

# COMMERCIAL BUILDING REHABILITATION I

## DESIGN DEVELOPMENT DRAWING SET



PROJECT ADDRESS: 241-247 5 AVE S.  
CLINTON, IA 52732



DRAWING SET INDEX	
SHEET NO.	SHEET NAME
0.0	COVER SHEET
A0.0	ARCHITECTURAL SYMBOL LEGENDS & GENERAL NOTES
A1.0	DEMOLITION PLAN
A1.1	COMPOSITE 3RD FLOOR PLAN
A1.2	R.C.P
A1.3	FINISH PLAN
A2.0	CAFE AREA & KITCHEN ELEVATION
A2.1	BATHROOM
A2.2	EXTERIOR ELEVATION
A3.0	TYPICAL DETAILS
A3.1	DOORS & FRAMES
E0.1	ELECTRICAL GENERAL NOTES
E1.0	L3 ELECTRICAL FLOOR PLAN
E1.1	L3 ELECTRICAL R.C.P.
E1.2	ROOF ELECTRICAL FLOOR PLAN
E1.3	BASEMENT ELECTRICAL FLOOR PLAN
E2.0	PANEL SCHEDULES
E3.0	ELECTRICAL DETAILS
E3.1	ELEVATOR CONTROLS DETAILS
E4.0	ELECTRICAL SCHEDULES
F0.1	FIRE PROTECTION GENERAL NOTES
F1.0	L3 FIRE PROTECTION FLOOR PLAN
F2.0	FIRE PROTECTION DETAILS
M0.1	MECH. GENERAL NOTES
M0.2	ELEVATOR GENERAL NOTES
M0.3	MECHANICAL SYMBOL LEGEND
M1.0	L3 MECHANICAL DUCTWORK FLOOR PLAN
M1.1	L3 MECHANICAL ENLARGED FLOOR PLANS
M1.2	ROOF MECHANICAL FLOOR PLAN
M2.0	MECHANICAL SCHEDULES
M3.0	ELEVATOR DETAILS
M3.1	MECHANICAL DETAILS
P0.1	PLUMBING GENERAL NOTES
P1.0	L3 PLUMBING DOMESTIC FLOOR PLAN
P1.1	L3 PLUMBING WASTE & VENT FLOOR PLAN
P2.2	PLUMBING DETAILS
P3.0	PIPING DIAGRAMS
S-1	GENERAL STRUCTURAL NOTES
S-2	OVERALL FLOOR FRAMING PLAN
S-2.1	ENLARGED FLOOR FRAMING PLANS
S-2.2	FLOOR FRAMING DETAILS
S-3	OVERALL ROOF FRAMING PLAN
S-4	FOUNDATION WALL REPAIR
S-5	ELEVATIONS
S-6	MISCELLANEOUS DETAILS



PROJECT:

DATE:

DRAWN BY:

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CIVIL AND ENVIRONMENTAL ENGINEERING

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COMMERCIAL REHABILITATION 1

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SHEET NAME

COVER SHEET

SHEET NO.

0.0



GENERAL NOTES:







- THE ARCHITECTURAL DRAWING SHEETS START WITH A AND SHEETS' NAME.
- THE GENERAL NOTES APPLY TO ALL THE ARCHITECTURAL DRAWING SHEETS.
- THE ARCHITECTURAL SYMBOL LEGEND APPLIES TO ALL THE ARCHITECTURAL DRAWING SHEETS.
- PAINT ALL EXPOSED SPRINKLER PIPING FINAL COLOR SELECTION TO BE CHOSEN BY THE OWNER.
- IT IS THE RESPONSIBILITY OF EACH CONTRACTOR TO PATCH ALL WALLS, FLOORS, CEILINGS, AND FINISHES, ETC. (TO MATCH EXIST.) WHICH ARE DAMAGED DURING CONSTRUCTION DUE TO THEIR OWN WORK.
- THE PURPOSE OF ALL NOTES AND TAGS IS TO DESCRIBE THE SCOPE OF THE WORK. WORK WHICH IS NOT TAGGED, BUT IS CLEARLY THE INTENT OF THE PROJECT, MUST BE PERFORMED BY THE CONTRACTOR AND WILL NOT BE CONSIDERED AS ADDITIONAL WORK BY OWNER.
- SPACE BETWEEN THE CEILING AND THE STRUCTURE IS LIMITED. ALL MECHANICAL, PLUMBING, AND ELECTRICAL MUST BE RUN AS TIGHT TO THE UNDERSIDE OF DECK OR STRUCTURE AS POSSIBLE TO MAINTAIN CLEARANCE FOR THE CEILING. ALL TRADES MUST COORDINATE WITH EACH OTHER.
- ALL MATERIALS AFFECTED BY DEMOLITION/ NEW CONSTRUCTION PATCH TO MATCH EXISTING CONDITIONS.
- A CLEAR PATH OF 3 FT NEEDS TO BE MAINTAINED IN THE CAFE AREA BETWEEN ROW OF TABLES TO MAKE SURE WHEELCHAIRS CAN GO THROUGH WITHOUT PROBLEMS.
- THE ARRANGEMENT OF THE BATHROOM ACCESSORIES SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (ALSO KNOWN AS ADA). A 60 FT DIAMETER CLEAR TURNING CIRCLE IS MARKED INSIDE OF THE BATHROOM PLAN TO INDICATE THE CLEAR TURNING CIRCLE REQUIRED BY ADA. MEANWHILE, THE REQUIRED DIMENSION OF TOILET ACCESSORIES ARE SHOWN IN BATHROOM DRAWING SHEET AND BATHROOM GENERAL NOTES. IT IS THE RESPONSIBILITY OF OWNER TO FOLLOW THE ADA REGULATION WHEN INSTALL THE BATHROOM ACCESSORIES DURING CONSTRUCTION.
- THE DIMENSION OF KITCHEN ACCESSORIES SHALL COMPLY WITH ADA REGULATION. A 60 FT DIAMETER CIRCLE IS MARKED INSIDE OF THE KITCHEN DRAWING TO INDICATE THE CLEAR TURNING CIRCLE REGULATED BY ADA. THE DETAIL DIMENSIONS OF KITCHEN ACCESSORIES ARE SHOWN IN KITCHEN DRAWING SHEET AND KITCHEN ACCESSORIES GENERAL NOTES. IT IS THE RESPONSIBILITY OF OWNER TO FOLLOW THE ADA REGULATION WHEN INSTALL THE KITCHEN ACCESSORIES DURING CONSTRUCTION.
- THE INTERIOR WALL AND CEILING FINISH SHALL BE TESTED AND CLASSIFIED BY NFPA 286 TO MAKE SURE THAT THE MATERIAL COMPLY WITH THE FOLLOWING
  - FLAMES SHALL NOT SPREAD TO THE CEILING DURING THE 40 KW EXPOSURE.
  - THE FLAME SHALL NOT SPREAD TO THE OUTER EXTREMITY OF THE SAMPLE ON ANY WALL OR CEILING.
  - FLASHOVER, AS DEFINED IN NFPA 286, SHALL NOT OCCUR.
  - THE PEAK HEAR RELEASE RATE THOUGHT THE TEST SHALL NOT EXCEED 800 KW.
  - THE TOTAL SMOKE RELEASED THROUGHOUT THE TEST SHALL NOT EXCEED 1000 M<sup>2</sup>
- THE INTERIOR WALL AND CEILING FINISH MATERIALS SHALL BE CLASSIFIED IN ACCORDANCE WITH ASTM. FOR GROUP M OCCUPANCY, THE CLASS B IS REQUIRED, WHICH FLAME SPREAD INDEX 26-75; AND SMOKE DEVELOPED INDEX0-450.
- FOR GROUP M OCCUPANCY WITH SPRINKLER SYSTEM INSTALLED, THE INTERIOR EXIT STAIRWAYS AND RAMPS AND EXIT PASSAGEWAYS SHALL HAVE A FLAME SPREAD INDEX LESS THAN CLASS B. THE CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND RAMPS AND ROOMS AND ENCLOSED SPACES SHALL HAVE A FLAME SPREAD INDEX LESS THAN CLASS C.
- INTERIOR FLOOR FINISH SHALL BE TESTED ACCORDANCE WITH ASTM. THE MATERIALS SHALL HAVE A MINIMUM CRITICAL RADIANT FLUX. FOR GROUP M OCCUPANCY, THE MINIMUM CRITICAL RADIANT FLUX SHALL BE NOT LESS THAN CLASS II.
- FOR GROUP M OCCUPANCY, THE COMBUSTIBLE DECORATIVE MATERIALS SHALL BE TESTED AND MEET THE FLAME PROPAGATION PERFORMANCE CRITERIA OF TEST 1 OR 2, OR EXHIBIT A MAXIMUM HEAT RELEASE RATE OF 100 KW WHEN TESTED IN ACCORDANCE WITH NFPA, USING THE 20 KW IGNITION SOURCE.
- THE QUALITY, DESIGN, FABRICATION OF THE ACOUSTICAL TILE CEILING SYSTEM SHALL CONFORM TO GENERALLY ACCEPTED ENGINEERING PRACTICE. THE ACOUSTICAL CEILING MATERIAL SHALL COMPLY WITH THE INTERIOR CEILING REGULATION MENTIONED ABOVE.
- THE FIRE PROTECTION IS INCLUDED IN FIRE PROTECTION GENERAL NOTES.
- THE ELECTRICAL DESIGN IS INCLUDED IN ELECTRICAL GENERAL NOTES.
- THE MEAN OF EGRESS DESIGN SHALL COMPLY WITH THE INTERNATIONAL BUILDING CODE. IT IS THE RESPONSIBILITY OF OWNER TO MAKE SURE THE MEAN OF EGRESS CLEAR WITHOUT BARRIER AND INTRUSION. THE MEAN OF EGRESS SHALL BE MAINTAINED ROUTINLY TO MAKE SURE THE FUNCTION IN ACCORDANCE WITH THE INTERNATIONAL FIRE CODE. IT IS THE RESPONSIBILITY OF OWNER TO DESIGN EVACUATION PLAN AND CLEARLY SHOW AND INFORM THE EVACUATION PLAN TO THE CUSTOMERS AND STUFFS WORKING IN THE BUILDING.
- THE CEILING HEIGHT SHALL NOT BE LESS THAN 7 FEET 6 INCHES ABOVE THE FINISHED FLOOR.
- THE WIDTH OF STAIRWAYS SHALL NOT BE LESS THAN 40 INCHES.
- DOORS, WHEN FULLY OPENED, SHALL NOT REDUCE THE REQUIRED WIDTH BY MORE THAN 7 INCHES. DOORS IN ANY POSITION SHALL NOT REDUCE THE REQUIRED WIDTH BY MORE THAN ONE-HALF.

DEMOLITION GENERAL NOTES:

- AT ALL LOCATIONS WHERE INTERIOR WALLS HAVE AN EXISTING BRICK VENEER FINISH BEHIND EXISTING DRYWALL, DEMO DRYWALL TO LEAVE REVEALED BRICK VENEER FINISH.

ALTERNATE #01 SKYDECK GENERAL NOTES:

- COORDINATE THE FOLLOWING NOTES WITH ALTERNATE #01 NOTES IN OTHER DRAWING SECTIONS.
- FURNISH AND INSTALL A SECURE TWO-POINT ENTRY GLASS VESTIBULE AT ELEVATOR LOBBY AT ROOF LEVEL. VESTIBULE DOOR SHALL HAVE ADA DOOR-OPERATORS AND ALL ASSOCIATED ELECTRICAL DEVICES TO PROPERLY ALLOW THE DOOR TO OPERATE AUTOMATICALLY. ADA HANDICAP PUSH BUTTON SHALL BE PEDESTAL MOUNTED AT 42" A.F.F.

ARCHITECTURAL SYMBOL LEGEND	
MARK	DESCRIPTION
	WINDOW TAG
	WALL TAG
	DOOR TAG
	ROOM TAG
	ACCESSORY TAG
	EXIT STAIRWAY TAG

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COMMERCIAL REHABILITATION 1

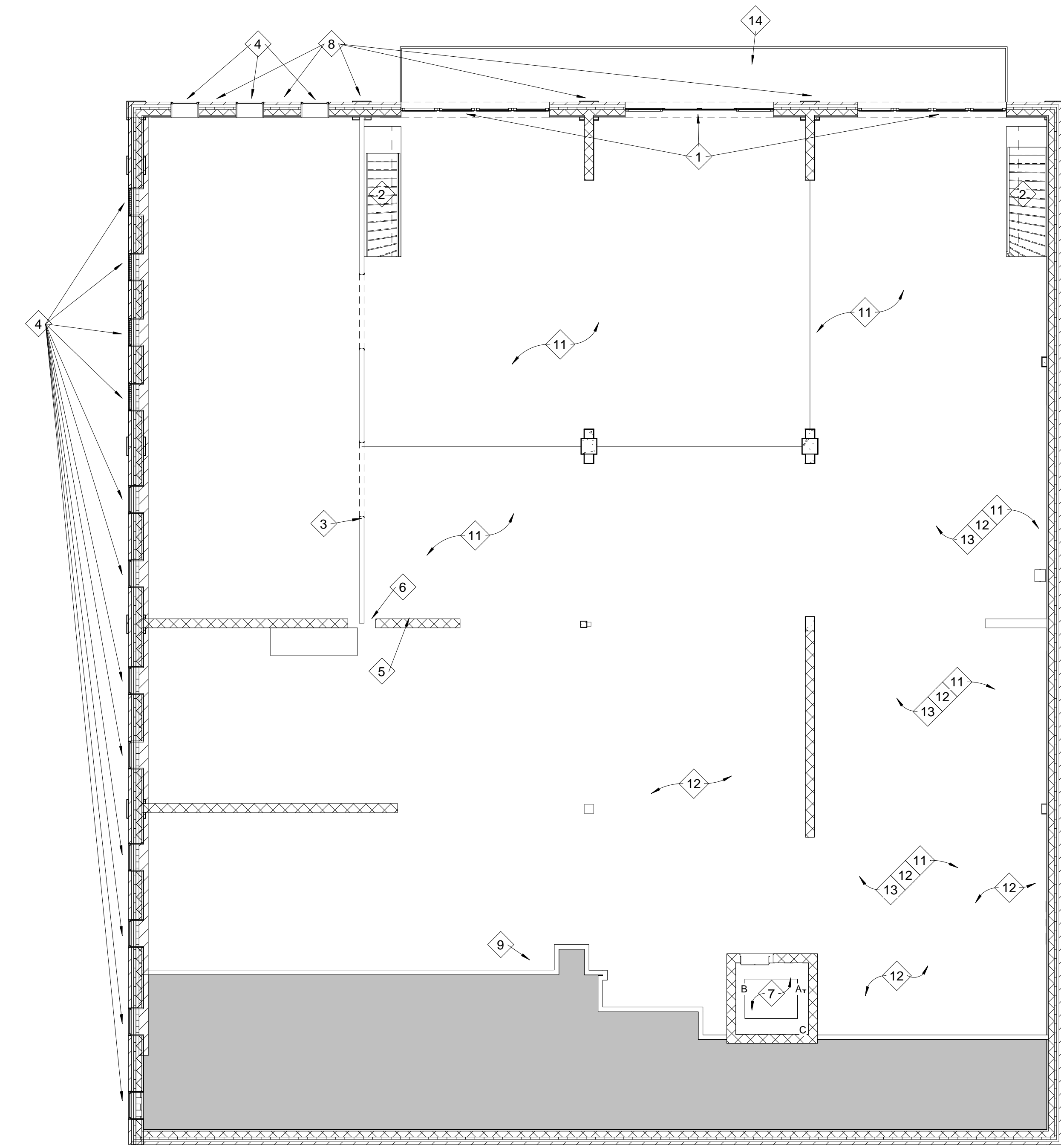
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SHEET NAME

ARCHITECTURAL SYMBOL  
LEGENDS & GENERAL  
NOTES

SHEET NO.

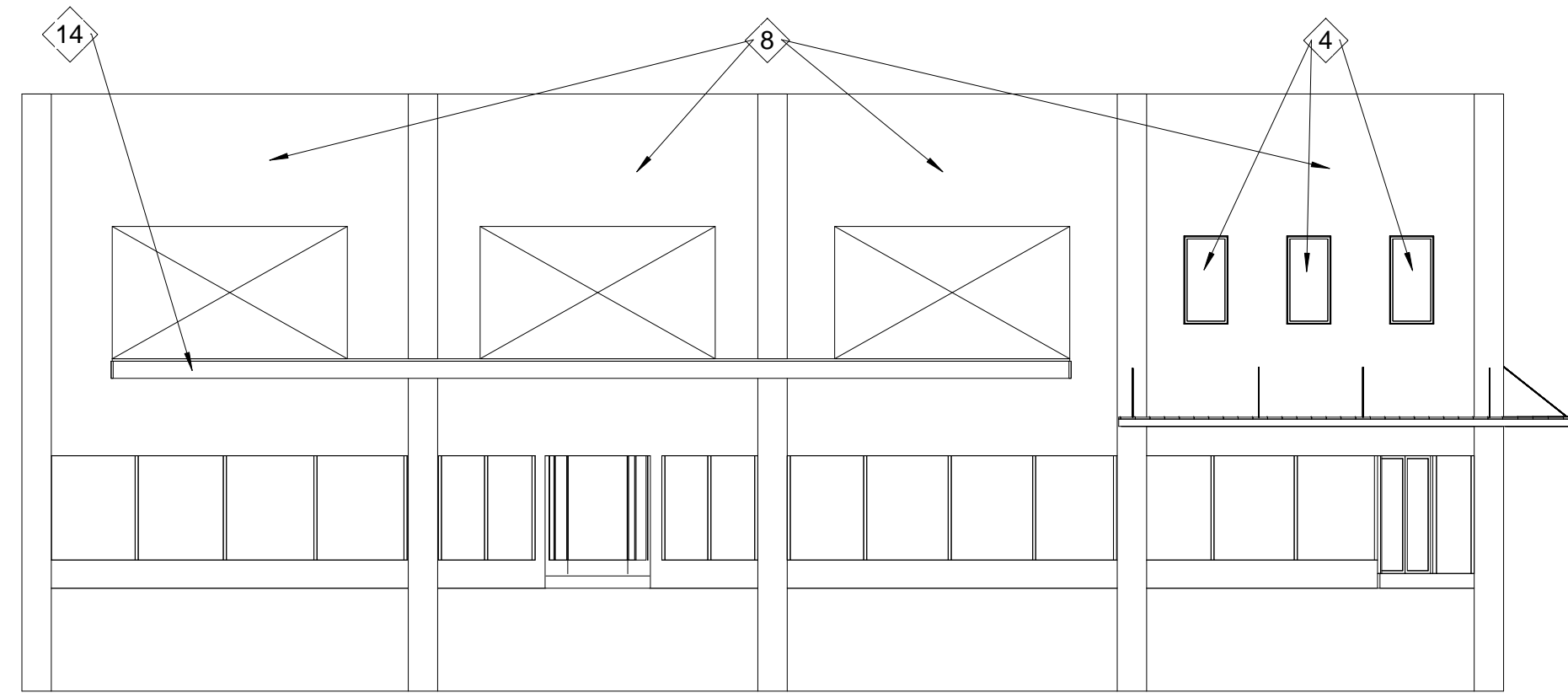
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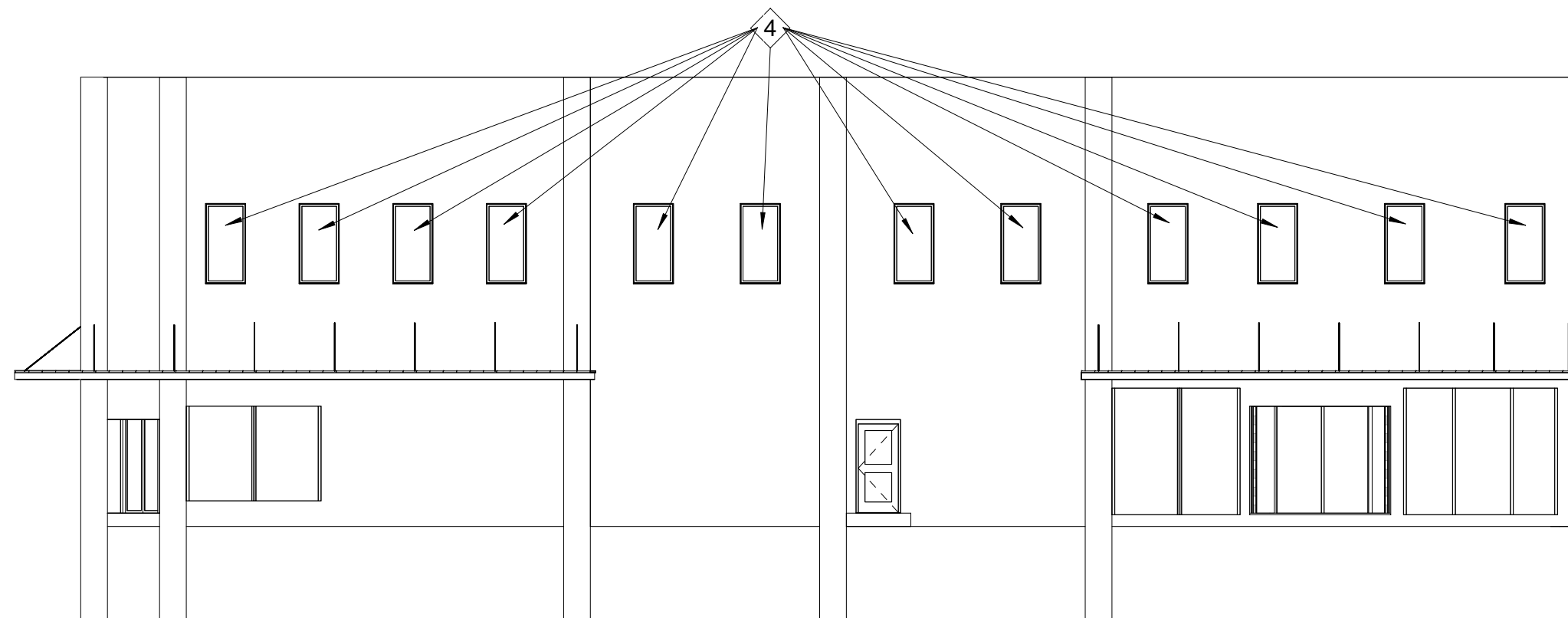
① LEVEL 3 DEMOLITION  
1/8" = 1'-0"

◇ SCOPE OF WORK NOTE - DEMOLITION

1. EXISTING 16'X9' WINDOW BAYS: REMOVE THE EXISTING DRYWALL COVERING THE 16'X9' WINDOW BAYS. PATCH AND PAINT DRYWALL SURROUNDING WINDOW BAYS. PROVIDE NEW DRYWALL CORNER BEADS AS REQUIRED FOR SMOOTH EDGES.
2. STAIRWAYS: MODIFY THE WIDTH OF STAIRWAYS TO 42 INCHES. THE DASHED LINE INDICATES THE EXISTING 36 INCHES STAIRWAY. SEE STAIR DETAILS FOR ADDITIONAL INFORMATION.
3. EXISTING INTERIOR WALL: OPEN THE WALL.
4. EXISTING EXTERIOR DRYWALL: REMOVE AND DISPOSE OF COMPLETE THE DRYWALL AND/OR CMU/BRICK VENEER AS REQUIRED TO EXPOSE EXISTING WINDOW OPENINGS.
5. EXISTING PLUMBING & WATER CLOSET SYSTEM: REMOVE AND DISPOSE OF COMPLETE. DEMOLISH ALL PIPING BACK TO MAINS AND CAP OFF.
6. EXISTING DOOR SYSTEM: REMOVE AND DISPOSE OF COMPLETE. INFILL THE OPENING WITH TYPICAL WALL FRAMING/GWB. REFER TO WALL DETAIL FOR ADDITIONAL INFORMATION.
7. EXISTING ELEVATOR SYSTEM: REMOVE AND DISPOSE OF COMPLETE, INCLUDING ALL ELECTRICAL WIRING, MECHANICAL COMPONENTS GUARDRAILS, EXISTING HOIST BEAM ETC.
8. EXTERIOR WALL: REMOVE AND DISPOSE OF COMPLETE THE EXISTING FALSE FACADE SYSTEM. INCLUDING METAL FASCIA COPING AND ANCHOR BOLTS PART OF FALSE FACADE SYSTEM.
9. EXISTING CABINET UNIT HEATER: REMOVE AND DISPOSE OF COMPLETE. REMOVE PIPING BACK TO MAIN AND CAP OFF. IF ANY PIECES OF BRANCH PIPING ARE DEEMED TO BE IN GOOD CONDITION AND THE CONTRACTOR WISHES TO REUSE, PROVIDE ALL NEW VALVES.
10. EXISTING CEILING SYSTEM: REMOVE AND DISPOSE OF COMPLETE THE CEILING IN POOR CONDITION. REMOVE AND DISPOSE OF COMPLETE ALL HINGES AND CEILING MOUNTING PIECES.
11. EXISTING WOOD FLOORING: REMOVE AND DISPOSE OF COMPLETE. COORDINATE ALL REQUIREMENTS WITH STRUCTURALLY FRAMING CONTRACTOR. REINFORCE THE FLOOR. SEE REINFORCEMENT DETAIL IN STRUCTURAL SHEETS. FLOOR CUT/PATCH.
12. EXISTING FLOOR: FLOOR CUT/PATCH REQUIRED FOR PLUMBING WASTE PIPING.
13. EXISTING FLOOR: FLOOR CUT/PATCH REQUIRED FOR NATURAL GAS PIPING ROUTING. SEE MECHANICAL DRAWINGS FOR DETAILS.
14. EXISTING FACADE: COORDINATE LEVEL 3 FLOOR DEMOLITION REQUIREMENTS WITH EXTERIOR DEMOLITION REQUIREMENTS FOR BALCONY.



② NORTH ELEVATION DEMOLITION  
1" = 10'-0"



③ WEST ELEVATION DEMOLITION  
1" = 10'-0"

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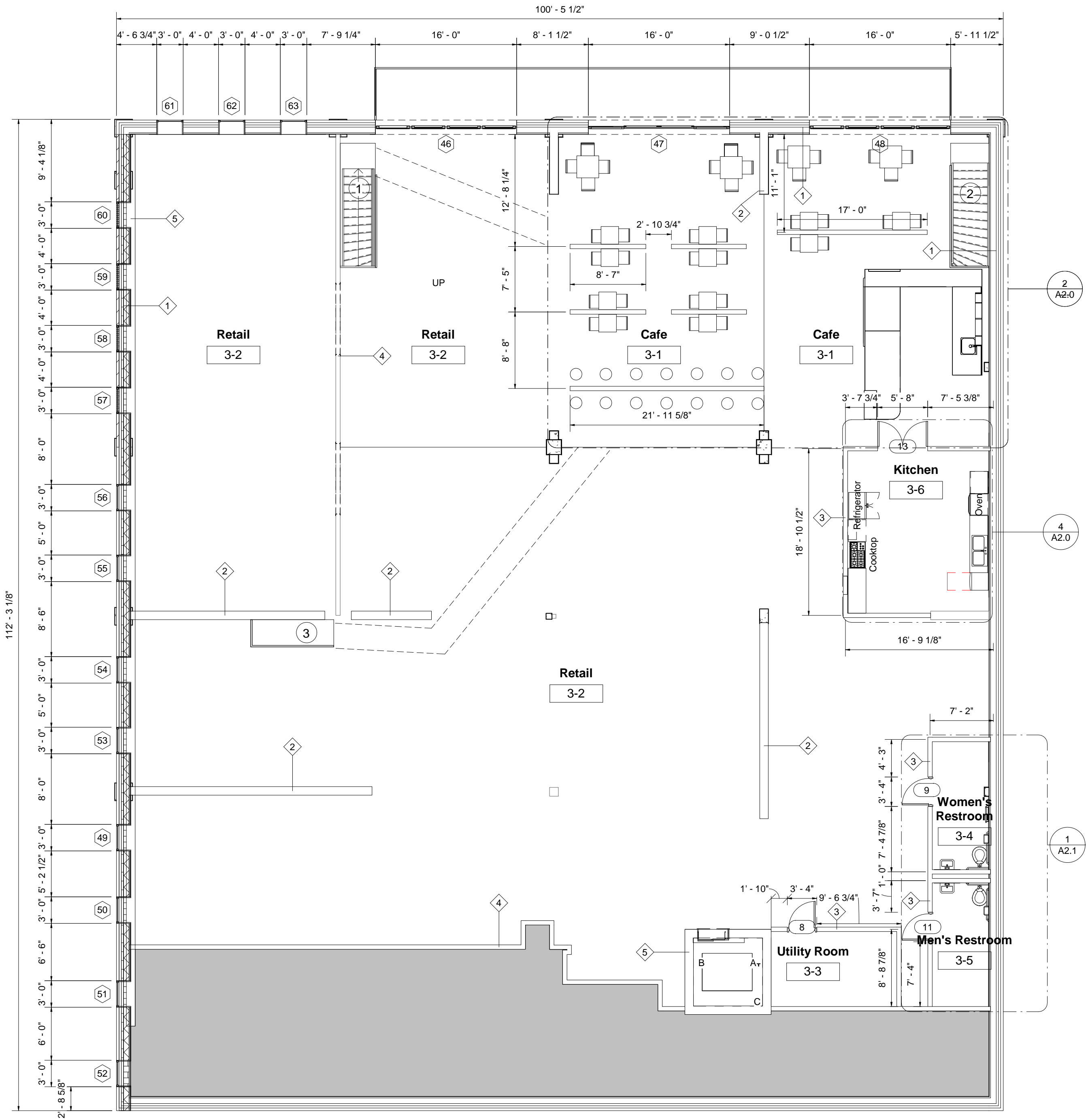
SHEET NAME

DEMOLITION PLAN

SHEET NO.

A1.0





1 LEVEL 3 COMPOSITE FLOOR PLAN  
1/8" = 1'-0"

WALL LEGEND			
MARK	CATEGORY	THICKNESS	MATERIALS
1	EXTERIOR WALL	1' 7 1/2"	3 5/8" BRICK FINISH; 3" AIR GAP; 3" INSULATION; 7 5/8" CONCRETE MASONRY UNITS; 1 5/8" METAL FURRING; 5/8" GYPSUM WALL BOARD
2	INTERIOR WALL	12"	CONCRETE MASONRY UNITS
3	INTERIOR WALL	6"	5/8" GYPSUM WALL BOARD ON BOTH SIDE OF THE WALL; 4 3/4" INSULATION
4	INTERIOR WALL	6"	2X6 STUD WAL - SOFT WOOD - LUMBER
5	INTERIOR WALL	8"	BRICK

STAIRWAY LEGEND	
MARK	DESCRIPTION
1 2	47" STAIRWAY
3	35" STAIRWAY

- GENERAL NOTES:**
- THE DASHED PARALLEL LINES SHOW THE MEAN OF EGRESS FOR CAFE AREA. THE WIDTH OF CLEAR PATH IS 3 FEET FROM GENERAL CAFE AREA TO STAIRWAYS 1, 2, AND 3 MARKED IN A CIRCLE. THE CLEAR PATH SHALL NOT BE OBSTRUCTED DURING THE ROUTINE DAILY USE. THE CLEARANCE OF PATH MAKES SURE THE SAFETY OF CUSTOMERS AND ENABLES A EVACUATION AS QUICK AS POSSIBLE.
  - THE CAFE AREA SEATING PLAN IS SHOWN IN ARCHITECTURAL DRAWING SHEET A2.0. REFER TO THE SHEET FOR ADDITIONAL INFORMATION.
  - THE THREE STAIRWAYS ARE MARKED IN THE SHEET. THOSE STAIRWAYS SHALL NOT BE OBSTRUCTED AND SHALL BE CLEARLY MARKED.
  - THE ADA REGULATION SHALL BE APPLIED TO AREA INCLUDING CAFE, KITCHEN, BATHROOM. THE DETAIL IS SHOWN IN ARCHITECTURAL DRAWING SHEETS A2.0 A2.1. REFER TO THOSE SHEETS FOR ADDITIONAL INFORMATION. IT IS THE RESPONSIBILITY TO PROVIDE A FRIENDLY ENVIRONMENT FOR PEOPLE WITH DISABILITIES.
  - WINDOW AND DOOR DETAIL ARE TAGGED BASED ON CATEGORY. REFER TO DRAWING SHEET A3.1 FOR ADDITIONAL DETAIL.
  - THE SHADED AREA AT THE BOTTOM OF 3RD FLOOR INDICATES A NON SCOPE OF WORK, WHICH APPLIES TO ALL DRAWING SHEETS.

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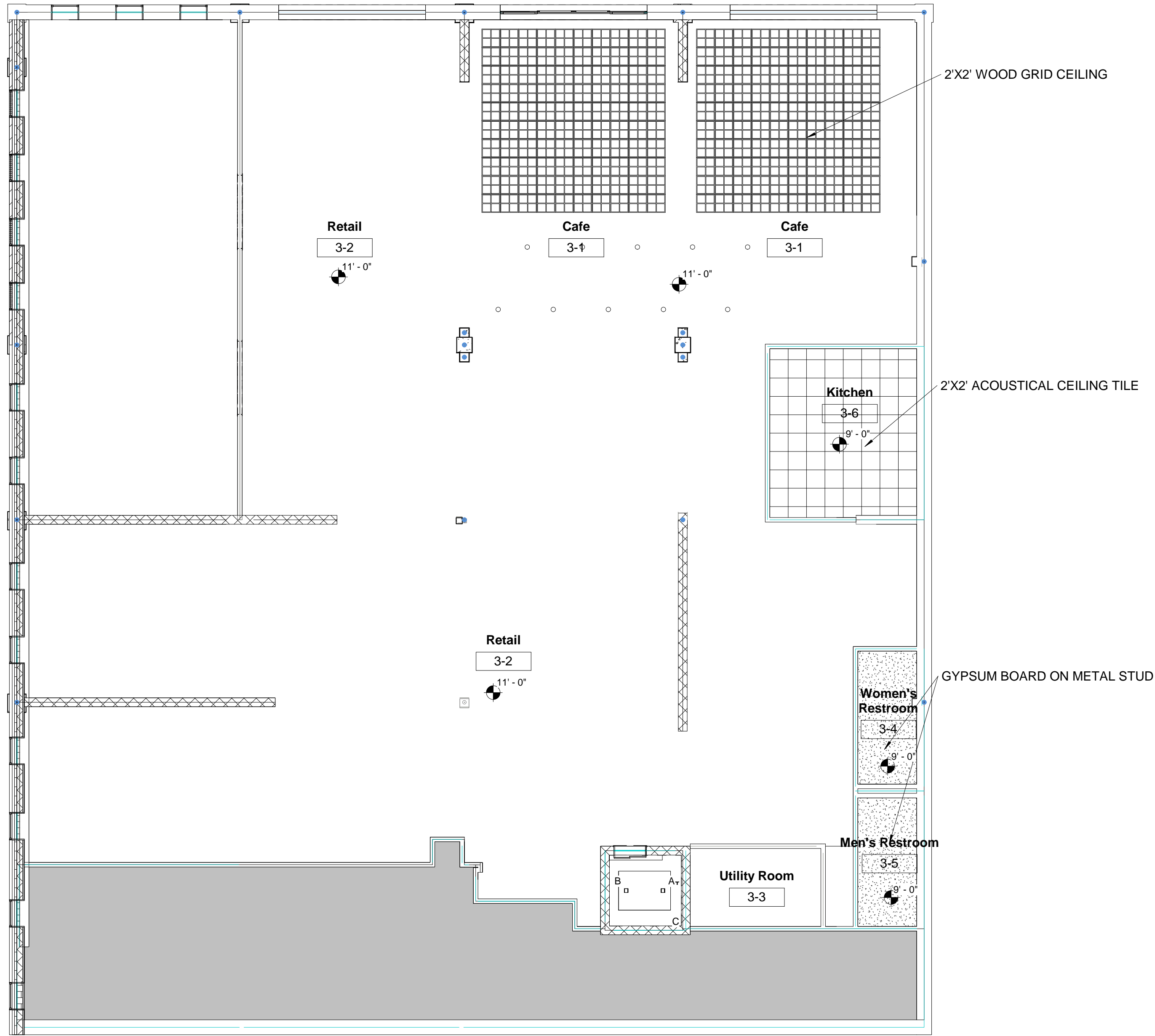
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SHEET NAME

COMPOSITE 3RD FLOOR PLAN

SHEET NO.

A1.1



CEILING LEGEND	
	COMPOUND CEILING - GWB ON MTL STUD 3 5/8" METAL STUD LAYER; 5/8" GYPSUM WALL BOARD
	COMPOUND CEILING - 2'X2' FINE FISSURED ACOUSTICAL CEILINGS - TILE, SQUARE
	COMPOUND CEILING - 2'X2' WOOD GRID CEILING SYSTEM

- CEILING PLAN GENERAL NOTES:**
1. THE EXISTING CEILING PLAN AT RETAIL AREA SHALL BE REUSED IF THE CEILING IS ESTIMATED AS IN GOOD CONDITION.
  2. THE 2'X2' HARDWOOD LOWER CEILING SYSTEM IS INSTALLED IN THE CAFE AREA. THE DRAWING CAN ONLY BE USED AS GENERAL INFORMATION AND SHALL NOT BE USED AS A CONSTRUCTION PLAN.
  3. THE GYPSUM BOARD INSTALLED IN THE BATHROOM SHALL BE WATERPROOF TO PREVENT INFILTRATION OF MOISTURE.
  4. THE MARKED ELEVATIONS INDICATE THE ELEVATION OF FINISHED CEILING.
  5. THE 2'X2' ACOUSTICAL CEILING TILE SHALL BE WATERPROOF TO PREVENT INFILTRATION OF MOISTURE, AND PREVENT NOISE FROM THE KITCHEN.

1 LEVEL-3 REFLECTED CEILING PLAN  
1/8" = 1'-0"

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COMMERCIAL REHABILITATION 1  
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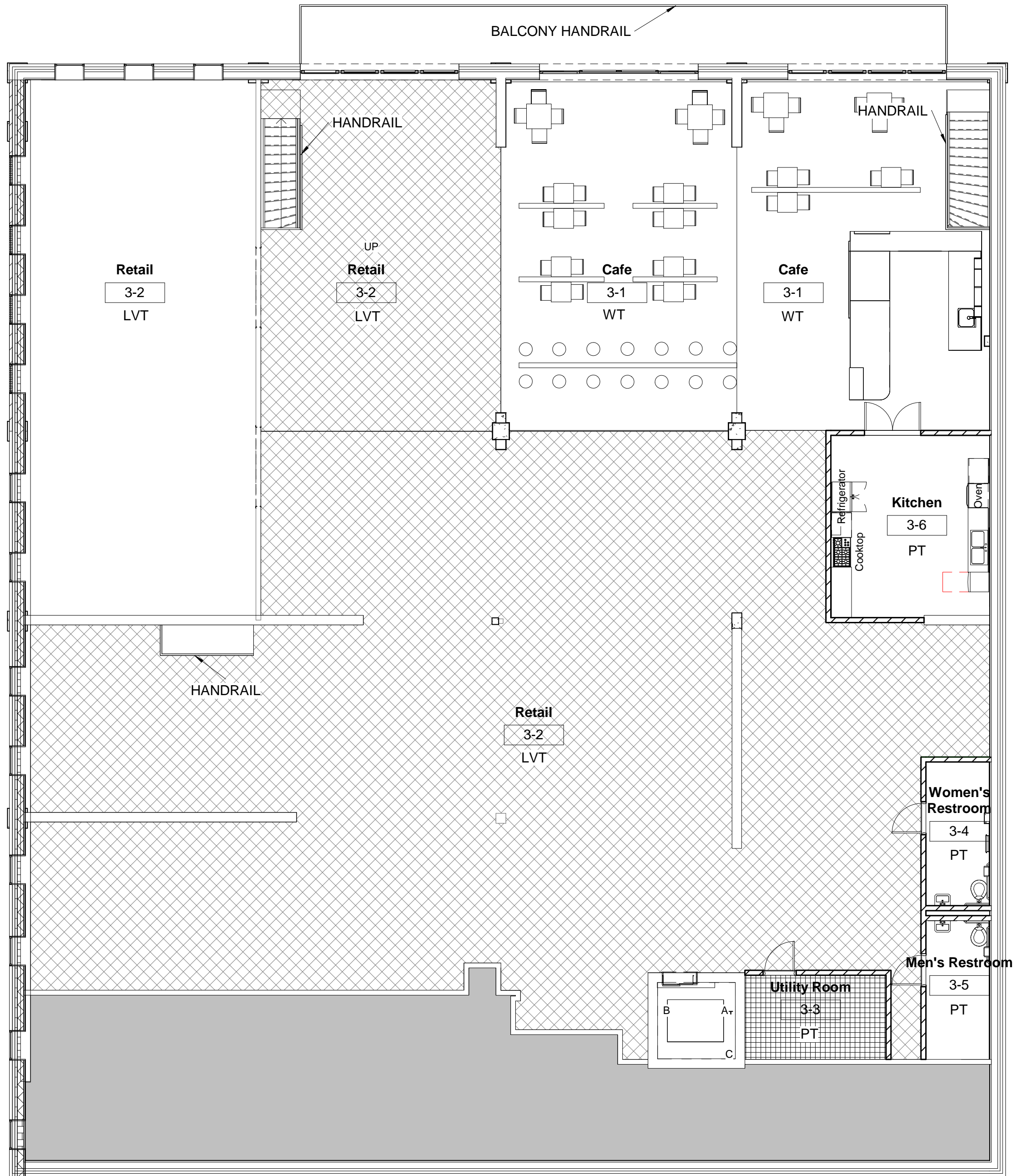
SHEET NAME

R.C.P

SHEET NO.

A1.2





① LEVEL 3 FINISH PLAN  
1/8" = 1'-0"

- FINISH GENERAL NOTES:**
1. FLOORING AFFECTED BY DEMOLITION / NEW CONSTRUCTION PATCH TO MATCH EXISTING CONDITION.
  2. FURNISH AND INSTALL THRESHOLDS AT DOORS.
  3. RAILINGS ARE PROVIDED AT 3 EXISTING FOR SAFETY CONCERN.
  4. FOR BATHROOM AND KITCHEN, THE PORCELAIN TILE USED AS FLOOR SHALL BE WATERPROOF TO PREVENT THE INFILTRATION OF MOISTURE.
  5. WOOD TILES ARE USED AS THE FLOORING FOR RETAIL AREA, THIS MATERIAL SHALL BE DURABLE AND RESISTANCE TO FRICTION.
  6. LUXURY VINYL TILES ARE USED AS THE FLOORING MATERIAL FOR CAFE AREA. THE LUXURY VINYL TILE IS DURABLE AND FLEXURAL IN ANY PATTERN. CONSIDERING THE HIGH TRAFFIC FLOW IN THE CAFE AREA, A DURABLE AND ESTHETIC MATERIAL SHALL BE USED IN THE CAFE AREA.
  7. 4 INCHES RUBBER BASES SHALL BE INSTALLED IN THE KITCHEN, CAFE AREA. THE DETAIL OF TYPE OF RUBBER BASE USED IS SHOWN ABOVE IN THE RUBBER BASE SCHEDULE.
  8. ALL PAINTING SCOPE TO INCLUDE A PRIMER COAT AND MINIMUM OF TWO (2) FINISH COATS. STANDARD TOUCH-UPS AND PUNCHLIST WORK AFTER FINISH COATS HAVE BEEN COMPLETED SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

FINISH LEGEND		
	WT	WOOD-GRAINED PLANK CERAMIC TILE
	LVT	LUXURY VINYL TILE
	PT	PORCELAIN TILE

FLOOR BASE SCHEDULE	
FLOORING TYPE	RUBBER BASE DETAIL
LVT	4" RUBBER BASE AT WALL PERIMETER
WT	4" INTEGRAL COVED FLOOR BASE MATCHING FLOOR TILE

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## COMMERCIAL REHABILITATION 1

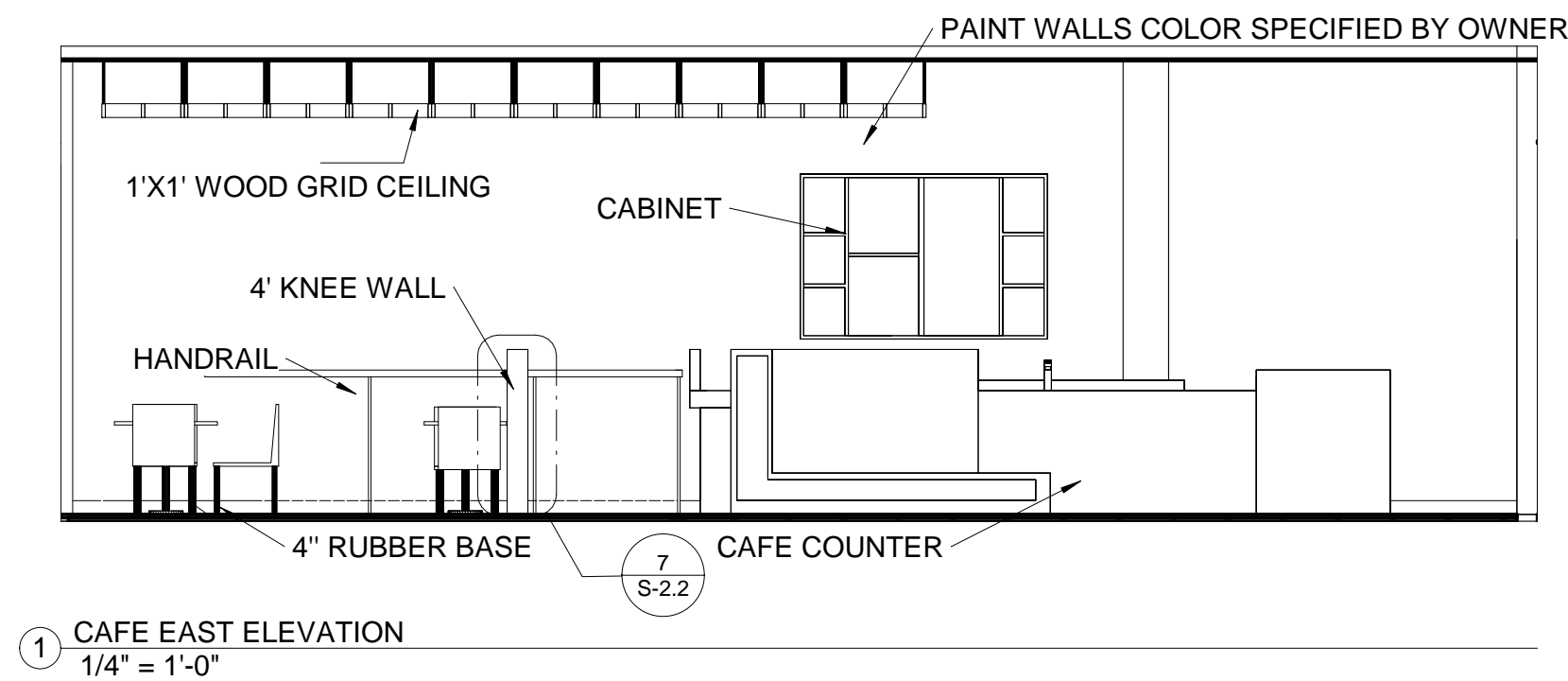
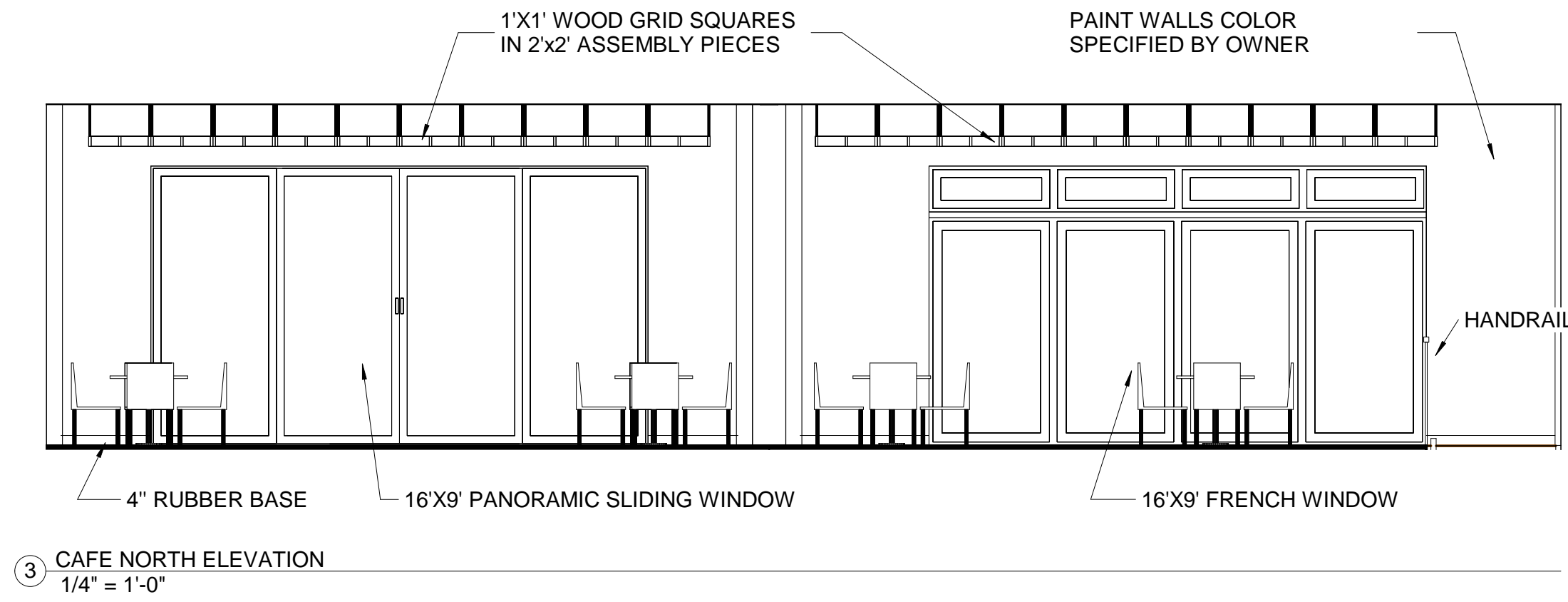
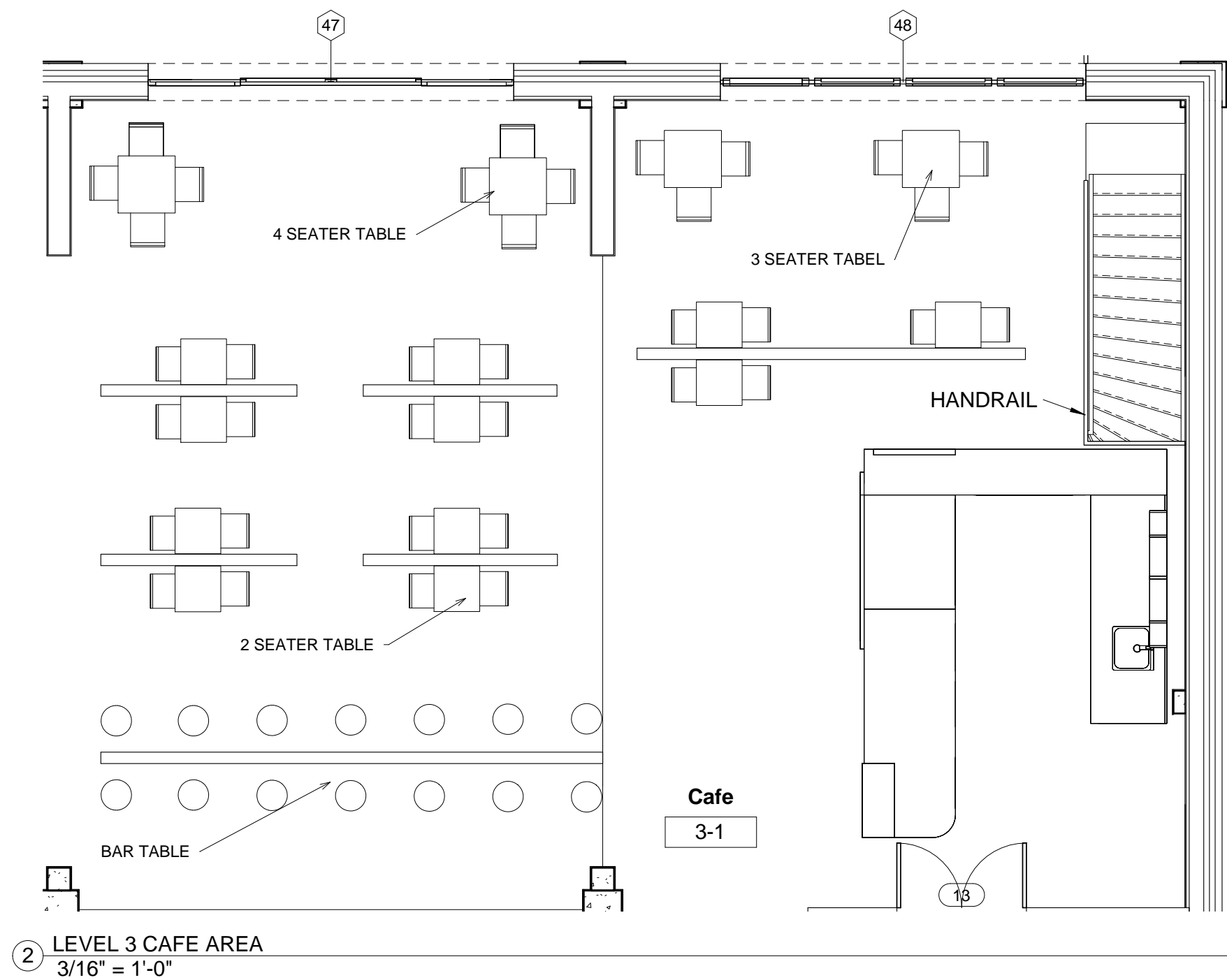
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SHEET NAME

FINISH PLAN

SHEET NO.

A1.3



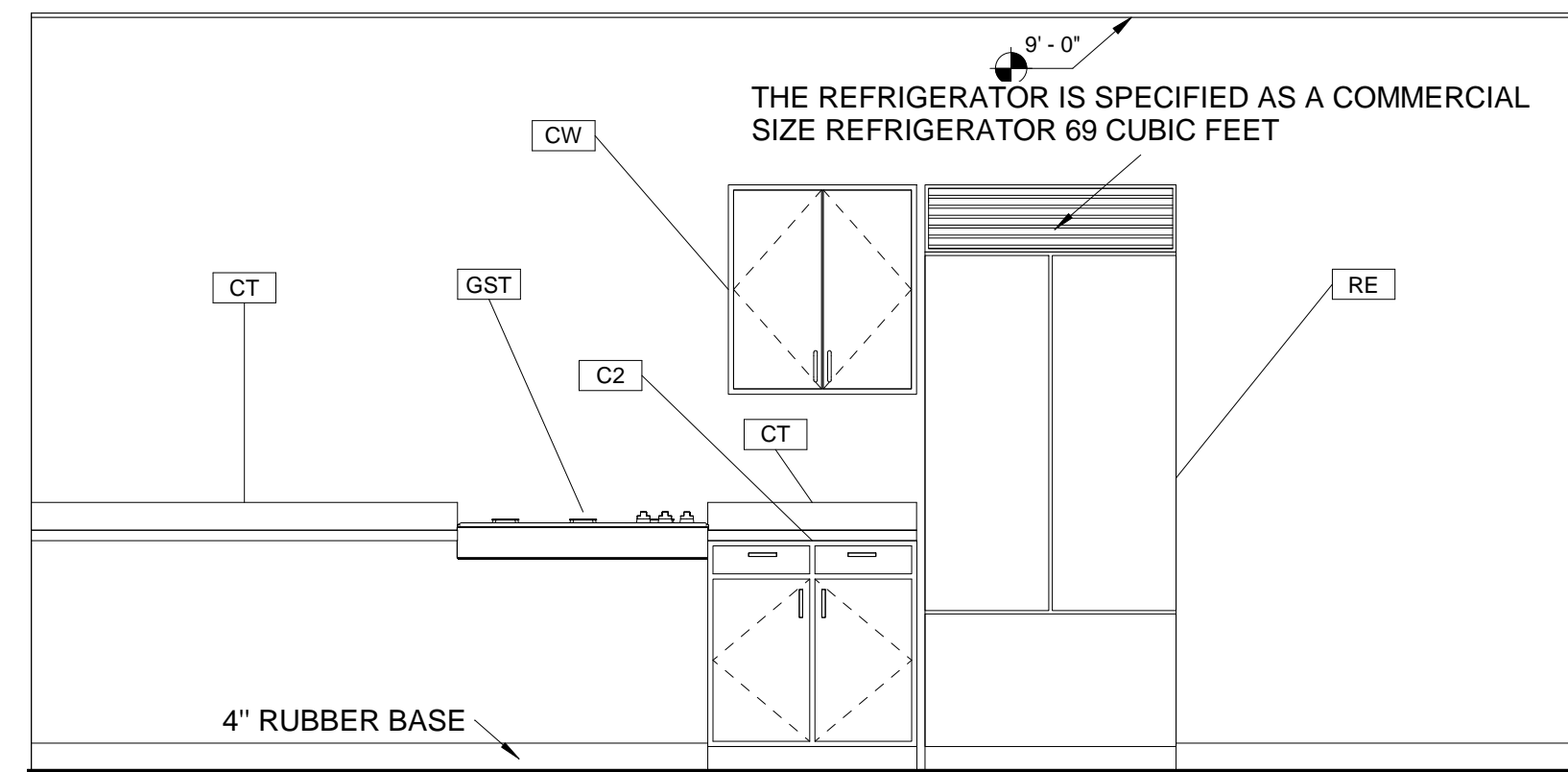
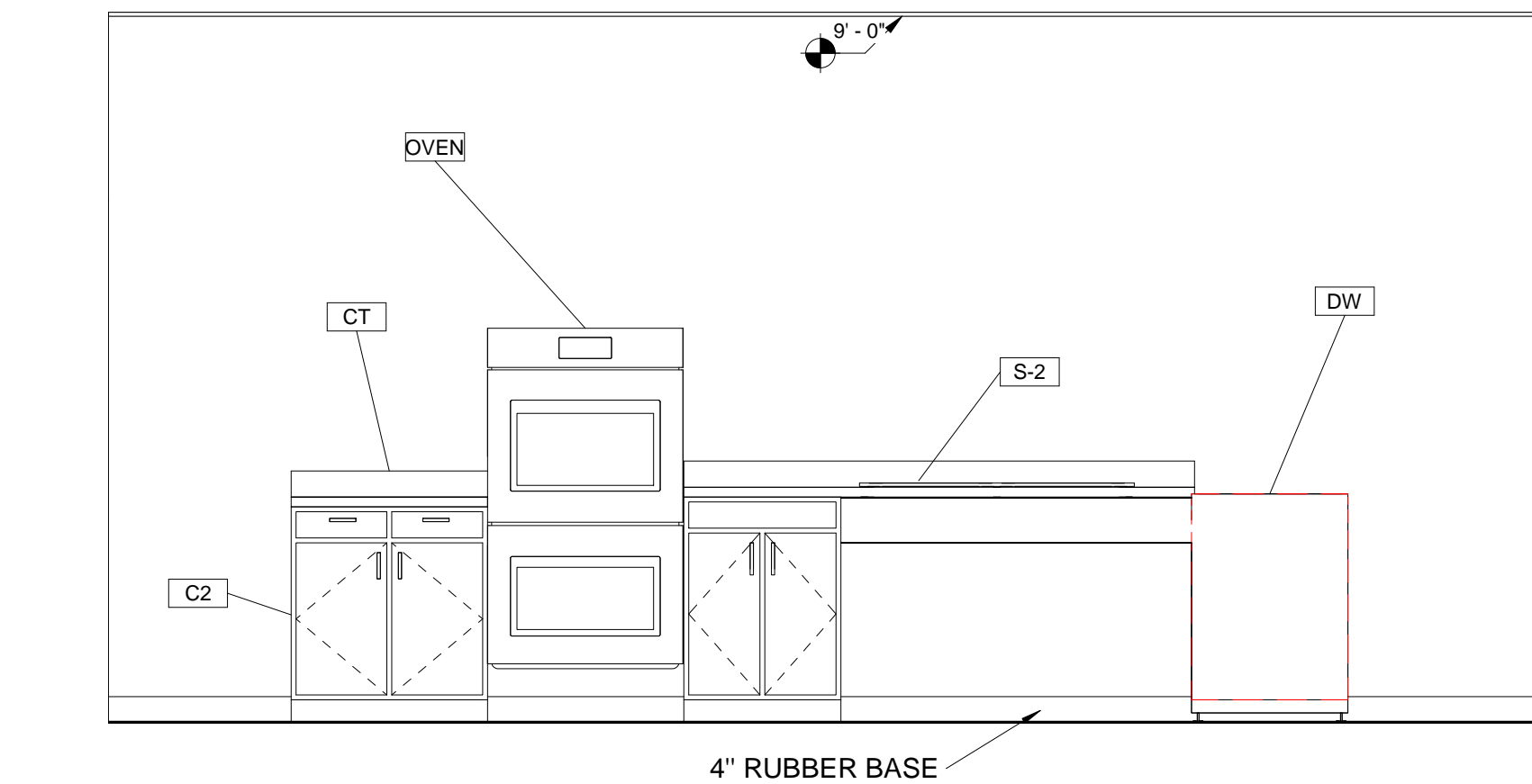
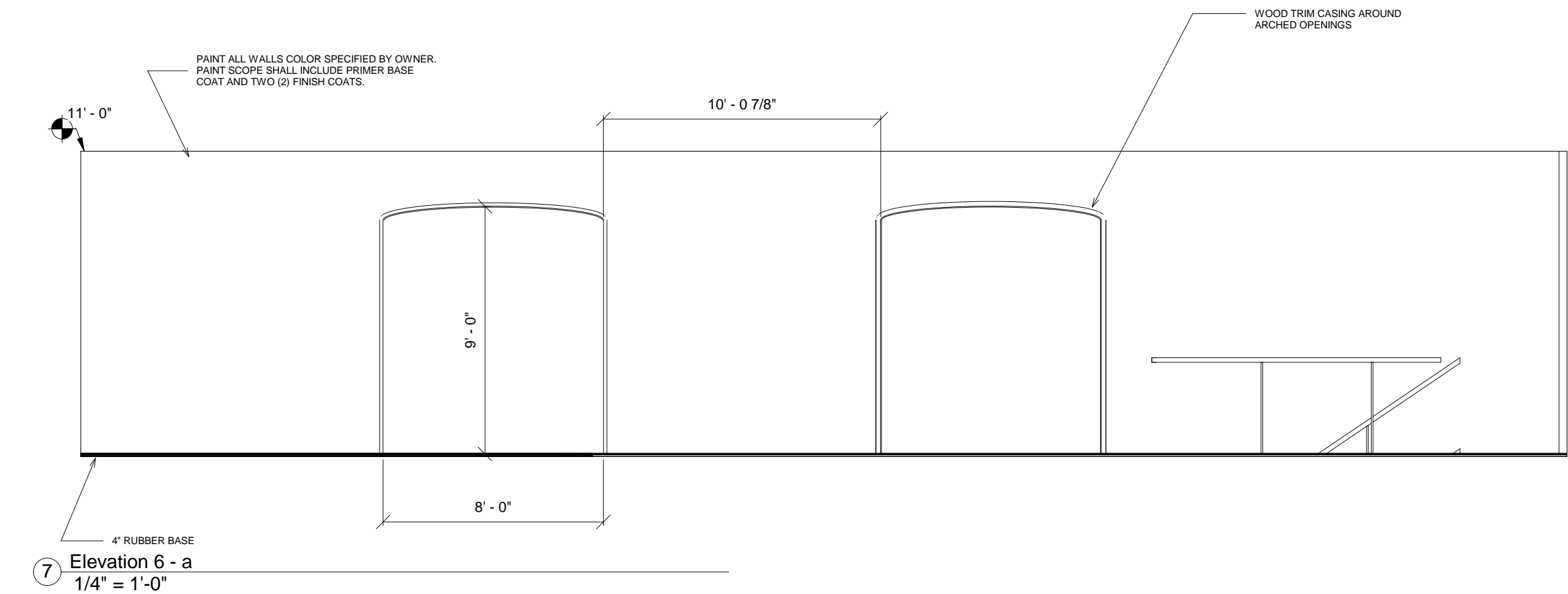
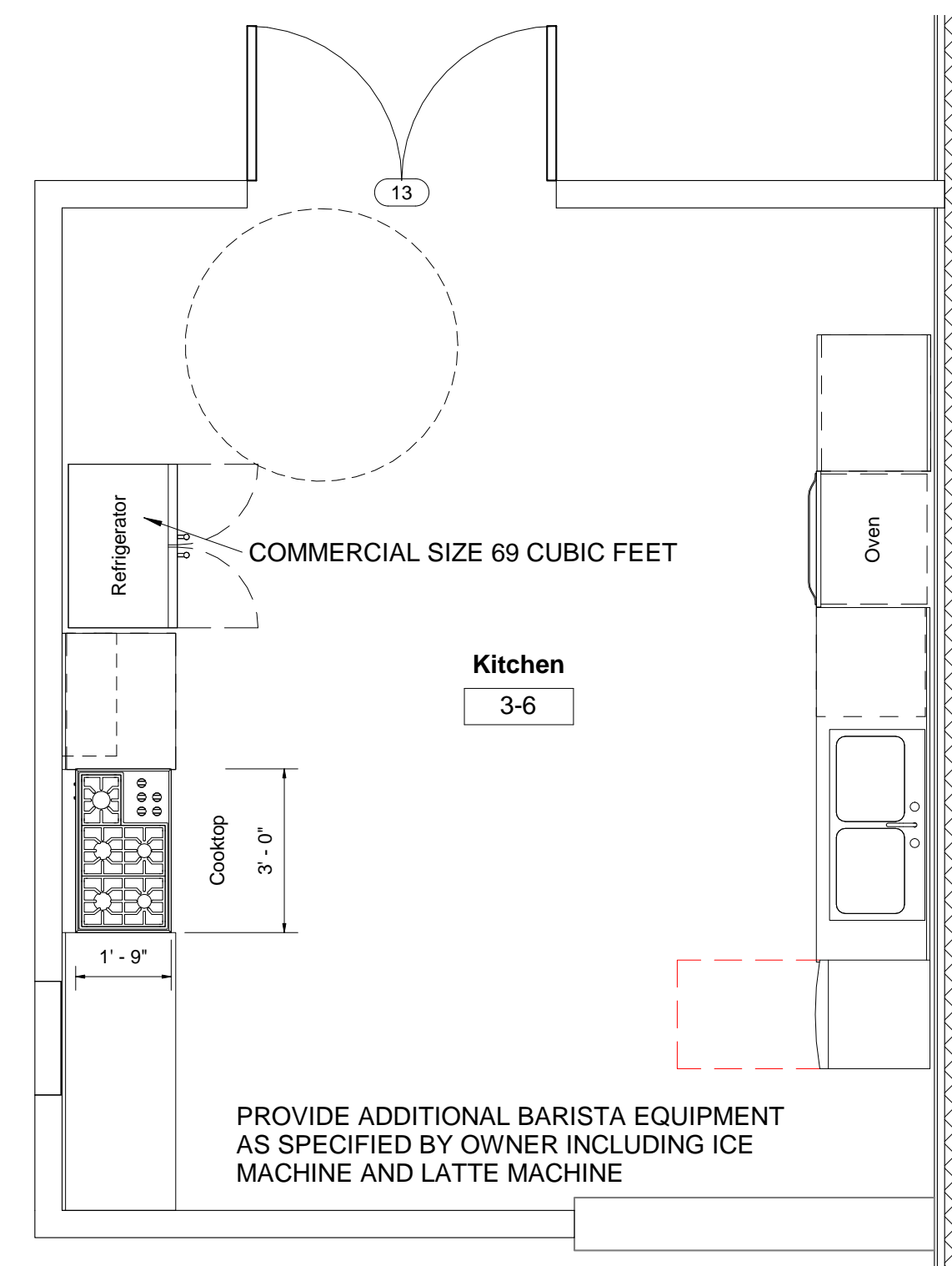
#### GENERAL NOTES:

1. THE KNEE WALLS ARE 4 FT TALL AND LOCATED IN THE CAFE AREA, THE OUTLETS WILL GO THOUGHT THE KNEE WALLS.
2. THE SEATING PLAN OF CAFE AREA IS SHOWN IN DRAWING. THE KNEE WALL ALSO SERVE AS CUTTING THE SPACE. THE KNEE WALL UNDER THE BAR TABLE IS ALSO USE AS THE FOUNDATION OF THE BAR TABLE.
3. THE DIMENSION OF BAT TABLE IS 30"X252", THE BAR TABLE SEAT HAS A DIAMETER OF 20", THE SEATING SPACE OF THE BAR TABLE IS WITHIN A 23" DISTANCE AWAY FROM THE NEAR EDGE OF THE BAR TABLE. THE DIMENSION BETWEEN EACH BAR TABLE SEAT IS 22" TO MAKE SURE A SPACE FOR TURNING AROUND.
4. BESIDES THE BAR TABLE, 2 SEATER TABLES AND 3 SEATER TABLES AND 4 SEATER TABLES ARE ALSO USED TO SERVICE DIFFERENT GROUP OF CUSTOMERS. THE 4 SEATER TABLES ARE LOCATED NEAR THE 16'X9' FRENCH WINDOWS. THE APPROXIMATE DIMENSION FOR THE TABLE IS 24"X24" FOR 2 SEATER TABLES, AND 30"X30" FOR 3 SEATER TABLES AND 4 SEATER TABLES. THE DIMENSION OF CHAIR IS 18"X18" FOR ALL TYPES OF TABLE.
5. THE WIDTH OF CLEAR PATH IS APPROXIMATE 3 FEET. THIS COUNTS FOR THE REQUIRED SPACE OF WHEELCHAIR. MEANWHILE, THE 3 FEET WIDTH PATH MAKE SURE A MEAN OF EGRESS REQUIRED BY INTERNATIONAL BUILDING CODE.
6. THE DETAIL OF THOSE 2 16'X9' WINDOWS ARE SHOWN IN ARCHITECTURAL DRAWING SHEET TYPICAL DETAIL. THE ONE LOCATED AT WEST SIDE IS A PANORAMIC SLIDING WINDOW, WHICH CUSTOMERS CAN OPEN THE DOOR AND ACCESS TO THE BALCONY. THE ONE LOCATED AT THE EAST SIDE IS A DEAD WINDOW, WHICH CANNOT BE OPENED.
7. THE CEILING PLAN OF CAFE AREA IS SHOWN IN ARCHITECTURAL DRAWING SHEET REFLECTED CEILING PLAN. THE 2'X2' WOOD GRID CEILING SYSTEM IS USED FOR THE WHOLE CAFE AREA.

#### KITCHEN GENERAL NOTES:

1. THE KITCHEN ACCESSORY DESIGN SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (ADA).
2. A CLEAT PATH SHALL BE PROVIDED WITH MINIMUM WIDTH OF 40 INCHES.
3. THE KITCHEN WORK SURFACE SHALL BE 34 INCHES MAXIMUM ABOVE THE FINISH FLOOR.
4. A CLEAR FLOOR SPACE WITH DIMENSION 30"X18" POSITIONED FOR A FORWARD APPROACH SHALL BE CENTERED ON THE KITCHEN WORK SURFACE AND SHALL PROVIDE A KNEE AND TOE CLEARANCE.
5. CABINETRY SHALL BE PERMITTED UNDER THE KITCHEN WORK SURFACE.
6. NO SHARP PR ABRASIVE SURFACES SHALL BE UNDER THE WORK SURFACE COUNTERS.
7. A CLEAR FLOOR SHALL BE PROVIDED FOR DISHWASHER AND COOKTOP WORK SPACE.
8. THE UNDER SIDE OF THE COOKTOP SHALL BE INSULATED.
9. REFRIGERATOR SHALL HAVE AT LEAST 50 PERCENT OF THE SPACE 54 INCHES MAXIMUM ABOVE THE FINISH FLOOR.
10. AT LEAST 50 PERCENT OF THE SHELF SPACE SHALL BE PROVIDED.

MARK	DESCRIPTION
RE	REFRIGERATOR - COMMERCIAL SIZE 69 CUBIC FEET
GST	COOKTOP - GAS
DW	DISHWASHER - BUILT-IN
S-2	SINK - KITCHEN - DOUBLE
OVEN	OVEN - DOUBLE
CT	WORK SURFACE
C2	CABINET - DOUBLE DOOR
CW	UPPER CABINET - WALL



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COMMERCIAL REHABILITATION 1

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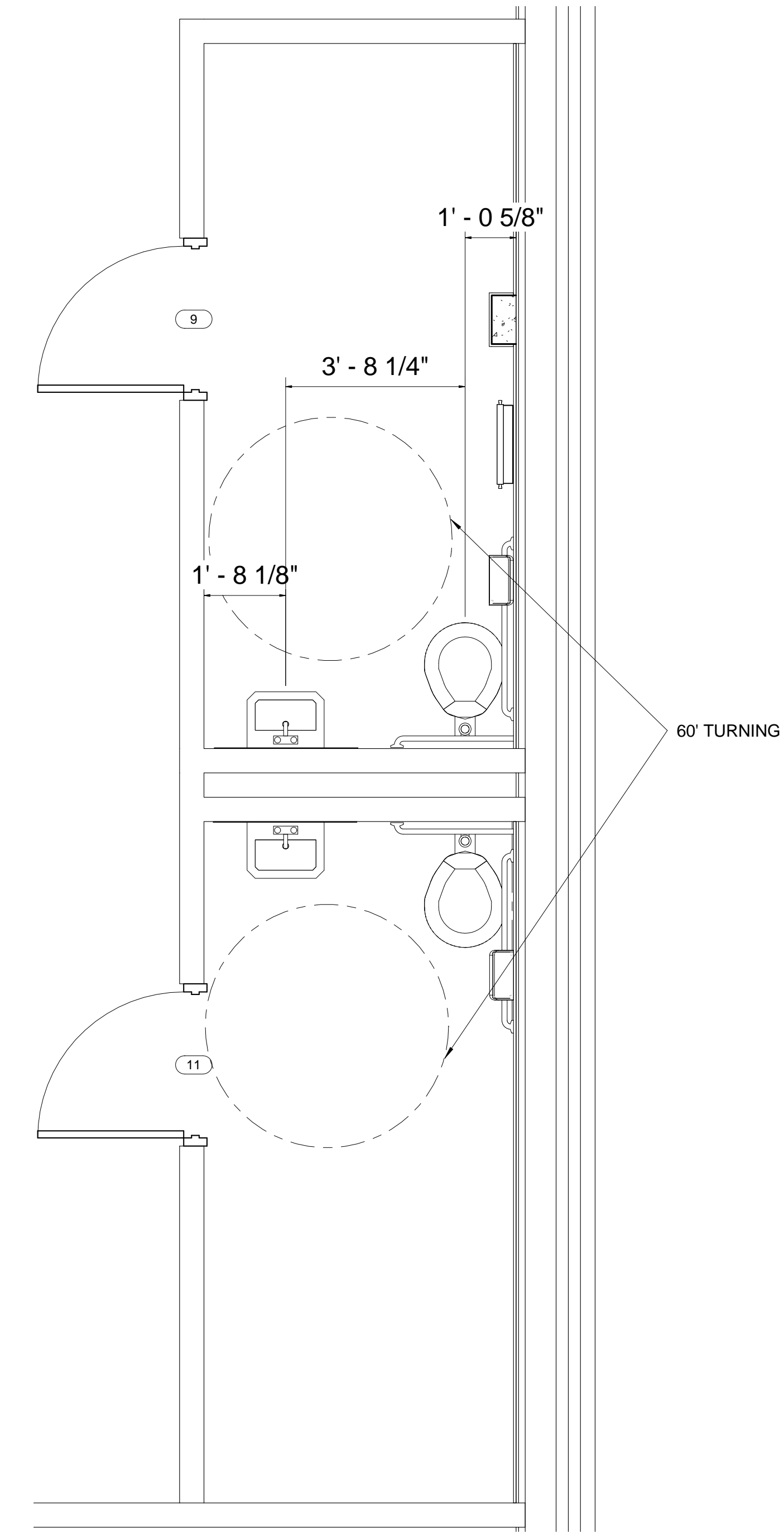
SHEET NAME

CAFE AREA & KITCHEN ELEVATION

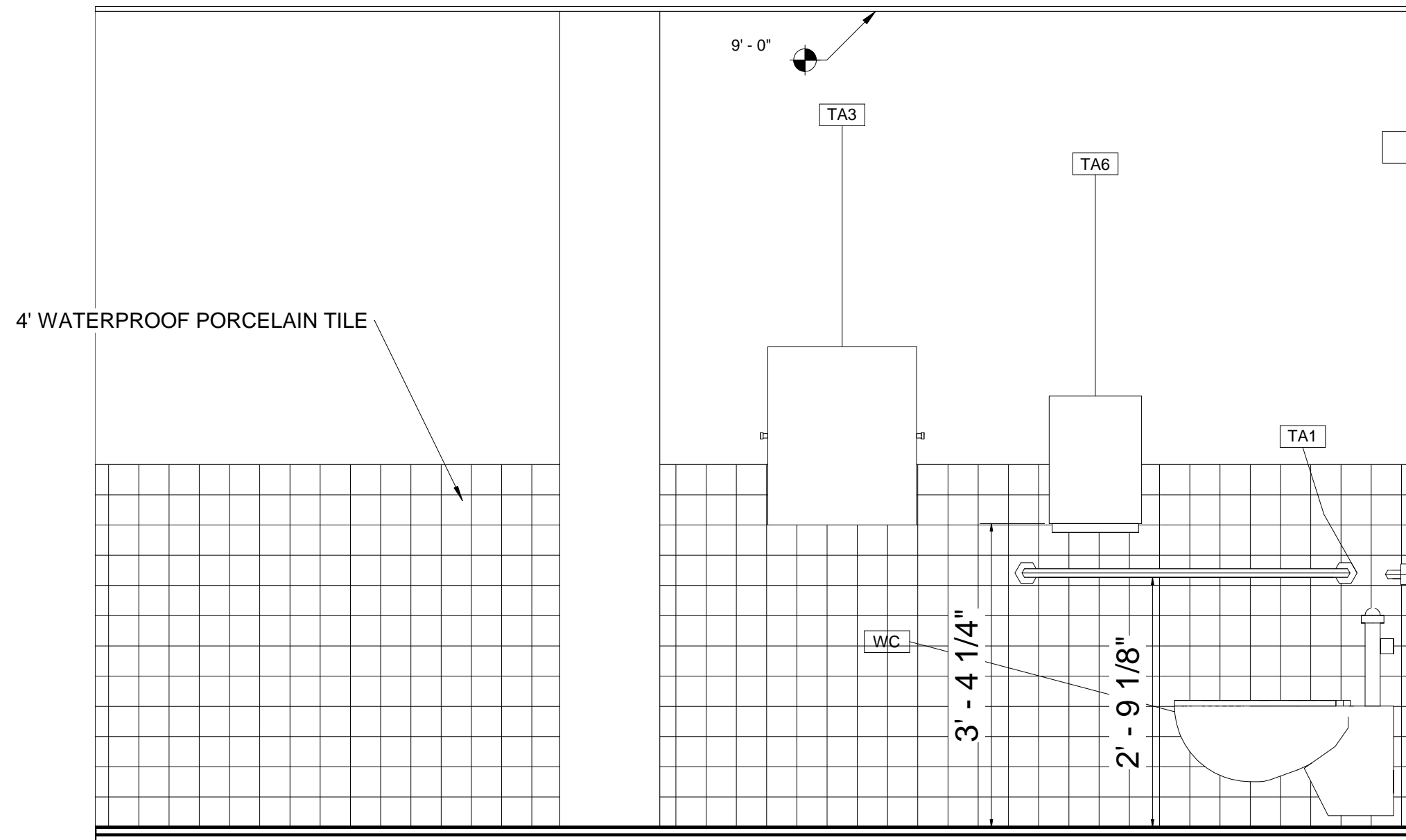
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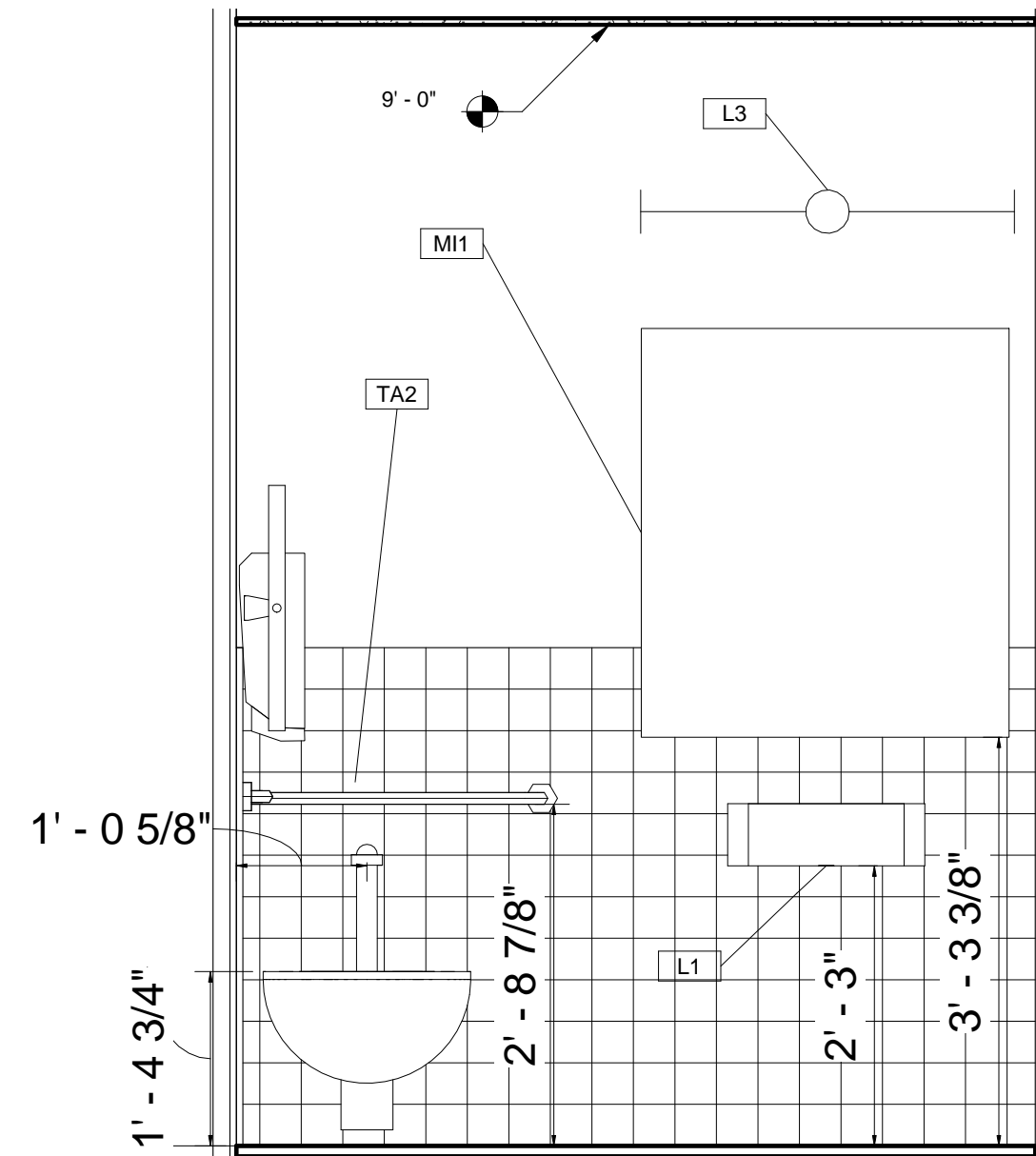




① LEVEL 3 BATHROOM  
1/2" = 1'-0"



② BATHROOM EAST ELEVATION  
3/4" = 1'-0"



③ BATHROOM SOUTH ELEVATION  
3/4" = 1'-0"

**BATHROOM GENERAL NOTES:**

1. ALL BATHROOM DESIGN SHALL COMPLY THE AMERICANS WITH DISABILITIES ACT (ADA).
2. THE CLEAR TURNING SPACE IS MARKED AS A 60 INCHES DIAMETER CIRCLE. THE CLEAR TURNING SPACE SHALL COMPLY WITH ADA REGULATION.
3. THE SPACE SHALL BE DESIGNED TO ACCOMMODATE A FORWARD OR PARALLEL APPROACH TO SINK. THE DIMENSION OF THE CLEAR APPROACH IS 30"x48".
4. THE CENTER LINE OF THE TOILET MUST BE BETWEEN 16 AND 18 INCHES FROM THE SIDE WALL.
5. A CLEAR CIRCLE OF AT LEAST 60 INCH AROUND THE SIDE WALL AND 56 INCHES FROM THE REAR WALL TO ALLOW A WHEELCHAIR TO TURN AROUND.
6. THE TOILET SEAT HEIGHT SHALL BE 17-19 INCHES.
7. SINKS SHALL BE MOUNTED SMALLER THAN 34 INCHES FROM THE FLOOR, AND A KNEE CLEARANCE OF 27 INCHES HIGH, 30 INCHES WIDE, AND 11 TO 25 INCHES DEEP.
8. FAUCETS SHALL BE LEVER-OPERATED, PUSH, TOUCH, OR ELECTRONICALLY CONTROLLED. MEANWHILE, THE FAUCETS SHALL BE USABLE WITH ONE HAND AND WITHOUT THE NEED TO TIGHTLY GRASP, PINCH, OR TWIST THE WRIST. LESS THAN 5 POUNDS OF FORCE SHALL BE EXERTED TO USE THE FAUCET.
9. 30 INCHES BY 48 INCHES ACCESS TO THE SINK SHALL BE MAINTAINED TO MAKE SURE A CLEAR PATH.
10. GRAB BARS SHALL BE AT LEAST 36 INCHES LONG ON THE REAR WALL OR 42 INCHES ON THE SIDE WALL AND SHOULD BE MOUNTED 33 TO 36 INCHES ABOVE THE FLOOR. THE GRIPPING SURFACE SHALL BE AT LEAST 1.25 INCHES, MOUNTED AT LEAST 1.5 INCHES FROM THE WALL. A AT LEAST 250 POUNDS OF PRESSURE SHALL BE DESIGNED TO WITHSTAND. A AT LEAST 1 1/2 INCHES SPACE BETWEEN THE GRAB BAR AND THE WALL SURFACE SHALL BE MAINTAINED. GRAB BARS SHALL HAVE A ROUND EDGES AND MUST RETURN TO THE WALL.
11. BATHROOM DOORS SHALL BE OPENED WITH MINIMAL FORCE AND HAVE HANDLES THAT ARE EASY TO GRAB WITH ONE HAND. DOORWAYS SHALL BE AT LEAST 32 INCHES WIDE WITH THE DOOR OPEN AT 90 DEGREES.
12. HAND DRYER SHALL BE IN REACH AND ABOUT 38-48 INCHES ABOVE THE FLOOR.
13. A SHARP EDGE AND TOUGH SURFACE SHALL BE AVOIDED IN THE BATHROOM.
14. A WATERPROOF FINISH MATERIAL SHALL BE USED AS THE FINISH PLAN FOR BATHROOM. THE WATERPROOF MATERIAL SHALL EXTEND 4 FT ABOVE THE FLOOR.

TOILET ACCESSORY	
MARK	DESCRIPTION
TA1	45" GRAB BAR
TA2	39" GRAB BAR
TA3	MIRROR
MI1	MIRROR
WC	WATER CLOSET-WALL MOUNTED
L1	LAVATORY-WALL MOUNTED
TA6	PAPER TOWEL DISPENSER
L3	STRIP LIGHTING

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SHEET NAME

BATHROOM

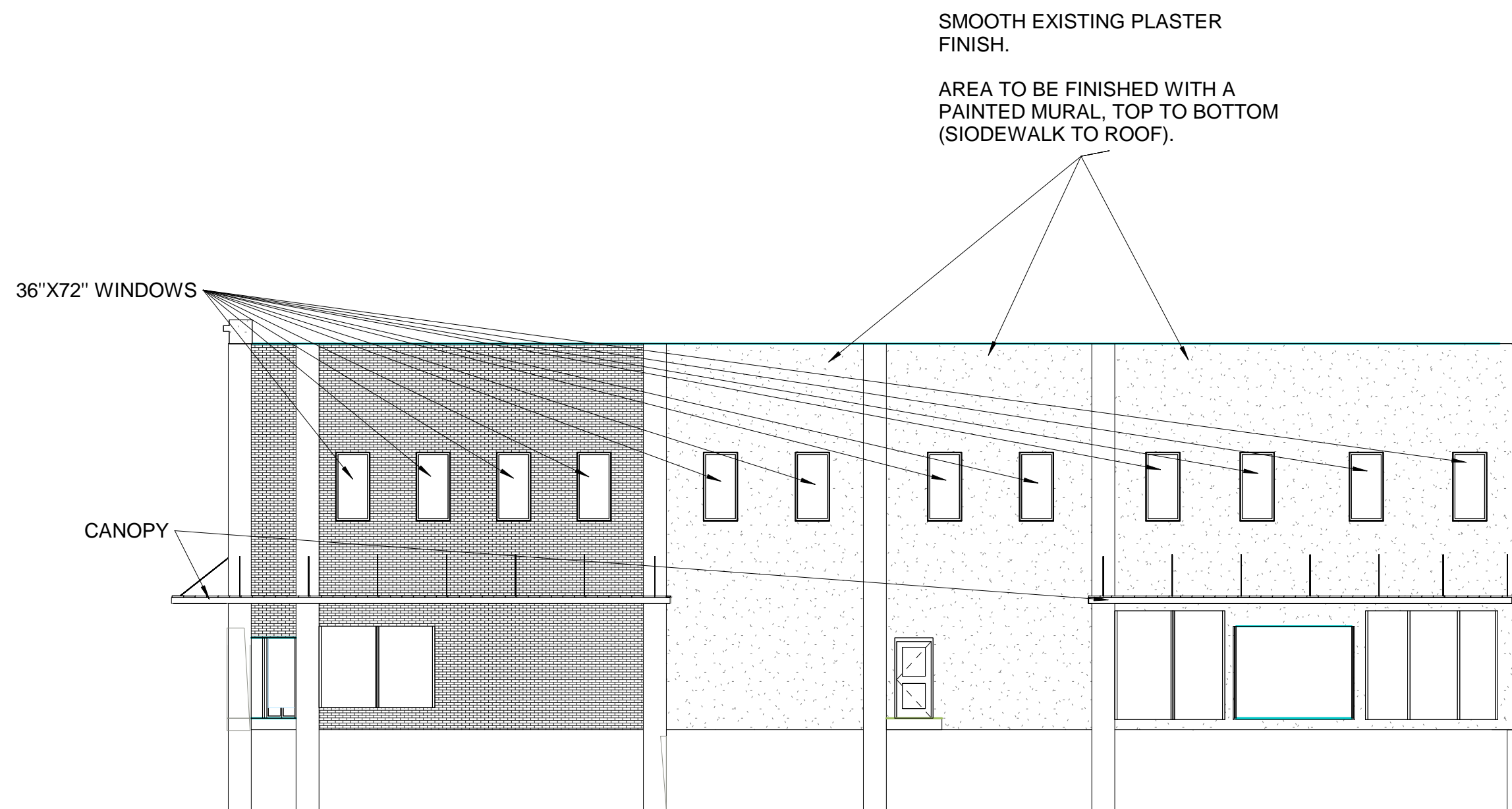
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① NORTH ELEVATION  
1" = 10'-0"



② WEST ELEVATION  
1" = 10'-0"

**EXTERIOR ELEVATION NOTES:**

1. THE BALCONY SHALL BE INSTALLED IN THE NORTH SIDE OF THE BUILDING AT THE LOCATION OF THREE 16'X9' WINDOW OPENINGS. THE 16'X9' WINDOW OPENING AT THE MIDDLE SHALL BE A PANORAMIC SLIDING WINDOW. THE TWO AT EACH SIDE SHALL BE FRENCH WINDOWS. REFER THE DETAILS OF WINDOWS TO THE ARCHITECTURAL DOORS AND FRAMES SHEET. THE ONE IN THE MIDDLE SHALL BE OPEN FOR CUSTOMER TO ACCESS TO THE BALCONY.
2. THE DETAIL OF THE STRUCTURE OF BALCONY IS INCLUDED IN THE STRUCTURAL DRAWING SHEETS. THE WIDTH OF BALCONY IS 5 FEET 10 INCHES. THE HANDRAIL SHALL BE INSTALLED AT THE PERIMETER OF BALCONY FOR SAFETY CONCERN. THE TYPE OF RAILING SHALL BE SELECTED BY OWNER.
3. FOR THE FACADE DESIGN, THE BRICK VENEER SHALL BE EXPOSED AT THE NORTH AND WEST ELEVATION.
4. THE 36'X72" WINDOW OPENINGS CURRENTLY SEALED SHALL BE OPEN AND THE SEALING MATERIAL SHALL BE REMOVED COMPLETELY. REFER DETAILS TO THE DEMOLITION PLAN.
5. THE DORMER SHALL BE INSTALLED IN THE NORTH SIDE OF THE ELEVATION. THE DESIGN SHALL FOLLOW THE 90' STYLE IDENTIFIED BY OWNER. REFER TO STRUCTURAL DRAWING SHEETS FOR DETAIL OF JOIST OF DORMER.
6. MULTIPLE 36'X72" WINDOW OPENINGS ARE LOCATED AT THE WEST SIDE OF THE BUILDING. THE SEALING SHALL BE REMOVED AND REOPEN THE WINDOWS. REFER TO DEMOLITION PLAN FOR DETAILS.

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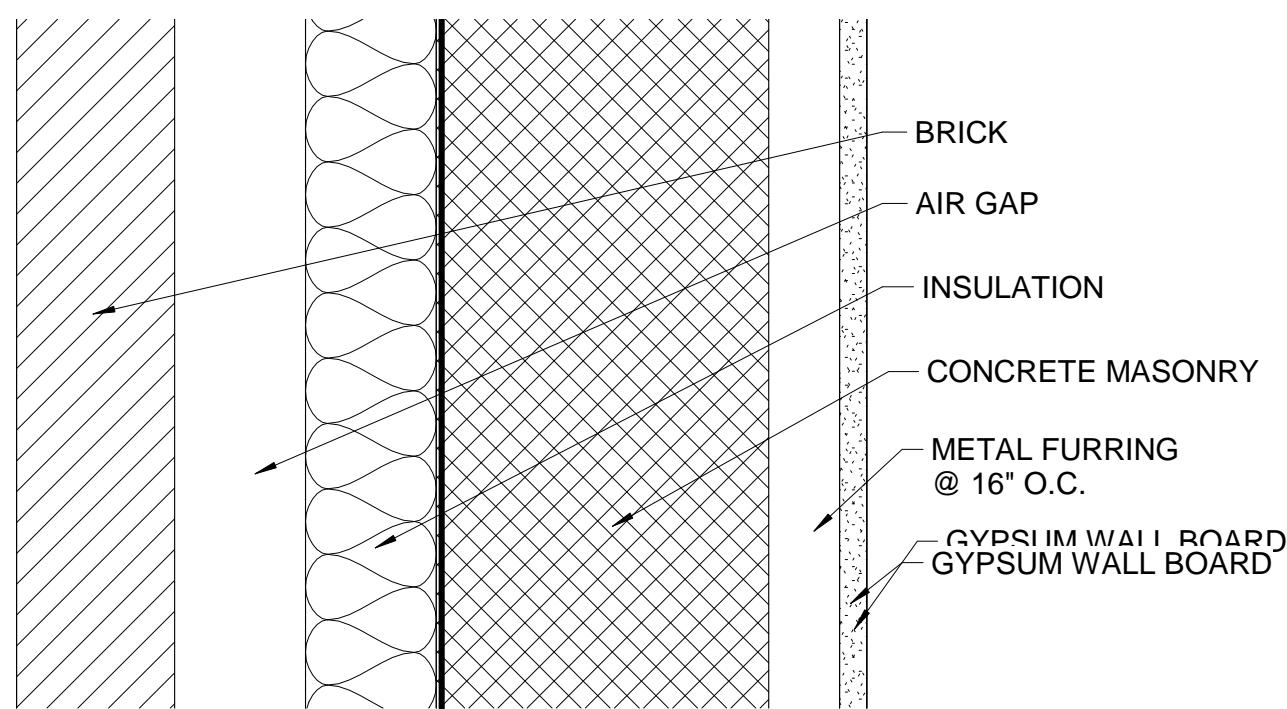
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EXTERIOR ELEVATION

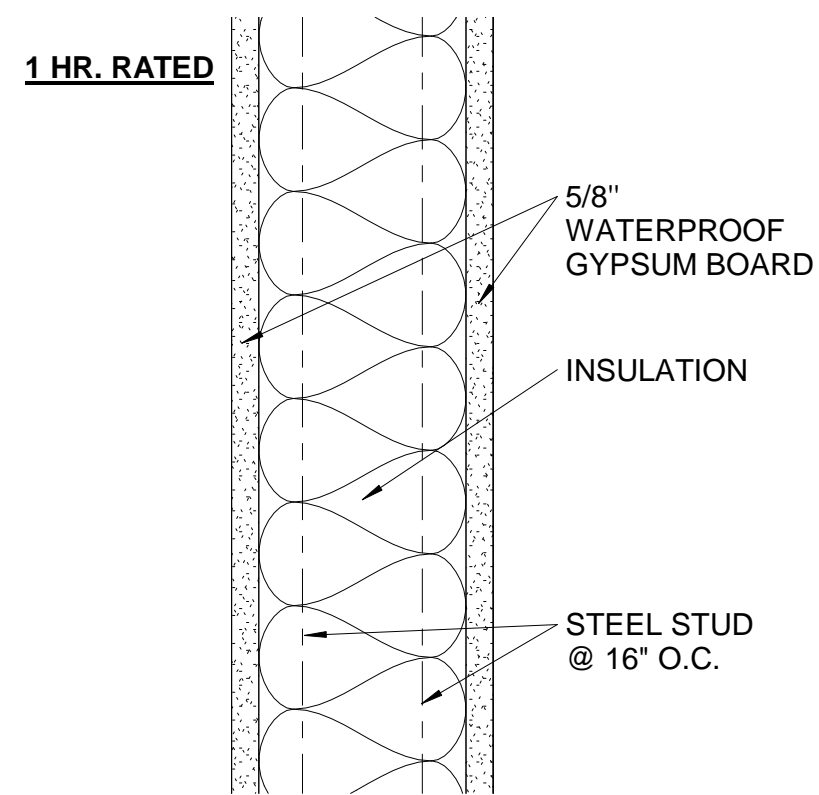
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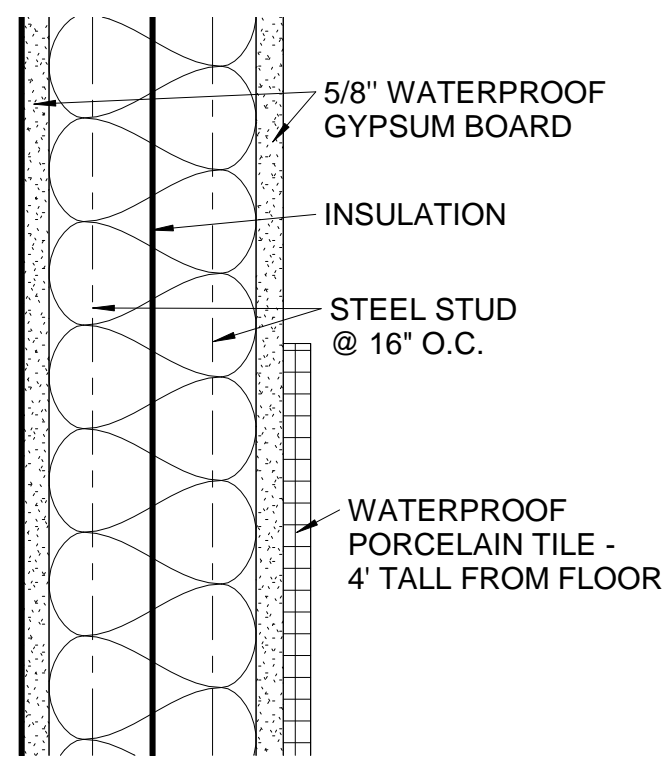




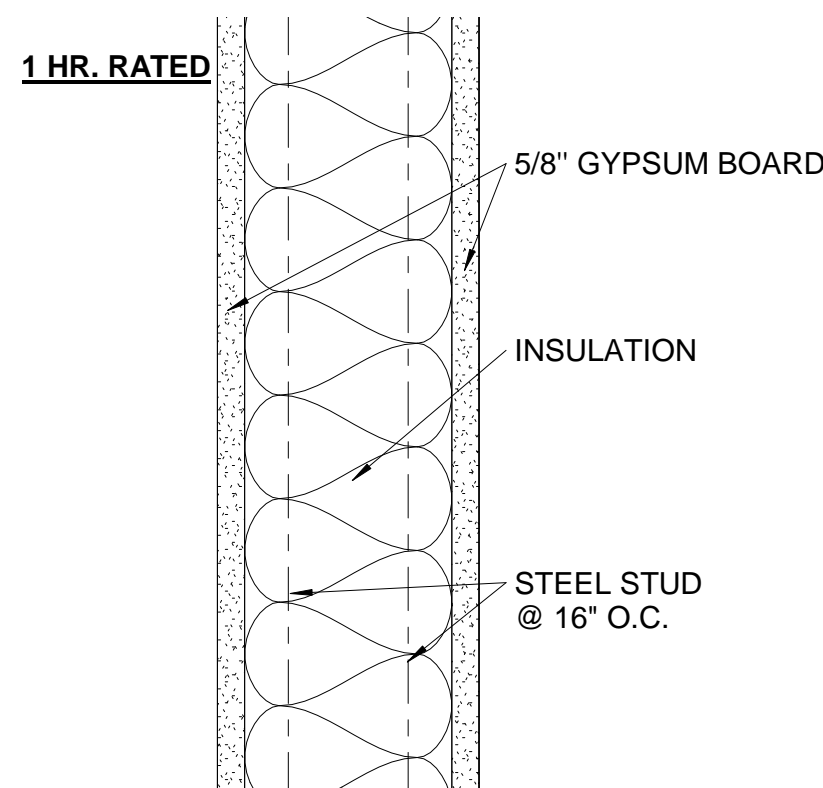
① TYPICAL EXTERIOR WALL  
3" = 1'-0"



③ KITCHEN WALL DETAIL  
3" = 1'-0"



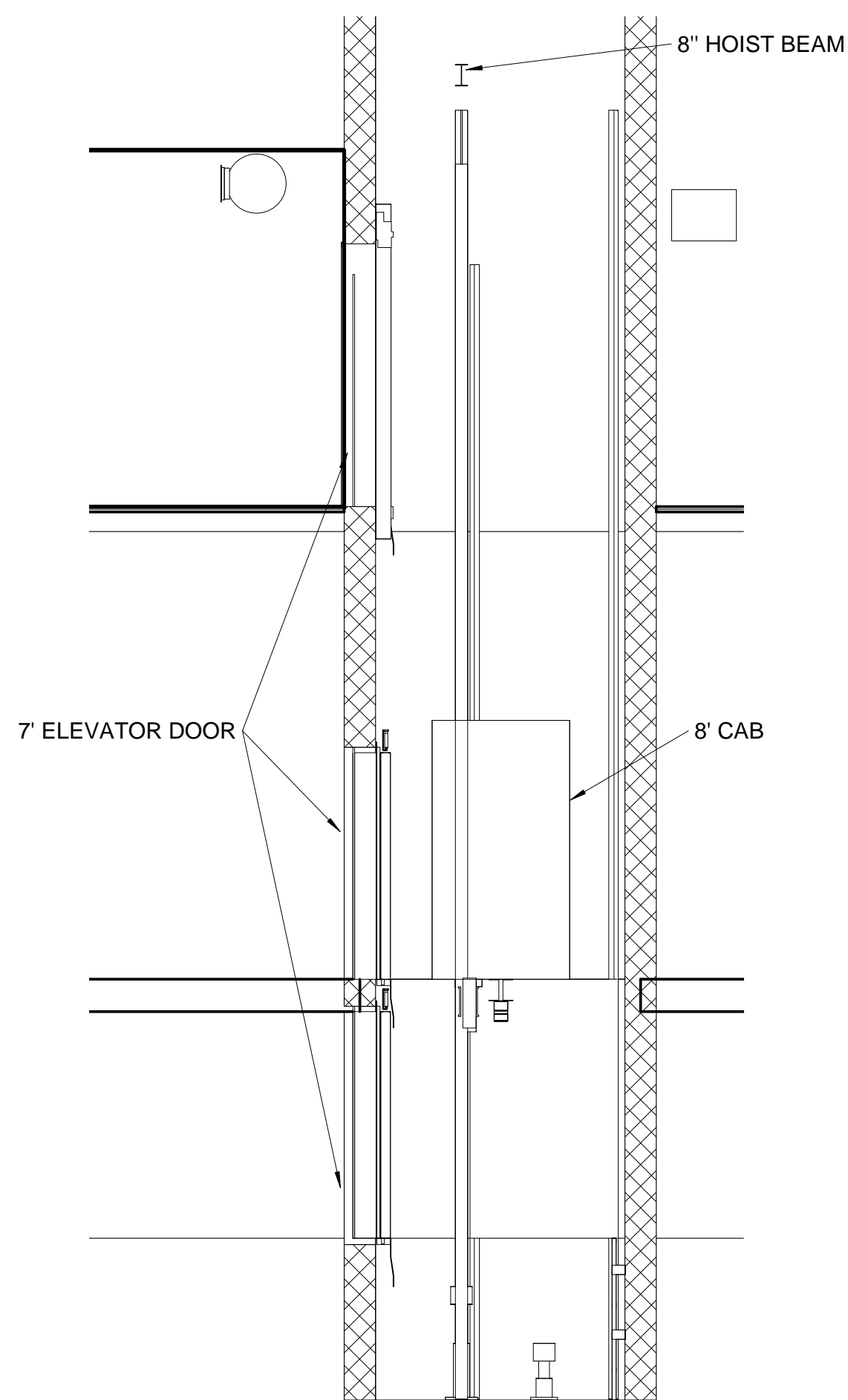
④ BATHROOM WALL DETAIL  
3" = 1'-0"



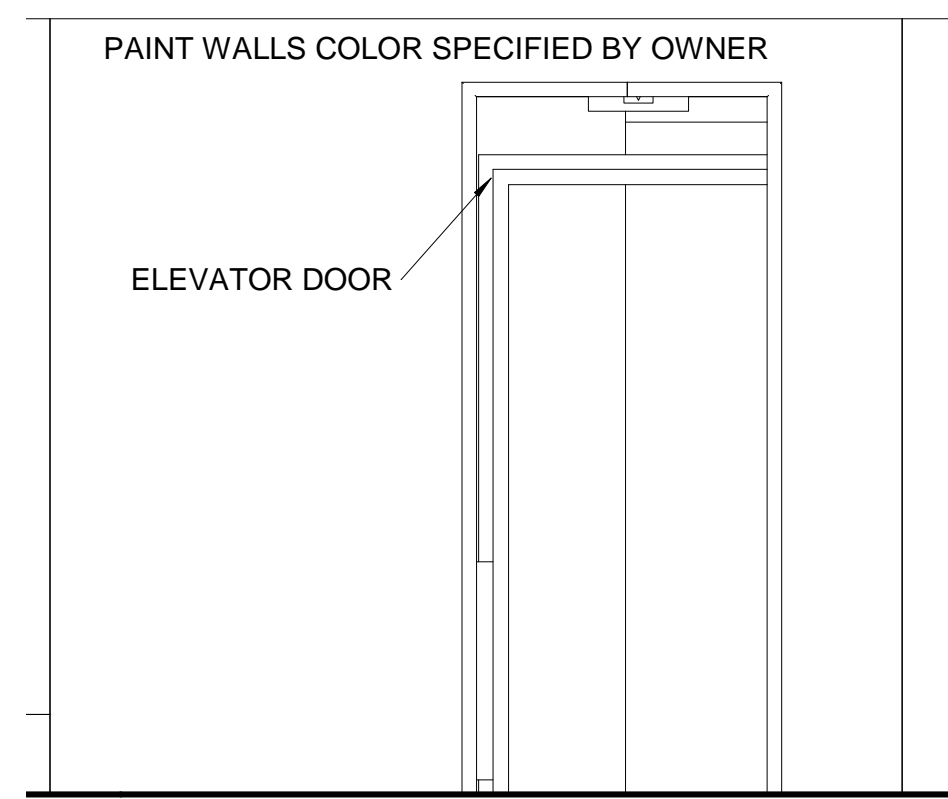
② UTILITY ROOM WALL DETAIL  
3" = 1'-0"

**WALL DETAIL GENERAL NOTES:**

1. FOR INTERIOR WALL OF KITCHEN, BATHROOM, AND UTILITY ROOM, THE WALL IS RATED AS 1 HR FIRE RATED WALL. THE TYPICAL DETAILS FOR 1 HR FIRE RATE WALL ARE SHOWN IN THE TYPICAL DETAIL DRAWING SHEET. THE WALL IS MADE UP WITH 5/8" GYPSUM BOARD ON BOTH SIDE OF THE WALL AND INSULATION BETWEEN THE GYPSUM WALL BOARD. FOR BATHROOM AND KITCHEN WALL, THE GYPSUM WALL BAORD NEEDS TO BE WATERPROOF TO PREVENT WATER INFILTRATED FROM BATHROOM AND KITCHEN.
2. FOR BATHROOM, THE 5/8" PORCELAIN TILE IS INSTALLED IN THE INSIDE OF THE WALL TO PROVIDE A WATERPROOF AND FRICTION RESISTANCE LAYER EXTENDING 4 FEET ABOVE THE FINISH FLOOR.



⑤ ELEVATOR SHAFT SECTION VIEW  
1/4" = 1'-0"



⑥ ELEVATOR FRONT VIEW  
1/2" = 1'-0"

**ELEVATOR SHAFT GENERAL NOTES:**

1. THE DRAWING MUST BE REVIEWED AND APPROVED BY A LICENSED PROFESSIONAL TO ENSURE COMPLIANCE WITH LOCAL BUILDING CODE.
2. THESE DRAWINGS ARE FOR INFORMATION PURPOSE ONLY AND MUST NOT BE USED FOR CONSTRUCTION PURPOSES. FULLY DETAILED CONSTRUCTION DRAWINGS ARE AVAILABLE FROM THE PRODUCT MANUFACTURER.
3. HOISTWAY VENTILATION SHALL BE PROVIDED PER CODE REQUIREMENTS.
4. PROVIDE SUITABLE LIGHTING FOR THE MACHINE SPACE WITH A LIGHT SWITCH.
5. ARRANGE FOR ALL BLOCK OUT/CUTOUT OF OPENING TO INSTALL HALL PUSHBUTTONS, SIGNAL FIXTURES, AND HATCH DUCT.
6. ENTRANCE WALLS SHALL BE LEFT OPEN UNTIL THE ELEVATOR EQUIPMENT IS INSTALLED.
7. A PIT LADDER SHALL BE PROVIDED.
8. AN I-BEAM MUST BE INSTALLED IN THE ELEVATOR HOISTWAY OVERHEAD.
9. THE ACCESS DOOR TO THE CONTROL SPACE OR THE CONTROL ROOM MUST SECURED.
10. A SUITABLE WORKING ENVIRONMENT SHALL BE PROVIDED, INCLUDING ADEQUATE ACCESS, PROPER LIGHTING, CLEAN AND SAFE STORAGE, AND SUFFICIENT ON-SITE REFUSE CONTAINERS FOR THE DISPOSAL.

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SHEET NAME

TYPICAL DETAILS

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WINDOWS LEGEND				
No.	NAME	PLAN VIEW	FRONT & BACK ELEVATION	WINDOW FRAME MATERIAL
46 48	16' X 9' FRENCH WINDOW			HARDWOOD
47	16' X 9' PANORAMIC SLIDING WINDOW			HARDWOOD
49 63	36"X72" INSTANCE WINDOW			ALUMINUM

DOORS LEGEND				
No.	NAME	PLAN VIEW	FRONT & BACK ELEVATION	DOOR FRAME MATERIALS
13	DOUBLE FLUSH PANEL			HOLLOW METAL FRAME WITH HARDWOOD AS BOARD CORE
8 9 11	PASSAGE SINGLE FLUSH			HOLLOW METAL FRAME WITH HARDWOOD AS BOARD CORE
	ELEVATOR DOOR			HOLLOW METAL FRAME WITH HARDWOOD AS BOARD CORE

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









GENERAL NOTES:





1. THESE GENERAL NOTES APPLY TO ALL WORK.
2. DO NOT SCALE DRAWINGS, USE FIELD MEASUREMENTS.
3. NOTES ON DRAWINGS SHALL APPLY TO SIMILAR CONDITIONS WHETHER THEY ARE REPEATED OR NOT.
4. REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ADDITIONAL GENERAL NOTES WHICH WILL APPLY HERE.
5. THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE A.D.A.A.G. (AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES) AND IOWA ACCESSIBILITY CODE.
6. WHERE SEVERAL DEVICES ARE GANGED TOGETHER, THE COVERPLATE SHALL BE OF THE GANGED STYLE FOR THE NUMBER OF DEVICES USED.
7. THE CONTRACTOR MUST VISIT THE SITE PRIOR TO SUBMITTING THE BID PROPOSAL TO BECOME FAMILIAR WITH THE EXISTING SITE AND BUILDING CONDITIONS WHICH WILL BE AFFECTED DURING CONSTRUCTION. THE CONTRACTOR IS CAUTIONED THAT THIS PROJECT IS A REMODELING JOB AND IT IS ASSUMED THAT FUNDS HAVE BEEN INCLUDED IN THE BID TO COVER UNFORESEEN ITEMS WHICH MUST BE MOVED, RELOCATED, OR ADJUSTED TO FIT THE WORK. NO EXTRA COMPENSATION WILL BE ALLOWED FOR ANY MATTER OR THING WHICH THE CONTRACTOR MIGHT HAVE BEEN FULLY INFORMED OF PRIOR TO BIDDING.
8. THE OWNER SHALL HAVE THE OPTION OF SELECTING ANY OR ALL OF THE ITEMS WHICH ARE DESIGNATED TO BE REMOVED BY THE CONTRACTOR AS SALVAGE FOR THE OWNER. THE CONTRACTOR SHALL REMOVE ALL ITEMS WITH EXTREME CARE AND RETURN SUCH ITEMS TO THE OWNER. ALL EQUIPMENT WHICH THE OWNER DOES NOT WANT WILL BECOME THE PROPERTY OF THE CONTRACTOR AND WILL BE PROMPTLY REMOVED FROM THE SITE.
9. ALL CUTTING AND PATCHING, RELOCATING OF ANY EQUIPMENT, LIGHTING FIXTURES, CONDUIT, PIPING, ETC., NECESSARY TO PERFORM THE WORK WILL BE THE CONTRACTOR'S RESPONSIBILITY U.N.O. ON THE ARCHITECTURAL DRAWINGS. ALL AFFECTED SURFACES WILL BE RESTORED TO THEIR ORIGINAL CONDITION. VERIFY ALL FIELD REQUIREMENTS.
10. CONTRACTOR WILL REFER TO ARCHITECTURAL DRAWINGS WHICH SHOW REMOVED WALLS AND OTHER ITEMS IN REFERENCE TO REMODELING, DEMOLITION AND BUILDING ADDITIONS. ONLY MINOR DEMOLITION IS SHOWN ON ELECTRICAL DRAWINGS. REFER TO SPECIFICATIONS AND OTHER NOTES.
11. ALL EXISTING EQUIPMENT IS TO REMAIN OPERATIONAL DURING CONSTRUCTION PERIOD. ANY TEMPORARY WIRING OR REROUTING OF CIRCUITRY TO ACHIEVE THIS IS BY ELECTRICAL CONTRACTOR. SHUTDOWN OF EXISTING SERVICES SHALL ONLY BE PERMITTED UPON WRITTEN APPROVAL FROM THE OWNER AND THEN ONLY FOR THE DATE AND DURATION AGREED UPON. INCLUDE ALL PREMIUM TIMES CHARGES IN THE BASE BID.
12. ELECTRICAL CONTRACTOR SHALL COVER WITH PROPER FINISH PLATE ALL EMPTY OUTLETS WHICH REMAIN. ANY INTERRUPTION OF CIRCUITING TO AREAS NOT BEING REMODELED SHALL BE INTERCEPTED AT A LOCATION THAT DOES NOT INTERFERE WITH NEW CONSTRUCTION. HOME RUN CIRCUITING FOR THESE INTERRUPTED CIRCUITS IS TO BE NEW WIRING. AFTER REMOVAL, ALL CONTINUITY IS TO BE CHECKED FOR ALL OUTLETS IN THE AREAS NOT BEING REMODELED TO INSURE PROPER FUNCTION.
13. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR FOR REMOVAL OR RELOCATION OF EXISTING ELECTRICAL EQUIPMENT (FOR EXAMPLE: LIGHTING FIXTURES, RECEPTACLES, DEVICES, CONDUIT AND WIRING) THAT WILL BE ABANDONED OR IN CONFLICT WITH NEW CONSTRUCTION. NO ADDITIONAL COST WILL BE PERMITTED. REFER TO ARCHITECTURAL DRAWINGS FOR EXTENT OF REMODELING.
14. EXISTING CONDUIT MAY BE REUSED WHERE POSSIBLE. PULL NEW WIRE AS REQUIRED. ALL UNUSED CONDUIT, WIRE, JUNCTION BOXES, ETC. WILL BE REMOVED. ALL JUNCTION BOXES MUST HAVE COVERS. VERIFY REQUIREMENTS IN FIELD.
15. BOXES LOCATED ON OPPOSITE SIDES OF NON-FIRE RATED WALLS SHALL BE OFFSET A MINIMUM OF 6" HORIZONTALLY. BOXES ON OPPOSITE SIDES OF FIRE RATED WALL SHALL OFFSET A MINIMUM OF 24" HORIZONTALLY. "THRU-THE WALL" BOXES SHALL NOT BE ALLOWED WITH OUT PRIOR WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER.
16. ELECTRICAL CONTRACTOR SHALL VERIFY TOTAL CONNECTED LOAD/HP AND VOLTAGE WITH MECHANICAL CONTRACTOR PRIOR TO WIRING OF ALL HVAC EQUIPMENT. MAKE ANY CHANGES TO OVERCURRENT DEVICES OR FEEDER SIZE PER 2020-NATIONAL ELECTRIC CODE.
17. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL DETECTORS AND/OR SPEAKERS WITH LIGHT FIXTURES, SPRINKLER HEADS, AND CEILING DIFFUSERS. CENTER ALL DEVICES IN CEILING TILE PATTERN.
18. CONTRACTOR SHALL REMOVE AND REINSTALL ALL CEILING TILES AS REQUIRED FOR THE EXECUTION OF ELECTRICAL WORK THAT IS OUTSIDE THE CONTRACTOR LIMITS OF CONSTRUCTION. CONTRACTOR SHALL REPLACE CEILING TILES WITH IDENTICAL MATERIAL WHERE DAMAGED BY THIS CONTRACTOR.
19. ALL EXISTING OUTLET, JUNCTION BOXES, CONDUIT AND WIRE WHICH IS SUPPORTED BY THE EXISTING CEILING SYSTEM WILL BE RESUPPORTED TO THE BUILDING CONSTRUCTION. NEW WIRING AND OUTLETS WILL BE SUPPORTED FROM THE BUILDING CONSTRUCTION.
20. CIRCUIT NUMBERS INDICATED FOR BUILDING MAIN DISTRIBUTION BOARD AND ANY OTHER WHOLE-BUILDING DISTRIBUTION SYSTEMS SHOWN ON PLANS ARE FOR REFERENCE ONLY. ELECTRICAL CONTRACTOR TO VERIFY IN FIELD PHASING AND CIRCUIT NUMBERS PRIOR TO WIRING.
21. ALL TEMPERATURE CONTROL WIRING SHALL BE FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR.
22. CONTRACTOR SHALL VERIFY ALL FURNITURE, MODULAR FURNITURE AND EQUIPMENT LOCATIONS WITH ARCHITECTURAL PLANS, ELEVATIONS AND REVIEWED SHOP DRAWINGS. PRIOR TO MAKING THE ACTUAL ELECTRICAL INSTALLATION THIS CONTRACTOR SHALL ADJUST RECEPTACLES, OUTLETS OR CONNECTION LOCATIONS TO ACCOMMODATE FURNITURE AND/OR EQUIPMENT.
23. REMOVE AND REPLACE ALL WIRING DEVICES AS REQUIRED BY REMODELING. ALL WIRING DEVICES WITH REMODELED SPACES SHALL BE NEW UPON COMPLETION OF THE PROJECT.















GENERAL DEMOLITION NOTES:





1. WHERE WIRING DEVICE, TELEPHONE, INTERCOM, FIXTURE, MOTOR, STARTER, DISCONNECT SWITCH, ETC., IS NOTED TO BE REMOVED. INSTALL BLANK BRUSHED STAINLESS STEEL COVERPLATES ON JUNCTION BOXES RECESSED IN WALLS WHICH ARE TO REMAIN. PROVIDE FOR WIRING CONTINUITY FOR EXISTING CIRCUITS WHICH REMAIN IN JUNCTION BOXES RECESSED OR SURFACE MOUNTED ON WALLS WHICH ARE REMOVED. EXTEND NEW CONDUIT AND WIRE TO BRIDGE REMOVED SECTIONS. VERIFY ALL IN THE FIELD.
2. ALL EQUIPMENT WHICH IS DISCONNECTED AND REMOVED WILL BE RETURNED TO THE OWNER TO LOCATIONS AS DIRECTED. EQUIPMENT WHICH THE OWNER DOES NOT WISH TO KEEP WILL BECOME PROPERTY OF THE CONTRACTOR AND PROMPTLY REMOVED FROM THE SITE.
3. ALL UNUSED CONDUIT AND WIRE WHICH IS EXISTING IN THE REMODELED AREAS AND IS ABANDONED WILL BE REMOVED ALONG WITH CONDUIT AND WIRE CAUSED TO BE ABANDONED DUE TO THIS REMODELING.
4. DUE TO THE SMALL SCALE AND INTERFERENCE OF EXISTING EQUIPMENT EACH AND EVERY ITEM IS NOT SHOWN. SHOWN INFORMATION IS INTENDED AS A GUIDE. CONTRACTOR WILL VERIFY ALL INFORMATION AND CONDITIONS IN THE FIELD.
5. THIS CONTRACTOR SHALL COORDINATE ALL HIS WORK WITH OTHER CONTRACTORS AT THE JOB SITE BEFORE REMOVING EXISTING OR INSTALLING NEW ELECTRICAL ITEMS.
6. EXISTING CONDUIT IN GOOD CONDITION, MAY BE REUSED IN PLACE. RELOCATED EXISTING CONDUIT SHALL NOT BE ALLOWED. BONDING CONDUCTORS SHALL BE INSTALLED IN ALL REUSED CONDUIT TO INSURE PROPER GROUND PATH.
7. EQUIPMENT REMOVAL IN CERTAIN LOCATIONS MAY REQUIRE THE INSTALLATION OF A JUNCTION BOX TO RECONNECT CIRCUITS THAT REMAIN IN OPERATION. EXTEND CONDUIT AND WIRING AS REQUIRED TO MAINTAIN POWER TO REMAINING EQUIPMENT.
8. BALLASTS MANUFACTURED PRIOR TO 1980 CONTAIN PCB'S AND SHALL BE DISPOSED OF BY A FEDERAL OR STATE E.P.A. APPROVED METHOD AND IN ACCORDANCE WITH SPECIFICATIONS.
9. HID AND FLUORESCENT LAMPS CONTAIN MERCURY AND SHALL BE DISPOSED OF BY A FEDERAL OR STATE E.P.A. APPROVED METHOD AND IN ACCORDANCE WITH SPECIFICATIONS.
10. BEFORE DISCONNECTING ANY SERVICE, THE OWNER WILL BE CONTACTED AND PERMISSION MUST BE OBTAINED IN WRITING.
11. ABANDONED INTERCOM, TELEPHONE, DATA, ANTENNA AND VIDEO WIRE WILL BE REMOVED COMPLETE FROM POINT OF ORIGATION TO POINT OF USE. VERIFY WITH OWNER.
12. ALL EXISTING CONDUITS WHICH ARE NOTED TO BE RELOCATED WILL BE RELOCATED IN A MANNER WHICH WILL REDUCE ITS LENGTH TO ALLOW THE REUSE OF EXISTING COMMUNICATION AND POWER WIRE. WHERE THE RELOCATION INCREASES THE LENGTH AND SUFFICIENT SLACK IS NOT AVAILABLE, COMMUNICATION CABLE MUST BE REPLACED, AND JUNCTION BOXES, CONDUIT AND NEW WIRE SPLICES FOR POWER WIRING ADDED. EXTEND WIRE AS REQUIRED. VERIFY IN FIELD.

LIGHTING FIXTURE SCHEDULE				
TAG	MOUNTING	SHIELDING	WATTAGE & LAMP	PENDANT HEIGHT
CL1	RECESSED	ALUMINUM ALZAK DIFFUSER	3205 lm 60 W LED ENGINE	
EL2	RECESSED	EXTRUDED ACRYLIC LENS	2600 lm 40 W LED ENGINE	
EL4	RECESSED	EXTRUDED ACRYLIC LENS	5200 lm 80 W LED ENGINE	
EXIT	WALL	STENCIL FACE / GLASS	LED	
L3	SURFACE	EXTRUDED ACRYLIC LENS	3050 lm 32 W LED ENGINE	
L4	SURFACE	EXTRUDED ACRYLIC LENS	3050 lm 32 W LED ENGINE	
L8	SURFACE	EXTRUDED ACRYLIC LENS	5800 lm 64 W LED ENGINE	
PL1	PENDANT	GLASS - CLEAR FROSTED	4308 lm 29 W LED ENGINE	2' - 0"
PL2	PENDANT	GLASS - CLEAR FROSTED	3205 lm 22 W LED ENGINE	
WS-1	WALL	SEE SCHEDULE NOTES	1380 lm 9 W 1 LED	
LIGHTING FIXTURE SCHEDULE NOTES:				
1. ALL LIGHTING FIXTURES SHALL BE RATED FOR BUILDING SYSTEM VOLTAGE (120/208V). CONTRACTOR MUST VERIFY ALL LOCATIONS.				
2. ALL LIGHTING FIXTURES MOUNTED ON 11'-0" CEILINGS (SEPARATION CEILING BETWEEN ATTIC AND THIRD FLOOR), SHALL BE UL 924 LISTED FOR INSULATED CEILING SYSTEMS (IC RATED).				
3. UNLESS INDICATED OTHERWISE, ALL FIXTURES WITH LED LAMPS SHALL BE 4000K COLOR TEMPERATURE, A MINIMUM OF 80 CRI, AND LUMEN OUTPUT MAINTENANCE AS SPECIFIED.				
4. ELECTRICAL CONTRACTOR SHALL CHECK AND COORDINATE ALL LIGHTING FIXTURE CATALOG NUMBERS WITH THE INTENT OF FIXTURE DESCRIPTIONS, LISTED ACCESSORIES AND TYPE OF INSTALLATION. VERIFY ALL LIGHTING FIXTURE LOCATIONS, FINISHES, COLOR, VOLTAGE AND CEILING TYPES WITH ARCHITECT PRIOR TO INSTALLING.				
5. ELECTRICAL CONTRACTOR SHALL PROVIDE EACH LIGHTING FIXTURE COMPLETE WITH PLASTER FRAMES AND ALL OTHER INSTALLATION AND HANGING HARDWARE AS REQUIRED FOR A COMPLETE AND FINISHED INSTALLATION AT EACH FIXTURE LOCATION.				
6. ALL FIXTURES SHALL BE "U.L." LABELED.				
7. REFER TO APPLICABLE DETAILS AND CALL-OUT NOTES ON PLANS FOR ADDITIONAL REQUIREMENTS FOR LIGHTING FIXTURES.				
8. ALL EXIT/DIRECTIONAL SIGNS SHALL BE INSTALLED COMPLETE WITH ALL INSTALLATION AND HANGING ACCESSORIES TO PROVIDE AN UNOBSTRUCTED VIEW OF EACH SIGN FACE AS REQUIRED. SIGNS IN GENERAL WILL BE CEILING MOUNTED, LOCATED AND ADJUSTED FOR BEST VIEW. SIGNS SHALL BE ADJUSTED AS NECESSARY WITHOUT ADDITIONAL COST. MOUNT SIGNS ON WALL AT MAXIMUM +8'-0" IN HIGH CEILING AREAS (NO PENDANTS WILL BE USED). ALL EXIT SIGNS AND BATTERY EMERGENCY UNITS MUST BE APPROVED BY LOCAL CODE.				
9. EXIT SIGNS SHALL BE SINGLE OR DOUBLE FACE, WITH OR WITHOUT DIRECTIONAL ARROWS, AS SHOWN ON PLANS. ALL EXIT SIGNS MUST BE APPROVED BY LOCAL CODE.				
10. EMERGENCY LIGHTING FIXTURES SHALL BE LED TYPE WITH SELF-CONTAINED BATTERY POWER SUPPLY. ALL EM LIGHT FIXTURES AND EXIT SIGNS SHALL BE IN ACCORDANCE WITH 2018-INTERNATIONAL BUILDING CODE (IBC), 2020-NFPA 101: LIFE SAFETY COD, AND 2020-NFPA 70: NATIONAL ELECTRICAL CODE. EM LIGHT FIXTURES SHALL PROVIDE MINIMUM AVERAGE LIGHTING OF 1 FC AT ALL EGRESS PATHS FROM THIRD FLOOR.				
11. LINEAR FIXTURE MODELS NOTED DO NOT INCLUDE LENGTH; VERIFY SPECIFIED LENGTHS (AND QUANTITIES OF EACH LENGTH) ON LIGHTING PLAN SHEETS.				
12. WS-1 EXTERIOR WALL MOUNTED LIGHT FIXTURES SHALL SEND LIGHT RAYS IN BOTH UPWARDS AND DOWNWARDS DIRECTIONS. THE LIGHT FIXTURE CONSTRUCTION SHALL BE PREFINISHED WITH A, WEATHER-RESISTANT COATING SUITABLE FOR THE ENVIRONMENTAL ELEMENTS. FINISH SHALL BE OF A COLOR SELECTED BY OWNER. THE LIGHT FIXTURE HOUSING SHALL BE SHEET METAL 16 GAUGE MINIMUM.				
13. L3 WALL MOUNTED STRIP LIGHT FIXTURE MOUNTED AT 7'-6" A.F.F. UNLESS NOTED OTHERWISE.				

FIRE ALARM SYMBOLS	
	HORN-STROBE CEILING MOUNTED, 75 CANDELAS UNLESS NOTED OTHERWISE
	HORN-STROBE WALL MOUNTED, 75 CANDELAS / 45 DEGREE ANGLE UNLESS NOTED OTHERWISE
	MANUAL PULL STATION
	SMOKE DETECTOR (2-WIRE)
	SMOKE DETECTOR (4-WIRE) (1) SD TO BE 4-WIRE AND TIED IN WITH SUPERVISORY CIRCUIT.
	HEAT DETECTOR
	COMBINATION SMOKE/CO DETECTOR
	DUCT DETECTOR KEY SWITCH TEST STATION (FAN RELAY MODULE)
	FIRE ALARM CONTROL PANEL
	DUCT DETECTOR - PLACED A MAXIMUM OF 15'-0" FROM CONNECTION TO HVAC UNITS (MOUNTED IN LAMINAR FLOW AIRSTREAM)

ELECTRICAL POWER SYMBOLS	
	QUAD RECEPTACLE - NORMAL / GFCI. MOUNT AT 17" AFF U.N.O.
	QUAD/BRUPLEX RECEPTACLE - NORMAL / GFCI. MOUNT AT 17" AFF U.N.O.
	CATEGORY-5 DATA PORT - SINGLE-GANG. MOUNT AT 17" AFF U.N.O.
	TAMPER-RESISTANT FEDERAL GRADE USB-C AND DUPLEX RECEPTACLE COMBINATION. MOUNT IN COORDINATION WITH FUTURE CAFE FURNITURE.

ELECTRICAL LIGHTING SYMBOLS	
	LIGHT SWITCH - STANDARD
	LIGHT SWITCH - WEATHERPROOF
	LIGHT SWITCH - KEY OPERATED
	120V ONE-LINE OCCUPANCY SENSOR COMBINATION MOTION AND VIBRATION. SEE ELEC DETAILS FOR RELAY INFORMATION
	CL1 - CAN LIGHT FIXTURE RECESSED
	EL2 - 2' x 2' RECESSED LAY-IN LIGHT FIXTURE
	EL4 - 2' x 4' RECESSED LAY-IN LIGHT FIXTURE
	EXIT - SELF POWERING EXIT SIGN WITH EMERGENCY BACKUP
	L3 - 3 FOOT STRIP LIGHT FIXTURE WALL MOUNTED
	L4 - 4 FOOT STRIP LIGHT FIXTURE SURFACE MOUNTED
	L8 - 8 FOOT STRIP LIGHT FIXTURE SURFACE MOUNTED
	PL1 - PENDANT LIGHT AIRCRAFT CABLE MOUNTING
	PL2 - PENDANT LIGHT AIRCRAFT CABLE MOUNTING
	ILLUMINATED ELEVATOR CALL BUTTON

ELECTRICAL TAGS	
	LIGHTING SWITCH SYSTEM CIRCUIT ID
	POWER CIRCUIT # / ELECTRICAL PANEL
	LIGHT FIXTURE SWITCH SYSTEM ID POWER CIRCUIT # / ELEC PANEL
	THERMOSTAT - MOUNTED AT 4'-0" A.F.F. UNLESS NOTED OTHERWISE. COORDINATE BACKBOX REQUIREMENTS WITH MANUFACTURER

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COMMERCIAL REHABILITATION 1

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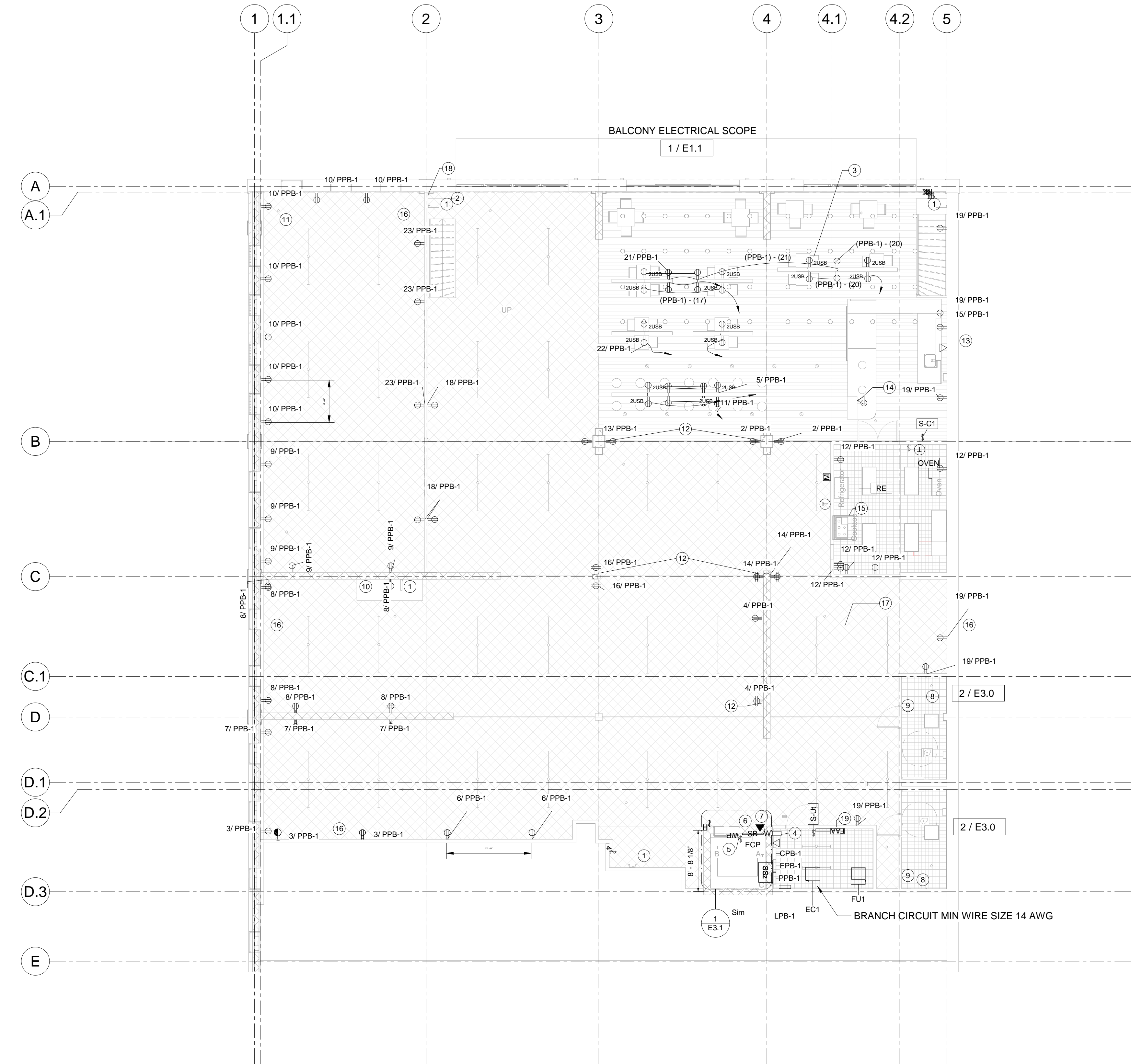
SHEET NAME

ELECTRICAL GENERAL  
NOTES

SHEET NO.

E0.1





1 Level 3 - Electrical  
1/8" = 1'-0"

L3 ELECTRICAL FLOOR PLAN KEYNOTES	
Note Number	Note Text
1	
2	NOTE: ALARM FLOW SWITCH - FACP ZONE 2 IDC. FLOW SWITCH TO BE FURNISHED BY SPRINKLER CONTRACTOR. ELECTRICAL CONTRACTOR TO PROVIDE ALL PULLING AND TERMINATION WORK TO FACP.
3	PROVIDE TAMPER-RESISTANT 20A DUPLEX RECEPTACLES WITH TWO 5-VOLT DC USB PORTS COMPATIBLE WITH USB 2.0 & 3.0 DEVICES. MOUNT DUAL-TYPE RECEPTACLES AT 3'-6" A.F.F. - ORIENTATION SHALL BE HORIZONTAL.
4	208V 30A FUSED DISCONNECT SWITCH AND 208V 15A FUSED DISCONNECT SWITCH POWER SERVICE TO ELEVATOR CONTROL PANEL. SEE ELEVATOR CONTROLS WIRING DIAGRAM FOR DETAILS. ELEVATOR DISCONNECT SWITCHES SHOWN FOR REFERENCE ONLY. VERIFY WITH ELEVATOR MANUFACTURER FINAL LOCATION. ELEVATOR SHUNT TRIP BREAKER LOCATION SHALL BE IN ACCORDANCE WITH NFPA 72 2010 SECTION 21.4.2.
5	208V 30A FUSED DISCONNECT SWITCH AND 208V 15A FUSED DISCONNECT SWITCH POWER SERVICE TO ELEVATOR CONTROL PANEL. SEE ELEVATOR CONTROLS WIRING DIAGRAM FOR DETAILS.
6	ELEVATOR CONTROL PANEL TO HAVE BACKUP POWER SUPPLY PROVIDED BY ELEVATOR MANUFACTURER. ELECTRICAL CONTRACTOR TO COORDINATE ALL POWER SERVICE REQUIREMENTS.
7	PROVIDE DEDICATED PHONE LINE TERMINATING AT THE ELEVATOR CONTROL CABINET
8	LINE-VOLTAGE RELAY INSTALLED 8'0" AFF. TIE INTO EF AND LIGHT FIXTURE. RELAY CONTROLLED BY 120VAC OCCUPANCY SENSOR WITH 24VDC OUTPUT.
9	PROVIDE TAMPER-PROOF GFCI SIMPLEX RECEPTACLE FOR CUSTODIAL USE.
10	PROVIDE SECURITY DOOR ALARM SYSTEM AT EMERGENCY EXIT DOOR. DOOR ALARM SYSTEM SHALL BE AUDIBLE AT DOOR. CONNECT DOOR ALARM SYSTEM TO SECURITY HEAD-END UNIT AT 1ST FLOOR CUSTOMER CHECKOUT AREA, OR AS DIRECTED BY THE OWNER.
11	SURFACE MOUNT RECEPTACLES IN MOST AESTHETIC WAY POSSIBLE. ALL WIREMOLD TRIM TO BE THE COLOR 'WHITE'.
12	PROVIDE STANDARD 110V QUAD-DUPLEX RECEPTACLES AT COLUMN LOCATIONS. PROVIDE A SEPERATE CIRCUIT FOR EACH COLUMN. WHERE SURFACE MOUNTING OF BACKBOXES WILL BE REQUIRED - WIRING SHALL BE INSTALLED IN WIREMOLD RACEWAY DOWN FROM CEILING. WIREMOLD TRIM TO BE COLOR 'WHITE'.
13	PROVIDE ADDITIONAL QUADRUPLEX RECEPTACLES FOR CAFE WORKSTATION EQUIPMENT
14	PROVIDE DATA PORT FOR CASH REGISTER (PROVIDED BY OTHERS). COORDINATE ALL REQUIREMENTS FOR CASH REGISTER WITH MANUFACTURER'S REQUIREMENTS.
15	UL-LISTED LIGHTING WILL BE PROVIDED IN EXHAUST HOOD (PROVIDED BY HOOD VENDOR). PROVIDE POWER ON SEPERATE CIRCUIT TO EPB-1.
16	PROVIDE DUPLEX RECEPTACLE OUTLETS WITHIN EVERY 6'-0" OF WALLS. DAISY CHAIN A MAXIMUM OF (4) DUPLEX RECEPTACLES PER A CIRCUIT TO ALLOW EXTRA CIRCUIT PROTECTION IN ANTICIPATION OF LARGER DRAWING CURRENTS FROM ANTIQUE BOOTH EQUIPMENT
17	STANDARD SMOKE AND HEAT DETECTORS ARE TO BE 2-WIRED. (1) SMOKE DETECTOR TO BE 4-WIRED SUPERVISORY CIRCUIT CONNECTION
18	PROVIDE COVER PLATES FOR EXISTING BACKBOXDES. REUSE BACKBOXES AS LOCATIONS FOR SPLICE POINTS, RELAYS, SENSORS, ETC. AS NEEDED.
19	FACP 120VAC SERVICE FROM MDB PER NFPA 13/NEC 70. FACP TO BE PROVIDED WITH BATTERY BACKUP. SIZE OF BATTERY BACKUP TO BE PROVIDED SHALL BE TEN (10) AMPERE-HOURS.

**ALTERNATE #03:**  
BUILDING CONTROLS PANEL CPB-1 RELOCATED TO CAFE WORKROOM IN AN ACCEPTABLE LOCATION PER CODE.  
SIGNIFICANT REDUCTION IN HOMERUN CABLE LENGTHS BASED ON T-STAT LOCATIONS

PROJECT: THE UNIVERSITY OF IOWA  
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## COMMERCIAL REHABILITATION 1

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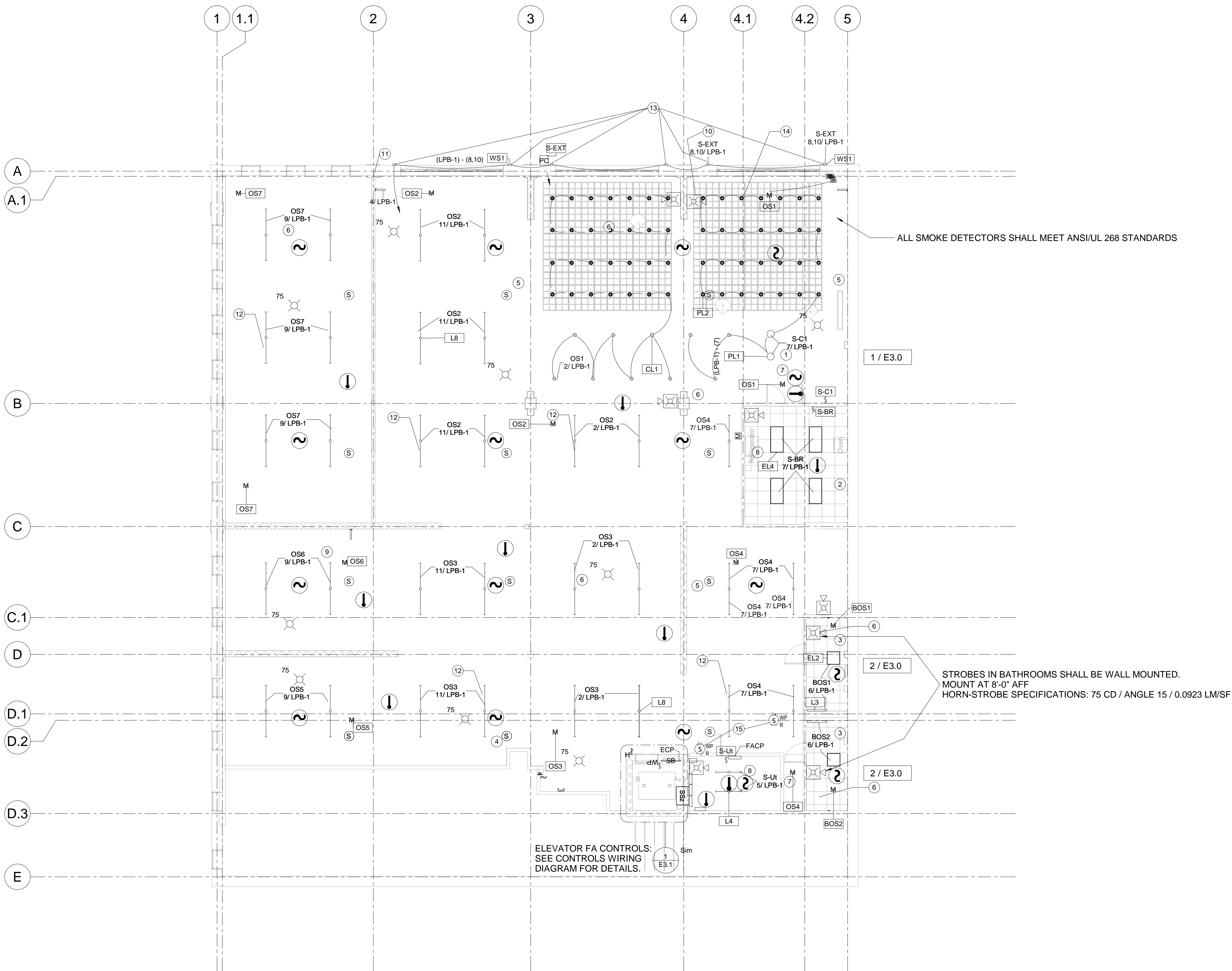
SHEET NAME

L3 ELECTRICAL FLOOR PLAN

SHEET NO.

E1.0





L3 ELECTRICAL RCP KEYNOTES	
Note Number	Note Text
1	PENDANT LIGHTING OVER CAFE COUNTER TO BE ON A SEPERATE SINGLE-POLE SWITCH SYSTEM. SWITCH TO BE LOCATED IN THE VICINITY OF AN EMPLOYEE-ONLY ACCESSIBLE AREA.
2	CARBON MONOXIDE DETECTORS SHALL BE PLACED WITHIN 12'-0" OF ALL GAS APPLIANCES
3	CEILING OCCUPANY SENSOR TO BE INSTALLED IN EACH BATHROOM. SEE OCCUPANCY SENSOR EF COMBINATION POWER WIRING DIAGRAM FOR DETAILS.
4	24VDC FIRE ALARM IDENTIFICATION DEVICES - MOUNT ALL LV CABLING ABOVE CEILING PER CODE STANDARDS. COIL-UP EXTRA CABELING AND SECURE TO ROOF TRUSS SYSTEM THROUGH AN APPROVED HANGER SYSTEM PER2020 NEC STANDARDS. ACCEPTABLE ALTERNATIVE: PROVIDE CABLE TRAY FOR ALL LV FEEDER MAINS BACK TO UTILITY ROOM.
5	SPEAKERS CONNECTED TO 24VDC POWER SUPPLY. PROVIDE A 24V COMMUNICATIONS HEAD-END UNIT AND INSTALL IN LOCATION SPECIFIED BY THE OWNER.
6	SMOKE DETECTORS SHALL BE PLACED HALF THE DISTANCE FROM INTERIOR WALL-TO-WALL OR A MAXIMUM OF 15'-0" FROM WALLS IN BOTH DIRECTIONS AND SPACED 30'-0" O.C. FOR MIDDLE DETECTORS PER NFPA 72-2016 SECTION 17.7.3.2.3.1
7	ADDITIONAL MOTION SENSOR ON SWITCH SYSTEM OS4 - PROVIDE ADDITIONAL OCCUPANY SENSOR AS SHOWN IN ALL AREAS OBSTRUCTED BY VIEWS DUE TO CORNERS, WALLS, EXPOSED MEP, ETC.
8	CARBON MONOXIDE DETECTORS SHALL BE PLACED WITHIN 12'-0" OF ALL GAS APPLIANCES
9	DUAL-TECHNOLOGY OCCUPANCY SENSORS - PASSIVE INFRARED AND ULTRASONIC SENSORS. 120VAC POWER INPUT TO SELF-CONTAINED POWER SUPPLY.
10	3RD FLOOR NOTIFICATION ALARM DEVICES SHALL BE ON ONE CIRCUIT WITH 16 AWG SOLID. (VOLTAGE DROP % OF 2.4474)
11	PROVIDE COVER PLATES FOR EXISTING BACKBOXES. UTILIZE AS SPLICE POINTS, END OF LINE RESISTORS, RELAY CONNECTIONS AS NEEDED
12	EXISTING LIGHT FIXTURE HOUSINGS (L8 HOUSINGS) TO BE REUSED. REPLACE LAMP WITH RETROFIT LED LAMP ASSEMBLY COMPLETE WITH ALL BALLAST AND ACCESSORIES REQUIRED.
13	LED EXTERIOR WALL SCONCE LIGHTS WITH UP AND DOWN LIGHT RAY DIRECTIONS ON PHOTOCELL SWITCH SYSTEM. PROVIDE A PROGRAMMABLE/ADJUSTABLE TIMER WITH PHOTOCELL SWITCH SYSTEM. TIMER SHALL BE SET TO SHUT-OFF AFTER 7:00PM.
14	CAN LIGHTS SHALL BE UL-RATED AND TO BE RECESSED ON CENTER IN CEILING SQUARES. CAN LIGHTS SHALL BE COMPATIBLE WITH FELT CEILING MATERIAL TO SIT ON TOP OF ARCHITECTURAL FRAMING AND HAVE AN INSULATED HOUSING. ATTACH FIXTURE BRACKETS DIRECTLY TO TOP OF CEILING FRAMING. FIXTURE HOUSINGS COLOR SHALL BE BLACK - TYPE IC FIXTURES (IN CONTACT WITH INSULATION)
15	PROVIDE DUCT DETECTORS IN SUPPLY AND RETURN MAINS CONNECTED TO FIRE ALARM PANEL. SEE FIRE ALARM DETAILS FOR FAN RELAY MODULE AND DUCT DETECTOR TEST SWITCH.

1 Level 3 - Electrical R.C.P.  
1/8" = 1'-0"

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COMMERCIAL REHABILITATION 1

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SHEET NAME

L3 ELECTRICAL R.C.P.

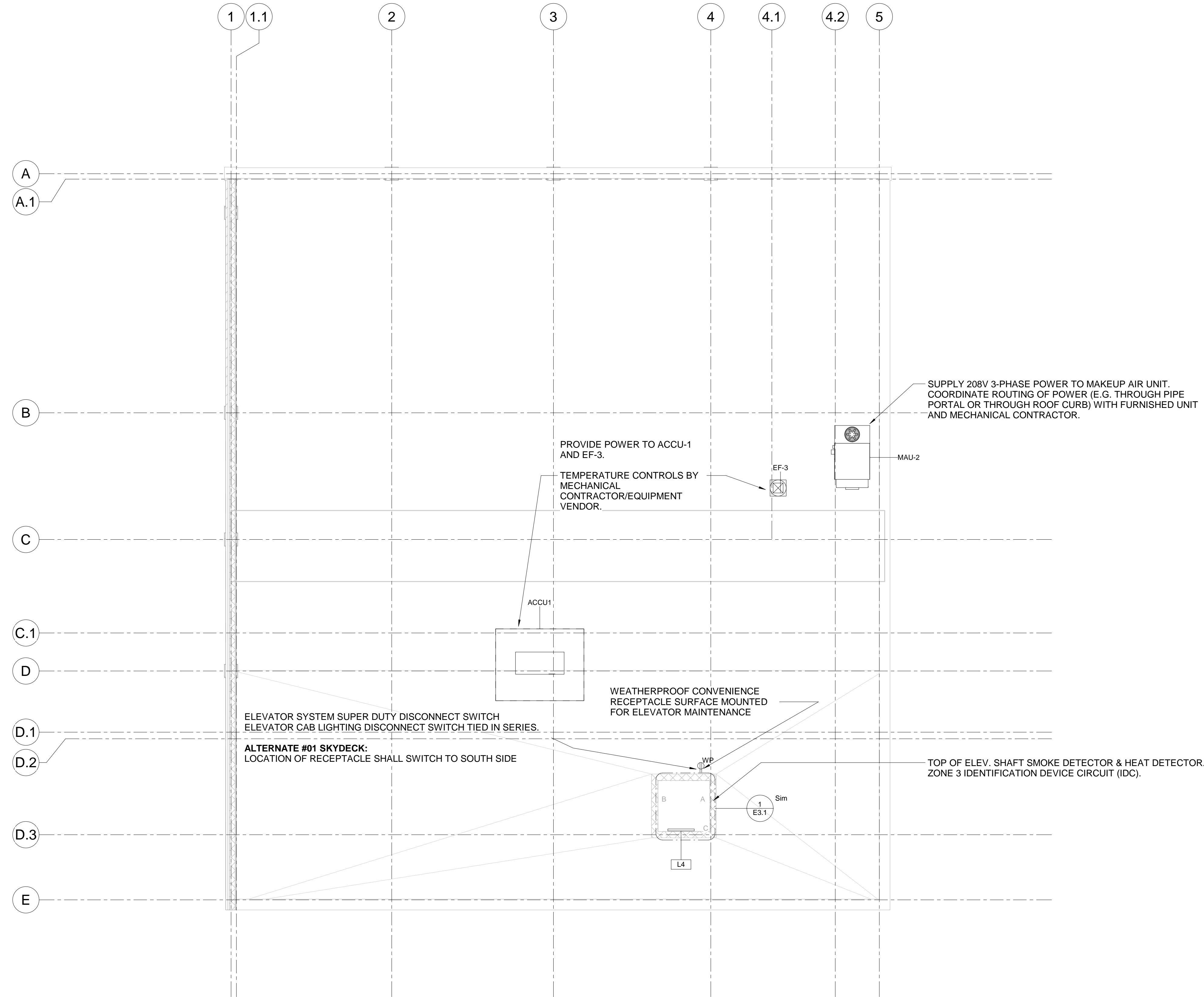
SHEET NO.

E1.1




GENERAL NOTES:

1. SEE ROOF MECHANICAL FLOOR PLAN FOR FURTHER INFORMATION ON ALTERNATE #01 SKYDECK.
2. ALL LIGHT SWITCHES (WHETHER EXTERIOR / INTERIOR / MOUNTED IN ELEVATOR SHAFT) ARE TO BE MOUNTED AT 42" A.F.F. UNLESS NOTED OTHERWISE.



1 Roof - Electrical  
1/8" = 1'-0"

PROJECT:	THE UNIVERSITY OF IOWA
DATE :	CIVIL AND ENVIRONMENTAL ENGINEERING
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COMMERCIAL REHABILITATION 1

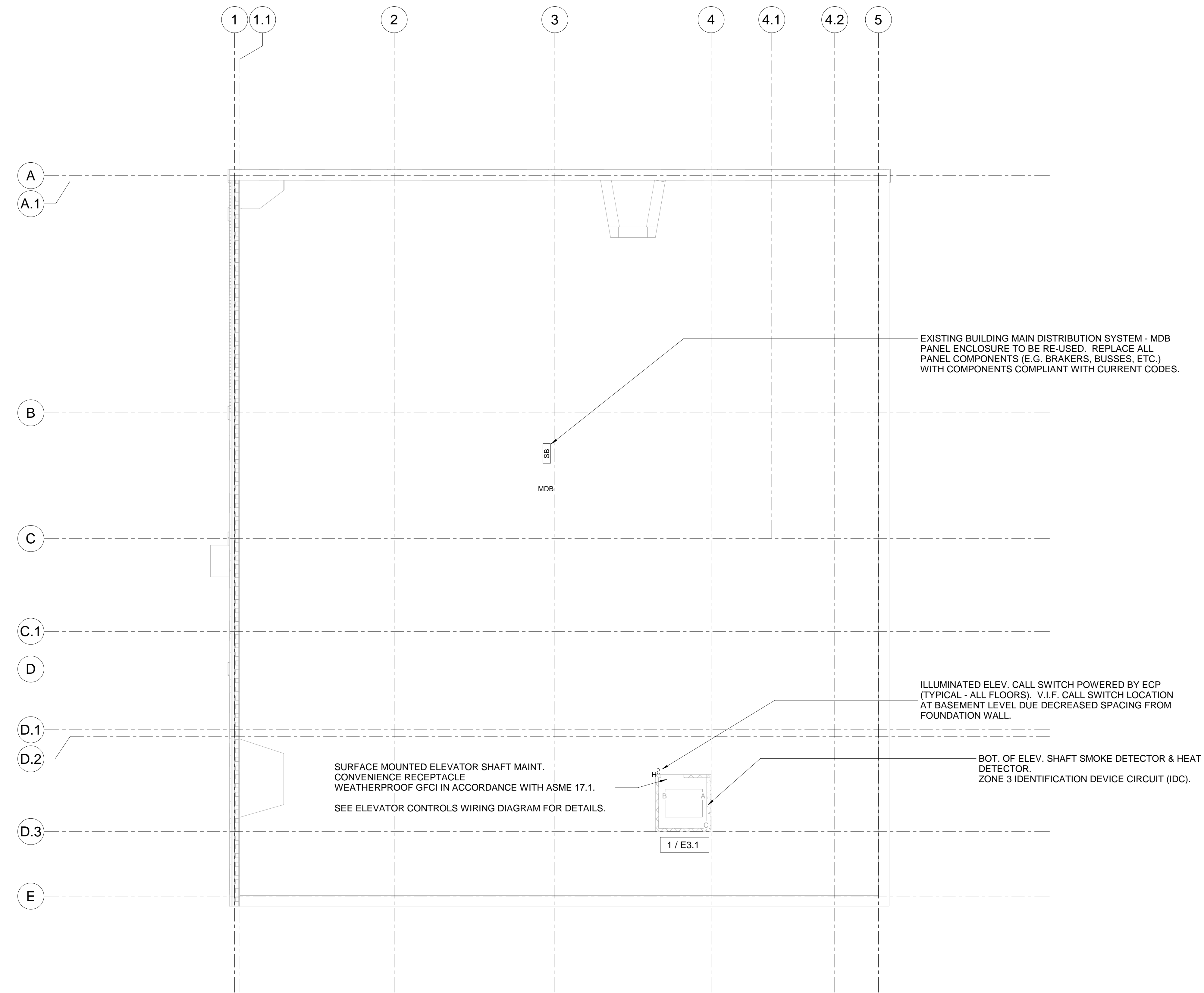
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SHEET NAME

ROOF ELECTRICAL FLOOR PLAN

SHEET NO.

E1.2



1 Basement - Electrical  
1/8" = 1'-0"

PROJECT:  
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## COMMERCIAL REHABILITATION 1

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SHEET NAME

BASEMENT ELECTRICAL  
FLOOR PLAN

SHEET NO.

E1.3



Branch Panel: LPB-1

Location: Space 3-3

Supply From: MDB

Mounting: SURFACE

Enclosure: TYPE 1

Volts: 120/208 Wye

Phases: 3

Wires: 4

A.I.C. Rating:

Mains Type:

Mains Rating: 100 A

MCB Rating: 100 A

Notes:  
30 CIRCUIT PANELBOARD ASSEMBLY

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT	
1	Other	20 A	1	0 VA	868 VA		1	20 A	LIGHTING - LIGHT BAY 3	2	
3	LIGHTING - S. BATHROOM	20 A	1		32 VA	100 VA	1	20 A	EM EXIT LIGHTING - NORMAL POWER	4	
5	LIGHTING - UTILITY ROOM	20 A	1			64 VA	144 VA	1	20 A	LIGHTING - N. BATHROOM	6
7	LIGHTING - LIGHT BAY 4	20 A	1	878 VA	0 VA			2	20 A	Lighting	8
9	LIGHTING - LIGHT BAY 1	20 A	1		640 VA	0 VA	--	--	--		10
11	LIGHTING - LIGHT BAY 2	20 A	1			640 VA					12
13											14
15											16
17											18
19											20
21											22
23											24
25											26
27											28
29											30
31											32
33											34
35											36
37											38
39											40
41											42
Total Load:				1746 VA	772 VA	848 VA					
Total Amps:				15 A	6 A	7 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Lighting	58 VA	100.00%	58 VA	
Other	0 VA	0.00%	0 VA	Total Conn. Load: 3366 VA
Power	0 VA	0.00%	0 VA	Total Est. Demand: 3938 VA
Altro	0 VA	0.00%	0 VA	Total Conn. Current: 9 A
				Total Est. Demand Current: 11 A

Notes:  
4-WAY LIGHT SWITCH TO CONTROL LIGHTING BAYS 1, 2, 3 AND 4.

Branch Panel: PPB-1

Location: Space 3-3

Supply From: MDB

Mounting: SURFACE

Enclosure: TYPE 1

Volts: 120/208 Wye

Phases: 3

Wires: 4

A.I.C. Rating:

Mains Type:

Mains Rating: 225 A

MCB Rating: 225 A

Notes:  
30 CIRCUIT PANELBOARD ASSEMBLY

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT	
1	n/a	20 A	1	0 VA	360 VA		1	20 A	Receptacle Room 3-1d, 3-1c	2	
3	Receptacle Space 77	20 A	1		540 VA	540 VA	1	20 A	Receptacle Space 80	4	
5	Power Space 3-1d	20 A	1			7500...	360 VA	1	20 A	Receptacle Space 78	6
7	Receptacle	20 A	1	720 VA	1980...			1	20 A	Receptacle	8
9	Receptacle	20 A	1		900 VA	1260...		1	20 A	Receptacle Space 3-1b-1	10
11	Receptacle Space 3-1d	20 A	1			720 VA	1080...	1	20 A	Receptacle Space 88	12
13	Receptacle Room 3-1e, 3-1d	20 A	1	360 VA	720 VA			1	20 A	Receptacle Room 72, 81	14
15	Receptacle Space 3-1c	20 A	1		360 VA	720 VA		1	20 A	Receptacle Room 76, 73	16
17	Power Space 3-1d	20 A	1			1000...	540 VA	1	20 A	Receptacle Room 3-1e, 73, 3-1b-2	18
19	Receptacle	20 A	1	1080...	1000...			1	20 A	Power Space 3-1c	20
21	Receptacle Room 3-1d, 3-1c	20 A	1		1080...	1000...		1	20 A	Power Space 3-1d	22
23	Receptacle Space 3-1b-1	20 A	1			540 VA					24
25											26
27											28
29											30
31											32
33											34
35											36
37											38
39											40
41											42
Total Load:				15220 VA	15400 VA	20740 VA					
Total Amps:				127 A	129 A	173 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
HVAC	0 VA	0.00%	0 VA	
Power	37500 VA	100.00%	37500 VA	Total Conn. Load: 51360 VA
				Total Est. Demand: 49430 VA
				Total Conn. Current: 143 A
				Total Est. Demand Current: 137 A

Notes:

Branch Panel: EPB-1

Location: Space 3-3

Supply From: MDB

Mounting: SURFACE

Enclosure: TYPE 1

Volts: 120/208 Wye

Phases: 3

Wires: 4

A.I.C. Rating:

Mains Type:

Mains Rating: 100 A

MCB Rating: 1 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	DISHWASHER - WORKRM	20 A	1	0 VA	0 VA		1	20 A	TANKLESS HOT WATER HEATER - UTILITY RM	2
3	DOUBLE OVEN - WORKRM	20 A	2		4100...					4
5	--	--	--			4100...				6
7	GAS COOKTOP ACCESSORY POWER ~...	20 A	1	1000...	1000...		1	20 A	REFRIGERATOR - WORKM	8
9					0 VA		3	20 A	CONTROLS CPB-1, 225 A, 120 V/208 V, Three...	10
11						0 VA	--	--	--	12
13	EVAPORATOR COILEC-1	20 A	2	0 VA	0 VA		--	--	--	14
15	--	--	--		0 VA	42 VA	3	20 A	INLINE DRIVE EXHAUST FANS	16
17	HWR RECIRCULATION PUMP	20 A	3			181 VA	42 VA	--	--	18
19	--	--	--	181 VA	42 VA		--	--	--	20
21	--	--	--		181 VA	313 VA	3	20 A	ROOFTOP EXHAUST FAN EF-3	22
23						313 VA	--	--	--	24
25					313 VA		--	--	--	26
27							--	--	--	28
29										30
31										32
33										34
35										36
37										38
39										40
41										42
Total Load:				2536 VA	4636 VA	4636 VA				
Total Amps:				21 A	41 A	41 A				

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
HVAC	63 VA	100.00%	63 VA	
Motor	63 VA	100.00%	63 VA	Total Conn. Load: 11808 VA
Other	0 VA	0.00%	0 VA	Total Est. Demand: 11808 VA
				Total Conn. Current: 33 A
				Total Est. Demand Current: 33 A

Notes:  
CONTROLS PANELBOARD (CPB-1) SHOWN FOR REFERENCE ONLY. END CONNECTION OF LIGHTING CONTROLS, HVAC CONTROLS AND TELECOMMUNICATION CONTROLS TO B TO HEADEND UNITS PROVIDED BY SELECTED MANUFACTURER. VERIFY WITH OWNER EXISTING BUILDING SYSTEMS. ALL DATA PORTS TO BE FEED FROM EXISTING BUILDING TELECOM NETWORK.

Switchboard: MDB

Location:

Supply From: XREM-1

Mounting: SURFACE

Enclosure: TYPE 4

Volts: 120/208 Wye

Phases: 3

Wires: 4

A.I.C. Rating:

Mains Type:

Mains Rating:

MCB Rating: 1 A

Notes:  
MDB PANEL SCHEDULE CREATED TO DISPLAY ADDED LOADINGS FROM NEW ELEVATOR DESIGN AND LEVEL 3 ELECTRICAL REQUIREMENTS. THE BUILDING'S MDB PANEL IS EXISTING. THIS SCHEDULE IS SHOWN FOR REFERENCE ONLY.

CKT	Circuit Description	# of Poles	Frame Size	Trip Rating	Load	Remarks
1	36"x16.25" Elev Control Panel	3	400 A	20 A	392 VA	
2	100 A, 120 V/208 V, Three Phase, 4 Wires, Wye	3	400 A	20 A	3366 VA	
3						
4	225 A, 120 V/208 V, Three Phase, 4 Wires, Wye	3	400 A	20 A	11808 VA	
5	100 A, 120 V/208 V, Three Phase, 4 Wires, Wye	3	400 A	20 A	51360 VA	
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
Total Conn. Load:					66926 VA	
Total Amps:					186 A	

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
HVAC	63 VA	100.00%	63 VA	
Lighting	58 VA	100.00%	58 VA	Total Conn. Load: 66926 VA
Motor	63 VA	100.00%	63 VA	Total Est. Demand: 65396 VA
Other	0 VA	0.00%	0 VA	Total Conn. Current: 186 A
Power	37500 VA	100.00%	37500 VA	Total Est. Demand Current: 182 A
Altro	0 VA	0.00%	0 VA	

Notes:  
V.I.F. EXISTING MDB PANEL SIZE IS ADEQUATE FOR ADDITIONAL CIRCUITS. UPGRADE MDB PANEL IF REQUIRED.

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COMMERCIAL REHABILITATION 1

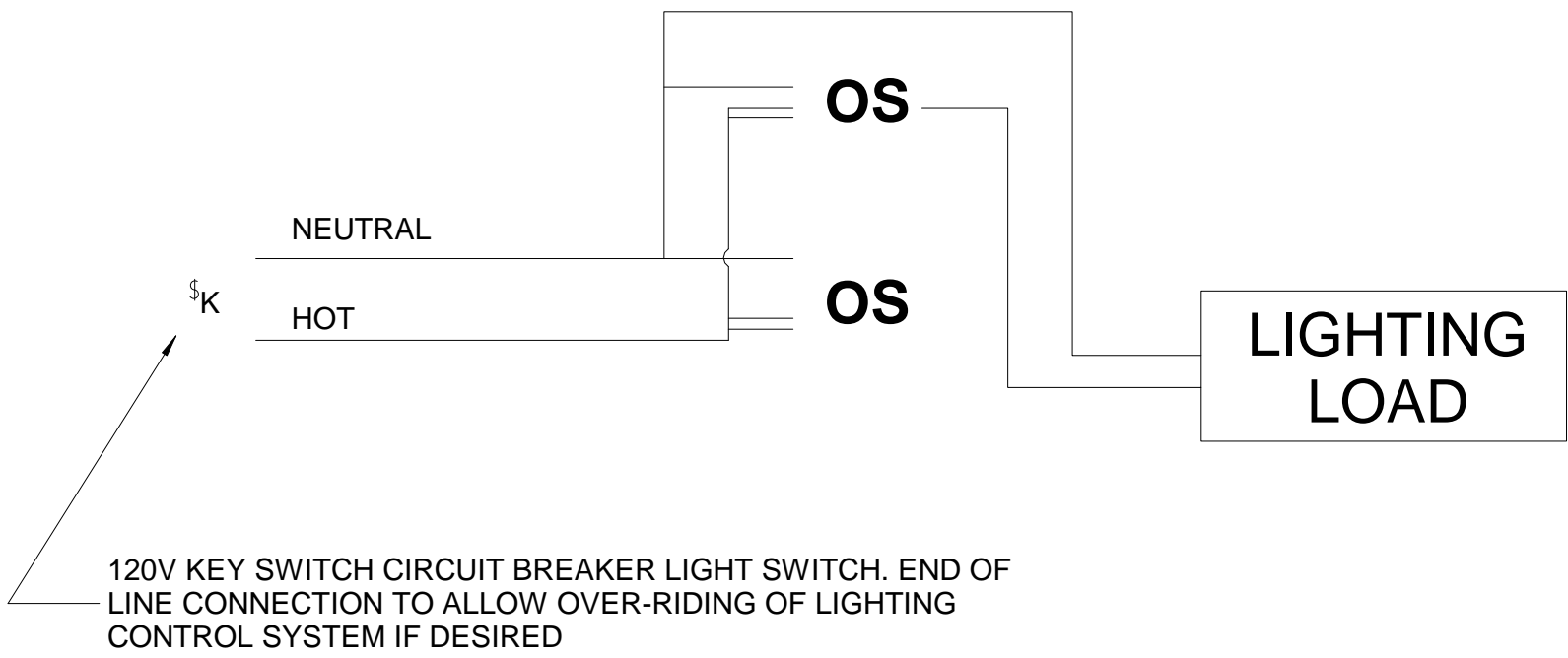
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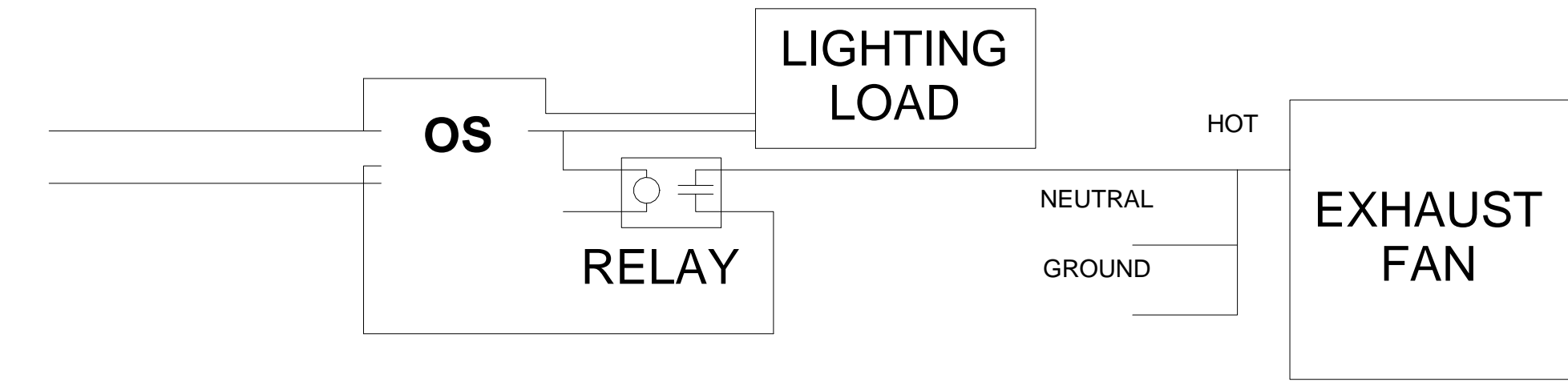
PANEL SCHEDULES

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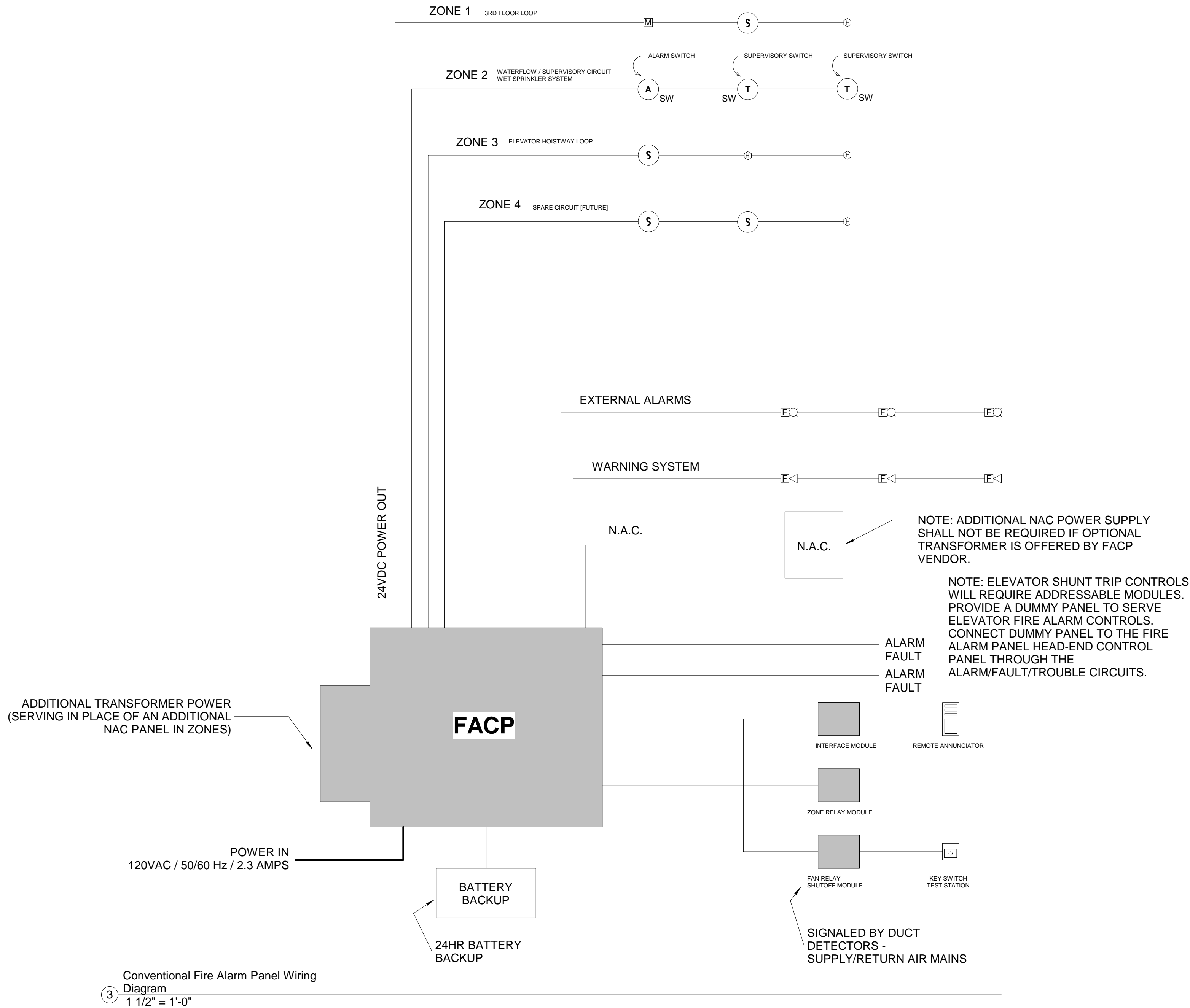


COMBINATION LIGHTING CONTROLS  
POWER WIRING DIAGRAM  
①  
6" = 1'-0"



LIGHTING AND EXHAUST FAN POWER  
WIRING DIAGRAM  
②  
6" = 1'-0"

FACP	
Location: Space 3-3 UTILITY ROOM	
CKT	Circuit Description
1	IDENTIFICATION DEVICES CIRCUIT - ZONE #1 - 3RD FLOOR
2	IDENTIFICATION DEVICES CIRCUIT - ZONE #3 - ELEVATOR HOISTWAY
3	WATERFLOW/SUPERVISORY IDENTIFICATION DEVICE CIRCUIT - ZONE #2 - SPRINKLER SYSTEM
4	Spare
5	NOTIFICATION APPLIANCE CIRCUIT #1
6	Space
7	Space
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
Notes:	



Conventional Fire Alarm Panel Wiring  
Diagram  
③  
1 1/2" = 1'-0"

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COMMERCIAL REHABILITATION 1

241-247 5 Ave S. Clinton, IA 52732

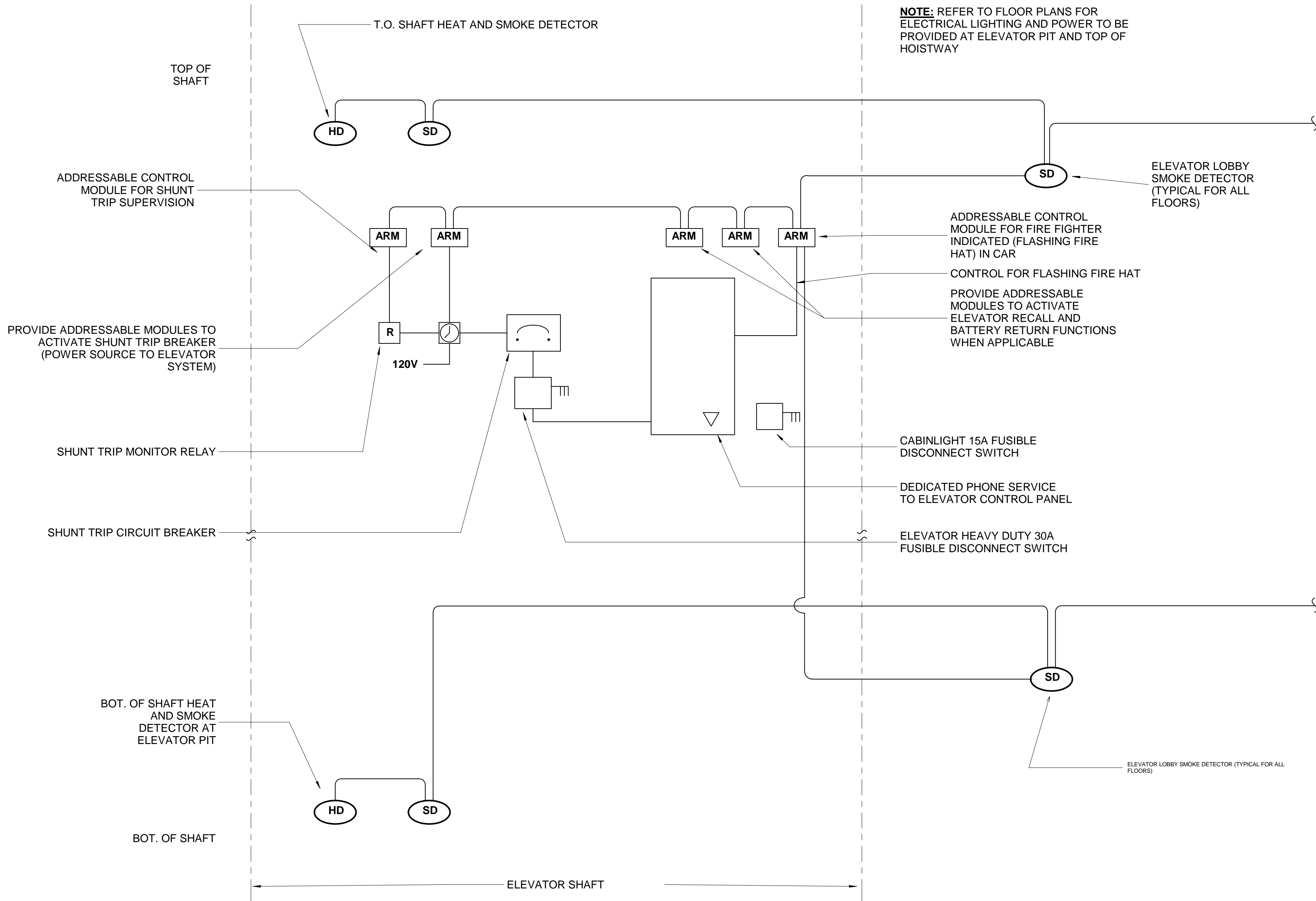
SHEET NAME

ELECTRICAL DETAILS

SHEET NO.

E3.0





NOTE:  
VERIFY REQUIRED POWER CONNECTION, FIRE ALARM DEVICES AND LOCATION WITH  
TRACTION ELEVATOR WITHOUT MACHINE ROOM

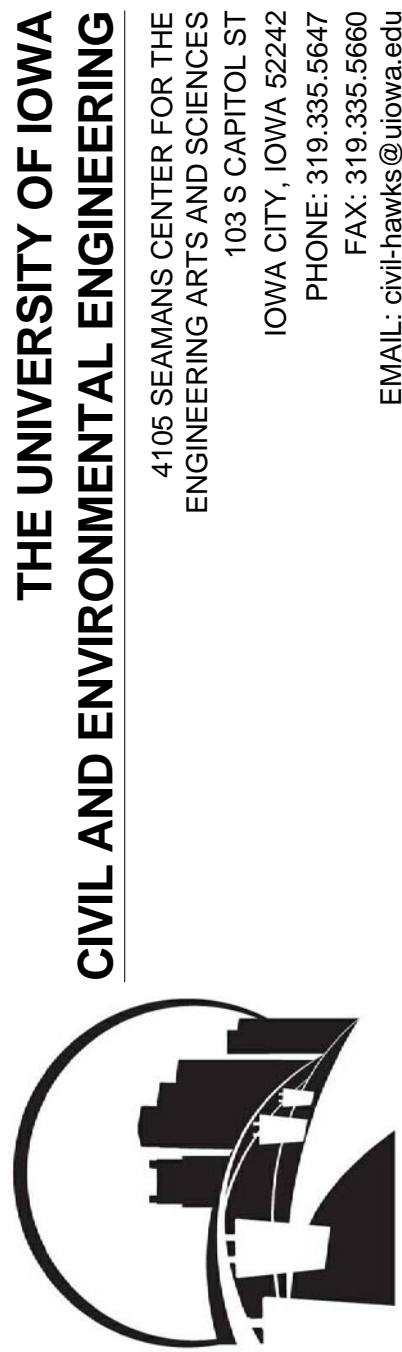
DETAILS ARE SCHEMATIC AS IN NATURE, CONTRACTOR SHALL PROVIDE AND INSTALL ALL  
NECESSARY EQUIPMENT FOR COMPLETE WORKING SYSTEM

- ELEVATOR NOTES:**
- PIT LIGHTING SWITCH SHALL BE UP AND OVER BY THE LADDER
  - PIT LIGHTING SHALL PROVIDE A MINIMUM OF TEN FOOT CANDLE AT THE PIT FLOOR AND AT THE PIT PLATFORM, WHEN PROVIDED
  - PROVIDE DEDICATED PHONE LAND LINE, COORDINATE WITH LOCAL AUTHORITIES
  - PROVIDE FIRE SMOKE SENSORS INTO ELEVATOR CONTROLLER WITH ALTERNATE FLOOR SENSORS, SHAFT, MACHINE ROOM AND ALL LOBBIES
  - PROVIDE FUSED MAINLINE DISCONNECT FOR ELEVATOR EQUIPMENT
  - PROVIDE SEPARATE FUSED LOCKABLE DISCONNECT SWITCH FOR CABIN LIGHTING
  - ELEVATOR SHUNT TRIP SHALL BE ACTIVATED PRIOR TO IN ONSET OF WATER FROM SPRINKLERS

- ELEVATOR EQUIPMENT ROOM, PROVIDE WORK AS FOLLOWS:**
- PROVIDE TWO FOUR FOOT LONG, LED STRIPLIGHT. FIXTURE TO MATCH BUILDING STANDARD. PROVIDE A SEPARATE DEDICATED BRANCH CIRCUIT FOR MACHINE ROOM SPACE LIGHTING AND RECEPTACLE PER NFPA 70, 1996, 620-23 TO LOCAL 120 VOLT PANELBOARD.
  - PROVIDE A CEILING MOUNTED DUAL CONTACT SMOKE DETECTOR WITH ONE CONTACT WIRED TO THE LOCAL FIRE ALARM ZONE AND THE OTHER TO OPERATE THE ELEVATOR RECALL FUNCTION. THE ELEVATOR MANUFACTURER REQUIRES WIRING FROM THE SMOKE DETECTORS TO MACHINE ROOM CONTROLLER. PROVIDE A SET OF FORM "C" CONTACTS (NORMALLY OPEN – COMMON – NORMALLY CLOSED) FROM THE SMOKE DETECTOR AT DESIGNED FIREMAN'S LANDING AND ONE SET OF FORM "C" CONTACTS REPRESENTING ALL OTHER SMOKE DETECTORS IN THE SYSTEM. REFERENCE ASME A17.1B – 1995 SAFETY CODE FOR ELEVATORS AND ESCALATORS RULE 211.3B.
  - PROVIDE A DUPLEX RECEPTACLE, GFCI TYPE. PROVIDE A SEPARATE DEDICATED BRANCH CIRCUIT FOR MACHINE ROOM SPACE LIGHTING AND RECEPTACLE PER NFPA 70, 1996, 620-23 TO LOCAL 120 VOLT PANELBOARD.
  - PROVIDE A SEPARATE DEDICATED BRANCH CIRCUIT FOR CAR LIGHTS AND RECEPTABLES. A DISCONNECT MEANS SHALL BE PROVIDED FOR CIRCUIT. THE DISCONNECT MEANS SHALL BE CAPABLE OF BEING LOCKED IN THE OPEN POSITION PER NFPA 70, 1996, 620-22 AND 620-53 HOMERUN CIRCUIT TO LOCAL 120 VOLT PANELBOARD.
  - PROVIDE TELEPHONE JACK AND PLATE OVER EXISTING OPENING WITH TELEPHONE CABLE BACK TO NETWORK POINT OF PRESENCE (NETPOP) FOR POSSIBLE CONNECTION TO A 24 HOUR EMERGENCY MONITORING SERVICE.
  - PROVIDE A 100A, 3 POLE, 600 VOLT, FUSIBLE SAFETY SWITCH WITH FLEXIBLE CONNECTION TO ELEVATOR CONTROLLER. PROVIDE FUSES SIZED PER EQUIPMENT MANUFACTURERS RECOMMENDATION. PROVIDE SELECTIVE COORDINATION OF FUSES PER NFPA 70, 620-6.

- AT ELEVATOR SHAFT AND PIT, PROVIDE WORK AS FOLLOWS:**
- IN PIT PROVIDE LIGHTING SWITCH AND PIT LIGHTING FIXTURE (JELLY JAR) WITH WIRE GUARD, LED LAMP. PROVIDE A SEPARATE DEDICATED BRANCH CIRCUIT FOR HOISTWAY PIT LIGHTING AND RECEPTACLE PER NFPA 70, 1996, 620-24 TO LOCAL 120 VOLT PANELBOARD.
  - PROVIDE A DUAL CONTACT SMOKE DETECTOR AT TOP OF SHAFT WITH ONE CONTACT WIRED TO THE LOCAL FIRE ALARM ZONE AND THE OTHER TO OPERATE THE ELEVATOR RECALL FUNCTION. THE ELEVATOR MANUFACTURER REQUIRES WIRING FROM THE SMOKE DETECTORS TO MACHINE ROOM CONTROLLER. PROVIDE A SET OF FORM "C" CONTACTS (NORMALLY OPEN – COMMON – NORMALLY CLOSED) FROM THE SMOKE DETECTOR AT DESIGNATED FIREMAN'S LANDING AND ONE SET OF FORM "C" CONTACTS REPRESENTING ALL OTHER SMOKE DETECTORS IN THE SYSTEM. REFERENCE ASME A17.1B – 1995 SAFETY CODE FOR ELEVATORS AND ESCALATORS RULE 211.3B.

- AT ELEVATOR VESTIBULES, PROVIDE WORK AS FOLLOWS:**
- PROVIDE A CEILING MOUNTED DUAL CONTACT SMOKE DETECTOR WITH ONE CONTACT WIRED TO THE LOCAL FIRE ALARM ZONE AND THE OTHER TO OPERATE THE ELEVATOR RECALL FUNCTION. THE ELEVATOR MANUFACTURER REQUIRES WIRING FROM THE SMOKE DETECTORS TO MACHINE ROOM CONTROLLER. PROVIDE A SET OF FORM "C" CONTACTS (NORMALLY OPEN – COMMON – NORMALLY CLOSED) FROM THE SMOKE DETECTOR AT DESIGNATED FIREMAN'S LANDING AND ONE SET OF FORM "C" CONTACTS REPRESENTING ALL OTHER SMOKE DETECTORS IN THE SYSTEM. REFERENCE ASME A17.1B – 1995 SAFETY CODE FOR ELEVATORS AND ESCALATORS RULE 211.3B.



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## COMMERCIAL REHABILITATION 1

241-247 5 Ave S. Clinton, IA 52732

SHEET NAME

ELEVATOR CONTROLS  
DETAILS

SHEET NO.

E3.1



SWITCH SYSTEM SCHEDULE					
Switch ID	Electrical Data	Type	Panel	Circuit Number	Comments
BOS1	120 V/1-0 VA	Dual Technology - 120 V	LPB-1	6	
BOS2	120 V/1-0 VA	Dual Technology - 120 V	LPB-1	3	
S-K4	120 V/1-0 VA	Key Operated	LPB-1	9	KEY OPERATED SWITCH OVERRIDING CONTROL TO 3RD FLOOR LIGHTING
	120 V/1-0 VA	Standard	ECP	3	WEATHERPROOF SWITCH - HOISTWAY LIGHTING CIRCUIT
ES2	120 V/1-0 VA	Standard	ECP	6	
	120 V/1-0 VA	Four Way	LPB-1	2	
S-Ut	120 V/1-0 VA	Single Pole	LPB-1	5	
S-K3	120 V/1-0 VA	Key Operated	LPB-1	11	KEY OPERATED SWITCH OVERRIDING CONTROL TO 3RD FLOOR LIGHTING
S-K2	120 V/1-0 VA	Key Operated	LPB-1	2	KEY OPERATED SWITCH OVERRIDING CONTROL TO 3RD FLOOR LIGHTING
S-K1	120 V/1-0 VA	Key Operated	LPB-1	7	KEY OPERATED SWITCH OVERRIDING CONTROL TO 3RD FLOOR LIGHTING
	120 V/1-0 VA	Standard	ECP	1	WEATHERPROOF SWITCH - HOISTWAY LIGHTING CIRCUIT
	120 V/1-0 VA	Standard	ECP	1	WEATHERPROOF SWITCH - HOISTWAY LIGHTING CIRCUIT
	120 V/1-0 VA	Standard	ECP	1	WEATHERPROOF SWITCH - HOISTWAY LIGHTING CIRCUIT
OS1	120 V/1-0 VA	Dual Technology - 120 V	LPB-1	7	MULTIPLE OCCUPANCY SENSORS SERVING A SINGLE ZONE SHALL BE SUPPLIED WITH REQUIRED RELAY TO FUNCTION AS ONE SWITCH SYSTEM
OS3	120 V/1-0 VA	Dual Technology - 120 V	LPB-1	2	
OS2	120 V/1-0 VA	Dual Technology - 120 V	LPB-1	11	
OS6	120 V/1-0 VA	Dual Technology - 120 V	LPB-1	9	
OS2	120 V/1-0 VA	Dual Technology - 120 V	LPB-1	2	
OS4	120 V/1-0 VA	Dual Technology - 120 V	LPB-1	7	
OS5	120 V/1-0 VA	Dual Technology - 120 V	LPB-1	9	
OS4	120 V/1-0 VA	Dual Technology - 120 V	LPB-1	7	
OS1	120 V/1-0 VA	Dual Technology - 120 V	LPB-1	7	MULTIPLE OCCUPANCY SENSORS SERVING A SINGLE ZONE SHALL BE SUPPLIED WITH REQUIRED RELAY TO FUNCTION AS ONE SWITCH SYSTEM
OS7	120 V/1-0 VA	Dual Technology - 120 V	LPB-1	9	MULTIPLE OCCUPANCY SENSORS SERVING A SINGLE ZONE SHALL BE SUPPLIED WITH REQUIRED RELAY TO FUNCTION AS ONE SWITCH SYSTEM
OS7	120 V/1-0 VA	Dual Technology - 120 V	LPB-1	9	MULTIPLE OCCUPANCY SENSORS SERVING A SINGLE ZONE SHALL BE SUPPLIED WITH REQUIRED RELAY TO FUNCTION AS ONE SWITCH SYSTEM
S-BR	120 V/1-0 VA	Single Pole	LPB-1	7	
	120 V/1-0 VA	Four Way	LPB-1	2	KEY OPERATED SWITCH OVERRIDING CONTROL TO 3RD FLOOR LIGHTING
	120 V/1-0 VA	Standard	ECP	7	WEATHERPROOF SWITCH - HOISTWAY LIGHTING CIRCUIT
S-C1	120 V/1-0 VA	Single Pole	LPB-1	7	
S-EXT	120 V/1-0 VA	Standard	LPB-1	1	PHOTOCELL DEVICE WITH PROGRAMMABLE/ADJUSTABLE TIMER SYSTEM. SEE DWGS FOR DETAILS.

ELECTRICAL DISTRIBUTION SCHEDULE						
TAG	TYPE	DESCRIPTION	ENCLOSURE	MOUNTING	NUMBER OF PHASES	Mains
PPB-1	Lighting and Appliance Panelboard - 208V MCB - Surface: LP-3 225 A		TYPE 1	SURFACE	3	225 A
LPB-1	Lighting and Appliance Panelboard - 208V MCB - Surface: 100 A		TYPE 1	SURFACE	3	100 A
ECP	Utility Switchboard: 36"x16.25" Elev Control Panel	ELEVATOR CONTROL PANEL FURNISHED AND INSTALLED BY ELEVATOR CONTRACTOR	TYPE 4	HOISTWAY	3	
MDB	Utility Switchboard: 36"x16.25"	MAIN DISTRIBUTION BOARD	TYPE 4	SURFACE	3	
XREM-1	Dry Type Transformer - 480-208Y120 - NEMA Type 2: 15 kVA		TYPE 2	SURFACE	3	
EPB-1	Lighting and Appliance Panelboard - 208V MCB - Surface: 100 A		TYPE 1	SURFACE	3	100 A
CPB-1	Controls Panelboard - 208V MCB - Surface: 100 A	LOW VOLTAGE PANEL FOR ALL BUILDING CONTROLS - MAY NOT BE REQUIRED. VERIFY ALL REQUIREMENTS WITH EQUIPMENT VENDORS OF BUILDING SPEAKERS AND HVAC CONTROLS.	TYPE 1	SURFACE		
LVXREM	Electrical-Controller_SE-Controls_Shevtec_OS2_30 -60-90A-PSU: 1 Zone SHEVTEC Control Panel C/W 30A PSU	COMMUNICATION SYSTEM HEAD-END UNIT - SECONDARY DISTRIBUTION: 24 VDC	TYPE 1	n/a	1	
	Disconnect Switches: 208V - Fusible 15A	ELEVATOR CAB LIGHTING HEAVY DISCONNECT SWITCH				
	Disconnect Switches: 208V - Fusible 30A	ELEVATOR SUPER DUTY DISCONNECT SWITCH				
<b>ELECTRICAL DISTRIBUTION SCHEDULE NOTES:</b>						
1. ELECTRICAL CONTRACTOR VERIFY CONDITION AND CAPACITY OF BUILDING'S MAIN DISTRIBUTION BOARD (MDB) TO BE SUITABLE FOR REUSE WITH NEW CONSTRUCTION DESIGN. ALL ELECTRICAL PANEL ENCLOSURES THAT ARE REUSED SHALL HAVE ALL PANELBOARD COMPONENTS (E.G. BREAKERS, MAIN BUSSES, ETC.) REPLACED WITH PANELBOARD COMPONENTS MEETING CURRENT CODES, INCLUDING BUT NOT LIMITED TO: A. 2018 INTERNATIONAL BUILDING CODE B. 2020 NATIONAL ELECTRIC CODE (NEC 70) C. 2018 INTERNATIONAL ENERGY CONSERVATION CODE						
2. THE MDB PANEL SCHEDULE IS SHOWN IN THIS DRAWING SET FOR REFERENCE ONLY TO CONVEY ADDED LOADINGS ON THE BUILDING'S EXISTING MECHANICAL EQUIPMENT. THE ELECTRICAL CONTRACTOR IS TO VERIFY WHETHER EXISTING TRANSFORMER IS SUITABLE FOR ADDED LOADING, OR IF A NEW TRANSFORMER IS REQUIRED. UTILIZE LOADING OF MDB PANEL SCHEDULE FOR TOTAL ADDED LOADING TO EXISTING BUILDING DISTRIBUTION SYSTEM FROM THE NEW DESIGN.						
3. ALL CIRCUITS TO HAVE BREAKER CONNECTIONS UNLESS NOTED OTHERWISE.						
4. LOW-VOLTAGE PANELS FOR COMMUNICATIONS AND HVAC CONTROLS ARE SHOWN FOR REFERENCE ONLY TO SHOW INTENT OF WHERE CONTROLS PANELS SHOULD BE TERMINATED TO, BUT THESE LV PANELS MAY NOT BE REQUIRED BASED ON THE FURNISHED TELECOM COMMUNICATION SYSTEM AND/OR HVAC CONTROLS FURNISHED BY MECHANICAL EQUIPMENT VENDOR. VERIFY ALL REQUIREMENTS WITH ASSOCIATED CONTRACTORS AND MECHANICAL EQUIPMENT VENDOR REQUIREMENTS AND RECOMMENDATIONS.						
5. ACCESSIBILITY TO ALL PANELBOARDS SHALL BE MAINTAINED TO HAVE A MINIMUM OF THREE FEET OF CLEARANCE IN FRONT OF PANELS AND A MINIMUM WIDTH TO BE 2.5 FEET OR THE WIDTH OF EQUIPMENT, WHICHEVER IS GREATER.						

CIRCUIT WIRE SCHEDULE						
CIRCUIT NO.	PANEL	WIRE SIZE	VOLTAGE DROP	POWER FACTOR	POWER FACTOR STATE	BALANCE D LOAD
19	PPB-1	1-#8, 1-#8, 1-#8	2 V	1	Lagging	No
8	PPB-1	1-#6, 1-#6, 1-#6	2 V	1	Lagging	No
2	MDB	3-#10, 1-#10, 1-#10	3 V	0.93363	Lagging	No
9	PPB-1	1-#8, 1-#8, 1-#8	2 V	1	Lagging	No
7	PPB-1	1-#10, 1-#10, 1-#10	2 V	1	Lagging	No
1	XREM-1	3-#1, 1-#1, 1-#1	6 V	0.991834	Lagging	No
1	MDB	3-#10, 1-#10, 1-#10	1 V	0.995918	Lagging	No
5	MDB	3-#1, 1-#1, 1-#1	5 V	1	Lagging	No
1	ECP	1-#10, 1-#10, 1-#10	0 V	1	Lagging	No
16,18,20	EPB-1	3-#10, 1-#10, 1-#10	0 V	0.8	Lagging	Yes
9	LPB-1	1-#10, 1-#10, 1-#10	2 V	0.95	Lagging	No
4	MDB	3-#6, 1-#6, 1-#6	4 V	0.972771	Lagging	No
10,12,14	EPB-1	3-#10, 1-#10, 1-#10	0 V	1	Lagging	Yes
5	LPB-1	1-#10, 1-#10, 1-#10	0 V	0.95	Lagging	No
3	LPB-1	1-#10, 1-#10, 1-#10	0 V	0.95	Lagging	No
11	LPB-1	1-#10, 1-#10, 1-#10	2 V	0.95	Lagging	No
2	LPB-1	1-#10, 1-#10, 1-#10	2 V	0.95	Lagging	No
7	LPB-1	1-#10, 1-#10, 1-#10	2 V	0.887244	Lagging	No
6	LPB-1	1-#10, 1-#10, 1-#10	0 V	0.95	Lagging	No
1	PPB-1	1-#10, 1-#10, 1-#10	0 V	1	Lagging	No
7	EPB-1	1-#10, 1-#10, 1-#10	1 V	1	Lagging	No
8	EPB-1	1-#10, 1-#10, 1-#10	1 V	1	Lagging	No
3,5	EPB-1	2-#6, 1-#6, 1-#6	4 V	1	Lagging	Yes
1	EPB-1	1-#10, 1-#10, 1-#10	0 V	1	Lagging	No
2	ECP	1-#12, 1-#12, 1-#12	0 V	0.95	Lagging	No
3	ECP	1-#8, 1-#8, 1-#8	0 V	1	Lagging	No
4	ECP	1-#10, 1-#10, 1-#10	0 V	1	Lagging	No
5	ECP	1-#10, 1-#10, 1-#10	0 V	1	Lagging	No
6	ECP	1-#10, 1-#10, 1-#10	0 V	1	Lagging	No

CIRCUIT WIRE SCHEDULE						
CIRCUIT NO.	PANEL	WIRE SIZE	VOLTAGE DROP	POWER FACTOR	POWER FACTOR STATE	BALANCE D LOAD
2	PPB-1	1-#10, 1-#10, 1-#10	1 V	1	Lagging	No
13	PPB-1	1-#10, 1-#10, 1-#10	1 V	1	Lagging	No
16	PPB-1	1-#10, 1-#10, 1-#10	1 V	1	Lagging	No
14	PPB-1	1-#10, 1-#10, 1-#10	1 V	1	Lagging	No
4	PPB-1	1-#10, 1-#10, 1-#10	1 V	1	Lagging	No
4	LPB-1	1-#10, 1-#10, 1-#10	0 V	0.95	Lagging	No
2	EPB-1	1-#10, 1-#10, 1-#10	0 V	1	Lagging	No
13,15	EPB-1	2-#10, 1-#10, 1-#10	0 V	1	Lagging	Yes
3	PPB-1	1-#10, 1-#10, 1-#10	1 V	1	Lagging	No
6	PPB-1	1-#10, 1-#10, 1-#10	0 V	1	Lagging	No
7	ECP	1-#10, 1-#10, 1-#10	0 V	1	Lagging	No
17,19,21	EPB-1	3-#10, 1-#10, 1-#10	0 V	0.8	Lagging	Yes
20	PPB-1	1-#1/0, 1-#1/0, 1-#1/0	2 V	1	Lagging	No
17	PPB-1	1-#1/0, 1-#1/0, 1-#1/0	2 V	1	Lagging	No
21	PPB-1	1-#8, 1-#8, 1-#8	2 V	1	Lagging	No
11	PPB-1	1-#10, 1-#10, 1-#10	1 V	1	Lagging	No
5	PPB-1	1-#2, 1-#2, 1-#2	2 V	1	Lagging	No
15	PPB-1	1-#10, 1-#10, 1-#10	1 V	1	Lagging	No
22	PPB-1	1-#1/0, 1-#1/0, 1-#1/0	2 V	1	Lagging	No
22,24,26	EPB-1	3-#10, 1-#10, 1-#10	0 V	0.8	Lagging	Yes
10	PPB-1	1-#6, 1-#6, 1-#6	2 V	1	Lagging	No
12	PPB-1	1-#10, 1-#10, 1-#10	2 V	1	Lagging	No
Feed Through Lugs	PPB-1	3-#10, 1-#10, 1-#10	0 V	1	Lagging	Yes
8,10	LPB-1	2-#10, 1-#10, 1-#10	0 V	1	Lagging	Yes
1	LPB-1	1-#10, 1-#10, 1-#10	0 V	1	Lagging	No
18	PPB-1	1-#10, 1-#10, 1-#10	1 V	1	Lagging	No
23	PPB-1	1-#10, 1-#10, 1-#10	2 V	1	Lagging	No

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COMMERCIAL REHABILITATION 1

241-247 5 Ave S. Clinton, IA 52732

SHEET NAME

ELECTRICAL SCHEDULES

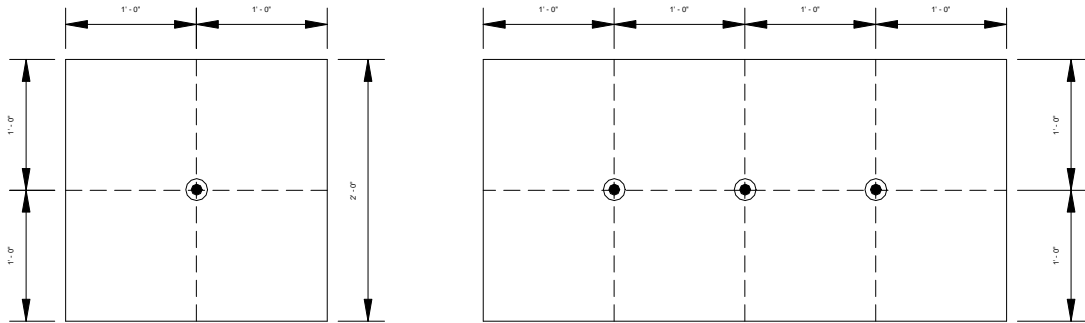
SHEET NO.

E4.0



FIRE PROTECTION SYMBOL LEGEND	
	PRESSURE GAUGE
	CALIBRATED PRESSURE RELIEF VALVE
	CHECK VALVE FLANGED
	ALARM FLOW SWITCH (SUPERVISED)
	DOUBLE CHECK BACKFLOW PREVENTER/DETECTION ASSEMBLY
	ALARM CHECK VALVE FLANGED
	PENDENT SPRINKLER ON DROP
	UPRIGHT SPRINKLER HEAD
	FIRE DEPARTMENT INLET CONNECTN 3-WAY
	FIRE HOSE VALVE CONNECTION

NOTE:  
COLORS FOR ALL SPRINKLERS HEADS SHALL BE SELECTED BY THE OWNER UNLESS NOTED OTHERWISE.



PENDANT SPRINKLER HEAD DETAIL  
3/4" = 1'-0"

GENERAL SYMBOLS	
	FLOOR PLAN SCOPE OF WORK NOTE
	DETAIL NO. / DRAWING SHEET (VIEW REFERENCE)

#### FIRE PROTECTION GENERAL NOTES:

- THESE GENERAL NOTES APPLY TO ALL WORK.
- DO NOT SCALE DRAWINGS, USE FIELD MEASUREMENTS.
- NOTES ON DRAWINGS SHALL APPLY TO SIMILAR CONDITIONS WHETHER THEY ARE REPEATED OR NOT.
- PROVIDE FIRE SAFING AT ALL WALL, FLOOR AND ROOF PENETRATIONS. RATING OF MATERIAL SHALL MEET OR EXCEED WALL FIRE RATING.
- PROVIDE PIPE SLEEVES AT ALL WALL PENETRATIONS. SLEEVES SHALL BE SCHEDULE 40 STEEL PIPING WHICH SHALL EXTEND 1" PAST WALL ON BOTH SIDES OF WALL. PIPE INSULATION SHALL BE CONTINUOUS THROUGH WALL PENETRATION. FURNISH AND INSTALL FIRE SAFING BETWEEN SLEEVE AND PIPE INSULATION.
- PAINT ALL NEW EXPOSED PIPING AND ASSOCIATED COMPONENTS COLOR AS SELECTED BY THE OWNER.
- ALL PIPING IN AREAS WITH SUSPENDED CEILINGS SHALL BE INSTALLED ABOVE CEILING. ALL PIPING RUN IN AREAS WITH EXPOSED CEILINGS SHALL BE RUN AS HIGH AS POSSIBLE - UP WITHIN THE JOIST SPACE - AND SHALL BE COORDINATED WITH MECHANICAL DUCTWORK, MECHANICAL PIPING AND PLUMBING PIPING.
- SHOULD CONDITIONS NECESSITATE ANY REARRANGEMENT OF PIPING OR EQUIPMENT OR IF SAME CAN BE RUN TO BETTER ADVANTAGE, THE CONTRACTOR SHALL PREPARE AND SUBMIT DRAWINGS SHOWING THE CHANGES BEFORE PROCEEDING WITH THE WORK. IF SUCH CHANGES ARE APPROVED, THEY SHALL BECOME A PART OF THIS CONTRACT.
- THE DRAWINGS AND DETAILS SHALL BE TAKEN AS A DIAGRAMMATIC MEANS OF PROVIDING PIPING AND EQUIPMENT. THEY DO NOT SHOW EVERY FITTING AND OFFSET, NOR EVERY STRUCTURAL, ELECTRICAL, PIPING, OR DUCTWORK CONFLICT THAT MAY BE ENCOUNTERED DURING THE INSTALLATION OF THE WORK.
- THE DIAGRAMS SHOW THE RELATIONSHIP OF MAJOR COMPONENTS OF THE FIRE PROTECTION SYSTEM. PROVIDE COMPLETE TRIM AS REQUIRED TO MEET NFPA & CODE REQUIREMENTS.

#### GENERAL SPRINKLER SYSTEM DETAILS, PROVIDE WORK AS FOLLOWS:

- THE SPRINKLER SYSTEM SHALL BE DESIGNED FOR LIGHT HAZARD THROUGHOUT THE BUILDING WITH THE FOLLOWING EXCEPTIONS: MECHANICAL ROOMS, KITCHEN, STORAGE AREAS LESS THAN 1000 SQFT, AND ATTIC - WHICH SHALL BE DESIGNED FOR ORDINARY HAZARD. STORAGE AREAS GREATER THAN 1000SQFT SHALL BE DESIGNED BASED ON THE COMMODITY TO BE STORED WITHIN - COMMODITIES SHALL BE ASSUMED TO BE CLASS IV COMMODITIES.
- THE SPRINKLER SYSTEM SHALL BE CAPABLE OF PROVIDING 0.10 GPM PER SQUARE FOOT FOR 1500 SQUARE FEET FOR ALL LIGHT HAZARD AREAS, 0.15 GPM PER SQUARE FOOT FOR 1500 SQUARE FEET FOR ORDINARY HAZARD (GROUP 1) AREAS AND 0.20 GPM PER SQUARE FOOT FOR 1500 SQUARE FEET FOR ALL ORDINARY HAZARD (GROUP 2) AREAS. COMMODITY STORAGE AREAS SHALL BE CAPABLE OF PROVIDING 0.20 TO 0.40 GPM PER SQUARE FOOT FOR 2000 SQFT BASED ON THE COMMODITY STORED WITHIN. PROVIDE INCREASED COVERAGE AREAS AS REQUIRED PER NFPA 13 OR DECREASED COVERAGE AREAS AS ALLOWED PER NFPA 13. VERIFY WATER FLOWS AND PRESSURES IN FIELD.
- NO PIPING SHALL BE INSTALLED IN ELECTRICAL ROOMS, ELEVATOR MACHINE ROOMS, ELEVATOR HOISTWAYS AND ALL OTHER SIMILAR AREAS. ONLY PIPING FEEDING DEVICES IN THESE AREAS SHALL BE ALLOWED TO BE INSTALLED IN THESE AREAS.
- PRIOR TO FINAL SYSTEM ACCEPTANCE THE CONTRACTOR SHALL:
  - PERFORM ALL REQUIRED ACCEPTANCE TESTS AS REQUIRED BY NFPA 13.
  - SUBMIT FOR REVIEW - COMPLETED AND SIGNED APPROPRIATE CONTRACTOR'S MATERIAL AND TEST CERTIFICATES INCLUDING BUT NOT LIMITED TO CERTIFICATES FOR ABOVEGROUND & UNDERGROUND PIPING.
  - NOTIFY THE AUTHORITY HAVING JURISDICTION AND THE OWNER'S REPRESENTATIVE OF THE TIME AND DATE TESTING WILL BE PERFORMED.
- PROVIDE A FIRE PROTECTION CABINET CONTAINING ATTIC STOCK SPRINKLER HEADS, FIRE DEPARTMENT VALVES AND A FIRE EXTINGUISHER.
- PROVIDE PORTABLE FIRE EXTINGUISHERS IN ALL OF THE FOLLOWING LOCATIONS PER IFC 2018 SECTION 906.1:
  - WITHIN 30 FEET DISTANCE OF TRAVEL FROM COMMERCIAL COOKING EQUIPMENT.
  - IN IN THE UTILITY ROOM AND OTHER AREAS WHERE FLAMMABLE OR COMBUSTIBLE LIQUIDS ARE STORED, USED OR DISPERSED.
  - ON EACH FLOOR OF STRUCTURES UNDER CONSTRUCTION.
- PER 2019 **NFPA 13 16.13.1**: A PRESSURE GAUGE WITH A CONNECTION NOT SMALLER THAN 1/4 IN. (6 MM) SHALL BE INSTALLED AT THE SYSTEM MAIN DRAIN, AT EACH MAIN DRAIN ASSOCIATED WITH A FLOOR CONTROL VALVE, AND ON THE INLET AND OUTLET SIDE OF EACH PRESSURE-REDUCING VALVE.
- PER 2019 NFPA 13 16.13.1: PRESSURE GAUGES IN WET-PIPE FIRE SPRINKLER SYSTEMS ARE REQUIRED AT EACH SYSTEM RISER CHECK VALVE AND ALARM CHECK VALVE.
- FURNISH AND INSTALL BLACK STEEL PIPE ASTM 153/A53M. BLACK STEEL FITTINGS SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH NFPA 13 TABLE 7.3.1.1, NFPA 13 TABLE 7.4.1, ASME B16.9, ASME B16.25, ASTM A234/A234M, ASME B16.5, AND ASME B16.18.
- AFTER COMPLETION OF SYSTEM CONSTRUCTION, THE BACKFLOW PREVENTION ASSEMBLY SHALL BE FORWARD FLOW TESTED TO ENSURE PROPER OPERATION IN ACCORDANCE WITH NFPA 13 6.10.2.5.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING THE BACKFLOW PREVENTION DEVICE TESTED AND CERTIFIED BY AN AUTHORIZED TESTING AGENCY AFTER THE INSTALLATION IS COMPLETE.

#### SPRINKLER HEAD DETAILS:

- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ANY ADDITIONAL HEADS REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION AT NO ADDITIONAL COST.
- THE CONTRACTOR SHALL PROVIDE A WIRE GUARD FOR ALL EXPOSED SPRINKLER HEADS LOCATED IN ALL MECHANICAL SPACES, STORAGE ROOMS, CLOSETS, MULTIPURPOSE ROOMS, KITCHENS, TOILET ROOMS, AND ALL OTHER LOCATIONS WHERE HEADS MAY BE READILY DAMAGED.
- ALL SPRINKLER HEADS SHOWN IN DESIGN DRAWINGS ARE STANDARD COVERAGE UNLESS NOTED OTHERWISE. EXTENDED COVERAGE HEADS WILL NOT BE ACCEPTED IN ANY AREAS OTHER THAN THOSE AREAS NOTED.

#### FIRE ALARM AUX DEVICES AND ACCESSORIES, PROVIDE WORK AS FOLLOWS:

- WATERFLOW/SUPERVISORY CIRCUIT SHALL BE ZONE2 ON THE FIRE ALARM CONTROL PANEL (FACP).
- WATERFLOW/SUPERVISORY CIRCUIT SHALL BE STYLE B (CLASS B)
- A PRESSURE FLOW SWITCH SHALL BE LOCATED ON THE SPRINKLER MAIN WITHIN 2' FROM THE RISER TO SIGNAL WHEN THE FIRE PUMP SHOULD TURN ON. THE SPRINKLER CONTRACTOR SHALL FURNISH AND INSTALL THIS PRESSURE FLOW SWITCH. WIRING IS TO TO THE FACP SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
- A SUPERVISORY TAMPER SWITCH SHALL BE PROVIDED AT THE SPRINKLER MAIN CONTROL VALVE.
- A UL LISTED SUPERVISION RELAY SHALL BE PROVIDED ON THE WATERFLOW/SUPERVISORY CIRCUIT, TIED IN WITH A 4-WIRE SMOKE DETECTOR.

#### REMODELING AND DEMOLITION

- THE CONTRACTOR MUST VISIT THE SITE PRIOR TO SUBMITTING THE BID PROPOSAL TO BECOME FAMILIAR WITH THE EXISTING SITE AND BUILDING CONDITIONS WHICH WILL BE AFFECTED DURING CONSTRUCTION. THE CONTRACTOR IS CAUTIONED THAT THIS PROJECT IS A REMODELING JOB AND IT IS ASSUMED THAT FUNDS HAVE BEEN INCLUDED IN THE BID TO COVER UNFORESEEN ITEMS WHICH MUST BE MOVED, RELOCATED, OR ADJUSTED TO FIT THE WORK. NO EXTRA COMPENSATION WILL BE ALLOWED FOR ANY MATTER OR THING WHICH THE CONTRACTOR MIGHT HAVE BEEN FULLY INFORMED OF PRIOR TO BIDDING.
- ALL CUTTING AND PATCHING, RELOCATING OF ANY EQUIPMENT, LIGHTING FIXTURES, CONDUIT, PIPING, ETC., NECESSARY TO PERFORM THE WORK WILL BE THE CONTRACTOR'S RESPONSIBILITY U.N.O.. ALL AFFECTED SURFACES WILL BE RESTORED TO THEIR ORIGINAL CONDITION.
- ALL EXISTING DUCT AND PIPING SIZES SHOWN ON THE DRAWINGS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR FOR LOCATION AND SIZE.
- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND COORDINATE SAME WITH ALL OTHER TRADES.
- REMOVE ANY CEILING TILES, GRID, AND LIGHT FIXTURES REQUIRED TO ACCOMPLISH THE WORK. REPLACE SAME AFTER THE INSTALLATION IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPLACE ANY ITEMS DAMAGED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING ELECTRICAL LINES, PLUMBING LINES, DUCTWORK, OR MECHANICAL PIPING LOCATED IN WALLS OR FLOORS PRIOR TO SAW CUTTING OR CORE DRILLING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPAIR ANY SUCH ITEMS DAMAGED.
- THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES PRIOR TO SAW CUTTING OR CORE DRILLING ANY EXISTING FLOOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY EXISTING UTILITIES DISRUPTED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MODIFICATIONS TO EXISTING OPENINGS WHICH WILL BE REUSED. THIS SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO, ALL SAW CUTTING, INSTALLATION OF NEW LINTELS, FIRE PROOFING AND INFILL OF MASONRY OPENINGS.

THE UNIVERSITY OF IOWA  
CIVIL AND ENVIRONMENTAL ENGINEERING



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COMMERCIAL REHABILITATION 1

241-247 5 Ave S. Clinton, IA 52732

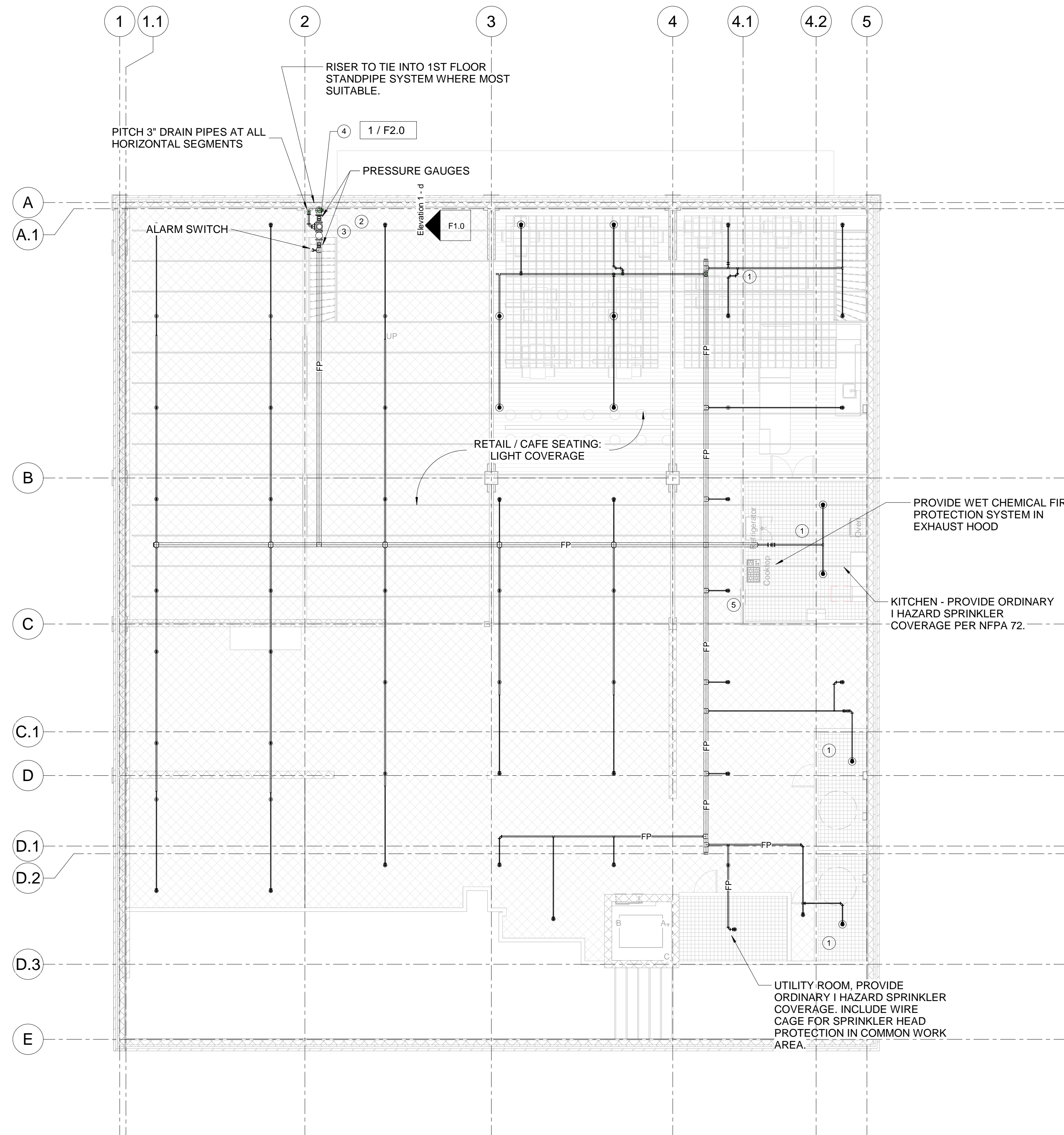
SHEET NAME

FIRE PROTECTION  
GENERAL NOTES

SHEET NO.

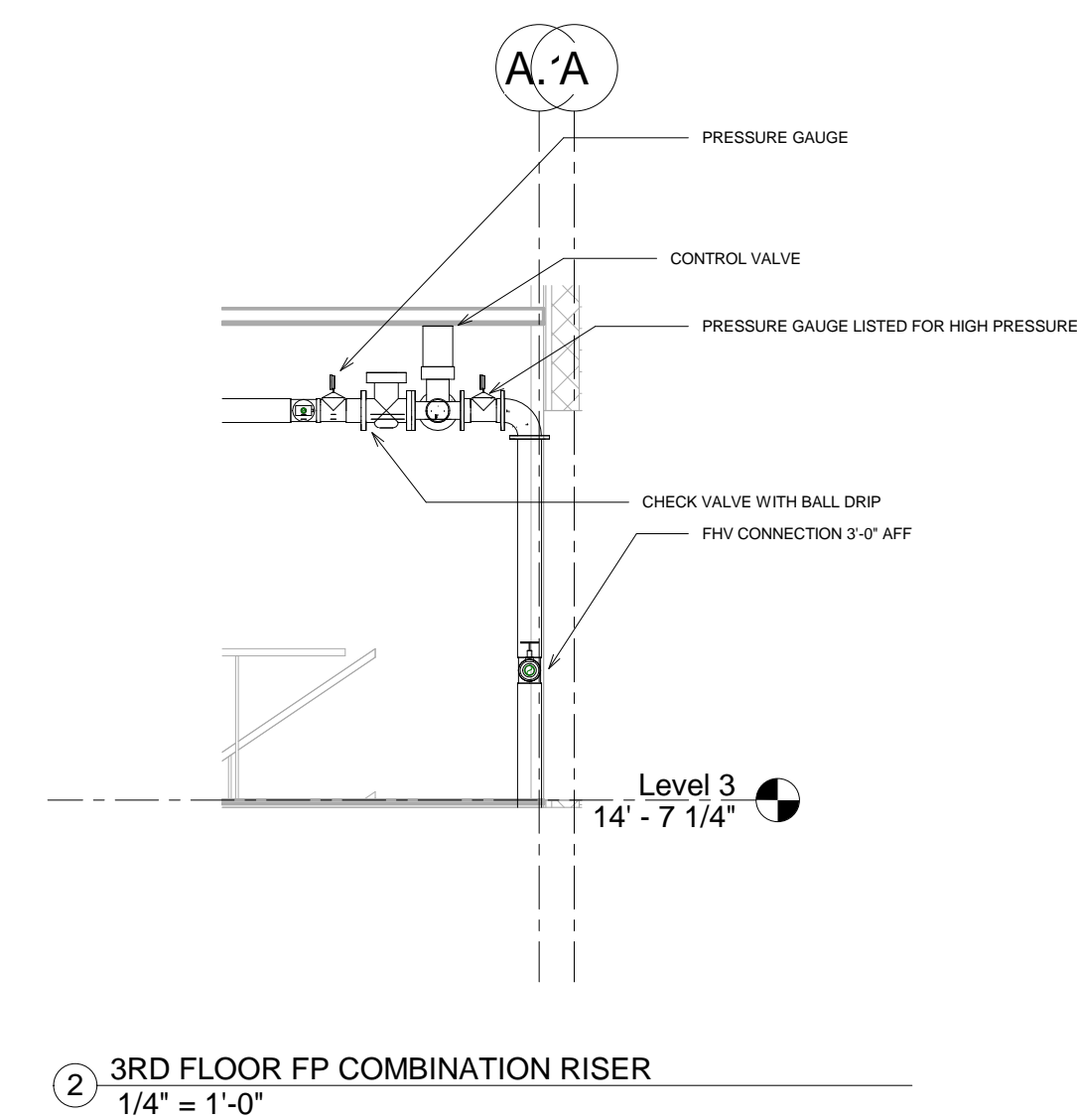
F0.1





1 Level 3 - Fire Protection  
1/8" = 1'-0"

L3 FIRE PROTECTION KEYNOTES	
Note Number	Note Text
1	PENDANT SPRINKLERS ON DROPS IN LOWERED CEILING
2	COMBINATION STANDPIPE RISER TO HAVE A 3-WAY CONTROL VALVE AND CHECK VALVE WHERE MAIN TEES-OFF RISER TIE IN NEW DRAINER RISER WITH EXISTING ON 1ST FLOOR.
3	FHV CONNECTION TO BE INSTALLED AT 3'-0" AFF FROM STAIRWELL LANDING
4	TYPICAL - 1ST AND 2ND FLOOR: IMMEDIATELY AFTER SPRINKLER MAIN BRANCH OFF FROM RISER PROVIDE THE FOLLOWING:
5	PROVIDE A FIRE PROTECTION CABINET CONTAINING ATTIC STOCK SPRINKLER HEADS, FIRE DEPARTMENT VALVES AND FIRE EXTINGUISHER



2 3RD FLOOR FP COMBINATION RISER  
1/4" = 1'-0"

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SHEET NAME

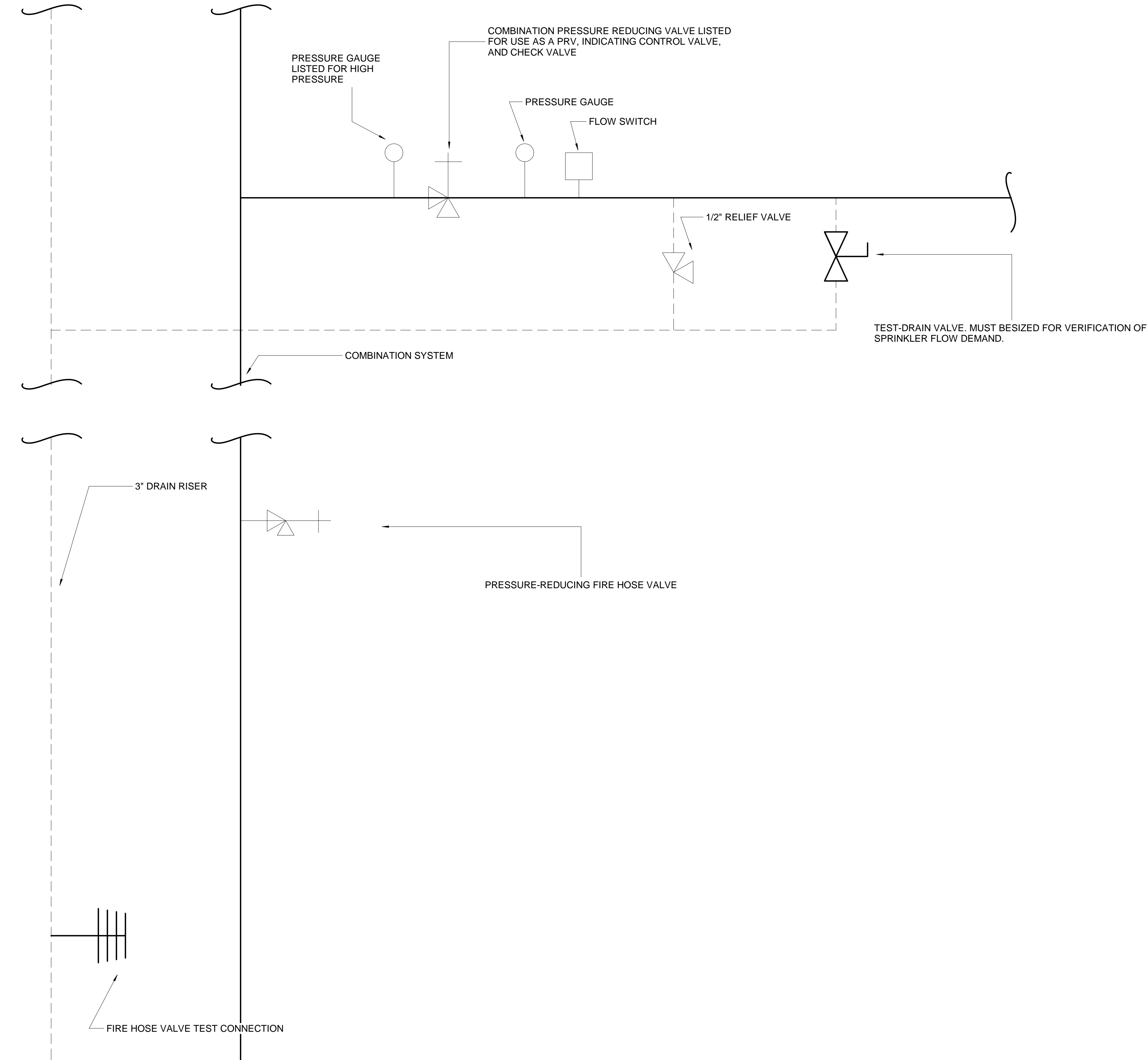
L3 FIRE PROTECTION FLOOR PLAN

SHEET NO.

F1.0

PROJECT: CIVIL AND ENVIRONMENTAL ENGINEERING  
DATE: 4/10/2015  
DRAWN BY: JAW  
REVISION: 1

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103 S CAPITOL ST  
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PHONE: 319.335.5647  
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① Combination Standpipe Riser Detail  
1" = 1'-0"

PROJECT:  
DATE :  
DRAWN BY:  
REVISION:

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## COMMERCIAL REHABILITATION 1

241-247 5 Ave S. Clinton, IA 52732

SHEET NAME

FIRE PROTECTION  
DETAILS

SHEET NO.

F2.0



GENERAL NOTES

1.

THIS CONTRACTOR SHALL COORDINATE MECHANICAL WORK WITH ALL OTHER TRADES, AND BUILDING OWNER PRIOR TO INSTALLATION. ALL NEW WORK AND MATERIALS SHALL CONFORM TO IMC 2012 AND IECC 2015 / ASHRAE 90.1 - 2013 STANDARDS.
2.

ALL OF THE GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET. THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.
3.

NOTES ON DRAWINGS SHALL APPLY TO ALL SIMILAR CONDITIONS WHETHER THEY ARE REPEATED OR NOT.
4.

PROVIDE FIRE SAFING AT ALL WALL, FLOOR AND ROOF PENETRATIONS. RATING OF MATERIAL SHALL MEET OR EXCEED WALL FIRE RATING.
5.

PAINT ALL EXPOSED SPRINKLER LINES A COLOR AS SELECTED BY THE OWNER. ALL EXTERIOR AND ROOF MOUNTED GAS PIPING SHALL BE CLEANED, PRIMED AND PAINTED SAFETY YELLOW.
6.

THE DRAWINGS AND DETAILS SHALL BE TAKEN AS A DIAGRAMMATIC MEANS OF PROVIDING PIPING AND DUCTWORK. THEY DO NOT SHOW EVERY FITTING AND OFFSET, NOR EVERY STRUCTURAL, ELECTRICAL, PIPING OR DUCTWORK DIFFICULTY THAT MAY BE ENCOUNTERED DURING THE INSTALLATION OF THE WORK.
7.

PROVIDE ACCESS PANELS IN CEILINGS, WALLS AND CASEWORK AT ALL VALVES, COCKS, HEATING COILS, FIRE DAMPERS, AND ANY OTHER MECHANICAL EQUIPMENT INSTALLED WITHIN INACCESSIBLE AREAS. ACCESS PANELS SHALL BE LARGE ENOUGH TO EASILY REMOVE ANY EQUIPMENT TO BE SERVICED THROUGH THE ACCESS PANEL.
8.

ALL ROOFTOP EQUIPMENT INCLUDING CONDENSING UNITS SHALL BE INSTALLED ATOP FULL 18" HIGH PREFABRICATED ROOF CURBS U.N.O. CURBS SHALL BE COMPLETE WITH THE FOLLOWING FEATURES: WELDED 18 GAUGE (MINIMUM) GALVANIZED STEEL CONSTRUCTION, FACTORY INSULATED WITH 1 1/2" RIGID INSULATION, FACTORY INSTALLED 2 X 2 WOOD NAILER, FULLY MITERED CANT ANDSHALL BE CONSTRUCTED SUCH THAT TOP OF CURB IS LEVEL ON PITCHED ROOF. THICKNESS OF CURB MATERIAL SHALL BE AS REQUIRED TO SUPPORT THE EQUIPMENT.
9.

PROVIDE A WIRE GUARD COVER FOR THERMOSTATS IN ALL MECHANICAL SPACES, JANITOR'S CLOSETS, MULTIPURPOSE ROOMS, GYMNASIUMS, KITCHENS, LOCKER ROOMS AND TOILETS.
10.

MAKEUP AIR OUTSIDE AIR INTAKE LOUVERS (AS REQUIRED FOR MAKEUP AIR UNIT) SHALL BE SUPPLIED BY UNIT MANUFACTURER.
11.

ALL LOUVERS NOT SPECIFIED ELSEWHERE SHALL BE ALUMINUM MATERIAL WITH BIRD SCREEN, SIZED AS INDICATED ON PLANS. COLOR AND FINISH OF LOUVER SHALL BE AS SELECTED BY THE OWNER.
12.

THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ANY BELTS OR SHEAVES REQUIRED TO PRODUCE THE DESIGN AIR FLOW QUANTITIES FOR ALL EQUIPMENT INSTALLED OR MODIFIED.
13.

PROVIDE INSULATED BACK PANEL FOR ANY THERMOSTATS MOUNTED ON OUTSIDE WALLS.
14.

FURNISH AND INSTALL NEW FILTERS IN ALL AIR HANDLING EQUIPMENT AT TIME OF SUBSTANTIAL COMPLETION.
15.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINAL COORDINATION WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL REQUIREMENTS OF EQUIPMENT.
16.

REMOVE ALL SHIPPING BOLTS AND ADJUST ALL VIBRATION ISOLATORS PRIOR TO STARTUP OF ALL EQUIPMENT.
17.

ALL COVERINGS, LININGS AND ASSOCIATED ADHESIVES SHALL BE FULLY PLENUM RATED AND SHALL HAVE A FLAME SPREAD INDEX OF LESS THAN 25 AND A SMOKE DEVELOPED RATING OF NOT MORE THAN 50.
18.

ALL ROOFTOP EQUIPMENT INCLUDING CONDENSING UNITS SHALL BE SECURELY FASTENED TO ITS RESPECTIVE MOUNTING STRUCTURE. SPRING ISOLATORS SHALL BE RESTRAINED SPRING TYPE. SUPPORTS SHALL BE CAPABLE OF WITHSTANDING LATERAL WIND LOADS IMPOSED ON THE EQUIPMENT.

RELATED DOCUMENTS

1.

THIS CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS, ELECTRICAL PLANS AND SPECIFICATIONS. SUCH PLANS AND SPECIFICATIONS ARE A PART OF THE CONTRACT DOCUMENTS. CONTRACTORS SHALL VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH ALL CONDITIONS SURROUNDING THE WORK.

PLANS AND SPECIFICATIONS

1.

THROUGHOUT THE COURSE OF THE WORK, THE BUILDING OWNER MAY REQUEST MINOR CHANGES AND ADJUSTMENTS TO THE PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL MAKE SUCH ADJUSTMENTS WITHOUT ADDITIONAL COST TO THE BUILDING OWNER, WHERE SUCH ADJUSTMENTS ARE NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE SYSTEMS, AND WITHIN THE INTENT OF THE CONTRACT DOCUMENTS.
2.

IT IS THE INTENT OF THE PLANS AND SPECIFICATIONS TO FORM A GUIDE FOR A COMPLETE INSTALLATION. EVERYTHING NECESSARY FOR THE COMPLETION AND SUCCESSFUL OPERATION OF THE WORK, WHETHER OR NOT DEFINITELY SPECIFIED OR INDICATED ON THE DRAWINGS SHALL BE PROVIDED AS IF SO SPECIFIED OR INDICATED WITHOUT ADDITIONAL COST TO THE BUILDING OWNER. THE MECHANICAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO INSTALLATION.
3.

NOT WITHSTANDING ANY OTHER PROVISIONS OF THE CONTRACT DOCUMENTS, THE CONTRACTOR BEARS ULTIMATE RESPONSIBILITY FOR COMPLIANCE OF THE INSTALLATION WITH THE REQUIREMENTS OF THE BUILDING OWNER AND OF THE LOCAL AUTHORITY HAVING JURISDICTION.
4.

CONTRACTORS SHALL SUBMIT COMPLETE COORDINATED FLOOR PLAN SHOP DRAWINGS OF HIS PROPOSED WORK INSTALLATION (1/4 INCH MINIMUM SCALE) FOR REVIEW BY ARCHITECT/ENGINEER/OWNER. "COORDINATED" MEANS WITH WORK OF ALL OTHER TRADES INCLUDING PROPOSED FEATURES OF THE GENERAL BUILDING CONSTRUCTION AND OTHER TRADE'S WORK.

CODE COMPLIANCE

1.

THIS CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF ALL STATE AND LOCAL CODES REGULATING THIS WORK. HOWEVER, THIS SHALL NOT BE CONSTRUED AS RELIEVING THE CONTRACTOR FROM COMPLYING WITH ANY REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS THAT MAY BE IN EXCESS OF ANY GOVERNING CODES.

PERMITS, FEES, LICENSES

1.

THIS CONTRACTOR SHALL PAY ALL FEES AND RELATED CHARGES FOR PERMITS, LICENSES, ETC., REQUIRED FOR INSTALLATION OF THE MECHANICAL SYSTEM.

WARRANTY

1.

ALL CONSTRUCTION WORK SHALL BE PERFORMED IN A FIRST-CLASS WORKMANLIKE MANNER AND SHALL BE IN GOOD AND USABLE CONDITION AT THE DATE OF COMPLETION. THIS CONTRACTOR SHALL REQUIRE ANY PERSONS PERFORMING ANY SUCH WORK TO GUARANTEE THE SAME TO BE FREE FROM ANY AND ALL DEFECTS IN WORKMANSHIP AND MATERIALS FOR ONE (1) YEAR FROM THE DATE OF COMPLETION THEREOF. PROVIDE A 5 YEAR PARTS AND LABOR WARRANTY FOR CONDENSING UNIT COMPRESSOR. THIS CONTRACTOR SHALL ALSO REQUIRE ANY SUCH PERSONS TO BE RESPONSIBLE FOR THE REPLACEMENT OR REPAIR WITHOUT ANY ADDITIONAL COST TO ANY AND ALL WORK DONE OR FURNISHED BY OR THROUGH SUCH PERSONS WHICH SHALL BECOME DEFECTIVE WITHIN ONE (1) YEAR AFTER SUBSTANTIAL COMPLETION OF WORK. THE CORRECTION OF SUCH WORK SHALL INCLUDE WITHOUT ADDITIONAL COST ALL EXPENSES AND DAMAGES IN CONNECTION WITH SUCH REMOVAL, REPLACEMENT OR REPAIR OF ANYPART OF THE WORK WHICH MAY BE DAMAGED OR DISTURBED THEREBY.
2.

ALL WARRANTIES OR GUARANTEES AS TO MATERIALS OR WORKMANSHIP WITH RESPECT TO THE BUILDING OWNER'S WORK SHALL BE WRITTEN SO THAT SUCH WARRANTIES OR GUARANTEES SHALL BE TO ENSURE THE BENEFIT OF BOTH BUILDING OWNER AND TENANT AS THEIR RESPECTIVE INTERESTS APPEAR AND CAN BE DIRECTLY ENFORCED BY EITHER.

FIELD QUALITY CONTROL

1.

UPON COMPLETION OF INSTALLATION OF MECHANICAL EQUIPMENT, START-UP AND OPERATE EQUIPMENT TO DEMONSTRATE CAPABILITY AND COMPLIANCE WITH REQUIREMENTS.
2.

REMOVE MALFUNCTIONING EQUIPMENT, REPLACE WITH NEW EQUIPMENT AND RETEST.
3.

REMOVE MALFUNCTIONING HVAC UNITS, REPLACE WITH NEW HVAC UNITS AND RETEST
4.

NOISE AND VIBRATION WILL NOT BE TOLERATED. CONTRACTOR SHALL BID ON FURNISHING EVERY DETAIL TO ASSURE THIS END.

REMODELING AND DEMOLITION

1.

THE CONTRACTOR MUST VISIT THE SITE PRIOR TO SUBMITTING THE BID PROPOSAL TO BECOME FAMILIAR WITH THE EXISTING SITE AND BUILDING CONDITIONS WHICH WILL BE AFFECTED DURING CONSTRUCTION. THE CONTRACTOR IS CAUTIONED THAT THIS PROJECT IS A REMODELING JOB AND IT IS ASSUMED THAT FUNDS HAVE BEEN INCLUDED IN THE BID TO COVER UNFORESEEN ITEMS WHICH MUST BE MOVED, RELOCATED, OR ADJUSTED TO FIT THE WORK. NO EXTRA COMPENSATION WILL BE ALLOWED FOR ANY MATTER OR THING WHICH THE CONTRACTOR MIGHT HAVE BEEN FULLY INFORMED OF PRIOR TO BIDDING.
2.

THE OWNER SHALL HAVE THE OPTION OF SELECTING ANY OR ALL OF THE ITEMS WHICH ARE DESIGNATED TO BE REMOVED BY THE CONTRACTOR AS SALVAGE FOR THE OWNER. THE CONTRACTOR SHALL REMOVE ALL ITEMS WITH EXTREME CARE AND RETURN SUCH ITEMS TO THE OWNER. ALL EQUIPMENT WHICH THE OWNER DOES NOT WANT WILL BECOME THE PROPERTY OF THE CONTRACTOR AND WILL BE PROMPTLY REMOVED FROM THE SITE.
3.

ALL CUTTING AND PATCHING, RELOCATING OF ANY EQUIPMENT, LIGHTING FIXTURES, CONDUIT, PIPING, ETC., NECESSARY TO PERFORM THE WORK WILL BE THE CONTRACTOR'S RESPONSIBILITY U.N.O.. ALL AFFECTED SURFACES WILL BE RESTORED TO THEIR ORIGINAL CONDITION.
4.

ALL EXISTING DUCT AND PIPING SIZES SHOWN ON THE DRAWINGS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR FOR LOCATION AND SIZE.
5.

THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND COORDINATE SAME WITH ALL OTHER TRADES.
6.

REMOVE ANY CEILING TILES, GRID, AND LIGHT FIXTURES REQUIRED TO ACCOMPLISH THE WORK. REPLACE SAME AFTER THE INSTALLATION IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPLACE ANY ITEMS DAMAGED DURING CONSTRUCTION.
7.

THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING ELECTRICAL LINES, PLUMBING LINES, DUCTWORK, OR MECHANICAL PIPING LOCATED IN WALLS OR FLOORS PRIOR TO SAW CUTTING OR CORE DRILLING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPAIR ANY SUCH ITEMS DAMAGED.
8.

THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES PRIOR TO SAW CUTTING OR CORE DRILLING ANY EXISTING FLOOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY EXISTING UTILITIES DISRUPTED.
9.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MODIFICATIONS TO EXISTING OPENINGS WHICH WILL BE REUSED. THIS SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO, ALL SAW CUTTING, INSTALLATION OF NEW LINTELS, FIRE PROOFING AND INFILL OF MASONRY OPENINGS.

DUCTWORK

1.

ALL DUCT SIZES SHOWN ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS.
2.

ALL BRANCH DUCTWORK TO ROUND NECK DIFFUSERS SHALL BE SAME SIZE AS DIFFUSER NECK U.N.O.
3.

ALL DUCT CONNECTIONS TO EQUIPMENT SHALL BE MADE WITH FLEXIBLE DUCTS. INSTALL TURNING VANES IN ALL SQUARE DUCT ELBOWS. INSTALL SPLITTER DAMPER AT EACH BRANCH DUCT CONNECTION TO MAIN AND AT EACH DUCT SPLIT. ALL DAMPERS SHALL BE COMPLETE WITH OPTIONAL 2" STANDOFF TO ALLOW FOR INSTALLATION OF ADJUSTMENT LEVER OUTSIDE OF INSTALLED INSULATION.
4.

ALL DUCTWORK SHALL BE EXTERNALLY INSULATED U.N.O.
5.

INSTALL ACCESS DOORS IN DUCTWORK WHERE REQUIRED FOR MAINTENANCE AND ADJUSTMENT OF MANUAL DAMPERS.
6.

INSTALL FIRE DAMPERS IN EVERY DUCT PASSING THROUGH A FIRE WALL, SMOKE BARRIER, EQUIPMENT ROOM WALL OR FLOOR, DUCT SHAFT PENETRATIONS AND ANY OTHER PLACE WHERE REQUIRED BY ANY AND ALL GOVERNING CODES. INSTALL AN ACCESS DOOR IN DUCTWORK AT EACH FIRE DAMPER. FIRE DAMPERS SHALL BE INSTALLED AS PER LATEST U.L. AND F.I.A. REQUIREMENTS. ALL FIRE DAMPERS SHALL BE RATED FOR DYNAMIC SERVICE UNLESS NOTED OTHERWISE. EXAMINE ALL EXISTING FIRE DAMPERS AND PROVIDE NEW FUSIBLE LINKS AS REQUIRED.
7.

INSTALL PREFABRICATED CURBS AROUND ALL DUCTS PASSING THROUGH ROOF FROM SUPPLY UNITS, ROOF EXHAUST FANS, RAINHOODS, RELIEF AND INTAKE VENTILATORS. COORDINATE ALL CURB REQUIREMENTS WITH ROOFING PLANS.

4.

DIFFUSERS, GRILLES AND REGISTERS

A.

ALL SUPPLY DIFFUSERS SHALL BE 4-WAY THROW UNLESS NOTED OTHERWISE.

B.

ROUND SUPPLY DIFFUSERS SHALL HAVE OPPOSED BLADE DAMPER.

C.

SIDEWALL DIFFUSERS SHALL BE DRUM LOUVERS.

D.

SIDEWALL RETURN GRILLES SHALL HAVE OPPOSED BLADE DAMPER.

E.

ALL OTHER DIFFUSERS AND GRILLES SHALL BE OF TYPE AS SPECIFIED ON PLANS.
5.

ALL GRILLES INSTALLED ON VERTICAL SURFACES ARE TO BE INSTALLED WITH BLADES FACING UP. ALL GRILLES INSTALLED ON HORIZONTAL SURFACES ARE TO BE INSTALLED WITH BLADES FACING NEAREST WALL.
6.

ALL EXPOSED DUCTWORK SHOWN ON PLANS SHALL BE GALVANIZED SHEET METAL UNLESS NOTED OTHERWISE. TURNING VANES ARE TO BE PROVIDED FOR ELBOW FITTINGS. THOSE FITTING WITH A DUCT DIMENSION OF GREATER THAN 12" SHALL BE 4 1/2" TYPE VANES.
7.

ALL JOINTS, SEAMS AND PENETRATIONS IN DUCTWORK SHALL BE SEALED WITH WELDS, GASKETS, MASTICS (ADHESIVES), LIQUID SEALANTS OR TAPES. CLOSURE SYSTEMS USED TO SEAL DUCTWORK SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL181A FOR RIGID DUCTWORK AND UL 181B FOR FLEXIBLE AIR CONNECTORS.
8.

ALL EXPOSED ROUND DUCTWORK TO BE INSULATED, DOUBLE WALL SPIRAL DUCT WITH PERFORATED INNER LINER AND SLIP-FIT TYPE CONNECTIONS, UNLESS NOTED OTHERWISE ON PLANS.
9.

ALL DAMPERS (GRAVITY, BACKDRAFT, M.O.D., ETC.) FOR EQUIPMENT AND DUCTWORK SHALL BE LOW LEAK TYPE AMCA CERTIFIED CLASS I LEAKAGE OR BETTER WITH NEOPRENE OR SILICONE RUBBER EDGES SEALS. SEALS SHALL BE LISTED FOR INSTALLATION IN AIRSTREAMS. ALL EXHAUST DAMPERS, OUTSIDE AIR INTAKE DAMPERS AND OTHER DAMPERS SEALING AGAINST OUTDOOR AIR SHALL BE INSULATED TYPE. ALL DUCT MOUNTED DAMPERS SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR. ALL UNIT MOUNTED DAMPERS SHALL BE SUPPLIED BY THE RESPECTIVE UNIT MANUFACTURER. REFERENCE PLANS, SCHEDULES, DETAILS AND DIAGRAMS FOR ADDITIONAL INFORMATION AND DAMPER LOCATIONS.
10.

ALL KITCHEN HOOD EXHAUST DUCTWORK SHALL BE 16 GAUGE WELDED BLACK IRON WITH 1 1/2" FIRE PROOF WRAP INSULATION UNLESS NOTED OTHERWISE.

MECHANICAL PIPING

1.

ALL VALVES SHALL BE FULL LINE SIZE UNLESS NOTED OTHERWISE. BALL VALVES SHALL BE COMPLETE WITH 2" EXTENSION FOR LEVER HANDLE TO HAVE THE ISOLATION LEVER INSTALLED OUTSIDE OF THE INSTALLED INSULATION.
2.

ALL REFRIGERANT LINES SHALL BE SIZED AND INSTALLED AS PER THE MANUFACTURER'S WRITTEN RECOMMENDATIONS AND REQUIREMENTS. THE CONTRACTOR SHALL PROVIDE MANUFACTURER APPROVED PIPING DIAGRAM PRIOR TO INSTALLATION OF ALL UNITS. ALL LINES SHALL BE INSULATED WITH 1" THICK CLOSED CELL INSULATION. LINES INSTALLED OUTSIDE OF THE BUILDING ENVELOPE SHALL BE JACKETED WITH SOLVENT WELDED PVC OR ALUMINUM JACKETING.
3.

REFRIGERANT PIPING CONNECTIONS TO COILS AND EVAPORATOR BUNDLES SHALL BE MADE ACCORDING TO THE MANUFACTURER'S REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR ALL DEVICES (EXPANSION VALVES, FILTERS, DRYERS, SOLENOID VALVES, ETC.) REQUIRED FOR A FULLY FUNCTIONAL INSTALLATION.
4.

ALL REFRIGERANT SAFETY AND RELIEF VALVES SHALL BE PIPED TO EXTERIOR OF BUILDING AS PER IMC 1 105.7. ALL VENTS SHALL BE SIZED PER MANUFACTURER'S WRITTEN RECOMMENDATIONS AS WELL AS PER LOCAL CODES.
5.

ALL CIRCUIT SETTERS WILL BE FULL LINE SIZE U.N.O.
6.

INSTALL AN ISOLATION VALVE IN EACH BRANCH LINE OFF OF MAINS. ISOLATION VALVES ARE TO BE FULL SIZE OF BRANCH LINES.
7.

ALL CONDENSATE PIPING SHALL BE INSTALLED AT A PITCH OF 1/4" PER FOOT AND SHALL BE INSULATED WITH 1/2" THICK (MINIMUM) PLENUM RATED CLOSED CELL INSULATION JOINED AND SEALED WITH RESPECTIVE MANUFACTURER'S LISTED ADHESIVE UNLESS NOTED OTHERWISE.
8.

INSTALL GAS SHUT OFF COCK / BALL VALVE AT EACH PIECE OF GAS FIRED EQUIPMENT AND APPLIANCE. CONNECT GAS TO EACH PIECE OF GAS FIRED EQUIPMENT THROUGH A GAS VALVE TRAIN AS REQUIRED BY F.I.A., U.L., AND A.G.A. ALL VALVING SHALL BE LISTED BY THE MANUFACTURER FOR INSTALLATION IN NATURAL GAS SYSTEMS.
9.

INSTALL GAS PRESSURE REGULATOR AT EACH PIECE OF GAS FIRED EQUIPMENT AND APPLIANCE. THE REGULATOR SHALL BE CAPABLE OF REDUCING SERVICE PRESSURE DOWN TO THE REQUIRED EQUIPMENT PRESSURE. VENT EACH REGULATOR INDEPENDENTLY AND TERMINATE OUTSIDE THE BUILDING WITH A TURNED DOWN SCREENED ELBOW. COORDINATE ALL REQUIREMENTS WITH THE LOCAL UTILITY AND THE EQUIPMENT MANUFACTURER. ALL REGULATORS SHALL BEAR APPROVAL OF A NATIONAL TESTING AGENCY. SHALL BE LISTED AS COMPLYING WITH ANSI Z21.80, SHALL MAINTAIN A REDUCED OUTLET PRESSURE UNDER LOCKUP (NO-FLOW) CONDITIONS AND SHALL BE CAPABLE OF OPERATION AS INDICATED BY MANUFACTURER PUBLISHED DATA WITH AN INLET PRESSURE 5 PSIG ABOVE LOCAL GAS COMPANY DELIVERY PRESSURE.
10.

INSTALL A TEE FITTING WITH BALL VALVE & CAP BETWEEN ALL GAS PRESSURE REGULATORS AND THE UPSTREAM ISOLATION VALVE AND A SECOND TEE FITTING A MINIMUM OF 10 PIPE DIAMETERS DOWNSTREAM OF ALL GAS PRESSURE REGULATOR OUTLETS. TEE FITTINGS SHALL BE ARRANGED TO ALLOW CONNECTION OF A PRESSURE MEASURING DEVICE. THE TEE FITTING UPSTREAM OF THE REGULATOR SHALL ALSO BE ARRANGED TO SERVE AS A SEDIMENT TRAP.
11.

NOT ALL VALVES ARE SHOWN ON THE FLOOR PLANS. FURNISH AND INSTALL ALL VALVES, FITTINGS, ETC. WHICH ARE SHOWN ON THE PIPING DIAGRAMS AND CONTROL SEQUENCES.
12.

ANY UNDERGROUND GAS PIPING INSIDE OF THE BUILDING SHALL BE INSTALLED WITHIN A WELDED SCHEDULE 40 SLEEVE. EACH END OF SLEEVE SHALL EXTEND UP 6" ABOVE FINISHED FLOOR AND BE SEALED TIGHT.
13.

PROVIDE SEPARATE CONDENSATION DRAIN LINE FROM DRIP PAN OF EACH AIR CONDITIONING SUPPLY UNIT AND SPILL INTO NEAREST FLOOR DRAIN. DRAIN PIPING SHALL BE FULL SIZE OF TAPPING AT DRAIN PAN.
14.

PROVIDE TRAP AT EACH ROOFTOP UNIT CONDENSATE CONNECTION. TRAP SHALL BE SIZED AS PER THE MANUFACTURER'S WRITTEN RECOMMENDATIONS.

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MECH. GENERAL NOTES

SHEET NO.

M0.1



TRACTION ELEVATOR SYSTEM SPECIFICAITONS:		PART 2     PRODUCTS			
1.01     SUMMARY		2.02     MANUFACTURER			
A.     SECTION INCLUDES: ELECTRIC TRACTION ELEVATOR.		A.     PROVIDE AC GEARLESS MACHINE ROOM-LESS ELEVATOR SYSTEMS SUBJECT TO COMPLIANCE WITH THE DESIGN AND PERFORMANCE REQUIREMENTS OF THIS SPECIFICATION. ELEVATOR MANUFACTURERS MAY INCLUDE BUT ARE NOT LIMITED TO ONE OF THE FOLLOWING:		B.     FLUSH MOUNTED CAR OPERATING PANEL SHALL CONTAIN A BANK OF ROUND, MECHANICAL, ILLUMINATED    BUTTONS MARKED TO CORRESPOND TO LANDINGS SERVED, EMERGENCY CALL BUTTON, DOOR OPEN    BUTTON, DOOR CLOSE BUTTON, AND KEY SWITCHES FOR LIGHTS, INSPECTION, AND EXHAUST FAN. THE BUTTONS ILLUMINATION (HALO) COLOR, THE CAR OPERATING DISPLAY PANEL DOT-MATRIX COLOR, AND THE COLOR OF ALL TEXTS WHEN ILLUMINATED SHALL BE SELECTED BY THE OWNER. THE CAR OPERATING PANEL FINISH SHALL BE SELECTED BY OWNER.	
B.     PRODUCTS SUPPLIED BUT NOT INSTALLED UNDER THIS SECTION:		1.     KONE, INC.		E.     ELECTRONIC DOOR SAFETY DEVICE. THE ELEVATOR CAR SHALL BE EQUIPPED WITH AN ELECTRONIC PROTECTIVE DEVICE EXTENDING THE FULL HEIGHT OF THE CAR. WHEN ACTIVATED, THIS SENSOR SHALL PREVENT THE DOORS FROM CLOSING OR CAUSE THEM TO STOP AND REOPEN IF THEY ARE IN THE PROCESS OF CLOSING. THE DOORS SHALL REMAIN OPEN AS LONG AS THE FLOW OF TRAFFIC CONTINUES AND SHALL CLOSE SHORTLY AFTER THE LAST PERSON PASSES THROUGH THE DOOR OPENING.	
3.     INSERTS MOUNTED IN BLOCK WALLS FOR RAIL ATTACHMENTS		2.     SCHINDLER GROUP		PART 3     EXECUTION	
C.     WORK SUPPLIED UNDER OTHER SECTIONS:		1.02     EQUIPMENT: CONTROL COMPONENTS AND CONTROL SPACE		3.01     EXAMINATION	
1.     TEMPORARY LIGHTING, INCLUDING TEMPORARY LIGHTING IN HOISTWAY FOR MACHINE SPACE WITH SWITCH LOCATED IN HOISTWAY ON THE STRIKE JAMB SIDE OF TOP LANDING DOOR.		A.     CONTROLLER: PROVIDE MICROCOMPUTER BASED CONTROL SYSTEM TO PERFORM ALL OF THE FUNCTIONS.		A.     FIELD MEASURE AND EXAMINE SUBSTRATES, SUPPORTS, AND OTHER CONDITIONS UNDER    WHICH ELEVATOR WORK IS TO BE PERFORMED.	
2.     MAIN LINE DISCONNECTS FOR EACH ELEVATOR.		1.     ALL HIGH VOLTAGE (110V OR ABOVE) CONTACT POINTS INSIDE THE CONTROLLER CABINET SHALL BE PROTECTED FROM ACCIDENTAL CONTACT IN A SITUATION WHERE THE CONTROLLER DOORS ARE OPEN.		B.     DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS ARE CORRECTED.	
a.     ONE FUSED THREE PHASE PERMANENT POWER IN BUILDING ELECTRICAL DISTRIBUTION ROOM		2.     CONTROLLER SHALL BE SEPARATED INTO TWO DISTINCT HALVES; MOTOR DRIVE SIDE AND CONTROL SIDE. HIGH VOLTAGE MOTOR POWER CONDUCTORS SHALL BE ROUTED AND    PHYSICALLY SEGREGATED FROM THE REST OF THE CONTROLLER.		C.     PRIOR TO START OF WORK, VERIFY HOISTWAY IS IN ACCORDANCE WITH SHOP DRAWINGS. DIMENSIONAL TOLERANCE OF HOISTWAY FROM SHOP DRAWINGS: -0 INCHES +2 INCHES. DO NOT BEGIN WORK    OF THIS SECTION UNTIL DIMENSIONS ARE WITHIN TOLERANCES.	
b.     ONE NON FUSED THREE PHASE PERMANENT POWER IN HOIST WAY AT TOP LANDING		B.     PROVIDE A SERIAL CARDRACK AND MAIN CPU BOARD CONTAINING A NON-ERASABLE EPROM AND OPERATING SYSTEM FIRMWARE.		D.     PRIOR TO START OF WORK, VERIFY PROJECTIONS GREATER THEN 2 INCHES (4 INCHES IF ASME A17.1/CSA B44 2000 APPLIES) MUST BE BEVELED NOT LESS THEN 75 DEGREES FROM HORIZONTAL.	
3.     HOISTWAY VENTILATION SHALL BE IN ACCORDANCE WITH LOCAL AND NATIONAL BUILDING CODE REQUIREMENTS.		C.     VARIABLE FIELD PARAMETERS AND ADJUSTMENTS SHALL BE CONTAINED IN A NON-VOLATILE MEMORY MODULE.		E.     PRIOR TO START OF WORK, VERIFY LANDINGS HAVE BEEN PREPARED FOR ENTRANCE SILL INSTALLATION. TRADITIONAL SILL ANGLE OR CONCRETE SILL SUPPORT SHALL NOT BE REQUIRED.	
4.     GUIDE RAIL SUPPORT SHALL BE STRUCTURALLY ADEQUATE TO EXTEND FROM PIT FLOOR TO TOP OF HOISTWAY, WITH SPANS IN ACCORDANCE WITH REQUIREMENTS OF AUTHORITY HAVING JURISDICTION AND FINAL LAYOUTS.		1.     DRIVE: PROVIDE VARIABLE VOLTAGE VARIABLE FREQUENCY AC DRIVE SYSTEM TO DEVELOP HIGH STARTING TORQUE WITH LOW STARTING CURRENT.		F.     PRIOR TO START OF WORK, VERIFY ELEVATOR PIT HAS BEEN CONSTRUCTED IN ACCORDANCE WITH REQUIREMENTS, IS DRY AND REINFORCED TO SUSTAIN VERTICAL FORCES, AS INDICATED IN APPROVED SUBMITTAL. VERIFY THAT SUMPS OR SUMP PUMPS LOCATED WITHIN PIT WILL NOT INTERFERE WITH INSTALLED ELEVATOR EQUIPMENT.	
5.     REMOVABLE BARRICADES AT ALL HOISTWAY OPENINGS, IN COMPLIANCE WITH OSHA 29 CFR 1926.502 IN ADDITION TO ANY LOCAL CODE REQUIREMENTS.		2.     THE DRIVE WILL BE SET UP FOR REGENERATION OF AC POWER BACK INTO THE BUILDING GRID.		G.     PRIOR TO START OF WORK, VERIFY CONTROL SPACE HAS BEEN CONSTRUCTED IN ACCORDANCE WITH REQUIREMENTS, WITH ACCESS COORDINATED WITH ELEVATOR SHOP DRAWINGS, INCLUDING SLEEVES AND PENETRATIONS.	
6.     LIFELINE ATTACHMENTS CAPABLE OF WITHSTANDING 5000 LB LOAD IN ACCORDANCE WITH OSHA 29 CFR 1926.502: PROVIDE A MINIMUM OF 2 AT THE TOP, FRONT OF EACH HOISTWAY.		3.     CONTROLLER LOCATION: LOCATE CONTROLLER(S) IN THE FRONT WALL INTEGRATED WITH THE TOP LANDING ENTRANCE FRAME, MACHINE SIDE OF THE ELEVATOR. A SEPARATE CONTROL SPACE SHOULD NOT BE REQUIRED.		H.     VERIFY INSTALLATION OF GFCI PROTECTED 20-AMP IN PIT AND ADJACENT TO EACH SIGNAL CONTROL CABINET IN CONTROL    SPACE.	
7.     PIT LIGHTING: FIXTURE WITH SWITCH AND GUARDS. PROVIDE ILLUMINATION LEVEL EQUAL TO OR GREATER THAN THAT REQUIRED BY ASME A17.1/CSA B44 2000, OR APPLICABLE VERSION.		2.06     EQUIPMENT: ELEVATOR OPERATION AND CONTROLLER		3.02     PREPARATION	
8.     CONTROL SPACE LIGHTING WITH SWITCH. COORDINATE SWITCH WITH LIGHTING FOR MACHINE SPACE AS ALLOWABLE BY CODE.		A.     ELEVATOR OPERATION		A.     COORDINATE INSTALLATION OF ANCHORS, BEARING PLATES, BRACKETS AND OTHER RELATED ACCESSORIES.	
D.     APPLICABLE INDUSTRY AND GOVERNMENT STANDARDS:		1.     SIMPLEX COLLECTIVE OPERATION: USING A MICROPROCESSOR-BASED CONTROLLER, OPERATION SHALL BE AUTOMATIC BY MEANS OF THE CAR AND HALL BUTTONS. IF ALL CALLS IN THE SYSTEM HAVE BEEN ANSWERED, THE CAR SHALL PARK AT THE LAST LANDING SERVED.		3.03     INSTALLATION	
1.     ICC/ANSI A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES		1.     HOISTWAY ACCESS BOTTOM LANDING		A.     INSTALL EQUIPMENT, GUIDES, CONTROLS, CAR AND ACCESSORIES    IN ACCORDANCE WITH MANUFACTURER INSTALLATION METHODS AND RECOMMENDED PRACTICES.	
2.     ADAAG - ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES		2.     HOISTWAY ACCESS TOP LANDING		B.     PROPERLY LOCATE GUIDE RAILS AND RELATED SUPPORTS AT LOCATIONS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND APPROVED SHOP DRAWINGS. ANCHOR TO BUILDING STRUCTURE USING ISOLATION SYSTEM TO MINIMIZE TRANSMISSION OF VIBRATION TO STRUCTURE.	
3.     ANSI/NFPA 70, NATIONAL ELECTRICAL CODE		3.     PROVIDE PROVISIONS FOR COAXIAL CABLE FOR CCTV. CCTV BY OTHERS.		C.     ALL HOISTWAY FRAMES SHALL BE SECURELY FASTENED TO FIXING ANGLES MOUNTED IN THE HOISTWAY. COORDINATE INSTALLATION    OF SILLS AND FRAMES WITH OTHER TRADES.	
4.     ANSI/NFPA 80, STANDARD FOR FIRE DOORS AND FIRE WINDOWS		4.     INTERCOM PROVISIONS		D.     LUBRICATE OPERATING SYSTEM COMPONENTS IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.	
5.     ASME/ANSI A17.1, SAFETY CODE FOR ELEVATORS AND ESCALATORS.		5.     EMERGENCY BATTERY POWER SUPPLY		E.     PERFORM FINAL ADJUSTMENTS, AND NECESSARY SERVICE PRIOR    TO SUBSTANTIAL COMPLETION.	
1.02     DESCRIPTION OF ELEVATOR		a.     WHEN THE MAIN LINE POWER IS LOST FOR LONGER THAN 5 SECONDS THE EMERGENCY BATTERY    POWER SUPPLY PROVIDES POWER AUTOMATICALLY TO THE ELEVATOR CONTROLLER. THE ELEVATOR WILL RISE OR LOWER TO THE FIRST AVAILABLE LANDING, OPEN THE DOORS, AND SHUT DOWN. THE ELEVATOR WILL RETURN TO SERVICE UPON THE RETURN OF NORMAL MAIN LINE POWER. AN AUXILIARY CONTACT ON THE MAIN LINE DISCONNECT AND SHUNT TRIP BREAKER WILL BE PROVIDED BY OTHERS.		3.04     CONSTRUCTION	
A.     DRIVE: REGENERATIVE		1.     HOISTWAY OPERATING DEVICES:		A.     INTERFACE WITH OTHER WORK:	
B.     QUANTITY OF ELEVATORS: 1		1.     EMERGENCY STOP SWITCH IN THE PIT		1.     GUIDE RAIL BRACKETS ATTACHED TO STEEL SHALL BE INSTALLED PRIOR TO APPLICATION OF FIREPROOFING.	
C.     LANDINGS: 3 (SKYDECK ALTERNATE: 4 LANDINGS, 4 FRONT OPENINGS)		2.     TERMINAL STOPPING SWITCHES.		2.     COORDINATE CONSTRUCTION OF ENTRANCE WALLS WITH INSTALLATION OF DOOR FRAMES AND SILLS. MAINTAIN FRONT WALL OPENING UNTIL ELEVATOR EQUIPMENT HAS BEEN INSTALLED.	
D.     OPENINGS: 3 FRONT OPENINGS, 0 BACK OPENINGS		3.     EMERGENCY STOP SWITCH ON THE MACHINE		A.     ENSURE ADEQUATE SUPPORT FOR ENTRANCE ATTACHMENT POINTS AT ALL LANDINGS.	
E.     TRAVEL: 22'-0" WITH 13' CLEAR OVERHEAD AND 5' PIT. ELEVATOR CONTRACTOR TO VERIFY IN FIELD PIT DEPTH. ELEVATOR SHALL BE FABRICATED FROM FIELD MEASUREMENTS BY ELEVATOR CONTRACTOR.		E.     POSITIONING SYSTEM: SYSTEM CONSISTING OF MAGNETS AND PROXIMITY SWITCHES.		B.     COORDINATE WALL OPENINGS FOR HALL PUSH BUTTONS, SIGNAL FIXTURES AND SLEEVES. EACH ELEVATOR REQUIRES SLEEVES WITHIN THE HOISTWAY WALL.	
F.     RATED CAPACITY: 2000 LBS		F.     GUIDE RAILS AND ATTACHMENTS: STEEL RAILS WITH BRACKETS AND FASTENERS.		C.     COORDINATE EMERGENCY POWER TRANSFER SWITCH AND POWER CHANGE PENDING SIGNALS AS REQUIRED FOR TERMINATION AT THE PRIMARY ELEVATOR SIGNAL CONTROL CABINET IN EACH GROUP.	
G.     RATED SPEED: 150FPM		2.03     EQUIPMENT: HOISTWAY ENTRANCES		D.     COORDINATE INTERFACE OF ELEVATORS AND FIRE ALARM SYSTEM.	
H.     ENTRANCE WIDTH AND TYPE: 3'-0", RIGHT		A.     HOISTWAY ENTRANCES		E.     COORDINATE INTERFACE OF DEDICATED TELEPHONE LINE.	
I.     ENTRANCE HEIGHT: 7' 0"		1.     SILLS: EXTRUDED.		F.     COORDINATE THE INSTALLATION OF THE NON FUSED THREE PHASE PERMANENT POWER DISCONNECT IN HOIST WAY AT TOP LANDING	
J.     MAIN POWER SUPPLY: 208 VOLTS + 5%, THREE-PHASE		2.     DOORS: HOLLOW METAL CONSTRUCTION WITH VERTICAL INTERNAL CHANNEL REINFORCEMENTS.		3.05     TESTING AND INSPECTIONS	
K.     OPERATION: SIMPLEX		3.     FIRE RATING: ENTRANCE AND DOORS SHALL BE UL FIRE-RATED FOR 1-1/2 HOUR. ELEVATOR SHAFT WALLS SHALL BE UL FIRE-RATED FOR 1-1/2 HOUR -- WORK NOT INCLUDED UNDER THIS SECTION, BUT APPLICABLE.		A.     PERFORM RECOMMENDED AND REQUIRED TESTING IN    ACCORDANCE WITH AUTHORITY HAVING JURISDICTION.	
L.     MACHINE LOCATION: INSIDE THE HOISTWAY MOUNTED ON CAR GUIDE RAIL		B.     ENTRANCE FINISH: ENTRANCE FINISH SHALL BE SELECTED BY OWNER.		B.     OBTAIN REQUIRED PERMITS AND PROVIDE ORIGINALS TO OWNER'S REPRESENTATIVE.	
M.     CONTROL SPACE LOCATION: FLOOR INSIDE HOISTWAY		C.     ENTRANCE MARKINGS JAMB PLATES: PROVIDE STANDARD ENTRANCE JAMB TACTILE MARKINGS ON BOTH JAMBS, AT ALL FLOORS. PLATE MOUNTING: REFER TO MANUFACTURER DRAWINGS.		3.06     DEMONSTRATION	
N.     ELEVATOR EQUIPMENT SHALL CONFORM TO THE REQUIREMENTS OF SEISMIC ZONE: NON-SEISMIC		2.04     EQUIPMENT: CAR COMPONENTS		A.     PRIOR TO SUBSTANTIAL COMPLETION, INSTRUCT OWNER'S REPRESENTATIVE ON THE PROPER FUNCTION AND REQUIRED DAILY MAINTENANCE OF ELEVATORS. INSTRUCT PERSONNEL ON EMERGENCY PROCEDURES.	
O.     MAINTENANCE SERVICE PERIOD: 1 YEAR		A.     CAR FRAME: PROVIDE CAR FRAME WITH ADEQUATE BRACING TO SUPPORT THE PLATFORM AND CAR ENCLOSURE.			
1.03     PERFORMANCE REQUIREMENTS		B.     PLATFORM: PLATFORM SHALL BE ALL STEEL CONSTRUCTION.			
A.     CAR PERFORMANCE		C.     CAR GUIDES: PROVIDE GUIDE-SHOES MOUNTED TO TOP AND BOTTOM OF BOTH AND COUNTERWEIGHT FRAME. EACH GUIDE-SHOE ASSEMBLY SHALL BE ARRANGED TO MAINTAIN CONSTANT CONTACT ON THE RAIL SURFACES. PROVIDE RETAINERS IN AREAS WITH SEISMIC DESIGN REQUIREMENTS.			
1.     CAR SPEED ± 5% OF CONTRACT SPEED UNDER ANY LOADING CONDITION OR DIRECTION OF TRAVEL		D.     STEEL CAB FINISH: STEEL CAB FINISH SHALL BE SELECTED BY OWNER.			
2.     CAR CAPACITY: SAFELY LOWER, STOP AND HOLD (PER CODE) UP TO 125% OF RATED LOAD.		E.     HANDRAIL:			
B.     SYSTEM PERFORMANCE		1.     RAILS TO BE LOCATED ON SIDE AND BACK WALL OF CAR ENCLOSURE.			
1.     VERTICAL VIBRATION (MAXIMUM): 25 MG		F.     FLOORING: BY OTHERS. (NOT TO EXCEED 2SQFT AND 1/2" FINISHED DEPTH.)			
2.     HORIZONTAL VIBRATION (MAXIMUM): 25 MG		G.     THRESHOLD: ALUMINUM			
3.     JERK RATE (MAXIMUM): 3.3 FT/SEC2		F.     EMERGENCY CAR SIGNALS			
4.     ACCELERATION (MAXIMUM) 1.3 FT/SEC2		1.     EMERGENCY SIREN: SIREN MOUNTED ON TOP OF CAB THAT IS ACTIVATED WHEN THE ALARM BUTTON IN THE CAR OPERATING PANEL IS ENGAGED. SIREN SHALL HAVE RATED SOUND PRESSURE LEVEL OF 80 DB(A) AT A DISTANCE OF THREE FEET FROM DEVICE. SIREN SHALL RESPOND WITH A DELAY OF NOT MORE THAN ONE SECOND AFTER ACTIVATION OF ALARM BUTTON.			
5.     IN CAR NOISE: = 55 DB(A)		2.     EMERGENCY CAR LIGHTING: PROVIDE EMERGENCY POWER UNIT EMPLOYING 12-VOLT SEALED RECHARGEABLE BATTERY AND TOTALLY STATIC CIRCUITS SHALL ILLUMINATE THE ELEVATOR CAR AND    PROVIDE CURRENT TO THE ALARM BELL IN THE EVENT OF BUILDING POWER FAILURE.			
6.     LEVELING ACCURACY: ±0.2 INCHES		3.     EMERGENCY EXIT CONTACT: AN ELECTRICAL CONTACT SHALL BE PROVIDED ON THE CAR-TOP EXIT.			
7.     STARTS PER HOUR (MAXIMUM): 120		4.     VENTILATION: FAN			
1.04     QUALITY ASSURANCE		2.05     EQUIPMENT: SIGNAL DEVICES AND FIXTURES			
A.     MANUFACTURER: MINIMUM OF FIFTEEN YEARS EXPERIENCE IN THE FABRICATION, INSTALLATION AND SERVICE OF ELEVATORS OF THE TYPE AND PERFORMANCE OF THE SPECIFIED. THE MANUFACTURER SHALL HAVE A DOCUMENTED QUALITY ASSURANCE PROGRAM.		A.     CAR OPERATING PANEL: PROVIDE CAR OPERATING PANEL WITH ALL PUSH BUTTONS, KEY SWITCHES, AND MESSAGE INDICATORS FOR ELEVATOR OPERATION. FIXTURE FINISH TO BE SELECTED BY OWNER.			
B.     INSTALLER: THE EQUIPMENT MANUFACTURER SHALL INSTALL THE ELEVATOR.					
C.     INSPECTION AND TESTING: IN ACCORDANCE WITH REQUIREMENTS OF LOCAL JURISDICTION, OBTAIN REQUIRED PERMITS, INSPECTIONS AND TESTS.					
1.05     DELIVERY, STORAGE AND HANDLING					
A.     COMPLY WITH MANUFACTURER'S RECOMMENDATIONS FOR DELIVERY, STORAGE AND HANDLING.					
B.     IF THE CONSTRUCTION SITE IS NOT PREPARED TO RECEIVE THE ELEVATOR EQUIPMENT AT THE AGREED SHIP DATE, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE A SAFE, DRY, AND EASILY ACCESSIBLE STORAGE AREA ON OR OFF THE PREMISES. ADDITIONAL LABLOR COSTS FOR DOUBLE HANDLING WILL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.					
C.     DELIVERED ELEVATOR MATERIALS SHALL BE STORED IN A PROTECTED ENVIRONMENT IN ACCORDANCE WITH MANUFACTURER    RECOMMENDATIONS. A MINIMUM STORAGE AREA OF 10 FEET BY 20 FEET IS REQUIRED ADJACENT TO THE HOISTWAY.					
1.06     WARRANTY					
A.     PROVIDE MANUFACTURER WARRANTY FOR A PERIOD OF ONE YEAR. THE WARRANTY PERIOD IS TO BEGIN UPON SUBSTANTIAL COMPLETION OF THE CONTRACT. WARRANTY COVERS DEFECTS IN MATERIALS AND WORKMANSHIP. DAMAGE DUE TO ORDINARY USE, VANDALISM, IMPROPER OR INSUFFICIENT MAINTENANCE, MISUSE, OR NEGLECT DO NOT CONSTITUTE DEFECTIVE MATERIAL OR WORKMANSHIP.					
1.07     MAINTENANCE SERVICE					
A.     THE ELEVATOR MANUFACTURER SHALL PROVIDE MAINTENANCE SERVICE CONSISTING OF REGULAR EXAMINATIONS AND ADJUSTMENTS OF THE ELEVATOR EQUIPMENT FOR A PERIOD OF 1 YEAR AFTER DATE OF SUBSTANTIAL COMPLETION. REPLACEMENT PARTS SHALL BE PRODUCED BY THE ORIGINAL EQUIPMENT MANUFACTURER.					
B.     MAINTENANCE SERVICE BE PERFORMED DURING REGULAR WORKING HOURS OF REGULAR WORKING DAYS AND SHALL INCLUDE REGULAR TIME CALL BACK SERVICE.					
C.     MAINTENANCE SERVICE SHALL NOT INCLUDE ADJUSTMENTS, REPAIRS OR REPLACEMENT OF PARTS DUE TO NEGLIGENCE, MISUSE, ABUSE OR ACCIDENTS.					

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

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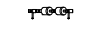

ELEVATOR GENERAL NOTES






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





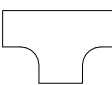
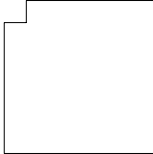
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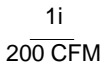


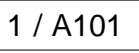





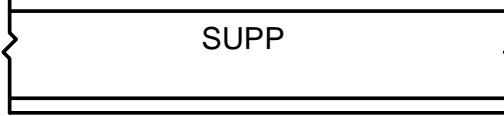
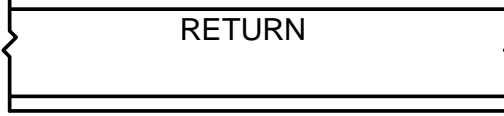
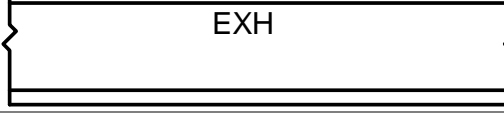
AIR TERMINALS	
	SUPPLY DIFFUSER CIRCULAR - DUCT MOUNTED
	SUPPLY DIFFUSER CIRCULAR - CEILING MOUNTED
	RETURN GRILLE WITH WIRE MESH - WALL OR DUCT MOUNTED
	RETURN GRILLE WITH TRIM - CEILING MOUNTED

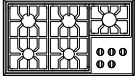
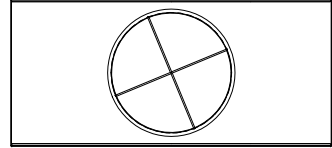
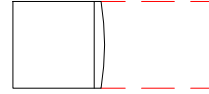
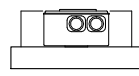
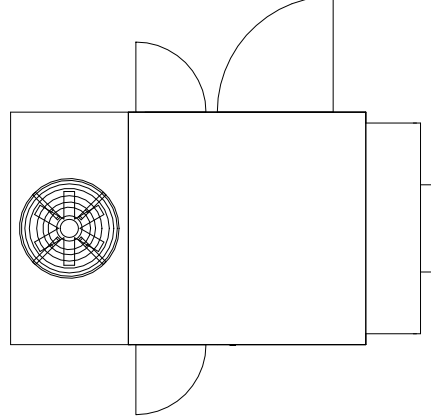

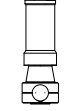

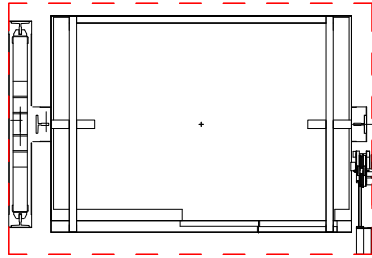
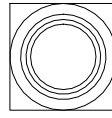
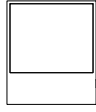


MECHANICAL PIPING VALVES AND ACCESSORIES	
	2-WAY MANUAL CONTROL VALVE
	PRESSURE GAUGE
	CALIBRATED PRESSURE RELIEF VALVE
	CHECK VALVE FLANGED
	BACKFLOW PREVENTER
	ALARM FLOW SWITCH - DIFFERENTIAL PRESSURE SWITCH

DUCT ACCESSORIES	
	MANUAL BALANCING DAMPER
 <b>FD</b>	FIRE DAMPER
	CONTROL DAMPER - OPPOSED BLADE
	MANUAL CONTROL DAMPER
	DUCT DETECTOR

DUCT FITTINGS	
	TEE
	ROUND TO RECTANGULAR TRANSITION
	ROUND CROSS WITH ENDCAP
	PLENUM MIXING BOX
	ENDCAP
	ELBOW 45 DEGREE
	ELBOW MITERED 90 DEGREE
	RECTANGULAR TEE FILLETED
	RECTANGULAR SHARP THROAT RADIUS HEEL ELBOW

GENERAL ANNOTATION TAGS	
	DUCT SIZE TAG (INCHES)
	DIFFUSER TAG AND DESIGN AIRFLOW
	MECHANICAL EQUIPMENT TAG
	FLOOR PLAN KEYNOTE
	VIEW REFERENCE
	HVAC ZONE TAG

MECHANICAL DUCT AND PIPE KEY	
	REFRIGERANT PIPING
	NATURAL GAS PIPING
	SUPPLY AIR DUCTWORK
	RETURN AIR DUCTWORK
	EXHAUST AIR DUCTWORK

MECHANICAL EQUIPMENT / SPECIALTY EQUIPMENT		
	NATURAL GAS COOKTOP	 AIR-COOLED CONDENSING UNIT
	COMMERCIAL REFRIGERATOR - SEE ARCHITECTURAL SCHEDULE FOR SIZING	
	TANKLESS WATER HEATER	 PACKAGED ROOFTOP MAKEUP AIR UNIT
	WIND TURBINE EXHAUST VENTILATOR	
	INLINE RECIRCULATION PUMP	
	INLINE DRIVE EXHAUST FAN - SEE DWG FOR SIZES	 TRACTION ELEVATOR SYSTEM
	EXHAUST FAN ROOFTOP - UPBLAST	
	GAS-FIRED FURNACE	 COMMERCIAL KITCHEN EXHAUST HOOD
	EVAPORATOR COIL	

PROJECT:  
DATE :  
DRAWN BY:  
REVISION:

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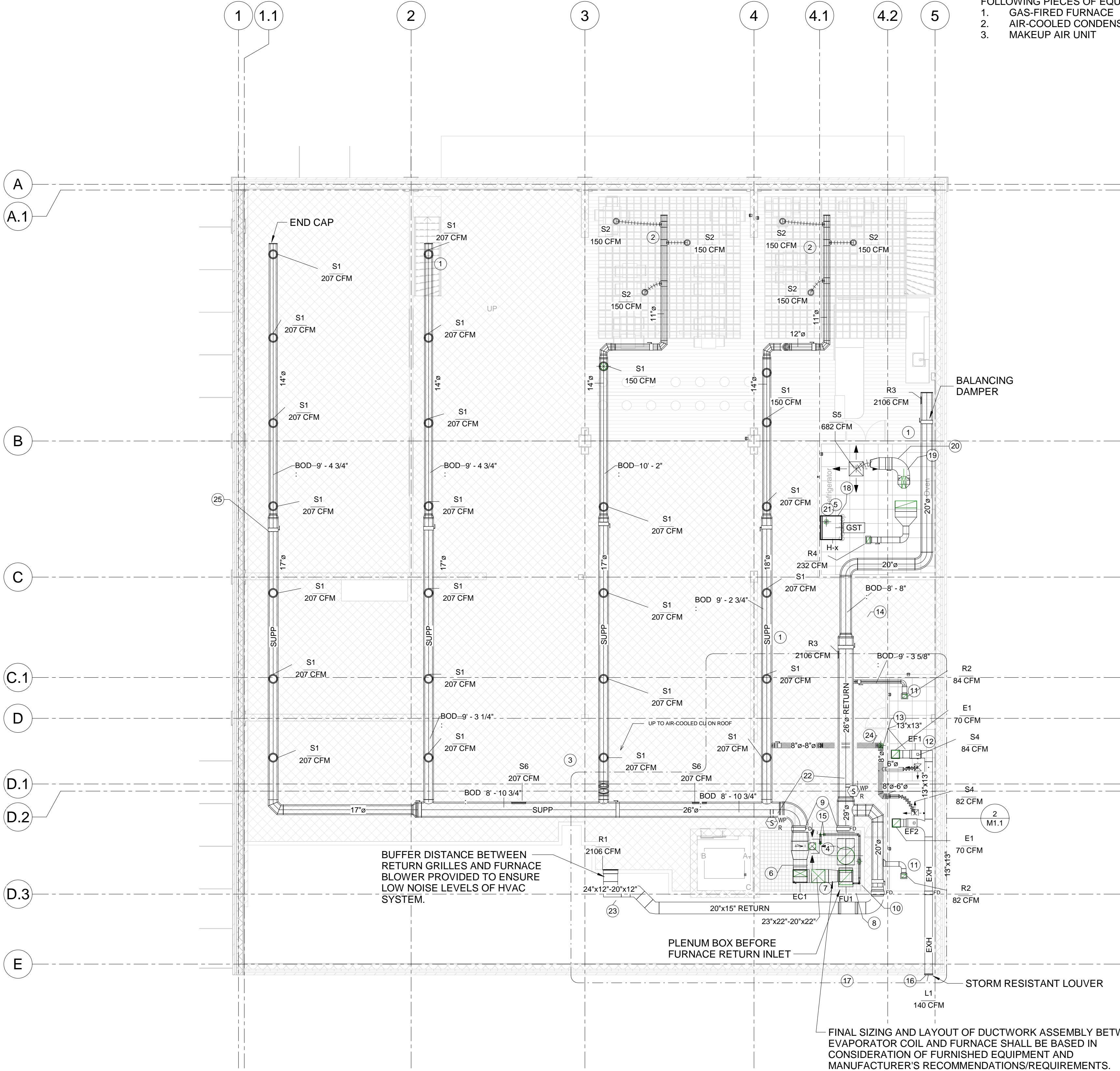
SHEET NAME

MECHANICAL SYMBOL  
LEGEND

SHEET NO.

M0.3





NOTE: MECHANICAL CONTRACTOR & EQUIPMENT VENDOR TO PROVIDE OPERATION & MAINTENANCE MANUAL AND OWNERS TRAINING FOR THE FOLLOWING PIECES OF EQUIPMENT:

1. GAS-FIRED FURNACE
2. AIR-COOLED CONDENSING UNIT
3. MAKEUP AIR UNIT

L3 MECHANICAL KEYNOTES	
Note Number	Note Text
1	ALL EXPOSED DUCTWORK SHALL BE GALVANIZED DOUBLE-LINED WITH 2" BATT INSULATION. REFER TO DRAWINGS FOR ALL DUCTWORK SIZES.
2	SUPPLY DIFFUSERS IN INACCESSIBLE CEILING SHALL HAVE BALANCING DAMPER AS PART OF DIFFUSER ASSEMBLY (ACCESSIBLE FROM BELOW CEILING)
3	CONDENSING UNIT REFRIGERANT PIPING TO BE CONCEALED ABOVE-CEILING. INSULATE ALL MECHANICAL PIPING WITH 2" INSULATION
4	DUCTWORK IN UTILITY ROOM TO BE INSULATED WITH 2" MINERAL WOOL DUCT WRAP. NO DOUBLE-LINED AND/OR GALVANIZED DUCTWORK IS REQUIRED IN BACK-OF-HOUSE SPACES.
5	EXHAUST AIR DISCHARGE TO AXIAL EXHAUST FAN ON ROOFTOP. KITCHEN EXHAUST HOOD TO BE EQUIPPED WITH UL-LISTED LIGHTING RECESSED IN HOOD. LIGHTING LUMENS TO BE IN ACCORDANCE WITH 2018 IBC.
6	PROVIDE ROOFTOP TURBINE EXHAUST FAN (WIND-DRIVEN) TO SERVE UTILITY ROOM VENTILATION SYSTEM
7	PROVIDE VIBRATION ISOLATION STANDS FOR ALL HVAC EQUIPMENT AND DUCTWORK MOUNTED FROM UTILITY ROOM FLOOR
8	SEAL ALL PENETRATIONS THROUGH RATED WALLS AND RATED ATTIC CEILING WITH UL-LISTED FIRECAULK.
9	FIRE DAMPER REQUIRED WHERE DUCTWORK PASSES THROUGH RATED WALL
10	FURNACE EXHAUST AIR STUBBED UP TO ROOF - TIE IN TWH-1 EXHAUST PIPING MINIMUM 7'-0" ABOVE FURNACE EXHAUST AIR DISCHARGE. OFFSET WATER HEATER EXHAUST PIPING ON A MINIMUM SLOPE OF 1'/12" TO CONNECTION POINT WITH VERTICAL EXHAUST VENT PIPE TO ROOF
11	OCCUPANCY SENSORS TO BE TIED IN SERIES WITH EXHAUST FANS. PROVIDE ELECTRICAL CONTRACTOR WITH NECESSARY CUT SHEETS AND PRODUCT DATA FROM EXHAUST FAN VENDOR FOR WIRING PURPOSES.
12	ALL CONCEALED DUCTWORK ABOVE-CEILING WRAP WITH 2" INSULATION DUCT WRAP
13	MID. OF DUCT 9' 11". RUN EXPOSED SPIRAL DUCT PARALLEL TO BATHROOM WALL, STUB OUT ROUND TAPS INTO BATHROOMS ABOVE 9'-0" BATHROOM CEILINGS ELEVATION.
14	V.I.F. NATURAL GAS PIPE ROUTING WITH OWNER - INTENT IS TO PRESERVE THE EXISTING 1ST FLOOR DECORATIVE CEILINGS AS MUCH AS POSSIBLE. TIE INTO EXISTING GAS LINES ABOVE 1ST FLOOR CEILING WHERE ABLE.
15	TANKLESS HW HEATER (TWH-1) SUPPLY & EXHAUST AIR: SCHED. 40 PVC PIPING IS ACCEPTABLE
16	PROVIDE STORM-RESISTANT LOUVER. V.I.F. FINAL LOCATION OF LOUVER. VERIFY DUCTWORK ROUTING WITH OWNER AND FUTURE INTENT OF 2ND FLOOR SPACE
17	FURNACE COMBUSTION AIR IN - INSTALL METAL SCREEN AT END OF 90 ELBOW TURN-DOWN
18	PER ASHRAE STANDARD 90.1-2010 THE COMMERCIAL KITCHEN EXHAUST HOOD SHALL MEET THE FOLLOWING REQUIREMENTS: 1.(6.5.7.1.1) "Short-circuit" airflow does not exceed 10% of exhaust rate. 2.(6.5.7.1.2) Conditioned makeup airflow to the kitchen is limited.
19	PERFORATED SUPPLY DIFFUSER REQUIRED IN COOKING AREA
20	CONCEALED DUCT ABOVE DROP-CEILING. SEE ARCHITECTURAL DRAWINGS FOR CEILING ELEVATION. ALL FLEX DUCTS IN CONCEALED CEILINGS SHALL BE INSULATED WITH 1" DUCT WRAP. ALL RETURN DUCTWORK INCLUDING CONNECTIONS TO RETURN GRILLES SHALL BE HARD DUCTED - TYP., ABOVE OR BELOW CEILING.
21	COMMERCIAL EXHAUST HOOD WITH CENTRIFUGAL ROOFTOP UPBLAST EXHAUST FAN. EXHAUST HOOD TO HAVE SLOPED FLANGED SIDES. HOOD TO BE STAINLESS STEEL CONSTRUCTION.
22	ELECTRICAL CONTRACTOR TO FURNISH DUCT DETECTORS. DUCT DETECTORS TO BE INSTALLED IN DUCT BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO PROVIDE ALL WORK TO TIE IN WITH FIRE ALARM SYSTEM AND ASSOCIATED KEY SWITCH/FAN RELAY MODULE.
23	V.I.F. WITH OWNER DUCTWORK ROUTING AND DUCT ELEVATIONS. TAKE INTO CONSIDERATION FUTURE PLANS FOR 2ND FLOOR SPACE TO BE USED FOR RESIDENTIAL APARTMENT SPACE.
24	ROUTING OF SUPPLY / RETURN / EXHAUST DUCTWORK SERVING BATHROOMS TO BE COORDINATED WITH ALL CONTRACTORS INVOLVED.
25	PROVIDE MANUAL BALANCING DAMPERS AT EACH LOCATION AS SHOWN ON DRAWINGS

- PACKAGED OUTDOOR MAKEUP AIR UNIT GENERAL NOTES:**
1. MAKEUP AIR UNIT TO HAVE VARIABLE SPEED CONTROLS. THE MAKEUP AIR UNIT SHALL SERVE AS THE INDEPENDENT UNIT FOR CONDITION OF THE WORKROOM.
    - A. COOLING (R-410A)
    - B. HEATING (NATURAL GAS)
  2. CONTROLS SHALL TELL THE MAKEUP AIR UNIT TO RAMP UP TO 100% CAPACITY AIRFLOW WHEN EXHAUST HOOD IS IN USE. NORMAL OPERATION SHALL BE FOR CONDITIONING OF THE SPACE.
  3. DESIGN SUPPLY AIRFLOW INTENT IS TO MATCH THE DIFFERENCE BETWEEN AIRFLOW EXHAUSTED BY KITCHEN HOOD (450 CFM).
- MAU-1 CONTROLS SEQUENCE:**  
UNIT SHALL SERVE WORKROOM INDEPENDENTLY OF FU-1/ACCU-1 SYSTEM.
- |                       |                |
|-----------------------|----------------|
| STANDARD OPERATION:   | 232 CFM SUPPLY |
|                       | 232 CFM RETURN |
| MAKEUP AIR OPERATION: | 682 CFM SUPPLY |
| (100% CAPACITY)       | 232 CFM RETURN |

1 Level 3 - Mechanical Ductwork  
1/8" = 1'-0"

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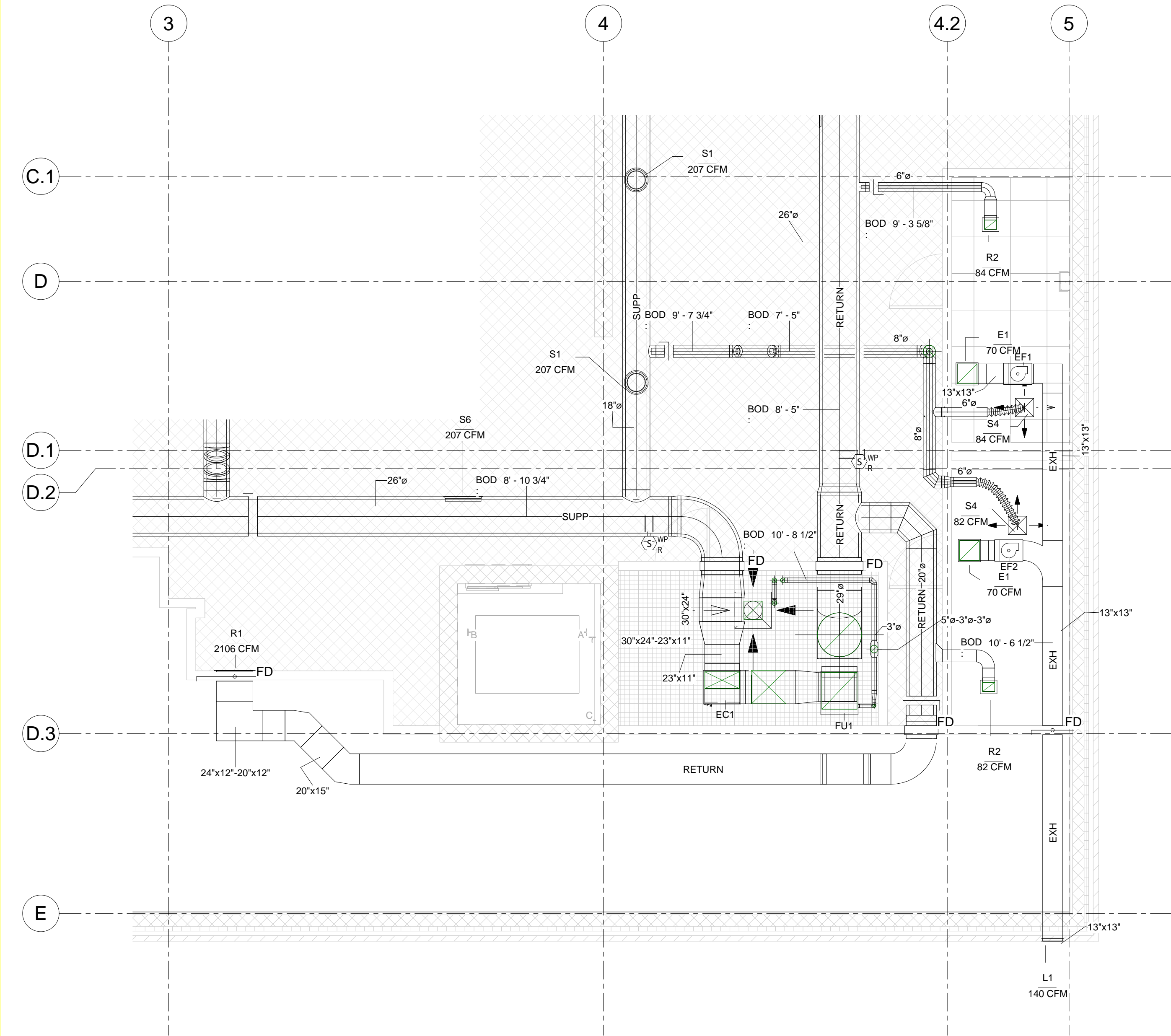
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L3 MECHANICAL  
DUCTWORK FLOOR PLAN

SHEET NO.

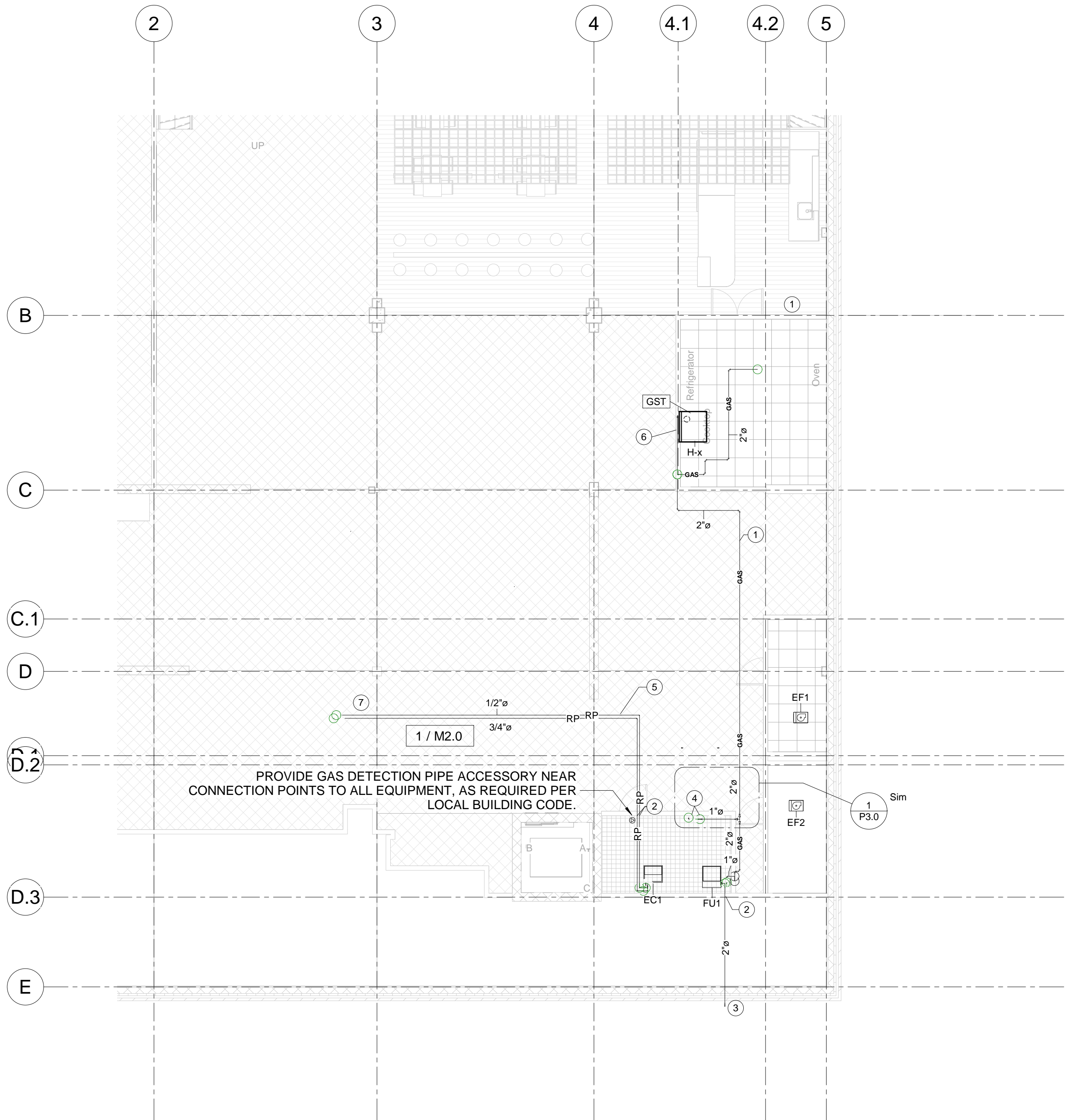
M1.0





LEVEL 3 - MECHANICAL DUCTWORK -  
ENLARGED FLOOR PLAN  
1/4" = 1'-0"

L3 MECHANICAL PIPE KEYNOTES	
Note Number	Note Text
1	V.I.F. NATURAL GAS PIPE ROUTING WITH OWNER - INTENT IS TO PRESERVE THE EXISTING 1ST FLOOR DECORATIVE CEILINGS AS MUCH AS POSSIBLE. TIE INTO EXISTING GAS LINES ABOVE 1ST FLOOR CEILING WHERE ABLE.
2	SEAL ALL PENETRATIONS THROUGH RATED WALLS AND ATTIC CEILING WITH UL LISTED FIRECAULK. SEE GENERAL NOTES FOR PIPE SLEEVE AND INSULATION REQUIREMENTS.
3	FURNACE COMBUSTION AIR IN - INSTALL METAL SCREEN AT END OF 90 ELBOW TURN-DOWN
4	TANKLESS HW HEATER (TWH-1) SUPPLY & EXHAUST AIR: SCHED. 40 PVC PIPING IS ACCEPTABLE
5	REFRIGERANT LINES SIZED USING LONG-LINE SET APPLICATIONS. IN THE CASE AN EVAPORATOR COIL MANUFACTURER REQUIRES LARGER LINES FOR THEIR UNIT. FOLLOW MANUFACTURER'S REQUIREMENTS.
6	NOTE: FINAL SIZE OF GAS PIPING FOR BRANCH TAKEOFFS TO SINGLE UNITS SHALL BE BASED ON MANUFACTURER'S RECOMMENDATIONS/REQUIREMENTS OF THE SUPPLIED EQUIPMENT.
7	UP TO AIR-COOLED CU ON ROOF. STUB-UP PIPING THROUGH UL-LISTED PIPE PORTAL FURNISHED AND INSTALLED BY ROOFING CONTRACTOR. FIELD VERIFY ROUTING OF REFRIGERANT PIPING WITH OWNER. INTENT IS TO PRESERVE THE EXISTING 1ST FLOOR DECORATIVE CEILINGS AS MUCH AS POSSIBLE.



1 Level 3 - Mechanical Pipe  
1/8" = 1'-0"

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## COMMERCIAL REHABILITATION 1

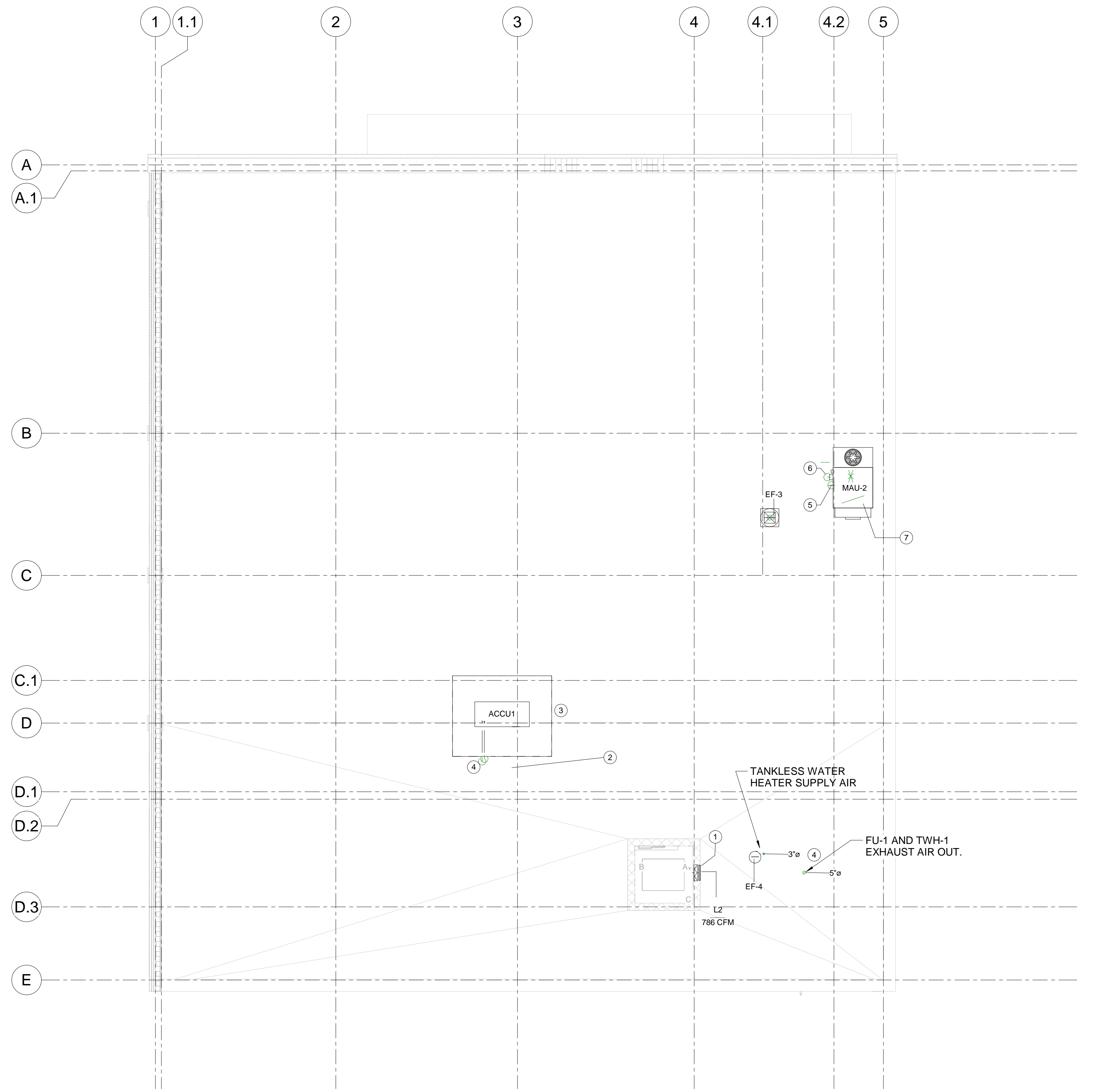
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SHEET NAME

L3 MECHANICAL  
ENLARGED FLOOR PLANS

SHEET NO.

M1.1



1 Roof - Mechanical  
1/8" = 1'-0"

ROOF MECHANICAL KEYNOTES	
Note Number	Note Text
1	STORM-RESISTANT LOUVER WITH PRESSURE-RELIEF DAMPER PROVIDING HOISTWAY VENTILATION
2	COORDINATE ROUTING OF REFRIGERANT PIPING TO ACCU-1 WITH MECHANICAL CONTRACTOR AND FIRE PROTECTION CONTRACTOR. REFRIGERANT LINES SHALL BE RAN ABOVE ATTIC CEILING, HOWEVER CEILING SPACE IS LIMITED AT BUILDING'S SOUTH END
3	CONDENSING UNIT TO BE A SINGLE REFRIGERATION SYSTEM WITH COMPRESSOR STAGING FOR CAPACITY REDUCTION
4	PROVIDE STORM-RESISTANT VENT PIPE TOPS AT ALL VERTICAL PIPING THROUGH ROOF TO PREVENT RAINFALL FROM BREACHING PIPING
5	CONDENSATE DRAIN - P-TRAP REQUIRED TO PREVENT AIR BEING PULLED-IN BUT STILL LET CONDENSATE WATER DISCHARGE. INSTALL P-TRAP IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS/REQUIREMENTS.
6	FINAL CONNECTION SIZE OF NAT. GAS PIPING, CONDENSATE DRAIN LINE, AND SUPP & RETURN DUCTWORK IN CLOSE PROXIMITY TO THE UNIT (APPROX. ROOF LEVEL) SHALL BE DETERMINED BASED ON MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.
7	SUPPLY AND RETURN INLETS TO UNIT SHALL BE FROM BELOW UNIT, UP THROUGH ALUMINUM PREFABRICATED ROOF CURB.

**ALTERNATE 01 SKYDECK: - PROVIDE THE FOLLOWING MEP COMPONENTS:**

- NATURAL GAS PIPING TO SERVE FIREPITS.
- PROVIDE STORM WATER ROUTING ADJUSTMENTS AS REQUIRED. E.G. SLOTTED HOLES IN DECK, ROOF PITCHING ALTERATIONS, STORM DRAINAGE PIPING UNDERNEATH TO DECK TO REDIRECT STORM WATER TO UNOCCUPIED PART OF ROOF.
- PROVIDE ACCESSIBILITY LIGHTING WITH ADEQUATE LUMENS PER 2018 IBC CODE REQUIREMENTS.
- PROVIDE ADA PUSH BUTTON AND DOOR OPERATOR FOR ELEVATOR SECURE ENTRY GLASS VESTIBULE.
- LOCATION INTENT FOR CONDENSING UNIT IS SUBJECT TO CHANGE AS PART OF THIS ALTERNATE. PROVIDE ALL COORDINATION, MATERIALS AND LABOR TO ROUTE PIPING AS REQUIRED. COORDINATE ALL ROUTING PATHS WITH OWNER.
- ELEVATOR SHAFT SHALL HAVE A MINIMUM CLEARANCE ON TOP OF CAB OF 13'-6". THE MASONRY CONTRACTOR SHALL VERIFY SHAFT REQUIREMENTS AND QUALITY CONSTRAINTS WITH THE ELEVATOR MANUFACTURER.

**PACKAGED OUTDOOR MAKEUP AIR UNIT GENERAL NOTES:**

- MAKEUP AIR UNIT TO HAVE VARIABLE SPEED CONTROLS. THE MAKEUP AIR UNIT SHALL SERVE AS THE INDEPENDENT UNIT FOR CONDITION OF THE WORKROOM.
  - COOLING (R-410A)
  - HEATING (NATURAL GAS)
- CONTROLS SHALL TELL THE MAKEUP AIR UNIT TO RAMP UP TO 100% CAPACITY AIRFLOW WHEN EXHAUST HOOD IS IN USE. NORMAL OPERATION SHALL BE FOR CONDITIONING OF THE SPACE.
- DESIGN SUPPLY AIRFLOW INTENT IS TO MATCH THE DIFFERENCE BETWEEN AIRFLOW EXHAUSTED BY KITCHEN HOOD (450 CFM).

**MAU-1 CONTROLS SEQUENCE:**  
UNIT SHALL SERVE WORKROOM INDEPENDENTLY OF FU-1/ACCU-1 SYSTEM.  
STANDARD OPERATION: 232 CFM SUPPLY  
232 CFM RETURN

MAKEUP AIR OPERATION: 682 CFM SUPPLY  
(100% CAPACITY) 232 CFM RETURN

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COMMERCIAL REHABILITATION 1

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SHEET NAME

ROOF MECHANICAL  
FLOOR PLAN

SHEET NO.

M1.2



COMMERCIAL FURNACE																
TAG	TYPE	SYSTEM	FAN CHARACTERISTICS					COOLING			HEATING		ELECTRICAL			
			NOM. CFM	MOTOR HP (hp)	ESP (W.C.)	FLA	V / PH / HZ	TOTAL NET (BTUH)	COOLING TYPE	MAX FACE VELOCITY ^	CAPACITY INPUT (BTUH)	CAP. OUTPUT (btuh)	TYPE	MCA	MOP	V / PH / Hz
FU1	SPLIT SYSTEM, GAS, VARIABLE SPEED	ACCU-1	6715	5.39	4.59	15.5	208 / 3 / 60	246,400	DX	1390	173,415	222000	NAT GAS	19.4	25	208 / 1 / 60

^ Max face velocity taken from peak cooling load CFM's, constant head loss .08 in. w.c./100ft used.

AIR COOLED CONDENSING UNIT														
TAG	TYPE	SYSTEM	COMPRESSOR / REFR.	NET TOTAL COOLING CAPACITY (BTUH)	ELECTRICAL							NOTES		
					LRA ^	RLA	FLA	VOLT	PH	MCA	MOP			
ACCU-1	SPLIT SYSTEM	FU-1	SCROLL / R-410A	246400	81.0	10.8	13.5	208	3	16.9	25	NO		

+ SINGLE POINT CONNECTION MEANS THE MANUFACTURER SUPPLIES A POWER PANEL FOR HIGH VOLTAGE, AND DOES NOT SUPPLY ANY CONTROLS SCOPE. THIS UNIT IS NOT A SINGLE POINT OF CONNECTION. ALL CONTROLS VALVE SHALL BE MANUALLY OPERATED, CONTROLS OF UNIT SHALL BE FROM THE MANUFACTURER OF THE UNIT.

^ Locked Rotor Current (LRA) current load when unit is starting up from off position (rotor locked position). Standard LRA Safety Factor = 6 \* FLA. 2020 NEC Chapter 4 Table 430.251(B) lists maximum LRA values with respect to voltage, power factor and rated horsepower. The LRA value does not exceed maximum LRA of

PACKAGED MAKEUP AIR ROOFTOP UNIT																
TAG	TYPE	SYSTEM	FAN CHARACTERISTICS					COOLING			HEATING		ELECTRICAL			
			NOM. CFM	MOTOR HP (hp)	ESP (W.C.)	FLA	V / PH / HZ	TOTAL NET (BTUH)	COOLING TYPE	MAX FACE VELOCITY (FPM) ^	CAPACITY INPUT (BTUH)	CAP. OUTPUT (btuh)	TYPE	MCA	MOP	V / PH / Hz
MAU-1	SPLIT-SYSTEM, DIRECT-FIRED GAS, VARIABLE SPEED	ACCU-1	682	0.11	0.95	0.32	208 / 3 / 60	246,400	DX	790	6,000	5500	NAT GAS	0.4	25	208 / 1 / 60

EXHAUST FANS														
TAG	ROOM SERVED	CFM	SP *(WG)	FAN		MAX RPM	MOTOR				VFD	MAX SONES *	CONTROLS	NOTES
				TYPE	DRIVE		BHP	HP (W)	PH	VOLT				
EF-1	NORTH BATHROOM	70	0.72	INLINE	DIRECT		0.01	7	1	120	N	2.5	OS /TIMER	
EF-2	SOUTH BATHROOM	70	0.32	INLINE	DIRECT		0.004	3	1	120	N	2.5	OS /TIMER	
H-x	CAFÉ WORKROOM	450	0.28	UPBLAST	BELT		0.022	16	1	115	N		SWITCH	

\*Based on ASHRAE 62.2 Ventilation Fans compliance requirements (maximum sones of 3.0)

AIR TERMINAL SCHEDULE				
TAG	TYPE	NECK SIZE (IN.)	BALANCING DAMPER	MATERIAL
E1	SEE DWG FOR SIZE - RECTANGULAR	13"x13"	YES	METAL
E2	2' x 2' RECTANGULAR	12"x12"	YES	ALUMINUM
L1	RECTANGULAR STORM-RESISTANT EXTERIOR LOUVER - SEE DWG FOR SIZE	SEE DWG		ALUMINUM
R1	27" x 15" RECTANGULAR	24"x12"	YES	METAL
R2	11" x 9" RECTANGULAR	8"x6"	YES	METAL
R4	11" x 9" RECTANGULAR	10"x6"	YES	METAL
S1	ROUND 12" DIAMETER	12"ø	YES	ALUMINUM
S2	ROUND 10" DIAMETER	6"ø	YES	ALUMINUM
S4	1' x 1' RECTANGULAR	6"ø	YES	ALUMINUM
S5	1' x 1' RECTANGULAR	12"ø	YES	ALUMINUM
S6	DRUM LOUVER SIDEWALL MOUNTED	12"x24"	YES	ALUMINUM

CONDENSING UNIT SCHEDULE NOTES:

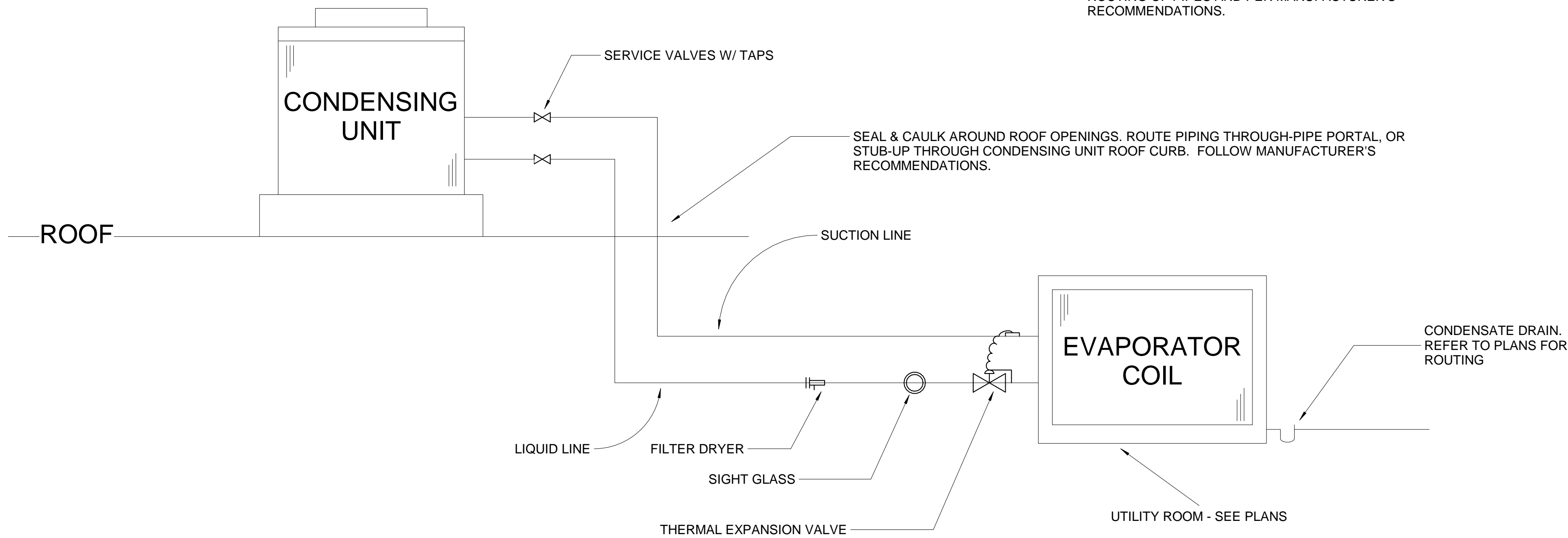
- COOLING CAPACITIES ARE BASED ON 95DEGREE OUTDOOR AIR.
- ALL UNITS SHALL BE SUPPLIED WITH ALL COMPONENTS AS SPECIFIED. REFER TO PIPING DIAGRAM AND PLAN NOTES FOR OTHER DETAILS.
- ALL ROOFTOP MOUNTED UNITS SHALL BE MOUNTED ATOP A FULL SIZED, PREFABRICATED 18" HIGH ROOF CURB WITH SHEET METAL CAP, SEALED WATER TIGHT. THE BOTTOM OF THE CURB SHALL BE SLOPED TO MATCH THE SLOPE OF THE ROOF TO PROVIDE FOR A LEVEL INSTALLATION OF THE UNIT.
- ALL UNITS SHALL BE COMPLETE WITH SUCTION LINE ACCUMULATORS, LIQUID AND SUCTION LINE SERVICE VALVES, CRANKCASE HEATERS, HIGH AND LOW PRESSURE CUTOFFS, COMPRESSOR START ASSIST CAPACITOR(S) AND RELAYS, LONG LINE LENGTH ACCESSORIES (AS APPLICABLE) AND LOW OIL PRESSURE CUTOFF.
- PROVIDE HAIL GUARDS FOR ALL UNITS U.N.O.
- PROVIDE COMPRESSOR SOUND BLANKS FOR ALL UNITS.
- MOUNT ALL UNITS ATOP SPRING TYPE VIBRATION ISOLATORS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINAL COORDINATION OF ALL ELECTRICAL REQUIREMENTS FOR ALL UNITS.
- ALL CONDENSING UNITS TO BE PROVIDED WITH FACTORY CONTROLS AND INSTALLED UNDER THIS BID PACKAGE.
- ALL REFRIGERANT LINES SHALL BE SIZED AND INSTALLED AS PER THE MANUFACTURER'S WITTEN RECOMMENDATIONS AND REQUIREMENTS. THE CONTRACTOR SHALL PROVIDE MANUFACTURER APPROVED PIPING DIAGRAM PRIOR TO INSTALLATION OF ALL UNITS. ALL LINES SHALL BE INSULATED WITH 1" THICK CLOSED CELL INSULATION. LINES INSTALLED OUTSIDE OF THE BUILDING ENVELOPE SHALL BE JACKETED WITH SOLVENT WELDED PVC OR ALUMINUM JACKETING.

RELIEF VENT SCHEDULE NOTES:

- ALL RELIEF VENTILATORS SHALL BE COMPLETE WITH PREFABRICATED ROOF CURB, BIRD SCREEN AND GRAVITY BACKDRAFT DAMPER INSTALLED IN RISER THROUGH ROOF. BACKDRAFT DAMPER SHALL BE ALUMINUM FRAME AND COUNTERBALANCED ALUMINUM BLADES.

NOTES:

- ALL REFRIGERANT PIPING SHALL BE TYPE K COPPER WITH BRAZED JOINTS.
- REMOVE ALL EXPANSION DEVICES, ETC. FROM AIR STREAM.
- PROVIDE 1/2" PRV AT COMPRESSOR DISCHARGE SET AT 400 PSI.
- DISTANCE BETWEEN CONDENSER UNIT & EVAPORATOR COIL SHALL NOT EXCEED MANUFACTURER'S RECOMMENDATIONS.
- PIPING SHOWN FOR REFERENCE ONLY, PROVIDE TRAPS ETC. AS REQUIRED PER MANUFACTURER'S RECOMMENDATIONS.
- FINAL PIPE SIZING SHALL BE BASED ON ACTUAL FIELD ROUTING OF PIPES AND PER MANUFACTURER'S RECOMMENDATIONS.



1 Refrigerant Piping Detail  
3/4" = 1'-0"

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COMMERCIAL REHABILITATION 1

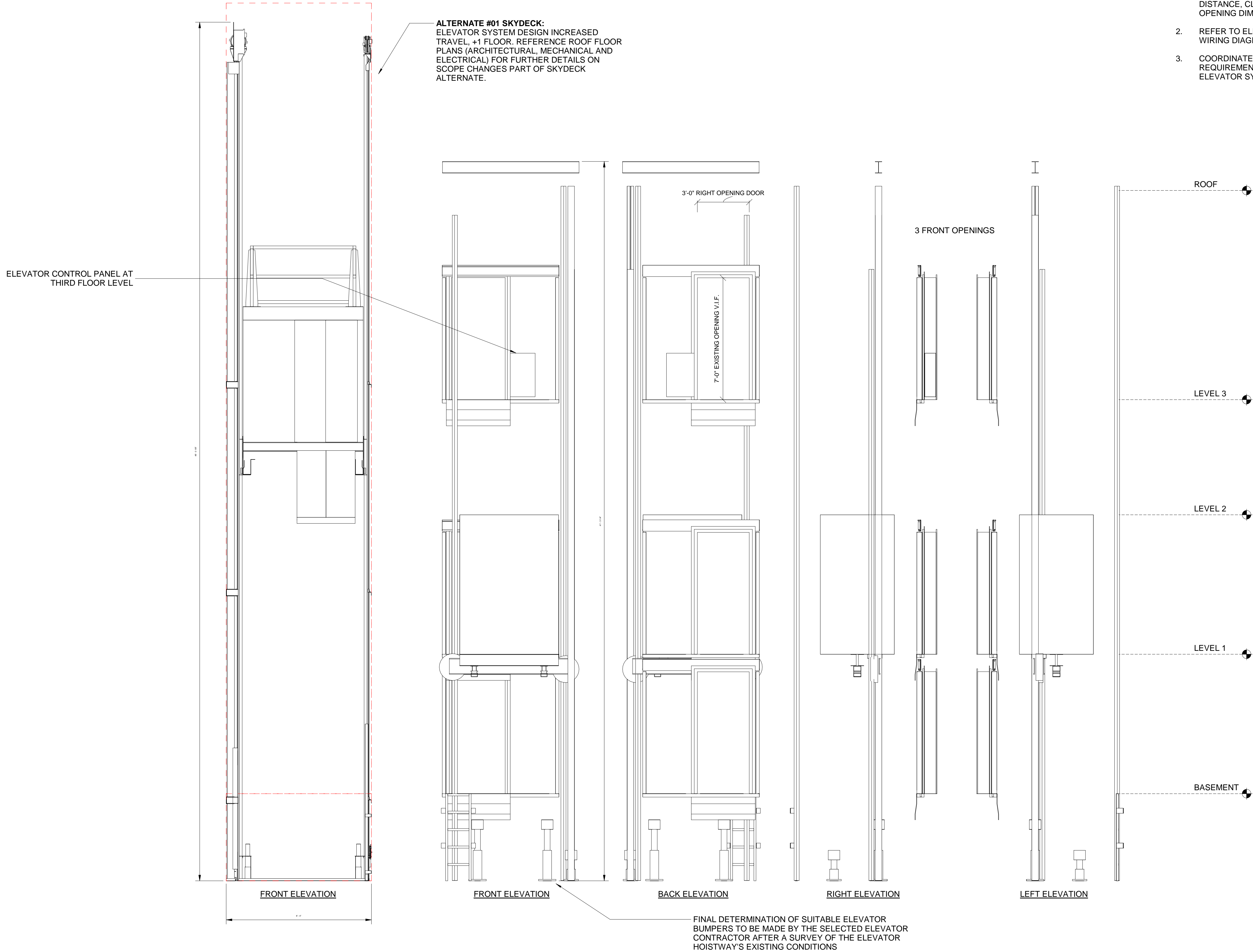
241-247 5 Ave S. Clinton, IA 52732

SHEET NAME

MECHANICAL SCHEDULES

SHEET NO.

M2.0



- GENERAL NOTES:**
1. REFERENCE SHEET M0.2 ELEVATOR GENERAL NOTES FOR ELEVATOR SYSTEM SPECIFICATIONS AND DESIGN REQUIREMENTS, INCLUDING BUT NOT LIMITED TO: TRAVEL DISTANCE, CLEAR OVERHEAD DIMENSION, CAB DIMENSIONS, OPENING DIMENSIONS, ETC.
  2. REFER TO ELEVATOR HOISTWAY CONTROLS AND FIRE ALARM WIRING DIAGRAM UNDER ELECTRICAL DISCIPLINE.
  3. COORDINATE ALL REQUIREMENTS WITH MANUFACTURER'S REQUIREMENTS/RECOMMENDATIONS FOR THE TRACTION ELEVATOR SYSTEM FURNISHED.

○ ELEVATOR RISER DETAIL  
3/8" = 1'-0"

THE UNIVERSITY OF IOWA

CIVIL AND ENVIRONMENTAL ENGINEERING

4105 SEAWARD CENTER FOR THE  
ENGINEERING ARTS AND SCIENCES

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EDUCATIONAL - NOT  
FOR CONSTRUCTION

COMMERCIAL REHABILITATION 1

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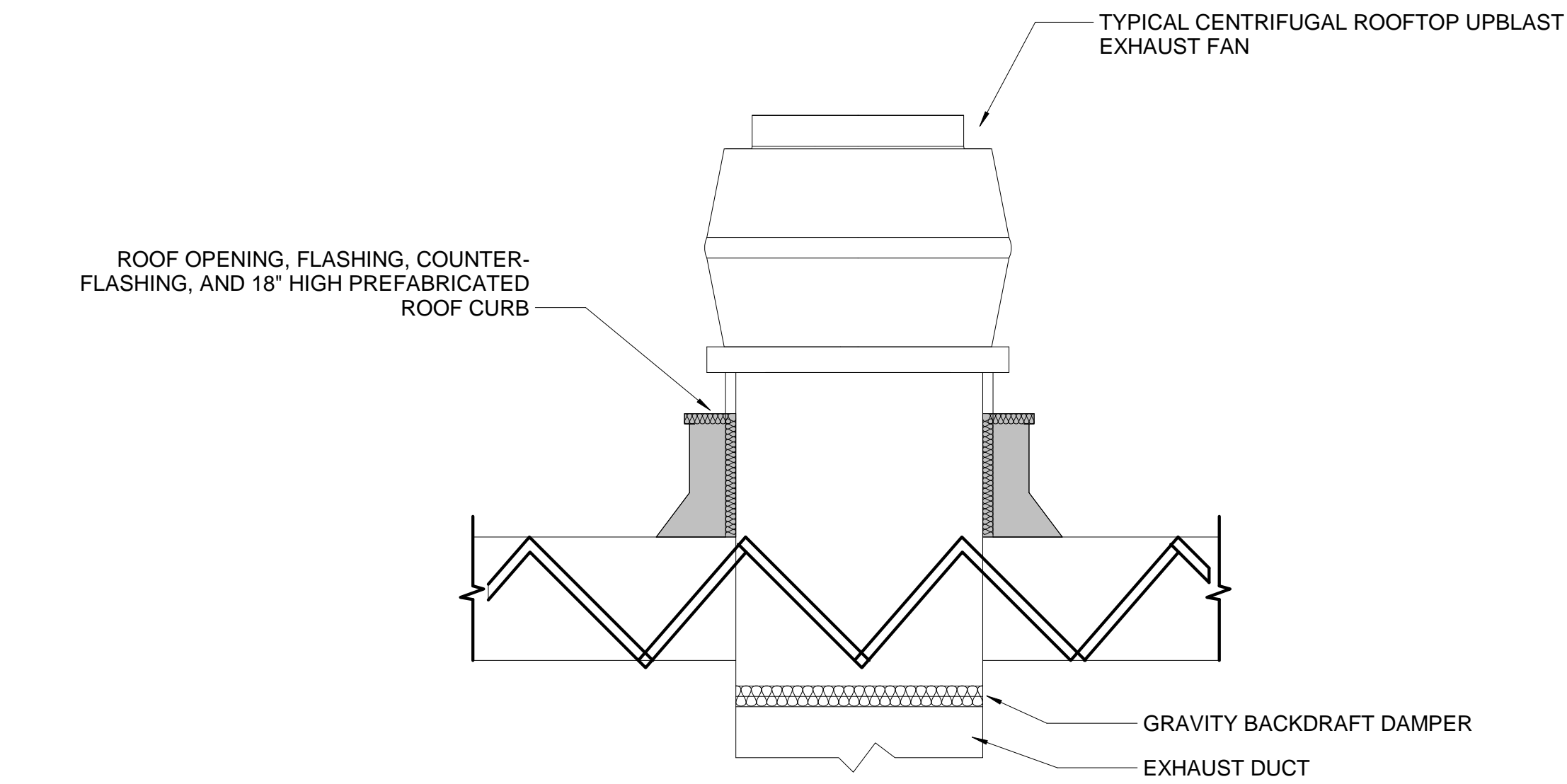
SHEET NAME

ELEVATOR DETAILS

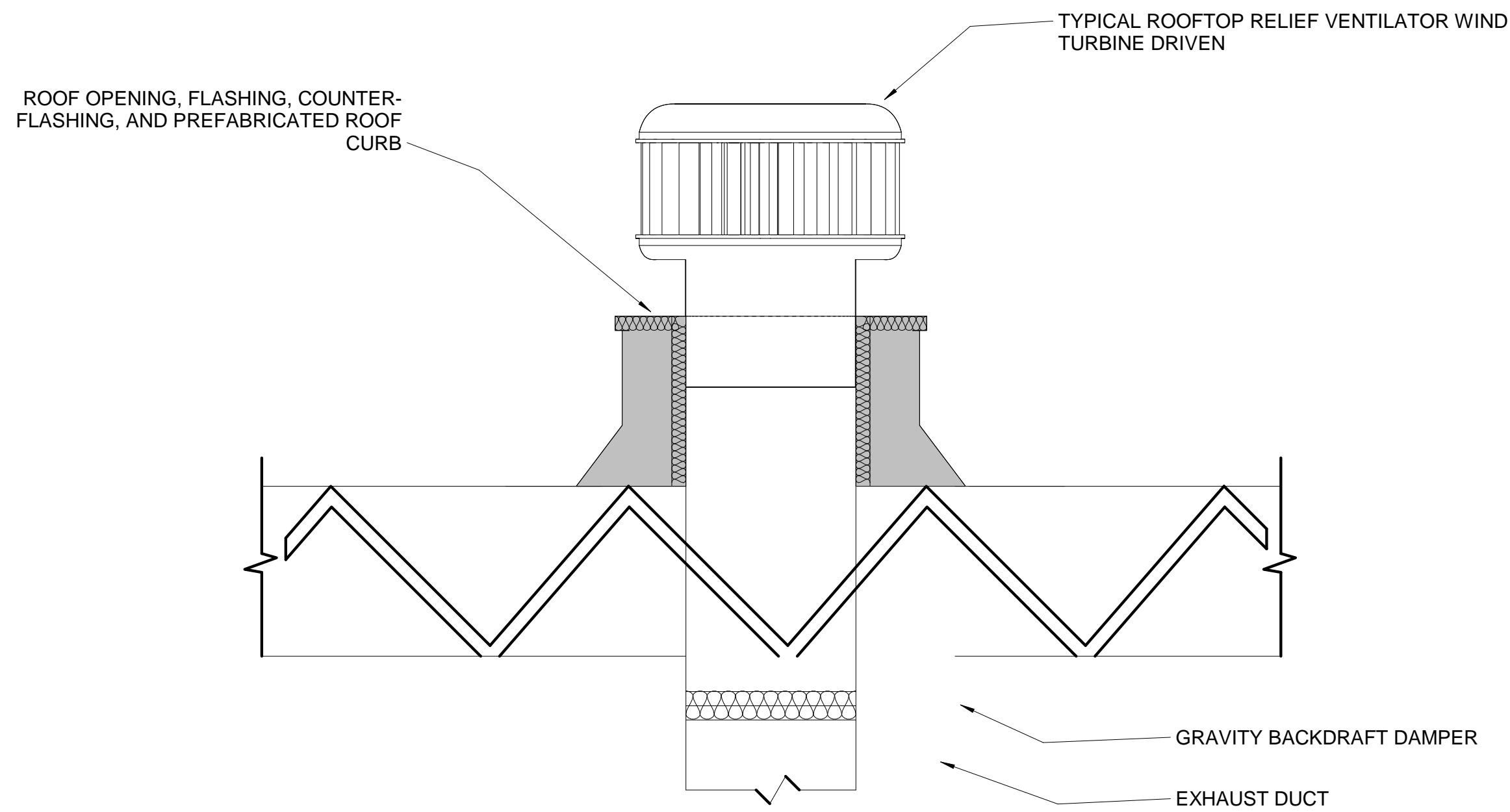
SHEET NO.

M3.0





TYPICAL ROOFTOP EXHAUST FAN  
DETAIL  
1" = 1'-0"



TYPICAL ROOFTOP RELIEF VENTILATOR  
1 1/2" = 1'-0"

PROJECT:  
DATE :  
DRAWN BY:  
REVISION:

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## COMMERCIAL REHABILITATION 1

241-247 5 Ave S. Clinton, IA 52732

SHEET NAME

MECHANICAL DETAILS

SHEET NO.

M3.1



PLUMBING NOTES

GENERAL:

1.

THESE GENERAL NOTES APPLY TO ALL WORK.
2.

DO NOT SCALE DRAWINGS, USE FIELD MEASUREMENTS.
3.

NOTES ON DRAWINGS SHALL APPLY TO SIMILAR CONDITIONS WHETHER THEY ARE REPEATED OR NOT.
4.

FURNISH AND INSTALL FIRE SAFING AT ALL WALL, FLOOR AND ROOF PENETRATIONS. RATING OF MATERIAL SHALL MEET OR EXCEED WALL FIRE RATING.
5.

PROVIDE PIPE SLEEVES AT ALL WALL PENETRATIONS. SLEEVES SHALL BE SCHEDULE 40 STEEL PIPING WHICH SHALL EXTEND 1" PAST WALL ON BOTH SIDES OF WALL. PIPE INSULATION SHALL BE CONTINUOUS THROUGH WALL PENETRATION. FURNISH AND INSTALL FIRE SAFING BETWEEN SLEEVE AND PIPE INSULATION.
6.

PAINT ALL NEW EXPOSED PIPING AND ASSOCIATED COMPONENTS COLOR AS SELECTED BY THE OWNER.
7.

THE DRAWINGS AND DETAILS SHALL BE TAKEN AS A DIAGRAMMATIC MEANS OF PROVIDING PIPING AND EQUIPMENT. THEY DO NOT SHOW EVERY FITTING AND OFFSET, NOR EVERY STRUCTURAL, ELECTRICAL, PIPING, OR DUCTWORK CONFLICT THAT MAY BE ENCOUNTERED DURING THE INSTALLATION OF THE WORK.
8.

CONSULT STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS. THE PLANS SHOW THE GENERAL ARRANGEMENT OF ALL PIPING, CONDUIT, AND EQUIPMENT. EXAMINE THE DRAWINGS AND SPECIFICATIONS CAREFULLY AND NOTIFY THE ARCHITECT BY LETTER OF ANY DISCREPANCIES SO THE SAME CAN BE RECTIFIED AT THE EARLIEST POSSIBLE DATE. THE CONTRACTOR SHALL FOLLOW THE PLUMBING PLANS AS CLOSELY AS POSSIBLE FOR THE INSTALLATION OF PIPING AND EQUIPMENT.
9.

THE CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL ARCHITECTURAL, STRUCTURAL, ELECTRICAL, AND MECHANICAL FEATURES OF THE BUILDING.
10.

SHOULD CONDITIONS NECESSITATE ANY REARRANGEMENT OF PIPING OR DUCTWORK, OR IF SAME CAN BE RUN TO BETTER ADVANTAGE, THE CONTRACTOR SHALL PREPARE DRAWINGS BEFORE PROCEEDING WITH THE WORK. IF SUCH CHANGES ARE APPROVED, THEY SHALL BECOME ART OF THE CONTRACT AFTER THEIR APPROVAL.
11.

INSTALL ISOLATION VALVES ON EACH SUPPLY BRANCH LINE. PROVIDE CIRCUIT SETTER (BALANCED TO 0.3 GPM MIN), CHECK VALVE AND BALL VALVE IN ALL HOT WATER RETURN BRANCH LINES. VALVING SHALL BE PROVIDED WHETHER OR NOT VALVES ARE INDICATED ON THE DRAWINGS.
12.

PROVIDE ACCESS PANELS IN CEILINGS AT ALL VALVES AND OTHER EQUIPMENT INSTALLED ABOVE INACCESSIBLE CEILINGS.
13.

ALL DOMESTIC PIPING, ALL SUSPENDED HORIZONTAL STORM PIPING, ALL ROOF DRAIN BODIES, AND ALL SUSPENDED SANITARY PIPING FROM FIXTURES RECEIVING CONDENSATE DISCHARGE FROM ANY MECHANICAL SYSTEM SHALL BE INSULATED. DOMESTIC HW & HWR LINES SHALL BE INSULATED WITH 1 1/2" THICK INSULATION. OTHER PIPING NOTED ABOVE SHALL BE INSULATED WITH 1" THICK INSULATION. PROVIDE SOLVENT WELDED PVC JACKETING OVER INSULATION FOR ALL PIPING EXPOSED UNFINISHED SPACES. COLOR OF PVC JACKETING SHALL BE SELECTED BY THE ARCHITECT. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
14.

ALL ISOLATION VALVES TO BE SAME SIZE AS INSTALLED LINE. ISOLATION VALVES THAT ARE 3" AND SMALL SHALL BE VALVE TYPE AND ALL VALVES 4" AND LARGER SHALL BE GATE VALVES, UNLESS NOTED OTHERWISE ON PLANS. ALL VALVES SHALL BE FULL PORT TYPE. ALL VALVING AND DEVICES INSTALLED IN THE DOMESTIC WATER SYSTEM SHALL BE OF LEAD FREE CONSTRUCTION.
15.

ALL SANITARY, STORM AND VENT LINES SHALL BE PITCHED AS FOLLOWS:  
3" AND SMALLER - 1/4" PER 1'-0"  
4" AND LARGER - 1/8" PER 1'-0"
16.

ALL SANITARY, STORM AND VENT PIPING SHALL BE PVC UNLESS NOTED OTHERWISE. ALL SANITARY AND STORM PIPING 18" AND LARGER SHALL BE DUCTILE IRON.
17.

ALL SUSPENDED DOMESTIC SUPPLY PIPING SHALL BE TYPE "L" COPPER PIPING WITH SOLDERED JOINTS UNLESS NOTED OTHERWISE. ALL UNDERGROUND DOMESTIC SUPPLY PIPING SHALL BE SEAMLESS TYPE "K" COPPER AND SHALL EXTEND 12" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE. ALL MATERIALS SHALL BE LEAD FREE. ALL DOMESTIC WATER PIPING INSTALLED NEW OR AS PART OF A MODIFIED SYSTEM SHALL BE FLUSHED AND CHLORINATED. SYSTEMS SHALL BE TESTED IN ACCORDANCE WITH IOWA PLUMBING CODE.
18.

PROVIDE DIELECTRIC UNIONS OR NIPPLES BETWEEN ALL DISSIMILAR MATERIALS. ALL FITTINGS SHALL BE RATED BY THE MANUFACTURER FOR USE AS A DIELECTRIC FITTING IN POTABLE WATER SYSTEMS.
19.

ALL BACKFLOW PREVENTERS SHALL BE TESTED AND CERTIFIED BY AN AUTHORIZED TESTING AGENCY AFTER INSTALLATION IS COMPLETE. ALL BACKFLOW PREVENTERS REQUIRING CERTIFICATION SHALL BE INSTALLED NOT GREATER THAN 5'-0" A.F.F. TO CENTERLINE OF DEVICE.
20.

ALL MATERIALS, PIPING, FITTINGS APPLIANCES, APPURTENANCES, FAUCETS, FIXTURE FITINGS, FIXTURES AND DEVICES USED SHALL BE IN COMPLIANCE WITH ALL IOWA PLUMBING CODE REQUIREMENTS.
21.

ALL NEW AND MODIFIED SANITARY, VENT AND STORM SEWER SYSTEMS SHALL HAVE AN AIR / WATER TEST CONDUCTED ON THE SYSTEM IN ACCORDANCE WITH IOWA PLUMBING CODE. CONTRACTOR TESTS SHALL CONFORM WITH ANY MUNICIPAL CODES WHICH REQUIRES MORE STRINGENT TESTS.
22.

PROVIDE 'LEAD-FREE' ASSE 1010 LISTED AND LABELED WATER HAMMER ARRESTERS IN ALL DOMESTIC COLD WATER AND HOT WATER PIPING TO FIXTURES TO ABSORB PRESSURE SURGES. ARRESTERS SHALL BE SIZED, LOCATED AND INSTALLED PER ALL MANUFACTURER RECOMMENDATIONS AND REQUIREMENTS. BUILDINGS WITH STATIC PRESSURES GREATER THAN 60 PSIG SHALL UTILIZE ARRESTERS ONE (1) SIZE LARGER THAN STANDARD SIZING PER RESPECTIVE MANUFACTURER REQUIREMENTS. AIR CHAMBERS SHALL NOT BE UTILIZED.
23.

ALL DEIONIZED WATER PIPING SHALL BE SPEARS LXT (LOW EXTRACTABLE) PVC PIPING SYSTEM, PVDF, POLYPROPYLENE COPOLYMER (PP-C) OR POLYPROPYLENE HOMOPOLYMER (PP-H). NON-CONTAMINATING PIPING NSHALL BE INSTALLED PER ALL MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS. PROVIDE JOINT TAPE AND / OR SEALANTS AS PER MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS. DEIONIZED PIPING RUNNING IN PLENUM CEILING AREAS SHALL BE PVDF.

REMODELING AND DEMOLITION

1.

THE CONTRACTOR MUST VISIT THE SITE PRIOR TO SUBMITTING THE BID PROPOSAL TO BECOME FAMILIAR WITH THE EXISTING SITE AND BUILDING CONDITIONS WHICH WILL BE AFFECTED DURING CONSTRUCTION. THE CONTRACTOR IS CAUTIONED THAT THIS PROJECT IS A REMODELING JOB AND IT IS ASSUMED THAT FUNDS HAVE BEEN INCLUDED IN THE BID TO COVER UNFORESEEN ITEMS WHICH MUST BE MOVED, RELOCATED, OR ADJUSTED TO FIT THE WORK. NO EXTRA COMPENSATION WILL BE ALLOWED FOR ANY MATTER OR THING WHICH THE CONTRACTOR MIGHT HAVE BEEN FULLY INFORMED OF PRIOR TO BIDDING.
2.

THE OWNER SHALL HAVE THE OPTION OF SELECTING ANY OR ALL OF THE ITEMS WHICH ARE DESIGNATED TO BE REMOVED BY THE CONTRACTOR AS SALVAGE FOR THE OWNER. THE CONTRACTOR SHALL REMOVE ALL ITEMS WITH EXTREME CARE AND RETURN SUCH ITEMS TO THE OWNER. ALL EQUIPMENT WHICH THE OWNER DOES NOT WANT WILL BECOME THE PROPERTY OF THE CONTRACTOR AND WILL BE PROMPTLY REMOVED FROM THE SITE.
3.

ALL CUTTING AND PATCHING, RELOCATING OF ANY EQUIPMENT, LIGHTING FIXTURES, CONDUIT, PIPING, ETC., NECESSARY TO PERFORM THE WORK WILL BE THE CONTRACTOR'S RESPONSIBILITY U.N.O.. ALL AFFECTED SURFACES WILL BE RESTORED TO THEIR ORIGINAL CONDITION.
4.

THE CONTRACTOR WILL REFER TO DRAWINGS WHICH SHOW REMOVED WALLS AND OTHER ITEMS IN REFERENCE TO REMODELING, DEMOLITION AND BUILDING ADDITIONS. ONLY MINOR DEMOLITION IS SHOWN ON DRAWINGS. REFER TO ALL KEYNOTES AND REFERENCED DETAILS ON PLANS AND THE ARCHITECTURAL DRAWING SET FOR ADDITIONAL INFORMATION.
5.

THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND COORDINATE SAME WITH ALL OTHER TRADES.
6.

REMOVE ANY CEILING TILES, GRID, AND LIGHT FIXTURES REQUIRED TO ACCOMPLISH THE WORK. REPLACE SAME AFTER THE INSTALLATION IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPLACE ANY ITEMS DAMAGED DURING CONSTRUCTION.
7.

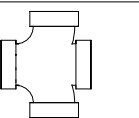
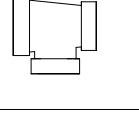
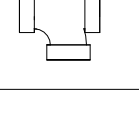
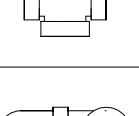
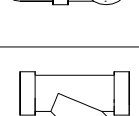
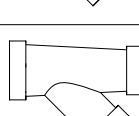
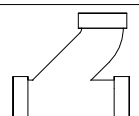
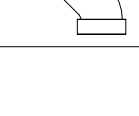
THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING ELECTRICAL LINES, PLUMBING LINES, DUCTWORK, OR MECHANICAL PIPING LOCATED IN WALLS OR FLOORS PRIOR TO SAW CUTTING OR CORE DRILLING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPAIR ANY SUCH ITEMS DAMAGED.
8.

THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES PRIOR TO SAW CUTTING OR CORE DRILLING ANY EXISTING FLOOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY EXISTING UTILITES DISRUPTED.
9.

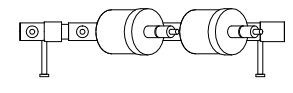
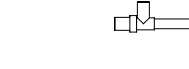
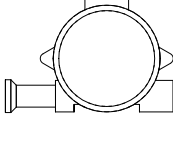
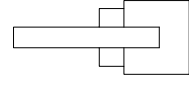
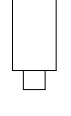
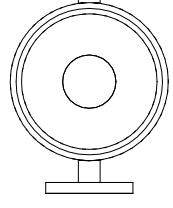
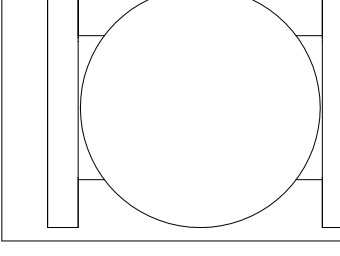
THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MODIFICATIONS TO EXISTING OPENINGS WHICH WILL BE REUSED. THIS SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO, ALL SAW CUTTING, ISNTALLATION OF NEW LINTELS, FIRE PROOFING AND INFILL OF MASONRY OPENINGS.
10.


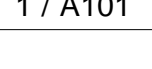


THE CONTRACTOR SHALL LOCATE ALL CONNECTIONS TO EXISTING PIPING PRIOR TO THE INSTALLATION OF ANY NEW WORK. LOCATION OF PIPING SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO, TELEVISING OF EXISTING UNDERGROUND STORM AND SANITARY PIPING.

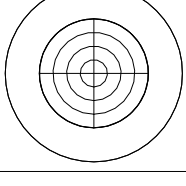
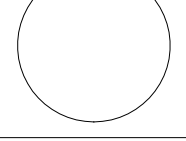
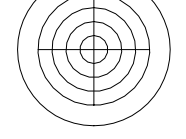
TRAP AND TRAP ARM SIZE SCHEDULE	
SIZE OF TRAP AND TRAP ARM (INCHES)	DRAINAGE FIXTURE UNIT VALUES (DFU)
1 1/4	1 UNIT
1 1/2	3 UNITS
2	4 UNITS
3	6 UNITS
4	8 UNITS

PLUMBING WASTE & VENT FITTINGS	
	TEE DOUBLE SANITARY - PVC SCHEDULE 40
	TEE REDUCING VENT - PVC SCHEDULE 40
	TEE SANITARY - PVC SCHEDULE 40
	TEE VENT - PVC SCHEDULE 40
	P-TRAP SANITARY - PVC SCHEDULE 40
	WYE 45 DEG - PVC SCHEDULE 40
	WYE 45 DEG REDUCING - PVC SCHEDULE 40
	WYE COMBINATION WITH 8TH BEND DOUBLE - PVC SCHEDULE 40

PLUMBING FIXTURE SCHEDULE						
TAG	DESCRIPTION	TYPE AND SIZE	WFO	HWFU	CWFU	REMARKS
FCO	FLOOR CLEAN OUT	ROUND TOP	0	0	0	CLEANOUT FITTING TO BE FULL SIZE OF LINE
FD1	STANDARD FLOOR DRAIN	FLOOR DRAIN - ROUND: 5" STRAINER - 2" DRAIN	2	0	0	CLEANOUT FITTING TO BE FULL SIZE OF LINE
GI-1	COMMERCIAL GREASE INTERCEPTOR	20 LBS (15 GPM) GREASE INTERCEPTOR - RECESSED IN FLOOR				
L1	SINGLE COMPARTMENT SELF RIMMING SINK	LAVATORY - WALL MOUNTED: 19"x14" - PUBLIC	1	0.5	0.5	MOUNT TOP OF FIXTURE AT 34" AFF
S-1	SINGLE COMPARTMENT SINK	STAINLESS STEEL: 18"x18"x12"	2	3	3	MOUNT IN COUNTERTOP
S-2	DOUBLE COMPARTMENT COMMERCIAL SINK	STAINLESS STEEL: 42"x21"x14"	2	1	1	MOUNT IN COUNTERTOP
S-3	SINGLE COMPARTMENT MOP SINK	FLOOR MOUNTED 20" x 18" x 10"	2	2.25	2.25	MOUNT AT FLOOR
WC	WATER CLOSET WALL HUNG-HANDICAP	WATER CLOSET - FLUSH VALVE - WALL MOUNTED: FLUSHING 1.6 GPF	6	0	5	MOUNT AT 18" AFF, BATTERY
WCO	WALL CLEAN OUT	STAINLESS STEEL COVER PLATE	0	0	0	COORDINATE SIZE OF COVER PLATE IN FIELD
FIXTURE SCHEDULE GENERAL NOTES:						
1. COLOR OF FIXTURES SHALL BE WHITE UNLESS NOTED OTHERWISE.						
2. ALL SINKS, LAVATORIES AND WATER COOLERS SHALL BE PROVIDED WITH 17 GAUGE CHROME PLATED BRASS TRAPS WITH CLEAN OUT PLUGS, TAILPIECE, STRIANER AND WALL ESCUTCHEONS.						
3. ALL FIXTURES SHALL BE EQUIPPED WITH ELAD-FREE WATER HAMMER ARRESTORS AND SHALL HAVE ELAD-FREE INDIVIDUAL CHROME PLATED, LOOSE KEY OPERATED SUPPLY STOPS RATED FOR 180DEG FARENHEIT SERVICE WITH WALL ESCUTCHEONS.						
4. PROVIDE OPEN FRONT TOILET SEAT WITH ANTI-MICROBIAL AGENT FOR ALL WATER CLOSETS.						
5. PROVIDE EACH LAVATORY WITH A CONCEALED LAV SUPPORT WITH WELDED STEEL BASE.						
6. PROVIDE EACH HANDICAP LAVATORY AND SINK WITH OFFSET TRAP AND TAILPIECE AND HANDI-SHIELD VINYL COVERED PIPE INSULATION WITH HOOD AND EYE CLOSURES OVER DRAIN LINE AND HOT AND COLD WATER LINES.						
7. PROVIDE HI-SET ADJUSTABLE WATER CLOSET SUPPORTS FOR ALL HANDICAP WATER CLOSETS AND STANDARD ADJUSTABLE SUPPORTS FOR ALL OTHER WATER CLOSETS.						
8. ALL TOILET FLUSH CONTROLS SHALL BE INSTALLED ON THE WIDE SIDE OF THE FIXTURE (AWAY FROM WALL).						
9. ALL SENSOR OPERAED FLUSH VALVES SHALL BECOMPLETE WITH MAUAL OVERRIDE BUTTON. ALL SENSOR OPERATED FLUSH VALVES FOR URINALS SHALL BE COMPLETE WITH OPTIONS TO SESE HIGH AND LOW FIELDS FOR TARGETING OF SMALL CHILDREN AND WHEELCHAIR USERS. BATTERY POWERED, SENSOR OPERATED FLUSHV ALVES SHALL BE COMPLETE WITH METAL COVER.						
10. COORDINATE ALL MOUNTING LOCATIONS AND HEIGHTS OF FIXTURES WITH ARCHITECTURAL DRAWINGS.						
11. INSTALL SILICONE CAULK BETWEEN WALL AND FIXTURE FOR ALL WALL MOUNTED FIXTURES.						
12. FURNISH AND INSTALL THERMOSTATIC MIXING VALVE FOR ALL PUBLIC USE FAUCETS NOT CONNECTED TO CENTRAL MIXING VALVE. PROVIDE ALL ADDITIONAL SUPPLY TUBING AND MOUNTING HARDWARE REQUIRED FOR A FULLY FUNCTIONAL INSTALLATION. THERMOSTATIC MIXING SHALL COMPLY WITH ANSI/ASSE 1017 OR 10780 AND BE ADJUSTED TO A MAXIMUM SETTING OF 110DEG FARENHEIT AT THE TIME OF INSTALLATION.						
13. WASHFOUNTAINS, LAVATORIES & SINKS SPECIFIED WITH A SINGLE TEMPERED WATER SUPPLY OUTLET (INFRARED CONTROL) SHALL BE COMPLETE WITH THERMOSTATIC MIXING VALVE FOR ALL PUBLIC USE FAUCETS NOT CONNECTED TO CENTRAL MIXING VALVE. PROVIDE ALL ADDITIONAL SUPPLY TUBING AND MOUNTING HARDWARE REQUIRED FOR A FULLY FUNCTIONAL INSTALLATION. THERMOSTATIC MIXING SHALL COMPLY WITH ANSI/ASSE 1017 OR 10780 AND BE ADJUSTED TO A MAXIMUM SETTING OF 110DEG FARENHEIT AT THE TIME OF INSTALLATION.						

PLUMBING VALVES AND ACCESSORIES	
	BACKFLOW PREVENTER
	PRESSURE REGULATING RELIEF VALVE (PRV)
	GAS DETECTOR
	BALL VALVE
	WATER FLOW SWITCH
	INLINE RECIRCULATION PUMP
	CHECK VALVE

GENERAL ANNOTATIONS	
	PIPE ACCESSORY TAG
x x/x	PIPE ACCESSORY TAG
System Abbreviation	PIPE SYSTEM TAG (E.G. DCW / DHW / SW / SV)
	VIEW REFERENCE CALLOUT
	SPOT ELEVATION MARK
	EQUIPMENT TAG - REFER TO SCHEDULES

PLUMBING FIXTURES	
	FLOOR DRAIN (F.D.)
	WALL CLEAN OUT (W.C.O.)
	FLOOR CLEAN OUT (F.C.O.)

THE UNIVERSITY OF IOWA

CIVIL AND ENVIRONMENTAL ENGINEERING



COMMERCIAL REHABILITATION 1

241-247 5 Ave S. Clinton, IA 52732

SHEET NAME

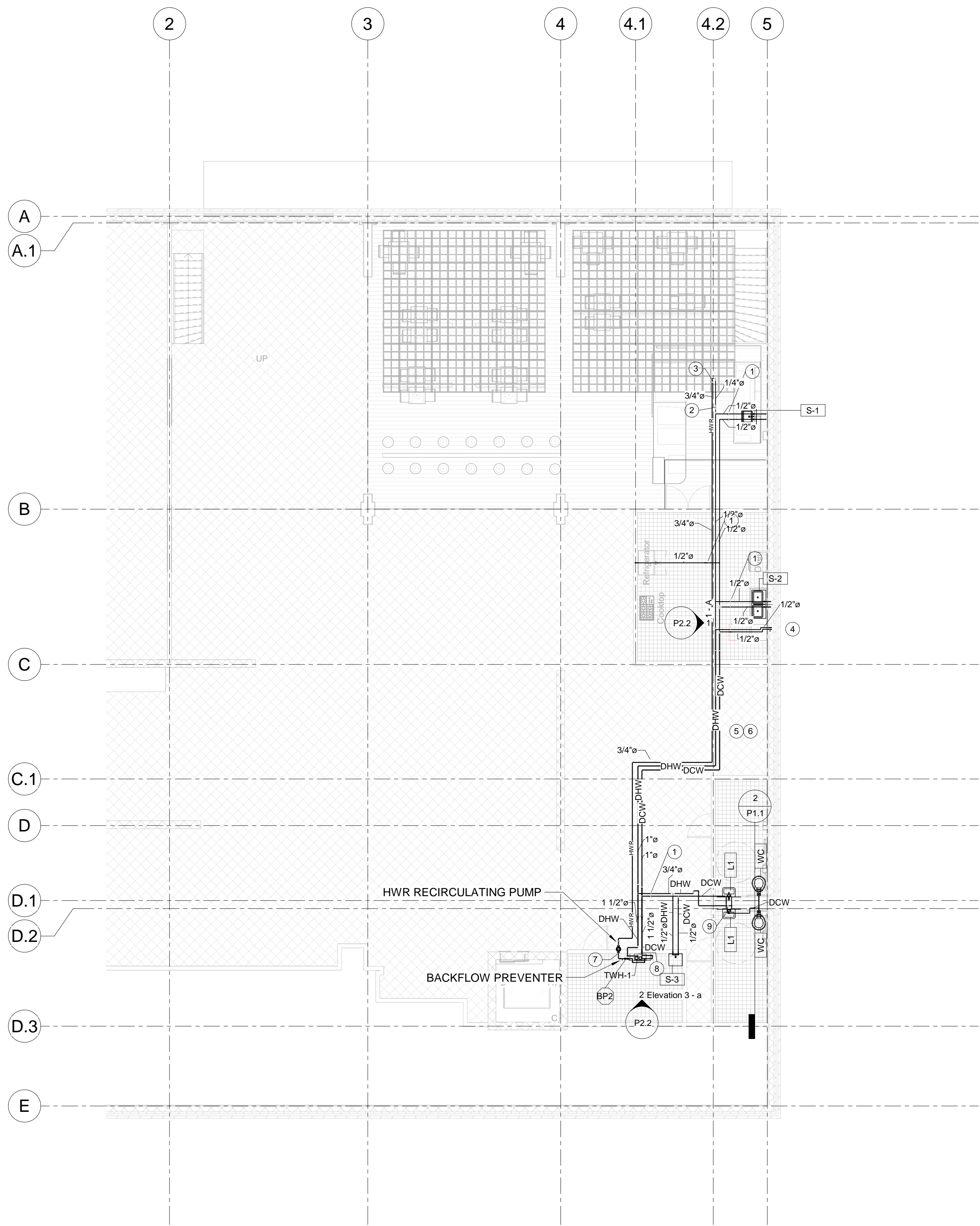
PLUMBING GENERAL NOTES

SHEET NO.

P0.1

PROJECT: THE UNIVERSITY OF IOWA  
DATE :  
DRAWN BY: 4105 SEAWANUS CENTER FOR THE  
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1 Level 3 - Plumbing Domestic  
1/8" = 1'-0"

GENERAL NOTES:

- PLUMBING CONTRACTOR TO PROVIDE OPERATION AND MAINTENANCE MANUAL AND OWNER'S TRAINING FOR THE FOLLOWING PIECES OF EQUIPMENT:
  - TANKLESS HOT WATER HEATER (TWH-1)
- DOMESTIC WATER LINES SHALL BE RAN IN INSULATED PIPE CHASE ABOVE-CEILING IN ATTIC. INSULATED CHASE CONSTRUCTION SHALL CONSIST OF:
  - DOUBLE LAYERED 2" RIGID FOAM BOARD
  - AIR PRESSURE RELIEF VENTS SHALL BE INSTALLED AS REQUIRED
  - PROVIDE MEANS FOR WARM SUPPLY AIR TO BE ROUTED INTO CHASE - STUB (2) 6" ROUND TAKEOFFS INTO PIPE CHASE AT 40 O.C. AT MOST SUITABLE LOCATION IN RELATION TO LEVEL 3 MEP.

L3 PLUMBING DOMESTIC KEYNOTES	
Note Number	Note Text
1	PROVIDE ISOLATING CONTROL VALVES AT ALL BRANCH LINES OFF OF MAINS
2	CHECK VALVE AT END OF DHW LINE/BEGINNING OF HWR LINE, TYP.
3	HWR LOOP ISOLATION CONTROL AT EACH END OF HWR LINE
4	VERIFY WATER SUPPLY CAPACITY REQUIREMENTS AND PIPE SIZING WITH MANUFACTURER'S SPECIFICATIONS OF PLUMBING FIXTURES
5	INSULATE ALL DOMESTIC PIPING WITH 2" INSULATION. PROVIDE SWEAT SLEAVES ON ALL COLD WATER VALVES.
6	PROVIDE PLUMBING PIPE IDENTIFICATION LABELING. IDENTIFY BOTH PYPE SYSTEM TYPE (E.G. DHW / DCW / HWR) AND DIRECTION OF FLOW WITH DIRECTIONAL ARROWS
7	PROVIDE A BALANCING VALVE DOWNSTREAM OF CIRCULATOR DISCHARGE
8	STUB-UP DCW TO THIRD FLOOR FROM EXTENSION OFF OF 1ST FLOOR EXISTING WATER LINE. V.I.F. EXACT ROUTING OF PIPING WITH OWNER.
9	A BALVE SHALL BE INSTALLED ON EACH FIXTURE LINE FOR MAINTENANCE PURPOSES. BALL LINES SHALL BE THE SAME SIZE AS WATER LINE U.N.O.

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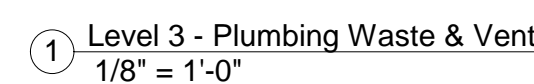
SHEET NAME

L3 PLUMBING DOMESTIC  
FLOOR PLAN

SHEET NO.

P1.0





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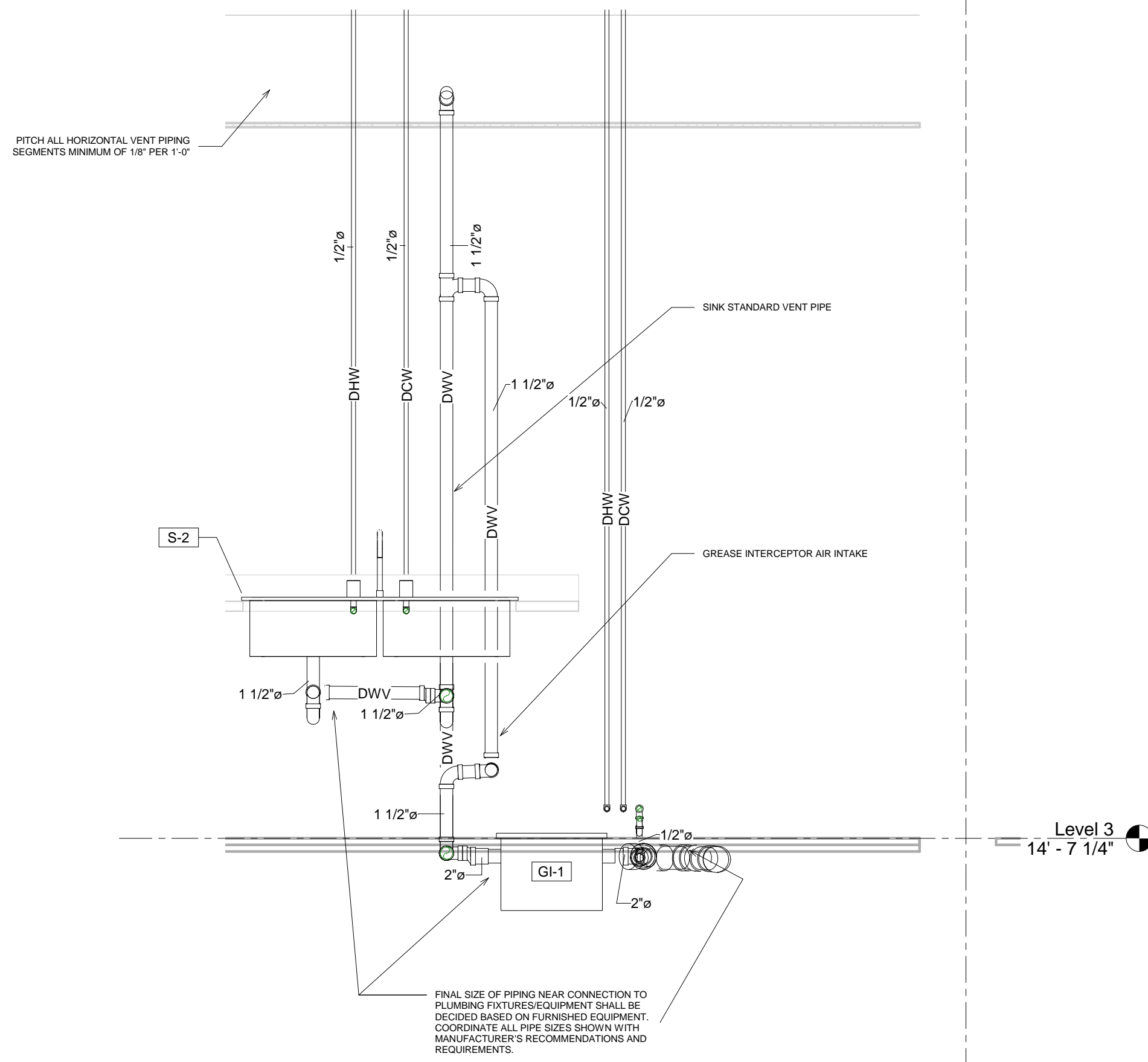
### L3 PLUMBING WASTE & VENT FLOOR PLAN

SHEET NO.

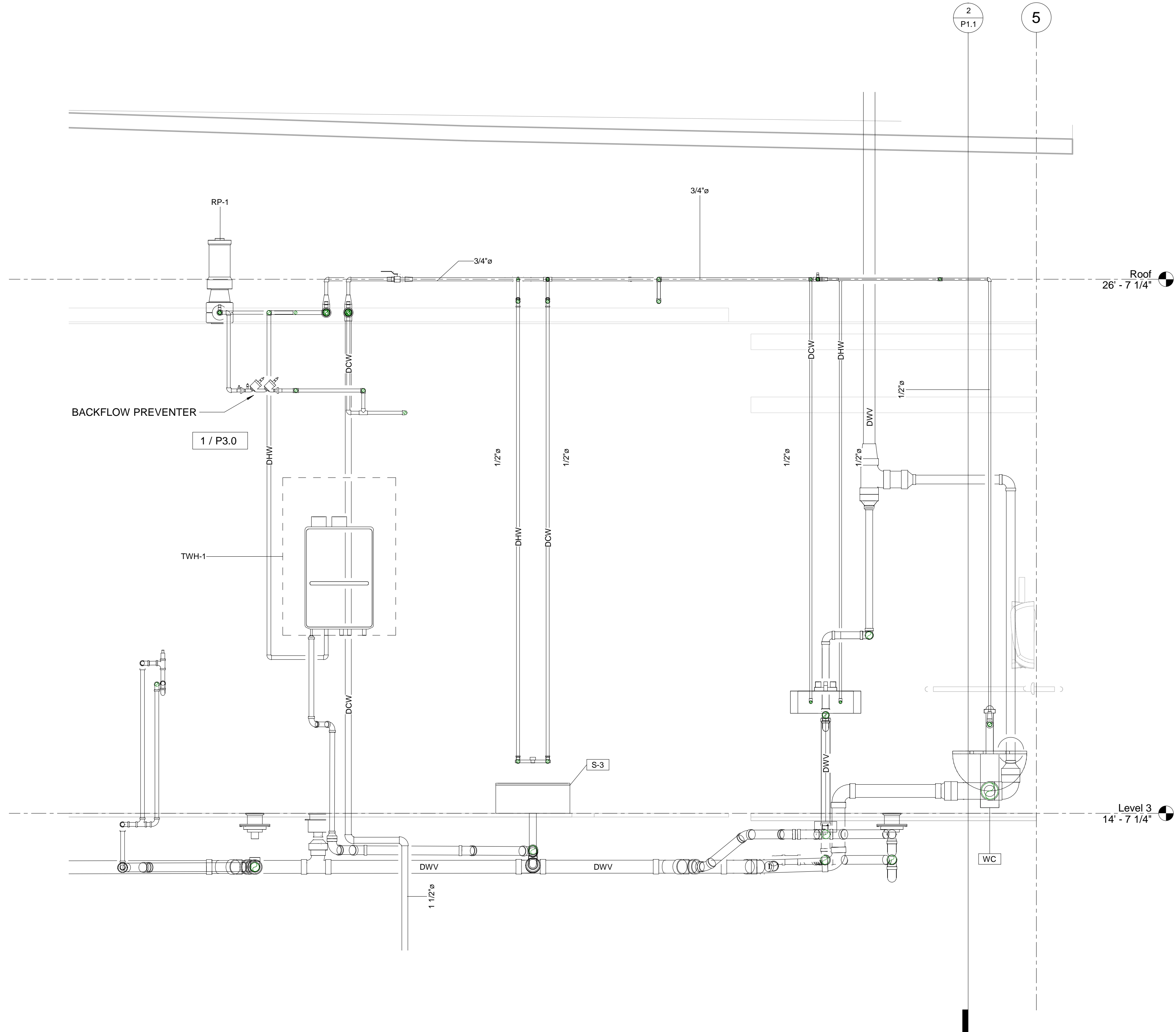
## P1.1



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



2 Elevation 3 - a  
3/4" = 1'-0"



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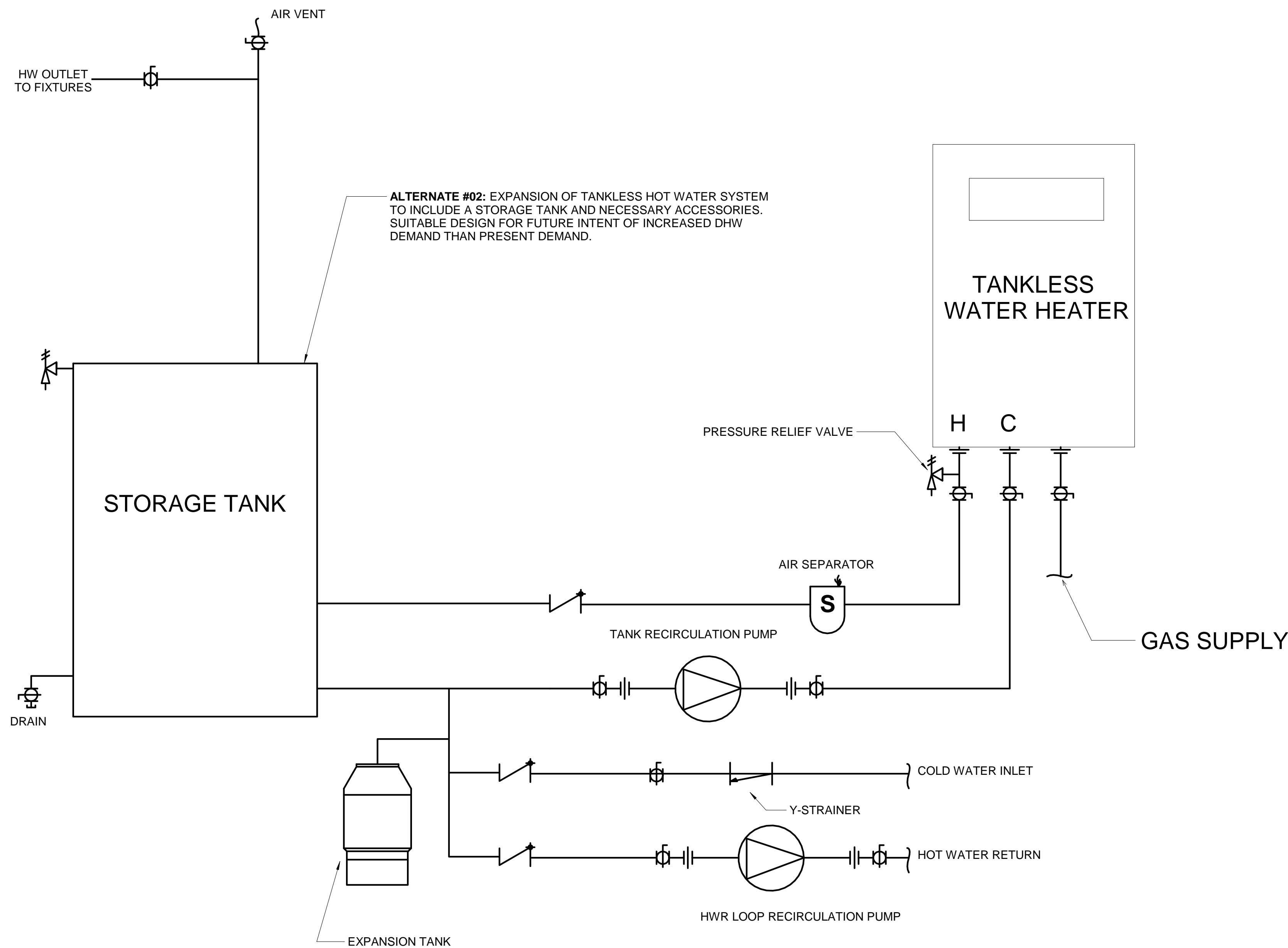
SHEET NAME

PLUMBING DETAILS

SHEET NO.

P2.2





1 Tankless Water Heater Piping Diagram  
1 1/2" = 1'-0"

**HWR RECIRCULATION PUMP SPECIFICATIONS:**

- Hot water return loop is sized as half the size of the building supply main for the third floor. This resulted in this most efficient recirculation pump curve on the Hot Water Return Loop.
- The recirculation pump shall maintain a temperature differential of (20) degrees Fahrenheit for the full hot water return loop.
- The hot water shall leave the tankless water heater at (140) degrees Fahrenheit. At the farthest point of the DHW line/beginning of the HWR loop, the temperature shall be approximately (130) degrees Fahrenheit due to heat loss. The recirculation pump shall maintain this temperature differential within +/-5%.

**PUMP DETAILS:**  
FLOW: 6 GPM  
PRESSURE HEAD: 20 FT.

**POWER DETAILS:**  
208 V / 3 Ph / 60 Hz

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SHEET NAME

PIPING DIAGRAMS

SHEET NO.

**P3.0**



GENERAL NOTES:

1.

THESE STRUCTURAL DRAWINGS ARE INTENDED TO BE USED IN CONJUNCTION WITH THE ARCHITECTURAL AND MEP DRAWINGS. SOME DIMENSIONS, SECTIONS, AND ELEVATIONS MAY BE SHOWN ON SAID DRAWINGS.
2.

DURING CONSTRUCTION, THE CONTRACTOR MAY ENCOUNTER EXISTING CONDITIONS THAT ARE UNKNOWN. SAID CONDITIONS MAY NEED TO BE REASSESSED.
3.

DIMENSIONS LABELED AS 'TYP' ARE TO BE TYPICAL UNLESS OTHERWISE NOTED (U.O.N.)
4.

THESE STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE. THE DRAWINGS DO NOT INDICAT THE MEANS AND METHODS OF CONSTRUCTION.
5.

TEMPORARY SHORING IS TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
6.

SEE ARCHITECTURAL AND MEP DRAWINGS FOR ANY OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
7.

SHOP DRAWINGS SUBMITTED BY SUBCONTRACTORS AND MANUFACTURERS SHALL BE REVIEWED AND STAMPED BY CONTRACTOR AND SUBMITTED TO THE STRUCTURAL ENGINEER.
8.

DESIGN LOADS (PER ASCE/SEI 7-16):

A.

FLOOR LIVE LOADS:

a.

RETAIL-----75 PSF

b.

CAFE-----100 PSF

c.

KITCHEN-----150 PSF

B.

ROOF LIVE LOADS

a.

TYPICAL ROOF-----20 PSF

b.

GROUND SNOW LOAD-----30 PSF

c.

FLAT ROOF SNOW LOAD-----25.2 PSF

C.

DEAD LOADS

a.

TYPICAL FLOOR-----10 PSF

b.

UPPER ROOF-----6 PSF

c.

LOWER ROOF-----14.9 PSF

d.

LOWERED CEILING-----2.5 PSF
- FOUNDATION NOTES:
1.

FOOTING ARE CENTERED UNDER WALLS ABOVE.

2.

FOUNDATION WALLS IN BASEMENT ARE SUGGESTED TO BE REPAIRED IN ACCORDANCE WITH SHEET S-4.
- MASONRY NOTES:
1.

CONTRACTOR TO REPAIR AND RE-GROUT EXTERIOR FACE BRICK AS REQUIRED.
- STRUCTURAL FRAMING NOTES:
1.

ALL NON-DIMENSIONAL LUMBER MEMBERS ARE TO BE WEYERHAEUSER PRODUCTS.

2.

ALL HANGERS ARE TO BE SIMPSON STRONG TIE PRODUCTS.

3.

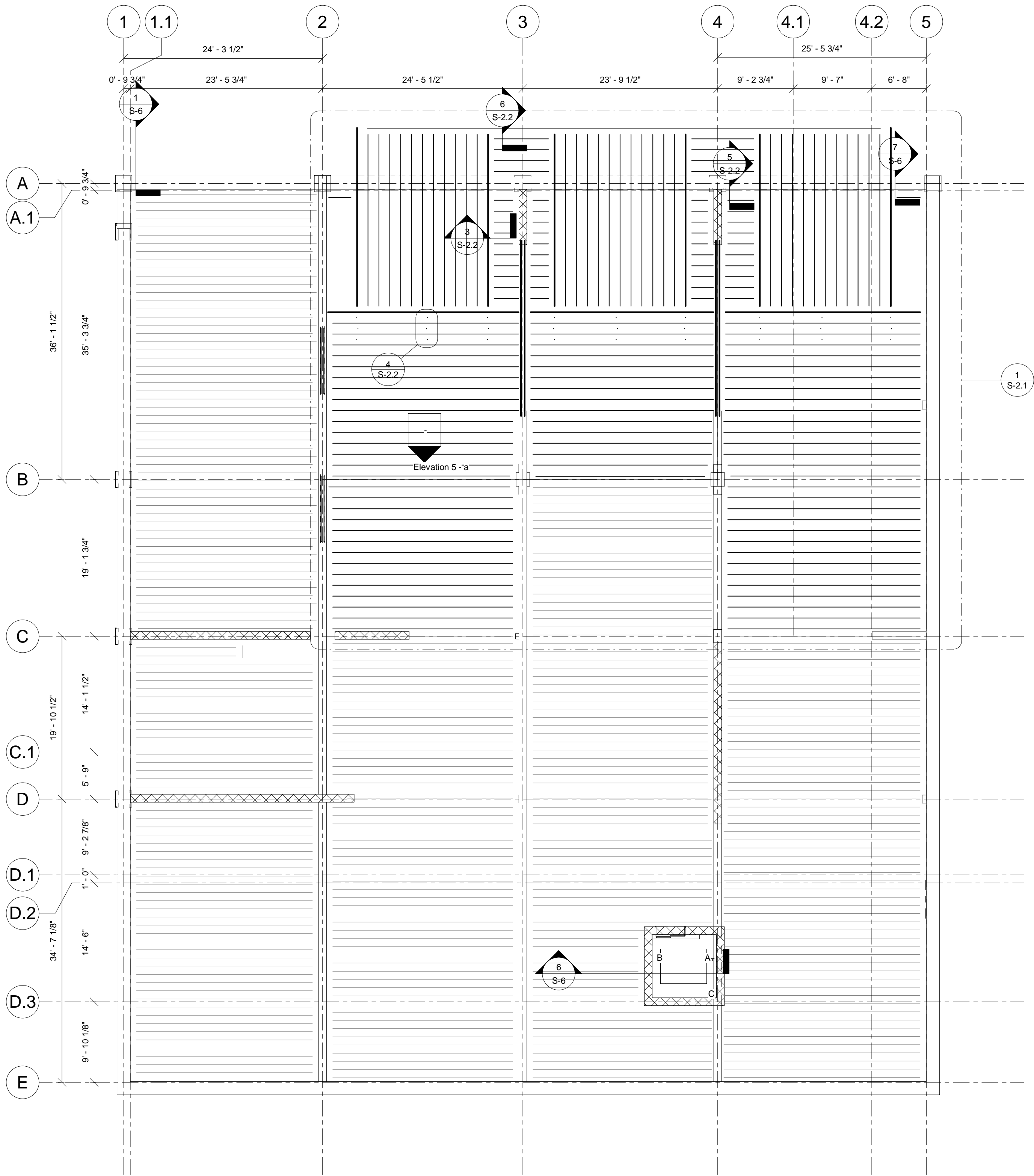
IF CONTRACTOR WOULD LIKE TO USE ANY OTHER PRODUCT MANUFACTURERS THEY MUST SUBMIT A SUBSTITUTION REQUEST FOR APPROVAL TO THE STRUCTURAL ENGINEER.

4.

SEE THE FOLLOWING SCHEDULE FOR FLOOR FRAMING TAGS, TYPES, ASSOCIATED HANGERS, AND LUMBER SPECIES.

5.

FLOOR SHEATHING TO BE 5/8" THICK ORIENTAL STRAND BOARD.
- | BEAM TAG SCHEDULE |                             |                  |         |
|-------------------|-----------------------------|------------------|---------|
| TAG               | TYPE                        | HANGER TYPE      | SPECIES |
| J1                | 1 3/4" x 18" LVL            | N/A              | -       |
| J2                | 1 3/4" x 14" LVL            | WP1.81 H=14      | -       |
| J3                | 1 3/4" x 11 1/4" LVL        | WP1.81 H=11.25   | -       |
| BALC-1            | 1 3/4" x 9 1/4" LVL         | WP1.81 H=9.5     | SP      |
| BALC-2            | 2x6                         | LUS26            | SP      |
| BALC-3            | 2x10                        | SS LUS28         | SP      |
| BALC-4            | 1 3/4" x 14" LVL            | WP1.81 H=14      | -       |
| BALC-5            | 5 1/4" x 18" PSL            | EGQ5.37-SDS H=18 | -       |
| B1                | DOUBLE (2) 5 1/4" x 18" PSL | N/A              | -       |
| RIM               | 1.75" x 14" LSL             | SS ML210Z        | -       |
- | FASTENER SCHEDULE                      |            |                           |         |
|--|------------|---------------------------|---------|
| CONNECTION                             | METHOD     | (#) FASTENER TYPE         | SPACING |
| FLOOR SHEATHING TO FLOOR JOIST         | FACE-NAIL  | (18) 8d                   | 16" OC  |
| J2 TO OTHER FRAMING (WP1.81 H=14)      | PER HANGER | (2) 10dx1.5" & (2) 16d    | -       |
| J3 TO OTHER FRAMING (WP1.81 H=11.25)   | PER HANGER | (2) 10dx1.5" & (2) 16d    | -       |
| BALC-1 TO OTHER MEMBERS (WP1.81 H=9.5) | PER HANGER | (2) 10dx1.5" & (2) 16d    | -       |
| BALC-2 TO OTHER MEMBERS (LUS26)        | PER HANGER | (8) 10d                   | -       |
| BALC-3 TO OTHER MEMBERS (SS LUS28)     | PER HANGER | (10) SS 10d               | -       |
| BALC-4 TO OTHER MEMBERS (WP1.81 H=14)  | PER HANGER | (2) 10dx1.5" & (2) 16d    | -       |
| BALC-5 TO OTHER MEMBERS (EGQ5.37-SDS)  | PER HANGER | (12) 3 SDS                | -       |
| WOOD BLOCKING TO CMU                   | -          | 1/2" Diameter Anchor Bolt | 4' OC   |
| RIM BOARD TO JOISTS (SS ML210Z)        | PER HANGER | (12) SS #10 x 1.5" Screw  | -       |
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- 241-247 5 Ave S. Clinton, IA 52732
- SHEET NAME
- GENERAL STRUCTURAL  
NOTES
- SHEET NO.
- S-1



1 OVERALL FLOOR FRAMING PLAN  
1/8" = 1'-0"

GENERAL SHEET NOTES:

1. SEE SHEET S-1 FOR GENERAL NOTES.
2. SEE SHEET S-1 FOR BEAM TAG INDICATION
3. FIELD VERIFY ALL EXISTING MEMBER SIZES.
4. ALL NEW FLOOR SHEATHING TO BE 1/2" THICK WITH LAYOUT ACCORDING TO SHEET S-2.2.

FLOOR FRAMING SCHEDULE				
Type	Cut Length	Count	Reference Level	Phase Created
1x14	65' - 4"	1	Level 3	New Construction
2x6	3' - 10 5/8"	1	Level 3	New Construction
2x6	4' - 3 1/8"	1	Level 3	New Construction
B1	21' - 5"	4	Level 3	New Construction
Balc1	22' - 2 1/4"	33	Level 3	New Construction
Balc2	3' - 3 7/8"	5	Level 3	New Construction
Balc2	3' - 4 3/8"	5	Level 3	New Construction
Balc2	3' - 6 7/8"	5	Level 3	New Construction
Balc2	3' - 8 3/8"	5	Level 3	New Construction
Balc2	3' - 8 7/8"	1	Level 3	New Construction
Balc2	4' - 0 5/8"	5	Level 3	New Construction
Balc2	4' - 2 1/8"	5	Level 3	New Construction
Balc2	4' - 7 1/8"	5	Level 3	New Construction
Balc2	4' - 7 5/8"	5	Level 3	New Construction
Balc3	7' - 11 3/4"	5	Level 3	New Construction
Balc3	8' - 11"	4	Level 3	New Construction
Balc4	22' - 2 1/4"	4	Level 3	New Construction
Balc4	22' - 3 3/8"	2	Level 3	New Construction
Balc5	23' - 4 1/4"	1	Level 3	New Construction
Balc5	24' - 5 1/2"	1	Level 3	New Construction
Balc5	25' - 0 1/2"	1	Level 3	New Construction
J1	22' - 11 1/4"	1	Level 3	New Construction
J1	24' - 10 3/4"	2	Level 3	New Construction
J1	24' - 11"	11	Level 3	New Construction
J2	22' - 0 1/2"	1	Level 3	New Construction
J2	22' - 8 1/2"	1	Level 3	New Construction
J2	22' - 8 7/8"	4	Level 3	New Construction
J2	23' - 3 1/4"	9	Level 3	New Construction
J2	24' - 6 3/4"	1	Level 3	New Construction
J2	24' - 10 3/4"	1	Level 3	New Construction
J2	24' - 11"	4	Level 3	New Construction
J2	24' - 11 1/2"	9	Level 3	New Construction
J3	23' - 7 1/2"	1	Level 3	New Construction
J3	23' - 10 3/8"	1	Level 3	New Construction
J3	23' - 11 1/2"	1	Level 3	New Construction
J3	23' - 11 3/4"	17	Level 3	New Construction
J3	24' - 5 1/2"	9	Level 3	New Construction
Lateral Bracing	1' - 0 1/2"	9	Level 3	New Construction
Lateral Bracing	1' - 2 1/4"	18	Level 3	New Construction

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SHEET NAME

OVERALL FLOOR  
FRAMING PLAN

SHEET NO.

S-2

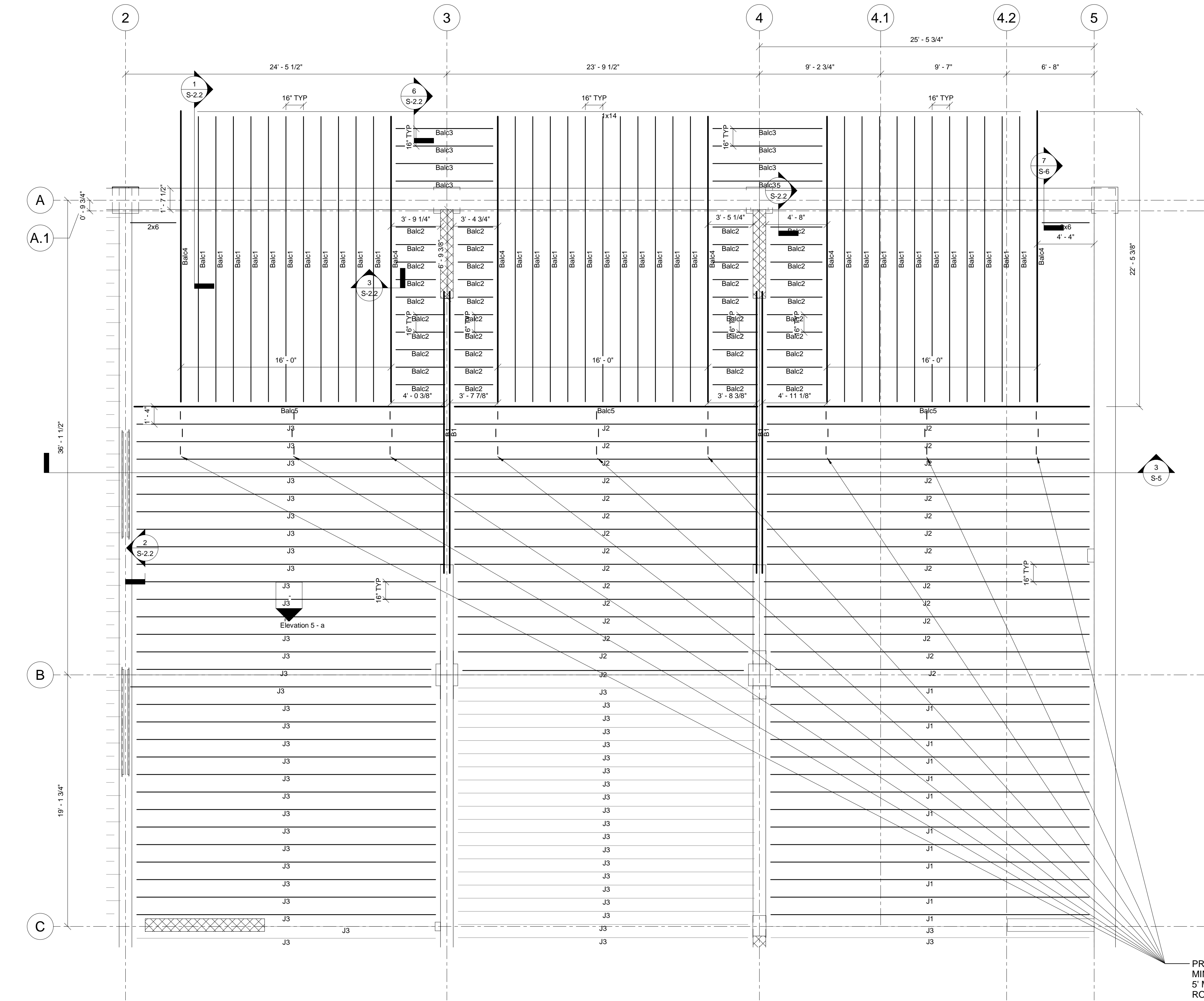


GENERAL SHEET NOTES:

- SEE SHEET S-1 FOR GENERAL NOTES.
- SEE SHEET S-1 FOR BEAM TAG INDICATION
- FIELD VERIFY ALL EXISTING MEMBER SIZES.
- ALL NEW FLOOR SHEATHING TO BE 1/2" THICK WITH LAYOUT ACCORDING TO SHEET S-2.2.

FLOOR FRAMING SCHEDULE				
Type	Cut Length	Count	Reference Level	Phase Created
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B1	21' - 5"	4	Level 3	New Construction
Balc1	22' - 2 1/4"	33	Level 3	New Construction
Balc2	3' - 3 7/8"	5	Level 3	New Construction
Balc2	3' - 4 3/8"	5	Level 3	New Construction
Balc2	3' - 6 7/8"	5	Level 3	New Construction
Balc2	3' - 8 3/8"	5	Level 3	New Construction
Balc2	3' - 8 7/8"	1	Level 3	New Construction
Balc2	4' - 0 5/8"	5	Level 3	New Construction
Balc2	4' - 2 1/8"	5	Level 3	New Construction
Balc2	4' - 7 1/8"	5	Level 3	New Construction
Balc2	4' - 7 5/8"	5	Level 3	New Construction
Balc3	7' - 11 3/4"	5	Level 3	New Construction
Balc3	8' - 11"	4	Level 3	New Construction
Balc4	22' - 2 1/4"	4	Level 3	New Construction
Balc4	22' - 3 3/8"	2	Level 3	New Construction
Balc5	23' - 4 1/4"	1	Level 3	New Construction
Balc5	24' - 5 1/2"	1	Level 3	New Construction
Balc5	25' - 0 1/2"	1	Level 3	New Construction
J1	22' - 11 1/4"	1	Level 3	New Construction
J1	24' - 10 3/4"	2	Level 3	New Construction
J1	24' - 11"	11	Level 3	New Construction
J2	22' - 0 1/2"	1	Level 3	New Construction
J2	22' - 8 1/2"	1	Level 3	New Construction
J2	22' - 8 7/8"	4	Level 3	New Construction
J2	23' - 3 1/4"	9	Level 3	New Construction
J2	24' - 6 3/4"	1	Level 3	New Construction
J2	24' - 10 3/4"	1	Level 3	New Construction
J2	24' - 11"	4	Level 3	New Construction
J2	24' - 11 1/2"	9	Level 3	New Construction
J3	23' - 7 1/2"	1	Level 3	New Construction
J3	23' - 10 3/8"	1	Level 3	New Construction
J3	23' - 11 1/2"	1	Level 3	New Construction
J3	23' - 11 3/4"	17	Level 3	New Construction
J3	24' - 5 1/2"	9	Level 3	New Construction
Lateral Bracing	1' - 0 1/2"	9	Level 3	New Construction
Lateral Bracing	1' - 2 1/4"	18	Level 3	New Construction

PROVIDE LATERAL BRACING AT A MINIMUM 3 SPANS BEHIND BALC 5' MEMBERS TO RESIST ROTATION IN LOCATIONS SHOWN (SEE DETAIL 4/S-2.2)



1 ENLARGED FLOOR FRAMING PLAN  
1/4" = 1'-0"

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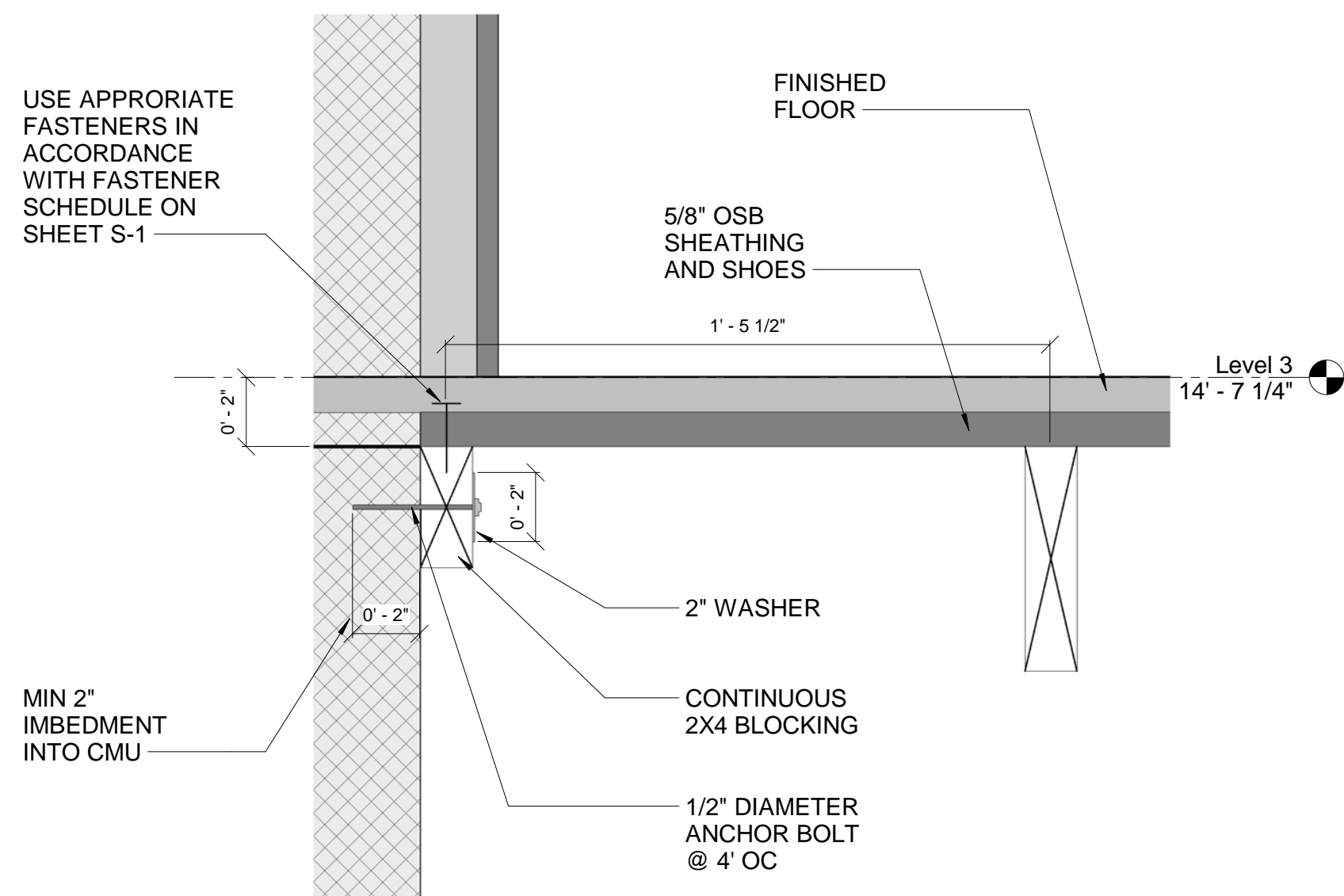
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ENLARGED FLOOR FRAMING PLANS

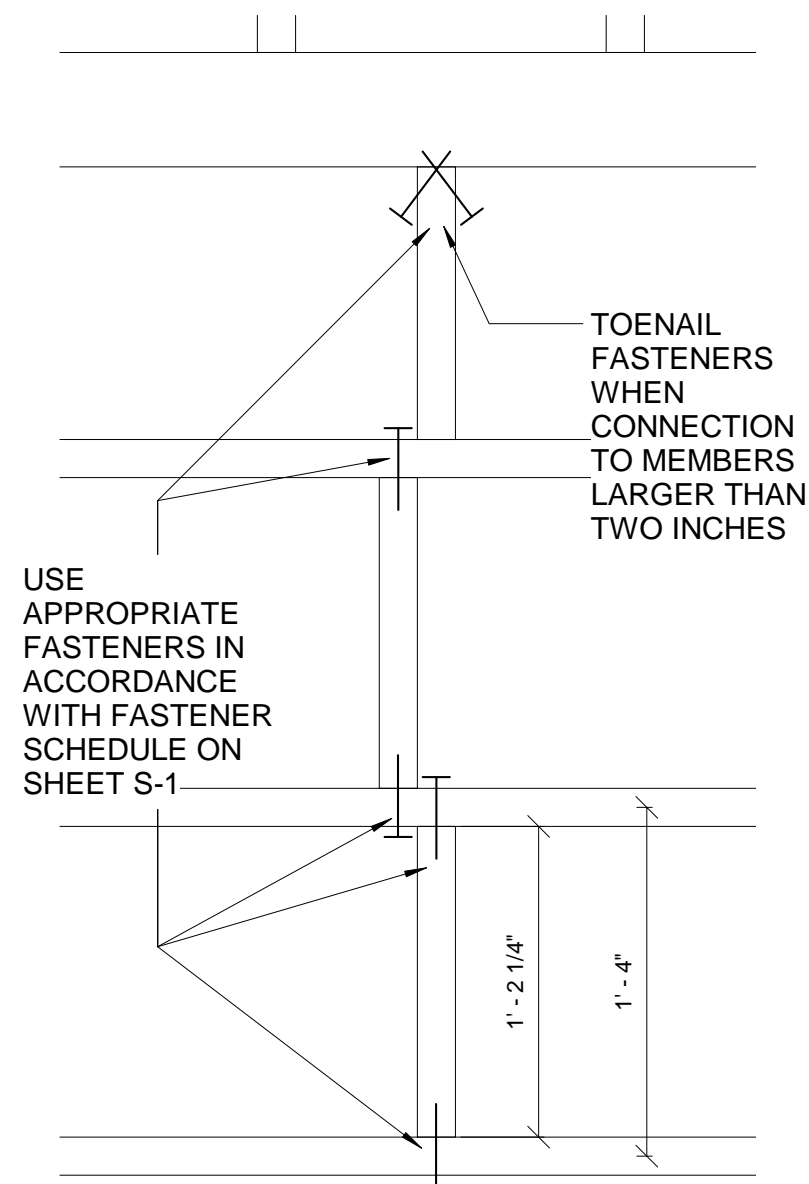
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S-2.1

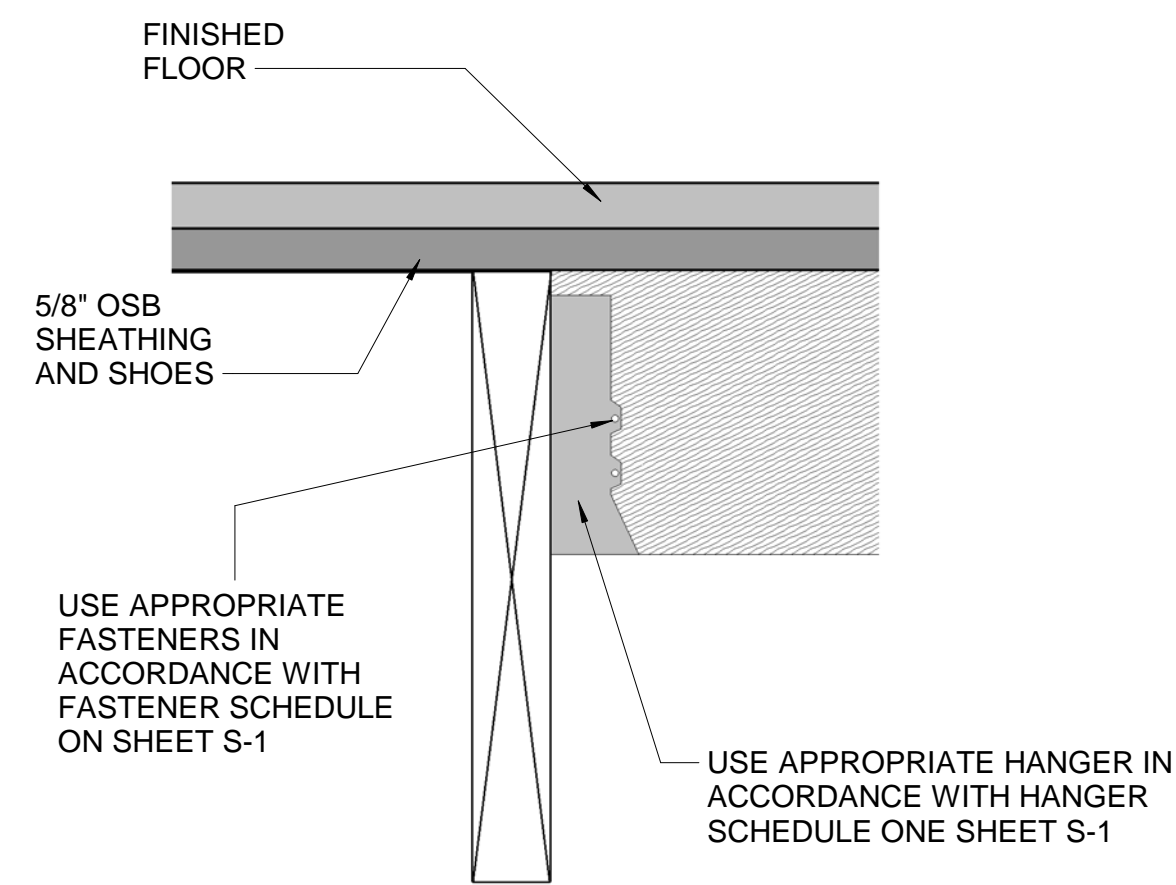




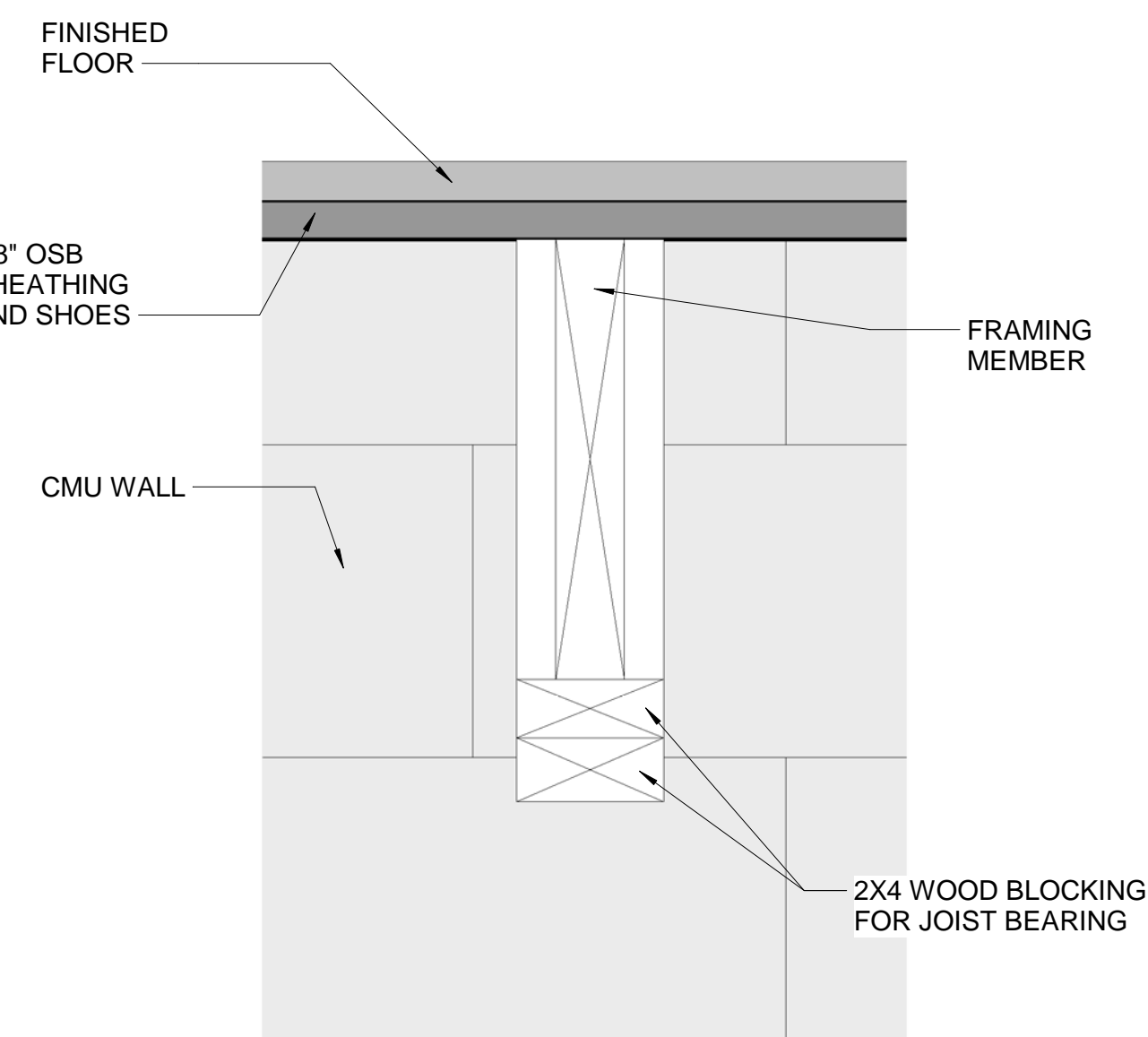
⑤ WOOD BLOCKING TO CMU  
3" = 1'-0"



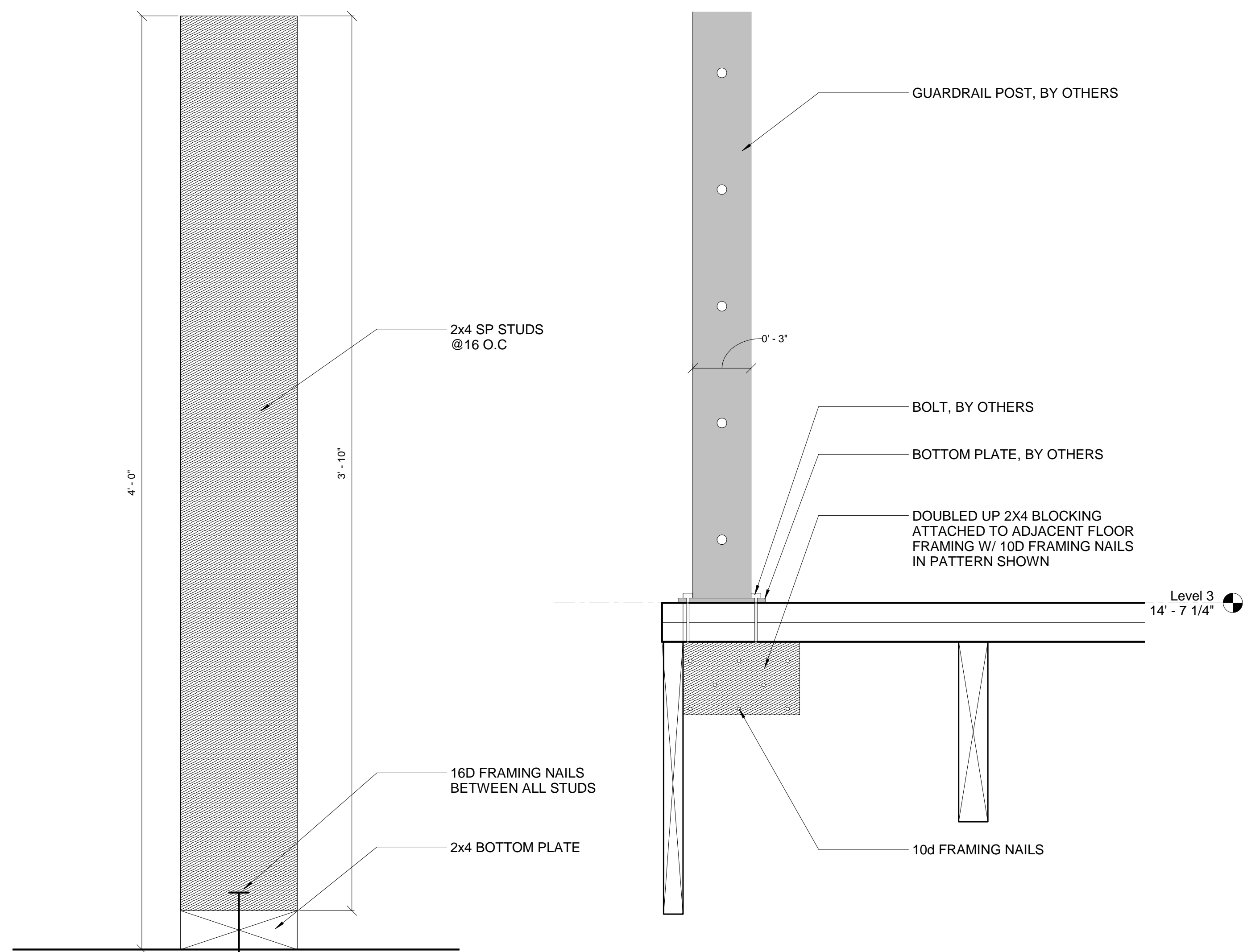
④ TYP. BLOCKING DETAIL  
1 1/2" = 1'-0"



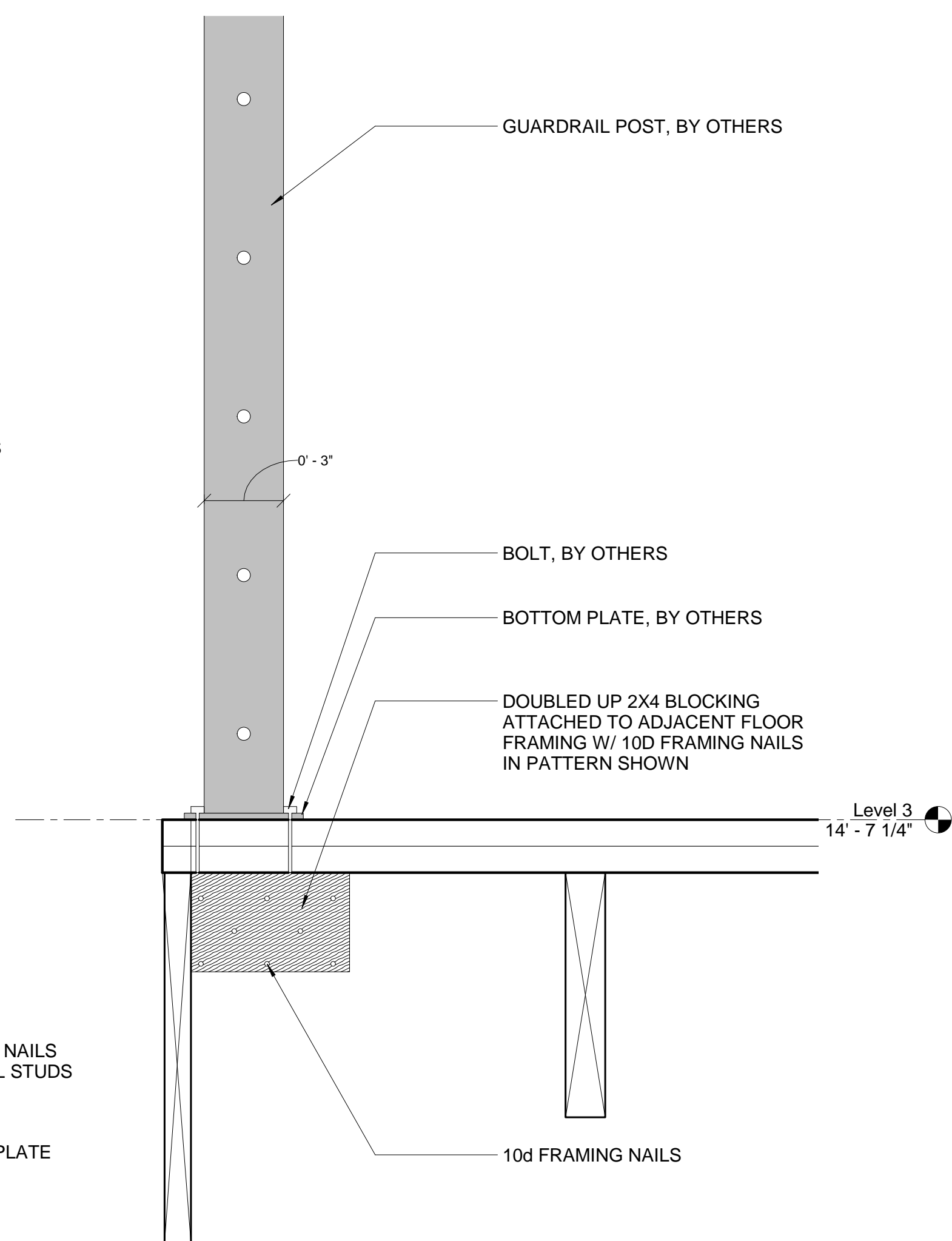
③ TYP. JOIST TO JOIST CONNECTION  
DETAIL  
3" = 1'-0"



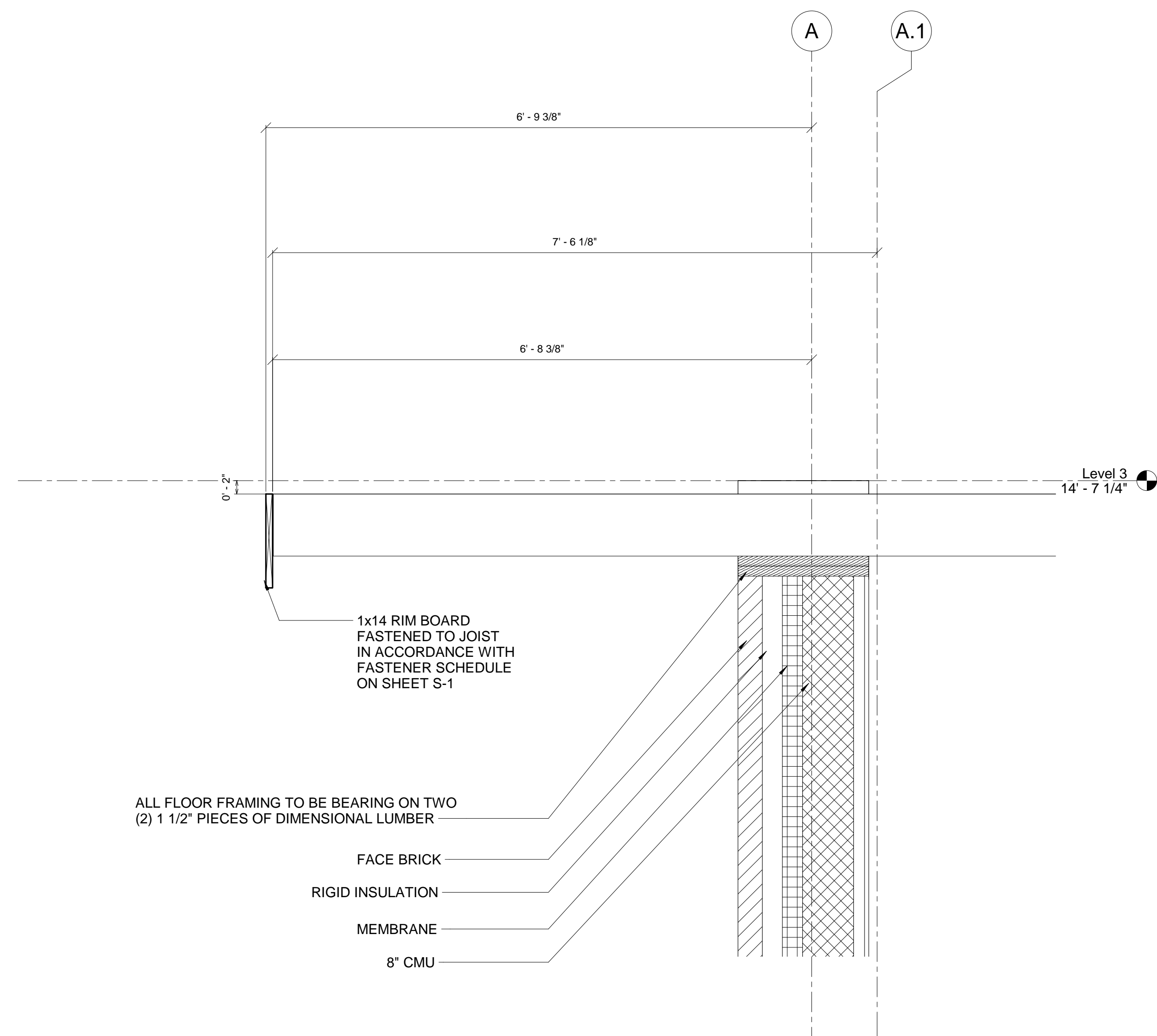
② TYP. FLOOR JOIST BEARING ON CMU  
DETAIL  
3" = 1'-0"



⑦ KNEE WALL SECTION VIEW  
3" = 1'-0"



⑥ RAILING POST CONNECTION DETAIL  
3" = 1'-0"



① BALCONY SECTION VIEW  
1" = 1'-0"

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FLOOR FRAMING DETAILS

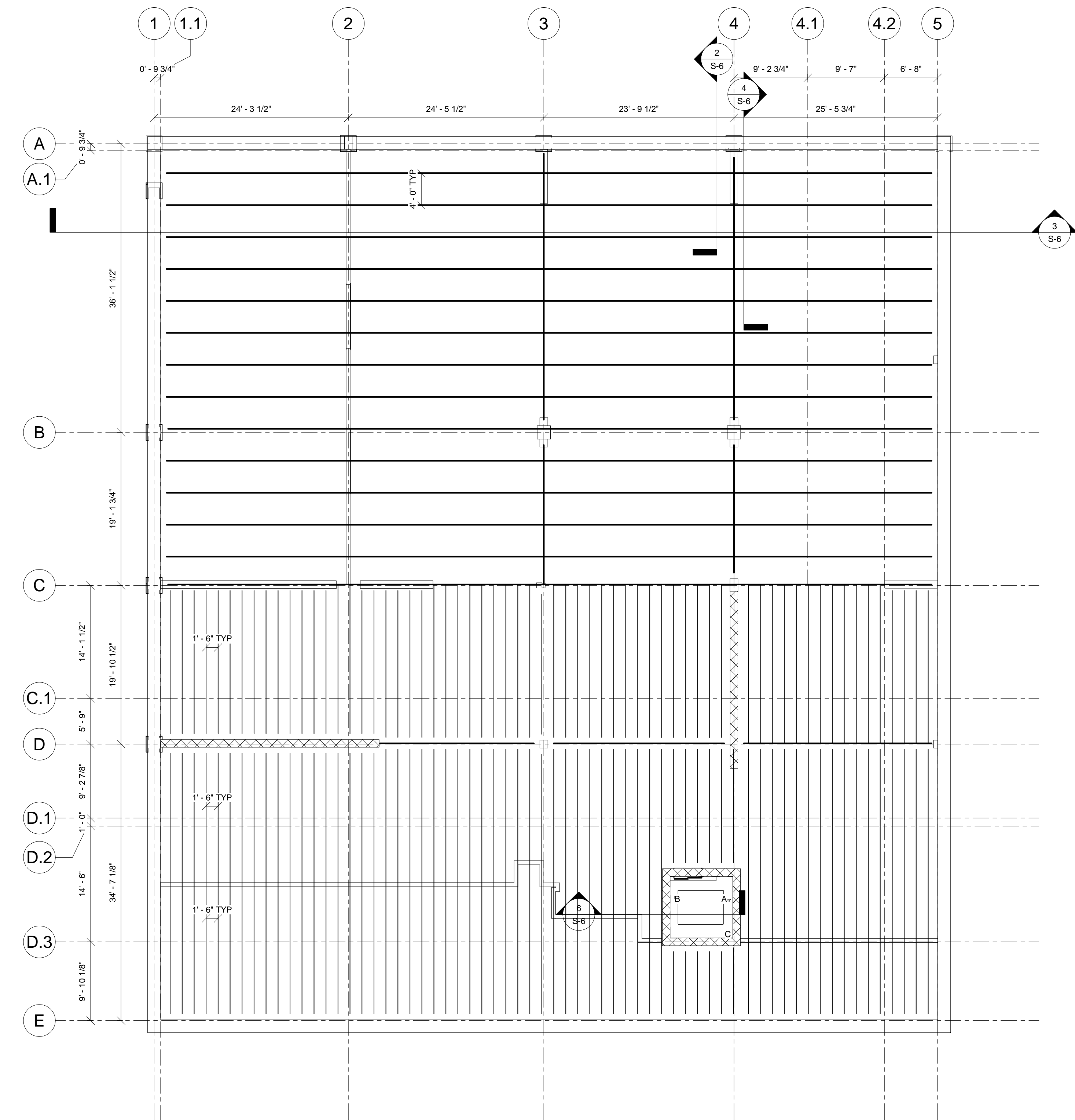
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S-2.2

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① OVERALL ROOF FRAMING PLAN  
1/8" = 1'-0"

**GENERAL SHEET NOTES:**

1. SEE SHEET S-1 FOR GENERAL NOTES.
2. ALL MEMBERS ARE EXISTING FIELD VERIFY ALL EXISTING MEMBER SIZES AND SPACING.
3. SEE MEP DRAWINGS FOR ANY ROOF PENETRATIONS AND OPENINGS

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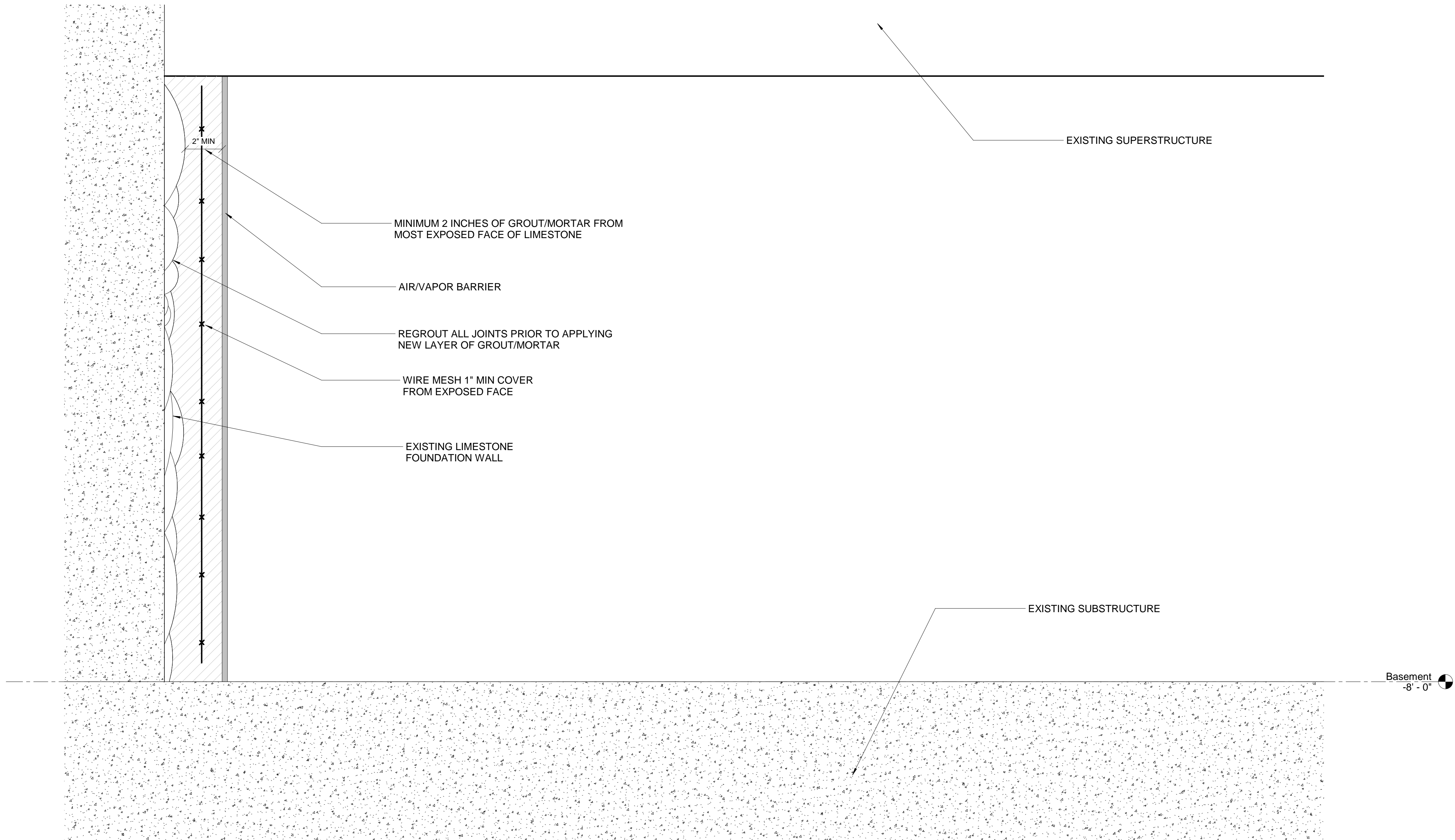
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SHEET NAME

OVERALL ROOF FRAMING  
PLAN

SHEET NO.

**S-3**



**FOUNDATION REPAIR**

1. TUCKPOINT AND RE-GROUT ALL APPARENT GAPS IN THE EXISTING FOUNDATION WALLS
2. APPLY 2" MINIMUM OF TYPE O MORTAR USING WIRE MESH FOR REINFORCEMENT
3. USE FLUID APPLIED AIR AND VAPOR BARRIER FOR MOISTURE MITIGATION

① FOUNDATION WALL REPAIR  
1 1/2" = 1'-0"

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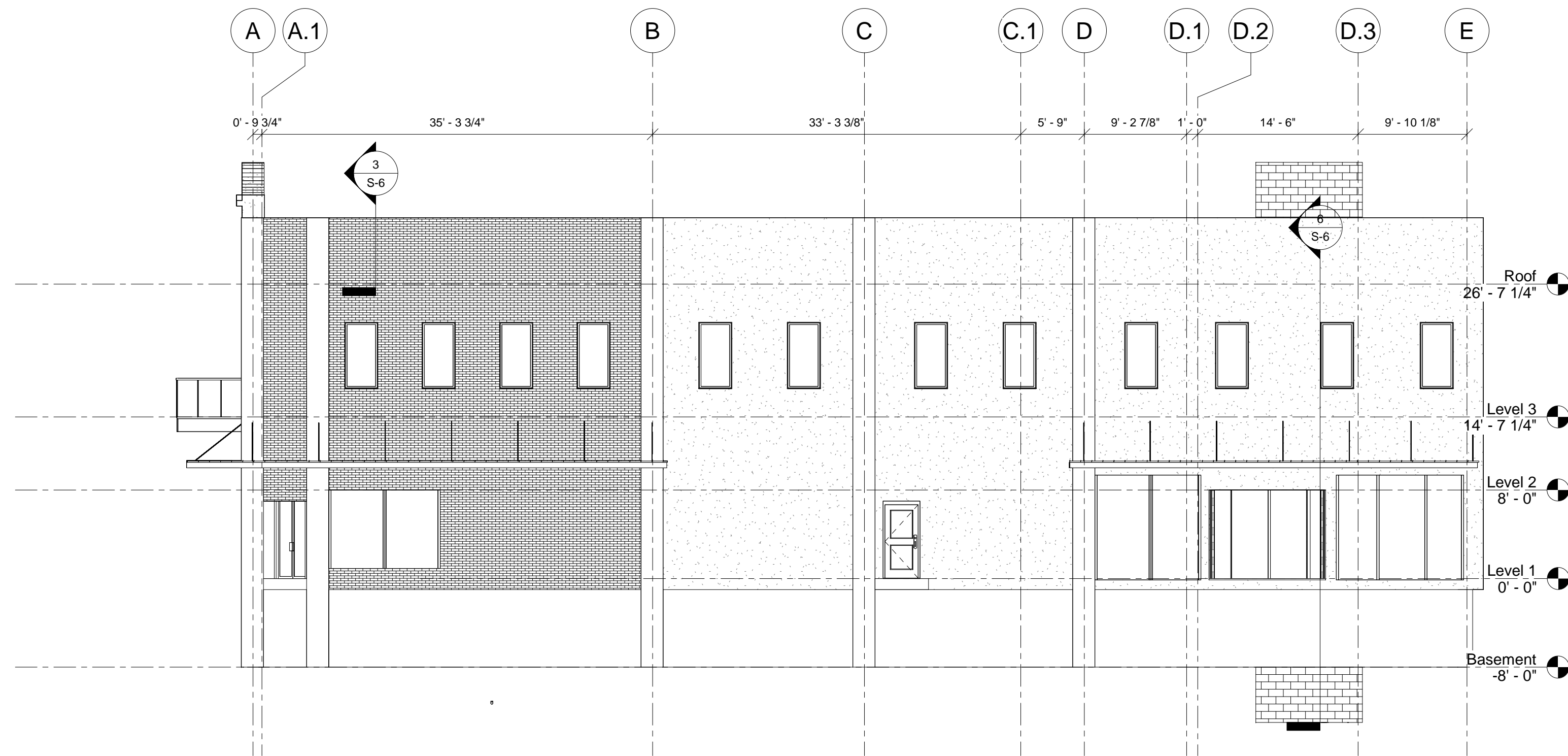
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FOUNDATION WALL  
REPAIR

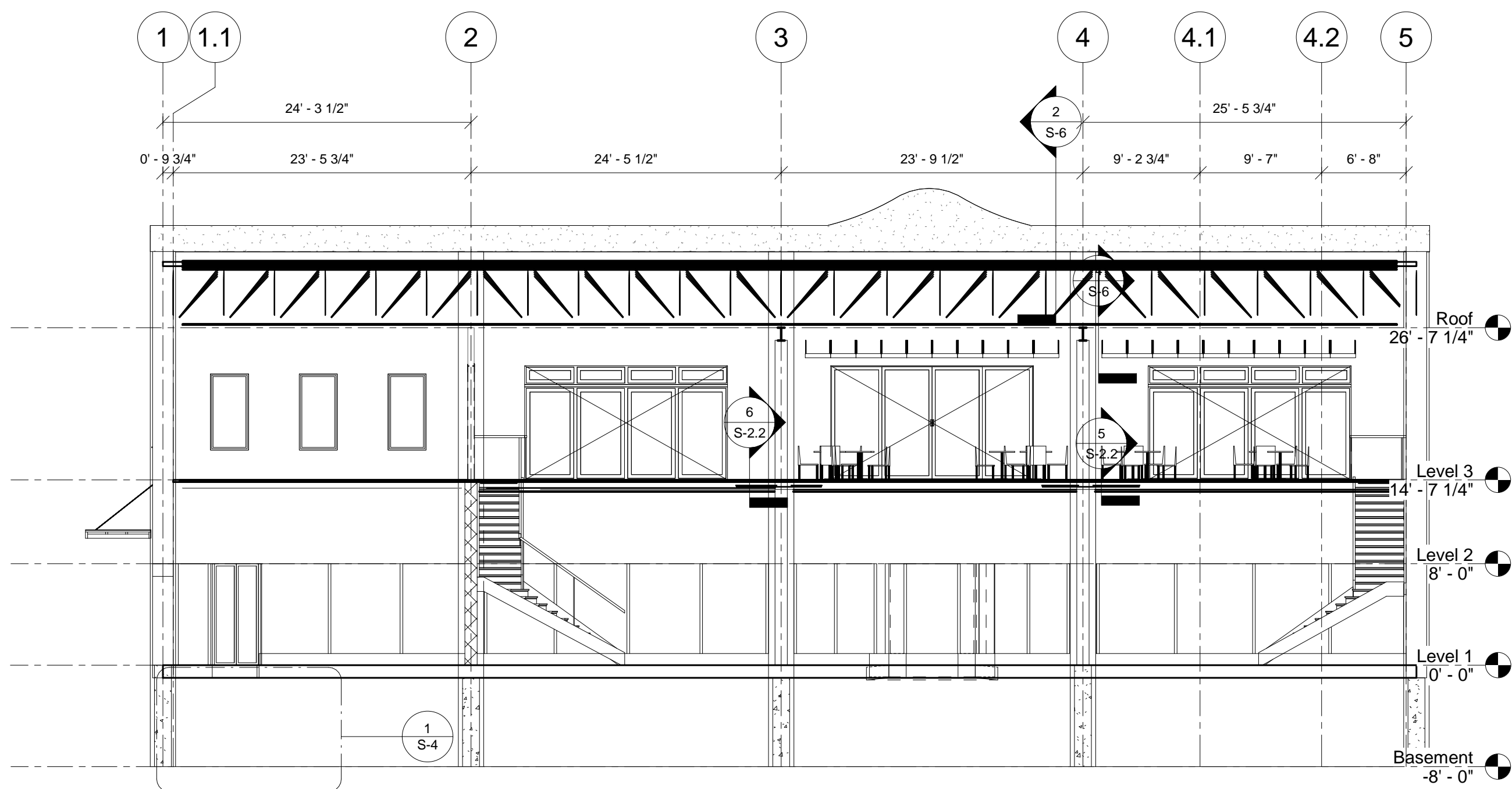
SHEET NO.

**S-4**

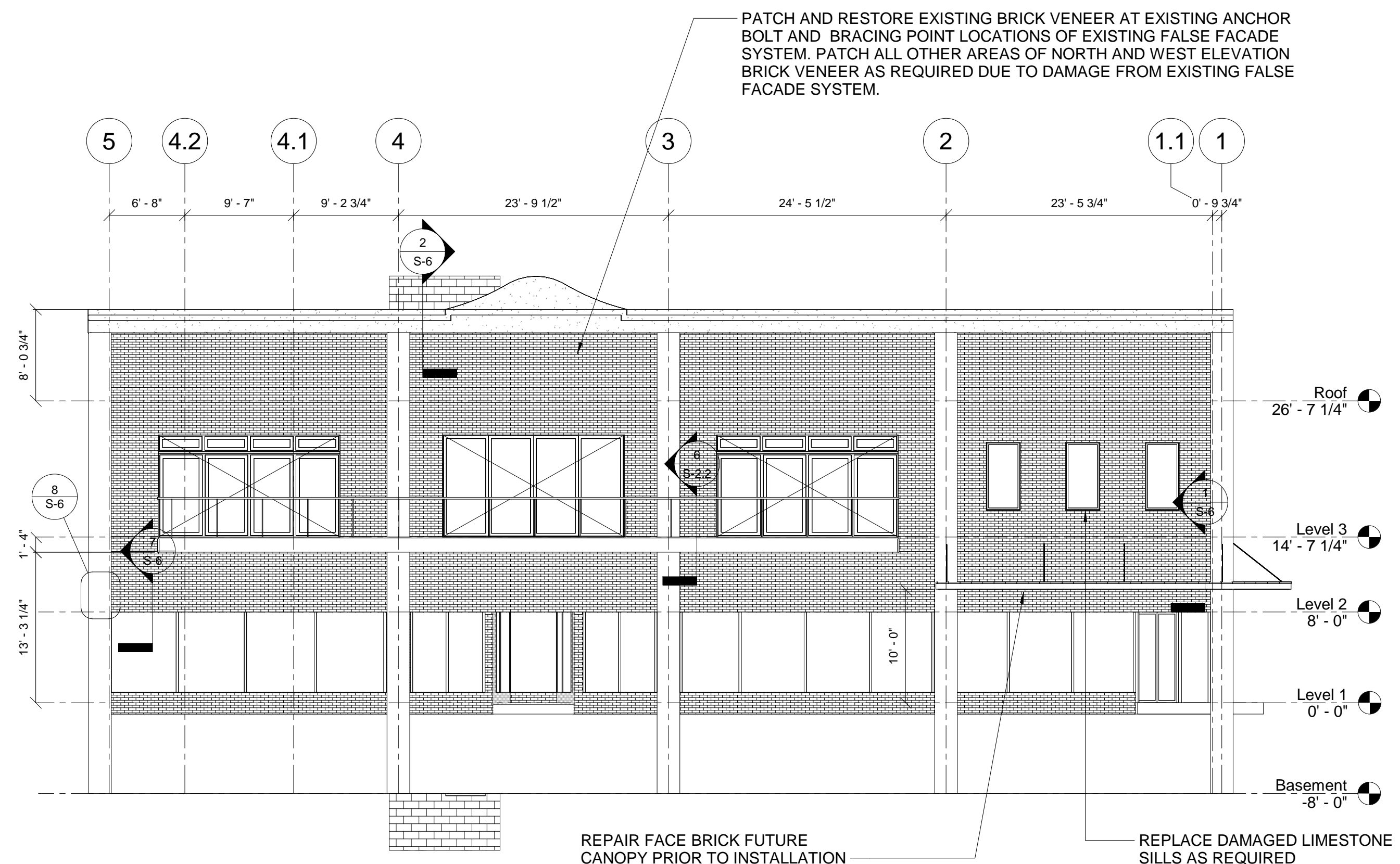




① WEST  
1/8" = 1'-0"



③ SOUTH INTERIOR ELEVATION  
1/8" = 1'-0"



② NORTH  
1/8" = 1'-0"

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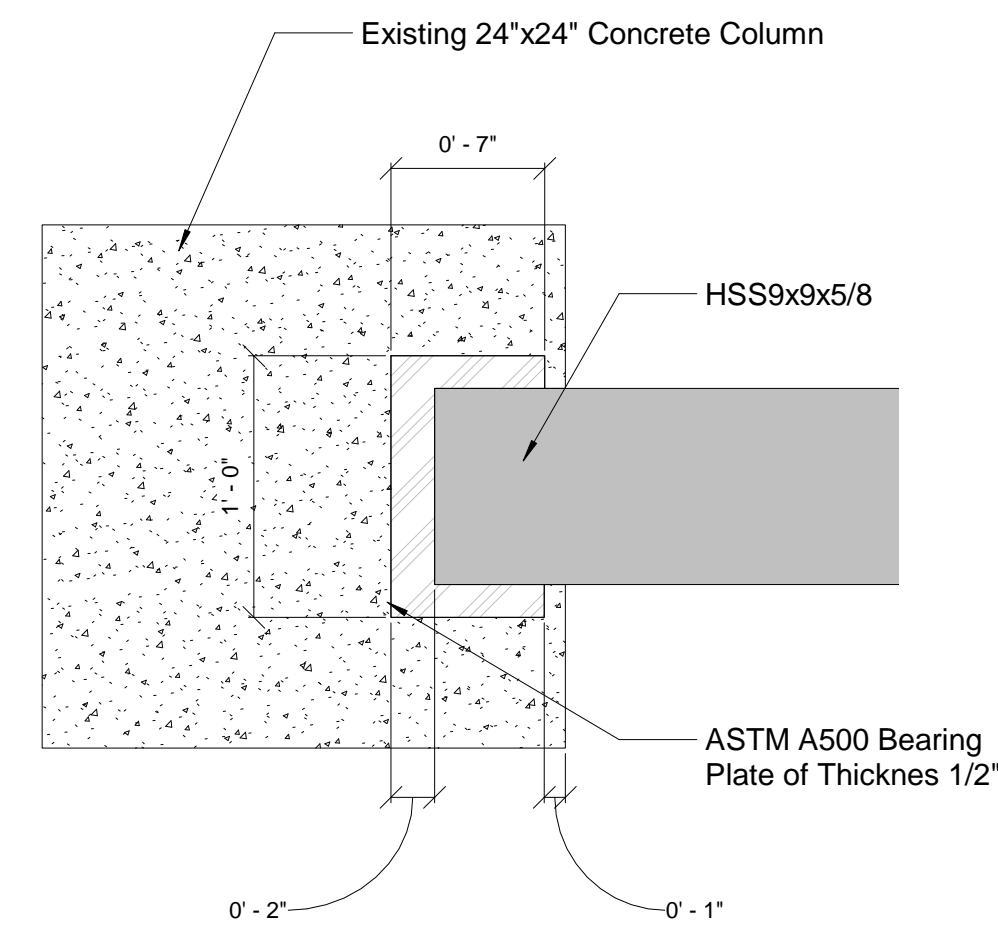
241-247 5 Ave S. Clinton, IA 52732

SHEET NAME

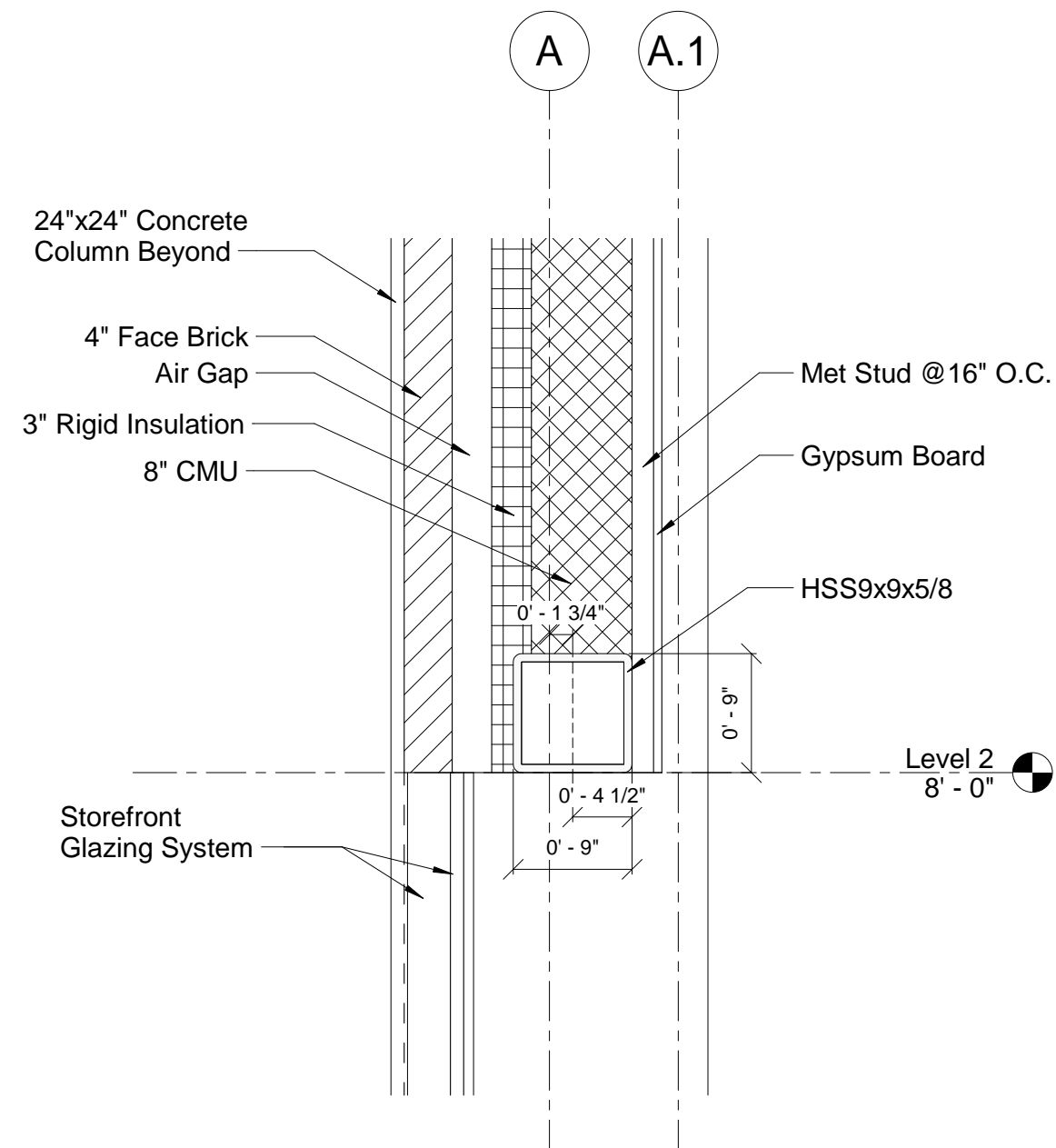
ELEVATIONS

SHEET NO.

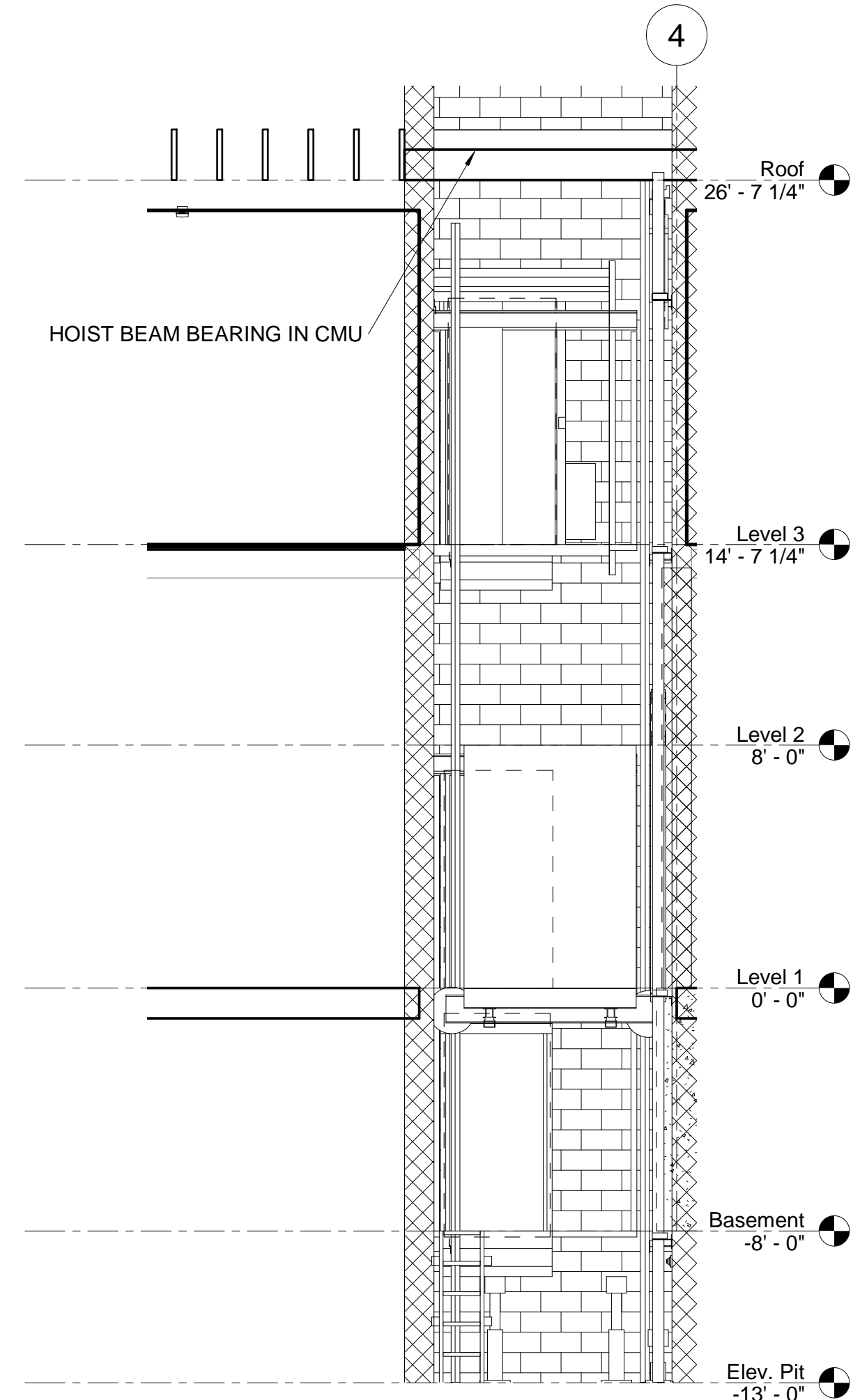
S-5



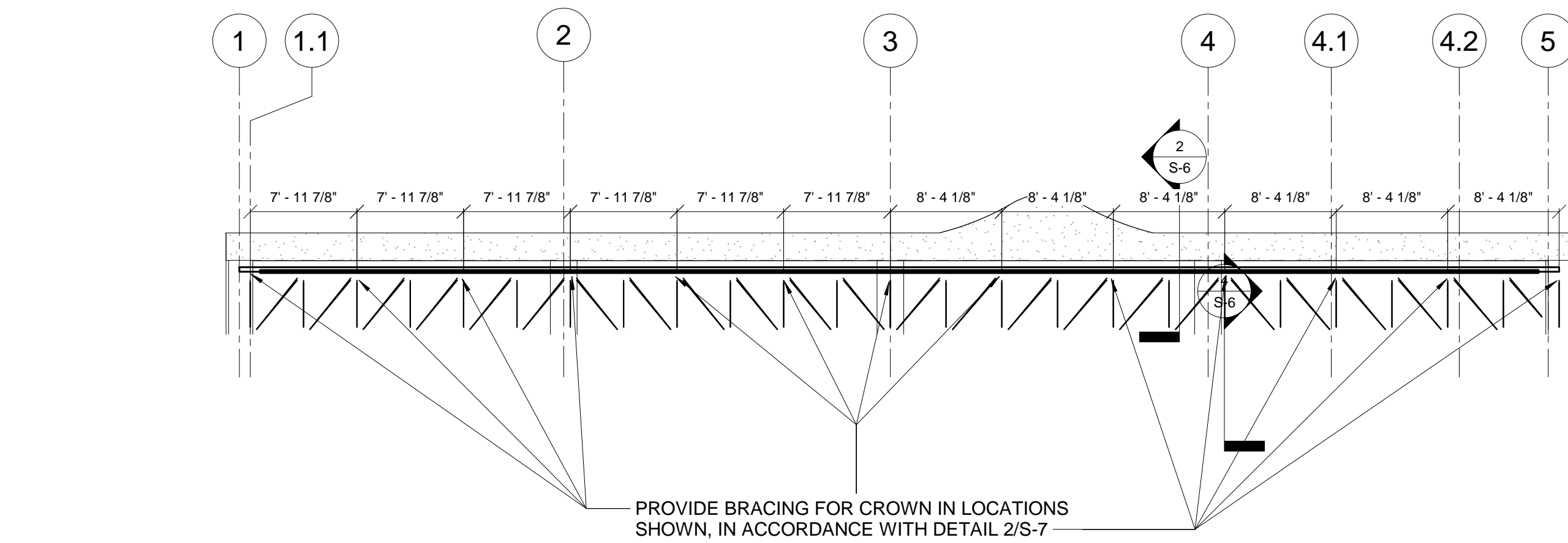
8 LINTEL BEARING DETAIL  
1 1/2" = 1'-0"



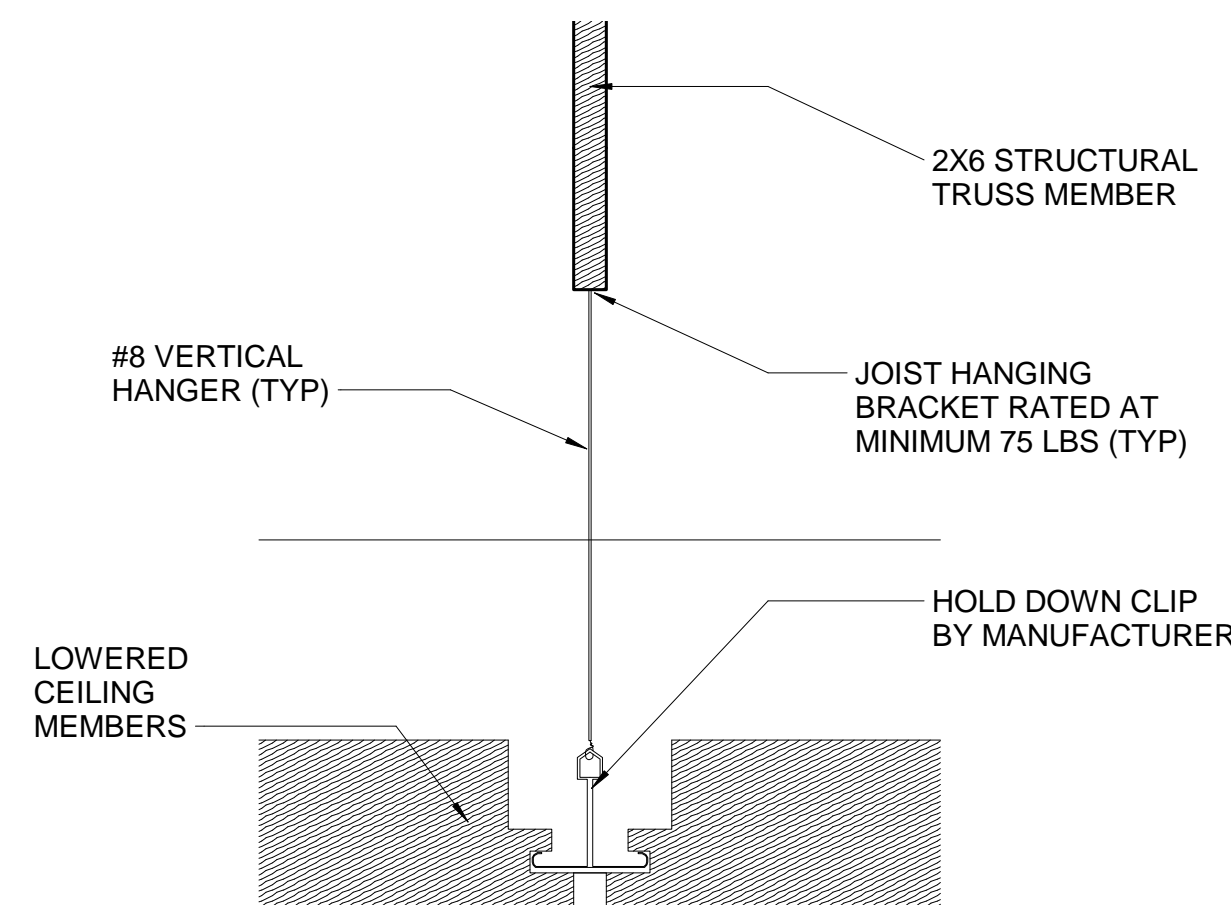
7 STOREFRONT LINTEL SECTION VIEW  
1" = 1'-0"



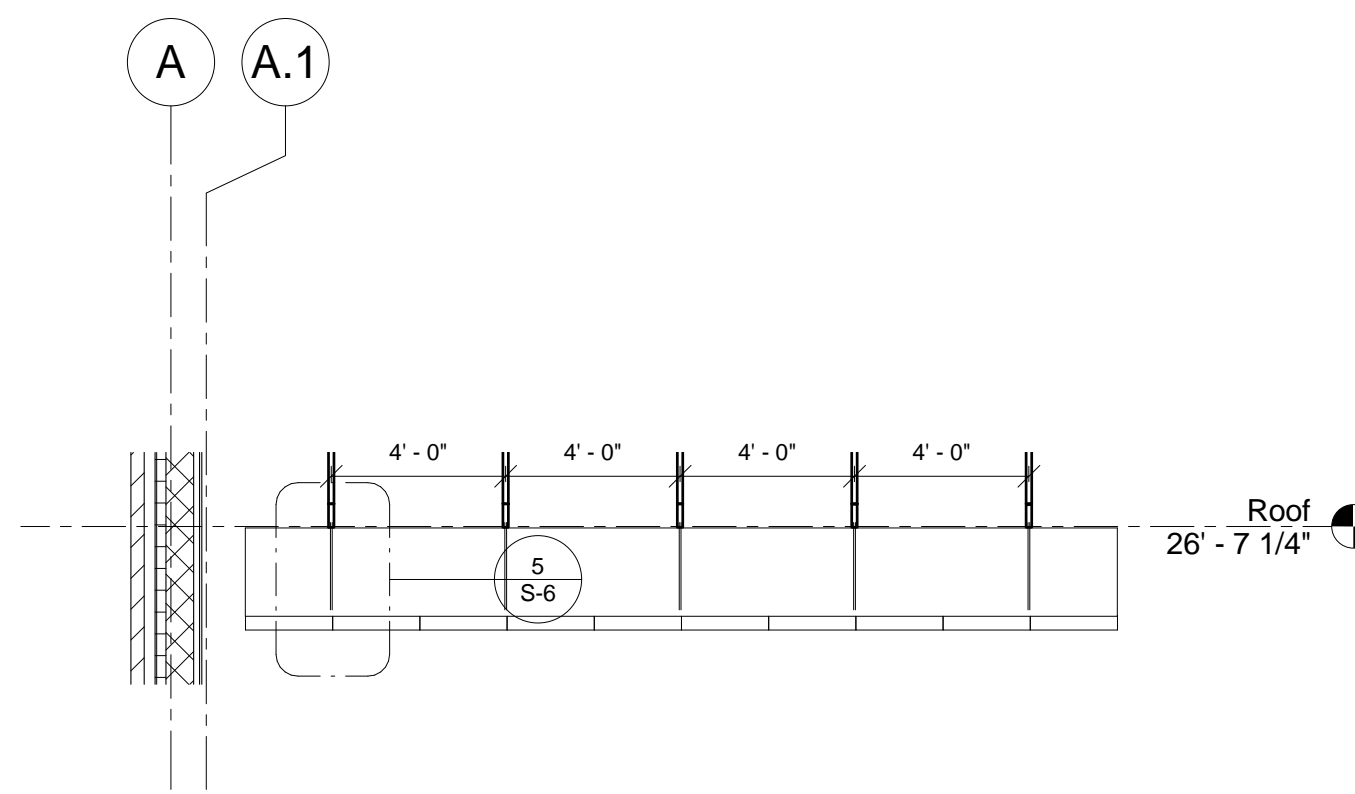
6 ELEVATOR ELEVATION  
1/4" = 1'-0"



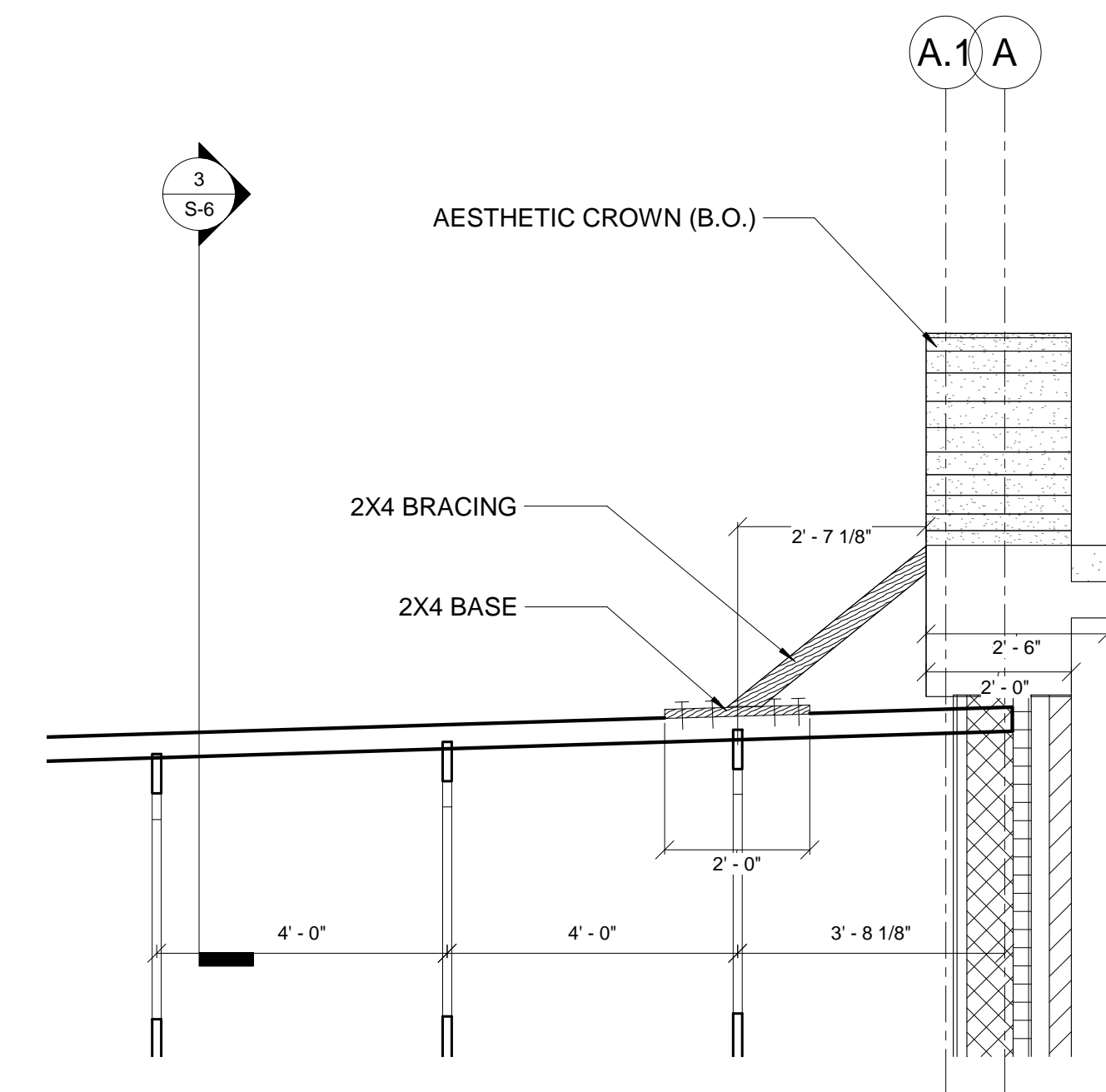
3 CROWN BRACING LOCATIONS  
1/8" = 1'-0"



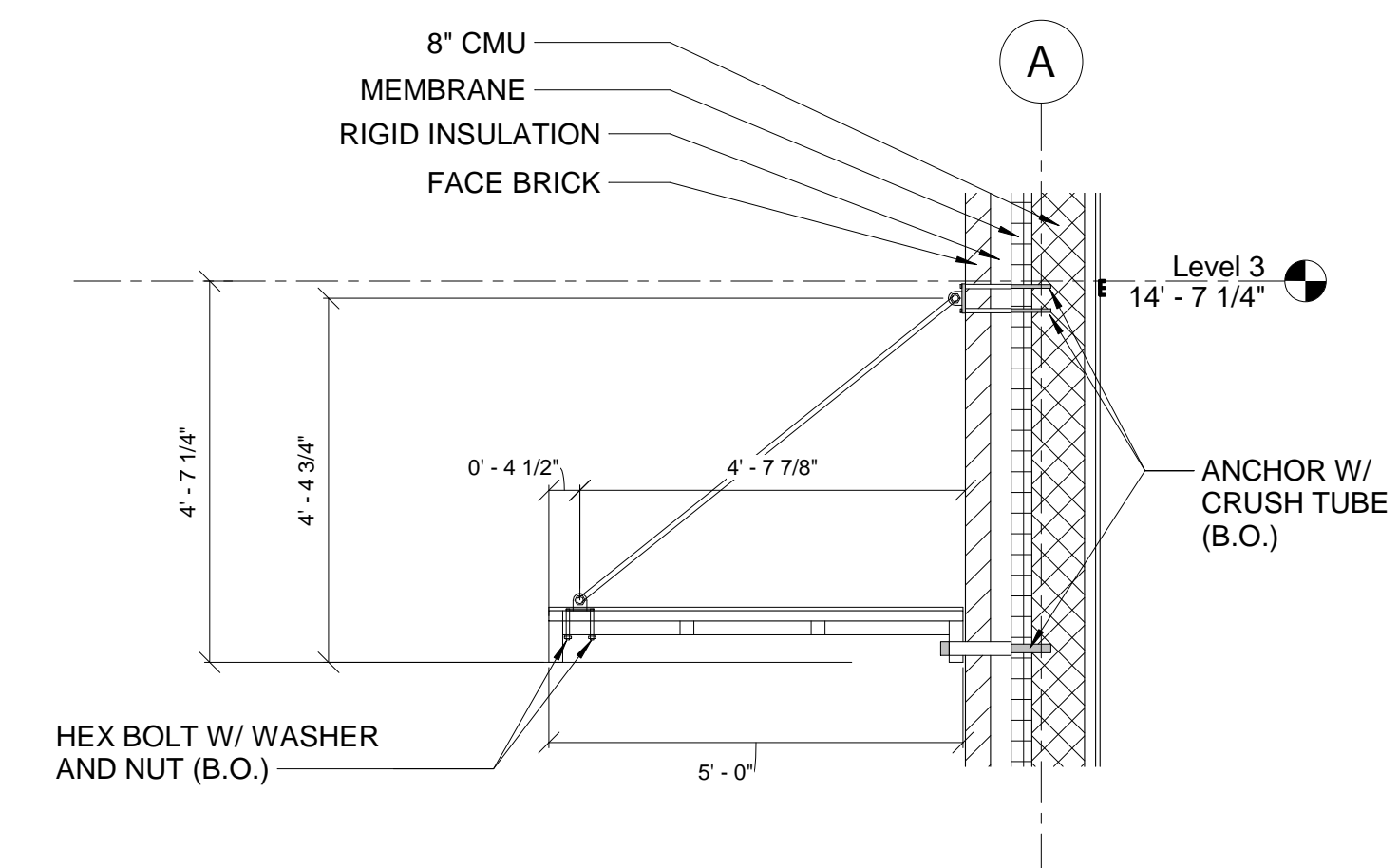
5 TYP DROPPED CEILING CONNECTION  
DETAIL  
1 1/2" = 1'-0"



4 DROPPED CEILING SECTION VIEW  
1/4" = 1'-0"



2 CROWN SECTION VIEW  
1/2" = 1'-0"



1 CANOPY CONNECTION DETAIL  
1/2" = 1'-0"

THE UNIVERSITY OF IOWA  
CIVIL AND ENVIRONMENTAL ENGINEERING



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COMMERCIAL REHABILITATION 1

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SHEET NAME

MISCELLANEOUS DETAILS

SHEET NO.

S-6

PROJECT: 4105 SEAMANS CENTER FOR THE  
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