

# EASTERN ACROBATICS

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NOT INCLUDED HERE SEE  
SITE+CIVIL 100% CD  
ADDENDUM 1, DATED FEB.  
14, 2023, ATTACHED  
SEPARATELY.

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## RECONCILED CD SET\* AS OF 4/3/23

\*THIS SET INCLUDES THE MOST RECENT REVISIONS TO INDIVIDUAL ARCHITECTURAL, STRUCTURAL, AND/OR MEP (INCL. FP + FA) SHEETS AS OF 4/3/23.  
\*THIS SET DOES NOT INCLUDE LANDSCAPE OR CIVIL DRAWINGS. SEE SITE+CIVIL 100% CD ADDENDUM 1, DATED FEB. 14, 2023, ATTACHED SEPARATELY.  
\*THIS SET DOES NOT INCLUDE REVISIONS AND/OR CLARIFICATIONS ISSUED AS ASI, ASK, SSK, OR IN RESPONSE TO RFI.

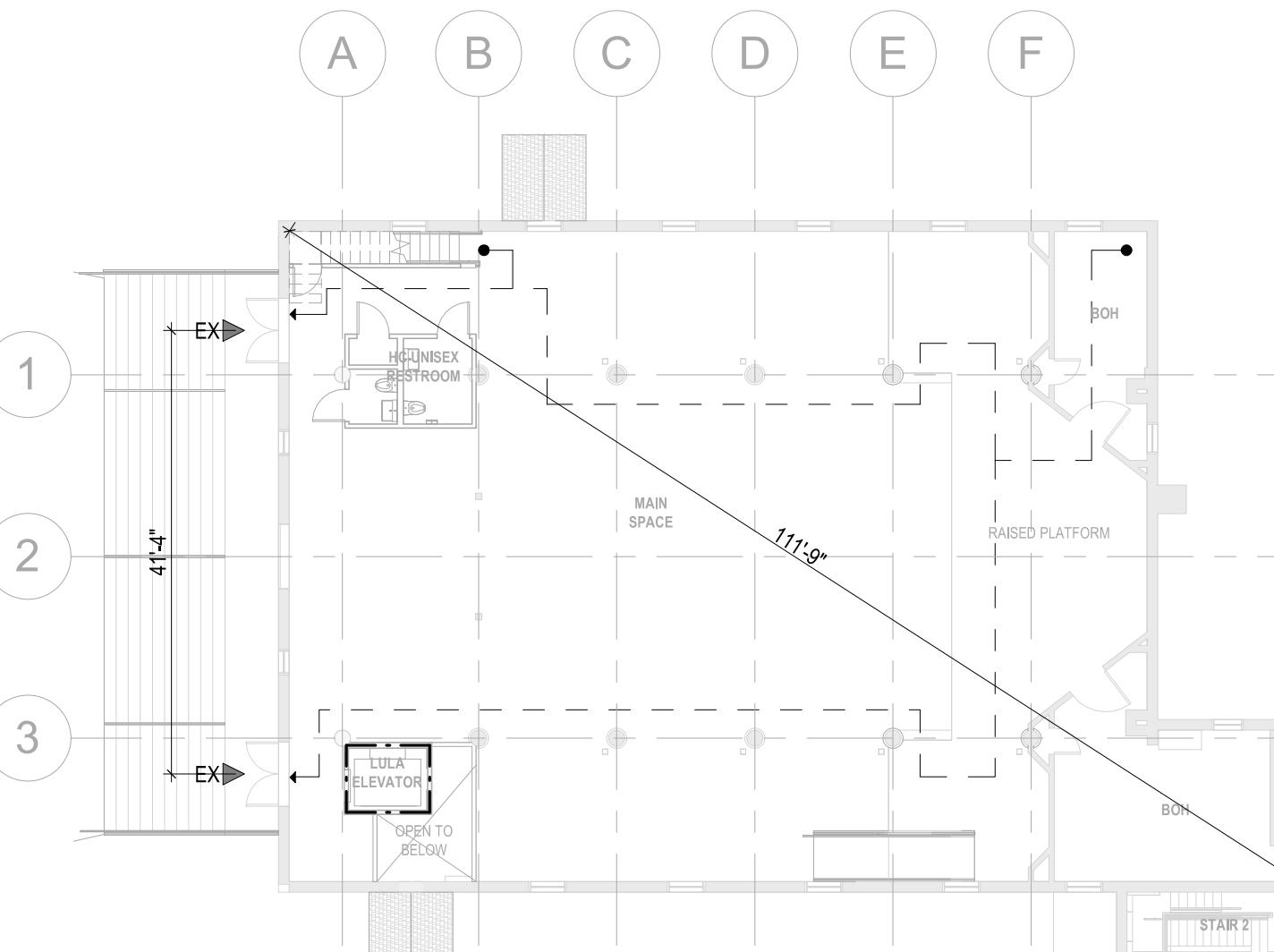
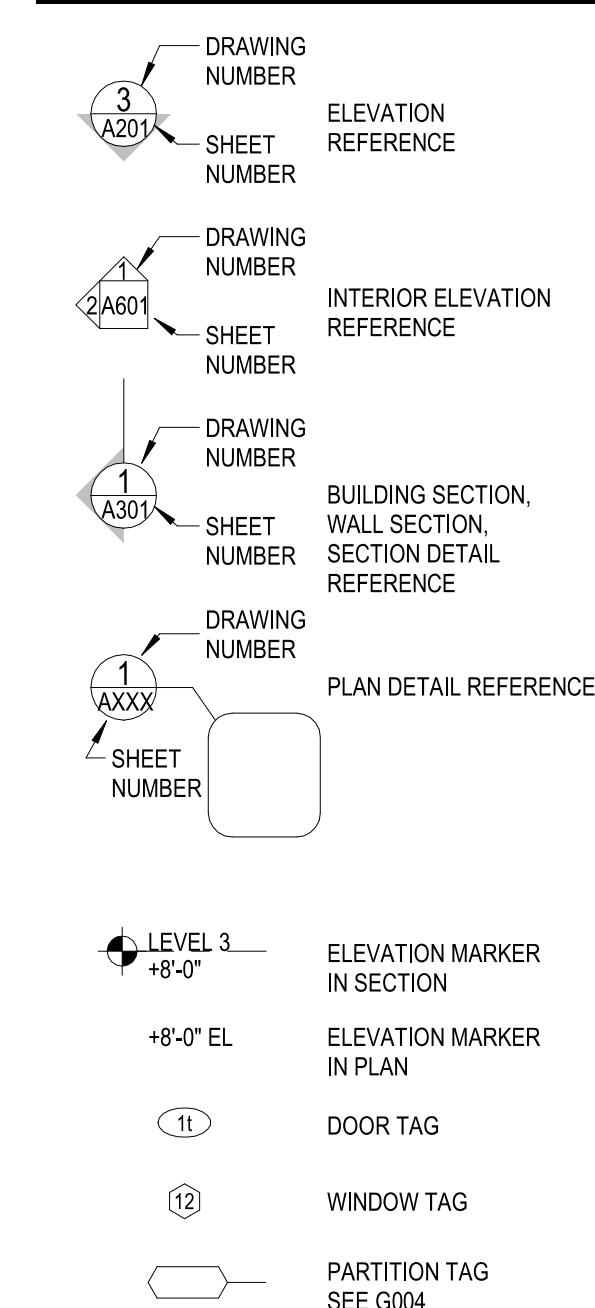
## GENERAL DESCRIPTION

THE PROPOSED PROJECT AT 28 ELLIOT STREET IS THE RENOVATION AND CHANGE OF USE OF A FORMER CHURCH TO A SCHOOL FOR CIRCUS ARTS AND ACROBATICS. THE PROJECT HAS NO EXTERIOR BUILDING ADDITIONS, BUT DOES INCLUDE SOME REPAIR AND UPGRADES TO ONE EXTERIOR VESTIBULE AS WELL AS EXTENSIVE LANDSCAPE WORK, INCLUDING A NEW PARKING LOT, NEW EXTERIOR LIGHTING, AND MANY NEW PLANTINGS AND TREES.

THE PRIMARY WORK OF THE INTERIOR INCLUDES VARIOUS ACCESSIBILITY UPDATES, INCLUDING A NEW ACCESSIBLE ENTRANCE, LIFT, AND ACCESSIBLE BATHROOMS. WORK ON THE MAIN FLOOR AND MEZZANINE IS PRIMARILY LIMITED TO ACCESSIBILITY, LIGHTING, AND COSMETIC UPDATES.

MEP UPDATES INCLUDE A NEW FIRE PROTECTION SYSTEM (FULLY SPRINKLERED THROUGHOUT), AND UPGRADED FIRE ALARM, EGGS, AND EMERGENCY LIGHTING.

## SYMBOLS LEGEND



3 BALCONY LEVEL LIFE SAFETY  
LIFE SAFETY PLANS 1/16" = 1'-0"

2 SANCTUARY LEVEL LIFE SAFETY  
LIFE SAFETY PLANS 1/16" = 1'-0"

1 BASEMENT LEVEL LIFE SAFETY  
LIFE SAFETY PLANS 1/16" = 1'-0"

## GENERAL NOTES

1. ANY REFERENCE TO "CODE" SHALL REFER TO MASSACHUSETTS STATE BUILDING CODE, 780 CMR, 9TH EDITION, UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS ARE TO FACE OF STUD OR FACE OF MASONRY ON NEW WALLS AND TO CENTERLINE OF OPENING, UNLESS OTHERWISE NOTED. DIMENSIONS ON EXISTING WALLS ARE TO FACE OF WALL.
3. DRAWINGS SHALL NOT BE SCALED; USE WRITTEN DIMENSIONS ONLY.
4. GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN FIELD.
5. ALL UNDERGROUND UTILITIES SHALL BE CONFIRMED WITH DIG SAFE AND/OR LOCAL JURISDICTION.
6. BLOCKING SHALL BE PROVIDED AT ALL LOCATIONS AS REQUIRED TO COMPLETE THE WORK.
7. FIRE RESISTANT WALLS ARE NOT TO BE INTERRUPTED BY UNPROTECTED OPENINGS, RECESSED EQUIPMENT, OR CASEWORK. RECESSES AND VOIDS SHALL BE BUILT IN SUCH A MANNER AS TO ASSURE CONTINUITY OF RATED CONSTRUCTION.
8. ANY VISIBLE ITEM, OF ANY TRADE, WHICH IS NOT SPECIFICALLY LOCATED THE DRAWINGS, SHALL BE INSTALLED AS LOCATED AND COORDINATED WITH THE ARCHITECT IN THE FIELD.
9. GENERAL CONTRACTOR SHALL SECURE ALL PERMITS, APPROVALS, VARIANCES (IF NECESSARY), AND INSPECTIONS REQUIRED FOR CONSTRUCTION.
10. "ALIGN" SHALL MEAN TO ACCURATELY LOCATE FINISH FACES IN THE SAME PLANE.
11. "TYPICAL" OR "TYP" SHALL MEAN THAT THE CONDITION IS REPRESENTATIVE FOR SIMILAR CONDITIONS THROUGHOUT, UNLESS NOTED OTHERWISE.
12. THESE DRAWINGS REQUIRE THE SELECTIVE REMOVAL AND SUBSEQUENT DISPOSAL OF VARIOUS BUILDING ELEMENTS AND MATERIALS. PROTECTIVE MEASURES MUST BE PROVIDED AS REQUIRED BY OSHA AND OTHER LOCAL CODES, AS WELL AS TO PROTECT EXISTING TENANT AREAS BEYOND THE SCOPE OF THIS FIT-OUT.
13. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE BROUGHT TO THE ARCHITECT'S IMMEDIATE ATTENTION, ANY WORK PURSUED, INSTALLED, OR CHANGED BY THE CONTRACTOR WITHOUT PRIOR DISCUSSION WITH THE ARCHITECT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR, INCLUDING ANY FIXES OR REWORK REQUIRED.

## CODE SUMMARY

<b>BUILDING AREA</b>	BASEMENT (STORY)	5,044 (FLOOR ABOVE >6' ABOVE GRADE PLANE)
	FLOOR 1, SANCTUARY LEVEL (STORY)	5,151
	MEZZANINE, BALCONY (NOT A STORY)	1,027 (<1/3 OF FLOOR 1)
	<b>TOTAL</b>	10,195 (EXCLUDES MEZZANINE)
<b>USE, OCCUPANCY, &amp; CONSTRUCTION CLASSIFICATIONS</b>		
	<b>EXISTING</b>	<b>PROPOSED</b>
OCCUPANCY CLASSIFICATION	A-3 ASSEMBLY	ACROBATICS TRAINING FACILITY
USE	PLACE OF WORSHIP	VB
CONSTRUCTION TYPE	VB	VB
<b>FIRE PROTECTION</b>		
	SPRINKLERS ARE REQUIRED AND WILL BE PROVIDED THROUGHOUT IN ACCORDANCE WITH NFPA 13	
<b>FIRE RATED CONSTRUCTION</b>	REQD (<4 STORIES)	PROVIDED
SHAF	1-HOUR	1-HOUR
ENCLUSES	710.4	
PRIMARY STRUCTURE	0	0
BEARING WALLS (INT. & EXT.)	0	0
NONBEARING WALLS (INT. & EXT.)	0	0
FLOOR CONSTRUCTION	0	0
ROOF CONSTRUCTION	0	0
<b>HEIGHT &amp; AREA LIMITATIONS</b>		
	ALLOWED	PROVIDED (EXISTING)
HEIGHT (FEET)	60	49' (EXCL. STEEPLE)
HEIGHT (STORIES)	2	2
AREA	24,000	10,195
<b>OCCUPANCY LIMITATIONS</b>		
	TOTAL OCCUPANCY AS LIMITED BY THE PROVIDED PLUMBING FIXTURE COUNT : 100 OCCUPANTS	
	EXISTING	PROVIDED (EXISTING)
		RATIO
WOMEN'S FIXTURES*	1	1
MEIN'S FIXTURES*	1	1
<b>MEZZANINE MAX. OCCUPANCY: &lt;50 OCCUPANTS</b>		
	*PROVIDED BATHROOMS ARE GENDER NEUTRAL; 248 CMR 10.10 (18) (r) IS SATISFIED	
<b>MEANS OF EGRESS</b>	REQD	PROVIDED
# OF EXITS PER STORY*	2	2
MAX. EXIT ACCESS TRAVEL DISTANCE	250'	<250'
MAX. COMMON PATH OF EGRESS TRAVEL	75'	<75'
MIN. DISTANCE BETWEEN EXITS	1/3 DIAGONAL	>1/3 DIAGONAL
*THE BALCONY LEVEL IS PERMITTED TO HAVE A SINGLE EXIT		
<b>CALCULATED OCCUPANT LOAD PER 1004.3</b>		
	BASEMENT	25
	FLOOR 1	76
	MEZZANINE	10
<b>EGRESS WIDTHS (PER SECTIONS 1005, 1011.2 &amp; 1020.2)</b>		
	LEVEL 3	32"
	LEVEL 2	36" (<50 OCCUPANTS)
	LEVEL 1	44"
	MEZZANINE	36" (<50 OCCUPANTS)
	STAIRWAY DIMENSIONS	
	HEADROOM	6'-8"
	RISER HEIGHT	7" MAX
	TREAD DEPTH	11" MIN
<b>ACCESSIBILITY</b>		
JURISDICTION/APPLICATION		
PROJECTS COSTS WILL EXCEED 30% OF THE REPLACEMENT COST VALUE, THEREFORE THE ENTIRE BUILDING IS READY TO COMPLY W/ 521 CMR, EXCEPT THE BASEMENT AND BALCONY LEVELS, WHICH WILL NOT BE OPENED TO THE PUBLIC (EMPLOYEES ONLY)		
ELEVATOR		
LIMITED USE-UNLIMITED APPLICATION (LULA) IS ALLOWED PER 521 CMR 28.1, EXCEPTION a, AND 521 CMR 28.12.1 OPTION d.		
RAMPS		
REQUIRED AT INTERIOR RAISED PLATFORM ON FLOOR 1		
MAX. SLOPE: 1:12		
CLEAR WIDTH BETWEEN HANDRAILS: 48"		



1 BASEMENT LEVEL LIFE SAFETY  
LIFE SAFETY PLANS 1/16" = 1'-0"

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28 Eliot Street  
Natick, MA 01760

OWNER

## THE ENTRUST INC.

FBO AUSTIN S. LIN

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NATICK, MA 01760

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MEP

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MEP



STAMP

DD/PRICING 4 FEB 2022  
DD/VE REPRICE 5 APR 2022  
PERMIT SET 21 JULY 2022

PHASE

2021-003 PROJECT NUMBER

## SCHEDULES & TYP. ASSEMBLIES

# G001

ROOM FINISH SCHEDULE							
LEVEL	NUMBER	ROOM	WALL FINISH	CEILING FINISH	WALL BASE	FLOOR FINISH	COMMENTS
BASEMENT LEVEL	001	FP ROOM	PTD GWB/EXPOSED BRICK	UNFINISHED	VINYL	EXISTING	
BASEMENT LEVEL	002	EMR	PTD GWB	PTD GWB	VINYL	EXISTING	
GROUND PLANE	003	ACCESSIBLE ENTRANCE	PTD GWB/EXPOSED BRICK	PTD GWB	VINYL	MARMOLEUM SHEET	FLOORING IN TWO COLORS TBD FROM MFR. STANDARD COLOR: COORDINATE W/ ARCHITECT
SANCTUARY LEVEL	100	ENTRANCE HALL 1	PTD EXISTING PLASTER/PTD GWB	PTD GWB	EXISTING/VINYL	EXISTING	
SANCTUARY LEVEL	101	TRAINING ROOM	PTD GWB	PTD GWB	VINYL	EXISTING	
SANCTUARY LEVEL	102	ENTRANCE HALL 2	PTD EXISTING PLASTER/PTD GWB	PTD GWB	VINYL	EXISTING	
SANCTUARY LEVEL	103	UNSEX RESTROOM	PTD GWB	PTD GWB	VINYL	MARMOLEUM SHEET	FLOORING IN TWO COLORS TBD FROM MFR. STANDARD COLOR: COORDINATE W/ ARCHITECT
SANCTUARY LEVEL	104	HC UNSEX RESTROOM	PTD GWB	PTD GWB	VINYL	MARMOLEUM SHEET	FLOORING IN TWO COLORS TBD FROM MFR. STANDARD COLOR: COORDINATE W/ ARCHITECT
SANCTUARY LEVEL	105	JAN. CLOSET	PTD GWB	PTD GWB	VINYL	MARMOLEUM SHEET	FLOORING IN TWO COLORS TBD FROM MFR. STANDARD COLOR: COORDINATE W/ ARCHITECT
SANCTUARY LEVEL	106	STORAGE	PTD GWB	PTD GWB	VINYL	EXISTING	
SANCTUARY LEVEL	107	MAIN SPACE	PTD EXISTING PLASTER	EXISTING	EXISTING	EXISTING	
SANCTUARY LEVEL	108	BOH	EXISTING	EXISTING	EXISTING	EXISTING	
SANCTUARY LEVEL	109	BOH	EXISTING	EXISTING	EXISTING	EXISTING	
SANCTUARY LEVEL	ST-1	STAIR 1	PTD EXISTING PLASTER/PTD GWB	PTD EXISTING PLASTER	PTD. WD. STRINGERS	WHITE OAK TREADS & LANDING	PTD. WD. RISERS
BASEMENT LEVEL	ST-2	STAIR-2	EXISTING	EXISTING	EXISTING	EXISTING	
BASEMENT LEVEL	ST-2	STAIR 2	EXISTING	EXISTING	EXISTING	EXISTING	

NOTES:  
1. SEE TYPICAL ASSEMBLIES SHEET FOR WALL, FLOOR, AND CEILING ASSEMBLY DETAILS  
2. PAINT AT ALL NEW WALLS, CEILINGS, TRIM, ETC. AND AT ANY EXISTING WALL AND/OR CEILING THAT IS PARTIALLY DEMO'D, ALTERED, OR DISTURBED IN ORDER TO EXECUTE THE NEW WORK. THIS INCLUDES THE EXTERIOR WALLS UNDER THE MEZZANINE.  
3. PAINT COLORS TBD, COORDINATE WITH ARCHITECT.  
4. 4" VINYL BSE THROUGHOUT, COLOR TBD, COORDINATE WITH ARCHITECT.  
5. AT EXISTING WD, FLOOR TO REMAIN, PATCH AND TOOTH IN NEW FLOORING TO MATCH AS NEEDED AT NEW WORK/DEMO.  
6. WHERE MARMOLEUM SHEET FLOORING IS SPEC'D, FLOORING IS TO BE OF TWO COLORS TO BE SELECTED BY ARCHITECT FROM AVAILABLE STANDARD COLOR SELECTION

EXTERIOR DOOR SCHEDULE										
DOOR ID	NEW/EXISTING	MANUFACTURER	TYPE	HINGE	WIDTH	HEIGHT	HARDWARE	GLAZING	NOTES	
E1	NEW	ATHERMATIC OR SIM.	INSULATED FIBERGLASS 2-PANEL SHAKER	OUTSWING	3' - 0"	6' - 8"	TBD - ADA COMPLIANT EXIT HARDWARE	HALF LITE	CLOSER W/ ADJ. TIMER; WEATHER STRIPPING; ADA COMPLIANT THRESHOLD	
E2	EXISTING				2' - 9"	6' - 4"			CHECK EXISTING HARDWARE, CLOSERS, THRESHOLDS, WEATHERSTRIPPING, ETC. AND REPAIR/ADJUST AS NEEDED	
E3	EXISTING				2' - 8"	6' - 8"			CHECK EXISTING HARDWARE, CLOSERS, THRESHOLDS, WEATHERSTRIPPING, ETC. AND REPAIR/ADJUST AS NEEDED	
E4	EXISTING				6' - 0"	7' - 0"			CHECK EXISTING HARDWARE, CLOSERS, THRESHOLDS, WEATHERSTRIPPING, ETC. AND REPAIR/ADJUST AS NEEDED	

NOTES:  
1. NEW EXTERIOR DOOR TO BE THERMATIC OR APPROVED EQ. INSULATED FIBERGLASS OR STEEL DOORS  
2. SUBMIT DOOR AND HARDWARE SPECIFICATIONS FOR REVIEW AND APPROVAL BY ARCHITECT AND OWNER.

INTERIOR DOOR SCHEDULE											HARDWARE	ROSETT	E	FUNCTION	FINISH	NOTES
ID #	LEVEL	NEW/EXISTING	HINGE TYPE	PANEL TYPE	STICKING	PANEL STYLE	DOOR	THICKNESS	HEIGHT	WIDTH	MAKE/MODEL	ROSETT	E	FUNCTION	FINISH	NOTES
001	BASEMENT LEVEL	NEW	SWING	HM	N/A	FLUSH	6' - 8"	3' - 0"	SCHLAGE/ELAN ROUND	KEYED	SATIN CHROME					
002	BASEMENT LEVEL	NEW	SWING	HM	N/A	FLUSH	6' - 8"	3' - 0"	SCHLAGE/ELAN ROUND	KEYED	SATIN CHROME					
103	SANCTUARY LEVEL	NEW	SWING	TRUSTILE TS1000 MDF, OR SIM. SS	C-FLAT PANEL	1-3/8"	6' - 8"	3' - 0"	SCHLAGE/ELAN ROUND	PRIVACY	SATIN CHROME					
104	SANCTUARY LEVEL	NEW	SWING	TRUSTILE TS1000 MDF, OR SIM. SS	C-FLAT PANEL	1-3/8"	6' - 8"	3' - 0"	SCHLAGE/ELAN ROUND	PRIVACY	SATIN CHROME					
105	SANCTUARY LEVEL	NEW	SWING	TRUSTILE TS1000 MDF, OR SIM. SS	C-FLAT PANEL	1-3/8"	6' - 8"	3' - 0"	SCHLAGE/ELAN ROUND	KEYED	SATIN CHROME					
106	SANCTUARY LEVEL	NEW	SWING	TRUSTILE TS1000 MDF, OR SIM. SS	C-FLAT PANEL	1-3/8"	6' - 8"	2' - 8"	SCHLAGE/ELAN ROUND	KEYED	SATIN CHROME					
108	SANCTUARY LEVEL	EXISTING	SWING				6' - 3"	3' - 10"			EXISTING					
108A	SANCTUARY LEVEL	EXISTING	SWING				7' - 4"	2' - 5"			EXISTING					
109	SANCTUARY LEVEL	EXISTING	SWING				8' - 3"	3' - 10"			EXISTING					
109A	SANCTUARY LEVEL	EXISTING	SWING				7' - 4"	2' - 5"			EXISTING					

LIGHTING FIXTURE SCHEDULE															
Type	Location / Use	Fixture Description	Manufacturer	Model / Catalog #	Light Source	Color Temp (K)	Lumens (Delivered)	Lumens (Delivered)	Control	Driver	Location	Fixture Load (W)	Fixture Load (W)	Created / Modified	Notes
P1	Interior	Pendant cylinder downlight, low brightness	CSL	#LP10-30-50-FINISH-S-x-c	3000K	1000 lm	dim	14 W	integral		3/31/2022				
P2	Bathroom	Decorative Pendant	By Owner						integral		3/31/2022				
TA	Public Space	One circuit track, black finish	Lightolier	#60-length-BK-accessories-BK							1/25/2022	Contractor responsible for all components to create complete operational assembly.			
T1	Track	Adjustable aimable spotlight, FLOOD optics, glare control snoot, black finish	Lightolier	#TH-10-930-NF-1-B	3000K	1000 lm	dim	integral			1/26/2022				
T2		Bare Sockt on track connector with black finish, with decorative 'seal-cage' globe lamp	Lightolier	#S201BK	2700K	350 lm	dim	integral	3.5 W		3/31/2022				
W1	Bathrooms	Wall mounted wrap-around	HE Williams	#LLM-length-L6-9-30-S-shielding-DRV-UNV	3000K	600 lm	FL	SWITCH	integral	16 W	1/27/2022				
EXTERIOR	YG1	Exterior													
															SEE LANDSCAPE DRAWINGS AND EXTERIOR LIGHTING SCHEDULE
	YG3	Exterior													
															SEE LANDSCAPE DRAWINGS AND EXTERIOR LIGHTING SCHEDULE
	YR1	Vestibule													

## DEMOLITION LEGEND

— — —	EXISTING TO DEMOLISH
— — —	EXISTING TO REMAIN
— — —	NEW OPENING IN EXISTING WALL/FLOOR/ROOF
— — —	

## GENERAL DEMO NOTES

1. SOLID LINE INDICATES STRUCTURE AND / OR EQUIPMENT TO REMAIN; DASHED LINE INDICATES STRUCTURE AND / OR EQUIPMENT TO BE REMOVED.
2. CONTRACTOR SHALL IDENTIFY ANY ITEMS TO BE SALVAGED WITH OWNER. OTHER ITEMS REMOVED FROM AREA OF DEMOLITION SHALL BECOME THE PROPERTY OF THE CONTRACTOR. ITEMS SHALL NOT BE SOLD ON SITE. REMOVED OR DEMOLISHED ITEMS SHALL BE REMOVED FROM THE SITE.
3. FIELD VERIFY ALL EXISTING CONDITIONS TO COORDINATE POINTS OF TERMINATION, RELOCATION OF EXISTING EQUIPMENT, AND RECONNECTION AND / OR REPLACEMENT OF COMPONENTS NEEDED TO MAINTAIN EXISTING AREAS NOT INCLUDED IN THE DEMOLITION SCOPE OF THE WORK.
4. DEMOLITION SHALL LEAVE NO DAMAGE TO ADJACENT RETAINED WORK, WHERE SUCH DAMAGE OCCURS, PATCH, REPAIR OR OTHERWISE RESTORE TO ITS ORIGINAL CONDITION. REPAIR SHALL BE APPROVED BY THE ARCHITECT.
5. HOLES AND DAMAGED SURFACES SHALL BE PATCHED AND REPAIRED TO MATCH ADJACENT SURFACES WHERE DEMOLITION WORK LEAVES HOLES AND DAMAGED SURFACES THAT WILL BE EXPOSED ON FINISHED WORK.
6. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND CONSTRUCTION MATERIALS.
7. CONTRACTOR SHALL REPORT ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND PLANS TO ARCHITECT FOR ADDITIONAL INFORMATION PRIOR TO STARTING WORK.
8. CONTRACTOR TO PROTECT ALL STRUCTURAL ELEMENTS IN AND ADJACENT TO AREA OF DEMOLITION.
9. COORDINATE ALL WALL, FLOOR, CEILING, STRUCTURE AND M.E.P REPAIR WITH CONSTRUCTION DRAWINGS, SPECIFICATIONS, AND EXISTING CONDITIONS PRIOR TO START OF CONSTRUCTION. NOTIFY DESIGN TEAM OF DISCREPANCIES PRIOR TO START OF CONSTRUCTION.
10. EXISTING WALLS, DOOR FRAMES, AND DOORS TO BE REMOVED IN THEIR ENTIRETY AS INDICATED. PATCH AND REPAIR EXPOSED FLOOR AND WALL SURFACES AS REQUIRED TO PREP FOR NEW CONSTRUCTION.
11. SEE MEP, FA, FF, & STRUCTURAL DRAWINGS AND SPECS FOR EXISTING CONDITIONS AND DEMO INFORMATION RELATED TO EACH DISCIPLINE.

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28 Eliot Street  
Natick, MA 01760

OWNER

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www.goodelandscapestudio.com

LANDSCAPE ARCHITECT

TIGHE & BOND INC.  
53 SOUTHPHAMPTON ROAD  
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www.tighebond.com

CIVIL

SOUTH MOUNTAIN  
PO BOX 1260  
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508-693-4850  
www.southmountain.com

STRUCTURE

BLW ENGINEERS, INC  
311 GREAT ROAD  
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978-486-4301  
www.blwengineers.com

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PROJECT NUMBER

## DEMO PLAN - BASEMENT

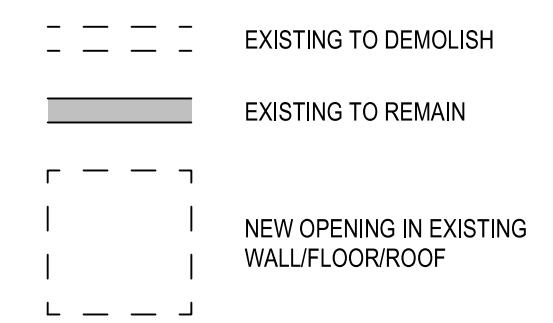
**AD100**

### 1A BASEMENT LEVEL - LULA LIFT OPTION

DEMOLITION PLAN

3/16" = 1'-0"

## DEMOLITION LEGEND



## GENERAL DEMO NOTES

1. SOLID LINE INDICATES STRUCTURE AND / OR EQUIPMENT TO REMAIN; DASHED LINE INDICATES STRUCTURE AND / OR EQUIPMENT TO BE REMOVED.
2. CONTRACTOR SHALL IDENTIFY ANY ITEMS TO BE SALVAGED WITH OWNER. OTHER ITEMS REMOVED FROM AREA OF DEMOLITION SHALL BECOME THE PROPERTY OF THE CONTRACTOR. ITEMS SHALL NOT BE SOLD ON SITE. REMOVED OR DEMOLISHED ITEMS SHALL BE REMOVED FROM THE SITE.
3. FIELD VERIFY ALL EXISTING CONDITIONS TO COORDINATE POINTS OF TERMINATION, RELOCATION OF EXISTING EQUIPMENT, AND RECONNECTION AND / OR REPLACEMENT OF COMPONENTS NEEDED TO MAINTAIN EXISTING AREAS NOT INCLUDED IN THE DEMOLITION SCOPE OF THE WORK.
4. DEMOLITION SHALL LEAVE NO DAMAGE TO ADJACENT RETAINED WORK, WHERE SUCH DAMAGE OCCURS, PATCH, REPAIR OR OTHERWISE RESTORE TO ITS ORIGINAL CONDITION. REPAIR SHALL BE APPROVED BY THE ARCHITECT.
5. HOLES AND DAMAGED SURFACES SHALL BE PATCHED AND REPAIRED TO MATCH ADJACENT SURFACES WHERE DEMOLITION WORK LEAVES HOLES AND DAMAGED SURFACES THAT WILL BE EXPOSED ON FINISHED WORK.
6. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND CONSTRUCTION MATERIALS.
7. CONTRACTOR SHALL REPORT ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND PLANS TO ARCHITECT FOR ADDITIONAL INFORMATION PRIOR TO STARTING WORK.
8. CONTRACTOR TO PROTECT ALL STRUCTURAL ELEMENTS IN AND ADJACENT TO AREA OF DEMOLITION.
9. COORDINATE ALL WALL, FLOOR, CEILING, STRUCTURE AND M.E.P REPAIR WITH CONSTRUCTION DRAWINGS, SPECIFICATIONS, AND EXISTING CONDITIONS PRIOR TO START OF CONSTRUCTION. NOTIFY DESIGN TEAM OF DISCREPANCIES PRIOR TO START OF CONSTRUCTION.
10. EXISTING WALLS, DOOR FRAMES, AND DOORS TO BE REMOVED IN THEIR ENTIRETY AS INDICATED. PAINT AND REPAIR EXPOSED FLOOR AND WALL SURFACES AS REQUIRED TO PREP FOR NEW CONSTRUCTION.
11. SEE MEP, FA, FP, & STRUCTURAL DRAWINGS AND SPECS FOR EXISTING CONDITIONS AND DEMO INFORMATION RELATED TO EACH DISCIPLINE.

## EASTERN ACROBATICS

28 Eliot Street  
Natick, MA 01760

OWNER

THE ENTRUST INC.  
FBO AUSTIN S. LIN  
28 ELIOT ST.  
NATICK, MA 01760

CLIENT

## RUNCIBLE STUDIOS, LLC

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## DEMO PLAN - SANCTUARY

**AD101**

**1A SANCTUARY LEVEL - LULA LIFT OPTION**  
DEMOLITION PLAN  
3/16" = 1'-0"

## DEMOLITION LEGEND

	EXISTING TO DEMOLISH
	EXISTING TO REMAIN
	NEW OPENING IN EXISTING WALL/FLOOR/ROOF

## GENERAL DEMO NOTES

1. SOLID LINE INDICATES STRUCTURE AND / OR EQUIPMENT TO REMAIN, DASHED LINE INDICATES STRUCTURE AND / OR EQUIPMENT TO BE REMOVED.
2. CONTRACTOR SHALL IDENTIFY ANY ITEMS TO BE SALVAGED WITH OWNER, OTHER ITEMS REMOVED FROM AREA OF DEMOLITION SHALL BECOME THE PROPERTY OF THE CONTRACTOR, ITEMS SHALL NOT BE SOLD ON SITE, REMOVED OR DEMOLISHED ITEMS SHALL BE REMOVED FROM THE SITE.
3. FIELD VERIFY ALL EXISTING CONDITIONS TO COORDINATE POINTS OF TERMINATION, RELOCATION OF EXISTING EQUIPMENT, AND RECONNECTION AND / OR REPLACEMENT OF COMPONENTS NEEDED TO MAINTAIN EXISTING AREAS NOT INCLUDED IN THE DEMOLITION SCOPE OF THE WORK.
4. DEMOLITION SHALL LEAVE NO HAZARD OR DAMAGE TO ADJACENT RETAINED WORK, WHERE SUCH DAMAGE OCCURS, PATCH, REPAIR OR OTHERWISE RESTORE TO ITS ORIGINAL CONDITION, REPAIR SHALL BE APPROVED BY THE ARCHITECT.
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## DEMO PLAN - BALCONY

**AD102**

1A BALCONY LEVEL - LULA LIFT OPTION  
DEMOLITION PLAN  
3/16" = 1'-0"

**EASTERN  
ACROBATICS**

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Natick, MA 01760

OWNER

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FBO AUSTIN S. LIN  
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STUDIOS, LLC**

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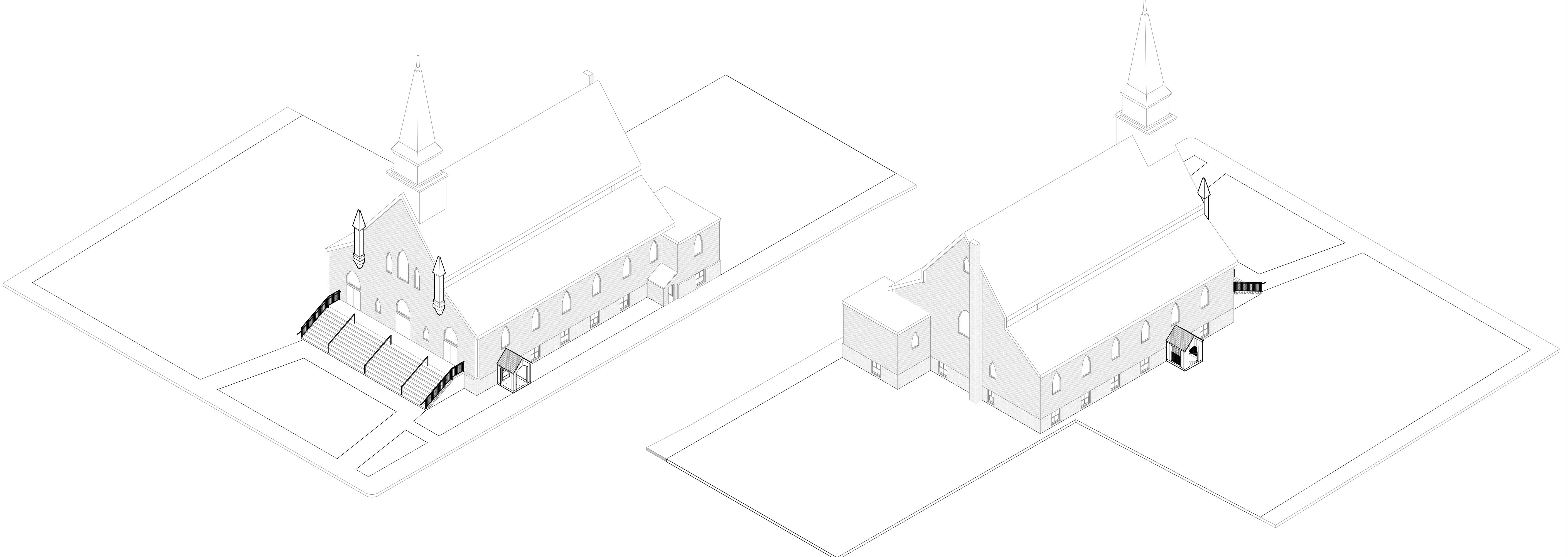
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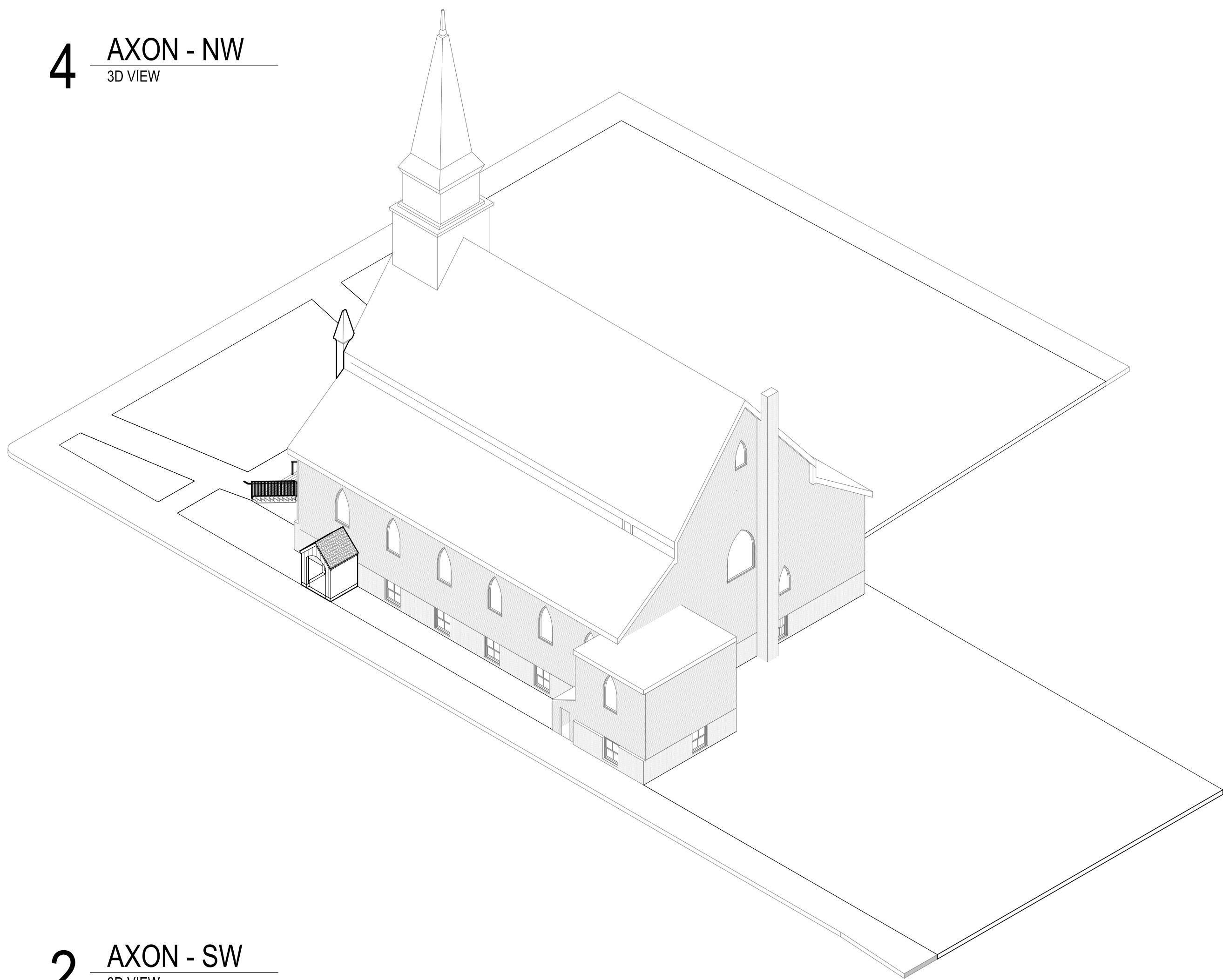
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PROJECT NUMBER

AXONS

**A010**

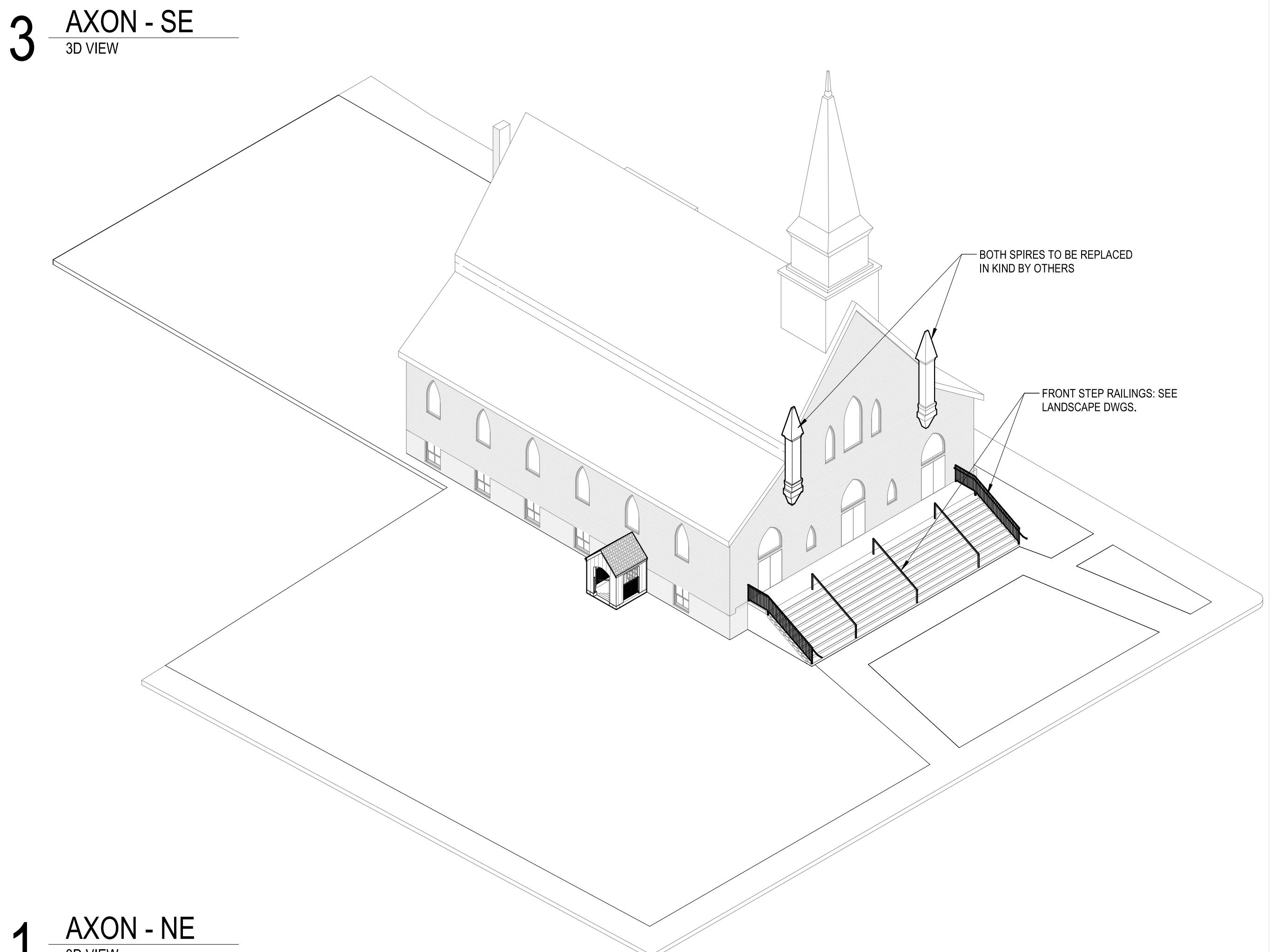


**4 AXON - NW**  
3D VIEW



**2 AXON - SW**  
3D VIEW

**3 AXON - SE**  
3D VIEW



**1 AXON - NE**  
3D VIEW

## PLAN NOTES

1. LIGHTING, SWITCHING, AND POWER RECEPTACLES TO BE LOCATED AND INSTALLED PER CODE. COORDINATE FINAL LOCATIONS AND FIXTURE SPECIFICATION WITH OWNER AND ARCHITECT PRIOR TO TO ROUGH-IN.
2. ANY REQUIRED MODIFICATIONS AND/OR ADDITIONS TO HVAC SYSTEM TO BE DONE PER CODE, AND COORDINATED WITH OWNER AND ARCHITECT PRIOR TO ROUGH-IN. DUCT WORK TO BE ROUTED THROUGH FLOOR JOIST BAYS, DROPPED CEILINGS, EAVE SPACE, CHASES, & SOFFITS ONLY AS PROVIDED FOR IN THE DRAWINGS. WHERE CONFLICTS ARISE, COORDINATE IN THE FIELD WITH THE ARCHITECT PRIOR TO INSTALLATION. DO NOT CREATE ADDITIONAL SOFFITS, OR CHASES WITHOUT COORDINATION WITH AND APPROVAL OF THE ARCHITECT.
3. ALL DIMENSIONS ARE TO FACE OF STUD OR FACE OF MASONRY ON NEW WALLS, AND TO CENTERLINE OF OPENING, UNLESS NOTED OTHERWISE. DIMENSIONS ON EXISTING WALLS ARE TO FACE OF WALL.
4. DRAWINGS SHALL NOT BE SCALED; USE WRITTEN DIMENSIONS ONLY.
5. GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD.
6. CENTER NEW EXTERIOR WINDOWS & DOORS IN EXISTING OPENINGS UNLESS NOTED OTHERWISE
7. EXISTING TO REMAIN SHOWN IN GRAY WALLS:  OTHER:
8. NEW WORK SHOWN IN BLACK & WHITE WALLS:  OTHER:
9. DEMO SHOWN AS HEAVY DASHED LINES DEMO:  (DEMO PLANS ONLY)

## EASTERN ACROBATICS

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OWNER

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FBO AUSTIN S. LIN

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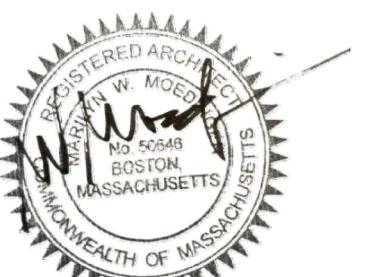
CIVIL

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PO BOX 1260  
WEST TSBURY, MA 02575  
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STRUCTURE

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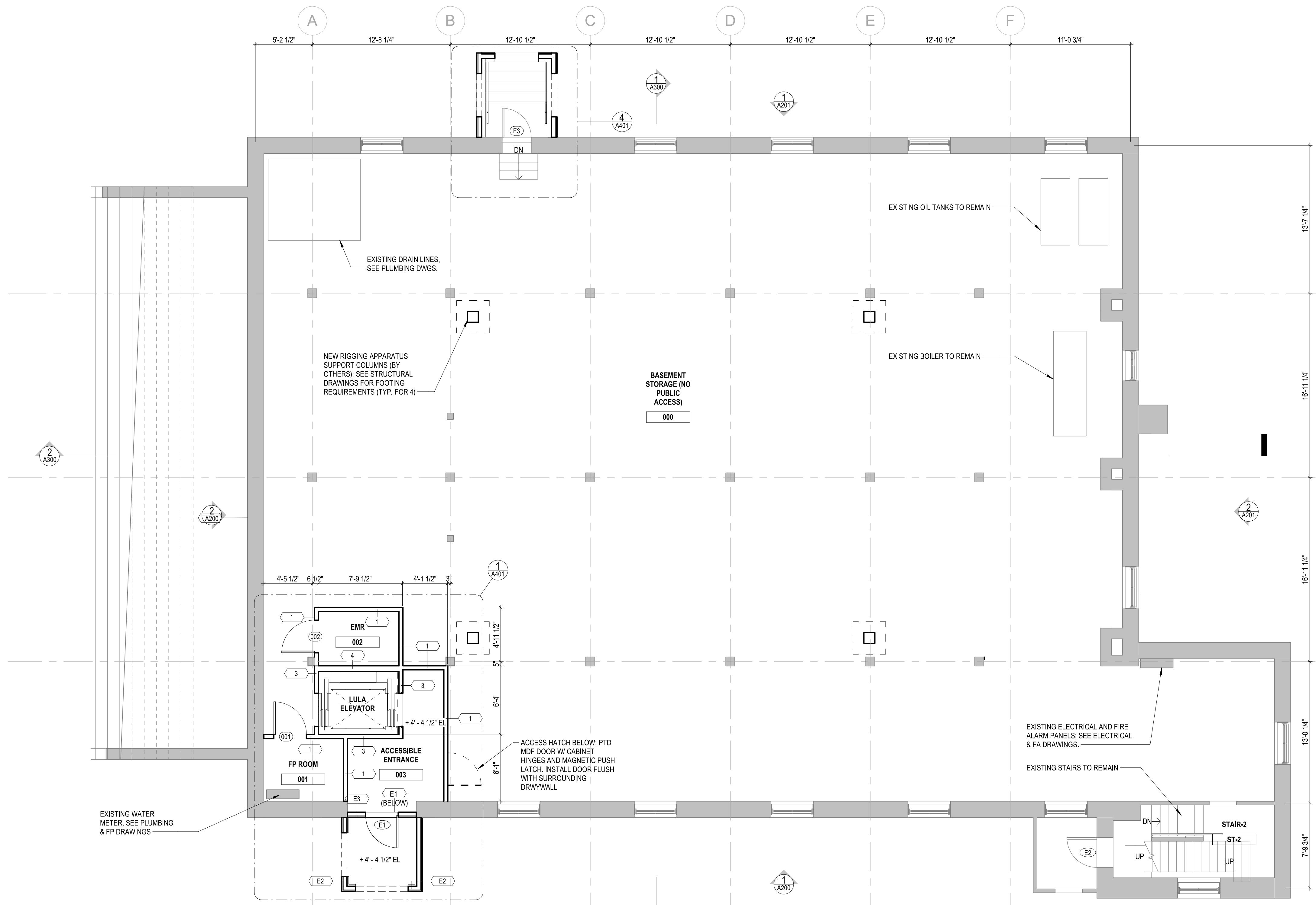
## BASEMENT FLOOR PLAN

**A100**

### 1 BASEMENT LEVEL

FLOOR PLAN

3/16" = 1'-0"





## PLAN NOTES

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## EASTERN ACROBATICS

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Natick, MA 01760

OWNER

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FBO AUSTIN S. LIN

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CLIENT

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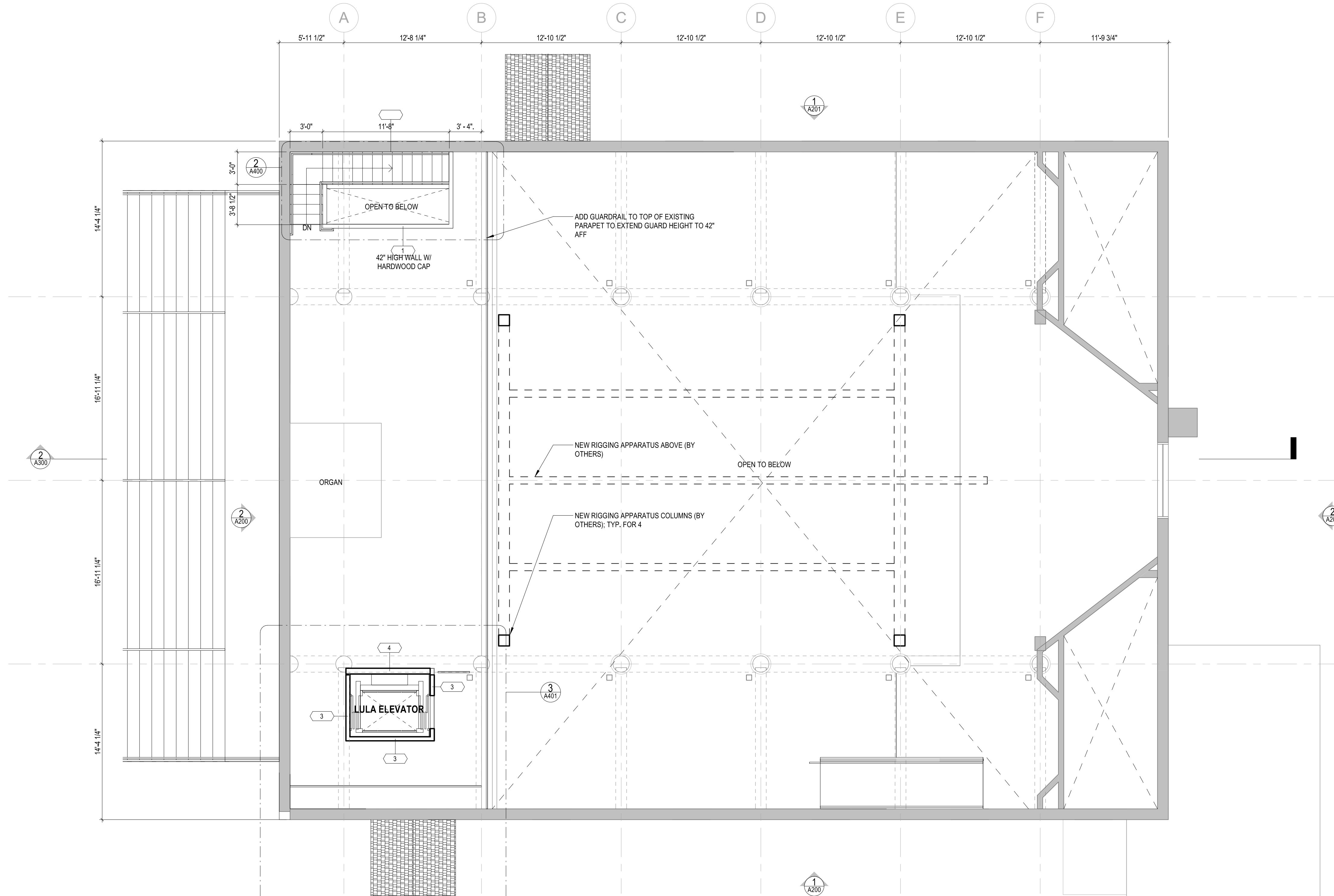
2021-003  
PROJECT NUMBER

## BALCONY FLOOR PLAN

**A102**

1 BALCONY LEVEL  
FLOOR PLAN

3/16" = 1'-0"



## EASTERN ACROBATICS

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Natick, MA 01760

OWNER

THE ENTRUST INC.  
FBO AUSTIN S. LIN  
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CLIENT

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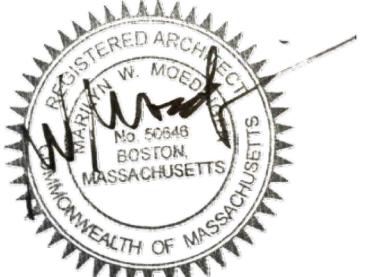
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## BASEMENT CEILING PLAN

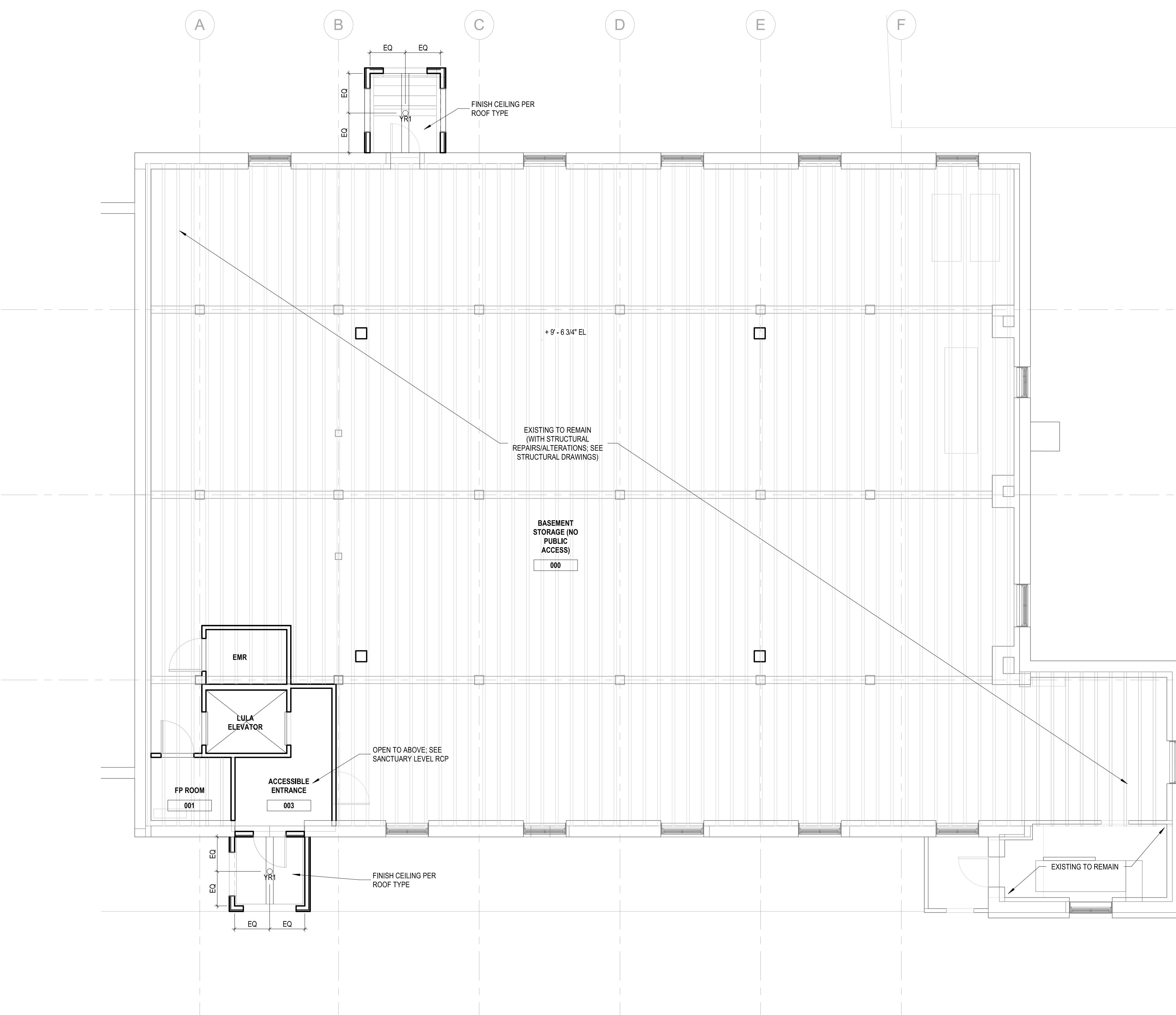
**A110**

1 BASEMENT LEVEL  
CEILING PLAN

3/16" = 1'-0"

### NOTES:

1. SEE LANDSCAPE DRAWINGS FOR BUILDING EXTERIOR, AND SITE LIGHTING.
2. COORDINATE LIGHTING W/ MEP DRAWINGS



# **EASTERN ACROBATICS**

28 Eliot Street  
Natick, MA 01760

## OWNER

THE ENTRUST INC.  
FBO AUSTIN S. LIN

28 ELIOT ST.  
NATICK, MA 01760

## CLIENT

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## ARCHITECT

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401-216-9845  
[www.goodelandscapestudio.com](http://www.goodelandscapestudio.com)  
**LANDSCAPE ARCHITECTURE**

WESLEY

**TIGHE & BOND INC.**  
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2021-003 PROJECT NUMBER

## NUMBER

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# SANCTUARY CEILING PLAN

**A111**

# 1 SANCTUARY LEVEL

---

---

$$\frac{3}{16}'' = 1'-0''$$

## EASTERN ACROBATICS

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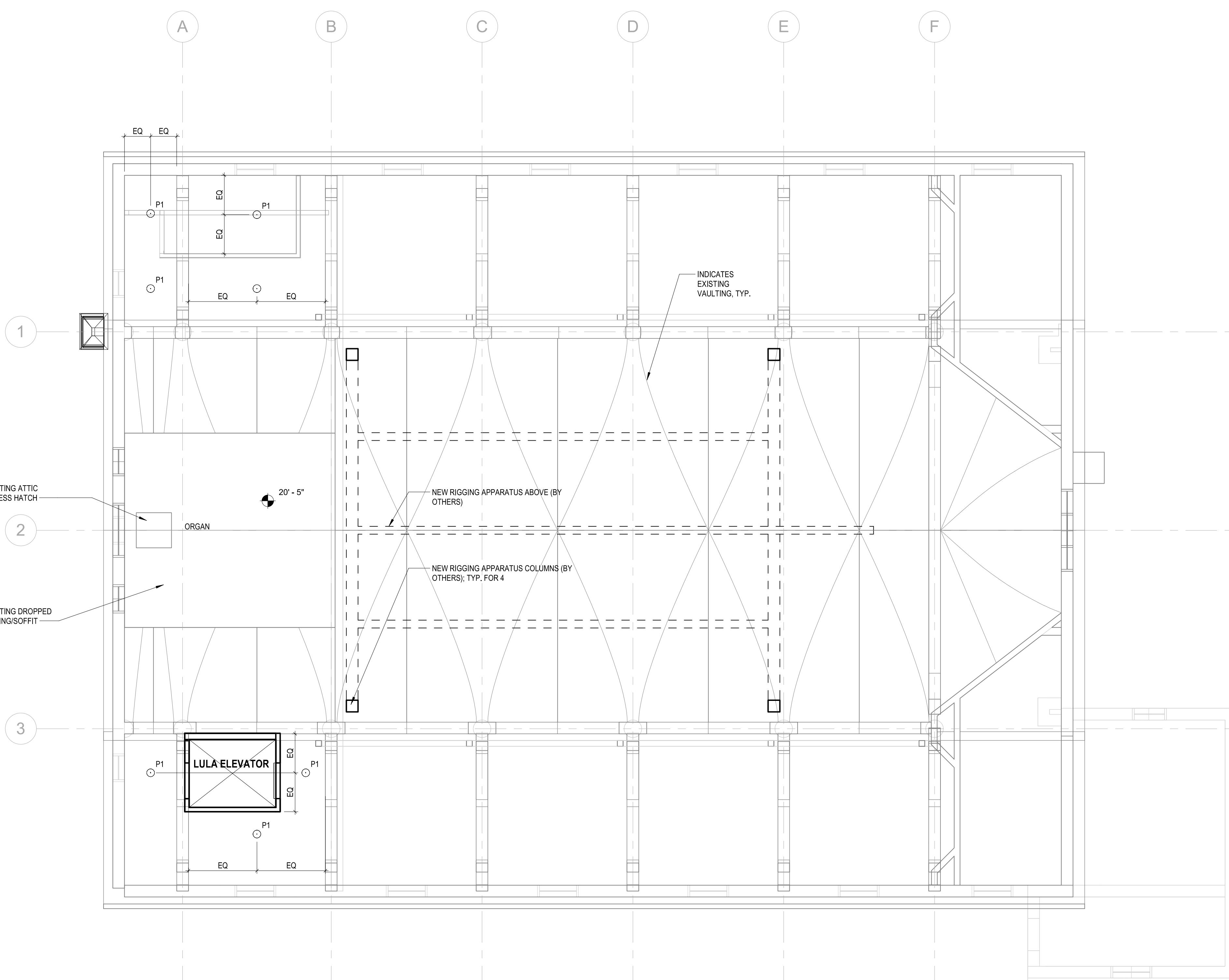
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## BALCONY CEILING PLAN

**A112**



**1** BALCONY LEVEL  
CEILING PLAN

3/16" = 1'-0"

## EASTERN ACROBATICS

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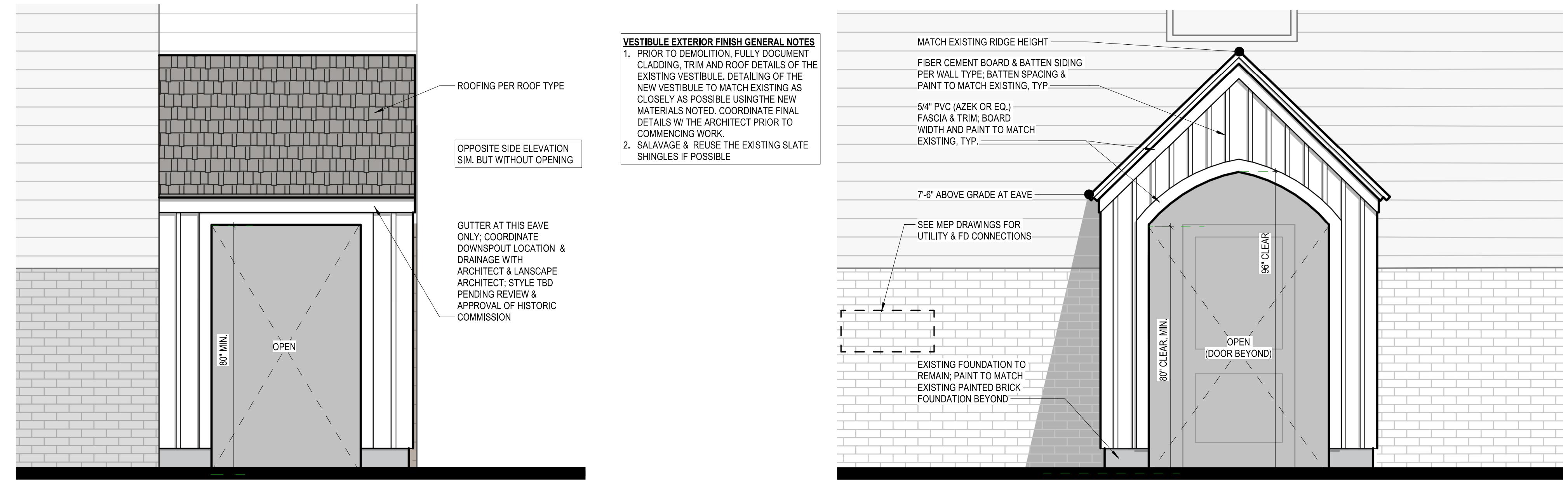
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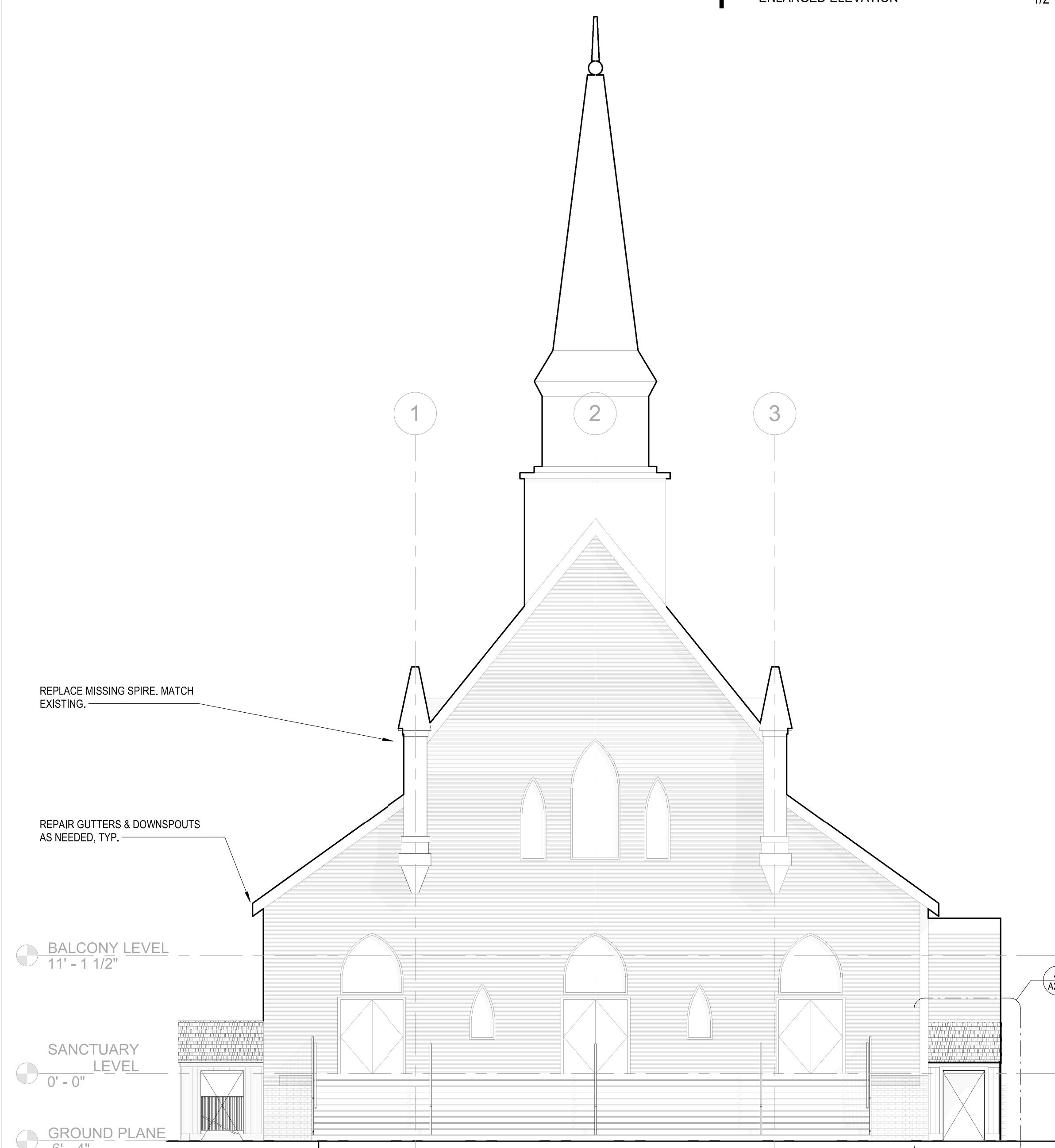
## EXTERIOR ELEVATIONS

**A200**

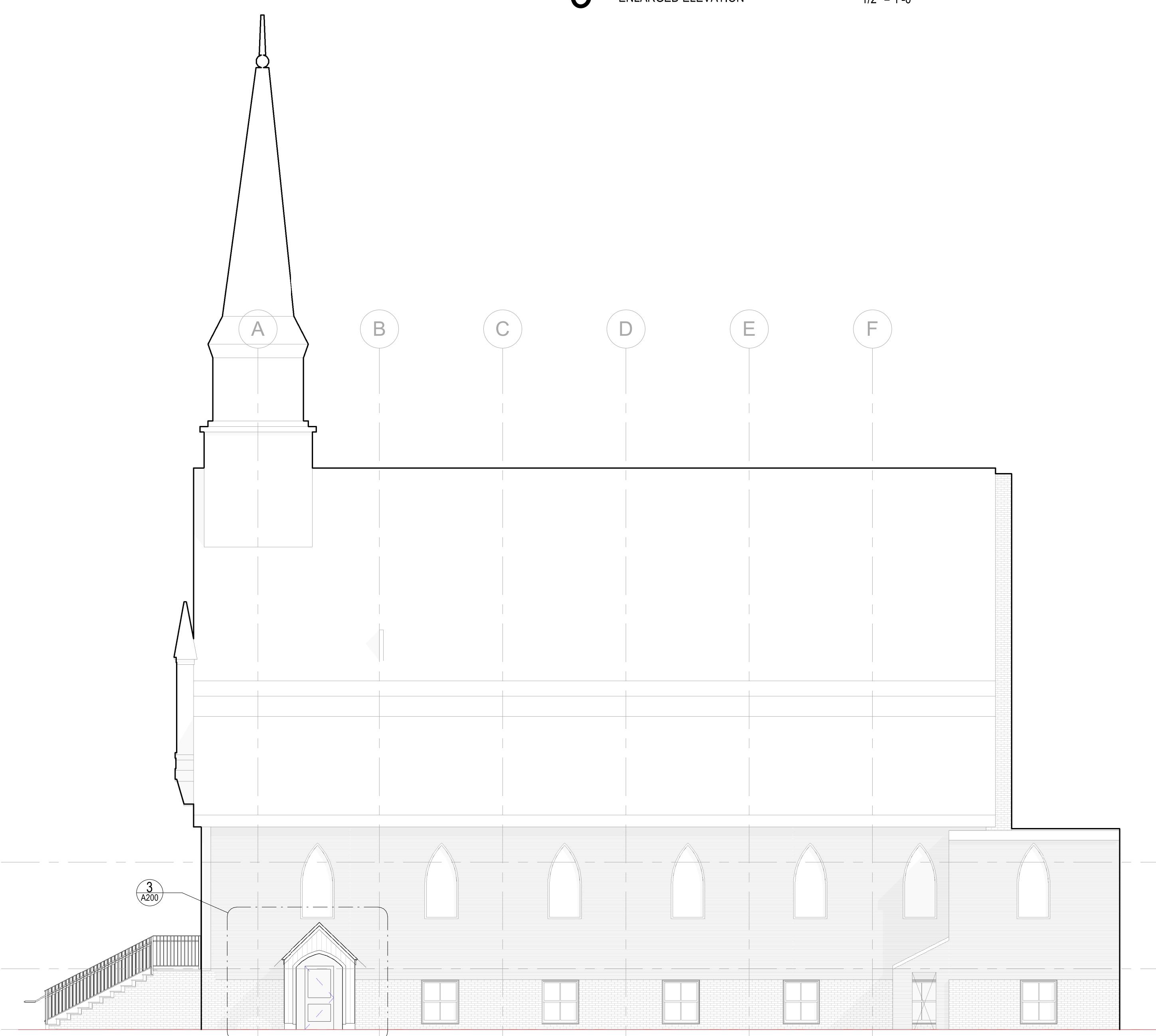


4 WATER ST. VESTIBULE - NORTH ELEVATION  
ENLARGED ELEVATION 1/2" = 1'-0"

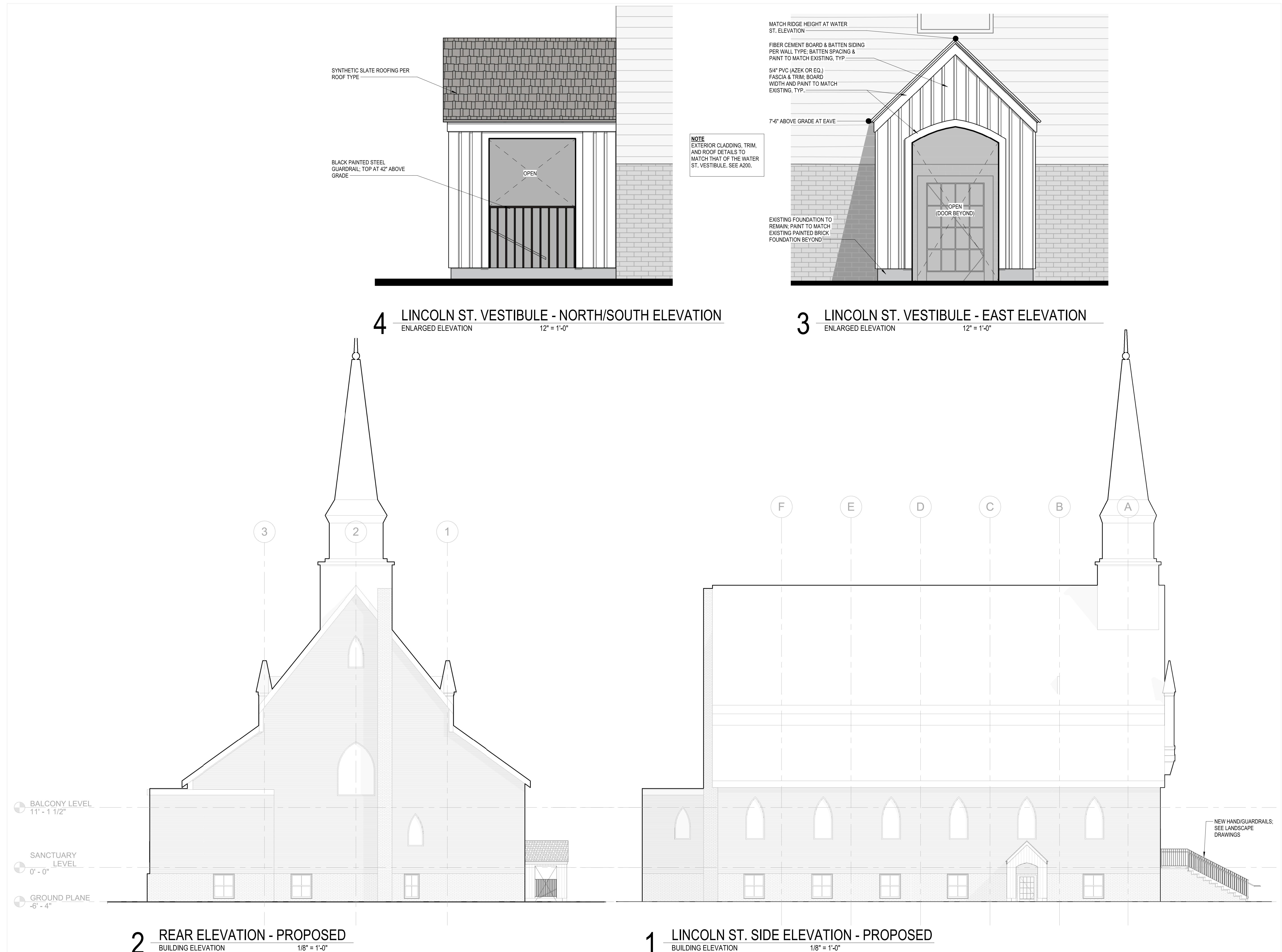
3 WATER ST. VESTIBULE - WEST ELEVATION  
ENLARGED ELEVATION 1/2" = 1'-0"



2 FRONT ELEVATION - PROPOSED  
BUILDING ELEVATION 1/8" = 1'-0"



1 WATER ST. SIDE ELEVATION - PROPOSED  
BUILDING ELEVATION 1/8" = 1'-0"



**EASTERN ACROBATICS**  
28 Eliot Street  
Natick, MA 01760  
OWNER

**THE ENTRUST INC.**  
FBO AUSTIN S. LIN  
28 ELIOT ST.  
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STRUCTURE

**BLW ENGINEERS, INC**  
311 GREAT ROAD  
LITTLETON, MA 01460  
978-486-4301  
www.blwengineers.com  
MEP

**STAMP**  
MASSACHUSETTS  
W. M. MORSE  
BOSTON, MASSACHUSETTS

**DD/PRICING**  
**DD VE REPRICE**  
**PERMIT SET**  
4 FEB 2022  
5 APR 2022  
21 JULY 2022  
PHASE  
2021-003  
PROJECT NUMBER

**EXTERIOR ELEVATIONS**

**A201**

# EASTERN ACROBATICS

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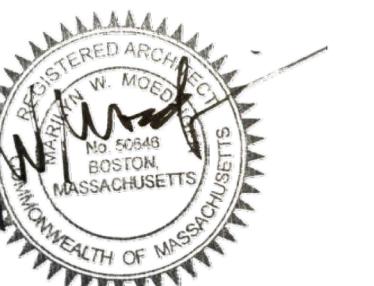
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STAMP

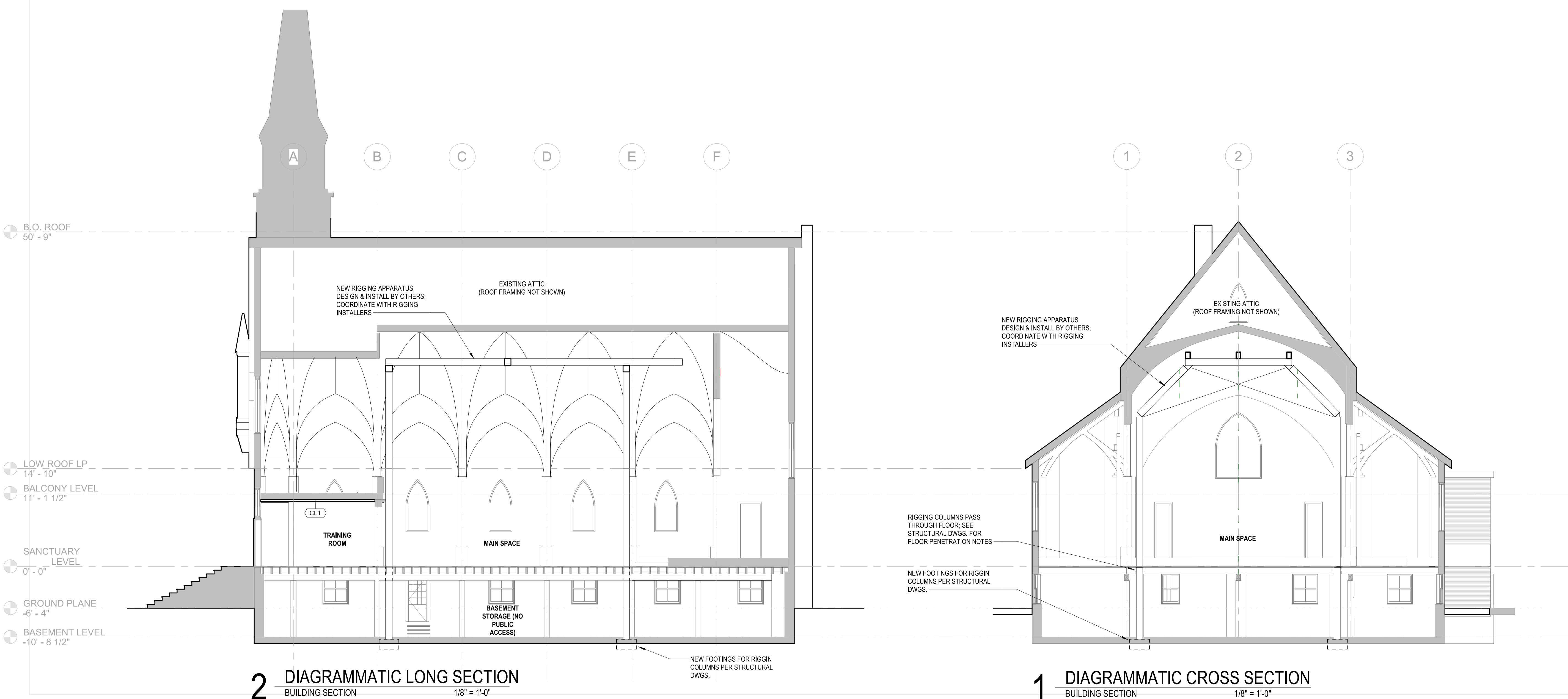
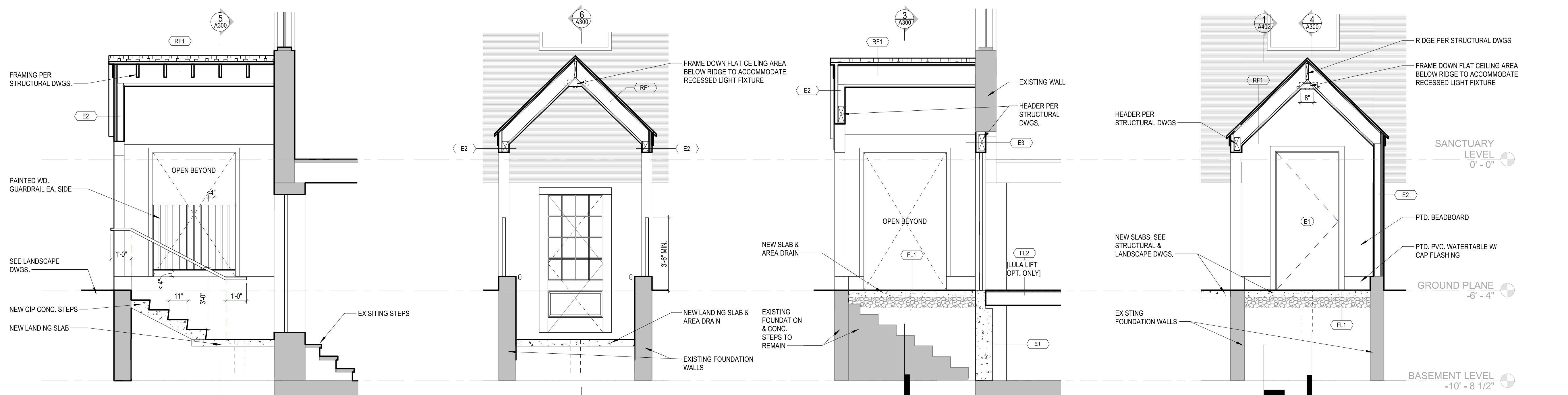
DD/PRICING  
DD/VE REPRICE  
PERMIT SET  
4 FEB 2022  
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21 JULY 2022

PHASE

2021-003  
PROJECT NUMBER

# BUILDING SECTIONS

**A300**



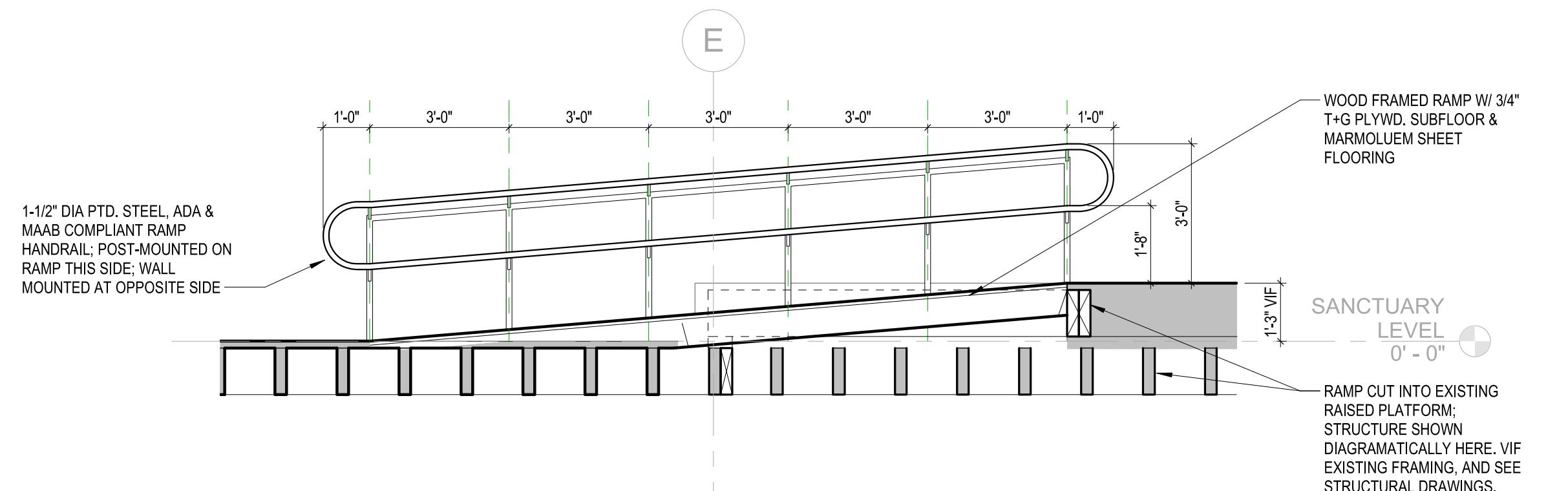
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28 Eliot Street  
Natick, MA 01760

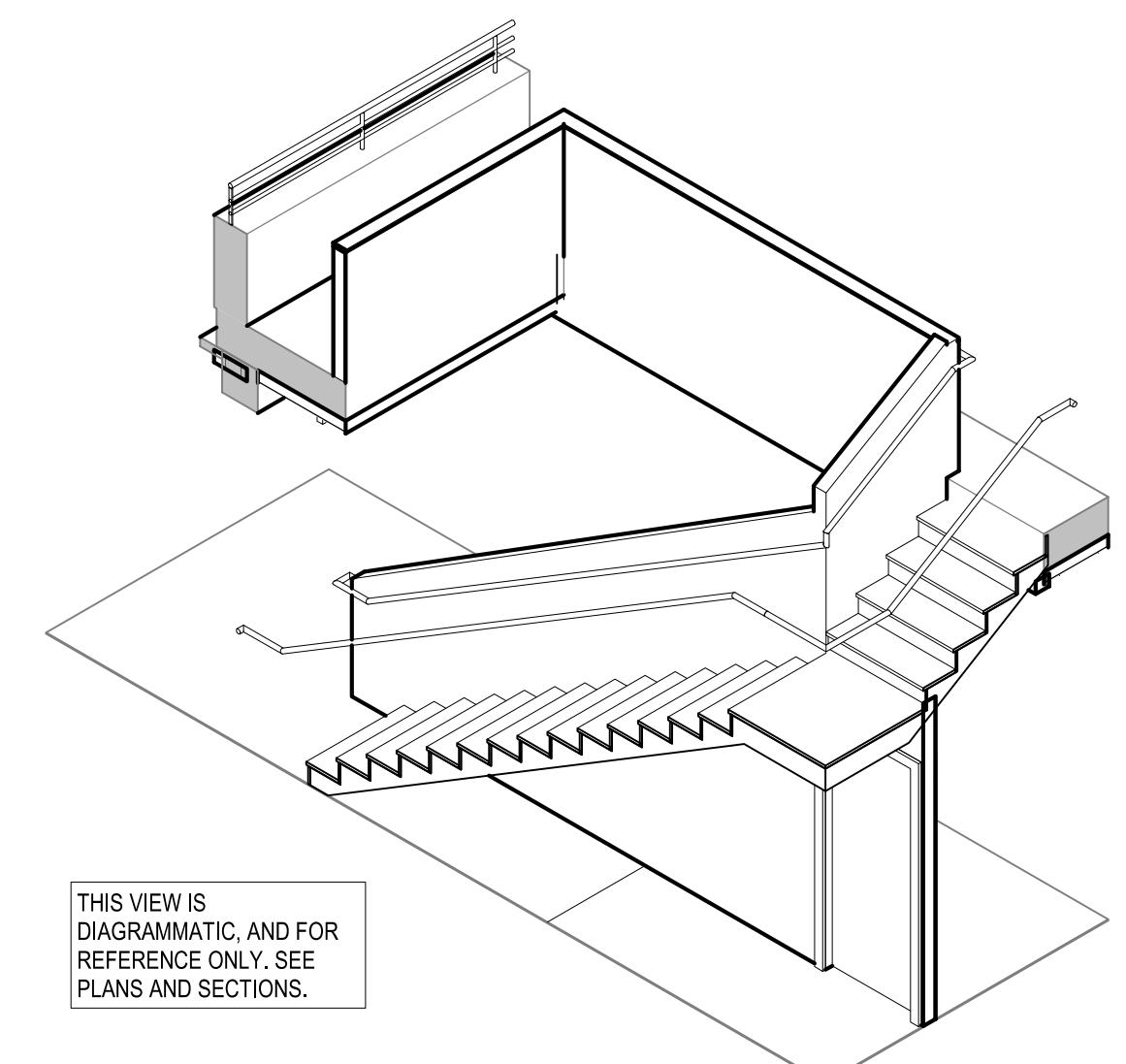
OWNER

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28 ELIOT ST.  
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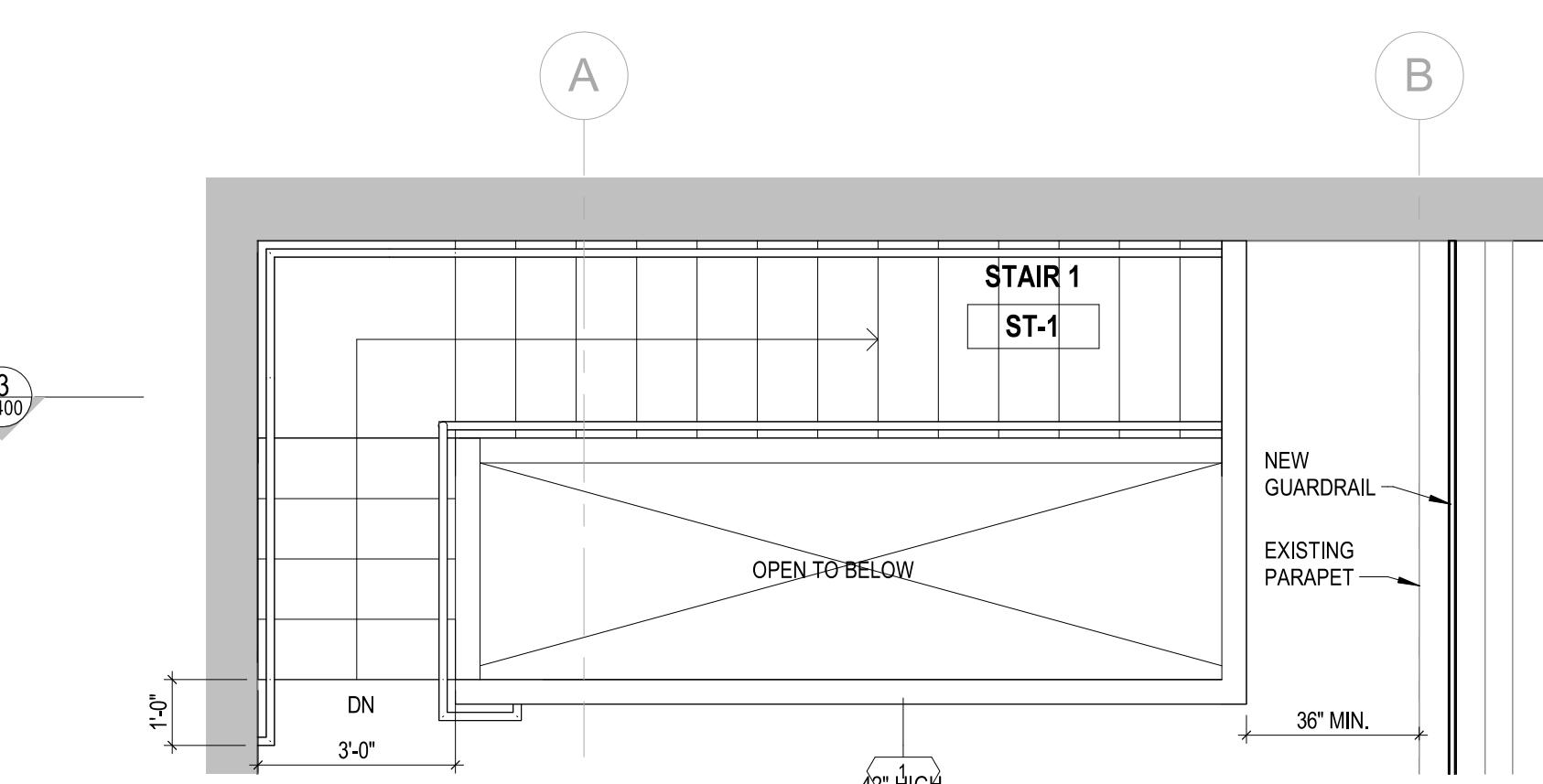
CLIENT



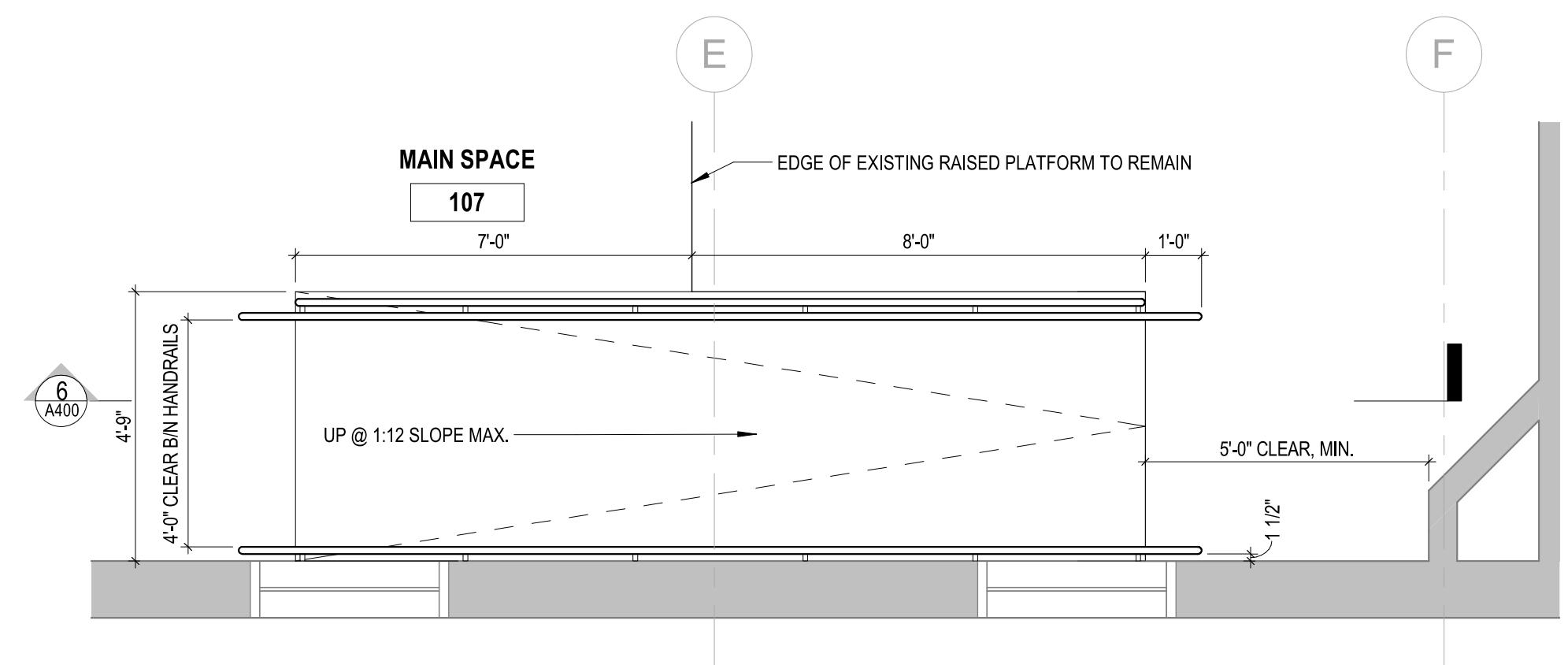
6 LONG SECTION - WHEELCHAIR RAMP  
ENLARGED SECTION 3/8" = 1'-0"



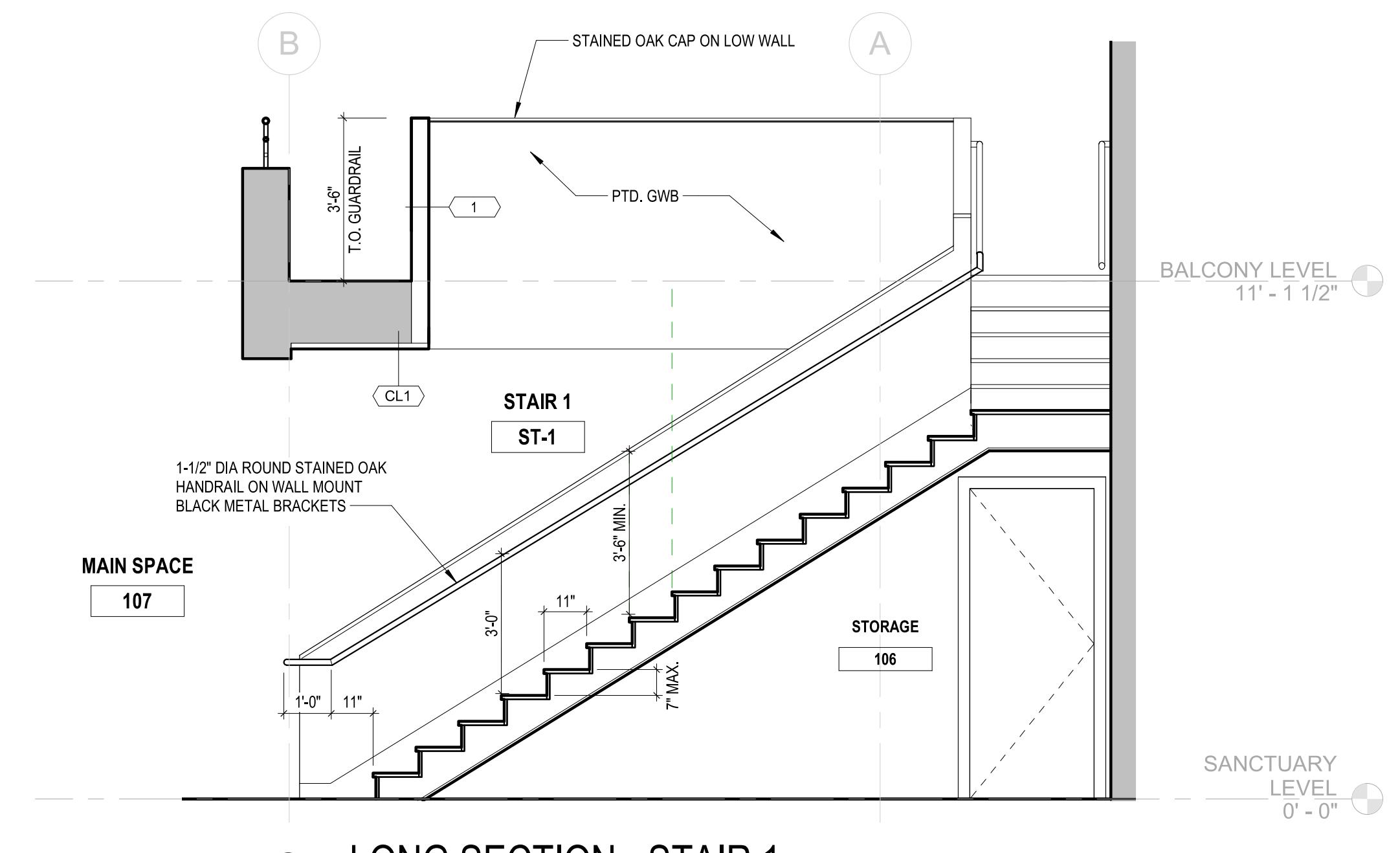
4 3D VIEW - STAIR 1  
3D VIEW



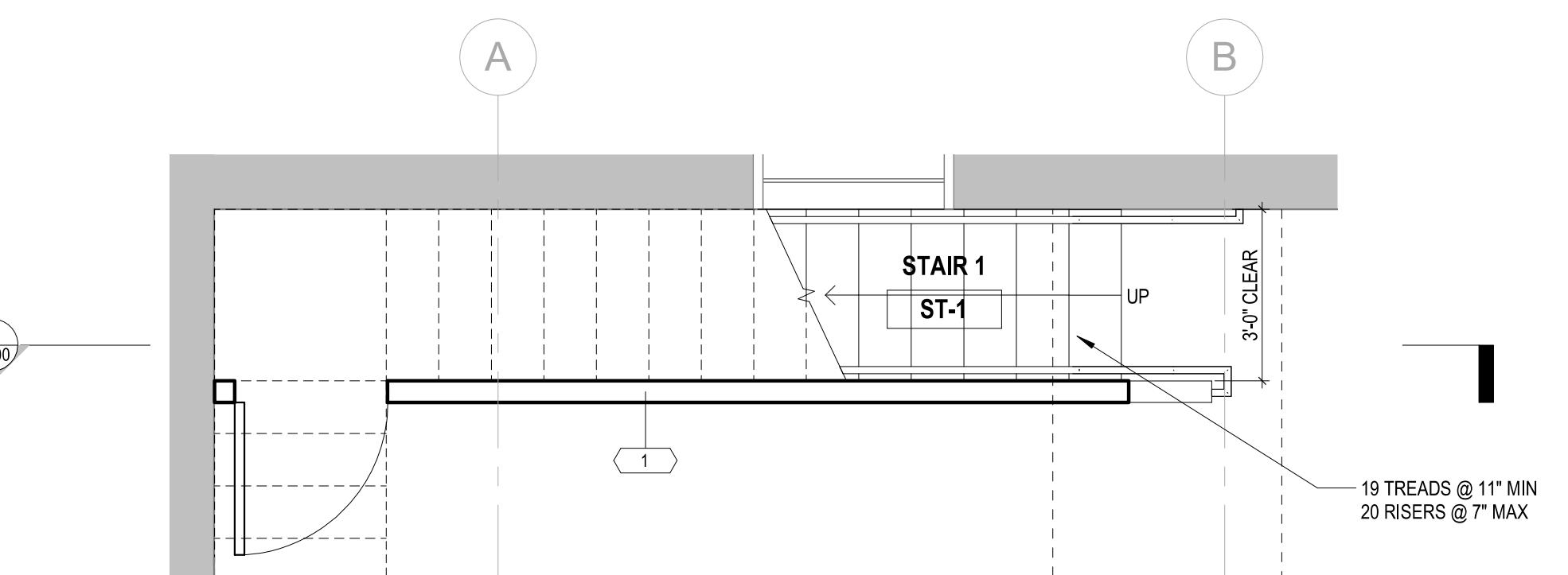
2 BALCONY LEVEL - STAIR 1  
ENLARGED PLAN 3/8" = 1'-0"



5 SANCTUARY LEVEL - WHEELCHAIR RAMP  
ENLARGED PLAN 3/8" = 1'-0"



3 LONG SECTION - STAIR 1  
ENLARGED SECTION 3/8" = 1'-0"



1 SANCTUARY LEVEL - STAIR 1  
ENLARGED PLAN 3/8" = 1'-0"

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21 JULY 2022

PHASE

2021-003  
PROJECT NUMBER

STAIR & RAMP PLANS & SECTION

A400



## EASTERN ACROBATICS

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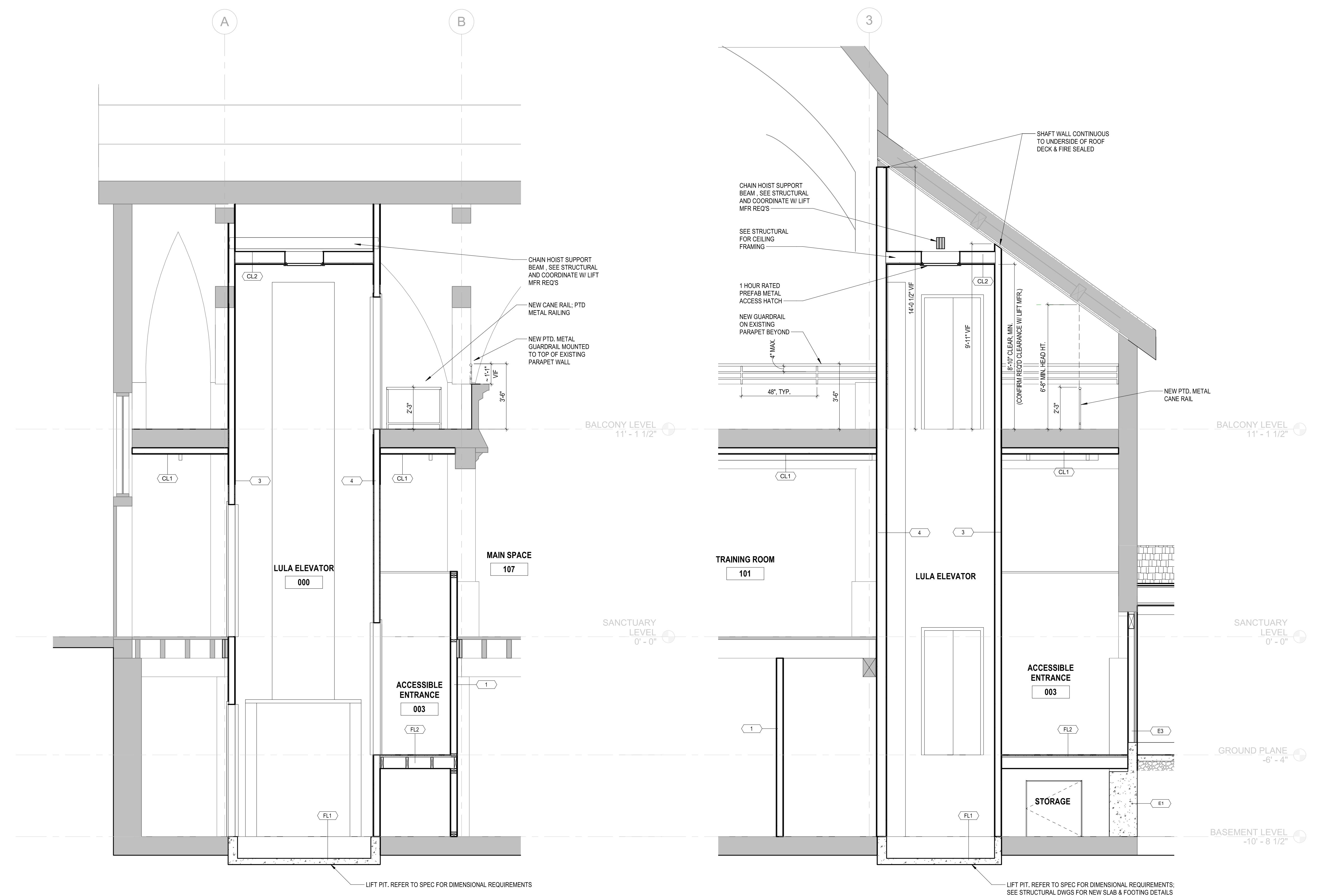
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2021-003  
PROJECT NUMBER

## LULA LIFT SECTIONS

**A402**



**2** LONG SECTION - LULA  
ENLARGED SECTION  
3/8" = 1'-0"

**1** CROSS SECTION - LULA  
ENLARGED SECTION  
3/8" = 1'-0"

**EASTERN  
ACROBATICS**

28 Eliot Street  
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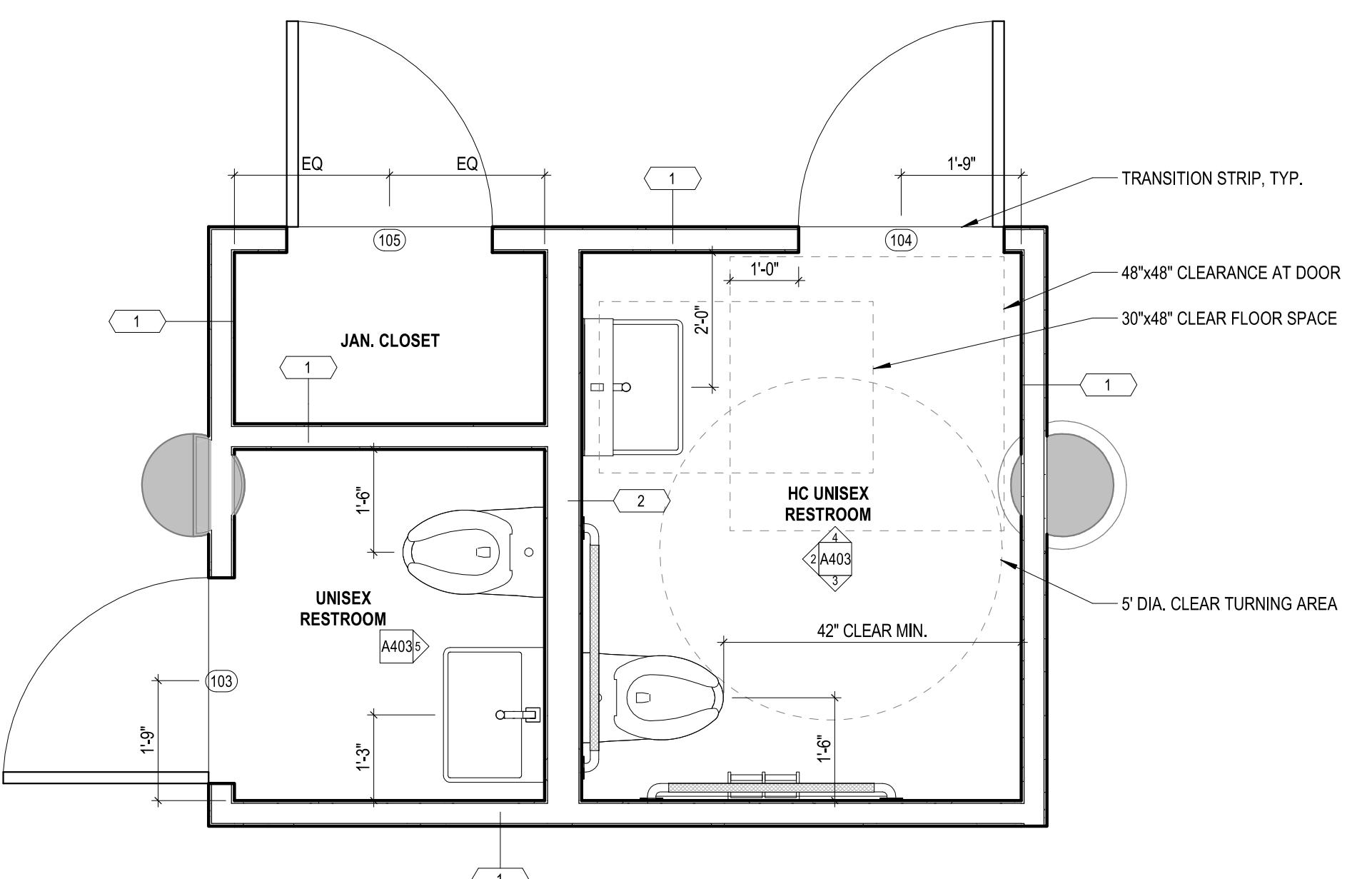
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DD/VE REPRICE  
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21 JULY 2022

PHASE

2021-003  
PROJECT NUMBER

**ENLARGED  
RESTROOM  
PLANS &  
ELEVATIONS**

**A403**



**1 SANCTUARY LEVEL - PUBLIC RESTROOMS**  
ENLARGED KITCHEN/BATH  
1/2" = 1'-0"

# GENERAL STRUCTURAL NOTES

## GENERAL REQUIREMENTS:

- All construction, unless specifically identified otherwise, shall conform to:
  - Ninth Edition of the Massachusetts Building Code
  - International Building Code (IBC) - 2015 Edition - including MA Amendments
  - Minimum Design Loads for Building and Other Structures - ASCE 7-10
  - Risk Category of Building - II

## STRUCTURAL LIVE LOADING:

The structure has been designed in accordance with the building code and/or more restrictive requirements for loads as given below unless specific areas of the drawings indicate different loading criteria. Refer to drawings for load schedules.

## Roof Loads:

1. <b>Roof Live Load</b>	20 psf
2. <b>Roof Structure</b>	Actual weight of materials
3. <b>Floor Live Load</b>	
A. Typical	100 psf
4. <b>Snow Load:</b>	
A. Ground Snow Load:	$P_g = 40 \text{ psf}$
B. Flat Roof Load:	$P_f = 30 \text{ psf} (\text{min.}) + \text{snow drift}$
C. Exposure:	$C_e = 1.0$
D. Importance Factor:	$I_s = 1.0$
E. Thermal Factor:	$C_t = 1.0$
5. <b>Wind Load:</b>	
A. Wind Speed:	Vult = 127 mph, Vasd = 98 mph
B. Exposure Category:	B
C. Importance Factor:	$I_w = 1.0$
D. Internal Pressure Coefficient:	0.18
E. Components and Cladding (Ultimate wind pressures):	

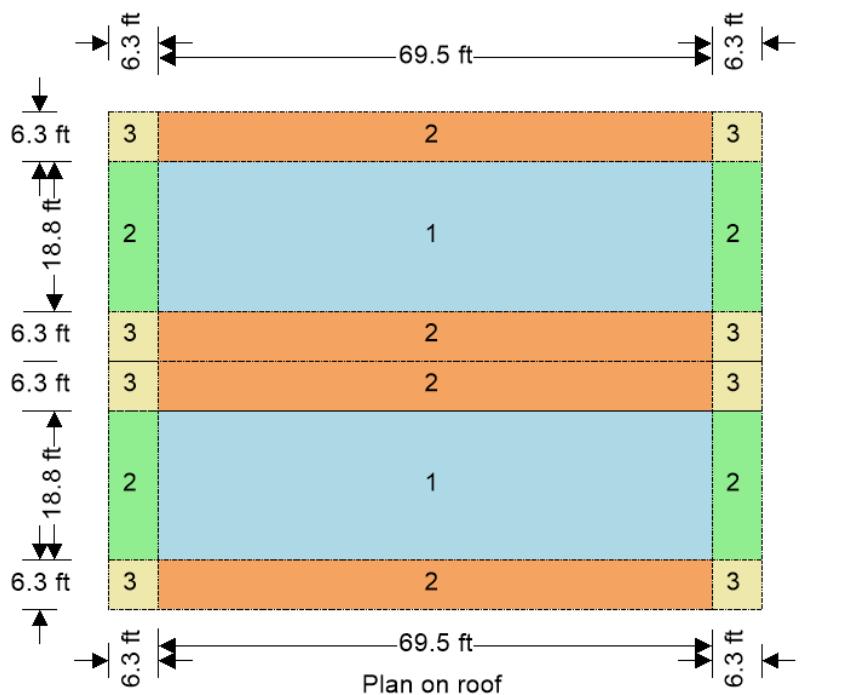
## Roof Wind Pressures:

Zone	Area	Zone Width (ft)	Pressure (positive) (psf)	Pressure (negative) (psf)
1	<10 sf	-	29.6	-32.3
1	25 sf	-	28.5	-30.1
1	50 sf	-	27.7	-28.5
1	>100 sf	-	26.8	-26.8
2	<10 sf	3	29.6	-37.8
2	25 sf	3	28.5	-35.6
2	50 sf	3	27.7	-34
2	>100 sf	3	26.8	-32.3
3	<10 sf	3	29.6	-37.8
3	25 sf	3	28.5	-35.6
3	50 sf	3	27.7	-34
3	>100 sf	3	26.8	-32.3

(-) indicates pressure acting away from surface

All pressures indicated act perpendicular to the roof surface

## Roof Zone Map:



Zone	Area	Zone Width (ft)	Pressure (positive) (psf)	Pressure (negative) (psf)
4	<10 sf	-	32.3	-35.1
4	50 sf	-	28.9	-31.7
4	200 sf	-	26	-28.8
4	>500 sf	-	24.1	-26.8
5	<10 sf	3	32.3	-43.3
5	50 sf	3	28.9	-36.5
5	200 sf	3	26	-30.7
5	>500 sf	3	24.1	-26.8

(-) indicates pressure acting away from surface

All pressures indicated act perpendicular to the wall surface

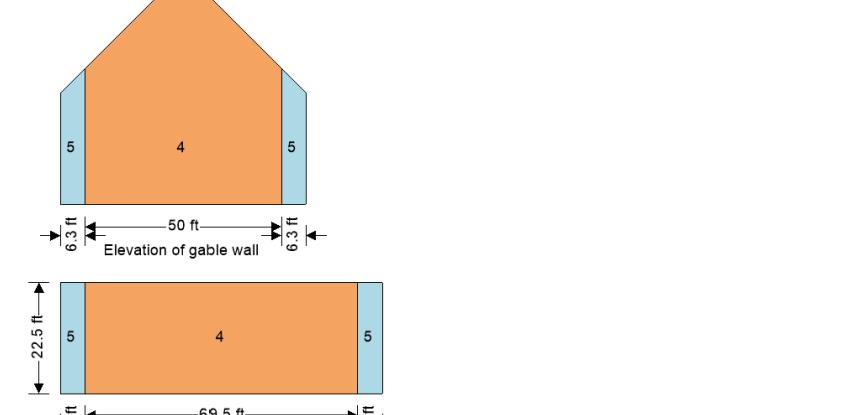
## Wall Pressures:

Zone	Area	Zone Width (ft)	Pressure (positive) (psf)	Pressure (negative) (psf)
4	<10 sf	-	32.3	-35.1
4	50 sf	-	28.9	-31.7
4	200 sf	-	26	-28.8
4	>500 sf	-	24.1	-26.8
5	<10 sf	3	32.3	-43.3
5	50 sf	3	28.9	-36.5
5	200 sf	3	26	-30.7
5	>500 sf	3	24.1	-26.8

(-) indicates pressure acting away from surface

All pressures indicated act perpendicular to the wall surface

## Wall Zone Map:



6. **Earthquake:**

- A. Site Class: D
- B. Basic Seismic Design Category: B
- C. Basic Seismic Force Resisting System: Existing Timber Frame and Gable-end Wood-framed Shear Walls
- D. Method of Analysis: Equivalent Lateral Force Method
- E. Importance Factor:  $I_e = 1.0$
- F. Spectral Acceleration (1 sec):  $S_1 = 6.7\%$
- G. Spectral Acceleration (short):  $S_2 = 19.7\%$
- H. Spectral Response Coefficients:  $Sd_1 = 0.107$   
 $Sd_2 = 0.210$
- I. Response Modification Factor:  $R = 1.5$
- J. Seismic Response Coefficient:  $C_s = 0.1401$
- K. Design Base Shear:  $V_e = 39 \text{ k}$

## COORDINATION:

### SPECIAL INSPECTIONS & QUALITY CONTROL

- The contract structural drawings and specifications represent the finished structure. They do not indicate the means or method of sequence of construction. The Contractor shall be responsible for and provide all measures necessary to protect the structure during construction. These measures shall include, but not be limited to: bracing, shoring of loads due to construction equipment, etc. The Contractor shall be responsible for the design and implementation of all scaffolding, bracing and shoring. Observation visits to the site by the Structural Engineer shall not include inspection of the above items. The Structural Engineer will not be responsible for the Contractor's means, methods, techniques, sequences or procedures of construction, nor will the Structural Engineer be responsible for construction site safety, or the safety precautions and the programs incident thereto.
- Contractor shall verify all dimensions, sizes, elevations, etc., and shall coordinate site conditions with the drawings prior to construction. Any discrepancies and omissions shall be resolved with the Structural Engineer prior to construction and prior to proceeding. Do not use scaled dimensions. Where any discrepancies occur between plans, details, structural notes and specifications, the greater requirements shall govern. Where no specific detail is shown, construction shall conform to the special inspector's requirements.
- Duties and responsibilities of the special inspector:
  - The special inspector shall observe the work assigned for conformance with the approved design drawings and specifications.
  - The special inspector shall furnish inspection reports to the building official and to the Architect or Architect of record. All discrepancies shall be brought to the immediate attention of the Contractor for correction; then, if uncorrected, to the Engineer or Architect of record and the Building Official.
  - Upon completion of the assigned work, the Special Inspector shall complete and sign a final report certifying that to the best of the inspector's knowledge, the work is in conformance with the approved plans and specifications, and the applicable workmanship provisions of the code.
  - Special inspection is required during the following operations per IBC Section 1704:
    - Grading, excavation and filling: During earthwork excavations, grading and filling as required to satisfy requirements of the geotechnical report and IBC Chapters 17, 18 & 33 and Appendix J and during placement of engineered fill.
    - Reinforcing steel: Verify size, quantity and placement of all reinforcing steel prior to placing of any concrete. Review both permit drawings and shop drawings (mild steel and post tension shops) for rebar requirements.
    - Concrete: During taking of specimens and placement of all concrete. Unless noted otherwise, special inspection of non-structural slabs on grade is not required. See general structural notes and/or project specifications for frequency of testing and strength requirements.
    - Welding: All structural field welding and shop welding (including welding of reinforcing steel), except welding performed in the shop of a building official-approved fabricator, as required by Section 1704.3 of the IBC.

## SUBMITTALS - SHOP DRAWINGS & PRODUCT DATA:

- The review of shop drawings and other submittals is only for review of general compliance with the design concept of the project and the information provided in the contract documents. It is the General Contractor's responsibility to review the shop drawings prior to submitting to the Architect. The General Contractor is responsible for confirming and correlating all quantities and dimensions, selecting fabrication processes and techniques of construction; coordinating the work with that of all other trades; and performing the work in a safe and satisfactory manner.

## FOUNDATIONS

- Foundation design is based on presumptive bearing capacity values per the building code to be verified by the contractor prior to construction. The structural engineer is not responsible for any geotechnical aspects of this project.
- Owner shall employ a Geotechnical Engineer licensed in the State of Jurisdiction to perform necessary testing and inspections for quality control and to ensure that the requirements of the geotechnical report are complied with. Test reports shall be submitted directly to the Architect and Engineer from the geotechnical engineer, with copy to Contractor.
- Any changes, substitutions, or deviations from the original contract drawings shall be clued by the manufacturer or fabricator. The Structural Engineer reserves the right to allow or not allow any changes to the original contract drawings at any time before or after shop drawing review.
- The shop drawings do not replace the original contract drawings. Items omitted or shown incorrectly and which are not noted as allowed by the Structural Engineer or Architect are not to be considered changes to the original contract drawings.
- Shop drawings will be returned for resubmittal if major errors or omissions are found during review.
- Electronic submittals are permitted with prior approval of the Structural Engineer.
- Allow a minimum of five working days for review of shop drawings by the Structural Engineer.

## SUBMITTALS - REQUIRED STRUCTURAL SUBMITTALS

ITEM	SUBMITTALS
GENERAL	<ul style="list-style-type: none"> <li>MIX DESIGN</li> <li>PRODUCT DATA</li> </ul>
REINFORCING	<ul style="list-style-type: none"> <li>SHOP DRAWINGS</li> </ul>
FINISHING	<ul style="list-style-type: none"> <li>SUBMIT SURFACE FINISHING PLAN TO ARCHITECT</li> </ul>
CURING	<ul style="list-style-type: none"> <li>STATEMENT OF CURING PROCEDURES</li> </ul>

ITEM	SUBMITTALS
STRUCTURAL STEEL	<ul style="list-style-type: none"> <li>SHOP DRAWINGS</li> <li>MILL TEST REPORTS</li> </ul>
WELDING	<ul style="list-style-type: none"> <li>WELDERS CERTIFICATES FOR ALL WELD TYPES ON JOB</li> </ul>
BOLTING	<ul style="list-style-type: none"> <li>PRODUCT DATA</li> </ul>

ITEM	SUBMITTALS
WOOD TREATMENT	<ul style="list-style-type: none"> <li>FIRE RETARDANT TREATMENT</li> <li>WOOD PRESERVATIVE TREATMENT</li> </ul>
SAWN LUMBER	<ul style="list-style-type: none"> <li>STATEMENT FROM CONTRACTOR OUTLINING SIZE, SPECIES AND GRADE FOR ALL STRUCTURAL COMPONENTS</li> </ul>
HANGERS	<ul style="list-style-type: none"> <li>MANUFACTURERS ENGINEERING DATE FOR ALTERNATES</li> </ul>
LVL PSL STRUCTURAL COMPOSITE LUMBER	<ul style="list-style-type: none"> <li>MATERIAL CERTIFICATE OR ICC-ES REPORT</li> </ul>
DECKING	<ul style="list-style-type: none"> <li>PRODUCT DATA</li> <li>SAMPLES IF REQUIRED BY ARCHITECT</li> </ul>
STRUCTURAL WOOD SHEATHING	<ul style="list-style-type: none"> <li>STATEMENT FROM CONTRACTOR INDICATING PRODUCT, USE AND ATTACHMENT</li> </ul>

**NOTE:**  
-NOT ALL SUBMITTALS, INSPECTIONS AND TESTS FOR THE PROJECT ARE NECESSARILY LISTED. REFER TO SPECIFICATIONS FOR OTHER REQUIREMENTS.  
-THIS TABLE MAY NOT INCLUDE ALL STRUCTURAL INSPECTIONS AND TESTS REQUIRED BY ALL JURISDICTIONS, REFER TO THE LOCAL BUILDING OFFICIAL FOR REQUIREMENTS.

## CAST-IN-PLACE CONCRETE

- Concrete work shall conform to all requirements of ACI 301, "Specifications for Structural Concrete for Buildings" and ACI 318, "Building Code Requirements for Reinforced Concrete", except as modified by the contract documents.
- Concrete shall be ready mixed concrete in accordance with ASTM C94. Minimum 28 day compressive strength shall be 4000 psi except as follows:

- foundation walls, pile caps, and mats 4,000 psi
- slab on grade 4,000 psi
- footings, stem walls and grade beams 3,000 psi

- Concrete components and characteristics shall conform to:
  - Cementitious conform:
  - ASTM C595 Type II(15), IS(40≤S≤70), IP (40), IT (L≤P≤S≤70),
  - ASTM C115, Type I, II, or Type V if recommended by Geotechnical Engineer for foundation elements.
- Aggregate per ASTM C33. Lightweight aggregate per ASTM C330.
- Maximum 4" slump for all concrete. Do not tamp slabs (use roller bug, vibrating screed or bull float only). Concrete containing superplasticizer admixture shall have field-verified 3" maximum slump prior to adding admixture and 8" maximum slump at placement.

- Granulated blast-furnace slag (GGBFS) shall be used to replace 70% (max.) of cement by weight. Coordinate quantity of GGBFS with preblended cements containing GGBFS and/or other pozzolans. GGBFS shall conform to ASTM C 989, Grades 100 or 120, and shall be proportioned in accordance with ASTM C 595, and shall follow the guidelines of ACI 233.
- Provide air-entraining admixture at all concrete exposed to freeze/thaw cycles at a rate adequate to provide 6.0% air at point of placement. Do not allow air content of interior concrete finished slabs to exceed 3.0%.
- Concrete shall be free of chloride.
- Mix designs shall be designed by the concrete production facility in accordance with ACI 301 and approved by the Structural Engineer prior to construction.

- Provide sleeves for utility openings in concrete before placing concrete. Do not cut any conflicting reinforcing.
- The contractor shall provide and install flood vents, as required, per the manufacturer's requirements, and shall coordinate their locations in the concrete or masonry walls with the Architect and Structural Engineer prior to concrete placement.

- No construction joints other than those shown on the drawings shall be installed without approval of the Structural Engineer. Provide 3/4" chamfer at all exterior corners and edges of permanently exposed concrete.
- Do not subject concrete to any procedure that will cause segregation. Deposit concrete as near as practicable to the final position to avoid segregation.

**1 TYPICAL CONCRETE WALL REINF.** 3/4" = 1'-0"

40 BAR DIA, LAP (2'-0" MINIMUM) -TYPICAL  
TYPICAL VERTICAL BAR OR DOWEL  
CORNER  
INTERSECTION  
END/JAMB  
1 1/2" CLR.

ALTERNATE BENDS  
CORNERS BARS TO MATCH AND LAP HORIZONTAL WALL REINF, TYPICAL

**2 UTILITIES THROUGH/UNDER FOUNDATION** 3/4" = 1'-0"

SLEEVE  
STEM WALL  
FOOTING  
UTILITY TO CLEAR SLEEVE BY 1/2" ALL AROUND.  
FILL WITH COMPRESSIBLE INSULATION  
NOTES:  
1. NO UTILITIES SHALL PASS THROUGH FOOTING.  
2. NO UTILITIES SHALL PASS THROUGH OR UNDER COLUMN FOOTINGS.  
3. PROVIDE 4" MINIMUM SPACING BETWEEN MULTIPLE PIPES.

**3 TYPICAL REINFORCING BAR DETAILS** 3/4" = 1'-0"

BAR SIZE BEND DIA "D" (INSIDE OF BAR)  
#3 THRU #5 4d<sub>b</sub>  
#6 THRU #8 6d<sub>b</sub>  
#9, #10, #11 8d<sub>b</sub>  
#14 AND #18 10d<sub>b</sub>

12d<sub>b</sub> FOR #6, #7, #8  
6d<sub>b</sub> FOR #3, #4, #5 OR 4" MIN.  
4d<sub>b</sub> OR 2 1/2" MINIMUM  
6d<sub>b</sub> OR 4" MIN.  
135°  
180° HOOK  
90° HOOK  
135° HOOK  
90° HOOK  
STANDARD HOOKS FOR STIRRUPS AND TIE REINFORCING  
STANDARD HOOKS FOR PRIMARY REINFORCING

LAP - SEE GENERAL STRUCTURAL NOTES.  
MAX. 1/5 LAP BUT NOT MORE THAN 6"  
WIR E TIES  
SPLICING DETAILS  
6 MIN. FOR COLUMN, 12 MIN. FOR BEAMS  
BAR OFFSET  
1d<sub>b</sub>(1" MINIMUM.)  
BAR CLEARANCE

**4 TYPICAL CORNER REINFORCING & CONSTRUCTION JOINTS IN CONCRETE FOOTINGS** 3/4" = 1'-0"

CONTINUOUS KEY - SEE TYPICAL KEY IN CONCRETE DETAIL  
FOOTING THICKNESS "T"  
SECTION  
CORNER BARS X 24" -TYPICAL  
FOOTING REINFORCING PER PLAN  
LAP SPLICING PER GENERAL STRUCTURAL NOTES  
CONSTRUCTION JOINT  
INTERSECTION  
MAXIMUM SLOPE BETWEEN BOTTOM OF FOOTINGS SHALL BE 45 DEGREES. STEP FOOTINGS AS REQUIRED.

**5 ADJACENT FOOTING DETAIL** 3/4" = 1'-0"

CONTINUOUS KEY - SEE TYPICAL CONCRETE KEY  
REINF.  
VAPOR RETARDER  
SAW CUT  
REINF. CLR.  
SAW/CUT DEPTH  
CONCRETE SLAB  
REINF. - DO NOT CUT  
VAPOR RETARDER  
CONTROL JOINT (CTJ)

**6 TRENCH IN SLAB-ON-GRADE** 3/4" = 1'-0"

W.W.F. (SEE PLANS)  
(N) CONCRETE SLAB  
#3 DOWELS X 18" AT 24" O.C.  
EPOXY GROUTED IN 1/2" MINIMUM DRILLED HOLES  
(E) CONCRETE SLAB  
4" CONCRETE SLAB  
W.W.F. (SEE PLANS)

**7 STAIR ON GRADE DETAIL** 3/4" = 1'-0"

SEE ARCHITECTURAL DRAWINGS  
CONCRETE SLAB  
TOOLED EDGE  
PROVIDE (1) #4 CONT. EA. SIDE & END w/ DIAG. AT CORNERS  
W.W.F.

**8 SLAB STEP DETAIL AT LULA LIFT MAT** 3/4" = 1'-0"

SEE ARCHITECTURAL DRAWINGS  
CONCRETE SLAB  
TOOLED EDGE  
PROVIDE (1) #4 CONT. EA. SIDE & END w/ DIAG. AT CORNERS  
W.W.F.  
SLAB THICKNESS  
10"

**9 ADJACENT FOOTING DETAIL** 3/4" = 1'-0"

NOTES:  
1. REINF. SHALL BE SUPPORTED AS REQUIRED TO PROVIDE CLEARANCE AS SHOWN. USE CONSTRUCTION JOINT DETAIL WHERE INDICATED ON PLAN OR BETWEEN SLAB POURS.  
2. INSTALL CRACK CONTROL/CONSTRUCTION JOINTS AT ALL COLUMNS, INTERIOR CORNER, AND AT A MAXIMUM LENGTH-TO-WIDTH RATIO OF 1.5:1.  
3. SAW CUT SHALL BE MADE SOON ENOUGH TO PREVENT CRACKING, BUT NOT SO SOON AS TO CAUSE SPALING OF THE CONCRETE WHILE SAWING. SAW CUT DEPTHS SEE SCHEDULE.

SLAB THICKNESS	MAX. CONTROL JOINT SPACING	REINF. CLEARANCE	SAW CUT DEPTH
4"	12'-0"	1 1/2"	1"
5"	15'-0"	2"	1 1/2"
6"	18'-0"	2 1/2"	2"

**10 SLAB ON GRADE AT EXISTING SLAB DETAIL** 3/4" = 1'-0"

TOP PLATE SPLICING  
(10) 16d NAILS EACH SIDE OF SPLICE - STAGGER 6'-0" MINIMUM  
(3) 16d NAILS EA PLY OF HEADER  
KING STUD PER HEADER DETAIL  
OPENING HEADER  
(2) x2 WOOD PLATE WITH 16d NAILS @12" O.C.  
SIMPSON A34 - TYPICAL BOTH SIDES @ OPENINGS OVER 5 FT  
HEADER DOOR  
HEADER WINDOW  
HEADER SILL  
2x PRESSURE TREATED SILL PLATE W/ 1/2"X12" A.B. @ 31" O.C. MAX MIN. OF 2 BOLTS PER PLATE. FOR ADDITIONAL NEUTRAL POINT BOTTOM PLATES MAY BE REQUIRED. SEE PLANS AND SECTIONS  
5" MINIMUM  
8" MAXIMUM  
16d NAILS @12" O.C. STAGGERED STUD TO STUD - TYPICAL JACK STUDS PER HEADER DETAIL  
(2) 16d NAILS STUD TO PLATE, TOP & BOTTOM  
(3) 16d NAILS EA PLY OF SILL  
JACK STUD BELOW SILL  
FLOOR JOIST PER PLAN  
FLOOR SHEATHING, ATTACH PER GENERAL NOTES  
INSTALL STUD PACK EQUAL TO WIDTH OF BEAM ABOVE U.N.O.  
MULTI-PLY BEAM PER PLAN  
METAL JOIST HANGER

**11 MULTI-PLY BEAM ASSEMBLY** 3/4" = 1'-0"

HEADER PER SCHEDULE  
FLOOR JOIST PER PLAN  
FLOOR SHEATHING, ATTACH PER GENERAL NOTES  
INSULATION CAVITY BETWEEN MEMBERS AS APPLICABLE AND INDICATED ON ARCH DWGS  
HEADER AT EXT. WALL OR BRC WALL  
HEADER AT PART WALLS  
KING STUDS  
OPENING WIDTH  
0'-0" TO 4'-0" (3) - 2 X 8 (2) - 2 X 6  
4'-1" TO 6'-0" (3) - 2 X 12 (2) - 2 X 6 (3) - 2 X 6  
6'-1" TO 8'-0" (3) - 1 3/4" X 9 1/2" LVL (2) - 2 X 8 (3) - 2 X 6  
8'-1" TO 10'-0" (3) - 1 3/4" X 11 7/8" LVL (2) - 2 X 10 (4) - 2 X 6

**12 TYPICAL DRILLED HOLES IN WOOD FRAMING** 3/4" = 1'-0"

NOTES:  
1. NOTCHING OF JOISTS, BEAMS AND STUDS IS NOT ALLOWED.  
2. HOLES SHALL BE PERMITTED ONLY IN THE MIDDLE 1/3 OF THE MEMBER.  
3. HOLES IN WOOD "I" JOISTS, LVLs, PSL, AND OTHER ENGINEERED LUMBER PRODUCTS ARE ONLY AS ALLOWED BY THE MANUFACTURER.

JOISTS AND BEAMS  
NOTES:  
1. NOTCHING OF JOISTS, BEAMS AND STUDS IS NOT ALLOWED.  
2. HOLES SHALL BE PERMITTED ONLY IN THE MIDDLE 1/3 OF THE MEMBER.  
3. HOLES IN WOOD "I" JOISTS, LVLs, PSL, AND OTHER ENGINEERED LUMBER PRODUCTS ARE ONLY AS ALLOWED BY THE MANUFACTURER.

**13 TYPICAL WOOD NAILING** 3/4" = 1'-0"

CONNECTION	NAILING
JOIST TO SILL OR GIRDER, TOENAIL	(3) 8d
BRIDGING TO JOIST, TOENAIL EACH END	(2) 8d
SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL	16d AT 16" O.C.
SOLE PLATE TO JOIST OR BLOCKING AT SHEAR WALL	(3) 16d (3 1/2" x 0.135") AT 16" O.C.
TOP PLATE TO STUD, END NAIL	(2) 16d
STUD TO SOLE PLATE	(2) 16d END NAIL
DOUBLE STUD, FACE NAIL	16d AT 24" O.C.
DOUBLE TOP PLATES, FACE NAIL	16d AT 16" O.C.
RIM JOIST TO TOP PLATE, TOENAIL	8d AT 6" O.C.
TOP PLATE, LAPS AND INTERSECTIONS, FACE NAIL	(2) 16d
CONTINUOUS HEADER, TWO PIECES	16d AT 16" O.C. ALONG EACH EDGE
CEILING JOISTS TO PLATE, TOENAIL	(3) 8d
CONTINUOUS HEADER TO STUDS, TOENAIL	(4) 8d
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	(3) 16d
CEILING JOIST TO PARALLEL RAFTERS, FACE NAIL	(3) 16d
RAFTER TO PLATE, TOENAIL	(3) 8d
BUILT-UP CORNER STUDS	16d AT 24" O.C.

1. THIS SCHEDULE SHALL APPLY UNLESS NOTED OTHERWISE.  
2. REFER TO IBC TABLE FOR ADDITIONAL NOTES.

**14 TYPICAL WOOD STUD WALL FRAMING** 3/4" = 1'-0"

HEADER PER SCHEDULE  
FLOOR JOIST PER PLAN  
FLOOR SHEATHING, ATTACH PER GENERAL NOTES  
INSULATION CAVITY BETWEEN MEMBERS AS APPLICABLE AND INDICATED ON ARCH DWGS  
HEADER AT EXT. WALL OR BRC WALL  
HEADER AT PART WALLS  
KING STUDS  
OPENING WIDTH  
0'-0" TO 4'-0" (3) - 2 X 8 (2) - 2 X 6  
4'-1" TO 6'-0" (3) - 2 X 12 (2) - 2 X 6 (3) - 2 X 6  
6'-1" TO 8'-0" (3) - 1 3/4" X 9 1/2" LVL (2) - 2 X 8 (3) - 2 X 6  
8'-1" TO 10'-0" (3) - 1 3/4" X 11 7/8" LVL (2) - 2 X 10 (4) - 2 X 6

**15 FLOOR JOIST AT FLUSH-FRAMED BEAM** 3/4" = 1'-0"

HEADER PER SCHEDULE  
FLOOR JOIST PER PLAN  
FLOOR SHEATHING, ATTACH PER GENERAL NOTES  
INSULATION CAVITY BETWEEN MEMBERS AS APPLICABLE AND INDICATED ON ARCH DWGS  
HEADER AT EXT. WALL OR BRC WALL  
HEADER AT PART WALLS  
KING STUDS  
OPENING WIDTH  
0'-0" TO 4'-0" (3) - 2 X 8 (2) - 2 X 6  
4'-1" TO 6'-0" (3) - 2 X 12 (2) - 2 X 6 (3) - 2 X 6  
6'-1" TO 8'-0" (3) - 1 3/4" X 9 1/2" LVL (2) - 2 X 8 (3) - 2 X 6  
8'-1" TO 10'-0" (3) - 1 3/4" X 11 7/8" LVL (2) - 2 X 10 (4) - 2 X 6

**16 TYPICAL WOOD STUD WALL OPENING SCHEDULE** 3/4" = 1'-0"

NOTES:  
• SCHEDULE APPLIES UNLESS OTHERWISE NOTED ON PLANS.  
• SEE TYPICAL WOOD STUD WALL FRAMING DETAIL FOR ADDITIONAL INFORMATION.  
• 2X STUDS ARE SPF #2 OR BETTER.

**17 TYPICAL STRUCTURAL DETAILS**

28 Eliot Street, Natick, MA 01760

**Eastern Acrobatics**

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GALLANT STRUCTURAL NO. 4955  
PROFESSIONAL ENGINEER  
LAWRENCE SOUTHERN, PE  
Duly signed by Lawrence Soutthern  
Date: 07/21/2022  
Drawing Set Type and Issue Date:  
DESIGN DEVELOPMENT 2-23-22  
DESIGN DEVELOPMENT 3-29-22  
CONSTRUCTION DOCUMENT PROGRESS 6-14-22  
PERMIT SET 7-21-22



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**Eastern Acrobatics**  
28 Eliot Street, Natick, MA 01760

**SANTUARY FRAMING PLAN**

**STRUCTURAL PROFESSIONAL ENGINEER**  
No. 49553  
Digitally signed by Unacademy  
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DESIGN DEVELOPMENT SET 3-28-22  
CONSTRUCTION DOCUMENT PROGRESS 6-14-22  
PERMIT SET 7-21-22

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**Annotations and Notes:**

- ADD (2) 2X12 BLOCKING BELOW WALLS TO SUPPORT STAIR LANDING ABOVE
- SISTER (E) JOIST W/ (N) 1 3/4" X 11 7/8" LVL AT STAIR STRINGER SUPPORT LOCATION
- (E) 2 3/4" X 11 1/2" JOISTS @ 16" O.C. TO REMAIN (V.I.F.)
- SISTER OR REPLACE (E) HEADED-OFF JOIST W/ (N) 1 3/4" X 11 7/8" LVL
- (E) 2 3/4" X 11 1/2" HEADERS TO BE REMOVED
- ADD 2X STABILITY BLOCKING BETWEEN PAIRS OF ENDS OF JOISTS OR FRAMING ANGLES EA. SIDE + 0' - 0" EL + 1' - 3" EL
- (E) RIGGING SYSTEM POSTS (BY OTHERS) TO REMAIN (TYP.) IF ANALYSIS OF (E) RIGGING IS REQUIRED, BUDGET TO SISTER ADJACENT JOISTS W/ (2) 1 3/4" X 11 7/8" LVLs AND LVL BLOCKING BELOW RIGGING COLUMN PLATES. (TYP.)
- PROVIDE EITHER FULL-HEIGHT BLOCKING BETWEEN ENDS OF BEAMS OR SIMSON A34 FRAMING ANGLES EA. SIDE OF BEAM FASTENED TO (E)(N) BLOCKING OR THE TOP OF THE (E) DROPPED 7 1/2" X 11 1/2" BEAM (TYP.)
- SISTER OR REPLACE (E) JOISTS DAMAGED FROM PREVIOUS PLUMBING WORK W/ (N) 1 3/4" X 11 7/8" LVL (V.I.F.) (TYP.)
- CUT AND SUPPORT EXISTING CONFLICTING JOIST W/ NEW (N) 2 1 3/4" X 11 7/8" LVL WHERE RIGGING COLUMNS CONFLICT WITH (E) JOISTS TO REMAIN, SISTER W/ (N) 1 3/4" X 11 7/8" LVL
- (E) 2 3/4" X 11 1/2" JOISTS @ 16" O.C. TO REMAIN (V.I.F.)
- VERIFY RIGGING CONFLICTS IN FIELD, PER RIGGING CONTRACTOR AND OWNER, 1 LOCATION HAS A CONFLICT BUT V.I.F. (TYP. ALL RIGGING COLUMN LOCATIONS).
- PROVIDE (2) 2x FULL-DEPTH BLOCKING TIGHTAROUND RIGGING COLUMN (TYP.)
- EXISTING STEPS TO REMAIN
- PROVIDE (N) (3) 1 3/4" X 14" LVL DROPPED BEAM TO SUPPORT (E) RAISED PLATFORM JOISTS. PROVIDE NEW BLOCKING AS REQUIRED TO ACHIEVE ELEVATION FOR PROPER BEARING OF UPPER LEVEL JOISTS (TYP. OF 4)
- SISTER (E) 2 3/4" X 11 1/2" DROPPED BEAM W/ (N) 1 3/4" X 11 7/8" LVL (RIP TO MATCH (E) DEPTH AT (E) BEARING BLOCK). (TYP. OF 4)
- NOTE #1: (E) WOOD PLANK DECKING AT RAISED PLATFORM TO REMAIN (V.I.F.)
- REPLACE (E) 3" X 11 1/2" DROPPED BEAM W/ (N) 3 1 3/4" X 14". REMOVE EXISTING BEARING BLOCK ABOVE (E) 7 1/2" X 11 3/4", PROVIDE NEW BLOCKING AS REQUIRED TO ACHIEVE ELEVATION FOR PROPER BEARING OF UPPER LEVEL JOISTS (TYP. OF 4)
- REBUILD MASONRY PIER W/ SOLID BRICK MASONRY BELOW EXISTING WOOD BEAMS ALONG GRID LINES 2 AND 3. MINIMUM PIER SIZE SHALL BE 8" X 16" CENTERED BELOW BEAMS.
- (E) FRAMING SOUTH OF GRID LINE 3 IS COVERED BY AN EXISTING CEILING FINISH, REMOVE FOR VERIFICATION OF CONDITION OF (E) FRAMING TO REMAIN. EXISTING SINK AND CABINET TO REMAIN
- NOTE #8  
(E) 7 1/2" X 11 3/4"
- 43 3/4" FINISHED FACE TO RAIL CL
- (N) (2) 2x10 HEADERS AND SILLS AT EACH ELEVATOR DOOR OPENING (TYP.)
- (E) 2 3/4" X 11 1/2" JOISTS @ 16" O.C. TO REMAIN (V.I.F.)
- BEAR (E) JOISTS ON LULA STUD WALLS. ALTERNATIVELY, PROVIDE (N) 1 3/4" X 11 7/8" LEDGER TO SUPPORT (E) JOISTS
- REPLACE EXISTING OPEN HANDRAILS WITH CODE COMPLIANT GUARDRAILS AT EACH END OF STAIR. SEE LANDSCAPE DRAWINGS.
- (N) STUD WALL BELOW W/ 2x4 STUDS @ 16" O.C.
- (N) STUD WALLS W/ 2x6 PT STUD @ 16" O.C.
- (N) (3) 2x6 PT POSTS (1 JACK / 2 KINGS) (TYP.)
- (N) 2X10 PT LEDGER
- (N) 2x8 PT RAFTERS @ 16" O.C.
- (N) 2x12 FRAMING @ 16" O.C. SLOPED OR TOP EDGE CUT ON SLOPE TO SUPPORT RAMP (SEE ARCH. DRAWINGS FOR RAMP DETAILS) SUPPORT ON (E) SISTERED DROPPED BEAM AND HUNG FROM NEW LVL BEAM
- WHERE (E) JOISTS ARE TO BE CUT AND SUPPORTED ON NEW FLUSH-FRAMED BEAMS, PROVIDE NEW JOIST HANGERS (TYP.)
- (E) STAIRS TO REMAIN. SEE ARCH. DRAWINGS.
- OPEN TO BELOW
- LULA ELEVATOR
- 1' - 6" X 11' - 6"
- 42" HIGH WALL W/ HARDWOOD CAP, TYP.
- (N) (2) 2x10 PT RIDGE BEAM
- (N) (2) 2x6 PT HEADERS
- STAIR 1 ST-1
- OPEN BQ
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# **Eastern Acrobatics**

28 Eliot Street, Natick, MA 01760

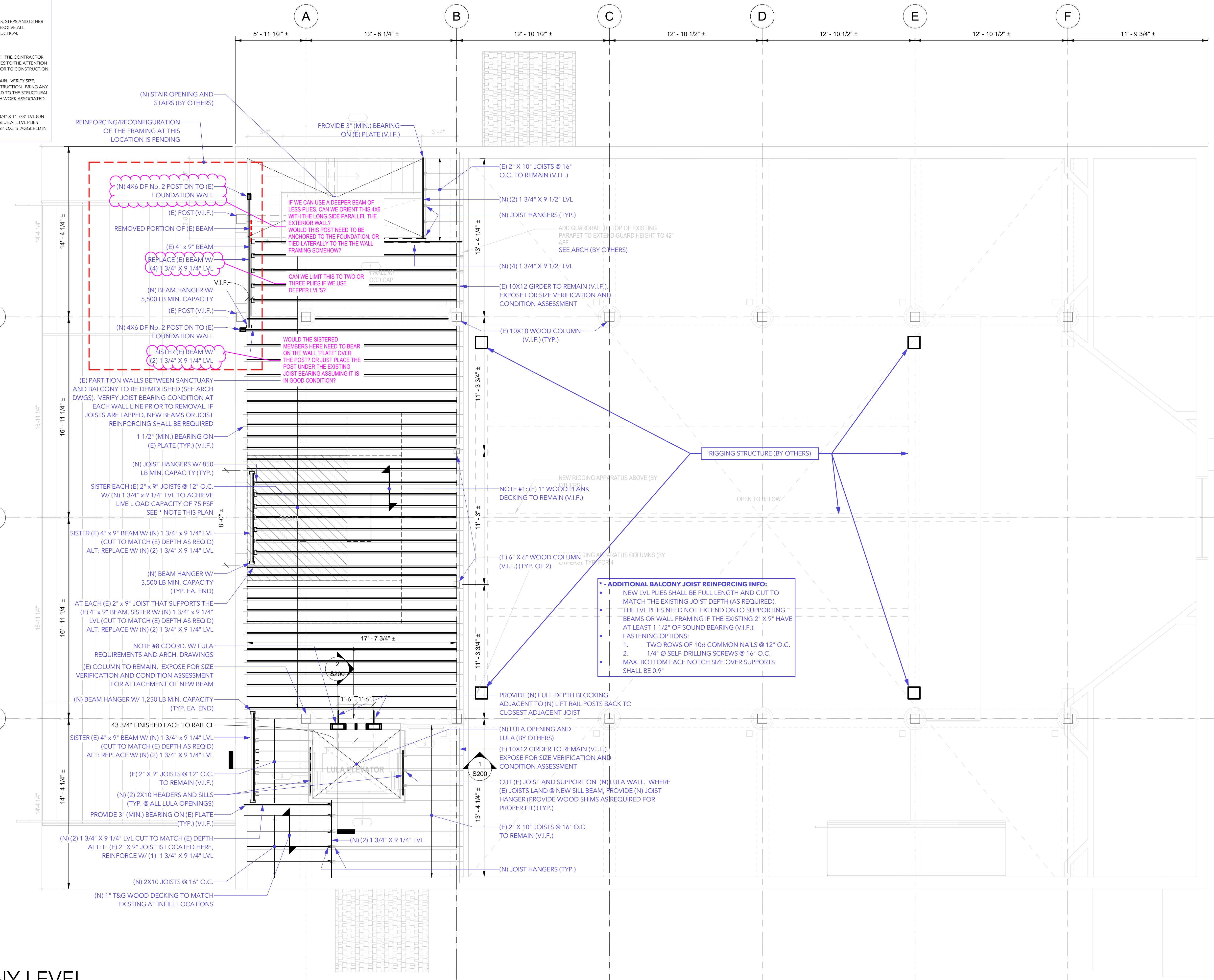
re: 7/21/22  
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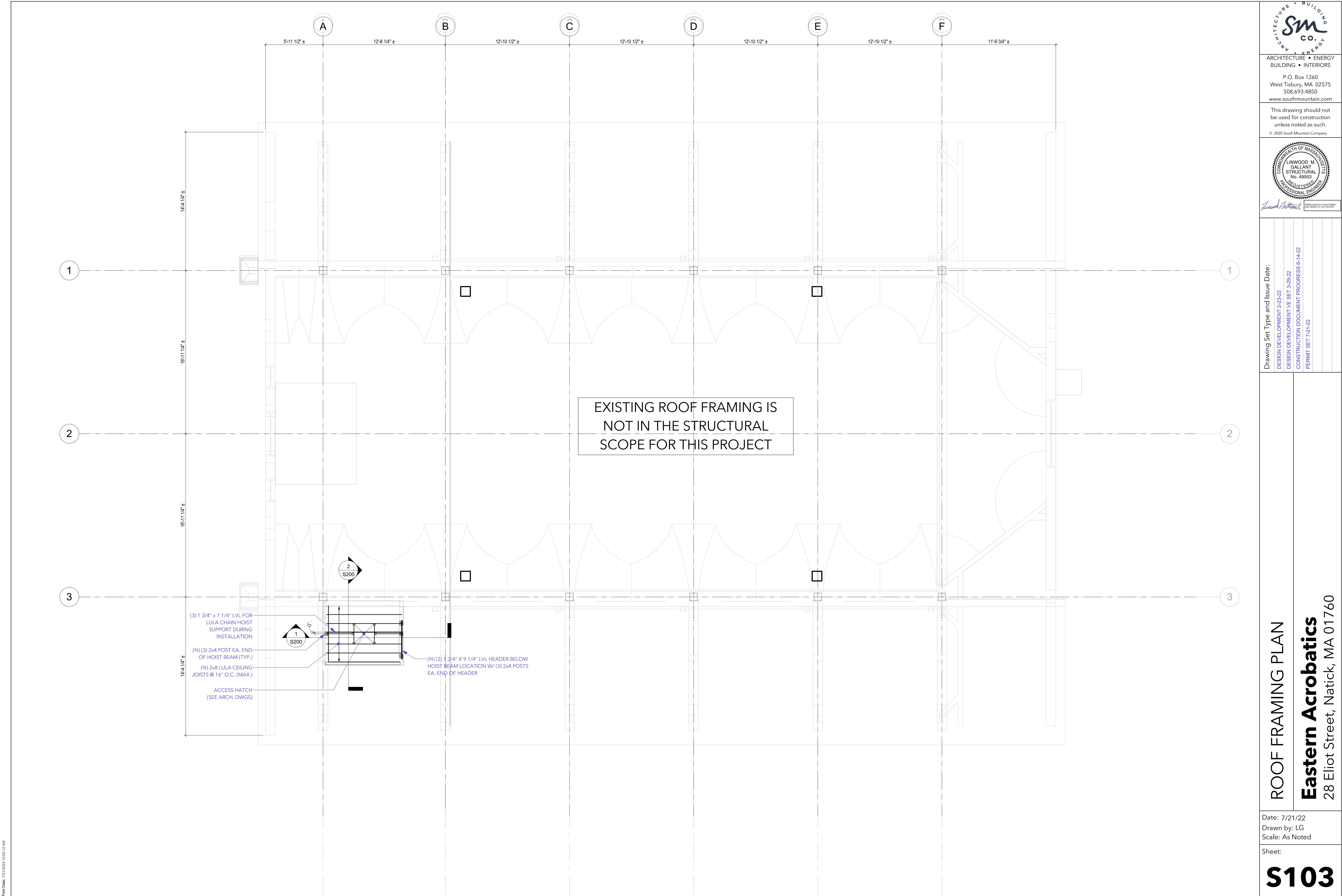
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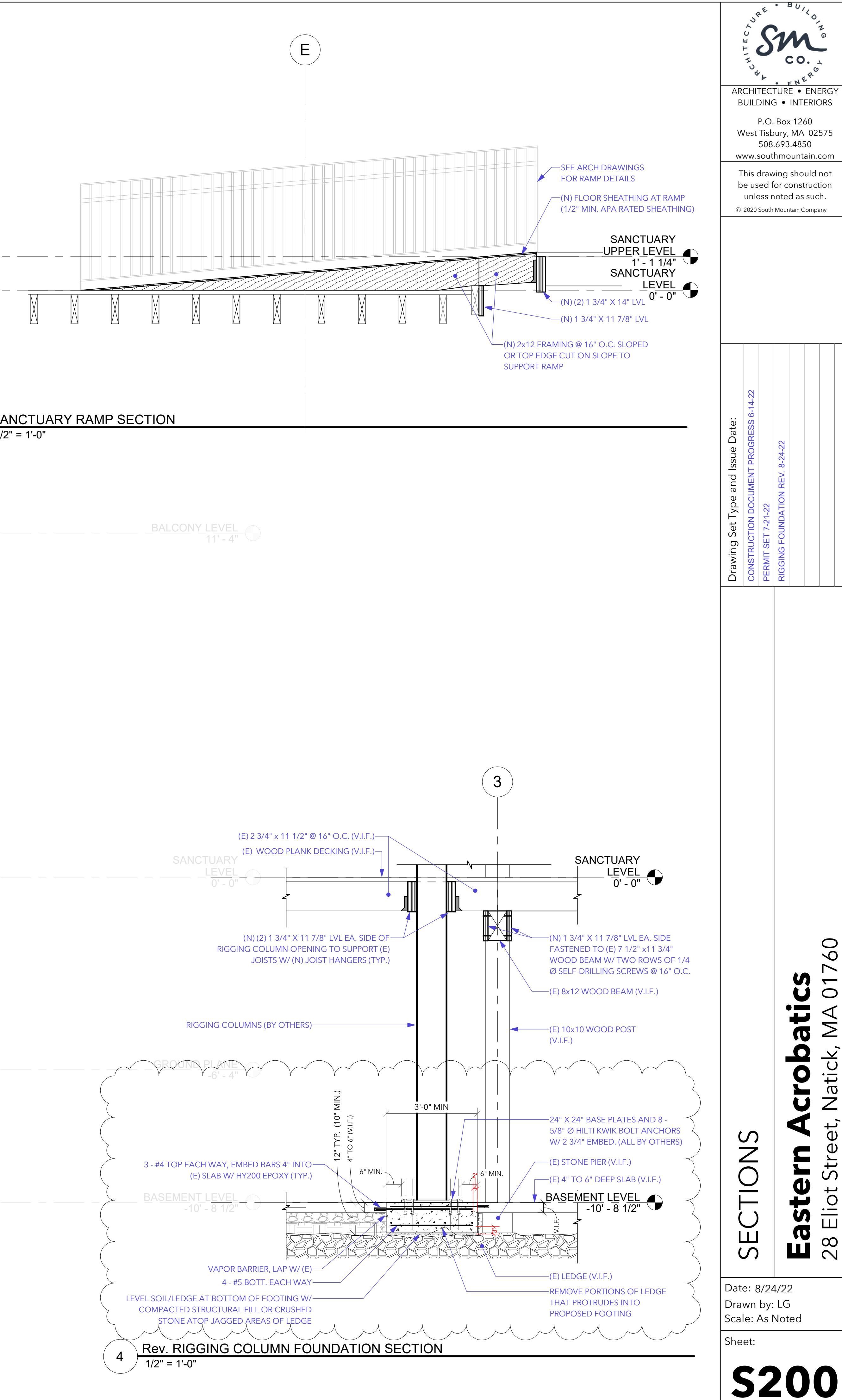
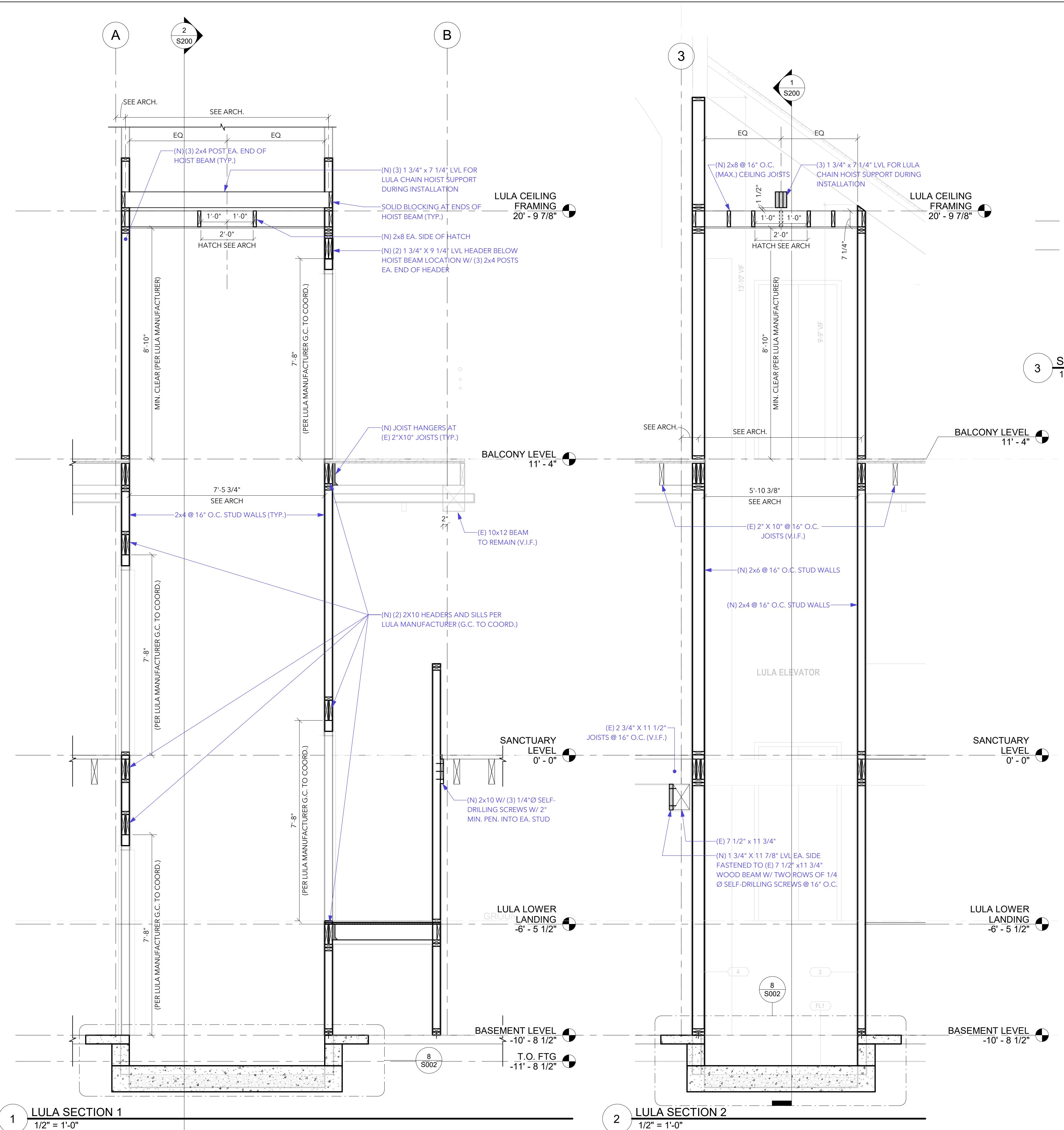
BALCONY FRAMING NOTES	
1.	INDICATES THE SPAN DIRECTION OF EXISTING T&G DECKING (V.I.F.). REPLACE DETERIORATED AREAS IN KIND (TYP.)
2.	INDICATES EXISTING STRUCTURAL MEMBERS TO BE DEMOLISHED.
	— INDICATES NEW STRUCTURAL MEMBERS
	— INDICATES EXISTING STRUCTURAL MEMBERS
3.	SEE SHEET 5001 FOR GENERAL STRUCTURAL NOTES.
4.	COORDINATE ALL DIMENSIONS, ELEVATIONS, SLOPES, STEPS AND OTHER INFORMATION WITH ARCHITECTURAL DRAWINGS. RESOLVE ALL DISCREPANCIES WITH ARCHITECT PRIOR TO CONSTRUCTION.
5.	DO NOT SCALE PLANS OR DETAILS.
6.	± INDICATES DIMENSIONS TO BE FIELD VERIFIED WITH THE CONTRACTOR PRIOR TO CONSTRUCTION. BRING ALL DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
7.	(E) INDICATES EXISTING FRAMING MEMBERS TO REMAIN. VERIFY SIZE, EXTENTS, AND CONDITION IN FIELD PRIOR TO CONSTRUCTION. BRING ANY DISCREPANCIES AND DAMAGE IDENTIFIED IN THE FIELD TO THE STRUCTURAL ENGINEER AND ARCHITECT PRIOR TO PROCEED WITH WORK ASSOCIATED WITH THE FRAMING IN QUESTION.
8.	LULA BALCONY POSTS SHALL CONSIST OF (3) 1 3/4" X 11 7/8" LVL (ON THE FLAT) W/ 1 3/4" X 5 1/2" LVL STUDS EACH SIDE. GLUE ALL LVL PLIES TOGETHER AND FASTEN WITH #8 WOOD SCREWS @ 6" O.C. STAGGERED IN TWO ROWS.

**1** BALCONY LEVEL

1/4" = 1'-0"









## EASTERN ACROBATICS

28 Eliot Street  
Natick, MA 01760

PROJECT

THE TRUST INC.  
FBO AUSTIN S. LIN

28 ELIOT ST.  
NATICK, MA 01760

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REVISIONS #1 08/05/2022  
CD SET 07/15/2022

PHASE

2021-003 PROJECT NUMBER

## FIRE PROTECTION LEGEND, NOTES, AND ABBREVIATIONS

**FP001**

### FIRE PROTECTION LEGEND

	SPRINKLER HEAD - CONCEALED PENDANT ORDINARY TEMPERATURE, QUICK RESPONSE	ARCH	ARCHITECT
	SPRINKLER HEAD - UPRIGHT, ORDINARY TEMPERATURE, QUICK RESPONSE TYPE. REFER TO PLANS FOR TYPE.	AFF	ABOVE FINISHED FLOOR
	SPRINKLER HEAD - DRY CONCEALED PENDANT, ORDINARY TEMPERATURE, QUICK RESPONSE TYPE	CLG	CEILING
	SPRINKLER HEAD - DRY CONCEALED PENDANT, ORDINARY TEMPERATURE, QUICK RESPONSE TYPE	CONT	CONTINUATION
	DCV DOUBLE CHECK VALVE ASSEMBLY	CTE	CONNECT TO EXISTING
	DR DRINKING FOUNTAIN	DR	DRINKING FOUNTAIN
	DS DRY SYSTEM	DS	DRY SYSTEM
	DWG DRAWING	DWG	DRAWING
	SPRINKLER HEAD GUARD	EC	ELECTRICAL CONTRACTOR
	ELBOW UP OR RISE	ELEC	ELECTRICAL
	ELBOW DOWN OR DROP	ETBR	EXISTING TO BE REMOVED
	ETR	EXISTING TO REMAIN	
	WS WET SYSTEM SPRINKLER PIPING	FOV	FLOOR CONTROL VALVE ASSEMBLY
	DS DRY SYSTEM SPRINKLER PIPING	FFE	FINISHED FLOOR ELEVATION
	CAP	FT	FOOT/FEET
	FDC FIRE DEPARTMENT CONNECTION	GC	GENERAL CONTRACTOR
	FVC FLOOR CONTROL VALVE ASSEMBLY	GPM	GALLON PER MINUTE
	DCV DOUBLE CHECK VALVE ASSEMBLY	MIN	MINIMUM
	ALARM CHECK VALVE	MAX	MAXIMUM
	CHECK VALVE	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
	RPFP REDUCED PRESSURE ZONE BACKFLOW PREVENTER	NIC	NOT IN CONTRACT
	NTS NOT TO SCALE	OED	OPEN-END DRAIN
	KEYNOTE DESIGNATION / DRAWING KEYNOTE	PC	PLUMBING CONTRACTOR
	DETAIL DESIGNATION NUMBER	SPR	SPRINKLER PIPING
	DRAWING NUMBER	WS	WET SYSTEM

### FLOW DATA

HYDRAULIC CALCULATIONS FOR THIS DESIGN HAS BEEN BASED ON THE FOLLOWING MINIMUM FLOW CRITERIA:	
STATIC PRESSURE	XX PSI
RESIDUAL PRESSURE	X PSI
FLOW	XX GPM
LOCATION: XXXX	
DATE OF FLOW TEST: XXX	
THE HYDRANT FLOW TEST DATA LISTED SHALL NOT BE USED BY THE SPRINKLER CONTRACTOR TO PERFORM THE HYDRAULIC CALCULATIONS FOR THE SPRINKLER CONTRACTOR SHOP DRAWINGS. THE SPRINKLER CONTRACTOR SHALL PERFORM A NEW HYDRANT FLOW TEST TO OBTAIN CURRENT FLOW AND PRESSURE, AND SHALL USE THIS NEWLY OBTAINED DATA TO PERFORM THE HYDRAULIC CALCULATIONS OF THE SPRINKLER SYSTEM. THE HYDRANT FLOW TEST SHALL BE PERFORMED IN ACCORDANCE WITH NFPA-13. THE SPRINKLER CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT, PAY ALL FEES, AND PERFORM ALL REQUIRED COORDINATION WITH THE LOCAL WATER AUTHORITY TO PERFORM THE FLOW TEST.	
DESIGN CRITERIA	
GENERAL BUILDING AREAS	MECHANICAL ROOMS, STORAGE ROOMS, SIMILAR AREAS
LIGHT HAZARD OCCUPANCY 0.10 GPM PER 1,500 SQUARE FEET 100 GPM HOSE STREAM ALLOWANCE	ORDINARY HAZARD GROUP 1 & 2 0.15/0.20 GPM PER 1,500 SQUARE FEET 250 GPM HOSE STREAM ALLOWANCE
UNHEATED ATTIC AREAS	
LIGHT HAZARD OCCUPANCY 0.10 GPM PER 2,335 SQUARE FEET 100 GPM HOSE STREAM ALLOWANCE	
NOTES: ALL DESIGN CRITERIA SHALL BE PER NFPA-13, UNLESS DIRECTED OTHERWISE BY BUILDING'S INSURANCE AUTHORITIES.	

### GENERAL NOTES

1. ALL NEW FIRE PROTECTION SYSTEMS SHALL BE SEISMICALLY BRACED, IF REQUIRED, ACCORDING TO THE APPLICABLE SECTIONS OF THE MASSACHUSETTS STATE BUILDING CODE, AND NFPA-13 LATEST ACCEPTED EDITIONS.
2. ALL FIRE PROTECTION SYSTEMS, EQUIPMENT AND PIPING SHALL BE DESIGNED, INSTALLED AND TESTED BY A SPRINKLER CONTRACTOR LICENSED OR EXPERIENCED IN THE STATE OF MASSACHUSETTS IN THE DESIGN, INSTALLATION, AND TESTING OF SPRINKLER SYSTEMS.
3. ALL WORK PERFORMED SHALL CONFORM TO THE APPLICABLE SECTIONS OF THE MASSACHUSETTS STATE BUILDING CODE AND NFPA-13 LATEST ACCEPTED EDITION AS WELL AS ALL RULES AND REGULATIONS OF THE AUTHORITY HAVING JURISDICTION.
4. ALL PIPING SHALL BE RUN CONCEALED AND ABOVE CEILING, UNLESS OTHERWISE NOTED. CARE SHALL BE TAKEN TO RUN ALL PIPING AS TIGHT TO CEILING AND WALLS AS POSSIBLE. ALL PIPING SHALL FOLLOW THE BUILDING LINES AND SHALL RUN PARALLEL TO WALL IN A NEAT MANNER.
5. CONTRACTOR SHALL PROVIDE FIRESTOPPING FOR ALL PENETRATIONS THRU FIRE WALLS AND FIRE RATED SEPARATIONS.
6. ALL SPRINKLER PIPING AND HEADS ARE SHOWN DIAGRAMMATICALLY. ALL SPRINKLER HEADS SHALL BE INSTALLED SYMMETRICALLY AND HARMONIOUSLY IN ALIGNMENT. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES BEFORE WORK BEGINS TO ENSURE THAT NO INTERFERENCES EXIST AND THAT ALL COMPONENTS OF THE SPRINKLER SYSTEM WILL FIT INTO THE SPACE.
7. CONTRACTOR SHALL COORDINATE WITH MECHANICAL AND ELECTRICAL CONTRACTORS CONDITIONS FOR LOCATIONS OF DUCTWORK, DIFFUSERS, AND LIGHT FIXTURES.
8. CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN ALL SCAFFOLDING, HOISTING EQUIPMENT, AND DERRICKS NECESSARY FOR INSTALLATION OF WORK.
9. THE DRAWINGS ARE FOR PRICING PURPOSES ONLY. THE CONTRACTOR SHALL PRODUCE A COMPLETE SET OF WORKING FIRE PROTECTION DRAWINGS IN ACCORDANCE WITH NFPA-13 LATEST ACCEPTED EDITION. THE SYSTEM SHALL BE HYDRAULICALLY CALCULATED PER THE DESIGN CRITERIA REQUIRED BY CODE. ALL DRAWINGS AND CALCULATIONS SHALL BE STAMPED AND SIGNED BY THE CONTRACTOR'S REGISTERED FIRE PROTECTION ENGINEER, AND SHALL BE SUBMITTED TO THE LOCAL FIRE DEPARTMENT FOR APPROVAL. THIS SHALL BE DONE PRIOR TO THE COMMENCEMENT OF ANY SPRINKLER WORK.
10. AN ADDITIONAL SET OF STAMPED FIRE PROTECTION DRAWINGS AND CALCULATIONS AS DESCRIBED ABOVE SHALL BE SUBMITTED TO THE OWNERS FOR APPROVAL. THIS SHALL BE DONE PRIOR TO THE COMMENCEMENT OF ANY SPRINKLER WORK.
11. WRITTEN APPROVAL OF THE SPRINKLER CONTRACTOR'S SHOP DRAWINGS AND HYDRAULIC CALCULATIONS SHALL BE OBTAINED FROM THE LOCAL FIRE DEPARTMENT AND THE OWNER PRIOR TO THE COMMENCEMENT OF ANY WORK.
12. THE DRAWINGS ARE NOT INTENDED TO SHOW EXACT SPRINKLER HEAD LOCATIONS, NUMBER OF SPRINKLER HEADS, OR THE EXACT ROUTING OF PIPING. THIS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL DRAWINGS FOR ALL CEILING TYPES.
13. SPRINKLER CONTRACTOR SHALL PROVIDE ALL CUTTING AND PATCHING IN ORDER TO ACCOMMODATE THE SPRINKLER WORK.
14. ACTIVE STANDPIPE SYSTEMS SHALL BE PROVIDED THROUGHOUT CONSTRUCTION. COORDINATE LOCATIONS WITH LOCAL FIRE DEPARTMENT.
15. THE CONTRACTOR SHALL MAKE REASONABLE CHANGES TO THE SPRINKLER HEAD LOCATIONS AND SPRINKLER PIPE ROUTES, AS A RESULT OF COORDINATION WITH THE OTHER TRADES AT NO EXTRA COST.
16. THE TERM "CONTRACTOR" SHALL MEAN "SPRINKLER CONTRACTOR".
17. PROVIDE WIRE CAGE GUARD PROTECTION FOR ALL SPRINKLER HEADS INSTALLED WITHIN 8'-0" OFF THE FLOOR.
18. THE FIRE DEPARTMENT CONNECTION TYPES AND LOCATIONS SHALL BE APPROVED BY THE LOCAL FIRE DEPARTMENT PRIOR TO PURCHASE AND INSTALLATION.
19. THE CONTRACTOR SHALL PROVIDE A FIRE DEPARTMENT PERSONNEL STAFFED "FIRE WATCH" DURING ALL WELDING OPERATIONS.
20. ALL MATERIALS AND EQUIPMENT USED FOR FIRE PROTECTION SYSTEMS SHALL BE UL LISTED OR FM APPROVED FOR FIRE PROTECTION SERVICE, AND SHALL BE RATED AT 175 PSI WORKING PRESSURE.
21. THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL FIRE DEPARTMENT FOR TESTING AND ACCEPTANCE OF ALL SPRINKLER WORK. THE CONTRACTOR SHALL FIX ANY DEFICIENCY FOUND DURING TESTING AND SHALL RETEST ALL SPRINKLER SYSTEMS UNTIL THE ENTIRE SYSTEM IS ACCEPTED BY THE LOCAL FIRE DEPARTMENT.
22. THE CONTRACTOR SHALL TEST AND FLUSH ALL SPRINKLER SYSTEMS IN ACCORDANCE WITH NFPA-13 & NFPA-25, AND SHALL PROVIDE FLUSHING AND TESTING REPORTS IN ACCORDANCE WITH NFPA-13 & NFPA-25, AND SHALL SUBMIT THESE REPORTS TO THE LOCAL FIRE DEPARTMENT PRIOR TO FINAL ACCEPTANCE OF THE SPRINKLER SYSTEMS.
23. THE DRAWINGS ARE NOT INTENDED TO SHOW ALL LOCATIONS WHERE FIRE RATED SLEEVES, SEALS OR CORE DRILLING WILL BE REQUIRED. IT SHALL BE THE RESPONSIBILITY OF THE SPRINKLER CONTRACTOR TO COORDINATE WITH THE OWNER FOR LOCATIONS OF ALL FIRE RATED WALLS AND FLOORS AND TO DETERMINE THE LOCATIONS OF ALL FIRE RATED SLEEVES, SEALS AND CORE DRILLING.
24. IT SHALL BE THE RESPONSIBILITY OF THE SPRINKLER CONTRACTOR TO SELECT ALL DESIGN AREAS AND DESIGN DENSITIES AS WELL AS THE NUMBER OF SPRINKLER HEADS IN ALL AREAS OF OPERATION THAT WILL BE USED TO CREATE THE SPRINKLER CONTRACTOR'S SHOP DRAWINGS, AND HYDRAULIC CALCULATIONS. ALL DESIGN AREAS, DESIGN DENSITIES AND THE NUMBER OF OPERATING SPRINKLER HEADS SHALL BE SELECTED BY THE SPRINKLER CONTRACTOR IN ACCORDANCE WITH NFPA-13.
25. THE DRAWINGS ARE NOT INTENDED TO SHOW ALL CEILING CONDITIONS. LIGHT FIXTURES, HVAC DIFFUSERS, MOLDING, SOFFITS OR ANY OTHER FIXTURES OR EQUIPMENT IN THE CEILINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL LIGHT FIXTURES, HVAC DIFFUSERS, MOLDING, SOFFITS, AND ALL OTHER FIXTURES OR EQUIPMENT IN THE CEILINGS AND SHALL INDICATE THESE CONDITIONS ON THE SPRINKLER SYSTEM SHOP DRAWINGS. THE CONTRACTOR SHALL USE THIS COORDINATION INFORMATION TO LOCATE HEADS IN THE BUILDING AND TO CREATE THE SPRINKLER SYSTEM SHOP DRAWINGS. PRIOR TO THE CREATING OF THE SPRINKLER SYSTEM SHOP DRAWINGS, THE CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL DRAWINGS TO VERIFY ALL CEILING ELEVATIONS.
26. THE CONTRACTOR SHALL PAY ALL FEES, OBTAIN ALL PERMITS AND APPROVALS, AND SHALL FURNISH ALL LABOR AND MATERIALS NEEDED FOR THE COMPLETE INSTALLATION OF ALL FIRE PROTECTION SYSTEMS SHOWN ON THE PLANS.
27. PROVIDE SPRINKLER COVERAGE IN COMBUSTIBLE AREAS, AS REQUIRED PER NFPA-13. COMBUSTIBLE SHALL INCLUDE, BUT NOT BE LIMITED TO, SPACES ABOVE CEILING, BALCONIES, APPLICABLE EXTERIOR PROJECTIONS. SPRINKLER CONTRACTOR SHALL COORDINATE SPRINKLER COVERAGE IN SUCH SPACES W/ OTHER TRADES, INCLUDING, BUT NOT LIMITED TO, HVAC, ELECTRICAL, INSULATION, STRUCTURAL. SPRINKLER COVERAGE SHALL BE PROVIDED IN FAN COIL CLOSETS AND CHASES, AS REQUIRED PER NFPA-13.
28. THE SPRINKLER CONTRACTOR SHALL CONDUCT A NEW FIRE HYDRANT FLOW TEST IN ORDER TO OBTAIN CURRENT FLOW AND PRESSURE DATA. THE CONTRACTOR SHALL USE THIS NEWLY OBTAINED DATA TO PERFORM HYDRAULIC CALCULATIONS FOR THE SPRINKLER SYSTEM SHOP DRAWINGS. HYDRAULIC CALCULATIONS SHALL BE STAMPED AND SIGNED BY THE CONTRACTOR'S FIRE PROTECTION ENGINEER, AND SHALL BE SUBMITTED WITH THE SPRINKLER SYSTEM SHOP DRAWINGS TO THE LOCAL FIRE DEPARTMENT AND OWNER INSURANCE AUTHORITY FOR FINAL APPROVAL. THIS SHALL BE DONE PRIOR TO THE COMMENCEMENT OF ANY SPRINKLER WORK.
29. THE SPRINKLER CONTRACTOR SHALL PROVIDE ALL LABORS, MATERIALS, TOOLS, EQUIPMENT AND SHALL PAY ALL FEES AND PERFORM ALL COORDINATION WITH LOCAL WATER AUTHORITY, FIRE DEPARTMENT AND OWNER, THAT IS REQUIRED FOR THE CONDUCTING OF THE NEW FLOW TEST.

REVISIONS #1 08/05/2022  
CD SET 07/15/2022

PHASE

2021-003 PROJECT NUMBER

## FIRE PROTECTION LEGEND, NOTES, AND ABBREVIATIONS

## EASTERN ACROBATICS

28 Eliot Street  
Natick, MA 01760

PROJECT

THE ENTRUST INC.  
FBO AUSTIN S. LIN  
28 ELIOT ST.  
NATICK, MA 01760

OWNER

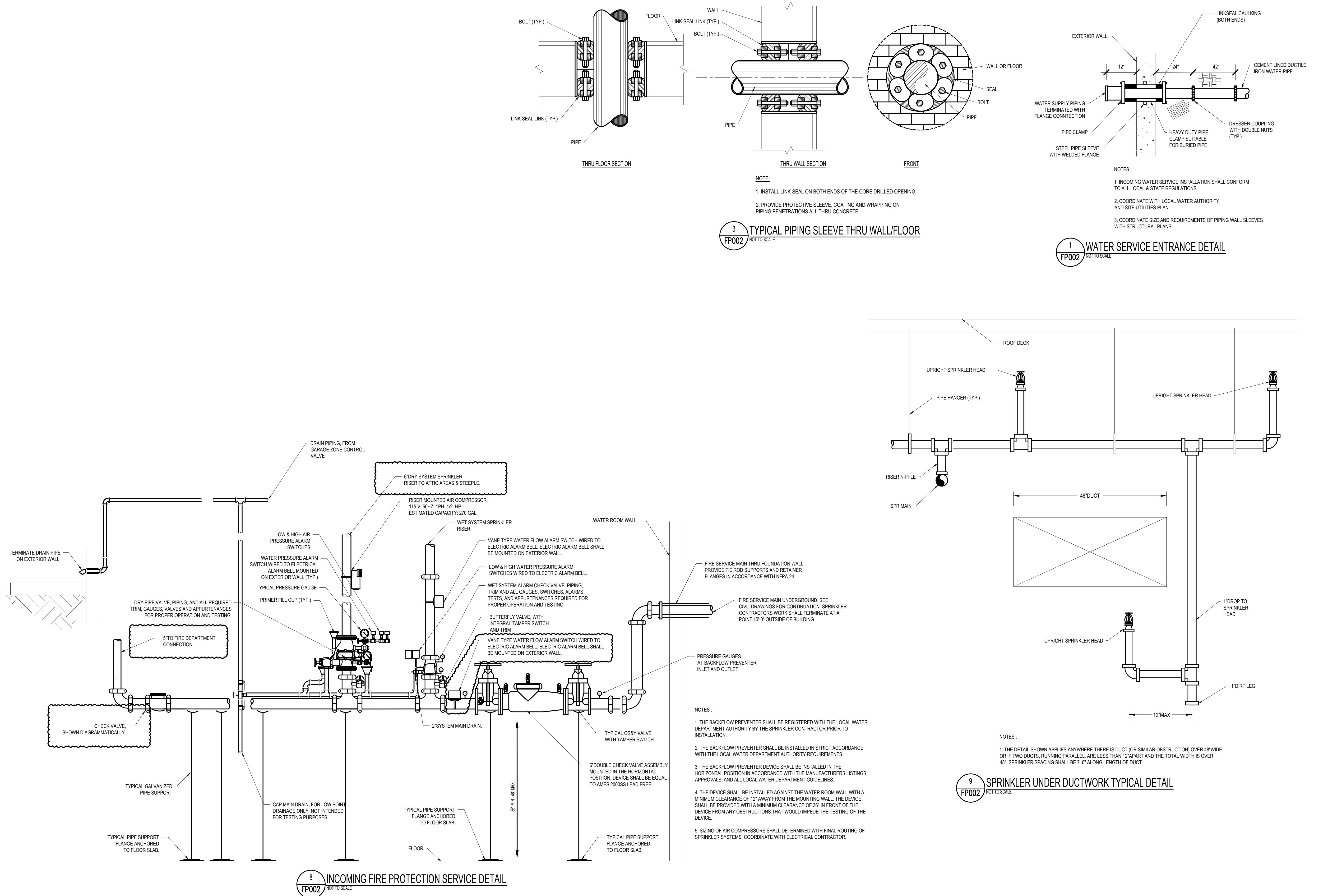
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HAC: Electrical Permitting / Fire Protection



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## FIRE PROTECTION DETAILS

**FP002**

## EASTERN ACROBATICS

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## RUNCIBLE STUDIOS, LLC

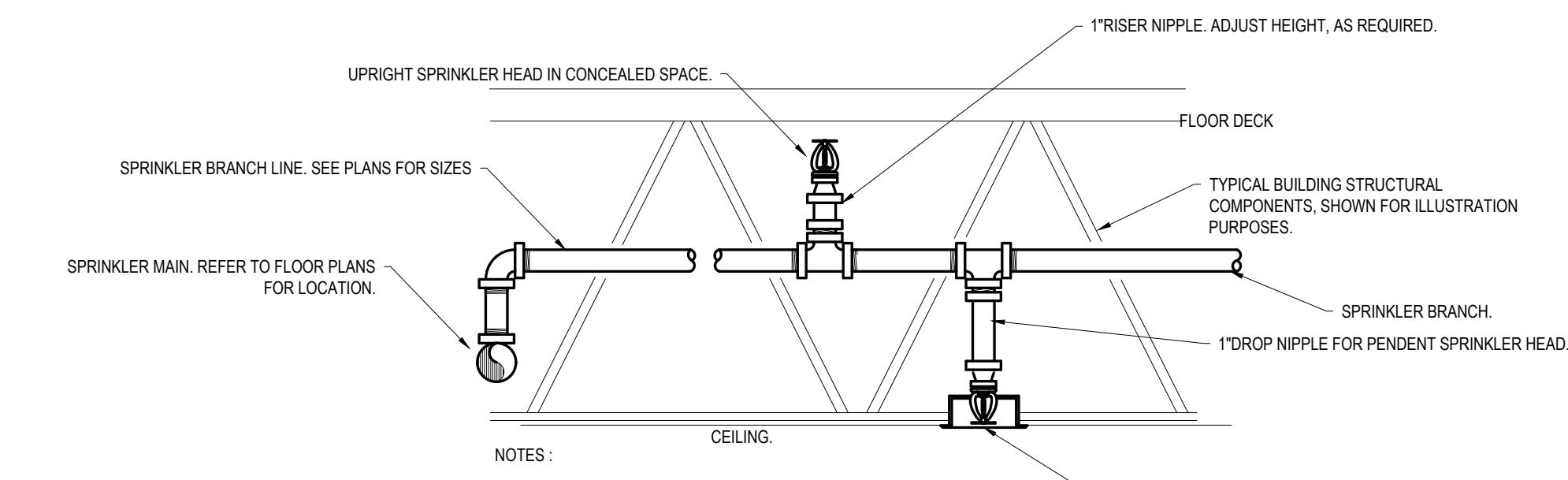
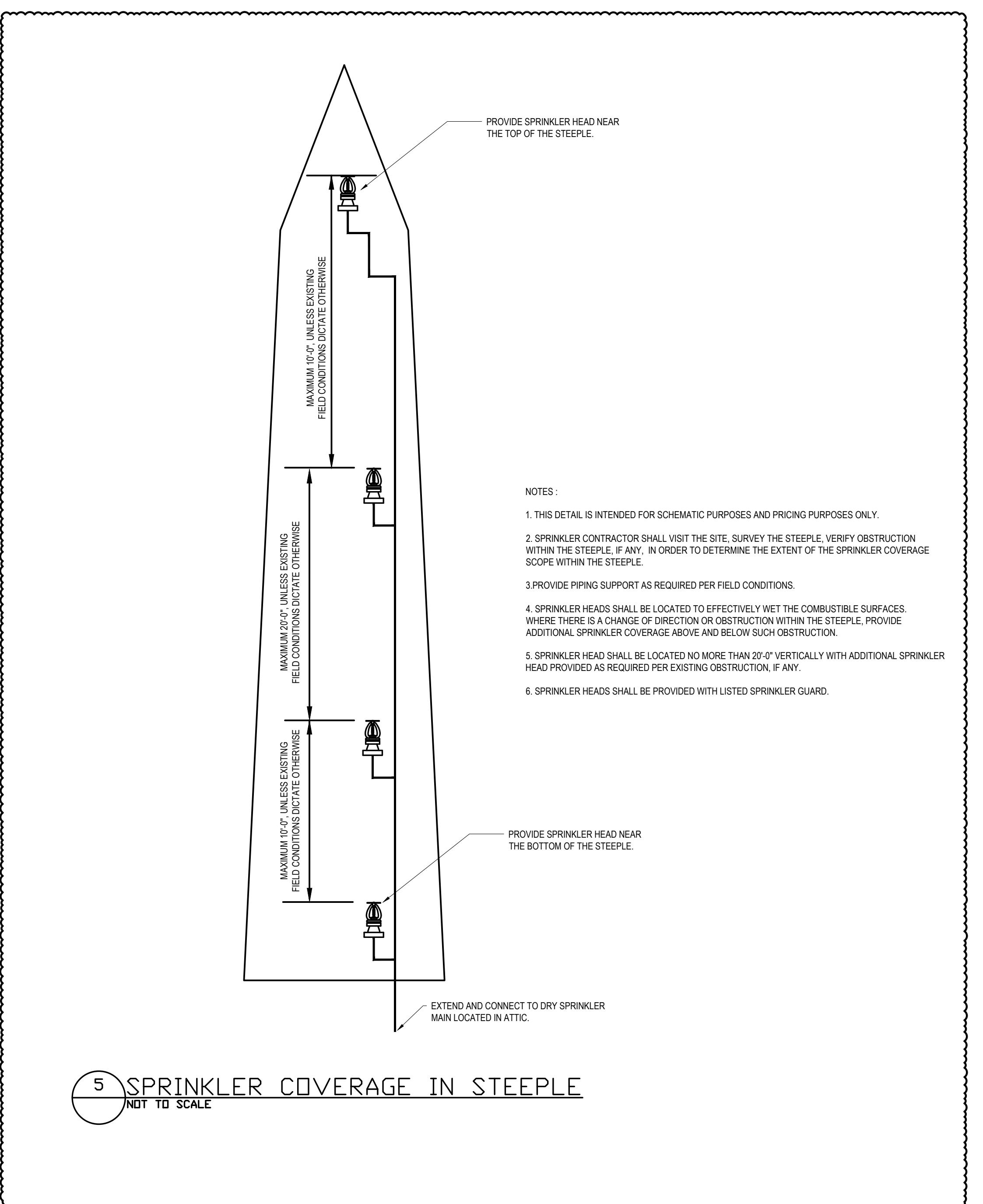
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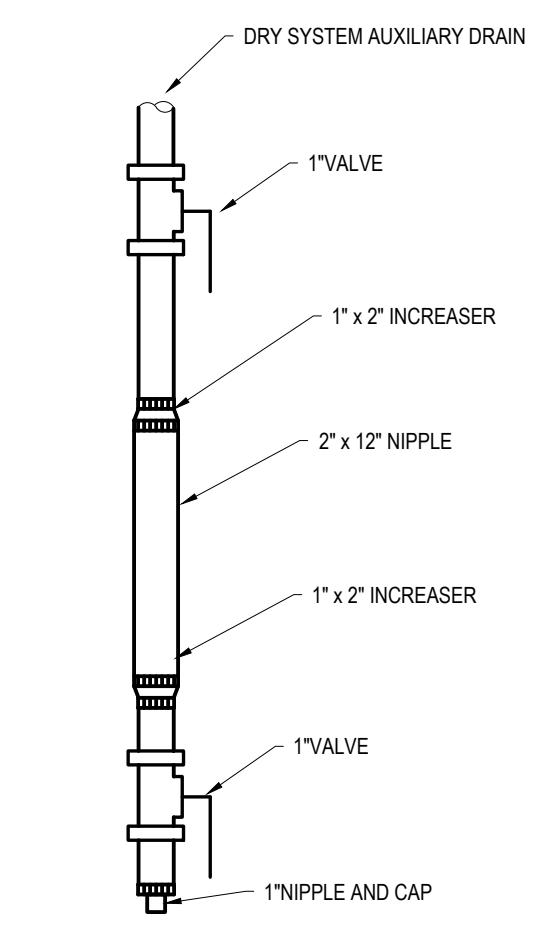


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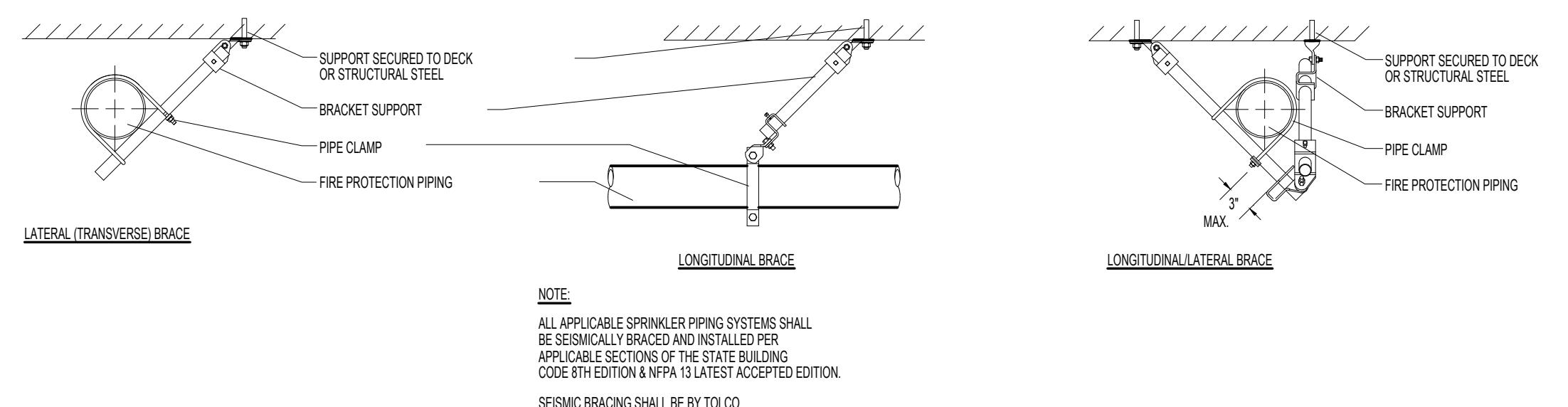
**2 SPRINKLER ABOVE AND BELOW CEILING**  
NOT TO SCALE



NOTES:

1. PROVIDE DRAINAGE, AS REQUIRED PER NFPA-13.
2. ALLOW POINT SHALL BE PROVIDED WITH DRAINAGE.
3. FINAL LOCATION OF DRAIN SHALL BE COORDINATED W/ ARCHITECT.

**1 DRY SYSTEM DRAIN DIAGRAM**  
FP0.3  
NOT TO SCALE



**4 TYPICAL SEISMIC BRACING DETAIL**  
FP002  
NOT TO SCALE

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## FIRE PROTECTION DETAILS

**FP003**

## EASTERN ACROBATICS

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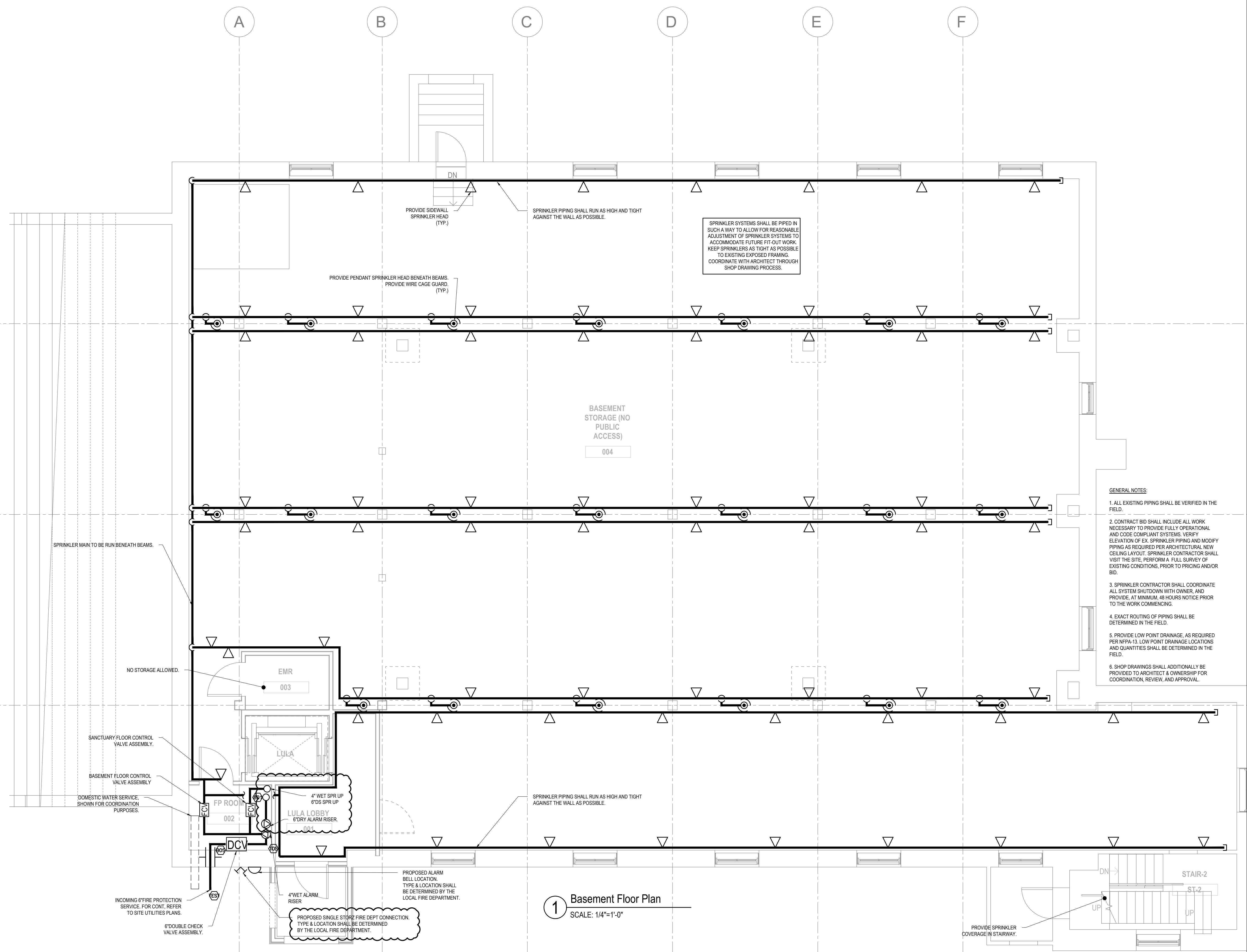
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2021-003  
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## FIRE PROTECTION BASEMENT NEW WORK FLOOR PLAN

**FP100**





## EASTERN ACROBATICS

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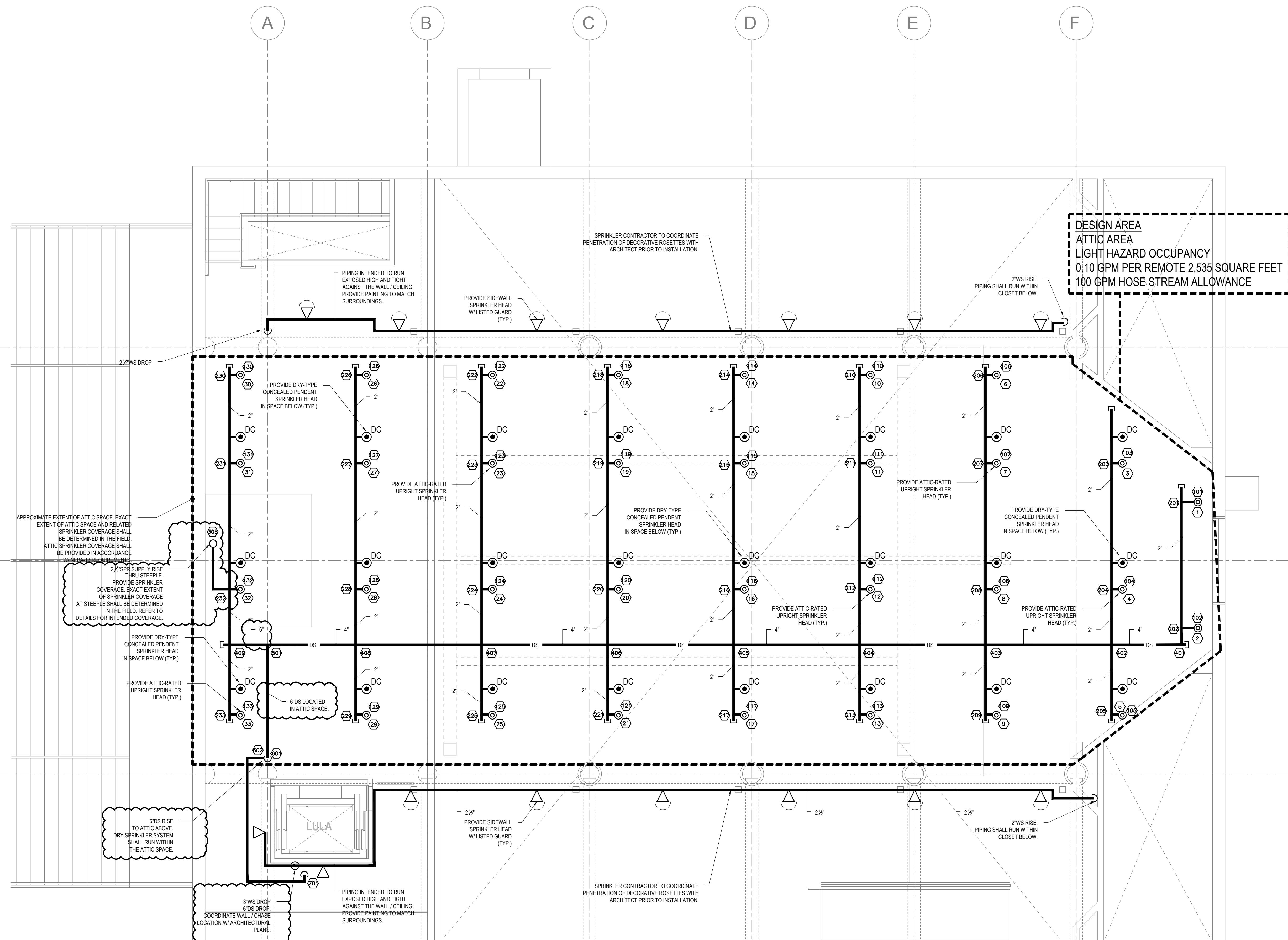
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## FIRE PROTECTION BALCONY NEW WORK FLOOR PLAN

**FP102**

1 Balcony Floor Plan  
SCALE: 1/4"=1'0"



## EASTERN ACROBATICS

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HAC: Electrical Plumbing Fire Protection

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Revision 3  
03/07/2023  
Revision 2  
1/18/2023  
REVISIONS #1 08/05/2022  
CD SET 07/15/2022

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2021-003 PROJECT NUMBER

## PLUMBING LEGEND, NOTES, AND ABBREVIATIONS

P001

### GENERAL NOTES

1. ALL PLUMBING WORK SHALL BE DONE IN ACCORDANCE WITH THE MASSACHUSETTS STATE FUEL GAS AND PLUMBING CODE, LATEST ACCEPTED EDITION.
2. CAREFULLY COORDINATE LOCATION OF PIPING WITH ALL OTHER TRADES.
3. ALL PIPING SHOWN DIAGRAMMATICALLY AND EXACT LOCATION SHALL BE DETERMINED IN THE FIELD.
4. ALL PIPING SHALL BE RUN CONCEALED ABOVE CEILINGS, IN WALLS AND IN CHASES, UNLESS OTHERWISE NOTED.
5. NO STRUCTURAL MEMBERS SHALL BE CUT WITHOUT THE APPROVAL OF THE STRUCTURE ENGINEER.
6. ALL PIPING SHALL BE SUPPORTED FROM BUILDING STRUCTURE.
7. THE TERM "PROVIDE" SHALL MEAN FURNISH AND INSTALL.
8. RUN WATER PIPE ON THE WARM SIDE OF BUILDING INSULATION. NO WATER PIPING SHALL BE RUN ON EXTERIOR WALLS.
9. PROVIDE DRAWDOWNS WITH BALL VALVE, HOSE END VACUUM BREAKER, CAP & CHAIN AT ALL DOMESTIC WATER LOW POINTS AND PITCH PIPING TO DRAIN.
10. ALL SANITARY WASTE PIPING SHALL PITCH A MIN OF  $\frac{1}{4}$  INCH PER FT. FOR PIPING 4" & LARGER, AND  $\frac{1}{8}$  INCH PER FT FOR PIPING UP TO 3".
11. WHERE DIFFERENT SIZES ARE SHOWN ON PLANS, THE LARGER SIZE SHALL SUPERCEDE.
12. LAUNDRY STACK HORIZONTAL OFFSETS SHALL RUN A MINIMUM 10-STACK PIPE DIAMETER PRIOR TO CONNECTION TO SANITARY/WASTE MAIN AND/OR BRANCH.
13. PROVIDE BALANCING VALVES ON THE HOT WATER RE-CIRCULATION SYSTEM AS REQUIRED, AND/OR AS SHOWN.
14. PROVIDE DANDY CLEAN-OUT AT THE BOTTOM OF ALL SANITARY AND STORM DRAIN STACKS. PROVIDE ACCESS PANEL WHERE REQUIRED. DANDY CLEAN-OUT SHALL BE LOCATED AT MINIMUM 0'-6" ABOVE FLOOR.
15. PROVIDE SHOCK ABSORBERS ON ALL PIPING SERVICING QUICK CLOSING FIXTURES.
16. ACCESSIBLE CLEANOUTS SHALL BE PROVIDED AT THE BOTTOM OF ALL STACKS/RISERS.
17. ALL PIPING SHALL BE NEW, INSTALLED PARALLEL TO BUILDING LINES AND PITCHED TO LOW POINTS.
18. PLUMBING CONTRACTOR SHALL PROVIDE FIRESTOPPING FOR ALL PENETRATIONS THRU FIRE WALLS AND FIRE RATED SEPARATIONS. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR THESE AREAS.
19. PLUMBING CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN ALL SCAFFOLDING, HOISTING EQUIPMENT DERRICKS, ETC., NECESSARY FOR INSTALLATION OF WORK.
20. ALL PLUMBING PIPING AND DRAINS SHALL BE KEPT CLEAR OF BLOCKAGE WHILE CONSTRUCTION IS UNDERTAKEN. ALL PLUMBING PIPING SHALL BE DEBURBED BEFORE JOINTS ARE MADE.
21. THE PLUMBING CONTRACTOR SHALL PROVIDE ALL CUTTING AND PATCHING IN ORDER TO ACCOMMODATE THE PLUMBING WORK.
22. WHERE PLUMBING DROPS ONLY ARE SHOWN TO FIXTURES OR GROUPS OF FIXTURES, THE PLUMBING CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS OF WATER, SANITARY AND VENT TO EACH FIXTURE. PLUMBING CONNECTIONS TO FIXTURES SHALL BE IN ACCORDANCE WITH THE PLUMBING FIXTURE SCHEDULE. PROVIDE SERVICE STOP AT EACH FIXTURE.
23. ALL ISOLATION VALVES, BALANCING VALVES AND BUTTERFLY VALVES INSTALLED IN WALLS OR ABOVE CEILINGS SHALL BE PROVIDED WITH ACCESS PANELS. WHERE REMOVABLE SUSPENDED CEILING TILES ARE USED, NO ACCESS PANELS ARE REQUIRED.
24. ALL PIPING RISER PENETRATIONS THRU FLOORS SHALL BE SEALED WATER TIGHT.
25. PROVIDE ANCHOR AND EXPANSION ON DOMESTIC WATER PIPING WHERE REQUIRED.
26. ALL VENT THRU ROOF PIPING SHALL BE LOCATED NO LESS THAN 25'-0" FROM ALL FRESH AIR INTAKE. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING VENT PIPING AT THE TOP FLOOR, AND COMBINE VENT PIPING TO THE EXTENT POSSIBLE PRIOR TO ROOF PENETRATION. VENT PIPING SHALL BE IN STRICT ACCORDANCE WITH 248 CMR MASSACHUSETTS STATE PLUMBING CODE. ALL VENT THRU ROOF LOCATIONS SHALL BE CAREFULLY COORDINATED W/ OWNER PRIOR TO INSTALLATION.

### DEMOLITION NOTES

1. PLUMBING CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH ALL EXISTING ELEMENTS OF CONSTRUCTION PRIOR TO COMMENCING DEMOLITION WORK. ALL WORK SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF MASSACHUSETTS BUILDING CODE, AND HEALTH REGULATIONS AND BE PERFORMED IN SUCH A MANNER AS TO ENSURE HUMAN SAFETY.
2. ALL ITEMS TO BE RE-USED SHALL BE CAREFULLY REMOVED FREE OF DAMAGE AND STORED IN A SECURE LOCATION.
3. ALL EXISTING PLUMBING PIPING TO BE REMOVED SHALL BE CAPPED AT A POINT NEAREST ACTIVE MAIN, OR AT POINT OF ORIGIN.
4. ALL DEMOLITION SHALL BE PERFORMED IN SUCH A MANNER AS TO MINIMIZE DAMAGE TO CONSTRUCTION THAT IS TO REMAIN.
5. PLUMBING CONTRACTOR SHALL COORDINATE WITH BUILDING MANAGER/OWNER ON SHUTDOWN TIME WHEN WORKING ON EXISTING SYSTEMS.
6. PLUMBING CONTRACTOR SHALL RECOGNIZE THAT THE BUILDING MIGHT REMAIN OCCUPIED THROUGHOUT DEMOLITION AND SHALL USE EVERY EFFORT AND MEANS POSSIBLE TO MINIMIZE NOISE CAUSED BY THE DEMOLITION OPERATIONS.
7. REMOVAL OF EXISTING PLUMBING FIXTURES/EQUIPMENT SHALL INCLUDE, BUT NOT LIMITED TO, UTILITY PIPING, FITTINGS, ACCESSORIES AND SUPPORT. REMOVAL, WHERE NECESSARY, SHALL BE COORDINATED WITH OTHER TRADES.
8. ALL WORK RELATED TO DEMOLITION SHALL BE CAREFULLY COORDINATED WITH OWNER, ARCHITECT, AND OTHER TRADES.
9. ABATEMENT AND/OR REMOVAL OF ASBESTOS AND HAZARDOUS MATERIALS SHALL BE CAREFULLY COORDINATED WITH THE GENERAL CONTRACTOR.

### PLUMBING LEGEND & ABBREVIATIONS

	CW	COLD WATER ABOVE FLOOR	AFF	ABOVE FINISHED FLOOR
	CW	COLD WATER BELOW FLOOR	ARCH	ARCHITECT
	HW	HOT WATER ABOVE FLOOR	BWV	BACKWATER VALVE
	HW	HOT WATER BELOW FLOOR	CFH	CUBIC FEET PER HOUR
	HWR	HOT WATER RETURN ABOVE FLOOR	CLG	CEILING
	HWR	HOT WATER RETURN BELOW FLOOR	CO	CLEANOUT
	FW	FILTERED WATER ABOVE FLOOR	CONN	CONNECTION
	NPCW	NON-POTABLE COLD WATER	CONT	CONTINUATION
	NPHW	NON-POTABLE HOT WATER	CTE	CONNECT TO EXISTING
	TW	TEMPERED WATER ABOVE FLOOR	DF	DRINKING FOUNTAIN
	TWR	TEMPERED WATER RETURN ABOVE FLOOR	DW	DISHWASHER MACHINE
	SAN OR W	SANITARY WASTE	DWG	DRAWING
	PD	PUMP DISCHARGE ABOVE FLOOR	EC	ELECTRICAL CONTRACTOR
	PD	PUMP DISCHARGE BELOW FLOOR	ELEC	ELECTRICAL
	IW	INDIRECT WASTE	ETBR	EXISTING TO BE REMOVED
	CD	CONDENSATE DRAIN	ETR	EXISTING TO REMAIN
	V	VENT ABOVE FLOOR	FCO	FLOOR CLEANOUT
	RL	RAIN LEADER ABOVE FLOOR	FD	FLOOR DRAIN
	G	NATURAL GAS LINE ABOVE FLOOR	FFE	FINISHED FLOOR ELEVATION
	TP	TRAP PRIMER SUPPLY ABOVE FLOOR	FT	FOOT/FEET
		HEAT-TRACED PIPING	GC	GENERAL CONTRACTOR
	FOO	FLOOR CLEANOUT	GI	GREASE INTERCEPTOR
	GCO	GRADE CLEANOUT	GPF	GALON PER FLUSH
	CO	CLEANOUT	GPM	GALLON PER MINUTE
	WCO	WALL CLEANOUT - PROVIDE ACCESS PANEL	GWH	GAS-FIRED WATER HEATER
		CAPPED PIPE	HB	HOSE BIBB
		UNION	INV. EL	INVERT ELEVATION
		FLOW ARROW	INV. EL	INVERT ELEVATION
		DIRECTION OF SLOPE	LAV.	LAVATORY
			LPC	LIMIT OF PLUMBING CONTRACT
			MIN	MINIMUM
			MAX	MAXIMUM
			NIC	NOT IN CONTRACT
			NTS	NOT TO SCALE
			OED	OPEN-END DRAIN
			P#	PLUMBING FIXTURE DESIGNATION
			PC	PLUMBING CONTRACTOR
			RD	ROOF DRAIN
			SI	SOLIDS INTERCEPTOR
			SH	SHOWER
			T	TRAP
			TP	TRAP PRIMER
			UR	URINAL
			VTR	VENT THRU ROOF
			WC	WATER CLOSET
			WH	WALL HYDRANT
	TMV	TERMOSTATIC MIXING VALVE		
	GATE VALVE			
	BALANCING VALVE			
	PRV	PRESSURE REGULATING VALVE		
	SOLNOID VALVE			
	CHECK VALVE			
	BWV	BACKWATER VALVE		
	RPBP	REDUCED PRESSURE ZONE BACKFLOW PREVENTER		
	SA/WHA	SHOCK ABSORBER, WATER HAMMER ARRESTOR		
	TP	TRAP PRIMER VALVE		
	ELBOW UP OR RISE			
	ELBOW DOWN OR DROP			
	TEE DROP			
	OPENEND DRAIN, P-TRAP			
	HB	HOSE BIBB		
	WH	WALL HYDRANT		
	CTE	CONNECT TO EXISTING PIPING		
	FD	FLOOR DRAIN		
	RD	ROOF/AREA DRAIN		
		KEYNOTE DESIGNATION / DRAWING KEYNOTE		
	HC	HANDICAPPED ACCESSIBLE		
		DETAIL DESIGNATION NUMBER		
		DRAWING NUMBER		
		REVISION CLOUD, REVISION NUMBER		

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2021-003 PROJECT NUMBER

## EASTERN ACROBATICS

28 Eliot Street  
Natick, MA 01760

PROJECT

THE ENTRUST INC.  
FBO AUSTIN S. LIN

28 ELIOT ST.  
NATICK, MA 01760

OWNER

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### PLUMBING FIXTURE SCHEDULE

TAG NO	TYPE	MANUFACTURER	MODEL	SIZE	CW (in)	HW (in)	SAN (in)	V (in)	FLOW RATE	FITTINGS				CARRIER	REMARKS	
										SUPPLIES	TYPE	MANUFACTURER	MODEL	TRAP		
P-1	WATER CLOSET	TOTO	CT 705 ELN	-	1"	-	4"	2"	1.28 GPF	FLUSH VALVE	SELF-GENERATING, SENSOR-OPERATED	TOTO	TET1LA328CP	INTEGRAL	FLOOR MOUNTED	SEAT SHALL BE TOTO SC134. INSTALL PER ADA REQUIREMENTS. PROVIDE SAV ON CW SUPPLY. PROVIDE TOILET FLANGE, WAX RING AND TOILET FLANGE BOLTS. WAX RING AND BOLT SET AS MANUFACTURED BY HARVEY MFG.
P-1A	ADA WATER CLOSET	TOTO	CT 705 ELN	-	1"	-	4"	2"	1.28 GPF	FLUSH VALVE	SELF-GENERATING, SENSOR-OPERATED	TOTO	TET1LA328CP	INTEGRAL	FLOOR MOUNTED	SEAT SHALL BE TOTO SC134. INSTALL PER ADA REQUIREMENTS. PROVIDE SAV ON CW SUPPLY. PROVIDE TOILET FLANGE, WAX RING AND TOILET FLANGE BOLTS. WAX RING AND BOLT SET AS MANUFACTURED BY HARVEY MFG.
P-2	LAVATORY	TOTO	LT 307	20" X 18"	X"	X"	2"	2"	0.5 GPM	X SWEAT X COMP EQUAL TO MC GUIRE LFH173LK. PROVIDE KEMPER FLOW SPLITTER UNIT	SELF-GENERATING, SENSOR-OPERATED	TOTO	TEL105-C20ET	1 1/2" x 1 1/2" 17GA CAST BRASS CHROME PLATED P-TRAP W/ CO PLUG, EQUAL TO MC GUIRE BB902	PROVIDE TO SUIT	PROVIDE 0.5GPM FLOW RESTRICTOR. PROVIDE GRID STRAINER. PROVIDE SAV ON CW & HW SUPPLIES. PROVIDE SUPPLY / WASTE PIPE COVERING EQUAL TO TRU BRO LAV GUARD SERIES. PROVIDE MIXING VALVE. SUPPLY SHALL NOT EXCEED 110°F.
P-3	MOP SINK	FIAT M	MSB242	24" X 24"	X"	X"	3"	2"	-	X COLD & HOT WATER	MANUAL	FIAT	830AA	3" P-TRAP	FLOOR	PROVIDE RPBF ON CW & HW SUPPLIES. PROVIDE WITH MOP HANGER FIAT FIAT MODEL 889-CC.

NOTES : FIXTURE SELECTION SHALL BE CAREFULLY COORDINATED WITH OWNER, AND ARCHITECT. COORDINATE ALL FIXTURE MOUNTING HEIGHTS WITH ARCHITECTURAL PLANS. PLUMBING FIXTURES SHALL BE COORDINATED WITH ARCHITECTURAL PLANS

### ELECTRIC WATER HEATER SCHEDULE

TAG NO	TYPE	MANUFACTURER	MODEL	STORAGE (GAL.)	TEMPERATURE SETTING (°F)	RECOVERY @100°F (GPH)	ELECTRICAL REQUIREMENTS			REMARKS
							KW	VOLTS	PH	
EWH-1	STORAGE	A.O. SMITH	DEL-15	15	140	10	2.5	240	1	PROVIDE W/ DRAIN PAN AND LEAK DETECTION. COORDINATE WITH ELECTRICAL CONTRACTOR.

NOTES : COORDINATE WITH ALL ELECTRICAL REQUIREMENTS W/ E.C., PRIOR TO PURCHASE AND INSTALLATION. WATER HEATER SHALL BE BY A.O. SMITH, EEMAX, STATE, BRADFORD WHITE, OR APPROVED EQUAL.

### DRAIN SCHEDULE

WATER HAMMER SCHEDULE					
TAG NO	Fixture Unit Rating	Manufacturer	Model	REMARKS	
SAA'	1-11	J.R. SMITH	5005		
SAB'	12-32	J.R. SMITH	5010		
SAC'	33-60	J.R. SMITH	5020		
SAD'	61-113	J.R. SMITH	5030		
SAE'	114-154	J.R. SMITH	5040		
SAF'	155-330	J.R. SMITH	5050		

NOTES : WATER HAMMER ARRESTORS SHALL BE BY J.R. SMITH, WATTS, SIOUX CHIEF OR APPROVED EQUAL.

### EJECTOR PUMP SCHEDULE

TAG NO	TYPE	LOCATION	MANUFACTURER	MODEL	FLOW (GPM)	HEAD (FT)	INLET (in)	OUTLET (in)	ELECTRICAL REQUIREMENTS			REMARKS
									VOLTS	HP	PH	
EP-1	DUPLEX SEWAGE, AUTOMATIC	WATER ROOM	ZOELLER	M267	10	15	4	2"	115	X	1	PROVIDE 30" DIAMETER-36" DEEP POLYETHYLENE BASIN ZOELLER MODEL #910-0031, AND DUPLEX ALTERNATOR ZOELLER MODEL #10-0804

NOTES : COORDINATE W/ ELECTRICAL CONTRACTOR. PUMPING SYSTEM ASSEMBLY SHALL BE CAREFULLY COORDINATED WITH BUILDING STRUCTURAL COMPONENTS.

### EXPANSION TANK SCHEDULE

TAG NO	MANUFACTURER	MODEL	TANK VOLUME (GAL.)	REMARKS
ET-1	ELBI	PLT-5	-	LEAD FREE AND LISTED FOR POTABLE WATER USE.

NOTES: EXPANSION TANK SHALL BE BY ELBI, WATTS, AMTROL, OR APPROVED EQUAL.

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CD SET 07/15/2022  
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## PLUMBING SCHEDULES

P002

## EASTERN ACROBATICS

28 Eliot Street  
Natick, MA 01760

PROJECT

THE ENTRUST INC.  
FBO AUSTIN S. LIN  
28 ELIOT ST.  
NATICK, MA 01760

OWNER

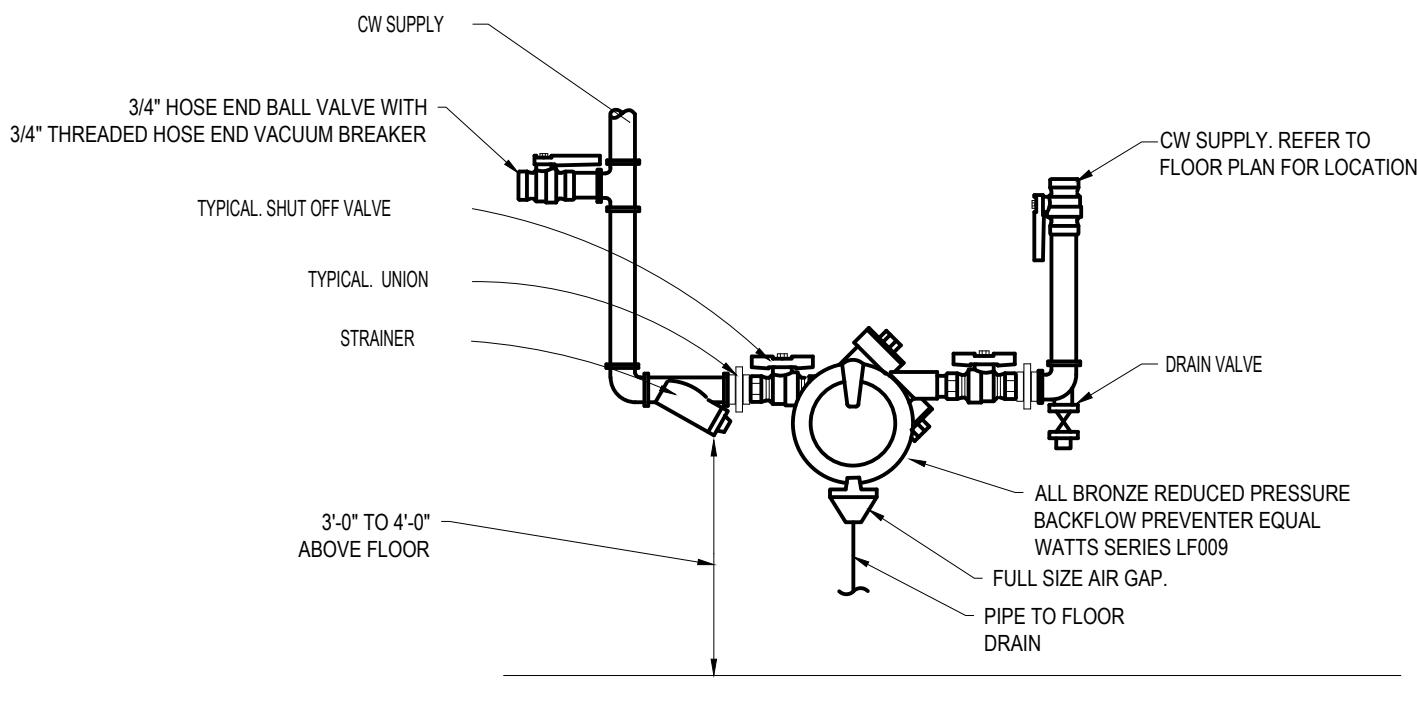
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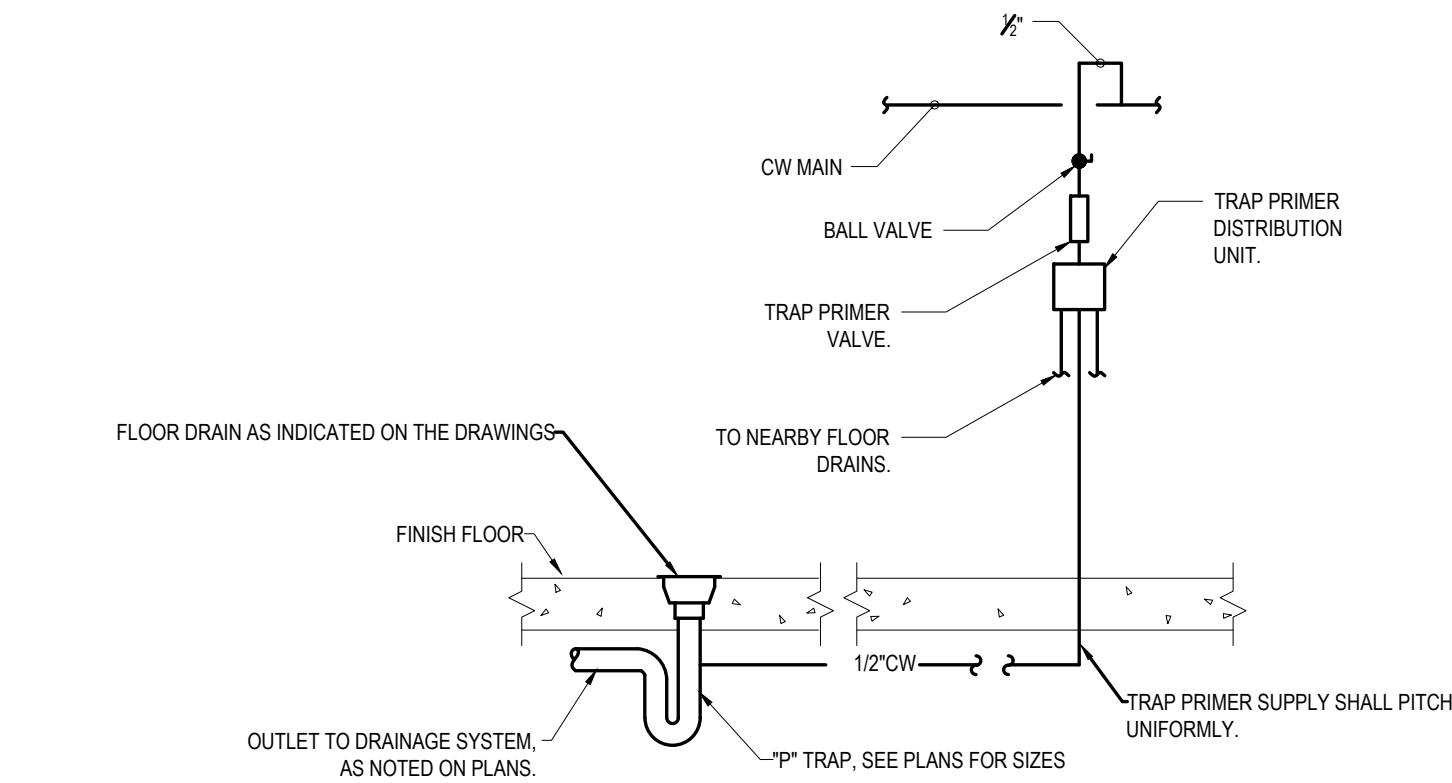


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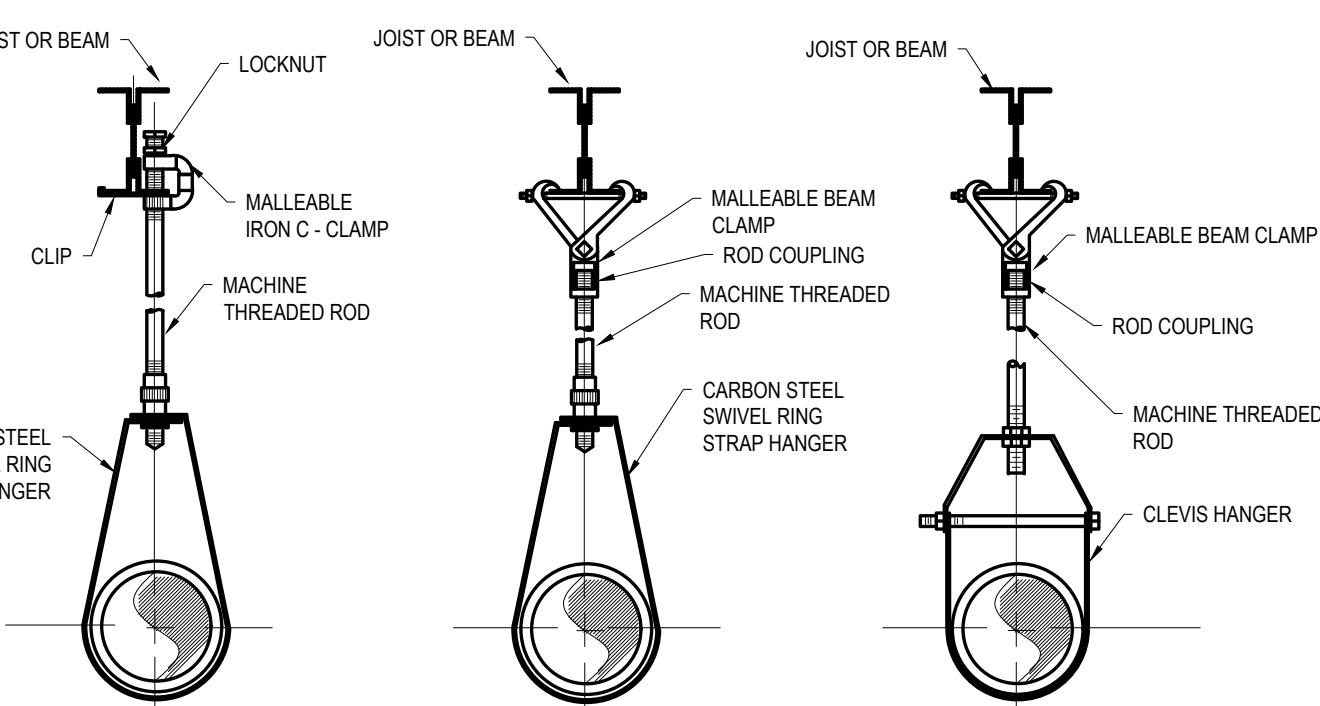
NOTES:  
1. FURNISH TO OWNER ONE TEST KIT AND SPARE PARTS KIT.  
2. P.C. SHALL ACT AS THE OWNER'S AGENT IN SEEKING APPROVAL FROM ALL LOCAL AND STATE AUTHORITIES, AND SUBMIT ALL PLANS, SPECS, AND APPLICATIONS REQUIRED FOR APPROVAL AND PAY ALL FEES.  
3. SEE FLOOR PLANS FOR SIZES AND LOCATIONS.  
4. MAINTAIN 1'-0" CLEARANCE FROM WALL.  
5. TEST AND CERTIFY EACH INSTALLATION.  
6. PROVIDE ADJUSTABLE FLOOR SUPPORT.

1 TYPICAL DRAIN VALVE  
P003A NOT TO SCALE



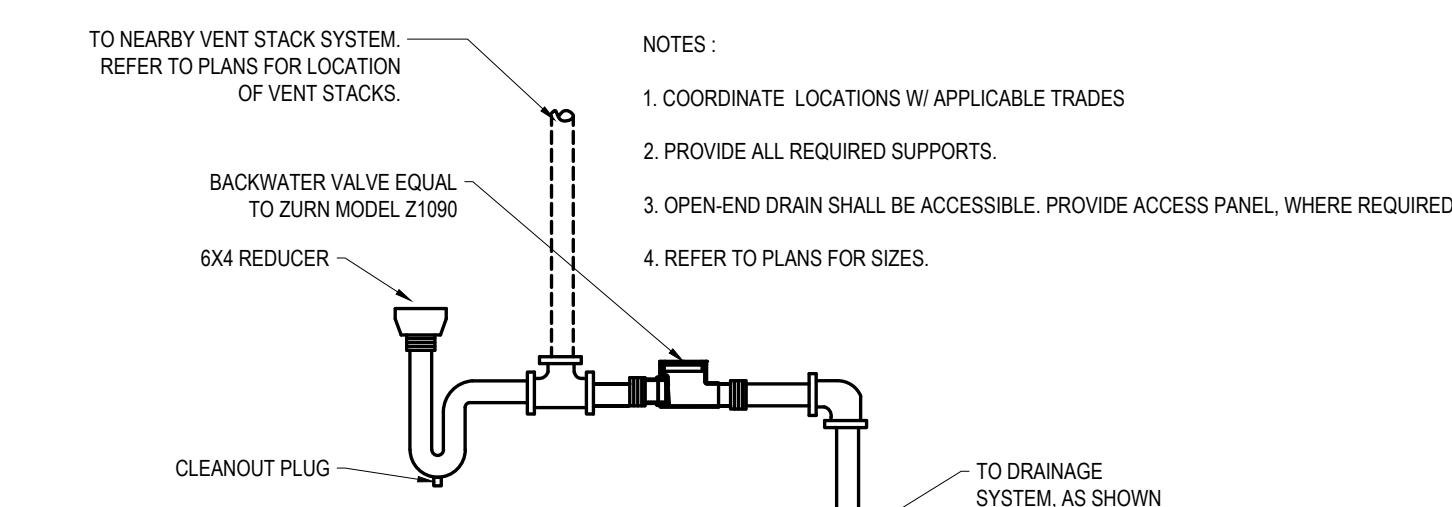
NOTES:  
1. TRAP PRIMER SHALL BE BY PRECISION PLUMBING PRODUCT, MI-FAB, SIOUX CHIEF OR APPROVED EQUAL.  
2. INSTALL TRAP PRIMER AS LOCATED ON PLANS.  
3. PROVIDE HEAT TRACING ON GARAGE FLOOR DRAIN TRAP PRIMER PIPING.  
4. PROVIDE TRAP PRIMER DEVICE WITH MULTIPLE OUTLETS WHERE REQUIRED.  
5. PROVIDE TRAP PRIMER DISTRIBUTION UNITS AS REQUIRED.  
6. TRAP PRIMERS SHALL BE PROVIDED WHERE REQUIRED AND/OR WHERE SHOWN ON PLANS.

2 TYPICAL TRAP PRIMER AT FLOOR DRAIN  
P003A NOT TO SCALE



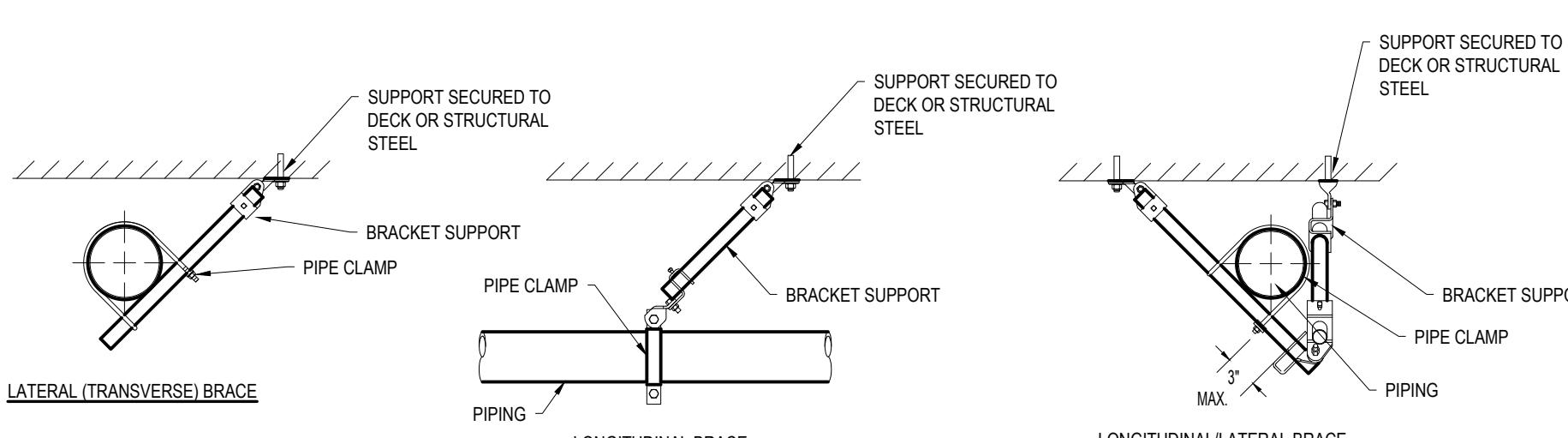
NOTES:  
1. HANGER ROD SHALL BE INSTALLED PER MANUFACTURER'S GUIDELINES.  
2. PROVIDE 1'-0" GALVANIZED STEEL SHIELD AT THE BOTTOM OF INSULATED PIPING.

3 REDUCED PRESSURE BACKFLOW PREVENTER  
P003A NOT TO SCALE



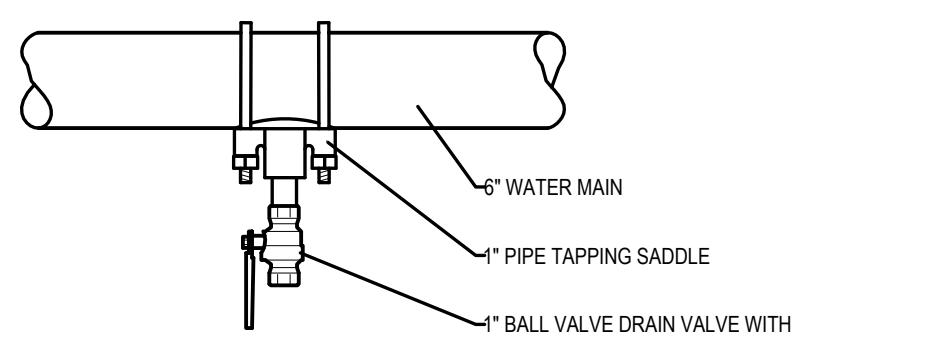
NOTES:  
1. COORDINATE LOCATIONS W/ APPLICABLE TRADES.  
2. PROVIDE ALL REQUIRED SUPPORTS.  
3. OPEN-END DRAIN SHALL BE ACCESSIBLE. PROVIDE ACCESS PANEL, WHERE REQUIRED.  
4. REFER TO PLANS FOR SIZES.

4 TYPICAL OPEN END DRAIN DETAIL  
P003A NOT TO SCALE



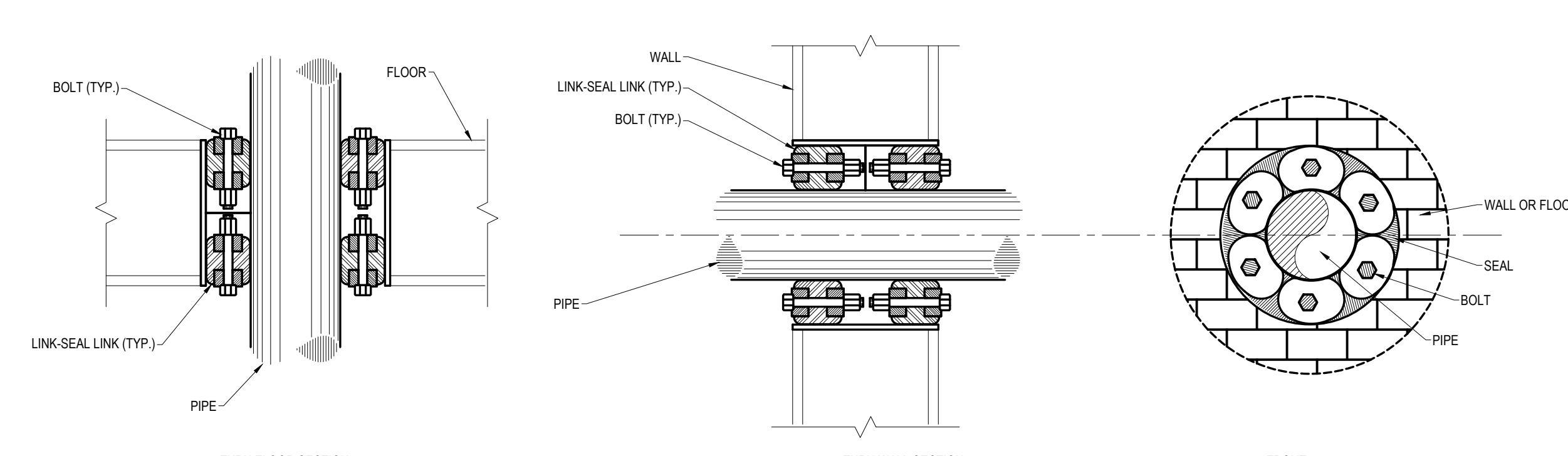
NOTES:  
ALL APPLICABLE PLUMBING PIPING SYSTEMS SHALL BE SEISMICALLY BRACED AND INSTALLED PER APPLICABLE SECTIONS OF THE STATE BUILDING.  
SEISMIC BRACING SHALL BE BY TOLCO

5 SEISMIC BRACING DETAILS  
P003A NOT TO SCALE



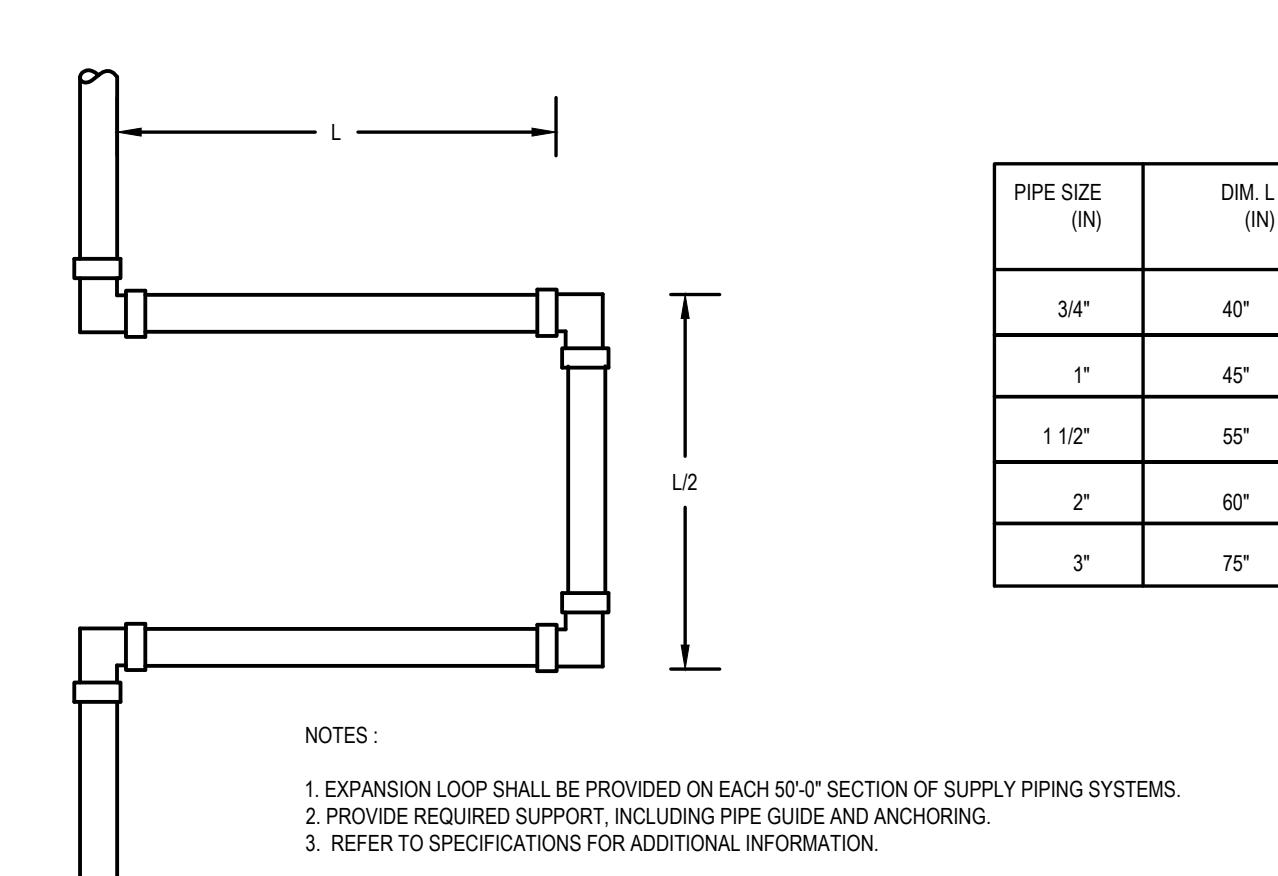
1. WATER MAINS SHALL BE PITCHED TO LOW POINT DRAIN VALVES IN SUCH A MANNER AS TO ALLOW FOR THE COMPLETE DRAINING OF THE WATER MAINS.  
2. DRAIN VALVES SHALL BE LOCATED IN AREAS THAT ARE READILY ACCESSIBLE.

6 TYPICAL DRAIN VALVE  
P003A NOT TO SCALE



NOTES:  
1. INSTALL LINK-SEAL ON BOTH ENDS OF THE CORE DRILLED OPENING.  
2. PROVIDE PROTECTIVE SLEEVE, COATING AND WRAPPING ON PIPING PENETRATIONS ALL THRU CONCRETE.

7 PIPE SLEEVES THRU WALL / FLOOR  
P003B NOT TO SCALE



NOTES:  
1. EXPANSION LOOP SHALL BE PROVIDED ON EACH 50'-0" SECTION OF SUPPLY PIPING SYSTEMS.  
2. PROVIDE REQUIRED SUPPORT, INCLUDING PIPE GUIDE AND ANCHORING.  
3. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

8 TYPICAL EXPANSION LOOP DETAIL  
P003A NOT TO SCALE

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## PLUMBING DETAILS

P003

## EASTERN ACROBATICS

28 Eliot Street  
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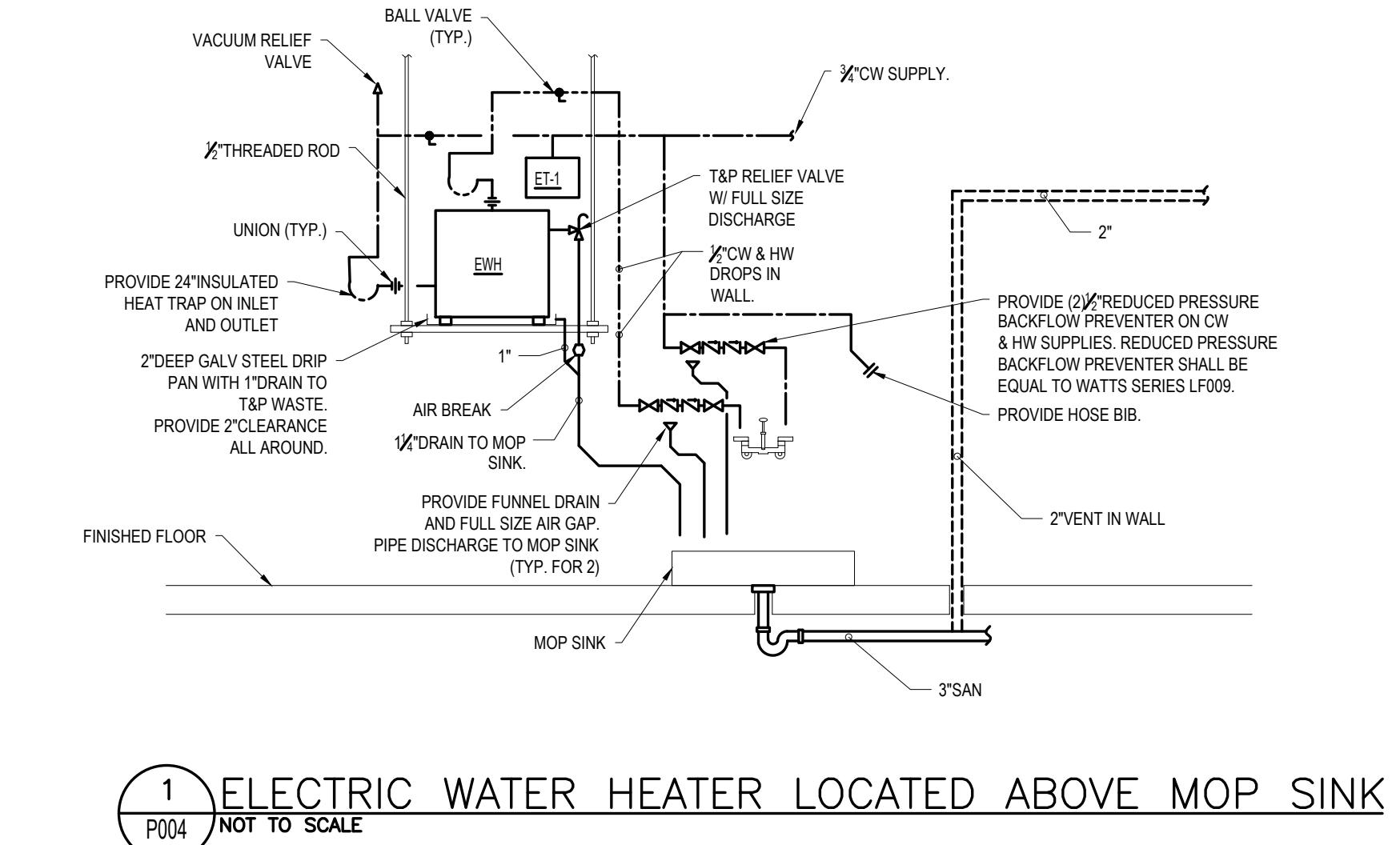
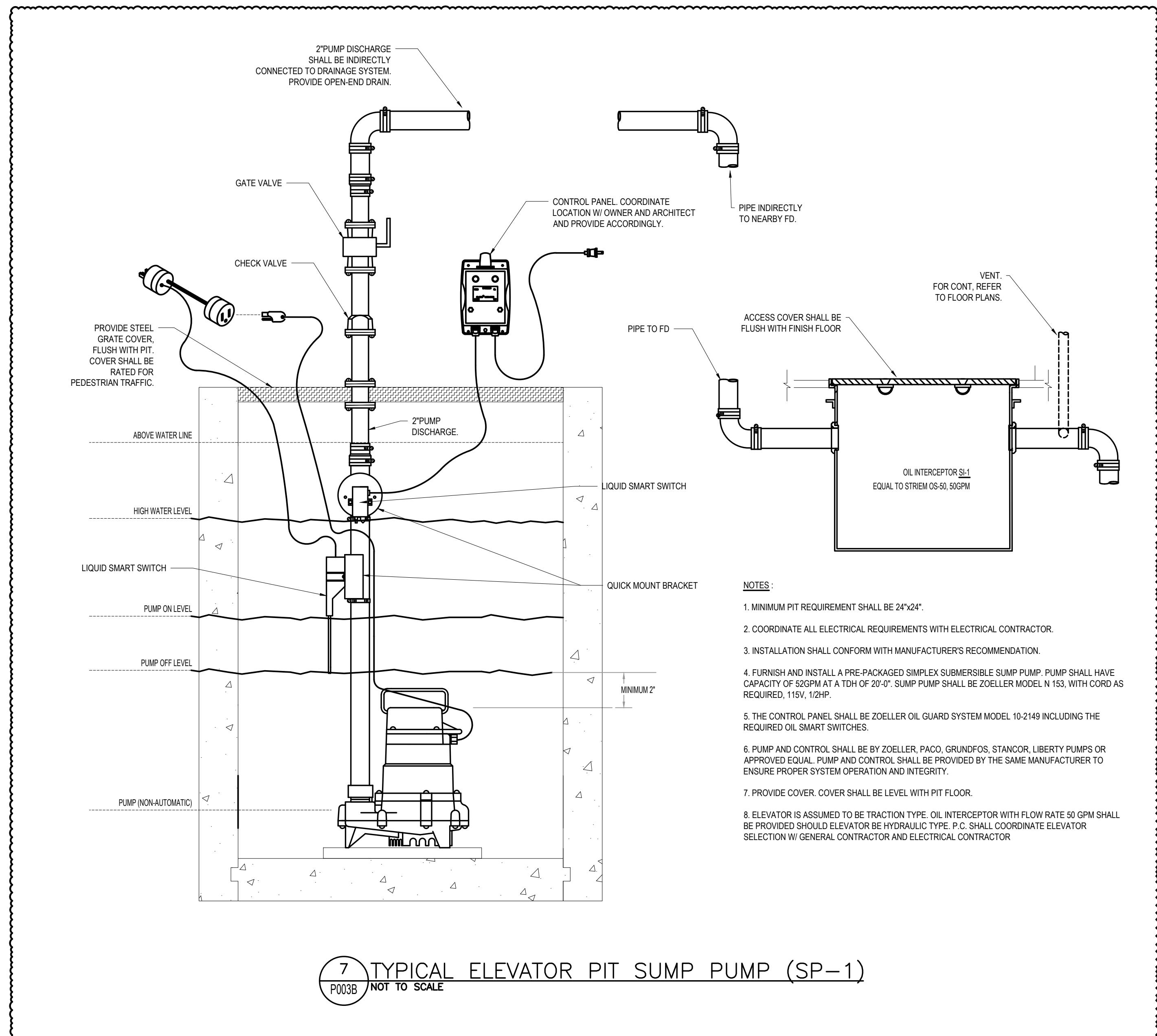
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03/07/2023  
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1/18/2023  
REVISIONS #1 08/05/2022  
CD SET 07/15/2022

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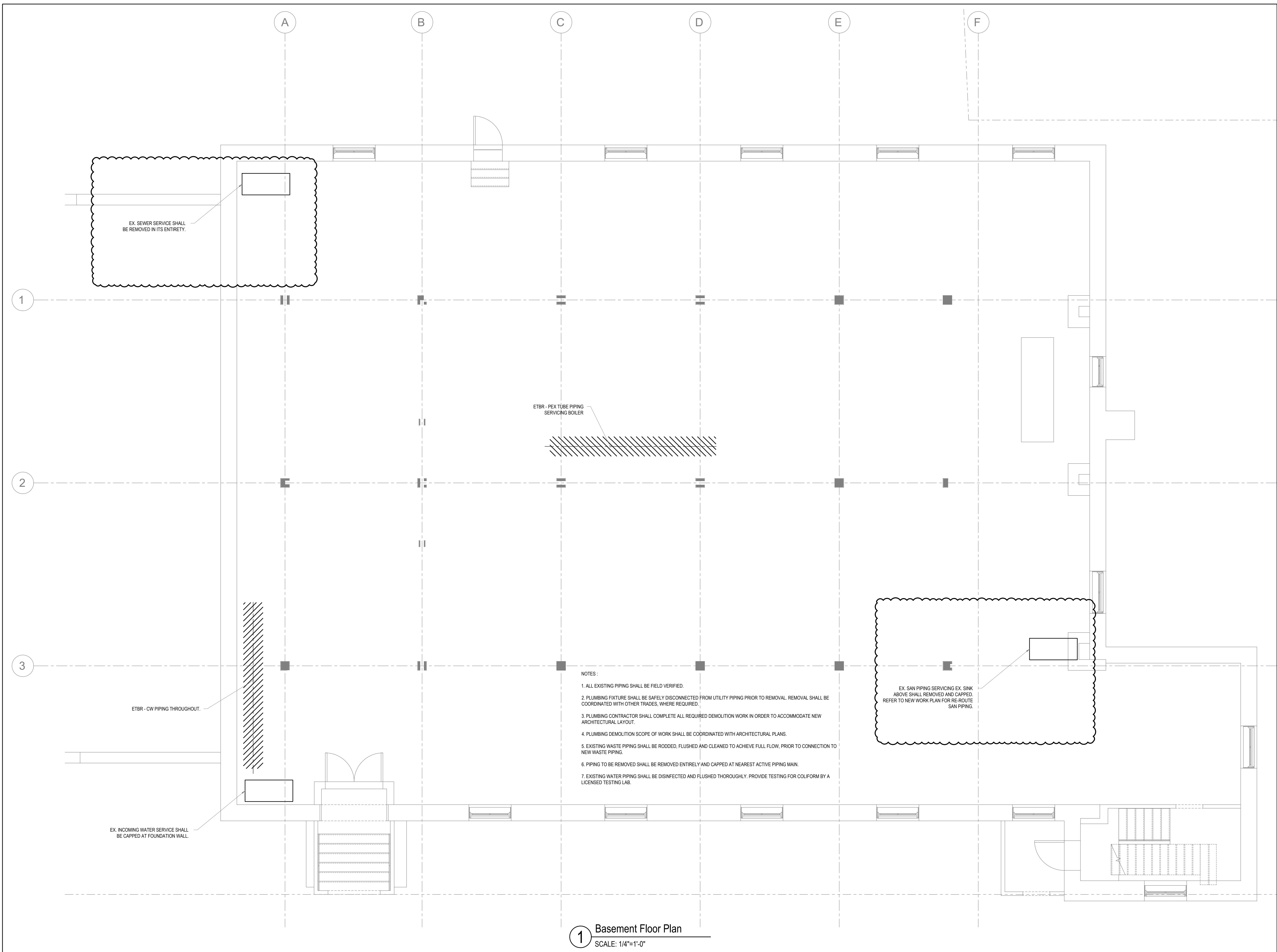
## PLUMBING DETAILS

**P004**



REMOVED FROM SCOPE OF WORK

**2 TYPICAL EJECTOR PUMP DETAIL**  
P004 NOT TO SCALE



## EASTERN ACROBATICS

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03/07/2023  
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## PLUMBING BASEMENT DEMOLITION PLAN

**PD100**

**EASTERN  
ACROBATICS**

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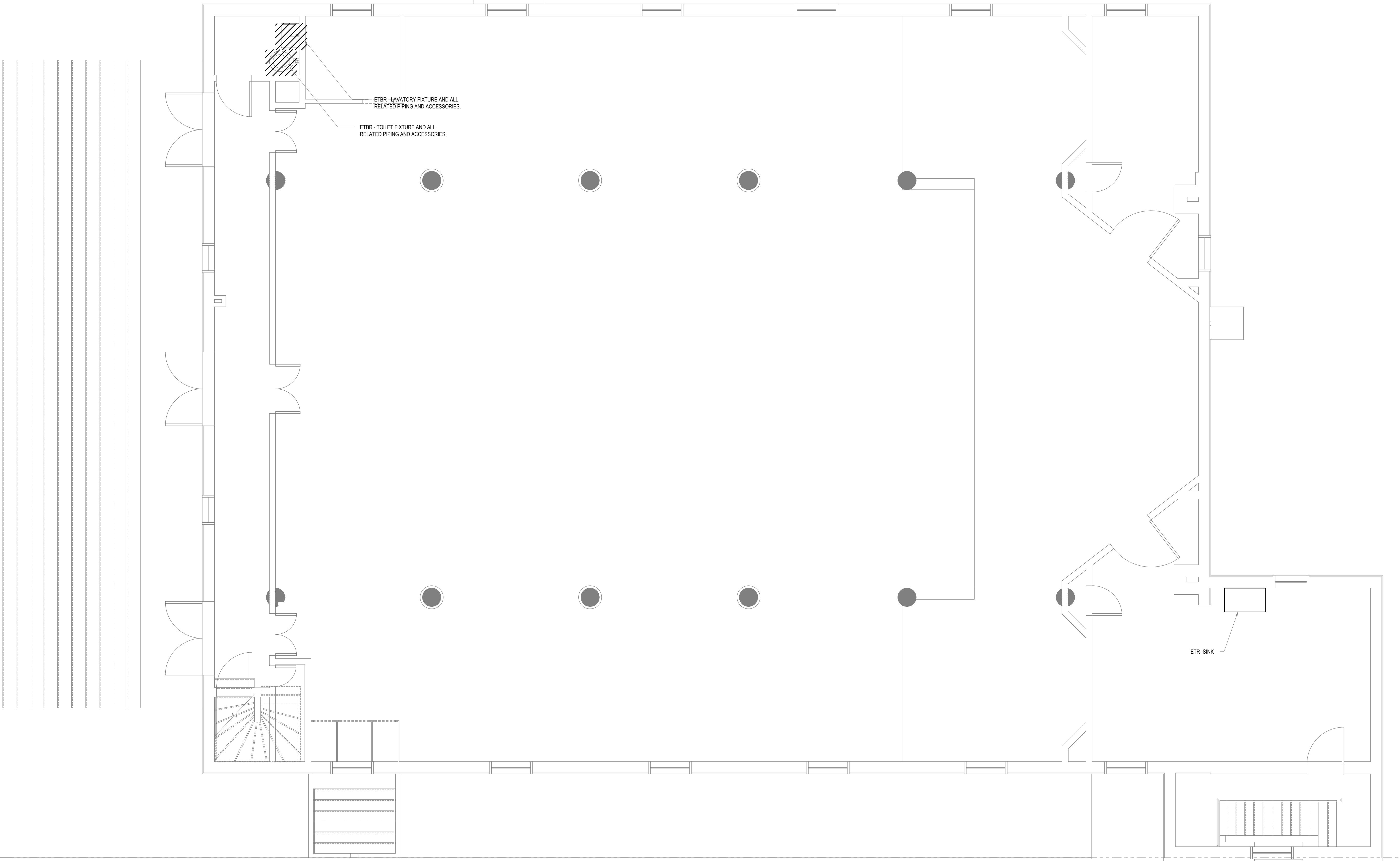
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**PLUMBING  
SANCTUARY  
FLOOR  
DEMOLITION PLAN**

**PD101**



1 Sanctuary Floor Plan  
SCALE: 1/4"=1'-0"



## EASTERN ACROBATICS

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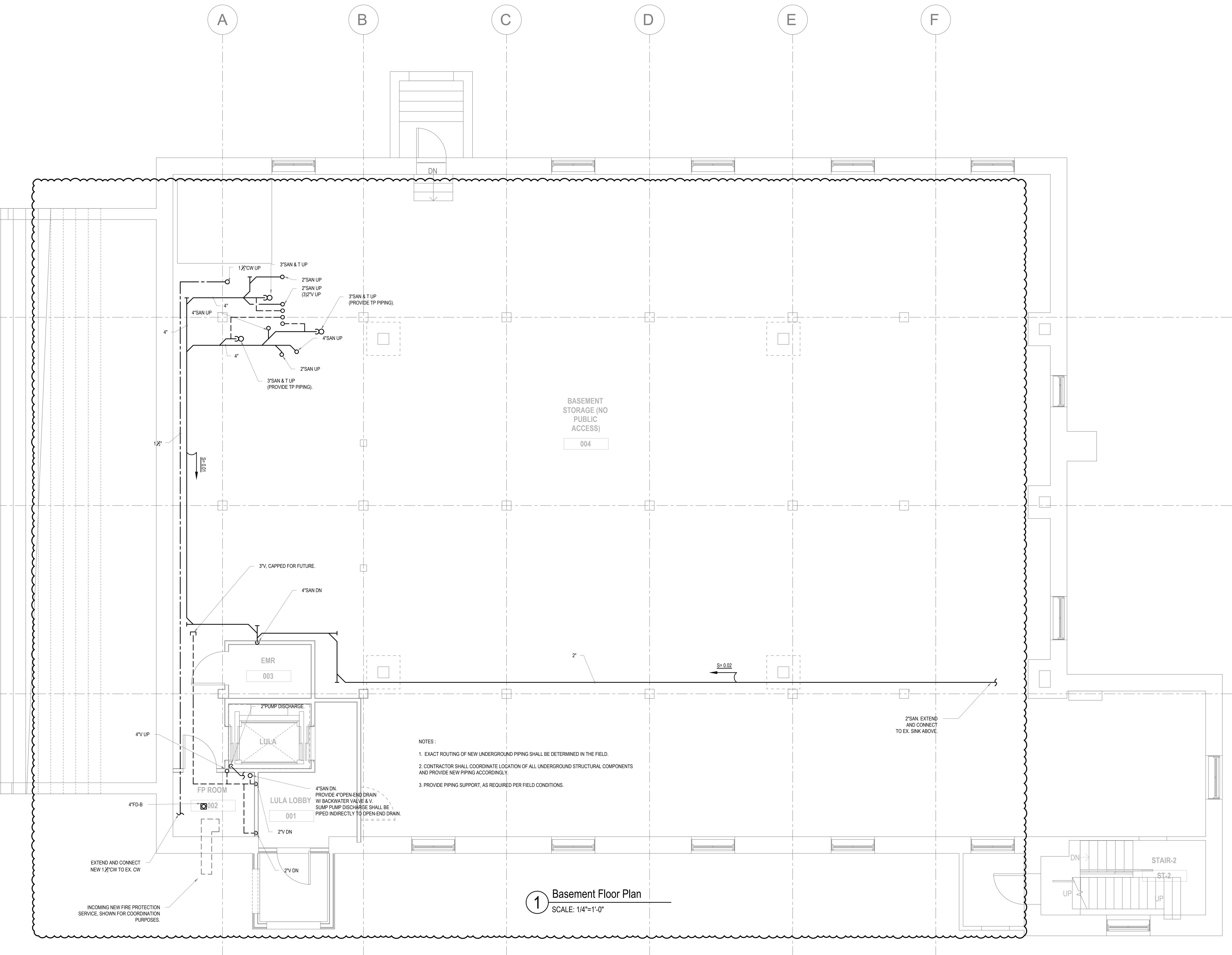
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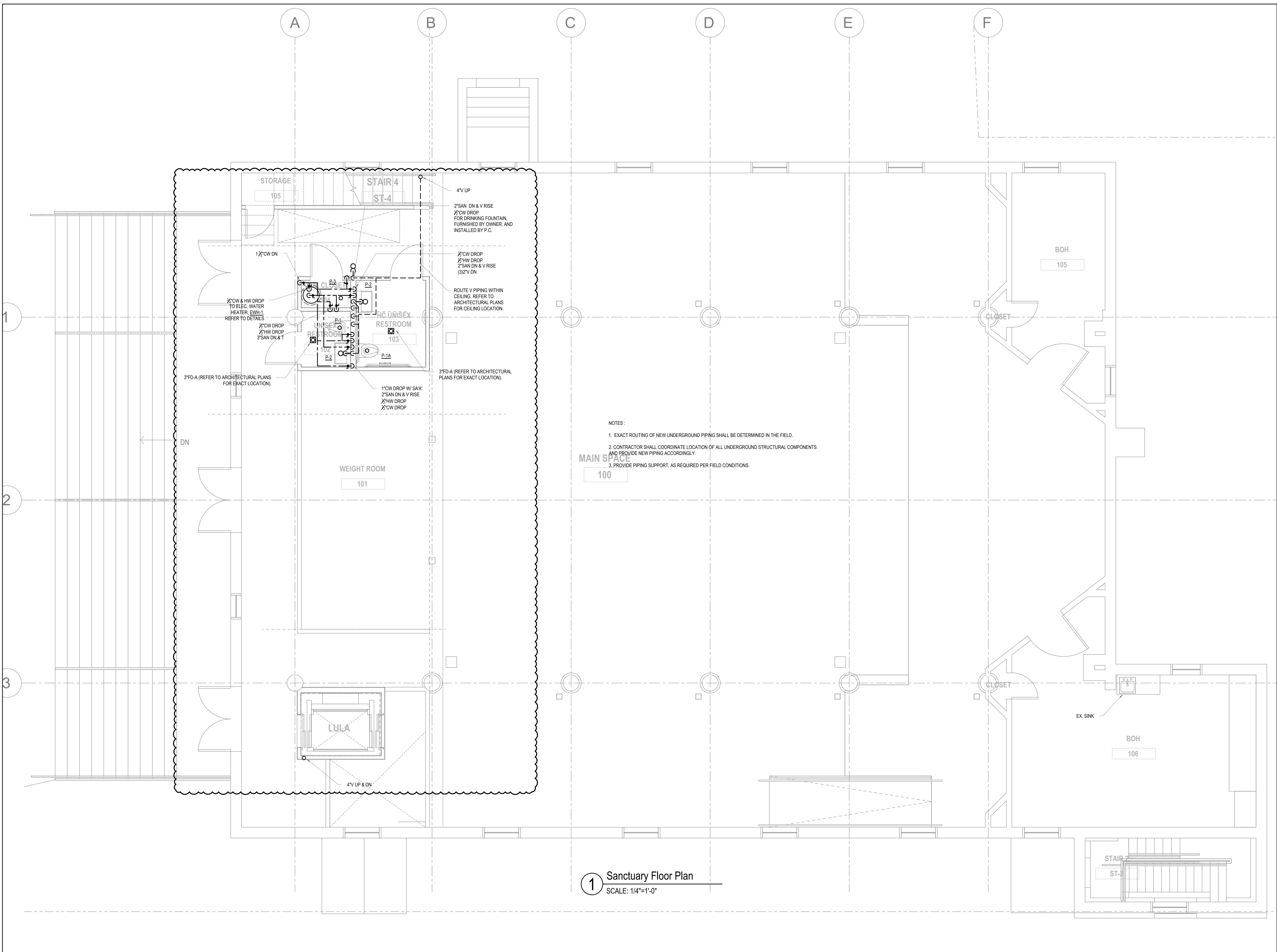
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## PLUMBING BASEMENT NEW FLOOR PLAN

P100





## EASTERN ACROBATICS

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Revision 3  
Revision 2  
REVISIONS # 0105020222  
CD SET 07/15/2022  
03/07/2023  
1/18/2023

PHASE

2021-003  
PROJECT NUMBER

## PLUMBING SANCTUARY NEW FLOOR PLAN

**P101**

**EASTERN  
ACROBATICS**

28 Eliot Street  
Natick, MA 01760

PROJECT

THE ENTRUST INC.  
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HAC: Electrical Piping Take-Off

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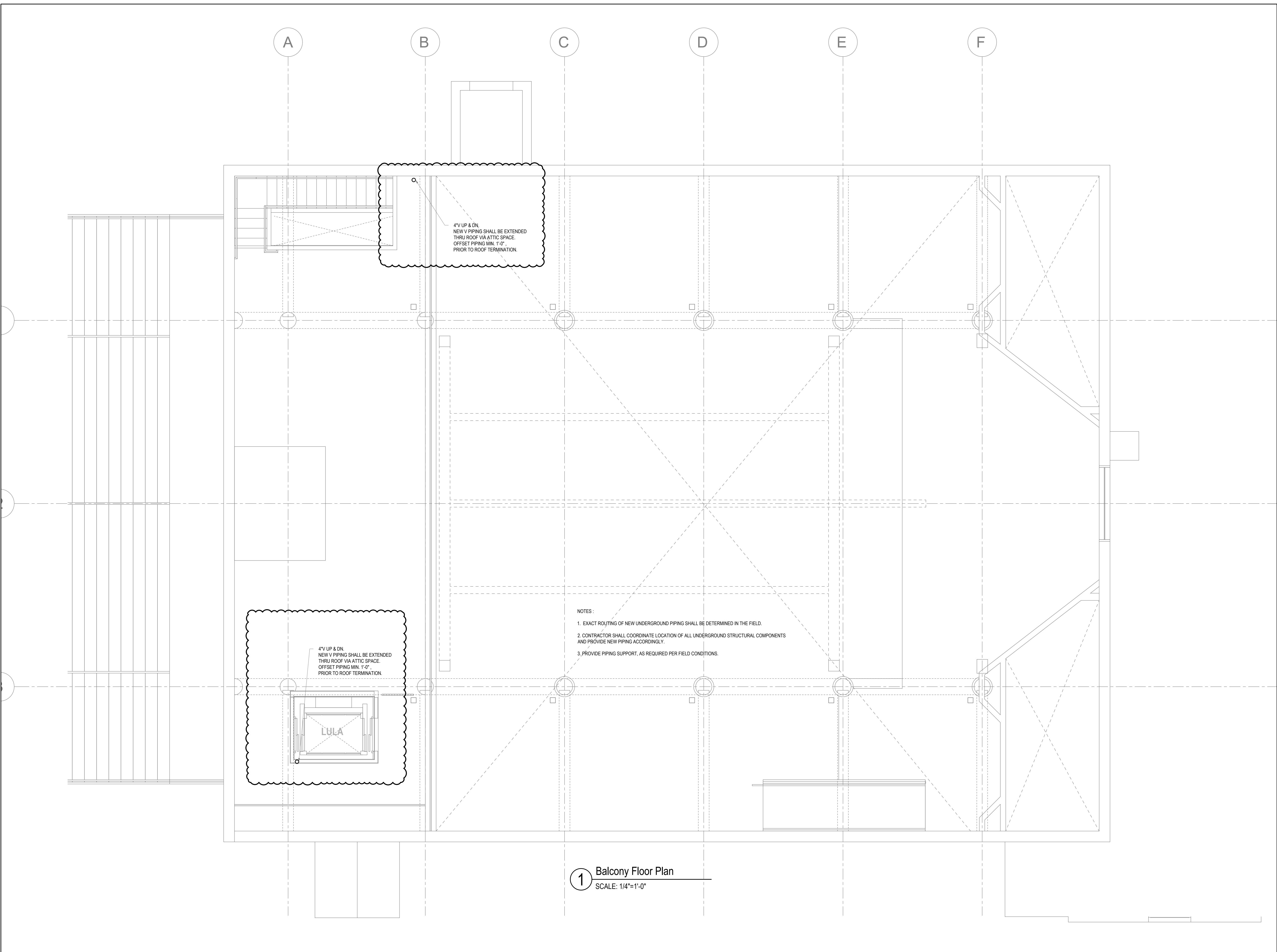
2021-003 PROJECT NUMBER

**PLUMBING  
BALCONY NEW  
FLOOR PLAN**

**P102**

1 Balcony Floor Plan

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



## EASTERN ACROBATICS

28 Eliot Street  
Natick, MA 01760

PROJECT

THE ENTRUST INC.  
FBO AUSTIN S. LIN

28 ELIOT ST.  
NATICK, MA 01760

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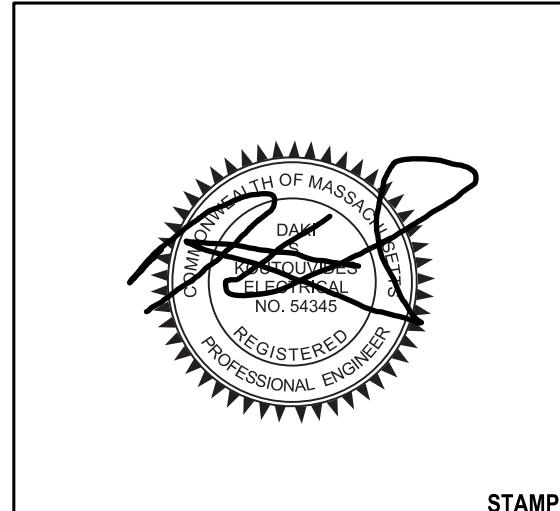
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MEP



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## ELECTRICAL LEGEND & NOTES

E001

GENERAL NOTES	ABBREVIATIONS	LIGHTING AND CONTROLS
<p>1. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR MOUNTING HEIGHTS AND EXACT LOCATIONS OF ALL DEVICES.</p> <p>2. PERFORM WORK AND PROVIDE MATERIALS AND EQUIPMENT TO MAKE INSTALLATION COMPLETE IN EVERY DETAIL UNDER THIS CONTRACT WHETHER OR NOT SPECIFICALLY SHOWN ON DRAWINGS.</p> <p>3. ALL CONDUIT, WIRING AND ELECTRICAL EQUIPMENT SHALL BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE LATEST STANDARDS OF THE NATIONAL &amp; STATE ELECTRICAL CODES AND ANY APPLICABLE LOCAL REGULATIONS.</p> <p>4. ALL FLOOR, MASONRY WALLS AND STRUCTURAL CEILING PENETRATIONS SHALL BE SLEEVED.</p> <p>5. PROVIDE FIRE/MOISTURE SEAL FOR WALL, FLOOR OR CEILING PENETRATIONS.</p> <p>6. DO NOT LAY CABLES OR RACEWAY ON, OR SUPPORT FROM SUSPENDED CEILING OR PIPING AND DUCTWORK.</p> <p>7. OUTLET BOXES SHALL BE MOUNTED FLUSH. CONDUIT SHALL BE RUN CONCEALED, WHERE WALLS ARE BLOCK, DEVICES AND WIRING SHALL BE SURFACE MOUNTED. PROVIDE WIREMOLD OR EQUAL TO SURFACE MOUNTED RACEWAY WITH FINISHED BOXES.</p> <p>8. NO CONDUIT SMALLER THAN 3/4" INCH ELECTRICAL TRADE SIZE SHALL BE USED, UNLESS SPECIFICALLY CALLED FOR ON THE DRAWINGS.</p> <p>9. ALL WIRING WITHIN UTILITY CLOSETS MAY BE IN SURFACE MOUNTED CONDUIT. EMT MAY BE UTILIZED.</p> <p>10. FLEXIBLE CONDUIT CONNECTIONS SHALL BE A MAXIMUM OF 6'-0".</p> <p>11. MC TYPE CONDUCTOR WITH INTEGRAL GROUND WIRE MAY BE UTILIZED FOR POWER AND LIGHTING CIRCUITS. MC CABLE SHALL BE UTILIZED ONLY WHERE COMPLETELY CONCEALED AND INSTALLED IN ACCORDANCE WITH CODE.</p> <p>STEEL OR FIRE-RATED ELECTRICAL BOXES (SWITCHES, OUTLETS, JUNCTION BOXES, ETC.) SHALL BE PROVIDED AND INSTALLED IN ALL FIRE RATED ASSEMBLIES AS IN ACCORDANCE WITH BUILDING AND ELECTRICAL CODES. UL LISTED MOLDABLE PUTTY PADS OR FIREBLOCKS/SPRAY FOAM INSULATE SHALL BE USED AT ALL ANNUAL SPACES/penetrations AROUND OUTLET BOXES. FIRE RATED ASSEMBLIES INCLUDE EXTERIOR WALLS, FIRE-RATED WALLS, FLOOR/CEILING ASSEMBLIES AND ROOF/CEILING ASSEMBLIES.</p> <p>RECESSED ELECTRICAL ENCLOSURES SUCH AS BUT NOT LIMITED TO, PANEELED BOARDS, LOW VOLTAGE MEDIA CENTERS, ETC. SHALL BE PROVIDED WITH FIRE-RATED BOXES WHERE INSTALLED IN FIRE-RESISTANCE-RATED ASSEMBLIES. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS OF FIRE-RATED ASSEMBLIES.</p> <p>ALL EQUIPMENT AND WIRING ON DWGS IS SHOWN DIAGRAMMATICALLY. EXACT LOCATION AND METHOD OF SUPPORT SHALL BE DETERMINED IN THE FIELD, EXCEPT WHERE SPECIFIC DIMENSIONS AND DETAILS ARE SHOWN.</p> <p>14. DETERMINED IN THE FIELD, EXCEPT WHERE SPECIFIC DIMENSIONS AND DETAILS ARE SHOWN. ALL CONDUIT RUNS SHALL BE RIGIDLY SUPPORTED.</p> <p>15. COORDINATE WITH ARCHITECTURAL FURNITURE LAYOUTS FOR EXACT LOCATION OF WALL MOUNTED POWER AND COMMUNICATIONS DEVICES. COORDINATE ALL LIGHTING FIXTURES, UNDER CABINET LIGHTING FIXTURES AND SWITCH LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS AND ELEVATIONS.</p>	<p>A/AMP AMPERE AC ALTERNATING CURRENT AF AMPERE FRAME AFF ABOVE FINISHED FLOOR AFG ABOVE FINISHED GRADE AIC AMPERE INTERRUPTING CAPACITY AL ALUMINUM AT AMPERE TRIP ATS AUTOMATIC TRANSFER SWITCH AWG AMERICAN WIRE GAUGE C CONDUIT CB CIRCUIT BREAKER CKT CIRCUIT CL CENTERLINE CU CONDUIT DC DIRECT CURRENT DE DUAL ELEMENT DWG DRAWING EC ELECTRICAL CONTRACTOR EMH ELECTRICAL MANHOLE EMT ELECTRICAL METALLIC CONDUIT EWC ELECTRIC WATER COOLER G/ND GROUND GC GENERAL CONTRACTOR GE GROUND-FAULT PROTECTION FOR EQUIPMENT (GFCI CB) GP GROUND-FAULT PROTECTION FOR PERSONNEL (GFCI CB) GFCI GROUND-FAULT CIRCUIT-INTERRUPTER HP HORSEPOWER HVAC HEATING, VENTILATION AND AIR CONDITIONING</p> <p>IMC INTERMEDIATE METALLIC CONDUIT JB JUNCTION BOX KVA KILOWATT-AMPERE KW KILOWATT LTC LIGHTING MLO MAIN LUGS ONLY MTD MOUNTED MTG MOUNTING NEC NATIONAL ELECTRICAL CODE No. # NUMBER NON-STEEL NFS NON-FIRE SCALE PC PLUMBING CONTRACTOR PWR POWER RGS RIGID STEEL CONDUIT RMS ROOT MEAN SQUARE VALUE RPM REVOLUTIONS PER MINUTE SF SQUARE FOOT SN SOLID NEUTRAL ST SHUT TRIP CIRCUIT BREAKER SWBD SWITCHBOARD TYP TYPICAL V VOLTS VA VOLT-AMPERE VFD VARIABLE FREQUENCY DRIVE WP WEATHERPROOF</p>	<p>FIXTURE SYMBOLS SHOWN BELOW ARE REPRESENTATIVE. NOT ALL SYMBOLS FROM THE PLANS HAVE BEEN SHOWN ON THIS LEGEND. FIXTURE TAG AND CIRCUIT NUMBER LOCATIONS ARE ALSO REPRESENTATIVE. ACTUAL TAG AND CIRCUIT NUMBER LOCATIONS MAY VARY ON PLANS.</p> <p> LIGHTING FIXTURE (SEE LIGHTING FIXTURE SCHEDULE) "a" INDICATES LIGHTING FIXTURE TYPE "N" INDICATES NIGHT LIGHT (UNSWITCHED) CIRCUIT</p> <p> SHADING INDICATES EMERGENCY FIXTURE WITH EMERGENCY DRIVER</p> <p> EMERGENCY BATTERY UNIT WITH (2) TWO HEADS</p> <p> EXIT SIGN, SHADING INDICATES FACE, ARROW INDICATES DIRECTION OF CHEVRON</p> <p> SINGLE POLE SWITCH, RATED 20A, 120/277V, MOUNTING HEIGHT 48" TO CENTERLINE OF TOGGLE SWITCH IN "ON" POSITION</p> <p> "a" INDICATES FIXTURE SWITCH CONTROL "3" INDICATES 3-WAY SWITCH CONTROL "4" INDICATES 4-WAY SWITCH CONTROL "D" INDICATES DIMMING CONTROL</p> <p> LIGHTING CONTROL SYSTEM DEVICE "SC" INDICATES SCENE CONTROLLER "TS" INDICATES TOUCH SCREEN "LC" INDICATES LOCAL CONTROL "PC" INDICATES PHOTOCELL, MOUNTED AT HIGHEST POINT ON ROOF FACING NORTH "TC" INDICATES TIMECLOCK, SURFACE MOUNTED</p> <p>TYPICAL SENSOR ANNOTATION: "3" INDICATES FIXTURE SWITCH CONTROL "3" INDICATES 3-WAY SWITCH CONTROL "4" INDICATES 4-WAY SWITCH CONTROL "D" INDICATED DIMMING CONTROL</p> <p> 3 H WALL OCCUPANCY SENSOR, MULTI-TECHNOLOGY, 180°, 300SF OF COVERAGE</p> <p> CEILING MOUNTED OCCUPANCY SENSOR, LOW VOLTAGE, 360° TWO-SIDED, 2000SF COVERAGE</p> <p> TWO DOTS INDICATES DUAL CIRCUIT CEILING OR WALL MOUNTED OCCUPANCY SENSOR</p>
		<p><b>EXISTING EQUIPMENT DESIGNATIONS</b></p> <p>X EXISTING TO BE REMOVED, REMOVE ALL ASSOCIATE CONDUIT AND CONDUCTORS</p> <p>XM EXISTING TO REMAIN</p> <p>XN EXISTING EQUIPMENT TO BE REPLACED WITH NEW, CONNECT TO NEW EQUIPMENT CIRCUIT</p> <p>XR EXISTING EQUIPMENT TO BE RELOCATED, JUNCTION AND EXTEND EXISTING CONDUIT AND CONDUCTORS</p> <p>XC NEW EQUIPMENT TO BE CONNECTED TO NEAREST AVAILABLE BRANCH CIRCUIT, PROVIDE NEW BRANCH CIRCUITRY FROM NEAREST EXISTING DEVICE (TO REMAIN) TO NEW DEVICE AS REQUIRED</p> <p>XL NEW LOCATION OF EXISTING EQUIPMENT, JUNCTION AND EXTEND CONDUIT AND CONDUCTORS AS REQUIRED</p>
		<p><b>RECEPTACLES AND DEVICES</b></p> <p>TYPICAL RECEPTACLE ANNOTATION: "1" INDICATES CIRCUIT NUMBER "WP" INDICATES WEATHERPROOF IN USE COVER "FB" INDICATES FLOOR BOX CONFIGURATION. REFER TO FLOOR BOX SCHEDULE / DETAILS FOR ADDITIONAL INFORMATION REFER TO SPECIFICATIONS FOR ADDITIONAL RECEPTACLE AND DEVICE DETAILS</p> <p> DUPLEX CONVENIENCE RECEPTACLE OUTLET</p> <p> DUPLEX CONVENIENCE RECEPTACLE OUTLET, COUNTERTOP MOUNTING</p> <p> DUPLEX GROUND FAULT CIRCUIT INTERRUPTING RECEPTACLE OUTLET</p> <p> DUPLEX GROUND FAULT CIRCUIT INTERRUPTING RECEPTACLE OUTLET, COUNTERTOP MOUNTING</p> <p> DOUBLE DUPLEX CONVENIENCE RECEPTACLE OUTLET</p> <p> WIRELESS ACCESS POINT (WAP)</p> <p> JUNCTION BOX, COORDINATE MOUNTING HEIGHT WITH ARCHITECT, "HT" INDICATES HEAT TRACE</p> <p> SPECIAL PURPOSE RECEPTACLE, REFER TO SPECIAL PURPOSE RECEPTACLE SCHEDULE, "P" INDICATES TYPE</p> <p> ELEVATOR SERVICE LIGHT, LIGHT SWITCH AND RECEPTACLE SHALL BE INSTALLED AT THE ELEVATOR PIT LEVEL AND TOP OF THE ELEVATOR SHAFT.</p>
		<p><b>TEL / DATA / COMM OUTLETS</b></p> <p>REFER TO SPECIFICATIONS FOR ADDITIONAL TEL / DATA DEVICE DETAILS</p> <p> TVH CABLE TELEVISION CONNECTION, FLUSH MOUNTING WITH SINGLE GANG BACK BOX AND COVER PLATE WITH "P" CONNECTOR</p> <p> T ▾ TELEPHONE / COMPUTER OR DATA OUTLET (RJ45), WITH SINGLE GANG BACK BOX AND COVER PLATE, <math>\frac{1}{2}</math>" CONDUIT BACK TO SERVER ROOM</p>
		<p><b>PANELBOARD AND TERMINAL CABINET</b></p> <p>120/208V PANEL, SURFACE MOUNTED, REFER TO PANEL SCHEDULES</p> <p>120/208V PANEL, RECESSED MOUNTED, REFER TO PANEL SCHEDULES</p> <p>TELEPHONE TERMINAL, <math>4 \times 8 \frac{1}{2}</math>" PLYWOOD BACKBOARD, PAINTED BLACK</p>
		<p><b>MOTORS AND CONTROLS</b></p> <p> MOTOR, NUMERAL INDICATES HORSEPOWER</p> <p> S<sub>0</sub> MANUAL MOTOR STARTED, RATED 20A, 250V, COORDINATE MOUNTING HEIGHT IN FIELD, MOUNTING HEIGHT SHALL NOT EXCEED 6'-7" AFF</p> <p> 60A 3P DISCONNECT SWITCH RATED 30A, 3-POLE, IN NEMA TYPE 1 ENCLOSURE, UNLESS OTHERWISE NOTED "3P" INDICATES NEMA TYPE 3R ENCLOSURE "2P" INDICATES 2-POLE, SINGLE PHASE DISCONNECT "60A" INDICATES 60A SWITCH</p> <p> 60A 40A 3P FUSED DISCONNECT SWITCH RATED 30A, 3-POLE, IN NEMA TYPE 1 ENCLOSURE, UNLESS OTHERWISE NOTED "3P" INDICATES NEMA TYPE 3R ENCLOSURE "2P" INDICATES 2-POLE, SINGLE PHASE DISCONNECT "60A" INDICATES 60A FUSE SIZE "40A" INDICATES 40A TRIP RATING</p> <p> 30A 3P ST ENCLOSED CIRCUIT BREAKER IN NEMA 1 TYPE ENCLOSURE, UNLESS OTHERWISE NOTED "30A" INDICATES BREAKER RATING "3P" INDICATES NEMA TYPE 3R ENCLOSURE "ST" INDICATES SHUNT-TRIP</p>
		<p><b>MISCELLANEOUS</b></p> <p> UTILITY METER</p> <p> SURFACE MOUNT RACEWAY, REFER TO DETAILS</p>
1. ALL CONDUIT, FIXTURES AND OUTLETS ARE SHOWN DIAGRAMMATICALLY. EXACT LOCATION AND METHOD OF SUPPORT SHALL BE DETERMINED IN THE FIELD, EXCEPT WHERE SPECIFIC DIMENSIONS AND DETAILS ARE SHOWN. <p>2. ALL LIGHTING FIXTURE SPACING DIMENSIONS AND MOUNTING HEIGHTS ARE RECOMMENDED LOCATIONS. SLIGHT VARIATIONS WHERE NECESSARY TO AVOID INTERFERENCE SHALL BE DETERMINED IN THE FIELD.</p> <p>3. WHERE REQUIRED, ADDITIONAL SUPPORT POLE FOR THE LIGHTING INSTALLATION SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. SEISMIC RESTRAINTS SHALL BE INCLUDED AS PER STATE BUILDING CODE.</p> <p>4. PROVIDE SEPARATE UN-SWITCHED NEUTRAL TO ALL EXIT SIGNS, EMERGENCY BATTERY UNITS AND EMERGENCY LIGHT FIXTURES CONTAINING EMERGENCY BALLASTS.</p> <p>5. FIRE-RATED BOXES/ENCLOSURES FOR RECESSED LIGHTING FIXTURES SHALL BE PROVIDED AND INSTALLED IN FIRE-RATED ASSEMBLIES AS IN ACCORDANCE WITH BUILDING AND ELECTRICAL CODES. FIRE-RATED ASSEMBLIES INCLUDE: FIRE-RATED WALLS, FLOOR/CEILING ASSEMBLIES AND ROOF/CEILING ASSEMBLIES. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS OF FIRE-RATED ASSEMBLIES.</p>		<p>THE ELECTRICAL DEMOLITION PLANS AND DETAILS INDICATE THE GENERAL INTENT AND ARE NOT INTENDED TO SHOW ALL ITEMS TO BE REMOVED OR RETAINED. THE ELECTRICAL CONTRACTOR SHALL NOT REMOVE ANY EQUIPMENT FROM THE SITE PRIOR TO THE SUBMISSION OF BIDS TO BECOME FAMILIAR WITH THE ACTUAL CONDITIONS AND EXTENT OF WORK. DEVICES AND EQUIPMENT LOCATED ON WALLS AND/OR CEILINGS TO BE REMOVED SHALL BE DE-CONNECTED AND MADE SAFE. THE ELECTRICAL CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE OF ANY UNPREDICTED HIDDEN CONDITIONS ENCOUNTERED DURING DEMOLITION.</p> <p>THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ALL SYSTEMS OR BUILDING COMPONENTS DAMAGED DURING THE EXECUTION OF THE WORK. DAMAGE SHALL INCLUDE BUT NOT BE LIMITED TO DESTRUCTION OR DISPOSAL OF ITEMS INTENDED TO REMAIN OR TO BE SALVAGED.</p> <p>4. THE ELECTRICAL CONTRACTOR SHALL DE-ENERGIZE AND LABEL ALL EXISTING BRANCH CIRCUITS AND FEEDERS WITHIN THE AREA OF DEMOLITION SCOPE PRIOR TO DE-ENERGIZING AND DISCONNECTION. ALL CIRCUITS WITHIN PANELBOARDS IDENTIFIED FOR REMOVAL SHALL BE TRACED AND LABELED TO ENSURE THAT NO AREA OUTSIDE THE DEMOLITION SCOPE IS AFFECTED.</p> <p>THE ELECTRICAL CONTRACTOR SHALL TEMPORARILY SUPPORT ALL ITEMS TO REMAIN THAT ARE AFFECTED BY THE DEMOLITION OF BUILDING STRUCTURAL COMPONENTS (WALLS, CEILINGS, ETC.). TEMPORARILY SUPPORTED ITEMS SHALL BE PERMANENTLY SUPPORTED AND INSTALLED WHEN FINALIZED STRUCTURES ARE IN PLACE.</p> <p>8. ALL REMOVED ITEMS SHALL BE LEGALLY DISPOSED OF UNLESS IDENTIFIED FOR REUSE. THE OWNER'S REPRESENTATIVE SHALL INSPECT ALL RETAINED ITEMS PRIOR TO PLACEMENT IN THE IDENTIFIED STORAGE LOCATION BY THE ELECTRICAL CONTRACTOR.</p> <p>THE EXISTING FIRE ALARM SYSTEM SHALL REMAIN FULLY FUNCTIONAL DURING THE ENTIRE DEMOLITION AND CONSTRUCTION PERIOD. REUSE OF EXISTING FIRE ALARM SYSTEM RACEWAYS SHALL NOT BE ALLOWED. ALL REQUIRED SYSTEM SHUTDOWNS SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER'S REPRESENTATIVE AND THE AUTHORITY HAVING JURISDICTION. DEMOLITION OF THE EXISTING SYSTEM SHALL NOT COMMENCE UNTIL THE NEW SYSTEM HAS BEEN COMPLETELY INSTALLED, TESTED AND APPROVED BY THE AUTHORITY HAVING JURISDICTION.</p> <p>10. ALL DEMOLITION SCOPE ASSOCIATED WITH LOW VOLTAGE SYSTEMS INCLUDING BUT NOT LIMITED TO TELEPHONE, DATA, SECURITY, PAGING, CCTV, ETC. SHALL BE INCLUDED IN THIS CONTRACT.</p> <p>REMOVED FLUORESCENT AND HID LAMPS AND BATTERIES SHALL BE RECYCLED BY A FACILITY APPROVED BY THE OWNER'S REPRESENTATIVE. A UNIFORM HAZARDOUS WASTE MANIFEST SHALL BE PREPARED FOR ALL DISPOSALS AND RETURNED WITH ALL APPLICABLE SIGN OFFS PRIOR TO APPLICATION FOR FINAL PAYMENT.</p> <p>ALL BALLAST IN LIGHTING FIXTURES TO BE DISPOSED SHALL BE VERIFIED TO BE PCB FREE. ALL BALLAST MANUFACTURED PRIOR TO 1979 AND NOT LABELED AS PCB FREE SHALL BE CONSIDERED TO CONTAIN PCBs. PROVIDE WRITTEN VERIFICATION TO THE OWNER'S REPRESENTATIVE THAT CONDUIT PCB FREE WASTE AND PCB WASTE CANNOT BE DISPOSED IN THE SAME CONTAINER. THIS SHALL NOT BE RECYCLED BY A FACILITY APPROVED BY THE OWNER'S REPRESENTATIVE. THIS PCB CONDUIT IS ELIMINATED BY A HIGH-TEMPERATURE INCINERATION. A UNIFORM HAZARDOUS WASTE MANIFEST SHALL BE PREPARED FOR ALL DISPOSALS AND RETURNED WITH ALL APPLICABLE SIGN OFFS PRIOR TO APPLICATION FOR FINAL PAYMENT. ALL HANDLING SHALL CONFORM TO EPA REQUIREMENTS. PROVIDE BREAKOUT COST FOR THIS SCOPE.</p>

## EASTERN ACROBATICS

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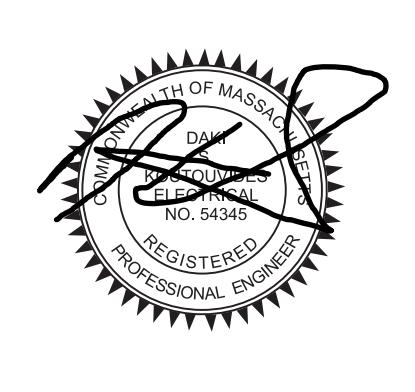
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## ELECTRICAL SPECIFICATIONS

E002

### ELECTRICAL SPECIFICATIONS

#### PART 1 - GENERAL

1. THE OWNERS GENERAL CONDITIONS, SPECIAL CONDITIONS AND SUPPLEMENTAL CONDITIONS OR REQUIREMENTS ARE PART OF THIS WORK.

2. EXAMINATION OF SITE AND CONTRACT DOCUMENT: BEFORE SUBMITTING HIS PROPOSAL, THIS CONTRACTOR SHALL VISIT THE PREMISE AND REVIEW THE ENTIRE PROJECT. THE CONTRACTOR SHALL DETERMINE THE DIFFICULTIES, CONDITIONS, AND DISPOSAL REQUIREMENTS WHICH MAY BE ENCOUNTERED DURING THE WORK. ALL CHARGES RELATED TO MEETING THE CONTENT OF THE DRAWINGS AND SPECIFICATIONS SHALL BE INCORPORATED INTO THE BID. IF DISCREPANCIES ARISE BETWEEN THE DRAWINGS AND SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL APPLY. NO ADDITIONAL CHARGES WILL BE ALLOWED DUE TO EXISTING CONDITIONS.

3. THE INSTALLATION OF ALL ELECTRICAL SYSTEMS SHALL CONFORM TO THE REQUIREMENTS OF THE STATE BUILDING CODE, ELECTRIC CODE, NATIONAL FIRE PROTECTION ASSOCIATION AND ALL OTHER APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES.

4. ALL MATERIALS SHALL BE NEW AND SHALL BEAR THE UNDERWRITERS' LABEL. SHALL BE PROVIDED IN QUANTITIES NECESSARY TO COMPLETE THE WORK AND SHALL BEAR ALL APPLICABLE LABELS FOR INTENDED USE.

5. OBTAIN AND PAY FOR ALL REQUIRED PERMITS, LICENSES AND CERTIFICATES, INCLUDE ALL FEDERAL, STATE AND LOCAL TAXES.

6. WORKMANSHIP: THE ENTIRE WORK PROVIDED IN THIS SPECIFICATION SHALL BE CONSTRUCTED AND FINISHED IN EVERY RESPECT IN A THOROUGH AND SUBSTANTIAL MANNER. EQUIPMENT THAT IS SPECIFICALLY RECALLED PLUMB, INDOR, ETC., NO ELECTRICAL EQUIPMENT SHALL BE SUPPORTED BY WORK OF OTHER TRADES. OBTAIN DETAILED INFORMATION FROM THE MANUFACTURERS OF APPARATUS AS TO THE PROPER METHOD OF INSTALLING AND CONNECTING EQUIPMENT. OBTAIN ALL INFORMATION FROM THE GENERAL CONTRACTOR AND OTHER SUBCONTRACTORS, WHICH MAY BE NECESSARY TO FACILITATE WORK AND THE COMPLETION OF THE WHOLE PROJECT.

7. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS. PROVIDE DEVICES AND COMPONENTS SHOWN ON PLANS BUT NOT INRSERS AND VICE VERSA AS IF EXPRESSLY SHOWN ON BOTH.

8. THE ELECTRICAL CONTRACTOR (EC) SHALL VERIFY THE LOCATIONS AND MOUNTING HEIGHTS OF ALL EQUIPMENT, LIGHT FIXTURES, PANELBOARDS, OUTLETS AND MECHANICAL EQUIPMENT WITH THE OWNER OR ARCHITECT PRIOR TO COMMENCING ANY WORK.

9. THE EC SHALL NOT BORE, NOTCH OR IN ANY WAY CUT INTO THE STRUCTURAL MEMBER, WITHOUT PROPER WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.

10. EXAMINE ALL DRAWINGS FOR REQUIREMENTS WHICH AFFECT THE WORK OF THIS SECTION. COORDINATE WORK WITH OTHER TRADES.

11. THE ELECTRICAL CONTRACTOR SHALL PROVIDE A COMPLETE TEMPORARY LIGHTING AND POWER SYSTEM FOR THE CONSTRUCTION OF THE PROJECT AND SHALL PAY FOR THE COST OF INSTALLATIONS. THE EC SHALL INCLUDE ALL CHARGES FROM THE UTILITY COMPANY TO CONNECT AND DISCONNECT THE TEMPORARY SERVICE. THE COST OF ELECTRICITY SHALL BE BY THE OWNER OR GENERAL CONTRACTOR.

12. RECORD DRAWINGS, IN ACCORDANCE WITH REQUIREMENTS, FURNISH AND KEEP IN THE JOB AT ALL TIMES, (2) COMPLETE AND SEPARATE SETS OF BLACKLINE PRINTS OF THE ELECTRICAL WORK ON WHICH SHALL BE CLEARLY, NEATLY AND ACCURATELY NOTED, PROMPTLY AS THE WORK PROGRESSES, ALL ELECTRICAL CHANGES, REVISIONS AND ADDITIONS TO THE WORK, WHENEVER WORK IS INSTALLED OTHERWISE THAN AS SHOWN ON THE CONTRACT DRAWINGS, SUCH CHANGES SHALL BE NOTED. AT THE CONCLUSION OF WORK, PREPARE RECORD DRAWINGS IN ACCORDANCE WITH GENERAL CONDITIONS.

13. THE COMPLETED ELECTRICAL INSTALLATION SHALL BE GUARANTEED IN WRITING BY THE ELECTRICAL CONTRACTOR TO BE FREE FROM DEFECTS OF MANUFACTURE AND INSTALLATION FOR A PERIOD OF ONE YEAR FROM THE DATE OF WRITTEN ACCEPTANCE BY THE OWNER. ANY FAULT SHALL BE DEFECTIVE OR IMPROPER MATERIAL, EQUIPMENT WORKMANSHIP OR DESIGN WHICH MAY DEVELOP SHALL BE MADE GOOD FORWTH BY, AND AT THE EXPENSE OF THE ELECTRICAL CONTRACTOR, INCLUDING ALL OTHER DAMAGES DONE TO AREAS, MATERIALS AND OTHER SYSTEMS RESULTING FROM THIS FAILURE.

14. THE EC SHALL NOTIFY THE OWNER/ENGINEER UPON: (1) COMPLETION OF ALL ROUGH WIRING BEFORE CLOSURE OF ALL WALLS AND (2) UPON SUBSTANTIAL COMPLETION<sup>1</sup> OF ALL ELECTRICAL WORK. AFTER SUBSTANTIAL COMPLETION, THE OWNER'S REPRESENTATIVE SHALL PREPARE A PUNCH LIST OF ITEMS TO BE CORRECTED. THE EC SHALL CORRECT, AT ADDITIONAL COST, ANY DEFICIENCIES FOUND.

15. RELATED WORK BY OTHERS

15.1. THERMISTS AND CONTROL WIRING SHALL BE SUPPLIED BY THE HVAC CONTRACTOR.

15.2. STARTERS FOR MECHANICAL EQUIPMENT SHALL BE SUPPLIED BY THE MECHANICAL CONTRACTOR, INSTALLED AND WIRED BY THE ELECTRICAL CONTRACTOR. U.N.C.

15.3. DUCT SMOKE DETECTORS ARE PURCHASED AND SUPPLIED BY THE MECHANICAL CONTRACTOR. THE MECHANICAL CONTRACTOR, SHALL SUPPLY THE DUCT SMOKE DETECTORS TO THE DUCT SMOKE DETECTOR TO THE FIRE ALARM CONTROL PANEL SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.

15.4. CUTTING, PATCHING AND TRENCHING SHALL BE PROVIDED BY THE GENERAL CONTRACTOR.

16. SUBMITTALS: EC SHALL PROVIDE ELECTRONIC PDF SUBMITTALS FOR ELECTRICAL EQUIPMENT TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. SUBMITTALS SHALL INDICATE ALL MATERIALS, DIMENSIONS AND RATINGS. PROVIDE INFORMATION ON THE FOLLOWING ITEMS WITHIN TEN DAYS FOR SUBMITTAL REVIEW:

16.1. SWITCHES AND RECEPTACLES

16.2. PANELBOARDS

16.3. SWITCHBOARDS

16.4. LIGHTING FIXTURES AND CONTROLS

16.5. FIRE ALARM SYSTEM COMPONENTS

16.6. CIRCUIT BREAKERS

16.7. FUSE PANEL BOXES

16.8. WIRING DEVICES

16.9. CONDUIT & WIRE

16.10. FIRE ALARM (EQUIPMENT CIRCUITS, RISERS, WIRE SIZING, ETC)

16.11. TEST REPORTS

16.12. SUBSTITUTIONS SHOULD BE NOTED WHEN SUBMITTED WITH AN EXPLANATION FOR THE SUBSTITUTION.

16.13. ELEVATOR AND ALL ELECTRICAL ROOMS, WITH PROPOSED MANUFACTURER'S EQUIPMENT SHALL BE SUBMITTED TO SHOW COMPLIANCE WITH THE APPROPRIATE CODE REQUIREMENTS.

16.14. THE ACCEPTANCE OF SYSTEMS, EQUIPMENT AND DATA SHEETS IS A GENERAL APPROVAL SUBJECT TO THE CONTRACT DRAWINGS, SPECIFICATIONS, AND VERIFICATION OF ALL MEASUREMENTS AT THE JOB. ACCEPTANCE DOES NOT RELIEVE THE ELECTRICAL CONTRACTOR FROM THE RESPONSIBILITY OF DATA SHEET ERRORS OR OMISSIONS. QUANTITY OF ITEMS INDICATED ON SUBMITTAL IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

#### PART 2 - PRODUCTS

1. GENERAL

1.1. AS PART OF THIS CONTRACT, THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ELECTRICAL EQUIPMENT, DEVICES, MATERIALS AND EQUIPMENT NECESSARY TO MAKE THE INSTALLATION COMPLETE AND OPERATIONAL IN EVERY DETAIL, WHETHER OR NOT SPECIFICALLY INDICATED ON THE DRAWINGS OR SPECIFIED HEREIN.

1.2. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND INCLUDE A MANUFACTURER'S WARRANTY.

1.3. IT IS THE INTENT OF THE SPECIFICATIONS THAT ONE MANUFACTURER BE SELECTED, NOT A COMBINATION, FOR ANY PARTICULAR CLASSIFICATION OF EQUIPMENT. FOR EXAMPLE, ALL WIRE OF ONE MANUFACTURER, ALL SWITCHES OF ONE MANUFACTURER, ETC. EXCEPT SPECIFIC MATERIAL CLASSIFICATIONS IN WHICH DELIVERY TIME BECOMES A PROBLEM, THE ENGINEER MAY GIVE SPECIFIC EXEMPTION FROM THE REQUIREMENTS.

1.4. WHERE MATERIALS, EQUIPMENT, APPARATUS, OR OTHER PRODUCTS ARE SPECIFIED BY MANUFACTURER, BRAND NAME, TYPE OR CATALOG NUMBER, SUCH DESIGNATION IS TO ESTABLISH STANDARDS OF PERFORMANCE, QUALITY, TYPE, AND STYLE.

2. FEEDERS: ALL FEEDERS BETWEEN PANELBOARDS AND SWITCHBOARDS SHALL BE PROVIDED IN TYPE EMT OR GRS CONDUIT; TYPE MC CABLE IS NOT PERMITTED. UNLESS NOTED OTHERWISE.

3. CONCEALED BRANCH CIRCUITS: ALL BRANCH CIRCUIT WIRING SHALL BE CONCEALED WHENEVER POSSIBLE, WITHIN CONCEALED SPACES SUCH AS ABOVE HUNG CEILING AREAS AND WITHIN WALL PARTITIONS:

3.1. BRANCH CIRCUIT WIRING SHALL BE TYPE MC CABLE, 1/2" OR 1/2" WITH FULL SIZE INSULATED GROUND WIRE.

3.2. MC TYPE CABLE MAY BE UTILIZED FOR LIGHTING AND CIRCUITS.

4. CONDUIT: ALL EXPOSED, OR SURFACE MOUNTED BRANCH CIRCUIT RUNS ABOVE 8'-0" SHALL BE INSTALLED USING TYPE EMT CONDUIT. BELOW 8'-0" RIGID GALVANIZED STEEL CONDUIT SHALL BE INSTALLED.

4.1. MINIMUM SIZE CONDUIT USED SHALL BE 3/4".

4.2. PROVIDE FIRE RESISTANT RATING AROUND ALL CONDUITS PENETRATING THROUGH FIRE RATED WALLS OR FLOORS. RATING OF FIRE PROOFING SHALL MATCH RATING OF WALLS.

4.3. ALL CONDUIT AND CONDUIT SUPPORTS SHALL BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE NATIONAL ELECTRICAL CODE.

4.4. ALL CONDUITS SHALL HAVE A PROPER SIZE GROUNDING CONDUCTOR.

4.5. ALL CONNECTIONS TO MACHINERY AND EQUIPMENT SUBJECT TO VIBRATION SHALL BE MADE WITH FLEXIBLE LIQUIDTIGHT CONDUIT, NOT IN EXCESS OF 6'-0": PROVIDE SUFFICIENT SLACK TO PREVENT VIBRATION TRANSMISSION.

4.6. PROVIDE EXPANSION FITTINGS ON ALUMINUM CONDUIT PASSING THROUGH BUILDING EXPANSION JOINTS.

4.7. CONDUITS ARE SHOWN DIAGRAMMATICALLY EXACT LOCATION AND METHOD OF SUPPORT SHALL BE DETERMINED BY FIELD CONDITIONS, ALL CONDUITS SHALL BE RIGIDLY SUPPORTED.

5. WIRING: WIRING SHALL BE A MINIMUM OF #12 AWG SOLID. ALL WIRE AND CABLE SHALL BE COPPER, NO ALUMINUM IS PERMITTED. WITHOUT APPROVAL OF THE OWNER/ENGINEER ON A VALUE ENGINEERING BASIS, WIRE AND CABLE SHALL BE MANUFACTURED BY PHELPS DODGE COPPER PRODUCTS CORP., GENERAL CABLE CO., TRIANGLE CONDUIT AND CABLE CO., OR EQUAL.

5.1. NON-METALIC CONDUIT TYPE NM/CROMEX SHALL ONLY BE ALLOWED WITH OWNER/ENGINEER APPROVAL & MUST BE ALLOWED BY CODE & BE INSTALLED IN ACCORDANCE WITH CODE REQUIREMENTS.

5.2. AWG WIRE SIZES SHALL BE STRANDED, AND ALL SMALLER AWG BE SOLID.

5.3. ALL WIRING LOADS, CIRCUITS, DATA, FREQUENCY, POWER AND CONTROL CIRCUIT SHALL BE PLENUM RATED; NO EXCEPTIONS.

5.4. ALL NEW WIRING SHALL BE THHN/TWAW RATED 75-90 DEGREES 60V. WET-DRY LOCATIONS.

5.5. BRANCH CIRCUITS LONGER THAN 150 FEET FOR 120V OR 250FT FOR 277V SHALL BE AT LEAST #10AWG FROM PANEL TO LAST OUTLET. CIRCUITING SHOWN ON THE DWGS IS DIAGRAMMATIC PROVIDE COMPLETE WIRING SYSTEM WHETHER OR NOT INDICATED GRAPHICALLY.

5.6. PROVIDE AT LEAST ONE HOT AND ONE NEUTRAL CONDUCTOR FOR ALL INDIVIDUAL BRANCH CIRCUIT WIRING.

#### 6. GROUNDING:

6.1. ALL GROUNDING SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE ARTICLE 250, AS AMENDED BY LOCAL AND STATE CODES.

6.2. PROVIDE A COMPLETE GROUNDING ELECTRODE SYSTEM AND EQUIPMENT GROUNDING SYSTEM.

6.3. CONDUCTORS UTILIZED FOR GROUNDING AND BONDING SHALL HAVE TYPE "THHN" OR BETTER INSULATION.

6.4. FOR EACH FEEDER OR RUN OF LIGHTING AND APPLIANCE BRANCH CIRCUITRY, INCLUDE EQUIPMENT AND RACEWAY GROUNDS CONDUCTORS RUN WITHIN THE RACEWAYS. THE INDICATED QUANTITIES OF CONDUCTORS DO NOT INCLUDE THE GROUND WIRES.

#### 7. OUTLET BOXES AND ACCESSORIES:

7.1. STEEL OR FIBER-PATED ELECTRICAL BOXES (SWITCHES, OUTLETS, JUNCTION BOXES, ETC.) SHALL BE PROVIDED AND INSTALLED IN ALL FIRE RATED ASSEMBLIES AS IN ACCORDANCE WITH BUILDING & ELECTRICAL CODES. PROVIDE UL LISTED MOLDABLE PUTTY PADS TO SEAL ANNULAR SPACES/PERFORATIONS AROUND ALL JUNCTION BOXES.

7.1.1. FIRE RATED ASSEMBLIES INCLUDE EXTERIOR WALLS, FIRE RATED WALL, FLOORICLING ASSEMBLIES AND ROOFING/CEILING ASSEMBLIES.

7.2. PROVIDE GALVANIZED SHEET STEEL OUTLET BOXES FOR ALL OUTLETS UNLESS OTHERWISE NOTED.

7.3. OUTLET BOXES FOR PENDANT-MOUNTED FIXTURES SHALL BE GALVANIZED, STAMPED STEEL FURNISHED WITH A FIXTURE STUD, SCREWS MOUNTED TO FRAMING.

7.4. ALL OUTLET BOXES FOR CONCEALED WORK SHALL BE GALVANIZED, STAMPED STEEL; THOSE FOR FIXTURES, FURNISHED WITH A FIXTURE STUD.

7.5. OUTLET BOXES SHALL BE OF SIZE AND TYPE TO ACCOMMODATE (1) STRUCTURAL CONDITIONS, (2) SIZE AND NUMBER OF RACEWAYS, CONDUCTORS OR CABLES ENTERING, AND (3) DEVICES OR FIXTURES FOR WHICH THEY ARE REQUIRED.

7.6. INSTALL BLANK PLATES ON ALL OUTLET BOXES, IN WHICH NO APPARATUS IS INSTALLED, WHICH DO NOT INTEGRALLY PROVIDE A COVER FOR THE BOX.

7.7. SPECIFICATIONS SHALL BE TAKEN TO SET ALL BOXES CORRECTLY SQUARE AND TRUE WITH THE BUILDING FINISH.

7.8. OUTLET BOXES SHALL HAVE #18" SOLID MALE FIXTURE STUDS AND AUXILIARY FIXTURE STEM SHALL BE SUPPORTED FROM 3/8" MALE FIXTURE STUDS.

7.9. OUTLET BOXES AND ACCESSORIES SHALL BE AS MANUFACTURED BY STEEL CITY, APPLETON, RACO, OR EQUAL.

#### 8. WIRING DEVICES:

8.1. ALL WIRING DEVICES SHALL BE OF A SINGLE MANUFACTURER, AS MANUFACTURED BY PASS & SEYMOUR, GENERAL ELECTRICAL, BROWN, BRONSON, ELECTRIC COMPANY, LEVITON, OR EQUAL. MANUFACTURERS LISTED BELOW ESTABLISH MINIMUM REQUIREMENTS, COORDINATE WITH OTHER TRADES.

8.2. 20A COMMERCIAL GRADE RECEPTACLES SHALL BE GROUNDING TYPE, 120V. RECEPTACLES SHALL BE BACK AND SIDE WIRED WITH SCREW TYPE TERMINALS OR PRESSURE TERMINALS.

8.3. PRESCHOOL, BUSINESS OFFICES, MEDICAL, DENTAL AND OUT PATIENT UNITS. SUBSETS OF ASSEMBLY GROUPS AND DORMITORIES.

8.4. WIRING DEVICES WITHIN COMMERCIAL KITCHEN AND BATH AREAS SHALL BE PROVIDED WITH IN USE CLEAR WEATHER PROOF COVER.

8.5. GFI RECEPTACLES AS REQUIRED SHALL HAVE AN ADDITIONAL GROUNDING LEG AND SHALL BE OF CAPACITY AND CONFIGURATION FOR THE EQUIPMENT TO BE CONNECTED. CONTRACTOR SHALL CONFIRM CONFIGURATION PRIOR TO ROUGH IN.

8.6. DAMP LOCATION WEATHERPROOF RECEPTACLES SHALL HAVE AN ENCLOSURE THAT IS WEATHERPROOF WHEN THE RECEPTACLE IS COVERED.

#### 8.7. RECESSED POLE THROUGH/FLOOR BOX:

8.7.1. 6 GANG, WITH OPEN/CLOSE PLATE AND ADJUSTABLE FIRE BARRIER.

8.7.2. PROVIDED IN APPROXIMATE HOLE SIZE, 8 1/4" DIAMETER, 17" DEEP FED FROM CEILING BELOW.

8.7.3. FLOOR BOX: PROVIDE CONDUIT FOR TELDATA AND POWER FROM NEAREST AVAILABLE WALL.

#### 8.7.4. CONFIGURED FOR THE FOLLOWING:

8.7.4.1. (1) DUPLEX OUTLET

8.7.4.2. (2) RJ45 JACKS

8.7.4.3. (2) AUDIOVISUAL (COORDINATE EXACT REQUIREMENTS WITH OWNER)

8.7.4.4. MINIATURE (2) CIRCUIT CONNECTIONS FOR TELDATA & AUDIOVISUAL

8.7.4.5. 34" CONDUIT FOR POWER

8.7.4.6. FINISH: COORDINATE FINISH WITH ARCHITECT.

8.8. WET LOCATION WEATHERPROOF RECEPTACLES SHALL CONFORM TO NEC ARTICLE 406.8(B)(i) AND SHALL HAVE AN ENCLOSURE THAT IS WEATHERPROOF WHETHER OR NOT THE ATTACHMENT PLUG CAP IS INSERTED. PROVIDE RECEPTACLE WITH COVER.

8.9. LIGHT SWITCHES: ALL LOCAL WALL SWITCHES SHALL BE OF THE FLUSH QUIET DECOR OR TOGGLE TYPE (AS COORDINATED WITH ARCHITECT).

8.10. SWITCHES: ALL LOCAL WALL SWITCHES SHALL BE COMMON INTERNAL TRIP. HANDLE TIES SHALL NOT BE PERMITTED.

## EASTERN ACROBATICS

28 Eliot Street  
Natick, MA 01760

PROJECT

THE ENTRUST INC.  
FBO AUSTIN S. LIN

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HAC: Electrical Planning / Site Protection



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8/5/2022  
Revision 2  
1/18/2023

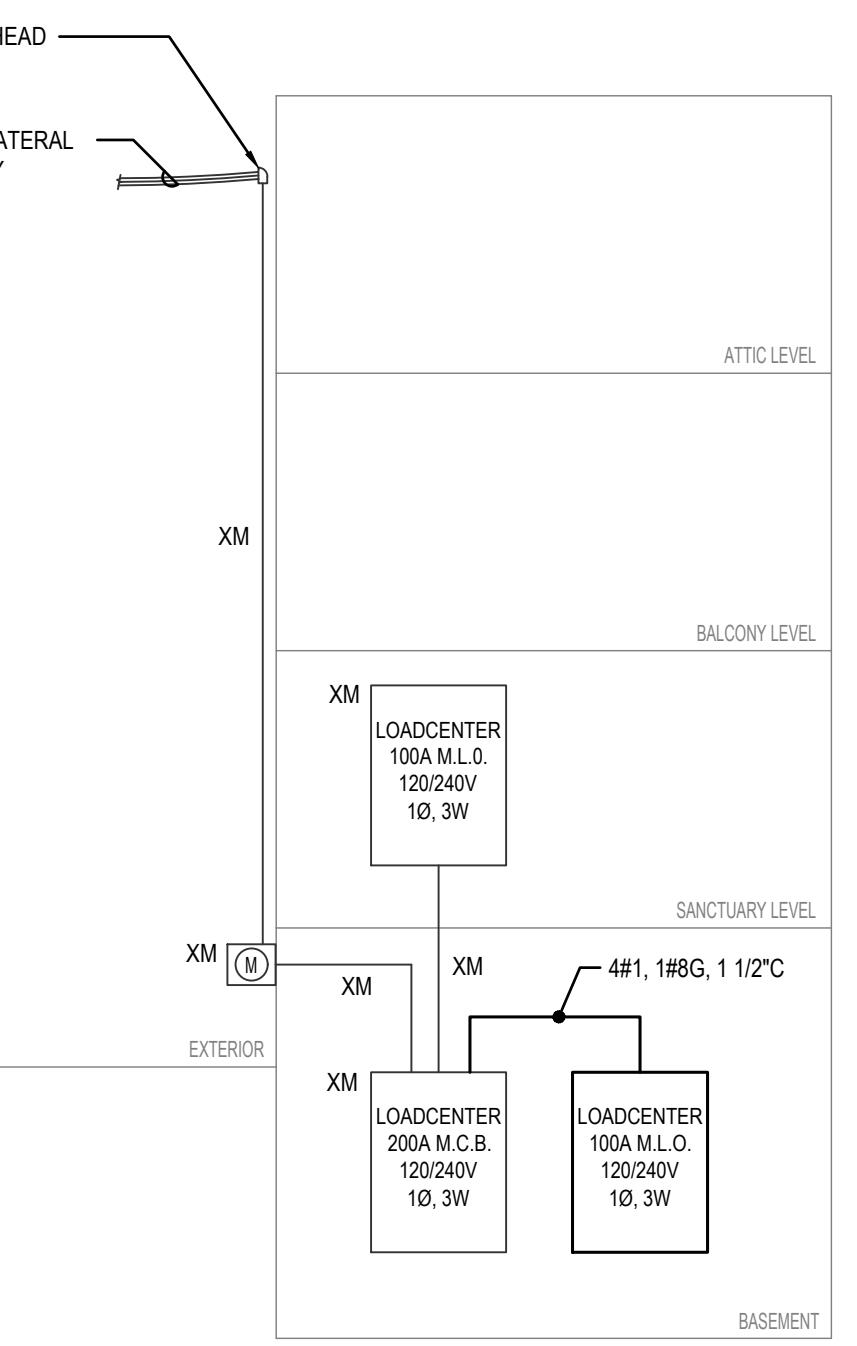
REVISIONS #1 08/05/2022  
CD SET 07/15/2022

PHASE

2021-003 PROJECT NUMBER

## ELECTRICAL SCHEDULES

**E003**



EXISTING PANEL 'PB', 200A, 120/240 VOLT, 1 PHASE, 3 WIRE AND GROUND									
INTERRUPTING CAPACITY: 10,000 AMPS RMS SYM MAIN: 200A M.C.B. MOUNTING: SURFACE									
LOAD DESCRIPTION	KVA LOAD	CB/ PHASE	CIRC NO.	PH	CIRC NO.	CB/ PHASE	KVA LOAD	LOAD DESCRIPTION	
EXISTING SUB-MAIN CB (XM)			100	1	A	2	20	EXISTING SPARE (XM)	
EXISTING 1ST FLOOR PANEL (XM)			100	3	B	4	15	EXISTING KITCHEN REC. (XM)	
EXISTING KITCHEN REC. (XM)			20	5	A	6	20	EXISTING SPARE (XM)	
EXISTING SPARE (XM)			20	7	B	8	15	EXISTING FIRE ALARM (XM)	
EXISTING KITCHEN REC. (XM)			20	11	B	12	20	EXISTING COLUMN REC. (XM)	
EXISTING PANEL REC. (XM)			20	13	A	14	20	EXISTING LEFT WALL REC. (XM)	
EXISTING SPARE (XM)			20	15	B	16	20	EXISTING REAR WALL REC. (XM)	
EXISTING RECEPTACLES (XM)			30	17	A	18	20	EXISTING RECEPTACLES (XM)	
EXISTING RECEPTACLES (XM)			15	19	B	20	20	EXISTING BATHROOM HEAT (XM)	
EXISTING RECEPTACLES (XM)			15	21	A	22	20	EXISTING SPARE (XM)	
EXISTING STAIR LIGHTING (XM)			15	23	B	24	15	EXISTING SECURITY REC. (XM)	
EXISTING BSMT HEATER (XM)			20	25	A	26	20	EXISTING BASEMENT HEAT (XM)	
EXISTING BSMT HEATER (XM)			20	27	B	28	30	EXISTING LOAD (XM)	
EXISTING BSMT HEATER (XM)			30	29	A	30	30	EXISTING LOAD (XM)	
EXISTING BOILER (XM)			20	31	B	32	30	EXISTING BATHROOM GFI (XM)	
EXISTING UNIT HEATER (XM)			20	33	A	34	20	EXISTING SPARE (XM)	
EXISTING SPARE (XM)			20	35	B	36	20	NEW PANEL PB2	
	0.00	0.00					0.00	SUBTOTALS	
							0.00	0.00	

\* OPTIONS:

NEW PANEL 'PB2', 100A, 120/240 VOLT, 1 PHASE, 3 WIRE AND GROUND									
INTERRUPTING CAPACITY: 10,000 AMPS RMS SYM MAIN: 100A M.L.O. MOUNTING: SURFACE									
LOAD DESCRIPTION	KVA LOAD	CB/ PHASE	CIRC NO.	PH	CIRC NO.	CB/ PHASE	KVA LOAD	LOAD DESCRIPTION	
* EXISTING WATER BUBBLER	0.40	20	1	A	2	30	2.50	LULA ELEVATOR FEED	
* EXISTING INSTA HOT (XM)	1.92	20	3	B	4	20	2.50	ELECTRIC WATER HEATER	
BASEMENT RECEPTACLES	0.80	20	5	A	6	20	1.25	EWH-1	
FIRST FLOOR RECEPTACLES	1.00	20	7	B	8	20	1.25	DUPLEX SEWAGE EJECTOR	
FIRST FLOOR RECEPTACLES	0.80	20	9	A	10	20	1.20	DUPLEX SEWAGE EJECTOR	
RESTROOM GFI RECEPTACLES	0.60	20	11	B	12	20	1.20	ELEV MACH. RM EXHAUST EF-1	
ELEVATOR MACH RM GFI REC.	0.20	20	13	A	14	20	1.20	ELEVATOR CAB LTG/FAN	
ELEVATOR CAB LTG/FAN	0.30	20	15	B	16	20	0.52	FIRST FLOOR LIGHTING	
ELEVATOR DAMPER	0.50	20	17	A	18	20	0.12	BALCONY LIGHTING	
ELEVATOR MACH RM LTG	0.10	20	19	B	20	20	0.40	SITE LIGHTING VIA TIMECLOCK	
ELEVATOR PIT LTG/GFI REC.	0.40	20	21	A	22	20	0.18	BASEMENT LIGHTING	
AIR COMPRESSOR/AC-1	1.20	20	23	B	24	20	0.60	BALCONY RECEPTACLES	
QUAD RECEPT	0.36	20	25	A	26	20	0.36	QUAD RECEPT	
QUAD RECEPT	0.36	20	27	B	28	20	0.36	QUAD RECEPT	
RECEPTACLES	0.72	20	29	A	30	—	—	SPACE AND HARDWARE	
	4.16	5.48					6.81	SUBTOTALS	
							6.83		

\* OPTIONS:

PHASE A 10.99 KVA									
TOTAL LOAD 23.29 KVA									
NOTES PERTAINING TO POWER RISER DIAGRAM:									
1. RELOCATE TWO (2) EXISTING CIRCUITS FROM EXISTING PANEL 'PB' TO NEW SUB-PANEL 'PB2' TO ACCOMMODATE SUB-PANEL CIRCUIT BREAKER.									
* EXISTING BRANCH CIRCUITS TO BE RELOCATED FROM EXISTING PANEL "PB". ELECTRICAL CONTRACTOR SHALL INTERCEPT AND EXTEND BRANCH CIRCUITRY TO NEW CIRCUIT BREAKERS AS INDICATED.									

LIGHTING FIXTURE SCHEDULE									
Fixture Type	Description	Manufacturer and Catalog Number	Lamps			Voltage	Notes		
			No.	Wattage	Type				
AE	4' LED STRIP WITH EMERGENCY BATTERY	H.E. WILLIAMS: 75S-4-165/835-EM/10WLP-DRV-UV	-	43	LED	120			
MD	SURFACE MOUNTED LED LIGHT WITH MOTION SENSOR	ENGINEERING PRODUCTS CO: 16540	-	7	LED	120			
P1	2" CYLINDER LED PENDANT	CREATIVE SYSTEMS LIGHTING (CSL): LP2-10-30-30-*.-S.*	-	14	LED	120	4		
P2	DECORATIVE LED PENDANT	BY OWNER	-	-	-	120			
TA	SINGLE CIRCUIT TRACK	LIGHTOLIER: 60-*.-BK*-BK	-	-	-	120	1,3,4		
T1	LED TRACK HEAD	LIGHTOLIER: TH-10-930-NF-1-B</							

## EASTERN ACROBATICS

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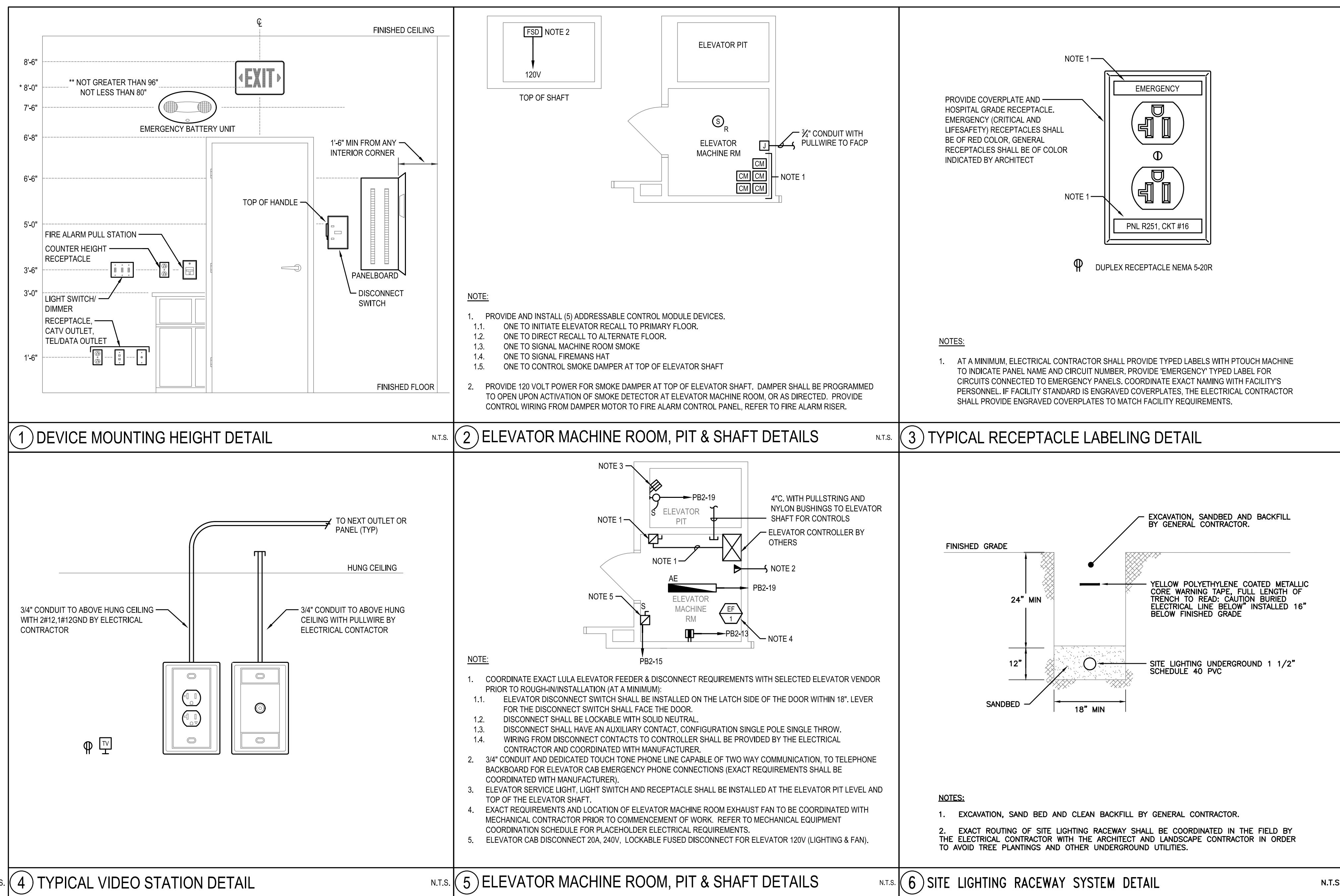


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## ELECTRICAL DETAILS

**E004**



## EASTERN ACROBATICS

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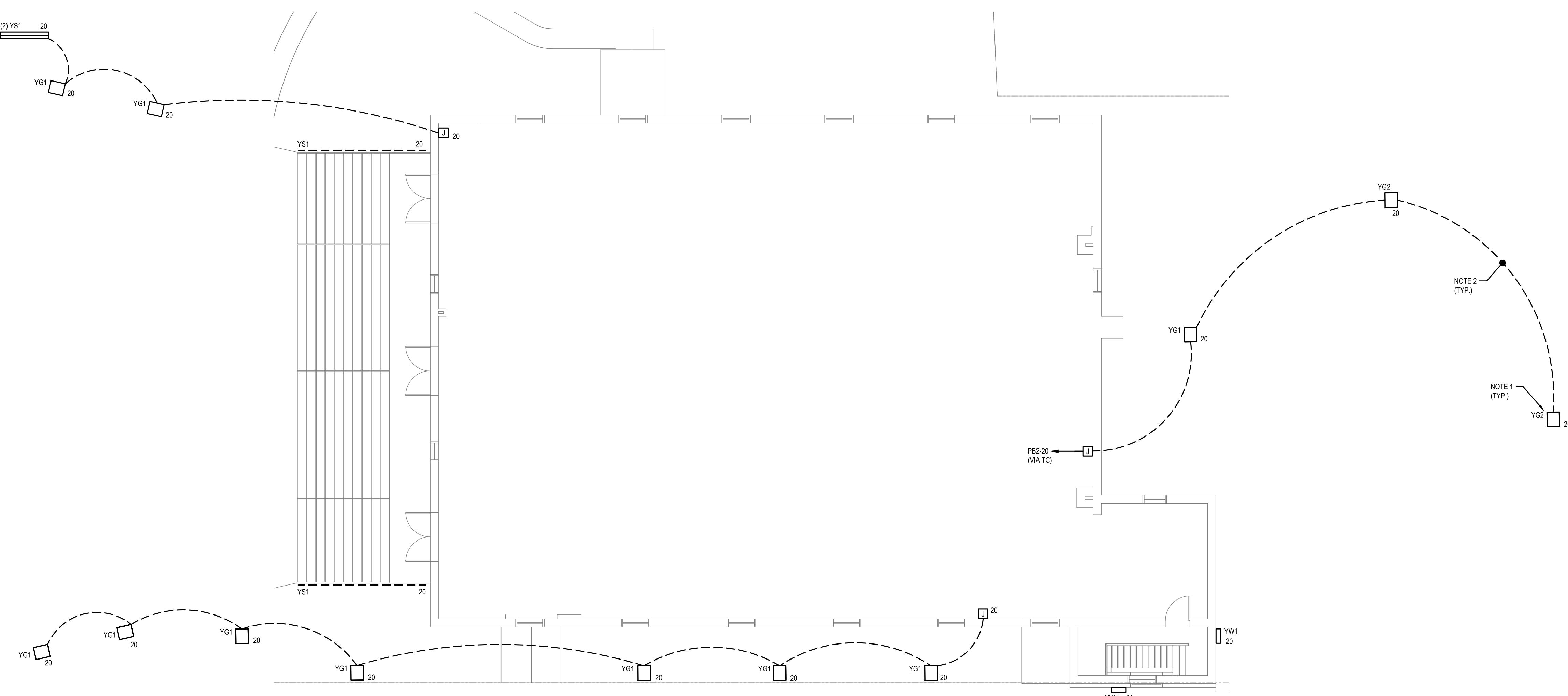
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2021-003

PROJECT NUMBER

## ELECTRICAL SITE PLAN

# E005



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

NOTES:

1. REFER TO LANDSCAPE LIGHTING PLAN DRAWING L-104 FOR EXACT LOCATIONS AND QUANTITIES OF ALL LANDSCAPE LIGHTING FIXTURES.
2. REFER TO DETAIL #6 ON DRAWING E005 FOR ADDITIONAL INFORMATION.
3. FIXTURE TYPES YG1, YS1 & YW1 ARE LOW VOLTAGE. REFER TO LIGHTING FIXTURE SCHEDULE ON DRAWING E003.

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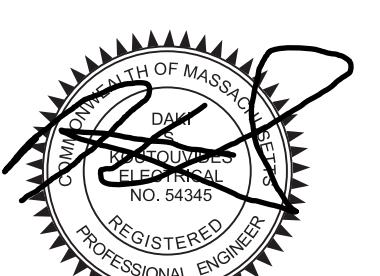
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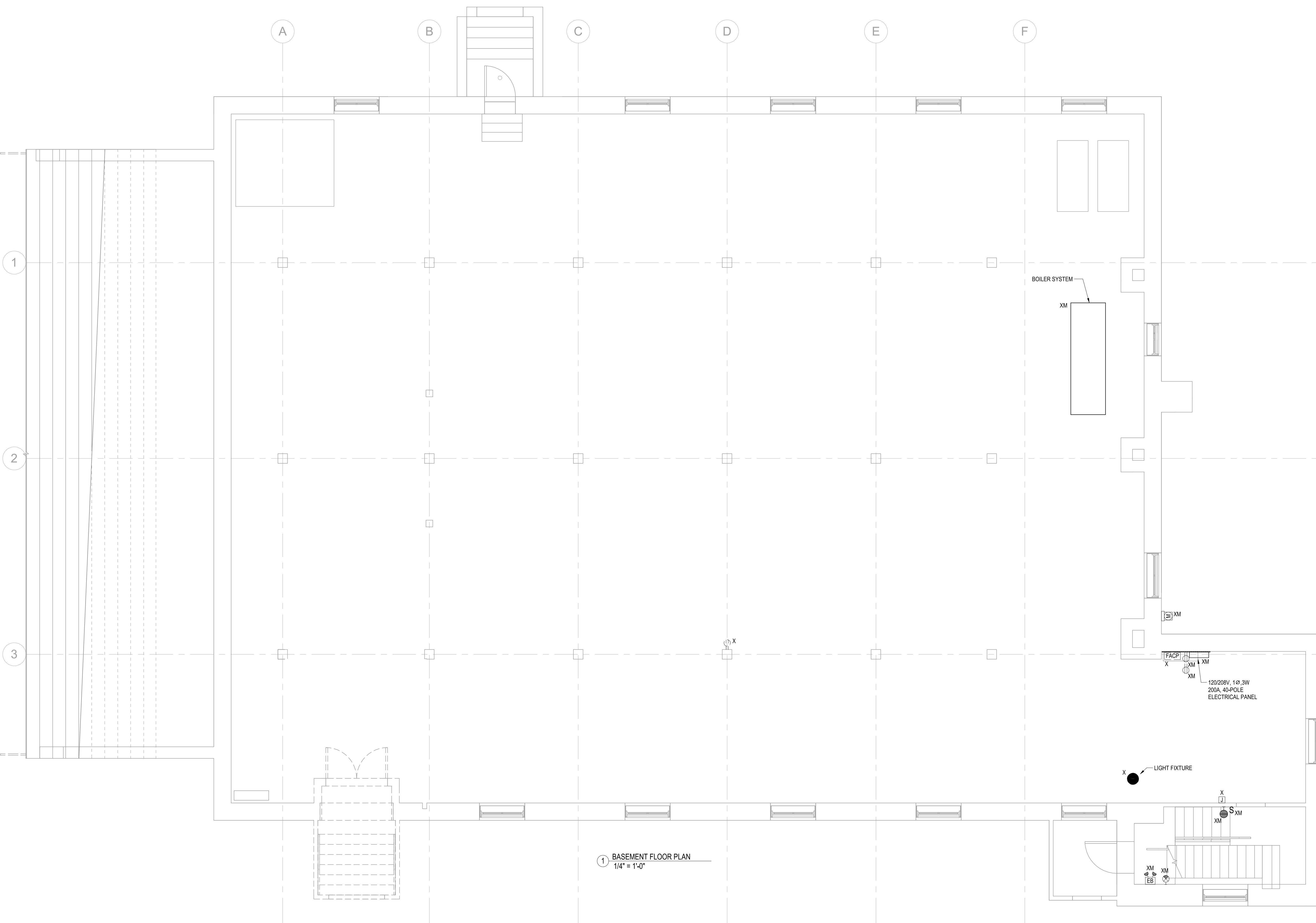
2021-003

PROJECT NUMBER

## ELECTRICAL BASEMENT DEMOLITION

# ED100

1 BASEMENT FLOOR PLAN  
1/4" = 1'-0"



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2021-003

PROJECT NUMBER

**ELECTRICAL  
SANCTUARY  
DEMOLITION**

**ED101**

① SANCTUARY FLOOR PLAN  
1/4" = 1'-0"

## EASTERN ACROBATICS

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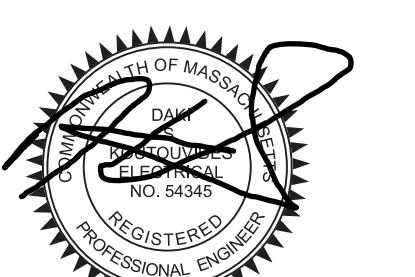
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## ELECTRICAL BALCONY DEMOLITION

# ED102

① BALCONY FLOOR PLAN

1/4" = 1'-0"

**EASTERN  
ACROBATICS**

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WESTFIELD, MA 01085  
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www.tighebond.com

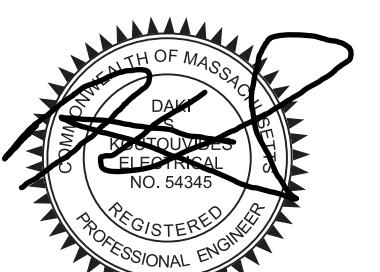
CIVIL

SOUTH MOUNTAIN  
PO BOX 1260  
WEST TSBURY, MA 02575  
508-693-4850  
www.southmountain.com

STRUCTURE

BLW ENGINEERS, INC  
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LITTLETON, MA 01460  
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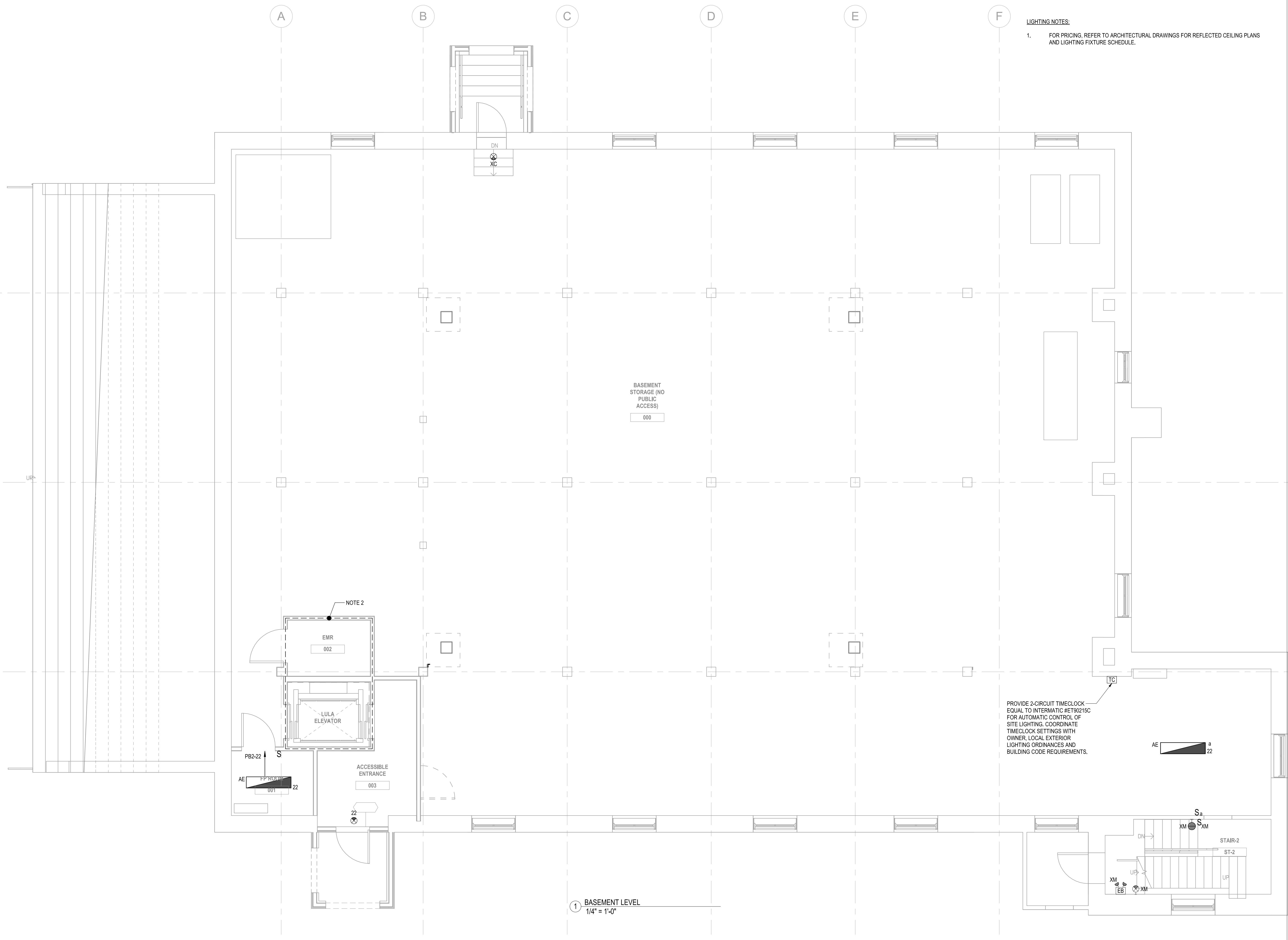
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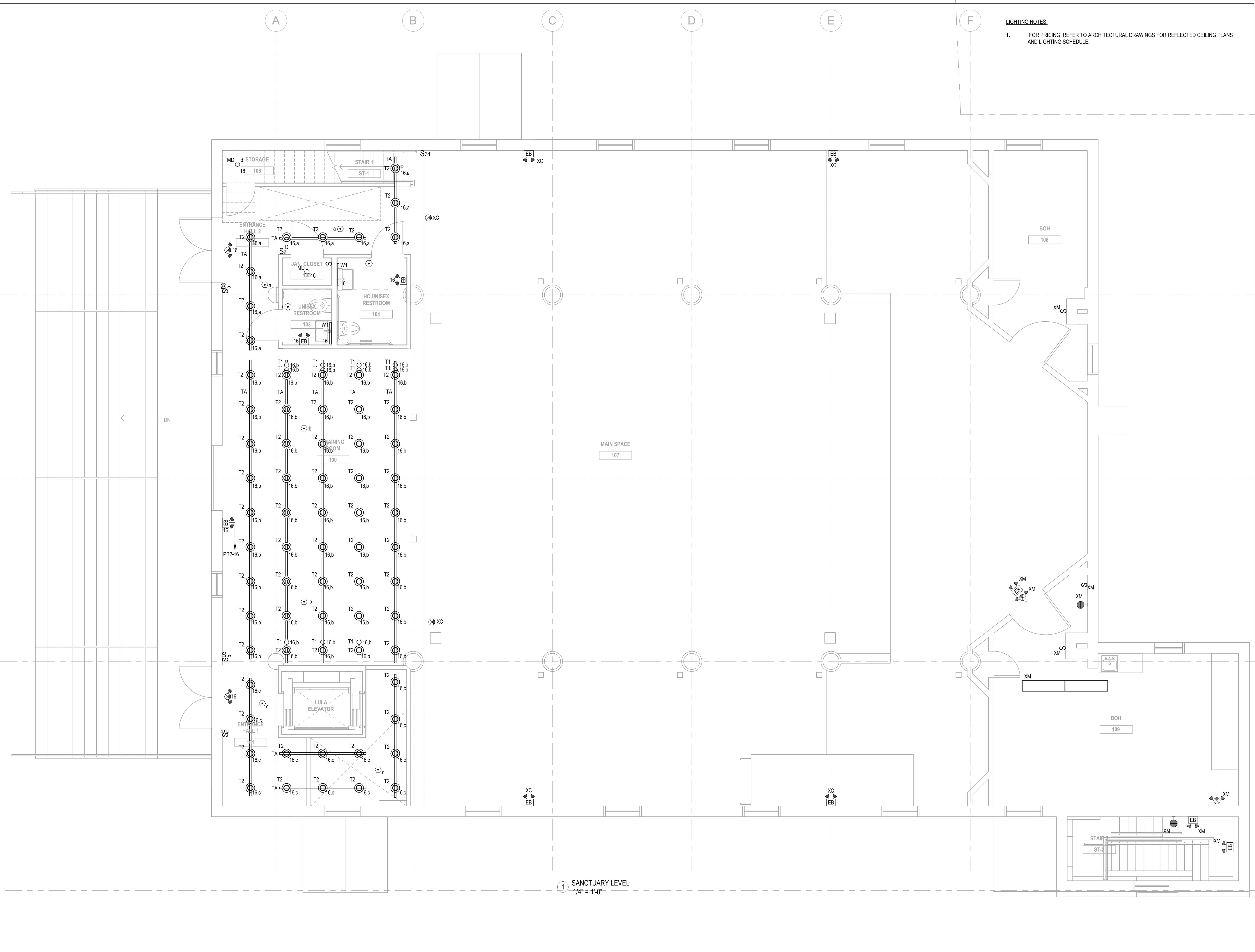
2021-003

PROJECT NUMBER

**ELECTRICAL  
BASEMENT  
LIGHTING  
PLAN**

**E100**





## EASTERN ACROBATICS

28 Eliot Street  
Natick, MA 01760

OWNER

THE ENTRUST INC.  
FBO AUSTIN S. LIN  
28 ELIOT ST.  
NATICK, MA 01760

CLIENT

## RUNCIBLE STUDIOS, LLC

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2021-003

PROJECT NUMBER

## ELECTRICAL SANCTUARY LIGHTING PLAN

**E101**

## EASTERN ACROBATICS

28 Eliot Street  
Natick, MA 01760

OWNER

THE ENTRUST INC.  
FBO AUSTIN S. LIN

28 ELIOT ST.  
NATICK, MA 01760

CLIENT

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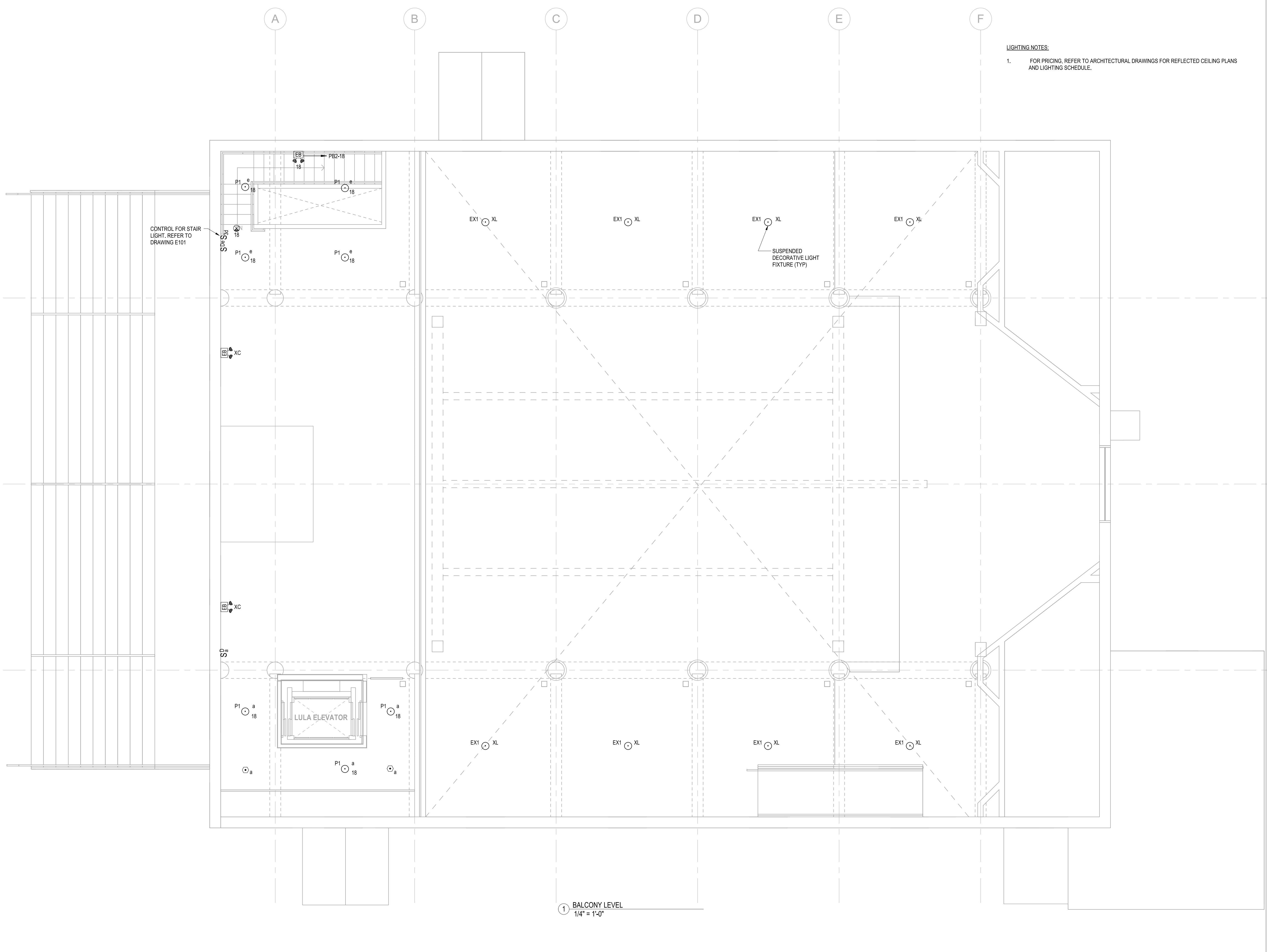
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2021-003

PROJECT NUMBER

## ELECTRICAL BALCONY LIGHTING PLAN

**E102**



## EASTERN ACROBATICS

28 Eliot Street  
Natick, MA 01760

OWNER

THE ENTRUST INC.  
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28 ELIOT ST.  
NATICK, MA 01760

CLIENT

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ARCHITECT

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8/5/2022

REVISIONS #1 08/05/2022  
CD SET 07/15/2022

PHASE

2021-003 PROJECT NUMBER

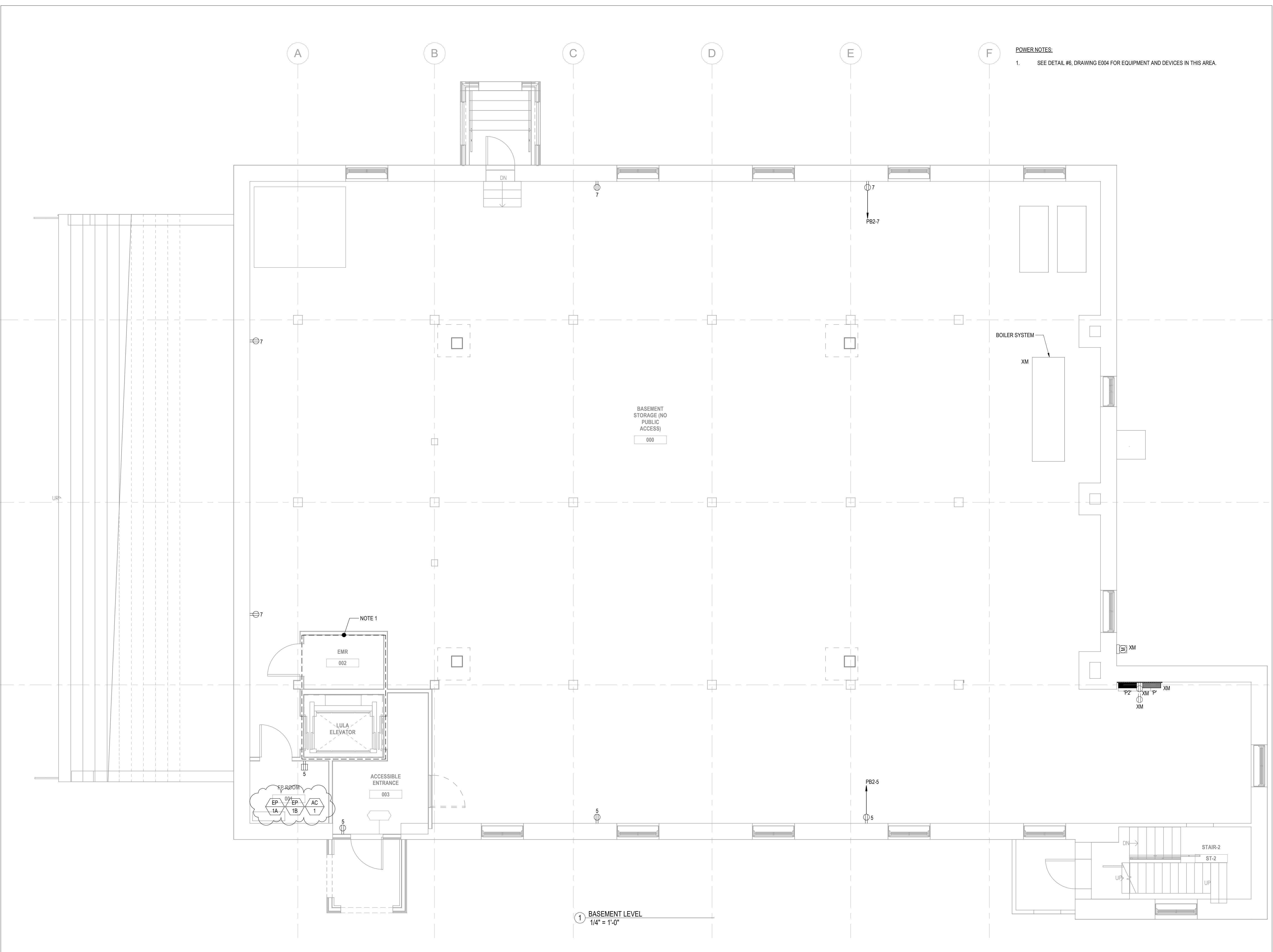
## ELECTRICAL BASEMENT POWER PLAN

**E200**

1 BASEMENT LEVEL

1/4" = 1'-0"

POWER NOTES:  
1. SEE DETAIL #6, DRAWING E004 FOR EQUIPMENT AND DEVICES IN THIS AREA.



**EASTERN  
ACROBATICS**

28 Eliot Street  
Natick, MA 01760

OWNER

THE ENTRUST INC.  
FBO AUSTIN S. LIN  
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NATICK, MA 01760

CLIENT

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1/18/2023

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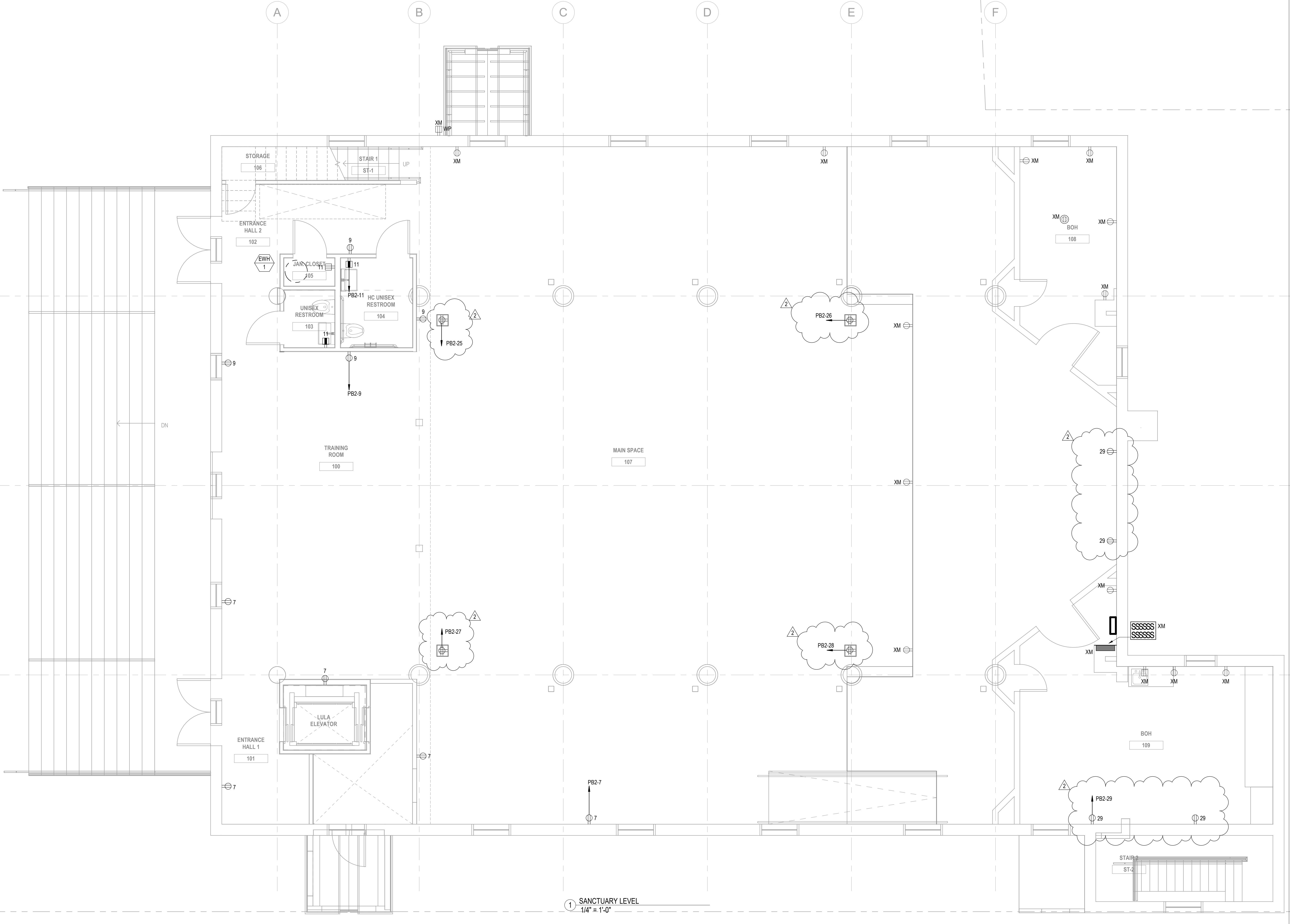
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2021-003

PROJECT NUMBER

**ELECTRICAL  
SANCTUARY  
POWER PLAN**

**E201**



## EASTERN ACROBATICS

28 Eliot Street  
Natick, MA 01760

OWNER

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FBO AUSTIN S. LIN  
28 ELIOT ST.  
NATICK, MA 01760

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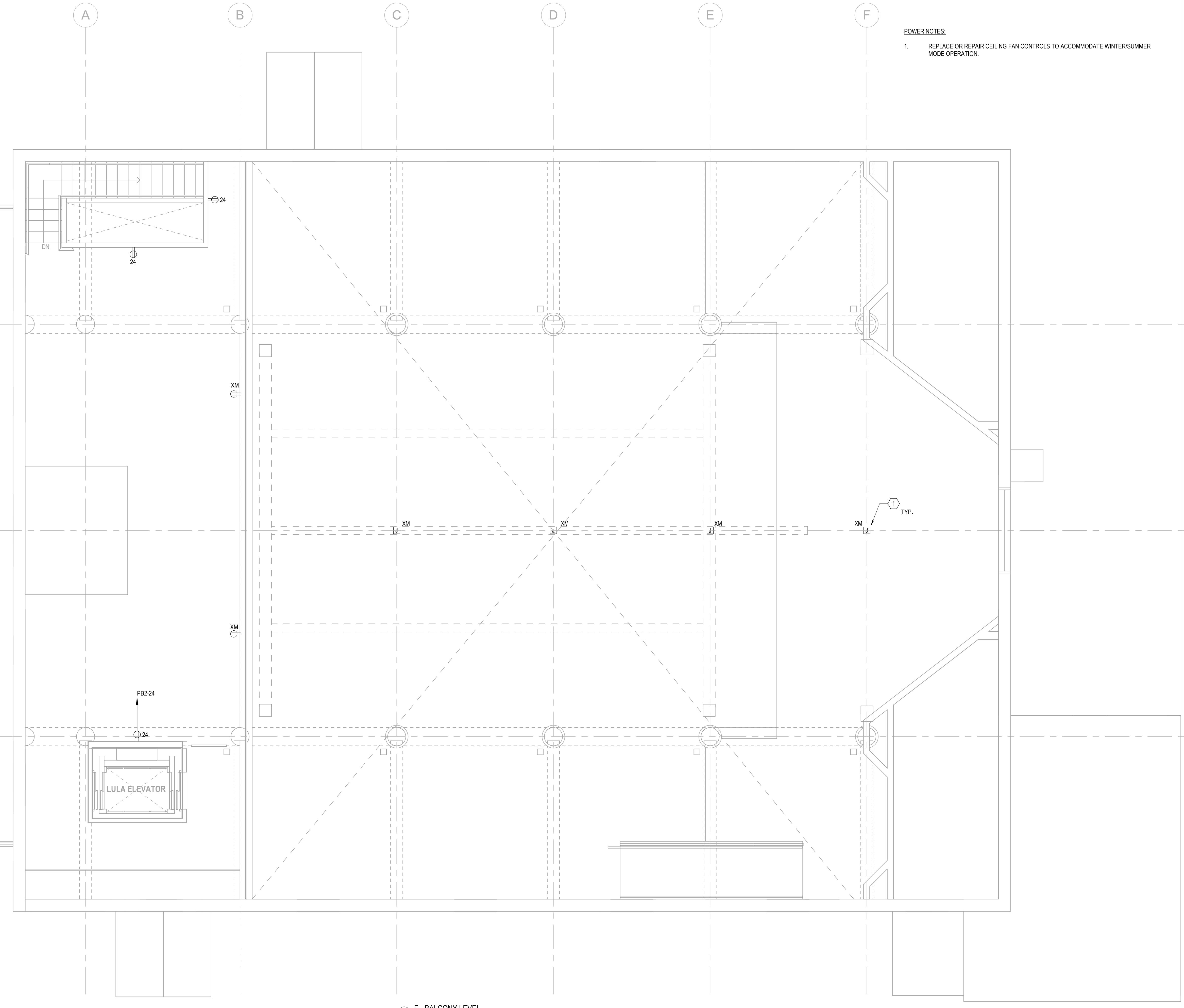
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2021-003

PROJECT NUMBER

## ELECTRICAL BALCONY POWER PLAN

**E202**



## EASTERN ACROBATICS

28 Eliot Street  
Natick, MA 01760

PROJECT

THE ENTRUST INC.  
FBO AUSTIN S. LIN  
28 ELIOT ST.  
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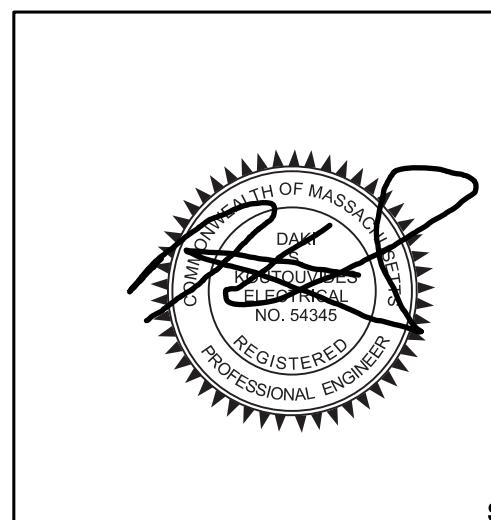
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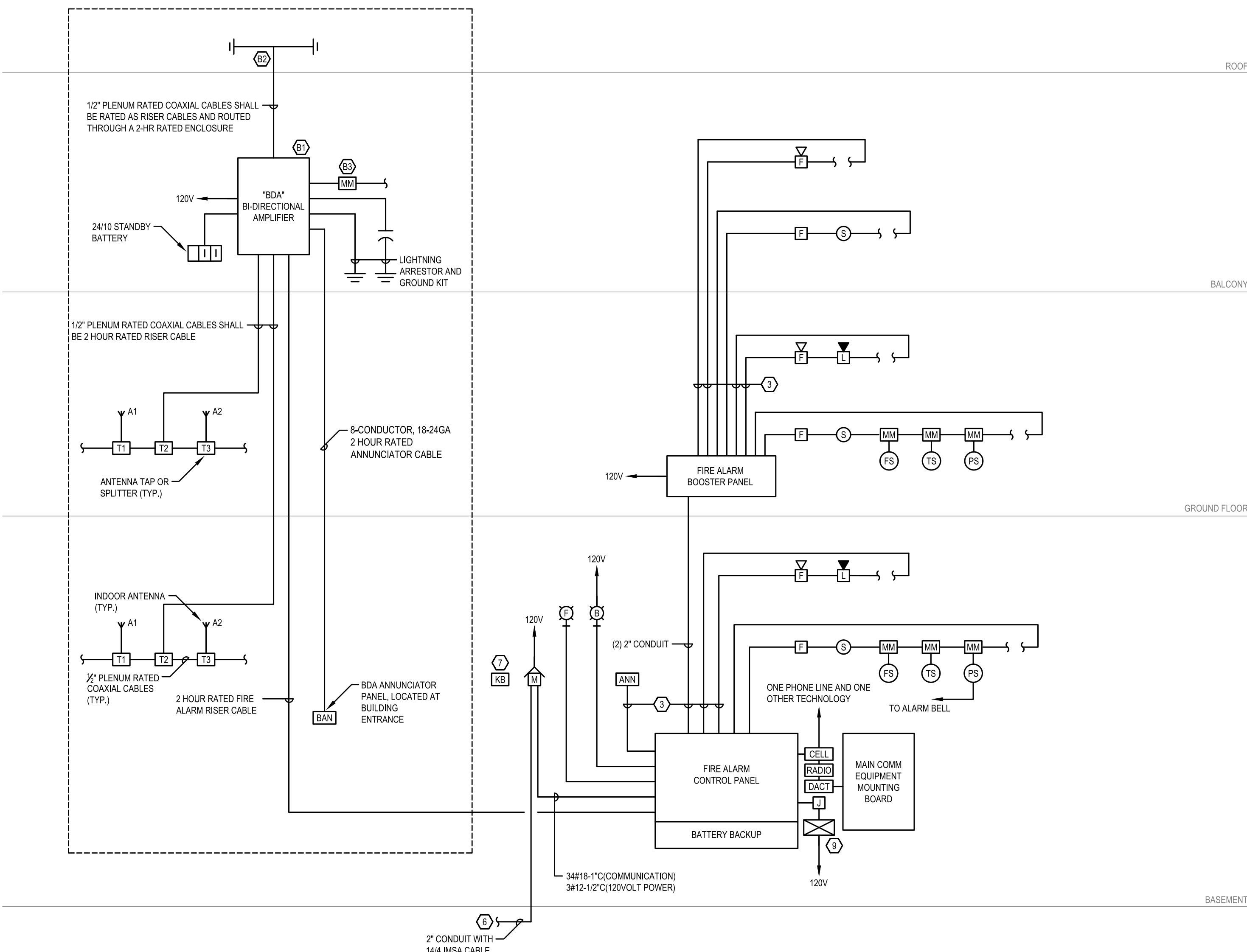
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FIRE ALARM	
TYPICAL DEVICE ANNOTATION: *15" INDICATES CANDLEA RATING	
<p><b>FK 15</b> AUDIO / VISUAL DEVICE "F" INDICATES HORN / VISUAL "S" INDICATES SPEAKER / VISUAL</p> <p><b>L 15</b> VISUAL ONLY DEVICE "L" INDICATES WHITE LENS FOR FIRE "C" INDICATES AMBER LENS FOR CARBON MONOXIDE</p> <p><b>F</b> MANUAL PULL STATION</p> <p><b>S R</b> SMOKE DETECTOR "D" INDICATES DUCT SMOKE DETECTOR "R" INDICATES ELEVATOR RECALL "NS" INDICATES NON-SYSTEM DEVICE, 120V HARDWIRED WITH BATTERY BACKUP</p> <p><b>H F</b> HEAT DETECTOR, 13° RATE-OF-RISE TYPE "F" INDICATES 190° FIXED TEMPERATURE "C" INDICATES MOUNTED ABOVE HUNG CEILING</p> <p><b>C NS</b> CARBON MONOXIDE DETECTOR "NS" INDICATES NON-SYSTEM DEVICE, 120V HARDWIRED WITH BATTERY BACKUP</p> <p><b>G NS</b> COMBINATION SMOKE / CARBON MONOXIDE DETECTOR "NS" INDICATES NON-SYSTEM DEVICE, 120V HARDWIRED WITH BATTERY BACKUP</p> <p><b>FS</b> FIRE PROTECTION SYSTEM INTERFACE DEVICE "FS" INDICATES FLOW SWITCH MONITOR MODULE "TS" INDICATES TAMPER SWITCH MONITOR MODULE "PS" INDICATES PRESSURE SWITCH MONITOR MODULE "PIV" INDICATES POST INDICATOR VALVE MONITOR MODULE</p> <p><b>FACP</b> FIRE ALARM DEVICE "FACP" INDICATES FIRE ALARM CONTROL PANEL "FAPB" INDICATES FIRE ALARM BOOSTER PANEL "FATC" INDICATES AES FIRE ALARM TERMINAL CABINET "AES" INDICATES FIRE ALARM ANNUNCIATOR PANEL "ANN" INDICATES FIRE ALARM ANNUNCIATOR PANEL "DACT" INDICATES DIGITAL ALARM COMMUNICATOR TRANSMITTER "CELL" INDICATES CELLULAR COMMUNICATOR "PDU" INDICATES POWER DISTRIBUTION UNIT "RTS" INDICATES REMOTE TEST STATION "FSD" INDICATES SMOKE DAMPER "BDA" INDICATES BI-DIRECTIONAL AMPLIFIER "BAN" INDICATES BI-DIRECTIONAL AMPLIFIER ANNUNCIATOR "SCP" INDICATES SMOKE CONTROL PANEL (FURNISHED AND INSTALLED BY M.C.; WIRED BY E.C.)</p> <p><b>F H</b> FIRE ALARM ANNUNCIATION DEVICE "B" INDICATES ALARM BELL, 120V HARDWIRED, EXTERIOR MOUNTED, WEATHERPROOF "F" INDICATES RED INDICATING BEACON, EXTERIOR MOUNTED, WEATHERPROOF "R" INDICATES REMOTE AREA LED INDICATOR</p> <p><b>M</b> FIRE ALARM MASTERBOX, COORDINATE TYPE WITH LOCAL FIRE DEPARTMENT</p>	



BDA RISER DIAGRAM  
N.T.S.

**BDA RISER DIAGRAM NOTES:**

1. BI-DIRECTIONAL AMPLIFIER PER FIRE DEPARTMENT SPECIFICATIONS EQUAL TO RSI (RADIO SOLUTIONS, INC.) MODEL NO. SB400M2A CLASS B SIGNAL BOOSTER. SYSTEM SHALL INCLUDE: ANTENNA, CABLES, CABLE TAPS OR SPLITTERS, MOUNTING HARDWARE, BATTERY BACK-UP, LIGHTNING ARRESTOR, GROUND KIT AND ANY OTHER ELECTRICAL APPURTENANCES FOR A COMPLETE WORKING SYSTEM.
2. MOUNTING HARDWARE SHALL BE COORDINATED IN THE FIELD BASED ON THE EXACT LOCATION OF THE DONOR (ROOF) ANTENNA. ANTENNA SHALL FACE SOUTHWEST DIRECTION. ANTENNA MAST GROUNDED/BONDED TO THE BUILDING GROUND.
3. PROVIDE (6) MONITORING MODULES TO BE CONNECTED TO THE FIRE ALARM CONTROL PANEL:
  - BDA ANNUNCIATOR MONITORING
  - BDA ANTENNA FAILURE
  - BDA TROUBLE
  - BDA POWER LOSS
  - BDA CHARGER TROUBLE
  - BDA LOW BATTERY
4. FINAL SYSTEM DIAGRAMS SHALL BE PROVIDED BY THE MANUFACTURER FOR A COMPLETE OPERATIONAL SYSTEM. A BILL OF MATERIAL SHALL BE SUPPLIED WITH THE SYSTEM DESIGN DRAWINGS. IN ORDER TO COMPLY WITH FCC RULES AND SIGNAL COVERAGE REQUIREMENTS, A SIGNAL SURVEY MUST BE PERFORMED PRIOR TO FINAL DESIGN.
  - EXISTING BUILDINGS SURVEY SHALL BE PROVIDED IMMEDIATELY.
5. THE SYSTEM SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH STATE BUILDING CODE, UL2524, NFPA-72, ALL APPLICABLE FCC RULES AND GUIDELINES, TECHNICAL SPECIFICATIONS OF THE LOCAL AUTHORITY HAVING JURISDICTION AND THE MANUFACTURERS QUALITY SPECIFICATIONS.

6. TO UTILITY POLE COORDINATE WITH LOCAL FIRE DEPARTMENT.
7. PROVIDE SURFACE KEY BOX. ELECTRICAL CONTRACTOR SHALL PURCHASE THROUGH LOCAL FIRE DEPARTMENT.
8. TO AUXILIARY CONTACTS IN RESPECTIVE AIR-HANDLING UNIT STARTER FOR UNIT SHUTDOWN ON ALARM. DUCT SMOKE DETECTOR SHALL BE PROVIDED AND WIRED BY ELECTRICAL CONTRACTOR, INSTALLED BY MECHANICAL CONTRACTOR. DUCT SMOKE DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH INTERNATIONAL MECHANICAL CODE:
  - SMOKE DETECTORS SHALL BE INSTALLED IN RETURN AIR SYSTEMS WITH A DESIGN CAPACITY GREATER THAN 2,000 CFM, IN DUCTS UPSTREAM OF AIR HANDLING EQUIPMENT AND AIR CONNECTIONS, OUTDOOR AIR CONNECTIONS, OR DECONTAMINATION EQUIPMENT AND APPLIANCES.
  - WHERE RETURN AIR RISERS SERVE TWO OR MORE STORIES AND SERVE ANY PORTION OF A RETURN AIR SYSTEM HAVING A DESIGN CAPACITY GREATER THAN 15,000 CFM, SMOKE DETECTORS SHALL BE INSTALLED AT EACH STORY. SUCH SMOKE DETECTORS SHALL BE LOCATED UPSTREAM OF THE CONNECTION BETWEEN THE RETURN AIR RISER AND ANY AIR DUCTS OR PLenums.
  - SMOKE DETECTORS SHALL BE INSTALLED IN THE SUPPLY AIR SYSTEM FOR ALL MAKE-UP AIR UNITS WITH A DESIGN CAPACITY GREATER THAN 2,000 CFM AS IN ACCORDANCE WITH NFPA 90A.
9. PROVIDE A 20AMP 120VOLT 1 PHASE SURGE PROTECTOR FOJAL TO MCG SURGE PROTECTION MODEL NO. 415. SURGE PROTECTOR SHALL BE INSTALLED BETWEEN THE CIRCUIT BREAKER IN THE PANEL AND THE FIRE ALARM PANEL, AND IN ACCORDANCE WITH MANUFACTURER'S WIRING RECOMMENDATIONS.
10. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL REQUIRED POWER SUPPLIES FOR A COMPLETE AND OPERABLE SYSTEM. POWER SUPPLY CALCULATIONS SHALL BE INCLUDED IN FIRE ALARM SHOP DRAWINGS.

NOTES:

1. ALL EVENTS SHALL BE RECORDED AT THE FIRE ALARM CONTROL PANEL AND SHALL INDICATE TIME AND DATE OF OCCURRENCE AND LIST DEVICE INITIATED.
2. TROUBLE AND SUPERVISORY SIGNALS SHALL BE MONITORED IN ACCORDANCE WITH 780CMR 903.4.

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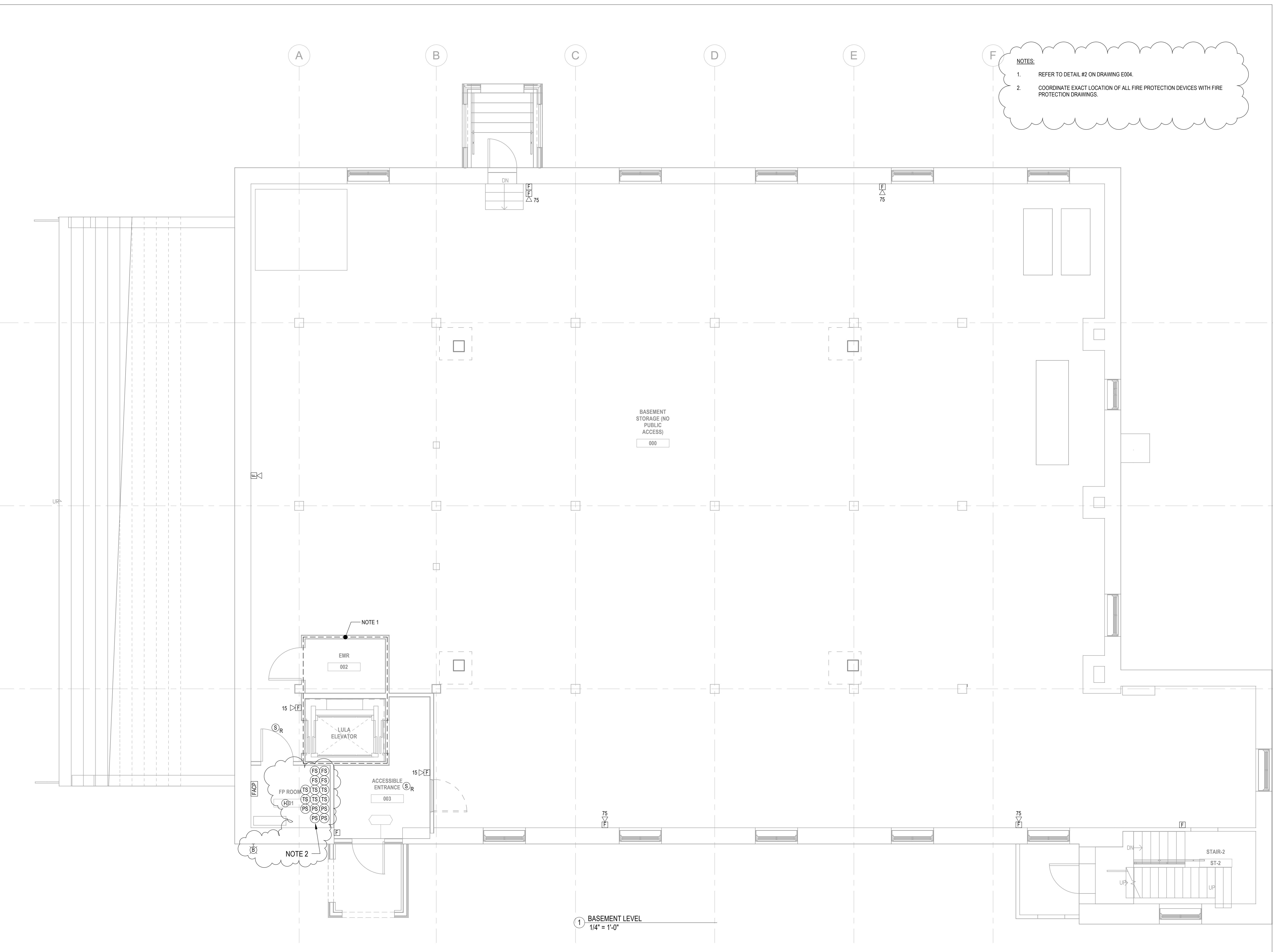
2021-03

PROJECT NUMBER

## FIRE ALARM LEGEND, RISER & NOTES

FA001





## EASTERN ACROBATICS

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Natick, MA 01760

OWNER

THE ENTRUST INC.  
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NATICK, MA 01760

CLIENT

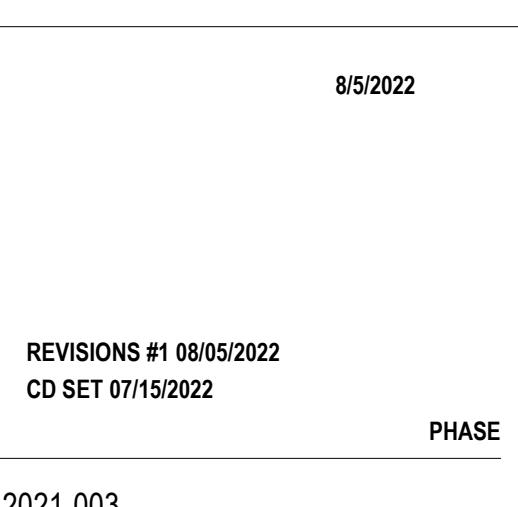
## RUNCIBLE STUDIOS, LLC

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ARCHITECT



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2021-003  
PROJECT NUMBER

## FIRE ALARM BASEMENT PLAN

**FA100**

## EASTERN ACROBATICS

28 Eliot Street  
Natick, MA 01760

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FBO AUSTIN S. LIN  
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2021-003

PROJECT NUMBER

## FIRE ALARM SANCTUARY PLAN

# FA101

① SANCTUARY LEVEL  
1/4" = 1'-0"

**EASTERN  
ACROBATICS**

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2021-003

PROJECT NUMBER

**FIRE ALARM  
BALCONY  
PLAN**

**FA102**

① BALCONY LEVEL  
1/4" = 1'-0"