

# HISTORIC AND DESIGN REVIEW COMMISSION

April 05, 2023

**HDRC CASE NO:** 2023-120  
**ADDRESS:** Multiple structures throughout the La Villita Historic District; Buildings 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 16, 17, 18, 20, 21, 22, 23, 24, and 29  
**LEGAL DESCRIPTION:** Public Property  
**ZONING:** D, H, RIO-3  
**CITY COUNCIL DIST.:** 1  
**DISTRICT:** La Villita Historic District  
**APPLICANT:** City of San Antonio  
**OWNER:** CITY OF SAN ANTONIO  
**TYPE OF WORK:** Review of impacts to historic structures by HVAC upgrades, exterior modifications, door replacement, vent installations  
**APPLICATION RECEIVED:** January 05, 2023  
**60-DAY REVIEW:** Not applicable due to City Council Emergency Orders  
**CASE MANAGER:** Edward Hall  
**REQUEST:**

The applicant is requesting a Certificate of Appropriateness for approval to perform exterior modifications to historic structures within the La Villita Historic District associated with the upgrade and installation of HVAC equipment and limited rehabilitation, repair and replacement scopes of work. Within this request the applicant has proposed the following:

- Building 1: Install an air vent on the rear (south) roof slope of the addition to the historic structure. The proposed vent will match the color of the standing seam metal roof.
- Building 2: Install two air vents on the rear (south) roof slope of the historic structure. The proposed vents will match the color of the standing seam metal roof.
- Building 3: Install an outside air louver in the wall of an existing porch addition. The proposed vent will match the existing wall color. This structure is a Recorded Texas Historic Landmark.
- Building 4: Install an air vent on the rear (north) roof slope of the historic structure. The proposed vent will match the color of the standing seam metal roof.
- Building 5: Install an air vent on the rear (north) roof slope of the historic structure. The proposed vent will match the color of the standing seam metal roof.
- Building 6: Install two air vents on the rear facing (east) roof slope of the structure. The proposed vents will match the color of the standing seam metal roof.
- Building 7: Install an air vent on the rear (east) roof slope of the historic structure. The proposed vent will match the color of the standing seam metal roof.
- Building 8: Install an air vent on the rear (north) roof slope of the existing structure. The proposed vent will match the color of the standing seam metal roof.
- Buildings 10 & 11: Install an air vent on the rear interior (west) roof slope of the historic structure and install an air louver in the historic brick wall facing the interior courtyard (west façade). The proposed roof vent will match the color of the standing seam metal roof. The proposed louver will match the color of the brick.
- Building 12: Install an air vent on the side (north) roof slope of the historic structure. The proposed vent will match the color of the standing seam metal roof.
- Building 13: Install air vents within the existing foundation vent openings of the historic structure. The existing grilles will be used.
- Building 14: Install air vents within an existing exterior louver on the east façade of the historic structure and create a new vent opening on the east façade at the street level. The proposed vents will match the color of the painted brick walls.
- Building 16: Install an air vent on the roof behind an east facing parapet wall and replace two wood doors with new fixed, wood doors.
- Building 17: Install an air vent on the rear (west) roof slope of the historic structure. The proposed vent will match the color of the standing seam metal roof.

- Building 18: Install an air vent within the existing, non-functioning chimney on the side elevation of the historic structure.
- Building 20: Install a louver within an existing transom window within a rear porch area of the historic structure.
- Building 21: Install an air vent on the rear (south) roof slope of the historic structure. The proposed vent will match the color of the standing seam metal roof.
- Building 22: Install an air louver within the existing rear wall by removing siding. The louver is to replace an existing, smaller louver. The proposed louver will match the color of the siding.
- Building 23: Install two air vents on the rear (south) roof slope of the historic structure. The proposed vents will match the color of the standing seam metal roof.
- Building 24: Install an air vent on the front (east) roof slope of the historic structure. The proposed vents will match the color of the standing seam metal roof.
- Building 29: Install an air louver on the east façade of the historic structure.

Buildings 3, 13, 14, 18, and 20 are Recorded Texas Historic Landmarks.

## **APPLICABLE CITATIONS:**

*Historic Design Guidelines, Chapter 2, Guidelines for Exterior Maintenance and Alterations*

### **6. Architectural Features: Doors, Windows, and Screens**

#### **A. MAINTENANCE (PRESERVATION)**

- i. Openings*—Preserve existing window and door openings. Avoid enlarging or diminishing to fit stock sizes or air conditioning units. Avoid filling in historic door or window openings. Avoid creating new primary entrances or window openings on the primary façade or where visible from the public right-of-way.
- ii. Doors*—Preserve historic doors including hardware, fanlights, sidelights, pilasters, and entablatures.
- iii. Windows*—Preserve historic windows. When glass is broken, the color and clarity of replacement glass should match the original historic glass.
- iv. Screens and shutters*—Preserve historic window screens and shutters.
- v. Storm windows*—Install full-view storm windows on the interior of windows for improved energy efficiency. Storm window may be installed on the exterior so long as the visual impact is minimal and original architectural details are not obscured.

#### **B. ALTERATIONS (REHABILITATION, RESTORATION, AND RECONSTRUCTION)**

- i. Doors*—Replace doors, hardware, fanlight, sidelights, pilasters, and entablatures in-kind when possible and when deteriorated beyond repair. When in-kind replacement is not feasible, ensure features match the size, material, and profile of the historic element.
- ii. New entrances*—Ensure that new entrances, when necessary to comply with other regulations, are compatible in size, scale, shape, proportion, material, and massing with historic entrances.
- iii. Glazed area*—Avoid installing interior floors or suspended ceilings that block the glazed area of historic windows.
- iv. Window design*—Install new windows to match the historic or existing windows in terms of size, type, configuration, material, form, appearance, and detail when original windows are deteriorated beyond repair.
- v. Muntins*—Use the exterior muntin pattern, profile, and size appropriate for the historic building when replacement windows are necessary. Do not use internal muntins sandwiched between layers of glass.

*Historic Design Guidelines, Guidelines for Additions*

### **5. Mechanical Equipment and Roof Appurtenances**

#### **A. LOCATION AND SITING**

- i. Visibility*—Do not locate utility boxes, air conditioners, rooftop mechanical equipment, skylights, satellite dishes, cable lines, and other roof appurtenances on primary facades, front-facing roof slopes, in front yards, or in other locations that are clearly visible from the public right-of-way.
- ii. Service Areas*—Locate service areas towards the rear of the site to minimize visibility from the public right-of-way. Where service areas cannot be located at the rear of the property, compatible screens or buffers will be required.

## B. SCREENING

- i. Building-mounted equipment*—Paint devices mounted on secondary facades and other exposed hardware, frames, and piping to match the color scheme of the primary structure or screen them with landscaping.
- ii. Freestanding equipment*—Screen service areas, air conditioning units, and other mechanical equipment from public view using a fence, hedge, or other enclosure.
- iii. Roof-mounted equipment*—Screen and set back devices mounted on the roof to avoid view from public right-of-way.

## FINDINGS:

- a. The applicant is requesting a Certificate of Appropriateness for approval to perform exterior modifications to historic structures within the La Villita Historic District associated with the upgrade and installation of HVAC equipment and limited rehabilitation, repair and replacement scopes of work.
- b. ROOF VENTS – The applicant has proposed for the majority of all air vents to be installed on rear facing roof slopes where they will not be visually impact the primary facades. Staff finds all installations on non-primary roof slopes (front facing) to be appropriate. All roof vents are To match the color of the roof material. Where vents are proposed on front facing roof slopes (Buildings 16 and 24), staff finds that the applicant either obscure vents behind original architectural elements, such as parapet walls, or shift the proposed vents to rear or side facing roof slopes.
- c. WALL LOUVERS – The applicant has proposed to install louvers into historic walls by creating or enlarging existing openings. Historic siding and brick materials would be removed to create each opening. All openings should be minimized in size to the greatest extent possible and all louvers should be painted to match the color of the historic structures' facades. Punched openings through masonry walls should be avoided, or limited to existing openings (windows / doors).
- d. DOOR REPLACEMENT – The applicant has proposed to replace existing wood doors at Building 16 with new wood doors. Both doors are utility access doors and are not located at pedestrian entrances. Staff finds that doors that are beyond repair are eligible for administrative approval; however, the profile of the replacement doors should match the existing or be comparable with existing, historic doors.

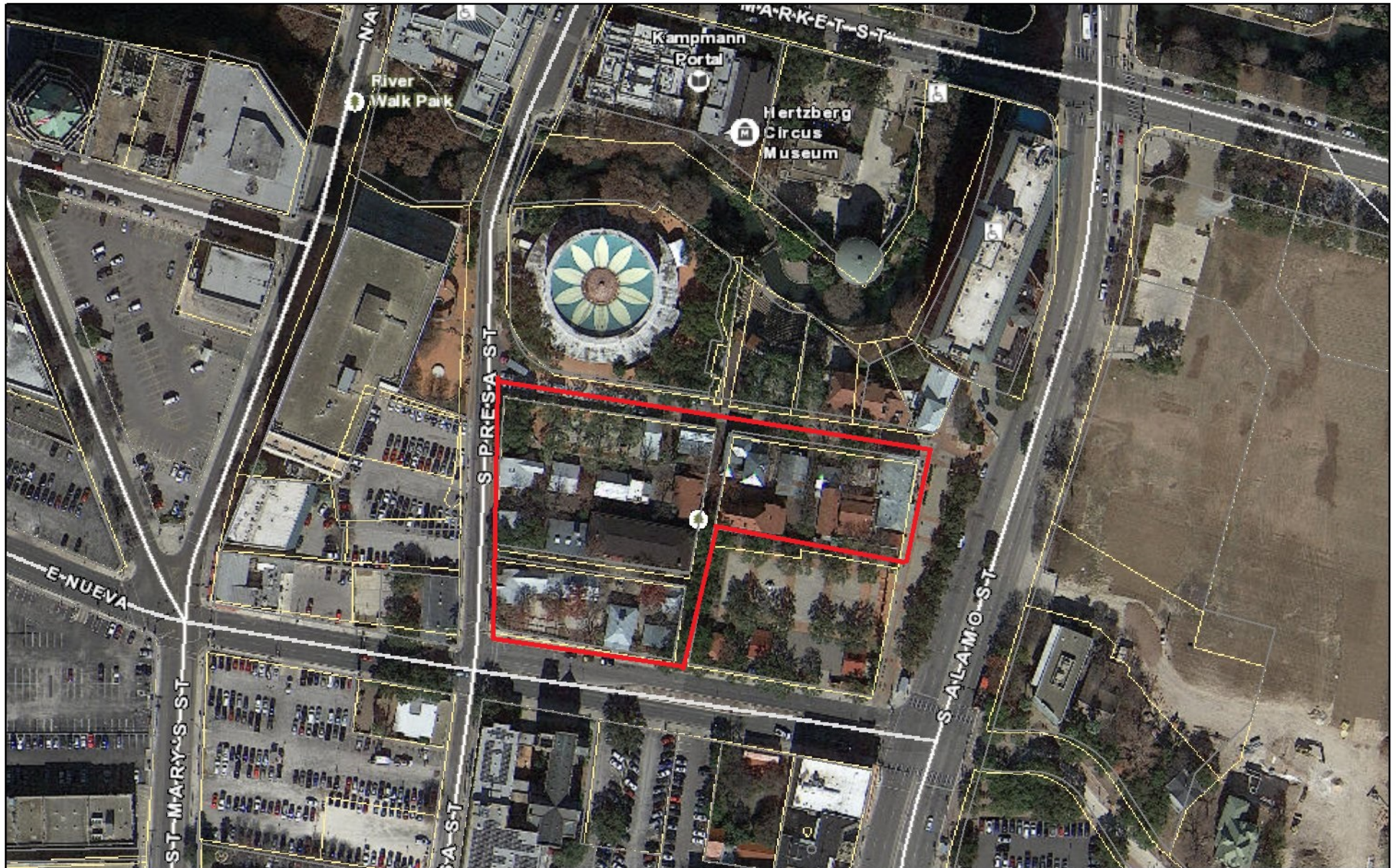
## RECOMMENDATION:

Staff recommends approval of the proposed exterior modifications to historic structures within the La Villita Historic District associated with the upgrade and installation of HVAC equipment and limited rehabilitation, repair and replacement scopes of work with the following stipulations:

- i. That vents located on the front roof slopes of structures (Buildings 16 and 24) be obscured behind architectural elements, such as parapet walls, or be shifted to the rear or side facing roof slopes.
- ii. That all louver openings be minimized in size to the greatest extent possible and be painted to match the historic structures facades. Punched openings through masonry walls should be avoided, or limited to existing openings (windows / doors). If the HDRC approves wall penetrations, any removed masonry materials shall be stored on site.
- iii. That the profile of the replacement doors at Building 16 match the existing or be compatible with existing historic doors.



# City of San Antonio One Stop



March 30, 2023

CoSA Addresses



Pre-K Sites

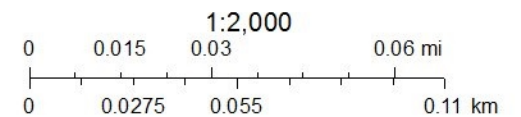
BCAD Parcels



Community Service Centers



CoSA Parcels





# CITY OF SAN ANTONIO - PUBLIC WORKS

## La Villita HVAC Upgrades

418 Villita Street, San Antonio, TX, 78205

### MAYOR

RON NIRENBERG

### CITY MANAGER

ERICK WALSH



### CONSTRUCTION DOCUMENTS

DECEMBER 05, 2022



### CITY COUNCIL

DISTRICT 1 MARIO BRAVO  
DISTRICT 2 JALEN MCKEE-RODRIGUEZ  
DISTRICT 3 PHYLLIS VIAGRAN  
DISTRICT 4 DR, ADRIANA ROCHA GARCIA  
DISTRICT 5 TERI CASTILLO

### CITY COUNCIL

DISTRICT 6 MELISSA CABELLO HAVRDA  
DISTRICT 7 ANA SANDOVAL  
DISTRICT 8 MANNY PELAEZ  
DISTRICT 9 JOHN COURAGE  
DISTRICT 10 CLAYTON PERRY

Project Number: 21032

**STRUCTURAL ENGINEER:**  
INTELLIGENT ENGINEERING SERVICES  
1045 Central Parkway North, Suite 200  
San Antonio, TX, 78232  
(210)349-9098



**MEP:**  
ENCOTECH ENGINEERING CONSULTANTS  
1770 NE Loop 410, Suite 600  
San Antonio, TX, 78217  
(210)545-3558



A

B

C

D

DRAWING SHEET LIST	
SHEET NUMBER	SHEET NAME
000	COVER SHEET
1101	INFORMATION
A001	SITE PLAN
A101	BUILDINGS 1, 2, 3 PLANS AND PHOTOS
A102	BUILDINGS 4, 5, 6 PLANS AND PHOTOS
A103	BUILDINGS 7, 8, 18 PLANS AND PHOTOS
A104	BUILDINGS 10, 11, 12, 13 PLANS AND PHOTOS
A105	BUILDINGS 14, 16, 16B PLANS AND PHOTOS
A106	BUILDINGS 17, 20, 21 PLANS AND PHOTOS
A107	BUILDINGS 22, 23, 24 PLANS AND PHOTOS
A108	BUILDING 29 PLANS AND PHOTOS
A200	MECHANICAL LOUVER SCHEDULE
A201	DOOR SCHEDULE

S0.1	STRUCTURAL NOTES, SPECIAL INSPECTIONS AND ABBREVIATIONS
S1.0	PARTIAL PLANS AND DETAILS
S2.0	PHOTOS
S2.1	PHOTOS

M000	MECHANICAL NOTES & LEGENDS
M101	MECHANICAL PLANS - BLDG. 1, 2, 3
M102	MECHANICAL PLANS - BLDG. 4, 5, 6
M103	MECHANICAL PLANS - BLDG. 7, 8
M104	MECHANICAL PLANS - BLDG. 10, 11, 12, 13
M105	MECHANICAL PLANS - BLDG. 14, 16, 16B
M106	MECHANICAL PLANS - BLDG. 17, 20, 21
M107	MECHANICAL PLANS - BLDG. 22, 23, 24
M108	MECHANICAL PLANS - BLDG. 9, 18
M201	MECHANICAL PLANS - BLDG. 9 ENLARGED
M201 - ALT	MECHANICAL PLANS - BLDG. 9 ENLARGED (ALT #2)
M301	MECHANICAL SCHEDULES
M401	MECHANICAL FLOW DIAGRAMS - BLDG. 9
M501	MECHANICAL DETAILS
M502	MECHANICAL DETAILS
M601	MECHANICAL CONTROLS
M602	MECHANICAL CONTROLS (PUMP ROOM)

E000	ELECTRICAL GENERAL NOTES & LEGENDS
E101	ELECTRICAL PLAN - BUILDINGS 1, 2, 3
E102	ELECTRICAL PLAN - BUILDINGS 4, 5, 6
E103	ELECTRICAL PLAN - BUILDINGS 7, 8
E104	ELECTRICAL PLAN - BUILDINGS 10, 11, 12, 13
E105	ELECTRICAL PLAN - BUILDINGS 4, 16A, 16B
E106	ELECTRICAL PLAN - BUILDINGS 17, 20, 21
E107	ELECTRICAL PLAN - BUILDINGS 22, 23, 24
E108	ELECTRICAL PLAN - BUILDINGS 9, 18
E301	ELECTRICAL SCHEDULES
E302	ELECTRICAL SCHEDULES
SHEET TOTAL: 45	

**2018 APPLICABLE CODES**  
2018 International Building Code, IBC  
2018 International Existing Building Code, IEBEC  
2018 International Residential Code, IRC  
2018 International Fire Code, IFC  
2018 International Mechanical Code, IMC  
2018 International Plumbing Code, IPC  
2018 International Fuel Gas Code, IFGC  
2018 International Energy Conservation Code, IECC  
2017 National Electrical Code, NEC  
2018 San Antonio Property Maintenance Code (based on the  
2018 International Property Maintenance Code)  
2018 International Swimming Pool and Spa Code, ISPSC  
(adopted by City Council on Sept. 3, 2020)

ABBREVIATIONS	
A/C	ABOVE COUNTER
AC	AIR CONDITIONING
ACT	ACOUSTIC CEILING TILE
ADA	AMERICANS WITH DISABILITIES ACT (Current Standards)
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISHED GRADE
ALUM	ALUMINUM
BD	BOARD
BLDG	BUILDING
BOF	BOTTOM OF FOOTING
BOT	BOTTOM
CC	CENTER TO CENTER
CF	CONTRACTOR FURNISHED
CG	CORNER GUARD
CI	CONTRACTOR INSTALLED
CJ	CONTROL JOINT
CL	CENTER LINE
CLG	CEILING
CLR	CLEAR
CLO	CLOSET
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
CONT	CONTINUOUS
COL	COLUMN
CORR	CORRIDOR
CT	CERAMIC TILE
CU FT	CUBIC FEET
CU YD	CUBIC YARD
DBL	DOUBLE
DIA	DIAMETER
DN	DOWN
DS	DOWNSPOUT
DTL	DETAIL
DWG	DRAWING
DWGS	DRAWINGS
EA	EACH
EIFS	EXTERIOR INSULATION FINISH SYSTEM
EJ	EXPANSION JOINT
ELEC	ELECTRICAL
ELEV	ELEVATION
EQ	EQUAL
EQMT	EQUIPMENT
EWV	ELECTRIC WATER COOLER
EXH	EXHAUST
EXT	EXTERIOR
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FFE	FINISHED FLOOR ELEVATION
FF&E	FURNITURE, FIXTURES & EQUIPMENT
FIN	FINISH
FL	FLOOR
FM	FM GLOBAL (Factory Mutual)
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FOOT, FEET
FVC	FIRE VALVE CABINET
GA	GAUGE
GALV	GALVANIZED
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GWB	GYP SUM WALL BOARD
GYP	GYP SUM
HB	HOSE BIB
HORIZ	HORIZONTAL
HVAC	HEATING VENTILATION & AIR CONDITIONING
ID	INTERIOR DIAMETER
INSUL	INSULATION
IN	INCH, INCHES
INT	INTERIOR
JAN	JANITOR
JT	JOINT
LAM	LAMINATE
LVT	LUXURY VINYL TILE
MAX	MAXIMUM
MCJ	MASONRY CONTROL JOINT
MDF	MEDIUM DENSITY FIBERBOARD
MDO	MEDIUM DENSITY OVERLAY
MECH	MECHANICAL
MFGR	MANUFACTURER
MIN	MINIMUM
MO	MASONRY OPENING
MTD	MOUNTED
MTL	METAL
NA	NOT APPLICABLE
NEC	NATIONAL ELECTRICAL CODE
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
OPP HD	OPPOSITE HAND
PLAM	PLASTIC LAMINATE
PLYWD	PLYWOOD
PNT	PAINT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PTD	PAINTED
PWR	POWER
RD	ROOF DRAIN
RDL	ROOF DRAIN LEADER
REF	REFERENCE
RO	ROUGH OPENING
SCHED	SCHEDULED
SD	SMOKE DETECTOR
SECT	SECTION
SF	SQUARE FOOT
SHT	SHEET
SIM	SIMILAR
SL	SLOPE
SPECS	SPECIFICATIONS
SQ FT	SQUARE FEET
SS	STAINLESS STEEL
SSM	SOLID SURFACE MATERIAL
STL	STEEL
STRUCT	STRUCTURAL
SV	SHEET VINYL
SY	SQUARE YARD
SY	SYSTEM
T&G	TONGUE AND GROOVE
TAS	TEXAS ACCESSIBILITY STANDARDS (Current Version)
TEL	TELEPHONE
TOB	TOP OF BEAM TOC TOP OF CONCRETE
TOF	TOP OF FOOTING
TOJ	TOP OF JOIST
TOP	TOP OF PARAPET
TOR	TOP OF ROOF
TOS	TOP OF STEEL
TV	TELEVISION
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VIF	VERIFY IN FIELD
VWC	VINYL WALL COVERING
W/	WITH
WO	WITHOUT
WD	WOOD
WH	WATER HEATER

NOTE: THE ABBREVIATIONS ABOVE MAY NOT ALL APPLY TO THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR UNDERSTANDING THE PROJECT'S SCOPE (FOR BOTH DEMOLITION AND THE NEW CONSTRUCTION) AND FOR RESPECTING & FOLLOWING THESE DIRECTIONS AS THEY APPLY TO THE PROJECT.

**REFERENCE SYMBOLS**

**BUILDING SECTION**

**WALL SECTION**

**EXTERIOR ELEVATION**

**DETAIL REFERENCE**

**INTERIOR ELEVATION REFERENCE**

**FLOOR REFERENCE**

**BASIC DRAWING TITLE**

**MILLWORK SECTION**

**SYMBOLS & TAGS**

**REVISION NUMBER AND EXTENT**

**MATCH LINE REFERENCE**

**LAYOUT GRID LINES**

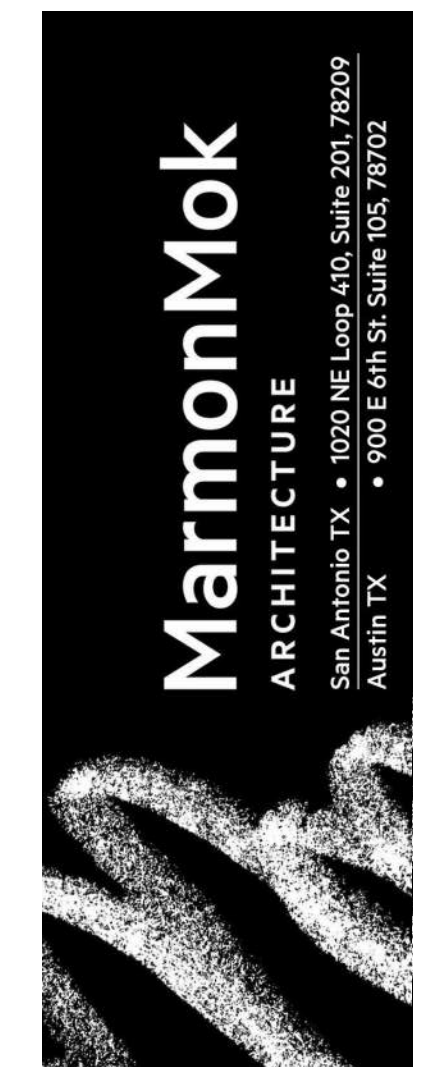
**NORTH ARROW REFERENCE**

**TAGS AND SYMBOLS**

**ROOM TAG**

**PARTITION TYPE TAG**

**GRAPHIC SCALE**



CITY OF SAN ANTONIO - PUBLIC WORKS  
LA VILLITA - HVAC UPGRADE  
418 Villita St., San Antonio, TX, 78205

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Date 12/05/2022  
Project No. 21032  
Revisions

SHEET TITLE  
INFORMATION

SHEET NO.  
1101

THE CONTRACTOR SHALL FAMILIARIZE ITSELF WITH THE PROJECT SCOPE AND SCHEDULE. THIS INCLUDES UNDERSTANDING EXISTING CONDITIONS (BUILDINGS & SITE), EXISTING UTILITIES, EXISTING SITE FEATURES, AND THE OWNER'S SCHEDULE REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND/OR COORDINATING THE EXISTING CONDITIONS WITH THE DESIGN INTENT CONVEYED IN THE CONTRACT DOCUMENTS.

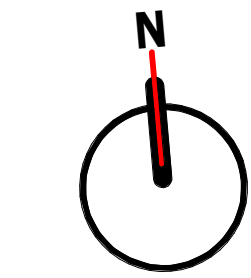




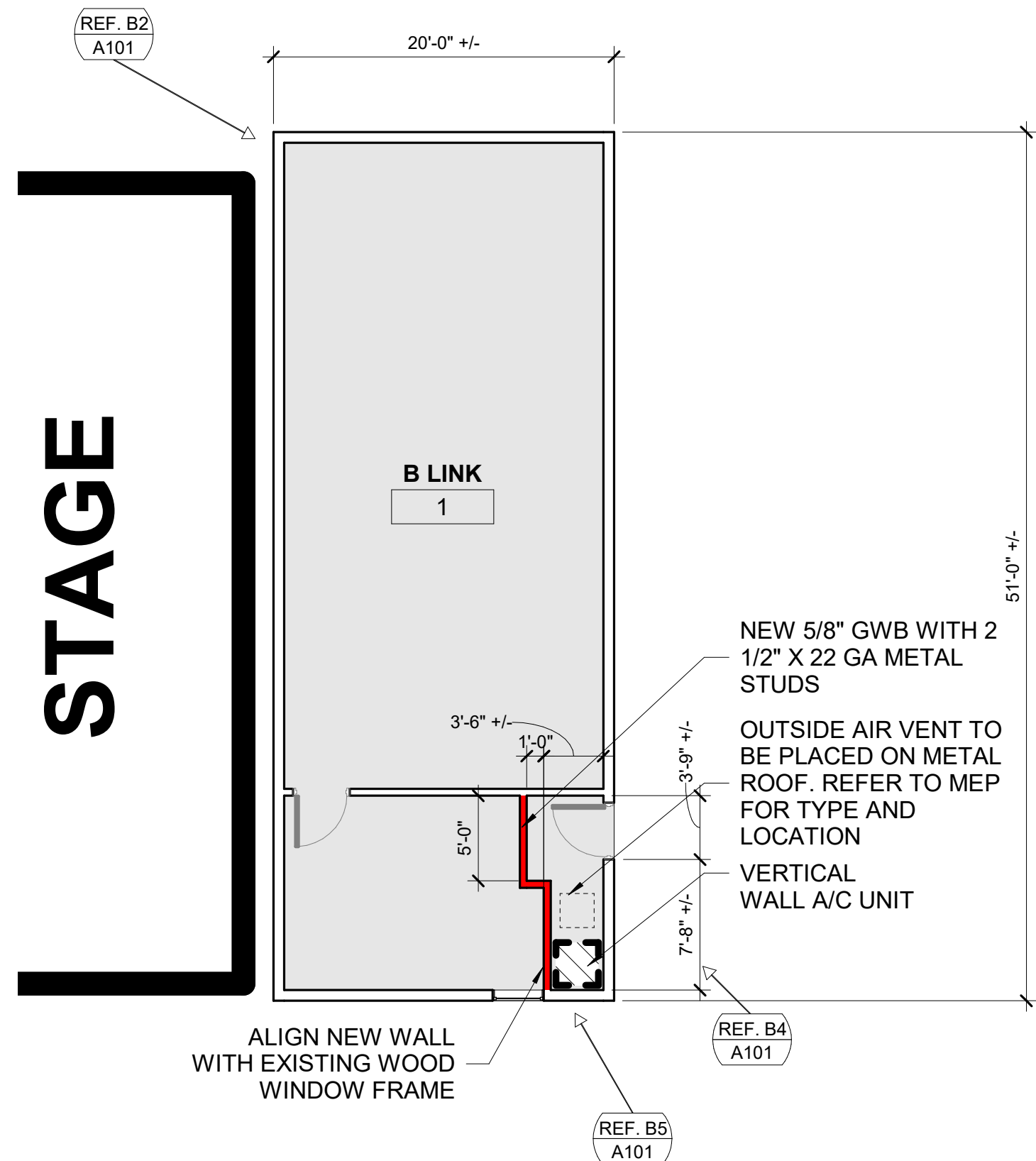


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C:\Users\mmon\Documents\21032 - La Villa HVAC Upgrade -  
Rev 001.dwg 12/8/2022 mmon 21032.dwg

A  
B  
C  
D



**B1 1 - B LINK**  
A101 1/8" = 1'-0"



**B2 MAIN ENTRANCE FACADE - (VIEW 1)**  
A101 NTS



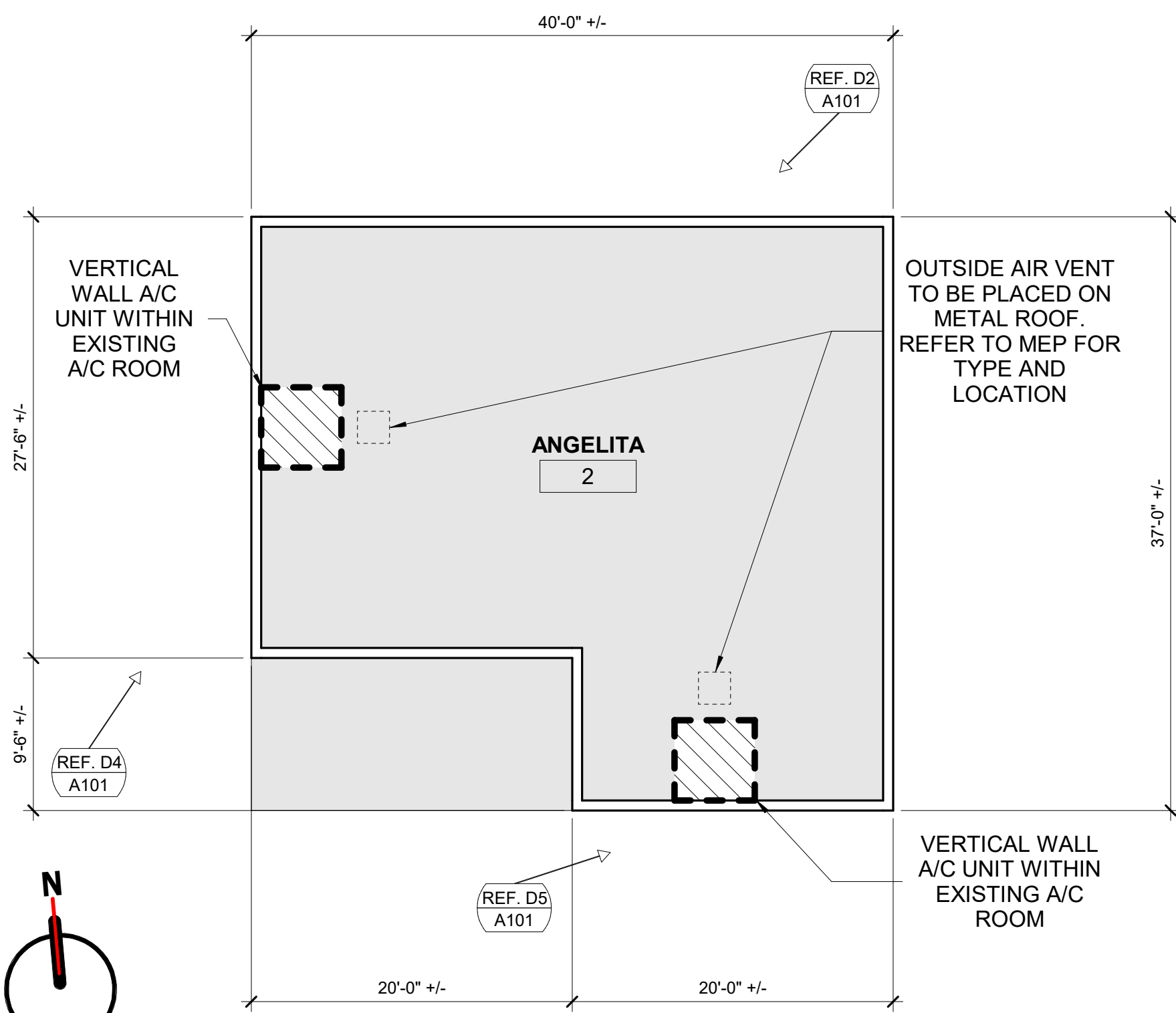
**B4 EAST FACADE - (VIEW 2)**  
A101 NTS



**B5 SOUTH EAST FACADE - (VIEW 3)**  
A101 NTS



**D1 2 - ANGELITA**  
A101 1/8" = 1'-0"



**D2 MAIN ENTRANCE FACADE - (VIEW 1)**  
A101 NTS



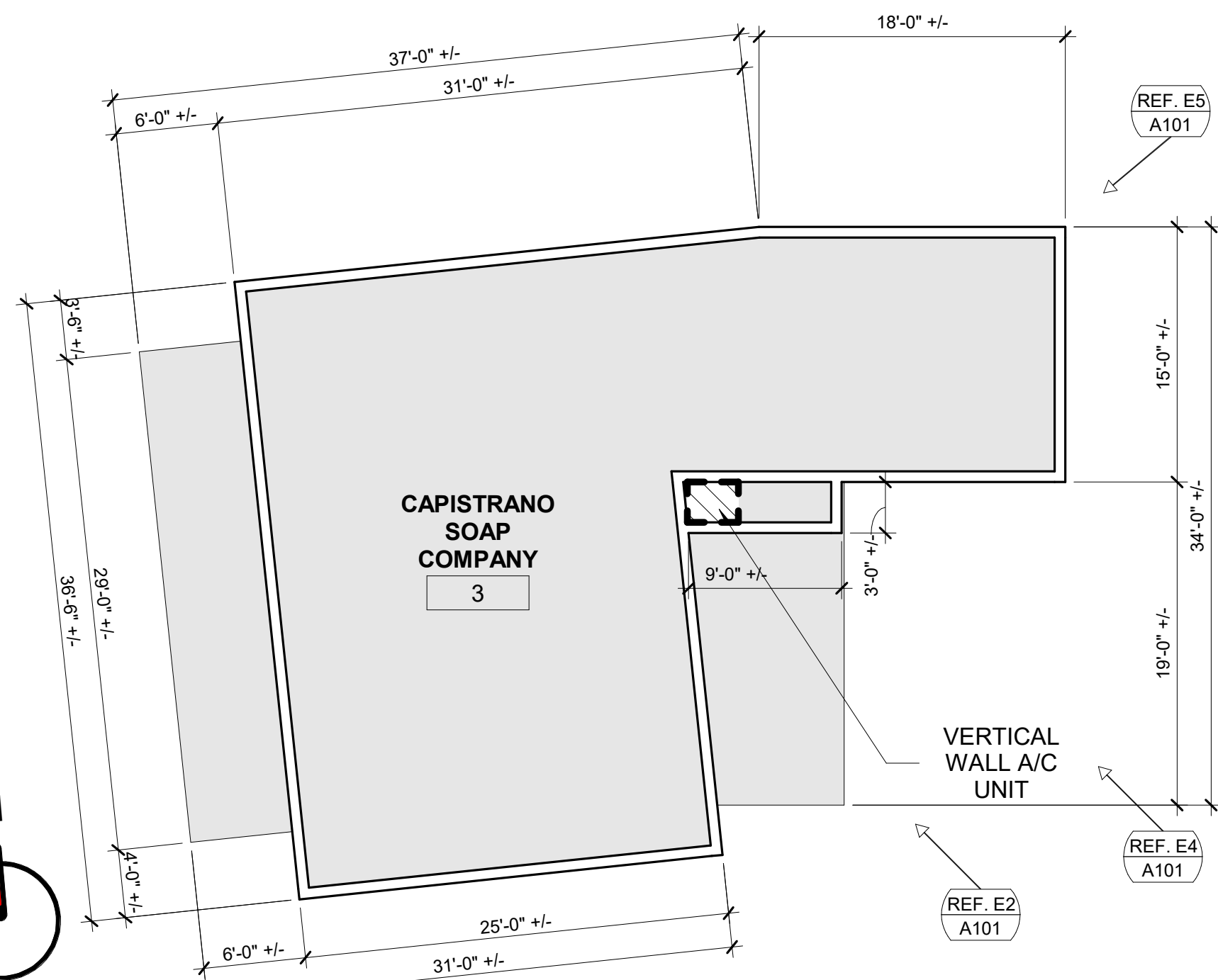
**D4 WEST FACADE - (VIEW 2)**  
A101 NTS



**D5 SOUTH FACADE - (VIEW 3)**  
A101 NTS



**E1 3 - CAPISTRANO SOAP COMPANY**  
A101 1/8" = 1'-0"



**E2 MAIN ENTRANCE FACADE - (VIEW 1)**  
A101 NTS



**E4 SOUTH EAST FACADE - (VIEW 2)**  
A101 NTS



**E5 NORTH EAST FACADE - (VIEW 3)**  
A101 NTS



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CITY OF SAN ANTONIO - PUBLIC WORKS  
LA VILLITA - HVAC UPGRADE

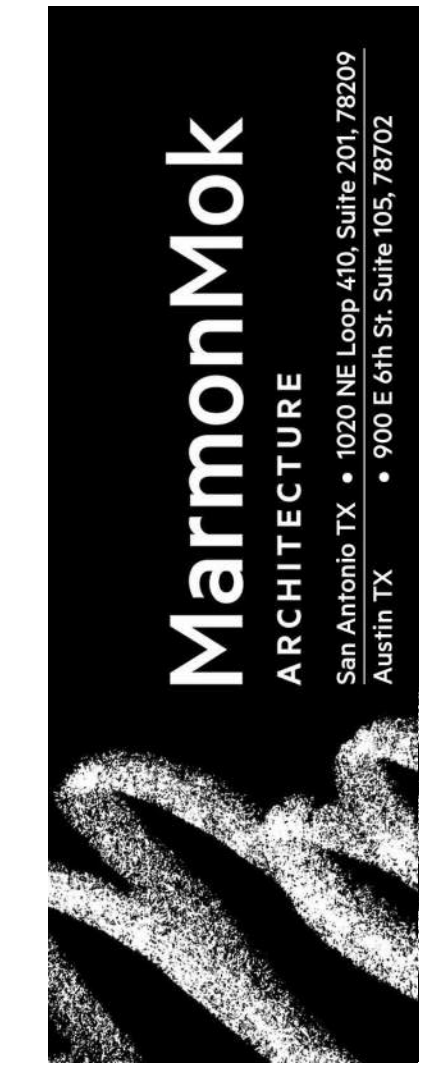
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Date 12/05/2022  
Project No. 21032  
Revisions

SHEET TITLE  
BUILDINGS 1, 2, 3  
PLANS AND  
PHOTOS

SHEET NO.

A101





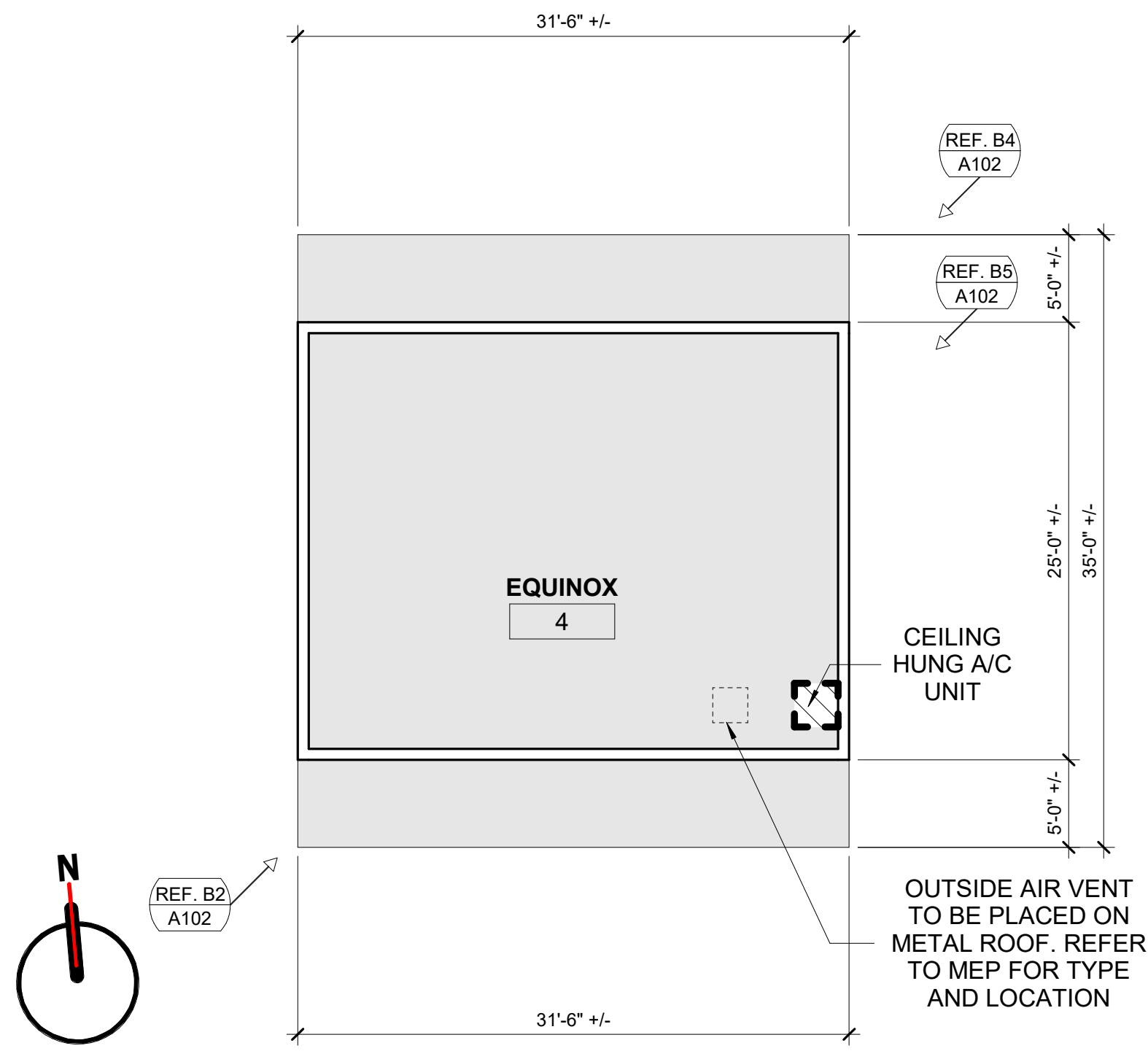
A

B

C

D

E



**B1 4 - EQUINOX**  
A102 1/8" = 1'-0"



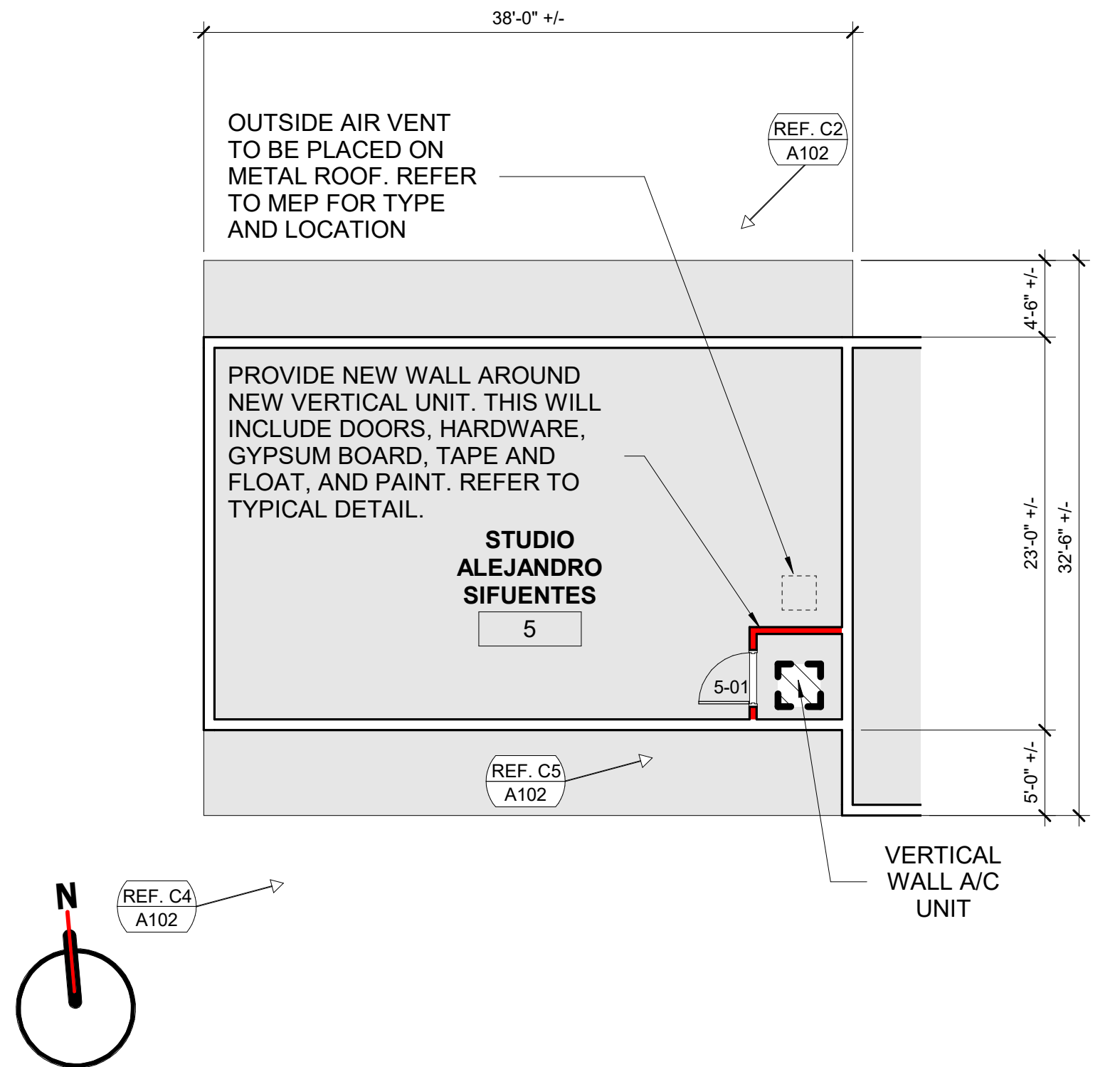
**B2 MAIN ENTRANCE FACADE - (VIEW 1)**  
A102 NTS



**B4 NORTH EAST FACADE - (VIEW 2)**  
A102 NTS



**B5 EAST FACADE - (VIEW 3)**  
A102 NTS



**C1 5 - STUDIO ALEJANDRO SIFUENTES**  
A102 1/8" = 1'-0"



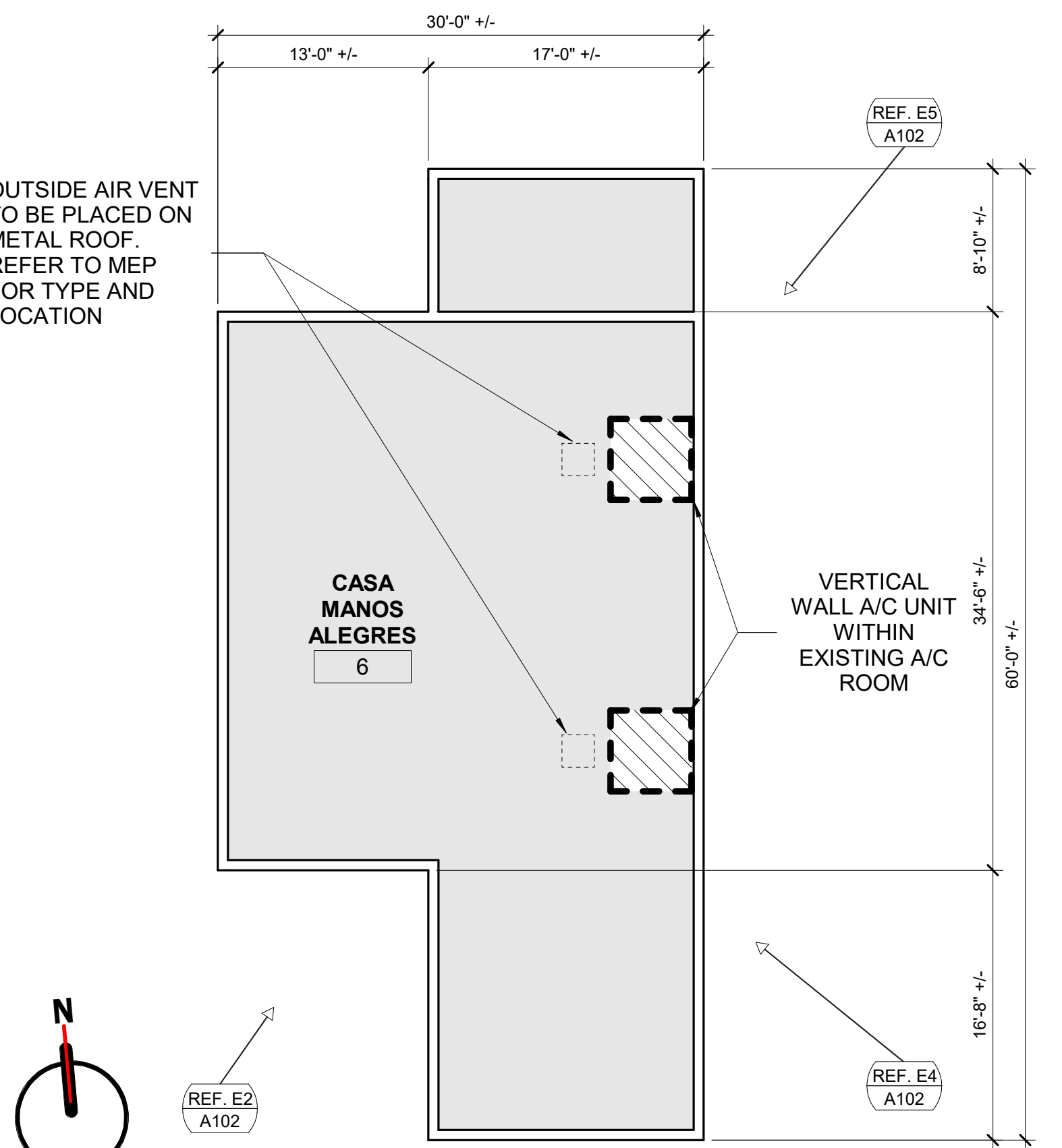
**C2 MAIN ENTRANCE FACADE - (VIEW 1)**  
A102 NTS



**C4 SOUTH WEST FACADE - (VIEW 2)**  
A102 NTS



**C5 SOUTH FACADE - (VIEW 3)**  
A102 NTS



**E1 6 - CASA MANOS ALEGRES**  
A102 1/8" = 1'-0"



**E2 MAIN ENTRANCE FACADE - (VIEW 1)**  
A102 NTS

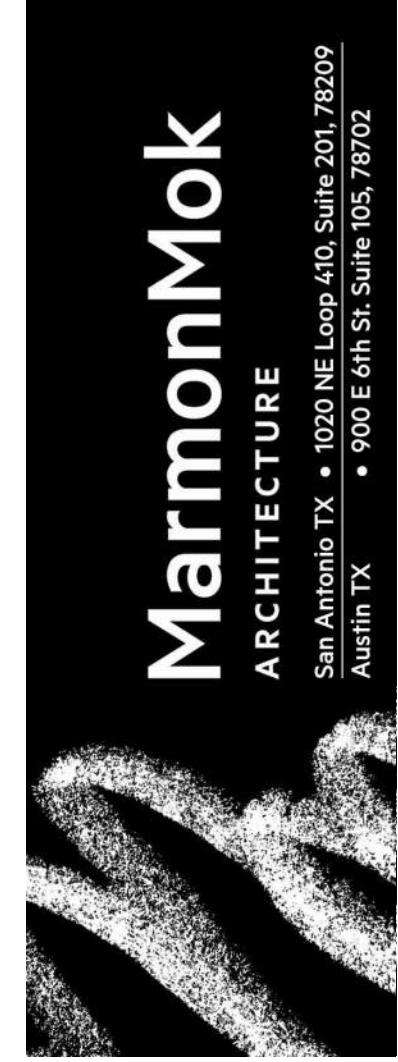


**E4 EAST ENTRANCE FACADE - (VIEW 2)**  
A102 NTS



**E5 EAST ENTRANCE FACADE - (VIEW 3)**  
A102 NTS

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CITY OF SAN ANTONIO - PUBLIC WORKS  
LA VILLITA - HVAC UPGRADE

418 Villita St., San Antonio, TX, 78205

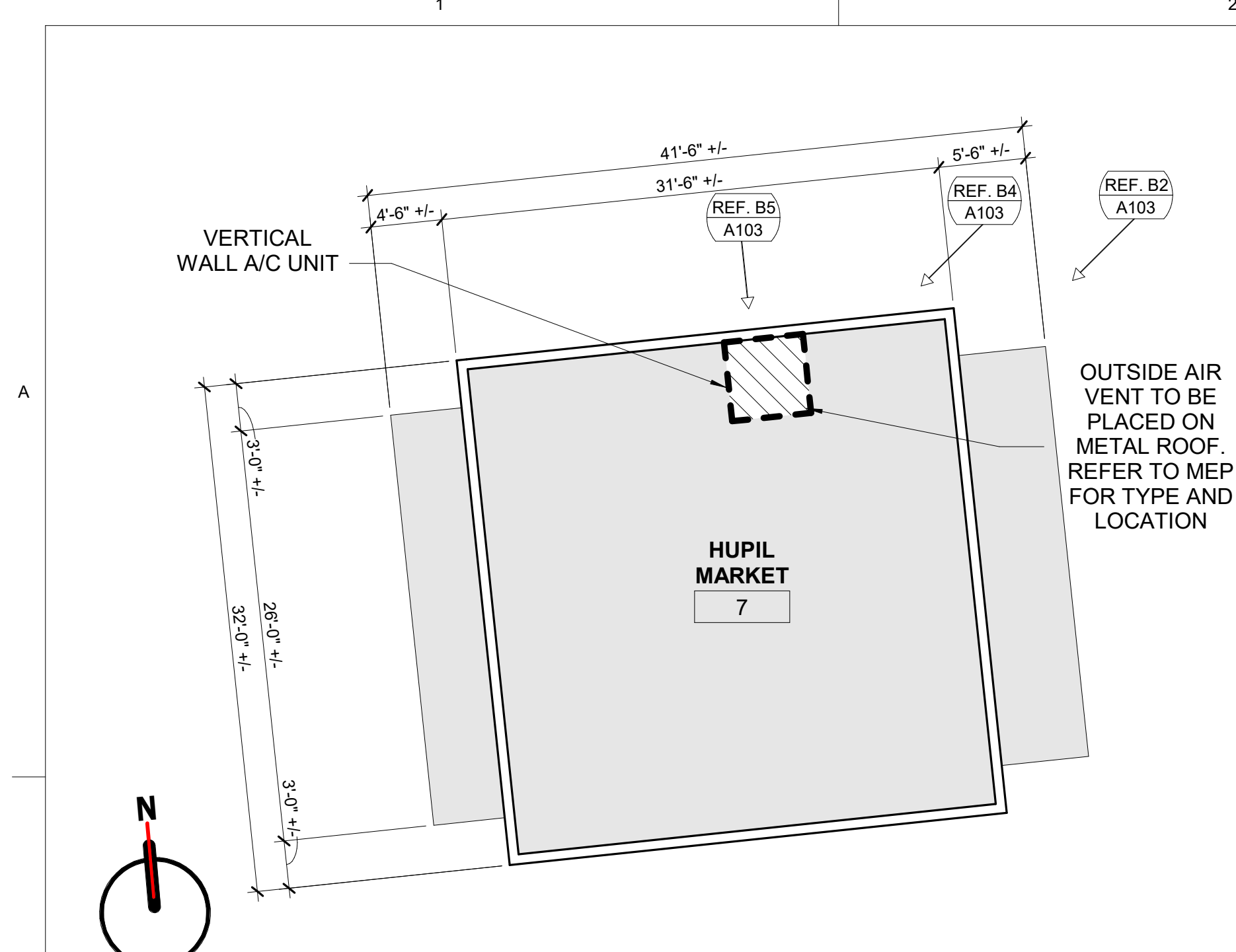
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Revisions

SHEET TITLE  
BUILDINGS 4, 5, 6  
PLANS AND  
PHOTOS

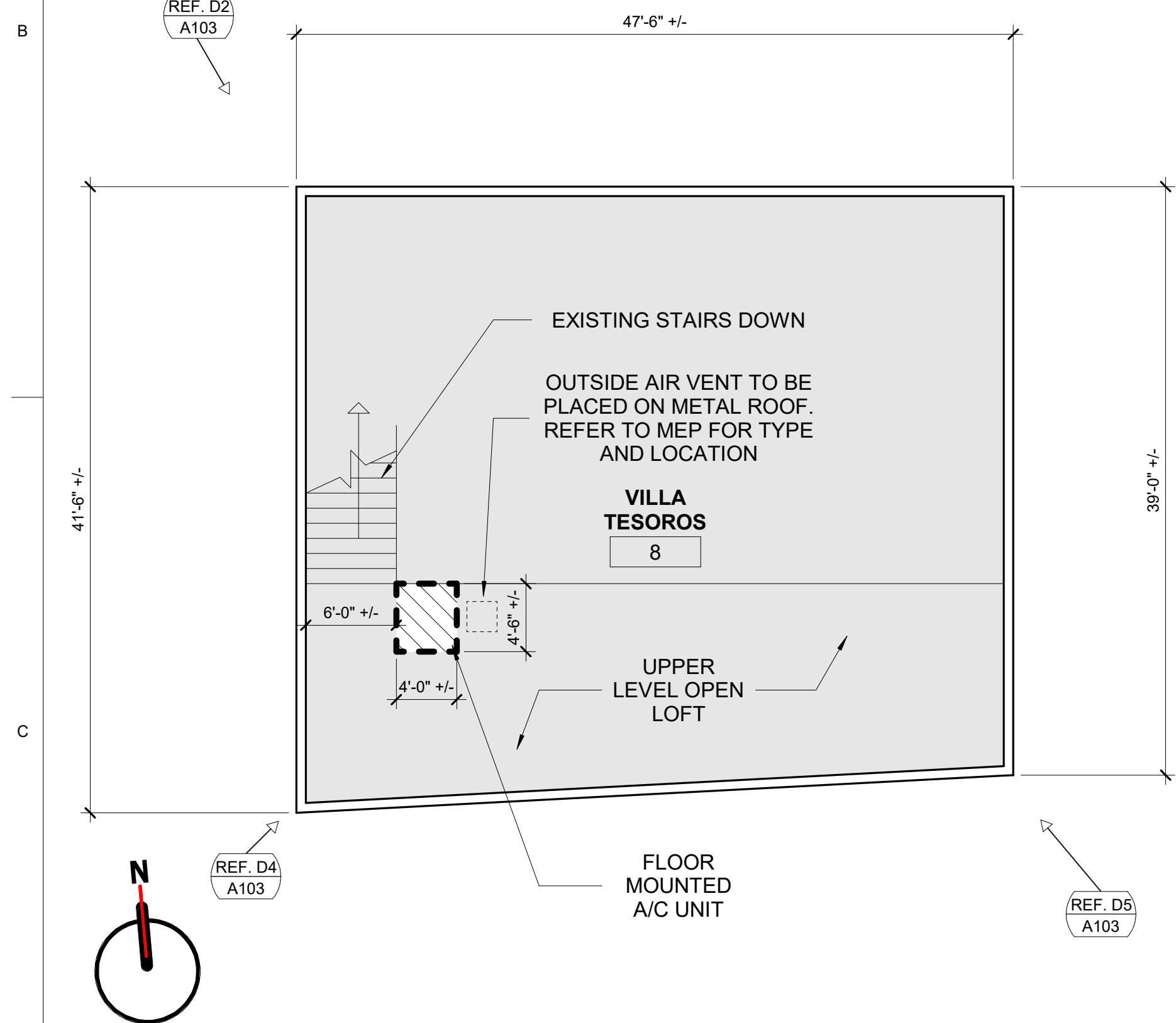
SHEET NO.

A102

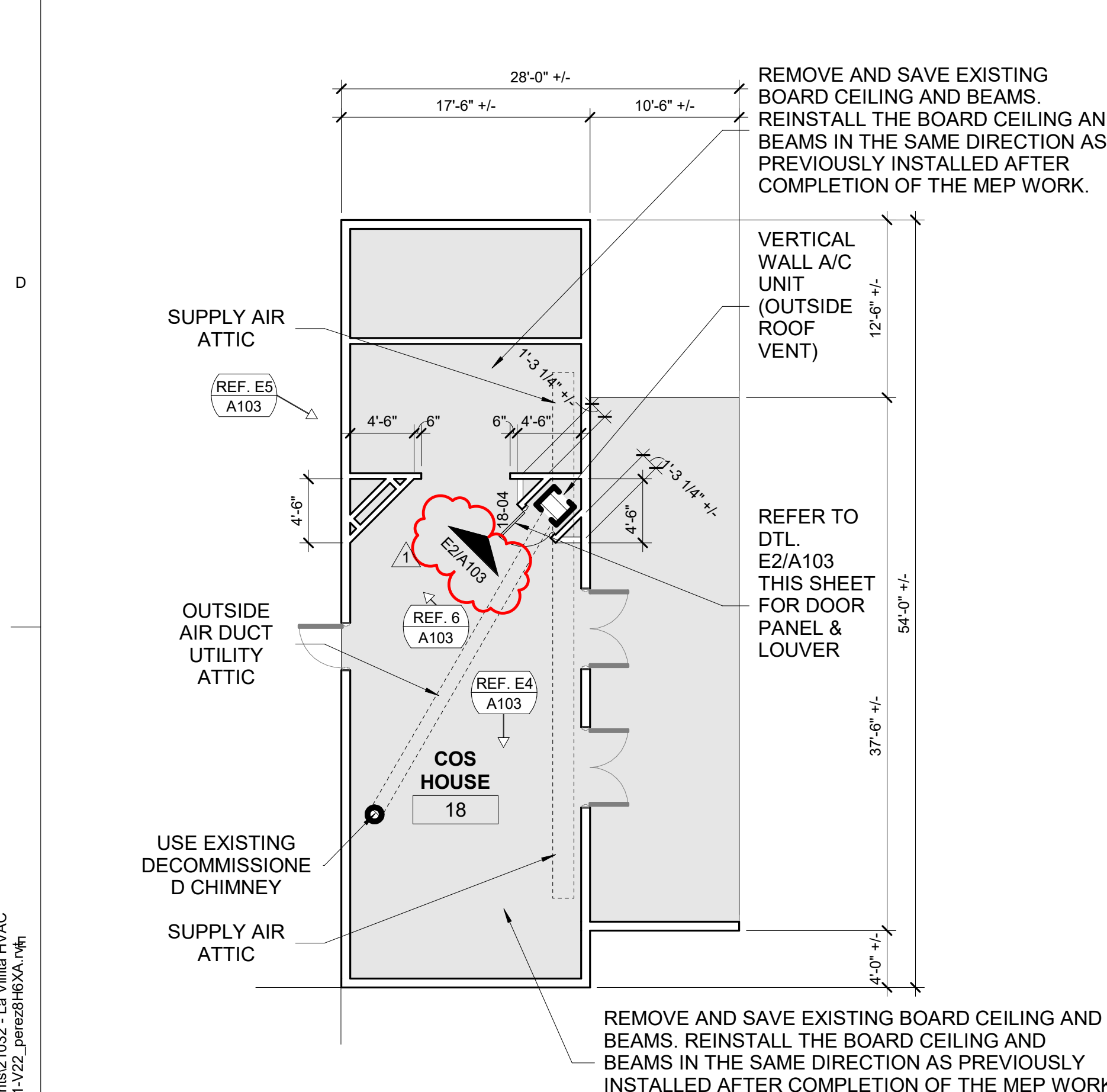




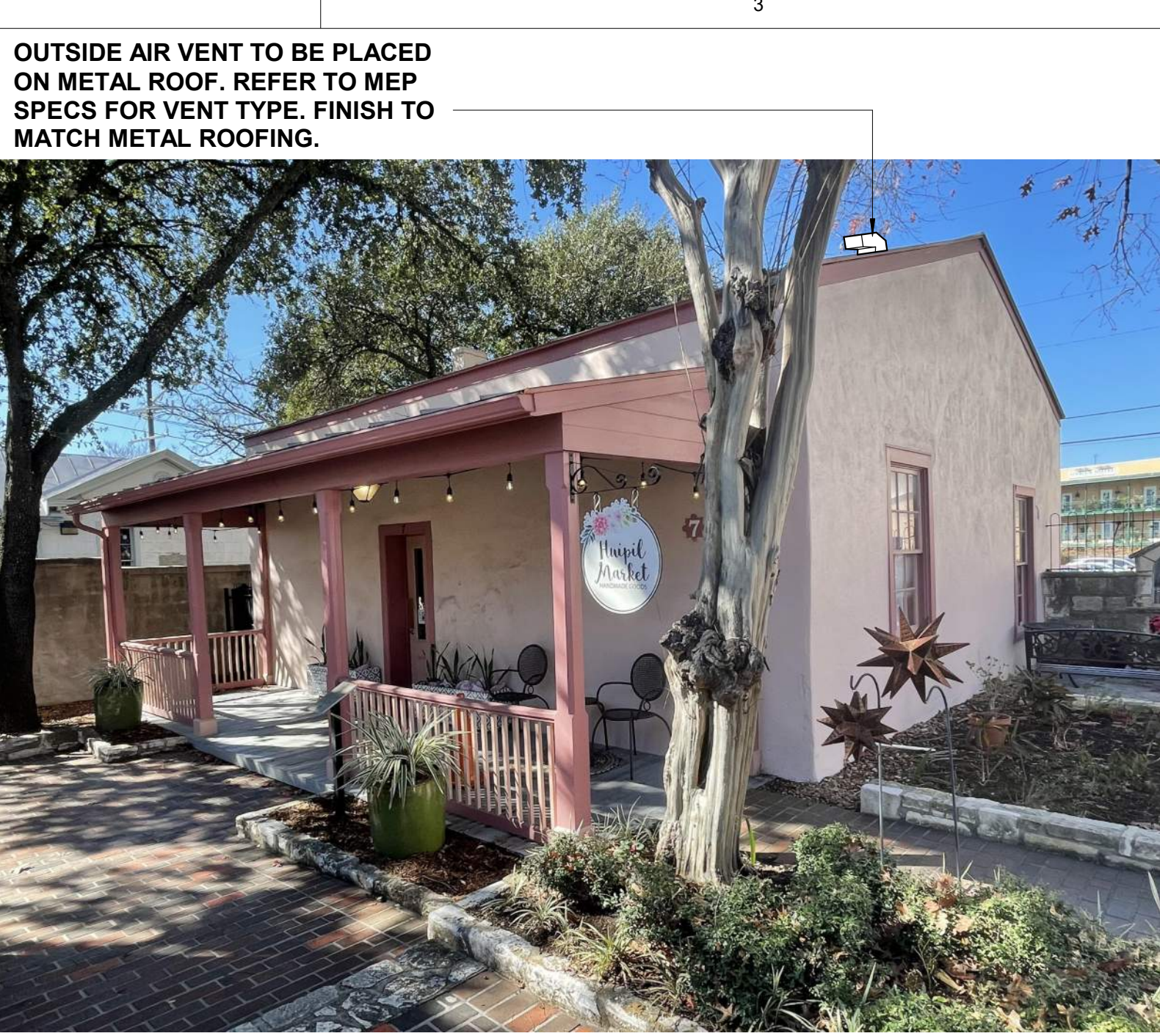
**B1** 7 - HUIPIL MARKET  
A103  
1/8" = 1'-0"



**D1** 8 - VILLA TESOROS  
A103  
1/8" = 1'-0"



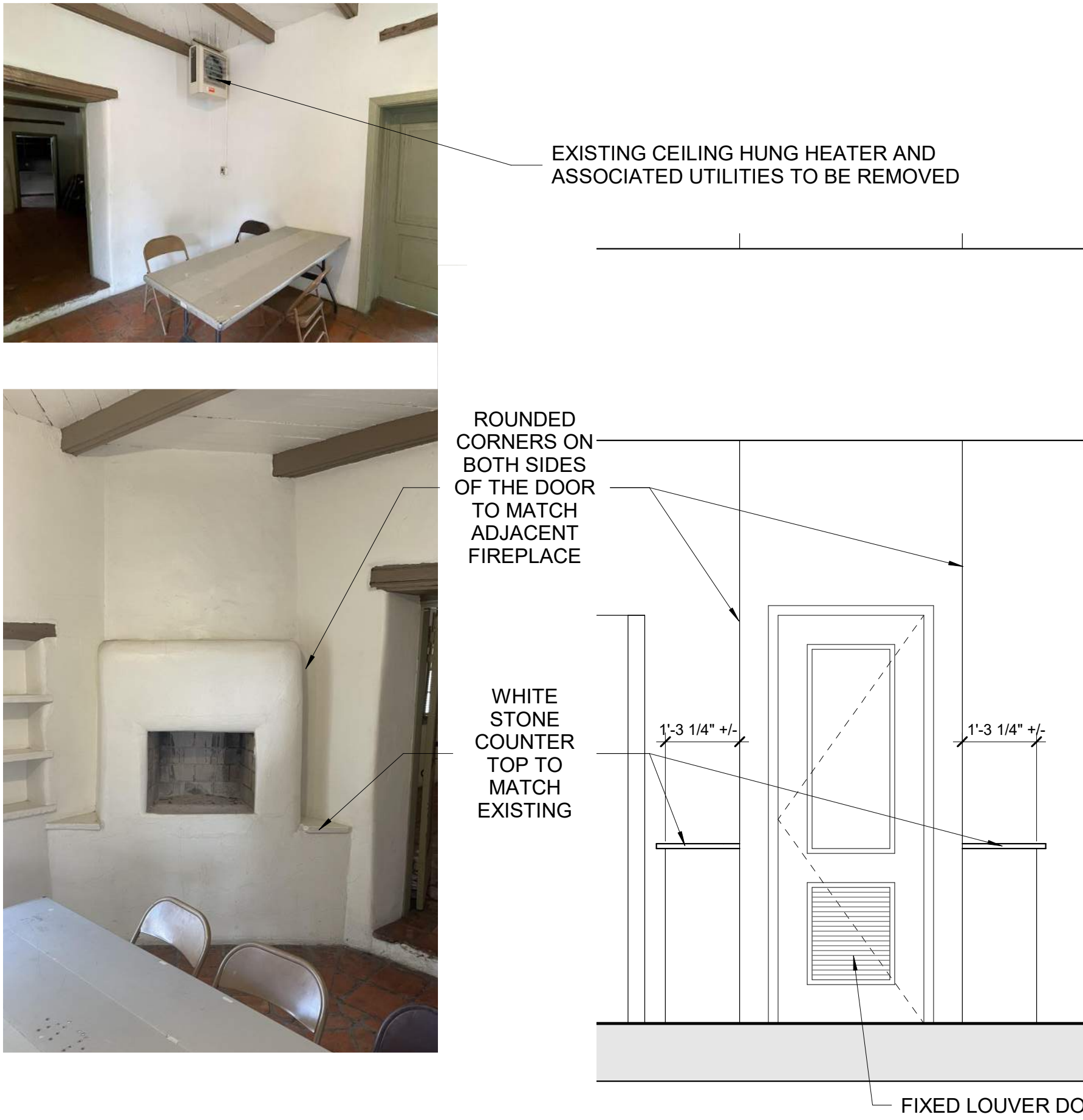
**E1** 18 - COS HOUSE (ALTERNATE NO. 1)  
A103  
1/8" = 1'-0"



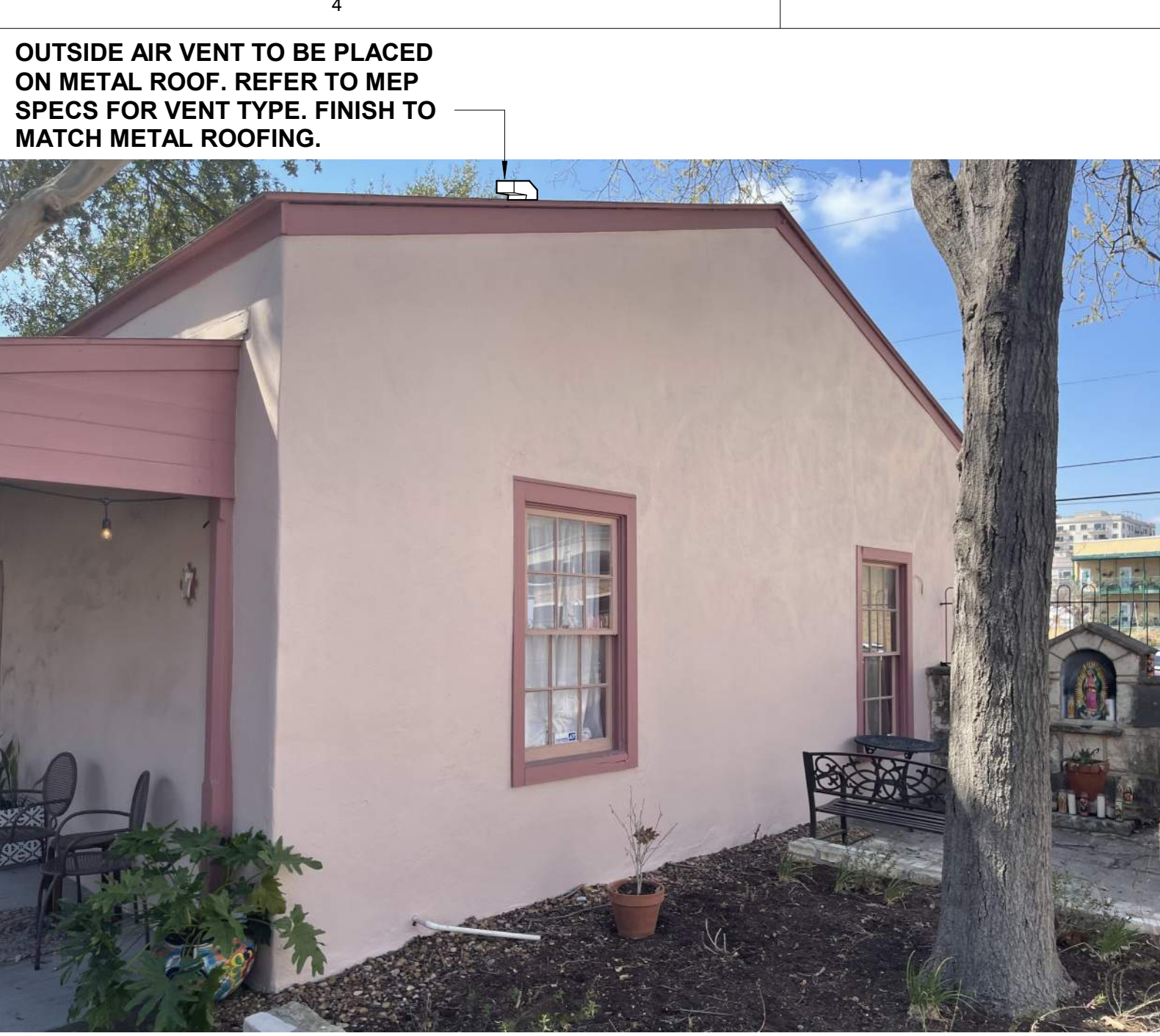
**B2** MAIN ENTRANCE FACADE - (VIEW 1)  
A103  
NTS



**D2** MAIN ENTRANCE FACADE - (VIEW 1)  
A103  
NTS



**E2** COS HOUSE - EXISTING CHIMNEY  
A103  
1/2" = 1'-0"



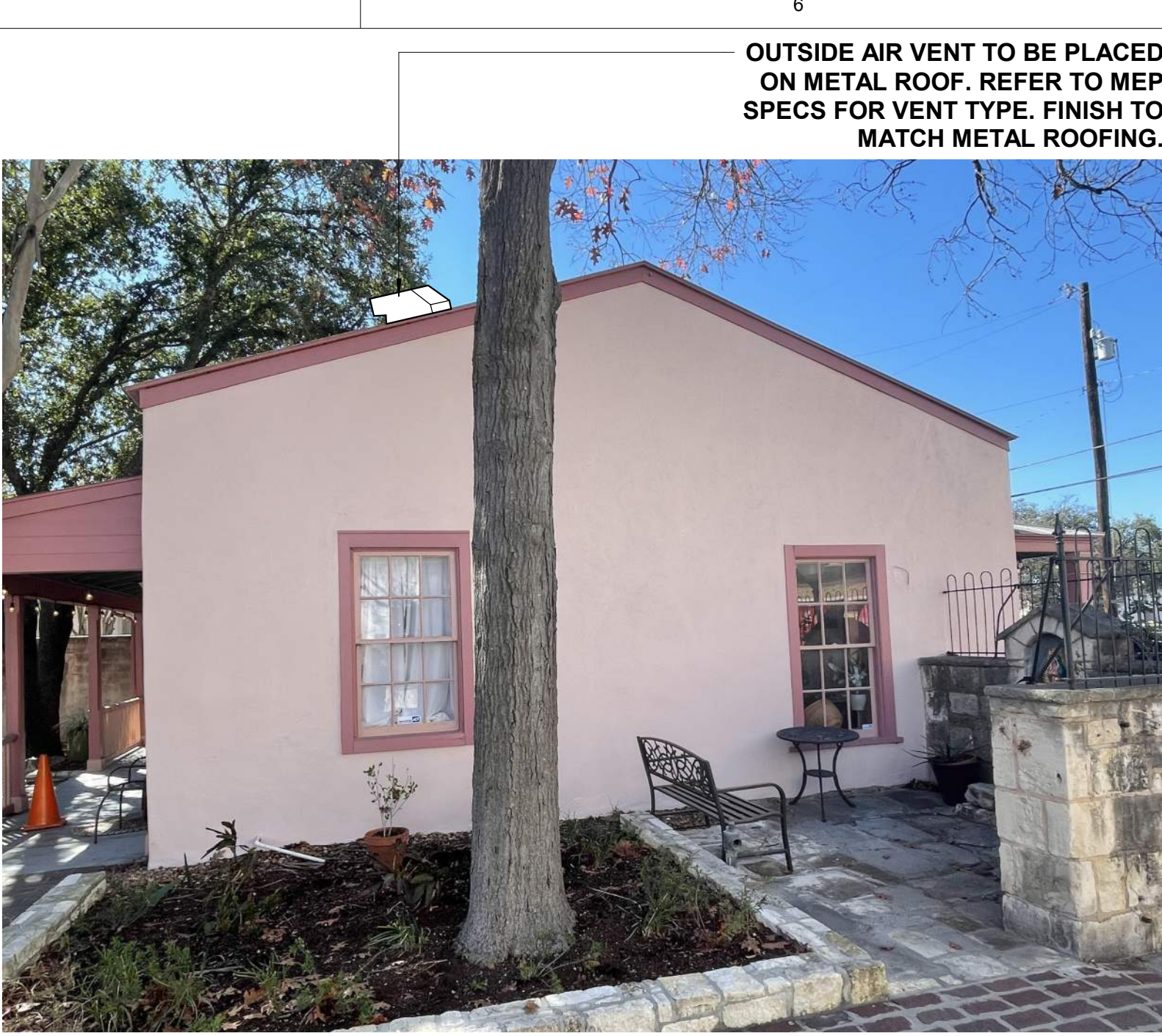
**B4** NORTH EAST FACADE - (VIEW 2)  
A103  
NTS



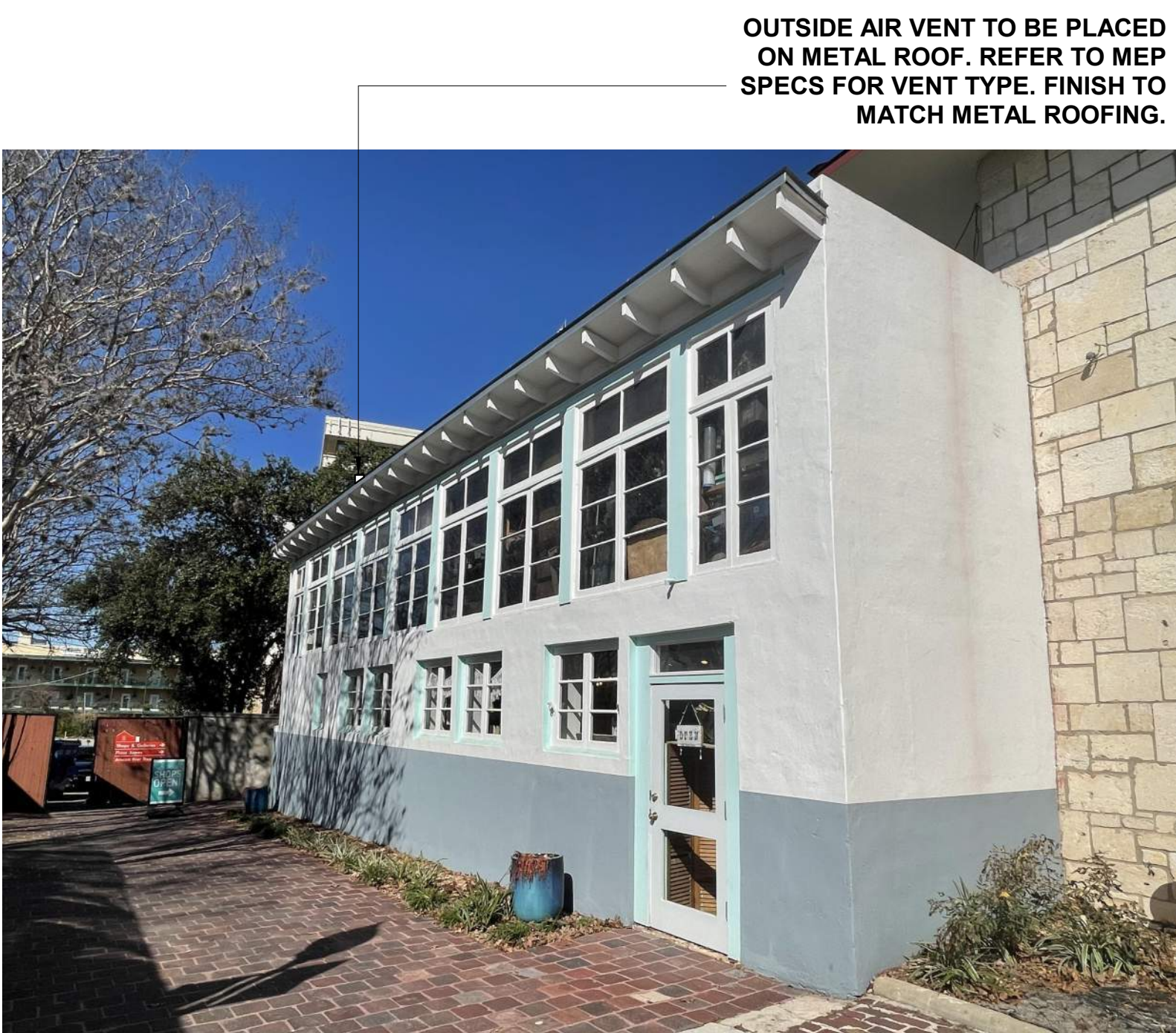
**D4** SOUTH WEST FACADE - (VIEW 2)  
A103  
NTS



**E4** COS HOUSE - INTERIOR VIEW  
A103  
1 1/2" = 1'-0"



**B5** NORTH FACADE - (VIEW 3)  
A103  
NTS



**D5** SOUTH EAST FACADE - (VIEW 3)  
A103  
NTS



**E5** EAST FACADE - EXISTING CHIMNEY  
A103  
1 1/2" = 1'-0"

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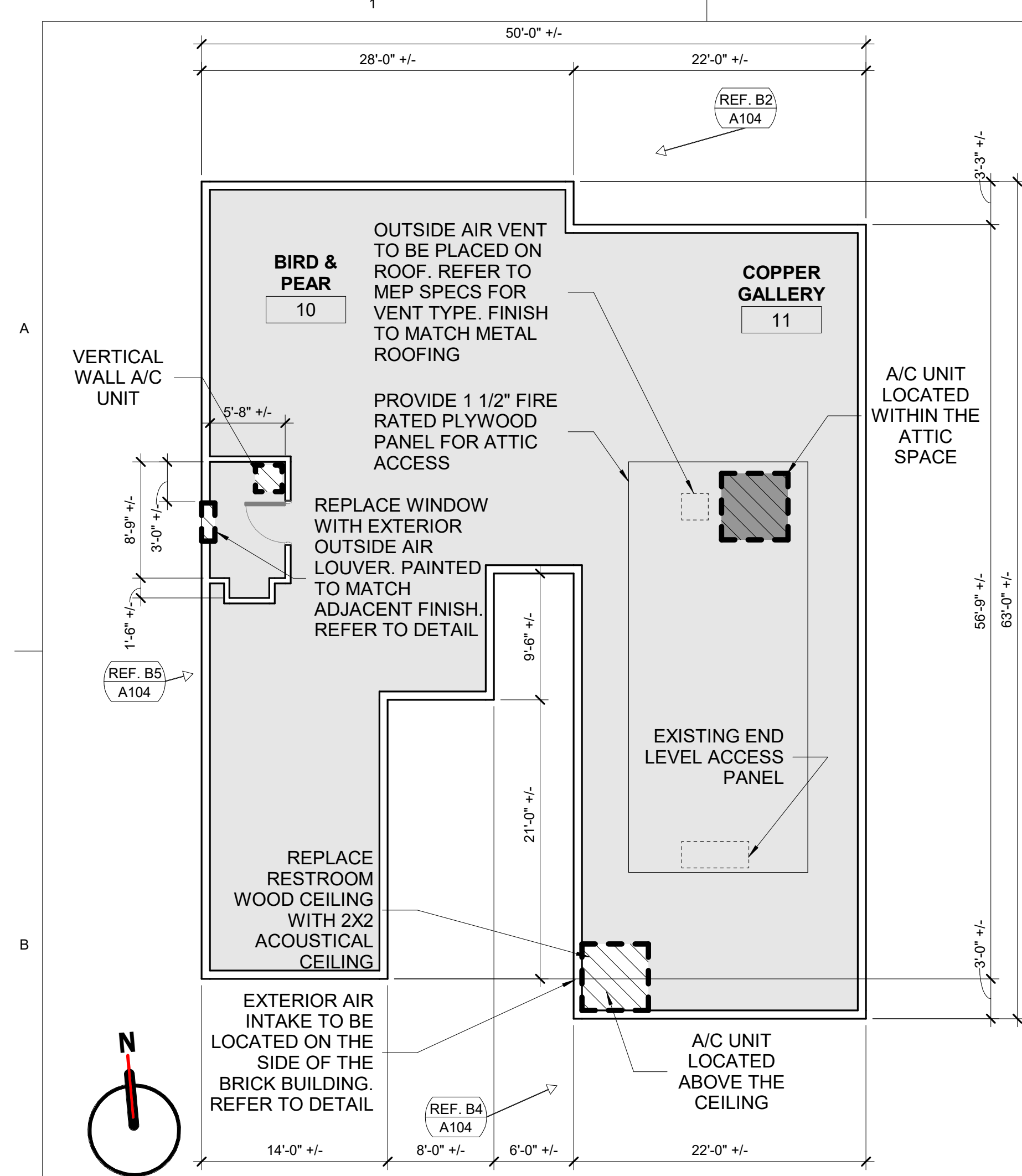
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Date 12/05/2022  
Project No. 21032  
Revisions  
1 01/23/2023 ADDENDUM 1

SHEET TITLE  
BUILDINGS 7, 8,  
18 PLANS AND  
PHOTOS

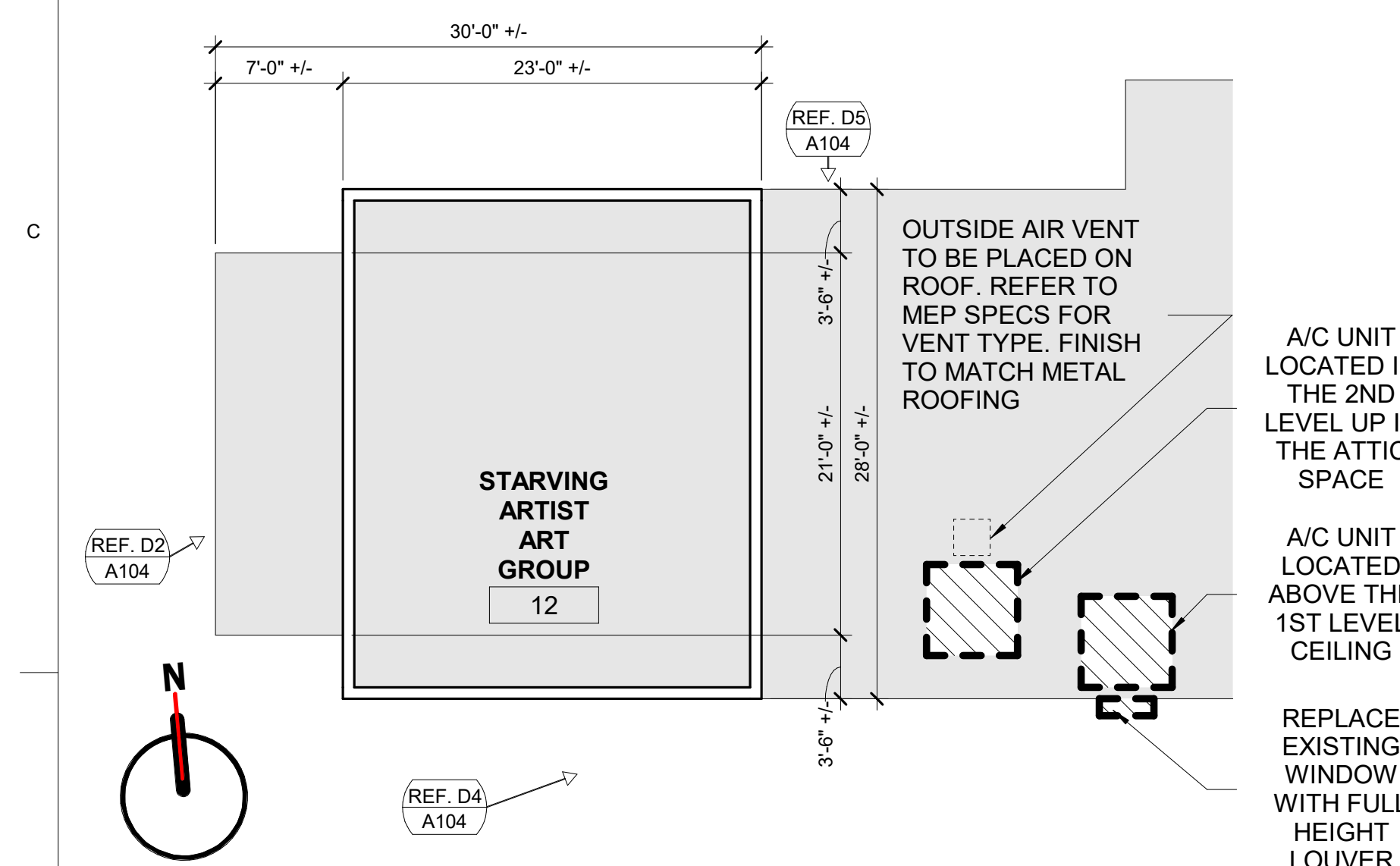
SHEET NO.  
**A103**



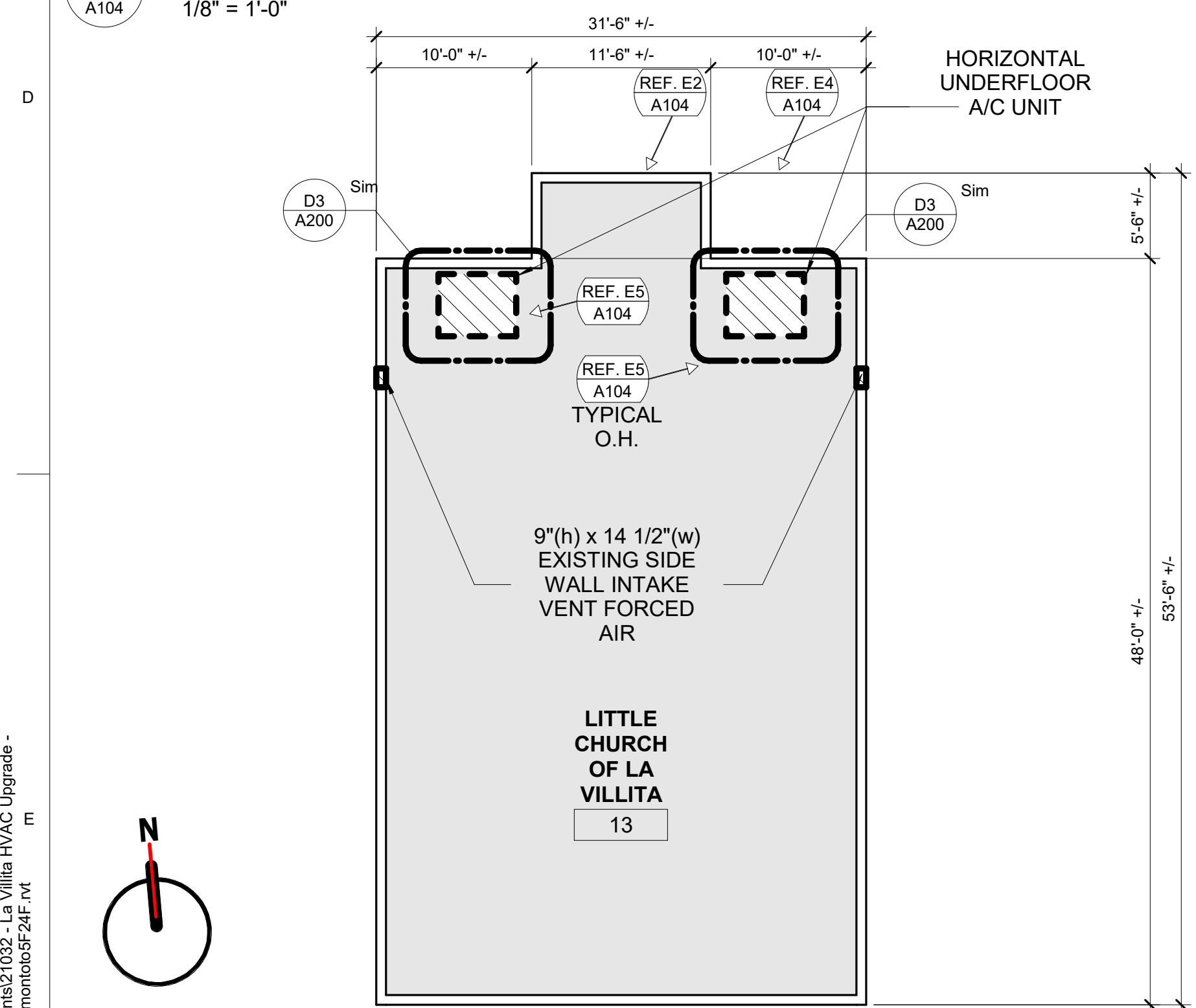
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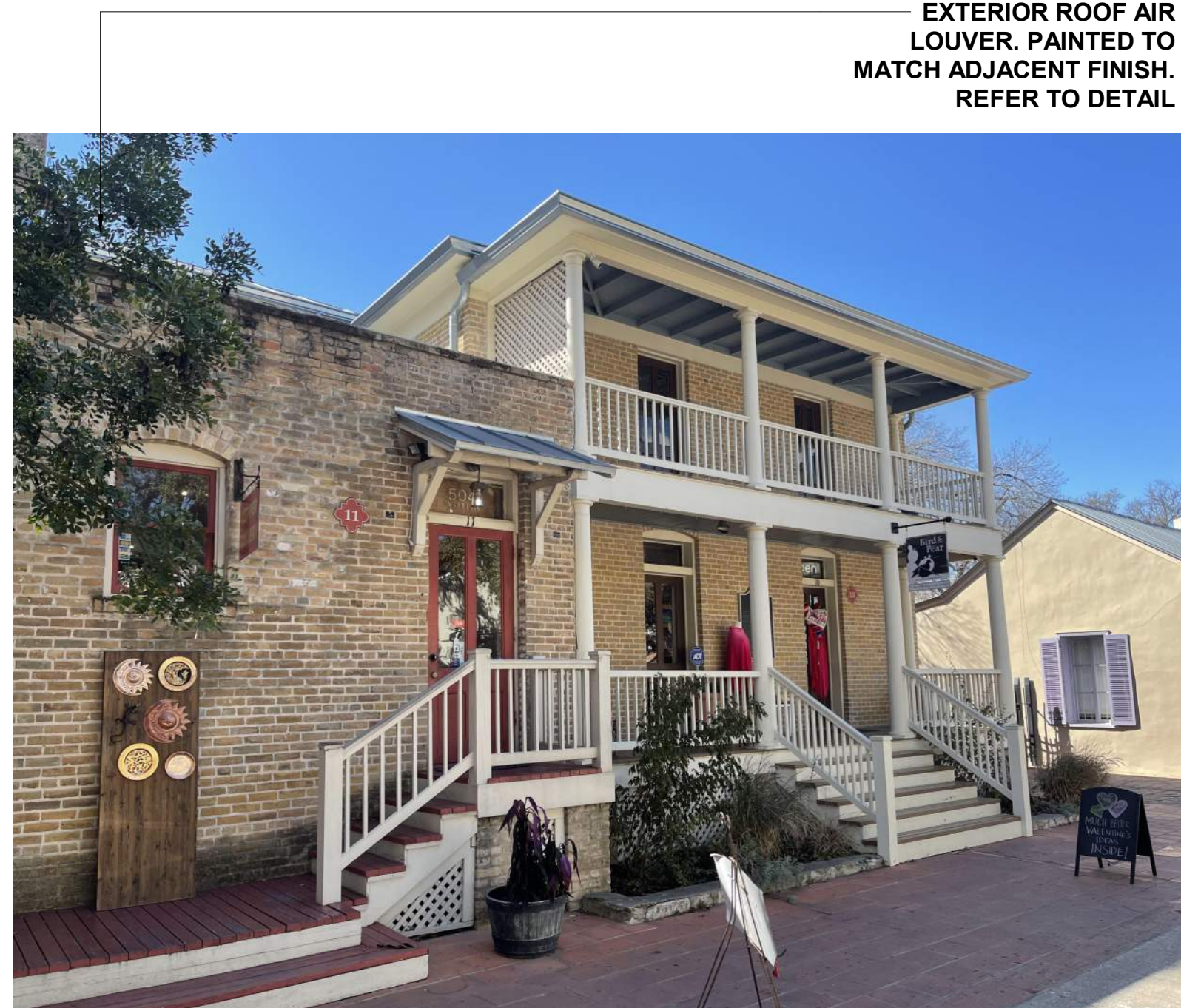
**B1 10 - BIRD & PEAR - 11 COPPER GALLERY**  
A104  
1/8" = 1'-0"



**D1 12 - STARVING ARTIST ART GROUP**  
A104  
1/8" = 1'-0"



**E1 13 - LITTLE CHURCH OF LA VILLITA**  
A104  
1/8" = 1'-0"



**B2 MAIN ENTRANCE FACADE - (VIEW 1)**  
A104  
NTS



**D2 MAIN ENTRANCE FACADE - (VIEW 1)**  
A104  
NTS



**E2 MAIN ENTRANCE FACADE - (VIEW 1)**  
A104  
NTS



**B4 SOUTH WEST FACADE - (VIEW 2)**  
A104  
NTS



**D4 NORTH WEST FACADE - (VIEW 2)**  
A104  
NTS



**E4 NORTH EAST FACADE - (VIEW 2)**  
A104  
NTS



**B5 WEST FACADE - (VIEW 3)**  
A104  
NTS



**D5 SOUTH FACADE - (VIEW 3)**  
A104  
NTS

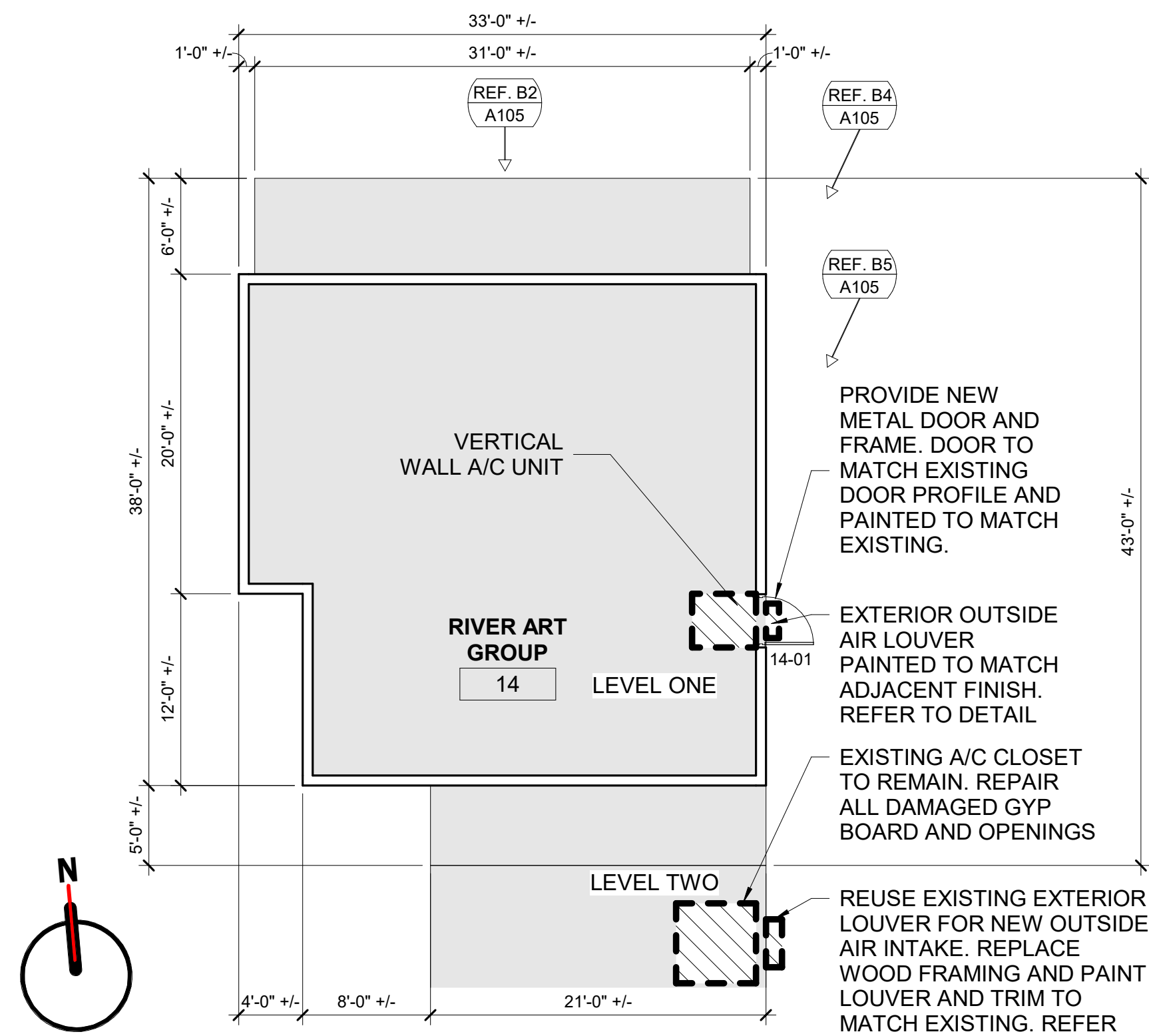


**E5 VIEW OF INTERIOR VENT - (VIEW 3)**  
A104  
NTS

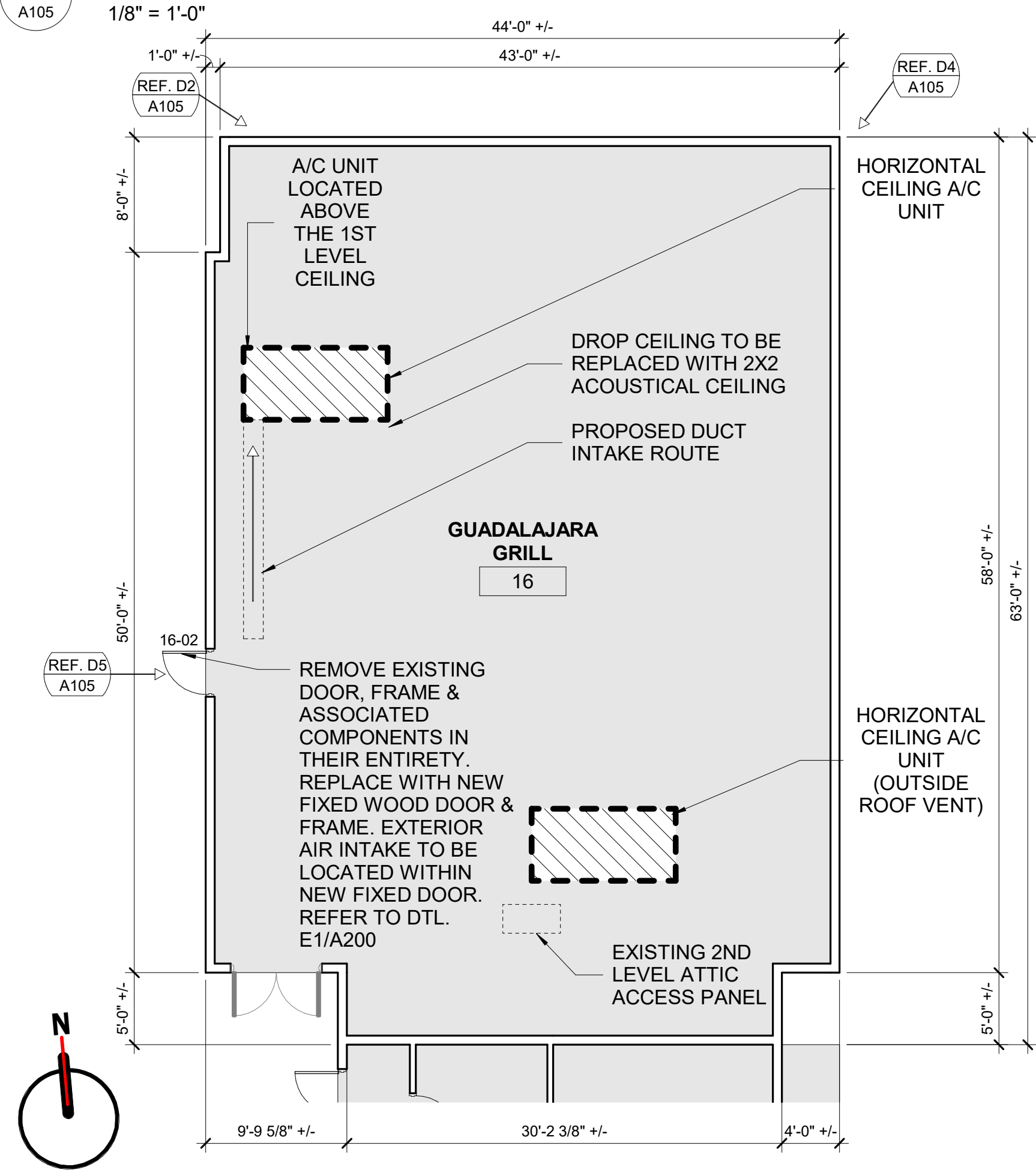
THE CONTRACTOR SHALL FAMILIARIZE ITSELF WITH THE PROJECT SCOPE AND SCHEDULE. THIS INCLUDES UNDERSTANDING EXISTING CONDITIONS (BUILDINGS & SITE), EXISTING UTILITIES, EXISTING SITE FEATURES, AND THE OWNER'S SCHEDULE REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND/OR COORDINATING THE EXISTING CONDITIONS WITH THE DESIGN INTENT CONVEYED IN THE CONTRACT DOCUMENTS.



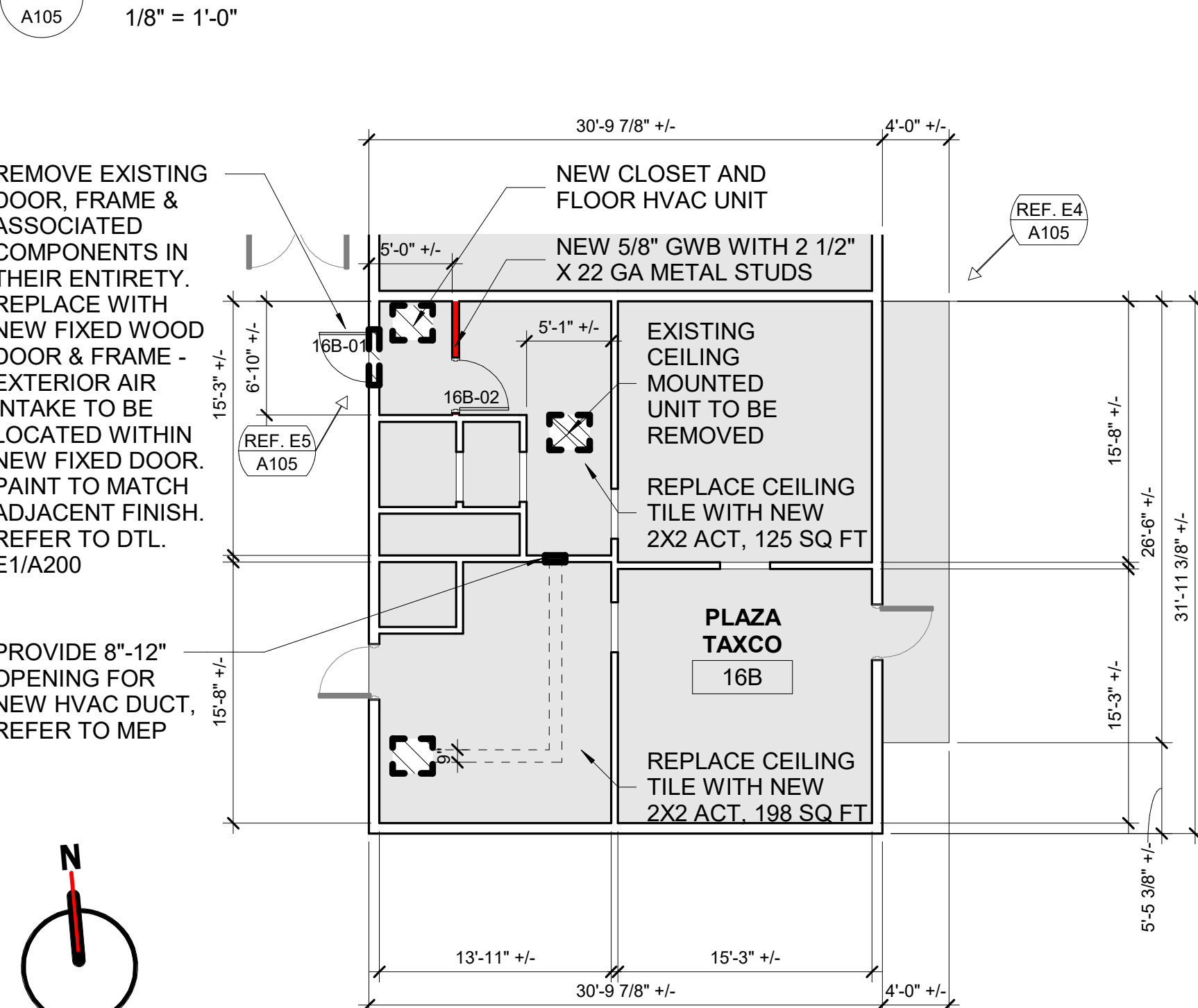
12/8/2022 5:21:48 PM  
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Rev 001.dwg (1/21/22)\_marmok.dwg



**B1 14 - RIVER ART GROUP**



**D1 16 - GUADALAJARA GRILL**



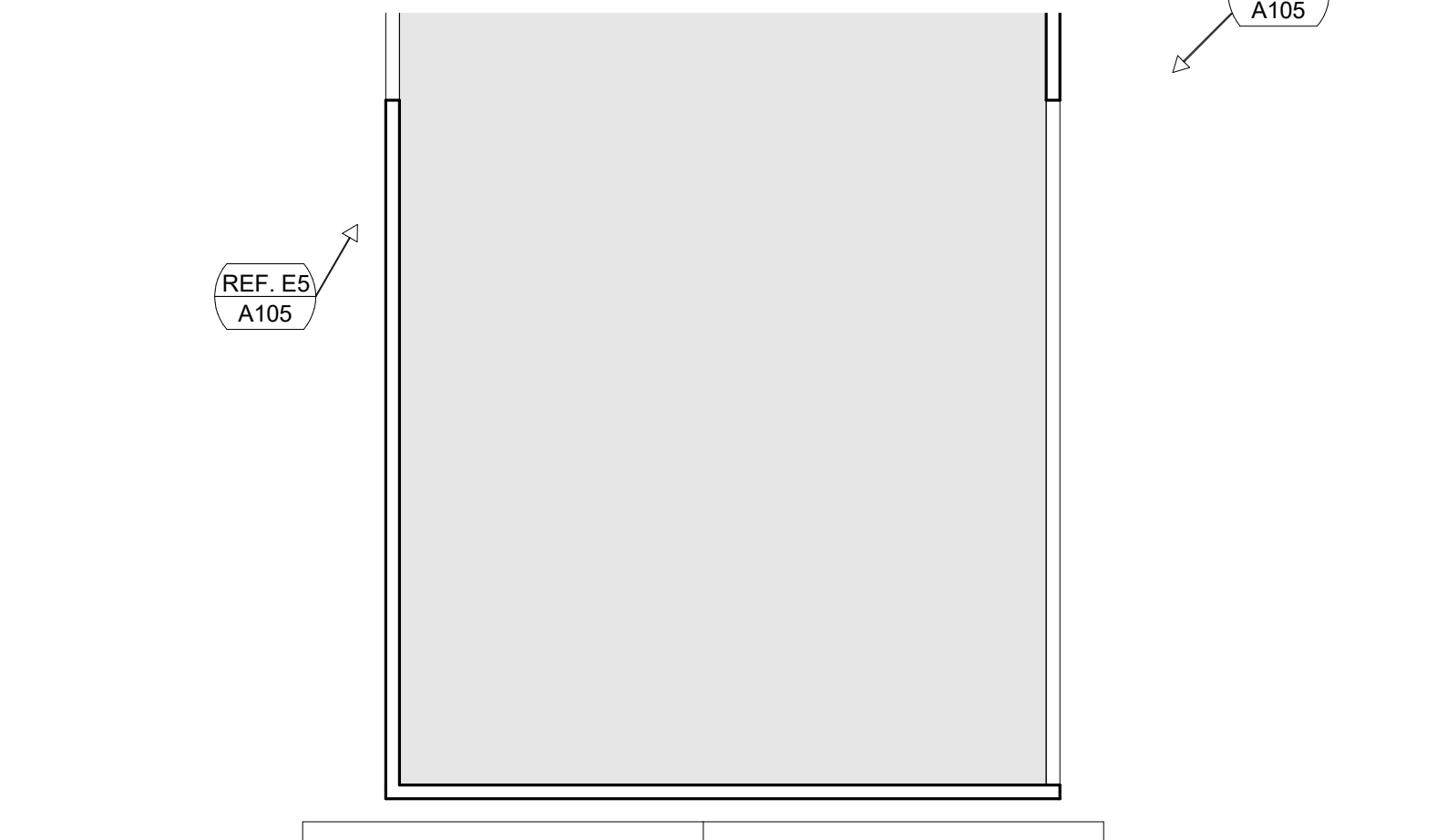
**E1 16B - PLAZA TAXCO**



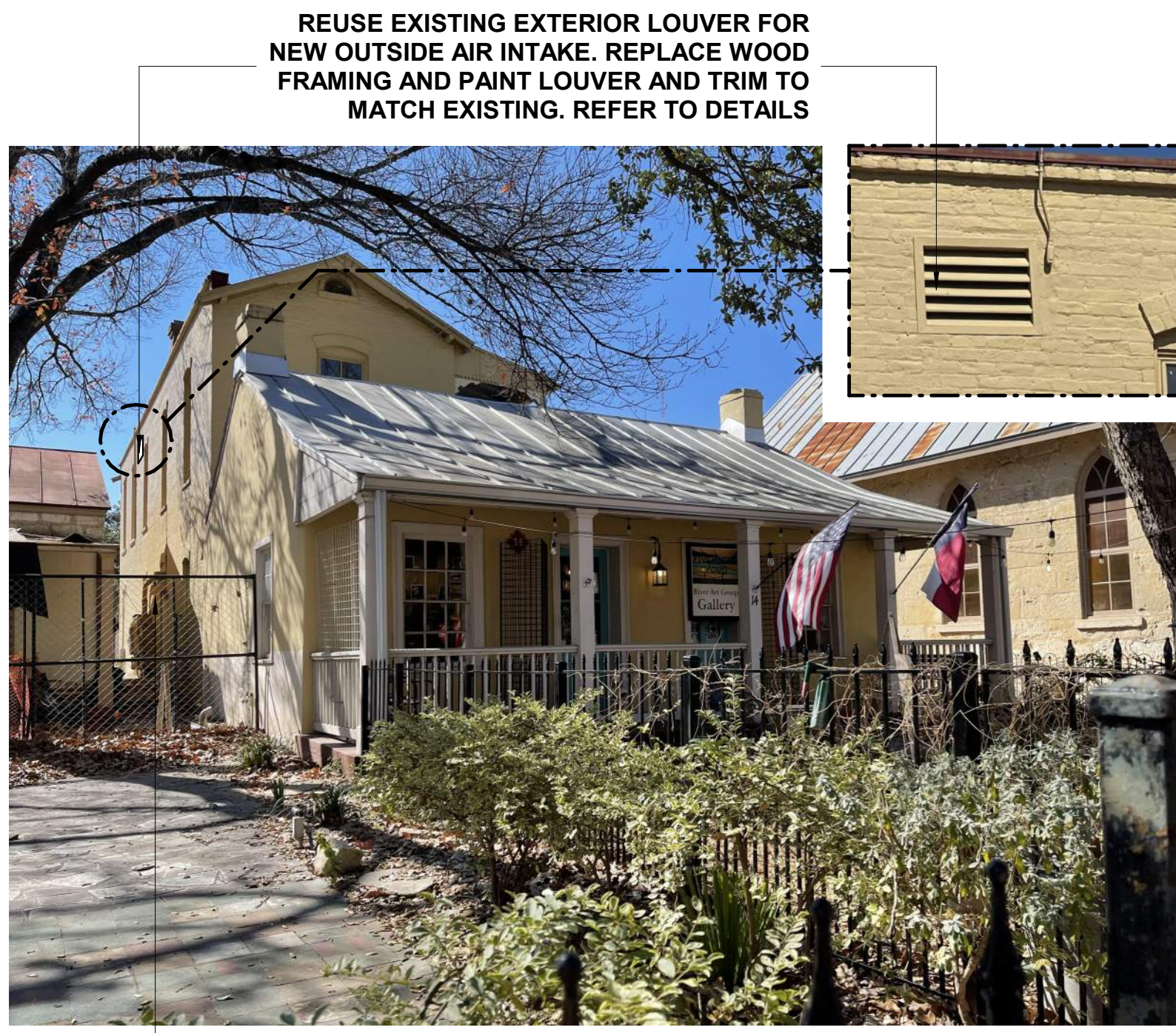
**B2 MAIN ENTRANCE FACADE - (VIEW 1)**



**D2 MAIN ENTRANCE FACADE - (VIEW 1)**



**E2 16B - PLAZA TAXCO - LVL 2**



**B4 NORTH EAST FACADE - (VIEW 2)**



**D4 NORTH EAST FACADE - (VIEW 2)**



**E4 MAIN ENTRANCE FACADE - (VIEW 1)**



**B5 NORTH EAST FACADE - (VIEW 3)**



**D5 EAST FACADE - (VIEW 3)**



**E5 EAST FACADE - (VIEW 3)**

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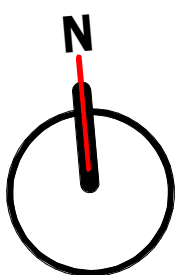
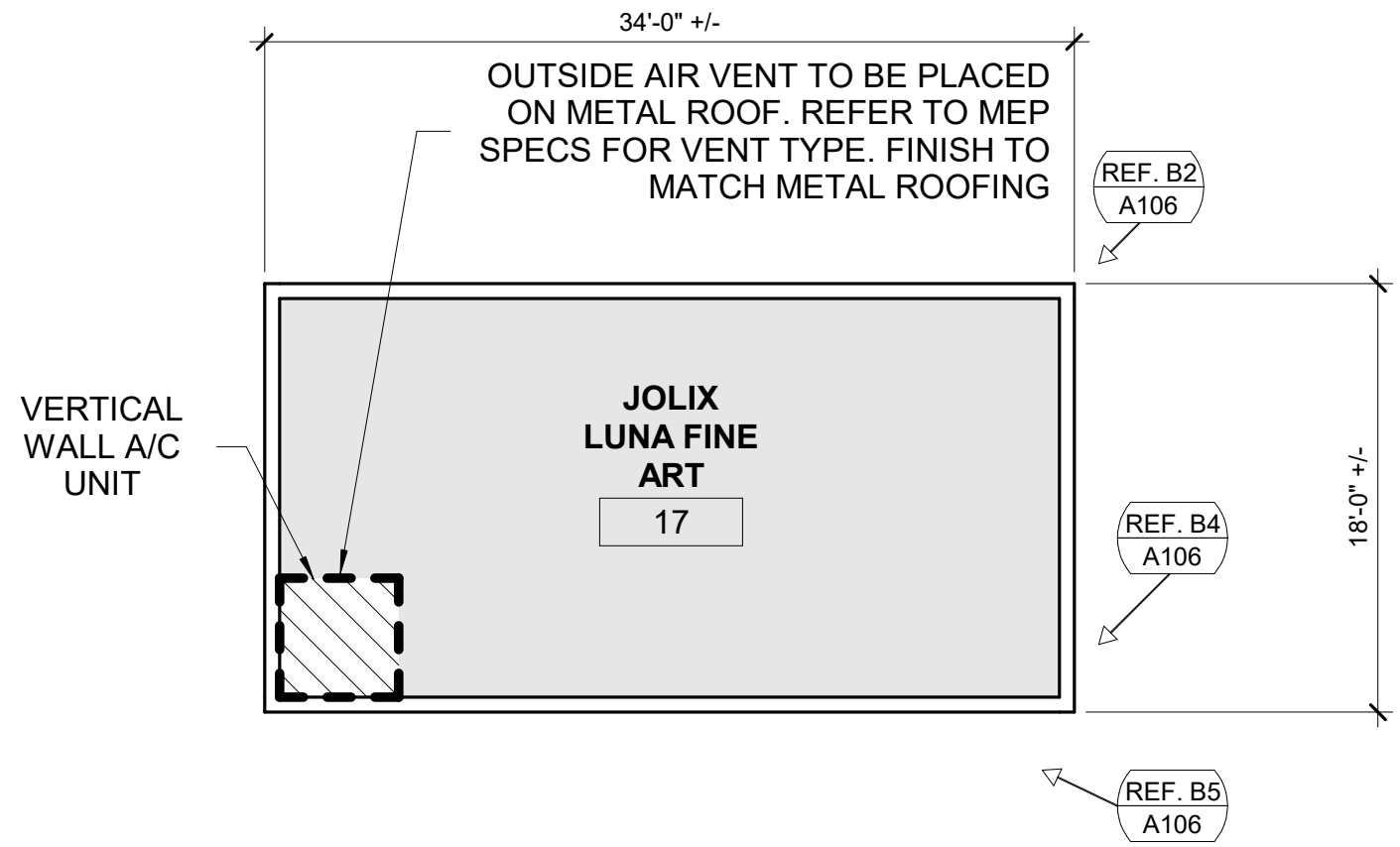
A

B

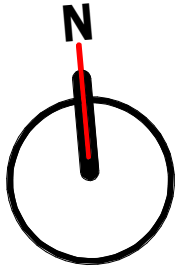
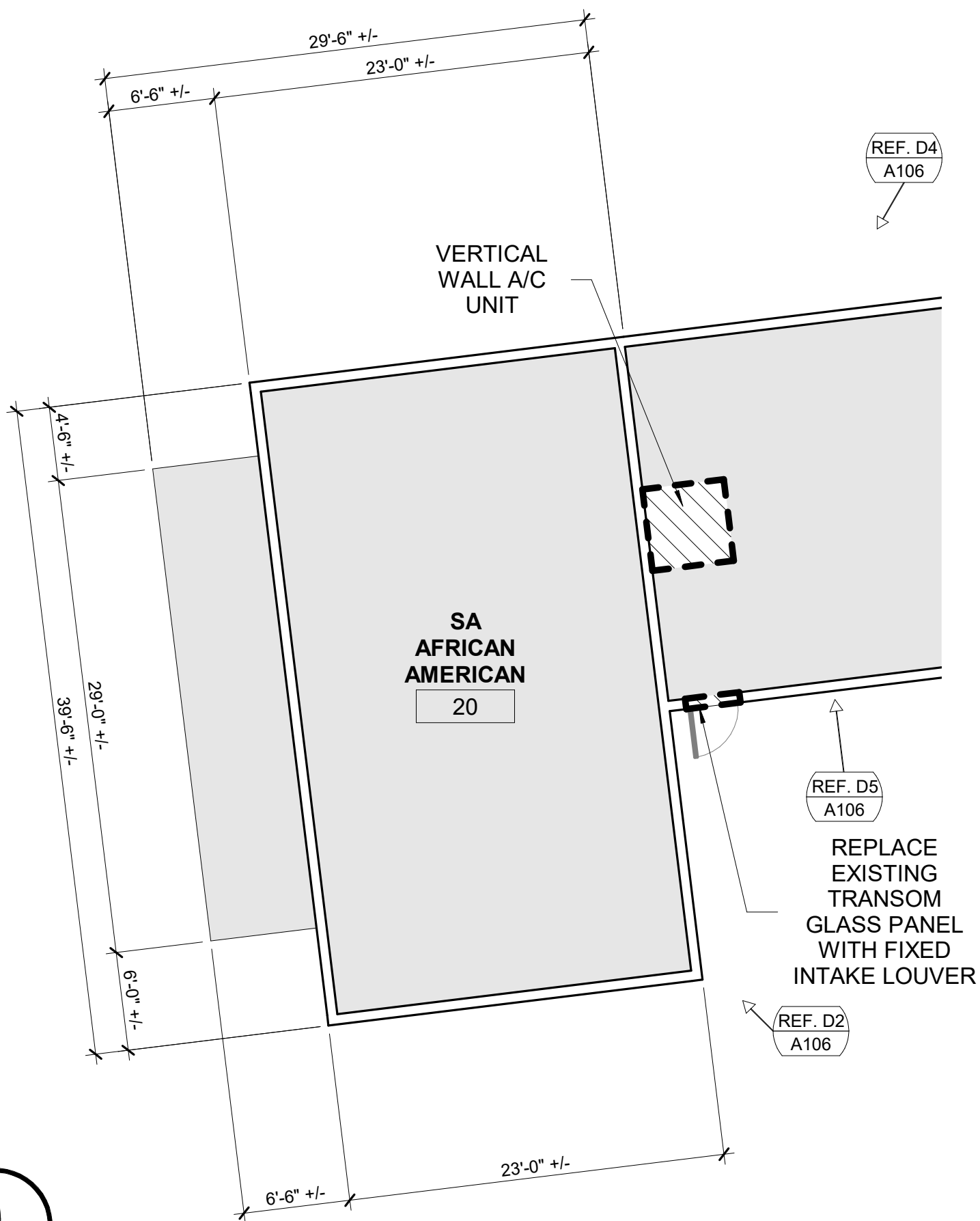
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D

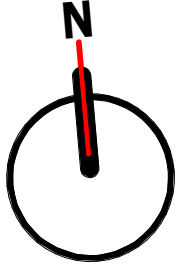
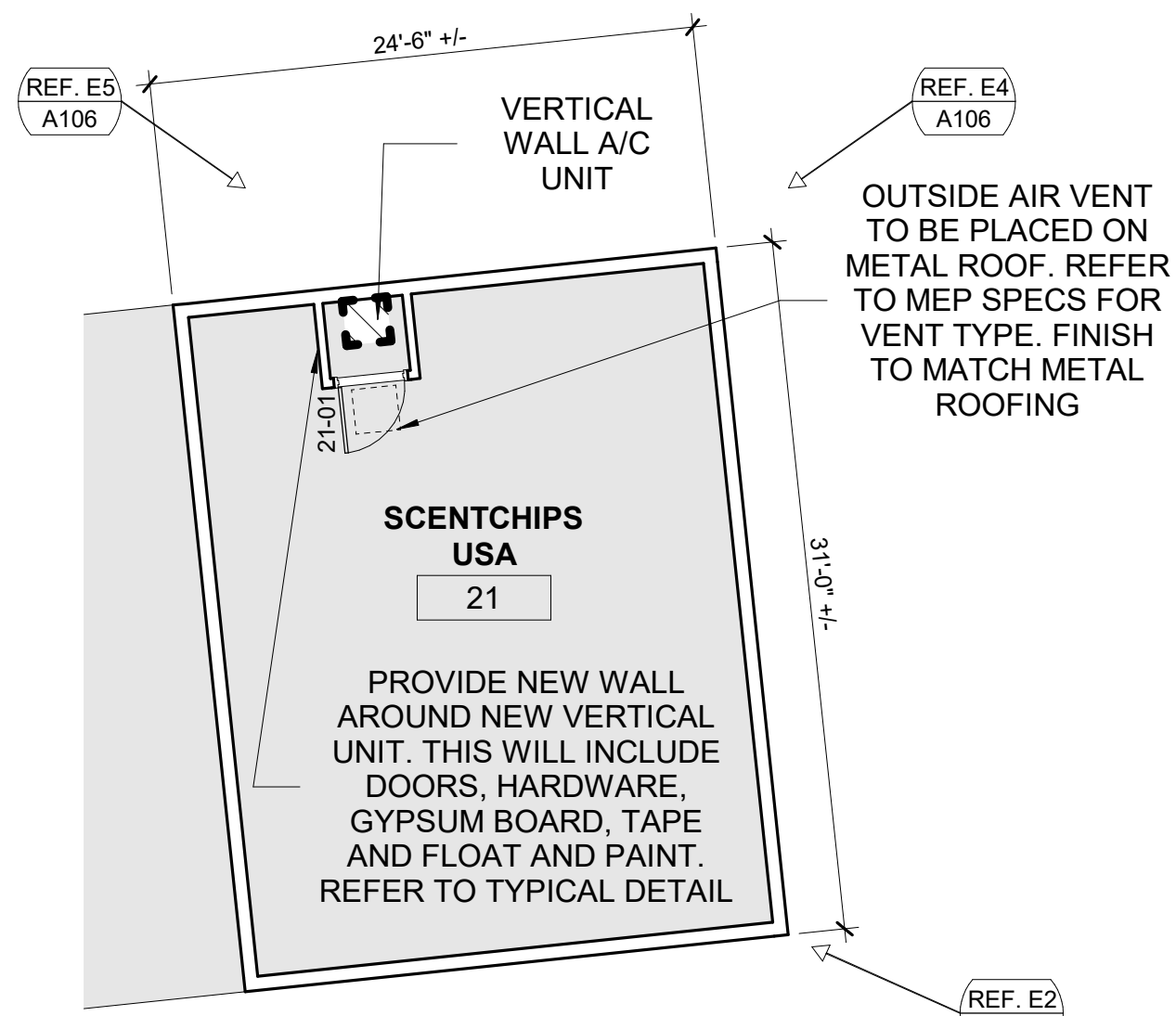
E



**B1** 17 - JOLIX LUNA FINE ART  
1/8" = 1'-0"



**D1** 20 - SA AFRICAN AMERICAN  
1/8" = 1'-0"



**E1** 21 - SCENTCHIPS USA  
1/8" = 1'-0"



**B2** MAIN ENTRANCE FACADE - (VIEW 1)  
NTS



**B4** EAST FACADE - (VIEW 2)  
NTS



**B5** SOUTH EAST FACADE - (VIEW 3)  
NTS



**D2** MAIN ENTRANCE FACADE - (VIEW 1)  
NTS



**D4** NORTH FACADE - (VIEW 2)  
NTS



**D5** SOUTH FACADE - (VIEW 3)  
NTS



**E2** MAIN ENTRANCE FACADE - (VIEW 1)  
NTS



**E4** NORTH EAST FACADE - (VIEW 2)  
NTS



**E5** NORTH WEST FACADE - (VIEW 3)  
NTS

THE CONTRACTOR SHALL FAMILIARIZE ITSELF WITH THE PROJECT SCOPE AND SCHEDULE. THIS INCLUDES UNDERSTANDING EXISTING CONDITIONS (BUILDINGS & SITE), EXISTING UTILITIES, EXISTING SITE FEATURES, AND THE OWNER'S SCHEDULE REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND/OR COORDINATING THE EXISTING CONDITIONS WITH THE DESIGN INTENT CONVEYED IN THE CONTRACT DOCUMENTS.



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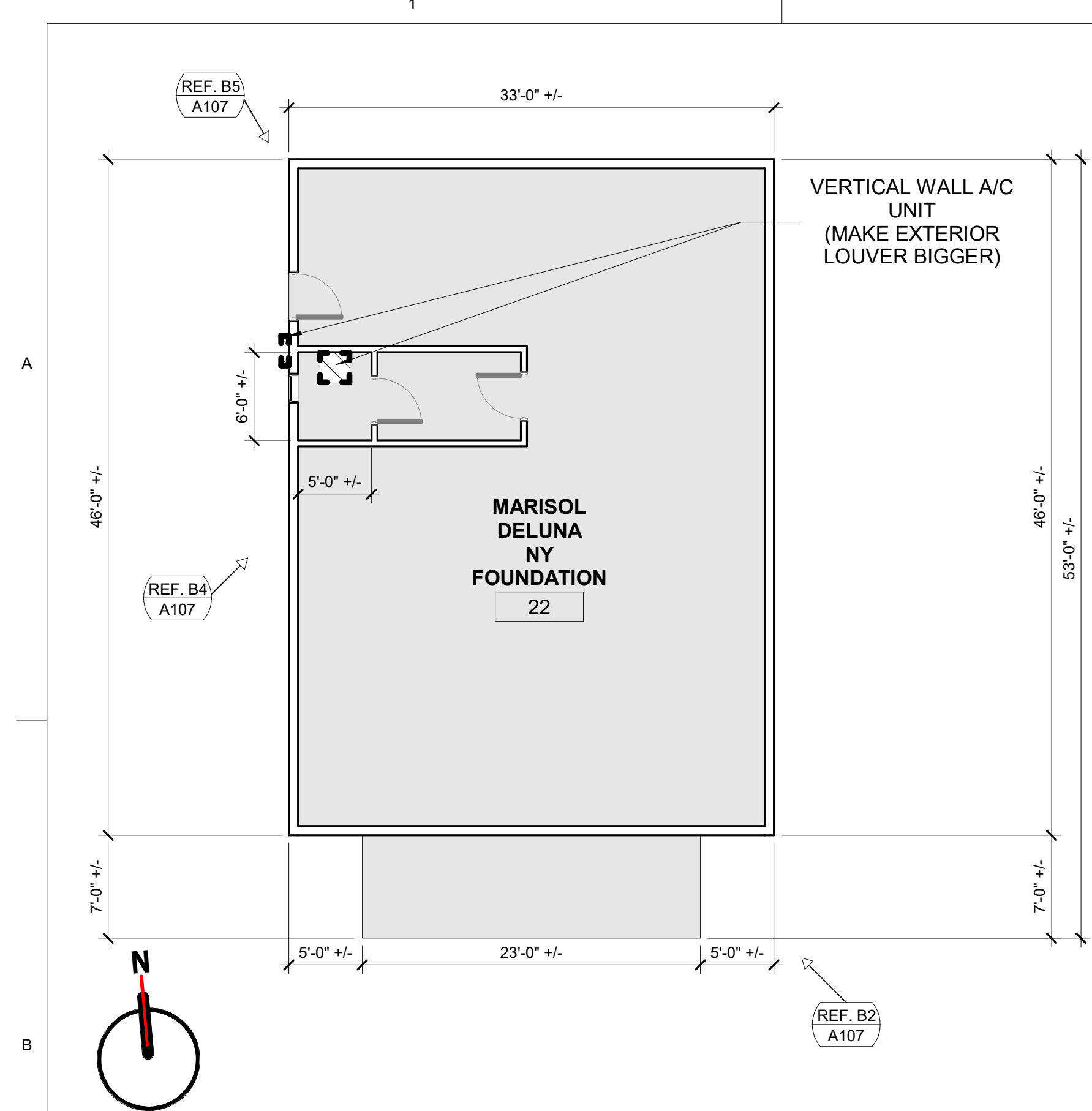
SHEET TITLE  
BUILDINGS 17,  
20, 21 PLANS  
AND PHOTOS

SHEET NO.

A106



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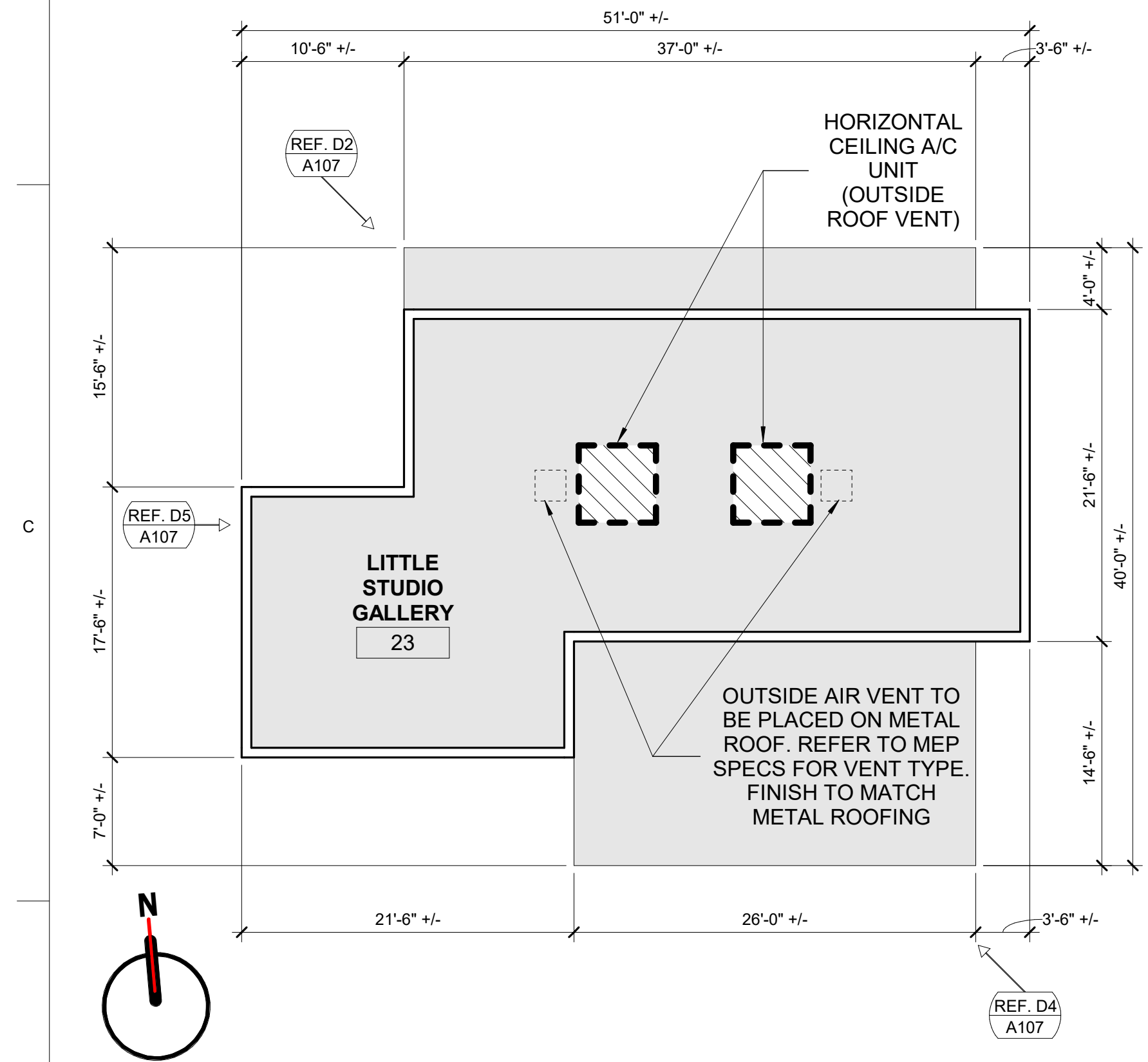


**B1** 22 - MARISOL DELUNA NY FOUNDATION  
1/8" = 1'-0"

**B2** MAIN ENTRANCE FACADE - (VIEW 1)  
NTS

**B4** WEST FACADE - (VIEW 2)  
NTS

**B5** NORTH WEST FACADE - (VIEW 3)  
NTS

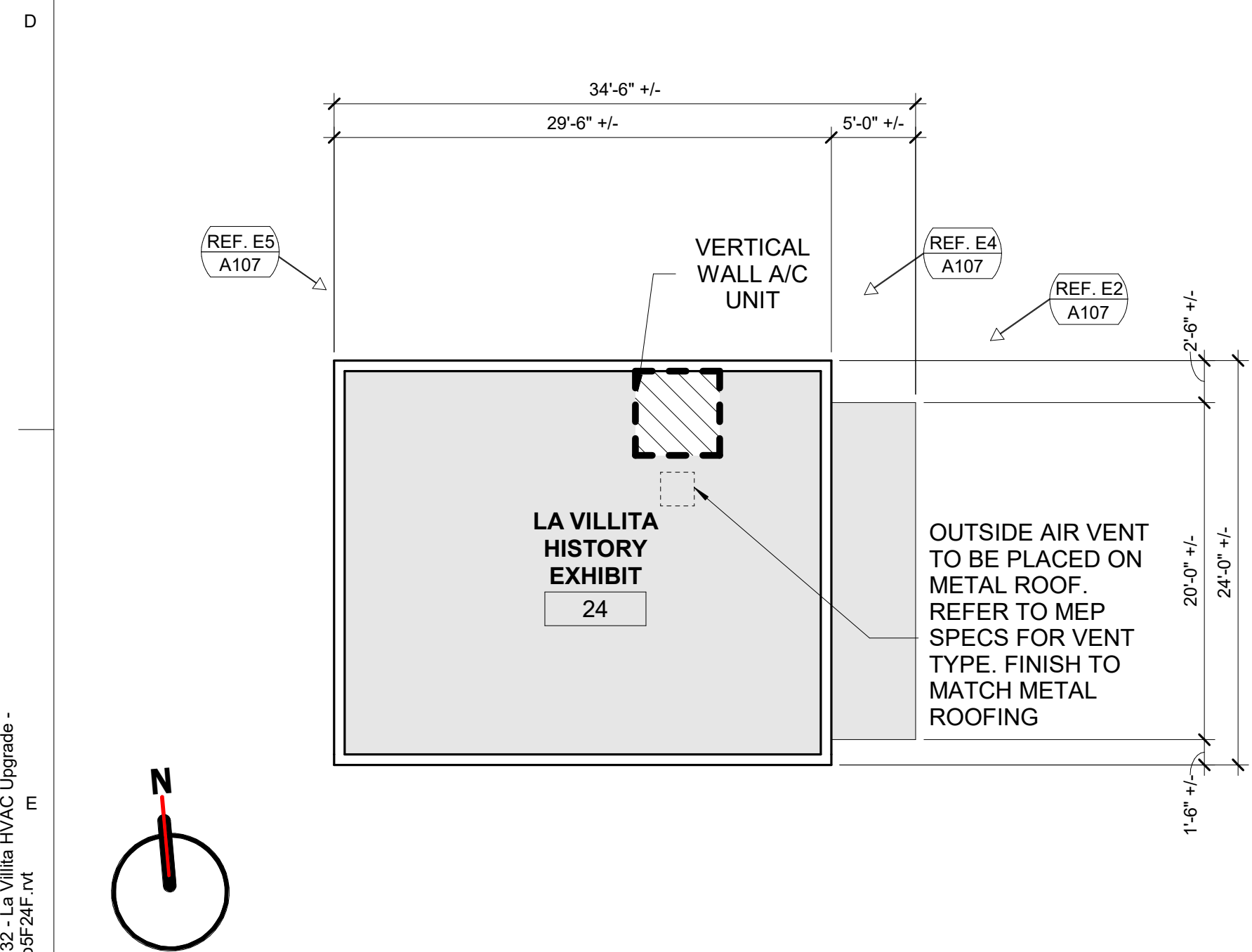


**D1** 23 - LITTLE STUDIO GALLERY  
1/8" = 1'-0"

**D2** MAIN ENTRANCE FACADE - (VIEW 1)  
NTS

**D4** SOUTH FACADE - (VIEW 2)  
NTS

**D5** WEST FACADE - (VIEW 3)  
NTS



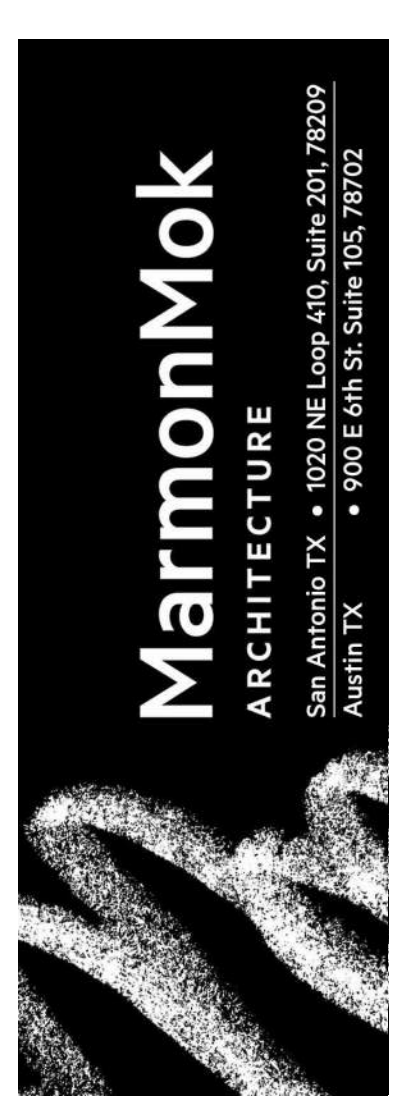
**E1** 24 - LA VILLITA HISTORY EXHIBIT  
1/8" = 1'-0"

**E2** MAIN ENTRANCE FACADE - (VIEW 1)  
NTS

**E4** NORTH EAST FACADE - (VIEW 2)  
NTS

**E5** NORTH WEST FACADE - (VIEW 3)  
NTS

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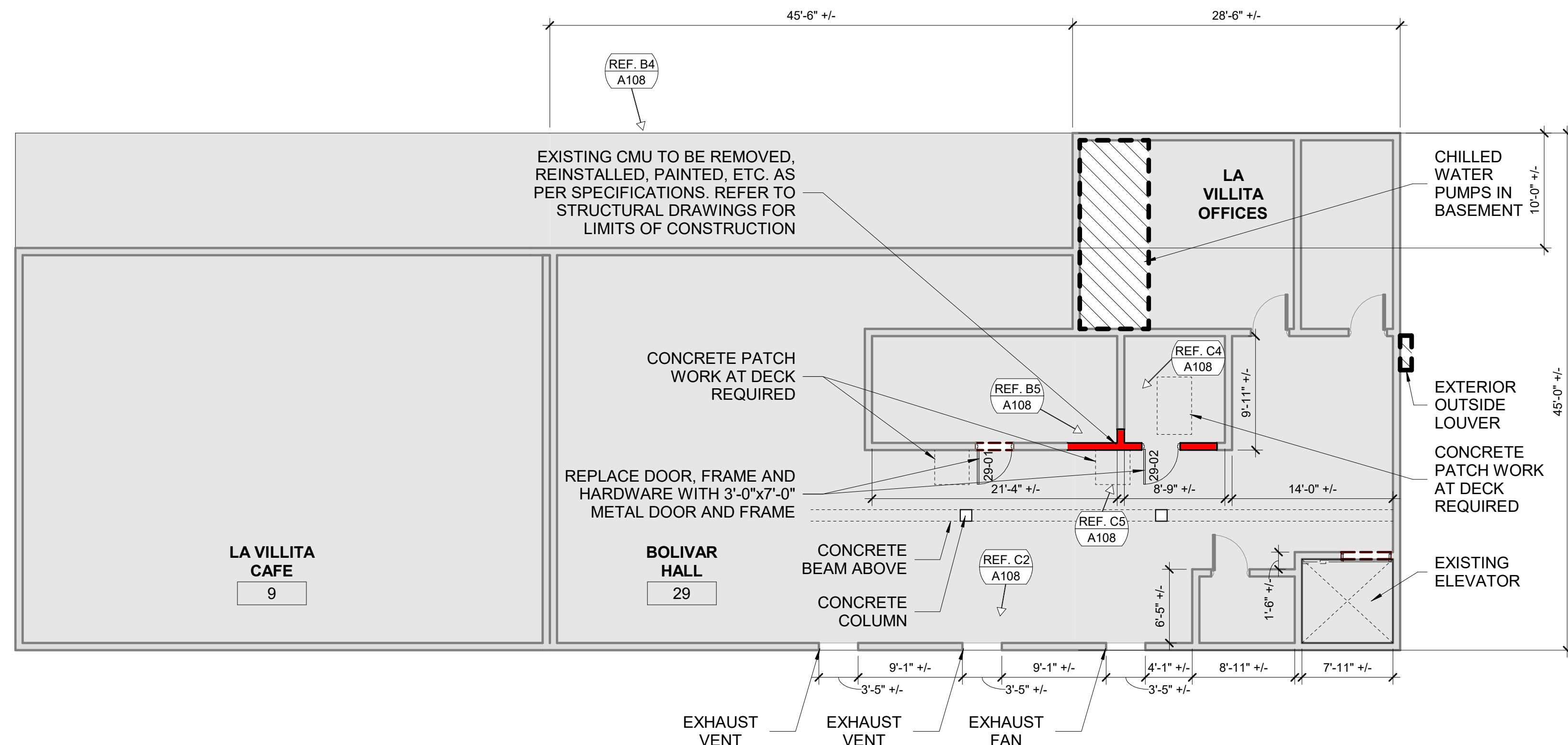
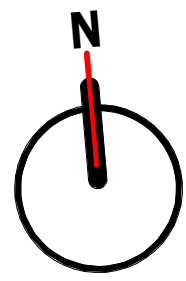
SHEET TITLE  
BUILDINGS 22,  
23, 24 PLANS  
AND PHOTOS

SHEET NO.

A107

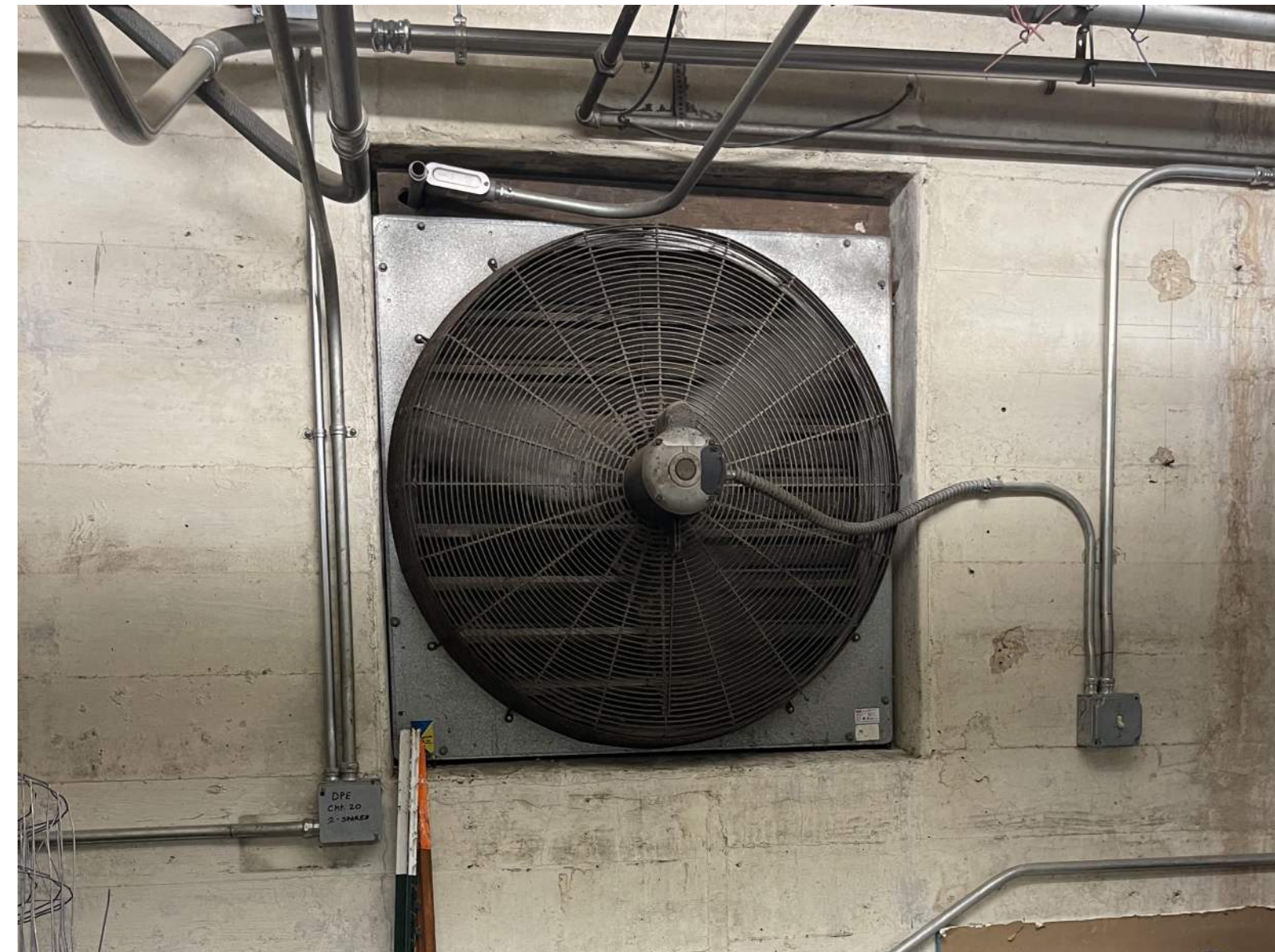
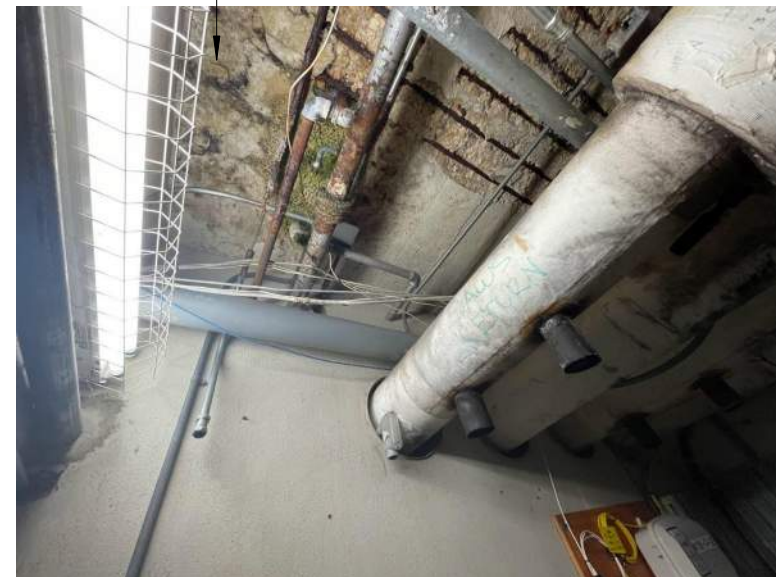


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Rev 001.dwg (1/25/2022) - mmarmon@sat.tx



**B1 29 - BOLIVAR HALL**  
1/8" = 1'-0"

CONCRETE PATCH WORK  
AT DECK REQUIRED

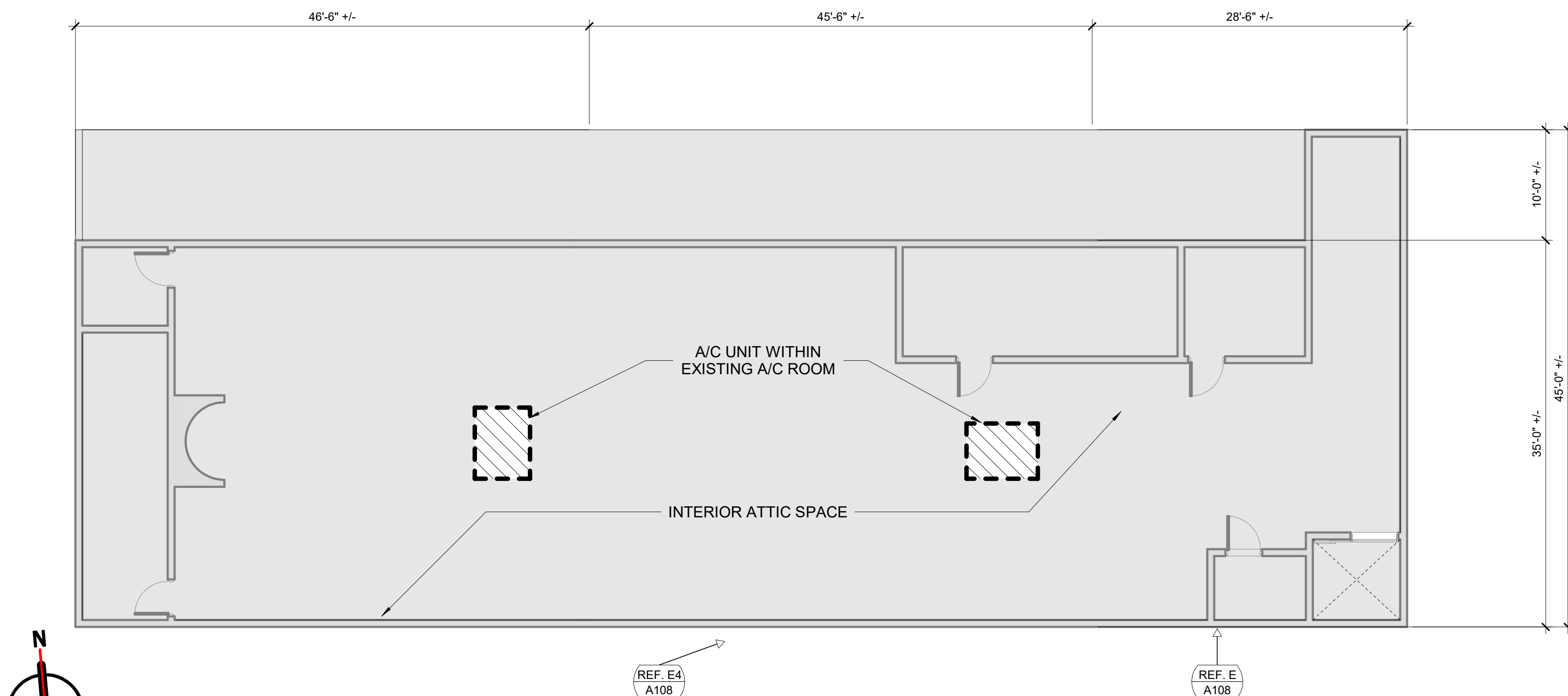


**C1 BOLIVAR HALL - INTERIOR PATCHWORK**  
1 1/2" = 1'-0"

**C2 BOLIVAR HALL - INTERIOR EXHAUST VENT**  
NTS

**C4 BOLIVAR HALL - INTERIOR DOOR**  
NTS

**C5 BOLIVAR HALL - INTERIOR PATCHWORK**  
1 1/2" = 1'-0"



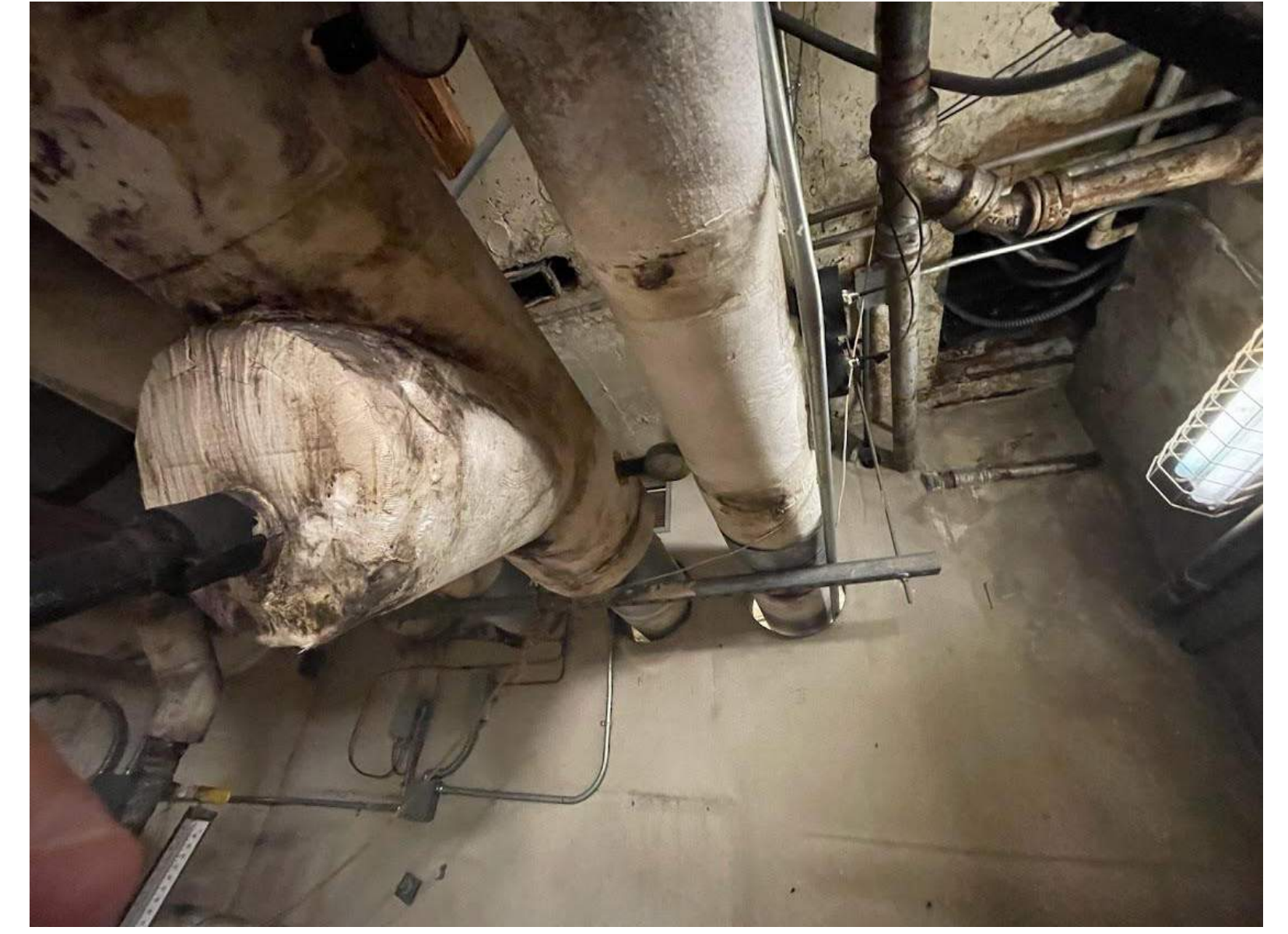
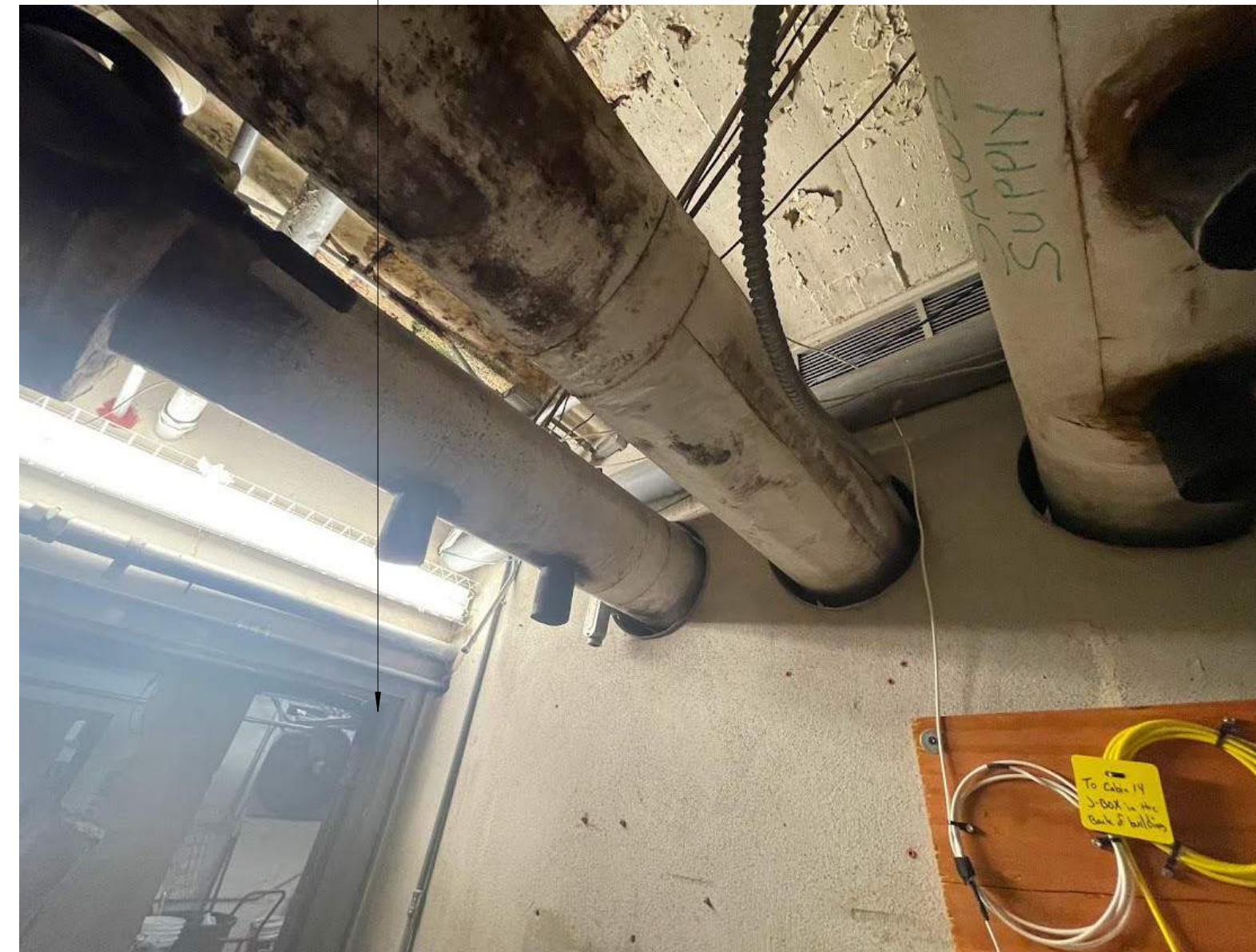
**E1 29 - BOLIVAR HALL - ATTIC SPACE**  
1/8" = 1'-0"

**E4 29 - BOLIVAR HALL - (VIEW 5)**  
1 1/2" = 1'-0"

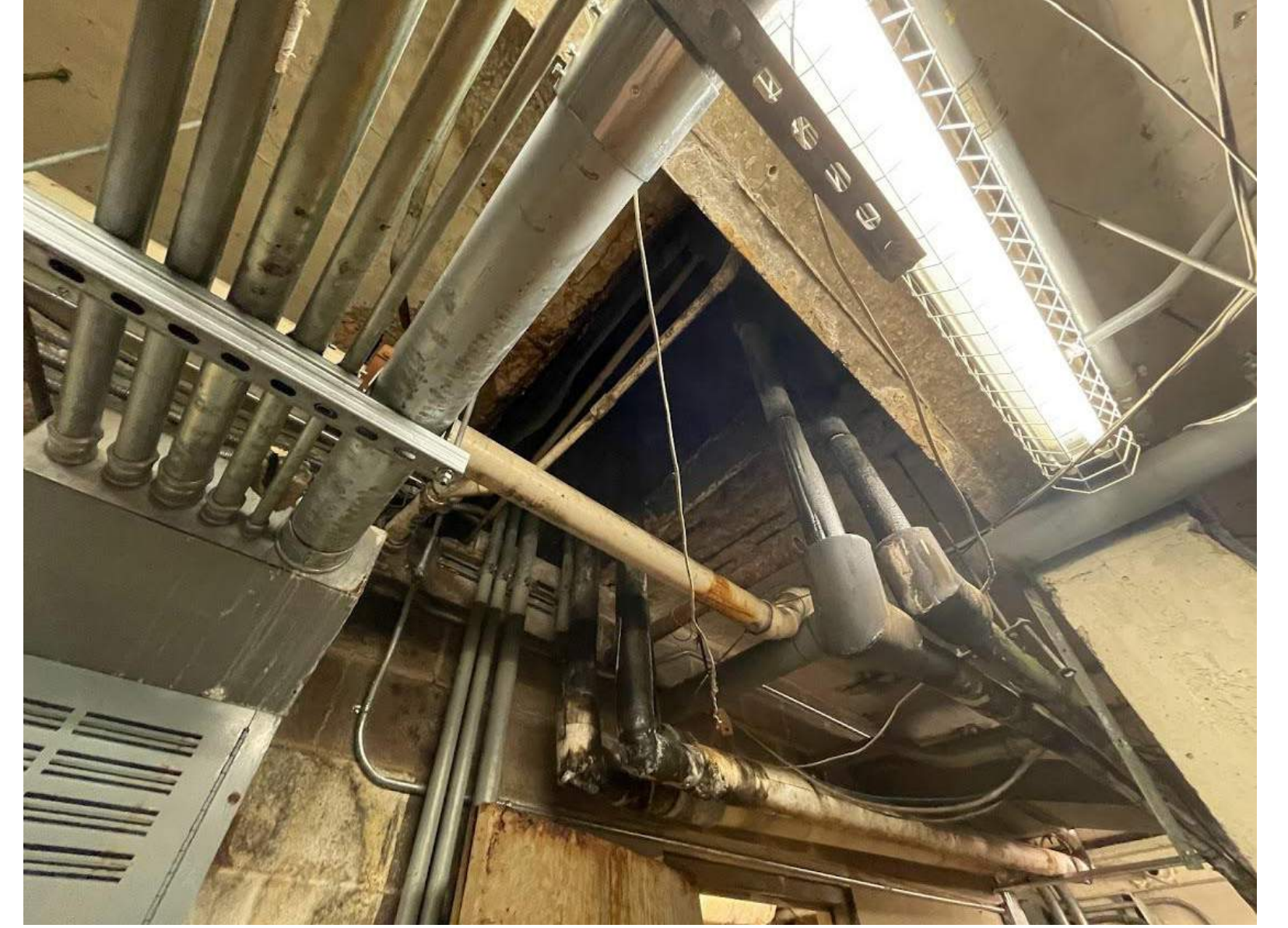


**B4 NORTH FACADE - (VIEW 1)**  
NTS

REPLACE DOOR, FRAME AND  
HARDWARE WITH 3'-0"x7'-0"  
METAL DOOR AND FRAME



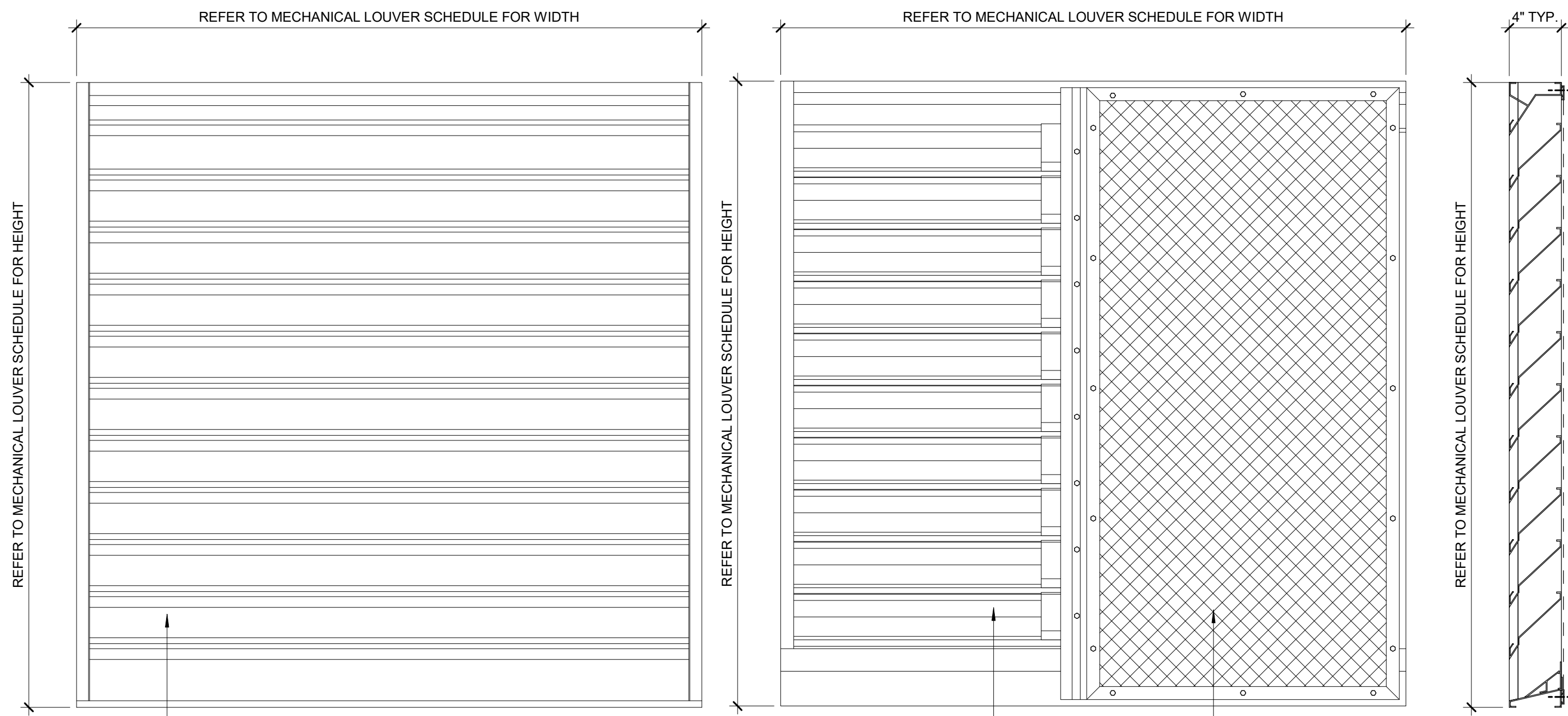
**B5 BOLIVAR HALL - INTERIOR PATCHWORK**  
1 1/2" = 1'-0"



**E 29 - BOLIVAR HALL - (VIEW 4)**  
1 1/2" = 1'-0"

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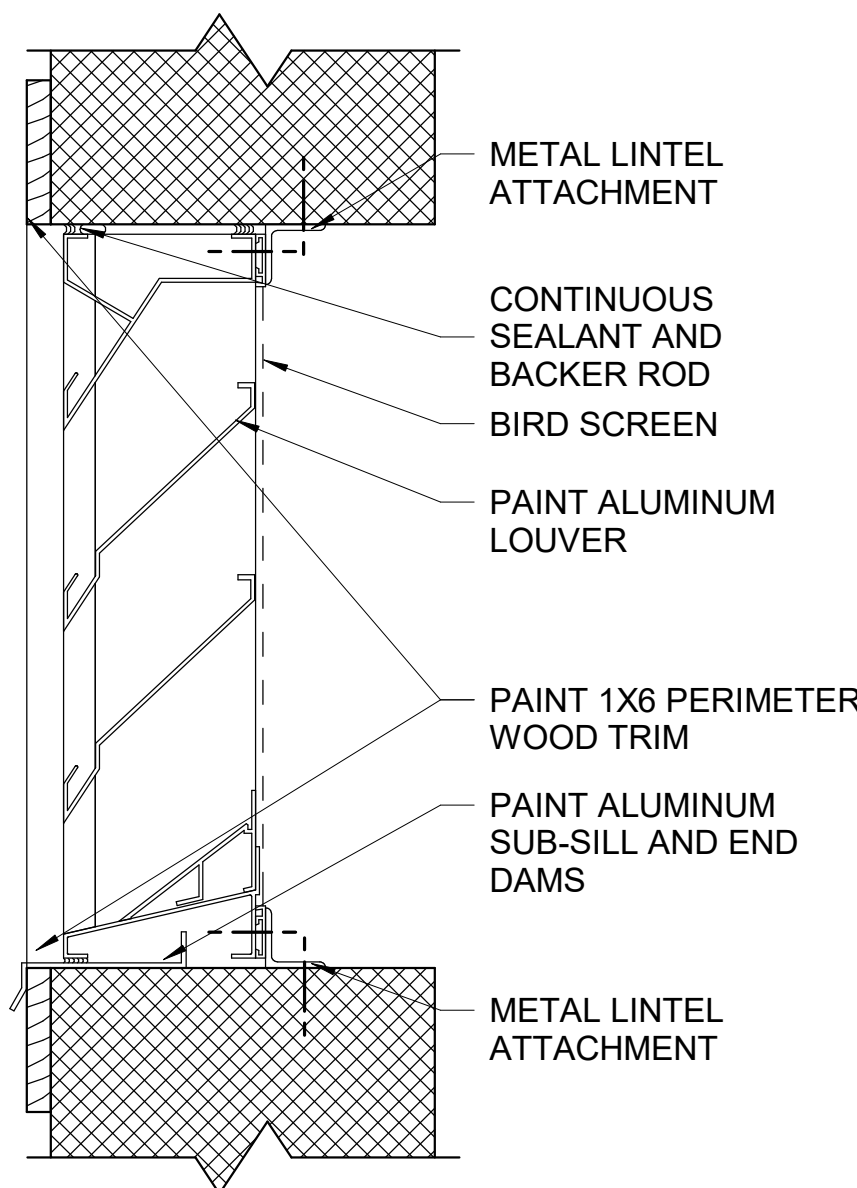
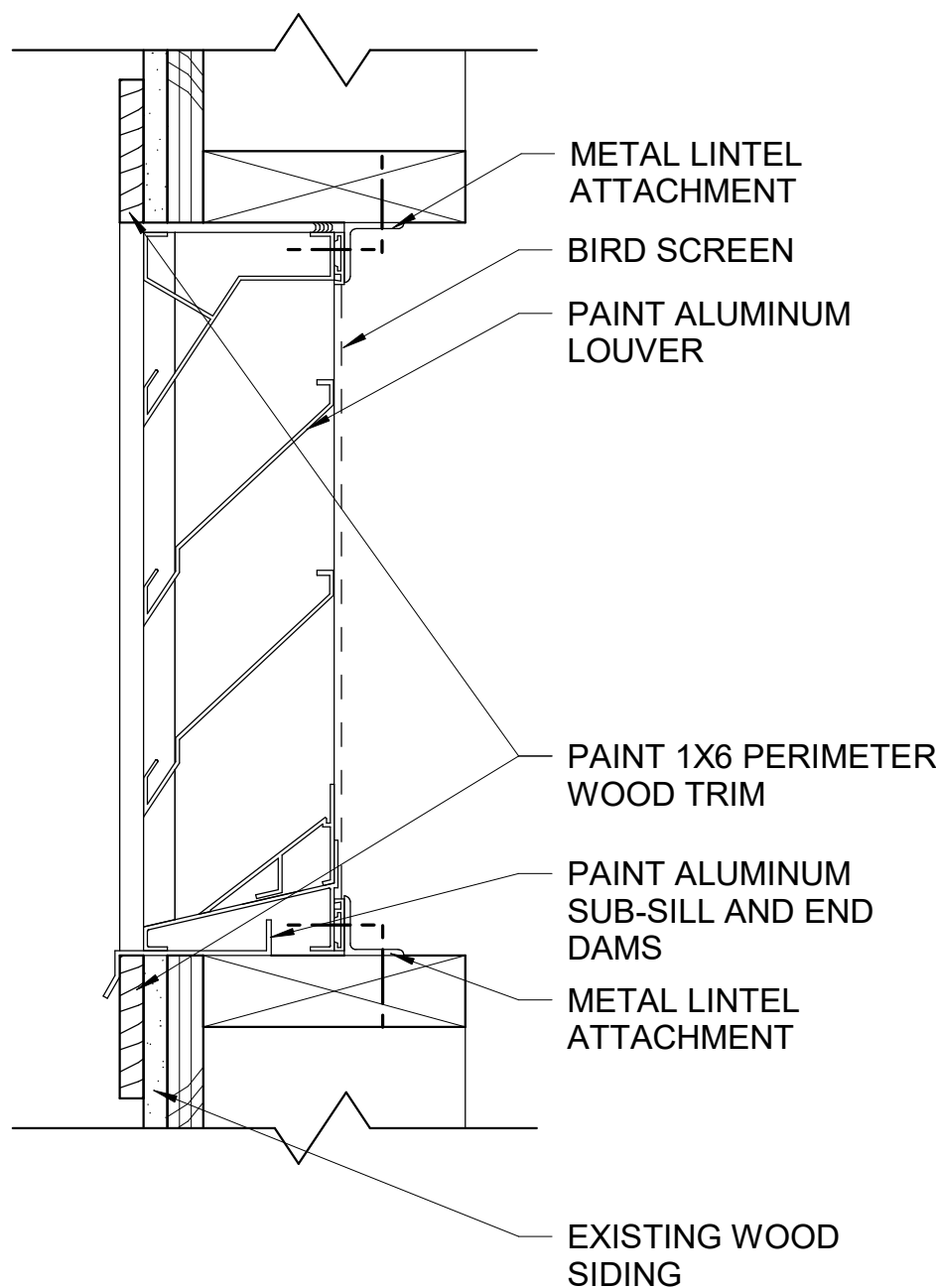
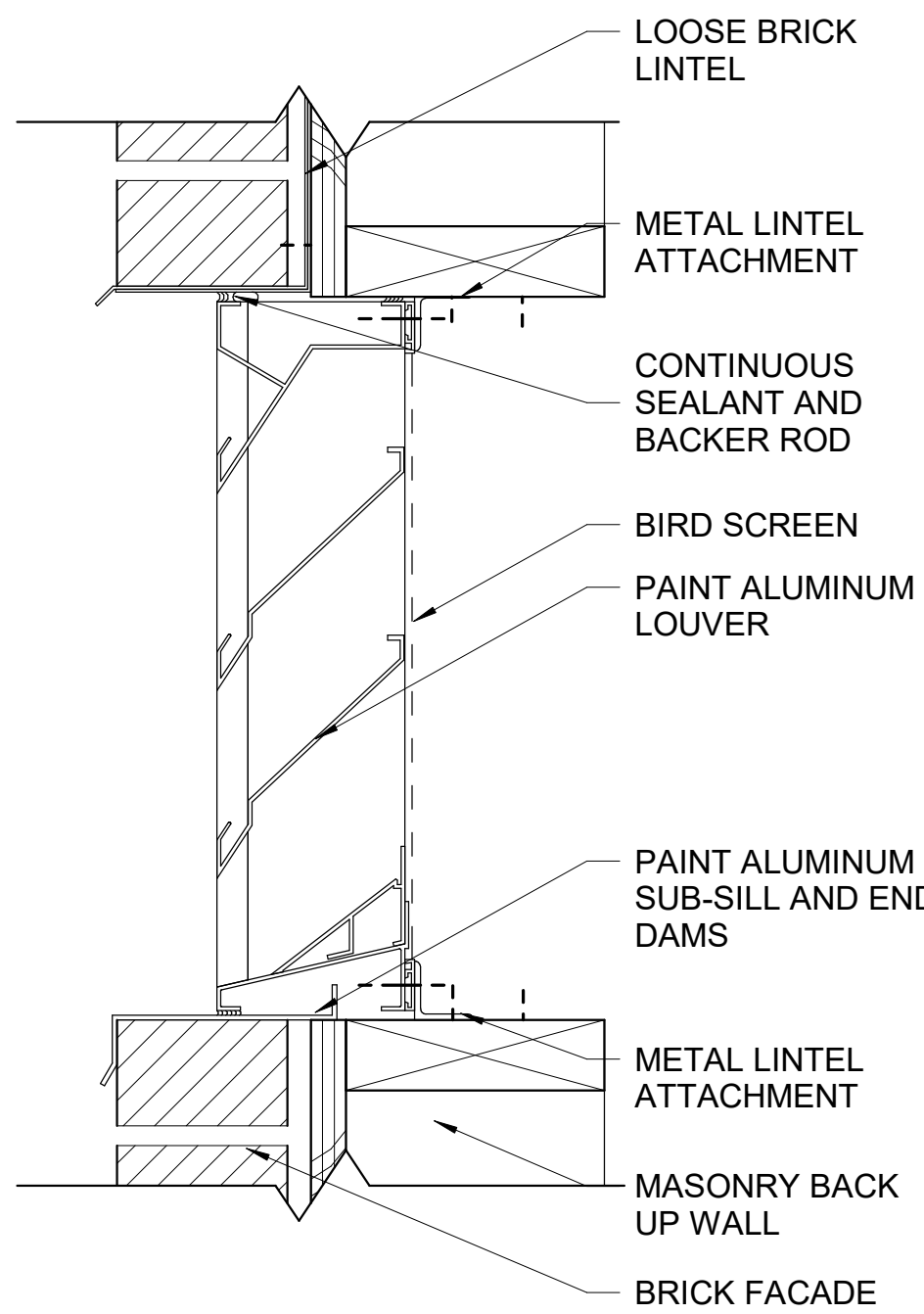
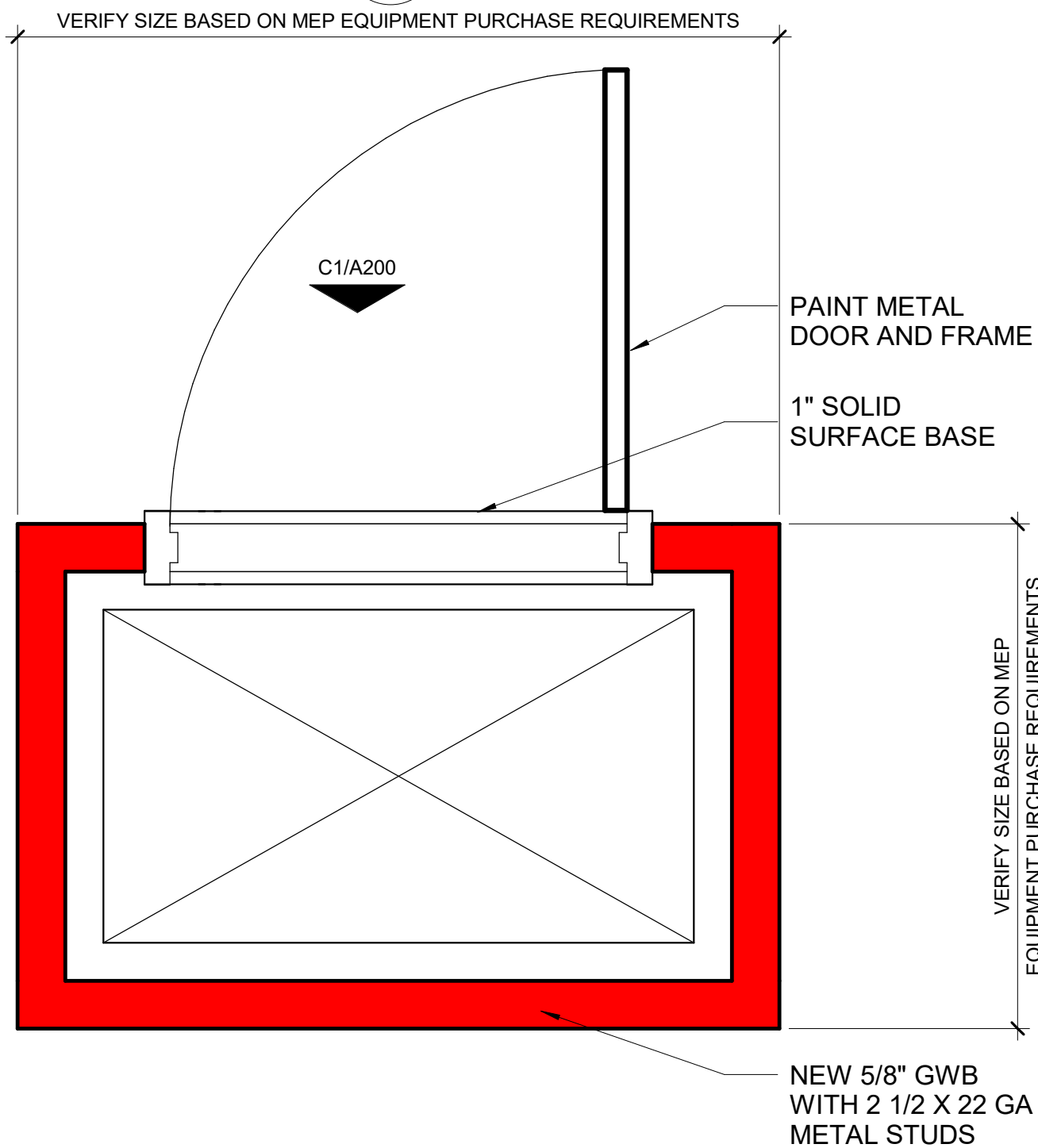


FRONT VIEW

REAR VIEW

SECTION

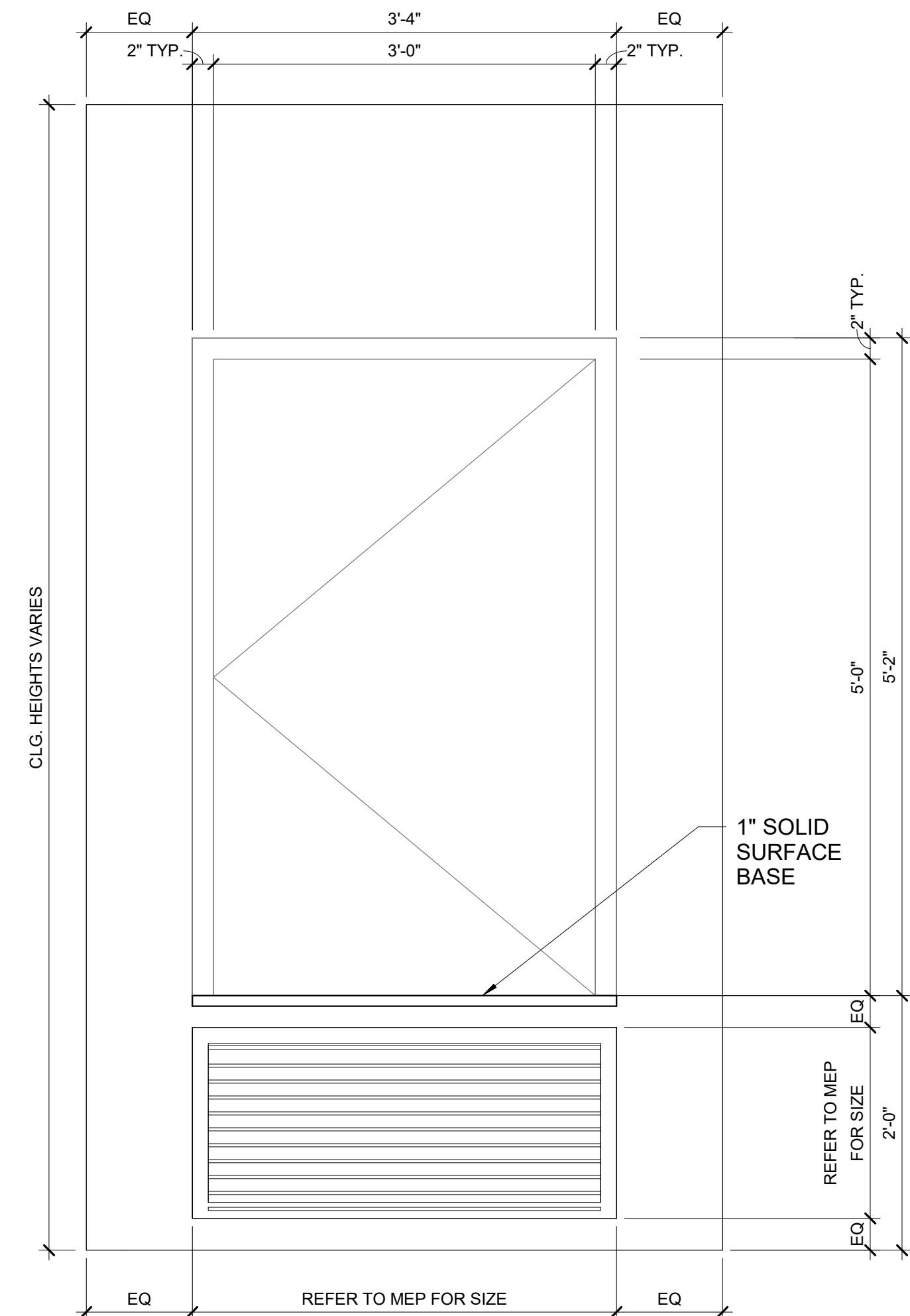
B2 TYPICAL MECHANICAL LOUVER



B5 HVAC INFORMATION SCHEDULE - VIEW REFERENCE

NTS

\* FIELD VERIFY EXISTING OPENING WITHIN DOOR AND WINDOWS PRIOR TO SIZING OF THE LOUVER. REFER TO A200/E1



C1 HVAC CLOSET - TYP. ELEVATION

A200

C2 HVAC CLOSET - TYP.

A200

C3 MECH. LOUVER - MASONRY WALL

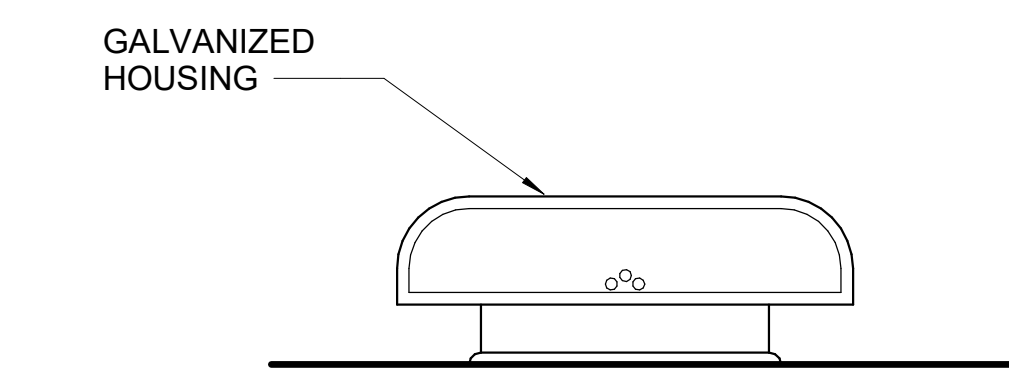
A200

C4 MECH. LOUVER - WOOD SIDING WALL

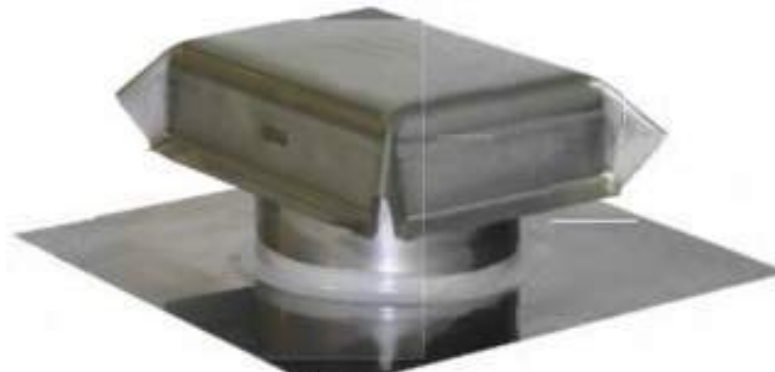
A200

C5 MECH. LOUVER - CMU TYP.

A200



3 PIECE HOOD STYLE



CRIMPED HOOD STYLE

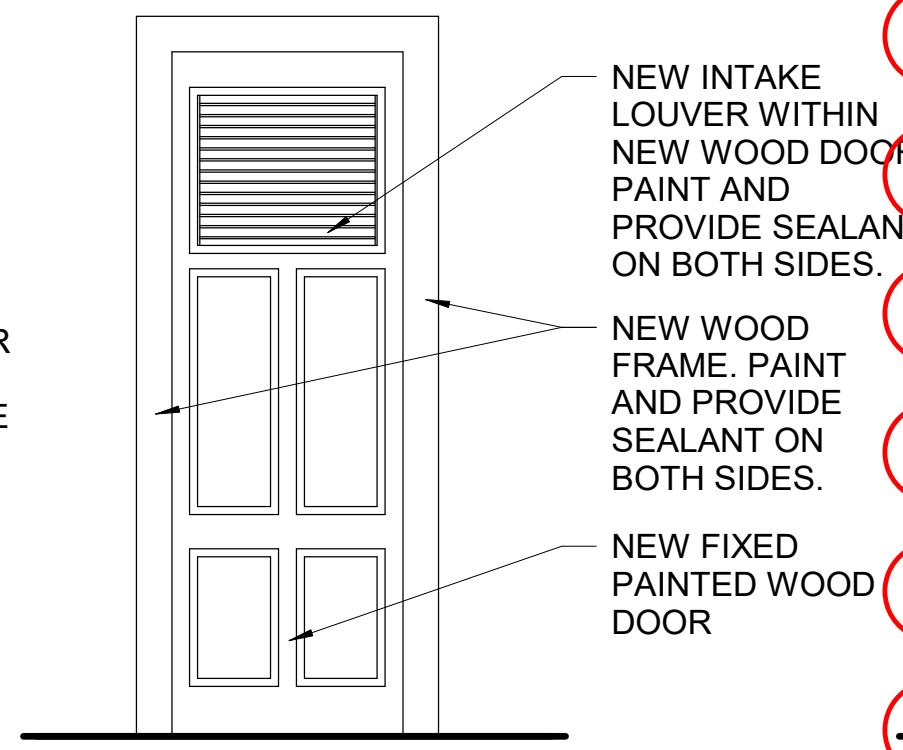
D2 TYPICAL ROOF VENT INTAKE

A200

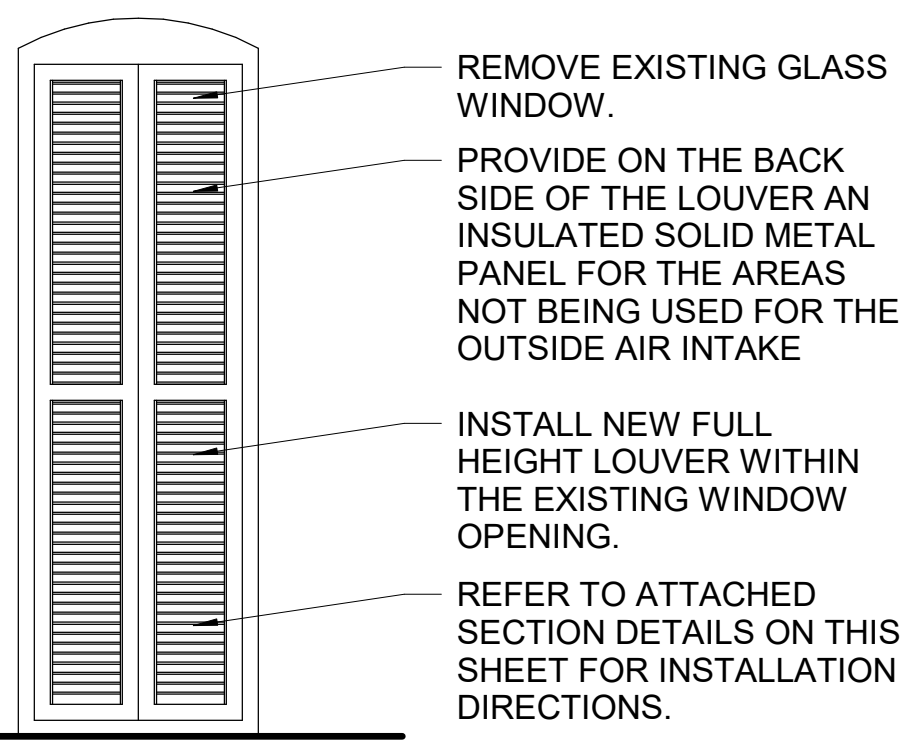
NTS (REFER TO MECHANICAL DRAWINGS & SPECS)

DOOR NOTES:

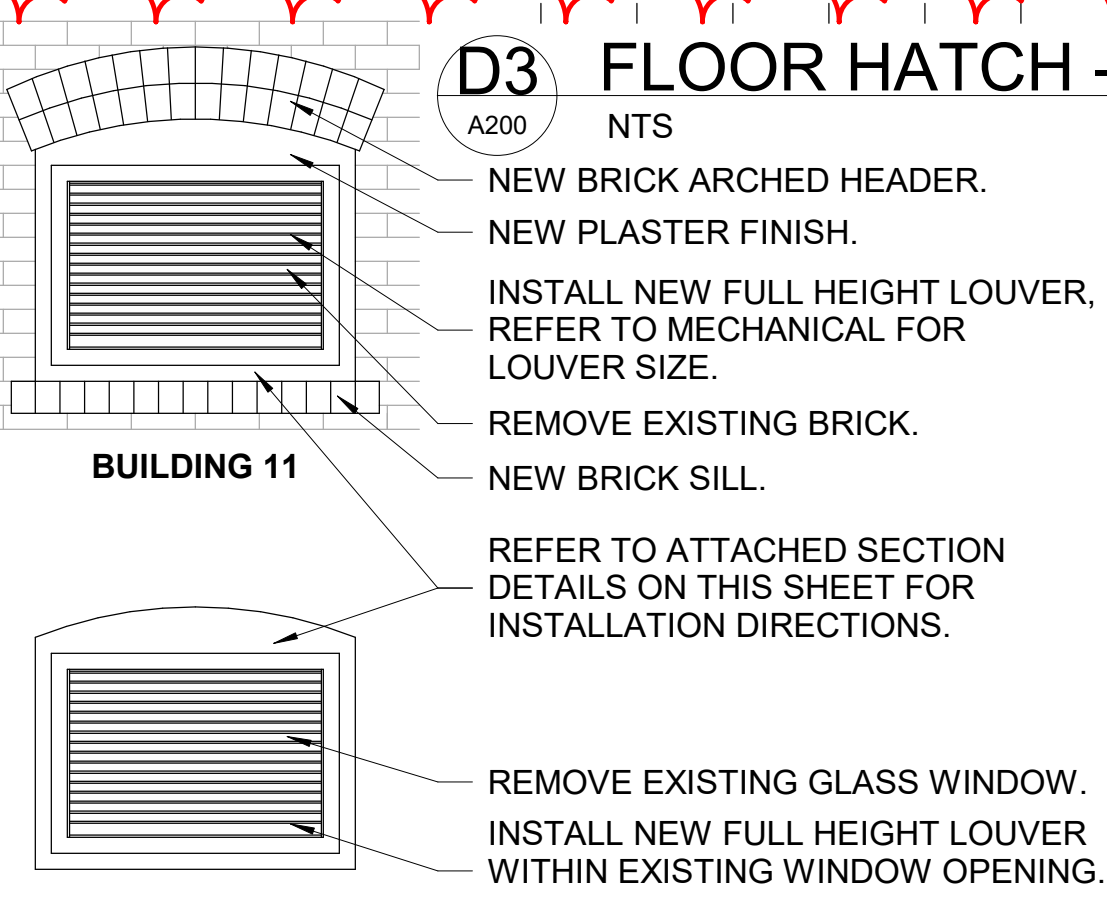
- ALL NEW DOORS AND FRAMES WILL BE REQUIRED TO BE CUSTOM TO MATCH EXISTING DOOR AND FRAME PROFILES.
- DOOR LISTED ON THE FLOOR PLANS ARE EXISTING TO REMAIN. DOOR LISTED TO BE REPLACED ARE NOTED ON THE FLOOR PLANS AND SHOWN ON SHEET A200 - DETAIL E1



BUILDING 16



BUILDING 12

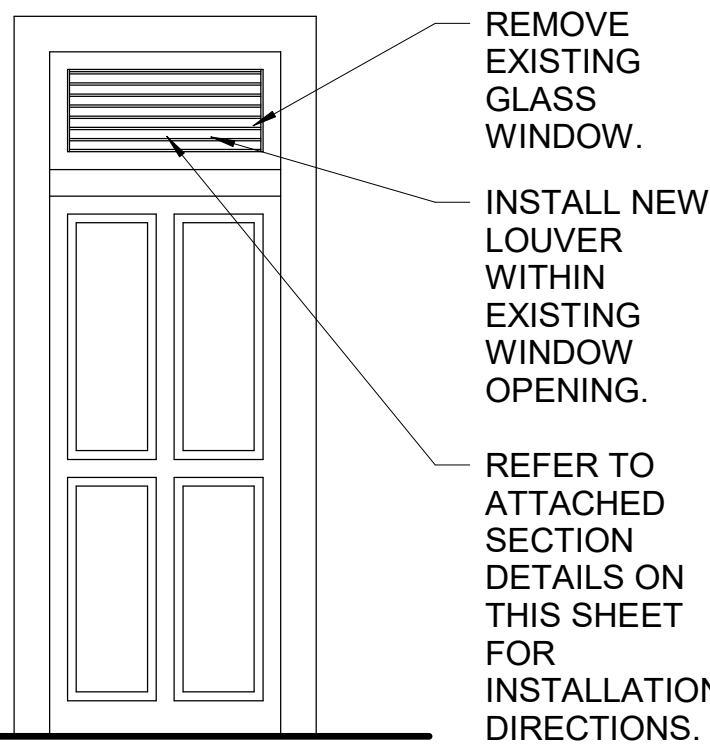


BUILDING 10

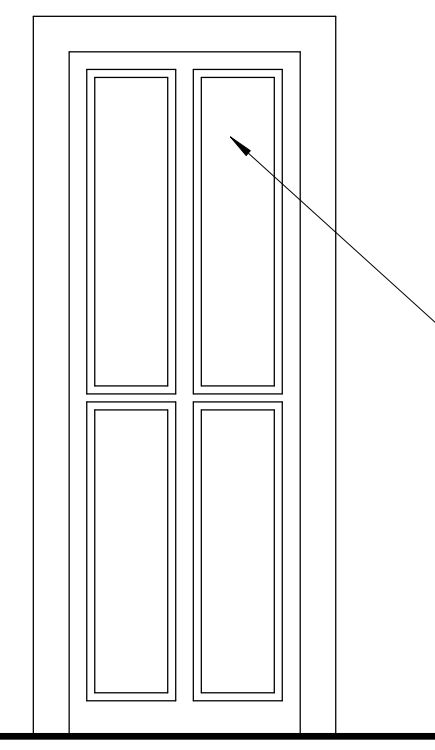
D3 FLOOR HATCH - FLOOR PLAN

A200

NTS



BUILDING 20

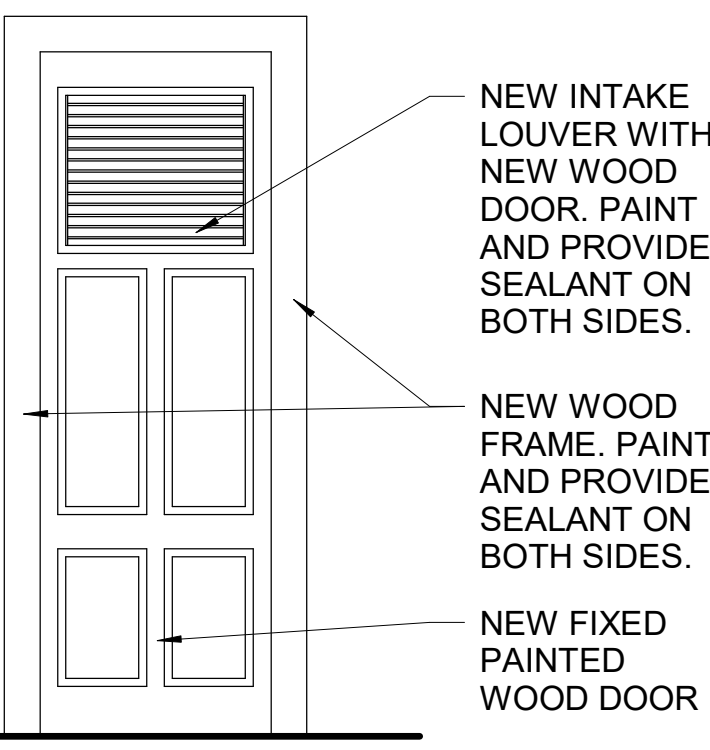


BUILDING 14

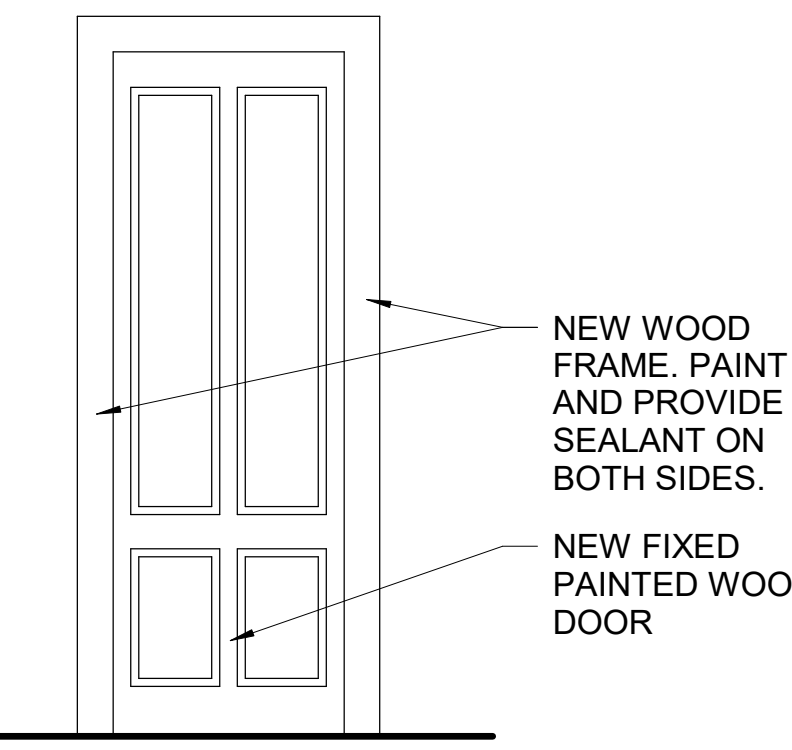
D5 FLOOR HATCH - SECTION

A200

NTS



BUILDING 16B - EXTERIOR



BUILDING 16B - INTERIOR

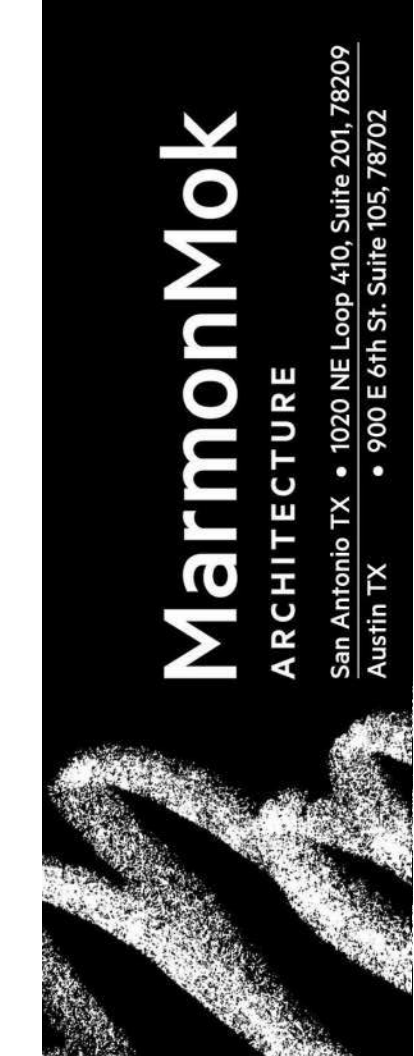
E1 DOOR, WINDOW, & FRAME

A200

NTS

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HVAC INFORMATION SCHEDULE				
BLDG. #	BUILDING NAME	INTAKE LOUVER SIZE	LOUVER LOCATION	LOUVER APPLICATION TYPE
1	B LINK	10" DIA.	EXTERIOR ROOF	REF. D2/A200
2	ANGELITA	10" DIA. (2 VENTS)	EXTERIOR ROOF	REF. D2/A200
3	CAPISTRANO SOAP COMPANY	14"x14"	EXTERIOR WALL	REF. C4/A200
4	EQUINOX	10" DIA.	EXTERIOR ROOF	REF. D2/A200
5	STUDIO ALEJANDRO SIFUENTES	10" DIA.	EXTERIOR ROOF	REF. D2/A200
6	CASA MANOS ALEGRES	10" DIA. (2 VENTS)	EXTERIOR ROOF	REF. D2/A200
7	HUPIL MARKET	10" DIA.	EXTERIOR ROOF	REF. D2/A200
8	VILLA TESOROS	14" DIA.	EXTERIOR ROOF	REF. D2/A200
10	BIRD & PEAR	30"x14"	EXTERIOR WINDOW LOUVER	REF. C3/A200
11	COPPER GALLERY	14"x14"	EXTERIOR WALL	REF. C3/A200
11	COPPER GALLERY	12" DIA.	EXTERIOR ROOF	REF. D2/A200
12	STARVING ARTIST ART GROUP	12" DIA.	EXTERIOR ROOF	REF. D2/A200
12	STARVING ARTIST ART GROUP	16"x16"	EXTERIOR WINDOW LOUVER	REF. D2/A200
13	LITTLE CHURCH OF LA VILLITA	14"x8" (2 VENTS)	EXTERIOR WALL (FORCED VENTILATION)	REF. C5/A200
14	RIVER ART GROUP	24"x12"	EXISTING LOUVER	REF. D2/A200
14	RIVER ART GROUP	24"x12"	LEVEL 1 - EXTERIOR WALL	REF. D2/A200
16	GUADALAJARA GRILL	32"x20"	DOOR LOUVER	REF. E1/A200
16B	PLAZA TAXCO	16"x14"	DOOR LOUVER	REF. D2/A200
16C	GUADALAJARA GRILL	14" DIA.	LEVEL 2 - EXTERIOR ROOF	REF. E1/A200
17	JOLIX LUNA FINE ART	10" DIA.	EXTERIOR ROOF	REF. D2/A200
18	COS HOUSE	12" DIA.	EXISTING ROOF CHIMNEY	REF. D2/A200
20	SA AFRICAN AMERICAN	24"x10"	WINDOW TRANSOM LOUVER	REF. E1/A200
21	SCENTCHIPS USA	14" DIA.	EXTERIOR ROOF	REF. D2/A200
22	MARISOL DELUNA NY FOUNDATION	16"x14"	EXTERIOR LOUVER	REF. C4/A200
23	LITTLE STUDIO GALLERY	10" DIA. (2 VENTS)	EXTERIOR ROOF	REF. E1/A200
24	LA VILLITA HISTORY EXHIBIT	12" DIA.	EXTERIOR ROOF	REF. D2/A200
29	BOLIVAR HALL	14" DIA. & 10" DIA.	EXTERIOR ROOF	REF. D2/A200



CITY OF SAN ANTONIO - PUBLIC WORKS  
LA VILLITA - HVAC UPGRADE

418 Villita St., San Antonio, TX, 78205

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Drawn GP  
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Date 12/05/2022  
Project No. 21032  
Revisions

1 01/23/2023 ADDENDUM 1

SHEET TITLE  
MECHANICAL  
LOUVER  
SCHEDULE

SHEET NO.

A200





DOOR SCHEDULE													
DOOR NO.	FIRE RATING	DOOR		DOOR			FRAME				HARWARE	TYPE REMARKS	
		TYPE	WIDTH	HEIGHT	THK	MATL	FINISH	TYPE	HEAD THICKNESS	MATL			FINISH
5-01	NR	F	3'-0"	5'-0"	1 3/4"	HM	PTD	I	2"	HM	PTD	100	
14-01	NR	F	3'-0"	7'-0"	1 3/4"	HM	PTD	I	2"	HM	PTD	101	MATCH EXISTING DOOR PROFILE
16-02	NR	F	3'-0"	7'-0"	1 3/4"	SCW	PTD	I	2"	WD	PTD	102	REFER TO DTL E1A102 FOR DOOR LOUVER
16B-01	NR	F	3'-0"	7'-0"	1 3/4"	SCW	PTD	I	2"	WD	PTD	102	REFER TO DTL E1A103 FOR DOOR LOUVER
16B-02	NR	F	3'-0"	7'-0"	1 3/4"	HM	PTD	I	2"	HM	PTD	101	
18-04	NR	F	2'-6"	7'-0"	1 3/4"	HM	PTD	I	2"	HM	PTD	101	REFER TO DTL E2A103 FOR DOOR LOUVER
21-01	NR	F	3'-0"	5'-0"	1 3/4"	HM	PTD	I	2"	HM	PTD	100	
28-01	NR	F	3'-0"	7'-0"	1 3/4"	HM	PTD	I	4"	HM	PTD	101	
29-02	NR	F	3'-0"	7'-0"	1 3/4"	HM	PTD	I	4"	HM	PTD	101	

## MANUFACTURER LIST

MC	McKinney
PE	Pemko
SA	Sargent

## FINISH LIST

Black Suede Powder Coat

### OPTION LIST

60 Disposable Construction Core

## HARDWARE SETS

**SET #100**

Doors: 5-01, 21-01				
3	Hinges	TA2714 4 1/2 x 4 1/2 NRP	BSP	MC
1	Mortise Lockset	60 8204 TRH010	BSP	SA
1	Interchangeable Core	6300	BSP	SA
1	Closer	1431 RUO	BSP	SA
1	Weatherstrip	303 BSPV 1 x 36", 2 X 60"		PE
1	Door Bottom	345 BSPV 36"		PE
1	Threshold	2005 BSPV 36"		PE

■ IMAGE REFERENCES: MCTA2714, PE2005\_T, SA6300\_SPEC

**SET #101**

Docs: 14-01, 16B-02, 18-04, 29-01, 29-02

3	Hinges	TA2714 4 1/2 x 4 1/2 NRP	BSP	MC
1	Mortise Lockset	60 8204 TRH010	BSP	SA
1	Interchangeable Core	6300	BSP	SA
1	Closer	1431 RUO	BSP	SA
1	Weatherstrip	303 BSPV 1 x 36", 2 X 84"		PE
1	Door Bottom	345 BSPV 36"		PE
1	Threshold	2005 BSPV 36"		PE

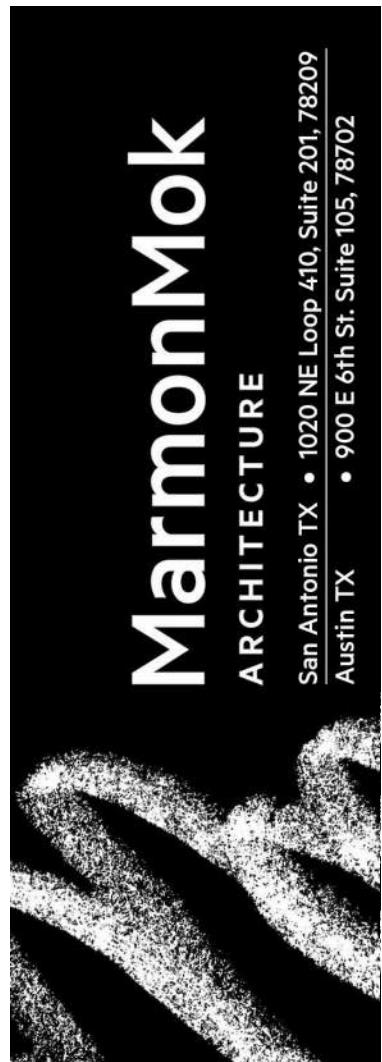
IMAGE REFERENCES: MCTA2714, PE2005 T, SA6300 SPEC

## SET #102

Doors: 16-02, 16B-01

3	Hinges	TA2714 4 1/2 x 4 1/2 NRP	BSP	MC
1	Mortise Lockset	60 8204 TRH010	BSP	SA
1	Interchangeable Core	6300	BSP	SA
1	Closer	1431 RUO	BSP	SA
1	Weatherstrip	303 BSPV 1 x 36", 2 X 84"		PE
1	Door Bottom	345 BSPV 36"		PE
1	Threshold	2005 BSPV 36"		PE

IMAGE REFERENCES: MCTA2714, PE2005, T, SA6300, SPEC



CITY OF SAN ANTONIO - PUBLIC WORKS  
LA VILLITA - HVAC UPGRADE

418 Villita St., San Antonio, TX, 78205



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Hall Mech  
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C:\Users\gignat\Documents\1032 - La Villita  
Upgrade - MMA-22.01.21-V22\_jenae818\A.rvt  
La Villita  
Central\_R21\_asendep.rvt

A

B

C

D

E

## 1000 COORDINATION

- A. The Contractor shall compare the Architectural, Structural, Mechanical, Electrical, Plumbing, and other series drawings and report any discrepancies between each set of drawings and within each set of drawings prior to fabrication and installation of any structural members.
- B. Shop drawings shall be prepared for all structural items and submitted for review by the Engineer. Structural Drawings shall not be reproduced and used as shop drawings. All items deviating from the Structural Drawings or from previously submitted shop drawings shall be clouded.
- C. The details designated as "Typical Details" apply generally to the Structural Drawings in all areas where conditions are similar to those described in the details.
- D. All dimensions and conditions of existing construction shall be verified at the job site prior to the preparation of shop drawings. Differences between existing construction and that shown on the Structural Drawings shall be referred to the Architect. Differences shall also be clouded on the shop drawings.
- E. All structural elements of the project have been designed by the Engineer to resist the required Code vertical and lateral forces that could occur in the final completed structure only. It is the responsibility of the Contractor to provide all required bracing during construction to maintain the stability and safety of all structural elements during the construction process until the lateral-load resisting or stability-providing system is completely installed and the structure is completely tied together. Temporary supports shall not result in the overstress or damage of the elements to be braced nor any elements used as brace supports.
- F. The Contract Structural Drawings and Specifications represent the finished structure, and except where specifically shown do not indicate the means or methods of construction. The Contractor and their Sub-Contractors shall supervise and direct the Work and shall be solely responsible for all construction means, methods, procedures, techniques, sequences and safety measures including, but not limited to, adherence to all OSHA guidelines. The Engineer shall not have control of, and shall not be responsible for, construction means, methods, techniques, sequences or procedures, for safety precautions and programs in connection with the Work, for the acts or omissions of the Contractor, Subcontractors, or any other person performing any of the Work, or for the failure of any of these persons to carry out the Work in accordance with the Structural Contract Documents.
- G. Where conflict exists among the various parts of the Structural Contract Documents, Structural Drawings, General Notes, and Specifications, the strictest requirements, as indicated by the Engineer, shall govern.
- H. Periodic site observation by field representatives of Intelligent Engineering Services, LLP (IES) is solely for the purpose of determining if the Work is proceeding in accordance with the Structural Contract Documents. This limited site observation is not intended to be a check of the quality or quantity of the Work, but rather a periodic check in an effort to inform the Owner against defects and deficiencies in the work of the Contractor.

## 1010 SUBSTITUTIONS

- A. All requests for substitutions of materials or details shown in the Structural Contract Documents shall be submitted for approval during the bidding period.
- B. Once bids are accepted, proposed substitutions will be considered only when they are officially submitted with an identified savings or duration to be deducted from the contract and/or schedule impact. Submittals not satisfying the above criteria will not be reviewed.

## 1020 CODES

- A. The General Building Code used as the basis for the structural design is as follows:  
City of San Antonio Building Code (2018 International Building Code with City of San Antonio Amendments)

## 1030 IRC 2018 DESIGN LOADS

- A. Dead Loads include the self-weight of the structural elements and the following superimposed loads:  
Mechanical at Floors 5 psf
- B. Live Loads 100psf
- C. Load Combinations
- Strength Design
    - $1.4(D+F)$
    - $1.2(D+F) + 1.6(LH) + 0.5(L \text{ or } S \text{ or } R)$
    - $1.2(D+F) + 1.6(L \text{ or } S \text{ or } R) + 1.6H + (F_L \text{ or } 0.5W)$
    - $1.2(D+F) + 1.0W + F_L + 1.6H + 0.5(L \text{ or } S \text{ or } R)$
    - $1.2(D+F) + 1.0E + F_L + 1.6H + F_5$
    - $0.9D + 1.0W + 1.6H$
    - $0.9(D+F) + 1.0E + 1.6H$
  - Allowable Stress Design:
    - $D + F$
    - $D + H + F + L$
    - $D + H + F + L \text{ (L or S or R)}$
    - $D + H + F + 0.75L + 0.75(L \text{ or } S \text{ or } R)$
    - $D + H + F + (0.6W \text{ or } 0.7E)$
    - $D + H + F + 0.75(0.6W) + 0.75L + 0.75(L \text{ or } S \text{ or } R)$
    - $D + H + F + 0.75(0.7E) + 0.75L + 0.75S$
    - $0.6D + 0.6W + H$
    - $0.6(D+F) + 0.7E + H$
- F<sub>1</sub> = 1.0 for places of public assembly live loads in excess of 100 pounds per square foot and parking garages, and 0.5 for other live loads.  
F<sub>2</sub> = 0.7 for roof configurations (such as saw tooth) that do not shed snow off the structure; and 0.2 for other roof configurations.

## 1100 SUBMITTALS

- A. Shop drawings shall be prepared for all structural items and submitted for review by the Engineer. Structural Drawings shall not be reproduced and used as shop drawings. All items deviating from the Structural Drawings or from previously submitted shop drawings shall be clouded.
- B. Contractor shall review shop drawings for compliance with the Structural Drawings and shall certify that they have done so by a stamp noting that the drawings have been "Approved" and which bears the signature (or initials) of an authorized representative of the Contractor and the date. Submittals which do not reflect the Contractor's approval, signature and date will be returned without review.
- C. Contractor shall be responsible for delays caused by rejection of inadequate shop drawings.
- D. where review and return of shop drawings is required or requested, the Engineer will review each submittal and, where possible, return within two weeks of receipt.
- E. Corrections or comments on shop drawings or manufacturer's data sheets do not relieve the Contractor from compliance with requirements of the plans and specifications. Engineer's review is for general conformance with the requirements of the Structural Drawings. Contractor is responsible for confirming and correcting all quantities and dimensions, selecting fabrication processes and techniques of construction, and coordinating the work with that of all other contractors.
- F. Refer to individual sections for specific submittal requirements.
- G. Contractor shall submit electronically in pdf format. Submittals shall be generated electronically and will be commented upon electronically as to maintain clarity of the image file. Scans of hard copy submittals shall be legible, full size scans. All illegible scans or scans of contractor comments on reduced size prints will be rejected. Contractor will be responsible for providing and distributing Engineer's comments to their subcontractors.

## 2203A POLYMER MODIFIED REPAIR MORTAR

- A. Polymer modified repair mortar. Comply with all handling, mixing, placing and curing requirements as specified by the manufacturer.
- B. Consult manufacturer representative if questions arise during the repair process about material installation procedures.
- C. Chip out all loose and unsound concrete and as required to provide minimum application thickness. Surface preparation shall be in accordance with ICRI Guideline 310.2-2013 A Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays. Concrete surface profile shall be a minimum of CSP-5. Material concrete surface. Mortar shall be applied to saturated surface dry (SSD) surface.
- D. Apply epoxy bonding agent to existing concrete surface and reinforcing steel prior to placing the repair mortar mix. Comply with time between application of bonding agent and repair mortar requirements.

## 2360 -CARBON FIBER REINFORCED POLYMER (CFRP) FOR STRUCTURAL STRENGTHENING

- A. Design of the CFRP system for strengthening of building elements indicated in the Structural Drawings shall be the responsibility of the Contractor. The CFRP reinforcement shall be designed and sealed by a Professional Engineer licensed in the State of Texas hired by the Contractor.
- B. The design and detailing of CFRP systems shall be in accordance with guidelines presented in ACI 440.2R-08.
- C. Contractor shall submit calculations verifying compliance with the design criteria indicated on the Structural Drawings. Calculations shall be prepared under the direct supervision of a Professional Engineer licensed in the State of Texas. Sealed calculations for all CFRP systems and applications designed by the Contractor shall be submitted for the Architect's files.
- D. CFRP materials utilized for strengthening building elements shall have a current ICC evaluation report, and shall be installed in accordance with the Contract Documents.
- E. Manufacturer of CFRP systems shall have a nationally recognized program of contractor training, certification, and technical support. The manufacturer shall have a minimum ten years experience in CFRP reinforcement confirmed by actual field tests of minimum 100 successful installations.
- F. Contractor installing CFRP system shall be trained by the manufacturer, and shall have completed a program of instruction in the use of CFRP reinforcement. The Contractor shall have a minimum of two years experience in CFRP reinforcement confirmed by actual field tests of at least five (5) successful installations.
- G. Manufacturer of CFRP systems shall have a nationally recognized program of contractor training.
- H. The surface to receive CFRP materials shall be clean and sound. Surfaces shall be free from fins, sharp edges, and protrusions that could cause voids behind the installed CFRP or damage to the floors. Surface defects shall be filled and leveled per the manufacturer's requirements.
- I. All concrete surfaces shall be air blasted and vacuumed clean to a dust free condition.
- J. Surfaces to receive CFRP shall be prepared in accordance with the manufacturer's requirements. Any structural members with deteriorated concrete surfaces, or corroded reinforcing steel shall be repaired in accordance with ACI 546R or ICRI 310.1R-2008 prior to installation of the CFRP system. Concrete surfaces with cracks wider than 0.010 inches shall be pressure injected with epoxy in accordance with ACI 224.1R prior to installation of the CFRP system. The concrete substrate, including all bond surfaces between repaired areas and the original substrate, where applicable, shall possess a minimum tensile strength of 200 psi, as determined by utilizing a pull-off type adhesion test as outlined in ACI 503R or ASTM D4541.
- K. Round off sharp and chamfered corners to a minimum radius of 1/2 inch when perpendicular to fiber orientation by means of grinding or smoothing by troweling epoxy mortar into the corners.
- L. Contractor shall furnish all materials, tools, equipment, transportation, necessary storage, access, labor and supervision required for the proper application of the CFRP system.
- M. Deliver epoxy materials in factory sealed containers with the manufacturer's labels intact and legible with verification of date of manufacture and shelf life.
- N. Store materials in a cool dry area away from direct sunlight as recommended by the manufacturer.
- O. Apply CFRP systems in accordance with manufacturer's requirements.
- P. Allow the CFRP system to fully cure per the manufacturer's specifications prior to being subjected to moisture or any load.
- Q. CFRP reinforcement shall be completely inspected by the Contractor during and immediately following application of the composite materials. The inspection shall be conducted by an individual knowledgeable of CFRP systems and be trained in the installation of CFRP systems. Inspection records shall be provided to the Architect.
- R. Witness panels (mockups) of CFRP system shall be prepared at the jobsite, and tested by an independent Testing Laboratory paid by the Owner in order to verify all design properties published by the manufacturer are attained.
- S. After the CFRP reinforcement has cured, the Contractor shall inspect all the work for voids and or de-bonding. Repair procedures (if applicable) shall be prepared by the Contractor and submitted to the Engineer for review.

1. Apply Manufacturer recommended fireproofing to protect the CFRP during a fire event. Architect shall review and approve fireproofing materials.

## 101000 DEFERRED SUBMITTALS

- A. In accordance with the General Building Code, Section 107.3.4.2, the following submittals will not be issued at the time of permit application, and will be "deferred" to a later date. Deferred submittals are required to be submitted to the Building Official. However, these submittals shall be submitted and approved by the Registered Design Professional in Responsible Charge (RDPR/C) prior to submitting to the Building Official. Deferred submittals are design items being delegated to the Contractor which shall be designed and sealed by a Professional Engineer licensed in the State of Texas.
- B. The following structural components shall be treated as deferred submittals:
- Fiber wrap
- C. Design of the items listed above shall be in accordance with the General Building Code, and shall include all attachments to the structure.
- D. Work associated with Deferred Submittals shall not be performed until the deferred submittal documents have been approved by the Building Official.
- E. Refer to the Contract Documents for additional Deferred Submittal items.

AG -	AIR CONDITIONER	EXIST -	EXISTING
AB -	ANCHOR BOLT	EXP -	EXPANSION
ABV -	ABOVE	EXT -	EXTERIOR
ACI -	AMERICAN CONCRETE INSTITUTE	EXTN -	EXTENSION
ADD -	ADDITIONAL	F TO F -	FACE TO FACE
ADH -	ADHESIVE	FABR -	FABRICATION
ADJ -	ADJACENT	FD -	FLOOR DRAIN
AE -	ARCHITECTURALLY EXPOSED CONCRETE	FEN -	FOUNDATION
AESB -	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	FE -	FINISHED FLOOR ELEVATION
ATF -	ABOVE FINISHED FLOOR	FNH -	FINISH (OR) FINISHED
ASSR -	ASBESTOS	FN FL -	FINISHED FLOOR
AHV -	AIR HANDLING UNIT	FL -	FLOOR
ASE -	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	FLG -	FLANGE
ALT -	ALTERNATE	FR -	FRAMING
APPROX -	APPROXIMATE	FRAG -	FRAGMENT(ING)
ARCH -	ARCHITECT (OR) ARCHITECTURAL	FS -	FAR SIDE
B TO B -	BACK TO BACK	FT -	FOOT (OR) FEET
BOWD -	BOWED	FTG -	FOOTING
B.O. -	BOTTOM OF	FV -	FIELD VERIFY
BF -	BACK FACE	GA -	GAUGE (OR) GAUGE
BFF -	BELCON FINISH FLOOR	GALVAN -	GALVANIZED
BL -	BOTTOM INSIDE LAYER	GC -	GENERAL CONTRACTOR
BL -	BUILDING LINE	GULAM -	GULF LAMINATED TIMBER
BLDG -	BUILDING	GR -	GRADE
BLKS -	BLOCKING	GR BM -	GRADE BEAM
BM -	BEAM	HB -	HORIZONTAL BRACE
BOL -	BOTTOM OUTSIDE LAYER	HOT -	HORIZONTAL CONCRETE ANCHOR
BOS -	BOTTOM OF STEEL	HDS -	HOT DIPPED GALVANIZED
BOTT -	BOTTOM	HDR -	HEADER
BP -	BASE PLATE	H -	HIGH
BRDG -	BRIDGING	HK -	HOOK
BRG -	BRACING	HL -	HOLE
BRKT -	BRAKET	HORZ -	HORIZONTAL
BRU -	BRICKLEDGE	HP -	HIGH POINT
BRWT -	BROWNT	HSD -	HOLLOW STRUCTURAL SECTION
BTN -	BETWEEN	HT -	HEIGHT
C -	CAMBER (OR) COMPRESSION	ID -	INSIDE DIAMETER
CANT -	CANTILEVER	IF -	INSIDE FACE
CPS -	COLD FORMED STEEL	INH -	INCH
CS -	CENTER OF GRAVITY	INFO -	INFORMATION
CSS -	CENTER OF GRAVITY OF STRAND	INT -	INTERIOR
CIP -	CAST-IN-PLACE	INTERM -	INTERMEDIATE
CJT -	CONTROL JOINT	JG -	JOIST GIRDER
CJP -	COMPLETE JOINT PENETRATION	JOBTS -	JOIST(S)
CL -	CENTER LINE	JT -	JOINT
CLS -	CEILING	K -	KIPS (1000 LBS)
CLR -	CLEAR (OR) CLEARANCE	KLP -	KIP PER LINEAR FOOT
CHU -	CONCRETE MASONRY UNIT	KSF -	KIP PER SQUARE FOOT
COL -	COLUMN	KSI -	KIP PER SQUARE INCH
C OR COMP -	COMPRESSION	L -	LENGTH
CONN(S) -	CONNECTION(S)	LES -	LIVE LOAD
CONST -	CONSTRUCTION	LLH -	LONG LES HORIZONTAL
CONSTR JT -	CONSTRUCTION JOINT	LLV -	LONG LES VERTICAL
CONT -	CONTIGUOUS	LM -	LOCATION
CONTR -	CONTRACTOR	LOC -	LOCATION
COORD -	COORDINATE	LOCN -	LOCATION
COVER -	COVER	LOCN -	LOCATION
DBA -	DEFORMED BAR ANCHORS	LSH -	LONG SIDE HORIZONTAL
DBL -	DOUBLE	LSH -	LONG SIDE HORIZONTAL
DE -	DECK EDGE	LSV -	LONG SIDE VERTICAL
DEN -	DEVELOPMENT	LVL -	LAMINATED VENEER LUMBER
DFT -	DOUGLAS FIR LARCH	LVL -	LIGHTWEIGHT
DIA -	DIAMETER	LVC -	LIGHTWEIGHT CONCRETE
DIM(S) -	DIMENSION(S)	M -	MOMENT
DKG -	DECKING	MAS -	MASONRY
DN -	DOWN	MAX -	MAXIMUM
DN -	DOWN	MC -	MOMENT CONNECTION(S)
DS -	DOWNSPOUT	ME -	MECHANICAL, ELECTRICAL, PLUMBING
DTL -	DETAIL	MEZ -	MEZZANINE
DYNS(S) -	DRAWING(S)	MF -	MANUFACTURER
DYLS(S) -	DOYLS	MID -	MIDDLE
EA -	EACH	MIN -	MINIMUM
EB -	EACH FACE (OR) EXHAUST FAN	MNE -	MECHANICAL
EJ -	EXPANSION JOINT	MTL -	METAL
EL -	ELEVATION	T -	TENSION
ELS -	ELECTRICAL	TOP -	TOP OF
ELEV -	ELEVATION	TBT -	TOP AND BOTTOM
EMBED -	EMBEDMENT	TGS -	TONGUE AND GROOVE
ENG -	ENGINEER	TEMP -	TEMPERATURE
ENG -	ENGINEER OF RECORD	THK -	THICK
EQ -	EQUAL (OR) EQUIVALENT	THRD -	THREADED
EQUIP -	EQUIPMENT	TL -	TOP INSIDE LAYER
EN -	EACH WAY	TDB -	TOP OF BEAM
		TCC -	TOP OF CONCRETE
		TOP -	TOP OF FOOTING
		TOU -	TOP OF JOIST

# FIBER REINFORCED POLYMER (FRP) INSPECTIONS AND TESTING REQUIREMENTS

FIBER REINFORCED POLYMER (FRP) INSPECTION AND TESTING REQUIREMENTS			
MINIMUM TESTS			REFERENCED STANDARD
The concrete substrate, where applicable, has been verified to possess a minimum tensile strength of 200 psi, as determined by utilizing a pull-off type adhesion test			ACI 503R or ASTM D1234
Witness panels to validate the FRP material properties constructed for each application day and batch of resin used (minimum of 1 panel for every 5,000 ft <sup>2</sup> of FRP installed)			ACI 440.2R
Installed FRP pull-off strength exceeds 200 psi and the failure occurs in the concrete substrate (minimum of 3 tests per day of installation or one test per 1000 ft. of substrate contact area)			ASTM D7522
INSPECTION TASKS	INSPECTION FREQUENCY		REFERENCED STANDARD
	CONTINUOUS	PERIODIC	
1. Verify compliance with the approved submittals and ICC Evaluation Report	--	X	
2. Prior to installation of the FRP system, verify the following:			
a. Corroded reinforcing steel has been repaired	--	X	ACI 546R or ICRI 310.1R
b. Concrete surface cracks wider than 0.010 inches have been pressure injected with epoxy	--	X	ACI 224.1R
c. Surface to receive FRP materials			
1. Concrete surface preparation methods are appropriate	--	X	ACI 440.2R
2. Surface profile meets the manufacturer's requirements via comparison with ICRI surface profile chips	--	X	ACI 440.2R
3. Prepared concrete is clean, sound, and dry	--	X	ACI 440.2R
4. Free from fins, sharp edges, and protrusions	--	X	ACI 440.2R
5. Surface defects have been filled or leveled per the manufacturer's requirements	--	X	ACI 440.2R
d. Ambient temperature, relative humidity, and surface temperature of the concrete are within the manufacturer's guidelines	--	X	ACI 440.2R
3. Verify during construction:			
a. Materials and procedures with the approved submittals and ICC Evaluation Report	--	X	
b. Fiber and ply orientation and quantity	--	X	
c. Size and location of FRP strips and wraps	--	X	ACI 440.2R
d. Type, size, and location of FRP anchors, if specified	--	X	
e. Lap splice lengths	--	X	
f. Proper curing and no moisture or load applied until fully cured	--	X	
4. Observe preparation of witness panels	X	--	ACI 440.2R
5. Inspection tasks after construction:			
a. Inspect for voids or debonding	--	X	ACI 440.2R
b. Observe repair work, if required	--	X	ACI 440.2R
c. Inspect fireproofing thickness complies with manufacturer requirements	--	X	ACI 440.2R

1. Small delaminations less than 2 in<sup>2</sup> are permissible, so long as the delaminated area is less than 5% of the total laminate area and there are no more than 10 such delaminations per 10 ft<sup>2</sup>.
2. Large delaminations greater than 25 in<sup>2</sup> shall be repaired with an overlapping sheet patch designed by the contractor's FRP design engineer. Delaminations less than 25 in<sup>2</sup> may be repaired by resin injection or ply replacement as specified by the contractor's FRP design engineer.

## FIBER REINFORCED POLYMER (FRP) INSPECTION AND TESTING

1. The inspections and testing requirements specified in this table are the responsibility of the contractor under the supervision of a licensed design professional or qualified inspector. The contractor shall keep records and submit testing reports to the FRP design engineer and the Architect. The FRP design engineer may specify an inspection and testing program to supersede these requirements.
2. Witness panels shall be constructed using the same fiber, saturating resins, equipment, and methods used in the installation of the FRP system. Make panels large enough to extract a minimum of 10 tensile test coupons. Store witness panels in a dry location on site and allow the panels to cure under the same environmental conditions as the installed FRP system.
3. Testing of Witness Panels: Send witness panels to a third party laboratory experienced with the tensile testing of FRP materials and test 5 samples in accordance with ASTM D7505. Report the average tensile strength and elongation to failure and the number of plies of the cured samples. The FRP system shall be accepted if the average tensile strength per ply exceeds the required tensile strength as specified by the FRP design engineer. Otherwise test the remaining 5 samples and combine the results with the original five samples. The FRP system shall be accepted if the average tensile strength per ply of the combined tests exceeds the required tensile strength as specified by the FRP design engineer. Otherwise it shall be rejected.
4. Inspection for Relative Cure of Resin: Obtain resin-cup samples for each batch of mixed resin used. Cure resin-cup samples at the temperature as the installed FRP system. Verify the relative cure of the resins comprising the FRP system by regularly examining the resin-cup samples. Remove and repair the FRP system in all areas where the resin is found to have not properly cured.
5. Testing reports, records, and unused witness panels shall be transferred to the owner at project closeout. The owner shall maintain these records and samples for a minimum of 10 years.
6. Inspect fireproofing thickness complies with manufacturer requirements.

SYMBOLS LEGEND	
SYMBOL	DESCRIPTION
	EXISTING CONCRETE COLUMN
	EXISTING NONLOAD-BEARING / BACKUP MASONRY WALL
	EXISTING NONLOAD-BEARING MASONRY WALL BELOW
	EXISTING CONSTRUCTION
	MISCELLANEOUS, SEE PLAN
	ROOF TOP UNIT (RTU)

STRUCTURAL NOTES,  
SPECIAL INSPECTIONS  
AND ABERRATIONS

SHEET NO.

S0.1

DATE: 12/02/2022

PROJECT NO: 21032

REVISIONS

ADDENDUM 01 1/24/2023

SHEET TITLE

Drawn: STAFF

Checked: JE

Date: 12/02/2022

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Revisions

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DESIGNED BY: JENAE818

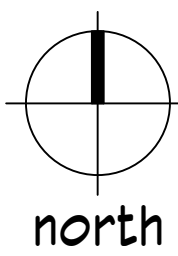
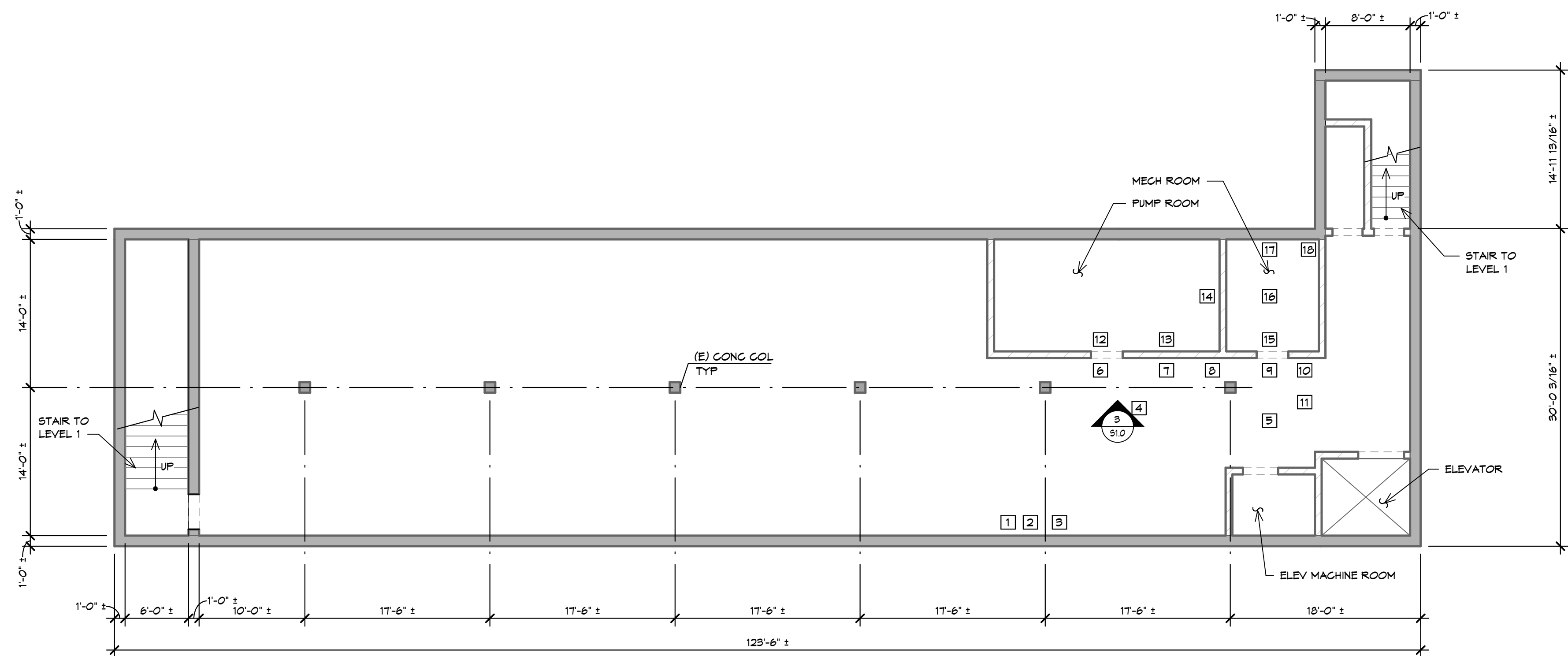
DATE: 12/02/2022

PROJECT NO: 21032

REVISIONS



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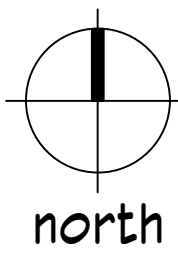
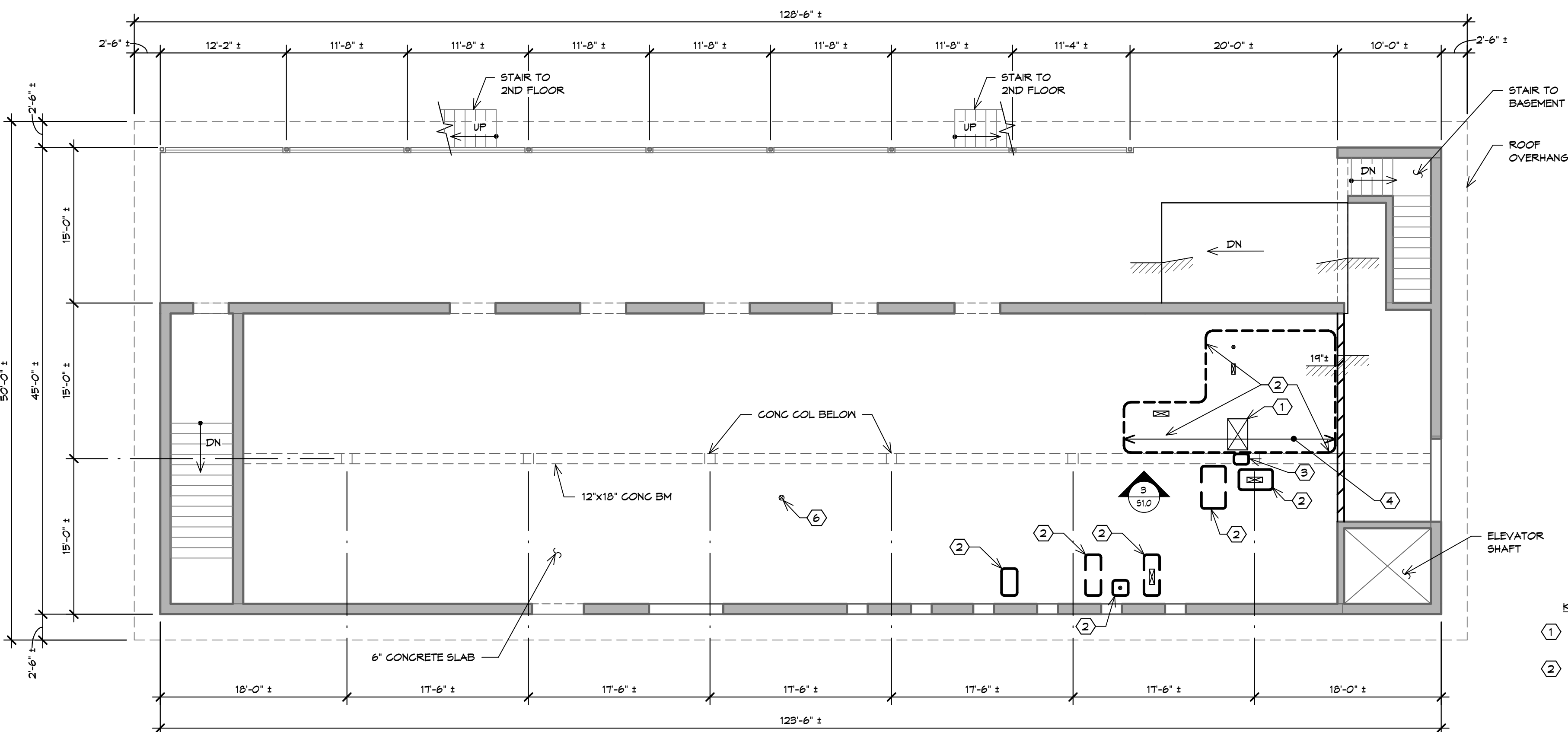


## 1 BASEMENT LEVEL FLOOR PLAN

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

### PLAN NOTES:

1. PHOTO NUMBER - SEE S2.0 AND S2.1
2. VERIFY ALL DIMENSIONS PRIOR TO SUBMITTING SHOP DRAWINGS OR ORDERING MATERIALS.
3. EXISTING FRAMING INFORMATION AND DIMENSIONS ARE PROVIDED FOR THE CONTRACTOR'S CONVENIENCE ONLY. IT IS BASED ON LIMITED FIELD OBSERVATIONS AS NO EXISTING DRAWINGS WERE AVAILABLE. THE DRAWING MAY NOT ACCURATELY REFLECT THE ACTUAL CONDITIONS IN THE FIELD. INTELLIGENT ENGINEERING SERVICES, LLP MAKES NO GUARANTEE CONCERNING THE ACCURACY OF THE INFORMATION PROVIDED REGARDING THE EXISTING STRUCTURE. ALL EXISTING CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR DURING CONSTRUCTION.
4. DO NOT DAMAGE THE EXISTING STRUCTURE DURING THE COURSE OF CONSTRUCTION WORK. PROVIDE ADEQUATE PROTECTION OF THE EXISTING BLDG FROM DAMAGE.

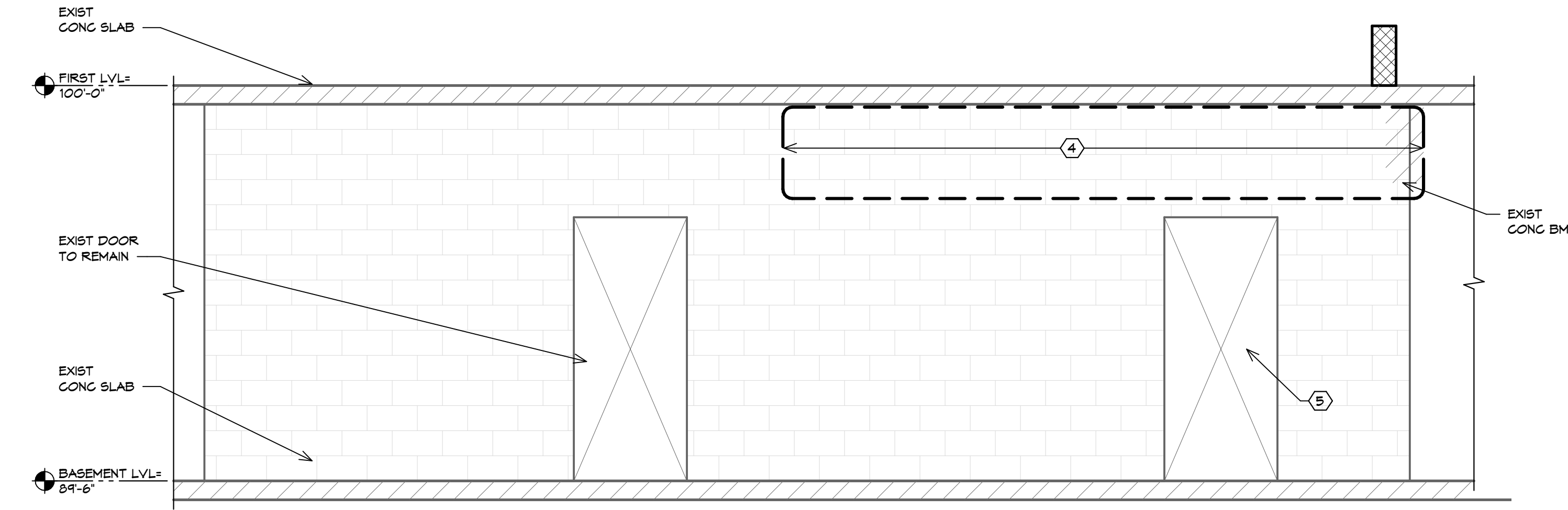


## 2 LEVEL 1 FLOOR PLAN

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

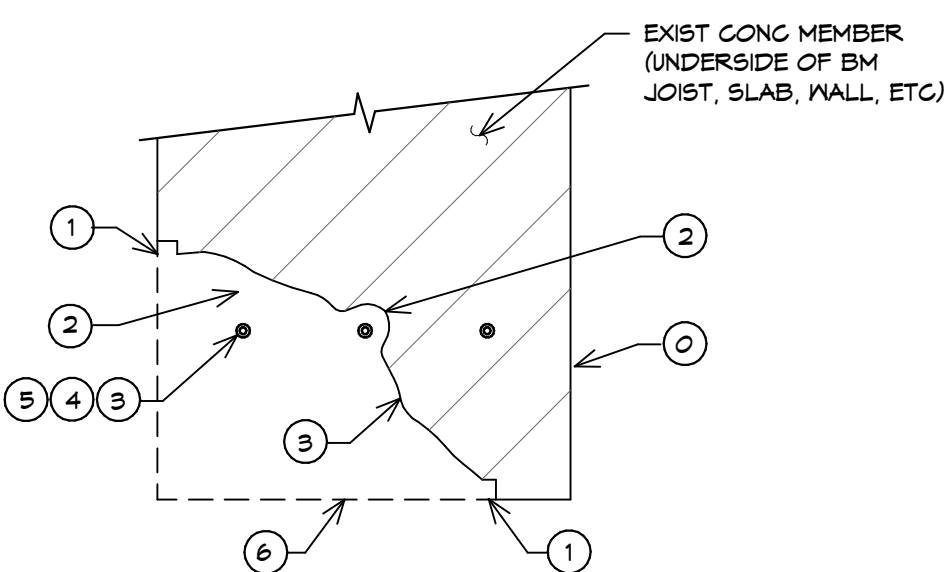
### PLAN NOTES:

1. SEE STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS, SCOPE OF REPAIRS, AND PHASING OF REPAIRS.
2. EXISTING FRAMING INFORMATION AND DIMENSIONS ARE PROVIDED FOR THE CONTRACTOR'S CONVENIENCE ONLY. IT IS BASED ON LIMITED FIELD OBSERVATIONS AS NO EXISTING DRAWINGS WERE AVAILABLE. THE DRAWING MAY NOT ACCURATELY REFLECT THE ACTUAL CONDITIONS IN THE FIELD. INTELLIGENT ENGINEERING SERVICES, LLP MAKES NO GUARANTEE CONCERNING THE ACCURACY OF THE INFORMATION PROVIDED REGARDING THE EXISTING STRUCTURE. ALL EXISTING CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR DURING CONSTRUCTION.
3. DO NOT DAMAGE THE EXISTING STRUCTURE DURING THE COURSE OF CONSTRUCTION WORK. PROVIDE ADEQUATE PROTECTION OF THE EXISTING BLDG FROM DAMAGE.



## 3 MECHANICAL ROOM ELEVATION

SCALE: 3/8" = 1'-0"



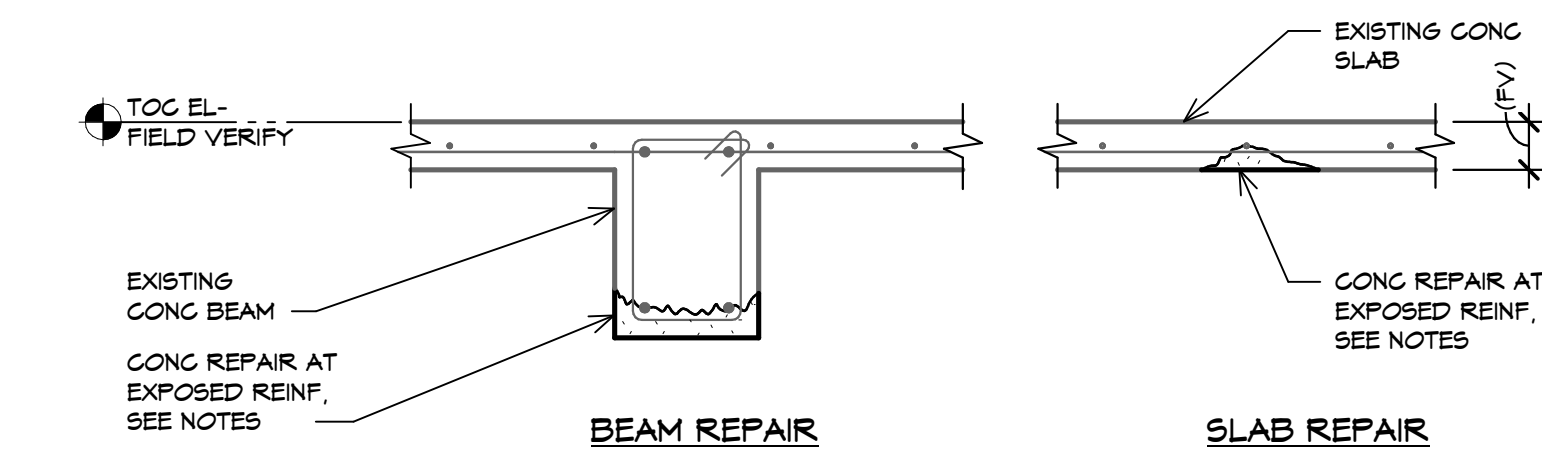
1. SAW CUT AT THE PERIMETER OF THE SPALL A MINIMUM OF 1/2". DO NOT DAMAGE THE EXISTING REINFORCEMENT. A SLIGHT UNDERCUT "DOVETAIL" IS RECOMMENDED, WHERE POSSIBLE. DETERMINE THE DEPTH OF THE REINFORCEMENT PRIOR TO SAW CUTTING.
2. REMOVE A MINIMUM OF 1/2" OF THE EXISTING CONCRETE BEHIND THE EXISTING REINFORCEMENT.
3. SANDBLAST THE EXISTING REINFORCEMENT TO REMOVE ANY CORROSION. CUT OUT ANY REINFORCEMENT THAT HAS LOST MORE THAN 15% OF ITS CROSS SECTIONAL AREA DUE TO CORROSION.

### SURFACE PREPARATIONS NOTES:

1. THE SURFACE MUST BE MECHANICALLY PREPARED. ALL AREAS TO BE CLEANED MUST BE CLEAN AND FREE OF ALL CONTAMINANTS. ALL LOOSE AND DETERIORATED CONCRETE SHALL BE REMOVED BY MECHANICAL MEANS APPROVED BY THE ENGINEER. SAW CUT PERIMETER A MINIMUM OF 1/2". CHIP CONCRETE SUBSTRATE TO OBTAIN A SURFACE PROFILE OF CSP-5 OR GREATER AS DEFINED BY THE ICR TECHNICAL GUIDELINE 910.2R-2013. BE SURE THE AREA TO BE REPAIRED IS NOT LESS THAN 1/8". WHEN REINFORCEMENT STEEL WITH ACTIVE CORROSION IS ENCOUNTERED, THE FOLLOWING PROCEDURE SHALL BE USED:
  - A. SANDBLAST REINFORCEMENT TO REMOVE ALL CONTAMINANTS AND RUST.
  - B. DETERMINE THE AMOUNT OF CROSS SECTION AREA LOST DUE TO CORROSION. CUT OUT ANY REINFORCEMENT THAT HAS LOST MORE THAN 15% OF ITS CROSS SECTIONAL AREA.
  - C. IF HALF OF THE REINFORCEMENT BAR DIAMETER IS EXPOSED, CHIP OUT FROM BEHIND THE REINFORCEMENT SO THE MORTAR IS A MINIMUM OF 1/2" DEEP.
2. ANY CRACKS IN THE SUBSTRATE IN THE AREA OF THE REPAIR MUST BE TREATED AS DIRECTED BY THE ENGINEER.
3. EXTEND ANY EXISTING CONTROL OR EXPANSION JOINTS THROUGH ANY REPAIR.
4. REINFORCING STEEL SHALL BE MECHANICALLY CLEANED TO REMOVE ALL RUST, GREASE, OIL OR OTHER BOND-INHIBITING MATTER BY SANDBLASTING OR OTHER APPROVED MECHANICAL MEANS. CUT OUT ANY REINFORCING WITH MORE THAN 15% OF THE CROSS SECTIONAL AREA HAS BEEN LOST.

## 4 TYPICAL DETAIL FOR REPAIR OF EXISTING SPALLED CONCRETE

NO SCALE



### NOTE:

1. REMOVE ANY LOOSE CONCRETE TO SOUND SUBSTRATE.
2. REINFORCING STEEL SHALL BE MECHANICALLY CLEANED TO REMOVE ALL RUST, GREASE, OIL, OR OTHER BOND-INHIBITING MATTER.
3. APPLY DURALPREP A.C. (AS MANUFACTURED BY EUGLID CHEMICAL COMPANY) BONDING AGENT PER MANUFACTURER'S REQUIREMENTS TO ALL EXPOSED REINFORCEMENT.
4. APPLY VERTICOAT SUPREME (AS MANUFACTURED BY EUGLID CHEMICAL COMPANY) POLYMER, MODIFIED REPAIR MORTAR PER MANUFACTURER'S REQUIREMENTS.
  - A. THE REPAIR AREA SHALL NOT BE LESS THAN 1/2" IN DEPTH.
  - B. THE SUBSTRATE SHALL BE SATURATED SURFACE DRY (SSD) DURING APPLICATION.
  - C. APPLY THE SCRUB COAT TO THE SUBSTRATE, FILLING ALL PORES AND VOIDS.
  - D. WHILE THE SCRUB COAT IS STILL NET APPLY DURALTOP GEL OR VERTICOAT SUPREME.
  - E. FOR APPLICATIONS GREATER THAN 1 1/2" IN DEPTH APPLY DURALTOP GEL OR VERTICOAT SUPREME IN LIFTS. SCORE THE TOP SURFACE OF EACH LIFT TO PRODUCE A ROUGHENED SURFACE FOR THE NEXT LIFT, ALLOWING THE PRECEDING LIFT TO REACH FINAL SET. REPEAT THE PROCEDURE FROM STEP B.
5. USE VERTICOAT SUPREME AT TEMPERATURES ABOVE 50° F.

## 5 TYPICAL REPAIR DETAIL FOR EXISTING CONCRETE

NO SCALE

4. DEMO CHU TO TOP OF DOORS. REBUILD AFTER REPAIRS. PROVIDE A 1-INCH THICK SOFFIT JOINT BETWEEN TOP OF CHU AND SLAB SOFFIT.
5. REPLACE DOOR AND DOOR FRAME IN KIND.
6. FILL HOLE IN CONCRETE (BASIS OF BID = 6" DIAMETER X 6" DEEP):
  1. ROUGHEN WALLS OF HOLE TO MINIMUM 1/4" PROFILE.
  2. CLEAN SUBSTRATE AND REBAR.
  3. COAT W/ DURALPREP AC.
  4. FORM AND FILL W/ HIGH STRENGTH, NON-SHRINK GROUT.

# CITY OF SAN ANTONIO - PUBLIC WORKS LA VILLITA - HVAC UPGRADE

418 Villita St., San Antonio, TX, 78205

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SHEET TITLE  
PLANS AND DETAILS

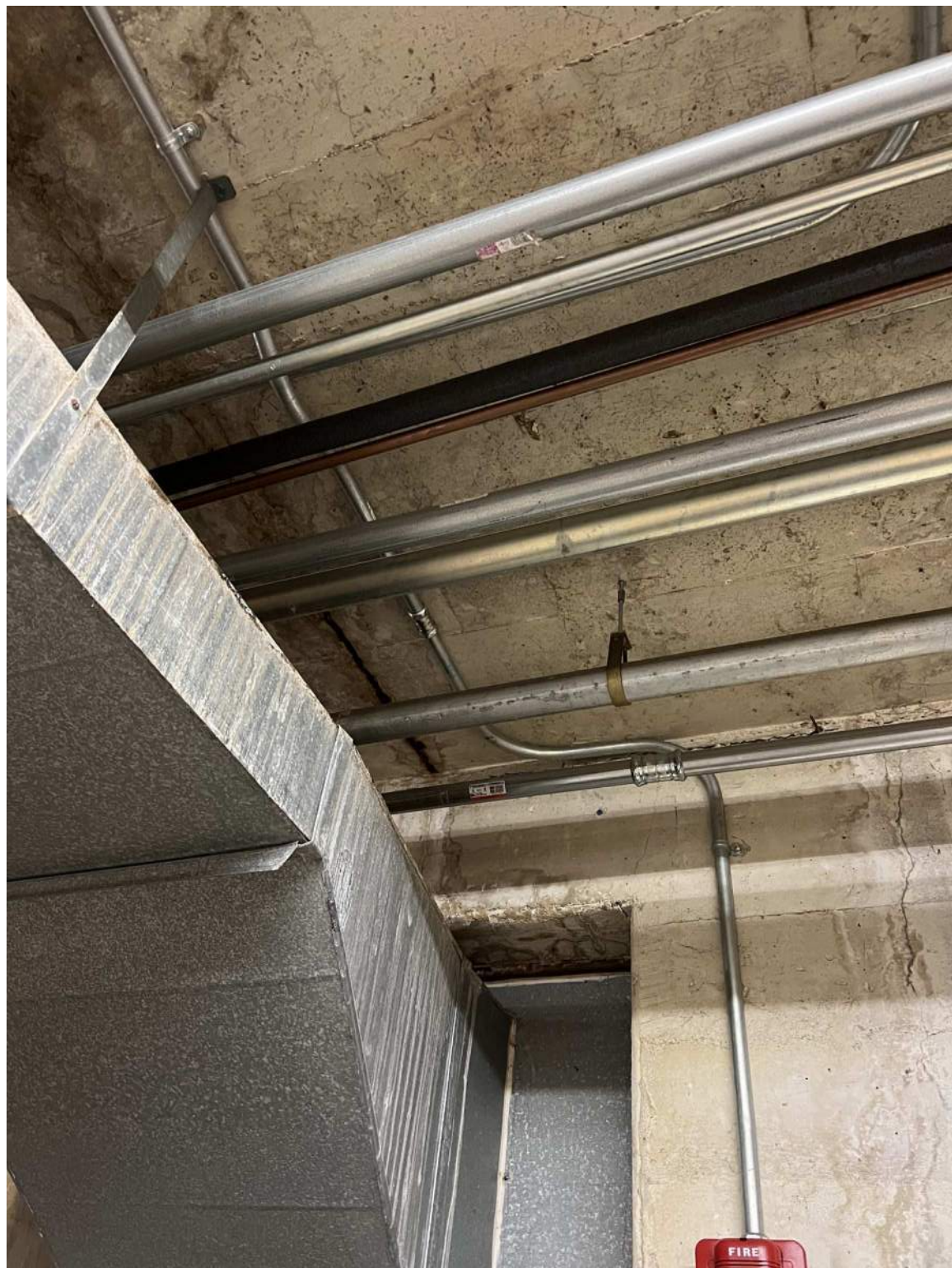
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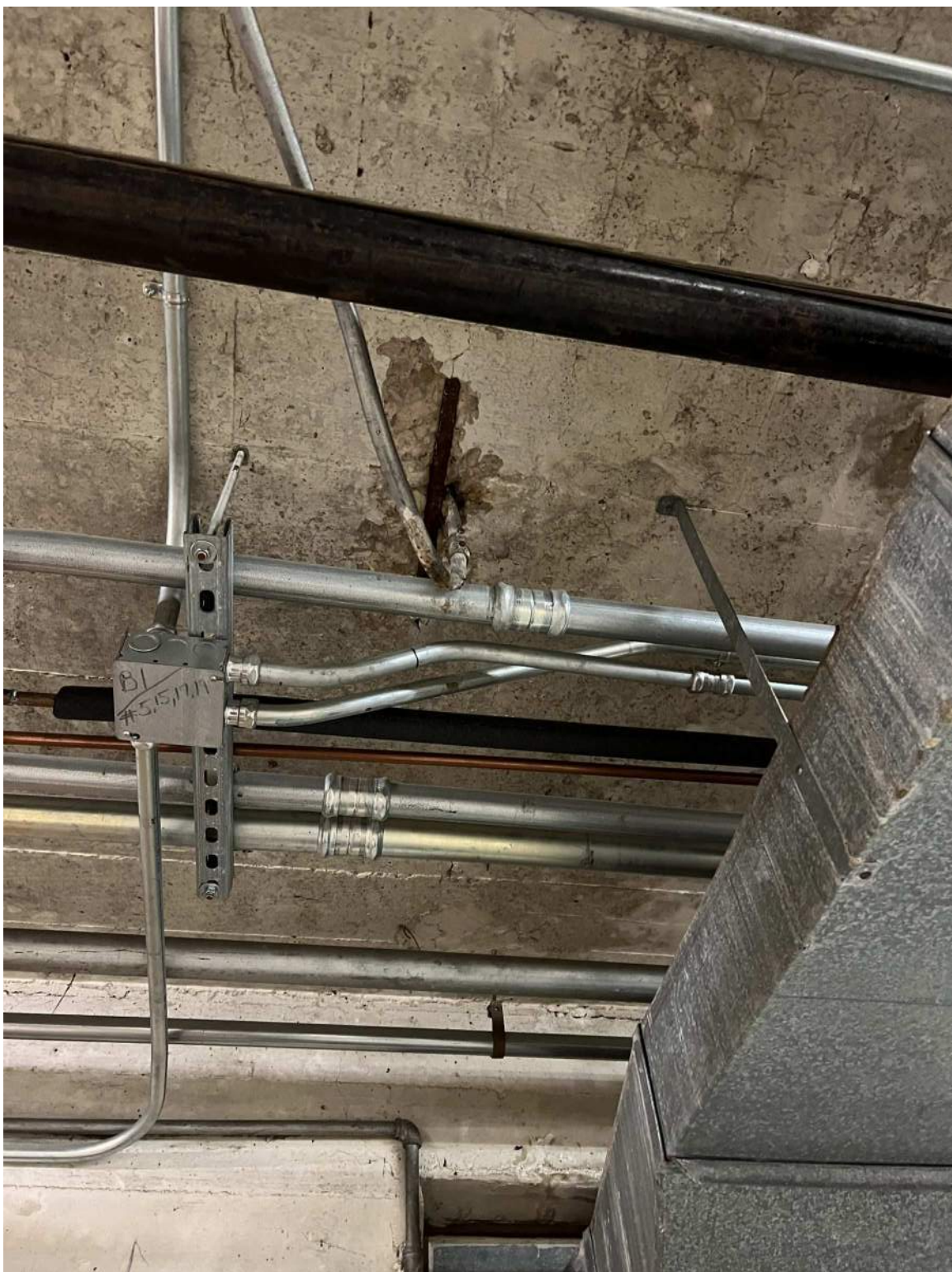
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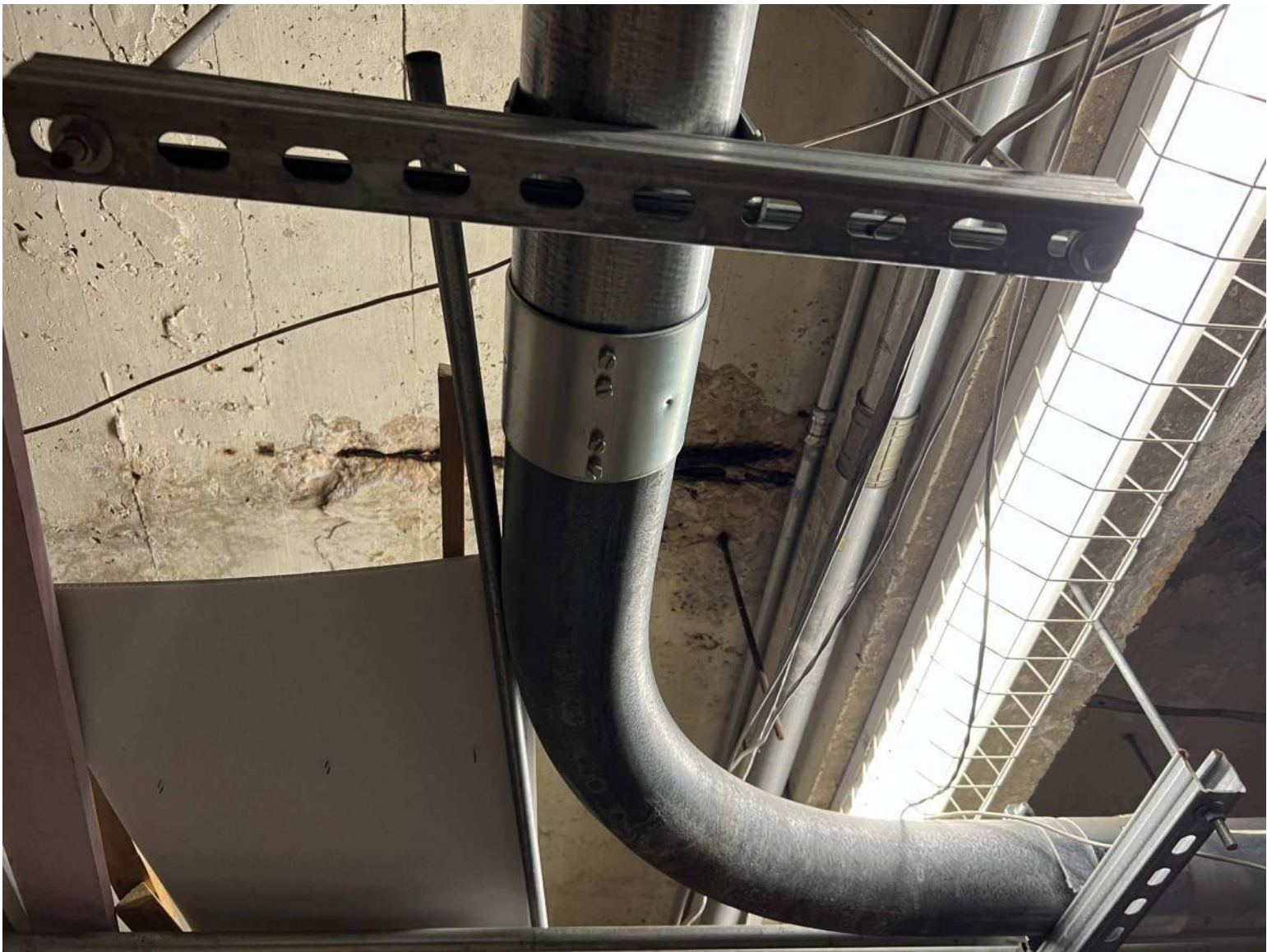
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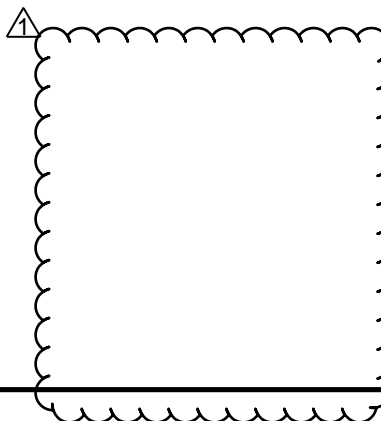
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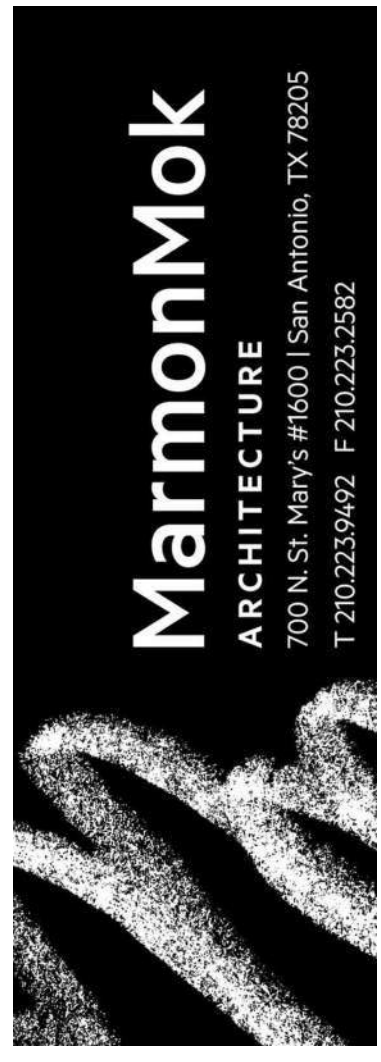


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STATE OF TEXAS

JUSTICE W. EDGE

92769

EXPIRATION DATE 12/31/2023

1/24/2023

CITY OF SAN ANTONIO - PUBLIC WORKS  
LA VILLITA - HVAC UPGRADE  
418 Villita St., San Antonio, TX, 78205

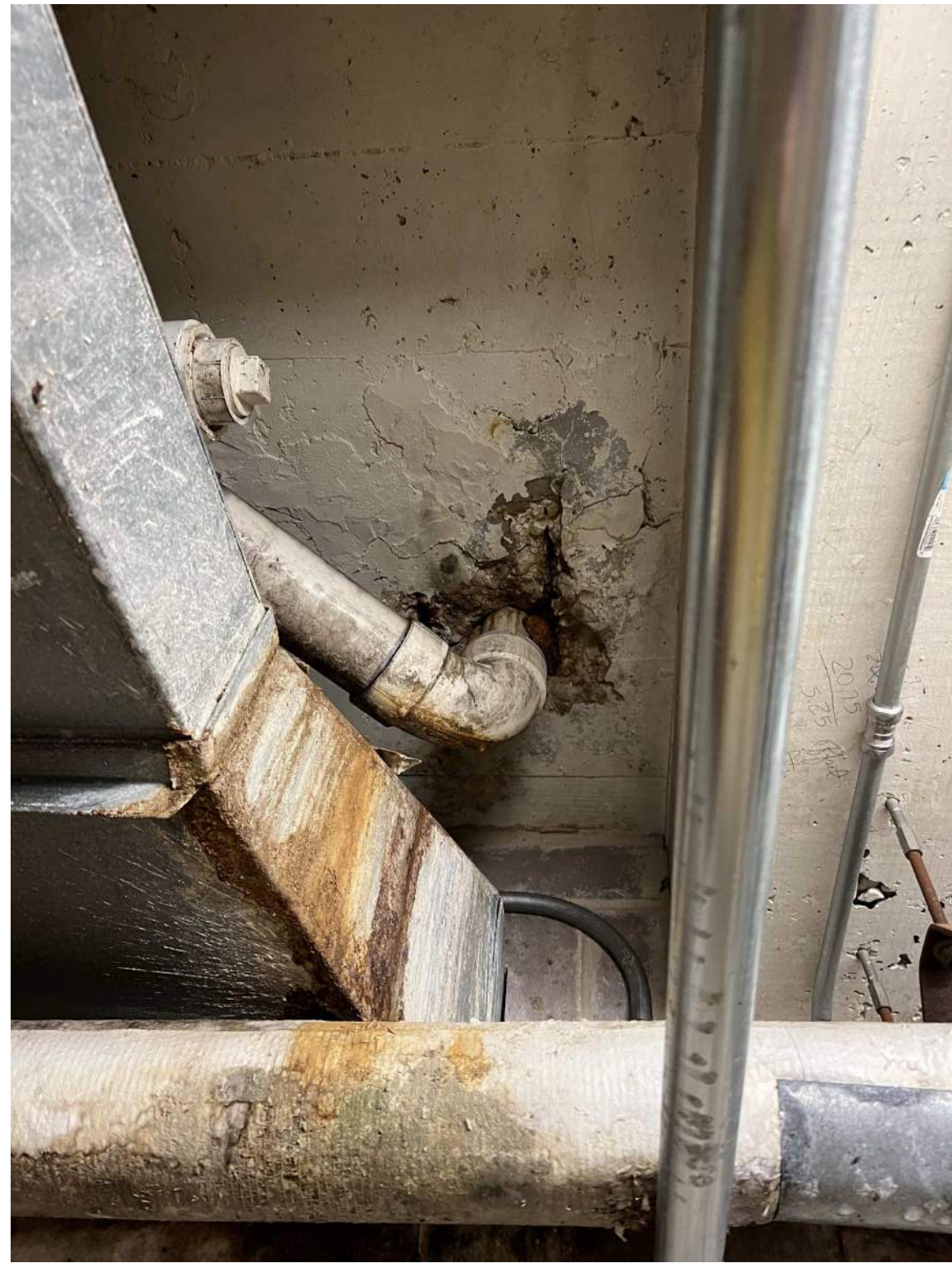
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Revisions  
ADDENDUM 01 1/24/2023

SHEET TITLE  
PHOTOS

SHEET NO.  
S2.0



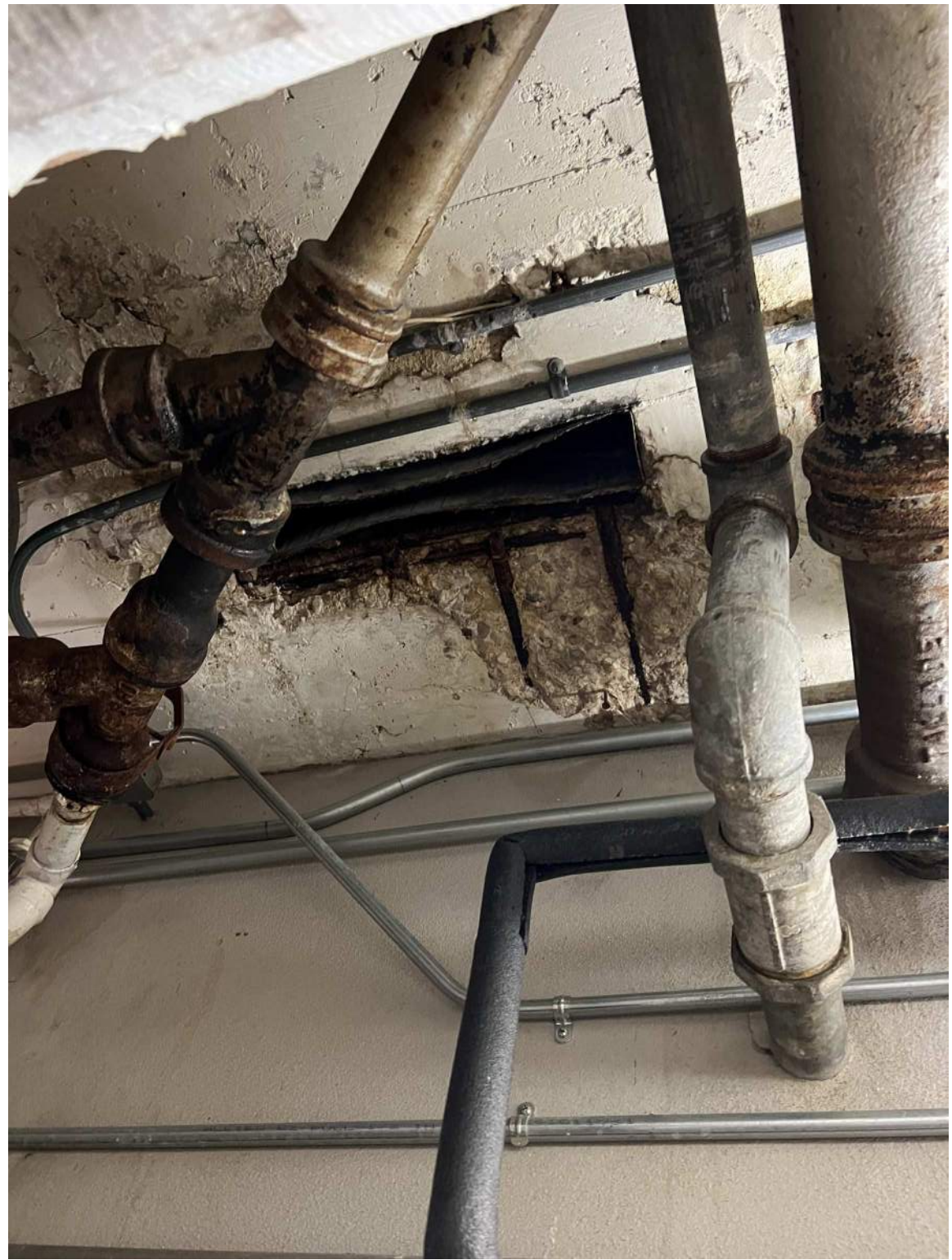
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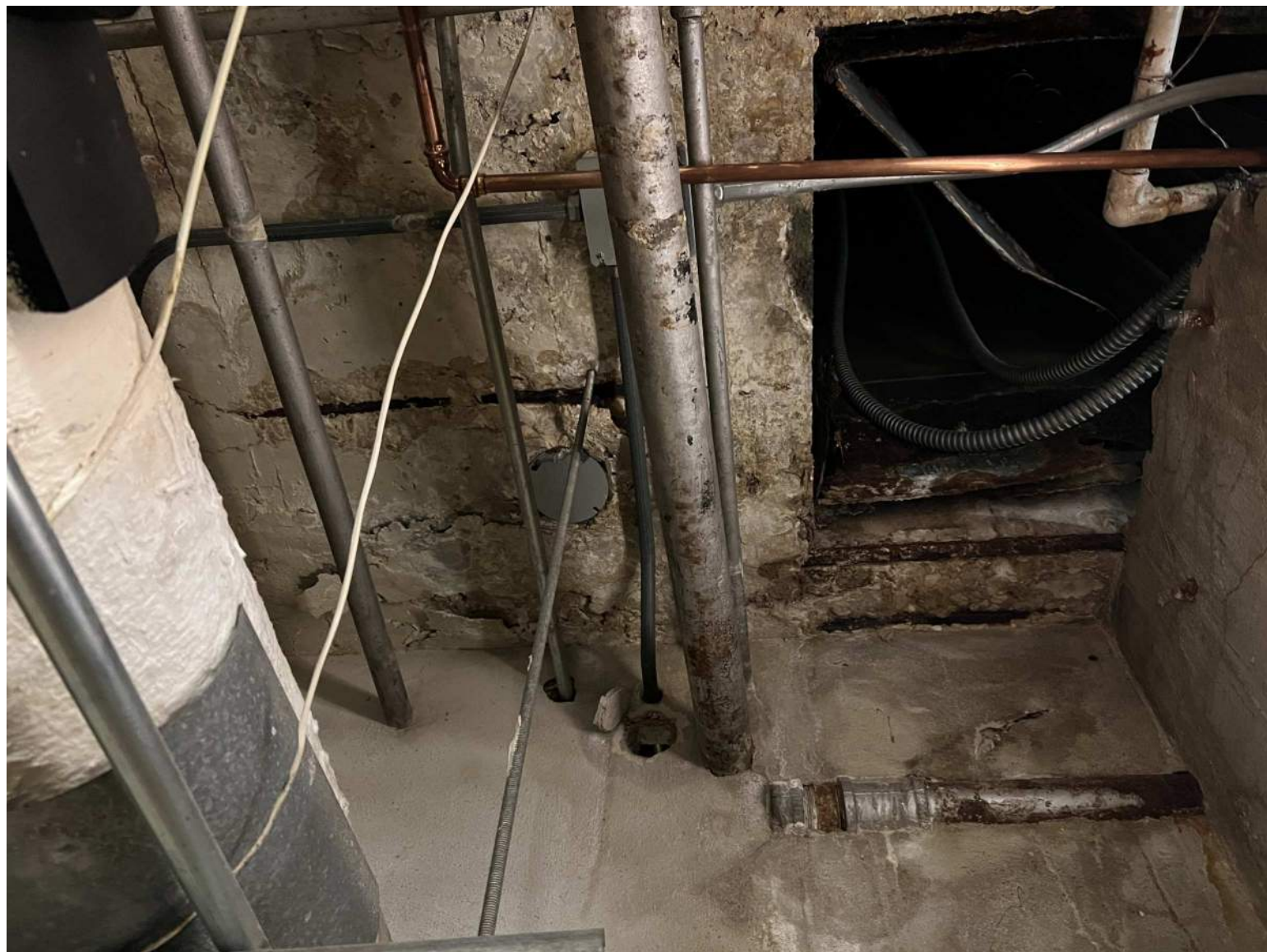
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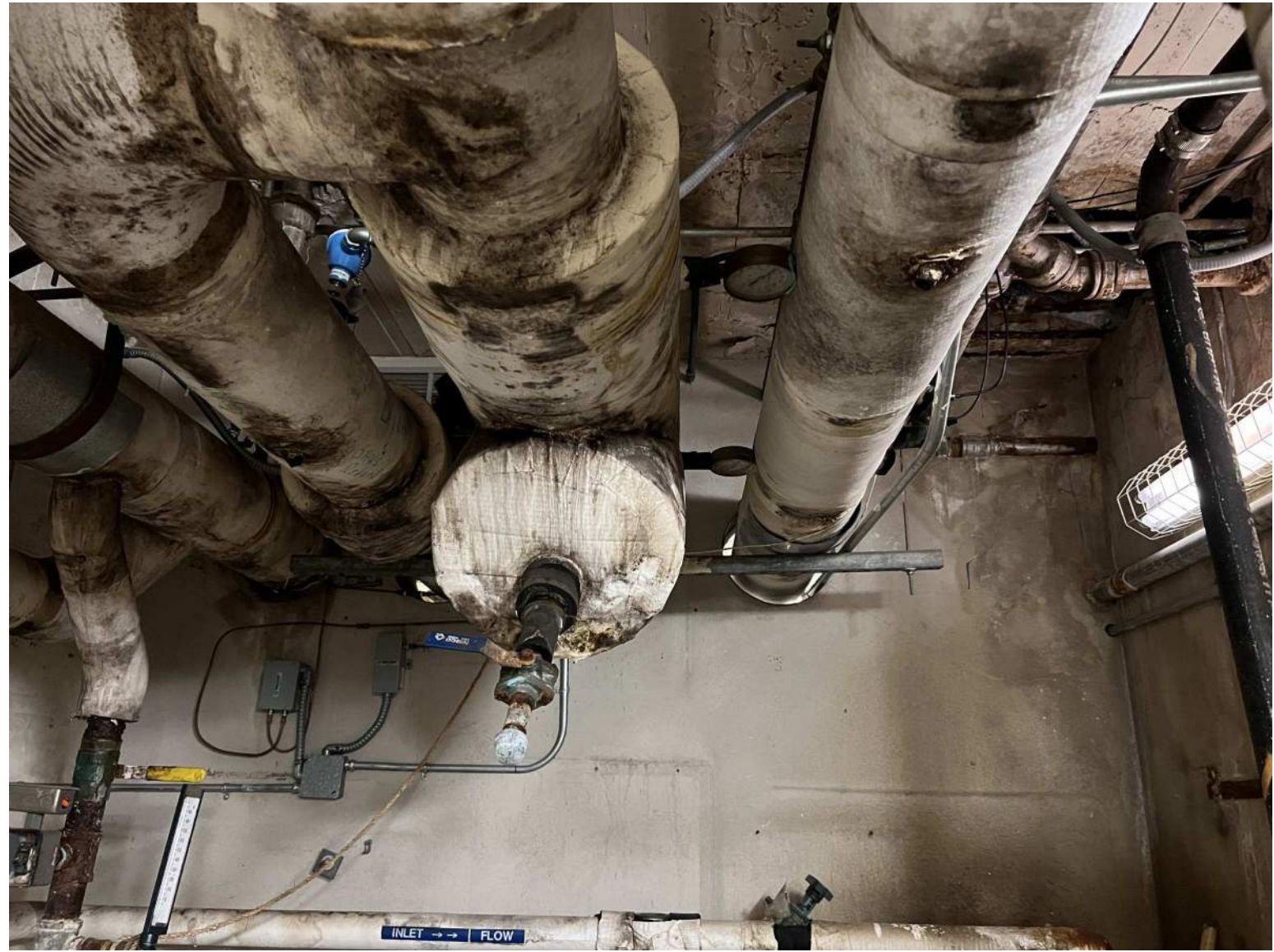
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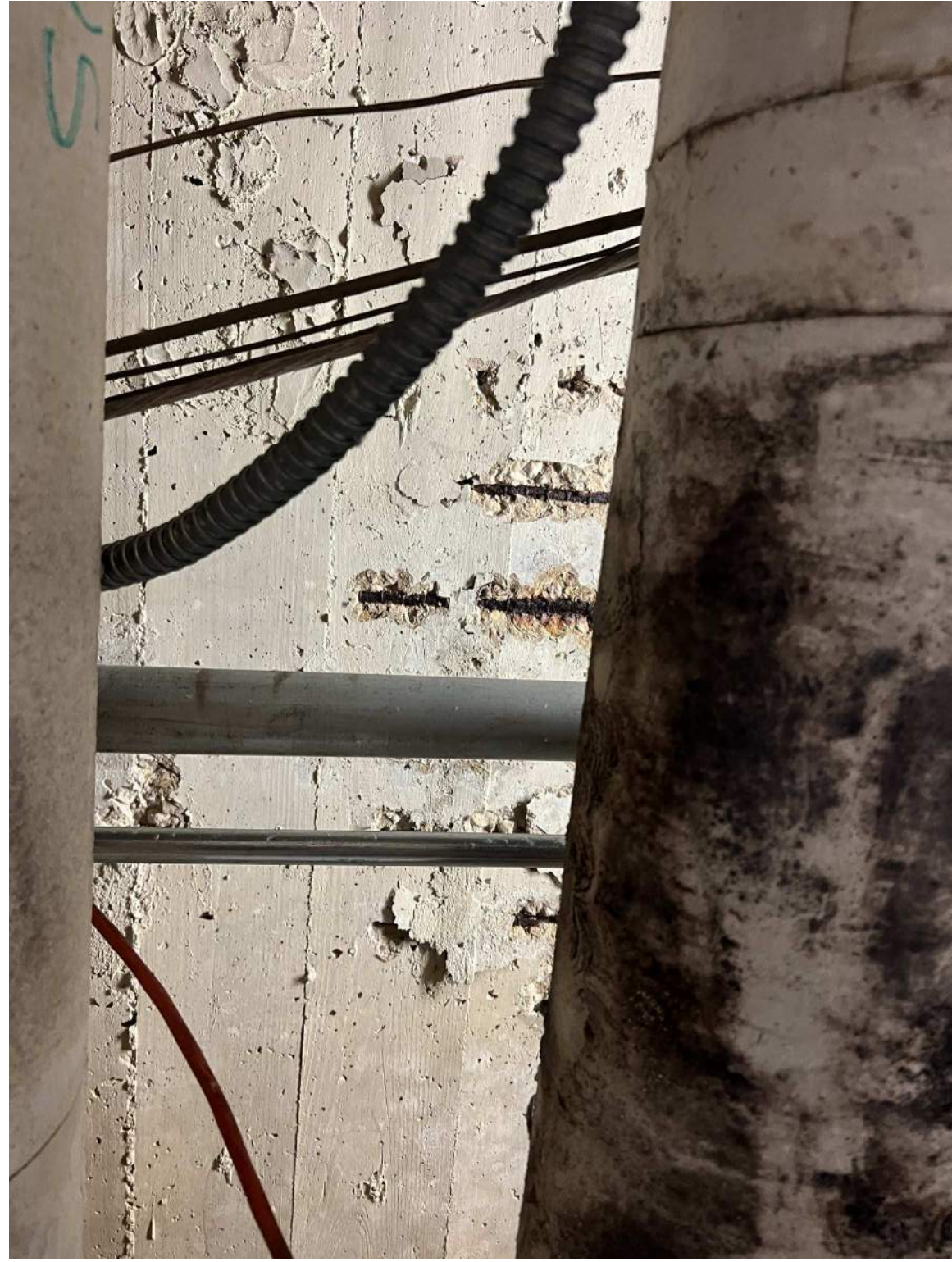
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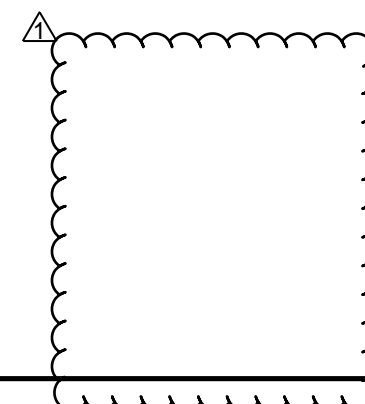
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9 PHOTO 18  
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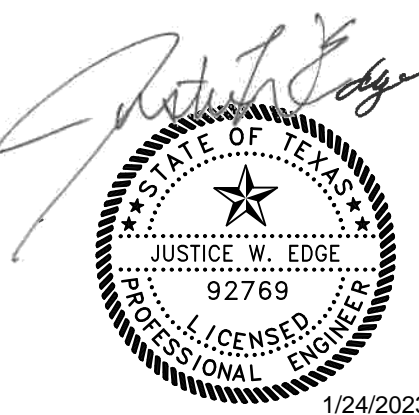
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Revisions  
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SHEET TITLE  
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S2.1

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LA VILLITA - HVAC UPGRADE

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1/24/2023



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#### MECHANICAL ABBREVIATIONS

A(AMP)	AMPERE	H.P.	HORSEPOWER
A/C	AIR CONDITIONING	HTR.	HEATER
ADD.	ADDENDUM	HVAC	HEATING, VENTILATION & AIR CONDITIONING
ADJ.	ADJUSTABLE	H.W.	HOT WATER
AF.	ABOVE FINISHED FLOOR	H.W.R.	HOT WATER RETURN
AFG.	ABOVE FINISHED GRADE	HZ.	HERTZ
AHU	AIR HANDLER UNIT	IN.	INCHES
APPROX.	APPROXIMATE(LY)	INFO.	INFORMATION
ARCH(1.)	ARCHITECT(URAL)	INSUL.	INSULATION
AUTO.	AUTOMATIC	INT.	INTERIOR
AUX.	AUXILIARY	KW	KILOWATT
BLDG.	BUILDING	L.	LOUVER
BOD	BOTTOM OF DUCT	LAT.	LEAVING AIR TEMPERATURE
BOP	BOTTOM OF PIPE	LBS	POUND(S)
BTU.	BRITISH THERMAL UNIT	LRE.	LONG RADIUS ELBOW
CAP	CAPACITY	LVG.	LEAVING
CD.	CONDENSATE DRAIN	MA.	MAKEUP AIR
CFM	CUBIC FOOT PER MINUTE	MAT.	MIXED AIR TEMPERATURE
CIR.	CIRCLE	MAX.	MAXIMUM
CLG.	COOLING	MBH.	1,000 BTU/HR
CO2	CARBON DIOXIDE	MECH.	MECHANICAL
CONST.	CONSTRUCTION	MFR.	MANUFACTURE(R)
CONT.	CONTINUATION	MIN.	MINIMUM
CTR.	CENTER	MISC.	MISCELLANEOUS
C.U.	CONDENSING UNIT	MOC	MAXIMUM OVERCURRENT PROTECTION
D.B.	DRY BULB	MTL.	METAL
DBL.	DOUBLE	MULT.	MULTIPLE
Def.	DEGREE FAHRENHEIT	NVD	MOTORIZED VOLUME DAMPER
DEMO.	DEMOLISH(ITION)	N.	NORTH
DIA.	DIAMETER	N/A	NOT APPLICABLE
DIV.	DIVISION	NAT.	NATURAL
DMPR.	DAMPER	NC.	NOISE CRITERIA
DN.	DOWN	N.I.C.	NOT IN CONTRACT
D.S.	DUCTLESS SPLIT	NO./#	NUMBER
DWG(S).	DRAWING(S)	NOM.	NOMINAL
DX.	DIRECT EXPANSION	N.T.S.	NOT TO SCALE
(E)	EXISTING	OA	OUTSIDE AIR
E.	EAST	PART.	PARTIAL
EA.	EXHAUST AIR	PD.	PRESSURE DROP
EAT.	ENTERING AIR TEMPERATURE	PH	PHASE
EER.	ENERGY EFFICIENCY RATIO	PSI	POUNDS PER SQUARE INCH
E.F.	EXHAUST FAN	PVC	POLYVINYL CHLORIDE
EFF.	EFFICIENCY	QTY.	QUANTITY
EL.	ELEVATION	R.	RADIUS
ELEC.	ELECTRICAL	R.A.	RETURN AIR
ENGR.	ENGINEER	REC.	RECESSED
ENT	ENTERING	REFRIG.	REFRIGERATION
EQ.	EQUAL	REINF.	REINFORCE(ING)(ED)(MENT)
EQT.	EQUIPMENT	REQ.(D)	REQUIRE(D)
ESP.	EXTERNAL STATIC PRESSURE	RM.	ROOM
ETC.	ETCETERA	RC	ROOF CAP
EXH.	EXHAUST	S.	SOUTH
EXST.	EXISTING	SA.	SUPPLY AIR
EXP.	EXPOSED	SCH.	SCHEDULE
EXT	EXTERNAL	S.D.	SMOKE DETECTOR
F.	FAHRENHEIT	SECT.	SECTION
F.F.	FINISH FLOOR	SEER	SEASONAL ENERGY EFFICIENCY
FIN.(D)	FINISH(ED)	SENS.	SENSIBLE
FL.	FLOOR	SF	SQUARE FEET
FLEX.	FLEXIBLE	SP.	STATIC PRESSURE
FT.	FOOT/FEET	SPEC.(S)	SPECIFICATION(S)
GA.	GAUGE		
GALV.	GALVANIZED		
G.C.	GENERAL CONTRACTOR		
G.H.	GAS HEATER		
GND.	GROUND		
GPM	GALLONS PER MINUTE		
GYP.	GYPSON BOARD		

NOTE: NOT ALL ABBREVIATIONS ON THIS LIST ARE APPLICABLE TO THIS PROJECT.

#### MECHANICAL DEMO SYMBOL LEGEND

	• DEMO SUPPLY AIR GRILLE
	• DEMO RETURN AIR GRILLE
	• DEMO EXHAUST AIR GRILLE
	• CONDENSATE DRAIN PIPE
	• DEMO CHILLED WATER RETURN
	• DEMO CHILLED WATER SUPPLY
	• DEMO HOT WATER RETURN
	• DEMO HOT WATER SUPPLY
	• EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, AND DAMPERS
	• DEMOLITION
	• DEMOLITION EQUIPMENT
	• DEMO VAV AIR TERMINAL BOX

#### PIPING SYMBOL LEGEND

— CHWS —	• CHILLED WATER SUPPLY
— CHWR —	• CHILLED WATER RETURN
— HWWS —	• HEATING HOT WATER SUPPLY
— HWWR —	• HEATING HOT WATER RETURN
— CD —	• CONDENSATE DRAIN
— CHWR —	• EXISTING CHILLED WATER RETURN
— CHWS —	• EXISTING CHILLED WATER SUPPLY
— HWWR —	• EXISTING HOT WATER RETURN
— HWWS —	• EXISTING HOT WATER SUPPLY

NOTE: NOT ALL SYMBOLS ON THIS LIST MAY BE APPLICABLE TO THIS PROJECT.

#### DRAFTING SYMBOLS

##### PLAN/DETAIL DESIGNATION

1	PLAN NAME/DETAIL TITLE
SCALE	SCALE
VIEW NUMBER	VIEW NUMBER

##### ELEVATION MARK

	DIRECTION OF VIEW FOR ELEVATION
X/XXXX	SHEET NUMBER
	SECTION NUMBER

##### SECTION MARK

	SHEET NUMBER
X/XXXX	SECTION NUMBER
	DIRECTION OF VIEW FOR SECTION CUT

##### OUTSIDE AIR DEVICE

	OUTSIDE AIR DEVICE TYPE (LOUVER OR ROOF CAP)
	OUTSIDE AIR DEVICE DESIGNATION
X-X/XXX/XØ	OUTSIDE AIR DUCT SIZE
	OUTSIDE AIR CFM

#### MECHANICAL CONTROLS SYMBOL LEGEND

	• CARBON DIOXIDE SENSOR
	• CARBON MONOXIDE SENSOR
	• TEMPERATURE SENSOR
	• HUMIDITY SENSOR
	• DIFFERENTIAL PRESSURE SENSOR
	• FLOW SWITCH
	• WELL PRESSURE SENSOR
	• WELL TEMPERATURE SENSOR
	• STARTER
	• CURRENT SWITCH
	• HAND-OFF-AUTO SWITCH
	• AVERAGING TEMPERATURE SENSOR
	• SINGLE POINT TEMPERATURE SENSOR
	• SMOKE DETECTOR
	• LOW TEMPERATURE LIMIT SWITCH
	• FILTER
	• MOTOR
	• OPPOSED BLADE DAMPER
	• PARALLEL BLADE DAMPER
	• MOTORIZED DAMPER
	• CHILLED WATER COIL
	• HEATING HOT WATER COIL
	• ELECTRIC RESISTIVE HEAT COIL

NOTE: NOT ALL SYMBOLS ON THIS LIST MAY BE APPLICABLE TO THIS PROJECT.

#### PIPING SYMBOL LEGEND

— CHWR —	• CHILLED WATER RETURN
— HWWS —	• HOT WATER SUPPLY
— HWWR —	• HOT WATER RETURN
— CD —	• CONDENSATE DRAIN PIPE
	• AUTOMATIC AIR VENT
	• FLEX
	• BALL VALVE
	• BUTTERFLY VALVE
	• CHECK VALVE, SWING GATE
	• DIRECTION OF FLOW
	• FLOW CONTROL VALVE
	• FLOW METER
	• FLOW SWITCH
	• GATE VALVE
	• OS&Y GATE VALVE
	• PIPE UNION
	• PRESSURE GAUGE ASSEMBLY
	• PRESSURE RELIEF VALVE
	• STRAINER
	• PIPING UP
	• PIPING DOWN
	• PIPING TEE DOWN

NOTE: NOT ALL SYMBOLS ON THIS LIST MAY BE APPLICABLE TO THIS PROJECT.

#### MECHANICAL SYMBOL LEGEND

	• SUPPLY AIR GRILLE
	• RETURN AIR GRILLE
	• EXHAUST AIR GRILLE
	• THERMOSTAT
	• HUMIDISTAT
	• COMBINATION FIRE/SMOKE DAMPER
	• FIRE DAMPER
	• FLEXIBLE DUCT WORK
	• MANUAL DAMPER
	• MOTORIZED VOLUME DAMPER
	• TAKEOFF WITH DAMPER
	• TAKEOFF WITHOUT DAMPER
	• SIDEWALL GRILLE, SUPPLY AIR
	• SIDEWALL GRILLE, RETURN / EXHAUST AIR
	• MECHANICAL EQUIPMENT WITH CLEARANCES, SEE SCHEDULES
	• TRANSITION RECTANGULAR TO ROUND DUCT
	• TURNINGVANE, 90 DEGREE ELBOW
	• RADIUS ELBOW
	• DOUBLE WALL SPIRAL DUCT
	• INCLINED RISE, IN DIRECTION OF AIR FLOW
	• INCLINED DROP, IN DIRECTION OF AIR FLOW
	• CONNECT TO EXISTING
	• DISCONNECT FROM EXISTING
	• SIZE OF RECTANGULAR DUCT
	• WHERE FIRST NUMBER INDICATES WIDTH AND SECOND NUMBER INDICATES VERTICAL DIMENSION
	• DIAMETER OF ROUND DUCT
	• VAV AIR TERMINAL BOX
	• EXISTING DUCTWORK
	• NEW DUCTWORK
	• SUPPLY AIR DUCT UP
	• SUPPLY AIR DUCT DOWN
	• RETURN AIR DUCT UP
	• RETURN AIR DUCT DOWN
	• EXHAUST AIR DUCT UP
	• EXHAUST AIR DUCT DOWN
	• PIPE DOWN
	• PIPE UP
	• UNDERCUT DOOR FOR A 1" MIN. CLEARANCE

NOTE: NOT ALL SYMBOLS ON THIS LIST MAY BE APPLICABLE TO THIS PROJECT.

#### MECHANICAL GENERAL NOTES

- PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE MECHANICAL SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.
- CONTRACT DOCUMENT DRAWINGS FOR MECHANICAL HVAC WORK IS DIAGRAMMATIC AND IS INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY. DO NOT SCALE DRAWINGS FOR EXACT LOCATION OF ITEMS SHOWN.
- INSTALL ALL MECHANICAL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS, MANUFACTURER'S CERTIFIED DRAWING, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.
- SHOULD DISCREPANCIES OCCUR WITHIN THE CONTRACT DOCUMENTS, THE MORE STRINGENT AND MORE COSTLY APPROACH SHALL APPLY FOR BIDDING PURPOSES. THE CONTRACTOR IS TO NOTIFY THE OWNER'S REPRESENTATIVE OF DISCREPANCIES FOR CLARIFICATION. CLARIFICATIONS ISSUED AFTER THE CONTRACT IS AWARDED ARE TO BE INCORPORATED BY THE CONTRACTOR AT NO ADDITIONAL COSTS AND ARE TO BE REVIEWED BY THE OWNER'S REPRESENTATIVE TO DETERMINE IF A REDUCTION IN COST IS JUSTIFIED.
- THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND PAY ALL FEES AND CHARGES TO ALL LOCAL AND OTHER RELATED AGENCIES AS REQUIRED.
- COORDINATE CONSTRUCTION OF ALL MECHANICAL WORK WITH ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL, PLUMBING WORK, ETC., SHOWN ON OTHER CONTRACT DOCUMENT DRAWING.
- CONCRETE HOUSEKEEPING PADS SHALL BE PROVIDED BY THE GENERAL CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO COORDINATE THE SIZE AND LOCATION OF CONCRETE HOUSEKEEPING PADS WITH THE GENERAL CONTRACTOR.
- MECHANICAL CONTRACTOR SHALL COORDINATE ANY ROOF PENETRATION WITH ROOFING CONTRACTOR, ROOF SYSTEM MANUFACTURER, ARCHITECT, AND ALL OTHER TRADES INVOLVED. ALL ROOF PENETRATIONS SHALL BE REVIEWED AND APPROVED BY ROOF SYSTEM MANUFACTURER TO COMPLY WITH ROOFING WARRANTY.
- MECHANICAL CONTRACTOR SHALL COORDINATE LOCATIONS, SIZES OF ALL FLOOR AND WALL PENETRATIONS AND SHALL BE COORDINATED WITH STRUCTURAL, PLUMBING, ELECTRICAL, AND ARCHITECTURAL WORK.

#### HVAC GENERAL NOTES

- COORDINATE DIFFUSER, REGISTER, AND GRILLE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS, LIGHTING, AND OTHER CEILING ITEMS AND MAKE MINOR DUCT MODIFICATIONS TO SUIT.
- ALL DUCTWORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS IN DUCTS, INCLUDING DIVIDED DUCTS AND TRANSITIONS AROUND OBSTRUCTIONS, SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
- PROVIDE ACCESS DOORS IN DUCTWORK TO PROVIDE ACCESS FOR ALL ITEMS AND EQUIPMENT LOCATED IN THE DUCTWORK THAT REQUIRE SERVICE AND/OR INSPECTION.
- SMOKE DETECTORS SHALL BE FURNISHED BY FIRE CONTRACTOR AND WIRED BY THE ELECTRICAL CONTRACTOR. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR MOUNTING THE SMOKE DETECTOR IN DUCTWORK AS SHOWN ON THE DRAWINGS AND IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS. SMOKE DETECTORS SHALL BE PROVIDED AS REQUIRED BY CODE AND AS INDICATED ON THE DRAWINGS.

#### MECHANICAL PIPING GENERAL NOTES

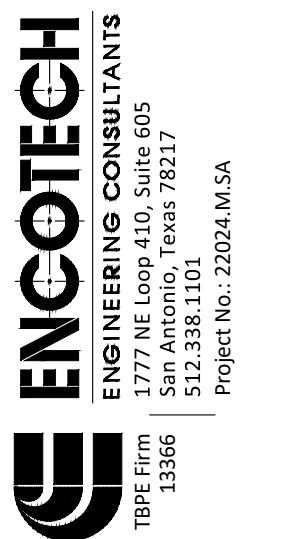
- PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE PIPING SYSTEMS AS INDICATED ON THE DRAWINGS, AND AS SPECIFIED AND REQUIRED BY CODE.
- INSTALL PIPING SO THAT ALL PIPING ACCESSORIES REQUIRING SERVICE, MAINTENANCE, OR REPLACING ARE ACCESSIBLE.
- ALL VALVES SHALL BE INSTALLED SO THAT THE VALVE REMAINS IN SERVICE WHEN EQUIPMENT OR PIPING ON THE EQUIPMENT SIDE OF THE VALVE IS REMOVED.
- ALL PIPING WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS IN PIPING AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

#### DEMOLITION GENERAL NOTES

- THE CONTRACTOR SHALL THOROUGHLY EXAMINE SITE AND SATISFY HIMSELF AS TO THE CONDITIONS UNDER WHICH THE DEMOLITION WORK IS TO BE PERFORMED. VERIFY ALL MECHANICAL ITEMS AND EQUIPMENT TO BE REMOVED PRIOR TO COMMENCING WORK.
- THE CONTRACTOR IS TO CONFIRM WITH THE OWNER WHICH EQUIPMENT DESIGNATED TO BE DEMOLISHED IS TO BE TURNED OVER TO THE OWNER AND WHICH ARE TO BE LEGALLY DISPOSED OF.



2022-12-01



# CITY OF SAN ANTONIO - PUBLIC WORKS LA VILLITA - HVAC UPGRADE

418 Villita St, San Antonio, TX 78205

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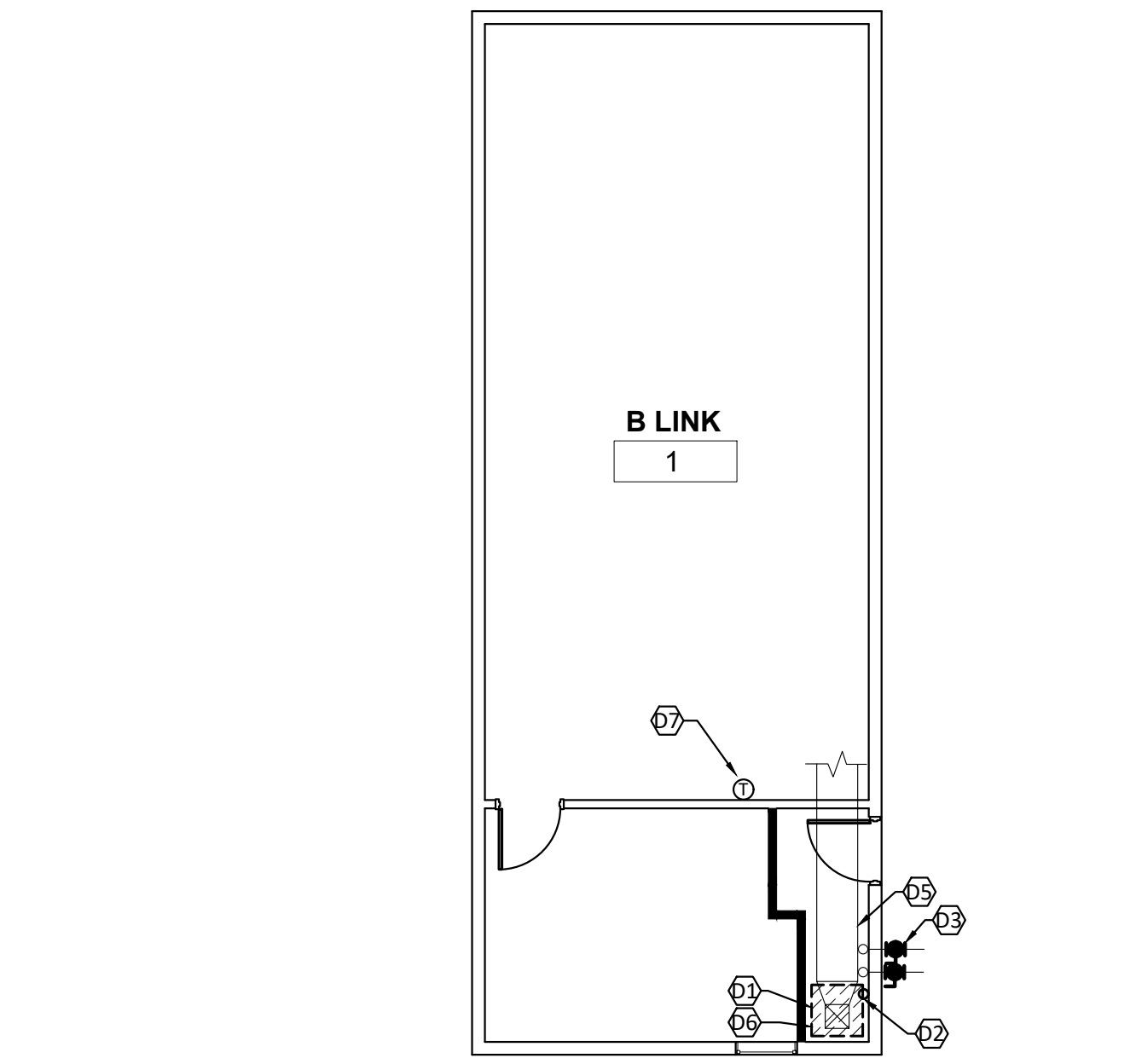
Drawn GGR  
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Date 12/05/2022  
Project No. 21032  
Revisions

SHEET TITLE  
MECHANICAL  
NOTES &  
LEGENDS

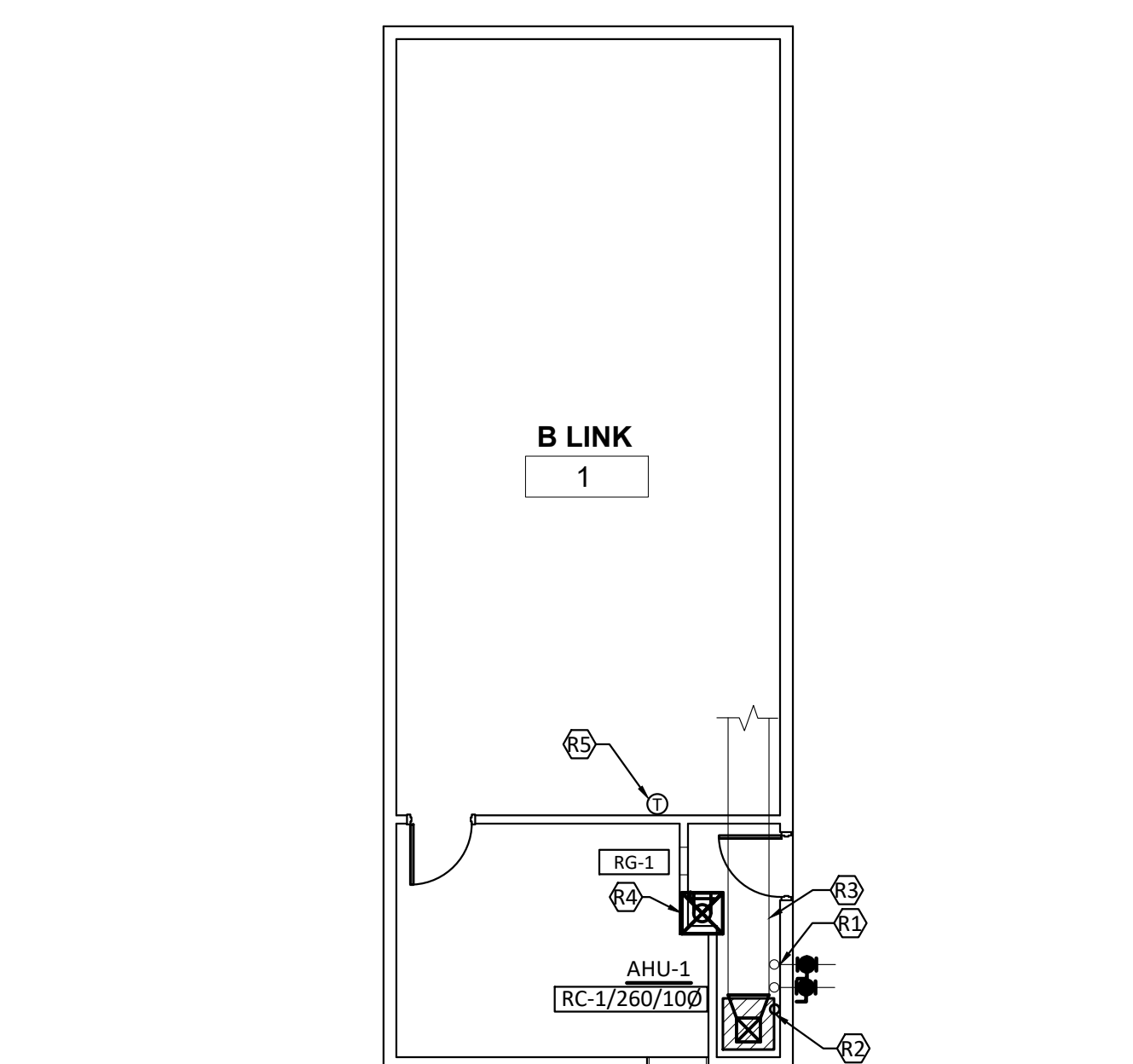
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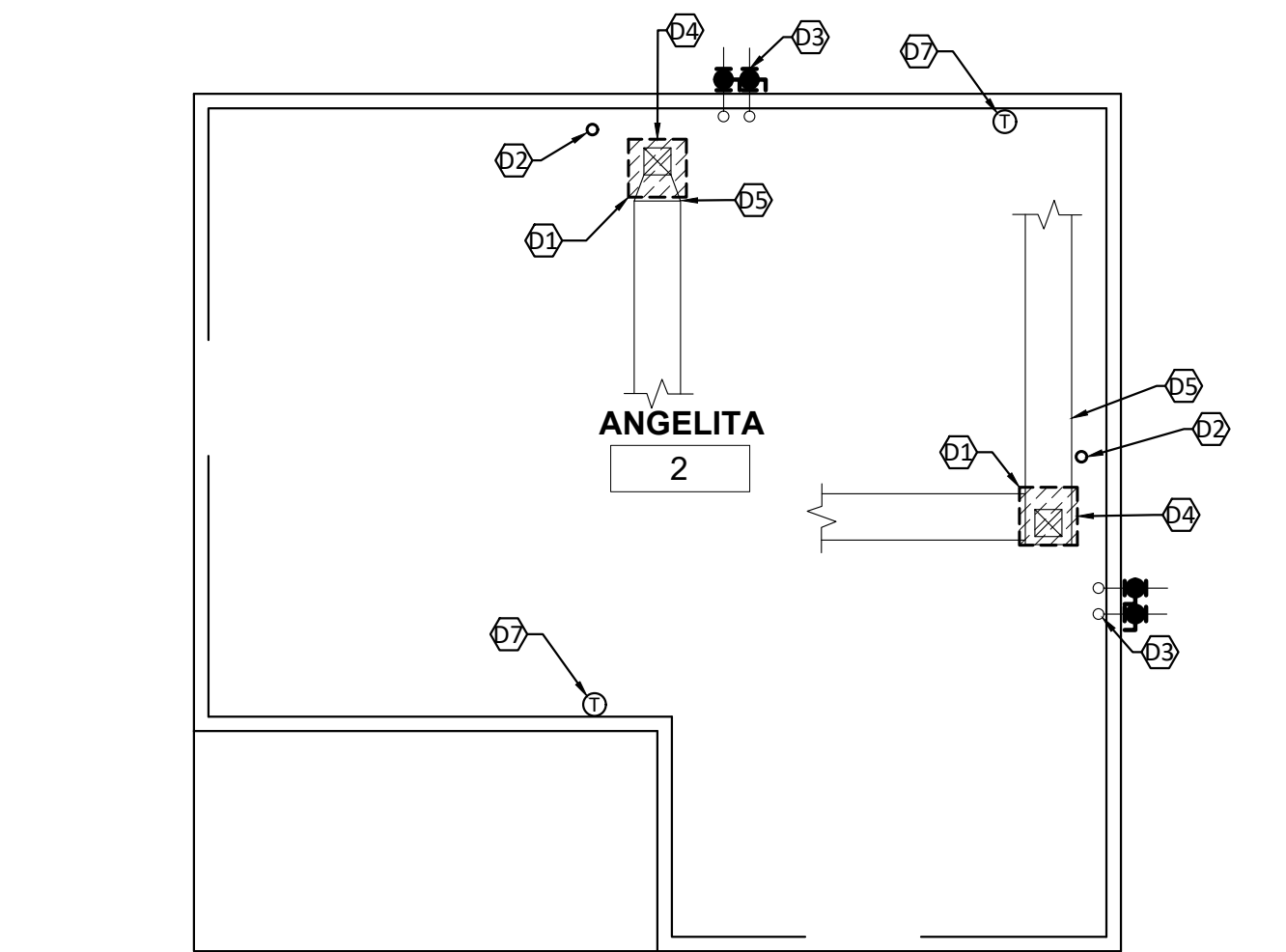




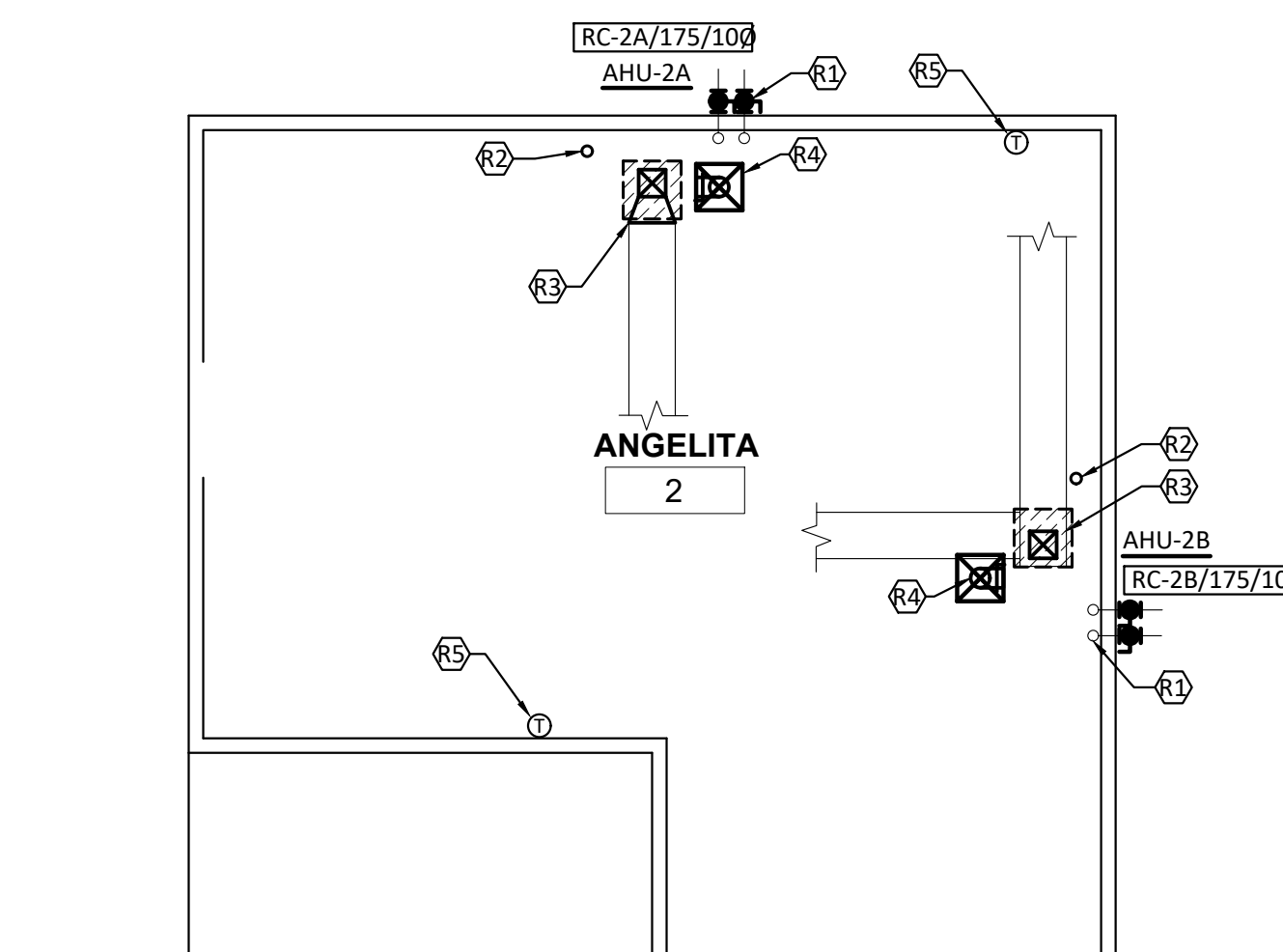
**1** BUILDING 1 - M&E DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



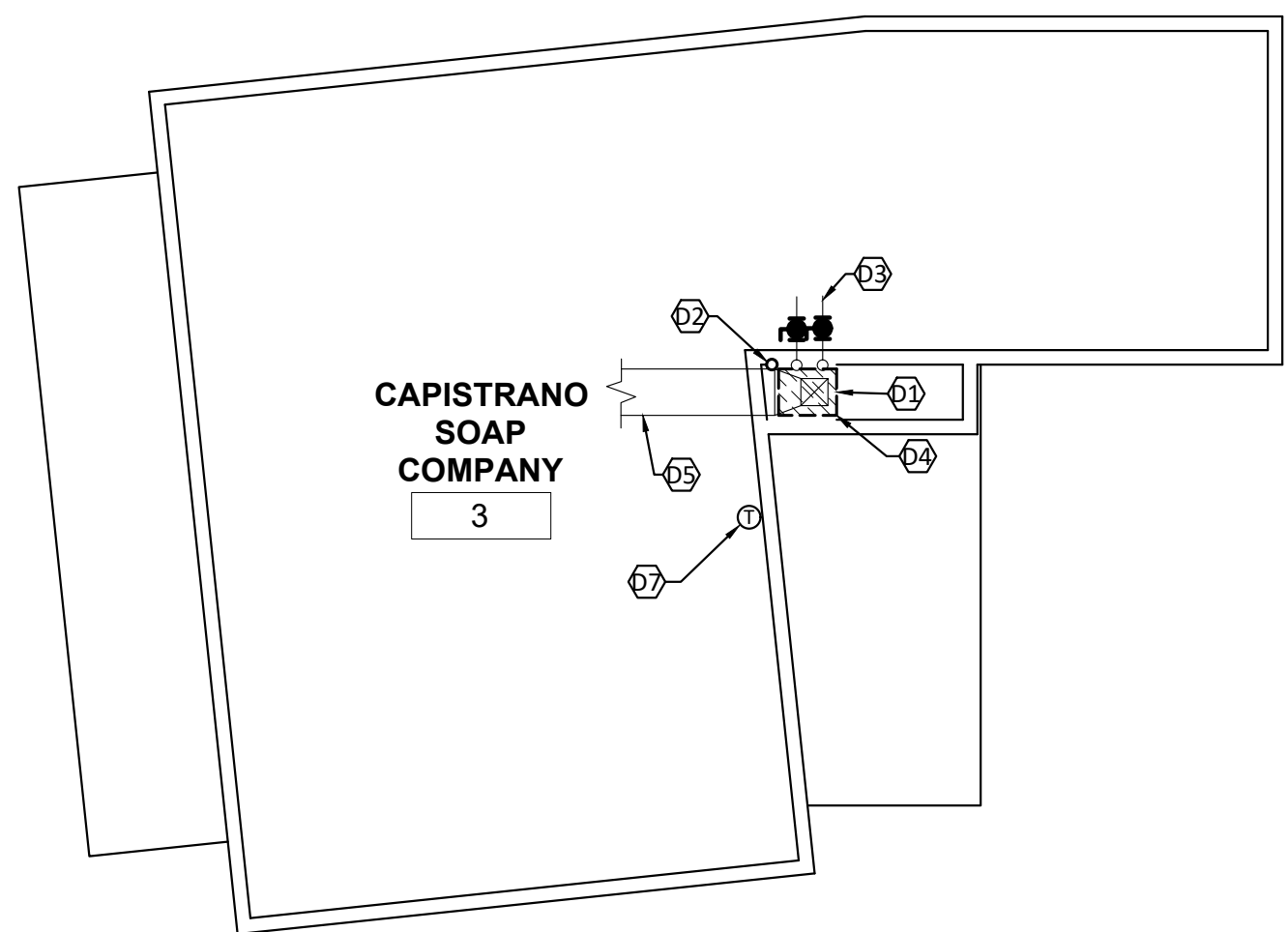
**2** BUILDING 1 - M&E NEW WORK PLAN  
SCALE: 1/8"=1'-0"



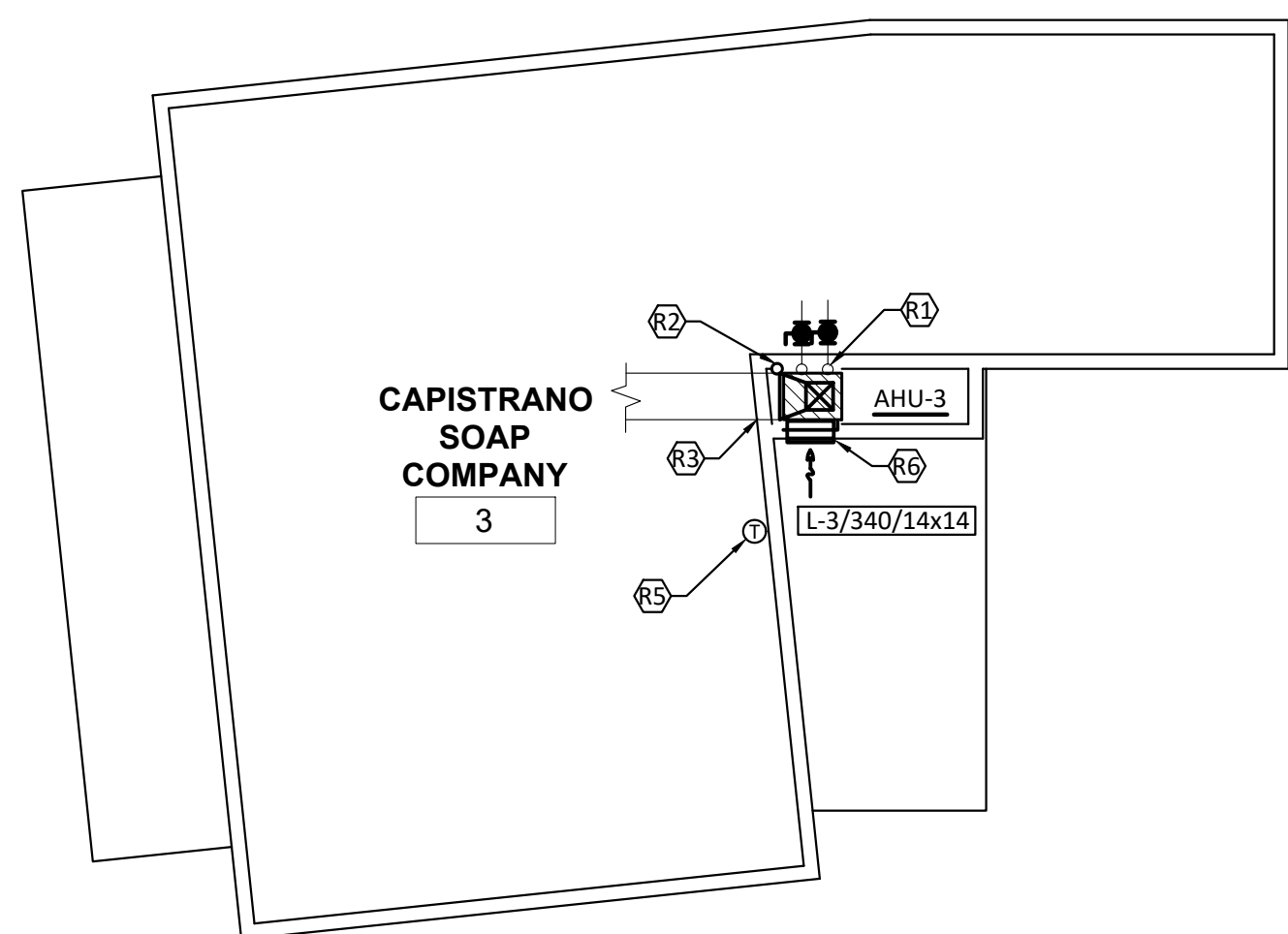
**3** BUILDING 2 - M&E DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



**4** BUILDING 2 - M&E NEW WORK PLAN  
SCALE: 1/8"=1'-0"



**5** BUILDING 3 - M&E DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



**6** BUILDING 3 - M&E NEW WORK PLAN  
SCALE: 1/8"=1'-0"

## GENERAL SHEET NOTES

- REFER TO SHEET M000 FOR ADDITIONAL INFORMATION.
- COORDINATE REMOVAL AND DOWNTIME OF THE ELECTRICAL SYSTEM WITH BUILDING OWNER/LEASEHOLDER.

## DEMOLITION PLAN NOTES

- EXISTING DIFFUSERS, GRILLS AND DUCT WORK NOT SHOWN TO BE REMOVED SHALL BE EXISTING TO REMAIN.
- ALL EQUIPMENT REMOVED DURING DEMOLITION SHALL BE TURNED OVER TO THE OWNER.
- COORDINATE REMOVAL AND DOWNTIME OF THE MECHANICAL SYSTEM WITH BUILDING OWNER/LEASEHOLDER.

## RENOVATION PLAN NOTES

- ALL WALL-MOUNTED THERMOSTATS, HUMIDISTAT, ETC IN PUBLIC PLACES SHALL BE INSTALLED WITH CLEAR LOCKABLE COVERS.
- UNLESS OTHERWISE NOTED, FOR ALL AIR HANDLING UNITS PROVIDE A MINIMUM 3/4 INCH CONDENSATE PIPING WITH 1 INCH ELASTOMERIC INSULATION TO THE NEAREST HUB DRAIN, TAILPIECE OR FLOOR SINK. SLOPE CONDENSATE PIPING MINIMUM 1/8 INCH PER LINEAR FOOT TOWARDS DRAIN.
- ALL NEW DUCTWORK AND PIPING SHALL NOT BE INSTALLED OVER EXISTING OR NEW ELECTRICAL EQUIPMENT.

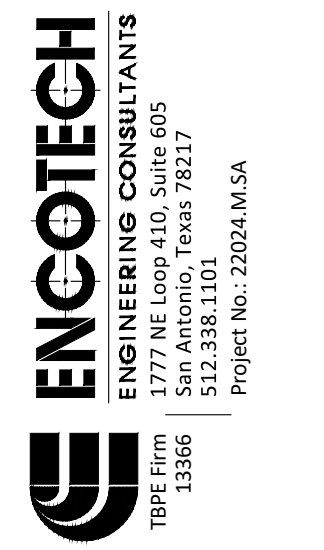
## KEYED NOTES

- EXISTING AIR HANDLER TO BE REMOVED. CHILLED WATER SUPPLY AND RETURN LINES FROM BUILDING SOURCE SHALL REMAIN IN PLACE. CONTRACTOR TO VERIFY PIPING AND VALVES ARE FULLY FUNCTIONAL.
- EXISTING CONDENSATE DRAIN. FIELD VERIFY CONDENSATE DRAIN IS CONNECTED TO THE SANITARY SEWER SYSTEM WITH AIR GAP CONNECTION AND IS FULLY FUNCTIONAL. REMOVE ANY CLOGS AND REPAIR DAMAGED LINES.
- EXISTING CHILLED WATER SUPPLY AND RETURN LINES FROM CHILLED WATER PUMP ROOM TO REMAIN IN PLACE. REMOVE PIPING FROM AHU ISOLATION VALVE TO UNIT AND PREPARE FOR NEW UNIT CONNECTION. CONTRACTOR TO FIELD VERIFY EXACT LOCATION.
- AIR HANDLER LOCATED ON FIRST FLOOR, ENCLOSED IN ROOM.
- EXISTING SUPPLY DUCT MAIN TO REMAIN. REMOVE DUCTWORK SECTION CONNECTED TO EXISTING UNIT AND PREPARE FOR RECONNECTION TO NEW UNIT REPLACEMENT.
- AIR HANDLER LOCATED ON FIRST FLOOR, OPEN TO ROOM.
- REMOVE EXISTING THERMOSTAT INCLUDING ALL ASSOCIATED CONTROL WIRING. LOCATION IS SHOWN DIAGRAMMATICALLY, FIELD VERIFY EXACT LOCATION.

- PROVIDE AND INSTALL NEW TWO-WAY CHILLED WATER CONTROL VALVE AT THE AIR HANDLING UNIT. RECONNECT CHILLED WATER SUPPLY AND RETURN LINES TO NEW AHU. ISOLATION VALVES EXISTING TO REMAIN AT AHU MATCH EXISTING PIPE SIZE.
- PROVIDE NEW AIR HANDLING UNIT ON 10H MINIMUM STAND. PROVIDE NEOPRENE ISOLATORS BETWEEN UNIT AND STAND. ROUTE 3/4" CONDENSATE DRAIN TO EXISTING DRAIN SOURCE.
- RECONNECT NEW AHU INTO EXISTING TO REMAIN SUPPLY DUCT.
- PROVIDE NEW OPEN ENDED OUTSIDE AIR DUCT FROM NEW ROOF CAP TO AIR HANDLING UNIT AREA. PROVIDE VOLUME DAMPER AND BALANCE TO CFM NOTED. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ROOF CAP.
- PROVIDE NEW THERMOSTAT WITH CLEAR, LOCKABLE COVERS IN EXISTING LOCATION. LOCATION IS SHOWN DIAGRAMMATICALLY, FIELD VERIFY EXACT LOCATION.
- PROVIDE NEW OPEN ENDED OUTSIDE AIR DUCT FROM EXISTING SIDE MOUNT LOUVER TO AIR HANDLING UNIT AREA. PROVIDE VOLUME DAMPER AND BALANCE TO CFM NOTED. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ROOF CAP.



2022-12-01



# CITY OF SAN ANTONIO - PUBLIC WORKS LA VILLITA - HVAC UPGRADE

418 Villita St, San Antonio, TX 78205

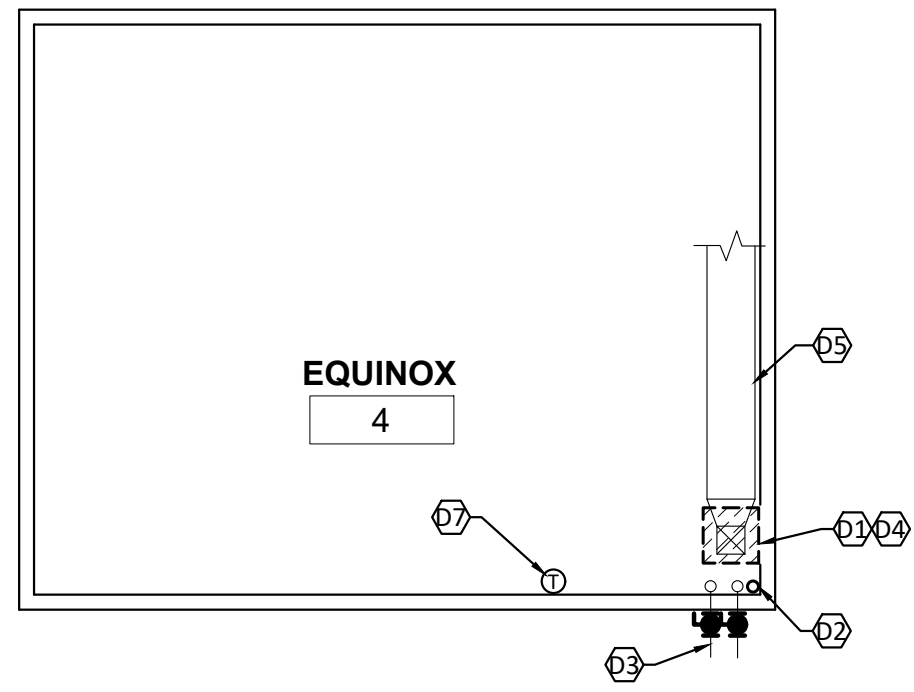
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Drawn GGR  
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Date 12/05/2022  
Project No. 21032  
Revisions

SHEET TITLE  
MECHANICAL  
PLANS -  
BLDG. 1,2,3

SHEET NO.

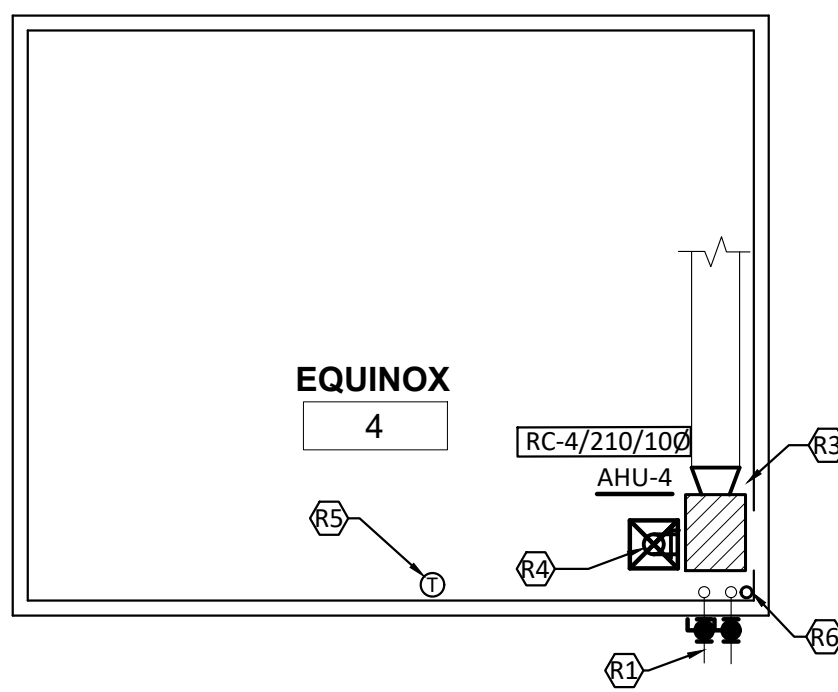
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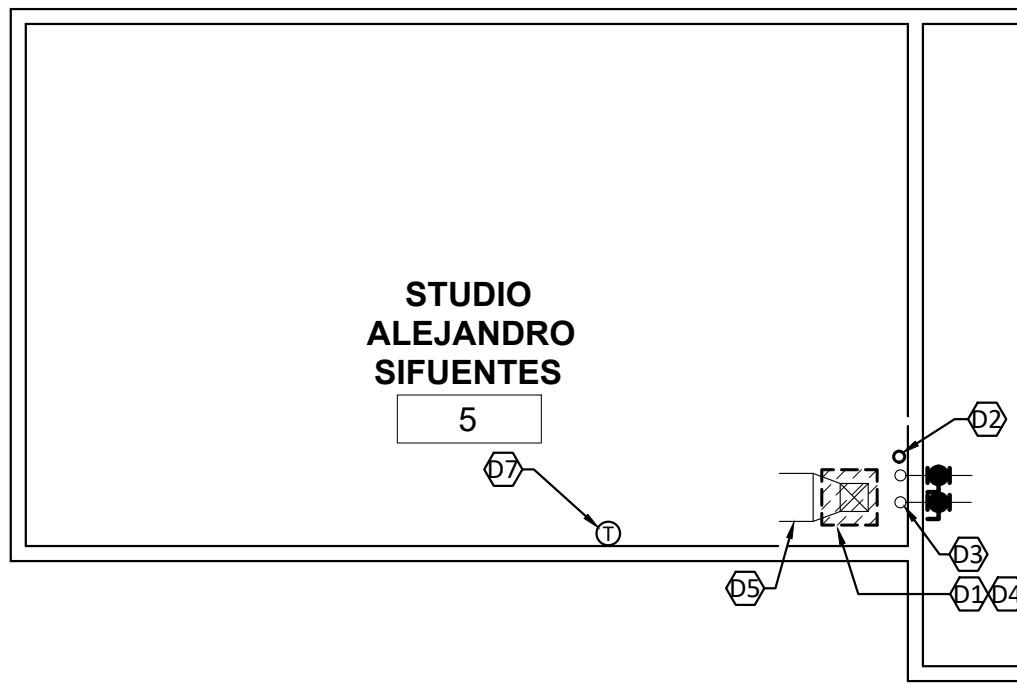
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SCALE: 1/8"=1'-0"



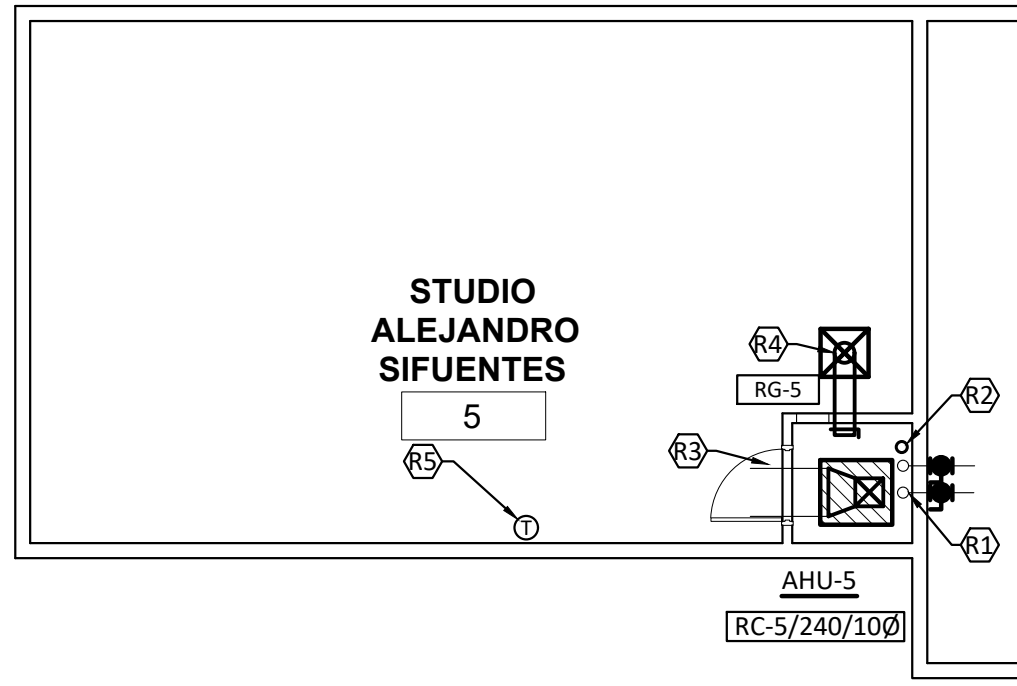
**2** BUILDING 4 - M&E NEW WORK PLAN

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



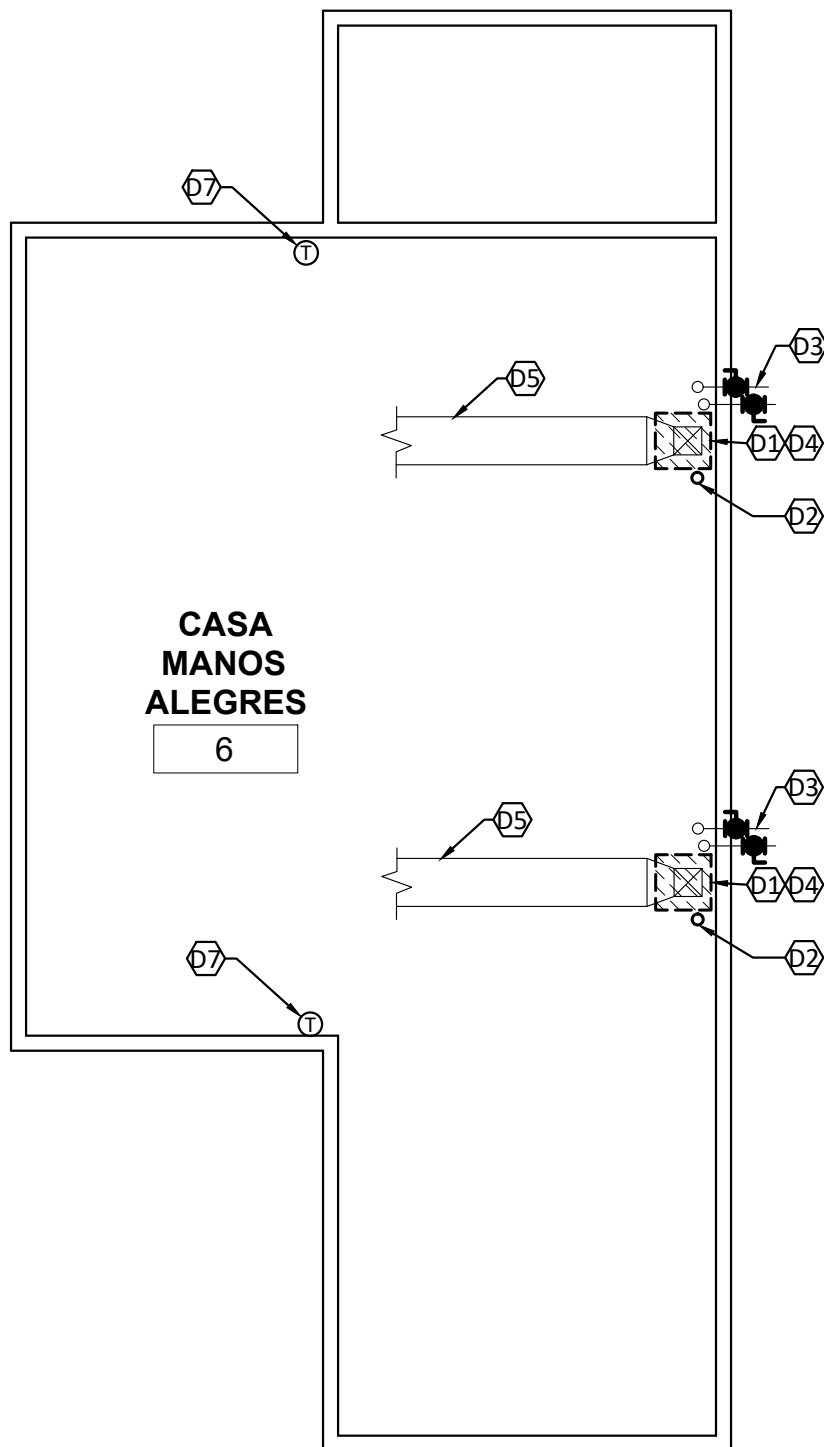
**3** BUILDING 5 - M&E DEMOLITION PLAN

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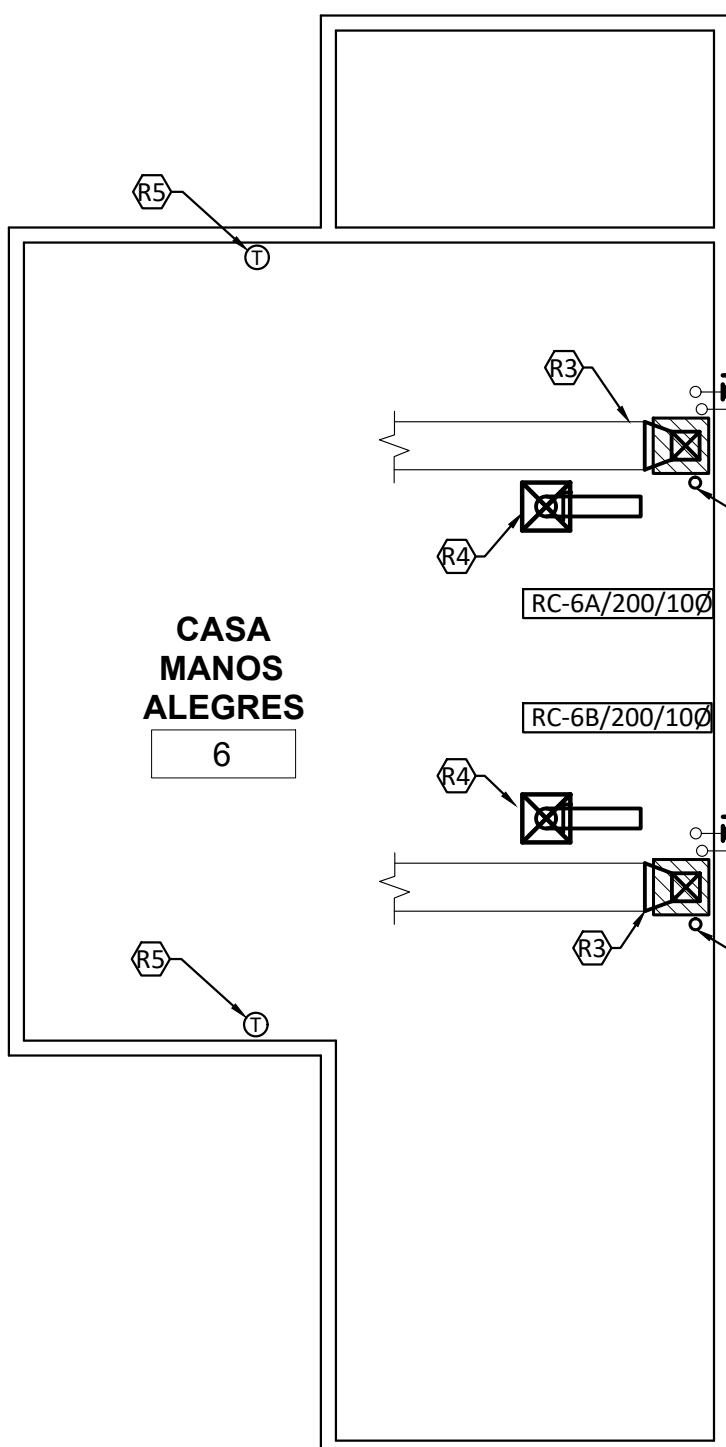
**4** BUILDING 5 - M&E NEW WORK PLAN

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



**5** BUILDING 6 - M&E DEMOLITION PLAN

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



**6** BUILDING 6 - M&E NEW WORK PLAN

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



## GENERAL SHEET NOTES

- REFER TO SHEET M000 FOR ADDITIONAL INFORMATION.
- COORDINATE REMOVAL AND DOWNTIME OF THE ELECTRICAL SYSTEM WITH BUILDING OWNER/LEASEHOLDER.

## DEMOLITION PLAN NOTES

- EXISTING DIFFUSERS, GRILLS AND DUCT WORK NOT SHOWN TO BE REMOVED SHALL BE EXISTING TO REMAIN.
- ALL EQUIPMENT REMOVED DURING DEMOLITION SHALL BE TURNED OVER TO THE OWNER.
- COORDINATE REMOVAL AND DOWNTIME OF THE MECHANICAL SYSTEM WITH BUILDING OWNER/LEASEHOLDER.

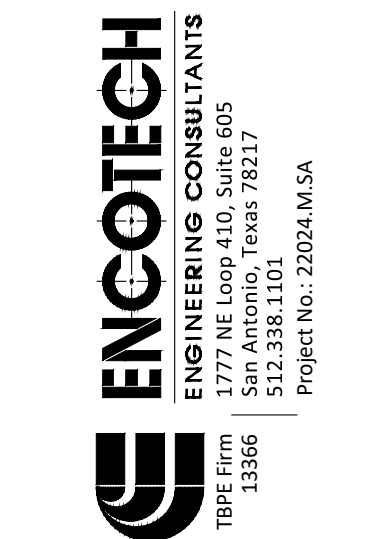
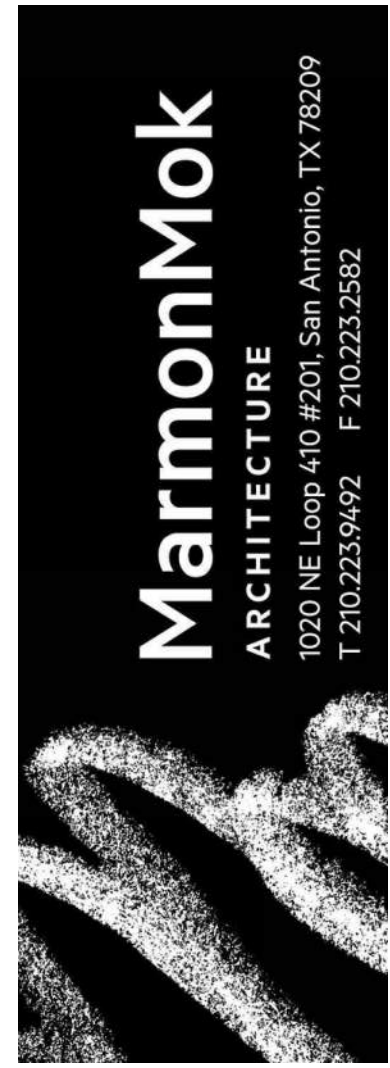
## RENOVATION PLAN NOTES

- ALL WALL-MOUNTED THERMOSTATS, HUMIDISTAT, ETC IN PUBLIC PLACES SHALL BE INSTALLED WITH CLEAR LOCKABLE COVERS.
- UNLESS OTHERWISE NOTED, FOR ALL AIR HANDLING UNITS PROVIDE A MINIMUM 3/4 INCH CONDENSATE PIPING WITH 1 INCH ELASTOMERIC INSULATION TO THE NEAREST HUB DRAIN, TAILPIECE OR FLOOR SINK. SLOPE CONDENSATE PIPING MINIMUM 1/8 INCH PER LINEAR FOOT TOWARDS DRAIN.
- ALL NEW DUCTWORK AND PIPING SHALL NOT BE INSTALLED OVER EXISTING OR NEW ELECTRICAL EQUIPMENT.

## KEYED NOTES

- EXISTING AIR HANDLER TO BE REMOVED. CHILLED WATER SUPPLY AND RETURN LINES FROM BUILDING SOURCE SHALL REMAIN IN PLACE. CONTRACTOR TO VERIFY PIPING AND VALVES ARE FULLY FUNCTIONAL.
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# CITY OF SAN ANTONIO - PUBLIC WORKS LA VILLITA - HVAC UPGRADE

418 Villita St, San Antonio, TX 78205

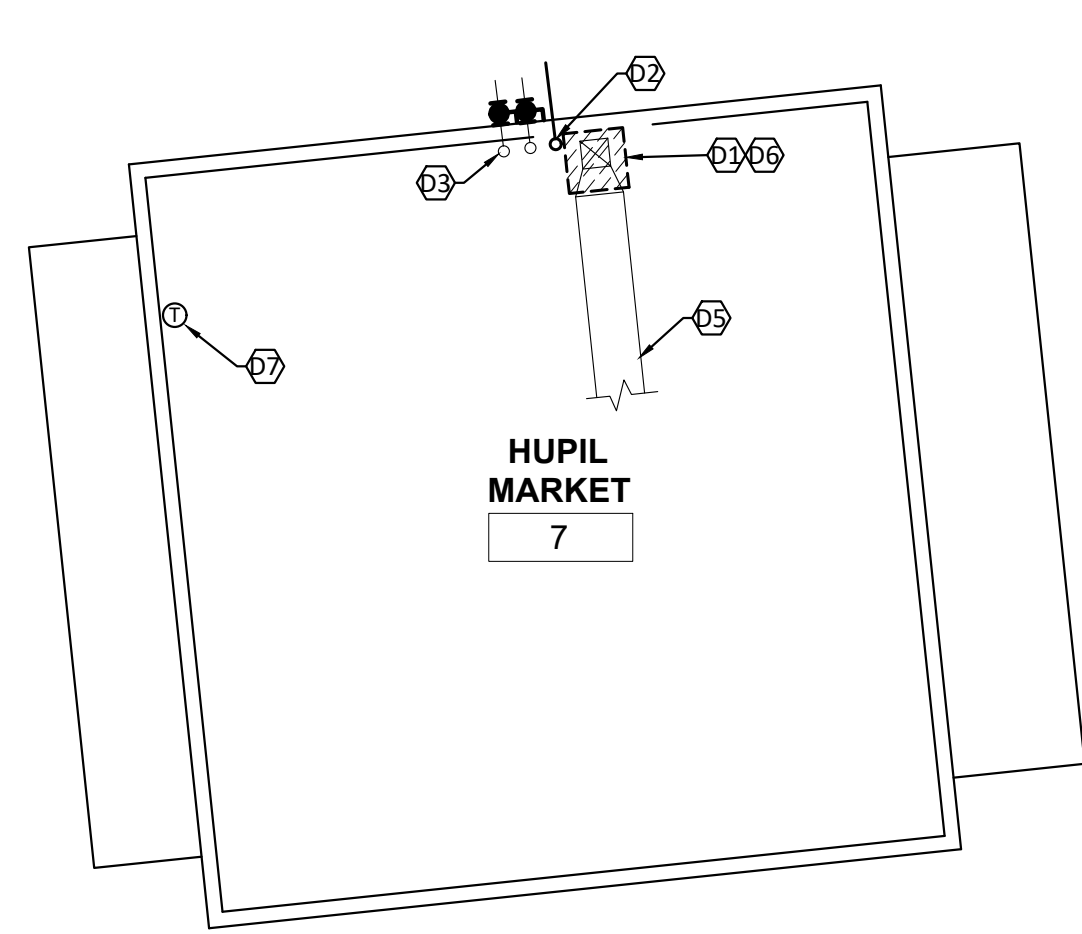
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Drawn GGR  
Checked EWR/MAM  
Date 12/05/2022  
Project No. 21032  
Revisions

SHEET TITLE  
MECHANICAL  
PLANS -  
BLDG. 4,5,6

SHEET NO.

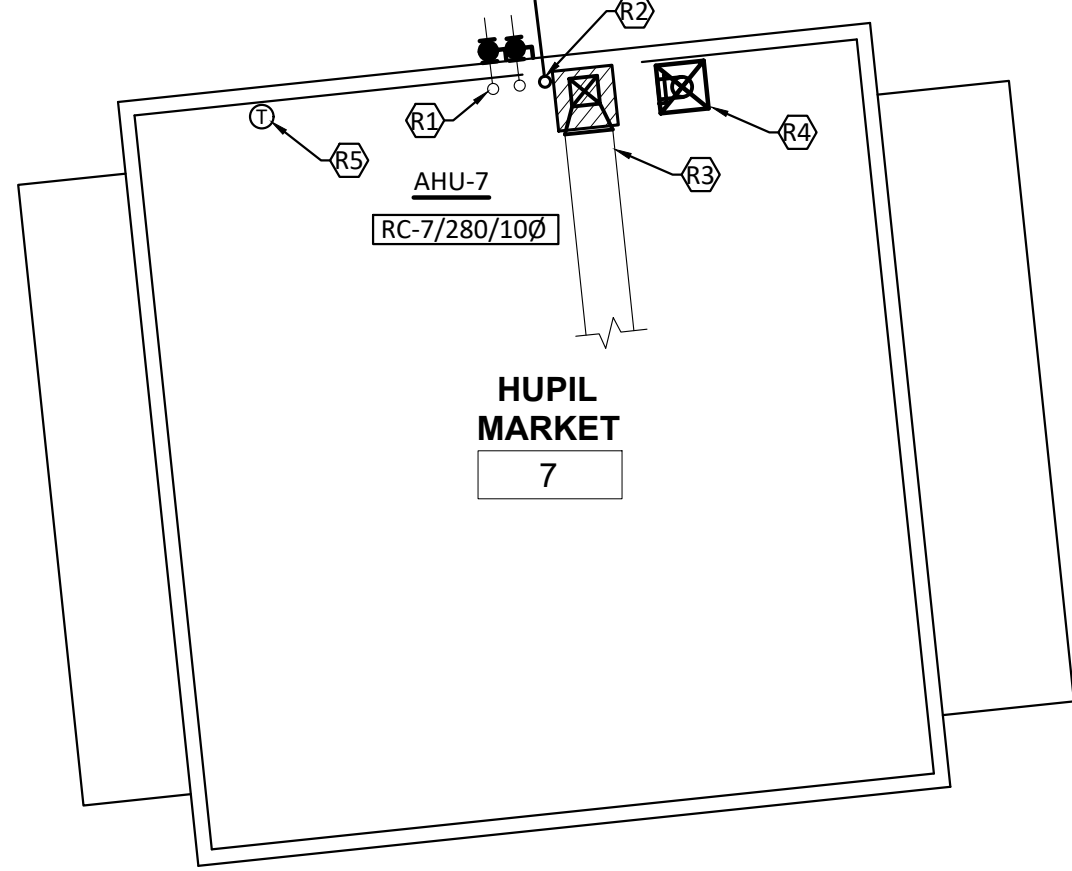
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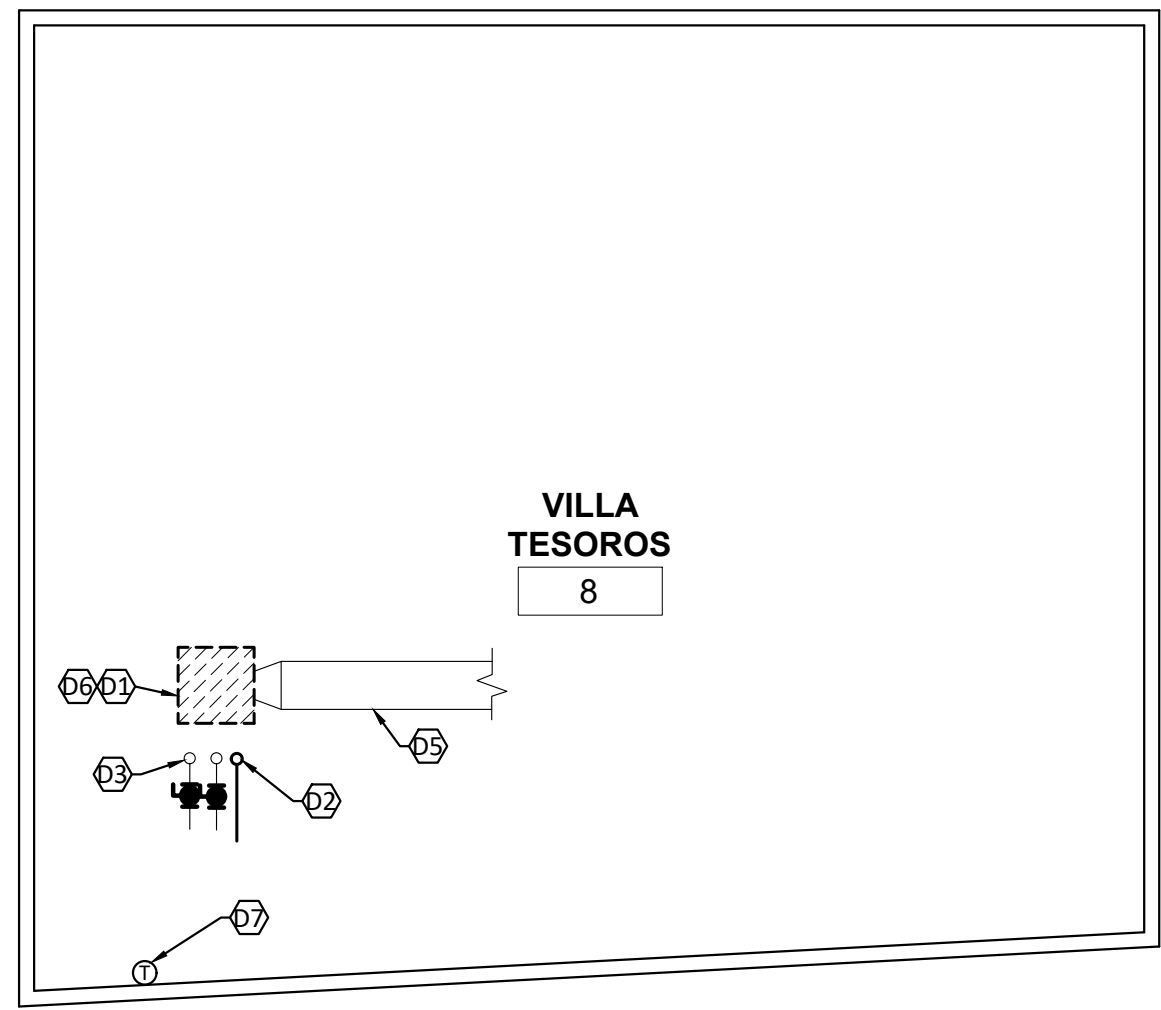
**1** BUILDING 7 - M&E DEMOLITION PLAN

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



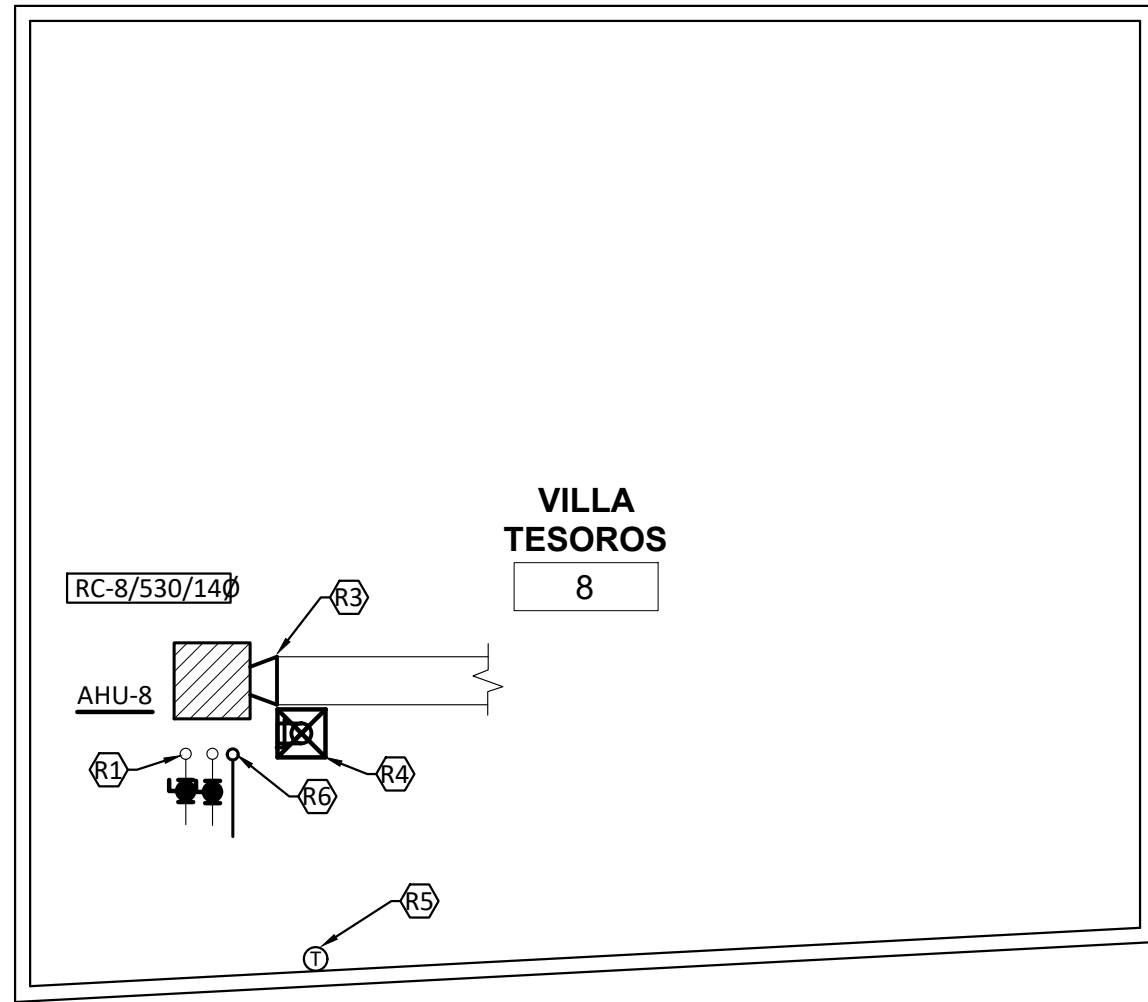
**2** BUILDING 7 - M&E NEW WORK PLAN

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



**3** BUILDING 8 - M&E DEMOLITION PLAN

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



**4** BUILDING 8 - M&E NEW WORK PLAN

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

#### GENERAL SHEET NOTES

- REFER TO SHEET M000 FOR ADDITIONAL INFORMATION.
- COORDINATE REMOVAL AND DOWNTIME OF THE ELECTRICAL SYSTEM WITH BUILDING OWNER/LEASEHOLDER.

#### DEMOLITION PLAN NOTES

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#### RENOVATION PLAN NOTES

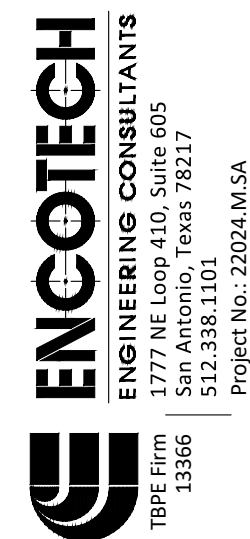
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#### KEYED NOTES

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- PROVIDE NEW THERMOSTAT WITH CLEAR, LOCKABLE COVERS IN EXISTING LOCATION. LOCATION IS SHOWN DIAGRAMMATICALLY, FIELD VERIFY EXACT LOCATION.
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2022-12-01



## CITY OF SAN ANTONIO - PUBLIC WORKS LA VILLITA - HVAC UPGRADE

418 Villita St, San Antonio, TX 78205

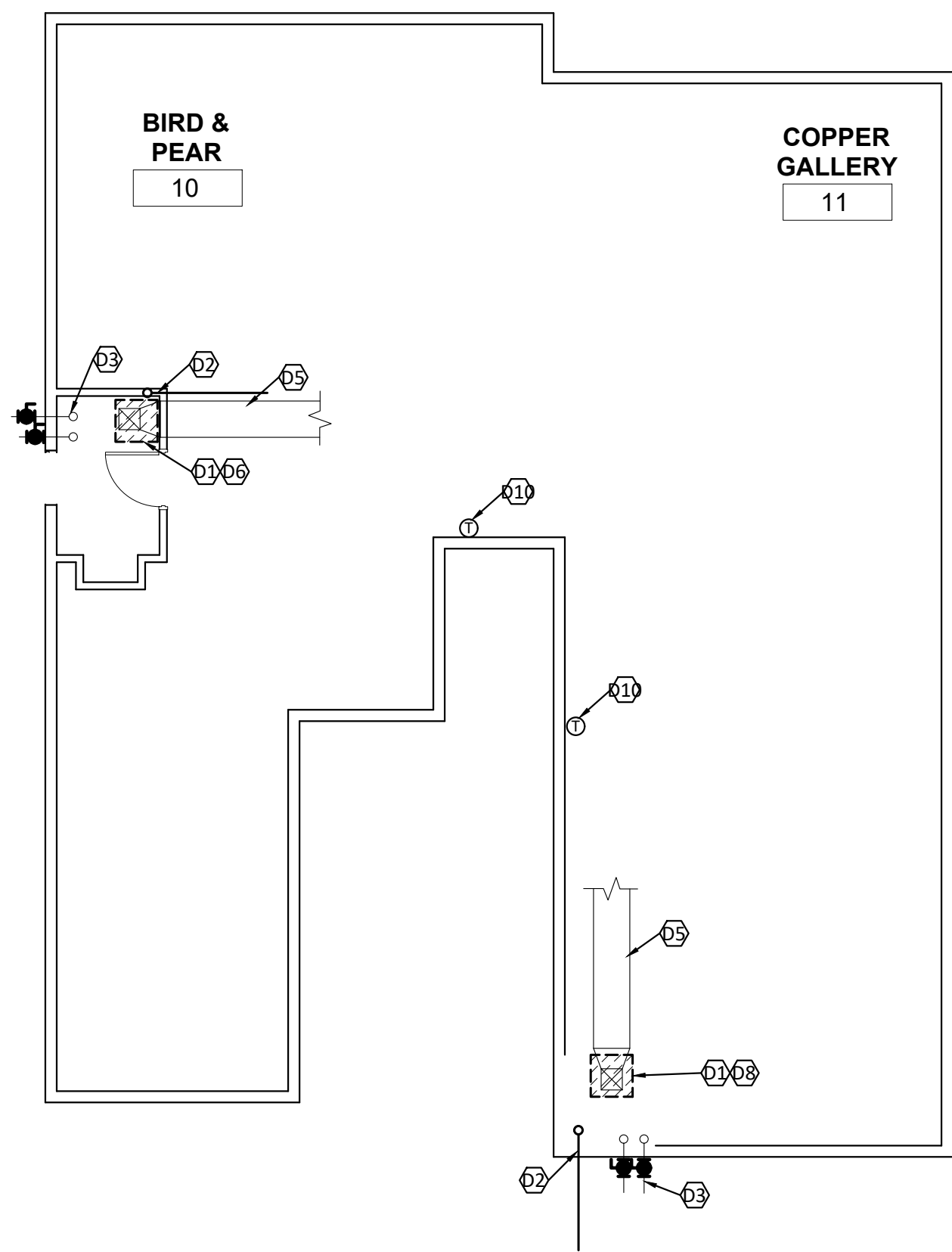
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Revisions

SHEET TITLE  
MECHANICAL  
PLANS -  
BLDG. 7,8

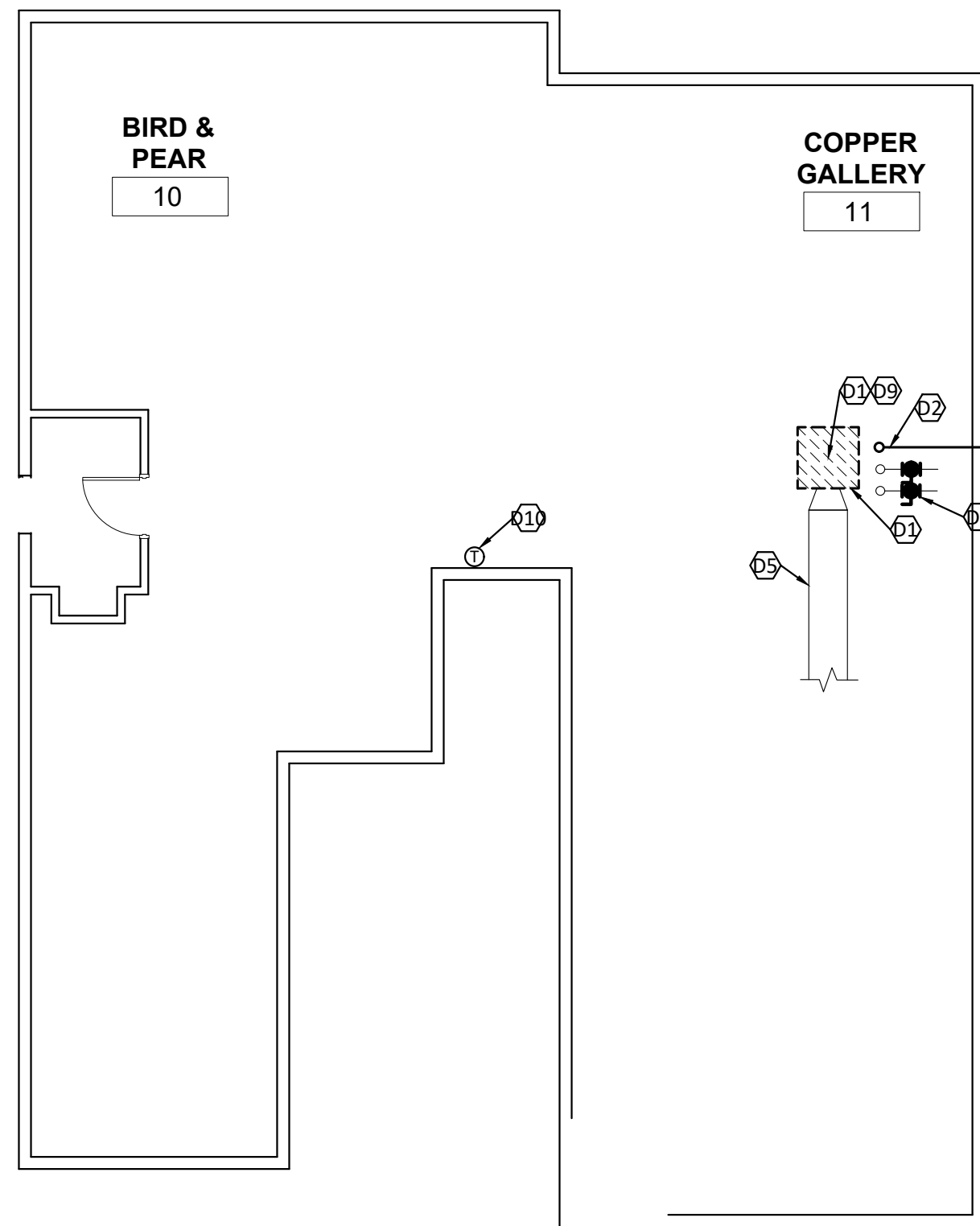
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M103

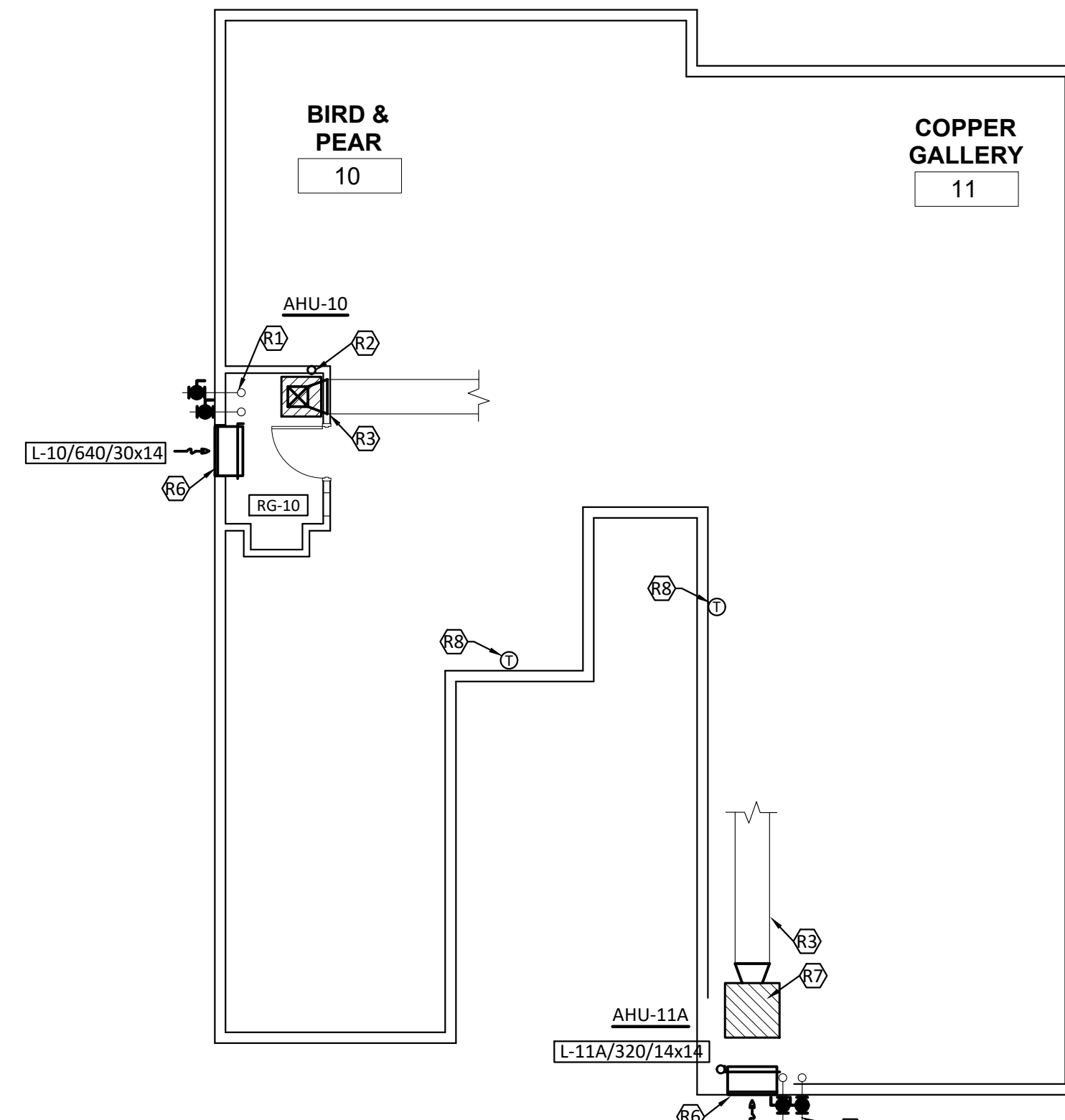




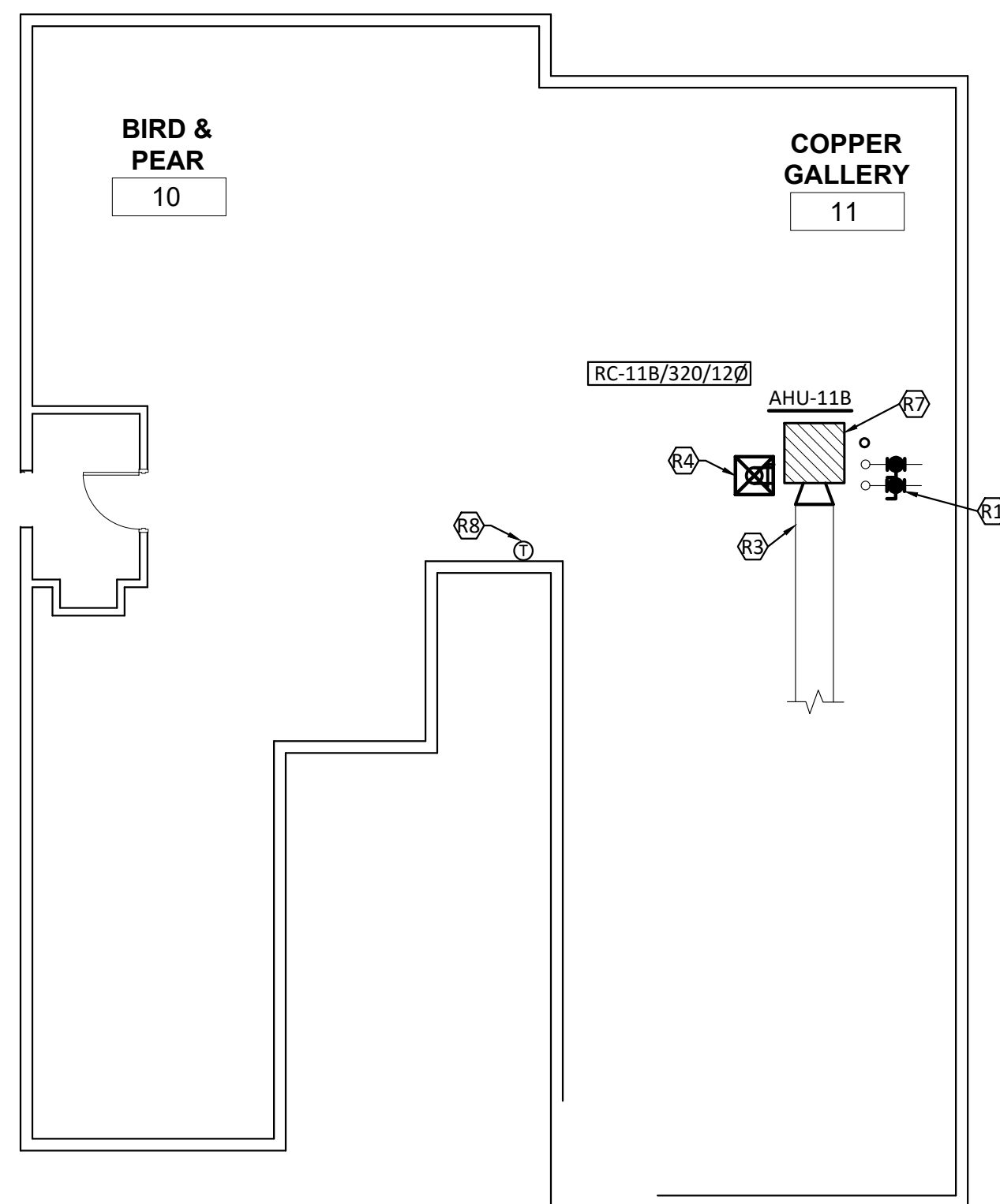
**1** BUILDING 10 & 11, LEVEL 1 - M&E DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



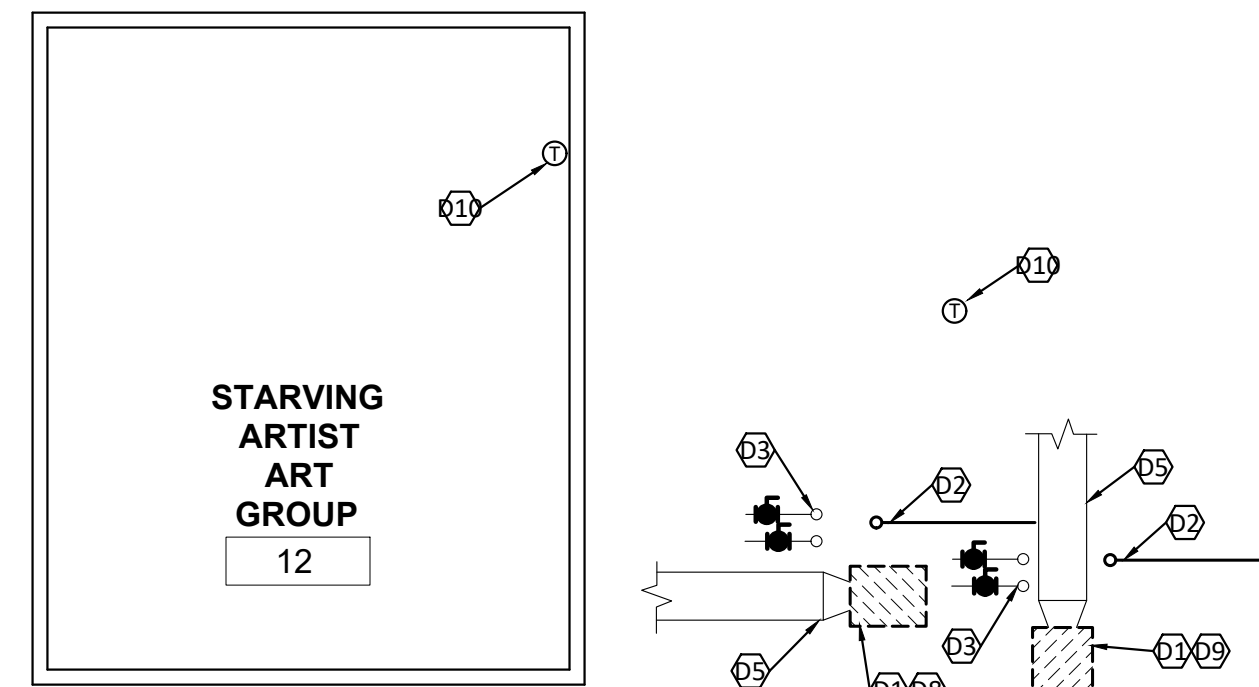
**2** BUILDING 10 & 11, LEVEL 2 - M&E DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



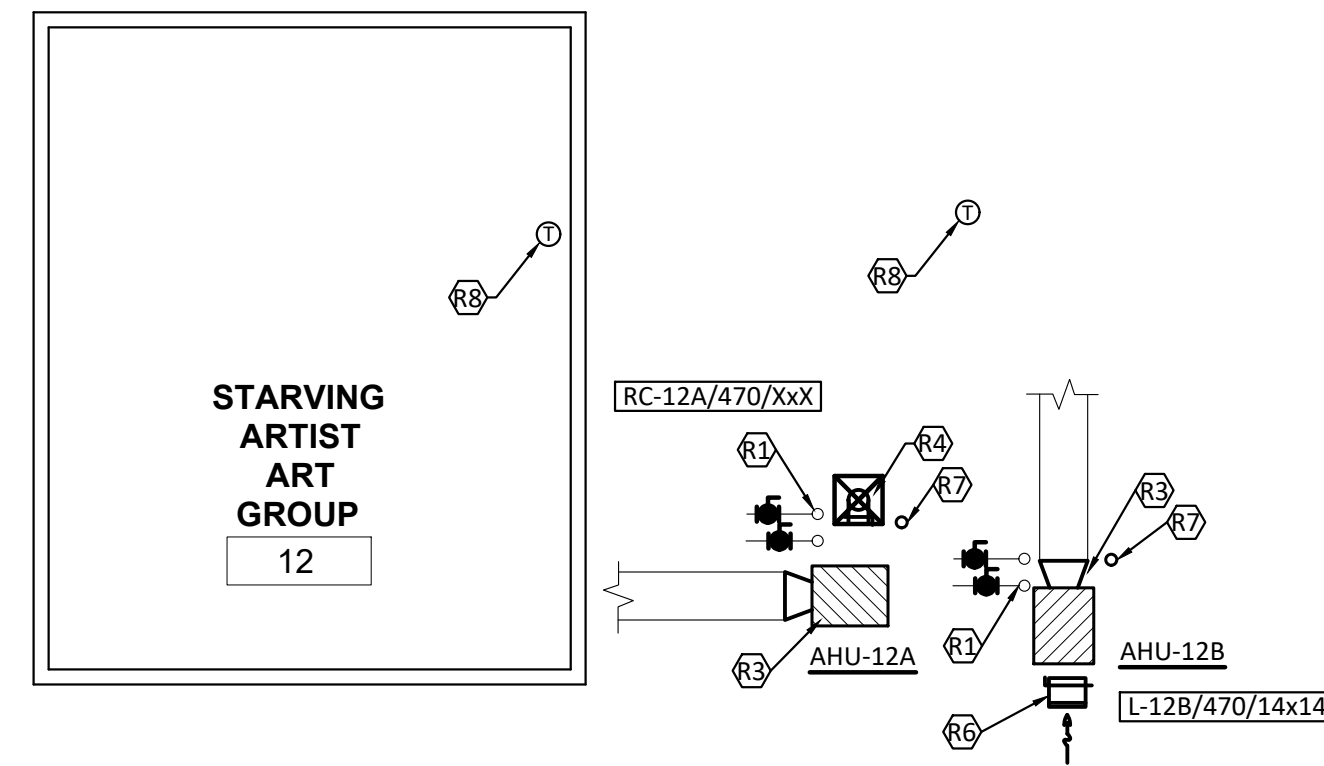
**3** BUILDING 10 & 11, LEVEL 1 - M&E NEW WORK PLAN  
SCALE: 1/8"=1'-0"



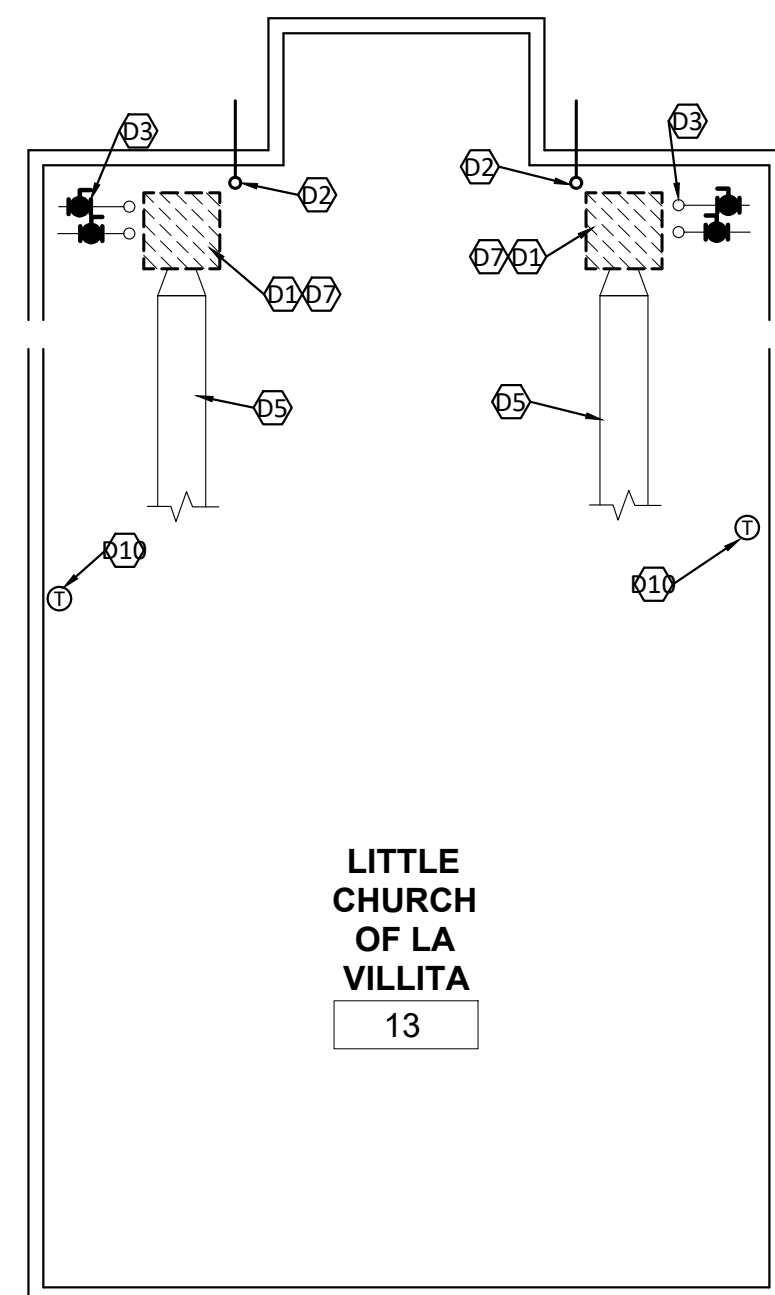
**4** BUILDING 10 & 11, LEVEL 2 - M&E NEW WORK PLAN  
SCALE: 1/8"=1'-0"



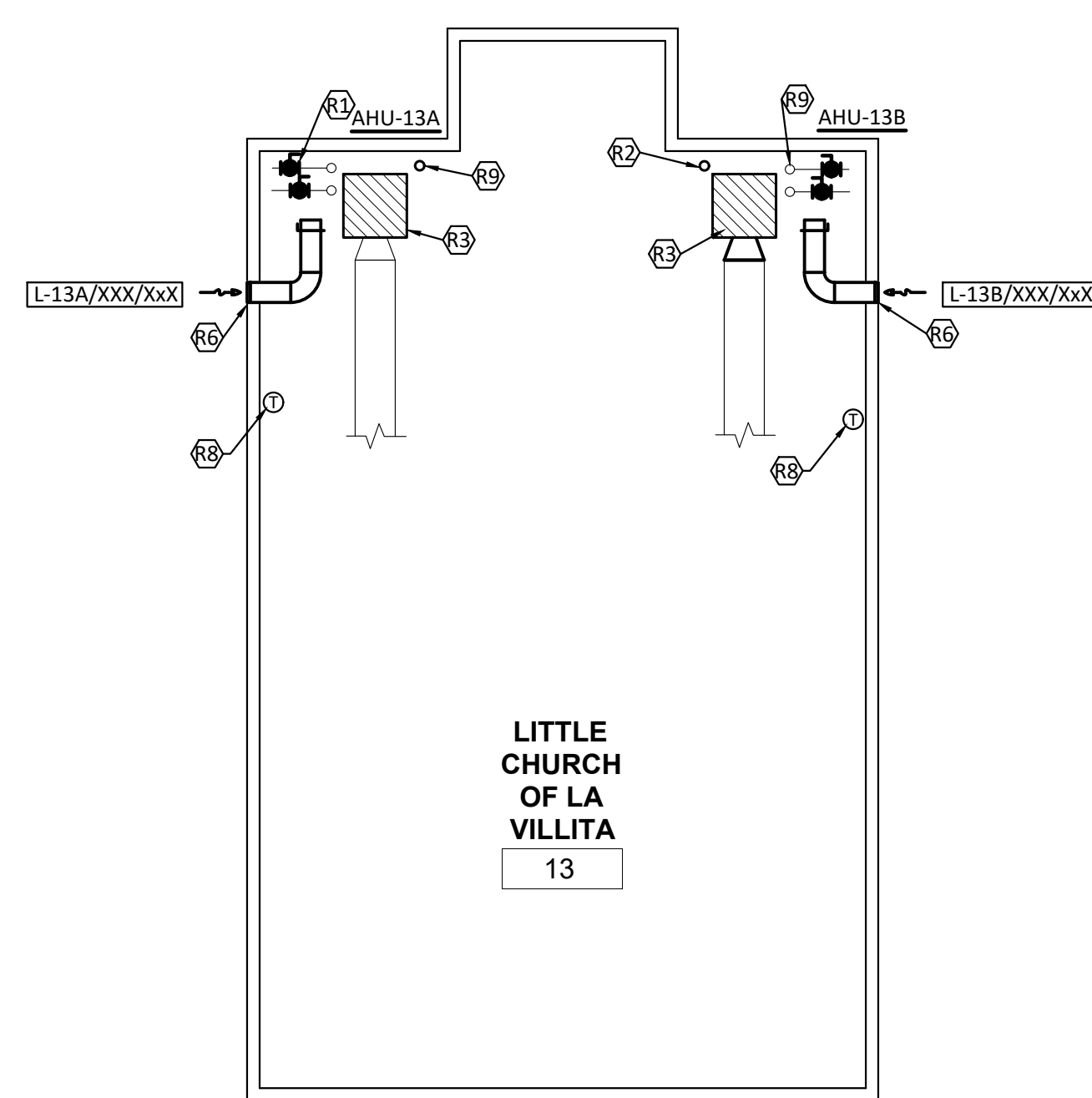
**5** BUILDING 12 - M&E DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



**6** BUILDING 12 - M&E NEW WORK PLAN  
SCALE: 1/8"=1'-0"



**7** BUILDING 13 - M&E DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



**8** BUILDING 13 - M&E NEW WORK PLAN  
SCALE: 1/8"=1'-0"

## GENERAL SHEET NOTES

- REFER TO SHEET M000 FOR ADDITIONAL INFORMATION.
- COORDINATE REMOVAL AND DOWNTIME OF THE ELECTRICAL SYSTEM WITH BUILDING OWNER/LEASEHOLDER.

## DEMOLITION PLAN NOTES

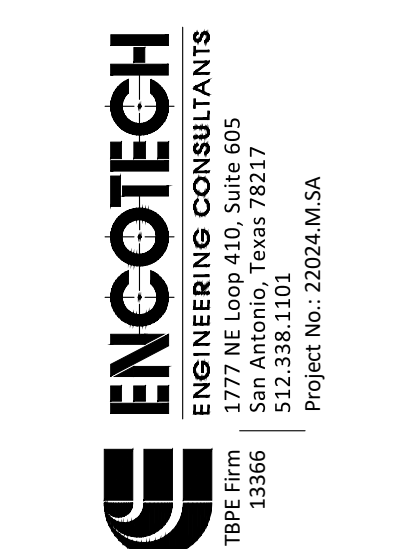
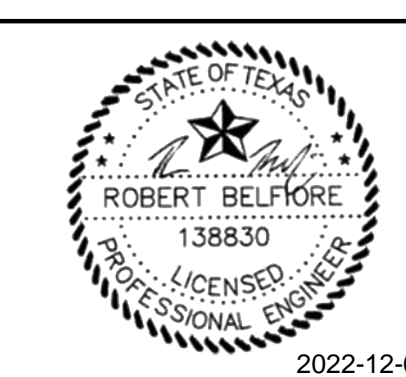
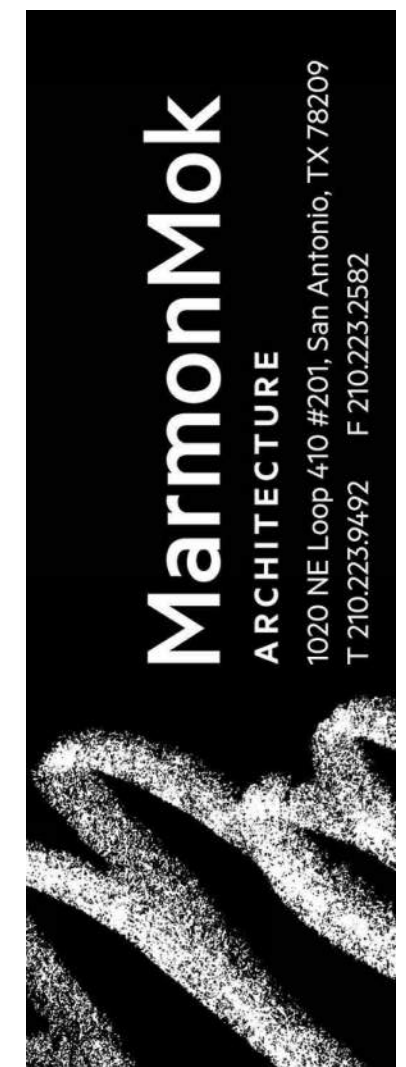
- EXISTING DIFFUSERS, GRILLS AND DUCT WORK NOT SHOWN TO BE REMOVED SHALL BE EXISTING TO REMAIN.
- ALL EQUIPMENT REMOVED DURING DEMOLITION SHALL BE TURNED OVER TO THE OWNER.
- COORDINATE REMOVAL AND DOWNTIME OF THE MECHANICAL SYSTEM WITH BUILDING OWNER/LEASEHOLDER.

## RENOVATION PLAN NOTES

- ALL WALL-MOUNTED THERMOSTATS, HUMIDISTAT, ETC IN PUBLIC PLACES SHALL BE INSTALLED WITH CLEAR LOCKABLE COVERS.
- UNLESS OTHERWISE NOTED, FOR ALL AIR HANDLING UNITS PROVIDE A MINIMUM 3/4 INCH CONDENSATE PIPING WITH 1 INCH ELASTOMERIC INSULATION TO THE NEAREST HUB DRAIN, TAILPIECE OR FLOOR SINK. SLOPE CONDENSATE PIPING MINIMUM 1/8 INCH PER LINEAR FOOT TOWARDS DRAIN.
- ALL NEW DUCTWORK AND PIPING SHALL NOT BE INSTALLED OVER EXISTING OR NEW ELECTRICAL EQUIPMENT.

## KEYED NOTES

- EXISTING AIR HANDLER TO BE REMOVED. CHILLED WATER SUPPLY AND RETURN LINES FROM BUILDING SOURCE SHALL REMAIN IN PLACE. CONTRACTOR TO VERIFY PIPING AND VALVES ARE FULLY FUNCTIONAL.
- UNLESS OTHERWISE NOTED, FIELD VERIFY CONDENSATE DRAIN IS CONNECTED TO THE SANITARY SEWER SYSTEM WITH AIR GAP CONNECTION AND IS FULLY FUNCTIONAL. REMOVE ANY CLOGS AND REPAIR DAMAGED LINES.
- EXISTING CHILLED WATER SUPPLY AND RETURN LINES FROM CHILLED WATER PUMP ROOM TO REMAIN IN PLACE. REMOVE PIPING FROM AHU ISOLATION VALVE TO UNIT AND PREPARE FOR NEW UNIT CONNECTION. CONTRACTOR TO FIELD VERIFY EXACT LOCATION.
- AIR HANDLER LOCATED ON FIRST FLOOR, ENCLOSED IN ROOM.
- EXISTING SUPPLY DUCT MAIN TO REMAIN. REMOVE DUCTWORK SECTION CONNECTED TO EXISTING UNIT AND PREPARE FOR RECONNECTION TO NEW UNIT REPLACEMENT.
- AIR HANDLER LOCATED ON FIRST FLOOR, OPEN TO ROOM.
- AIR HANDLER LOCATED BELOW FINISHED FLOOR IN CRAWL SPACE.
- AIR HANDLER LOCATED WITHIN FIRST FLOOR CEILING SPACE.
- AIR HANDLER LOCATED WITHIN SECOND FLOOR CEILING SPACE.
- REMOVE EXISTING THERMOSTAT INCLUDING ALL ASSOCIATED CONTROL WIRING. LOCATION IS SHOWN DIAGRAMMATICALLY, FIELD VERIFY EXACT LOCATION.
- PROVIDE AND INSTALL NEW TWO-WAY CHILLED WATER CONTROL VALVE AT THE AIR HANDLING UNIT. RECONNECT CHILLED WATER SUPPLY AND RETURN LINES TO NEW AHU. ISOLATION VALVES EXISTING TO REMAIN AT AHU/MATCH EXISTING PIPE SIZE.
- PROVIDE NEW AIR HANDLING UNIT ON 10H MINIMUM STAND. PROVIDE NEOPRENE ISOLATORS BETWEEN UNIT AND STAND. ROUTE 3/4" CONDENSATE DRAIN TO EXISTING DRAIN SOURCE.
- RECONNECT NEW AHU INTO EXISTING TO REMAIN SUPPLY DUCT.
- PROVIDE NEW OPEN ENDED OUTSIDE AIR DUCT FROM NEW ROOF CAP TO AIR HANDLING UNIT AREA. PROVIDE VOLUME DAMPER AND BALANCE TO CFM NOTED. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ROOF CAP.
- PROVIDE NEW OPEN ENDED OUTSIDE AIR DUCT FROM NEW SIDE MOUNT LOUVER TO AIR HANDLING UNIT AREA. PROVIDE VOLUME DAMPER AND BALANCE TO CFM NOTED. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ROOF CAP.
- PROVIDE NEW OPEN ENDED OUTSIDE AIR DUCT FROM EXISTING SIDE MOUNT LOUVER TO AIR HANDLING UNIT AREA. PROVIDE VOLUME DAMPER AND BALANCE TO CFM NOTED. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ROOF CAP.
- PROVIDE CEILING MOUNTED NEW AIR HANDLING UNIT SUSPENDED FROM STRUCTURE WITH SPRING ISOLATORS. ROUTE 3/4" CONDENSATE DRAIN TO EXISTING HUB DRAIN.
- PROVIDE NEW THERMOSTAT WITH CLEAR, LOCKABLE COVERS IN EXISTING LOCATION. LOCATION IS SHOWN DIAGRAMMATICALLY, FIELD VERIFY EXACT LOCATION.
- PROVIDE NEW UNDERFLOOR HORIZONTAL AIR HANDLING WITH NEOPRENE ISOLATION. ROUTE 3/4" CONDENSATE DRAIN TO EXISTING DRAIN SOURCE.



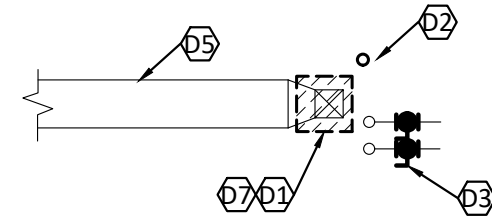
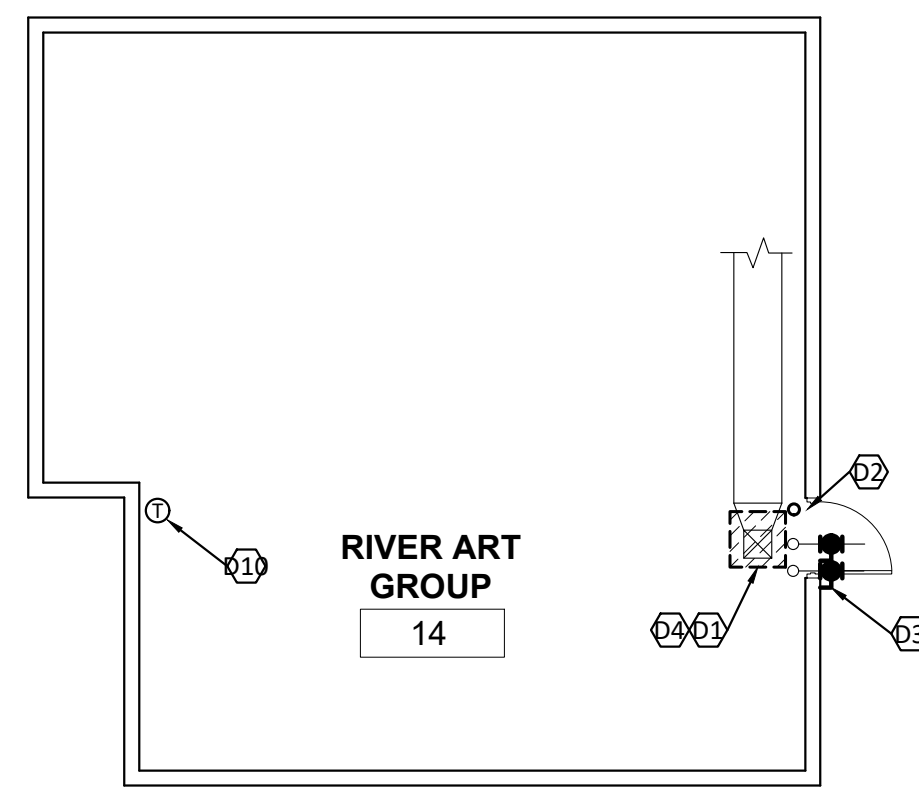
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**LA VILLITA - HVAC UPGRADE**  
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Date 12/05/2022  
Project No. 21032  
Revisions

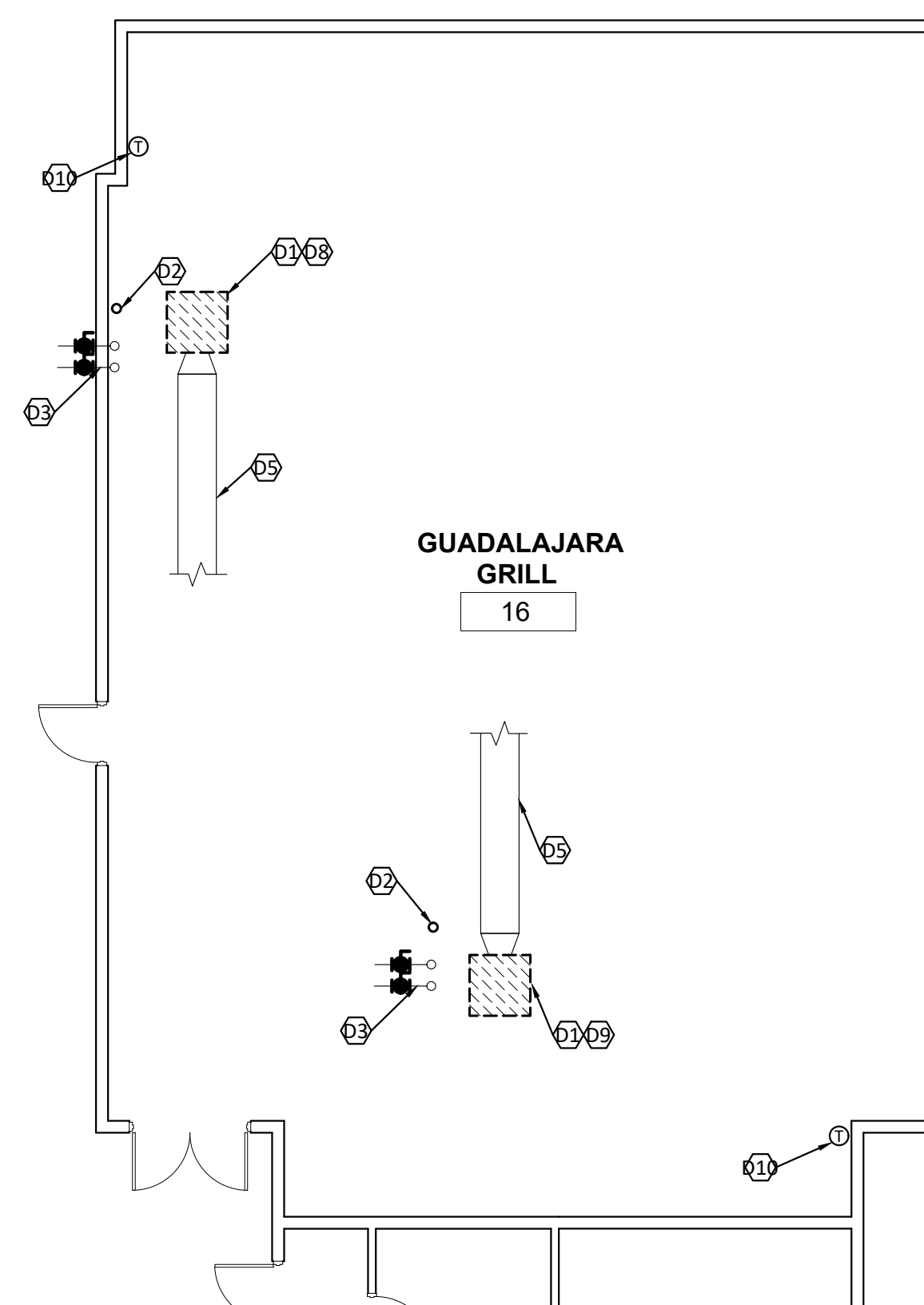
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SHEET NO.

**M104**

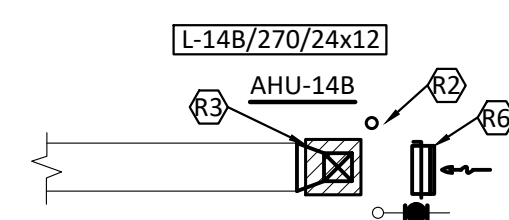
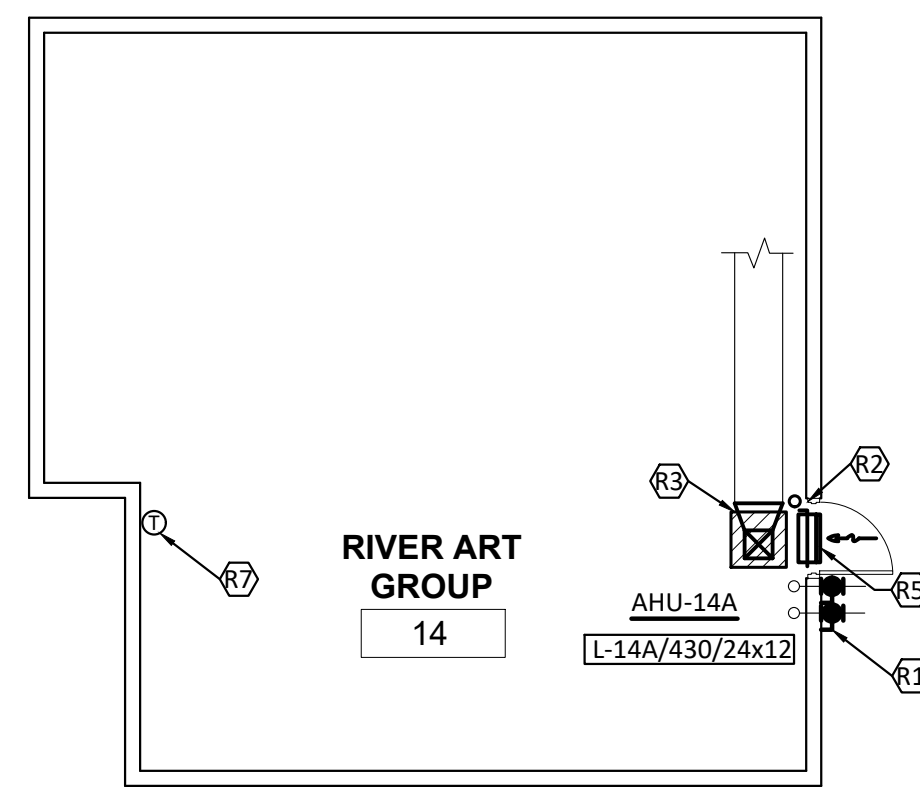




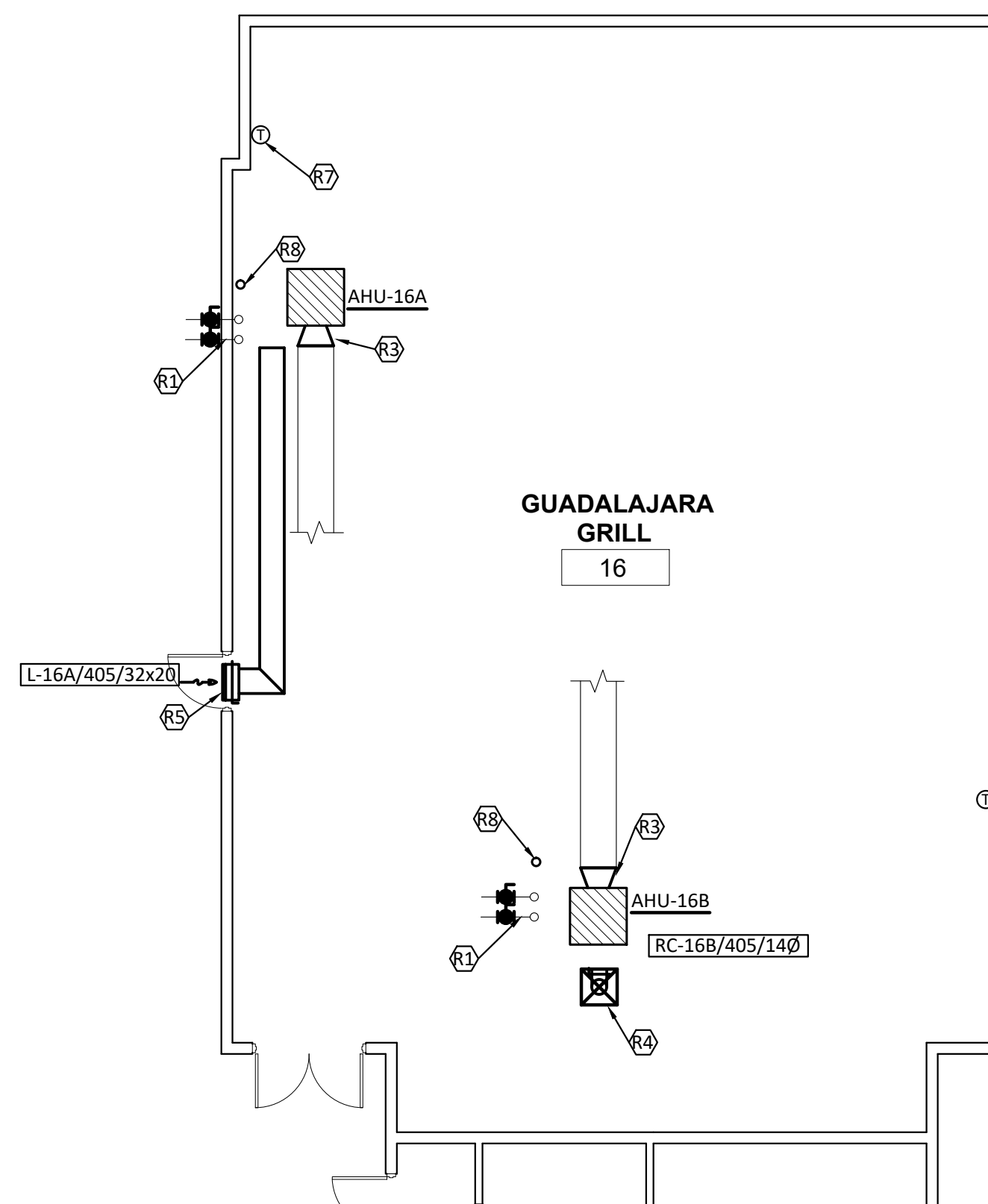
# 1 BUILDING 14 - M&E DEMOLITION PLAN



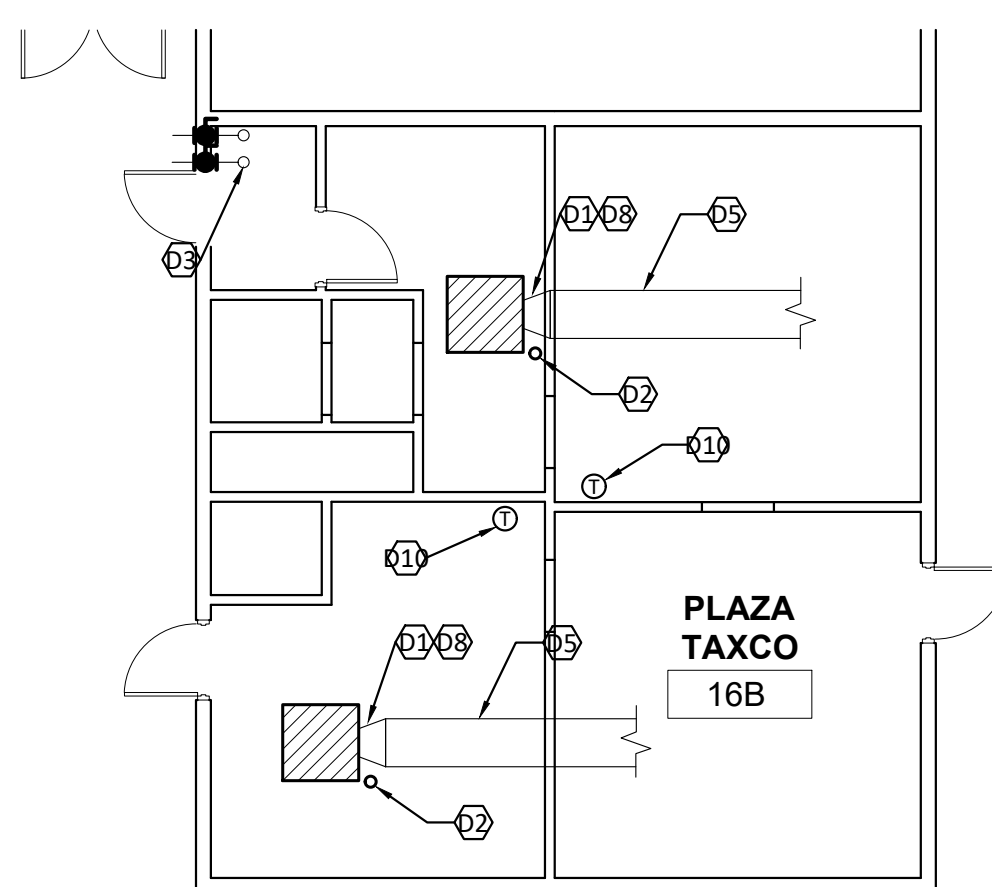
### 3 BUILDING 16 - M&E DEMOLITION PLAN



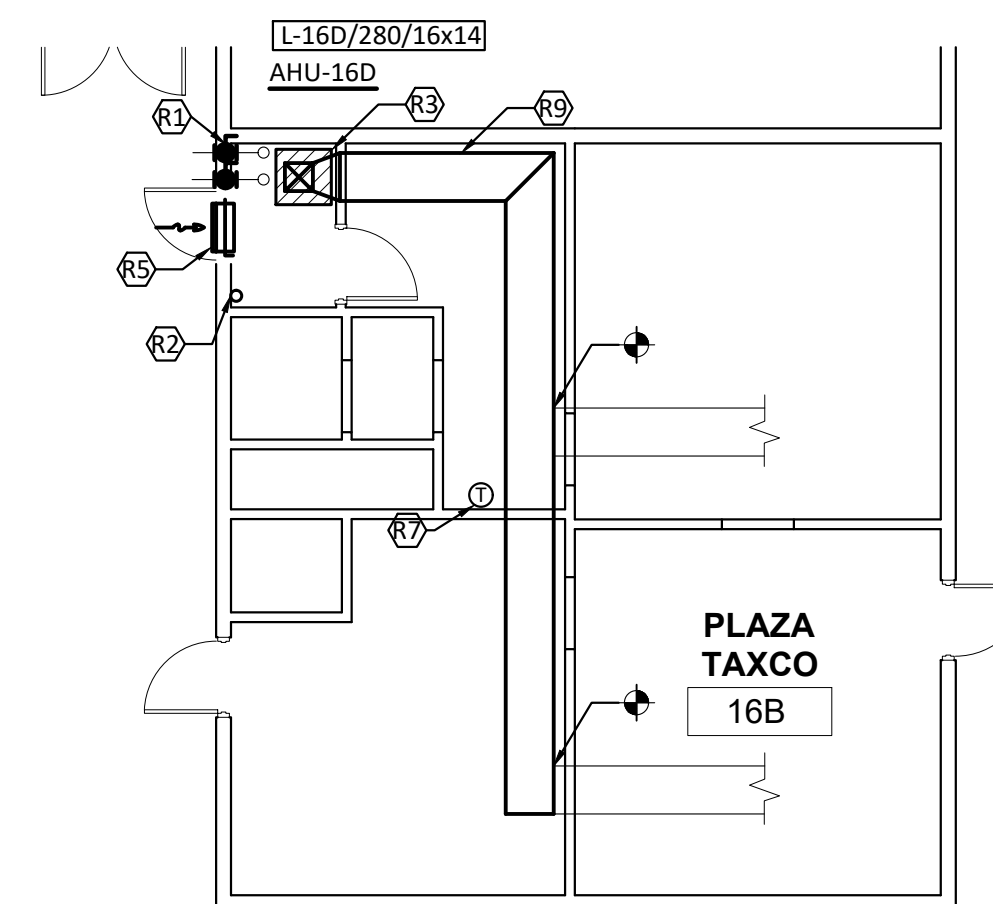
## 2 BUILDING 14 - M&E NEW WORK PLAN



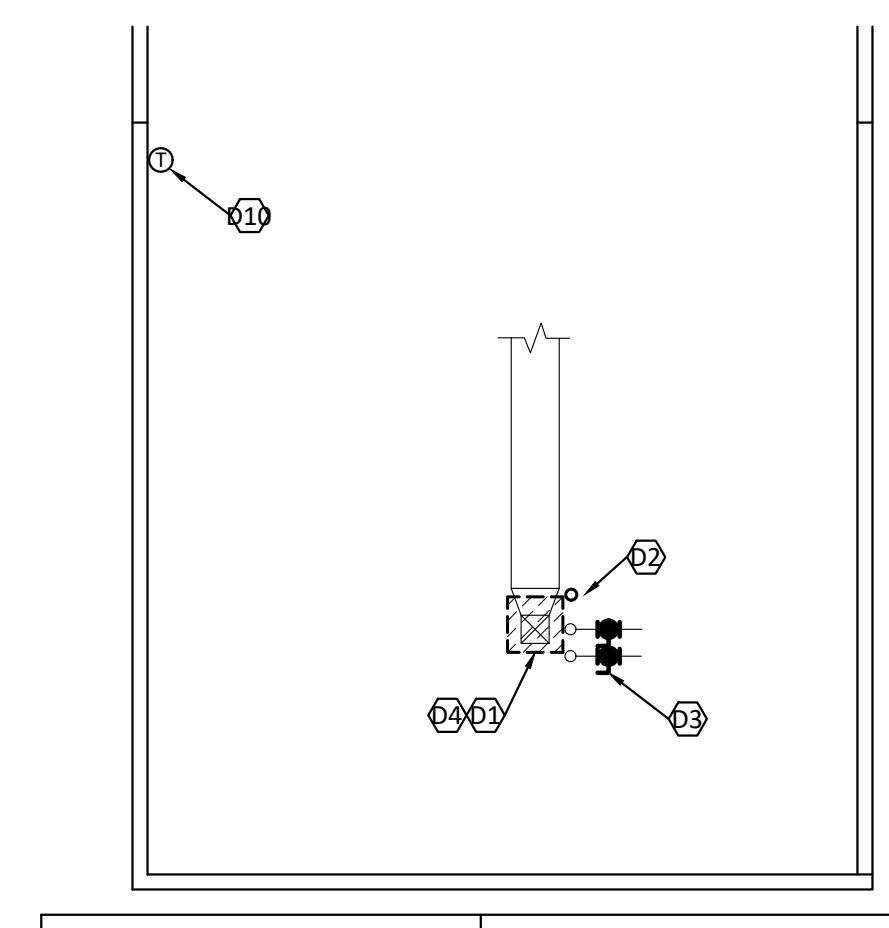
#### 4 BUILDING 16 - M&E NEW WORK PLAN



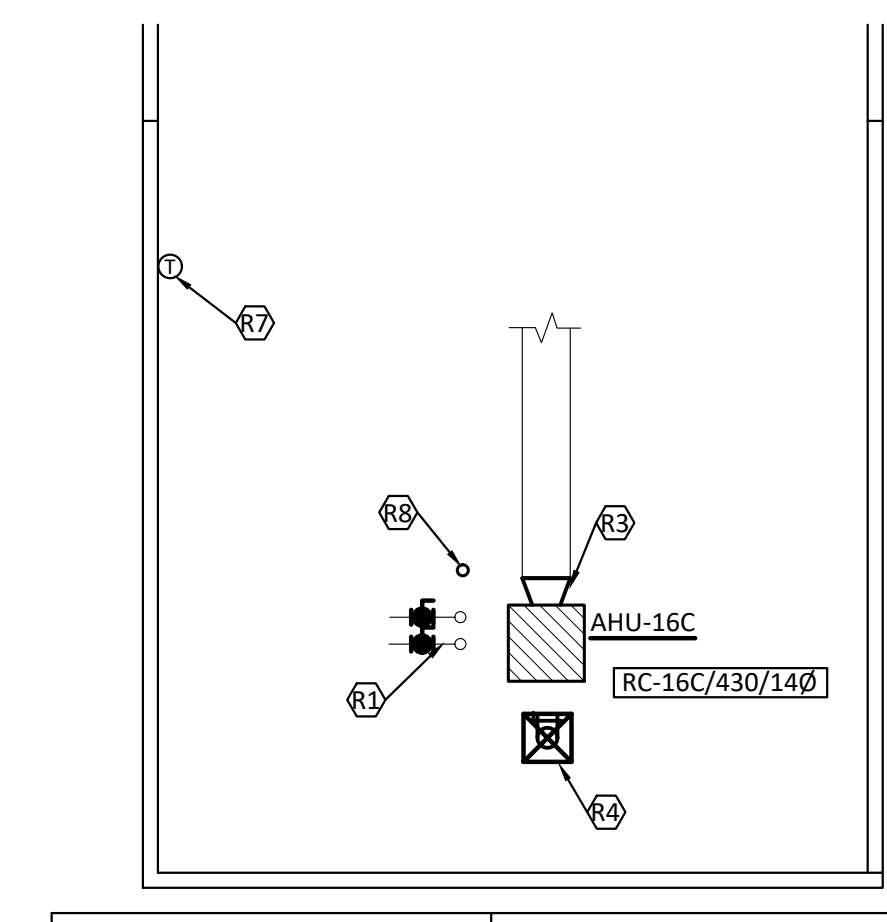
## 5 BUILDING 16B - M&E DEMOLITION PLAN



## 6 BUILDING 16B - M&E NEW WORK PLAN



**7 BUILDING 16C - M&E DEMOLITION PLAN**  
SCALE: 1/8"=1'-0"



**8 BUILDING 16C - M&E NEW WORK PLAN**  
SCALE: 1/8"=1'-0"

GENERAL SHEET NOTES

- A. REFER TO SHEET M000 FOR ADDITIONAL INFORMATION.
- B. COORDINATE REMOVAL AND DOWNTIME OF THE ELECTRICAL SYSTEM WITH BUILDING OWNER/LEASEHOLDER.

## DEMOLITION PLAN NOTES

- A. EXISTING DIFFUSERS, GRILLS AND DUCT WORK NOT SHOWN TO BE REMOVED SHALL BE EXISTING TO REMAIN.
- B. ALL EQUIPMENT REMOVED DURING DEMOLITION SHALL BE TURNED OVER TO THE OWNER.
- C. COORDINATE REMOVAL AND DOWNTIME OF THE MECHANICAL SYSTEM WITH BUILDING OWNER/LEASEHOLDER.

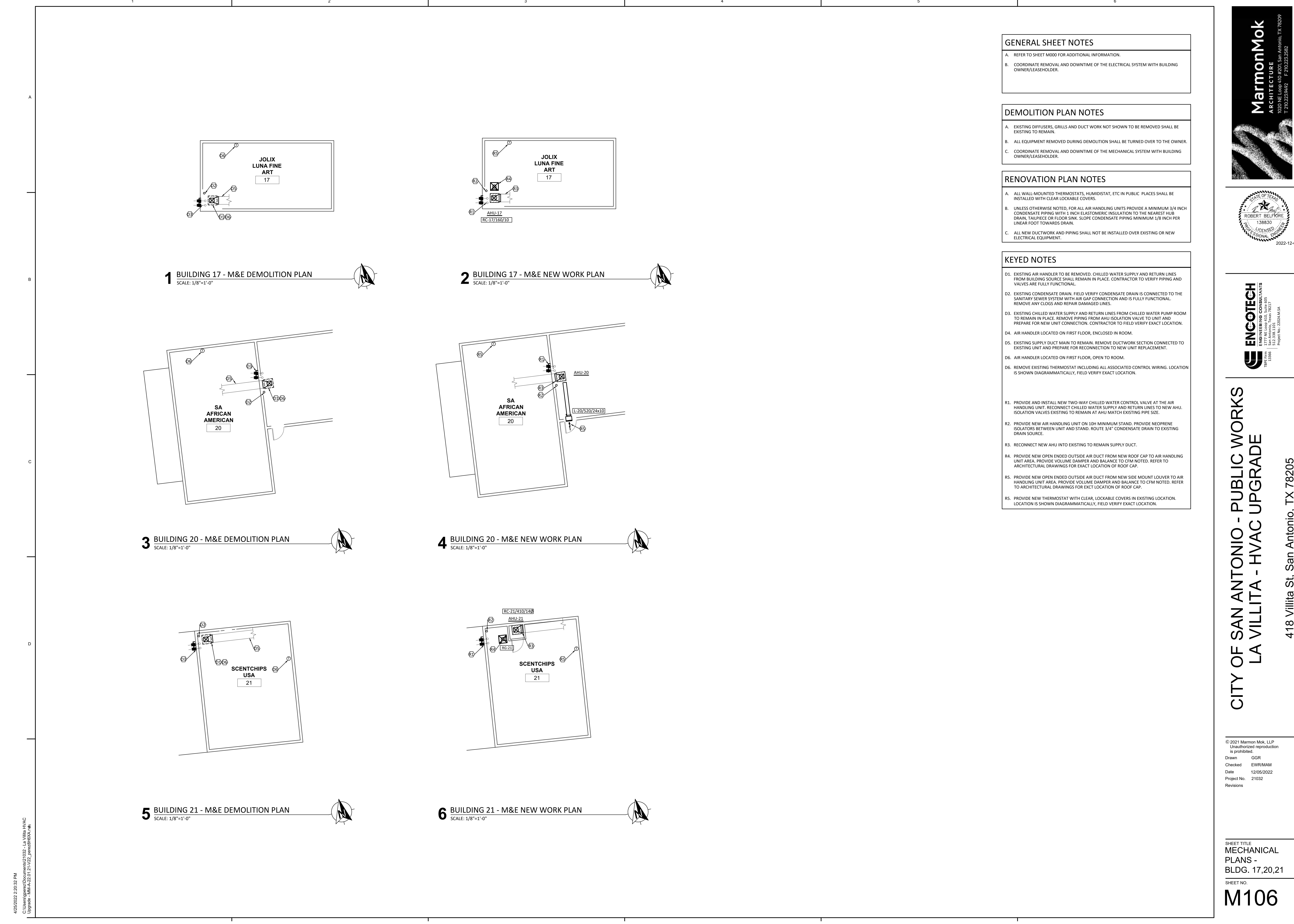
## RENOVATION PLAN NOTES

- A. ALL WALL-MOUNTED THERMOSTATS, HUMIDISTAT, ETC IN PUBLIC PLACES SHALL BE INSTALLED WITH CLEAR LOCKABLE COVERS.
- B. UNLESS OTHERWISE NOTED, FOR ALL AIR HANDLING UNITS PROVIDE A MINIMUM 3/4 INCH CONDENSATE PIPING WITH 1 INCH ELASTOMERIC INSULATION TO THE NEAREST HUB DRAIN, TAILPIPE OR FLOOR SINK. SLOPE CONDENSATE PIPING MINIMUM 1/8 INCH PER LINEAR FOOT TOWARDS DRAIN.
- C. ALL NEW DUCTWORK AND PIPING SHALL NOT BE INSTALLED OVER EXISTING OR NEW ELECTRICAL EQUIPMENT.

## KEYED NOTES

- D1. EXISTING AIR HANDLER TO BE REMOVED. CHILLED WATER SUPPLY AND RETURN LINES FROM BUILDING SOURCE SHALL REMAIN IN PLACE. CONTRACTOR TO VERIFY PIPING AND VALVES ARE FULLY FUNCTIONAL.
- D2. EXISTING CONDENSATE DRAIN. FIELD VERIFY CONDENSATE DRAIN IS CONNECTED TO THE SANITARY SEWER SYSTEM WITH AIR GAP CONNECTION AND IS FULLY FUNCTIONAL. REMOVE ANY CLOGS AND REPAIR DAMAGED LINES.
- D3. EXISTING CHILLED WATER SUPPLY AND RETURN LINES FROM CHILLED WATER PUMP ROOM TO REMAIN IN PLACE. REMOVE PIPING FROM AHU ISOLATION VALVE TO UNIT AND PREPARE FOR NEW UNIT CONNECTION. CONTRACTOR TO FIELD VERIFY EXACT LOCATION.
- D4. AIR HANDLER LOCATED ON FIRST FLOOR, ENCLOSED IN ROOM.
- D5. EXISTING SUPPLY DUCT MAIN TO REMAIN. REMOVE DUCTWORK SECTION CONNECTED TO EXISTING UNIT AND PREPARE FOR RECONNECTION TO NEW UNIT REPLACEMENT.
- D6. AIR HANDLER LOCATED ON FIRST FLOOR, OPEN TO ROOM.
- D7. AIR HANDLER LOCATED ON SECOND FLOOR, ENCLOSED IN ROOM.
- D8. AIR HANDLER LOCATED WITHIN FIRST FLOOR CEILING SPACE.
- D9. AIR HANDLER LOCATED WITHIN SECOND FLOOR CEILING SPACE.
- D10. REMOVE EXISTING THERMOSTAT INCLUDING ALL ASSOCIATED CONTROL WIRING. LOCATION IS SHOWN DIAGRAMMATICALLY. FIELD VERIFY EXACT LOCATION.
- R1. PROVIDE AND INSTALL NEW TWO-WAY CHILLED WATER CONTROL VALVE AT THE AIR HANDLING UNIT. RECONNECT CHILLED WATER SUPPLY AND RETURN LINES TO NEW AHU. ISOLATION VALVES EXISTING TO REMAIN AT AHU MATCH EXISTING PIPE SIZE.
- R2. PROVIDE NEW AIR HANDLING UNIT ON 10H MINIMUM STAND. PROVIDE NEOPRENE ISOLATORS BETWEEN UNIT AND STAND. ROUTE 3/4" CONDENSATE DRAIN TO EXISTING DRAIN SOURCE.
- R3. RECONNECT NEW AHU INTO EXISTING TO REMAIN SUPPLY DUCT.
- R4. PROVIDE NEW OPEN ENDED OUTSIDE AIR DUCT FROM NEW ROOF CAP TO AIR HANDLING UNIT AREA. PROVIDE VOLUME DAMPER AND BALANCE TO CFM NOTED. REFER TO ARCHITECTURAL DRAWINGS FOR EXCT LOCATION OF ROOF CAP.
- R5. PROVIDE NEW OPEN ENDED OUTSIDE AIR DUCT FROM NEW SIDE MOUNT LOUVER TO AIR HANDLING UNIT AREA. PROVIDE VOLUME DAMPER AND BALANCE TO CFM NOTED. REFER TO ARCHITECTURAL DRAWINGS FOR EXCT LOCATION OF ROOF CAP.
- R6. PROVIDE NEW OPEN ENDED OUTSIDE AIR DUCT FROM EXISTING SIDE MOUNT LOUVER TO AIR HANDLING UNIT AREA. PROVIDE VOLUME DAMPER AND BALANCE TO CFM NOTED. REFER TO ARCHITECTURAL DRAWINGS FOR EXCT LOCATION OF ROOF CAP.
- R7. PROVIDE NEW THERMOSTAT WITH CLEAR, LOCKABLE COVERS IN EXISTING LOCATION. LOCATION IS SHOWN DIAGRAMMATICALLY. FIELD VERIFY EXACT LOCATION.
- R8. PROVIDE NEW HORIZONTAL AIR HANDLING UNIT SUSPENDED FROM STRUCTURE WITH SPRING ISOLATION. ROUTE 3/4" CONDENSATE DRAIN TO EXISTING DRAIN SOURCE.
- R9. INSTALL NEW 18"x12" DUCT. CONNECT TO EXISTING DUCT.





### GENERAL SHEET NOTES

- REFER TO SHEET M100 FOR ADDITIONAL INFORMATION.
- COORDINATE REMOVAL AND DOWNTIME OF THE ELECTRICAL SYSTEM WITH BUILDING OWNER/LEASEHOLDER.

### DEMOLITION PLAN NOTES

- EXISTING DIFFUSERS, GRILLS AND DUCT WORK NOT SHOWN TO BE REMOVED SHALL BE EXISTING TO REMAIN.
- ALL EQUIPMENT REMOVED DURING DEMOLITION SHALL BE TURNED OVER TO THE OWNER.
- COORDINATE REMOVAL AND DOWNTIME OF THE MECHANICAL SYSTEM WITH BUILDING OWNER/LEASEHOLDER.

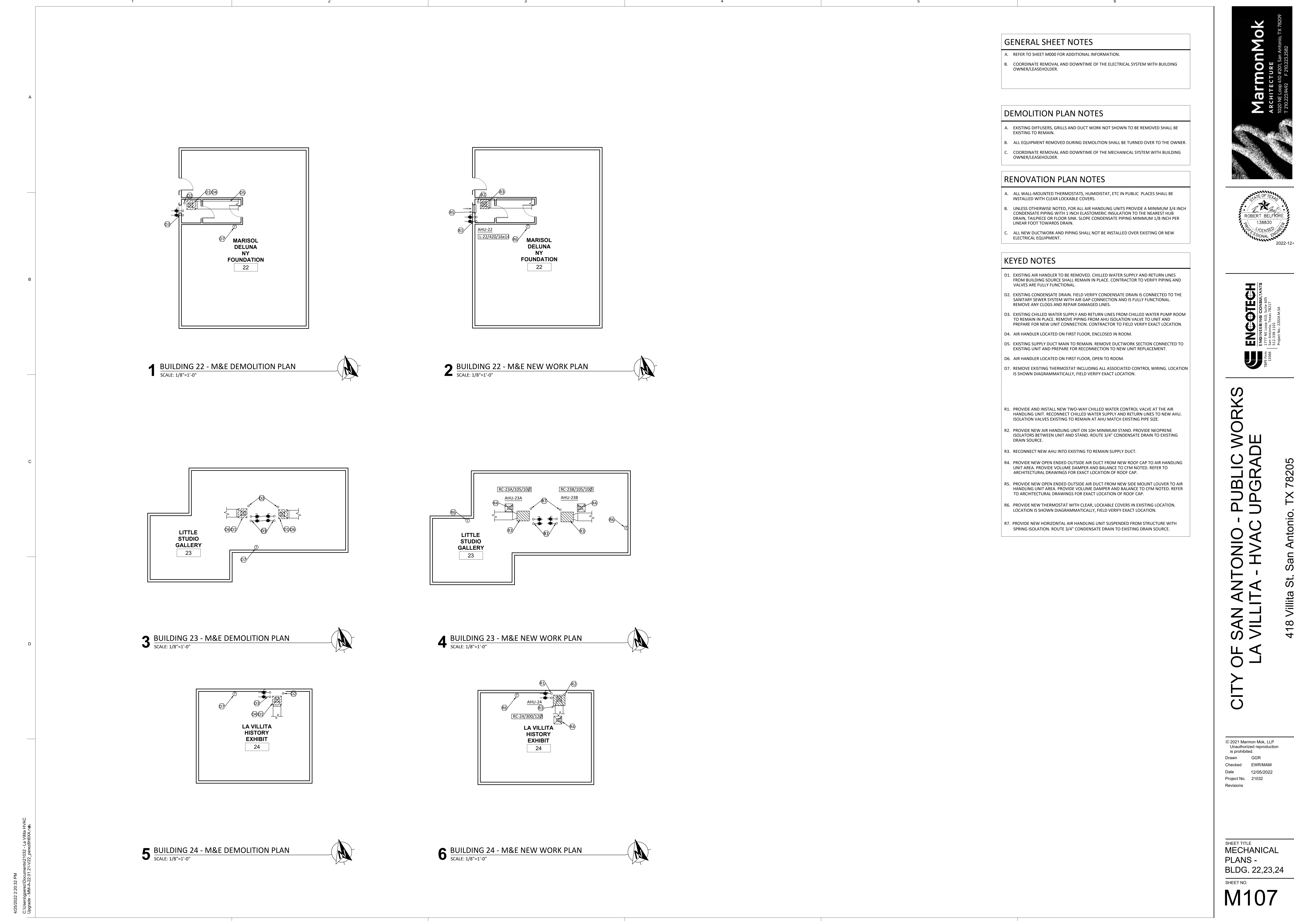
### RENOVATION PLAN NOTES

- ALL WALL-MOUNTED THERMOSTATS, HUMIDISTAT, ETC IN PUBLIC PLACES SHALL BE INSTALLED WITH CLEAR LOCKABLE COVERS.
- UNLESS OTHERWISE NOTED, FOR ALL AIR HANDLING UNITS PROVIDE A MINIMUM 3/4 INCH CONDENSATE PIPING WITH 1 INCH ELASTOMERIC INSULATION TO THE NEAREST HUB DRAIN, TAILPIECE OR FLOOR SINK. SLOPE CONDENSATE PIPING MINIMUM 1/8 INCH PER LINEAR FOOT TOWARDS DRAIN.
- ALL NEW DUCTWORK AND PIPING SHALL NOT BE INSTALLED OVER EXISTING OR NEW ELECTRICAL EQUIPMENT.

### KEYED NOTES

- EXISTING AIR HANDLER TO BE REMOVED. CHILLED WATER SUPPLY AND RETURN LINES FROM BUILDING SOURCE SHALL REMAIN IN PLACE. CONTRACTOR TO VERIFY PIPING AND VALVES ARE FULLY FUNCTIONAL.
  - EXISTING CONDENSATE DRAIN. FIELD VERIFY CONDENSATE DRAIN IS CONNECTED TO THE SANITARY SEWER SYSTEM WITH AIR GAP CONNECTION AND IS FULLY FUNCTIONAL. REMOVE ANY CLOGS AND REPAIR DAMAGED LINES.
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  - AIR HANDLER LOCATED ON FIRST FLOOR, ENCLOSED IN ROOM.
  - EXISTING SUPPLY DUCT MAIN TO REMAIN. REMOVE DUCTWORK SECTION CONNECTED TO EXISTING UNIT AND PREPARE FOR RECONNECTION TO NEW UNIT REPLACEMENT.
  - AIR HANDLER LOCATED ON FIRST FLOOR, OPEN TO ROOM.
  - REMOVE EXISTING THERMOSTAT INCLUDING ALL ASSOCIATED CONTROL WIRING. LOCATION IS SHOWN DIAGRAMMATICALLY, FIELD VERIFY EXACT LOCATION.
- 
- PROVIDE AND INSTALL NEW TWO-WAY CHILLED WATER CONTROL VALVE AT THE AIR HANDLING UNIT. RECONNECT CHILLED WATER SUPPLY AND RETURN LINES TO NEW AHU. ISOLATION VALVES EXISTING TO REMAIN AT AHU MATCH EXISTING PIPE SIZE.
  - PROVIDE NEW AIR HANDLING UNIT ON 10H MINIMUM STAND. PROVIDE NEOPRENE ISOLATORS BETWEEN UNIT AND STAND. ROUTE 3/4" CONDENSATE DRAIN TO EXISTING DRAIN SOURCE.
  - RECONNECT NEW AHU INTO EXISTING TO REMAIN SUPPLY DUCT.
  - PROVIDE NEW OPEN ENDED OUTSIDE AIR DUCT FROM NEW ROOF CAP TO AIR HANDLING UNIT AREA. PROVIDE VOLUME DAMPER AND BALANCE TO CFM NOTED. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ROOF CAP.
  - PROVIDE NEW OPEN ENDED OUTSIDE AIR DUCT FROM NEW SIDE MOUNT LOUVER TO AIR HANDLING UNIT AREA. PROVIDE VOLUME DAMPER AND BALANCE TO CFM NOTED. REFER TO ARCHITECTURAL DRAWINGS FOR EXCT LOCATION OF ROOF CAP.
  - PROVIDE NEW THERMOSTAT WITH CLEAR, LOCKABLE COVERS IN EXISTING LOCATION. LOCATION IS SHOWN DIAGRAMMATICALLY, FIELD VERIFY EXACT LOCATION.





GENERAL SHEET NOTES

- A. REFER TO SHEET M000 FOR ADDITIONAL INFORMATION.
- B. COORDINATE REMOVAL AND DOWNTIME OF THE ELECTRICAL SYSTEM WITH BUILDING OWNER/LEASEHOLDER.

DEMOLITION PLAN NOTES

- A. EXISTING DIFFUSERS, GRILLS AND DUCT WORK NOT SHOWN TO BE REMOVED SHALL BE EXISTING TO REMAIN.
- B. ALL EQUIPMENT REMOVED DURING DEMOLITION SHALL BE TURNED OVER TO THE OWNER.
- C. COORDINATE REMOVAL AND DOWNTIME OF THE MECHANICAL SYSTEM WITH BUILDING OWNER/LEASEHOLDER.

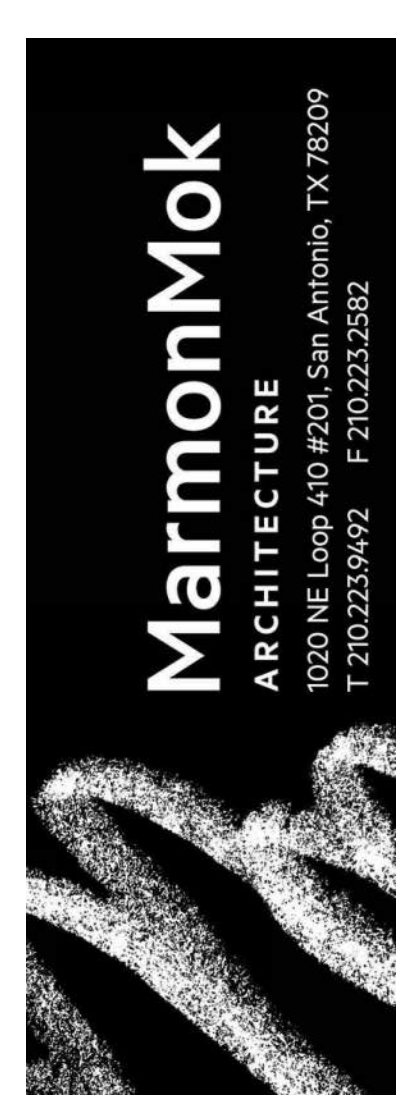
RENOVATION PLAN NOTES

- A. ALL WALL-MOUNTED THERMOSTATS, HUMIDISTAT, ETC IN PUBLIC PLACES SHALL BE INSTALLED WITH CLEAR LOCKABLE COVERS.
- B. UNLESS OTHERWISE NOTED, FOR ALL AIR HANDLING UNITS PROVIDE A MINIMUM 3/4 INCH CONDENSATE PIPING WITH 1 INCH ELASTOMERIC INSULATION TO THE NEAREST HUB DRAIN, TAILPIECE OR FLOOR SINK. SLOPE CONDENSATE PIPING MINIMUM 1/8 INCH PER LINEAR FOOT TOWARDS DRAIN.
- C. ALL NEW DUCTWORK AND PIPING SHALL NOT BE INSTALLED OVER EXISTING OR NEW ELECTRICAL EQUIPMENT.

KEYED NOTES

- D1. EXISTING AIR HANDLER TO BE REMOVED. CHILLED WATER SUPPLY AND RETURN LINES FROM BUILDING SOURCE SHALL REMAIN IN PLACE. CONTRACTOR TO VERIFY PIPING AND VALVES ARE FULLY FUNCTIONAL.
- D2. EXISTING CONDENSATE DRAIN. FIELD VERIFY CONDENSATE DRAIN IS CONNECTED TO THE SANITARY SEWER SYSTEM WITH AIR GAP CONNECTION AND IS FULLY FUNCTIONAL. REMOVE ANY CLOGS AND REPAIR DAMAGED LINES.
- D3. EXISTING CHILLED WATER SUPPLY AND RETURN LINES FROM CHILLED WATER PUMP ROOM TO REMAIN IN PLACE. REMOVE PIPING FROM AHU ISOLATION VALVE TO UNIT AND PREPARE FOR NEW UNIT CONNECTION. CONTRACTOR TO FIELD VERIFY EXACT LOCATION.
- D4. AIR HANDLER LOCATED ON FIRST FLOOR, ENCLOSED IN ROOM.
- D5. EXISTING SUPPLY DUCT MAIN TO REMAIN. REMOVE DUCTWORK SECTION CONNECTED TO EXISTING UNIT AND PREPARE FOR RECONNECTION TO NEW UNIT REPLACEMENT.
- D6. AIR HANDLER LOCATED ON FIRST FLOOR, OPEN TO ROOM.
- D7. REMOVE EXISTING THERMOSTAT INCLUDING ALL ASSOCIATED CONTROL WIRING. LOCATION IS SHOWN DIAGRAMMATICALLY, FIELD VERIFY EXACT LOCATION.

- R1. PROVIDE AND INSTALL NEW TWO-WAY CHILLED WATER CONTROL VALVE AT THE AIR HANDLING UNIT. RECONNECT CHILLED WATER SUPPLY AND RETURN LINES TO NEW AHU. ISOLATION VALVES EXISTING TO REMAIN AT AHU MATCH EXISTING PIPE SIZE.
- R2. PROVIDE NEW AIR HANDLING UNIT ON 10H MINIMUM STAND. PROVIDE NEOPRENE ISOLATORS BETWEEN UNIT AND STAND. ROUTE 3/4" CONDENSATE DRAIN TO EXISTING DRAIN SOURCE.
- R3. RECONNECT NEW AHU INTO EXISTING TO REMAIN SUPPLY DUCT.
- R4. PROVIDE NEW OPEN ENDED OUTSIDE AIR DUCT FROM NEW ROOF CAP TO AIR HANDLING UNIT AREA. PROVIDE VOLUME DAMPER AND BALANCE TO CFM NOTED. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ROOF CAP.
- R5. PROVIDE NEW OPEN ENDED OUTSIDE AIR DUCT FROM NEW SIDE MOUNT LOUVER TO AIR HANDLING UNIT AREA. PROVIDE VOLUME DAMPER AND BALANCE TO CFM NOTED. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ROOF CAP.
- R6. PROVIDE NEW THERMOSTAT WITH CLEAR, LOCKABLE COVERS IN EXISTING LOCATION. LOCATION IS SHOWN DIAGRAMMATICALLY, FIELD VERIFY EXACT LOCATION.
- R7. PROVIDE NEW HORIZONTAL AIR HANDLING UNIT SUSPENDED FROM STRUCTURE WITH SPRING ISOLATION. ROUTE 3/4" CONDENSATE DRAIN TO EXISTING DRAIN SOURCE.



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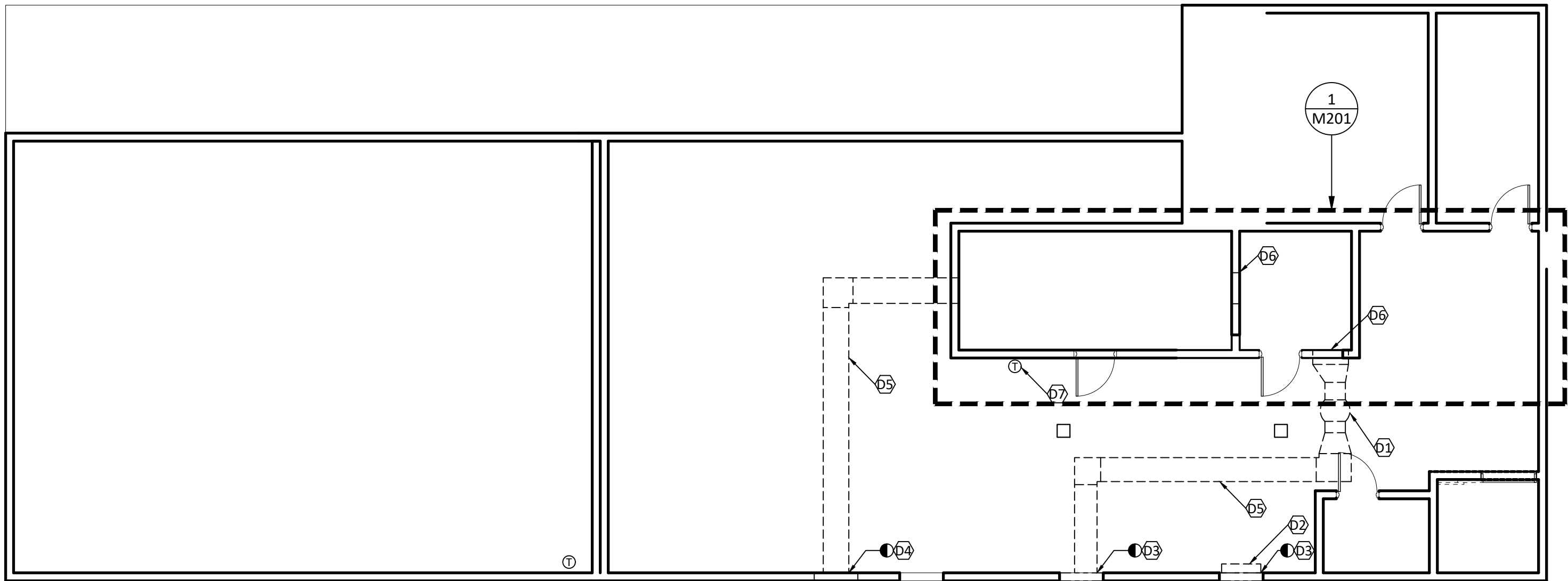
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Date 12/05/2022  
Project No. 21032  
Revisions

SHEET TITLE  
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BLDG. 22,23,24

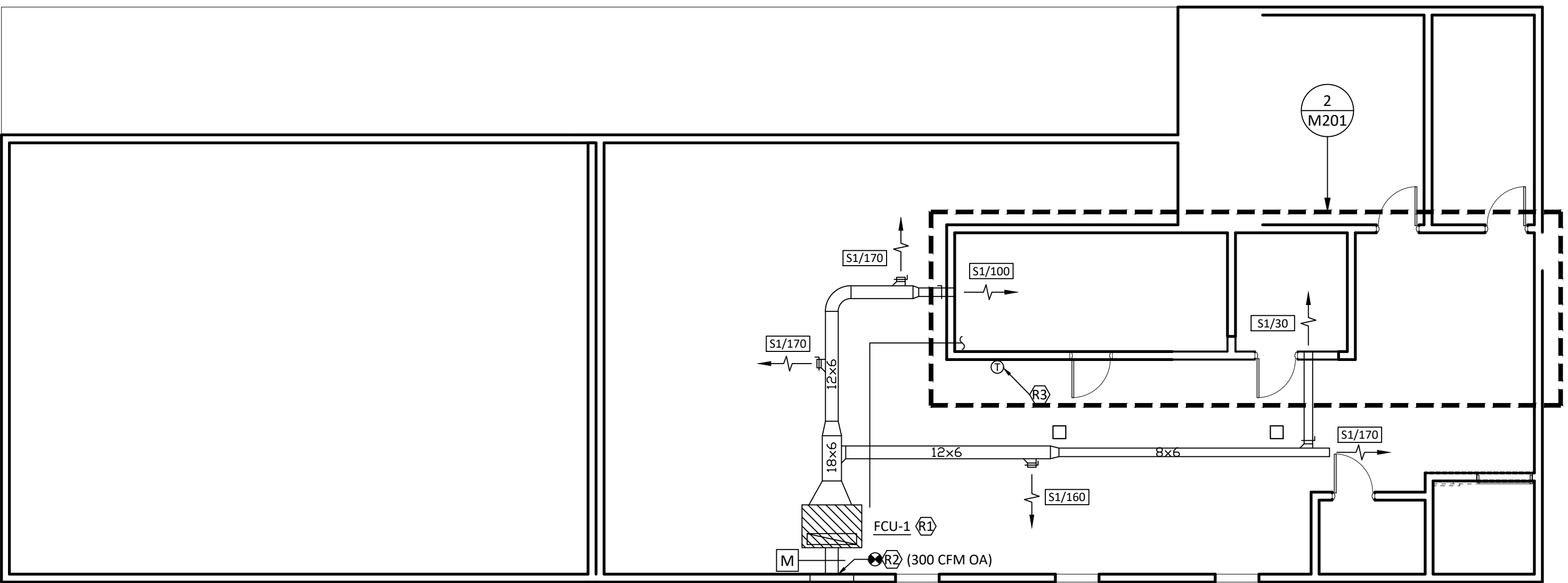
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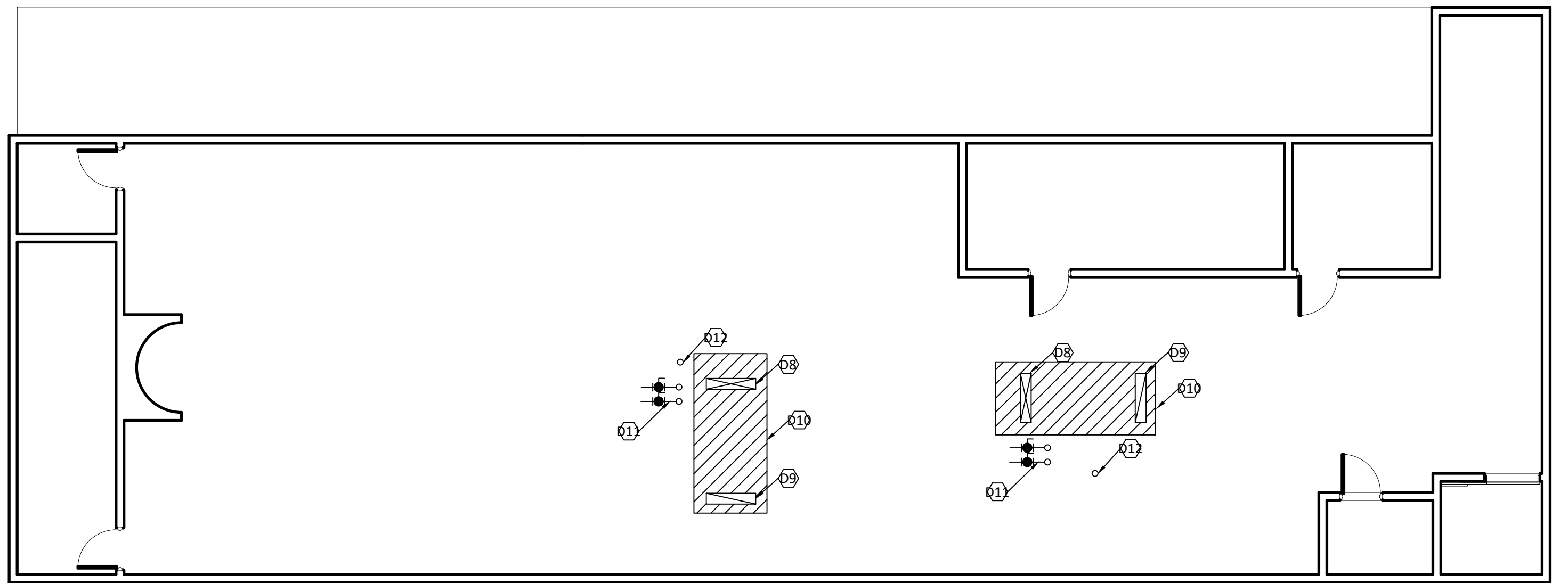
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**1** BUILDING 9, BASEMENT - M&E DEMOLITION PLAN  
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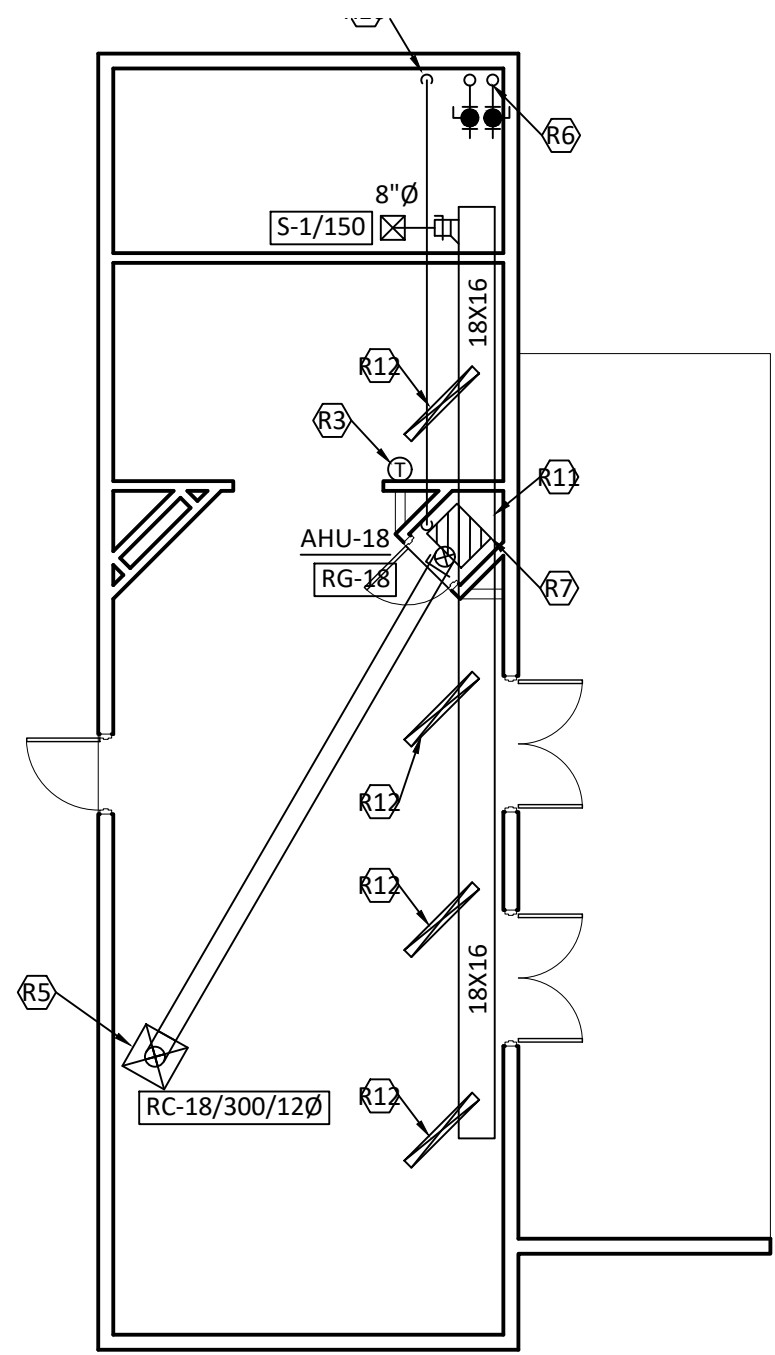


**2** BUILDING 9, BASEMENT - M&E NEW WORK PLAN  
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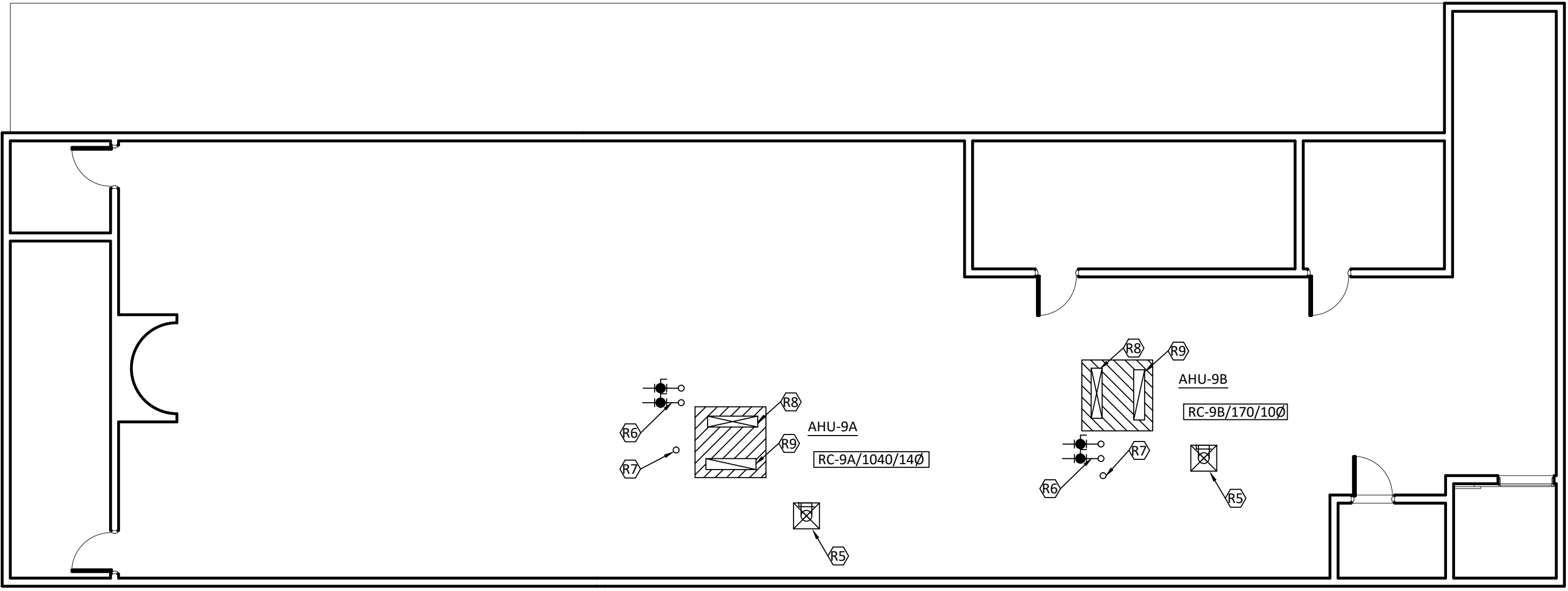


**3** BUILDING 9, ATTIC - M&E DEMOLITION PLAN  
SCALE: 1/8"=1'-0"

ALT #1



**5** BUILDING 18 - M&E NEW WORK PLAN  
SCALE: 1/8"=1'-0"



**4** BUILDING 9, ATTIC - M&E NEW WORK PLAN  
SCALE: 1/8"=1'-0"

#### GENERAL SHEET NOTES

- REFER TO SHEET M000 FOR ADDITIONAL INFORMATION.
- REFER TO SHEET M201 FOR PUMP ROOM PIPING/EQUIPMENT PLANT.
- COORDINATE REMOVAL AND DOWNTIME OF THE ELECTRICAL SYSTEM WITH BUILDING OWNER/LEASEHOLDER.
- MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC SHALL NOT BE INSTALLED DIRECTLY ABOVE ELECTRICAL EQUIPMENT.

#### DEMOLITION PLAN NOTES

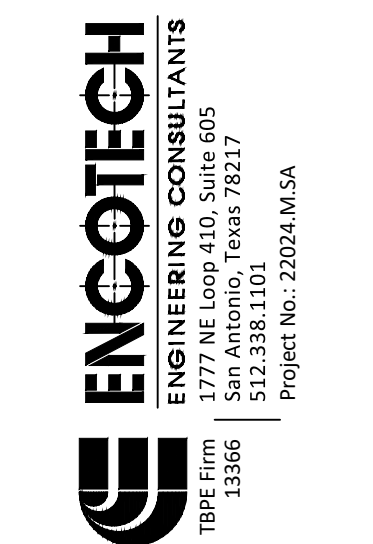
- EXISTING DIFFUSERS, GRILLS AND DUCT WORK NOT SHOWN TO BE REMOVED SHALL BE EXISTING TO REMAIN.
- ALL EQUIPMENT REMOVED DURING DEMOLITION SHALL BE TURNED OVER TO THE OWNER.
- COORDINATE REMOVAL AND DOWNTIME OF THE MECHANICAL SYSTEM WITH BUILDING OWNER/LEASEHOLDER.

#### RENOVATION PLAN NOTES

- ALL WALL-MOUNTED THERMOSTATS, HUMIDISTAT, ETC IN PUBLIC PLACES SHALL BE INSTALLED WITH CLEAR LOCKABLE COVERS.
- UNLESS OTHERWISE NOTED, FOR ALL AIR HANDLING UNITS PROVIDE A MINIMUM 3/4 INCH CONDENSATE PIPING WITH 1 INCH ELASTOMERIC INSULATION TO THE NEAREST HUB DRAIN, TAILPIECE OR FLOOR SINK. SLOPE CONDENSATE PIPING MINIMUM 1/8 INCH PER LINEAR FOOT TOWARDS DRAIN.
- ALL NEW DUCTWORK AND PIPING SHALL NOT BE INSTALLED OVER EXISTING OR NEW ELECTRICAL EQUIPMENT.

#### KEYED NOTES

- EXISTING IN-LINE EXHAUST FAN TO BE REMOVED.
- EXISTING WALL MOUNTED EXHAUST FAN TO BE REMOVED. FILL IN GAP IN WALL WITH INSULATED BOARD.
- REMOVE EXISTING DUCTWORK TO TERMINATION POINT AS SHOWN. FILL GAP IN WALL WITH INSULATED BOARD.
- REMOVE EXISTING DUCTWORK TO TERMINATION POINT AS SHOWN. PREPARE FOR NEW WORK CONNECTION.
- REMOVE EXISTING DUCTWORK.
- REMOVE EXISTING AIRFLOW GRILLE.
- REMOVE EXISTING THERMOSTAT INCLUDING ALL ASSOCIATED CONTROL WIRING. LOCATION IS SHOWN DIAGRAMMATICALLY, FIELD VERIFY EXACT LOCATION.
- EXISTING SUPPLY DUCT MAIN TO REMAIN. REMOVE DUCTWORK SECTION CONNECTED TO EXISTING UNIT AND PREPARE FOR RECONNECTION TO NEW UNIT REPLACEMENT.
- EXISTING RETURN DUCT TO REMAIN. REMOVE DUCTWORK SECTION CONNECTED TO EXISTING UNIT AND PREPARE FOR RECONNECTION TO NEW UNIT REPLACEMENT.
- EXISTING AIR HANDLER TO BE REMOVED. CHILLED WATER SUPPLY AND RETURN LINES FROM BUILDING SOURCE SHALL REMAIN IN PLACE. CONTRACTOR TO VERIFY PIPING AND VALVES ARE FULLY FUNCTIONAL.
- EXISTING CHILLED WATER SUPPLY AND RETURN LINES FROM CHILLED WATER PUMP ROOM TO REMAIN IN PLACE. REMOVE PIPING FROM AHU ISOLATION VALVE TO UNIT AND PREPARE FOR NEW UNIT CONNECTION. CONTRACTOR TO FIELD VERIFY EXACT LOCATION.
- EXISTING CONDENSATE DRAIN. FIELD VERIFY CONDENSATE DRAIN IS CONNECTED TO THE SANITARY SEWER SYSTEM WITH AIR GAP CONNECTION AND IS FULLY FUNCTIONAL. REMOVE ANY CLOGS AND REPAIR DAMAGED LINES.
- PROVIDE NEW HORIZONTAL MOUNTED FAN COIL UNIT SUSPENDED FROM STRUCTURE WITH VIBRATION ISOLATION. ROUTE 1" CONDENSATE DRAIN TO FLOOR DRAIN LOCATED IN PUMP ROOM.
- PROVIDE NEW OUTSIDE AIR DUCTWORK FROM LOCATION SHOWN TO FAN COIL UNIT OUTSIDE AIR INTAKE.
- PROVIDE NEW THERMOSTAT WITH CLEAR, LOCKABLE COVERS IN EXISTING LOCATION. LOCATION IS SHOWN DIAGRAMMATICALLY, FIELD VERIFY EXACT LOCATION.
- PROVIDE NEW HORIZONTAL MOUNTED FAN COIL UNIT SUSPENDED FROM STRUCTURE WITH VIBRATION ISOLATION. ROUTE 1" CONDENSATE DRAIN TO EXTERIOR.
- PROVIDE NEW OPEN ENDED OUTSIDE AIR DUCT FROM NEW ROOF CAP TO AIR HANDLING UNIT AREA. PROVIDE VOLUME DAMPER AND BALANCE TO CFM NOTED. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ROOF CAP.
- PROVIDE AND INSTALL NEW TWO-WAY CHILLED WATER CONTROL VALVE AT THE AIR HANDLING UNIT. RECONNECT CHILLED WATER SUPPLY AND RETURN LINES TO NEW AHU. ISOLATION VALVES EXISTING TO REMAIN AT AHU MATCH EXISTING PIPE SIZE.
- PROVIDE NEW AIR HANDLING UNIT ON 10H MINIMUM STAND. PROVIDE NEOPRENE ISOLATORS BETWEEN UNIT AND STAND. ROUTE 3/4" CONDENSATE DRAIN TO EXISTING DRAIN SOURCE.
- RECONNECT NEW AHU INTO EXISTING TO REMAIN SUPPLY DUCT.
- RECONNECT NEW AHU INTO EXISTING TO REMAIN RETURN DUCT.
- CONNECT AHU CONDENSATE PIPE TO LAVATORY SINK. REFER TO DETAILS. LOCATION SHOWN FOR GENERAL INTENT ONLY, CONTRACTOR TO FIELD VERIFY EXACT LOCATION.
- CONNECT NEW SUPPLY DUCT MAIN TO AHU-18. MAIN DUCT LOCATED ABOVE CEILING IN ATTIC AREA.
- INSTALL LINEAR BAR GRILLE IN EXISTING CEILING STRUCTURE. PROVIDE INSULATED SHEET METAL PLENUM AND TAP INTO MAIN DUCTWORK IN ATTIC WITH VOLUME DAMPER FOR BALANCING. COORDINATE EXACT DIFFUSER LENGTH/WIDTH TO REPLACE EXISTING CEILING WOODEN PLANK. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION. LOCATIONS SHOWN FOR GENERAL INTENT ONLY.



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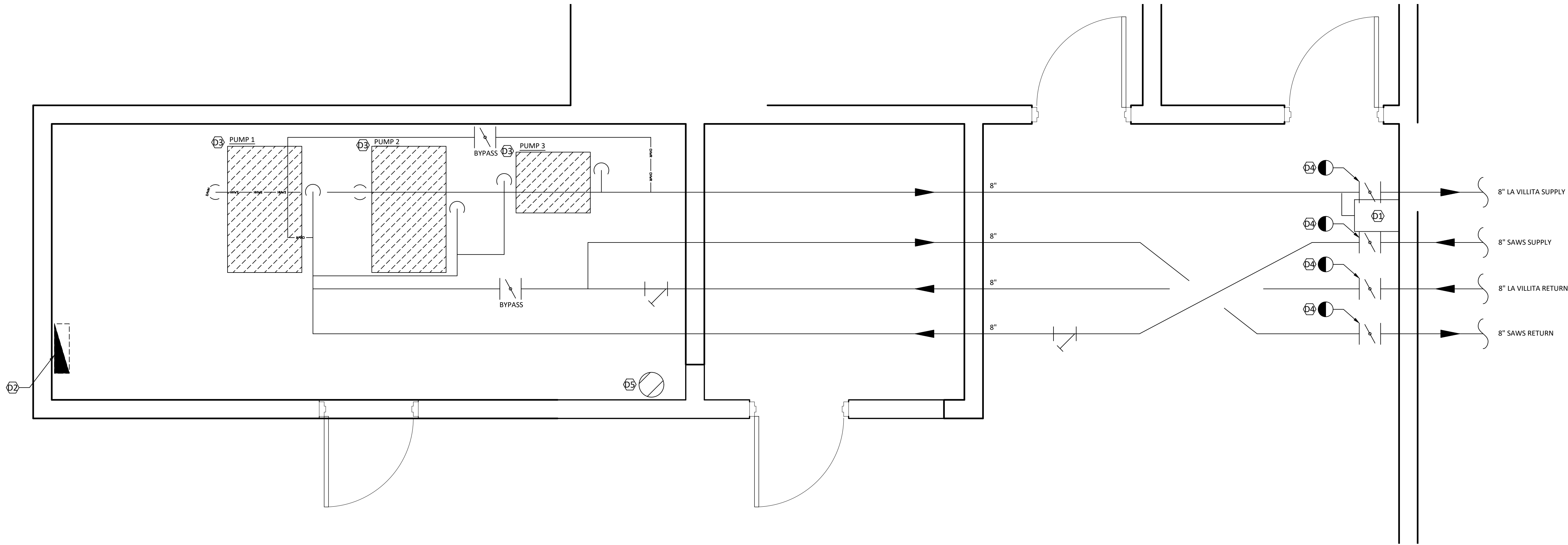
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Revisions

SHEET TITLE  
MECHANICAL  
PLANS -  
BLDG. 9,18

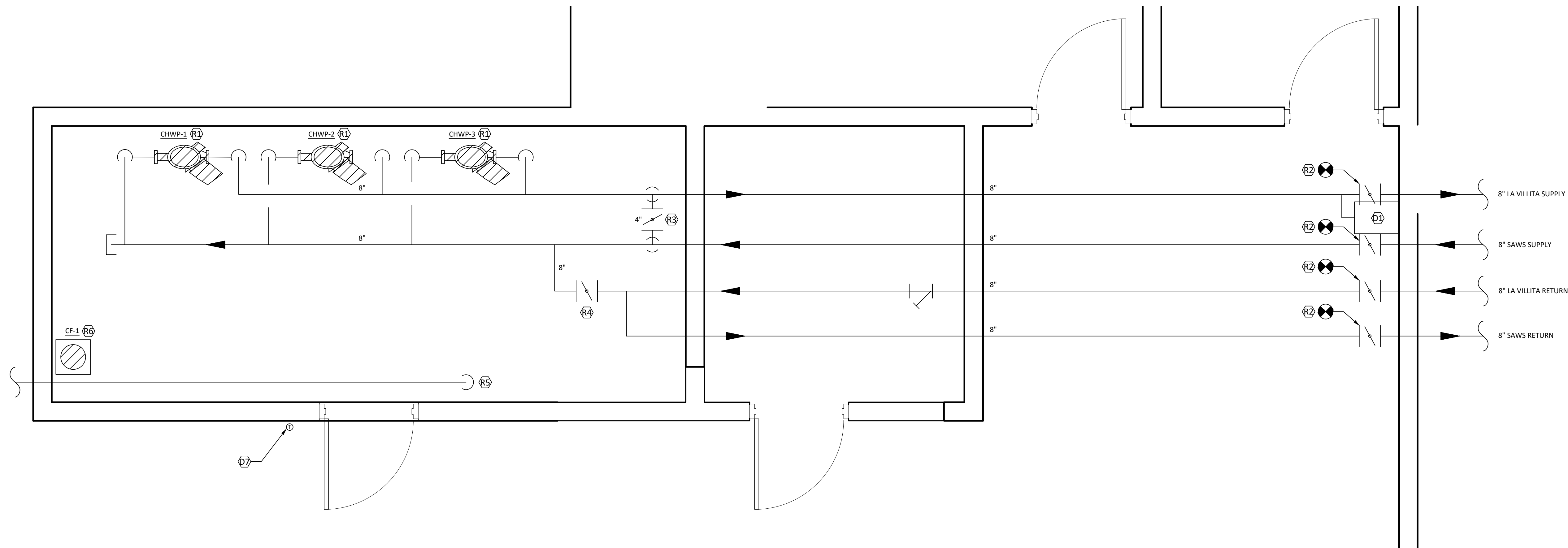
SHEET NO.

M108





**1** BUILDING 9, BASEMENT - DEMOLITION PLAN  
SCALE: 1/2"=1'-0"



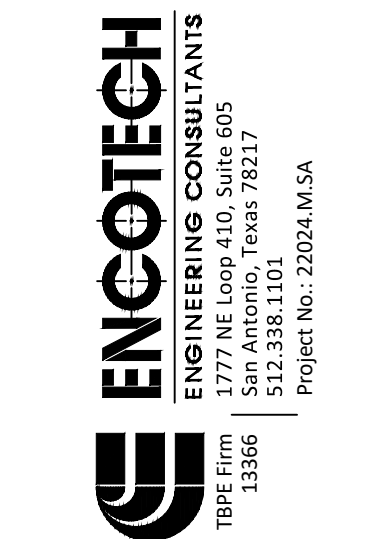
**2** BUILDING 9, BASEMENT - NEW WORK PLAN (BASE BID)  
SCALE: 1/2"=1'-0"

#### GENERAL SHEET NOTES

- A. REFER TO GENERAL NOTES ON M0.00.
- B. PROTECT ALL SURFACES FROM DAMAGE, DUST AND DEBRIS FOR ALL FLOOR SURFACES, IT EQUIPMENT, AND ELECTRICAL GEAR FOR THE DURATION OF CONSTRUCTION.
- C. FLOORS (AND WALLS WHERE REQUIRED) SHALL BE PROTECTED BY 1/8" MASONITE, CLEANED AND MAINTAINED DURING CONSTRUCTION. DAMAGED SECTIONS SHALL BE REPLACED.
- D. ALL DUCT OPENINGS SHALL BE COVERED TO PROTECT FROM DUST AND DEBRIS DURING CONSTRUCTION.
- E. MAINTAIN AND RESTORE VAPOR BARRIER AND JACKETING ON INSULATION AS REQUIRED. PIPING TO REMAIN INSULATED WHILE IN SERVICE.
- F. EXISTING FACILITIES SHOWN OR NOT SHOWN TO BE REPLACED SHALL REMAIN IN SERVICE.
- G. DRAINDOWN OF SYSTEM SHALL BE DONE LOCALLY WITH THE USE OF ISOLATION VALVES. COORDINATE SHUTDOWN WITH OWNER.
- H. MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC SHALL NOT BE INSTALLED DIRECTLY ABOVE ELECTRICAL EQUIPMENT.

#### KEYED NOTES

- D1. CHILLED WATER PUMP SERVICE DISCONNECT (ETR)
- D2. EXISTING CHILLED WATER PUMP PANEL TO BE REMOVED.
- D3. REMOVE EXISTING BASE MOUNTED PUMP, INCLUDING PUMP BASE AND ALL ASSOCIATED ACCESSORIES/WIRING/PIPING.
- D4. REMOVE CHILLED WATER PIPING, INCLUDING ALL ASSOCIATED VALVES AND PIPE ACCESSORIES, FROM PUMP ROOM TO MAIN SHUTOFF VALVES. EXISTING MAIN SHUTOFF VALVES TO REMAIN.
- D5. REMOVE CHEMICAL FEEDER AND ALL ASSOCIATED PIPING.
- R1. PROVIDE NEW IN-LINE PUMP ON NEW 6" CONCRETE PAD. MOUNT PUMP 12" ABOVE FLOOR AT CENTERLINE. PROVIDE STANTION PLATE SUPPORT FROM PUMP TO PAD. PROVIDE NEOPRENE PAD BETWEEN PUMP AND SUPPORT FOR VIBRATION ISOLATION.
- R2. PROVIDE NEW CHILLED WATER PIPING FROM MAIN SHUTOFF VALVES TO NEW PUMPS LOCATED IN PUMP ROOM. REFER TO FLOW DIAGRAM FOR ADDITIONAL DETAILS.
- R3. 4" LINE SIZE DIFFERENTIAL PRESSURE BYPASS.
- R4. 8" SAWS BYPASS.
- R5. PROVIDE 1" CONDENSATE AND TERMINATE AT FLOOR DRAIN.
- R6. PROVIDE CHEMICAL FEEDER/FILTER ON NEW 6" CONCRETE PAD.E
- R7. PROVIDE NEW THERMOSTAT WITH CLEAR, LOCKABLE COVERS IN EXISTING LOCATION. LOCATION IS SHOWN DIAGRAMMATICALLY, FIELD VERIFY EXACT LOCATION.



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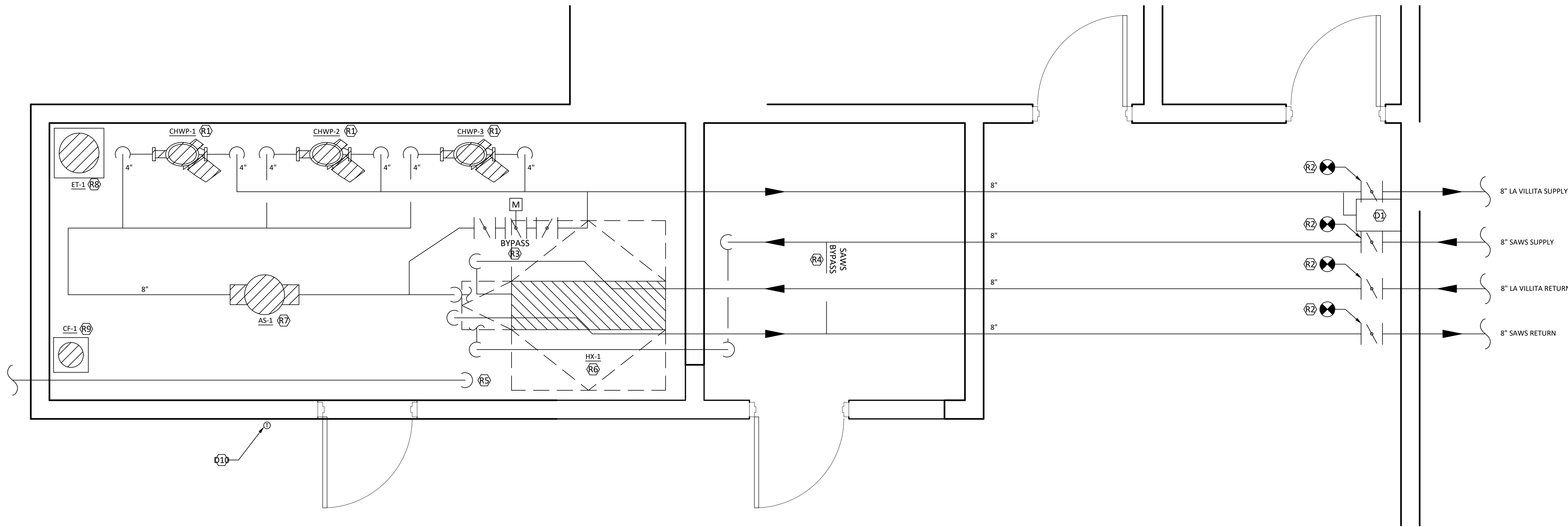
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Revisions

SHEET TITLE  
MECHANICAL PLANS  
- BLDG. 9 ENLARGED

SHEET NO.  
**M201**





**1** BUILDING 9, BASEMENT - NEW WORK PLAN (ALT #2)  
SCALE: 1/2"=1'-0"

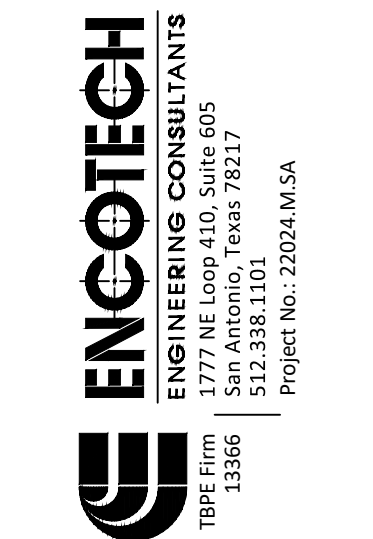


**GENERAL SHEET NOTES**

- A. REFER TO GENERAL NOTES ON M0.00.
- B. PROTECT ALL SURFACES FROM DAMAGE, DUST AND DEBRIS FOR ALL FLOOR SURFACES, IT EQUIPMENT, AND ELECTRICAL GEAR FOR THE DURATION OF CONSTRUCTION.
- C. FLOORS (AND WALLS WHERE REQUIRED) SHALL BE PROTECTED BY 1/8" MASONITE, CLEANED AND MAINTAINED DURING CONSTRUCTION. DAMAGED SECTIONS SHALL BE REPLACED.
- D. ALL DUCT OPENINGS SHALL BE COVERED TO PROTECT FROM DUST AND DEBRIS DURING CONSTRUCTION.
- E. MAINTAIN AND RESTORE VAPOR BARRIER AND JACKETING ON INSULATION AS REQUIRED. PIPING TO REMAIN INSULATED WHILE IN SERVICE.
- F. EXISTING FACILITIES SHOWN OR NOT SHOWN TO BE REPLACED SHALL REMAIN IN SERVICE.
- G. DRAINDOWN OF SYSTEM SHALL BE DONE LOCALLY WITH THE USE OF ISOLATION VALVES. COORDINATE SHUTDOWN WITH OWNER.
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**KEYED NOTES**

- D1. CHILLED WATER PUMP SERVICE DISCONNECT (ETR)
- D2. EXISTING CHILLED WATER PUMP PANEL TO BE REMOVED.
- D3. REMOVE EXISTING BASE MOUNTED PUMP, INCLUDING PUMP BASE AND ALL ASSOCIATED ACCESSORIES/WIRING/PIPING.
- D4. REMOVE CHILLED WATER PIPING, INCLUDING ALL ASSOCIATED VALVES AND PIPE ACCESSORIES, FROM PUMP ROOM TO MAIN SHUTOFF VALVES. EXISTING MAIN SHUTOFF VALVES TO REMAIN.
- R1. PROVIDE NEW IN-LINE PUMP ON NEW 6" CONCRETE PAD. MOUNT PUMP 12" ABOVE FLOOR AT CENTERLINE. PROVIDE STANTION PLATE SUPPORT FROM PUMP TO PAD. PROVIDE NEOPRENE PAD BETWEEN PUMP AND SUPPORT FOR VIBRATION ISOLATION.
- R2. PROVIDE NEW CHILLED WATER PIPING FROM MAIN SHUTOFF VALVES TO NEW PUMPS LOCATED IN PUMP ROOM. REFER TO FLOW DIAGRAM FOR ADDITIONAL DETAILS.
- R3. 4" LINE SIZE DIFFERENTIAL PRESSURE BYPASS.
- R4. 8" SAWS BYPASS.
- R5. PROVIDE 1" CONDENSATE AND TERMINATE AT FLOOR DRAIN.
- R6. PROVIDE HEAT EXCHANGER ON NEW 2"H CONCRETE PAD.
- R7. PROVIDE AIR SEPARATOR EQUIPMENT SUSPENDED FROM CEILING. REFER TO FLOW DIAGRAM FOR ADDITIONAL PIPING DETAILS.
- R8. PROVIDE 1" CHILLED WATER LINE TO EXPANSION TANK. INSTALL TANK ON NEW 6"H CONCRETE PAD. REFER TO FLOW DIAGRAM FOR ADDITIONAL PIPING DETAILS.
- R9. PROVIDE CHEMICAL FEEDER/FILTER ON NEW 6" CONCRETE PAD.
- R10. PROVIDE NEW THERMOSTAT WITH CLEAR, LOCKABLE COVERS IN EXISTING LOCATION. LOCATION IS SHOWN DIAGRAMMATICALLY, FIELD VERIFY EXACT LOCATION.



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SHEET TITLE  
**MECHANICAL PLANS  
- BLDG. 9 ENLARGED  
(ALT #2)**

SHEET NO.

**M201**



A

B

C

D

OUTDOOR AIR VENTILATION CALCULATION											
BUILDING	SPACE NAME	OCCUPANCY CATEGORY	ZONE FLOOR AREA, A <sub>f</sub> (SQ. FT.)	ZONE POPULATION, P <sub>z</sub> (NO. PEOPLE)	AREA OUTDOOR AIR RATE, R <sub>a</sub> (CFM/SQ.FT)	PEOPLE OUTDOOR AIR RATE, R <sub>p</sub> (CFM/PERSON)	ZONE AIR COOLING (E <sub>cool</sub> )	ZONE AIR HEATING (E <sub>heat</sub> )	REQ'D OA SUB-TOTAL, V <sub>oa</sub> (CFM)	SCHEDULED OA (CFM)	
1	BUILDING 1 (B LINK)	RETAIL - SALES	883	13	0.12	7.5	1.0	0.8	257	260	
2	BUILDING 2 (ANGELITA)	RETAIL - SALES	1,195	18	0.12	7.5	1.0	0.8	347	350	
3	BUILDING 3 (CARSTRANO SOAP COMPANY)	RETAIL - SALES	1,155	17	0.12	7.5	1.0	0.8	336	340	
4	BUILDING 4 (EQUINO)	RETAIL - SALES	218	11	0.12	7.5	1.0	0.8	209	210	
5	BUILDING 5 (STUDIO ALEJANDRO SI FUENTES)	RETAIL - SALES	890	12	0.12	7.5	1.0	0.8	233	240	
6	BUILDING 6 (CASA MANOS ALLEGRES)	RETAIL - SALES	1,358	20	0.12	7.5	1.0	0.8	395	400	
7	BUILDING 7 (HUPIL MARKET)	RETAIL - SALES	930	14	0.12	7.5	1.0	0.8	270	280	
8	BUILDING 8 (VILLA TESOROS)	RETAIL - SALES	1,803	27	0.12	7.5	1.0	0.8	524	530	
9	BUILDING 9 (LEVEL 2 OFFICE)	OFFICE	1,500	8	0.06	5.0	1.0	0.8	163	170	
9	BUILDING 9 (LEVEL 2 BOLIVAR HALL)	CONFERENCE	1,930	97	0.18	7.5	1.0	0.8	1,237	1,240	
10	BUILDING 10 (BIRD & PEAR)	RETAIL - SALES	2,200	33	0.12	7.5	1.0	0.8	639	640	
11	BUILDING 11 (COPPER GALLERY LEVEL 1)	RETAIL - SALES	1,096	16	0.12	7.5	1.0	0.8	319	320	
11	BUILDING 11 (COPPER GALLERY LEVEL 2)	RETAIL - SALES	1,096	16	0.12	7.5	1.0	0.8	319	320	
12	BUILDING 12 (STARVING ARTIST ART GROUP)	RETAIL - SALES	1,600	24	0.12	7.5	1.0	0.8	465	470	
12	BUILDING 12 (LEVEL 2)	RETAIL - SALES	1,600	24	0.12	7.5	1.0	0.8	465	470	
13	BUILDING 13 (LITTLE CHURCH OF LA VILLITA)	MUSEUM/GALLERIES	1,470	59	0.12	7.5	1.0	0.8	774	780	
13	BUILDING 13 (LITTLE CHURCH OF LA VILLITA)	RETAIL - SALES	1,200	18	0.12	7.5	1.0	0.8	349	350	
14A	BUILDING 14 (RIVER ART GROUP)	STORAGE	500	0	0.12	0.0	1.0	0.8	75	430	
14B	BUILDING 14 (LEVEL 2)	RETAIL - SALES	900	14	0.12	7.5	1.0	0.8	262	270	
16A	BUILDING 16A (GUADALAJARA GRILL LEVEL 1)	DINING/KITCHEN	550	39	0.18	7.5	1.0	0.8	489		
		KITCHEN	750	16	0.11	7.5	1.0	0.8	255	810	
		STORAGE	400	0	0.12	0.0	1.0	0.8	60		
16A	BUILDING 16A (GUADALAJARA GRILL LEVEL 2)	DINING/KITCHEN	800	56	0.18	7.5	1.0	0.8	705		
		STORAGE	600	0	0.12	0.0	1.0	0.8	90	800	
		DINING/KITCHEN	250	35	0.18	7.5	1.0	0.8	384	430	
16B	BUILDING 16B (GUADALAJARA GRILL LEVEL 2)	STORAGE	250	0	0.12	0.0	1.0	0.8	38		
16B	BUILDING 16B (PLAZA TAXCO)	RETAIL - SALES	454	7	0.12	7.5	1.0	0.8	132	140	
16B	BUILDING 16B (PLAZA TAXCO)	RETAIL - SALES	457	7	0.12	7.5	1.0	0.8	133	140	
17	BUILDING 17 (JOLIX LUNA FINE ART)	RETAIL - SALES	549	8	0.12	7.5	1.0	0.8	160	160	
18	BUILDING 18 (COS HOUSE)	MUSEUM/GALLERIES	857	34	0.06	7.5	1.0	0.8	383	390	
20	BUILDING 20 (SA AFRICAN AMERICAN)	MUSEUM/GALLERIES	850	34	0.06	7.5	1.0	0.8	383	520	
21	BUILDING 21 (SCENTHIPS USA)	STORAGE	850	0	0.12	0.0	1.0	0.8	128		
		RETAIL - SALES	1,400	21	0.12	7.5	1.0	0.8	407	410	
22	BUILDING 22 (MARISOL DELUNA NY FOUNDATION)	RETAIL - SALES	1,421	21	0.12	7.5	1.0	0.8	413	420	
23	BUILDING 23 (LITTLE STUDIO GALLERY)	RETAIL - SALES	1,039	16	0.12	7.5	1.0	0.8	302	310	
24	BUILDING 24 (LA VILLITA HISTORY EXHIBIT)	MUSEUM/GALLERIES	643	26	0.06	7.5	1.0	0.8	292	300	

AIR DEVICE SCHEDULE							
MARK	LOCATION	SIZE	MOUNTING	CFM RANGE	NC @ MAX CFM	DESCRIPTION	MFGR
LD-1	BUILDING 18	48x5	CEILING	90/FT	25	ALUMINUM BAR GRILLE	TITUS
S-1	BUILDING 18	12x12	CEILING	150-250	25	ALUMINUM CEILING DIFFUSER	TITUS
RG-1	BUILDING 1	18x14	WALL	800-1000	25	ALUMINUM SINGLE DEFLECTION GRILLE	TITUS
RG-5	BUILDING 3	18x14	WALL	800-1000	25	ALUMINUM SINGLE DEFLECTION GRILLE	TITUS
RG-10	BUILDING 10	28x20	WALL	2000-2000	25	ALUMINUM SINGLE DEFLECTION GRILLE	TITUS
RG-18	BUILDING 18	32x12	WALL	1200-1700	25	ALUMINUM SINGLE DEFLECTION GRILLE	TITUS
RG-21	BUILDING 21	22x22	WALL	1200-1700	25	ALUMINUM SINGLE DEFLECTION GRILLE	TITUS
REQUIREMENTS (APPLIES TO ALL ITEMS):							
A. PROVIDE DISCONNECT, TO BE FIELD-MOUNTED BY ELECTRICAL CONTRACTOR.							
B. PROVIDE UNIT WITH HIGH EFFICIENCY FAN MOTOR AND 5-YEAR PARTS AND LABOR WARRANTY.							
C. TSP VALUES SHOWN IN SCHEDULE IS BASED UPON BASIS OF DESIGN EQUIPMENT AND INCLUDES ALL INTERNAL COMPONENTS AND FILTERS. ALTERNATE EQUIPMENT SHALL MEET ESP VALUES, BUT TSP VALUES MAY VARY BY MFGR.							
D. FURNISH AND INSTALL TEMPERATURE SENSORS AND UNIT CONTROLLERS.							
E. PROVIDE WITH DISCHARGE TEMPERATURE ELECTRIC HEATER. REFER TO SCHEDULE NOTES FOR ADDITIONAL DATA. HEATER TO INSTALLED DIRECTLY AT UNIT DISCHARGE ACCORDING TO MANUFACTURER INSTALLATION REQUIREMENTS. PROVIDE WITH SCR CONTROL, MAGNETIC CONTACTORS, AIRFLOW SWITCH AND DISCONNECT SWITCH.							
F. PROVIDE UNIT WITH MFGR RECOMMENDED 1" REPLACEABLE FILTER EQUAL TO OR GREATER THAN MERV 8 DURING CONSTRUCTION. REPLACE FILTERS WITH MERV 8 AT CONCLUSION OF CONSTRUCTION AND PRIOR TO OCCUPANCY.							
G. PROVIDE WITH CONDENSATE OVERFLOW SWITCH WIRED TO UNIT SHUTOFF.							
H. PROVIDE NEOPRENE PADS FOR FLOOR-MOUNTED UNITS OR SPRING VIBRATION ISOLATORS FOR CEILING HUNG UNITS.							
NOTES:							
1. FOR UNITS WITH GREATER THAN 2,000 CFM, PROVIDE UNIT WITH DUCT SMOKE DETECTORS ON THE SUPPLY AND RETURN DUCTS.							
2. PROVIDE CONDENSATE PUMP SIMILAR TO LITTLE GIANT MODEL VCM-200LS							
3. PROVIDE UNIT WITH 30"H STAND TO ALLOW FOR RETURN AIR. (VERTICAL UNITS)							

AIR HANDLING UNIT SCHEDULE																								
MARK	TYPE	SPACE NAME	SUPPLY AIRFLOW (CFM)	OUTSIDE AIR MAX./MIN. (CFM)	ELECTRIC HEATING COIL							FAN DATA							OPERATING WEIGHT (LBS)	MFGR	MODEL	NOTES		
					CAPACITY (KW)	VOLT	PHASE	HZ	HEATING AMBIENT AIR (F)	EAT (F)	LAT (F)	FAN TYPE	TSP (IN)	ESP (IN)	NO. OF FANS	VOLT	PHASE	HZ					MCA	MOPC
AHU-1	VERTICAL	BUILDING 1 (B LINK)	1,600	260	8.0	208	1	60	29.0	66.7	82.5	PLENUM/ECM	1.0	0.5	1	120	1	60	12.0	20	300	MAGIC AIR	NDB168	3
AHU-2A	VERTICAL	BUILDING 2A (ANGELITA)	1,200	175	6.0	208	1	60	29.0	67.4	83.2	PLENUM/ECM	1.0	0.5	1	120	1	60	12.0	20	191	MAGIC AIR	NDB128	3
AHU-2B	VERTICAL	BUILDING 2B (ANGELITA)	1,200	175	6.0	208	1	60	29.0	67.4	83.2	PLENUM/ECM	1.0	0.5	1	208	1	60	12.0	20	191	MAGIC AIR	NDB128	3
AHU-3	VERTICAL	BUILDING 3 (CAPISTRANO SOAP COMPANY)	1,600	340	10.0	208	1	60	29.0	64.4	84.2	PLENUM/ECM	1.0	0.5	1	120	1	60	12.0	20	300	MAGIC AIR	NDB168	3
AHU-4	HORIZONTAL	BUILDING 4 (EQUINO)	1,200	210	7.0	208	3	60	29.0	66.1	84.5	PLENUM/ECM	1.0	0.5	1	120	1	60	12.0	20	300	MAGIC AIR	HCA128	3
AHU-5	VERTICAL	BUILDING 5 (STUDIO ALEJANDRO SI FUENTES)	1,200	240	7.0	208	1	60	29.0	65.0	83.4	PLENUM/ECM	1.0	0.5	1	120	1	60	12.0	20	191	MAGIC AIR	NDB128	3
AHU-6A	VERTICAL	BUILDING 6 (CASA MANOS ALLEGRES)	1,200	200	6.0	208	1	60	29.0	66.5	82.3	PLENUM/ECM	1.0	0.5	1	120	1	60	12.0	20	191	MAGIC AIR	NDB128	3
AHU-6B	VERTICAL	BUILDING 6 (CASA MANOS ALLEGRES)	1,200	200	6.0	208	1	60	29.0	66.5	82.3	PLENUM/ECM	1.0	0.5	1	208	1	60	9.1	15	191	MAGIC AIR	NDB128	3
AHU-7	VERTICAL	BUILDING 7 (HUPIL MARKET)	1,600	280	9.0	208	1	60	29.0	66.1	83.9	PLENUM/ECM	1.0	0.5	1	208	1	60	9.1	15	300	MAGIC AIR	NDB168	3
AHU-8	HORIZONTAL	BUILDING 8 (VILLA TESOROS)	4,000	530	16.0	208	3	60	29.0	68.0	80.7	PLENUM/ECM	1.0	0.5	1	208	3	60	9.8	15	764	MAGIC AIR	HCA408	3
AHU-9A	HORIZONTAL	BUILDING 9 (LEVEL 2 OFFICE)	3,000	170	12.0	208	3	60	29.0	71.5	84.1	PLENUM/ECM	1.0	0.5	1	208	3	60	9.8	15	646	MAGIC AIR	HCA308	1
AHU-9B	HORIZONTAL	BUILDING 9 (LEVEL 2 BOLIVAR HALL)	4,000	1,040	22.0	208	3	60	29.0	62.3	79.7	PLENUM/ECM	1.0	0.5	1	208	3	60	9.8	15	764	MAGIC AIR	HCA408	1
AHU-10	VERTICAL	BUILDING 10 (BIRD & PEAR)	3,000	640	17.0	208	3	60	29.0	64.4	82.3	PLENUM/ECM	1.0	0.5	1	208	3	60	9.8	15	764	MAGIC AIR	HCA408	1.3
AHU-11A	HORIZONTAL	BUILDING 11 (COPPER GALLERY LEVEL 1)	1,600	320	10.0	208	1	60	29.0	65.0	84.7	PLENUM/ECM	1.0	0.5	1	120	1	60	12.0	20	362	MAGIC AIR	HCA168	3
AHU-11B	HORIZONTAL	BUILDING 11 (COPPER GALLERY LEVEL 2)	1,600	320	10.0	208	1	60	29.0	65.0	84.7	PLENUM/ECM	1.0	0.5	1	120	1	60	12.0	20	362	MAGIC AIR	HCA168	3
AHU-12A	HORIZONTAL	BUILDING 12 (STARVING ARTIST LEVEL 1)	2,000	470	14.0	208	3	60	29.0	63.4	85.5	PLENUM/ECM	1.0	0.5	1	208	1	60	9.1	15	422	MAGIC AIR	HCA208	1
AHU-12B	HORIZONTAL	BUILDING 12 (STARVING ARTIST LEVEL 2)	2,000	470	13.0	208	3	60	29.0	63.4	85.9	PLENUM/ECM	1.0	0.5	1	208	1	60	9.1	15	422	MAGIC AIR	HCA208	1
AHU-13A	HORIZONTAL	BUILDING 13 (LITTLE CHURCH OF LA VILLITA)	1,600	390	8.0	208	1	60	29.0	63.0	78.8	PLENUM/ECM	1.0	0.5	1	120	1	60	12.0	20	362	MAGIC AIR	HCA168	3
AHU-13B	HORIZONTAL	BUILDING 13 (LITTLE CHURCH OF LA VILLITA)	1,600	390	8.0	208	1	60	29.0	63.0	78.8	PLENUM/ECM	1.0	0.5	1	120	1	60	12.0	20	362	MAGIC AIR	HCA168	3
AHU-14A	VERTICAL	BUILDING 14 (RIVER ART GROUP LEVEL 1)	3,000	430	15.0	208	3	60	29.0	67.6	83.3	PLENUM/ECM	1.0	0.5	1	208	3	60	9.8	15	472	MAGIC AIR	NDB308	1.3
AHU-14B	VERTICAL	BUILDING 14 (RIVER ART GROUP LEVEL 2)	3,000	430	14.0	208	3	60	29.0	66.4	82.2	PLENUM/ECM	1.0	0.5	1	208	3	60	9.1	15	300	MAGIC AIR	NDB168	3
AHU-16A	HORIZONTAL	BUILDING 16 (GUADALAJARA LEVEL 1)	3,000	810	16.0	208	3	60	29.0	61.9	78.7	PLENUM/ECM	1.0	0.5	1	208	3	60	9.8	15	646	MAGIC AIR	HCA308	1
AHU-16B	HORIZONTAL	BUILDING 16 (GUADALAJARA LEVEL 2)	3,000	800	16.0	208	3	60	29.0	62.0	78.8	PLENUM/ECM	1.0	0.5	1	208	3	60	9.8	15	646	MAGIC AIR	HCA308	1
AHU-16C	VERTICAL	BUILDING 16B (GUADALAJARA LEVEL 2)	1,200	430	8.0	208	1	60	29.0	61.9	78.8	PLENUM/ECM	1.0	0.5	1	208	1	60	12.0	20	362	MAGIC AIR	HCA128	3
AHU-16D	VERTICAL	BUILDING 16B (PLAZA TAYCO)	1,200	280	10.0	208	1	60	29.0	66.1	85.9	PLENUM/ECM	1.0	0.5	1	208	1	60	9.1	15	300	MAGIC AIR	NDB168	3
AHU-17	VERTICAL	BUILDING 17 (JOUX LUNA FINE ART)	1,200	160	5.0	208	1	60	29.0	68.0	81.2	PLENUM/ECM	1.0	0.5	1	208	1	60	9.1	15	191	MAGIC AIR	NDB128	3
AHU-18	VERTICAL	BUILDING 18 (COS HOUSE)	3,000	800	16.0	208	3	60	29.0	63.0	78.8	PLENUM/ECM	1.0	0.5	1	208	1	60	9.1	15	300	MAGIC AIR	NDB168	2.3
AHU-20	VERTICAL	BUILDING 20 (SARAFICAN AMERICAN)	1,600	520	15.0	208	3	60	29.0	66.2	82.0	PLENUM/ECM	1.0	0.5	1	208	3	60	9.8	15	472	MAGIC AIR	NDB308	1.3
AHU-21	VERTICAL	BUILDING 21 (SCENTHESIS USA)	2,000	410	13.0	208	3	60	29.0	64.8	85.3	PLENUM/ECM	1.0	0.5	1	208	1	60	9.1	15	364	MAGIC AIR	NDB208	1.3
AHU-22	VERTICAL	BUILDING 22 (MARIKEL DELVINO FOUNDATION)	420	110	2.0	208	1	60	29.0	64.6	85.3	PLENUM/ECM	1.0	0.5	1	208	1	60	9.1	15	364	MAGIC AIR	NDB208	1.3
AHU-23A	VERTICAL	BUILDING 23 (LITTLE STUDIO GALLERY)	800	155	5.0	208	1	60	29.0	65.3	85.0	PLENUM/ECM	1.0	0.5	1	208	1	60	6.3	15	257	MAGIC AIR	HCA08B	2
AHU-23B	VERTICAL	BUILDING 23 (LITTLE STUDIO GALLERY)	800	155	5.0	208	1	60	29.0	65.3	85.0	PLENUM/ECM	1.0	0.5	1	120	1	60	9.6	15	257	MAGIC AIR	HCA08B	2
AHU-24	HORIZONTAL	BUILDING 24 (LA VILLITA HISTORY EXHIBIT)	1,200	300	6.0	120	1	60	29.0	62.8	78.5	PLENUM/ECM	1.0	0.5	1	120	1	60	12.0	20	191	MAGIC AIR	NDB128	3



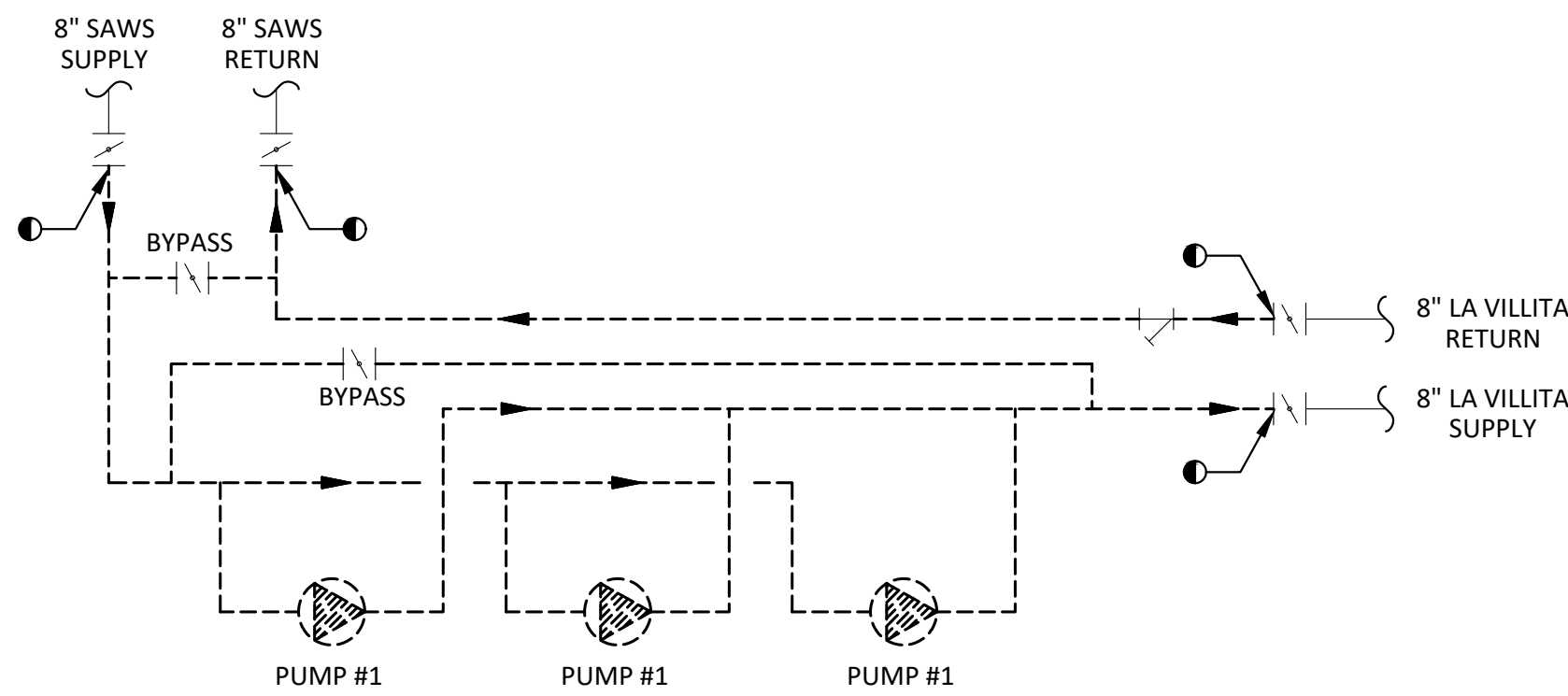
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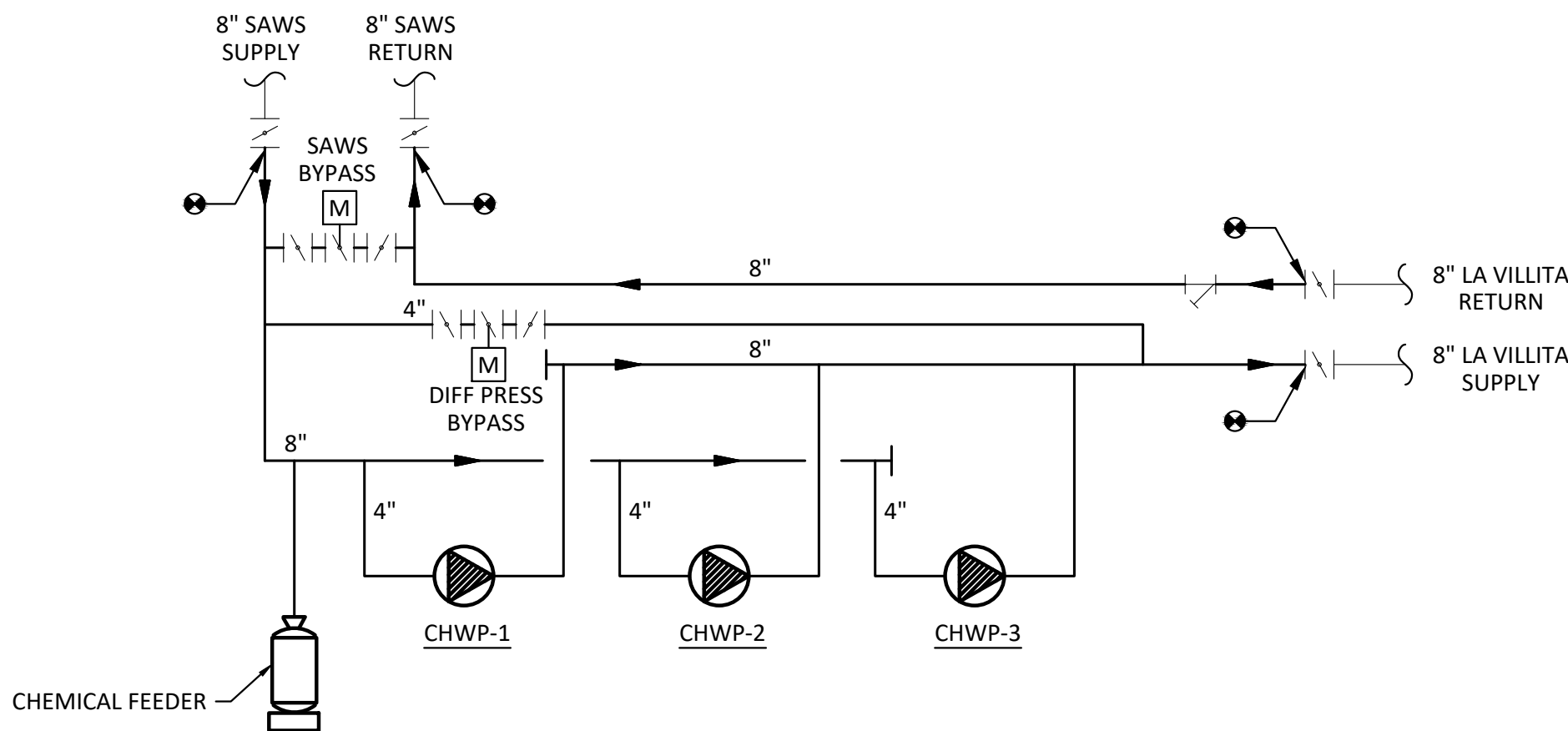
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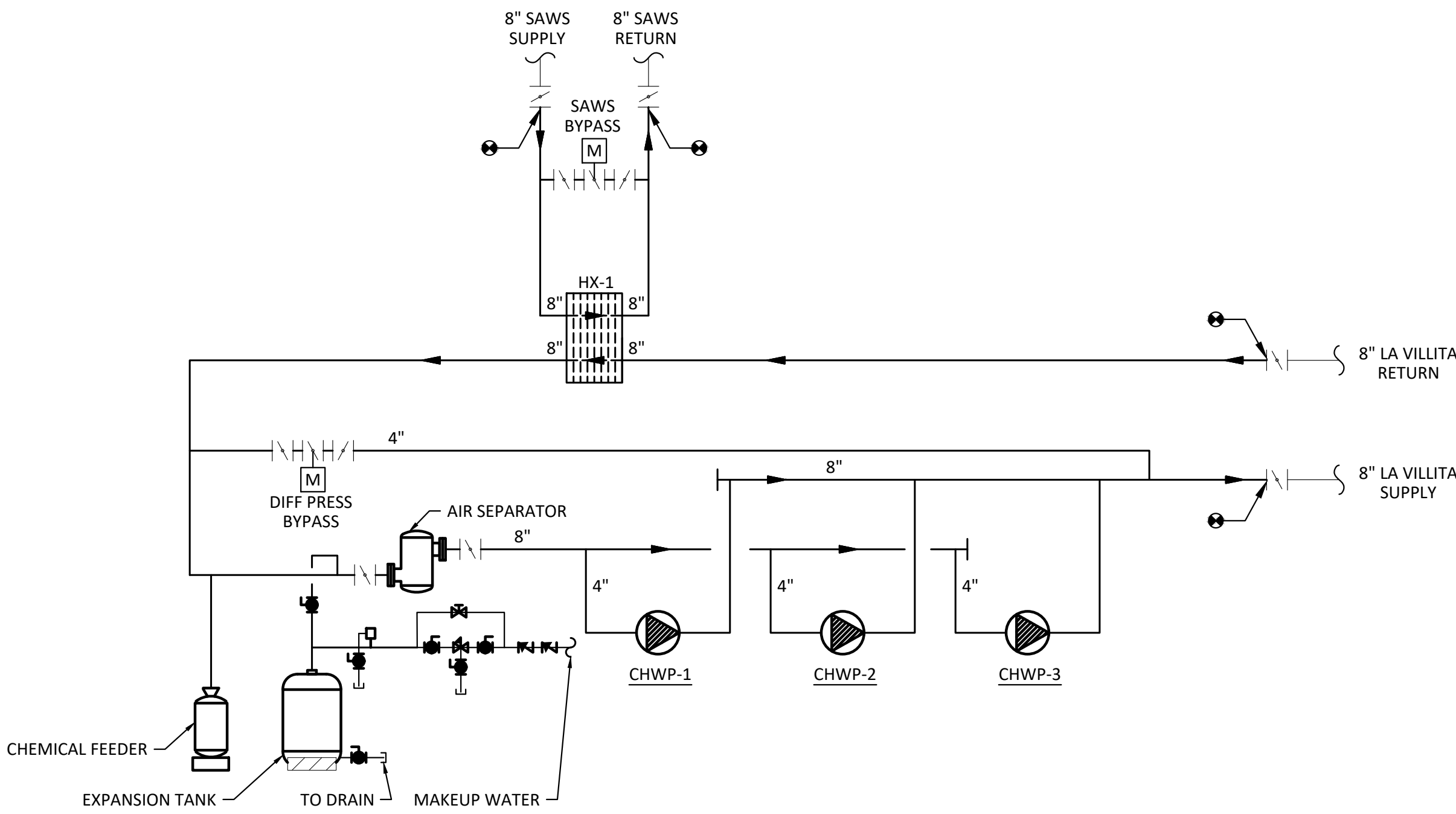
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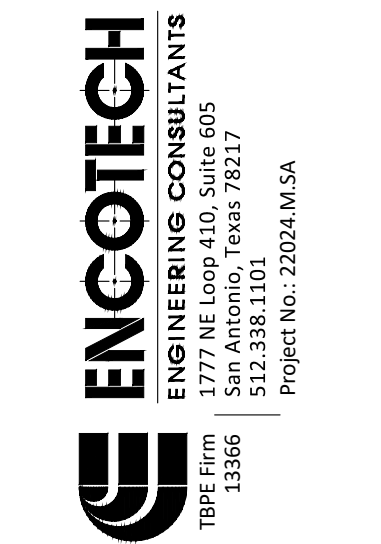
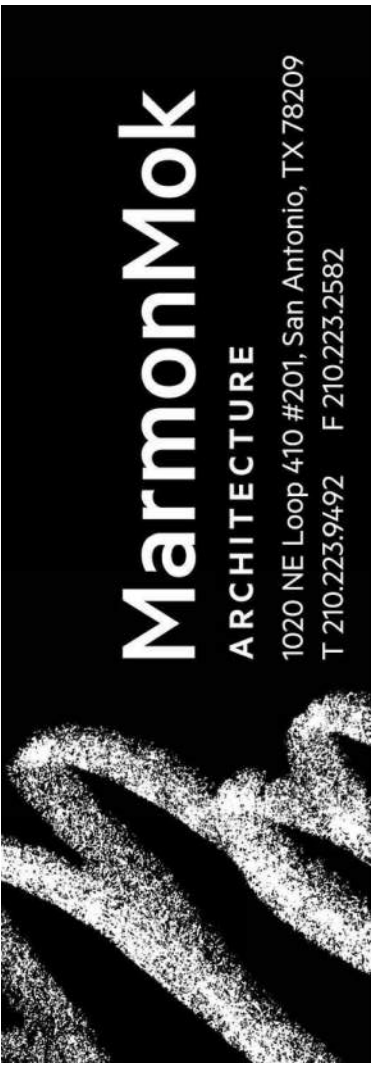
1 BUILDING 9, BASEMENT - DEMOLITION FLOW DIAGRAM  
N.T.S.



2 BUILDING 9, BASEMENT - NEW WORK FLOW DIAGRAM (BASE BID)  
N.T.S.



3 BUILDING 9, BASEMENT - NEW WORK FLOW DIAGRAM (ALT #2)  
N.T.S.



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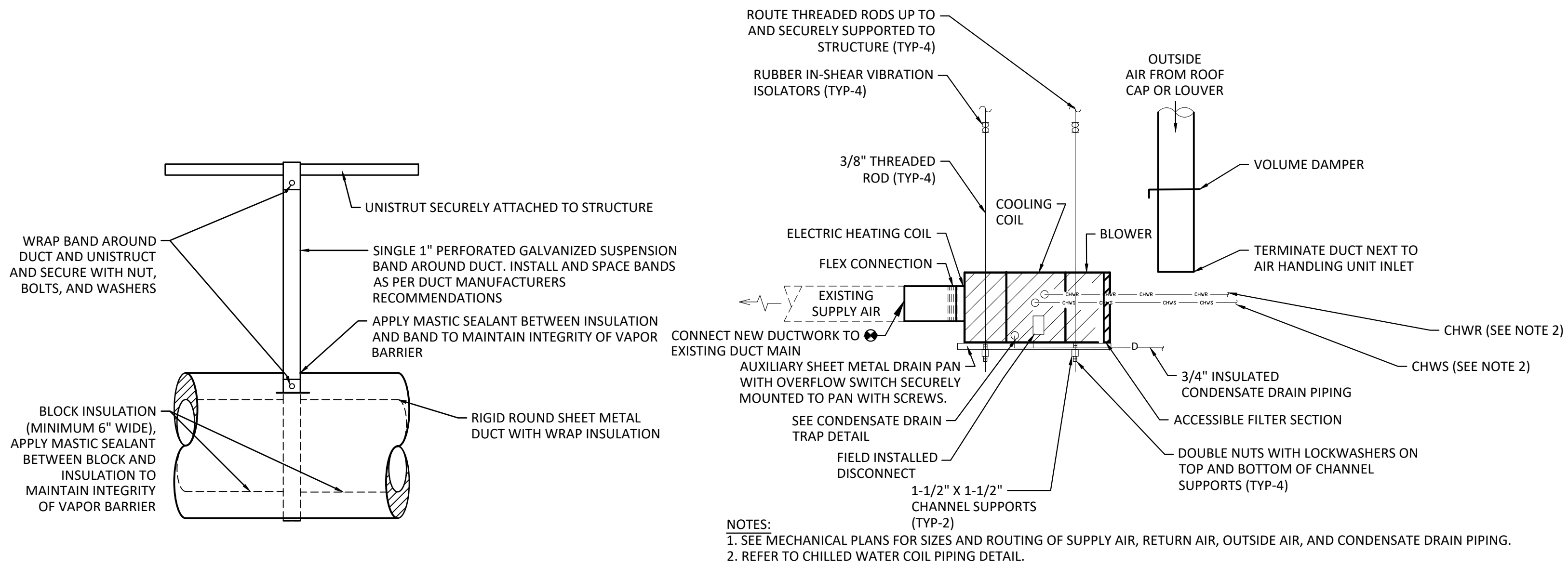
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Drawn GGR  
Checked EWR/MAM  
Date 12/05/2022  
Project No. 21032  
Revisions

SHEET TITLE  
MECHANICAL  
FLOW DIAGRAMS -  
BLDG. 9

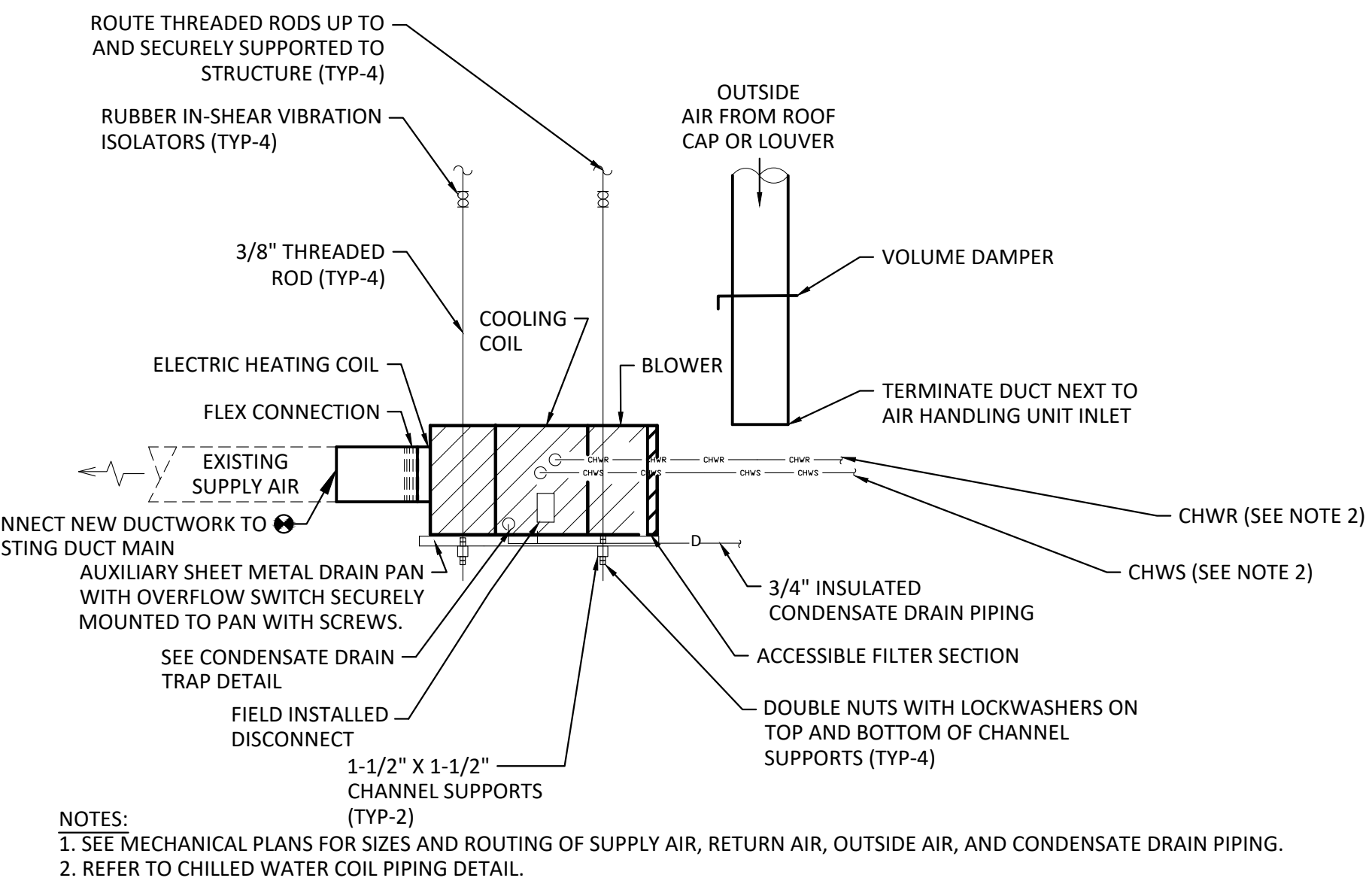
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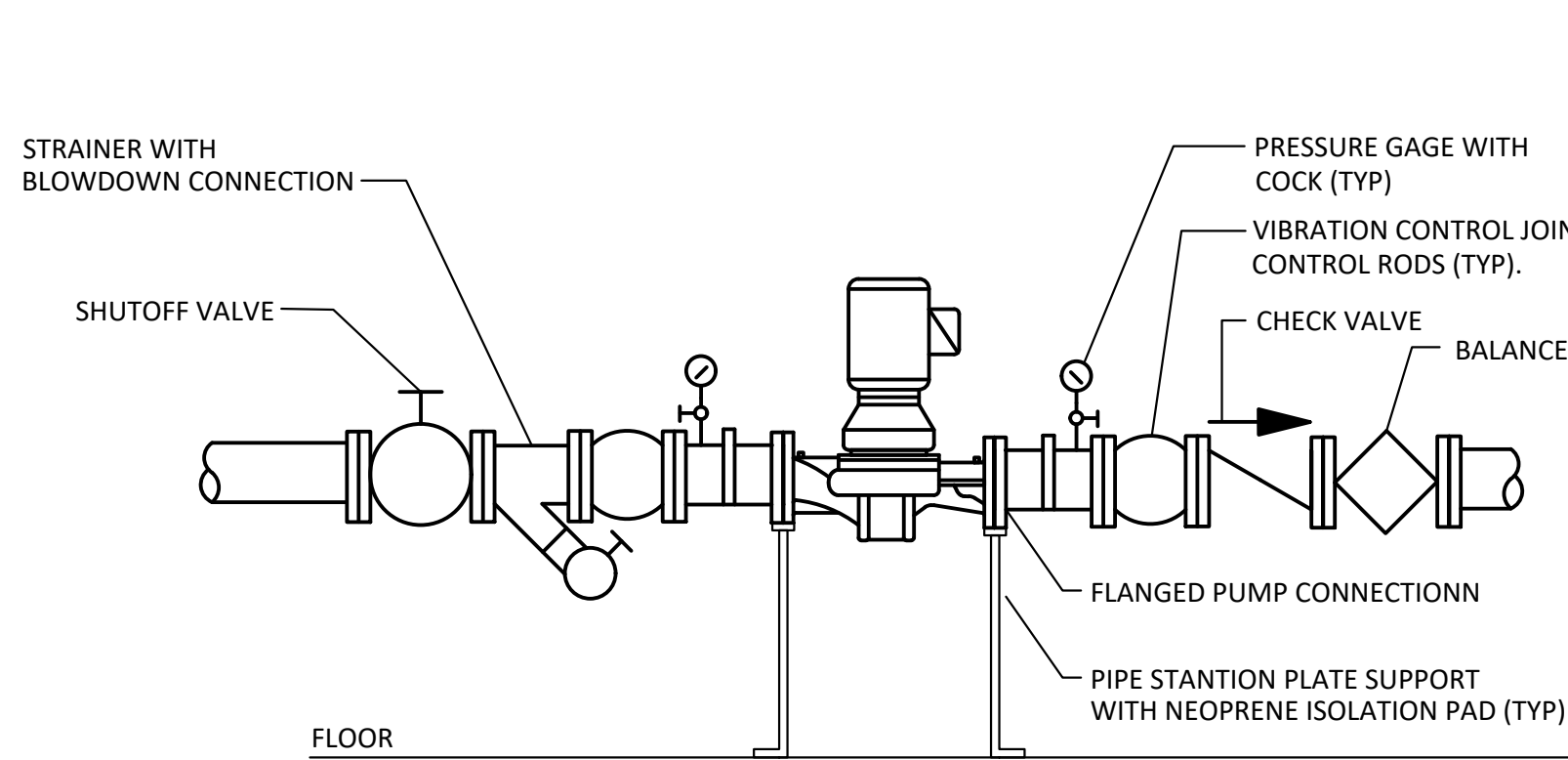
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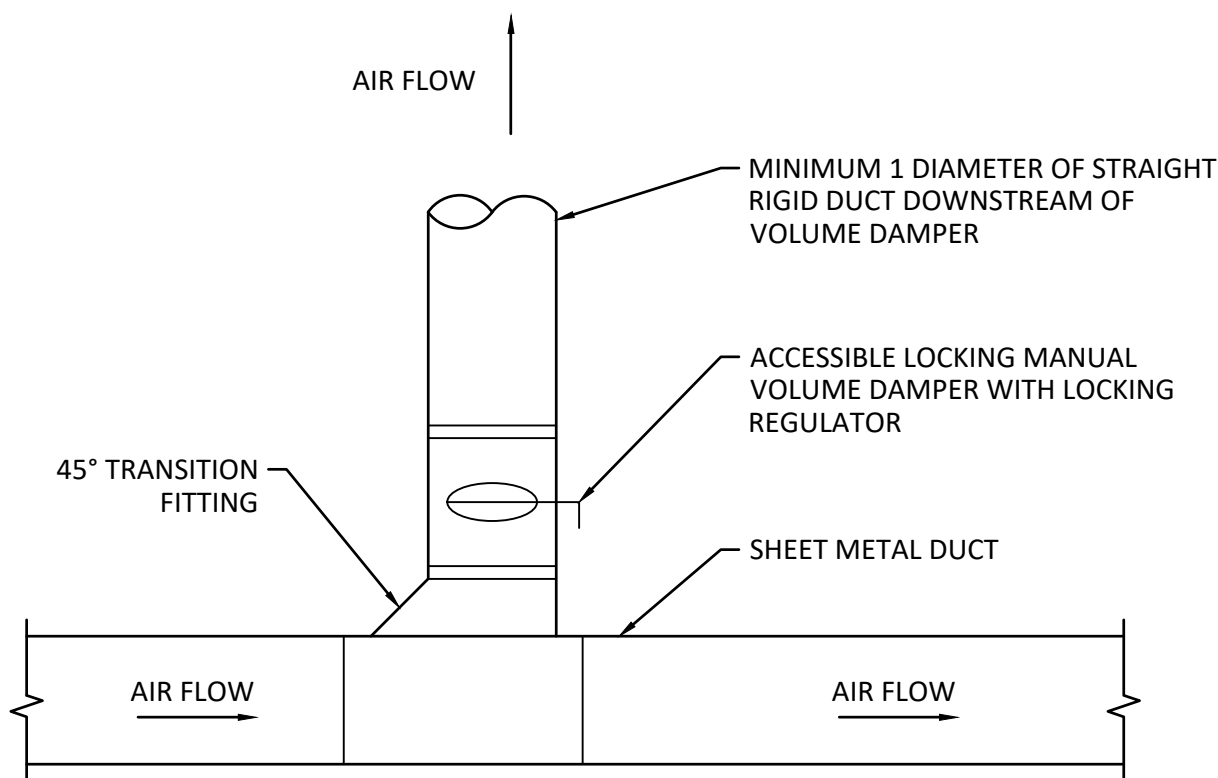
10 RIGID ROUND INSULATED DUCT HANGER DETAIL  
N.T.S.



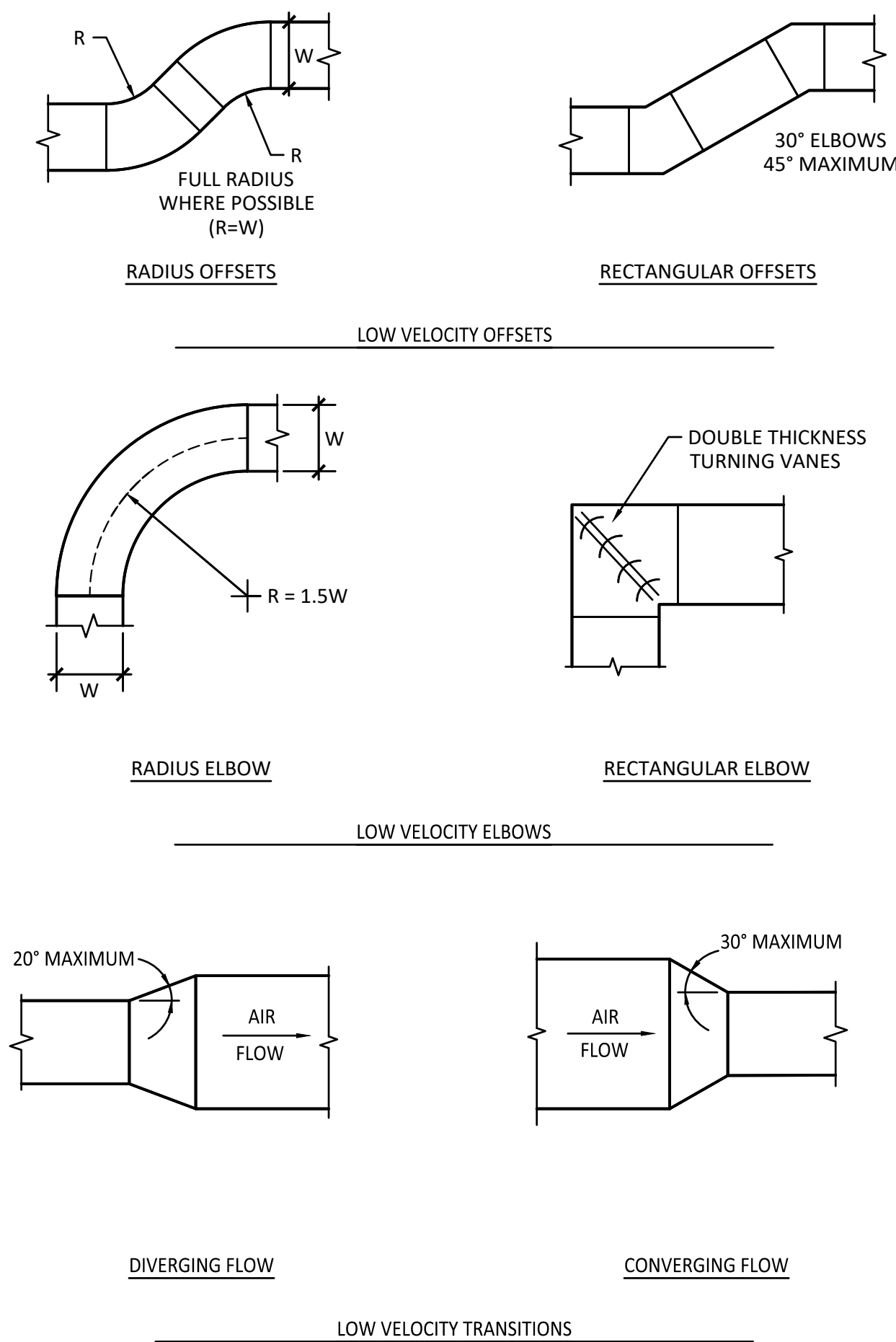
9 SUSPENDED CHW FAN COIL UNIT WITH ELECTRIC HEAT DETAIL  
N.T.S.



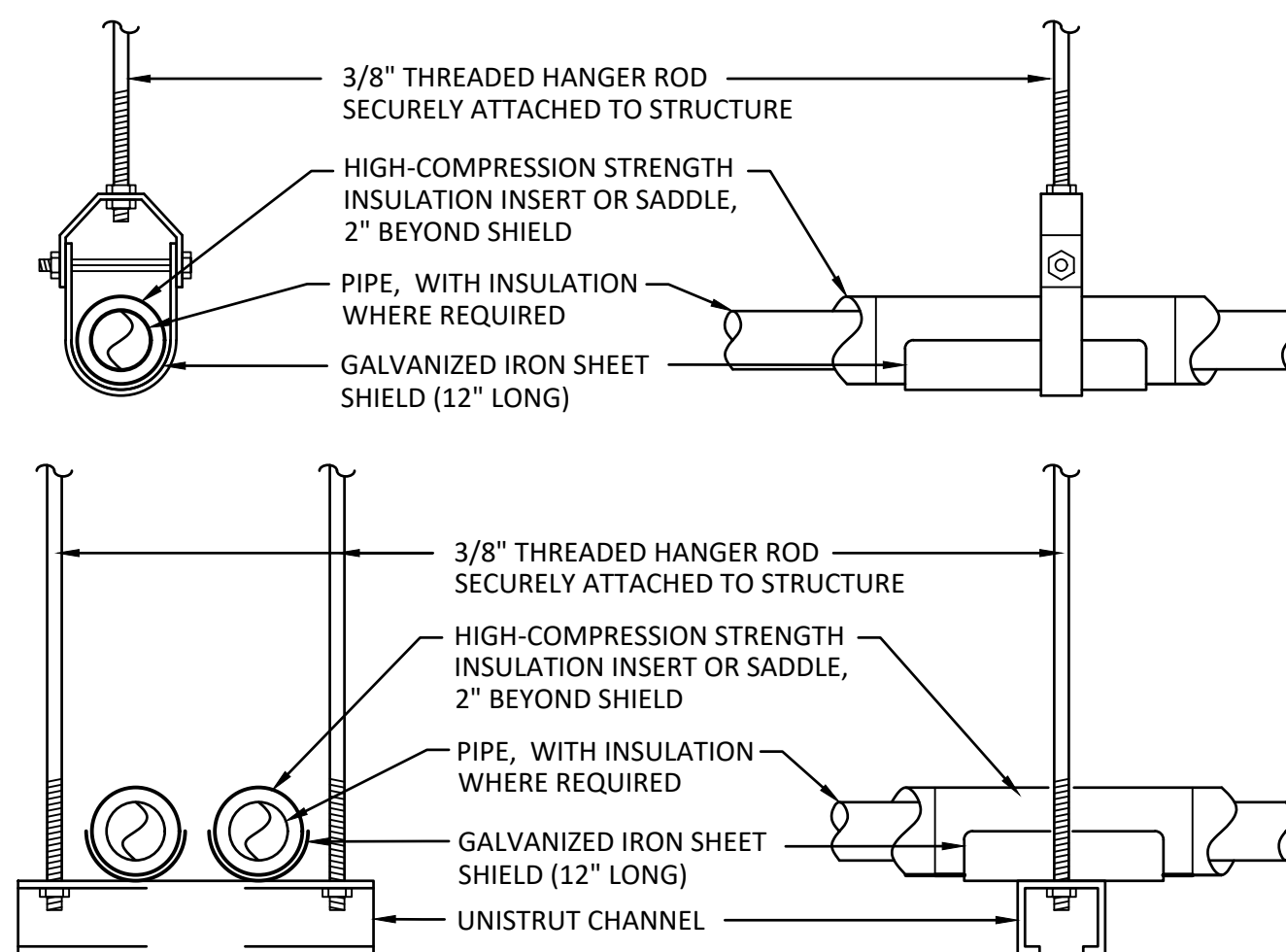
7 IN-LINE PUMP DETAIL  
N.T.S.



6 SUPPLY AIR BRANCH DUCT DETAIL  
N.T.S.



8 LOW VELOCITY DUCT TRANSITIONS, OFFSETS, AND ELBOWS  
N.T.S.



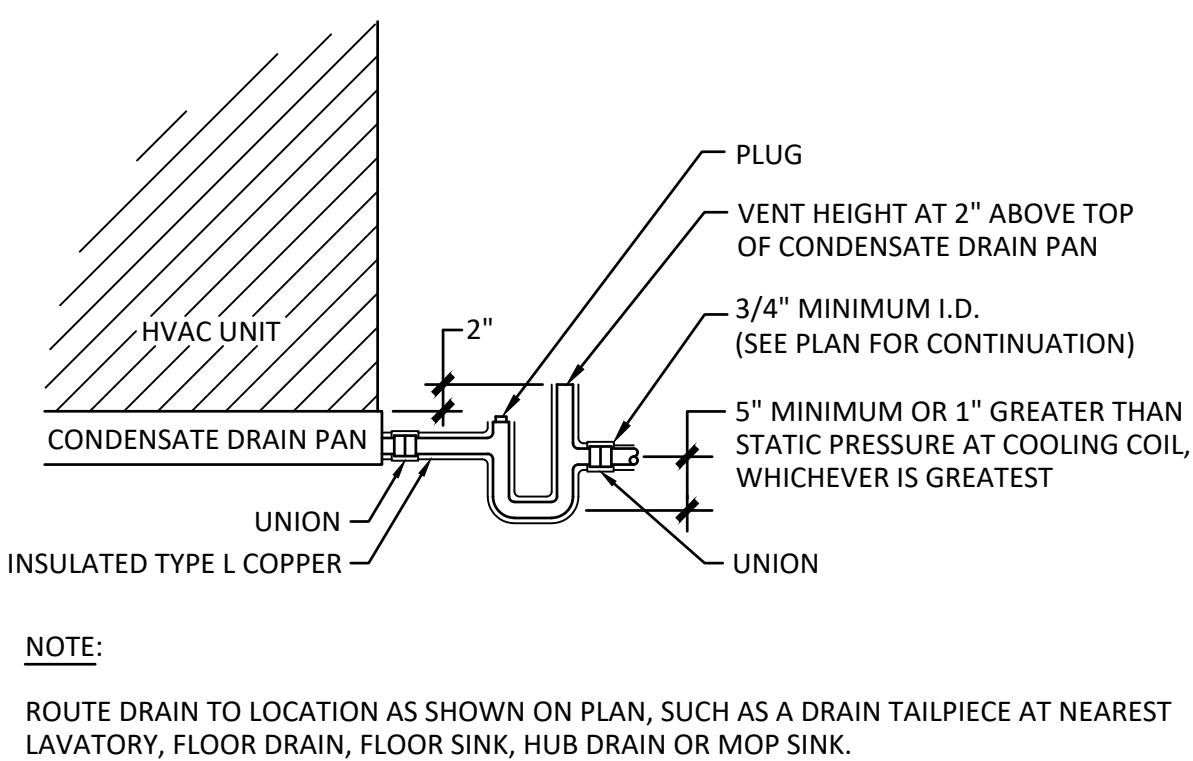
- NOTES:
- FOR STEEL STRUCTURES: ATTACH SUPPORTS FOR ALL PIPING SUSPENDED FROM THE STEEL STRUCTURE TO THE TOP CORD OF JOISTS OR BEAM.
  - FOR CONCRETE STRUCTURES: ATTACH SUPPORTERS FOR ALL PIPING USING CONCRETE ANCHORS SIZED PER WEIGHT SUPPORTED.
  - PROVIDE COPPER OR PLASTIC COATED HANGERS FOR NON-INSULATED COPPER PIPE.

5 PIPE HANGER DETAIL (UP TO 4\"/>

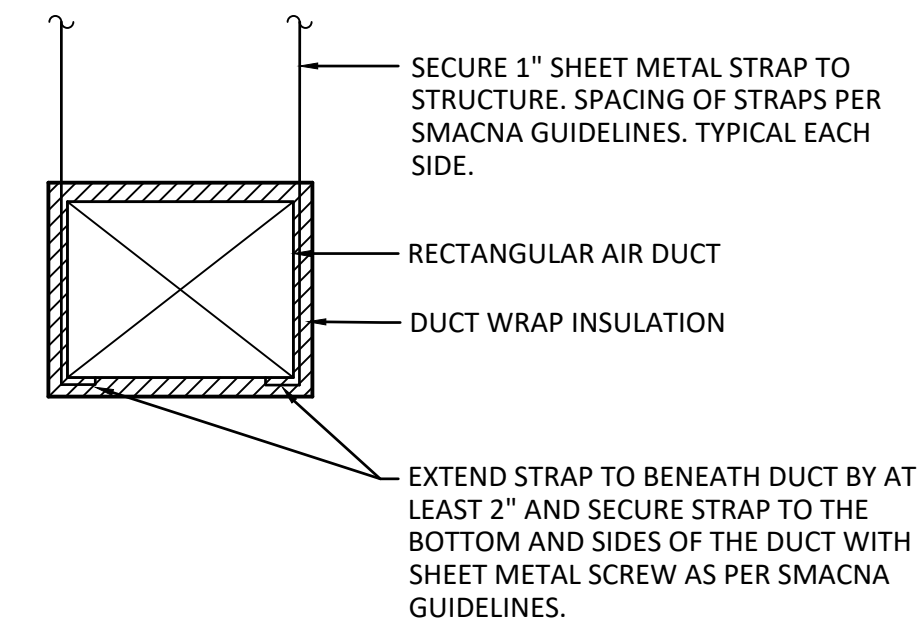
PIPE HANGER & SUPPORT SPACING (2021 IMC & UMC)			
PIPING MATERIAL	JOINT TYPE	MAXIMUM HORIZONTAL SPACING	MAXIMUM VERTICAL SPACING
ABS PIPE	SOLVENT CEMENTED	4 FT, ALLOW FOR EXPANSION EVERY 30 FT	10 FT, BASE & EACH FLOOR, MID-STORY GUIDE, PROVIDE FOR EXPANSION EVERY 30 FT
ALUMINUM PIPE & TUBING		10 FT	15 FT
CAST-IRON PIPE	LEAD & OAKUM	FOR ≠ 10 FT, 5 FT FOR 10 FT, 10 FT	15 FT, BASE & EACH FLOOR
	COMPRESSION GASKET	FOR ≤ 4 FT, EVERY OTHER JOINT FOR > 4 FT, EACH JOINT	
CAST-IRON HUBLESS	SHIELDED COUPLING	FOR ≤ 4 FT, EVERY OTHER JOINT FOR > 4 FT, EACH JOINT	15 FT, BASE & EACH FLOOR
COPPER & COPPER-ALLOY PIPE	SOLDERED, BRAZED, THREADED, OR MECHANICAL	IMC: 12 FT UMC: FOR ≤ 1 1/2 IN, 6 FT FOR ≥ 2 IN, 10 FT	10 FT, EACH FLOOR
COPPER & COPPER-ALLOY TUBING	SOLDERED, BRAZED, THREADED, OR MECHANICAL	IMC: 8 FT UMC: FOR ≤ 1 1/2 IN, 6 FT FOR ≥ 2 IN, 10 FT	10 FT, EACH FLOOR
CPVC PIPE & TUBING	SOLVENT CEMENTED	FOR ≤ 1 IN, 3 FT FOR ≥ 1 1/2 IN, 4 FT	10 FT, BASE & EACH FLOOR, MID-STORY GUIDE
CPVC-AL-CPVC	SOLVENT CEMENTED	FOR 1/2 IN, 5 FT FOR 3/4 IN, 65 IN FOR 1 IN, 6 FT	BASE & EACH FLOOR, MID-STORY GUIDE
LEAD PIPE	WIPED OR BURNED	CONTINUOUS	4 FT
PEX TUBING	COLD EXPANSION, INSERT, & COMPRESSION	FOR ≤ 1 IN, 2 1/2 FT (32 IN) FOR ≥ 1 1/2 IN, 4 FT	10 FT, BASE & EACH FLOOR, MID-STORY GUIDE
PEX-AL-PEX	METAL INSERT & METAL COMPRESSION	8 1/2 FT (98 IN)	BASE & EACH FLOOR, MID-STORY GUIDE
PE-AL-PE	METAL INSERT & METAL COMPRESSION	8 1/2 FT (98 IN)	BASE & EACH FLOOR, MID-STORY GUIDE
PE-RT	INSERT & COMPRESSION	FOR ≤ 1 IN, 2 3/8 FT (32 IN) FOR ≥ 1 1/2 IN, 4 FT	BASE & EACH FLOOR, MID-STORY GUIDE
POLYPROPYLENE (PP)	FUSION WELD (SOCKET, BUTT, SADDLE, ELECTROFUSION), THREADED METAL THREADS ONLY), OR MECHANICAL	FOR ≤ 1 IN, 2 3/8 FT (32 IN) FOR ≥ 1 1/2 IN, 4 FT	10 FT, BASE & EACH FLOOR, MID-STORY GUIDE
PVC PIPE	SOLVENT CEMENTED	4 FT, ALLOW FOR EXPANSION EVERY 30 FT	10 FT, BASE & EACH FLOOR, EXPANSION EVERY 30 FT
STEEL PIPE	MECHANICAL	12 FT	15 FT
STEEL PIPE FOR GAS	THREADED OR WELDED	FOR 1/2 IN, 6 FT FOR 3/4 IN & 1 IN, 8 FT FOR ≥ 1 1/2 IN, 10 FT	FOR 1/2 IN, 6 FT FOR 3/4 IN & 1 IN, 8 FT FOR ≥ 1 1/2 IN, EVERY FLOOR
STEEL PIPE FOR WATER DWV	THREADED OR WELDED	FOR ≤ 3/4 IN, 10 FT FOR ≥ 1 IN, 12 FT	25 FT, EVERY OTHER FLOOR
STEEL TUBING		8 FT	10 FT

FOR SI UNIT: 1 IN = 25.4 MM, 1 FT = 304.8 MM

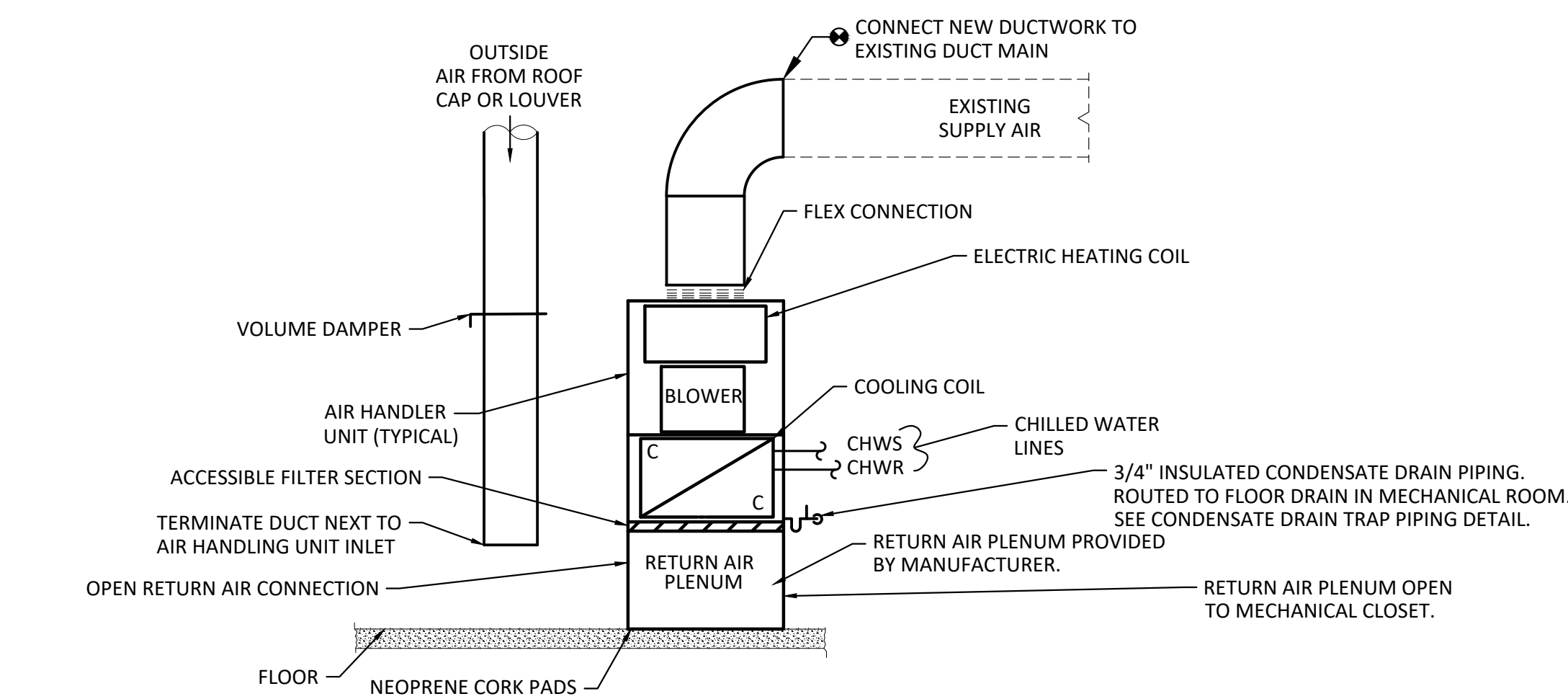
- NOTES:
- SUPPORT ADJACENT TO JOINT, NOT TO EXCEED 18 IN.
  - BRACE NOT TO EXCEED 40 FT INTERVALS TO PREVENT HORIZONTAL MOVEMENT.
  - SUPPORT AT EACH HORIZONTAL BRANCH CONNECTION.
  - HANGERS SHALL NOT BE PLACED ON THE COUPLING.
  - VERTICAL WATER LINES SHALL BE PERMITTED TO BE SUPPORTED IN ACCORDANCE WITH RECOGNIZED ENGINEERING PRINCIPLES WITH REGARD TO EXPANSION AND CONTRACTION, WHERE FIRS APPROVED BY THE AUTHORITY HAVING JURISDICTION.



4 CONDENSATE DRAIN DETAIL  
N.T.S.

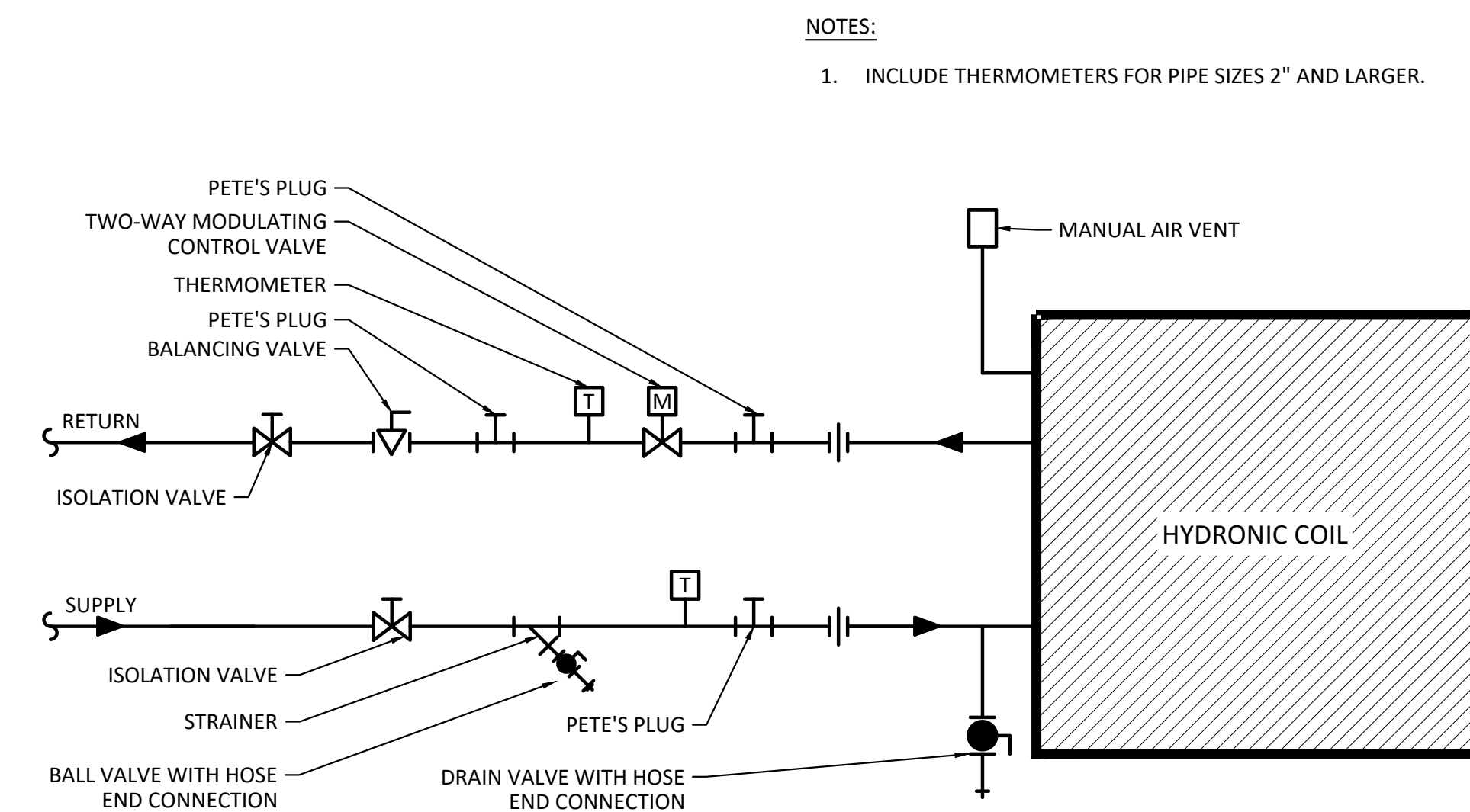


3 RECTANGULAR DUCT HANGER DETAIL  
N.T.S.



- NOTES:
- SEE MECHANICAL PLANS FOR SIZES AND ROUTINGS OF SUPPLY AIR, RETURN AIR, AND OUTSIDE AIR.
  - REFRIGERANT PIPE SIZE AND ROUTING AS PER MANUFACTURING RECOMMENDATION.

2 FLOOR MOUNTED CHILLED WATER VERTICAL AIR HANDLER UNIT WITH ELECTRIC HEAT DETAIL  
N.T.S.



1 HYDRONIC COIL WITH 2-WAY CONTROL VALVE PIPING DETAIL  
N.T.S.



418 Villita St, San Antonio, TX 78205

SHEET NO.

SHEET NO.





A

B

C

D

FCU SEQUENCE OF OPERATION

SYSTEM DESCRIPTION

CONSTANT VOLUME, SINGLE-ZONE, TWO PIPE FAN COIL UNIT. SYSTEM SHALL PROVIDE COOLING AND VENTILATION TO THE ELECTRIC ROOM.

SET POINTS

- ROOM TEMPERATURE SETPOINT / COOLING: 75°F (ADJ.) / HEATING 72°F (ADJ.)

OCCUPIED MODE

SUPPLY FANS

- THE SUPPLY FAN SHALL BE ENERGIZED WHEN IN OCCUPIED MODE AND SHALL BE ACTIVATED TO OPERATE CONTINUOUSLY ANYTIME THE AIR HANDLING UNIT IS SET TO SCHEDULE TO OPERATE.

OUTSIDE AIR DAMPER CONTROL

- DURING NORMAL OPERATION THE OUTSIDE AIR DAMPER SHALL OPEN.

CHILLED WATER COIL

- THE RETURN AIR CHILLED WATER VALVE SHALL MODULATE TO MAINTAIN THE SUPPLY AIR TEMPERATURE SET POINT.
- THE CHILLED WATER VALVE SHALL CLOSE WHEN THE UNIT IS OFF.
- THE CHILLED WATER VALVE SHALL CLOSE WHEN THE CHILLED WATER PUMPS AND CHILLER ARE OFF.

UNOCCUPIED MODE

SUPPLY FANS

- THE SUPPLY FAN SHALL BE OFF.

OUTSIDE AIR DAMPER CONTROL

- DURING UNOCCUPIED MODE OPERATION THE OUTSIDE AIR DAMPER SHALL BE CLOSED.

CHILLED WATER VALVE CONTROL

- THE COOLING COIL CHILLED WATER VALVE SHALL OPERATE PER OCCUPIED SEQUENCE DURING UNOCCUPIED MODE.

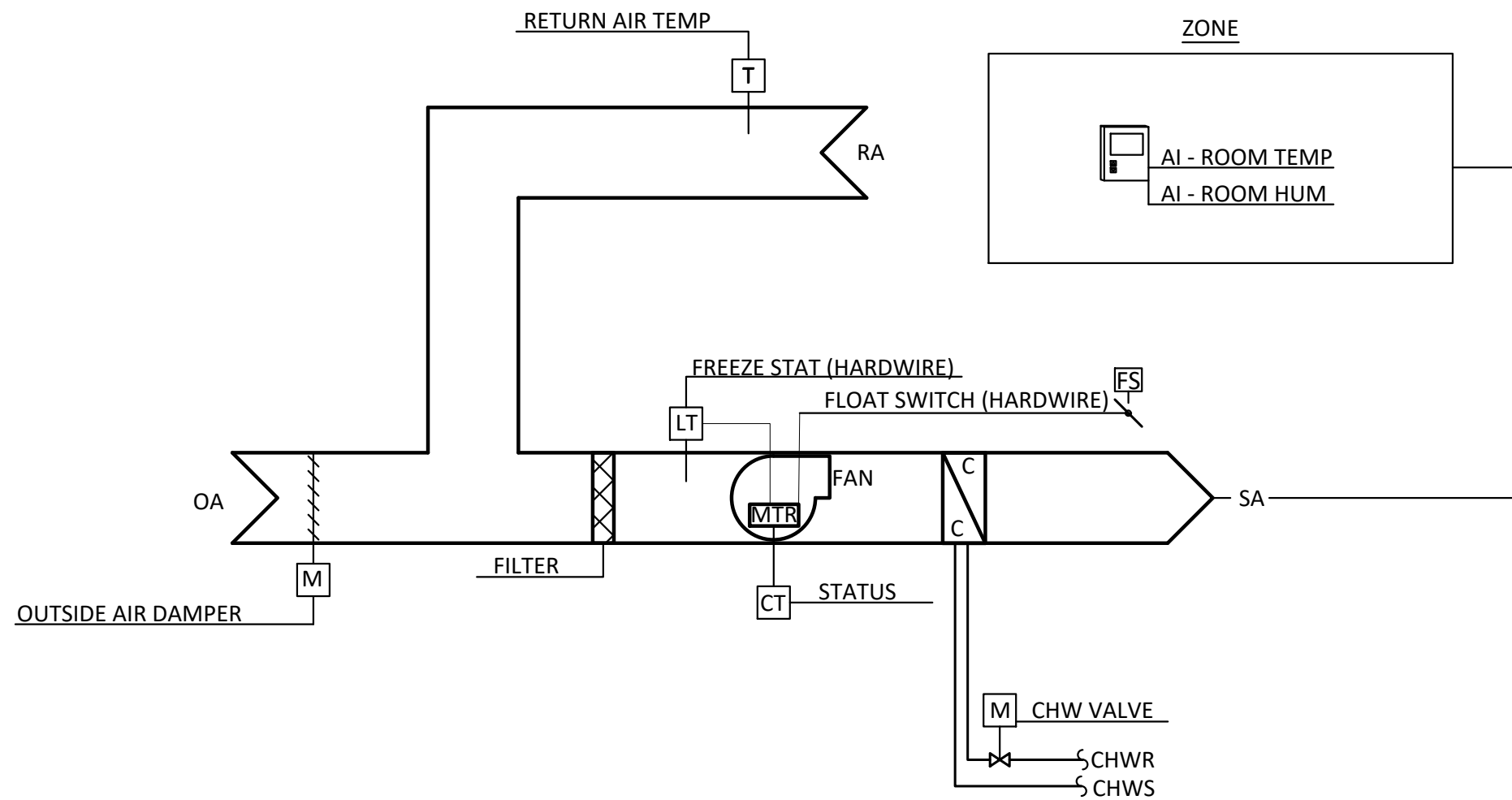
SAFETIES AND SHUTDOWN

WHEN A SAFETY IS TRIGGERED, THE FAN SHALL DE-ENERGIZE, RELIEF DAMPER AND OUTSIDE AIR DAMPER SHALL CLOSE, RETURN DAMPER SHALL OPEN, AND THE VALVES SHALL GO TO NORMAL POSITION IF ANY OF THE FOLLOWING OCCURS.

- THE FREEZESTAT REGISTERS A MIXED AIR TEMPERATURE OF 37°F (SEE FREEZE PROTECTION SEQUENCE).
- WATER IS DETECTED IN THE SECONDARY DRAIN PAN BY THE FLOAT SWITCH.

2 FCU CONTROL DIAGRAM

N.T.S.



AHU SEQUENCE OF OPERATION

SYSTEM DESCRIPTION

CONSTANT VOLUME AIR HANDLING UNITS WITH ELECTRIC HEATING AND CHILLED WATER COILS SERVING A SINGLE ZONE.

SET POINTS

- ROOM TEMPERATURE SETPOINT / COOLING: 75°F (ADJ.) / HEATING 72°F (ADJ.)

SUPPLY FAN

- THE FAN SHALL OPERATE ANYTIME THE UNIT IS IN OCCUPIED MODE.
- START/STOP CONTROL FROM HAND OFF AUTO (H.O.A.) SWITCH.
- WHEN H.O.A. SWITCH IS IN HAND FAN SHALL OPERATE CONTINUOUSLY.
- WHEN H.O.A. SWITCH IS IN OFF FAN AND UNIT SHALL BE OFF.
- WHEN H.O.A. SWITCH IS IN AUTO FAN SHALL OPERATE IN ACCORDANCE TO THIS SEQUENCE OF OPERATION.

OCCUPIED MODE

- OCCUPIED MODE SHALL BE DESIGNATED BY THE SCHEDULES SET AT THE ZONE THERMOSTAT.
- SUPPLY FAN SHALL OPERATE ANYTIME THE UNIT IS IN OCCUPIED MODE

OCCUPIED COOLING MODE

- COOLING MODE SHALL BE ACTIVE WHEN THE SPACE TEMPERATURE RISES 3°F (ADJ.) ABOVE COOLING SET POINT.
- THE ELECTRIC HEAT SHALL BE OFF WHILE UNIT IS IN COOLING MODE AND THE REVERSING VALVE SHALL BE SET TO COOLING.
- THE CHILLED WATER VALVE SHALL MODULATE OPEN TO MAINTAIN THE COOLING SUPPLY TEMPERATURE SET POINT.
- IF THE ROOM TEMPERATURE CONTINUES TO DROP THE UNIT SHALL EXIT COOLING MODE AND THE CHILLED WATER VALVE SHALL SHUT.

OCCUPIED HEATING MODE

- HEATING MODE SHALL BE ACTIVATED ANYTIME THE ROOM TEMPERATURE DROPS 3°F (ADJ.) BELOW HEATING SET POINT.
- UPON A CALL FOR HEATING FROM THE SPACE THE ELECTRIC HEAT COIL SHALL ACTIVATE STAGE 1 AND OPERATE TO MAINTAIN A ROOM TEMPERATURE HEATING SET POINT.
- IF THE ROOM TEMPERATURE CONTINUES TO DROP 3°F (ADJ.) BELOW HEATING SET POINT, BECAUSE STAGE 1 OF THE ELECTRIC HEAT COIL PROVES INADEQUATE, STAGE 2 SHALL ACTIVATE AND OPERATE TO MAINTAIN THE ROOM HEATING TEMPERATURE SET POINT.

UNOCCUPIED MODE

- UNOCCUPIED MODE SHALL BE DESIGNATED BY THE SCHEDULES SET AT THE ZONE THERMOSTAT.
- THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED WHILE IN UNOCCUPIED MODE.
- THE SUPPLY FAN SHALL REMAIN DE-ENERGIZED AND THE AHU SHALL BE OFF.
- THE CHILLED WATER VALVE SHALL BE CLOSED AND ELECTRIC HEAT COILS SHALL REMAIN DE-ENERGIZED.

ALARMS

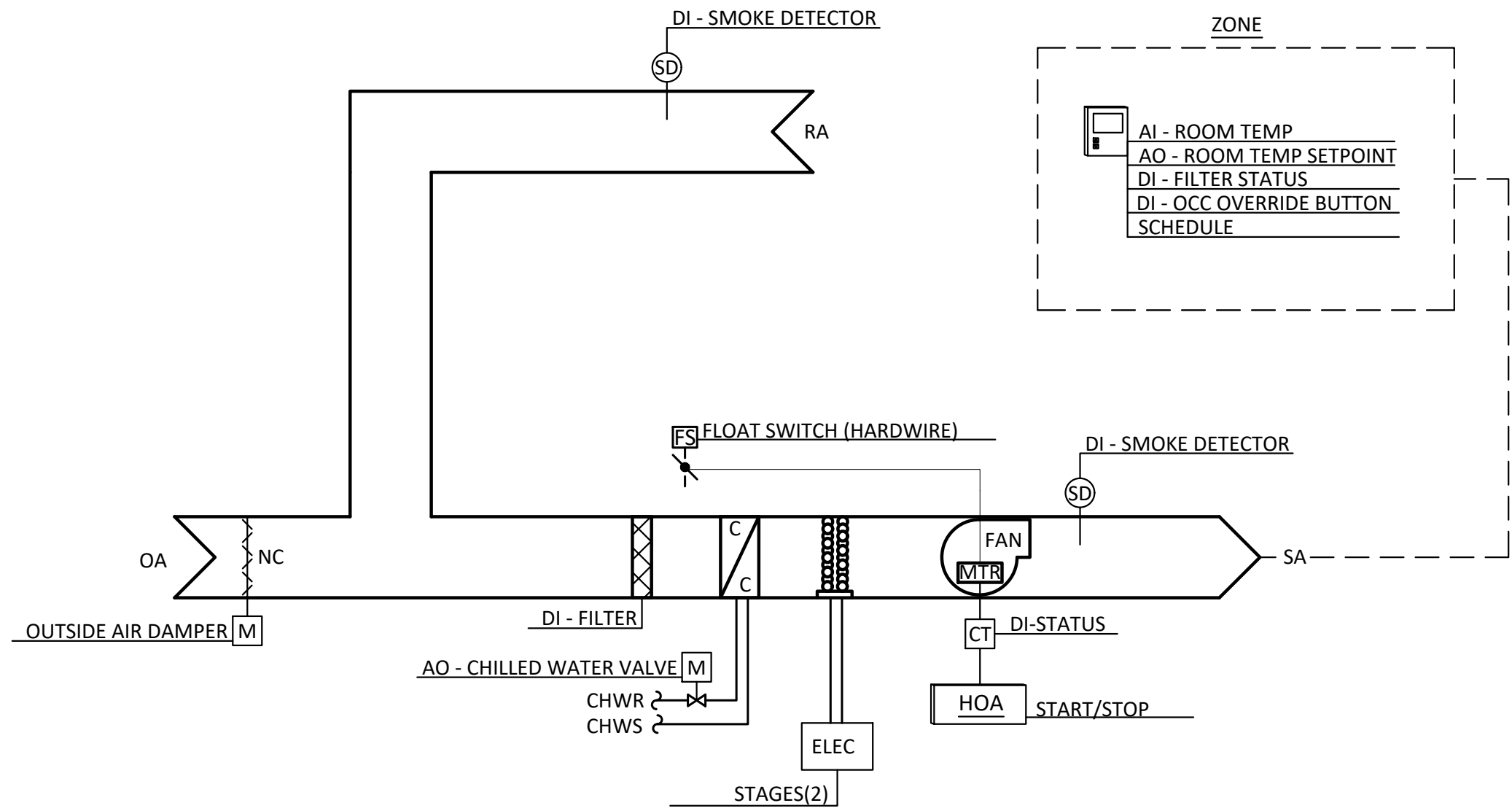
AN ALARM SHALL BE MADE AT THE THERMOSTAT ANYTIME ANY OF THE FOLLOWING IS TRUE

- THE SUPPLY FAN IS COMMANDED ON BUT STATUS IS OFF.
- THE SUPPLY FAN IS COMMANDED OFF BUT STATUS IS ON.
- PRESSURE ACROSS AIR FILTER RISES ABOVE MANUFACTURER RECOMMENDED SET POINT.
- THE FLOAT SWITCH IN THE SECONDARY DRAIN PAN IS TRIPPED.

SAFETIES AND SHUTDOWN

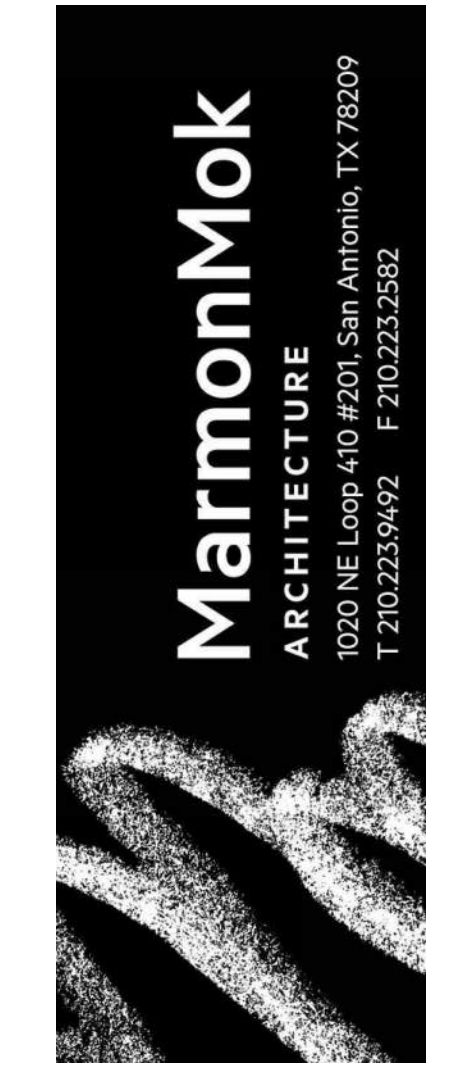
THE FAN SHALL DE-ENERGIZE, OUTSIDE AIR DAMPER SHALL CLOSE, AND COMPRESSOR SHALL DE-ENERGIZE IF ANY OF THE FOLLOWING OCCURS.

- SMOKE IS DETECTED IN THE SUPPLY AIR DUCT FOR UNITS OVER 2,000 CFM.
- SMOKE IS DETECTED IN THE RETURN AIR DUCT FOR UNITS OVER 2,000 CFM.
- WATER IS DETECTED IN THE SECONDARY DRAIN PAN BY THE FLOAT SWITCH

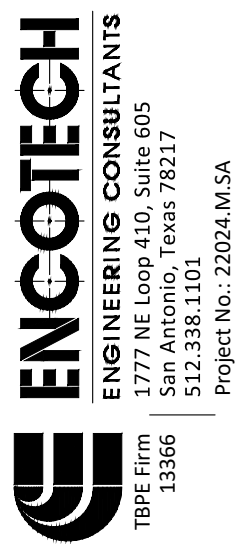


1 AHU CONTROL DIAGRAM

NOT TO SCALE



2022-12-01



CITY OF SAN ANTONIO - PUBLIC WORKS  
LA VILLITA - HVAC UPGRADE

418 Villita St, San Antonio, TX 78205

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Date 12/05/2022  
Project No. 21032  
Revisions

SHEET TITLE  
MECHANICAL  
CONTROLS

SHEET NO.  
M601







ELECTRICAL ABBREVIATIONS

AMPERE	A(AMP)
ABOVE	ABV
ABOVE FINISHED FLOOR	AFF
ABOVE FINISHED GRADE	AFG
AIR CONDITIONING	A/C
ALUMINUM	AL
APPROXIMATE(LY)	APPROX.
ARCHITECT(URAL)	ARCH('L)
AUTHORITY HAVING JURISDICTION	AHJ
BELOW	BLW
BREAKER	BKR
BUILDING	BLDG.
CARD READER	CR
CEILING	CLG
CIRCUIT	CKT
CONCRETE MASONRY UNIT	CMU
CONDENSATE DRAIN	COND.
COPPER	CU
CONDUIT	C
COUNTER	CTR
CURRENT TRANSFORMER	CT
DEMOLISH(ITION)	DEMO.
DEPARTMENT	DEPT.
DETAIL	DET.
DISCONNECT	DISC.
DIVISION	DIV.
DRAWING(S)	DWG(S)
EACH	EA.
ELECTRICAL CONTRACTOR	EC
ELECTRICAL	ELEC.
ELECTRIC WATER COOLER	EW
ELEVATOR	ELEV.
EMERGENCY	EM, EMER
ENGINEER	ENGR.
EQUIPMENT	EQPT.
ETCETERA	ETC.
EXHAUST FAN	EF
EXISTING	EXIST., (E)
EXISTING RELOCATED	ER
EXISTING TO REMAIN	ETR
FIRE ALARM	F/A
FIRE ALARM CONTROL PANEL	FACP
FIRE ALARM ANNUNCIATOR	FAAP
PANEL	P
FIRE / SMOKE DAMPER	F/S
FOOT/FEET	FT.

GALVANIZED	GALV.
GENERAL CONTRACTOR	GC
GROUND	GND, G
GROUNDING ELEC. CONDUCTOR	GEC
GROUND FAULT CIRCUIT INTERRUPTER	GFCI, GF
HEATING, VENTILATION & AIR CONDITIONING	HVAC
INFORMATION	INFO
INTERIOR	INT.
ISOLATED GROUND	IG
JUNCTION BOX	JB, (J-BOX)
KILOAMPERE INTERRUPTING CAPACITY	KAIC
KILOVOLT-AMPS	KVA
LIGHTING CONTACTOR	LC
LIGHTING CONTROL PANEL	LCP
MAIN CIRCUIT BREAKER	MCB
MAIN LUG ONLY	MLO
MANUFACTURE(R)	MFR.
MAXIMUM	MAX
MAXIMUM OVERCURRENT PROTECTION	MOCP
MECHANICAL	MECH.
MINIMUM	MIN.
MINIMUM CURRENT AMPACITY	MCA
MISCELLANEOUS	MISC.
MOUNTING HEIGHT TO CENTER LINE OF DEVICE AFF OR AFG	-(#)"
NATIONAL ELECTRICAL CODE	NEC
NEMA 1, NEMA 3R, NEMA	N1, N3R, N
RATING (AS NOTED)	
NIGHT LIGHT	NL
NOMINAL	NOM.
NOT APPLICABLE	N/A
NOT IN CONTRACT	N.I.C.
NOT TO SCALE	N.T.S.
NUMBER	NO., #
PANEL	PNL
PARTIAL	PART.
PHASE	PH., Ø
PHOTOCELL	PC
POLE	P
POLYVINYL CHLORIDE	PVC
POWER POLE	PP

QUANTITY	QTY
RECEPTACLE	RECEPT.
REFER TO / REFERENCE	REF.
REQUIRE(D)	REQ.(D)
RIGID GALVANIZED STEEL	RGS
ROOM	RM
SERVICE DISTRIBUTION	SDE
ENCLOSURE	
SPECIFICATION(S)	SPEC.(S)
SQUARE	SQ.
SQUARE FEET	SF
STRUCTURED MEDIA CENTER	SMC
SURGE PROTECTIVE DEVICE	SPD
SWITCH	SW.
TELEPHONE / DATA COMBO	TELEDATA
TELEPHONE	TEL.
TELEPHONE MOUNTING BOARD	TM/B
TELEVISION	TV
TEXAS	TX
THROUGH	THRU
TIMECLOCK	TC
TRANSFORMER	XFMR
TYPICAL	TYP
UNDERGROUND	UG
UNDERWRITER LABORATORIES INC.	UL
UNINTERRUPTIBLE POWER SUPPLY	UPS
UNLESS NOTED OTHERWISE	UNO
UTILITY	UTIL.
VOLT-AMPS	VA
VOLTAGE / VOLTS	V
WEATHER PROOF	WP
WEATHER RESISTANT	WR
WITH	W/
WITHOUT	W/O

VOLTAGE DROP TABLE (20A CIRCUITS ONLY)		
	208V, 1Ø	120V, 1Ø
#12 AWG	0 - 90 FT.	0 - 50 FT.
#10 AWG	91 - 150 FT.	51 - 90 FT.
#8 AWG	151 - 250 FT.	91 - 140 FT.
#6 AWG	251 - 390 FT.	141 - 225 FT.
#4 AWG	391 - 630 FT.	226 - 300 FT.
(VERIFY MINIMUM VOLTAGE DROP AND CONDUIT SIZE, PER N.E.C.)		

APPLICABLE CODES
2018 IBC
2020 NEC
2018 IECC
2018 TAS
2018 IFC
LOCAL CODES AND ORDINANCES

ELECTRICAL LEGEND		NOTES: MOUNTING HEIGHTS LISTED BELOW INDICATE HEIGHT TO CENTER OF DEVICE. ALL SYMBOLS SHOWN ON LEGEND ARE NOT NECESSARILY USED.	
SYMBOL	DESCRIPTION	SYMBOL	
	SINGLE 20A RECEPTACLE AT 18" UNLESS NOTED		PANELBOARD OR LOAD CENTER - SURFACE MOUNT, RECESSED MOUNT
	20A DUPLEX RECEPTACLE AT 18" UNLESS NOTED		TRANSFORMER
	20A GFI DUPLEX RECEPTACLE AT 18" UNLESS NOTED		DISCONNECT SWITCHES - NON-FUSED, FUSED. FUSE SIZES NOTED ON DRAWINGS WITH "AF".
	DOUBLE 20A DUPLEX RECEPTACLE AT 18" UNLESS NOTED		MAGNETIC MOTOR STARTER, COMBINATION STARTER AND DISCONNECT
	SPECIAL RECEPTACLE		VARIABLE FREQUENCY DRIVE (VFD), COMBINATION VFD AND DISCONNECT
	20A DUPLEX RECEPTACLE SPECIAL MOUNT (FLOOR, CLG)		MOTOR
	J-BOX (CEILING/WALL, FLOOR)		PUSHBUTTON - SINGLE, MUSHROOM HEAD
	NUMBERS AT RECEPTACLES OR J-BOXES REPRESENTS MOUNTING HEIGHT ABOVE FINISHED FLOOR IN INCHES.		METER - PLAN VIEW, ONE-LINE DIAGRAM
	WIRING SYMBOL. STRAIGHT WIRE SYMBOLS DENOTE CONTRACTOR TO INSTALL CONDUIT RUNS EXACTLY AS DRAWN		MAKE DIRECT EQUIPMENT CONNECTION
	WIRING SYMBOL. CURVED WIRE SYMBOLS DENOTE THAT DESIGN OF ROUTING FOR CONDUIT RUNS IS BY CONTRACTOR	DATA SYMBOLS	
	CONDUIT STUB-UP - CAP & MARK		DATA BOX AND CONDUIT. PROVIDE 4" BOX AND 1-1/4" CONDUIT TO ABOVE CEILING.
	CONDUIT OR CIRCUIT BREAK/CONTINUATION (DIAGRAMMATIC ONLY)		
	GROUND		
	ELECTRICAL CIRCUIT NUMBER DESIGNATION FOR THIS FIXTURE AND ANY CONNECTED BY WIRING SYMBOLS.		
LIGHTING CONTROLS		LIGHTING CONTROLS SUBSCRIPTS	
	LIGHTING ZONE. CIRCUIT ALL LIGHTING FIXTURES CONTAINED WITHIN SPACE TO LISTED CIRCUIT	3	3-WAY SWITCH
	OCCUPANCY SENSOR, VACANCY SENSOR - CEILING MOUNTED	4	4-WAY SWITCH
	OCCUPANCY SENSOR, VACANCY SENSOR - MOUNTED HIGH ON WALL	D	DIMMER SWITCH
	PHOTOELECTRIC CELL	F	CEILING FAN & LIGHT SWITCH TO ALLOW CONTROL OF FAN INDEPENDENT OF LIGHT KIT
	LIGHTING CONTACTOR	K	KEY-OPERATED SWITCH
	TIMECLOCK	O	OCCUPANCY SENSOR SWITCH
	LIGHTING CONTROL PANEL	P	SWITCH WITH PILOT LIGHT
	DAYLIGHT ZONE SENSOR	R	RED EMERGENCY BRANCH SWITCH
	LIGHT SWITCH AT 48" UNLESS NOTED	T	TIMER SWITCH
	LOW-VOLTAGE SMART LIGHT SWITCH, SMART DIMMER LIGHT SWITCH AT 48" UNLESS NOTED	V	VACANCY SENSOR SWITCH (AUTO OFF, MANUAL ON)
	LOWER CASE LETTER AT FIXTURES AND SWITCHES (a, b, ETC.) INDICATES SWITCHING CONTROL.		
	UPPER CASE LETTERS AT SWITCHES: REFER TO 'LIGHTING CONTROLS SUBSCRIPTS'		

ELECTRICAL GENERAL NOTES

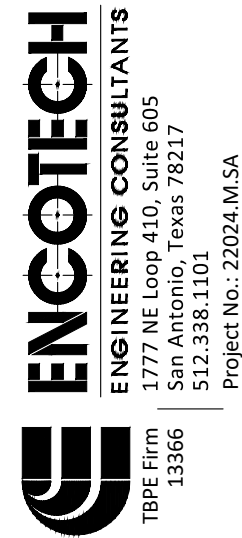
- EXISTENCE AND LOCATION OF DEVICES, FIXTURES, EQUIPMENT, CIRCUITING, ETC. THAT ARE SHOWN TO BE EXISTING WAS TAKEN FROM EXISTING DRAWINGS AND/OR VISUAL INSPECTION AND SHOULD BE VERIFIED IN FIELD PRIOR TO ANY PRICING OR WORK.
- COORDINATE LOCATION AND MOUNTING HEIGHT OF ALL LIGHTING FIXTURES WITH ARCHITECTURAL DRAWINGS, REFLECTED CEILING PLANS, AND ELEVATIONS.
- ELECTRICAL CONTRACTOR SHALL VISIT SITE AND SHALL BECOME FAMILIAR WITH SITE CONDITIONS AND VERIFY DIMENSIONS AND WORK TO BE INSTALLED PRIOR TO SUBMITTING A BID. BY SUBMITTING A BID, CONTRACTOR CERTIFIES FAMILIARITY WITH EXISTING JOBSITE CONDITIONS PRIOR TO COMMENCEMENT OF WORK; FAILURE TO DO SO WILL NOT BE CAUSE FOR EXTRA WORK COMPENSATION.
- ALL MATERIAL SHALL BE NEW AND SHALL BE LISTED OR LABELED BY U.L. OR OTHER RECOGNIZED TESTING FACILITY.
- FURNISH ALL MATERIAL, LABOR, EQUIPMENT AND PERMITS TO PROVIDE A COMPLETE, OPERATIONAL ELECTRICAL SYSTEM CONSISTENT WITH THE INTENT OF THE DRAWINGS. WHERE THE WORD "PROVIDE" IS USED, IT SHALL MEAN, "FURNISH AND INSTALL COMPLETE AND READY FOR USE".
- INSTALLATIONS FOUND NOT COMPLYING WITH SPECIFIED WORKMANSHIP PRACTICES SHALL BE REVISED TO COMPLY AT NO ADDITIONAL COST TO THE OWNER.
- ELECTRICAL CONTRACTOR SHALL PERFORM WORK IN A SAFE MANNER AND MAINTAIN ADEQUATE PROTECTION OF WORK, THE OWNER'S PROPERTY AND ALL PERSONS ON SITE FROM INJURY, DAMAGE OR LOSS.
- FIELD-COORDINATE LOCATION OF PANELS, CONDUITS AND DEVICES WITH STRUCTURAL MEMBERS AND EQUIPMENT FROM OTHER TRADES. CAREFULLY COORDINATE INSTALLATION SCHEDULES WITH OTHER TRADES AND GENERAL CONTRACTOR. VERIFY EXACT LOCATION OF EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN. COORDINATE LOCATION AND INSTALLATION OF OWNER-FURNISHED ITEMS AFFECTING THIS TRADE.
- ALL WIRING SHALL BE IN CONDUIT. ALL WIRING SHALL BE #12 AWG MINIMUM COPPER CONDUCTORS. ALUMINUM CONDUCTORS SHALL NOT BE ALLOWED.
- BRANCH WIRING SHALL BE COPPER, UNLESS NOTED OTHERWISE.
- WIRING DEVICES THAT OCCUR TOGETHER SHALL BE GANGED UNDER A COMMON WALL PLATE, UNLESS NOTED OTHERWISE.
- ELECTRICAL CONTRACTOR SHALL ASSIGN CIRCUITS IN FIELD ON ALL PANELBOARDS TO MAKE LOADS ON EACH PHASE AS BALANCED AS POSSIBLE.
- ELECTRICAL CONTRACTOR SHALL ASSEMBLE AND PROVIDE TO THE OWNER AS PART OF CLOSE-OUT SUBMISSION REQUIREMENTS, ORGANIZED BINDER WITH TECHNICAL DATA, CUT SHEETS, MAINTENANCE REQUIREMENTS, ADJUSTMENT PROCEDURES, TEST REPORTS, APPROVALS, WARRANTIES, PHONE NUMBERS OF SERVICE PERSONNEL, SOURCES OF REPLACEMENT PARTS AND OTHER PERTINENT INFORMATION.
- BEFORE BEGINNING EXCAVATIONS OR DEMOLITION OF ANY NATURE WHATSOEVER, CONTRACTOR SHALL LOCATE ALL SERVICES AND UTILITIES OCCURRING WITHIN THE BOUNDS OF THE PROJECT. THE CONTRACTOR SHALL THEN PROCEED WITH CAUTION IN HIS WORK SO THAT NO UTILITY OR LINE SERVING AREAS THAT ARE TO REMAIN BE DAMAGED WITH A RESULTANT LOSS OF SERVICE. VERIFY THE SOURCE AND SERVICE OF EACH AND EVERY LINE ENCOUNTERED AND RECORD SERVICE, SIZE AND LOCATION ON RECORD DRAWINGS.
- COORDINATE EACH AND EVERY INTERRUPTION OF SERVICES AND UTILITIES WITH THE OWNER AND UTILITY COMPANIES TO ENSURE MINIMUM SHUT-DOWN TIMES ARE ACCEPTABLE.
- FOR EACH EQUIPMENT CONNECTION SHOWN, PROVIDE THE DEVICE, OUTLET, DISCONNECT SWITCH, OR JUNCTION BOX REQUIRED TO CONNECT THE EQUIPMENT.
- NO SINGLE CONDUIT SHALL CONTAIN MORE THAN 6 CURRENT CARRYING CONDUCTORS, UNLESS NOTED OTHERWISE AND PROPERLY DERATED.
- WHERE FIXTURES CONTAINING BATTERY PACKS ARE SWITCHED (BY TOGGLE SWITCH, OCCUPANCY SENSOR, TIMECLOCK/LIGHTING CONTROL PANEL, ETC.), SUPPLY TO BATTERY PACKS SHALL BE UNSWITCHED. EXIT LIGHTS SHOWN ON A SWITCHED CIRCUIT SHALL BE POWERED BY AN UNSWITCHED LINE ON THAT CIRCUIT.
- LIGHT SWITCHES SHOWN IN ROOM CONTROL ALL LIGHTS IN THAT ROOM UNLESS NOTED OTHERWISE. WALL SWITCHES SHOWN IN ROOMS WITH CEILING OCCUPANCY SENSOR SWITCHES SHALL OVERRIDE OCCUPANCY SENSOR CONTROL.
- DOCUMENTS CERTIFYING THAT THE INSTALLED LIGHTING CONTROLS MEET DOCUMENTED PERFORMANCE CRITERIA OF IECC SECTION C405 SHALL BE PROVIDED TO THE BUILDING OWNER WITHIN 90 DAYS FROM THE DATE OF RECEIPT OF THE CERTIFICATE OF OCCUPANCY PER IECC C408.3.2.
- REVIEW ARCHITECTURAL, MECHANICAL, AND OTHER DRAWINGS PRIOR TO BID.
- INSTALL ALL MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ANY DEVIATIONS SHALL BE BROUGHT TO THE ARCHITECT/ENGINEER'S ATTENTION PRIOR TO INSTALLATION.
- FIELD LOCATE FIXTURES IN MECHANICAL/ELECTRICAL ROOMS SO EQUIPMENT DOES NOT OBSTRUCT LIGHTING OR EQUIPMENT ACCESS. COORDINATE WITH MECHANICAL AND OTHER TRADES AS NEEDED.
- SEE MECHANICAL DRAWINGS FOR ALL DIVISION 23 EQUIPMENT LOCATIONS AND ELECTRICAL LOAD REQUIREMENTS.
- ELECTRICAL CONTRACTOR TO PROVIDE MEANS (REQUEST AND INSTALLATION OF) TEMPORARY CONSTRUCTION POWER.
- CONTRACTOR IS RESPONSIBLE TO REVIEW ARCHITECTURAL DRAWINGS TO CONFIRM CEILING TYPES IN ALL ROOMS (ACCESSIBLE, EXPOSED OR "HARD LID") AND TO USE THE APPROPRIATE WIRING METHOD FOR EACH ENSURE ALL J-BOXES ARE ACCESSIBLE AFTER ALL OTHER TRADE'S WORK IS COMPLETED. DO NOT LOCATE ANY J-BOXES ON "HARD" CEILINGS. ALL WIRING MUST BE ACCESSIBLE THROUGH LUMINAIRE ONLY IN "DAISY-CHAIN" METHOD OR WITH DEDICATED HOMERUNS TO EACH LUMINAIRE. J-BOXES MAY BE LOCATED ABOVE OTHER TRADE'S ACCESS DOORS IF FEASIBLE AND DOES NOT INTERFERE WITH ACCESS.

ELECTRICAL DEMOLITION NOTES

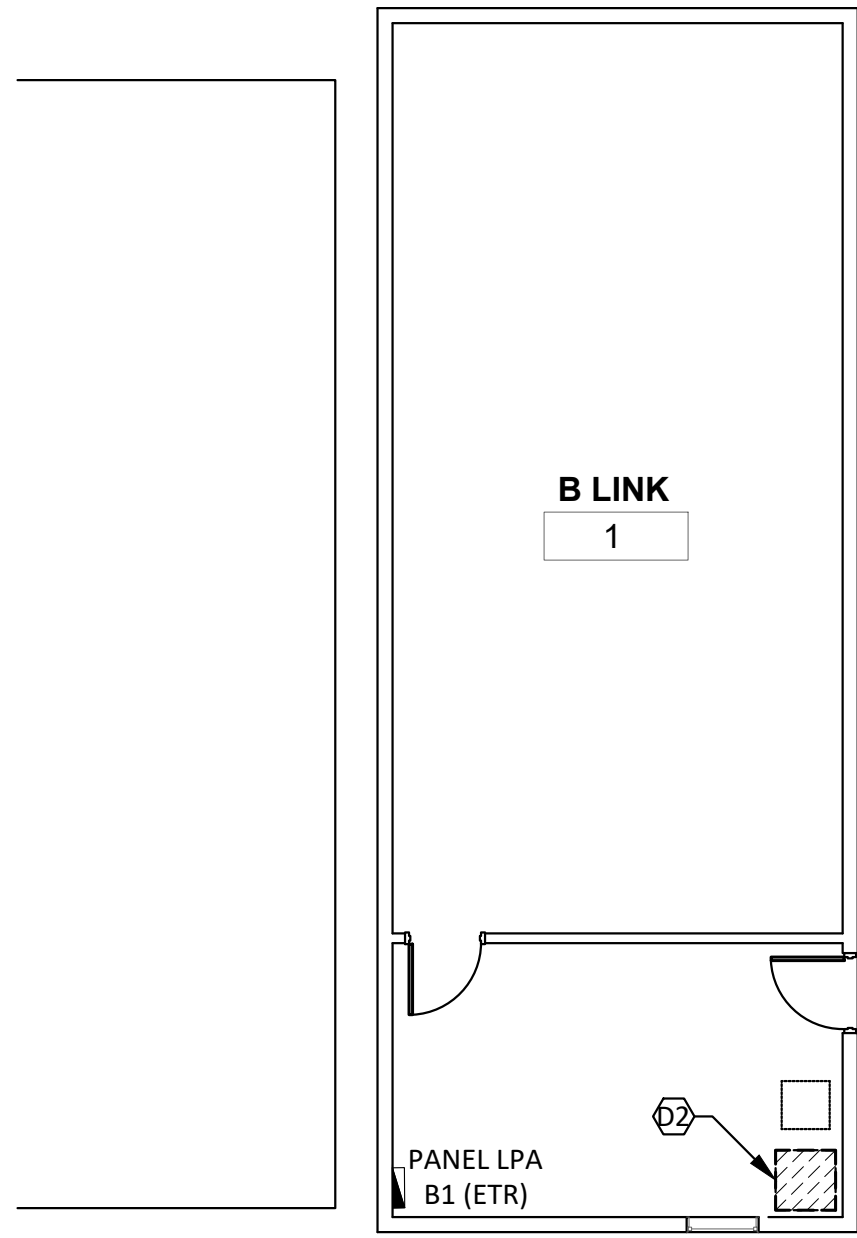
- DEMOLITION: REMOVE ALL DEVICES AND EQUIPMENT UNLESS NOTED OTHERWISE TO REMAIN.
- DEMOLITION: WHERE REQUIRED, EXTEND LIMITS OF DEMOLITION TO ACCOMMODATE FINISHED CONSTRUCTION. TYPICAL THROUGHOUT PROJECT. CONTACT ENGINEER/ARCHITECT FOR CLARIFICATIONS, AS NEEDED.
- DEMOLITION: DISCONNECT ALL BRANCH CIRCUITS TO DEVICES, EQUIPMENT, ETC. TO BE REMOVED AND REMOVE CONDUCTORS AND CONDUIT BACK TO LAST J-BOX OR DEVICE TO REMAIN.
- DEMOLITION: UNLESS OTHERWISE NOTED, ALL MATERIALS TO BE REMOVED SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED BY THE CONTRACTOR.
- DEMOLITION: REPAIR ALL CEILINGS AND WALLS DAMAGED DURING DEMOLITION PHASE. REPAIR SURFACES TO ORIGINAL CONDITION AND PAINT/FINISH AS DIRECTED BY ARCHITECT. ALL REPAIRS SHALL BE PERFORMED BY PERSONNEL EXPERIENCED IN THIS TYPE OF WORK. ALL REPAIRS MUST BE APPROVED BY THE ARCHITECT.



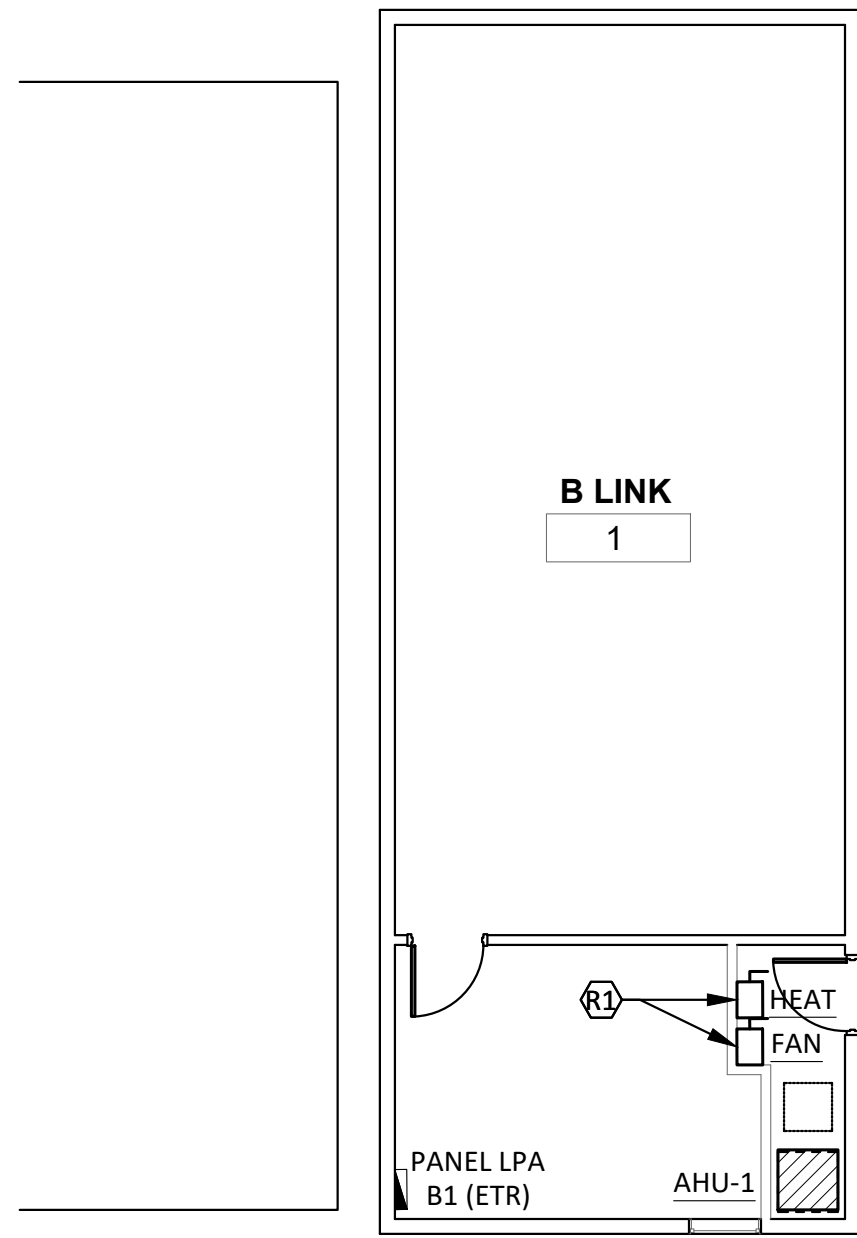
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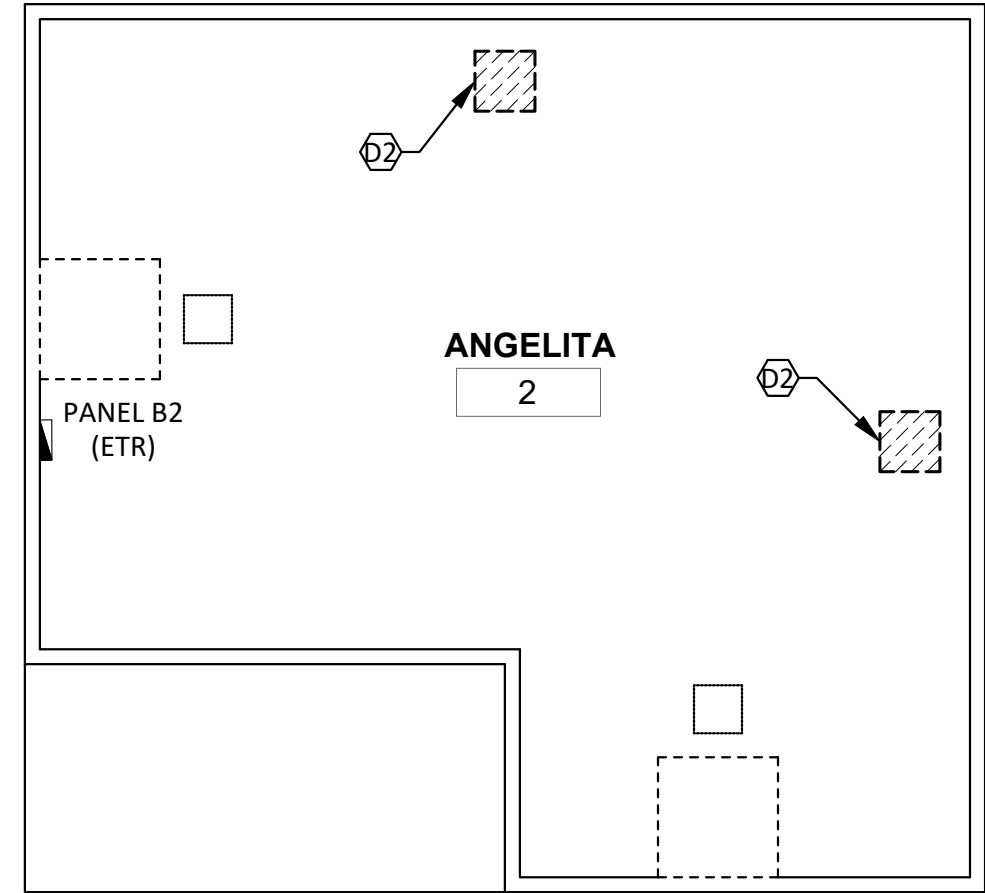




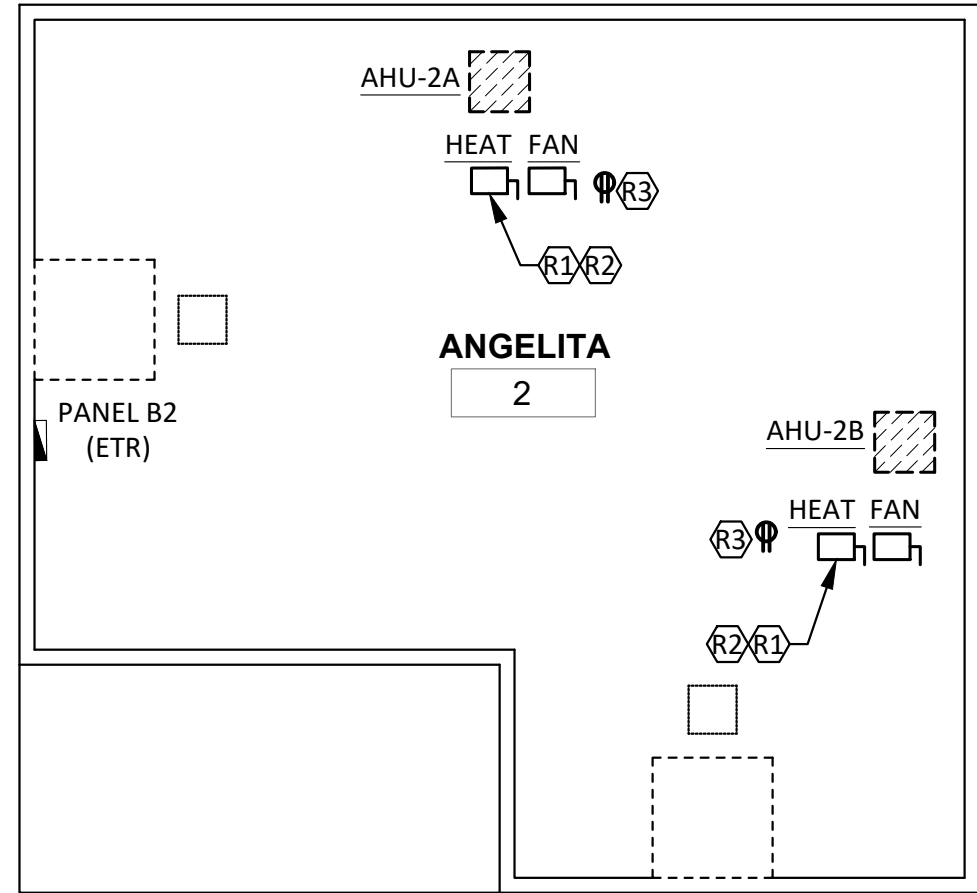
**1** BUILDING 1 - ELECTRICAL DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



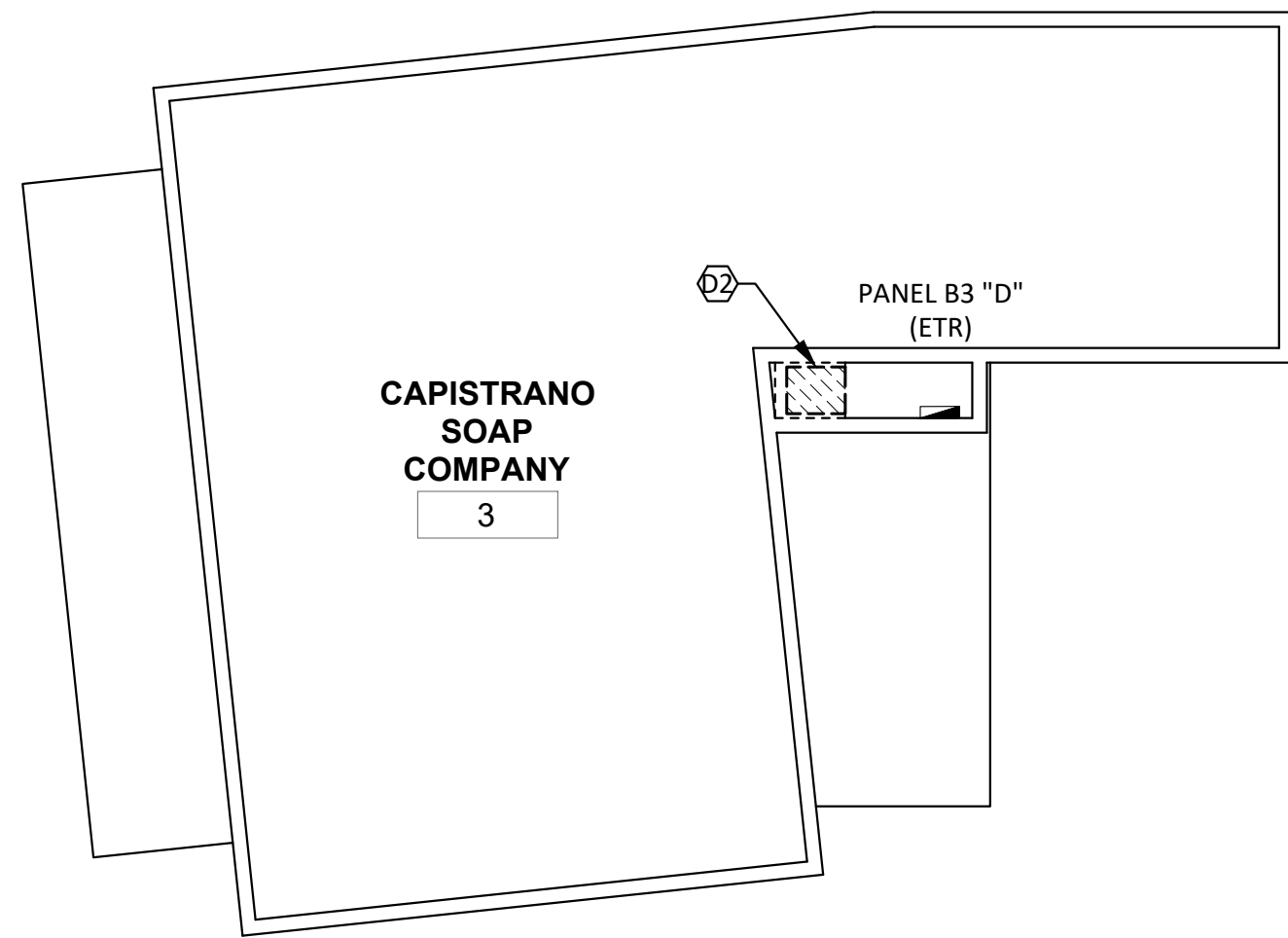
**2** BUILDING 1 - ELECTRICAL NEW WORK PLAN  
SCALE: 1/8"=1'-0"



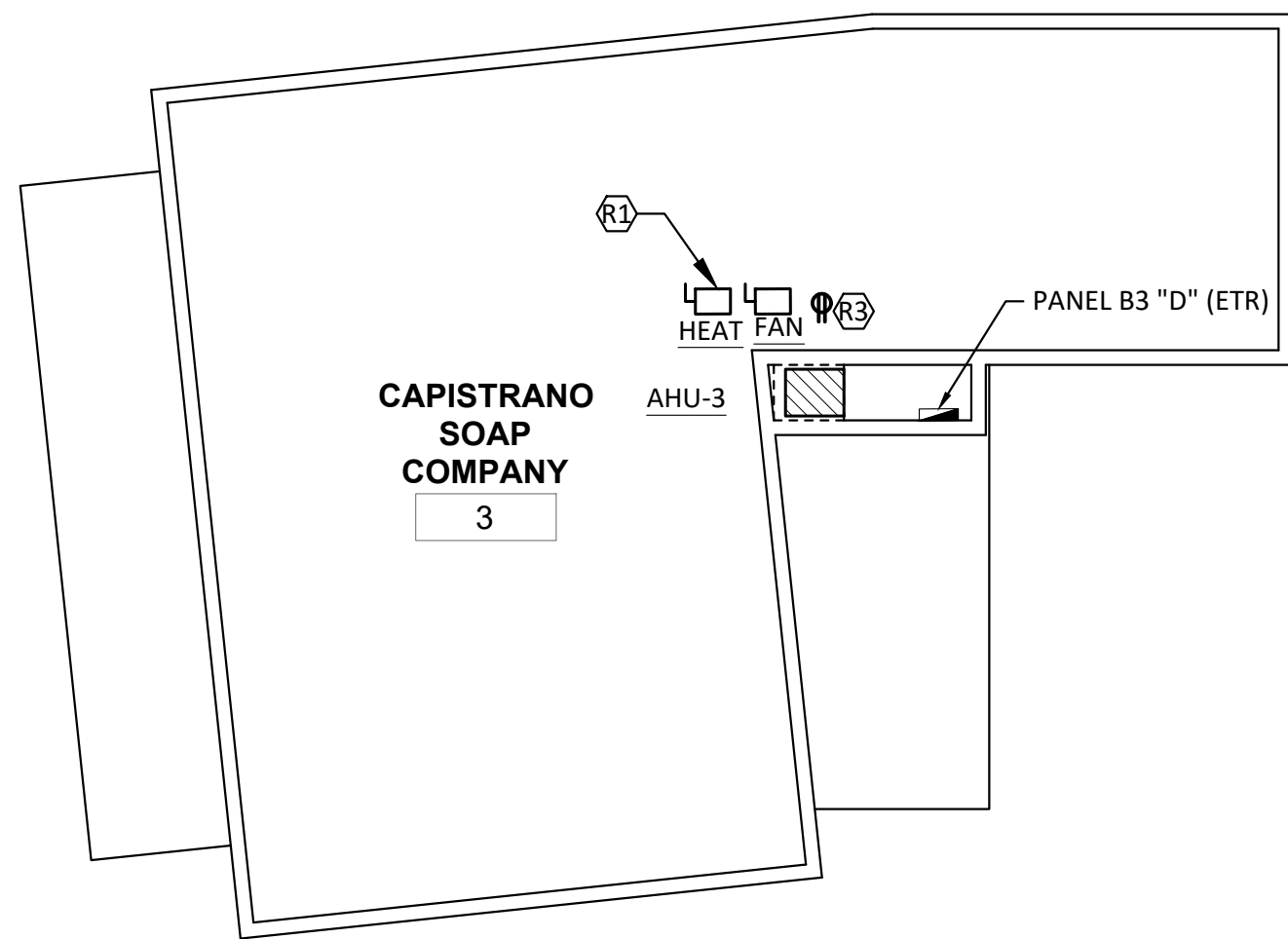
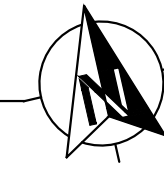
**3** BUILDING 2 - ELECTRICAL DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



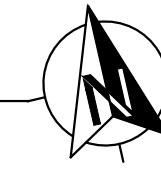
**4** BUILDING 2 - ELECTRICAL NEW WORK PLAN  
SCALE: 1/8"=1'-0"



**5** BUILDING 3 - ELECTRICAL DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



**6** BUILDING 3 - ELECTRICAL NEW WORK PLAN  
SCALE: 1/8"=1'-0"

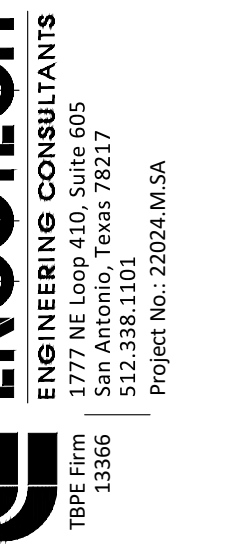
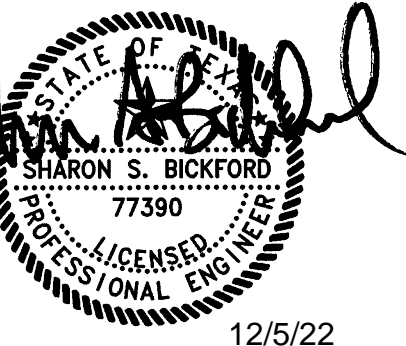


#### GENERAL SHEET NOTES

- A. ETR - EXISTING TO REMAIN
- B. COORDINATE REMOVAL AND DOWNTIME OF THE ELECTRICAL SYSTEM WITH BUILDING OWNER/LEASEHOLDER.
- C. SEPARATE ELECTRICAL DISCONNECTS AND CONNECTIONS REQUIRED FOR AHU. ONE FOR FAN. ONE FOR ELECTRIC HEATER.
- D. LOCATE DISCONNECTS WITHIN LINE OF SIGHT OF NEW EQUIPMENT.
- E. REFER TO ELECTRICAL MECHANICAL SCHEDULE ON SHEET E301 FOR DISCONNECT AND WIRE SIZES.
- F. REFER TO ARCHITECTURAL SITE PLAN ON SHEET A001 FOR BUILDING LOCATIONS.

#### KEYED NOTES

- D1. DEMOLISH EXISTING ELECTRICAL PANEL. RETAIN EXISTING BRANCH CIRCUITRY TO RECONNECT TO NEW PANEL. RE: A2/E100.
- D2. DISCONNECT EXISTING ELECTRICAL DISCONNECT SERVING MECHANICAL EQUIPMENT TO BE DEMOLISHED. REMOVE CONDUCTORS BACK TO SOURCE.
- R1. PROVIDE NEW DISCONNECT FOR NEW MECHANICAL EQUIPMENT. PROVIDE POWER FROM EXISTING SOURCE.
- R2. MOUNT DISCONNECT TO STRUCTURE ABOVE CEILING WITHIN SIGHT OF EQUIPMENT.
- R3. PROVIDE SERVICE RECEPTACLE MOUNTED TO STRUCTURE ABOVE CEILING. CONNECT TO NEAREST 120V CIRCUIT.



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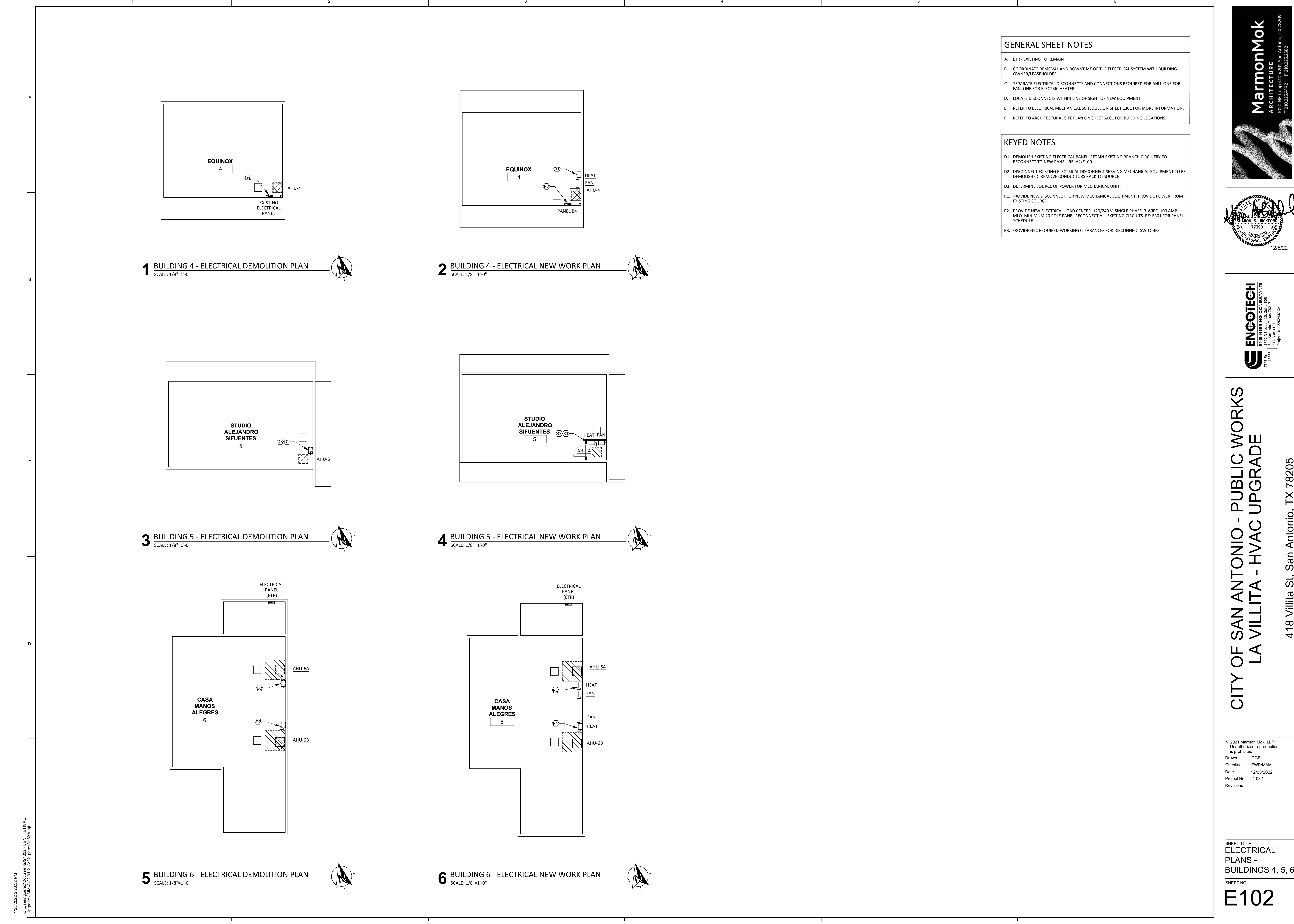
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Project No. 21032  
Revisions

SHEET TITLE  
ELECTRICAL  
PLAN -  
BUILDINGS 1, 2, 3

SHEET NO.

E101



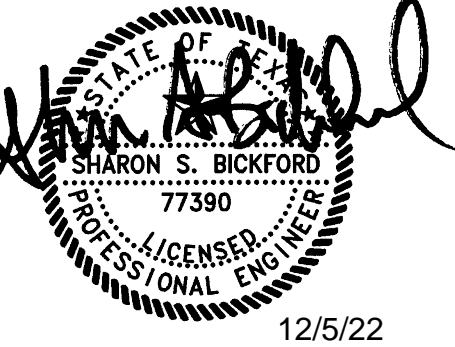
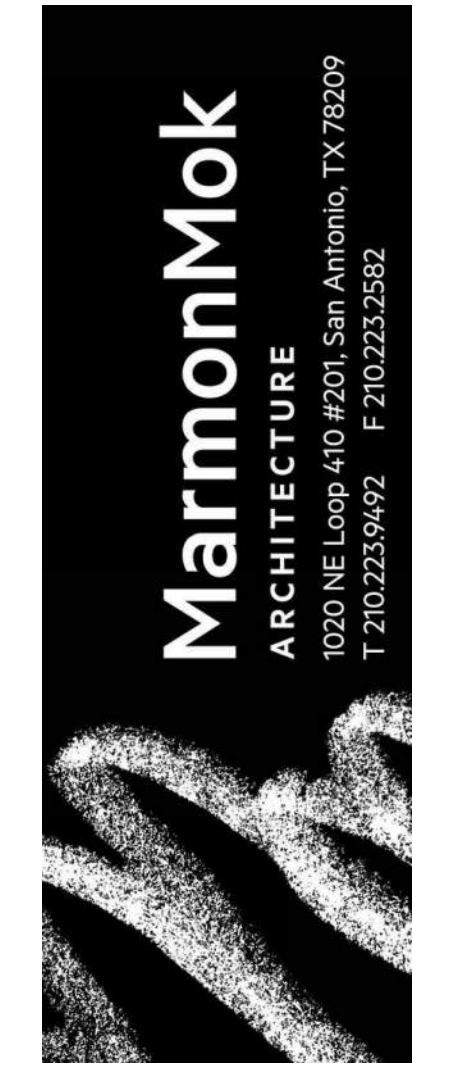


GENERAL SHEET NOTES

- A. ETR - EXISTING TO REMAIN
- B. COORDINATE REMOVAL AND DOWNTIME OF THE ELECTRICAL SYSTEM WITH BUILDING OWNER/LEASEHOLDER.
- C. SEPARATE ELECTRICAL DISCONNECTS AND CONNECTIONS REQUIRED FOR AHU. ONE FOR FAN. ONE FOR ELECTRIC HEATER.
- D. LOCATE DISCONNECTS WITHIN LINE OF SIGHT OF NEW EQUIPMENT.
- E. REFER TO ELECTRICAL MECHANICAL SCHEDULE ON SHEET E301 FOR MORE INFORMATION.
- F. REFER TO ARCHITECTURAL SITE PLAN ON SHEET A001 FOR BUILDING LOCATIONS.

KEYED NOTES

- D1. DEMOLISH EXISTING ELECTRICAL PANEL. RETAIN EXISTING BRANCH CIRCUITRY TO RECONNECT TO NEW PANEL. RE: A2/E100.
- D2. DISCONNECT EXISTING ELECTRICAL DISCONNECT SERVING MECHANICAL EQUIPMENT TO BE DEMOLISHED. REMOVE CONDUCTORS BACK TO SOURCE.
- D3. DETERMINE SOURCE OF POWER FOR MECHANICAL UNIT.
- R1. PROVIDE NEW DISCONNECT FOR NEW MECHANICAL EQUIPMENT. PROVIDE POWER FROM EXISTING SOURCE.
- R2. PROVIDE NEW ELECTRICAL LOAD CENTER. 120/240 V, SINGLE PHASE, 3-WIRE, 100 AMP MLO. MINIMUM 20 POLE PANEL RECONNECT ALL EXISTING CIRCUITS. RE: E301 FOR PANEL SCHEDULE.
- R3. PROVIDE NEC REQUIRED WORKING CLEARANCES FOR DISCONNECT SWITCHES.



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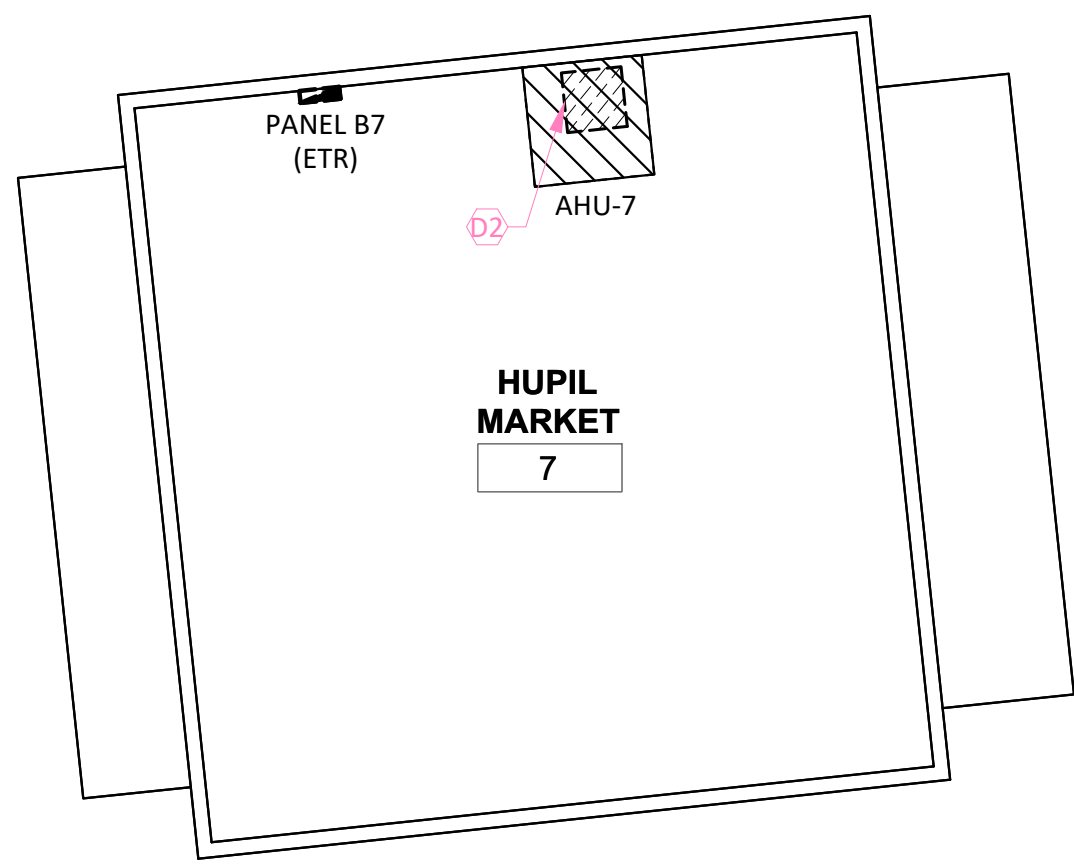
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Project No. 21032  
Revisions

SHEET TITLE  
ELECTRICAL  
PLANS -  
BUILDINGS 4, 5, 6

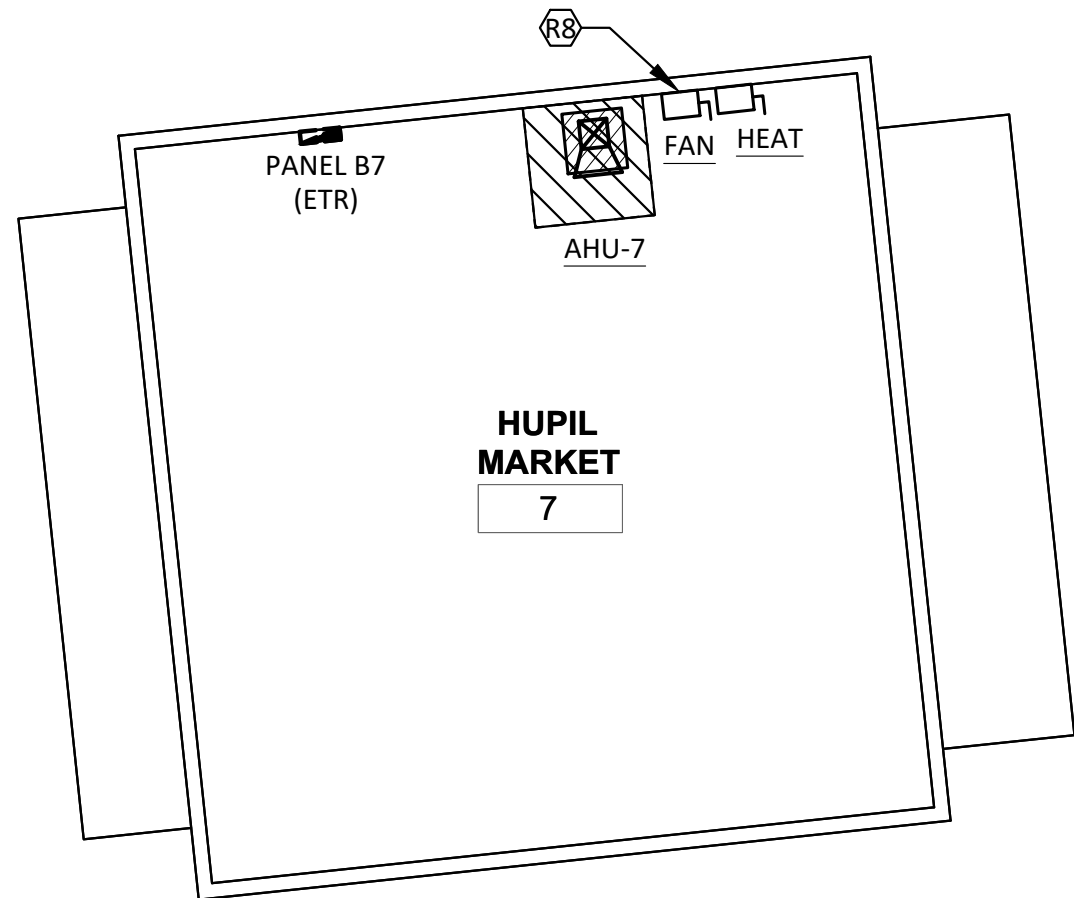
SHEET NO.

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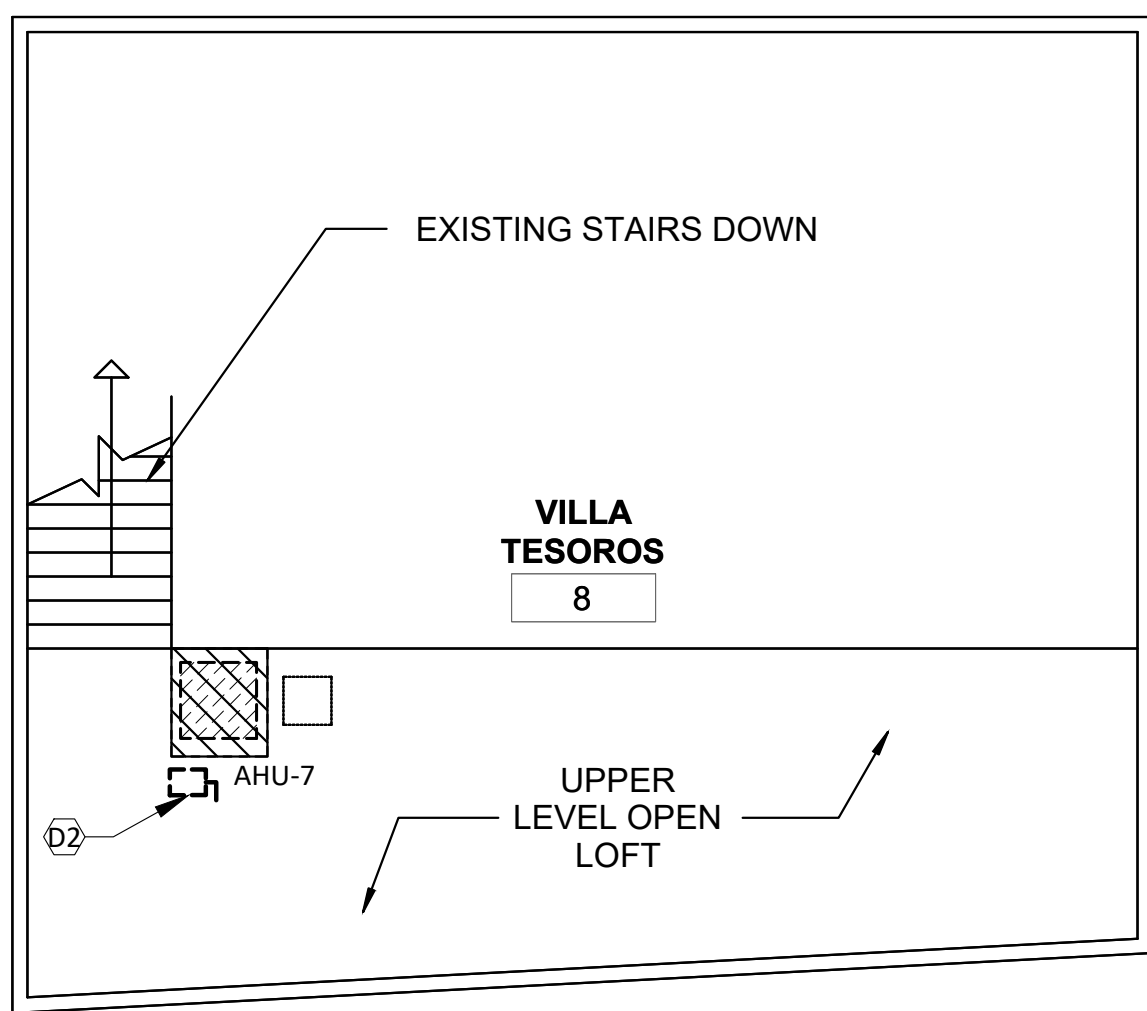




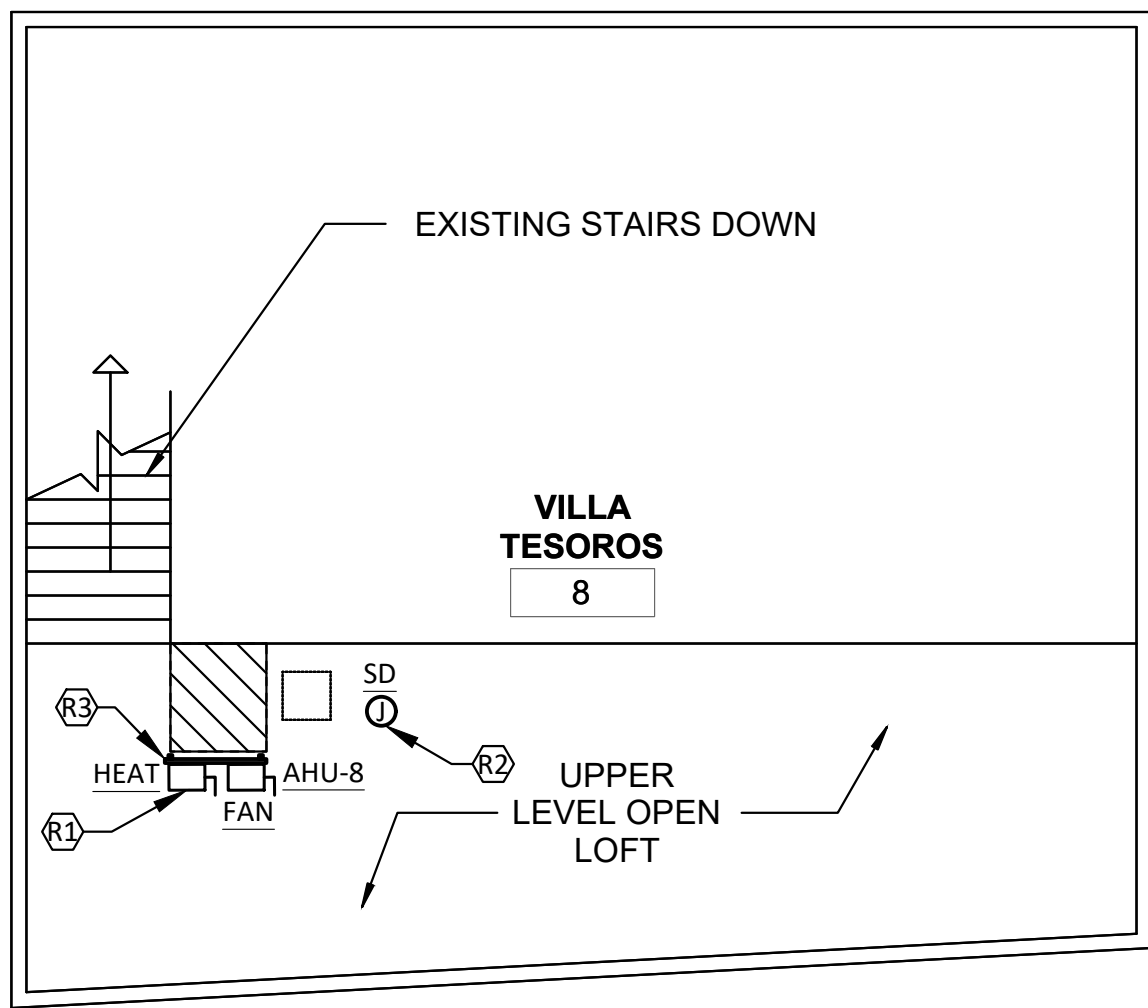
**1** BUILDING 7 - ELECTRICAL DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



**2** BUILDING 7 - ELECTRICAL NEW WORK PLAN  
SCALE: 1/8"=1'-0"



**3** BUILDING 8 - ELECTRICAL DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



**4** BUILDING 8 - ELECTRICAL NEW WORK PLAN  
SCALE: 1/8"=1'-0"



#### GENERAL SHEET NOTES

- ETR - EXISTING TO REMAIN
- COORDINATE REMOVAL AND DOWNTIME OF THE ELECTRICAL SYSTEM WITH BUILDING OWNER/LEASEHOLDER.
- SEPARATE ELECTRICAL DISCONNECTS AND CONNECTIONS REQUIRED FOR AHU. ONE FOR FAN. ONE FOR ELECTRIC HEATER.
- LOCATE DISCONNECTS WITHIN LINE OF SIGHT OF NEW EQUIPMENT.
- REFER TO ELECTRICAL MECHANICAL SCHEDULE ON SHEET E301 FOR MORE INFORMATION.
- REFER TO ARCHITECTURAL SITE PLAN ON SHEET A001 FOR BUILDING LOCATIONS.

#### KEYED NOTES

- DISCONNECT EXISTING ELECTRICAL DISCONNECT SERVING MECHANICAL EQUIPMENT TO BE DEMOLISHED. REMOVE CONDUCTORS BACK TO SOURCE.
- PROVIDE NEW DISCONNECT FOR NEW MECHANICAL EQUIPMENT. PROVIDE POWER FROM EXISTING SOURCE.
- PROVIDE 120V POWER TO SMOKE DETECTOR IN SUPPLY DUCT FROM NEAREST 120V CIRCUIT. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATION.



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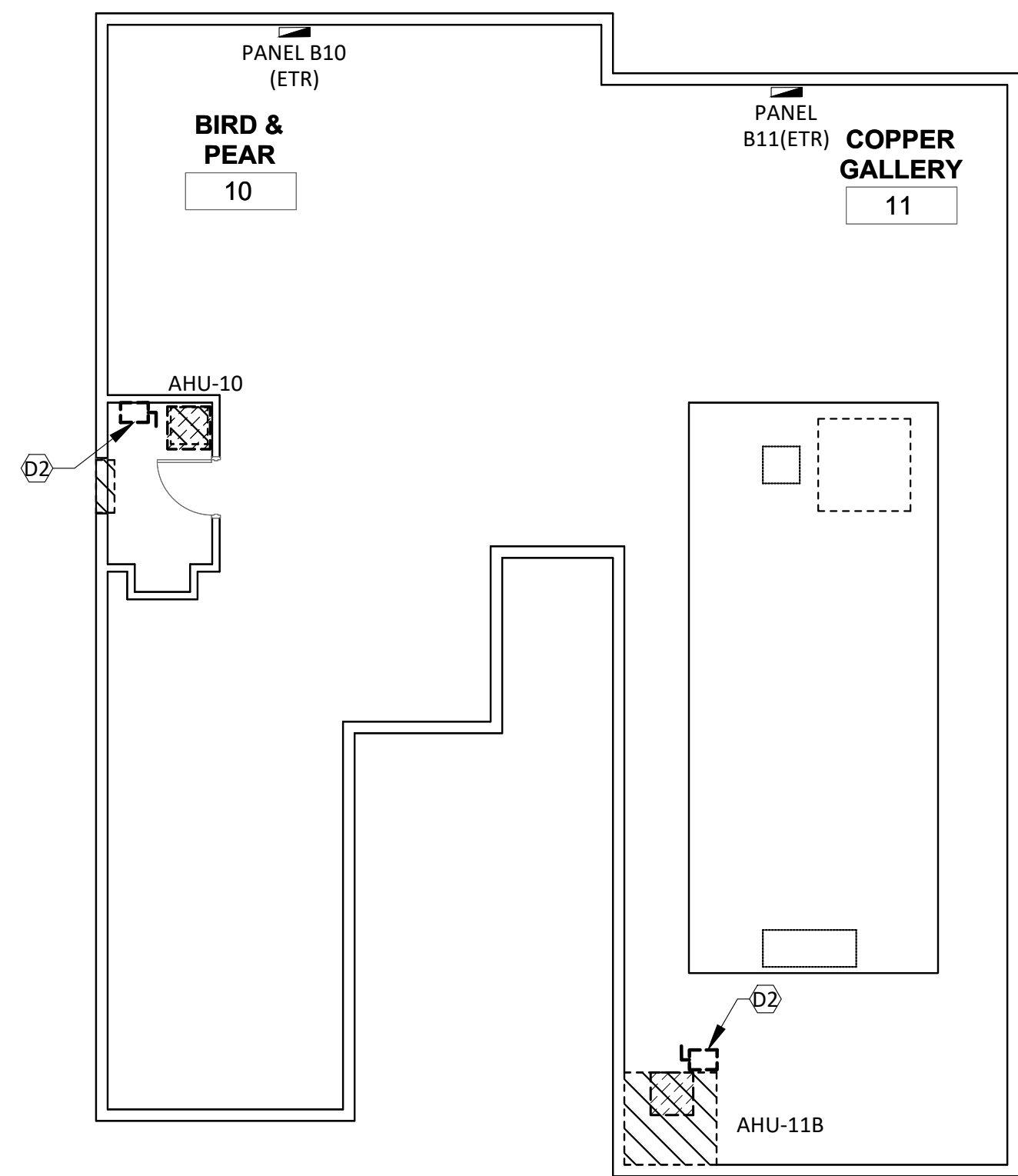
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SHEET TITLE  
ELECTRICAL  
PLAN -  
BUILDINGS 7, 8

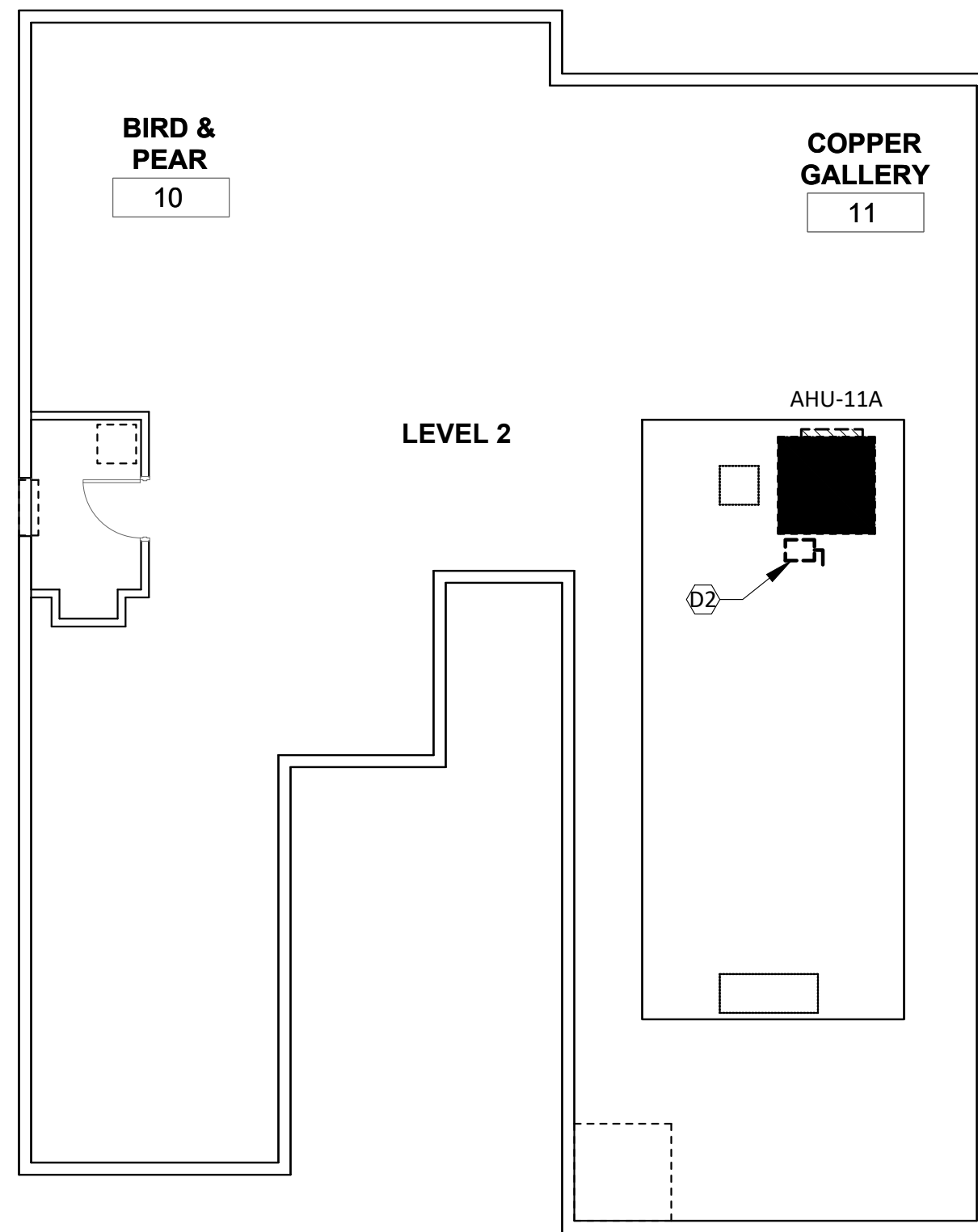
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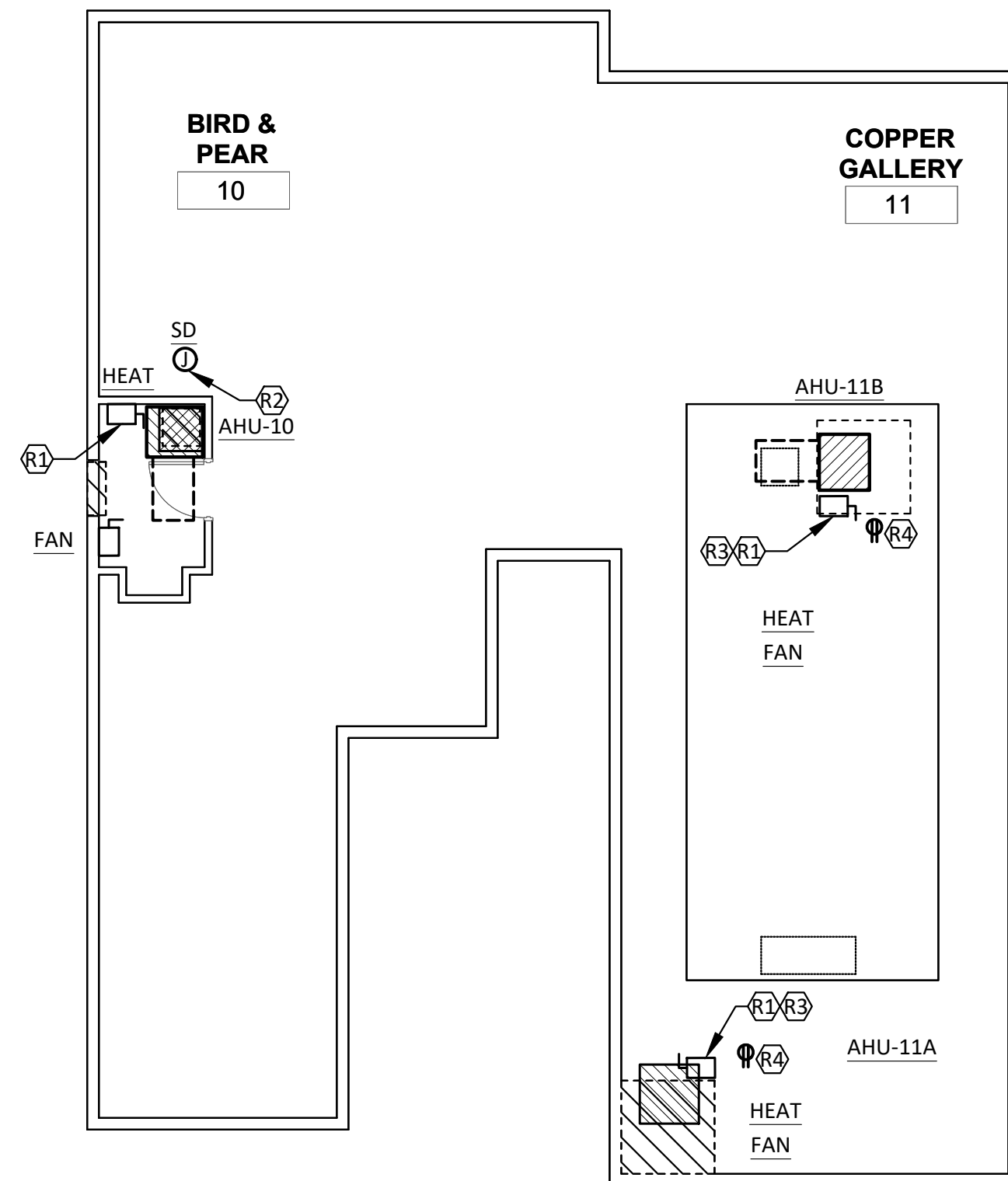




**1** BUILDING 10 & 11, LEVEL 1 - ELECTRICAL DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



**2** BUILDING 10 & 11, LEVEL 2 - ELECTRICAL DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



**3** BUILDING 10 & 11, LEVEL 1 - ELECTRICAL NEW WORK PLAN  
SCALE: 1/8"=1'-0"

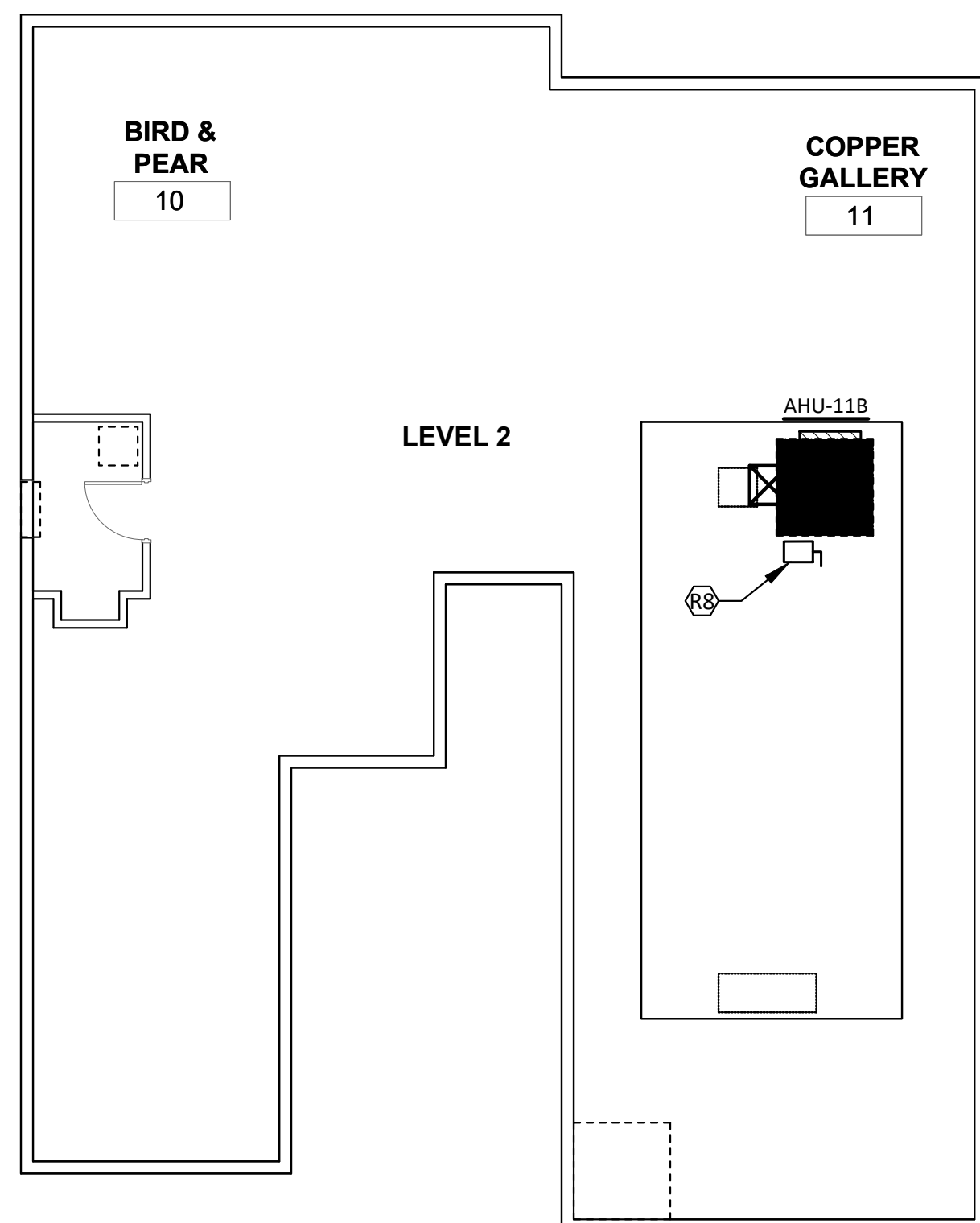


#### GENERAL SHEET NOTES

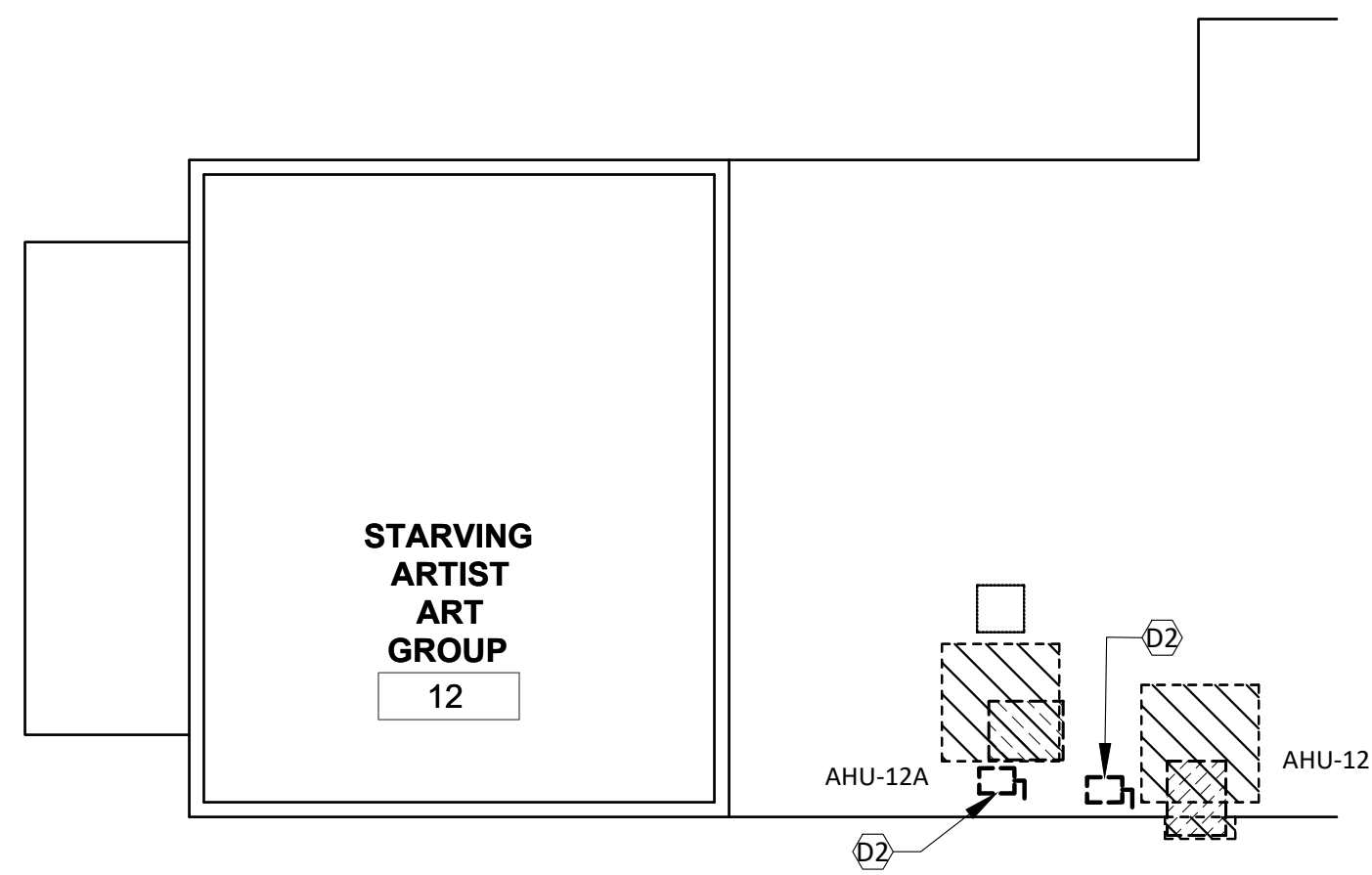
- ETR - EXISTING TO REMAIN
- COORDINATE REMOVAL AND DOWNTIME OF THE ELECTRICAL SYSTEM WITH BUILDING OWNER/LEASEHOLDER.
- SEPARATE ELECTRICAL DISCONNECTS AND CONNECTIONS REQUIRED FOR AHU. ONE FOR FAN, ONE FOR ELECTRIC HEATER.
- LOCATE DISCONNECTS WITHIN LINE OF SIGHT OF NEW EQUIPMENT.
- REFER TO ELECTRICAL MECHANICAL SCHEDULE ON SHEET E301 FOR MORE INFORMATION.
- REFER TO ARCHITECTURAL SITE PLAN ON SHEET A001 FOR BUILDING LOCATIONS.

#### KEYED NOTES

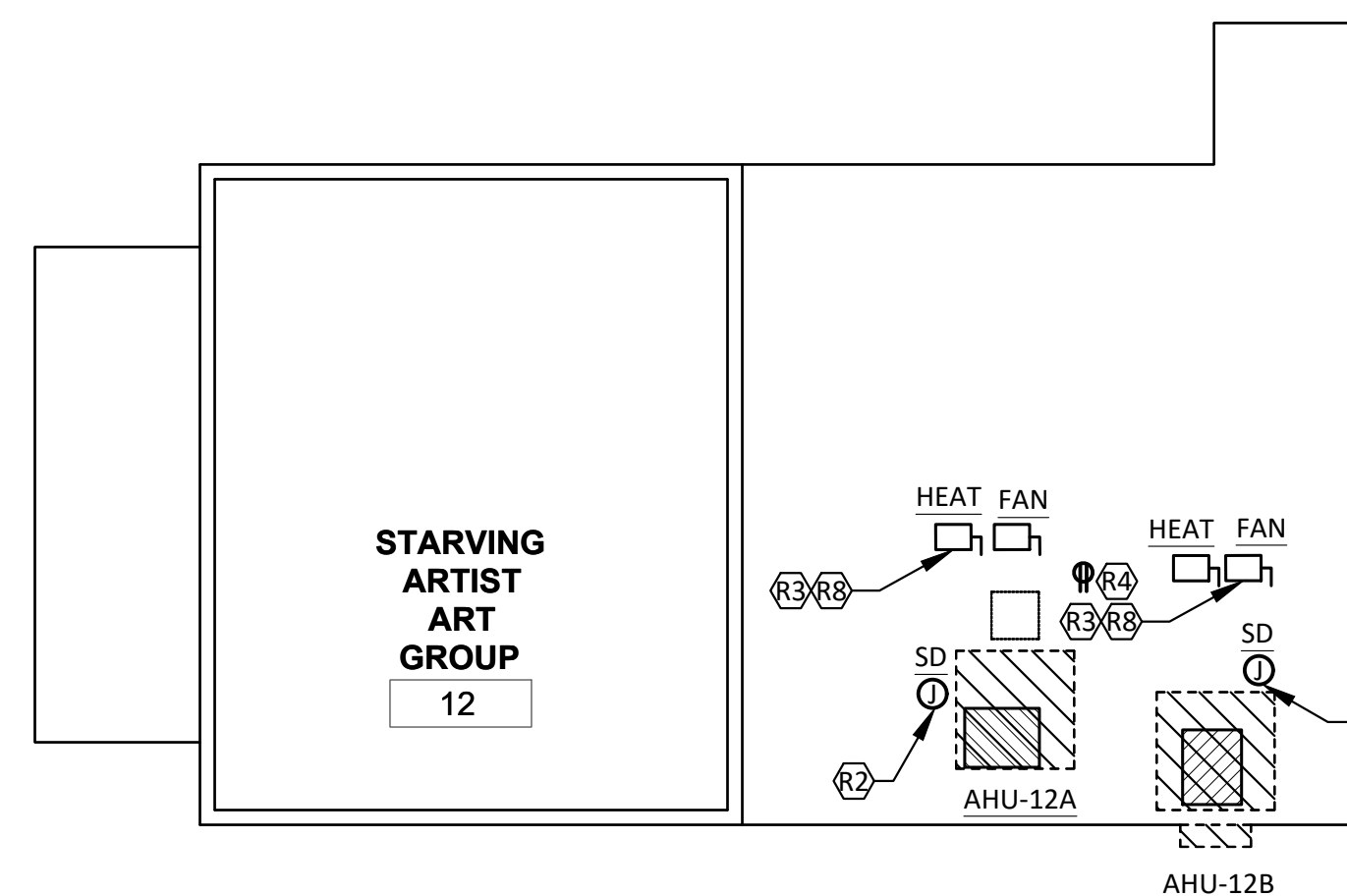
- DEMOLISH EXISTING ELECTRICAL DISCONNECT SERVING MECHANICAL EQUIPMENT TO BE DEMOLISHED. RETAIN FEEDER CIRCUIT TO FEED NEW DISCONNECT.
- DETERMINE SOURCE OF POWER FOR EXISTING AHU AND DEMOLISH T TO NEAREST JUNCTION BOX. PRESERVE CIRCUITRY TO EXTEND TO NEW MECHANICAL EQUIPMENT.
- PROVIDE NEW DISCONNECT FOR NEW MECHANICAL EQUIPMENT. PROVIDE POWER FROM EXISTING SOURCE.
- PROVIDE 120V POWER TO SMOKE DETECTOR IN SUPPLY DUCT FROM NEAREST 120V CIRCUIT. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATION.
- MOUNT DISCONNECT TO STRUCTURE ABOVE CEILING WITHIN SIGHT OF EQUIPMENT.
- PROVIDE SERVICE RECEPTACLE MOUNTED TO STRUCTURE ABOVE CEILING. CONNECT TO NEAREST 120V CIRCUIT.



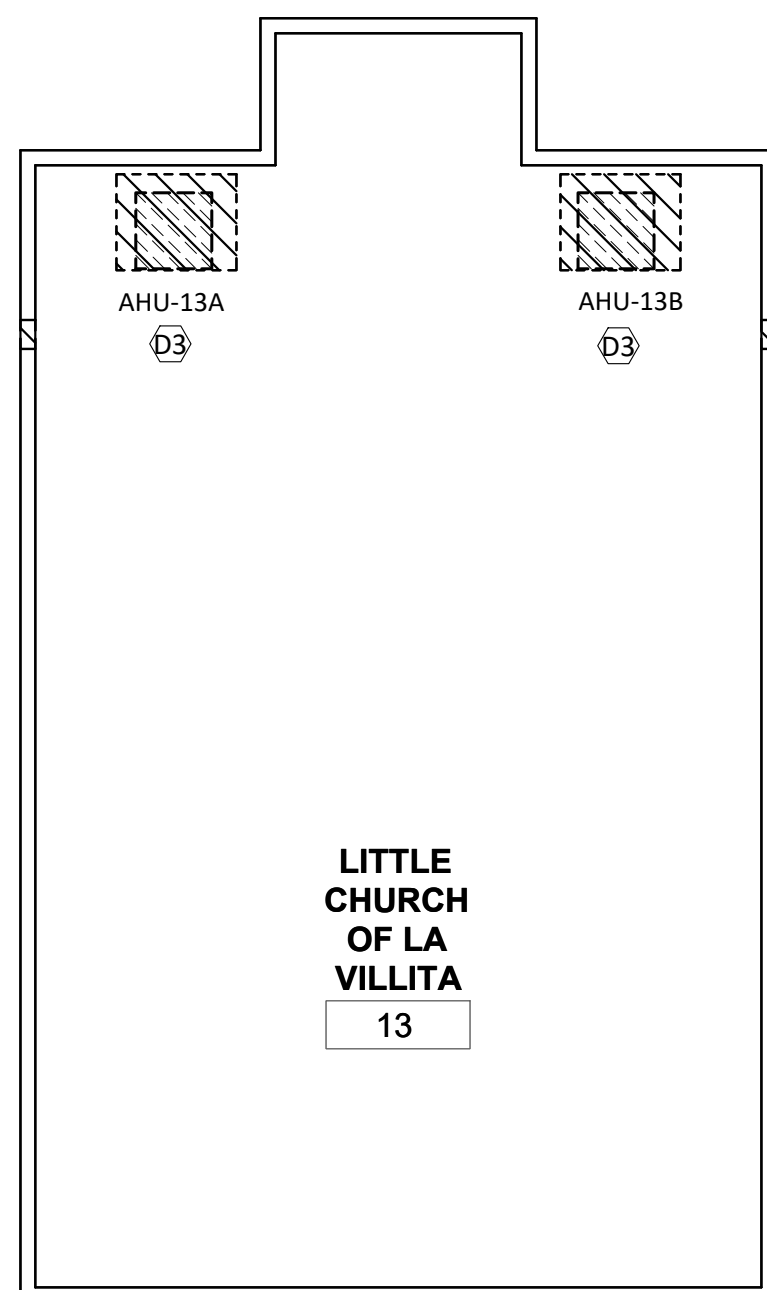
**4** BUILDING 10 & 11, LEVEL 2 - ELECTRICAL NEW WORK PLAN  
SCALE: 1/8"=1'-0"



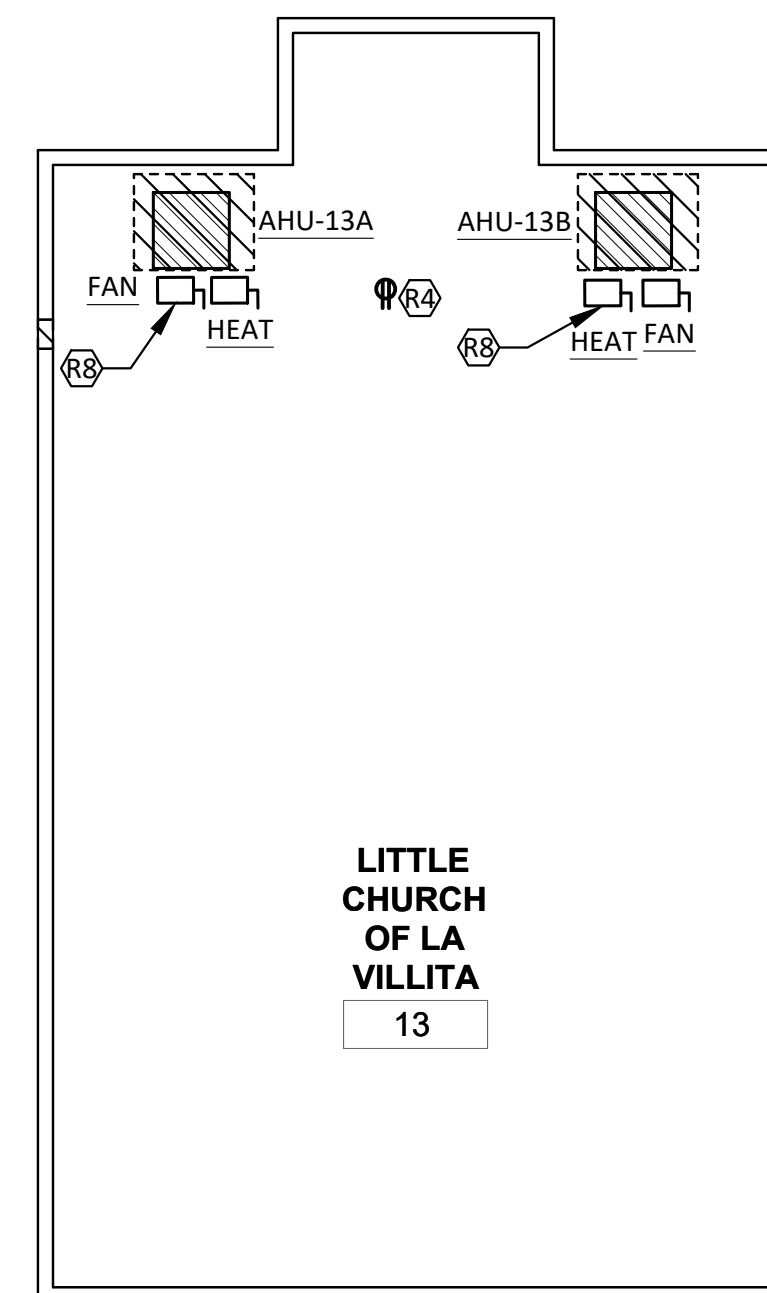
**5** BUILDING 12 - ELECTRICAL DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



**6** BUILDING 12 - ELECTRICAL NEW WORK PLAN  
SCALE: 1/8"=1'-0"



**7** BUILDING 13 - ELECTRICAL DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



**8** BUILDING 13 - ELECTRICAL NEW WORK PLAN  
SCALE: 1/8"=1'-0"



12/5/22



## CITY OF SAN ANTONIO - PUBLIC WORKS LA VILLITA - HVAC UPGRADE

418 Villita St, San Antonio, TX 78205

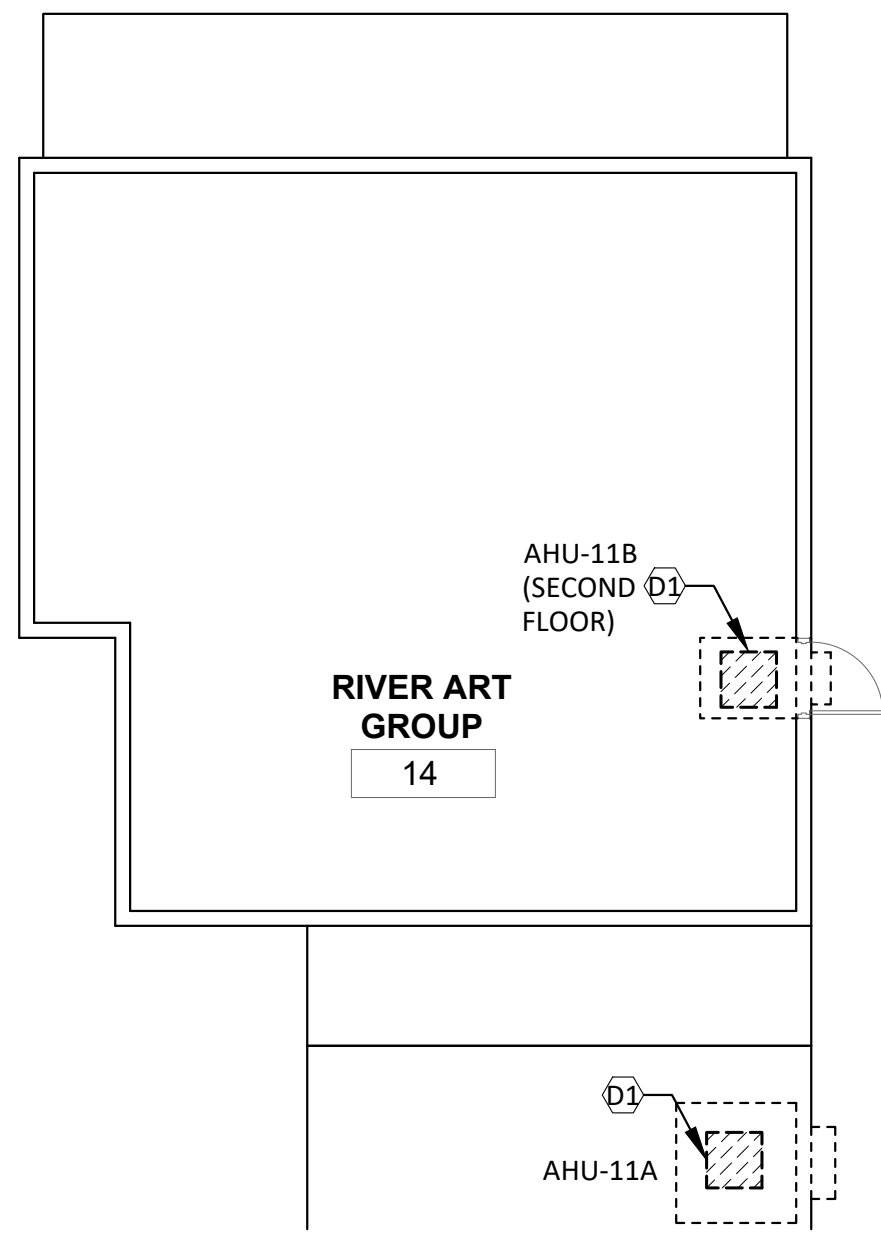
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Revisions

SHEET TITLE  
ELECTRICAL PLAN  
BUILDINGS  
10,11,12,13

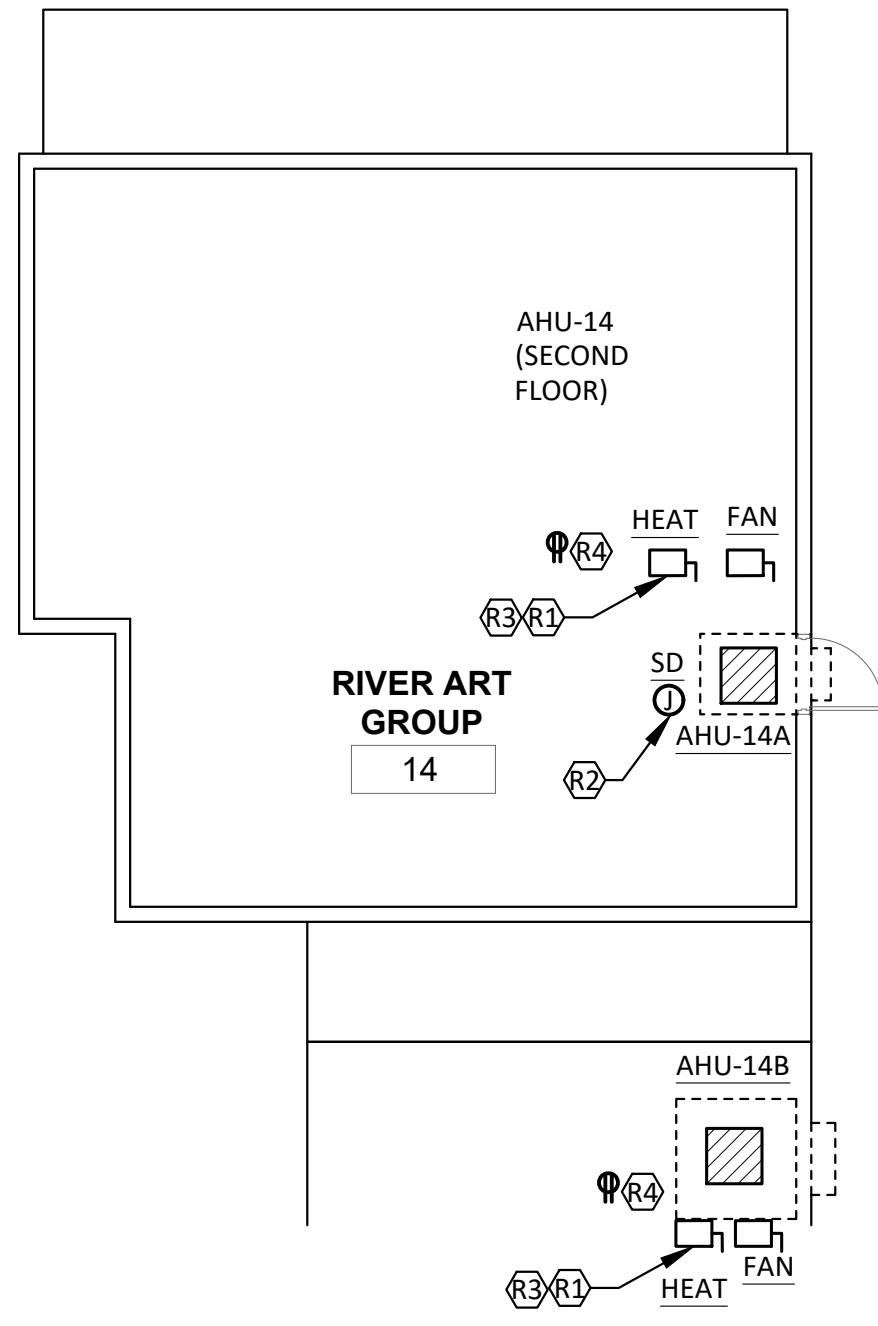
SHEET NO.

E104

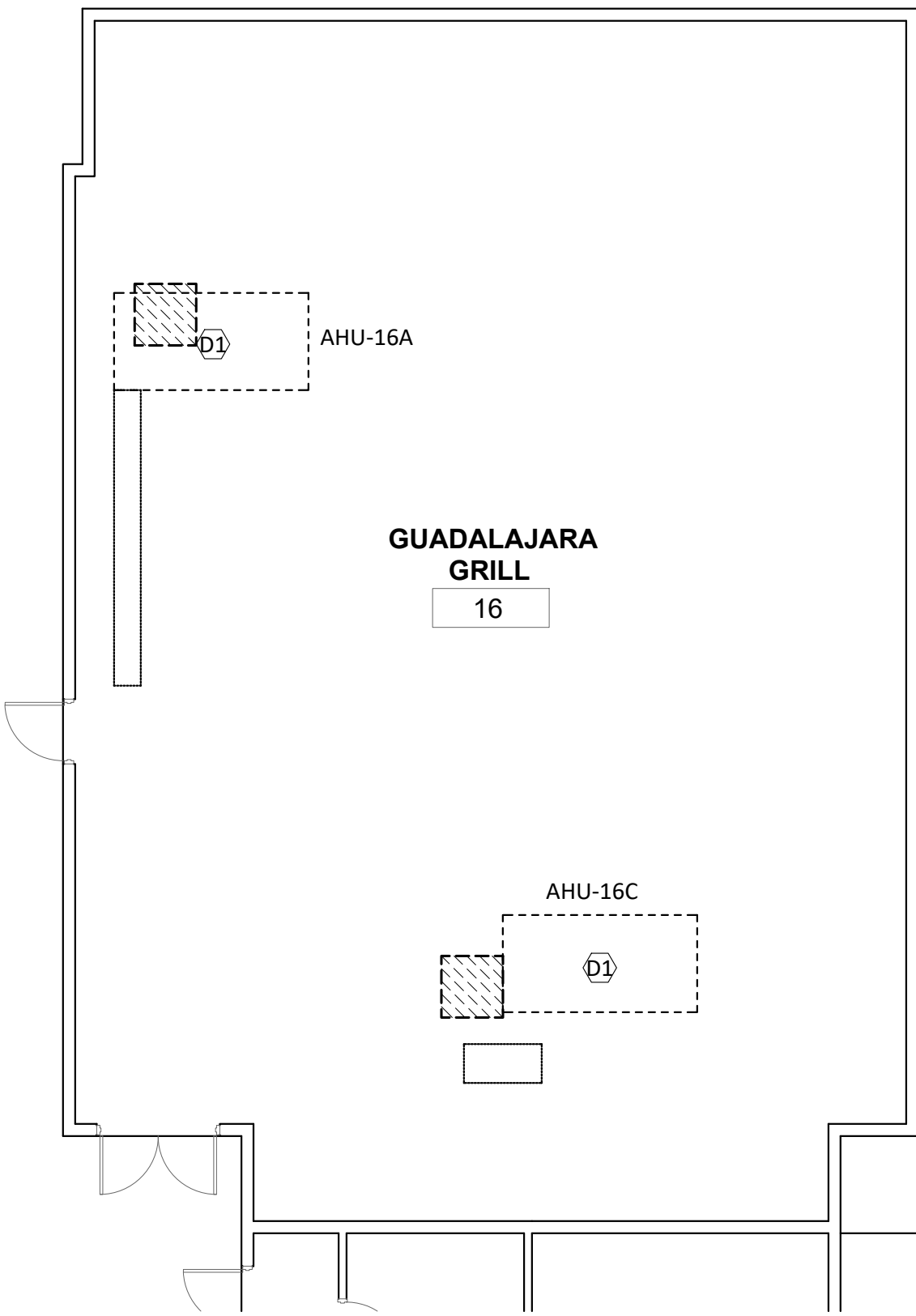




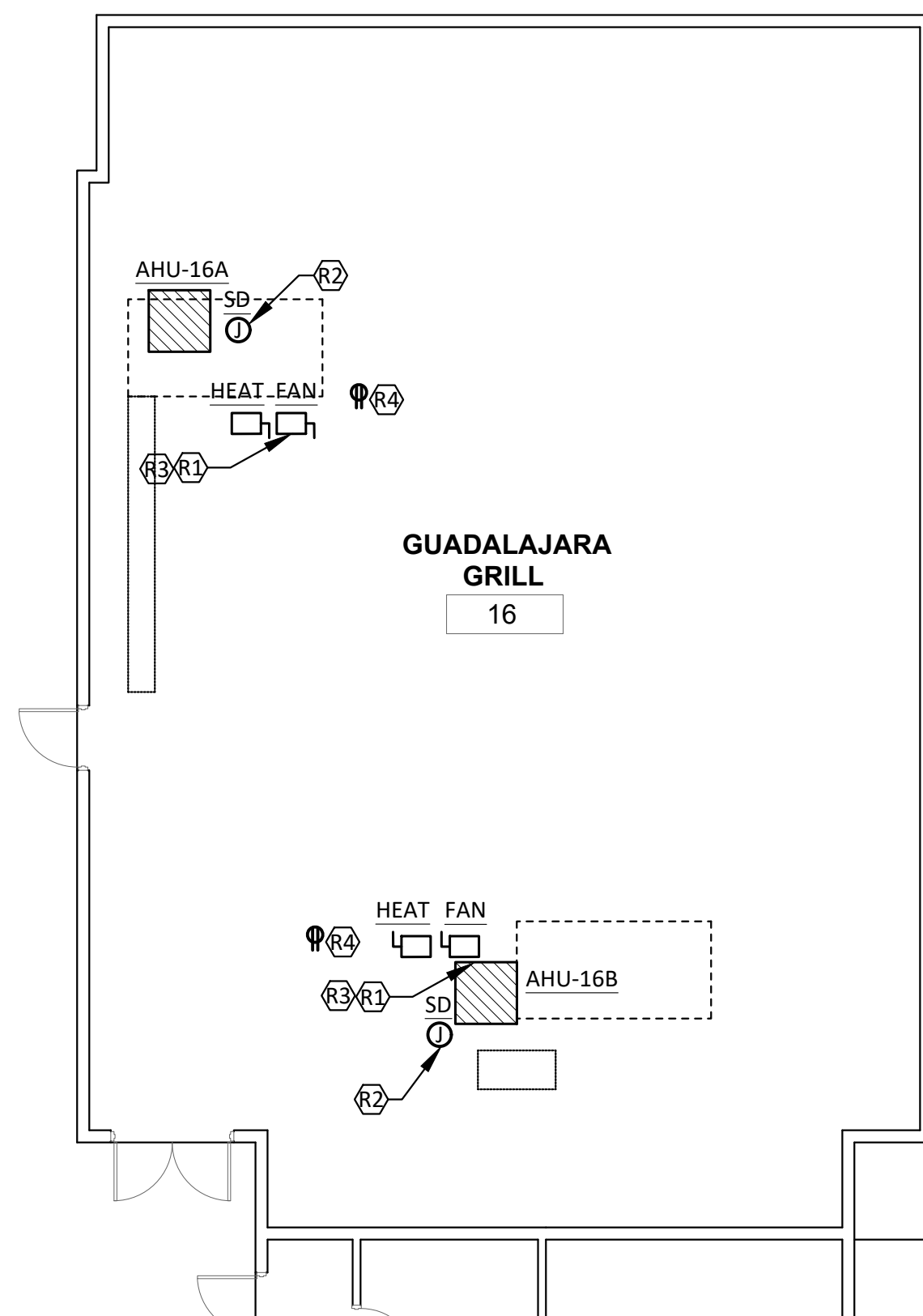
**1** BUILDING 14 - ELECTRICAL DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



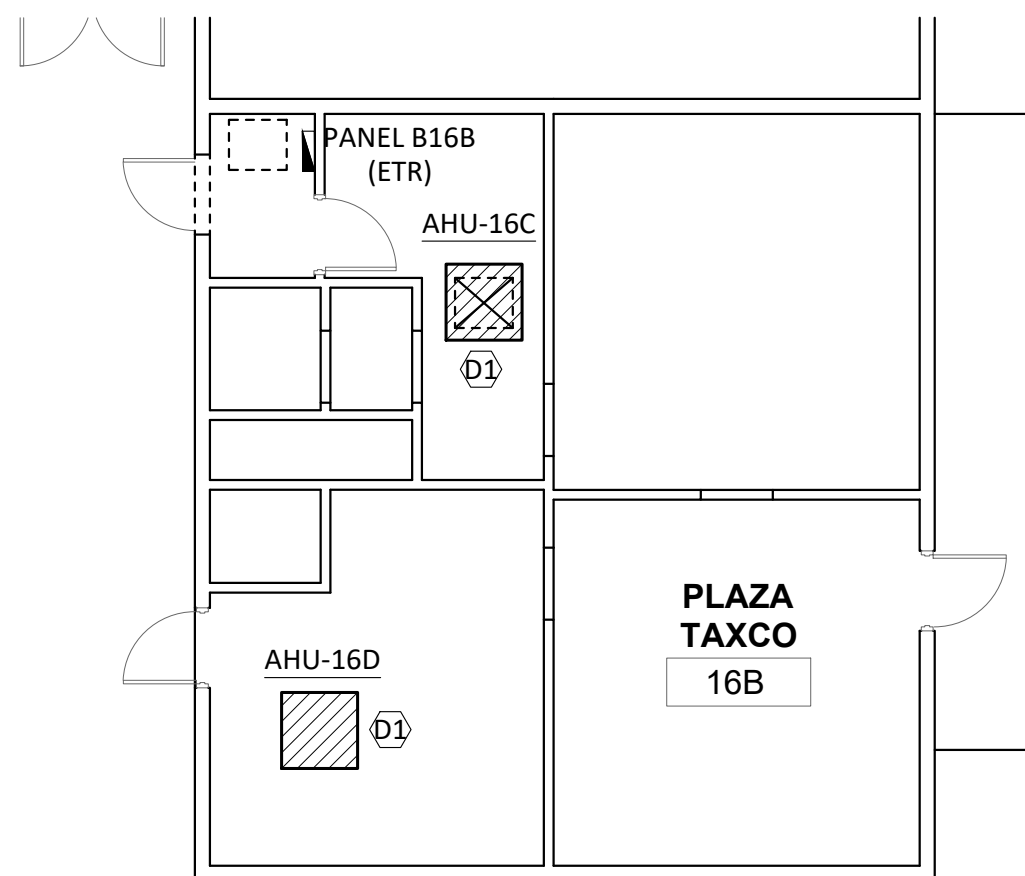
**2** BUILDING 14 - ELECTRICAL NEW WORK PLAN  
SCALE: 1/8"=1'-0"



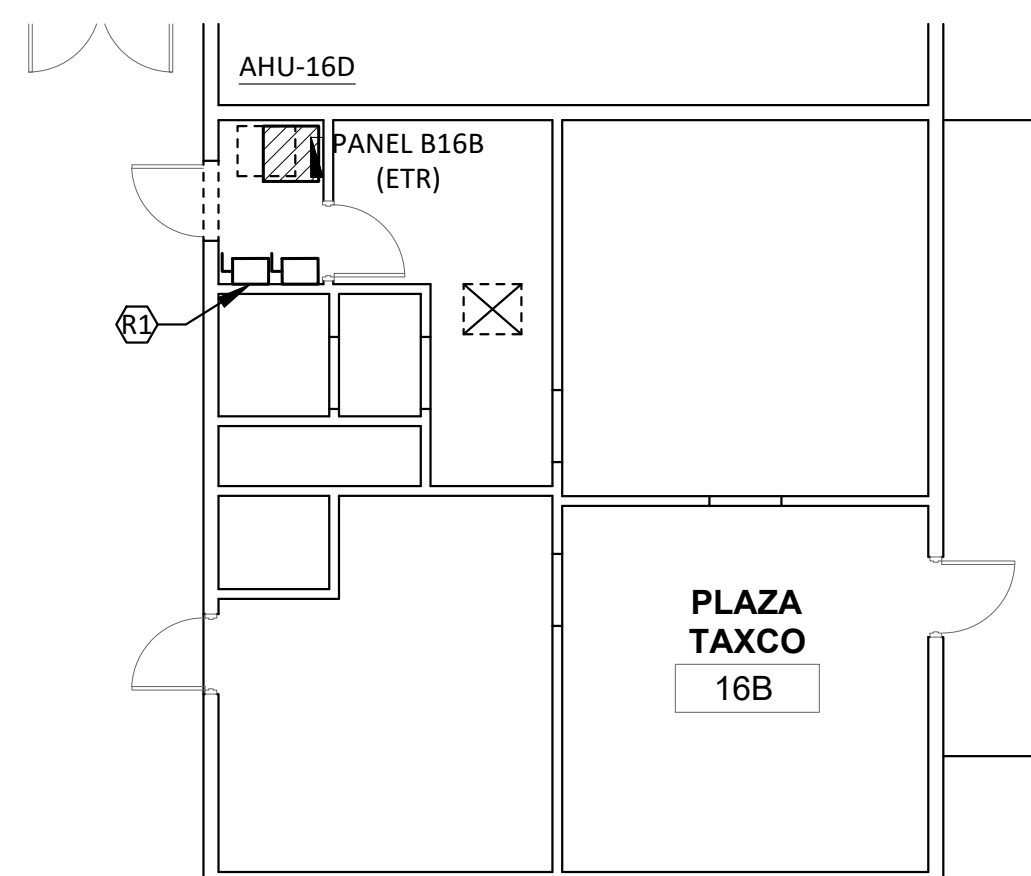
**3** BUILDING 16 - ELECTRICAL DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



**4** BUILDING 16 - ELECTRICAL NEW WORK PLAN  
SCALE: 1/8"=1'-0"



**5** BUILDING 16B - ELECTRICAL DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



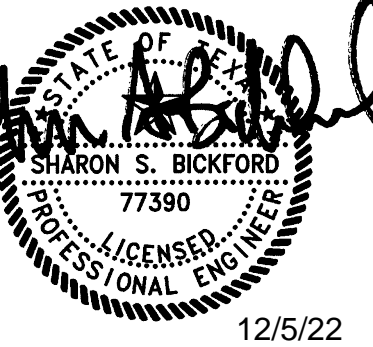
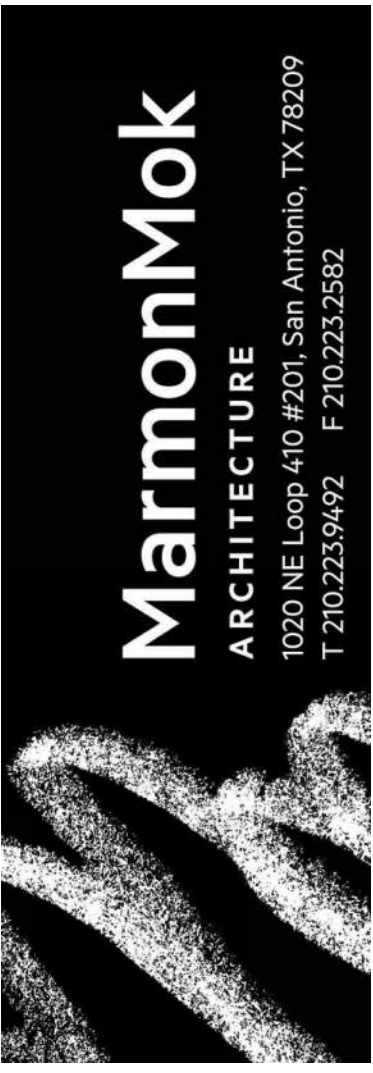
**6** BUILDING 16B - ELECTRICAL NEW WORK PLAN  
SCALE: 1/8"=1'-0"

## GENERAL SHEET NOTES

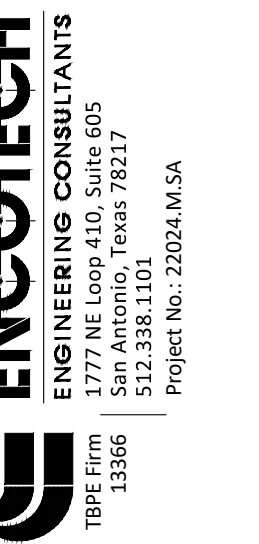
- ETR - EXISTING TO REMAIN
- COORDINATE REMOVAL AND DOWNTIME OF THE ELECTRICAL SYSTEM WITH BUILDING OWNER/LEASEHOLDER.
- SEPARATE ELECTRICAL DISCONNECTS AND CONNECTIONS REQUIRED FOR AHU. ONE FOR FAN. ONE FOR ELECTRIC HEATER.
- LOCATE DISCONNECTS WITHIN LINE OF SIGHT OF NEW EQUIPMENT.
- REFER TO ELECTRICAL MECHANICAL SCHEDULE ON SHEET E301 FOR MORE INFORMATION

## KEYED NOTES

- DEMOLISH EXISTING ELECTRICAL DISCONNECT SERVING MECHANICAL EQUIPMENT TO BE DEMOLISHED. RETAIN FEEDER CIRCUIT TO FEED NEW DISCONNECT.
- PROVIDE NEW DISCONNECT FOR NEW MECHANICAL EQUIPMENT. PROVIDE POWER FROM EXISTING SOURCE.
- PROVIDE 120V POWER TO SMOKE DETECTOR IN SUPPLY DUCT FROM NEAREST 120V CIRCUIT. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATION.
- MOUNT DISCONNECT TO STRUCTURE ABOVE CEILING WITHIN SIGHT OF EQUIPMENT.
- PROVIDE SERVICE RECEPTACLE MOUNTED TO STRUCTURE ABOVE CEILING. CONNECT TO NEAREST 120V CIRCUIT.



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LA VILLITA - HVAC UPGRADE

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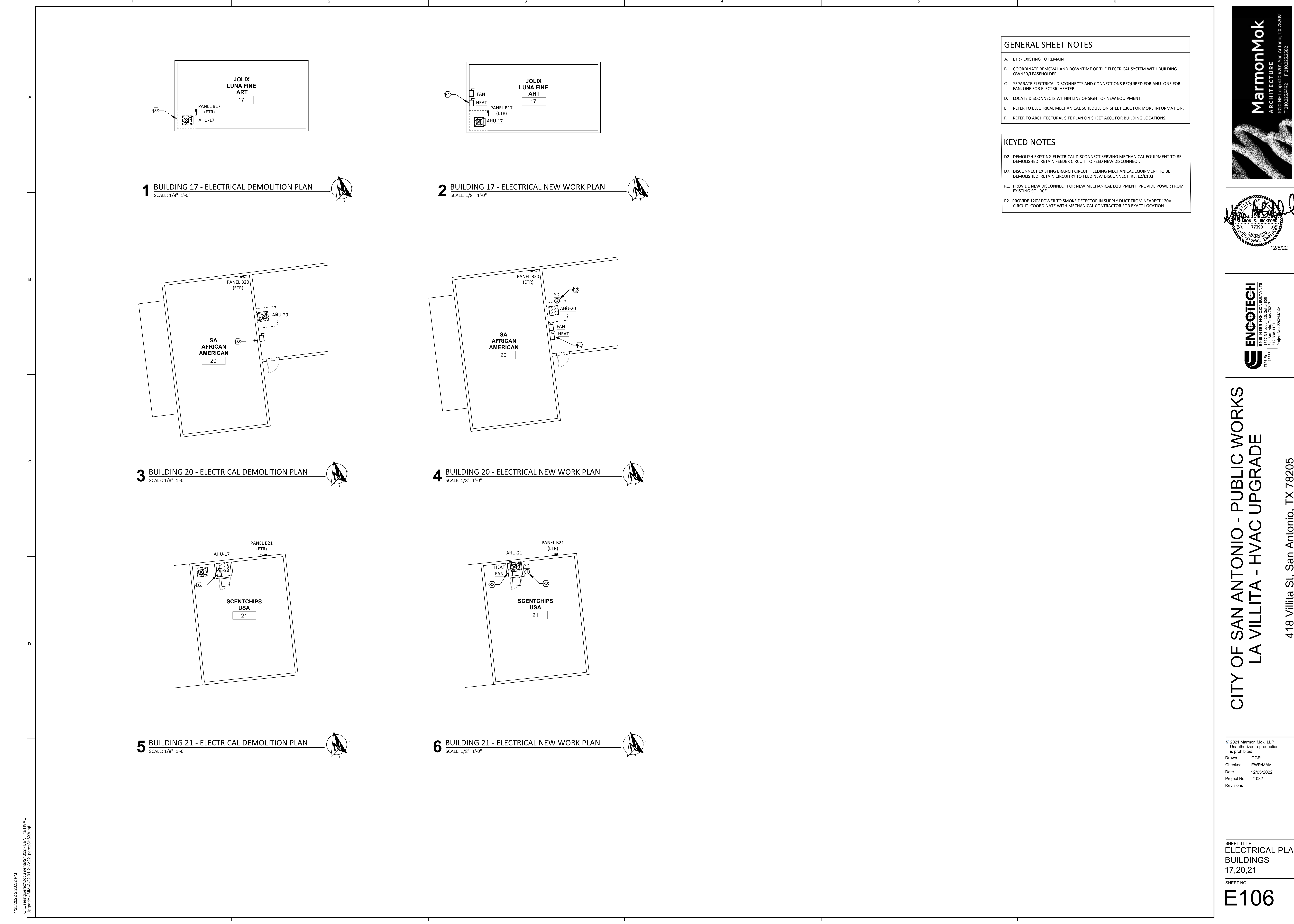
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SHEET TITLE  
ELECTRICAL PLAN  
BUILDINGS  
14,16,16B

SHEET NO.

E105



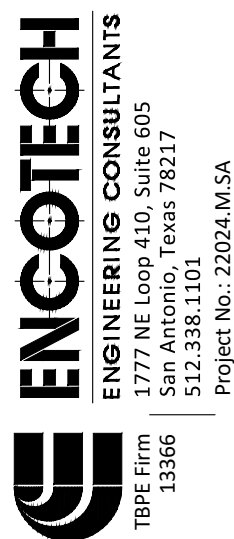
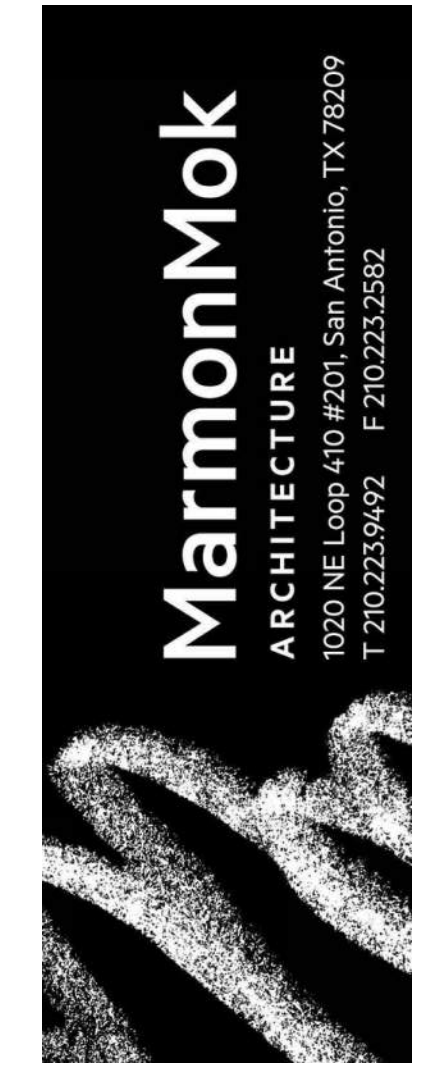


GENERAL SHEET NOTES

- A. ETR - EXISTING TO REMAIN
- B. COORDINATE REMOVAL AND DOWNTIME OF THE ELECTRICAL SYSTEM WITH BUILDING OWNER/LEASEHOLDER.
- C. SEPARATE ELECTRICAL DISCONNECTS AND CONNECTIONS REQUIRED FOR AHU. ONE FOR FAN. ONE FOR ELECTRIC HEATER.
- D. LOCATE DISCONNECTS WITHIN LINE OF SIGHT OF NEW EQUIPMENT.
- E. REFER TO ELECTRICAL MECHANICAL SCHEDULE ON SHEET E301 FOR MORE INFORMATION.
- F. REFER TO ARCHITECTURAL SITE PLAN ON SHEET A001 FOR BUILDING LOCATIONS.

KEYED NOTES

- D2. DEMOLISH EXISTING ELECTRICAL DISCONNECT SERVING MECHANICAL EQUIPMENT TO BE DEMOLISHED. RETAIN FEEDER CIRCUIT TO FEED NEW DISCONNECT.
- D7. DISCONNECT EXISTING BRANCH CIRCUIT FEEDING MECHANICAL EQUIPMENT TO BE DEMOLISHED. RETAIN CIRCUITRY TO FEED NEW DISCONNECT. RE: L2/E103
- R1. PROVIDE NEW DISCONNECT FOR NEW MECHANICAL EQUIPMENT. PROVIDE POWER FROM EXISTING SOURCE.
- R2. PROVIDE 120V POWER TO SMOKE DETECTOR IN SUPPLY DUCT FROM NEAREST 120V CIRCUIT. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATION.



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LA VILLITA - HVAC UPGRADE  
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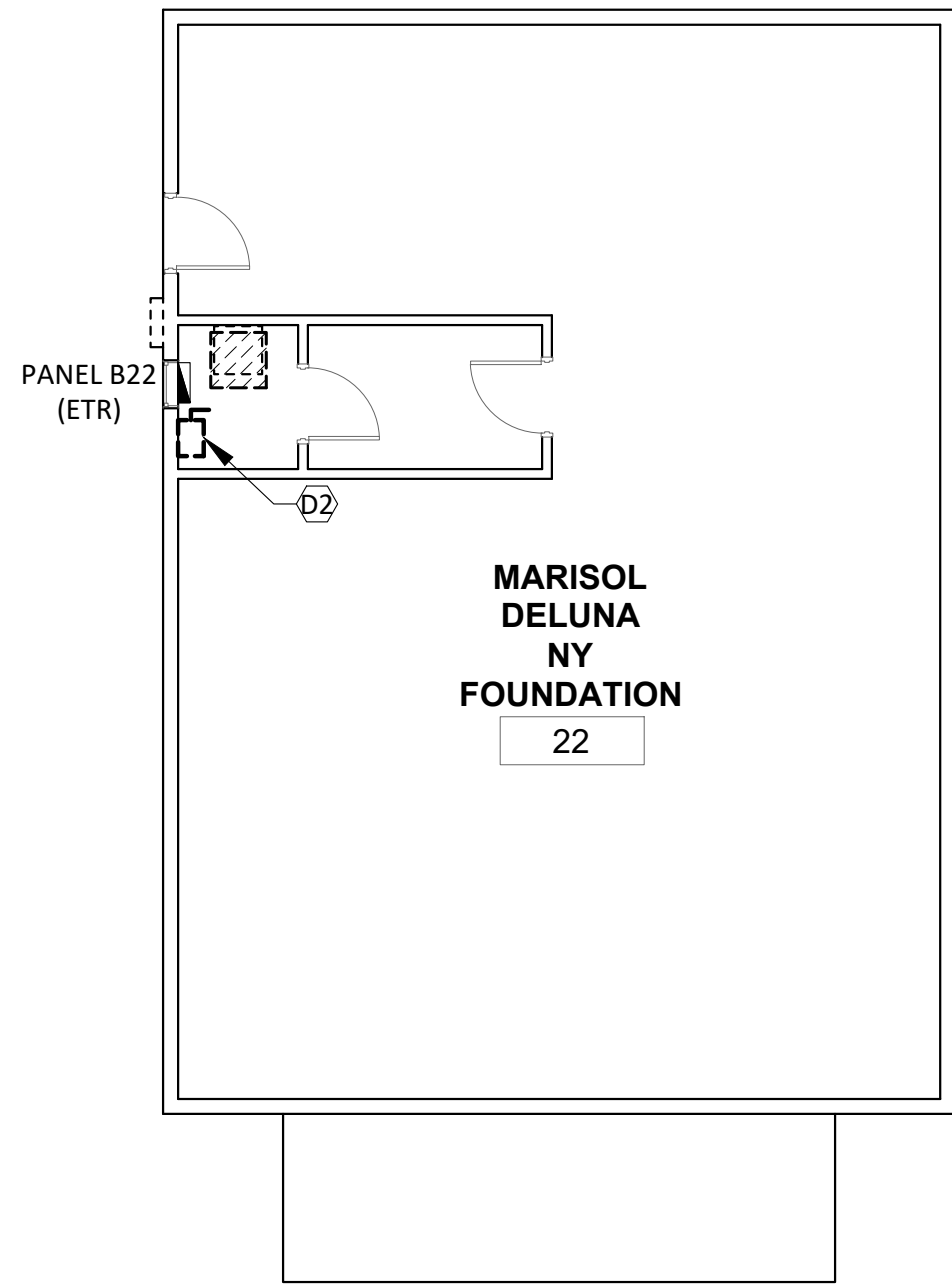
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Revisions

SHEET TITLE  
ELECTRICAL PLAN  
BUILDINGS  
17,20,21

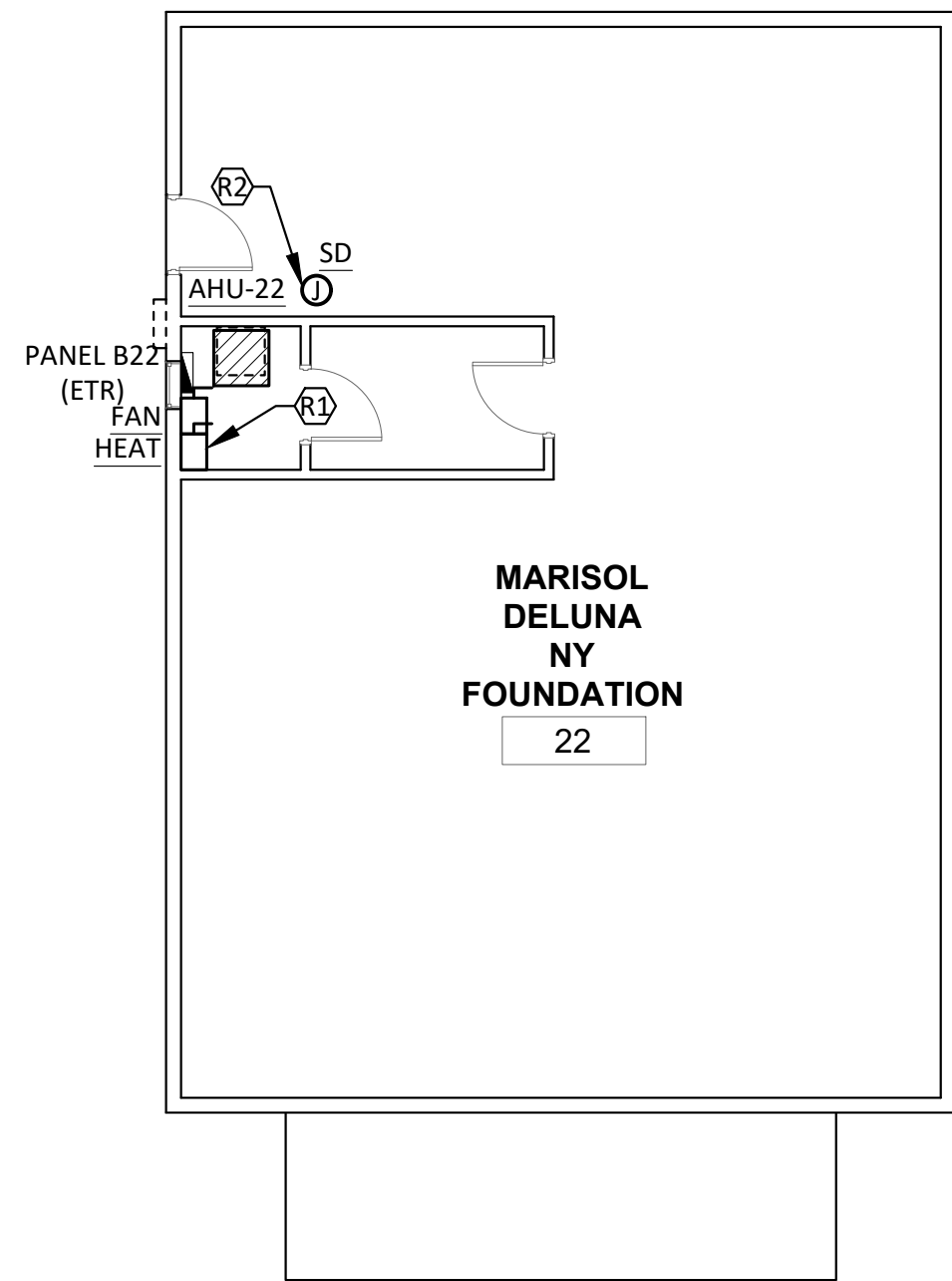
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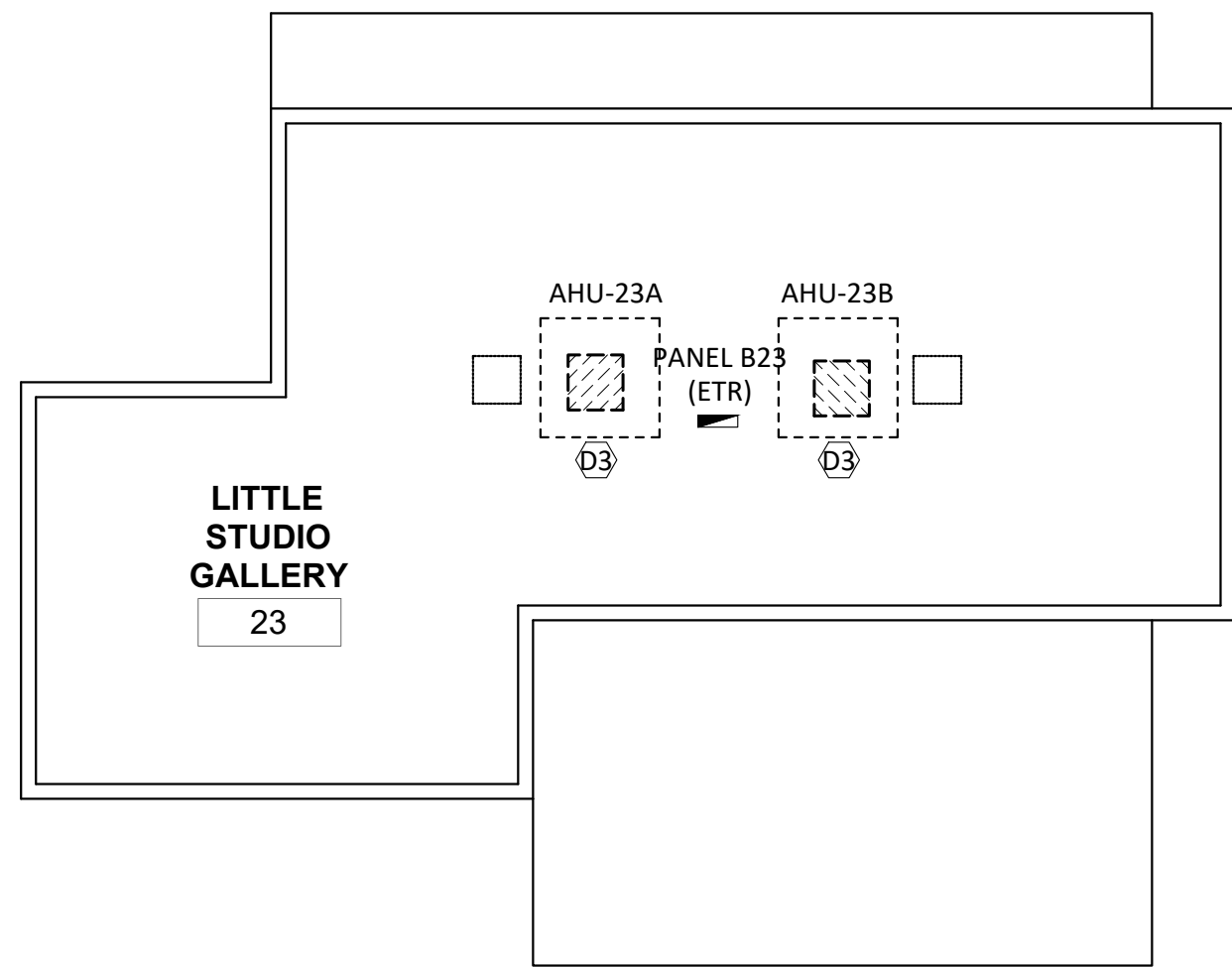




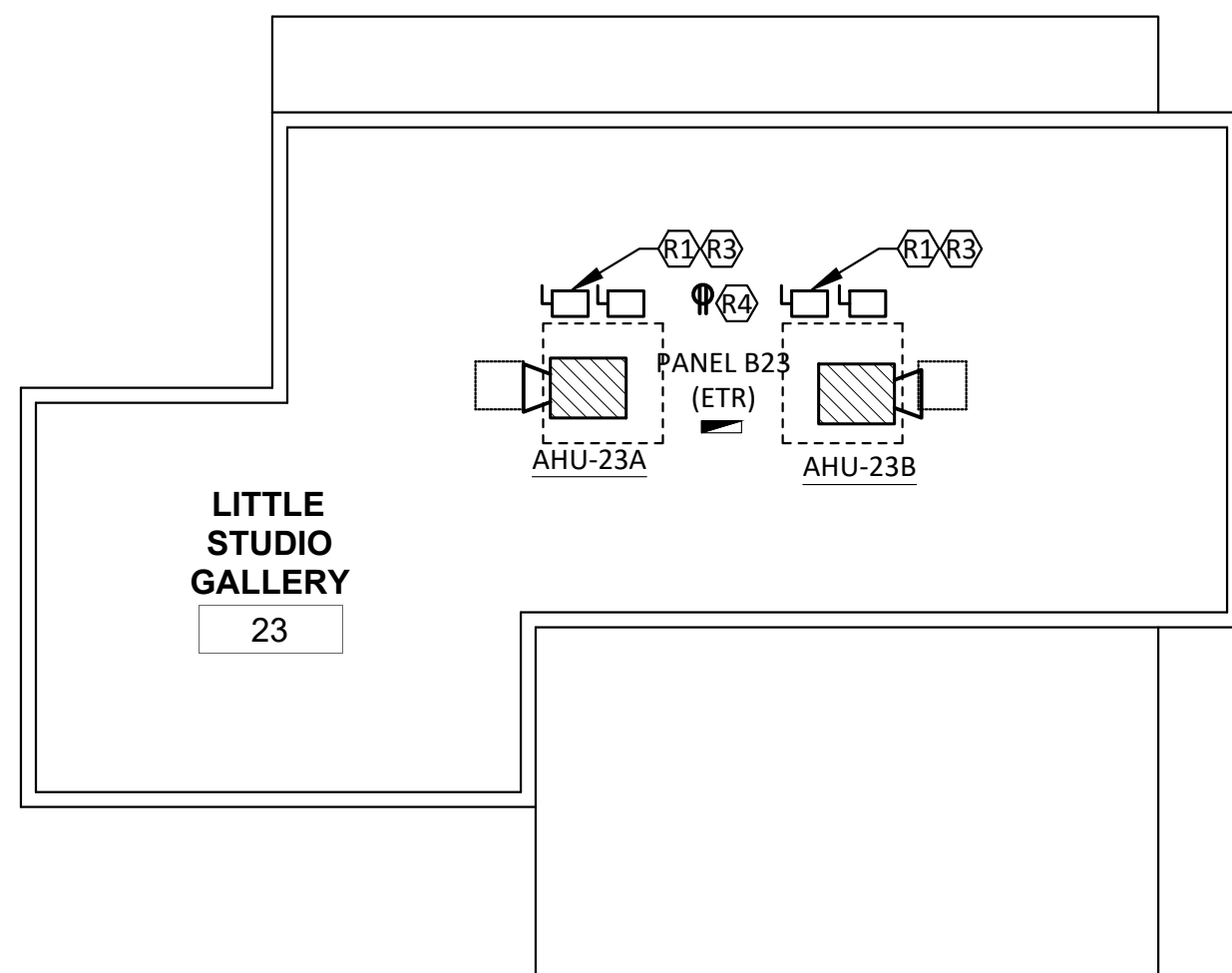
**1** BUILDING 22 - ELECTRICAL DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



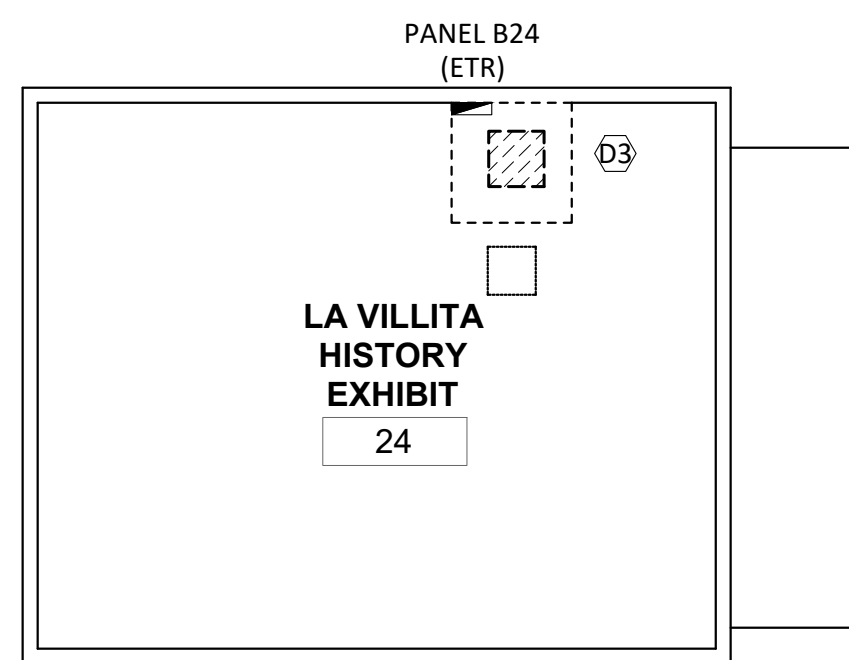
**2** BUILDING 22 - ELECTRICAL NEW WORK PLAN  
SCALE: 1/8"=1'-0"



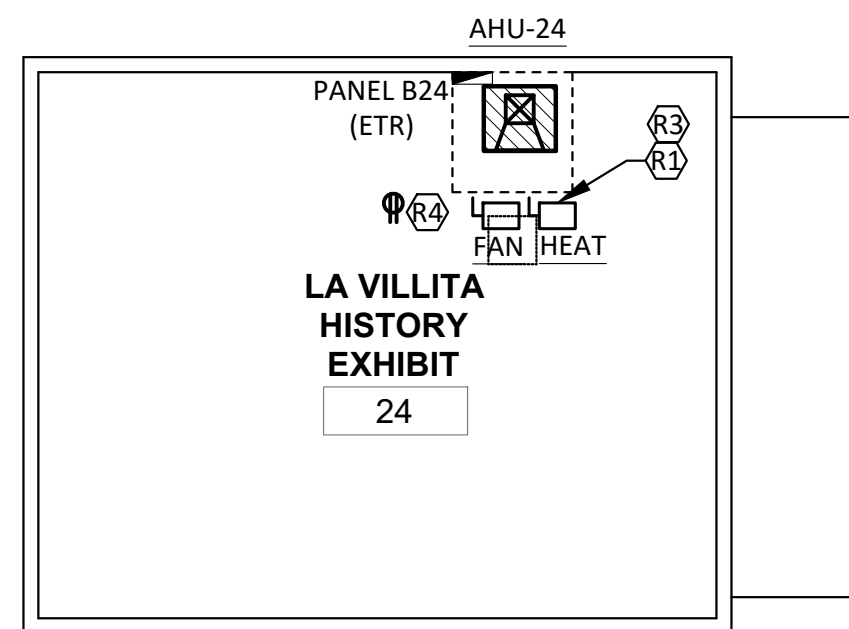
**3** BUILDING 23 - ELECTRICAL DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



**4** BUILDING 23 - ELECTRICAL NEW WORK PLAN  
SCALE: 1/8"=1'-0"



**5** BUILDING 24 - ELECTRICAL DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



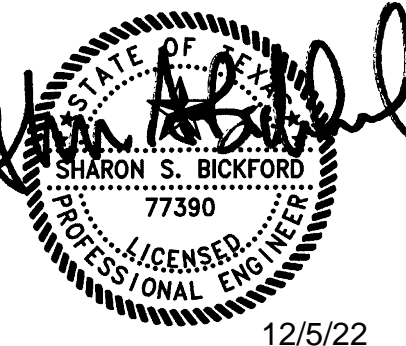
**6** BUILDING 24 - ELECTRICAL NEW WORK PLAN  
SCALE: 1/8"=1'-0"

## GENERAL SHEET NOTES

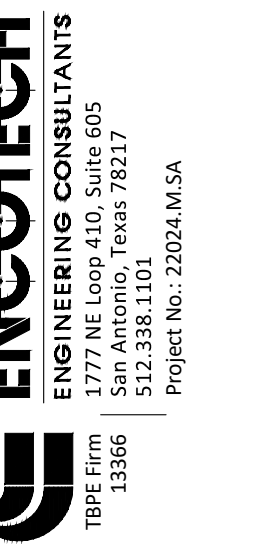
- ETR - EXISTING TO REMAIN
- COORDINATE REMOVAL AND DOWNTIME OF THE ELECTRICAL SYSTEM WITH BUILDING OWNER/LEASEHOLDER.
- SEPARATE ELECTRICAL DISCONNECTS AND CONNECTIONS REQUIRED FOR AHU. ONE FOR FAN, ONE FOR ELECTRIC HEATER.
- LOCATE DISCONNECTS WITHIN LINE OF SIGHT OF NEW EQUIPMENT.
- REFER TO ELECTRICAL MECHANICAL SCHEDULE ON SHEET E301 FOR MORE INFORMATION.
- REFER TO ARCHITECTURAL SITE PLAN ON SHEET A001 FOR BUILDING LOCATIONS.

## KEYED NOTES

- DEMOLISH EXISTING ELECTRICAL DISCONNECT SERVING MECHANICAL EQUIPMENT TO BE DEMOLISHED. RETAIN FEEDER CIRCUIT TO FEED NEW DISCONNECT.
- DETERMINE ELECTRICAL SOURCE FEEDING AHU. DISCONNECT FROM SOURCE AND RETAIN EXISTING CIRCUITRY TO CONNECT NEW MECHANICAL EQUIPMENT.
- PROVIDE NEW DISCONNECT FOR NEW MECHANICAL EQUIPMENT. PROVIDE POWER FROM EXISTING SOURCE.
- PROVIDE 120V POWER TO SMOKE DETECTOR IN SUPPLY DUCT FROM NEAREST 120V CIRCUIT. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATION.
- MOUNT DISCONNECT TO STRUCTURE ABOVE CEILING WITHIN SIGHT OF EQUIPMENT.
- PROVIDE SERVICE RECEPTACLE MOUNTED TO STRUCTURE ABOVE CEILING. CONNECT TO NEAREST 120V CIRCUIT.



12/5/22



# CITY OF SAN ANTONIO - PUBLIC WORKS LA VILLITA - HVAC UPGRADE

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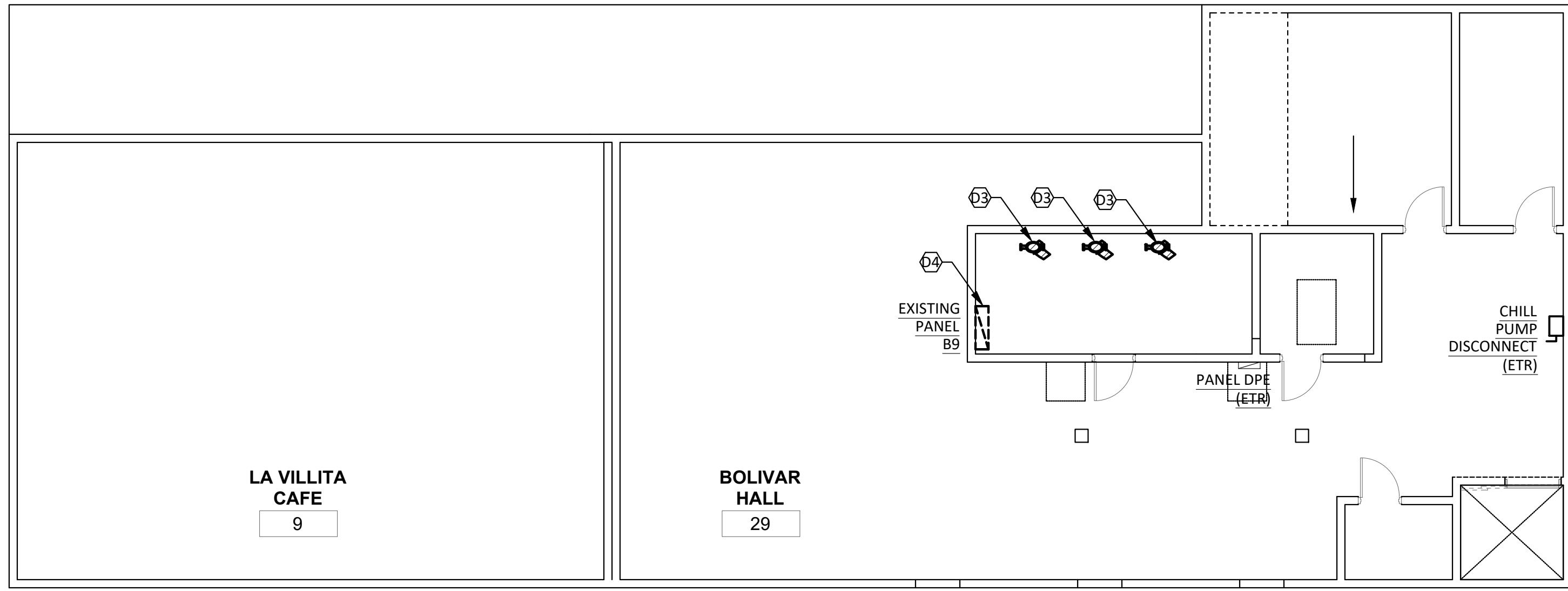
SHEET TITLE  
ELECTRICAL PLAN  
BUILDINGS  
22,23,24

SHEET NO.

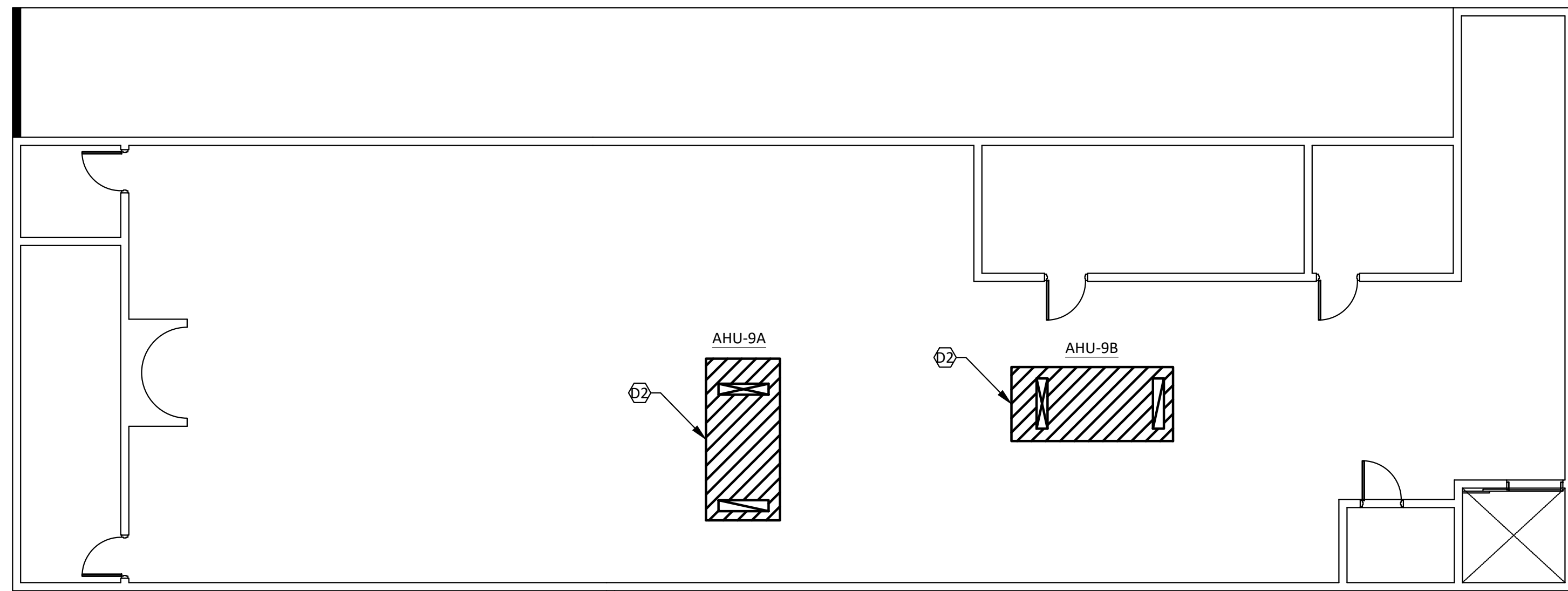
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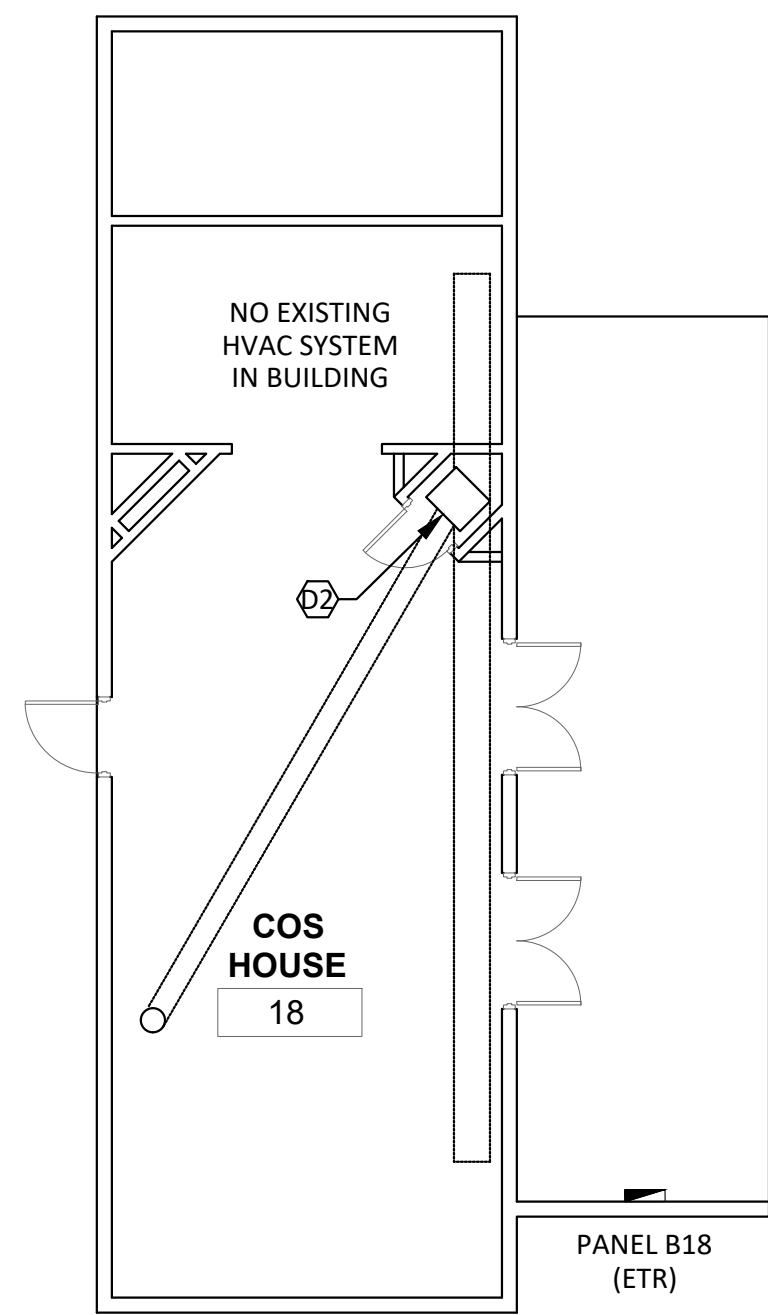
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Upgrade - M&E\20\_12\_12\_2022\02\_102\_12\_12\_2022.dwg



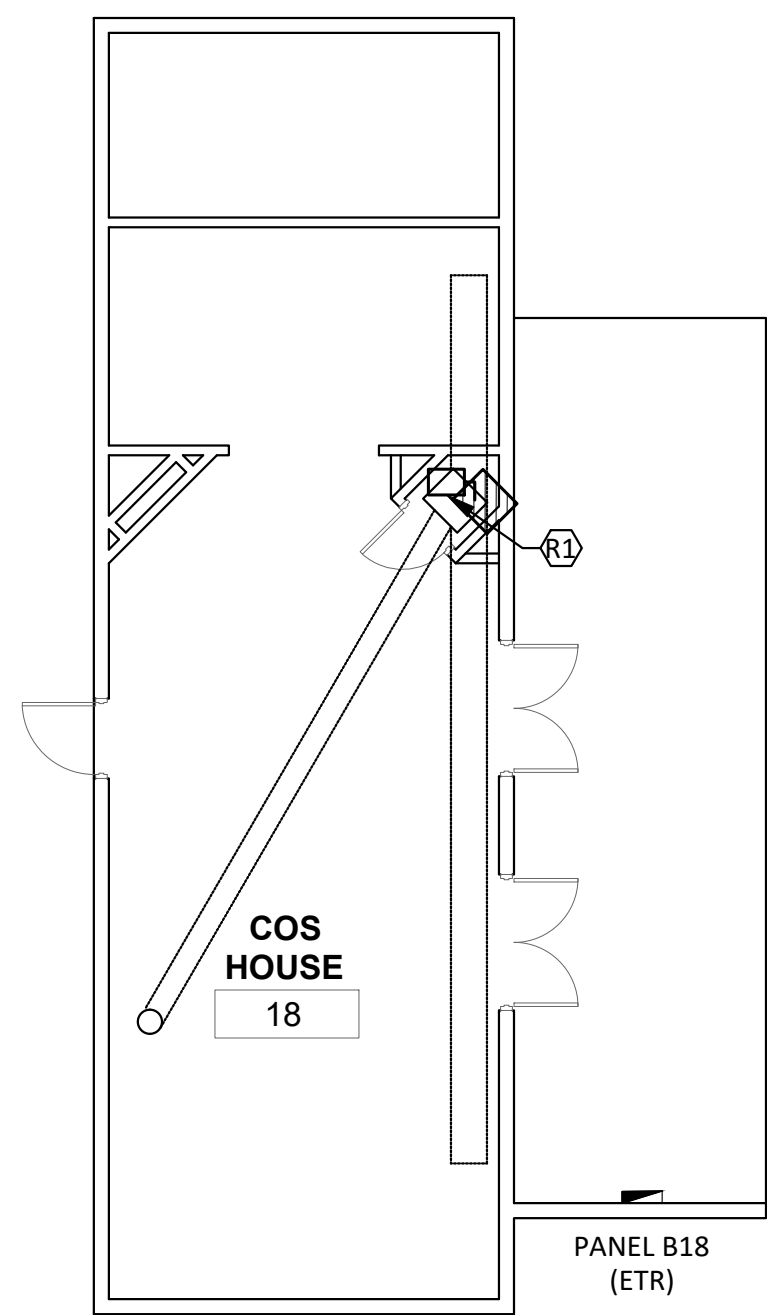
**1** BUILDING 9 - ELECTRICAL DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



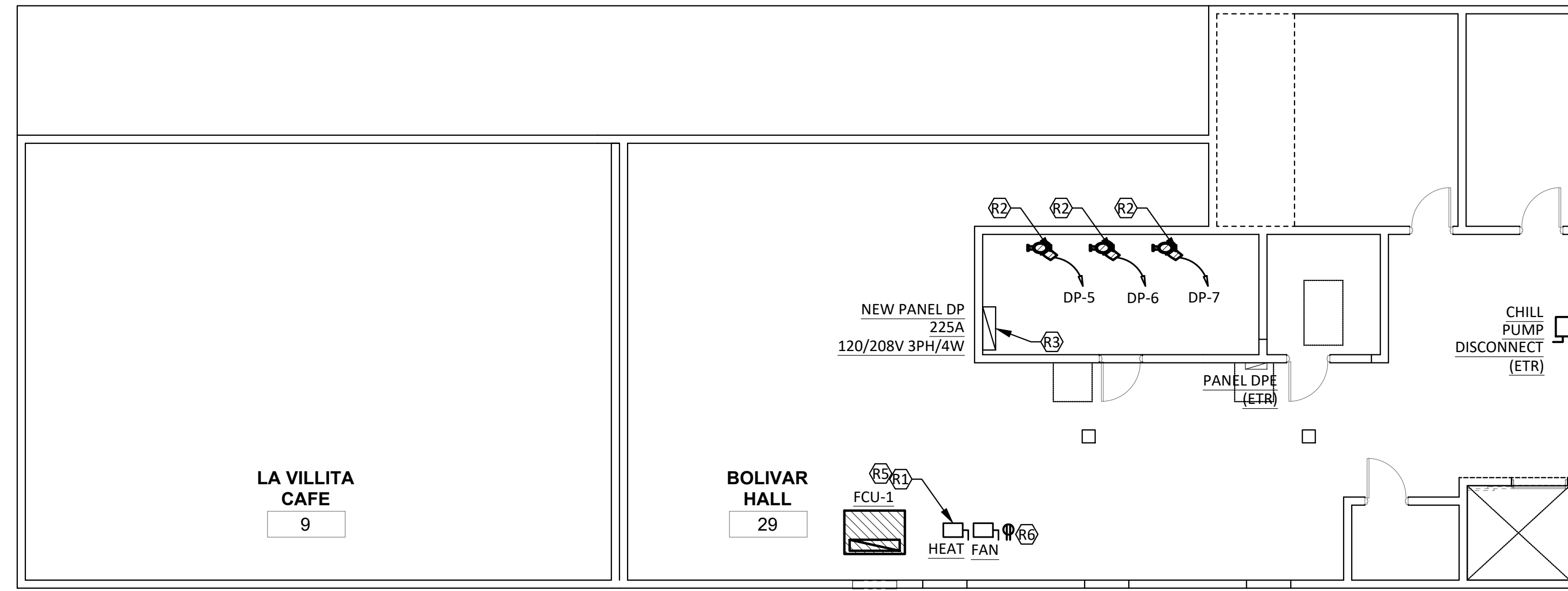
**3** BUILDING 09 - ATTIC - ELECTRICAL DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



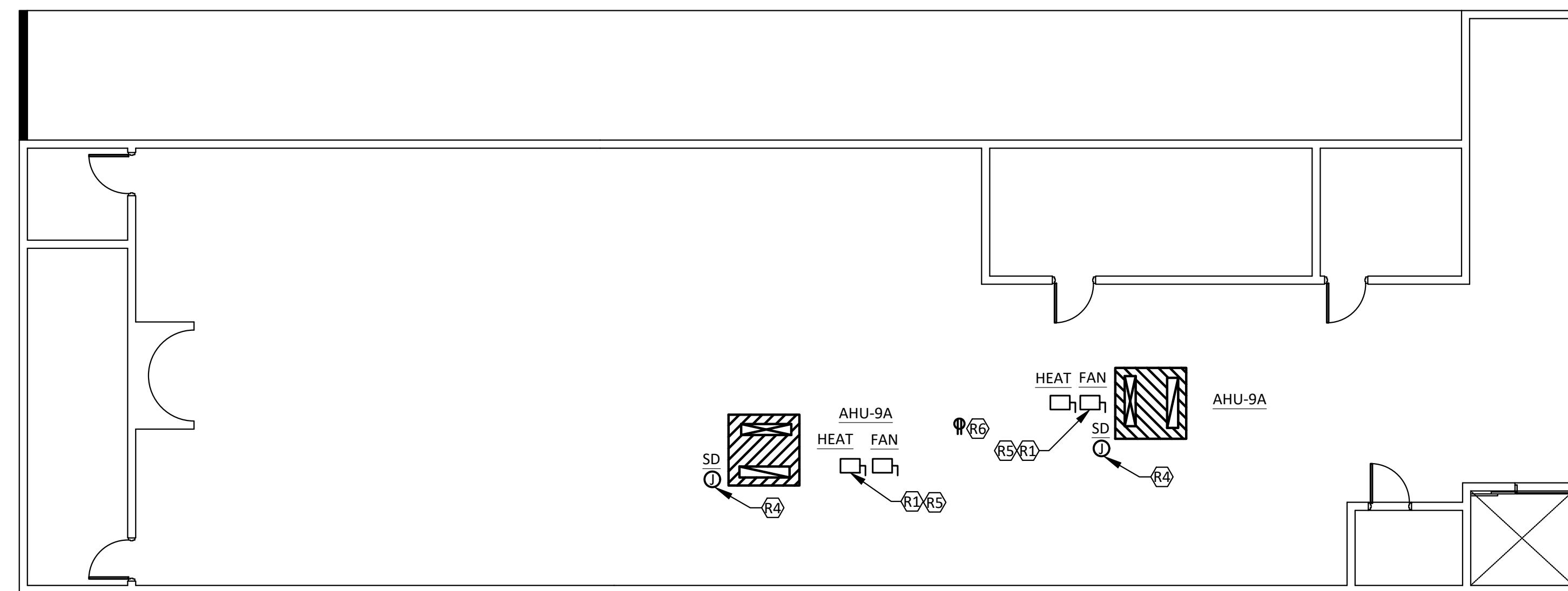
**5** BUILDING 18 - M&E DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



**6** BUILDING 18 - M&E NEW WORK PLAN  
SCALE: 1/8"=1'-0"



**2** BUILDING 9 - ELECTRICAL NEW WORK PLAN  
SCALE: 1/8"=1'-0"



**4** BUILDING 09 - ATTIC - ELECTRICAL NEW WORK PLAN  
SCALE: 1/8"=1'-0"



#### GENERAL SHEET NOTES

- ETR - EXISTING TO REMAIN
- COORDINATE REMOVAL AND DOWNTIME OF THE ELECTRICAL SYSTEM WITH BUILDING OWNER/LEASEHOLDER.
- SEPARATE ELECTRICAL DISCONNECTS AND CONNECTIONS REQUIRED FOR AHU. ONE FOR FAN. ONE FOR ELECTRIC HEATER.
- LOCATE DISCONNECTS WITHIN LINE OF SIGHT OF NEW EQUIPMENT.
- REFER TO ELECTRICAL MECHANICAL SCHEDULE ON SHEET E301 FOR MORE INFORMATION.
- REFER TO ARCHITECTURAL SITE PLAN ON SHEET A001 FOR BUILDING LOCATIONS.

#### KEYED NOTES

- DEMOLISH EXISTING ELECTRICAL DISCONNECT SERVING MECHANICAL EQUIPMENT TO BE DEMOLISHED. RETAIN FEEDER CIRCUIT TO FEED NEW DISCONNECT.
- DEMOLISH EXISTING ELECTRICAL CONNECTIONS BACK TO SOURCE FEEDING EXISTING PUMP MOTOR TO BE DEMOLISHED.
- DEMOLISH EXISTING DISTRIBUTION PANELBOARD. RETAIN EXISTING BRANCH CIRCUITS TO RECONNECT TO NEW DISTRIBUTION PANELBOARD.
- PROVIDE NEW DISCONNECT FOR NEW MECHANICAL EQUIPMENT. PROVIDE POWER FROM EXISTING SOURCE.
- CONNECT TO INTEGRAL VFD ON PUMP MOTOR.
- PROVIDE NEW 225A-208V/3P PANELBOARD. REFER TO PANEL SCHEDULE ON SHEET E301 FOR MORE INFORMATION.
- PROVIDE 120V POWER TO SMOKE DETECTOR IN SUPPLY DUCT FROM NEAREST 120V CIRCUIT. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATION.
- MOUNT DISCONNECT TO STRUCTURE ABOVE CEILING WITHIN SIGHT OF EQUIPMENT.
- PROVIDE SERVICE RECEPTACLE MOUNTED TO STRUCTURE ABOVE CEILING. CONNECT TO NEAREST 120V CIRCUIT.



ELECTRICAL MECHANICAL SCHEDULE													
MARK	SPACE NAME	ELECTRIC HEATING COIL				FAN DATA							
		CAPACITY (KW)	VOLTS	PHASE	FLA	MOCF	WIRE SIZE	D/S SIZE	VOLTS	PHASE	MCA	MOCF	D/S SIZE
AHU-1	BUILDING 1 (B LNK)	8.0	208	1	38	50	#8	60A/NF/N1	120	1	12.0	20	30A/NF/N1
AHU-2A	BUILDING 2A (ANGELITA)	6.0	208	1	29	40	#8	60A/NF/N1	120	1	12.0	20	30A/NF/N1
AHU-2B	BUILDING 2B (ANGELITA)	6.0	208	1	29	40	#8	60A/NF/N1	208	1	12.0	20	30A/NF/N1
AHU-3	BUILDING 3 (CARSTRANO SOAP COMPANY)	10.0	208	1	48	60	#6	60A/NF/N1	120	1	12.0	20	30A/NF/N1
AHU-4	BUILDING 4 (EQUINOX)	7.0	208	3	34	45	#8	60A/NF/N1	120	1	12.0	20	30A/NF/N1
AHU-5	BUILDING 5 (STUDIO ALEJANDRO SIFUENTES)	7.0	208	1	34	45	#8	60A/NF/N1	120	1	12.0	20	30A/NF/N1
AHU-6A	BUILDING 6 (CASA MANOS ALLEGRES)	6.0	208	1	29	40	#8	60A/NF/N1	120	1	12.0	20	30A/NF/N1
AHU-6B	BUILDING 6 (CASA MANOS ALLEGRES)	6.0	208	1	29	40	#8	60A/NF/N1	208	1	9.3	15	30A/NF/N1
AHU-7	BUILDING 7 (HURL MARKET)	9.0	208	1	43	55	#8	60A/NF/N1	208	1	9.3	15	30A/NF/N1
AHU-8	BUILDING 8 (VILLA TESOROS)	16.0	208	3	44	60	#8	60A/NF/N1	208	3	9.8	15	30A/NF/N1
AHU-9A	BUILDING 9 (LEVEL 2 OFFICE)	12.0	208	3	33	45	#8	60A/NF/N1	208	3	9.8	15	30A/NF/N1
AHU-9B	BUILDING 9 (LEVEL 2 BOLIVAR HALL)	22.0	208	3	61	80	#4	100A/NF/N1	208	3	9.8	15	30A/NF/N1
AHU-10	BUILDING 10 (BIRD & PEAR)	17.0	208	3	47	60	#6	60A/NF/N1	208	3	9.8	15	30A/NF/N1
AHU-11A	BUILDING 11 (COPPER GALLERY LEVEL 1)	10.0	208	1	48	60	#6	60A/NF/N1	120	1	12.0	20	30A/NF/N1
AHU-11B	BUILDING 11 (COPPER GALLERY LEVEL 2)	10.0	208	1	48	60	#6	60A/NF/N1	120	1	12.0	20	30A/NF/N1
AHU-12A	BUILDING 12 (STARVING ARTIST LEVEL 1)	14.0	208	3	39	50	#6	60A/NF/N1	208	1	9.3	15	30A/NF/N1
AHU-12B	BUILDING 12 (STARVING ARTIST LEVEL 2)	13.0	208	3	36	45	#6	60A/NF/N1	208	1	9.3	15	30A/NF/N1
AHU-13A	BUILDING 13 (LITTLE CHURCH OF LA VILLITA)	8.0	208	1	38	50	#6	60A/NF/N1	120	1	12.0	20	30A/NF/N1
AHU-13B	BUILDING 13 (LITTLE CHURCH OF LA VILLITA)	8.0	208	1	38	50	#6	60A/NF/N1	120	1	12.0	20	30A/NF/N1
AHU-14A	BUILDING 14 (RIVER ART GROUP LEVEL 1)	15.0	208	3	42	55	#6	60A/NF/N1	208	3	9.8	15	30A/NF/N1
AHU-14B	BUILDING 14 (RIVER ART GROUP LEVEL 2)	8.0	208	1	38	50	#6	60A/NF/N1	208	1	9.3	15	30A/NF/N1
AHU-16A	BUILDING 16 (GUADALAJARA LEVEL 1)	16.0	208	3	44	60	#6	60A/NF/N1	208	3	9.8	15	30A/NF/N1
AHU-16B	BUILDING 16 (GUADALAJARA LEVEL 2)	16.0	208	3	44	60	#6	60A/NF/N1	208	3	9.8	15	30A/NF/N1
AHU-16C	BUILDING 16B (GUADALAJARA LEVEL 2)	8.0	208	3	38	50	#8	60A/NF/N1	120	1	12.0	20	30A/NF/N1
AHU-16D	BUILDING 16B (PLAZA TACCO)	10.0	208	3	28	35	#10	60A/NF/N1	208	1	9.3	15	30A/NF/N1
AHU-17	BUILDING 17 (LOUX LUNA FINE ART)	5.0	208	1	24	30	#10	30A/NF/N1	208	1	9.3	15	30A/NF/N1
AHU-18	BUILDING 18 (COS HOUSE)	8.0	208	3	22	30	#10	30A/NF/N1	208	1	9.3	15	30A/NF/N1
AHU-21	BUILDING 20 (SA AFRICAN AMERICAN)	15.0	208	3	42	55	#6	60A/NF/N1	208	3	9.8	15	30A/NF/N1
AHU-21	BUILDING 21 (SCIENTIFICS USA)	13.0	208	3	36	45	#6	60A/NF/N1	208	1	9.3	15	30A/NF/N1
AHU-22	BUILDING 22 (MARISOL DELUNA NY FOUNDATION)	13.0	208	3	36	45	#6	60A/NF/N1	208	1	9.3	15	30A/NF/N1
AHU-23A	BUILDING 23 (LITTLE STUDIO GALLERY)	5.0	208	1	24	30	#10	30A/NF/N1	208	1	9.3	15	30A/NF/N1
AHU-23B	BUILDING 23 (LITTLE STUDIO GALLERY)	5.0	208	1	24	30	#10	30A/NF/N1	120	1	9.6	15	30A/NF/N1
AHU-24	BUILDING 24 (LA VILLITA HISTORY EXHIBIT)	6.0	120	1	29	40	#8	60A/NF/N1	120	1	12.0	20	30A/NF/N1
NOTES: 1. PROVIDE NEMA 1 ELECTRICAL DISCONNECT 2. PROVIDE DEDICATED BREAKER TO EACH DISCONNECT. CIRCUIT TO EXISTING PANEL IN BUILDING. TWO POINTS OF CONNECTION ONE FOR FAN, THE OTHER FOR ELECTRIC HEATER. SIZE DISCONNECT AND BREAKER AS SHOWN IN TABLE ABOVE. 3. PROVIDE 120V POWER FOR CONDENSATE PUMP. CONNECT TO NEAREST 120V CIRCUIT.													

PANELBOARD SCHEDULE														B4		LOCATION: BUILDING 4	
														C.B. RATING: 22 K.A.I.C.			
WIRE SIZE	TYP E	VOLTAGE	PHASE	WIRE	MOUNTING SURFACE				SIZE	LUG	TYPE	TYP E	WIRE SIZE				
		208/120V	1	3			125	MLO	NEMA 1								
		USE and/or AREA SERVED		C/B POLE	CIR	LOAD	CIR	C/B POLE	USE and/or AREA SERVED								
		CLOSEST WALL PLUG BLWR	20/1	1	180	2486	2	20/1	AHU FAN								
		TRACK LIGHTS - EAST	20/1	3	1250	1250	4	20/1	WALL PLUGS & PORCH LIGHTS								
		TRACK LIGHTS - WEST	20/1	5	1250	1250	6	20/1	ALARM								
		FRONT - EXT. LIGHTING	-	7	1250	1250	8	20/1	EXISTING LOAD								
		SPACE	-	9	1250	1250	10	20/1	EXISTING LOAD								
		SPACE	-	11	1250	1250	12	20/1	EXISTING LOAD								
		ELECTRIC HEATER	25/2	13	4800	14	-	SPACE									
				15	-	4800	16	-	SPACE								
		SPACE	-	17	-	-	18	-	SPACE								
		SPACE	-	19	-	-	20	-	SPACE								
TOTAL LOAD PER PHASE					10726		11050		11050 VA / 240 V = 46 A								
① GFCI    ② AFCI    ③ AFCI/GFCI    ④ SHUNT TRIP    ⑤ SWD    ⑥ HACR    ⑦ LOCKABLE    OPTIONS: NONE - REFER TO SPECIFICATIONS																	
FEEDER OCPD AND CONDUCTOR CALCULATION																	
LOAD DESCRIPTION (LOAD IN KVA)		CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD	LOAD MULTIPLIER	FEEDER LOAD	NOTES										
LIGHTING		3.75	1.00	3.75	1.25	4.69											
RECEPTACLES		4.68	50%>10	4.68	1.00	4.68											
LARGEST MOTOR		2.50	1.00	2.50	1.25	3.12											
HEATING		9.60	1.00	9.60	1.25	12.00											
TOTAL KVA		20.53	-	-	-	24.49											
TOTAL AMPS		99 A	-	-	-	118 A											

PANELBOARD SCHEDULE							BLDG #6		LOCATION: BUILDING 4 C.B. RATING: 22 K.A.I.C.			
WIRE SIZE	T Y P E	VOLTAGE	PHASE	WIRE	MOUNTING		SIZE	LUG	TYPE	T Y P E	WIRE SIZE	
		240/120V	1	3	SURFACE		100	MLO	NEMA 1			
		USE and/or AREA SERVED		C/B POLE	CIR	LOAD	CIR	C/B POLE	USE and/or AREA SERVED			
		EXISTING LOAD	20/1	1	180	750	2	20/1	EXISTING LOAD			
		EXISTING LOAD	20/1	3	180	1250	4	20/1	EXISTING LOAD			
		EXISTING LOAD	20/1	5	1250	2500	6	70/2	EXISTING LOAD			
		EXISTING LOAD	20/1	7	1250	2500	8	50/2	EXISTING LOAD			
		EXISTING LOAD	20/1	9	1250	2500	10	-	EXISTING LOAD			
		EXISTING LOAD	20/1	11	1250	2500	12	-	EXISTING LOAD			
		EXISTING LOAD	20/1	13	4800	4800	14	-	SPACE			
		SPACE	-	15	-	-	16	-	SPACE			
		SPACE	-	17	-	-	18	-	SPACE			
		SPACE	-	19	-	-	20	-	SPACE			
		SPACE	-	21	-	-	22	-	SPACE			
		SPACE	-	23	-	-	24	-	SPACE			
TOTAL LOAD PER PHASE					9980		11050		11050 VA / 120 V = 92 A			
① GFCI    ② AFCI    ③ AFCI/GFCI    ④ SHUNT TRIP    ⑤ SWD    ⑥ HACR    ⑦ LOCKABLE    OPTIONS: NONE - REFER TO SPECIFICATIONS												
FEEDER OCPD AND CONDUCTOR CALCULATION												
LOAD DESCRIPTION (LOAD IN KVA)		CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD	LOAD MULTIPLIER	FEEDER LOAD	NOTES					
LIGHTING		3.75	1.00	3.75	1.25	4.69						
RECEPTACLES		4.68	50%>10	4.68	1.00	4.68						
LARGEST MOTOR		1.75	1.00	1.75	1.25	2.19						
HEATING		9.60	1.00	9.60	1.25	12.00						
TOTAL KVA		19.78	-	-	-	23.56						
TOTAL AMPS		82 A	-	-	-	98 A						

PANELBOARD										FDP-BDP-MSP			LOCATION: UNKNOWN C.B. & BUS RATING: 22 K.A.I.C.	
CIR	TYP	VOLTAGE		PHASE	TYPE			MOUNTING			WIRE 4	BUS (A) 22	LUG MLO	
		208Y/120V		3	NEMA 1			FREE-STANDING						
		USE and/or AREA SERVED				C/B POLES	C/B FR. (A)	C/B TRIP (A)	LOAD (VA)					
						ga	ga	gc						
1		C.W.B METERING		1	20	20	750	0	750	0				
2		C.W.B METERING		1	20	20	0	750	0	750				
3		C.W.B METERING		1	20	20	-	-	750					
4		EXISTING LOAD		1	20	20	750	-	-					
5		PUMP #1		3	100	100	4140	4140	4140					
6		PUMP #2		3	100	100	4140	4140	4140					
7		PUMP #3		3	100	100	4140	4140	4140					
TOTAL LOAD PER PHASE (VA)							13920	13170	13170	13170 VA / 120 V = 110 A				
FEEDER OCPD AND CONDUCTOR CALCULATION														
LOAD DESCRIPTION (LOAD IN KVA)				CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD	LOAD MULTIPLIER	FEEDER LOAD	NOTES					
LIGHTING				0.00	1.00	0.00	1.25	0.00						
RECEPTACLES				3.00	50%>10	3.00	1.00	3.00						
LARGEST MOTOR (OTHER MOTOR(S))				12.42	1.00	11.21	1.25	14.01						
				24.84	1.00	24.84	1.00	24.84						
HEATING				0.00	1.00	0.00	1.25	0.00						
TOTAL KVA				40.26	-	-	-	41.85						
TOTAL AMPA				112 A	-	-	-	116 A						



PANELBOARD SCHEDULE										B24		LOCATION: BUILDING 24		C.B. RATING: 30 K.A.I.C.							
WIRE SIZE	TYP E	VOLTAGE		PHASE 1	WIRE	MOUNTING			SIZE	LUG	TYPE	TYP E	WIRE SIZE								
		208/120V				C/B POLE	C/R	SURFACE						C/R	C/B POLE	USE and/or AREA SERVED	MLO			NEMA 1	
		USE and/or AREA SERVED						LOAD													
		AHU (HEATER/BLOWER)	60/2	1	5000			2	20/1	EXISTING LOAD											
		SPACE	-	3	180			4	-	SPACE											
		SPACE	-	5				6	-	SPACE											
		SPACE	-	7				8	-	SPACE											
		SPACE	-	9				10	-	SPACE											
		SPACE	-	11				12	-	SPACE											
TOTAL LOAD PER PHASE						5180		5000		5180 VA / 240 V = 22 A											
① GFCI    ② AFCI    ③ AFCI/GFCI    ④ SHUNT TRIP    ⑤ SWD    ⑥ HACR    ⑦ LOCKABLE										OPTIONS: NONE - REFER TO SPECIFICATIONS											
FEEDER OCPD AND CONDUCTOR CALCULATION																					
LOAD DESCRIPTION (LOAD IN KVA)		CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD	LOAD MULTIPLIER	FEEDER LOAD	NOTES														
LIGHTING		5.00	1.00	5.00	1.25	6.25															
RECEPTACLES		5.00	50%>10	5.00	1.00	5.00															
LARGEST MOTOR		0.18	1.00	0.18	1.25	0.23															
HEATING		0.00	1.00	0.00	1.25	0.00															
TOTAL KVA		10.18	-	-	-	11.48															
TOTAL AMPS		49 A	-	-	-	55 A															

PANELBOARD SCHEDULE						EXISTING		B20		LOCATION: BUILDING 20		C.B. RATING: 10 K.A.I.C.							
WIRE SIZE	TYP	E	VOLTAGE		PHASE	WIRE	MOUNTING			SIZE	LUG	TYPE	TYP	E	WIRE SIZE				
			208Y/120V				3	4	SURFACE							225	NEMA 1		
			USE and/or AREA SERVED						C/B POLE									C/R	GA
			SPACE		-	1	3300			2	-	SPACE							
			SPACE		-	3	1500			4	-	SPACE							
			EXISTING LOAD		20/1	5				6	20/1	EXISTING LOAD							
			EXISTING LOAD		20/1	7	180			8	20/1	EXISTING LOAD							
			EXISTING LOAD		20/1	9	180			10	20/1	EXISTING LOAD							
			EXISTING LOAD		20/1	11				12	20/1	EXISTING LOAD							
			EXISTING LOAD		20/1	13	180			14	20/1	EXISTING LOAD							
			EXISTING LOAD		20/1	15	180			16	20/1	EXISTING LOAD							
			EXISTING LOAD		20/1	17				18									
			EXISTING LOAD		20/1	19	180			20	20/3	AHU FAN							
			EXISTING LOAD		20/1	21	1175			22									
			EXISTING LOAD		20/1	23				24									
			EXISTING LOAD		20/1	25	180			26	55/3	ELECTRIC HEATER							
			EXISTING LOAD		20/1	27	5000			28									
			SPACE		-	29				30	-	SPACE							
			SPACE		-	31				32	-	SPACE							
			SPACE		-	33				34	-	SPACE							
			SPACE		-	35				36	-	SPACE							
			SPACE		-	37				38	-	SPACE							
			SPACE		-	39				40	-	SPACE							
			SPACE		-	41				42	-	SPACE							
TOTAL LOAD PER PHASE							12056	12056	14376	14376 VA / 120 V = 120 A									
① GFCI ② AFCI ③ AFCI/GFCI ④ SHUNT TRIP ⑤ SWD ⑥ HACR ⑦ LOCKABLE							OPTIONS: NONE - REFER TO SPECIFICATIONS												
FEEDER OCPD AND CONDUCTOR CALCULATION																			
LOAD DESCRIPTION (LOAD IN KVA)		CONNECTED LOAD		DEMAND FACTOR		DEMAND LOAD		LOAD MULTIPLIER		FEEDER LOAD		NOTES							
LIGHTING		2.22		1.00		2.22		1.25		2.78									
RECEPTACLES		13.54		50%-10		11.77		1.00		11.77									
LARGEST MOTOR		3.53		1.00		3.53		1.25		4.41									
OTHER MOTOR(S)		1.18		1.00		1.18		1.00		1.18									
CONTINUOUS LOADS		0.00		1.00		0.00		1.25		0.00									
NONCONTINUOUS LOADS		0.36		1.00		0.36		1.00		0.36									
TOTAL KVA		39.12		-		-		-		43.37									
TOTAL AMPS		109 A		-		-		-		120 A									

PANELBOARD SCHEDULE						EXISTING			B21		LOCATION: BUILDING 21 C.B. RATING: 30 K.A.I.C.							
WIRE SIZE	T Y P E	VOLTAGE		PHASE	WIRE	C/B POLE	C/R	MOUNTING SURFACE			BUS (A)	LUG	TYPE	T Y P E	WIRE SIZE			
		208Y/120V						LOAD								NEMA 1		
		USE and/or AREA SERVED						GA	GB	GC						USE and/or AREA SERVED		
		EXISTING LOAD			20/1	1					2	20/1	EXISTING LOAD					
		EXISTING LOAD			20/1	3		180			4	20/1	EXISTING LOAD					
		EXISTING LOAD			20/1	5				180	6	20/1	EXISTING LOAD					
		EXISTING LOAD			20/1	7		180			8	20/1	EXISTING LOAD					
		EXISTING LOAD			20/1	9				180	10	20/1	EXISTING LOAD					
		EXISTING LOAD			20/1	11				180	12	20/1	EXISTING LOAD					
		EXISTING LOAD			20/1	13		180			14	20/1	EXISTING LOAD					
		EXISTING LOAD			20/1	15				180	16	20/1	EXISTING LOAD					
		SPACE			-	17					18	-	SPACE					
TOTAL LOAD PER PHASE						1080	1080	4540	4540 VA / 120 V = 38 A									
① 4FCI		② 4FCI		③ 4FCI/4FCI		④ SHUNT TRIP		⑤ 5WD		⑥ HACR		⑦ LOCKABLE		OPTIONS: NONE - REFER TO SPECIFICATIONS				
FEEDER OCPD AND CONDUCTOR CALCULATION																		
LOAD DESCRIPTION (LOAD IN WVA)						CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD	LOAD MULTIPLIER	FEEDER LOAD	NOTES							
LIGHTING						0.72	1.00	0.72	1.25	0.90								
RECEPTACLES						5.98	50%/10	5.98	1.00	5.98								
LARGEST MOTOR						0.00	1.00	0.00	1.25	0.00								
OTHER MOTOR(S)						0.00	1.00	0.00	1.25	0.00								
CONTINUOUS LOADS						0.00	1.00	0.00	1.25	0.00								
NONCONTINUOUS LOADS						0.00	1.00	0.00	1.00	0.00								
TOTAL KVA						6.70	-	-	-	6.88								
TOTAL AMPS						19 A	-	-	-	19 A								