

GENERAL NOTES

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH BY IBC 2009 EDITION AND SHALL CONFORM TO ALL OTHER APPLICABLE MUNICIPAL, STATE, AND FEDERAL REGULATIONS INCLUDING THE ILLINOIS ACCESSIBILITY CODE (1997) AND THE AMERICANS WITH DISABILITIES ACT.

A. GENERAL NOTES

- 1. ALL CONTRACTORS ARE REQUIRED TO VISIT THE SITE AND BE KNOWLEDGEABLE REGARDING EXISTING CONDITIONS AND THEIR EFFECT ON THE PROPOSED WORK. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR, ANY CONDITIONS REQUIRING MODIFICATION BEFORE PROCEEDING WITH THE PROJECT.
2. NOTIFY THE OWNER'S REPRESENTATIVE A MINIMUM OF 72 HOURS PRIOR TO THE INTERRUPTION OF ANY UTILITY.
3. PROTECT AND KEEP IN SERVICE ACTIVE UNDERGROUND UTILITIES, PIPES, OR CONDUITS, WHETHER INDICATED ON THE DRAWINGS OR NOT, UNLESS SPECIFICALLY CALLED FOR TO BE REMOVED, RELOCATED, OR DISCONNECTED AND ABANDONED.
4. CONTRACTORS AND SUBCONTRACTORS SHALL COORDINATE THEIR WORK WITH THAT OF OTHER TRADES.
5. NO WORK WILL BE PERMITTED TO BE INSTALLED WITHOUT RECEIPT AND SUBSEQUENT REVIEW OF FULL AND COMPLETE SUBMITTALS BY THE ARCHITECT/ENGINEER.
6. DO NOT SCALE DRAWINGS, DIMENSIONS INDICATED TAKE PRECEDENCE OVER SCALE.
7. VERIFY ALL DIMENSIONS AND ELEVATIONS IN THE FIELD. WHERE DISCREPANCIES ARE FOUND BETWEEN DIMENSIONS OR ELEVATIONS SHOWN AND ACTUAL FIELD CONDITIONS, NOTIFY ARCHITECT/ENGINEER.
8. WHERE CONFLICTS MAY EXIST BETWEEN THE REQUIREMENTS OF PORTIONS OF THE CONTRACT DOCUMENTS, THE GREATER QUANTITY, HIGHER QUALITY OR MORE STRINGENT REQUIREMENT SHALL GOVERN. THEREFORE, BY EXECUTING A CONTRACT FOR CONSTRUCTION, THE CONTRACTOR AGREES THAT, IF IT RAISED NO QUESTIONS REGARDING SUCH CONFLICTS DURING THE BIDDING PROCESS, AND IN THE ABSENCE OF A CLARIFYING ADDENDUM ISSUED DURING THE BIDDING PROCESS, IT IS VOLUNTEERED TO COMPLY WITH THE MORE EXPENSIVE REQUIREMENT AS PART OF ITS BASE BID AND IS NOT ENTITLED TO ANY ADDITIONAL COMPENSATION TO RESOLVE THE CONFLICT.
9. THE CONTRACT DOCUMENTS REQUIRE THE CONTRACTOR TO FURNISH AND INSTALL COMPLETE PRODUCTS, SYSTEMS AND SERVICES. BY EXECUTING A CONTRACT FOR CONSTRUCTION, THE CONTRACTOR AGREES THAT THE DRAWINGS SET FORTH THE DESIGN INTENT AND, THEREFORE, MAY NOT EXPRESSLY DEPICT EVERY LENGTH, SEGMENT, PIECE, PART, COMPONENT OR UNIT OF A PRODUCT, SYSTEM OR SERVICE. THE CONTRACTOR FURTHER AGREES THAT, AS PART OF ITS BID, IT MUST FURNISH AND INSTALL EVERY LENGTH, SEGMENT, PIECE, PART, COMPONENT OR UNIT OF A PRODUCT, SYSTEM OR SERVICE AND, CONSEQUENTLY, THE CONTRACTOR IS NOT ENTITLED TO ANY ADDITIONAL COMPENSATION FOR ANY LENGTH, SEGMENT, PIECE, PART COMPONENT OR UNIT OF A PRODUCT, SYSTEM OR SERVICE BECAUSE IT IS NOT EXPRESSLY DEPICTED HEREIN.

B. MISCELLANEOUS AND DEMOLITION NOTES

- 1. COORDINATE PENETRATIONS AND/OR SLEEVES REQUIRED IN WALLS, FLOORS, CEILING OR ROOFS FOR MECHANICAL AND ELECTRICAL WORK REQUIRED BY ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
2. SEAL PENETRATIONS OF DUCTWORK, CONDUIT OR PIPES WITH UL APPROVED MATERIALS TO MAINTAIN THE FIRE RATING OF ASSEMBLIES. PROVIDE FIRE DAMPERS AS INDICATED ON THE DRAWINGS.
3. APPLY APPROPRIATE & COMPATIBLE SEALANT MATERIALS AS REQUIRED TO SEPARATE DISSIMILAR METALS, FILL GAPS IN EXISTING ASSEMBLIES OR WHERE NEW AND EXISTING ASSEMBLIES MEET OR WHERE OTHERWISE REQUIRED BY THE SPECIFICATIONS.
4. BRING ANY UNFORESEEN OR CONFLICTING CONDITIONS TO THE IMMEDIATE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK.
5. REPAIR, PATCH, OR REPLACE FINISH MATERIALS OR VISIBLE ASSEMBLIES THAT ARE SOILED, CUT OR DAMAGED IN ANY FASHION DURING THE COURSE OF THE WORK. PERFORM PATCHING SUCH THAT EDGES BLEND INTO CONTIGUOUS SURFACES SMOOTHLY, MATCHING TEXTURE AND COLOR OF ADJACENT SURFACES.

STANDARD ABBREVIATIONS

Table with 4 columns of abbreviations and their corresponding full names. Includes categories like ANCHOR BOLT, FLOOR DRAIN, PLATE, etc.

THE MATERIALS, ABBREVIATIONS, AND DRAFTING SYMBOLS LEGEND ARE EACH AN ALL INCLUSIVE MASTER LIST USED BY THIS FIRM. THE INCLUSION OF THESE LEGENDS INTO THESE DOCUMENTS DOES NOT IMPLY THAT ALL THE SYMBOLS OR MATERIALS INCLUDED IN THESE LEGENDS ARE INCORPORATED INTO THIS PROJECT.

DRAFTING MATERIALS LEGEND

Table showing drafting materials legend with symbols for detail numbers, column numbers, location elevations, room numbers, door numbers, nominal thickness, keynotes, window types, and toilet accessories.

Table showing drafting materials legend with symbols for spot elevations, steel, earth, concrete, insulation, brick, wood, blocking, concrete masonry units, acoustic ceiling panels, gypsum wall board, gravel, and ranked joints.



PROJECT

TENNIS CENTER HVAC UPGRADE
1300 FOREST GATE ROAD
OAK BROOK, ILLINOIS 60523

OWNER

OAK BROOK PARK DISTRICT
1450 FOREST GATE ROAD
OAK BROOK, ILLINOIS 60523

ARCHITECT/ENGINEER

KLUBER, INC.
10 S. SHUMWAY AVENUE
BATAVIA, ILLINOIS 60510
TEL 630-406-1213
FAX 630-406-9472
www.kluberinc.com

INDEX OF DRAWINGS

Table listing drawing titles and sheet numbers: G100 COVER SHEET, A210 PARTIAL UPPER AND LOWER LEVEL DEMOLITION PLANS, A310 PARTIAL UPPER AND LOWER LEVEL FLOOR PLANS, A410 PARTIAL UPPER AND LOWER LEVEL REFLECTED CEILING PLANS, A1200 SECTION DETAILS AND WALL TYPES, M210 PARTIAL UPPER AND LOWER LEVEL MECHANICAL DEMOLITION PLANS, M310 PARTIAL UPPER AND LOWER LEVEL VENTILATION FLOOR PLANS, M410 PARTIAL UPPER AND LOWER LEVEL PIPING FLOOR PLANS, M510 TEMPERATURE CONTROL SCHEMATICS, M610 MECHANICAL SCHEDULES AND DETAILS, F310 PARTIAL UPPER LEVEL FIRE PROTECTION PLANS, E310 PARTIAL LOWER LEVEL ELECTRICAL AND ELECTRICAL DEMOLITION PLANS, E320 PARTIAL UPPER LEVEL ELECTRICAL AND ELECTRICAL DEMOLITION PLANS.



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TENNIS CENTER HVAC UPGRADE

OAK BROOK PARK DISTRICT
1450 FOREST GATE ROAD
OAK BROOK, IL 60523

APPLICABLE CODES

- 1. INTERNATIONAL BUILDING CODE (IBC); 2009 EDITION.
2. INTERNATIONAL MECHANICAL CODE; 2009 EDITION.
3. ILLINOIS PLUMBING CODE; 2014 EDITION.
4. NATIONAL ELECTRICAL CODE (NEC); 2008 EDITION.
5. INTERNATIONAL PROPERTY MAINTENANCE CODE; 2009 EDITION.
6. INTERNATIONAL ENERGY CONSERVATION CODE; 2015 EDITION.
7. INTERNATIONAL EXISTING BUILDING CODE; 2009 EDITION.
8. INTERNATIONAL FUEL GAS CODE; 2009 EDITION.
9. ILLINOIS ACCESSIBILITY CODE; 1997 EDITION.
10. INTERNATIONAL FIRE CODE; 2009 EDITION.
11. NFPA 13, 2007 EDITION.



SITE LOCATION PLAN
SCALE: 1/16" = 1'-0"

SEALS & CERTIFICATES

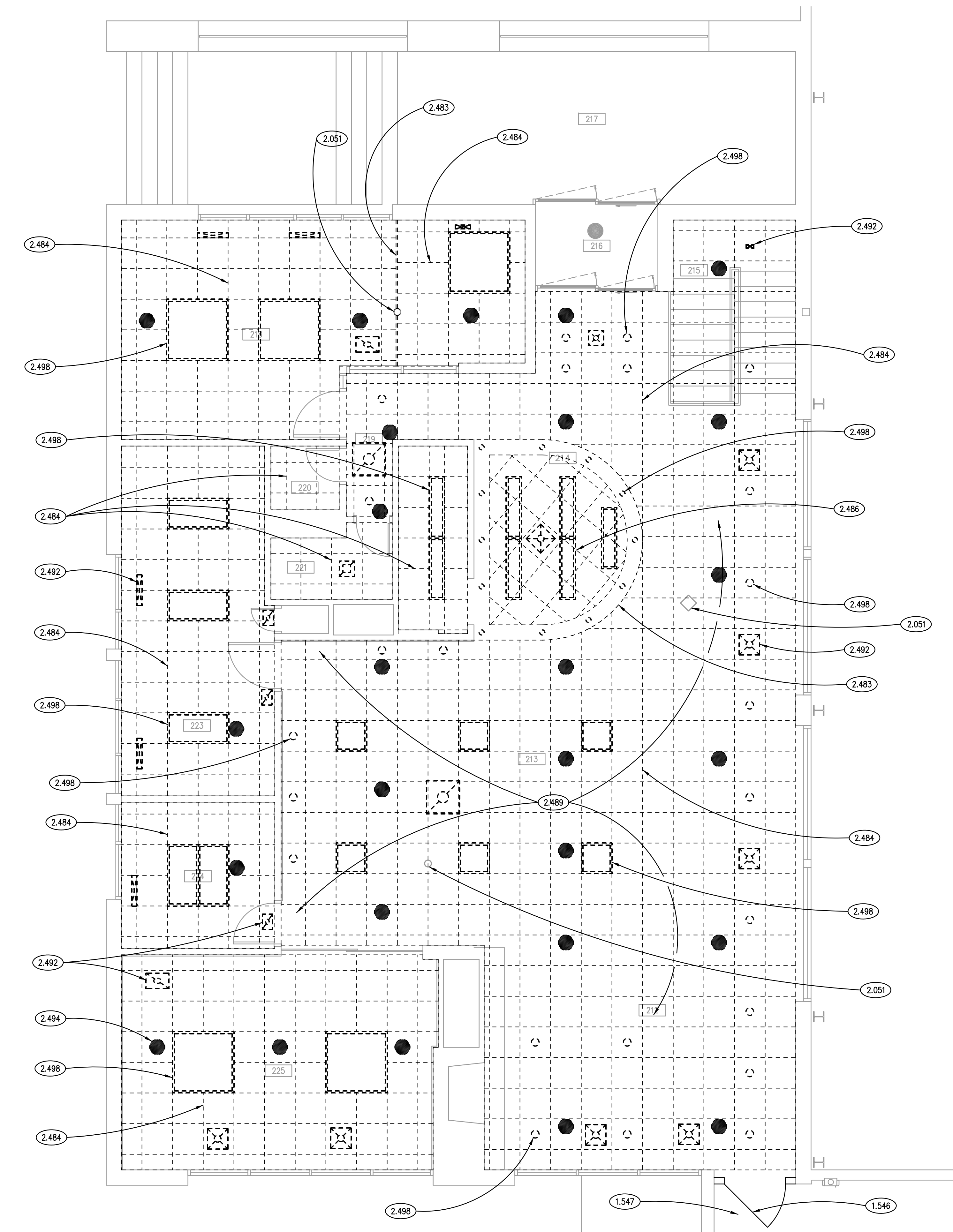
Table with three columns for Architect's Seal, Mechanical Engineer's Seal, and Electrical Engineer's Seal, each with a box for the signature and title.

I HAVE PREPARED, OR CAUSED TO BE PREPARED UNDER MY DIRECT SUPERVISION, THE ATTACHED PLANS AND SPECIFICATIONS AND STATE THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND TO THE EXTENT OF MY CONTRACTUAL OBLIGATION, THEY ARE IN COMPLIANCE WITH IBC 2009 EDITION, THE ENVIRONMENTAL BARRIERS ACT AND THE ILLINOIS ACCESSIBILITY CODE.

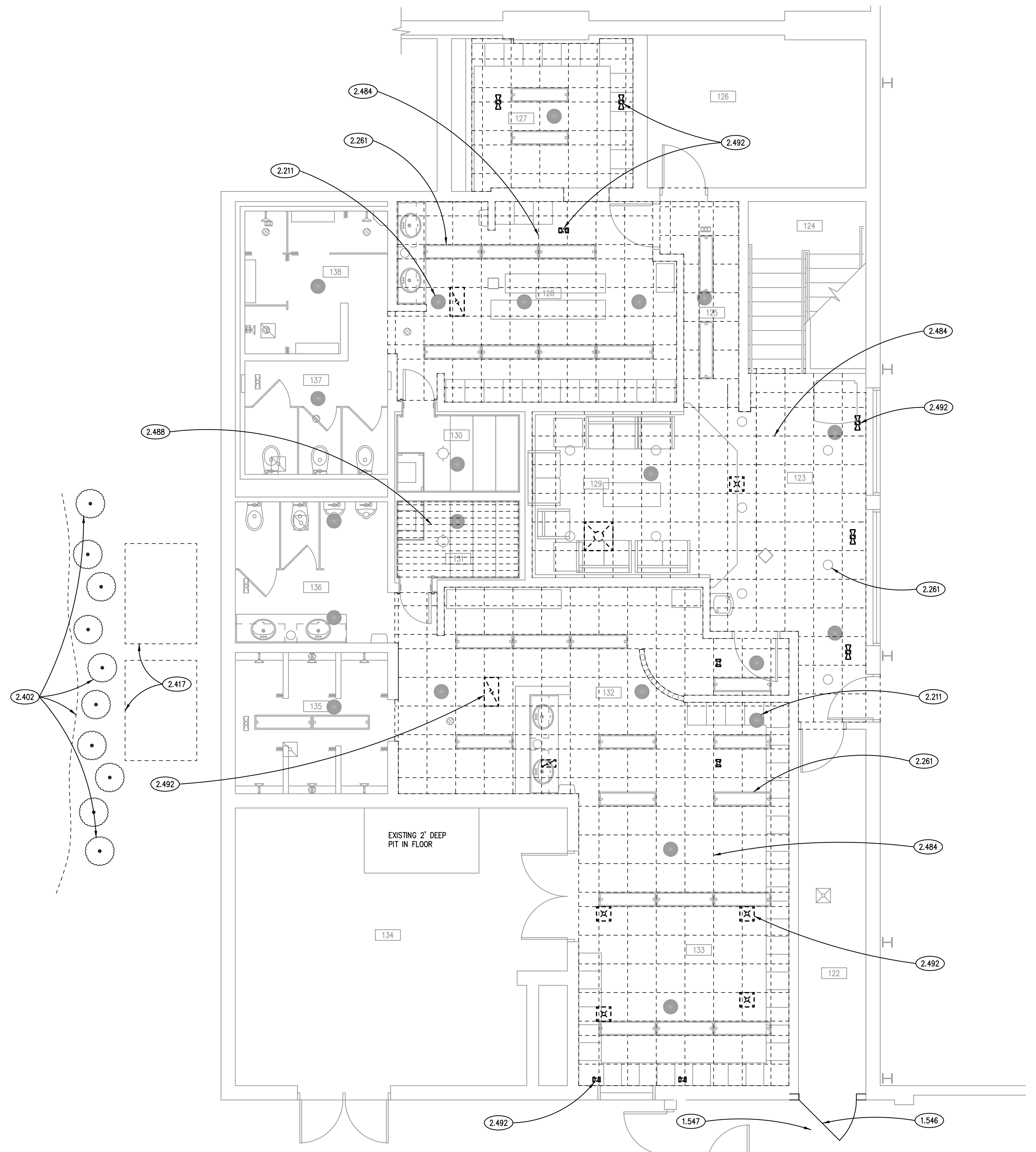
KLUBER, INC. ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE #184-001284

Table with columns for JOB NO. (16-310-1053), DRAWN (DDW), CHECKED (DDW), APPROVED (DDW), SHEET TITLE (COVER SHEET), and SHEET NUMBER (G100).

G100



**PARTIAL UPPER LEVEL DEMOLITION PLAN** ②  
SCALE: 1/4" = 1'-0"



**PARTIAL LOWER LEVEL DEMOLITION PLAN** ①  
SCALE: 1/4" = 1'-0"

**KEYNOTES**

- 1.000 KEYNOTES TYPICALLY ARE NOT DUPLICATED WITHIN A GIVEN DETAIL. CONTRACTOR IS TO ASSUME THAT AN UN-KEYED ITEM IS TO BE THE SAME AS THE KEYNOTED ITEM WITHIN THE SAME DETAIL.
- 1.546 TEMPORARY INTERIOR ENCLOSURE: WOOD STUD-FRAMED, PLYWOOD SHEATHED, WITH PLYWOOD DOOR WITH HASP AND EYE FOR PADLOCK BY CONTRACTOR. SEAL JOINTS AT PERMANENT CONSTRUCTION AND SEAL PERIMETER OF DOOR AGAINST PASSAGE OF DUST.
- 1.547 TEMPORARY PROTECTION: PROVIDE TACKY TRACK-OFF MAT, MIN. 5'-0" LONG IN DIRECTION OF TRAVEL, OUTSIDE TEMPORARY ENCLOSURE TO CAPTURE DUST AND DIRT TRAKED FROM CONSTRUCTION AREA TO OCCUPIED AREA OF BUILDING; REPLACE DAILY WITH NEW MAT.
- 2.051 EXISTING STRUCTURAL STEEL COLUMN.
- 2.211 EXISTING SPRINKLER SYSTEM HEAD TO REMAIN, TYPICAL.
- 2.261 EXISTING LIGHT FIXTURE TO REMAIN, TYPICAL.
- 2.402 SALVAGE EXISTING SITE FEATURE: EXISTING PLANTINGS; TO BE RELOCATED APPROX. 5 FEET WEST OF EXISTING PLANTING BED LINE; CAREFULLY EXCAVATE, WRAP BULB IN BURLAP, AND RELOCATE EXISTING PLANTINGS; REFER TO SPECIFICATIONS.
- 2.417 DEMOLISH EXISTING SUBSTRUCTURE: CONCRETE EQUIPMENT PAD.
- 2.483 DEMOLISH EXISTING INTERIOR CEILING FINISH: DRYWALL SOFFIT AND FRAMING.
- 2.484 DEMOLISH EXISTING INTERIOR CEILING FINISH: ACOUSTICAL PANELS AND SUSPENDED GRID.
- 2.486 DEMOLISH EXISTING INTERIOR CEILING FINISH: LUMINOUS CEILING PANELS AND SUSPENDED GRID.
- 2.488 CAREFULLY REMOVE AND SALVAGE EXISTING SAUNA WOOD PLANK CEILING, AND INSULATION ABOVE CEILING, FOR MECHANICAL WORK ABOVE CEILING; SAVE FOR REUSE ON THIS PROJECT.
- 2.489 THROUGHOUT THIS AREA ABOVE SUSPENDED CEILING, DEMOLISH REMAINING EXISTING SLOPED CEILING FRAMING COMPONENTS, HANGARS AND OTHER ABANDONED ITEMS ASSOCIATED WITH PREVIOUSLY DEMOLISHED SLOPED GYPSUM CEILING.
- 2.492 DEMOLISH EXISTING MECHANICAL SYSTEM COMPONENT: CEILING DIFFUSER/GRILLE, TYPICAL.
- 2.494 DEMOLISH EXISTING FIRE PROTECTION SYSTEM COMPONENT: SPRINKLER HEAD.
- 2.498 DEMOLISH EXISTING LIGHT FIXTURE, TYPICAL.

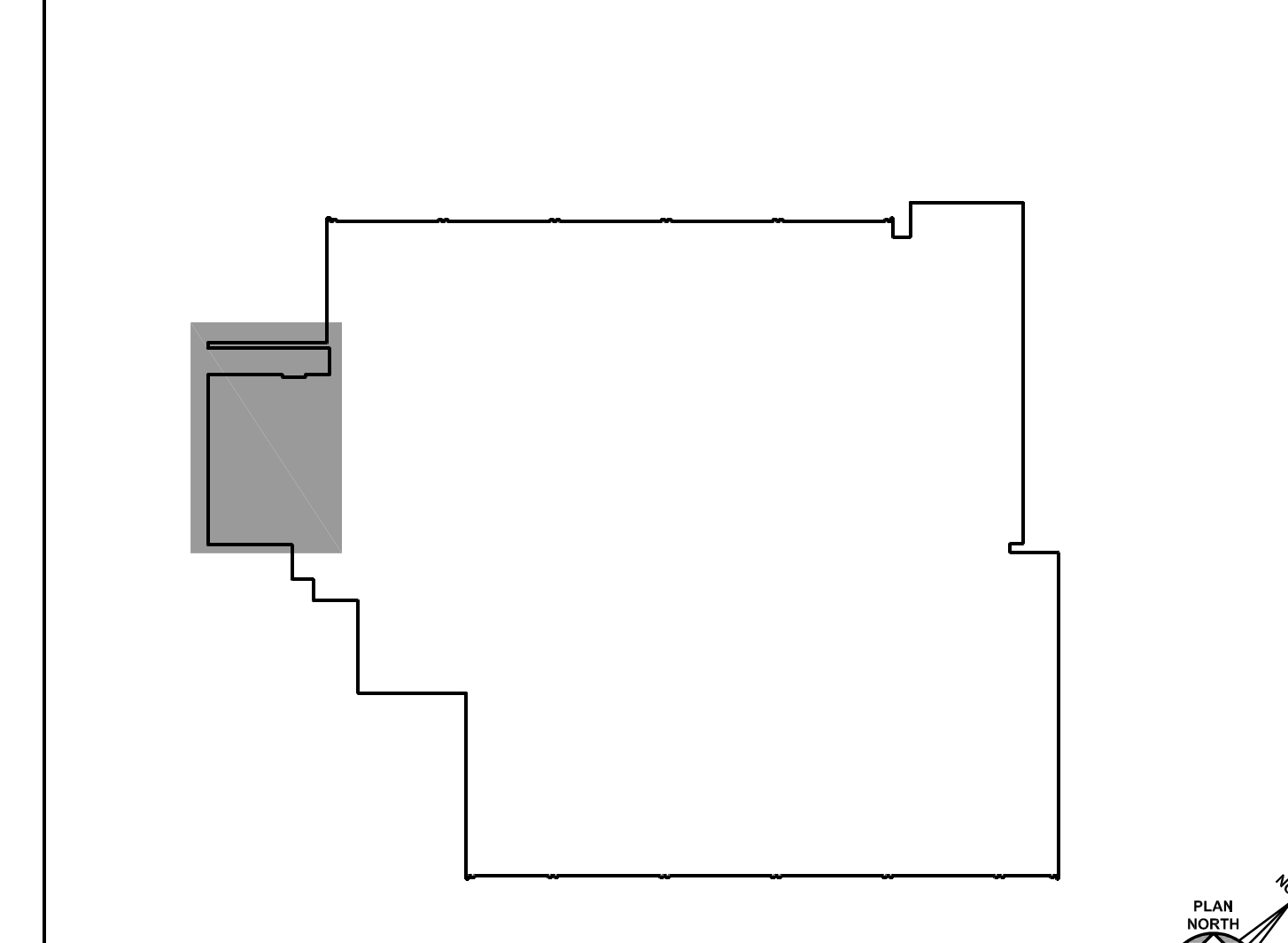
**ROOM SCHEDULE**

RM. NO.	ROOM NAME	RM. NO.	ROOM NAME
122	EXISTING CORRIDOR	212	EXISTING RECEPTION AREA
123	EXISTING CORRIDOR	213	EXISTING MERCHANDISE SALES AREA
124	EXISTING STAIRS	214	EXISTING LOUNGE AREA
125	EXISTING CORRIDOR	215	EXISTING STAIRS
126	EXISTING ELECTRICAL ROOM	216	EXISTING ENTRY VESTIBULE
127	EXISTING WOMEN'S LOCKERS	217	EXISTING OUTDOOR COVERED ENTRY
128	EXISTING WOMEN'S LOCKERS	218	EXISTING OFFICE
129	EXISTING LOUNGE	219	EXISTING CORRIDOR
130	EXISTING WOMEN'S SAUNA	220	EXISTING STORAGE
131	EXISTING MEN'S SAUNA	221	EXISTING TOILET ROOM
132	EXISTING MEN'S LOCKERS	222	NOT USED
133	EXISTING MEN'S LOCKERS	223	EXISTING WORK/BREAK ROOM
134	EXISTING MECHANICAL ROOM	224	EXISTING STORAGE
135	EXISTING MEN'S SHOWERS	225	EXISTING OFFICE
136	EXISTING MEN'S TOILET AREA		
137	EXISTING WOMEN'S TOILET AREA		
138	EXISTING WOMEN'S SHOWERS		

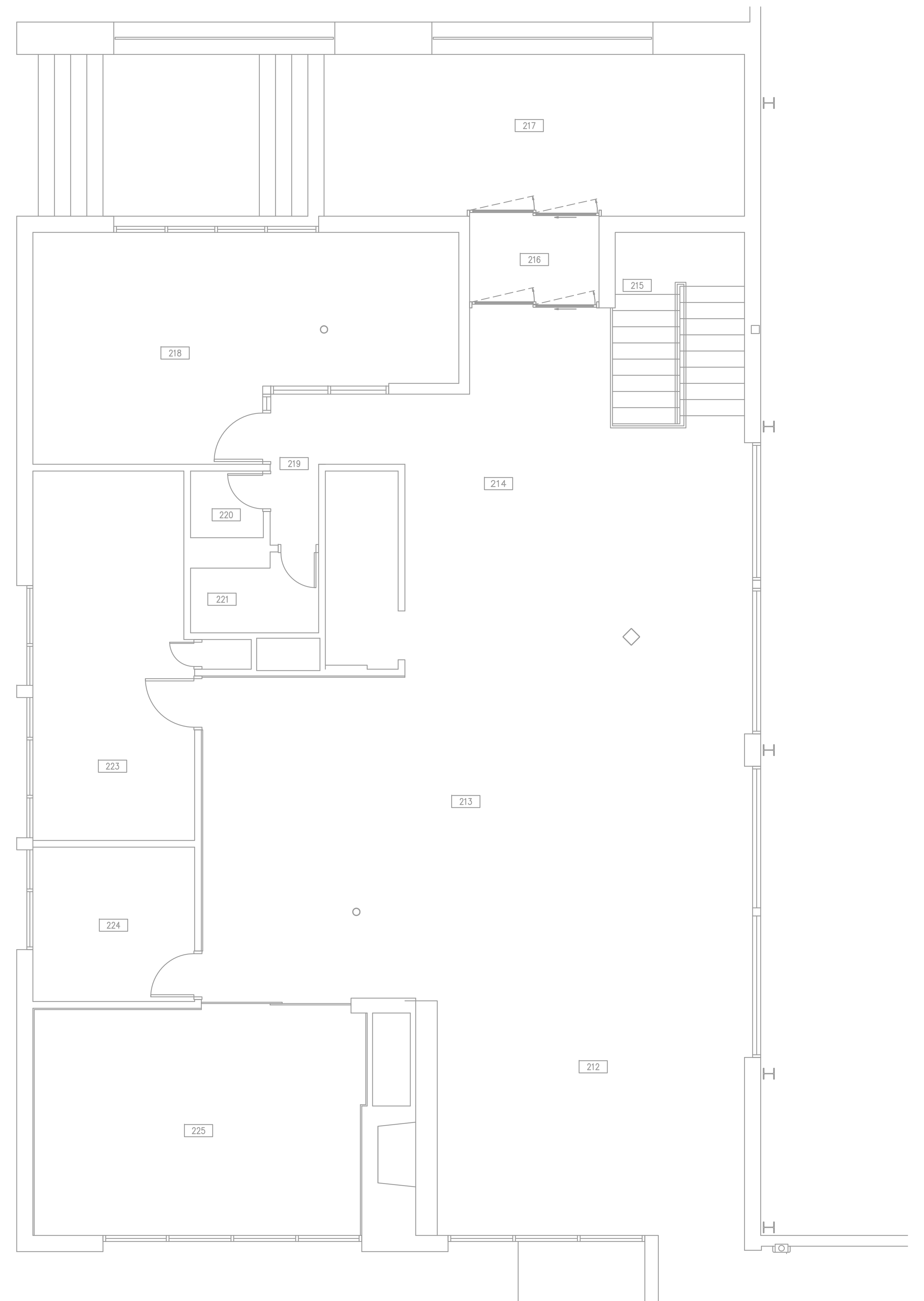
**GENERAL NOTES**

1. REFER TO DRAWING G100 FOR PROJECT GENERAL NOTES.
2. UNLESS NOTED OTHERWISE, WHERE EXISTING CEILING SURFACES ARE SCHEDULED TO RECEIVE FINISHES, DEMOLISH EXISTING FINISH MATERIALS AND SALVAGE SURFACE-MOUNTED ITEMS; REINSTALL SURFACE-MOUNTED ITEMS AT NEW LOCATIONS DETERMINED BY OWNER UNLESS SPECIFIC LOCATIONS ARE INDICATED ON DRAWINGS.
3. STORE SALVAGED ITEMS AS DIRECTED BY OWNER.
4. PROTECT SALVAGED ITEMS FROM DAMAGE UNTIL INCORPORATED INTO THE WORK.
5. SALVAGE FOR RE-USE ALL INTACT CEILING GRID COMPONENTS AND ACOUSTICAL PANELS FROM CEILING AREAS UNLESS INDICATED TO BE DEMOLISHED.
6. AT CEILING GRID AREAS TO BE DEMOLISHED, TEMPORARILY SUPPORT LIGHT FIXTURES THAT ARE TO INDICATED TO REMAIN IN PLACE AS PART OF THE PERMANENT WORK.
7. ADDITIONAL DEMOLITION/ RECONSTRUCTION AND REMOVAL/REPLACEMENT OF ARCHITECTURAL IS REQUIRED TO COMPLETE THE WORK OF THIS PROJECT. COORDINATE WITH ARCHITECTURAL, MECHANICAL, FIRE PROTECTION AND ELECTRICAL DRAWINGS; AND PROVIDE DEMOLITION/RECONSTRUCTION AND REMOVAL/REPLACEMENT OF ARCHITECTURAL AND STRUCTURAL ELEMENTS AS REQUIRED TO COMPLETE THE WORK SHOWN ON THOSE DRAWINGS.
8. PROTECT CARPETED SURFACES AND LOCKER SURFACES FROM DUST, DEBRIS AND DAMAGE FROM CONSTRUCTION OPERATIONS.

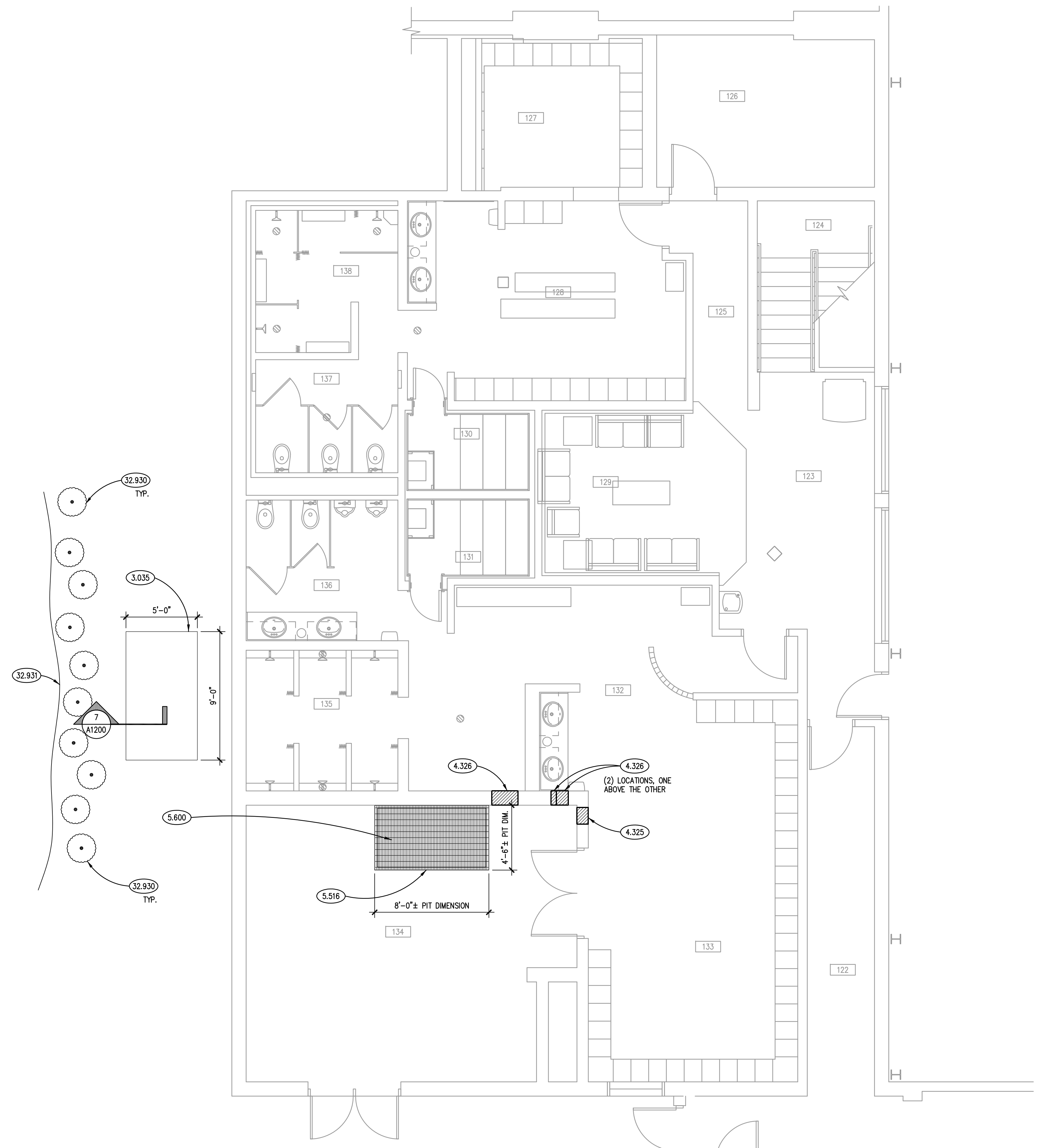
**KEY PLAN**



ISSUED	
DATE	
BY	
CHECKED	
APPROVED	
JOB NO. 16-310-1053	
DRAWN	CDH
CHECKED	CDH
APPROVED	CDH
SHEET TITLE	
PARTIAL UPPER AND LOWER LEVEL DEMOLITION PLANS	
SHEET NUMBER	
A210	



**PARTIAL UPPER LEVEL FLOOR PLAN** ②  
SCALE: 1/4" = 1'-0"



**PARTIAL LOWER LEVEL FLOOR PLAN** ①  
SCALE: 1/4" = 1'-0"

**GENERAL NOTES**

- REFER TO DRAWING G100 FOR PROJECT GENERAL NOTES.
- PROVIDE FINAL CLEANING OF ALL FLOOR AND WALL SURFACES IN THE AREAS SHOWN ON THIS DRAWING, INCLUDING VACUUMING OF GROOVES IN ALL SLATWALL SURFACES ON THE UPPER LEVEL.

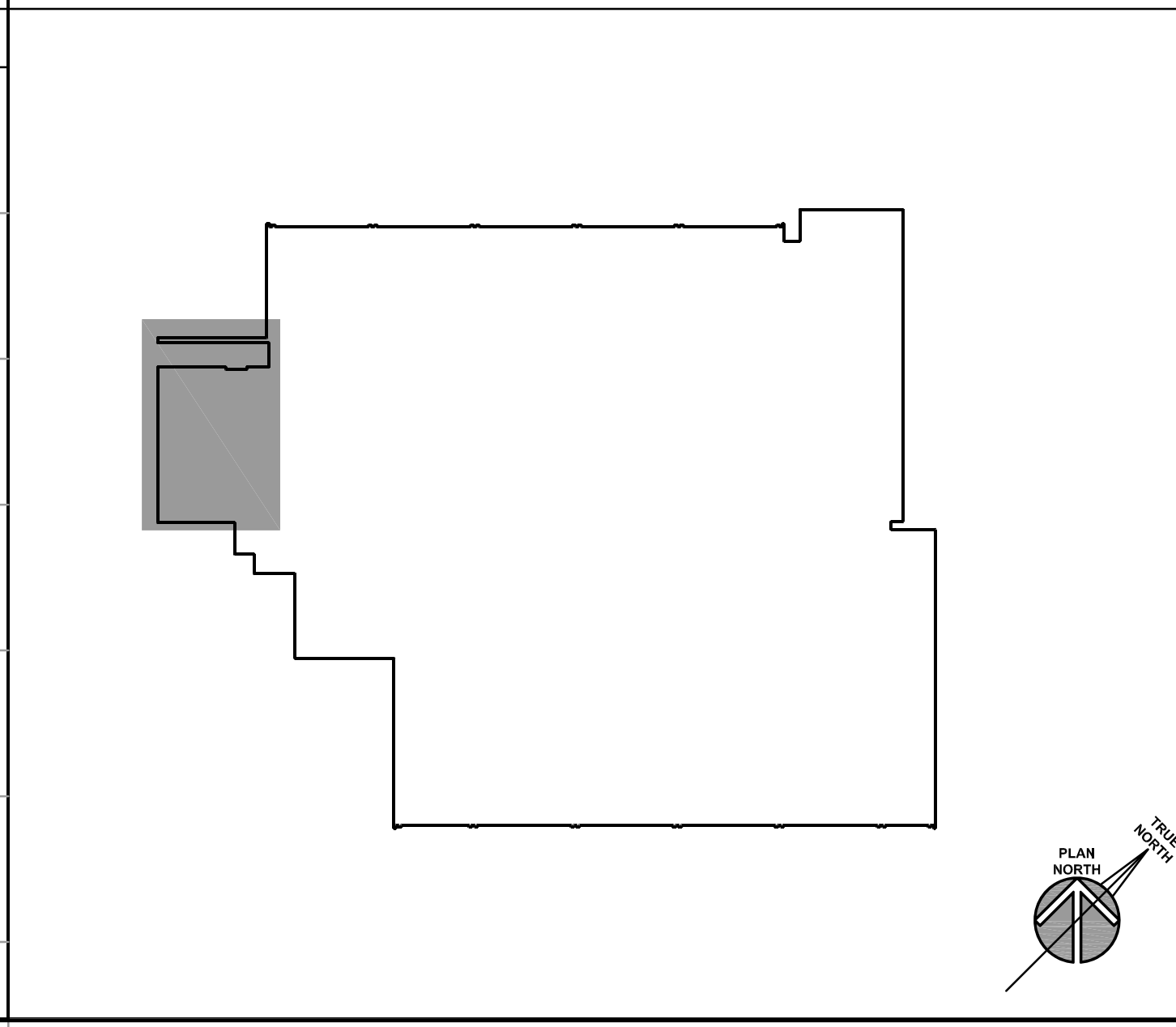
**KEYNOTES**

- 1.000 KEYNOTES TYPICALLY ARE NOT DUPLICATED WITHIN A GIVEN DETAIL. CONTRACTOR IS TO ASSUME THAT AN UN-KEYED ITEM IS TO BE THE SAME AS THE KEYNOTED ITEM WITHIN THE SAME DETAIL.
- 3.035 CAST-IN-PLACE CONCRETE: 6" EQUIPMENT PAD; VERIFY EXACT LOCATION IN FIELD; COORDINATE WITH MECHANICAL DRAWINGS.
- 4.325 CONCRETE BLOCK MASONRY INFILL: 8" (NOM.) THK.; STACK BOND PATTERN; INFILL FROM REMOVED HVAC DUCT/GRILLE (COORDINATE WITH MECHANICAL DRAWINGS); CUT BLOCK AS REQ. TO FIT; PAINT CMU TO MATCH EXISTING ADJACENT CMU.
- 4.326 CONCRETE BLOCK MASONRY INFILL: 8" (NOM.) THK.; STACK BOND PATTERN; INFILL ABOVE LAY-IN CEILING FROM REMOVED HVAC DUCT/GRILLE (COORDINATE WITH MECHANICAL DRAWINGS); CUT BLOCK AS REQ. TO FIT.
- 5.516 METAL FABRICATION: CONTINUOUS STEEL ANGLE ANCHORED TO WALL USING POST INSTALLED ANCHORS. ANGLE SIZE TO BE L6x4x3/8 (LLV). ANCHORS TO BE 3/4" DIAMETER HILTI KWIK BOLT III EXPANSION ANCHORS OR APPROVED EQUAL. SPACING TO BE 2'-0" O.C. U.N.O. EMBEDMENT TO BE 4 3/4". ALL MATERIALS TO BE GALVANIZED.
- 5.600 METAL GRATING: GW 1"x3/16" SERRATED BAR GRATING AS MANUFACTURED BY MANNICHOOLS OR APPROVED EQUAL. PROVIDE ALL CONNECTIONS PER MANUFACTURER'S RECOMMENDATIONS. GRATING TO BE GALVANIZED. BAND ALL EDGES.
- 32.930 RELOCATED AND REPLANTED EXISTING PLANTINGS. VERIFY EXACT LOCATION IN THE FIELD.
- 32.931 RELOCATED PLANTING BED LINE; PROVIDE ADDITIONAL RED DYED HARDWOOD MULCH TO MATCH EXISTING; 6" DEEP; VERIFY LOCATION OF PLANTING BED WITH ADJACENT MECHANICAL EQUIPMENT AND WITH OWNER IN THE FIELD.

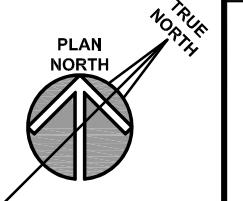
**ROOM SCHEDULE**

RM. NO.	ROOM NAME	RM. NO.	ROOM NAME
122	EXISTING CORRIDOR	212	EXISTING RECEPTION AREA
123	EXISTING CORRIDOR	213	EXISTING MERCHANDISE SALES AREA
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136	EXISTING MEN'S TOILET AREA		
137	EXISTING WOMEN'S TOILET AREA		
138	EXISTING WOMEN'S SHOWERS		

**KEY PLAN**



ISSUED	
REVISED	
DATE	
DESCRIPTION	
JOB NO.	16-310-1053
DRAWN	CDH
CHECKED	CDH
APPROVED	CDH
SHEET TITLE	PARTIAL UPPER AND LOWER LEVEL FLOOR PLANS
SHEET NUMBER	A310

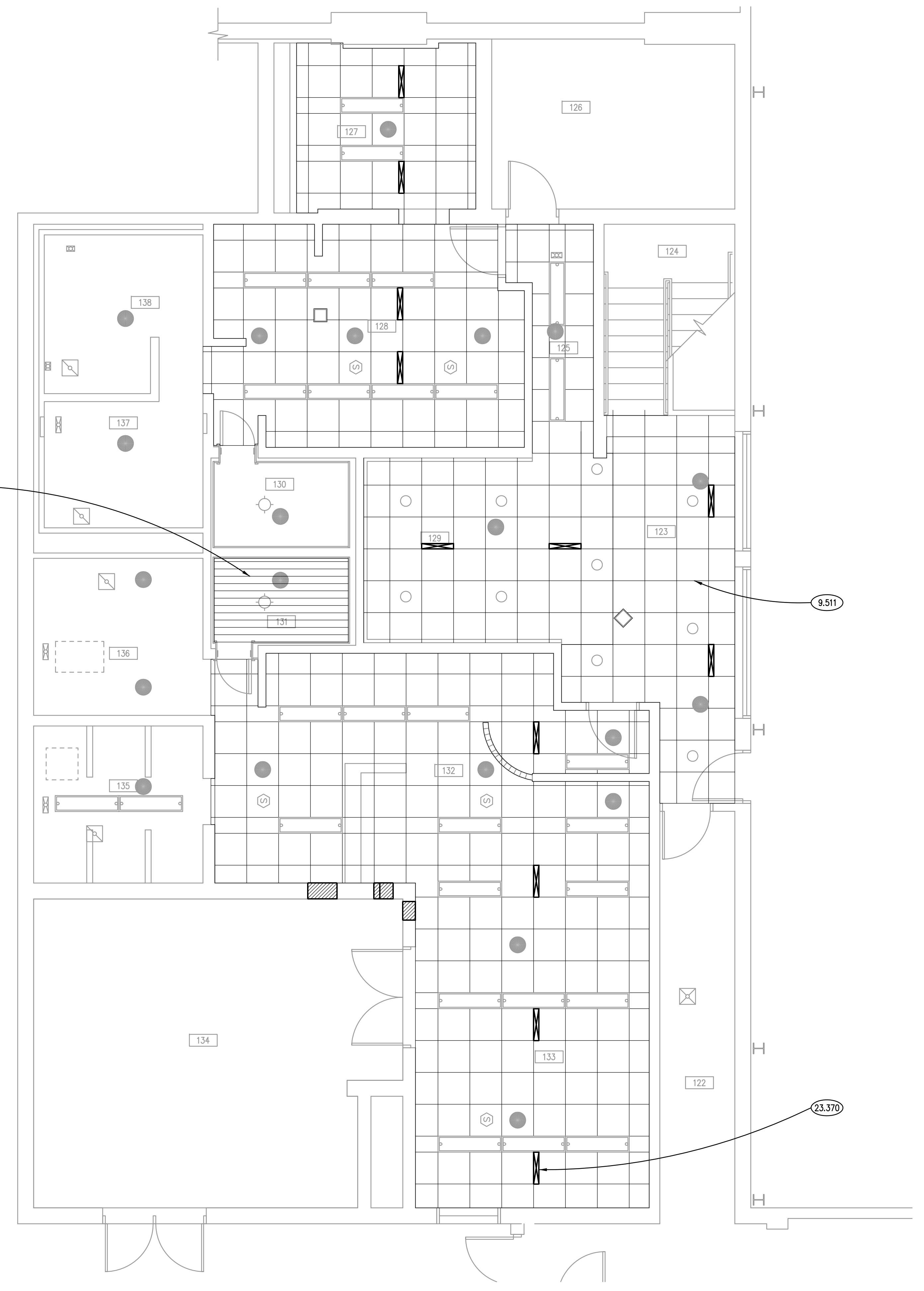
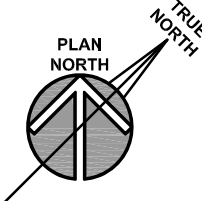


ISSUED	
FOR REVIEW	
FOR COMMENTS	
FOR APPROVAL	

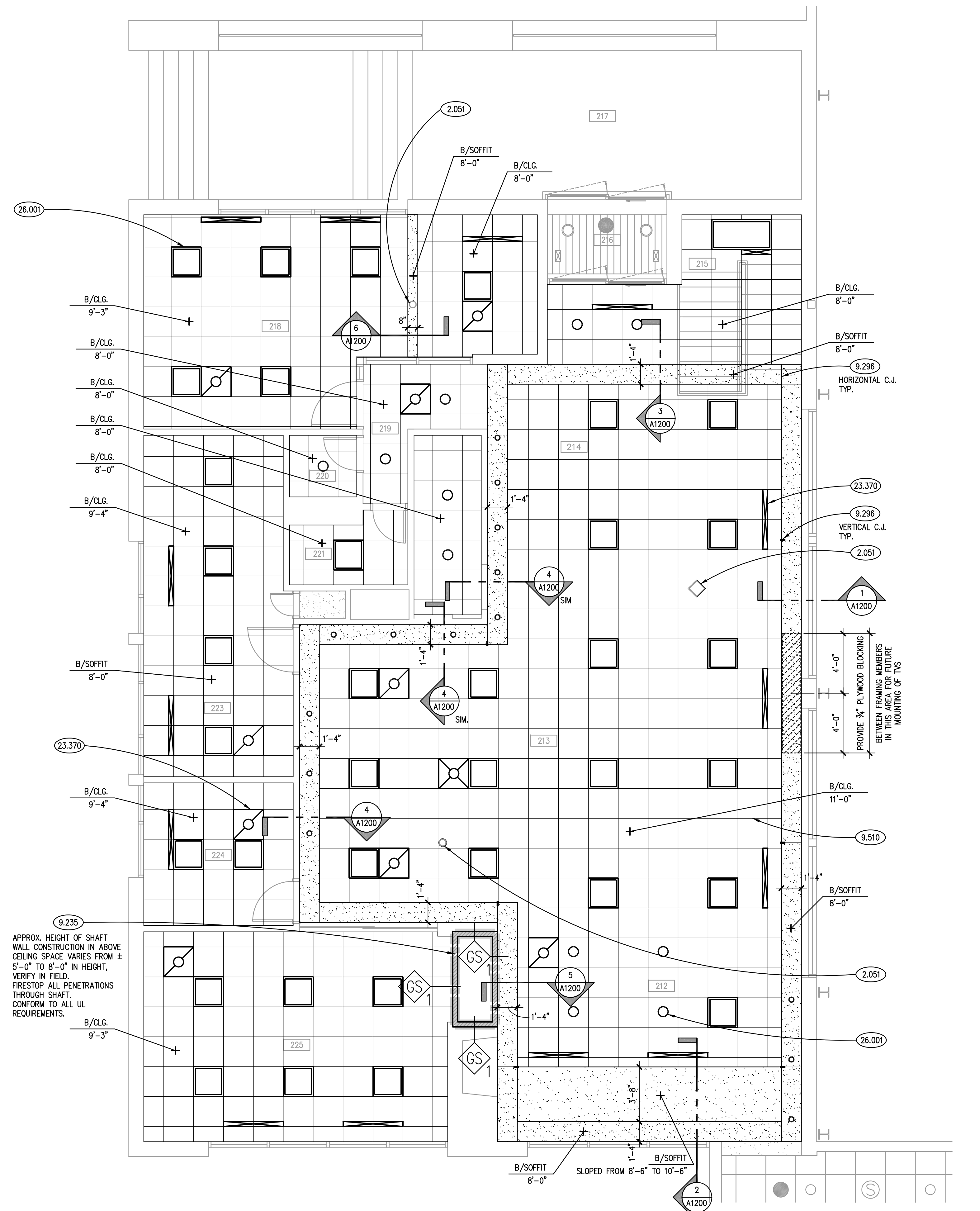
JOB NO. 16-310-1053  
DRAWN CDH  
CHECKED CDH  
APPROVED CDH

SHEET TITLE  
**PARTIAL UPPER AND LOWER LEVEL REFLECTED CEILING PLANS**

SHEET NUMBER  
**A410**



**PARTIAL LOWER LEVEL REFLECTED CEILING PLAN** ①  
SCALE: 1/4" = 1'-0"



**PARTIAL UPPER LEVEL REFLECTED CEILING PLAN** ②  
SCALE: 1/4" = 1'-0"

**KEYNOTES**

- 1.000 KEYNOTES TYPICALLY ARE NOT DUPLICATED WITHIN A GIVEN DETAIL. CONTRACTOR IS TO ASSUME THAT AN UN-KEYED ITEM IS TO BE THE SAME AS THE KEYNOTED ITEM WITHIN THE SAME DETAIL.
- 2.051 EXISTING STRUCTURAL STEEL COLUMN.
- 6.800 RE-INSTALL SALVAGED SAUNA WOOD PLANK CEILING AND INSULATION ABOVE; INSTALL NEW 6 MIL. POLYETHYLENE VAPOR RETARDER OVER ENTIRE SAUNA CEILING; TAPE ALL JOINTS AND OVERLAP/TAPE WITH EXISTING VERTICAL VAPOR BARRIER.
- 9.235 METAL STUD SHAFT WALL ABOVE EXISTING MASONRY SHAFT; REFER TO WALL TYPE.
- 9.296 GYPSUM BOARD ACCESSORY: CONTROL JOINT.
- 9.510 ACOUSTICAL CEILING PANELS TYPE C1 AND GRID TYPE S51. REFER TO SPECIFICATIONS.
- 9.511 ACOUSTICAL CEILING PANELS TYPE C2 AND GRID TYPE S51. REFER TO SPECIFICATIONS.
- 23.370 MECHANICAL DIFFUSER/GRILLE: REFER TO MECHANICAL DRAWINGS.
- 26.001 LIGHT FIXTURE: REFER TO ELECTRICAL DRAWINGS.

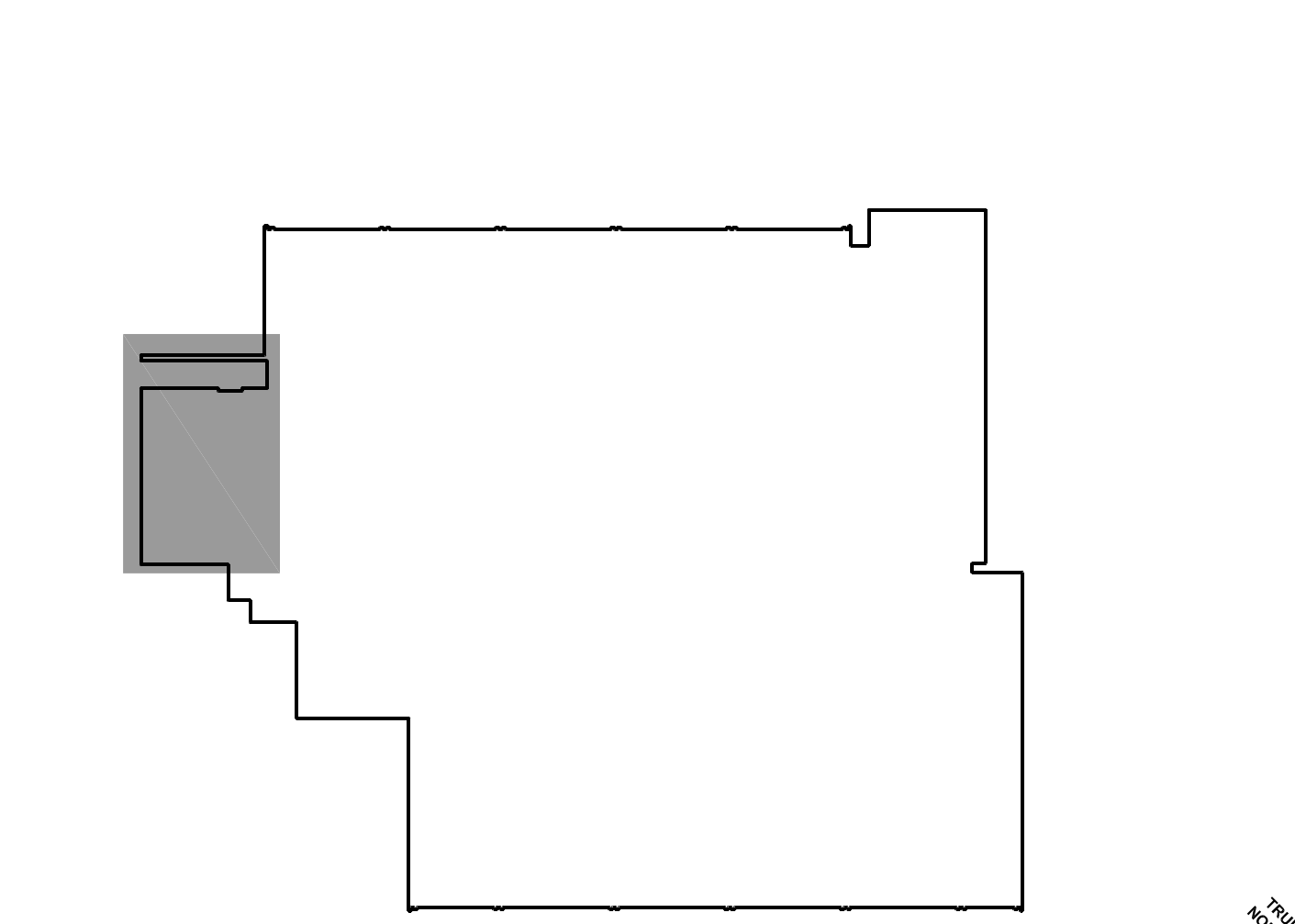
**CEILING SYMBOL LEGEND**

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	GYPSUM BOARD		FLUORESCENT LIGHT FIXTURE: 24" X 48"
			LIGHT FIXTURE: 24" X 24" LED
	ACOUSTICAL CEILING TILE: 24" X 24" ON SUSPENSION GRID; • PROVIDE PAINTED STEEL SUSPENSION GRID ON UPPER LEVEL; CEILING PANELS TYPE C1. • PROVIDE PAINTED ALUMINUM SUSPENSION GRID ON LOWER LEVEL; CEILING PANELS TYPE C2.		DOWN LIGHT FIXTURES: A: SPOT, B: DOWN, C: WALL WASHER, D: SOURCE
	1-HR RATED FIRE SEPARATION ASSEMBLY		EXIT LIGHT FIXTURE
			SPRINKLER HEAD
			MECHANICAL DIFFUSER: SUPPLY; 24" X 24"
			MECHANICAL DIFFUSER: SUPPLY; LINEAR
			MECHANICAL DIFFUSER: RETURN

**GENERAL NOTES**

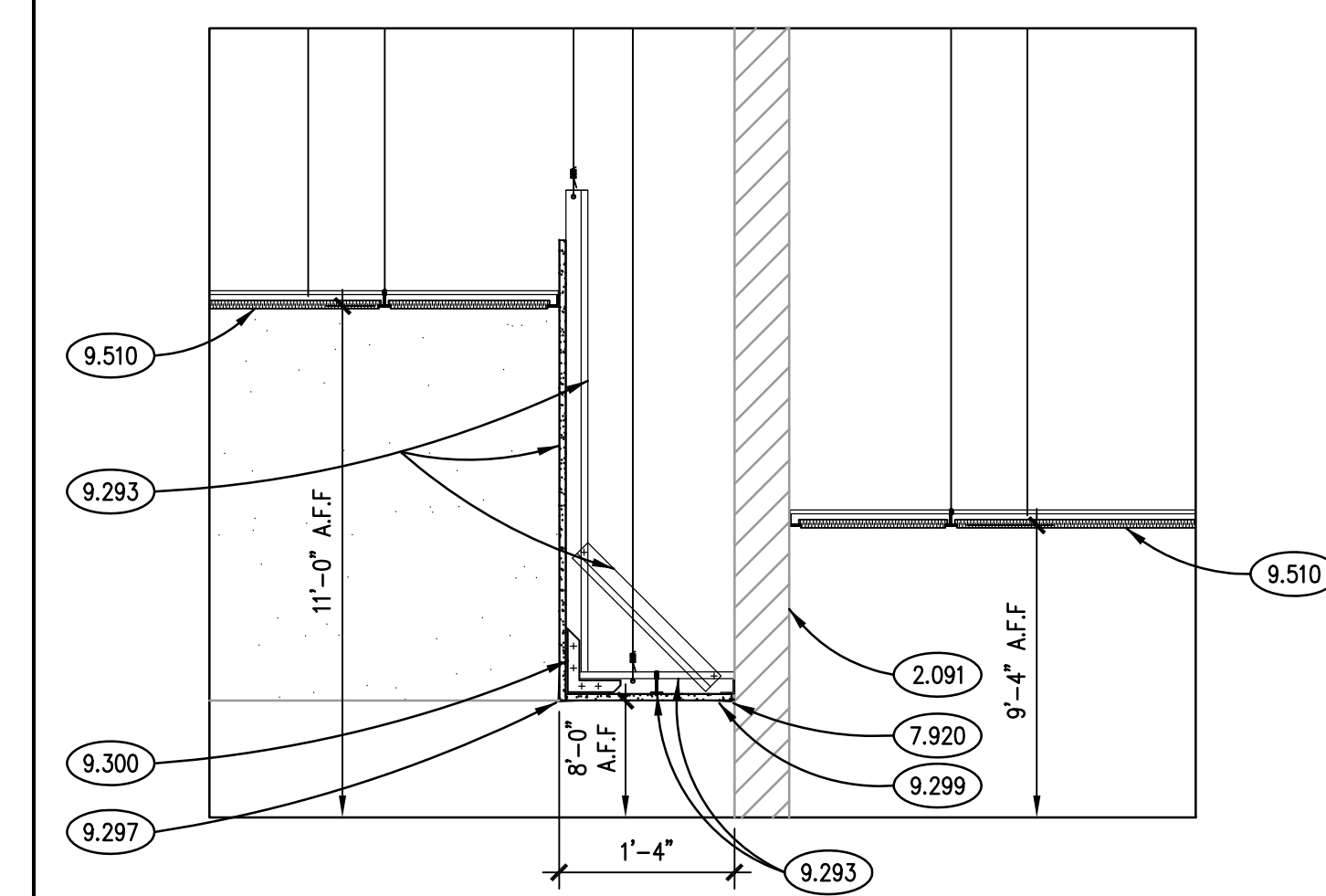
1. REFER TO DRAWING G100 FOR PROJECT GENERAL NOTES.
2. SPOT ELEVATIONS ARE DESIGNATED NOMINAL HEIGHTS ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE. COORDINATE FINAL HEIGHTS OF CEILING ELEMENTS WITH INFORMATION CONTAINED ON MECHANICAL, FIRE PROTECTION AND ELECTRICAL DRAWINGS.
3. PROVIDE GYPSUM BOARD HEADERS TO FORM VERTICAL SOFFITS AT CHANGES OF ACOUSTICAL CEILING HEIGHTS UNLESS NOTED OR DETAILED OTHERWISE.
4. ATTACH HANGERS FOR ACOUSTICAL CEILING AND GYPSUM BOARD CEILING SUSPENSION SYSTEMS SECURELY TO OVERHEAD STRUCTURE ABOVE (I.E. STRUCTURAL ROOF DECK OR STRUCTURAL STEEL MEMBERS). ATTACHMENT OF HANGERS TO NON-STRUCTURAL ELEMENTS OR TO INFRASTRUCTURE SYSTEMS COMPONENTS (E.G. CONDUIT, PIPING, DUCTWORK) IS NOT PERMITTED.
5. REPLACE CEILING TILE WHERE A MECHANICAL DIFFUSER, LIGHT, OR SPRINKLER HEAD IS ADJUSTED, REPLACED, OR REPAINTED.
6. PROVIDE FINAL CLEANING OF ALL FLOOR AND WALL SURFACES IN THE AREAS SHOWN ON THIS DRAWING, INCLUDING VACUUMING OF GROOVES IN ALL SLATWALL SURFACES ON THE UPPER LEVEL.
7. ALL NEW GYPSUM BOARD SOFFITS OR WALLS ARE TO BE PAINTED WITH 1 COAT OF PRIMER AND 3 COATS OF PAINT; REFER TO SPECIFICATIONS.

**KEY PLAN**

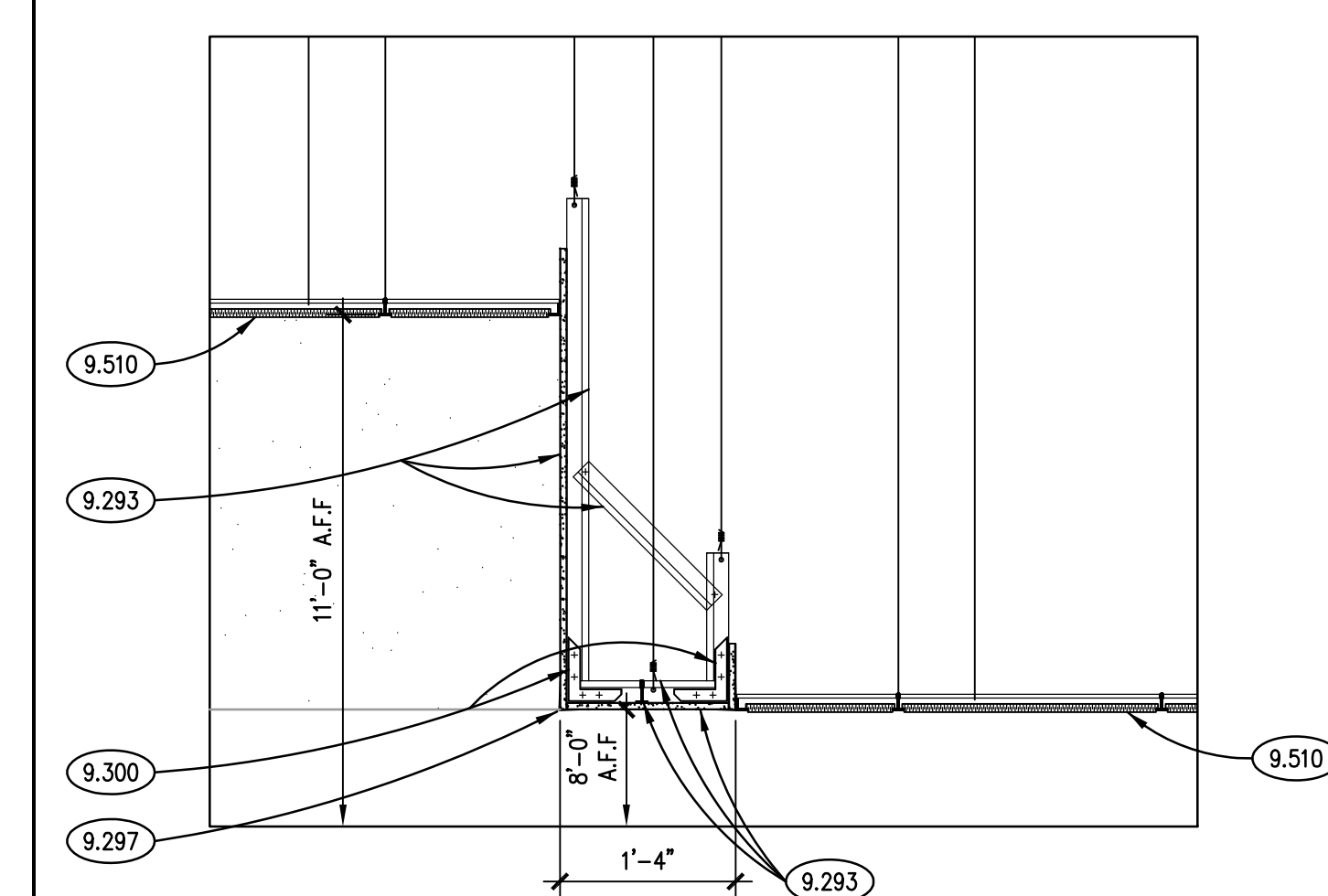


**KEYNOTES**

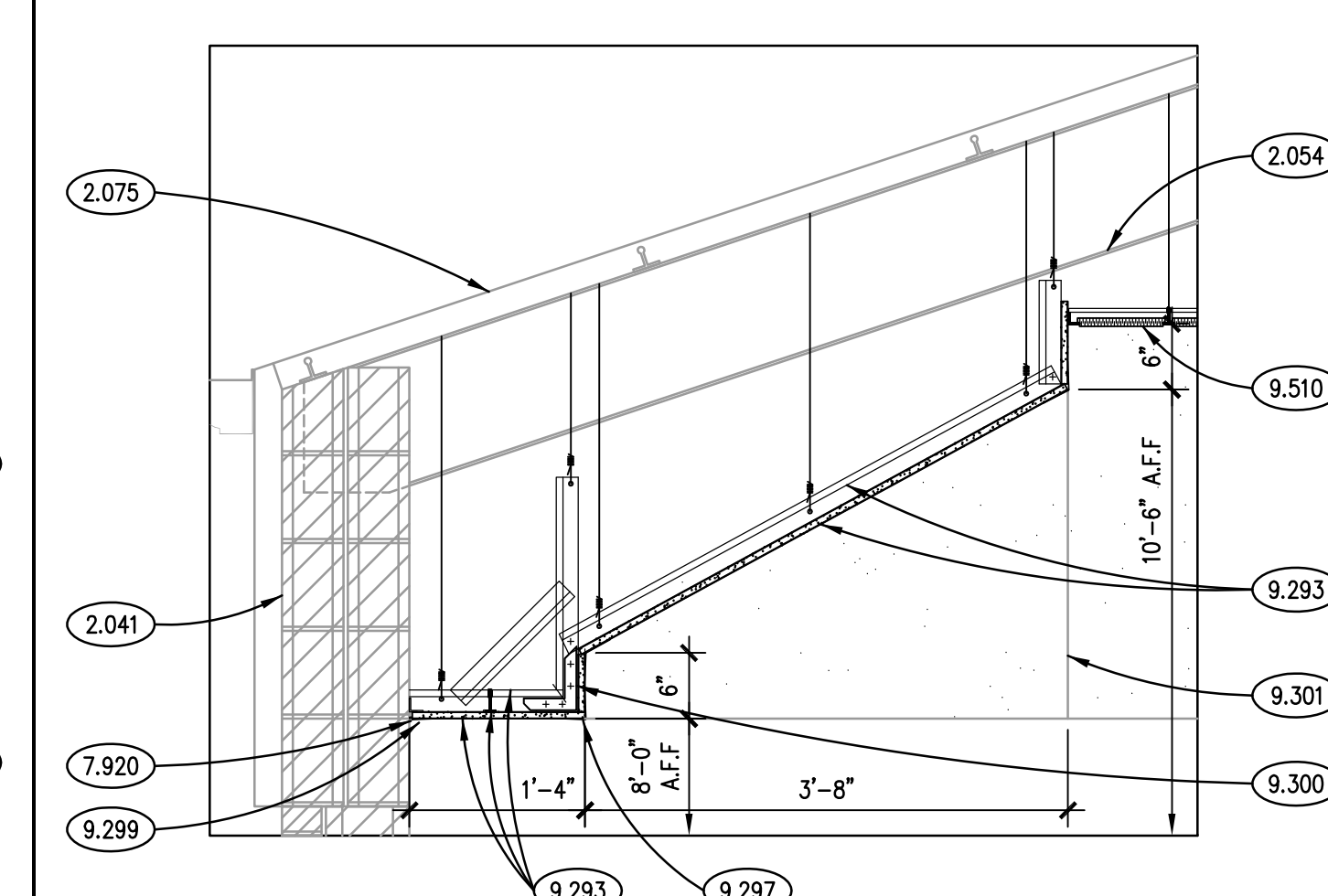
- 1.000 KEYNOTES TYPICALLY ARE NOT DUPLICATED WITHIN A GIVEN DETAIL. CONTRACTOR IS TO ASSUME THAT AN UN-KEYED ITEM IS TO BE THE SAME AS THE KEYNOTED ITEM WITHIN THE SAME DETAIL.
- 2.041 EXISTING MASONRY WALL.
- 2.051 EXISTING STRUCTURAL STEEL COLUMN.
- 2.053 EXISTING STRUCTURAL STEEL LINTEL.
- 2.054 EXISTING STRUCTURAL STEEL PURLIN.
- 2.075 EXISTING ROOFING: AS INDICATED.
- 2.083 EXISTING WINDOW.
- 2.091 EXISTING DRYWALL CONSTRUCTION.
- 3.111 CONCRETE FORMING AND ACCESSORIES: CONTINUOUS 3/4" CHAMFER U.N.O.
- 3.215 CONCRETE REINFORCING: REINFORCING STEEL MAT. #5 @ 12" O.C. EACH WAY U.N.O.
- 3.216 CONCRETE REINFORCING: CONTINUOUS REINFORCING BAR, #5 U.N.O. QUANTITY AS DEPICTED.
- 3.221 CONCRETE REINFORCING: #4 DOWELS @ 1'-0" O.C. HORIZONTAL LEG= 2'-6", VERTICAL LEG= 2'-6" U.N.O.
- 3.303 CAST-IN-PLACE CONCRETE: EXTERIOR SLAB-ON-GRADE. REFER TO SPECIFICATIONS FOR MIX TYPE AND FINISH. SEE DETAIL FOR REINFORCING.
- 7.841 FIRESTOPPING: SEALANT; REFER TO SPECIFICATIONS.
- 7.920 JOINT SEALANT: REFER TO SCHEDULE IN SPECIFICATION SECTION 07 92 00; PROVIDE BACKER ROD OR BOND BREAKER.
- 9.210 METAL STUD FRAMING: SHAFTWALL "CH" STUD; 2-1/2"; GA. AS SPECIFIED; 24" O.C. SPACING.
- 9.235 METAL STUD SHAFT WALL ABOVE EXISTING MASONRY SHAFT; REFER TO WALL TYPE.
- 9.290 GYPSUM BOARD: 5/8" THICK; TYPE "X" - MOLD RESISTANT TYPE.
- 9.292 GYPSUM BOARD: 1" THICK; SHAFT LINER PANEL.
- 9.293 GYPSUM BOARD: 5/8" THICK; TYPE "X" - MOLD RESISTANT TYPE ON SUSPENDED METAL CEILING GRID SYSTEM; PROVIDE DIAGONAL BRACING AS REQUIRED; TYPICAL AT ALL CEILING OR SOFFIT FRAMING LOCATIONS.
- 9.297 GYPSUM BOARD ACCESSORY: CORNER BEAD.
- 9.299 GYPSUM BOARD ACCESSORY: EDGE TRIM, "J" PROFILE.
- 9.300 GYPSUM BOARD ACCESSORY: TRANSITION CLIP; 90 DEGREE; SCREW TRANSITION CLIP TO INTERSECTING GRID COMPONENTS TO PROVIDE A STRUCTURAL CONNECTION.
- 9.301 GYPSUM BOARD ACCESSORY: GYPSUM BOARD CONTROL JOINT; PROVIDE CONTINUOUS HORIZONTAL AND VERTICAL GYPSUM BOARD CONTROL JOINTS AT SOFFIT/PARTITION INTERSECTIONS, AND WHERE INDICATED ON THE DRAWINGS.
- 9.510 ACOUSTICAL CEILING PANELS TYPE C1 AND GRID TYPE S51. REFER TO SPECIFICATIONS.
- 31.232 EXCAVATION FILL: ENGINEERED GRANULAR FILL.



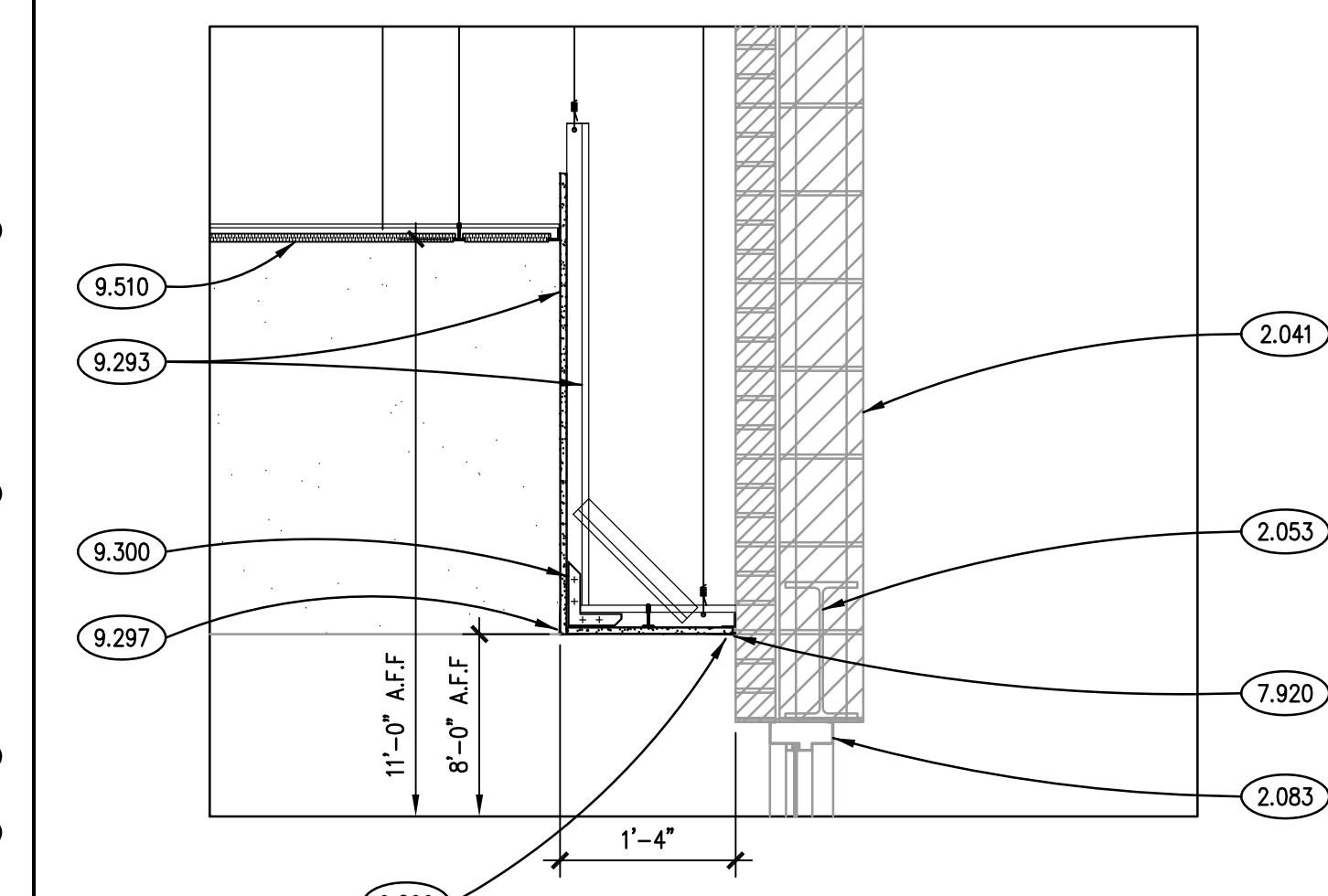
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**SECTION DETAIL 3**  
SCALE: 3/4" = 1'-0"



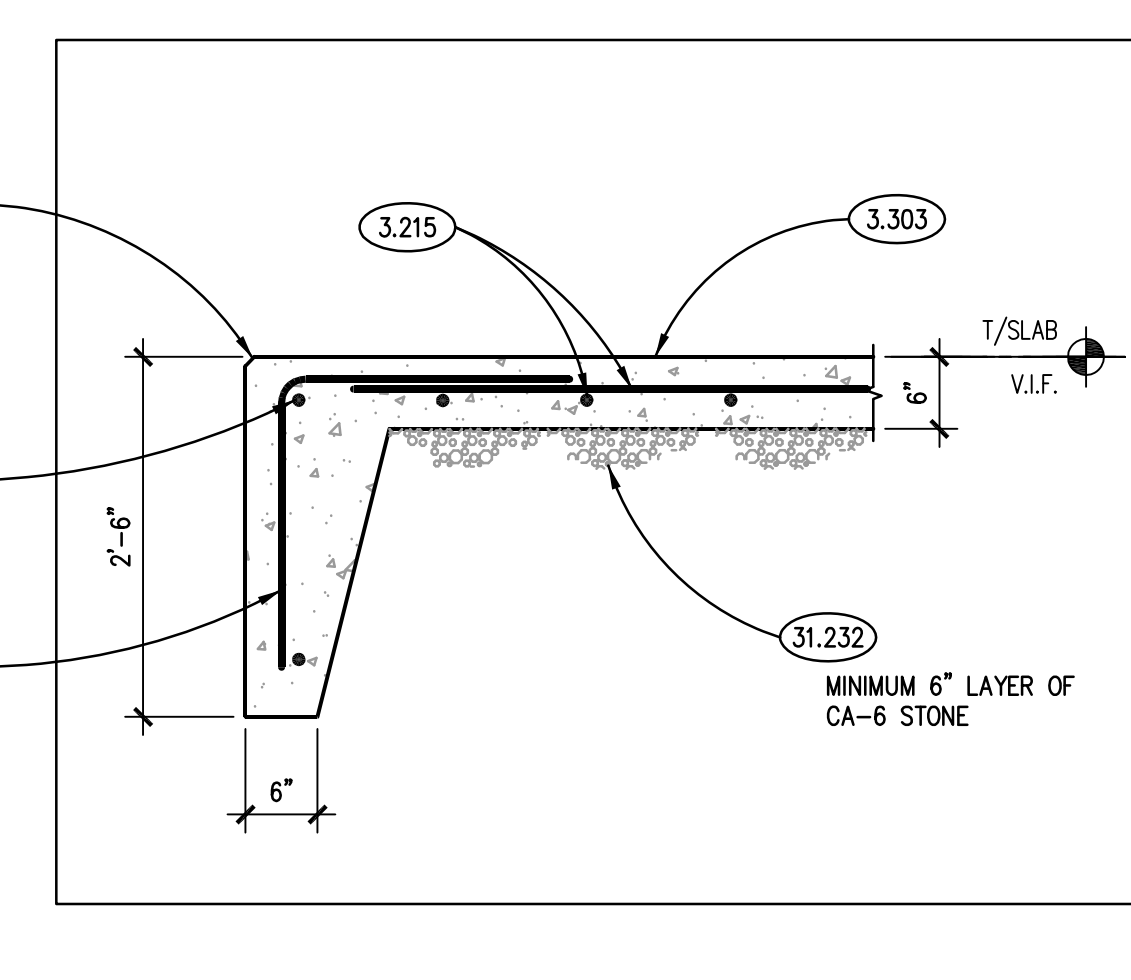
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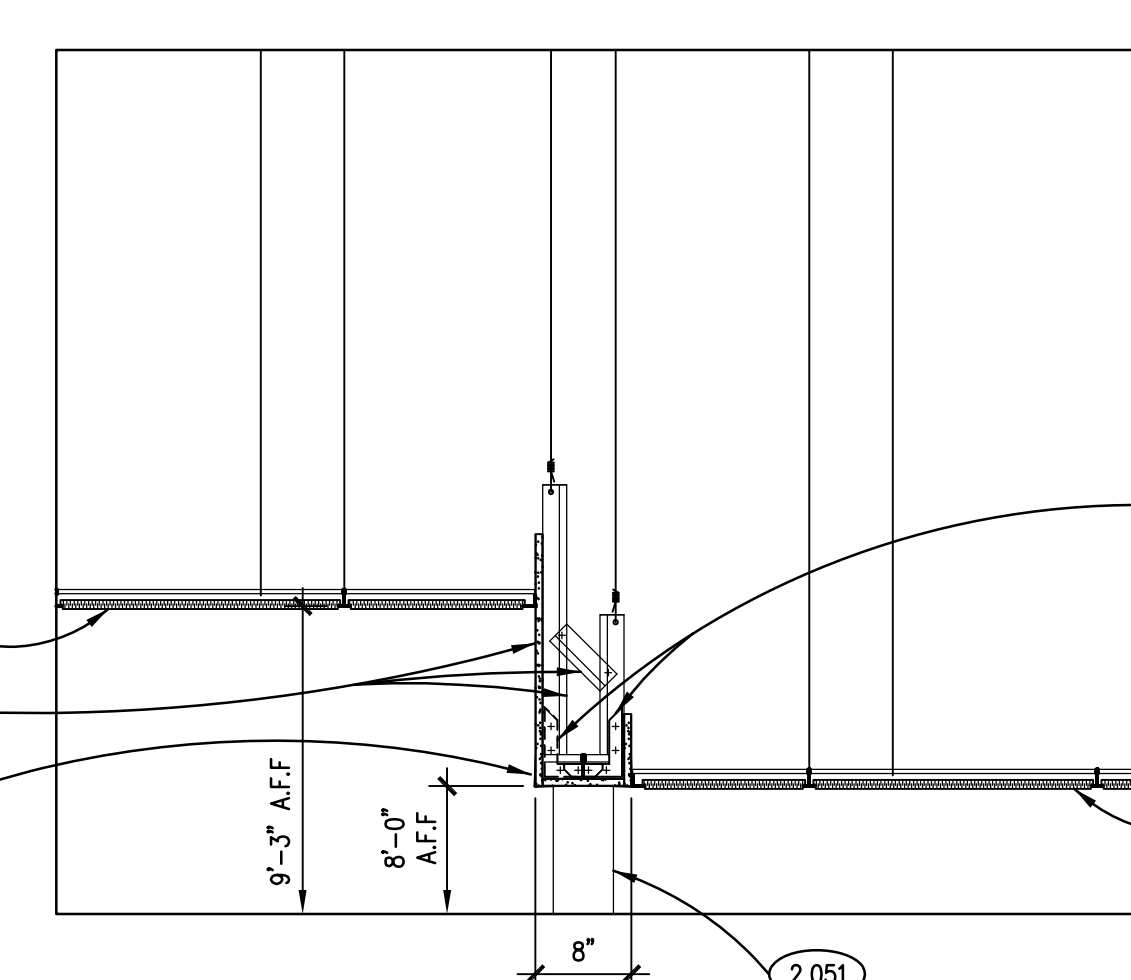
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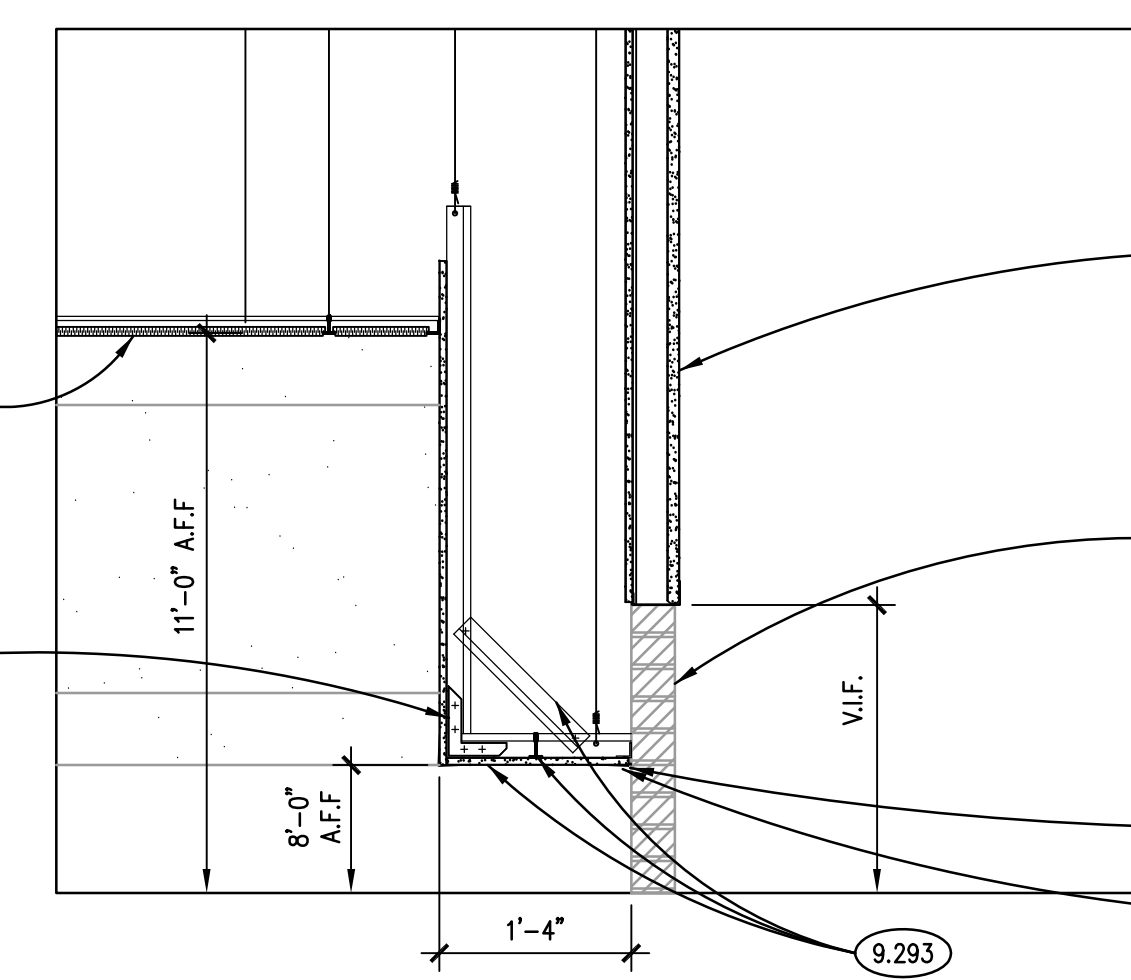
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**SECTION DETAIL 7**  
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**SECTION DETAIL 6**  
SCALE: 3/4" = 1'-0"



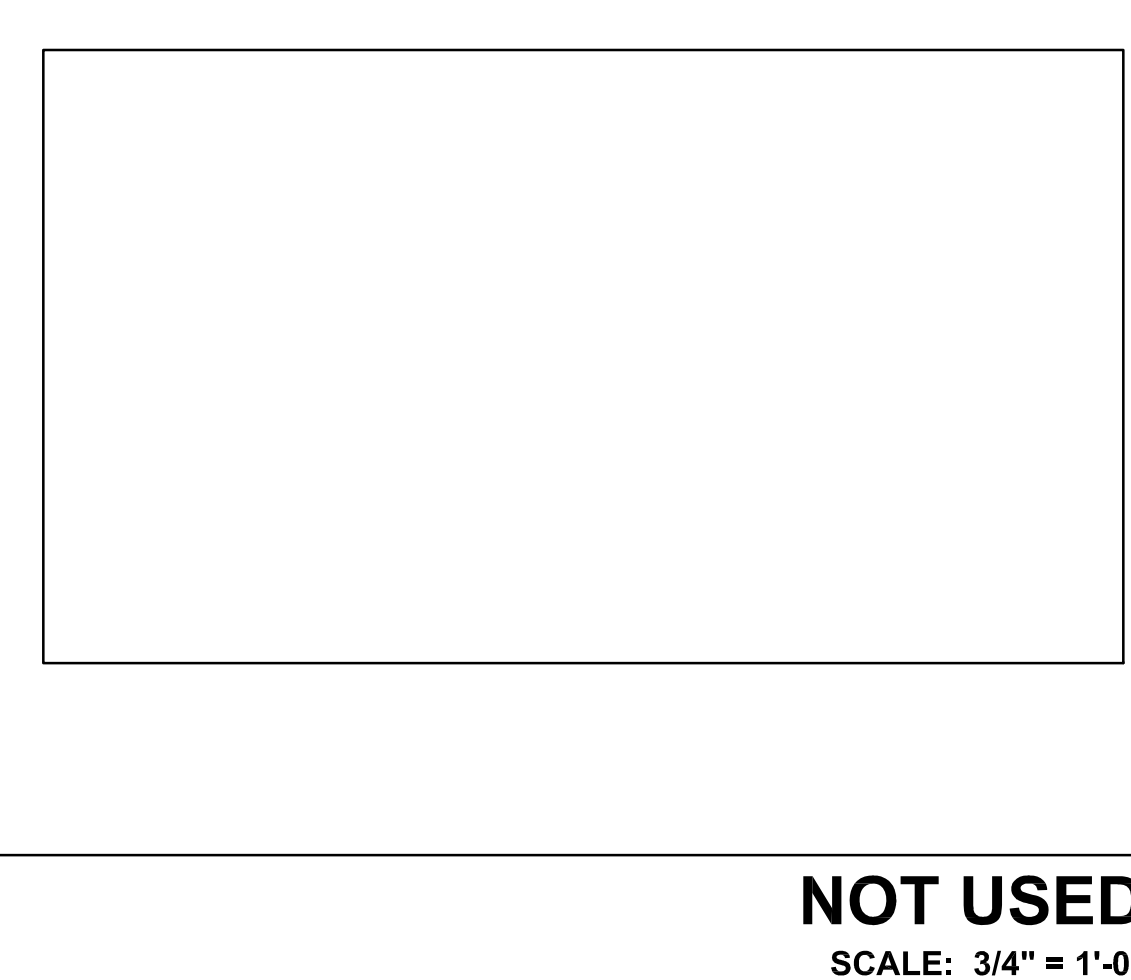
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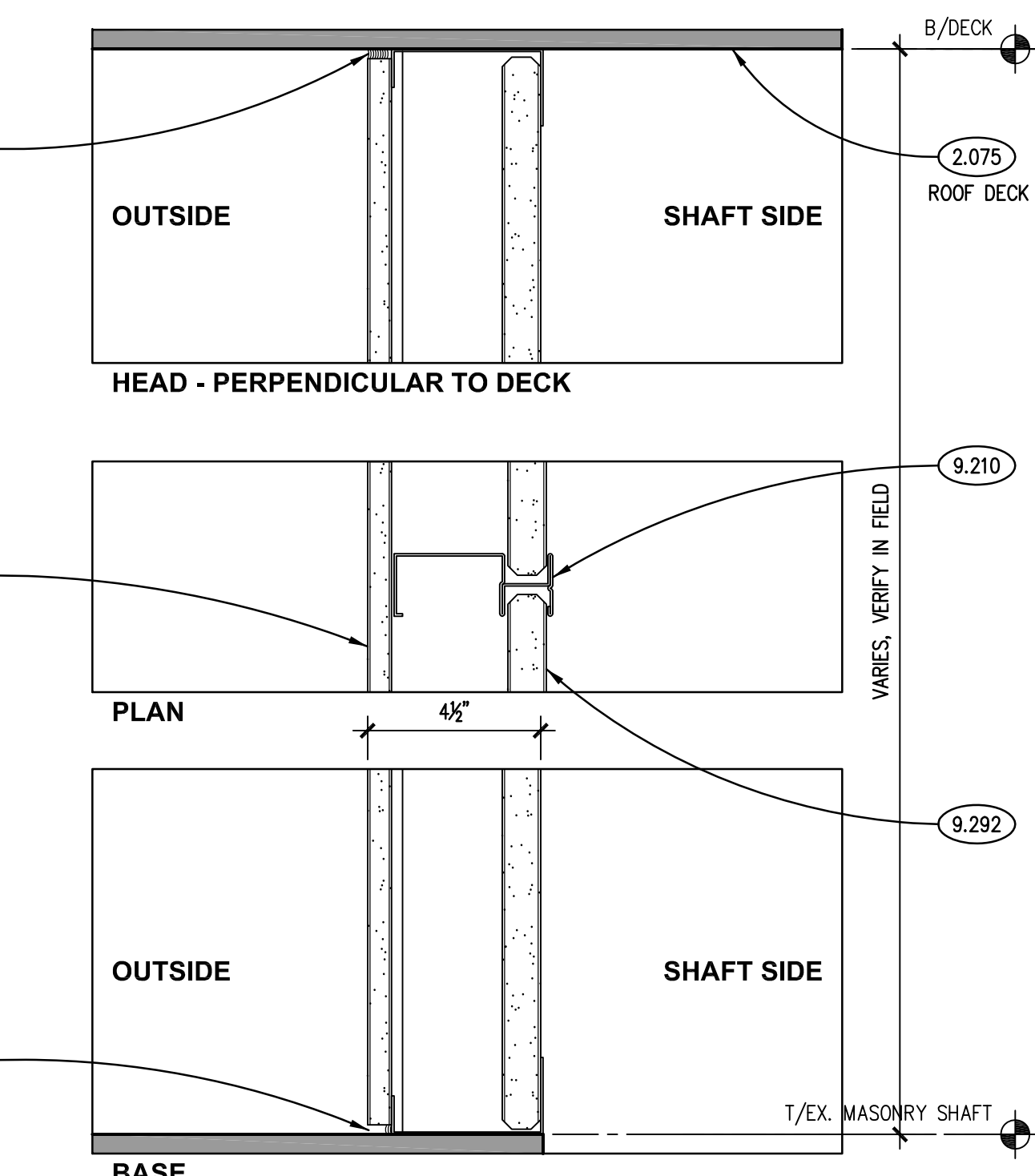
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**NOT USED 11**  
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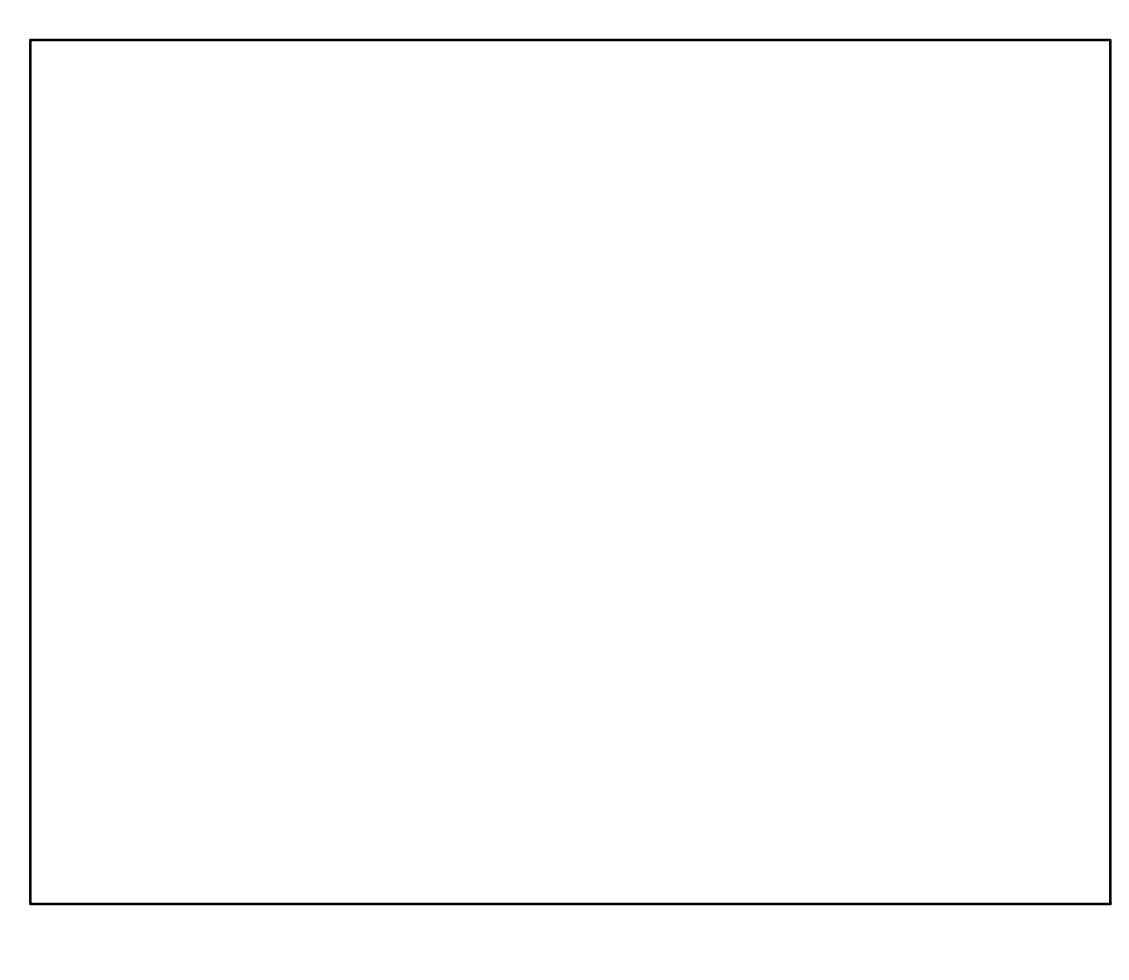
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**1 HR-RATED SHAFT WALL 13**  
SCALE: 3" = 1'-0"



**NOT USED 16**  
SCALE: 3/4" = 1'-0"



**NOT USED 15**  
SCALE: 3/4" = 1'-0"



**NOT USED 14**  
SCALE: 3/4" = 1'-0"



**NOT USED 13**  
SCALE: 3/4" = 1'-0"

CONFORM TO UL DESIGN NO. U415 - SYSTEM A

**GENERAL NOTES**

- 1. REFER TO DRAWING G100 FOR PROJECT GENERAL NOTES.
- 2. REFER TO A400 SERIES REFLECTED CEILING PLAN DRAWINGS FOR B/CLG. ELEVATIONS.
- 3. KEYNOTES TYPICALLY ARE NOT DUPLICATED WITHIN A GIVEN DETAIL. AN UNKEYED ITEM IS THE SAME AS THE KEYNOTED ITEM WITHIN THE DETAIL.
- 4. IN METAL STUD/GYPSUM BOARD PARTITIONS AND WALLS, PROVIDE 2X FIRE RETARDANT TREATED WOOD BLOCKING FOR WALL-MOUNTED ITEMS REQUIRING MECHANICAL ANCHORAGE.
- 5. ADD BRACING AND DIAGONALS AS REQUIRED TO SUSPENDED GYPSUM BOARD SYSTEM AS REQUIRED FOR STRUCTURAL STABILITY.
- 6. PROVIDE ADDITIONAL FRAMING MEMBERS AS REQUIRED TO SECURE SUSPENDED GYPSUM BOARD SYSTEM TO ROOF STRUCTURE ABOVE. VERIFY EXISTING CONDITIONS IN THE FIELD.

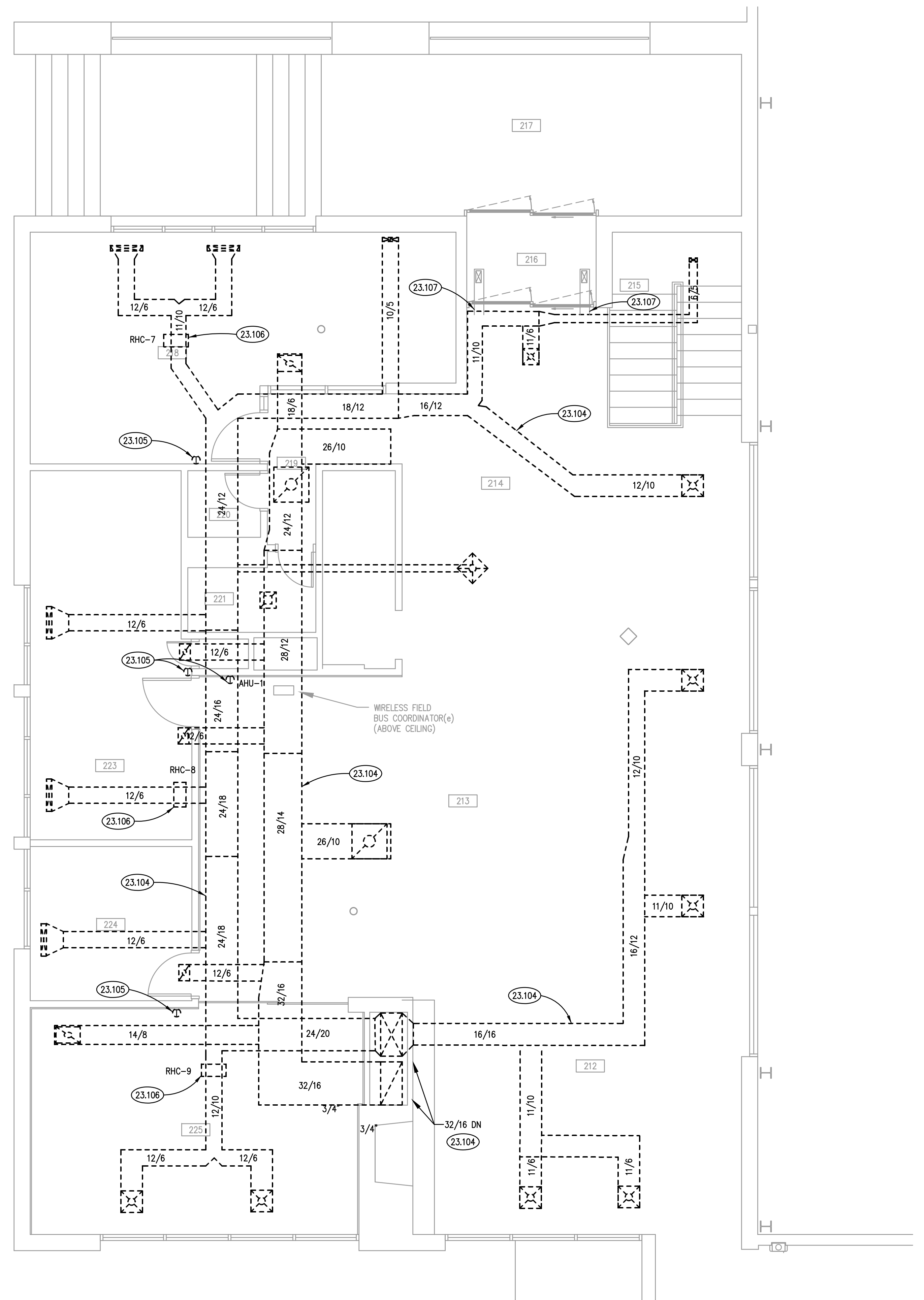
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REVISIONS	
DATE	
BY	
DESCRIPTION	

JOB NO.	16-310-1053
DRAWN	JAB
CHECKED	CDH
APPROVED	CDH

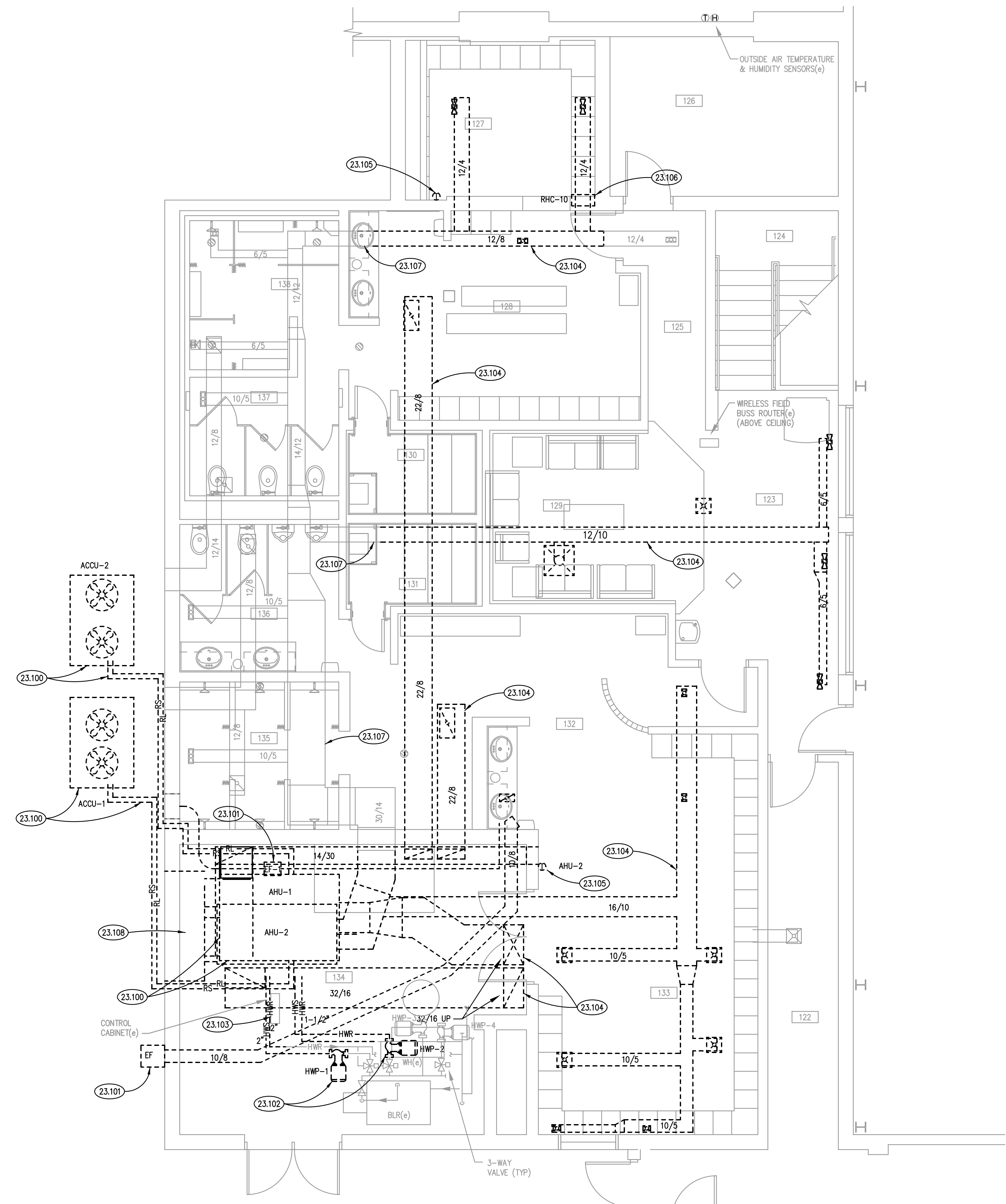
SHEET TITLE  
**SECTION DETAILS AND WALL TYPES**

SHEET NUMBER

**A1200**



**PARTIAL UPPER LEVEL MECHANICAL DEMOLITION PLAN** ②  
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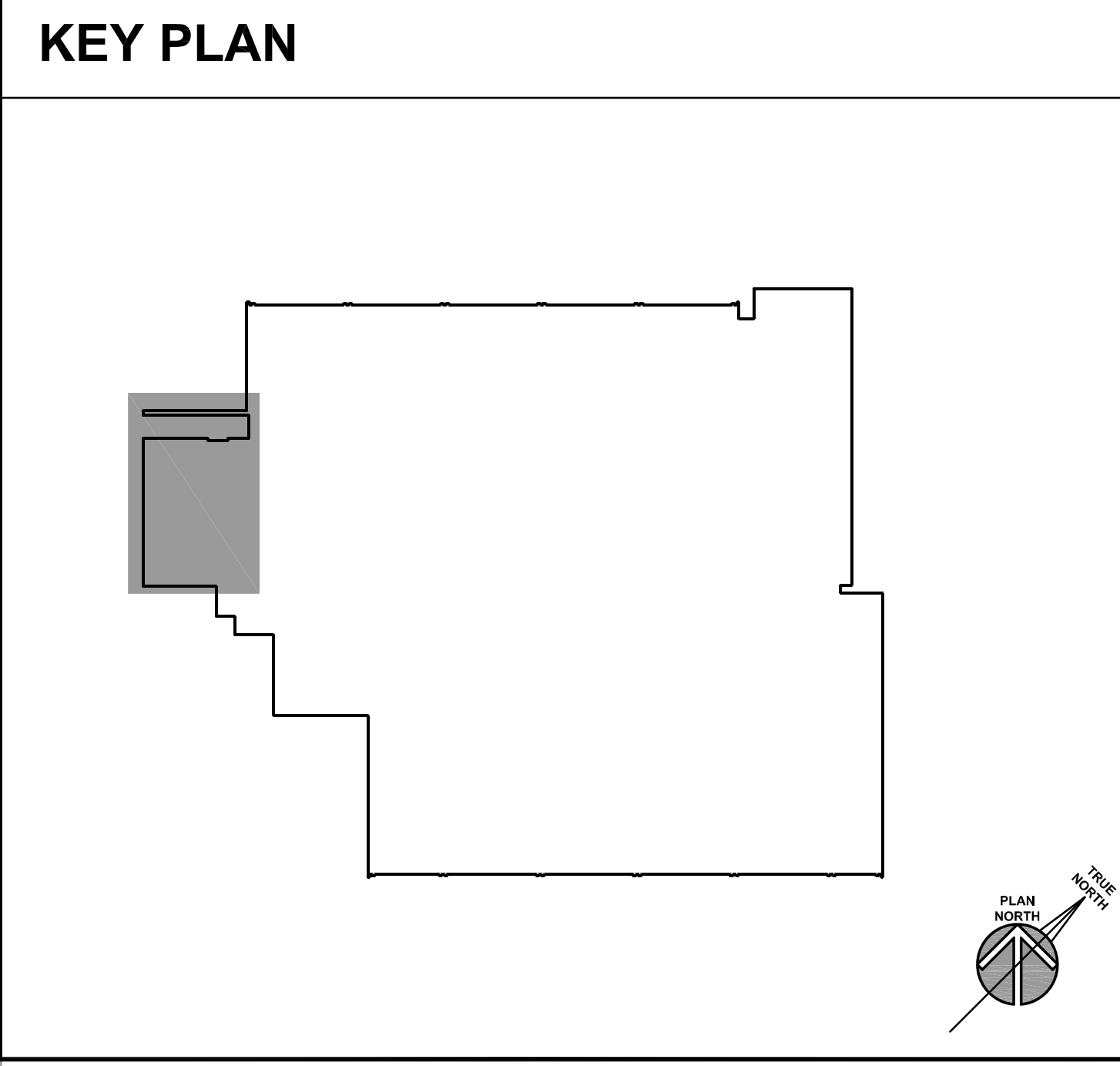


**PARTIAL LOWER LEVEL MECHANICAL DEMOLITION PLAN - AREA 'A'** ①  
SCALE: 1/4" = 1'-0"

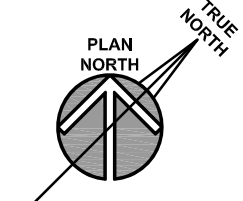
ROOM SCHEDULE			
RM. NO.	ROOM NAME	RM. NO.	ROOM NAME
122	EXISTING CORRIDOR		
123	EXISTING CORRIDOR		
124	EXISTING STAIRS		
125	EXISTING CORRIDOR		
126	EXISTING ELECTRICAL ROOM		
127	EXISTING WOMEN'S LOCKERS		
128	EXISTING WOMEN'S LOCKERS		
129	EXISTING LOUNGE		
130	EXISTING WOMEN'S SAUNA		
131	EXISTING MEN'S SAUNA		
132	EXISTING MEN'S LOCKERS		
133	EXISTING MEN'S LOCKERS		
134	EXISTING MECHANICAL ROOM		
135	EXISTING MEN'S SHOWERS		
136	EXISTING MEN'S TOILET AREA		
137	EXISTING WOMEN'S TOILET AREA		
138	EXISTING WOMEN'S SHOWERS		
212	EXISTING RECEPTION AREA		
213	EXISTING MERCHANDISE SALES AREA		
214	EXISTING LOUNGE AREA		
215	EXISTING STAIRS		
216	EXISTING ENTRY VESTIBULE		
217	EXISTING OUTDOOR COVERED ENTRY		
218	EXISTING OFFICE		
219	EXISTING CORRIDOR		
220	EXISTING STORAGE		
221	EXISTING TOILET ROOM		
222	NOT USED		
223	EXISTING WORK/BREAK ROOM		
224	EXISTING STORAGE		

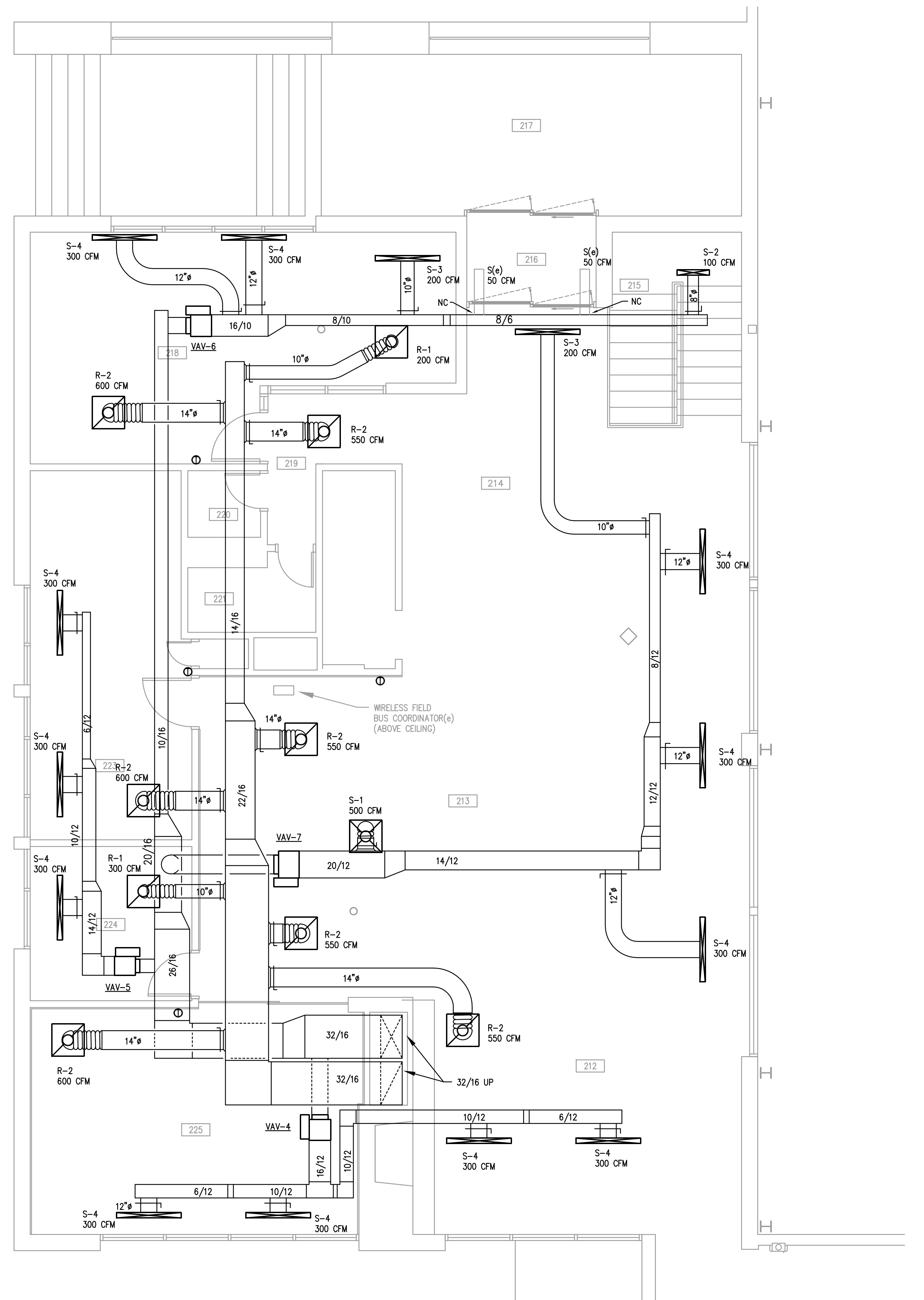
- GENERAL NOTES**
- REFER TO DRAWING G100 FOR PROJECT GENERAL NOTES.
  - ALL PIPING AND DUCTWORK IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL REQUIRED FITTINGS, OFFSETS, DROPS AND RISES. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL MATERIAL AND LABOR FOR A COMPLETE AND WORKING SYSTEM. COORDINATE WITH OTHER TRADES FOR SPACE AVAILABLE AND RELATIVE LOCATIONS OF EQUIPMENT, PIPING, DUCTWORK, ETC.
  - ALL TAPES AND MASTICS USED TO SEAL DUCTWORK LISTED AND LABELED IN ACCORDANCE WITH UL 181A SHALL BE MARKED ACCORDINGLY. ALL TAPES AND MASTICS USED TO SEAL FLEXIBLE DUCTS AND AIR CONNECTORS SHALL COMPLY WITH UL 181B AND MARKED ACCORDINGLY.
  - THERMOSTATIC CONTROLS OF EQUIPMENT SHALL HAVE A 5' F DEADBAND.
  - GENERALLY, SMALL DIAMETER PIPE RUNS FROM DRIPS, CONDENSATE PANS AND OTHER SERVICES ARE NOT SHOWN BUT MUST BE PROVIDED.
  - SPACE ALLOCATION, COORDINATION WITH ELECTRICAL, ARCHITECTURAL & OTHER MECHANICAL COMPONENTS HAVE BEEN MADE WITH RESPECT TO ALL EQUIPMENT SCHEDULED ON THESE DRAWINGS AND IN THE SPECIFICATIONS OF THE FIRST NAMED MANUFACTURER ONLY. OTHER MANUFACTURERS ARE ACCEPTABLE PROVIDED THEY MEET PERFORMANCE REQUIREMENTS AND AFOREMENTIONED COORDINATION.
  - DO NOT CUT THROUGH THE MASONRY BOND BEAMS OR OTHER STRUCTURAL ELEMENT WHEN INSTALLING OPENINGS REQUIRED FOR ALL DUCTWORK, PIPING, CONDUITS OR OTHER WORK. COORDINATE WITH THE STRUCTURAL DRAWINGS AND MASON CONTRACTOR FOR ALL BOND BEAM AND STRUCTURAL ELEMENT LOCATIONS. CONTRACTOR CUTTING THROUGH OR OTHERWISE DAMAGING THESE ELEMENTS WILL BE RESPONSIBLE FOR ALL ASSOCIATED ENGINEERING FEES AND SUBSEQUENT RETRO-FIT/REINFORCING DEEMED NECESSARY TO REINSTATE THE CONTINUITY OF THE DISRUPTED ELEMENTS.
  - OBTAIN AND PAY ALL COSTS FOR PERMITS, LICENSES, CERTIFICATE PLING AND ALL INSPECTIONS BY AUTHORITIES HAVING JURISDICTION.

- KEYNOTES**
- 23.100 REMOVE AIR HANDLING UNIT, ASSOCIATED AIR COOLED CONDENSING UNIT AND REFRIGERANT PIPING.
  - 23.101 REMOVE EXHAUST AND ALL DUCTWORK AS SHOWN.
  - 23.102 REMOVE HOT WATER PUMPS AND PIPING AS SHOWN. REFER TO DETAIL SHEET FOR CLARIFICATION ON DEMOLITION AND NEW CONNECTIONS.
  - 23.103 EXISTING BUILDING AUTOMATION SYSTEM CONTROLLERS TO BE RETAINED AND REUSED FOR NEW TEMPERATURE CONTROL SEQUENCES.
  - 23.104 REMOVE DUCTWORK AND DIFFUSERS AS SHOWN.
  - 23.105 REMOVE THERMOSTATS AND RETAIN FOR REUSE WITH NEW MECHANICAL SYSTEM.
  - 23.106 REMOVE DUCT MOUNTED ELECTRIC REHEAT COILS.
  - 23.107 EXISTING DUCTWORK BRANCHES AS SHOWN AND CAP UNUSED BRANCHES AIR TIGHT.
  - 23.108 REMOVE OUTSIDE AIR PLENUM BOX. EXISTING LOUVERS TO REMAIN IN PLACE.

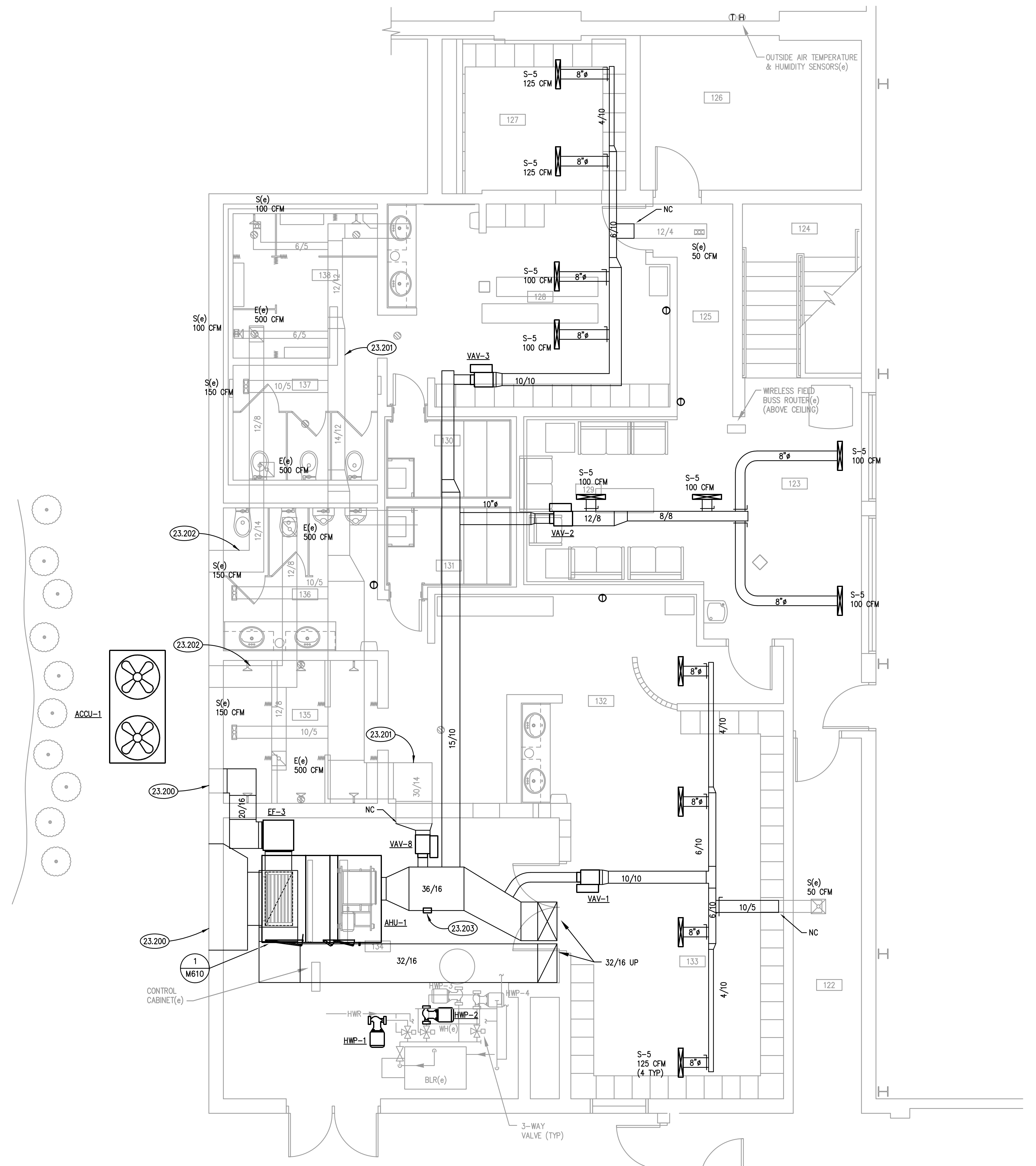


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06/06/16	BID DOCUMENTS
JOB NO. 16-310-1053	
DRAWN	DDW
CHECKED	DDW
APPROVED	DDW
SHEET TITLE	
PARTIAL UPPER AND LOWER LEVEL MECHANICAL DEMOLITION PLANS	
SHEET NUMBER	
<b>M210</b>	





**PARTIAL UPPER LEVEL FLOOR PLAN** ②  
SCALE: 1/4" = 1'-0"



**PARTIAL LOWER LEVEL FLOOR PLAN** ①  
SCALE: 1/4" = 1'-0"

**ROOM SCHEDULE**

RM. NO.	ROOM NAME	RM. NO.	ROOM NAME
122	EXISTING CORRIDOR		
123	EXISTING CORRIDOR		
124	EXISTING STAIRS		
125	EXISTING CORRIDOR		
126	EXISTING ELECTRICAL ROOM		
127	EXISTING WOMEN'S LOCKERS		
128	EXISTING WOMEN'S LOCKERS		
129	EXISTING LOUNGE		
130	EXISTING WOMEN'S SAUNA		
131	EXISTING MEN'S SAUNA		
132	EXISTING MEN'S LOCKERS		
133	EXISTING MEN'S LOCKERS		
134	EXISTING MECHANICAL ROOM		
135	EXISTING MEN'S SHOWERS		
136	EXISTING MEN'S TOILET AREA		
137	EXISTING WOMEN'S TOILET AREA		
138	EXISTING WOMEN'S SHOWERS		
212	EXISTING RECEPTION AREA		
213	EXISTING MERCHANDISE SALES AREA		
214	EXISTING LOUNGE AREA		
215	EXISTING STAIRS		
216	EXISTING ENTRY VESTIBULE		
217	EXISTING OUTDOOR COVERED ENTRY		
218	EXISTING OFFICE		
219	EXISTING CORRIDOR		
220	EXISTING STORAGE		
221	EXISTING TOILET ROOM		
222	NOT USED		
223	EXISTING WORK/BREAK ROOM		
224	EXISTING STORAGE		

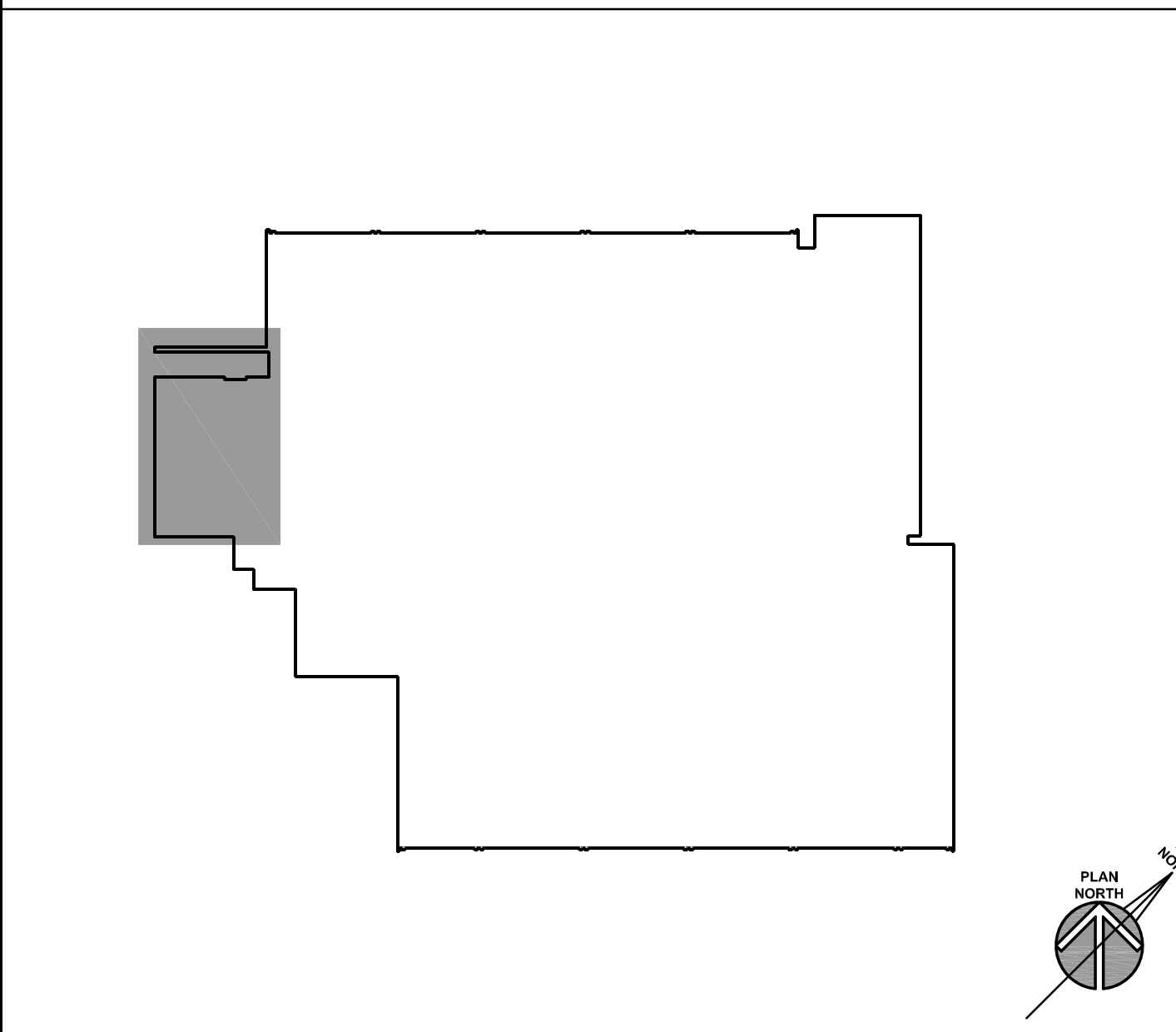
**GENERAL NOTES**

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- OBTAIN AND PAY ALL COSTS FOR PERMITS, LICENSES, CERTIFICATE PLING AND ALL INSPECTIONS BY AUTHORITIES HAVING JURISDICTION.

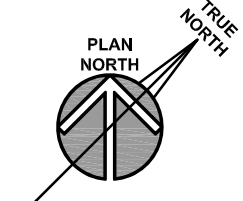
**KEYNOTES**

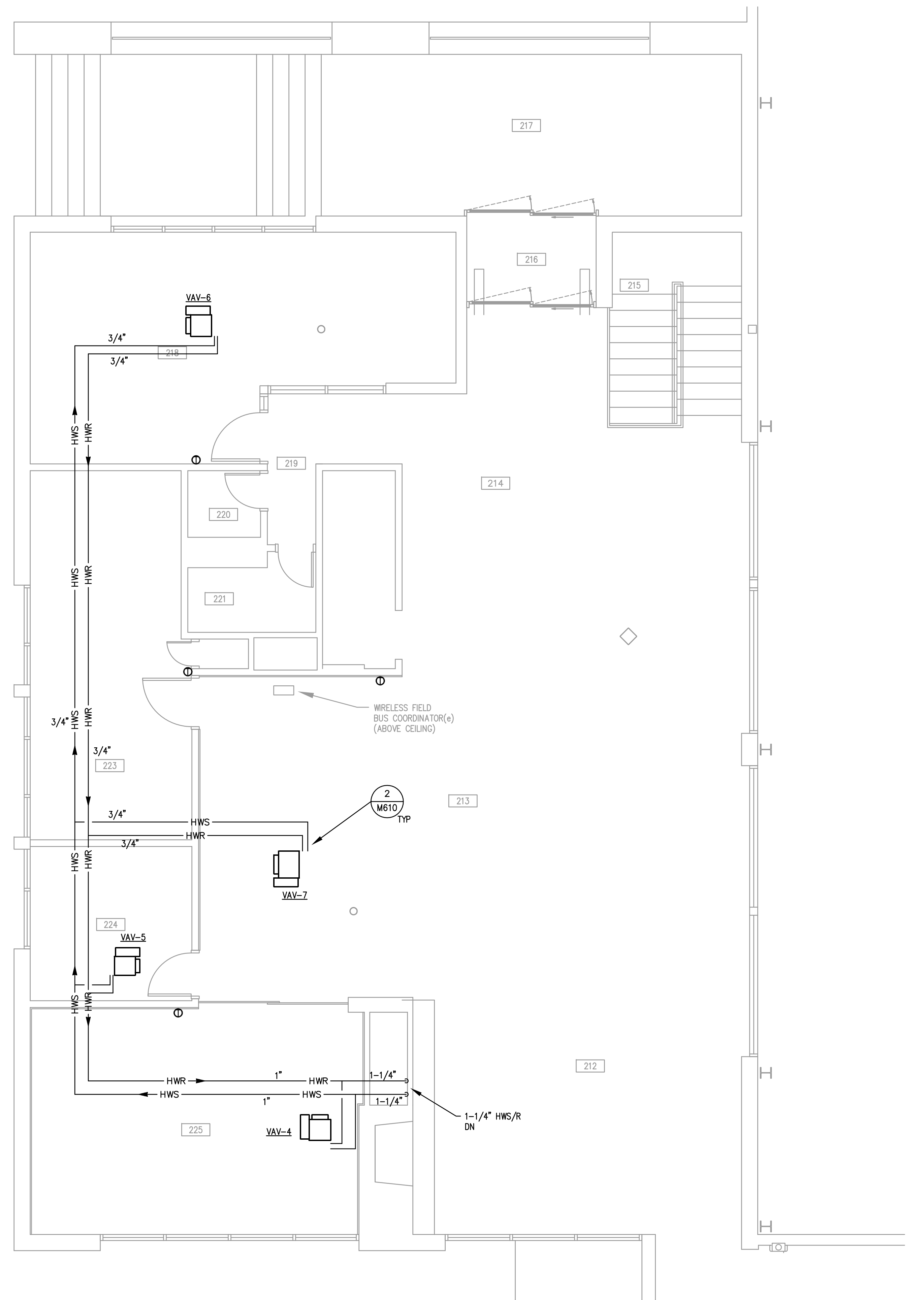
- 23.200 PROVIDE DUCTWORK CONNECTION TO EXISTING WALL LOUVER.
- 23.201 THOROUGHLY CLEAN EXISTING BRANCH DUCTWORK REMAINING IN PLACE PRIOR TO CONNECTING TO VAV BOX.
- 23.202 PROVIDE START/STOP AND STATUS FOR EXISTING LOCKER ROOM EXHAUST FANS.
- 23.203 PROVIDE DUCT MOUNTED AIR IONIZER.

**KEY PLAN**

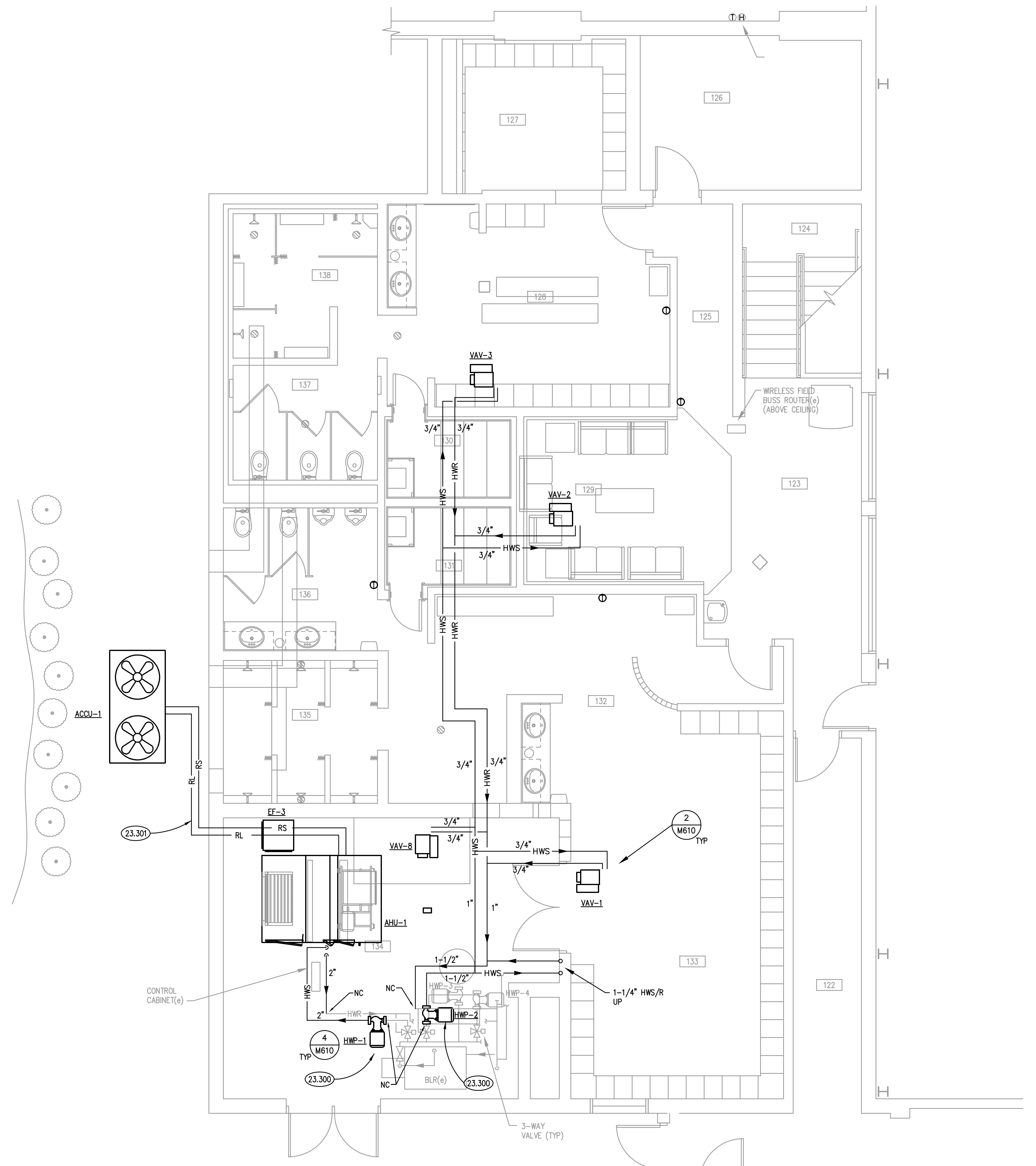


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08/08/16	BID DOCUMENTS
JOB NO.	16-310-1053
DRAWN	DW
CHECKED	DW
APPROVED	DW
SHEET TITLE	
PARTIAL UPPER AND LOWER LEVEL VENTILATION FLOOR PLANS	
SHEET NUMBER	
<b>M310</b>	





**PARTIAL UPPER LEVEL PIPING FLOOR PLAN (2)**  
SCALE: 1/4" = 1'-0"



**PARTIAL LOWER LEVEL PIPING FLOOR PLAN (1)**  
SCALE: 1/4" = 1'-0"

**ROOM SCHEDULE**

RM. NO.	ROOM NAME	RM. NO.	ROOM NAME
122	EXISTING CORRIDOR		
123	EXISTING CORRIDOR		
124	EXISTING STAIRS		
125	EXISTING CORRIDOR		
126	EXISTING ELECTRICAL ROOM		
127	EXISTING WOMEN'S LOCKERS		
128	EXISTING WOMEN'S LOCKERS		
129	EXISTING LOUNGE		
130	EXISTING WOMEN'S SAUNA		
131	EXISTING MEN'S SAUNA		
132	EXISTING MEN'S LOCKERS		
133	EXISTING MEN'S LOCKERS		
134	EXISTING MECHANICAL ROOM		
135	EXISTING MEN'S SHOWERS		
136	EXISTING MEN'S TOILET AREA		
137	EXISTING WOMEN'S TOILET AREA		
138	EXISTING WOMEN'S SHOWERS		
212	EXISTING RECEPTION AREA		
213	EXISTING MERCHANDISE SALES AREA		
214	EXISTING LOUNGE AREA		
215	EXISTING STAIRS		
216	EXISTING ENTRY VESTIBULE		
217	EXISTING OUTDOOR COVERED ENTRY		
218	EXISTING OFFICE		
219	EXISTING CORRIDOR		
220	EXISTING STORAGE		
221	EXISTING TOILET ROOM		
222	NOT USED		
223	EXISTING WORK/BREAK ROOM		
224	EXISTING STORAGE		

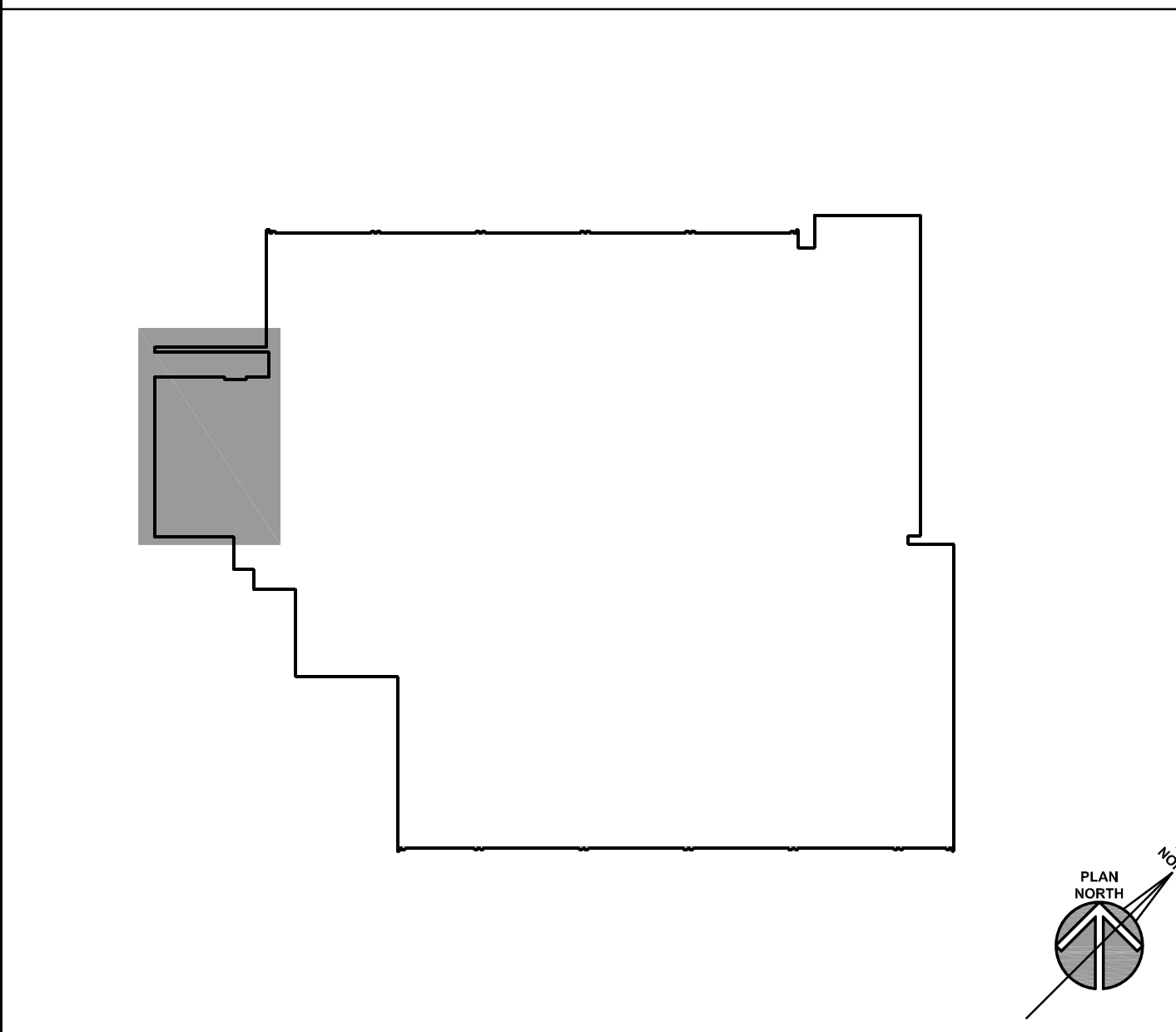
**GENERAL NOTES**

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- OBTAIN AND PAY ALL COSTS FOR PERMITS, LICENSES, CERTIFICATE PLING AND ALL INSPECTIONS BY AUTHORITIES HAVING JURISDICTION.

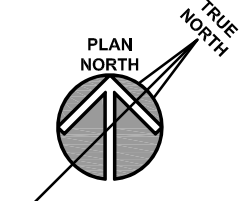
**KEYNOTES**

- 23.300 PROVIDE NEW PUMP AND SPECIALTIES. CONNECT TO EXISTING BOILER SYSTEM. REFER TO DETAILS FOR NEW CONNECTION POINTS.
- 23.301 PROVIDE REFRIGERANT PIPES BETWEEN AHU DX-COOL AND AIR COOLED CONDENSING UNIT. SIZE IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.

**KEY PLAN**

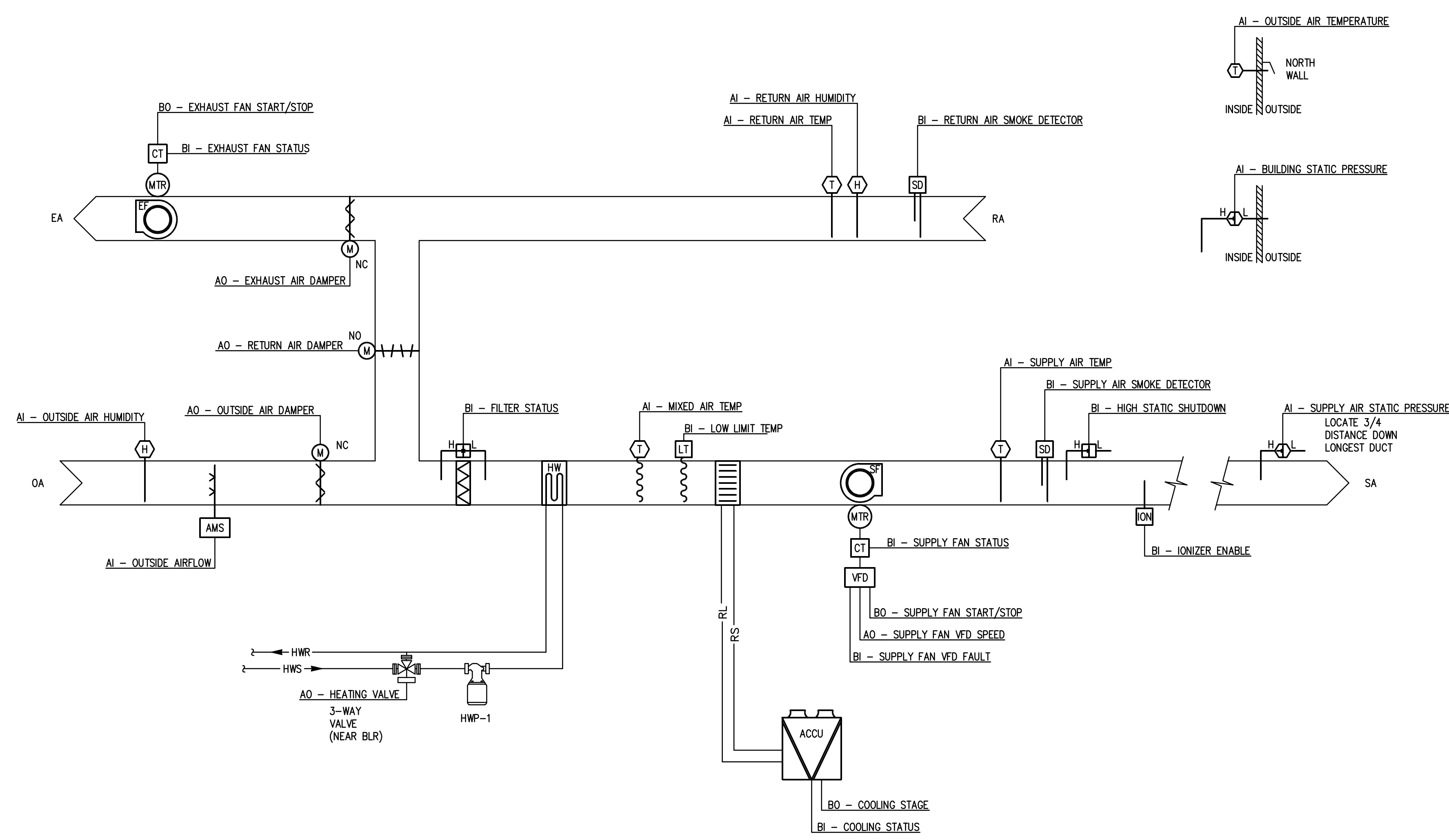


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08/08/16	BID DOCUMENTS
JOB NO.	16-310-1053
DRAWN	DDW
CHECKED	DDW
APPROVED	DDW
SHEET TITLE	
PARTIAL UPPER AND LOWER LEVEL PIPING FLOOR PLANS	
SHEET NUMBER	
<b>M410</b>	





### AIR HANDLING UNIT CONTROL SCHEMATIC



### SEQUENCE OF OPERATION

**AIR HANDLING UNIT (AHU-1):**  
 THE OCCUPIED/UNOCCUPIED MODE SCHEDULING SHALL BE MADE AT THE BUILDING AUTOMATION SYSTEM. PROVISIONS SHALL BE MADE FOR MANUAL SHUTDOWN OF EQUIPMENT. ALL SETPOINTS SHALL BE ADJUSTABLE. UNOCCUPIED SPACE TEMPERATURE SETPOINTS SHALL 80 DEGREES F COOLING AND 65 DEGREES F HEATING.  
 SUPPLY FAN - THE SUPPLY FAN SHALL RUN CONTINUOUSLY DURING OCCUPIED MODE AND INTERMITTENTLY DURING UNOCCUPIED MODE. THE SUPPLY FAN VARIABLE FREQUENCY DRIVE SHALL MODULATE THE SPEED OF THE FAN TO MAINTAIN THE DUCT STATIC PRESSURE SETPOINT. IF AIRFLOW IS NOT DETECTED WITHIN TWO MINUTES AFTER A START COMMAND THE FAN MOTOR SHALL BE DE-ENERGIZED AND AN AUDIBLE ALARM SHALL BE ACTIVATED. IF A HIGH STATIC PRESSURE IS SENSED IN THE SUPPLY AIR THE SUPPLY FAN SHALL BE DE-ENERGIZED AND SIGNAL AN ALARM CONDITION. ONCE AIRFLOW HAS BEEN ESTABLISHED THE AIR IONIZER SHALL BE ENABLED. THE BAS SHALL MONITOR THE VAV TERMINAL UNIT DAMPER POSITIONS AND RESET DUCT STATIC SETPOINT BASED ON THE ZONE REQUIRING THE MOST PRESSURE.  
 EXHAUST FAN - THE EXHAUST FAN SHALL BE ENERGIZED WHEN THE AIR HANDLING UNIT IS IN ECONOMIZER. THE FAN SPEED SHALL MODULATE AS REQUIRED TO MAINTAIN THE BUILDING PRESSURE ON THE UPPER LEVEL.  
 SMOKE DETECTORS - UPON DETECTION OF SMOKE THE FANS SHALL BE DE-ENERGIZED, CLOSE OUTSIDE AIR DAMPER, AND SIGNAL ALARM LOCALLY AND AT FIRE ALARM PANEL.  
 OA/RA/EA DAMPERS - AN AIRFLOW MEASURING STATION/DAMPER SENSOR SHALL MODULATE THE OUTSIDE AIR DAMPERS TO MAINTAIN THE MINIMUM OUTSIDE AIR CFM SETPOINT. AN ECONOMIZER SHALL MODULATE THE DAMPERS BASED ON DIFFERENTIAL ENTHALPY OF THE RETURN AIR AND OUTSIDE AIR TO MAINTAIN A SUPPLY AIR TEMPERATURE OF 55 DEGREES F. ECONOMIZER FAULT DETECTION SHALL SIGNAL ALARM WHEN ECONOMIZER IS NOT OPERATING CORRECTLY. IN UNOCCUPIED MODE THE OUTSIDE AIR DAMPER SHALL BE FULLY CLOSED.  
 COOLING MODE - THE AIR COOLED CONDENSING UNIT COMPRESSORS SHALL BE STAGED OR UNLOADED TO MAINTAIN A SUPPLY AIR TEMPERATURE OF 55 DEGREES F WHEN THE OUTSIDE AIR TEMPERATURE IS ABOVE 60 DEGREES F. THE AHU SHALL BEGIN A MORNING COOL-DOWN AT LEAST ONE HOUR BEFORE OCCUPIED MODE.  
 HEATING MODE - THE HOT WATER COIL CONTROL VALVE SHALL MODULATE TO MAINTAIN A DISCHARGE TEMPERATURE SETPOINT OF 65 DEGREES F WHEN IN THE OCCUPIED MODE. THE AHU SHALL BEGIN A MORNING WARM-UP AT LEAST ONE HOUR BEFORE OCCUPIED MODE. AFTER SPACE TEMPERATURE REACHES 70 DEGREES F IN ALL ZONES THE AHU SHALL OPERATE IN OCCUPIED MODE. THE SUPPLY FAN SHALL BE DE-ENERGIZED THROUGH A HARDWIRED ELECTRICAL INTERLOCK WITH THE COIL FREEZESTAT. IF THE FREEZESTAT IS ACTIVATED OR BY THE DDC CONTROLLER IF THE MIXED AIR TEMPERATURE IS LESS THAN 40 DEGREES F. THE OUTSIDE AIR DAMPER SHALL CLOSE AND THE RETURN AIR DAMPER SHALL OPEN. AN AUDIBLE ALARM SHALL BE ACTIVATED.

### POINTS LIST

	HARDWARE				SOFTWARE			
	AI	AO	BI	BO	SCHED	TREND	ALARM	GRAPHIC
OCCUPIED/UNOCCUPIED MODE			X	BO	X	X		X
SUPPLY FAN START/STOP			X		X	X		X
SUPPLY FAN STATUS			X				X	X
SUPPLY FAN VARIABLE FREQUENCY DRIVE SPEED		X				X		X
SUPPLY FAN VARIABLE FREQUENCY DRIVE FAULT			X				X	X
EXHAUST FAN START/STOP				X		X		X
EXHAUST FAN STATUS				X			X	X
DUCT STATIC PRESSURE	X					X		X
BUILDING STATIC PRESSURE	X					X		X
OUTSIDE AIR TEMPERATURE	X					X		X
SUPPLY AIR TEMPERATURE	X					X		X
RETURN AIR TEMPERATURE	X					X		X
MIXED AIR TEMPERATURE	X					X		X
LOW LIMIT TEMPERATURE			X				X	X
OUTSIDE AIR DAMPER		X				X		X
RETURN AIR DAMPER		X				X		X
OUTSIDE AIR CFM	X					X		X
OUTSIDE AIR HUMIDITY	X					X		X
RETURN AIR HUMIDITY	X					X		X
COOLING STATUS			X			X		X
COOLING STAGE			X			X		X
HEATING STATUS			X			X		X
HOT WATER COIL CONTROL VALVE		X				X		X
FILTER STATUS			X			X		X
AIR IONIZER ENABLE			X			X		X
SUPPLY AIR SMOKE DETECTOR STATUS			X			X		X
RETURN AIR SMOKE DETECTOR STATUS			X			X		X
HIGH STATIC PRESSURE SHUTDOWN			X			X		X

NOTES:  
 1. HEATING CONTROL VALVE SHALL HAVE SPRING RETURN ACTUATORS TO FAIL OPEN DURING LOSS OF POWER.  
 2. OUTSIDE AIR DAMPERS SHALL HAVE SPRING RETURN ACTUATORS TO FAIL IN CLOSE POSITION DURING LOSS OF POWER.

- NOTES:  
 1. COMPONENTS AND INTERCONNECTIONS SHOWN ARE SCHEMATIC ONLY.  
 2. CONTRACTOR IS RESPONSIBLE FOR PROVIDING COMPONENTS, SENSORS, RELAYS, ETC. TO ENSURE A COMPLETE OPERATING SYSTEM.  
 3. SMOKE DETECTORS SHALL BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR.

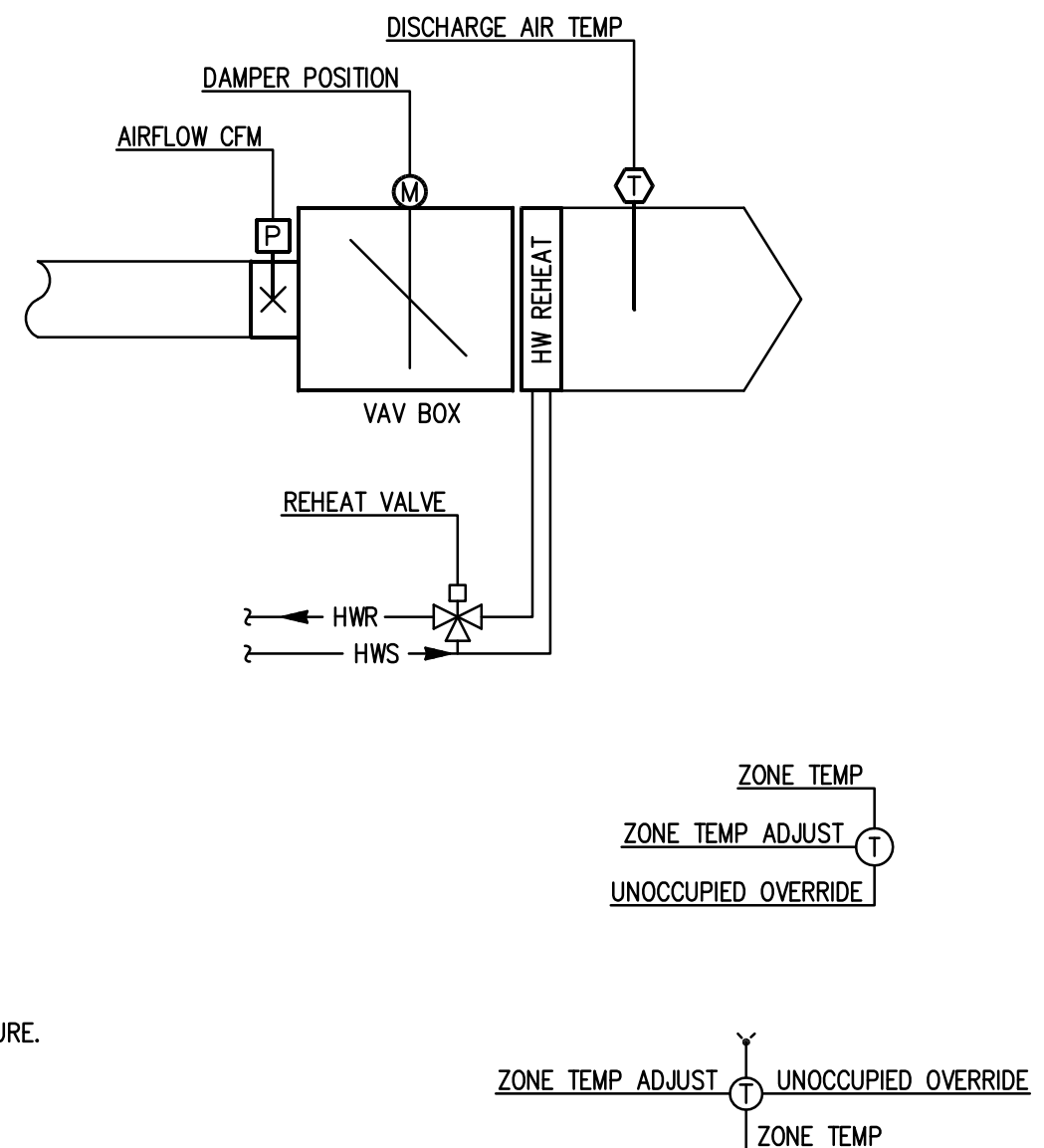
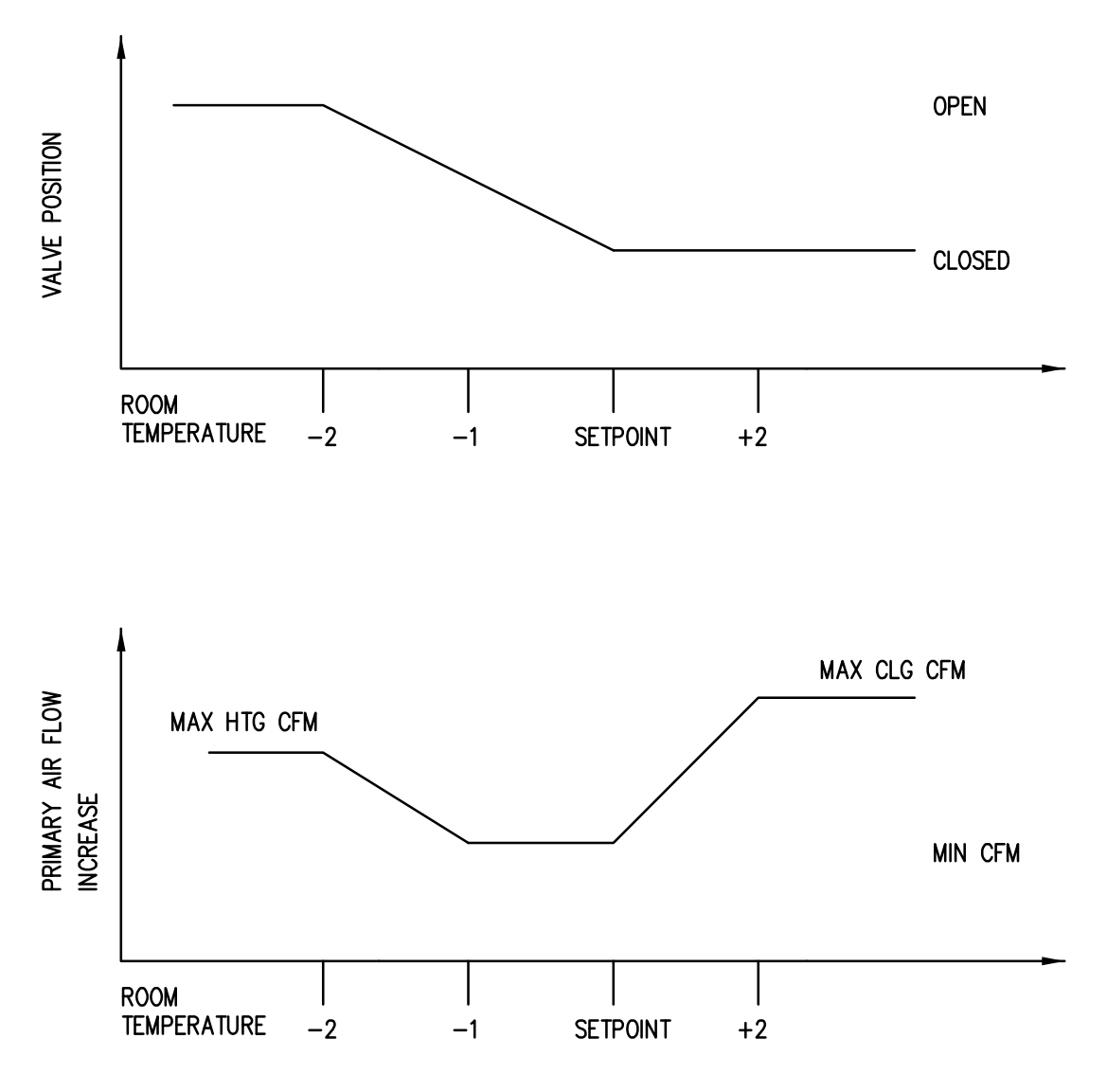
### VARIABLE AIR VOLUME BOX CONTROL SCHEMATIC

#### POINTS LIST

VARIABLE AIR VOLUME BOX	HARDWARE				SOFTWARE		
	AI	AO	BI	BO	SCHED	TREND	ALARM
DISCHARGE AIR TEMPERATURE	X					X	
ZONE AIR TEMPERATURE	X					X	
ZONE TEMPERATURE ADJUSTMENT							X
HEATING SETPOINT		X					
COOLING SETPOINT		X					
DAMPER POSITION		X					
AIRFLOW CFM		X					X
MINIMUM AIRFLOW SETPOINT		X					
MAXIMUM COOLING AIRFLOW SETPOINT		X					
MAXIMUM HEATING AIRFLOW SETPOINT		X					
ZONE HIGH TEMPERATURE ALARM			X				X
ZONE LOW TEMPERATURE ALARM			X				X
REHEAT COIL 3-WAY VALVE		X				X	
UNOCCUPIED MODE OVERRIDE			X				

#### SEQUENCE OF OPERATIONS

PRESSURE INDEPENDENT AIR TERMINAL SHALL MAINTAIN ZONE TEMPERATURE HEAT/COOL SETPOINTS OF 72/75 DEGREES F (ADJ) AND UNOCCUPIED COOL/HEAT SETPOINTS OF 80/65 DEGREES F. ALL SETPOINTS SHALL BE ADJUSTABLE.  
 OCCUPIED MODE:  
 COOLING - THE TERMINAL UNIT DAMPER SHALL MODULATE TO MAINTAIN THE ZONE COOLING TEMPERATURE SETPOINT BY MODULATING SUPPLY AIR FLOW. WHEN THE ZONE TEMPERATURE IS ABOVE SETPOINT THE DAMPER SHALL MODULATE TO THE MAXIMUM COOLING CFM POSITION. WHEN THE ZONE TEMPERATURE IS BELOW SETPOINT THE DAMPER SHALL MODULATE TO THE MINIMUM CFM POSITION.  
 HEATING - WHEN THE TERMINAL UNIT DAMPER HAS REACHED THE MINIMUM CFM POSITION AND THE ZONE TEMPERATURE IS BELOW SETPOINT THE VALVE SHALL MODULATE OPEN TO PROVIDE A DISCHARGE AIR TEMPERATURE OF 95 DEGREES F. IF THE ZONE CONTINUES TO REMAIN BELOW SETPOINT THE TERMINAL UNIT DAMPER SHALL MODULATE OPEN TO THE HEATING CFM MAXIMUM CFM. THE VALVE SHALL MODULATE IN UNISON WITH THE DAMPER TO MAINTAIN A 95° F DISCHARGE AIR TEMPERATURE. AS THE ZONE TEMPERATURE INCREASES THE DAMPER AND VALVE SHALL REACT IN A REVERSE MANNER.  
 UNOCCUPIED MODE:  
 THE TERMINAL UNIT DAMPER AND REHEAT SHALL OPERATE AS DESCRIBED ABOVE WHEN THE ASSOCIATED AIR HANDLING UNIT IS ENERGIZED. THE UNIT SHALL OPERATE TO MAINTAIN THE UNOCCUPIED HEATING/COOLING SETPOINTS.  
 ZONE THERMOSTAT SHALL HAVE PLUS/MINUS 2° F TEMPERATURE SETPOINT ADJUSTMENT OF THE SETPOINT SET AT THE BAS AND TIMED UNOCCUPIED OVERRIDE BUTTON.



MODULATE PRIMARY VALVE FULLY OPEN WHEN ROOM AIR TEMPERATURE IS 2 DEGREES ABOVE SETPOINT.  
 MODULATE PRIMARY AIR VALVE AND HEATING VALVE AS REQUIRED TO MAINTAIN 95 DEGREE F DISCHARGE AIR TEMPERATURE.

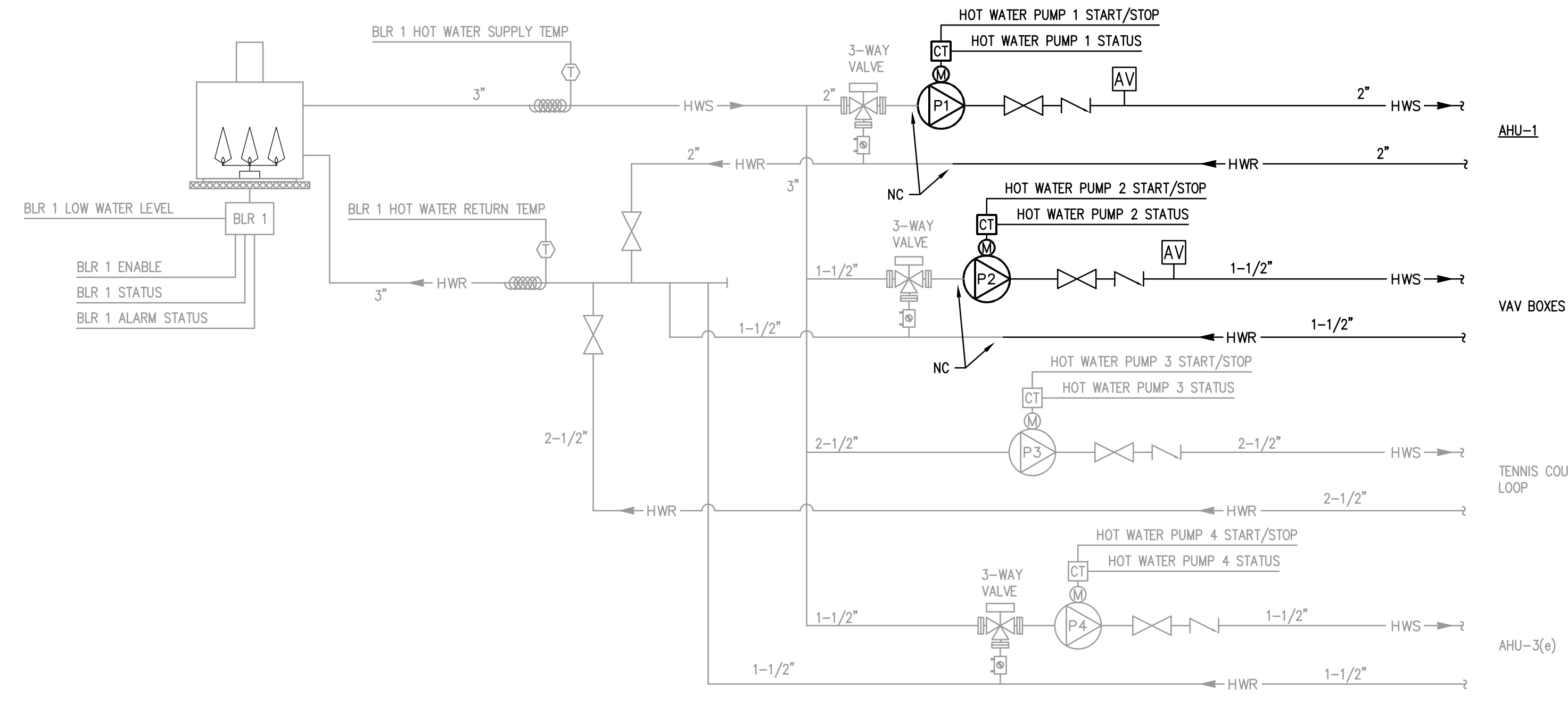
### BOILER TEMPERATURE CONTROL SCHEMATIC (EXISTING REQUIRING MODIFICATION)

#### POINTS LIST

BOILER PLANT	AI	AO	DI	DO
BOILER ENABLE				X
BOILER STATUS			X	
BOILER SAFETIES			X	
HOT WATER PUMP START/STOP (P-1, P-2, P-3, P-4)				X
HOT WATER PUMP STATUS (P-1, P-2, P-3, P-4)			X	
BOILER SUPPLY WATER TEMPERATURE	X			
BOILER RETURN WATER TEMPERATURE	X			

#### SEQUENCE OF OPERATIONS

**BOILER (B-1):**  
 BURNER - THE BURNER SHALL BE ENABLED WHEN THE OUTSIDE AIR TEMPERATURE FALLS BELOW 60 DEGREES F (ADJ). FLOW THROUGH THE BOILER SHALL BE VERIFIED PRIOR TO THE BURNER BEING ENERGIZED.  
 THE BOILER CONTROL PANEL SHALL ENERGIZE THE BOILER AS REQUIRED TO MAINTAIN A HEATING WATER TEMPERATURE OF 180 DEGREES F (ADJ).  
 AN ALARM SHALL BE GENERATED IF THERE IS A BOILER ALARM OR A LOW WATER LEVEL ALARM.  
 COMBUSTION AIR DAMPER - THE COMBUSTION AIR DAMPER SHALL OPEN PRIOR TO THE BOILER BEING ENERGIZED. THE DAMPER SHALL BE PROVEN OPEN PRIOR TO THE BOILERS FIRING.  
**PUMPS (P-1, P-2, P-3, P-4):**  
 HEATING WATER PUMP P-1 SHALL BE ENERGIZED WHEN AHU-1 IS IN HEATING MODE.  
 HEATING WATER PUMP P-2 SHALL BE ENERGIZED WHEN HEATING IS REQUIRED AT THE VAV BOX REHEAT COILS.  
 HEATING WATER PUMP P-3 SHALL BE ENERGIZED WHEN THE OUTDOOR AIR TEMPERATURE DROPS BELOW 60 DEGREES F.  
 HEATING WATER PUMP P-4 SHALL BE ENERGIZED WHEN AHU-3 IS IN HEATING MODE.  
 AN ALARM SHALL BE GENERATED UPON A PUMP FAULT STATUS.



NOTES:  
 1. LIGHT WEIGHT ITEMS ARE EXISTING.

ISSUED	DATE	BY	DESCRIPTION

JOB NO. 16-310-1053  
 DRAWN DDW  
 CHECKED DDW  
 APPROVED DDW

SHEET TITLE  
**TEMPERATURE CONTROL SCHEMATICS**

SHEET NUMBER  
**M510**

### DUCT BLANKET INSULATION DETAILS

SCALE: NTS

- RECTANGULAR DUCT
- BLANKET INSULATION (SHOWN WITH FACTORY-APPLIED VAPOR JACKET)
- FACTORY LAP (SEALED WITH ADHESIVE AND/OR STAPLES OR VAPOR-RETARDER TAPE)
- MECHANICAL FASTENERS SUPPORTING INSULATION ON THE UNDERSIDE OF DUCTS OVER 600MM (24") WIDE AND ON VERTICAL DUCTWORK AS NEEDED
- VAPOR-RETARDER TAPE OVER TEARS AND PENETRATIONS OF THE VAPOR-RETARDER JACKET (OPTIONAL ON HOT APPLICATIONS)
- ALTERNATE METHOD OF LAP SEAL—LONGITUDINAL JOINT LAPPED AND FOLDED, THEN STAPLED SECURELY IN PLACE

### DIFFUSER DETAILS

SCALE: NTS

Labels: CEILING FRAMING SUSPENSION SYSTEM, METAL BOX, FLEXIBLE DUCT OR CONNECTOR, DAMPER, CHANNEL DIFFUSER SUPPORT RESTING ON CEILING FRAMING, CEILING, SLOT DIFFUSER, CEILING GRID SUPPORT PATTERN, CEILING, DAMPER, CEILING DIFFUSER.

### AIR HANDLING UNIT SCHEDULE

MARK	AIR FLOW (CFM)	MINIMUM OA (CFM)	COOLING				HEATING				EXTERNAL STATIC PRESS (IN WG)	RETURN FAN (HP)	EXTERNAL STATIC PRESS (IN WG)	ELECTRICAL V/PH/Hz	MCA	MODEL	NOTES	
			ENT AIR TEMP (db / wb °F)	LVG AIR TEMP (db / wb °F)	SENS CAP (MBH)	TOTAL CAP (MBH)	EWT / LWT (°F)	EAT / LAT (°F)	WATER FLOW RATE (GPM)	WATER PRESS DROP (FT)								SUPPLY FAN (HP)
AHU-1	6700	2000	80 / 67	55 / 54	183.8	268.0	180 / 160	55 / 95	29	4.7	7.5	1.5	-	-	208/3/60	28.0	CLCH14	1

NOTES  
1. MODEL BASED ON TRANE.

### AIR-COOLED CONDENSING UNIT SCHEDULE

MARK	NOMINAL CLG CAP (MBH)	AMBIENT OAT (°F)	COMPRESSOR TYPE	COMPRESSOR (NO.)	REFRIGERANT TYPE	ELECTRICAL V/PH/Hz	MCA	MINIMUM EFFICIENCY (EER)	MODEL	UNIT SERVED	NOTES

NOTES  
1. MODEL BASED ON TRANE.

### VARIABLE AIR VOLUME BOX SCHEDULE

MARK	AIR FLOW (CFM)	MIN AIR FLOW (CFM)	INLET SIZE (IN)	REHEAT COIL				MODEL	AREA SERVED	NOTES			
				AIR FLOW (CFM)	MAX APD (IN WG)	EAT / LAT (°F)	WATER (GPM)				EWT/LWT (°F)	MAX WPD (FT)	CAPACITY (MBH)
VAV-1	550	260	8	550	0.19	55 / 95	1.4	180 / 145	0.29	23.9	DESV	132, 133	1
VAV-2	400	130	8	400	0.11	55 / 95	0.8	180 / 137	0.17	17.4	DESV	123, 129	1
VAV-3	500	260	8	500	0.17	55 / 95	1.2	180 / 141	0.22	21.7	DESV	127, 128	1
VAV-4	1200	400	12	1200	0.22	55 / 95	2.9	180 / 144	0.65	52.1	DESV	212, 225	1
VAV-5	900	300	10	900	0.24	55 / 95	2.6	180 / 150	0.45	39.0	DESV	222, 223, 224	1
VAV-6	1000	330	12	1000	0.17	55 / 95	2.0	180 / 136	0.33	43.4	DESV	215, 216, 218	1
VAV-7	1600	500	14	1000	0.19	55 / 95	1.6	180 / 125	0.16	43.4	DESV	213, 214	1
VAV-8	650	650	8	650	0.26	55 / 95	2.0	180 / 152	0.59	28.2	DESV	-	1, 2

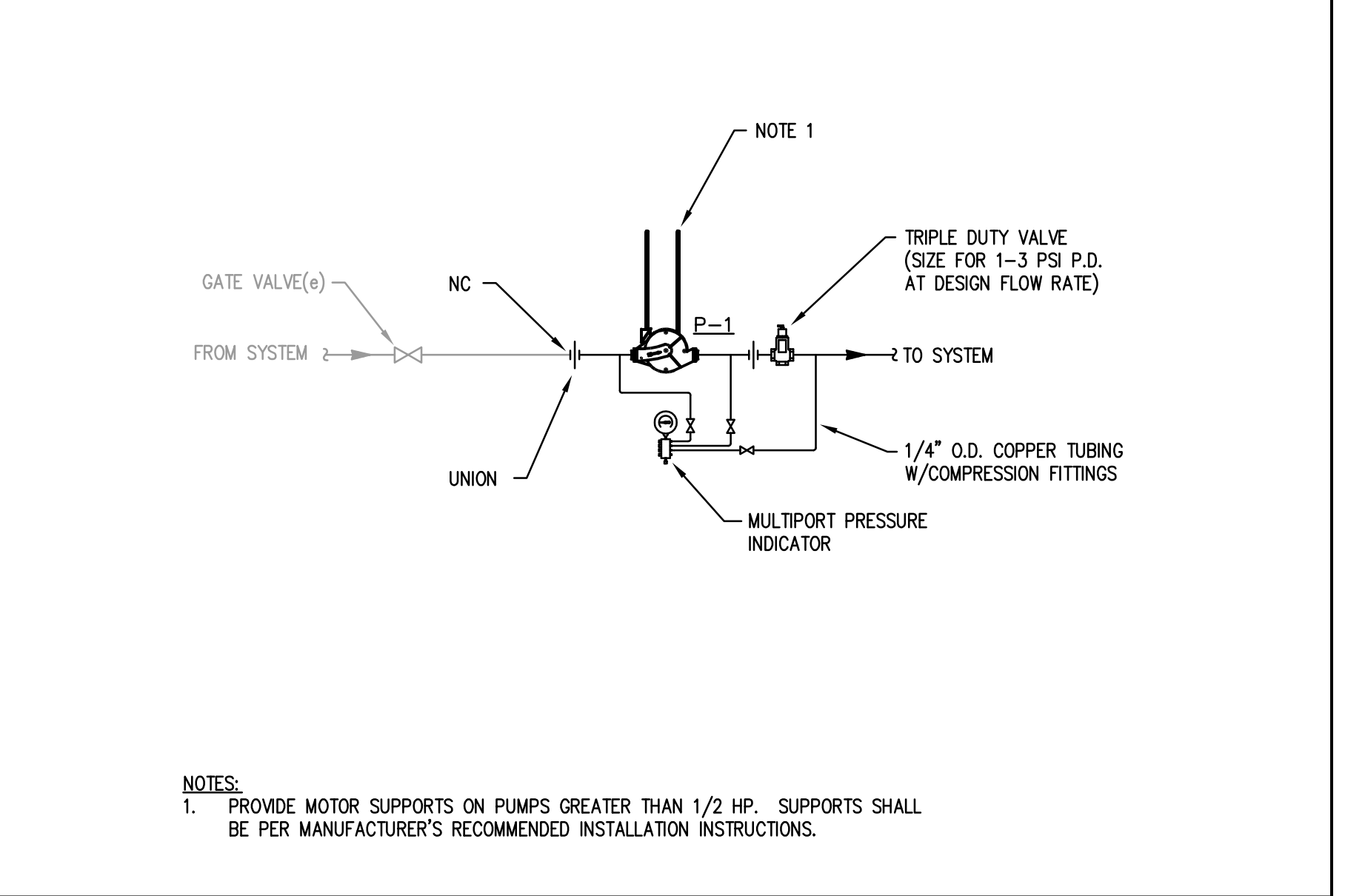
NOTES  
1. MODEL BASED ON TITUS.  
2. ROOMS 135, 136, 137, 138.

### MINIMUM HANGER SIZE FOR ROUND DUCTWORK

DUCTWORK DIAMETER (INCHES)	12' MAXIMUM SPACING		
	WIRE	ROD	STRAP
UP TO 10	(1) 12 GAGE	1/4"	1" X 22 GAGE
11 - 18	(2) 12 GAGE	1/4"	1" X 22 GAGE
19 - 24	(2) 10 GAGE	1/4"	1" X 22 GAGE
25 - 36	(2) 8 GAGE	3/8"	1" X 20 GAGE
37 - 50	-	(2) 3/8"	(2) 1" X 20 GAGE
51 - 60	-	(2) 3/8"	(2) 1" X 18 GAGE

Labels: WIRE, STRAP, LOAD RATED FASTENER, ROD, BAND SAME SIZE AS HANGER STRAP.

10" DIA. MAX, 24" DIA. MAX, 50" DIA. MAX



### PUMP SCHEDULE

MARK	WATER FLOW RATE (GPM)	HEAD (FT)	TYPE	MOTOR POWER (HP)	ELECTRICAL (V/PH/Hz)	MOTOR SPEED (RPM)	SERVICE	MODEL	NOTES
HWP-1	29	15	INLINE	1/3	120/1/60	1800	AHU-1 HW	SERIES e-90	1
HWP-2	15	20	INLINE	1/3	120/1/60	1800	VAV HW	SERIES e-90	1

NOTES  
1. MODEL BASED ON B&G.

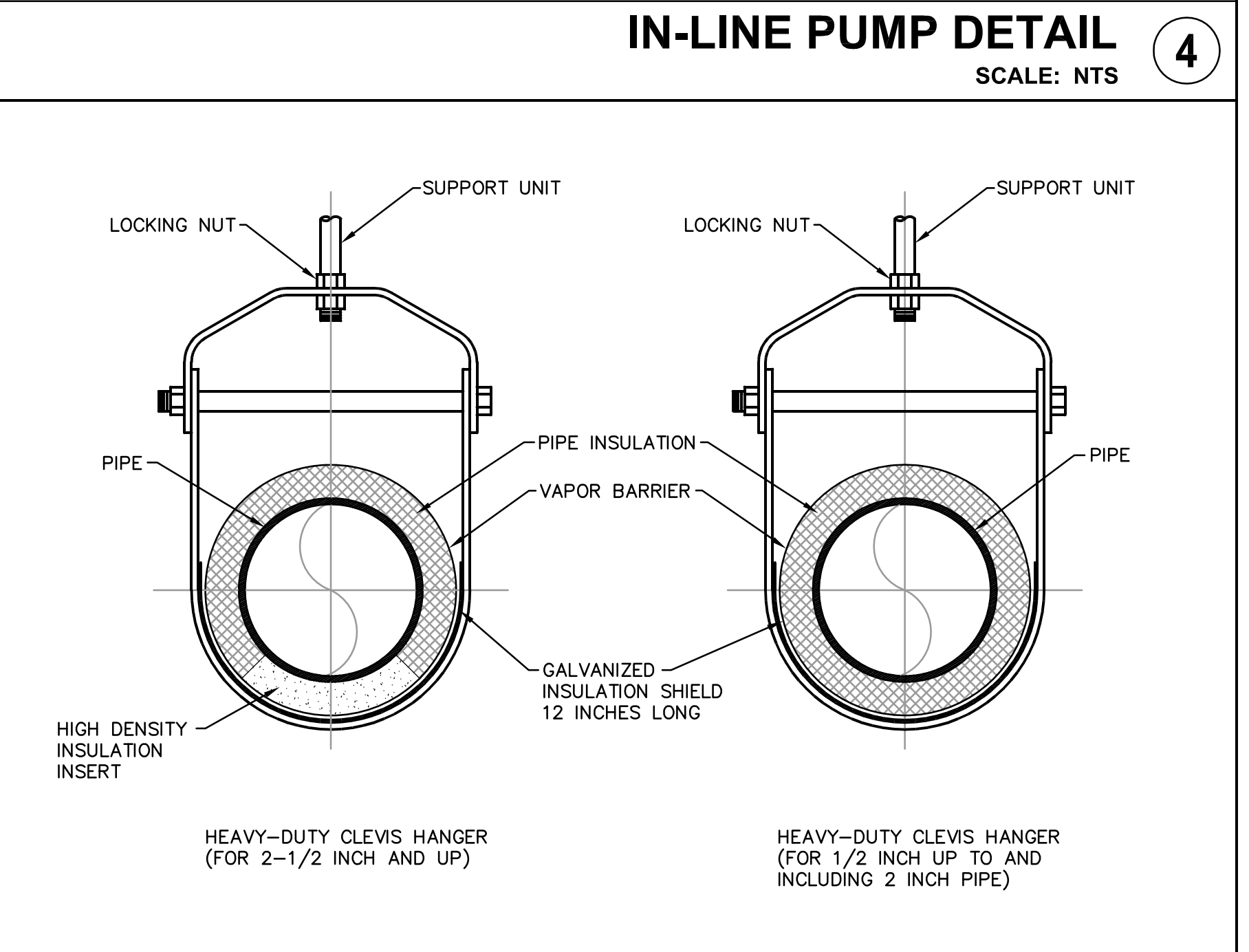
### RECTANGULAR DUCTWORK HANGER DETAILS

SCALE: NTS

MAXIMUM HALF OF DUCT PERIMETER	PAIR AT 4' SPACING		PAIR AT 8' SPACING	
	STRAP	WIRE/ROD	STRAP	WIRE/ROD
P/2 = 30"	1" X 22 GAGE	12 GAGE	1" X 22 GAGE	10 GAGE
P/2 = 72"	1" X 22 GAGE	1/4"	1" X 20 GAGE	1/4"
P/2 = 96"	1" X 22 GAGE	1/4"	1" X 18 GAGE	3/8"
P/2 = 120"	1" X 20 GAGE	1/4"	1" X 16 GAGE	3/8"
P/2 = 168"	1" X 18 GAGE	3/8"	1-1/2" X 16 GAGE	1/2"
P/2 = 192"	1" X 16 GAGE	3/8"	1-1/2" X 16 GAGE	1/2"

Labels: GALV STEEL STRAP, WIRE/ROD, NUT AND BOLT AT END OF ROD SIZED FOR LOAD.

STRAP TYPE: 8' MAX. HANGER SPACING ALSO PROVIDE 3 HANGERS AT EACH TAKE-OFF OR BRANCH.  
WIRE/ROD TYPE: 8' MAX. HANGER SPACING



### DIFFUSERS, REGISTERS AND GRILLES SCHEDULE

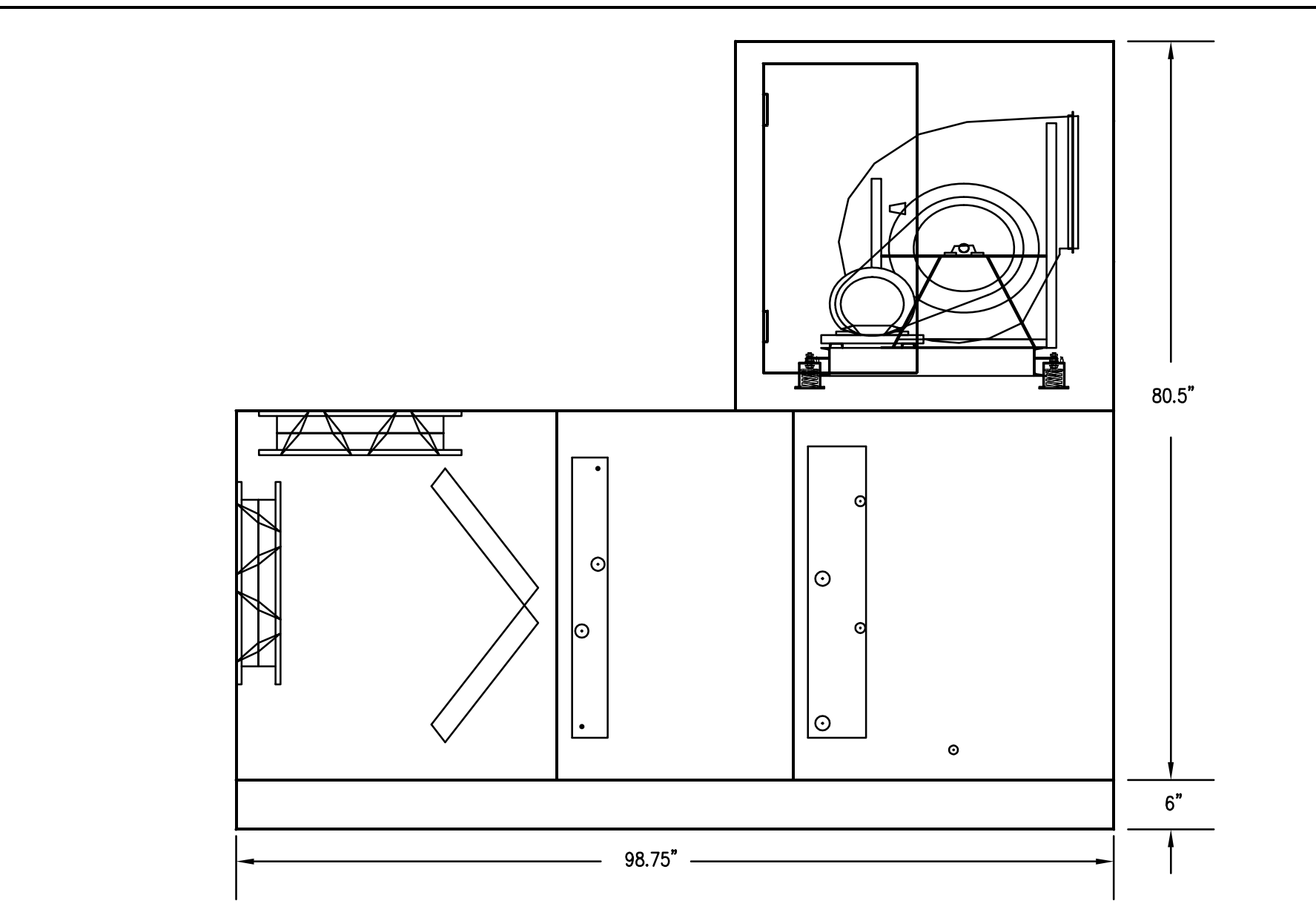
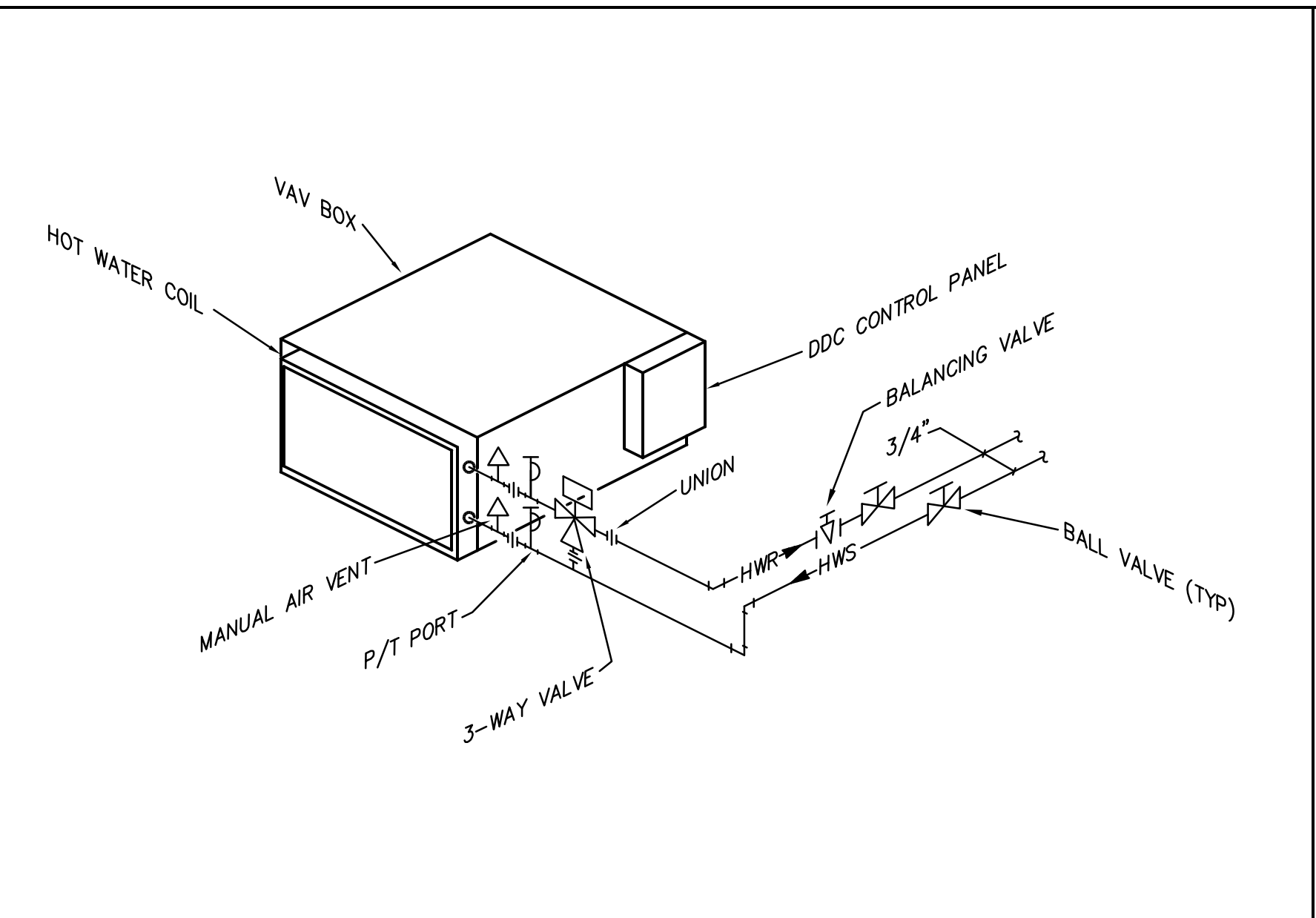
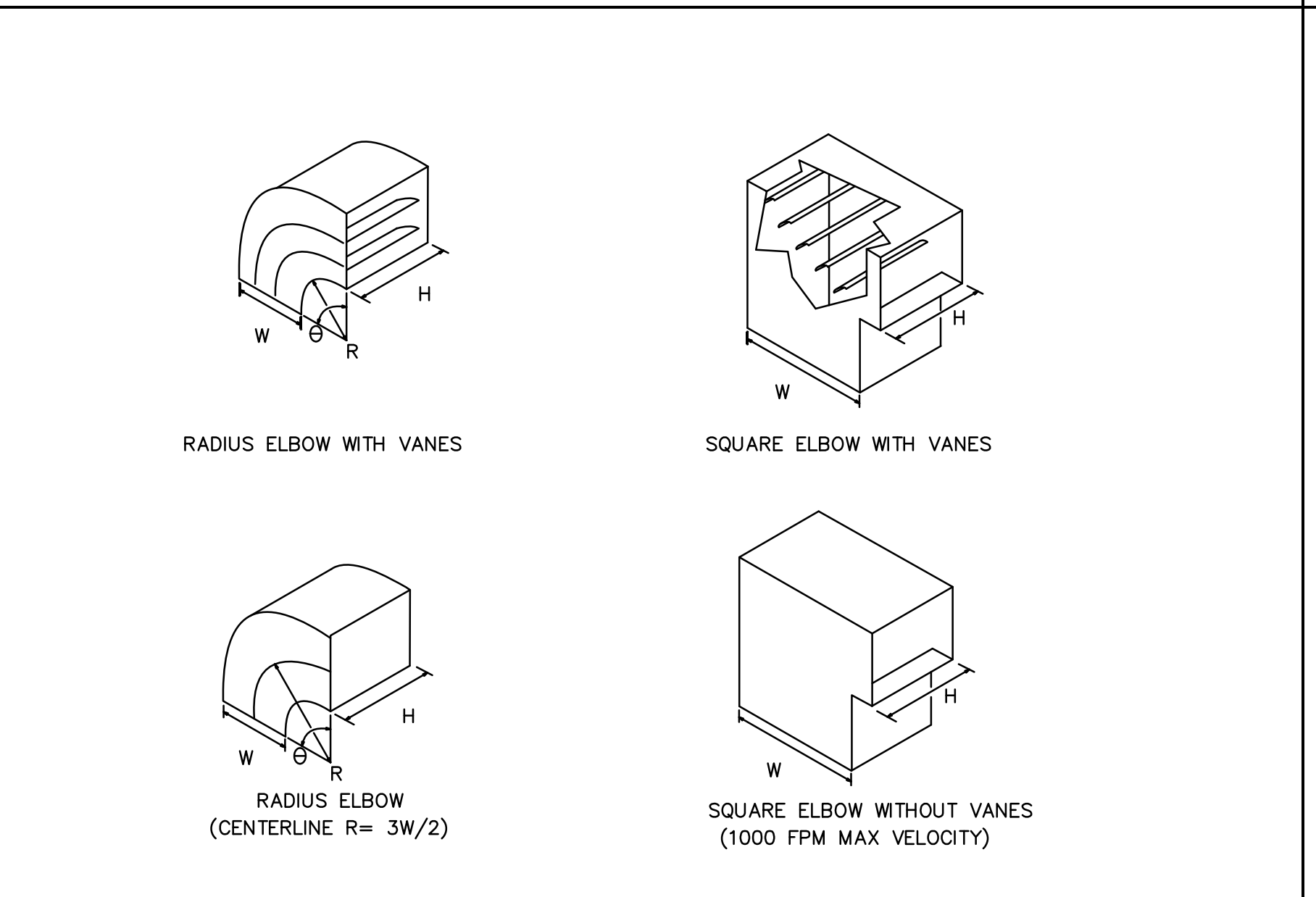
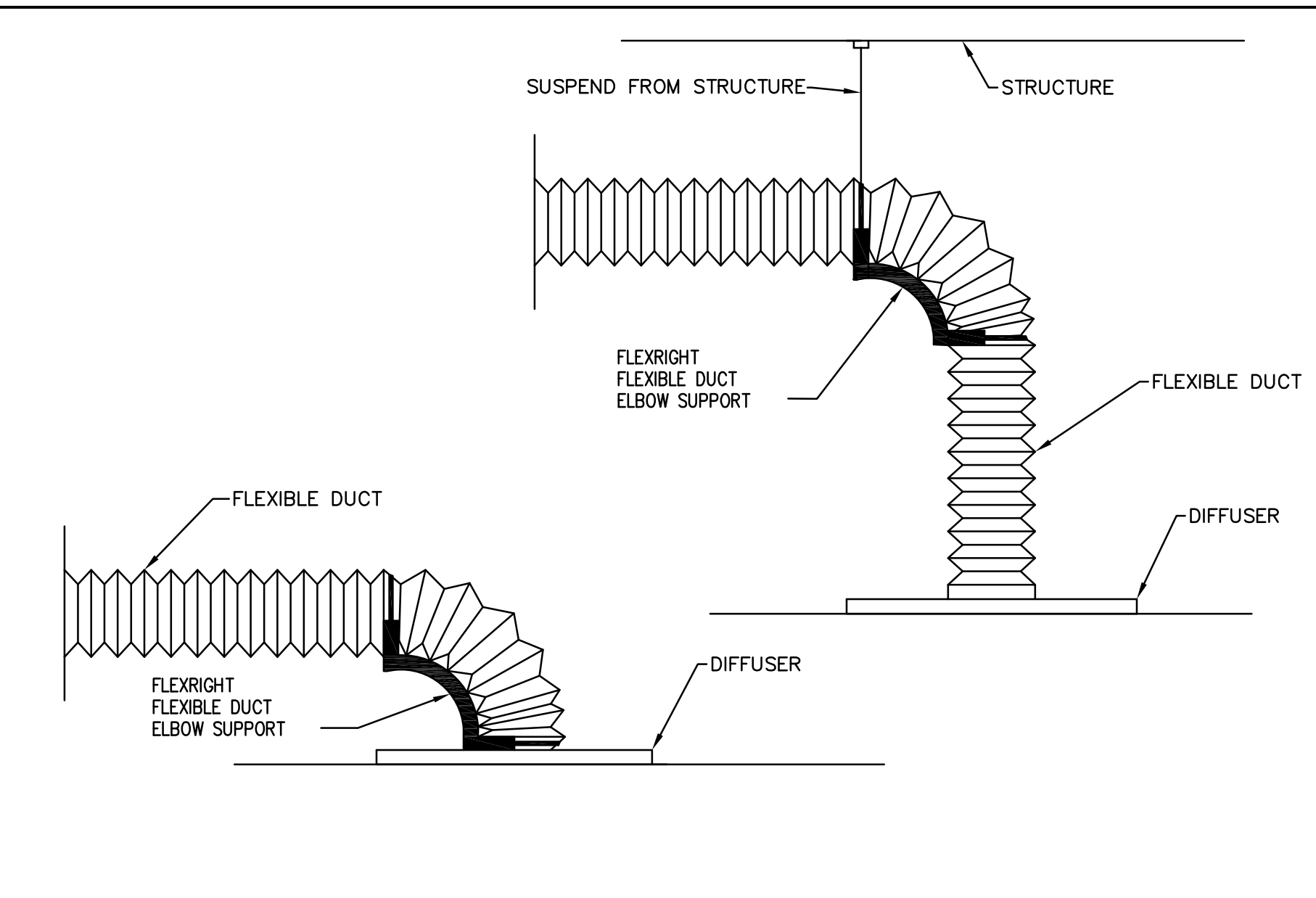
MARK	MODEL	SIZE	NECK	DAMPER	MATERIAL	REMARKS
S-1	TMS	24/24	12"Ø	ØBD	ST	1
S-2	EOS	24/4	8" OVAL	-	ST	1
S-3	EOS	48/4	10" OVAL	-	ST	1
S-4	EOS	48/4	12" OVAL	-	ST	1
S-5	TBO-80	24/5	8"Ø	-	ST	1, 2
R-1	PAR	24/24	10"Ø	-	ST	1
R-2	PAR	24/24	14"Ø	-	ST	1

NOTES  
1. MODEL BASED ON TITUS.  
2. TWO 1-1/2 INCH SLOTS. BALANCE THROW AS 2-WAY, HORIZONTAL.

### FAN SCHEDULE

MARK	AIR FLOW RATE (CFM)	EXTERNAL S.P. (IN WG)	TYPE	MOTOR (HP)	ELECTRICAL (V/PH/Hz)	AREA SERVED	LOCATION	MODEL	NOTES
EF-1	3000	1.0	INLINE	1.0 ECM	208/1/60	AHU-1	134	ACMD VF	1

NOTES  
1. MODEL BASED ON COOK. PROVIDE WITH PRESSURE CONTROL FOR EC MOTORS.



**KLUBER**  
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 Phone: 630.408.2123  
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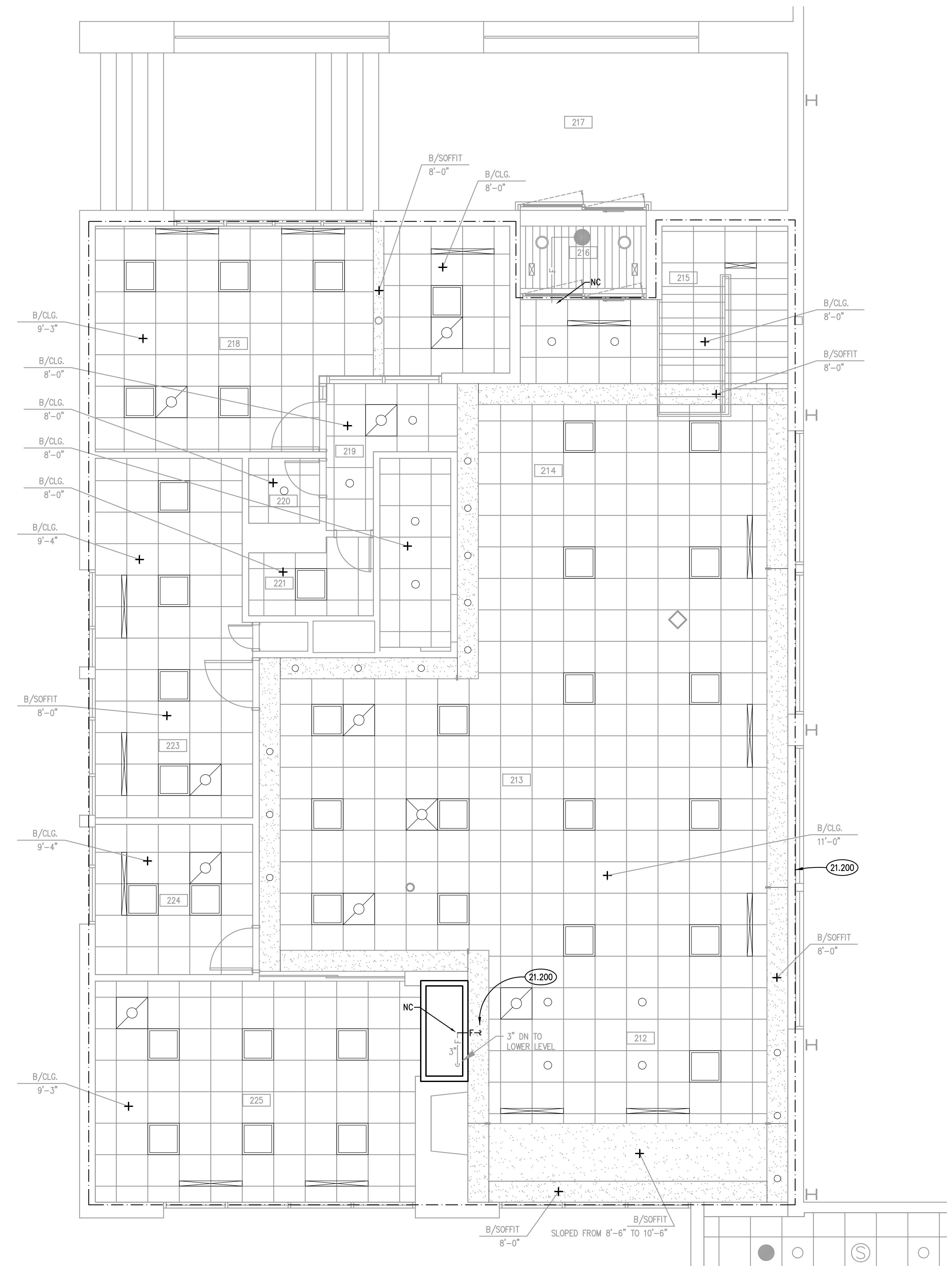
**TENNIS CENTER HVAC UPGRADE**

ISSUED  
 08/08/16  
 BID DOCUMENTS

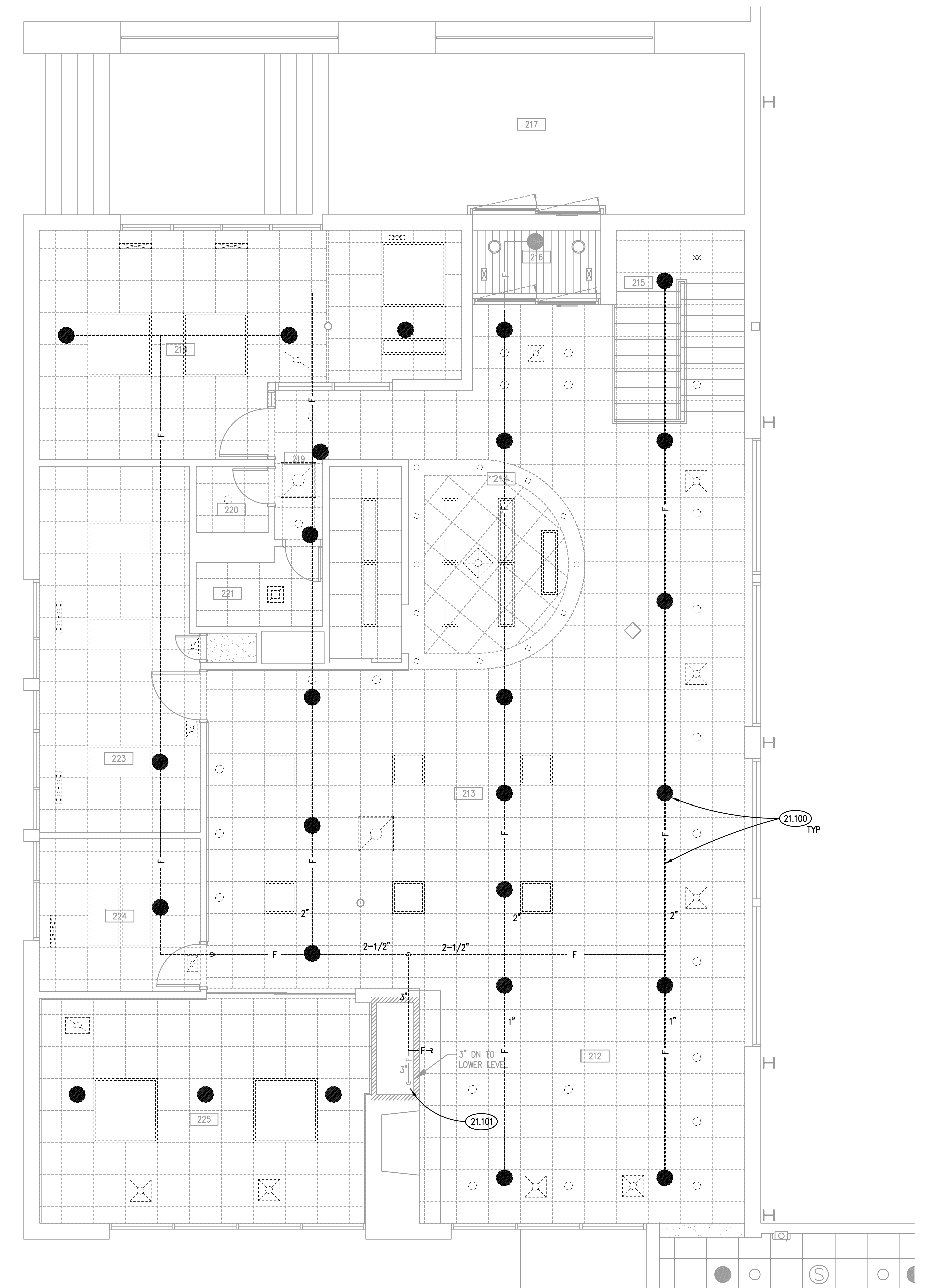
JOB NO. 16-310-1053  
 DRAWN DDW  
 CHECKED DDW  
 APPROVED DDW

SHEET TITLE  
 MECHANICAL SCHEDULES AND DETAILS

SHEET NUMBER  
**M610**



**PARTIAL UPPER LEVEL FIRE PROTECTION PLAN (2)**  
SCALE: 1/4" = 1'-0"



**PARTIAL UPPER LEVEL FIRE PROTECTION DEMOLITION PLAN (1)**  
SCALE: 1/4" = 1'-0"

**CEILING SYMBOL LEGEND**

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	GYPSUM BOARD		FLOURESCENT LIGHT FIXTURE : 24" X 48"
	PLASTER		FLOURESCENT LIGHT FIXTURE : 12" X 48"
	ACOUSTICAL CEILING TILE : 12" X 12"		FLOURESCENT LIGHT FIXTURE : STRIP
	ACOUSTICAL CEILING TILE : 24" X 24"		LIGHT FIXTURES : 24"X24" FLOOR; 12"X12" INCAN.
	ACOUSTICAL CEILING TILE : 24" X 48"		SPECULAR CEILING GRID : 1" X 1" WITH FLOOR LOTS.
	ACCESS PANEL : 24" X 24" : U.O.I.N.		DOWN LIGHT FIXTURES : A. SPOT, B.FLOOR, C.WALL WASHER, D.SOURCE
	EXPOSED METAL		EXIT LIGHT FIXTURE
			LIGHT TRACK FIXTURE
			EMERGENCY LIGHT FIXTURE
			SPRINKLER HEAD
			MECHANICAL DIFFUSER : SUPPLY
			MECHANICAL DIFFUSER : RETURN

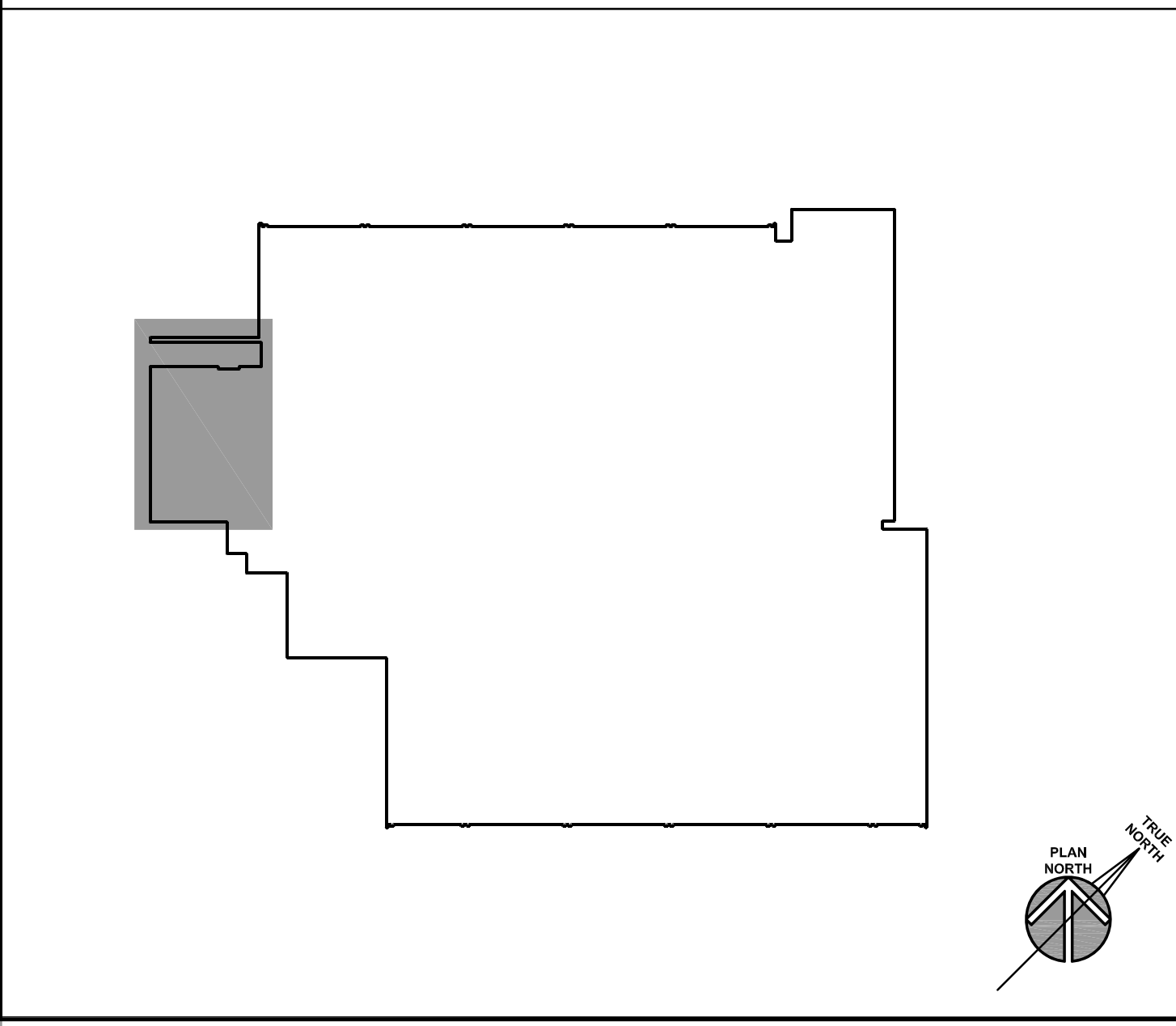
**GENERAL NOTES**

- REFER TO DRAWING G100 FOR PROJECT GENERAL NOTES.
- SPRINKLER SYSTEM SHOWN ARE CONCEPT DRAWINGS AND ARE SCHEMATIC FOR BIDDING PURPOSES ONLY. CONCEPT DRAWINGS ARE INTENDED TO ILLUSTRATE THE SCOPE OF WORK. THE CONTRACTOR SHALL VERIFY ALL INFORMATION CONTAINED ON THESE DRAWINGS.
- ALL PIPING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, DROPS, AND RISES. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL MATERIAL AND LABOR FOR A COMPLETE AND WORKING SYSTEM.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF THE SPRINKLER SYSTEM. THE DESIGN SHALL BE ACCOMPLISHED UNDER THE DIRECT SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER OR NICET LEVEL III/IV. SHOP DRAWINGS AND HYDRAULIC CALCULATIONS SHALL BEAR THE LICENSED PROFESSIONAL'S STAMP.
- FIRE PROTECTION SYSTEM SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 13.
- HYDRAULIC CALCULATIONS FOR: LIGHT HAZARD - 0.10 GPM/SF OVER 1500 SQUARE FEET; ORDINARY HAZARD - GROUP 1, 0.15 GPM/SF OVER 1500 SQUARE FEET; ORDINARY HAZARD - GROUP 2, 0.20 GPM/SF OVER 1500 SQUARE FEET.
- SHOP DRAWINGS AND HYDRAULIC CALCULATIONS SHALL REQUIRE SUBMISSION TO KODIAK FIRE PROTECTION SERVICES (OAK LAWN, IL) AND AHJ FOR APPROVAL.
- ALL SPRINKLER HEADS IN LAY-IN CEILING TILES SHALL BE CENTERED ON 2'x2' END AREA OF TILE.
- HYDRANT TEST DATA IS NOT AVAILABLE. COORDINATE WITH AUTHORITY HAVING JURISDICTION TO PERFORM NEW HYDRANT FLOW TEST.
- THE CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL TRADES.
- DO NOT CUT THROUGH MASONRY BOND BEAMS OR ANY OTHER STRUCTURAL ELEMENT WHEN INSTALLING OPENINGS REQUIRED FOR ALL PIPING, CONDUITS OR OTHER WORK. COORDINATE WITH STRUCTURAL DRAWINGS AND MASON CONTRACTOR FOR ALL BOND BEAM AND STRUCTURAL ELEMENT LOCATIONS. CONTRACTOR CUTTING THROUGH OR OTHERWISE DAMAGING THESE ELEMENTS WILL BE RESPONSIBLE FOR ALL ASSOCIATED ENGINEERING FEES AND SUBSEQUENT RETRO-FIT/REINFORCING DEEMED NECESSARY TO REINSTATE THE CONTINUITY OF THE DAMAGED ELEMENTS.
- OBTAIN AND PAY ALL COSTS FOR PERMITS, LICENSES, CERTIFICATE FILING AND INSPECTIONS BY AUTHORITIES HAVING JURISDICTION.

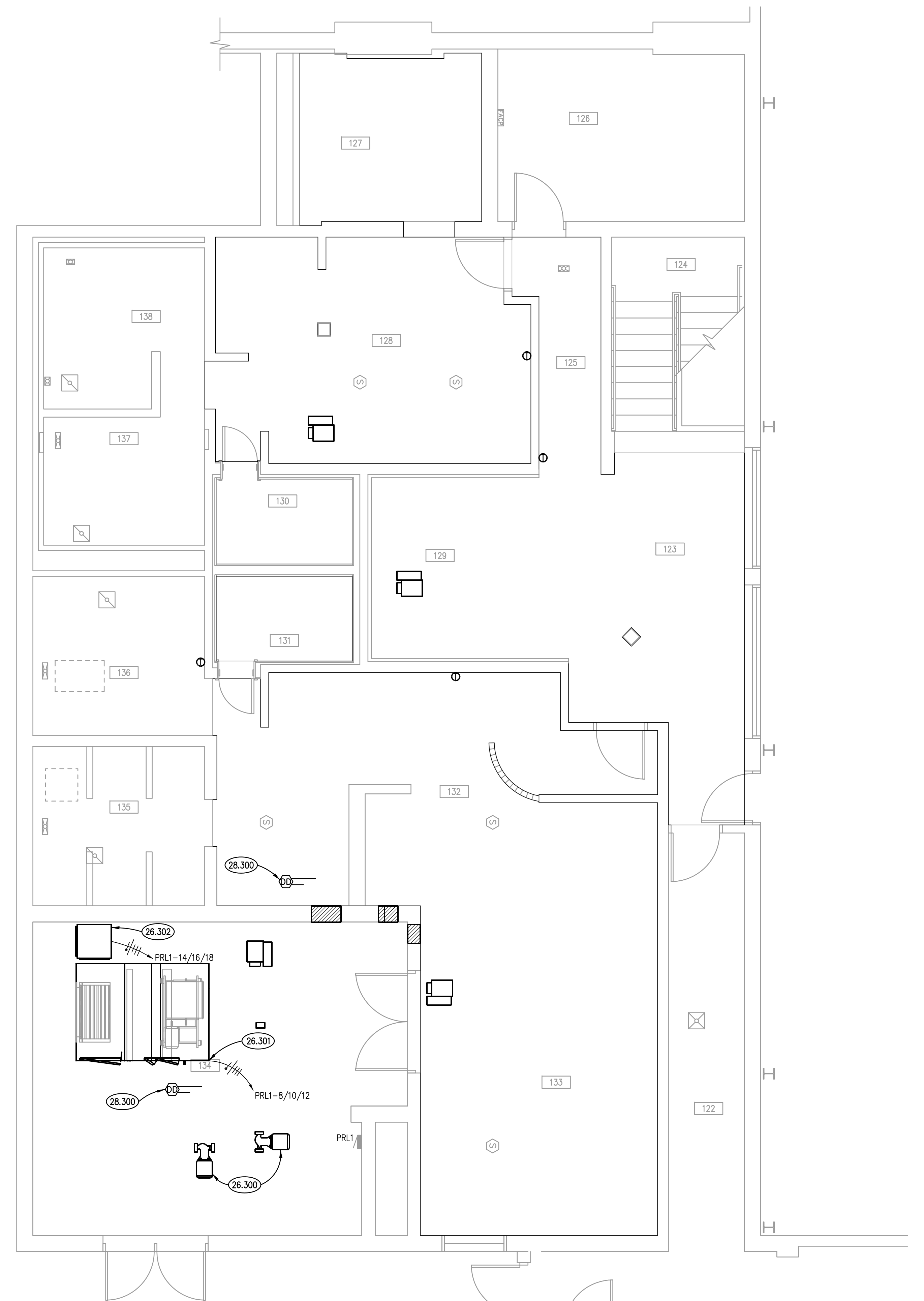
**KEYNOTES**

- 21.100 REMOVE SPRINKLER HEADS AND BRANCH PIPES IN REMODELED AREA. CEILING HEIGHT SHALL BE RAISED.
- 21.101 EXISTING SPRINKLER RISER FROM LOWER LEVEL SUPPLYING UPPER LEVEL.
- 21.200 PROVIDE NEW SPRINKLER PIPING AND HEADS FOR UPPER LEVEL TO ACCOMDATE NEW CEILING CONFIGURATION.

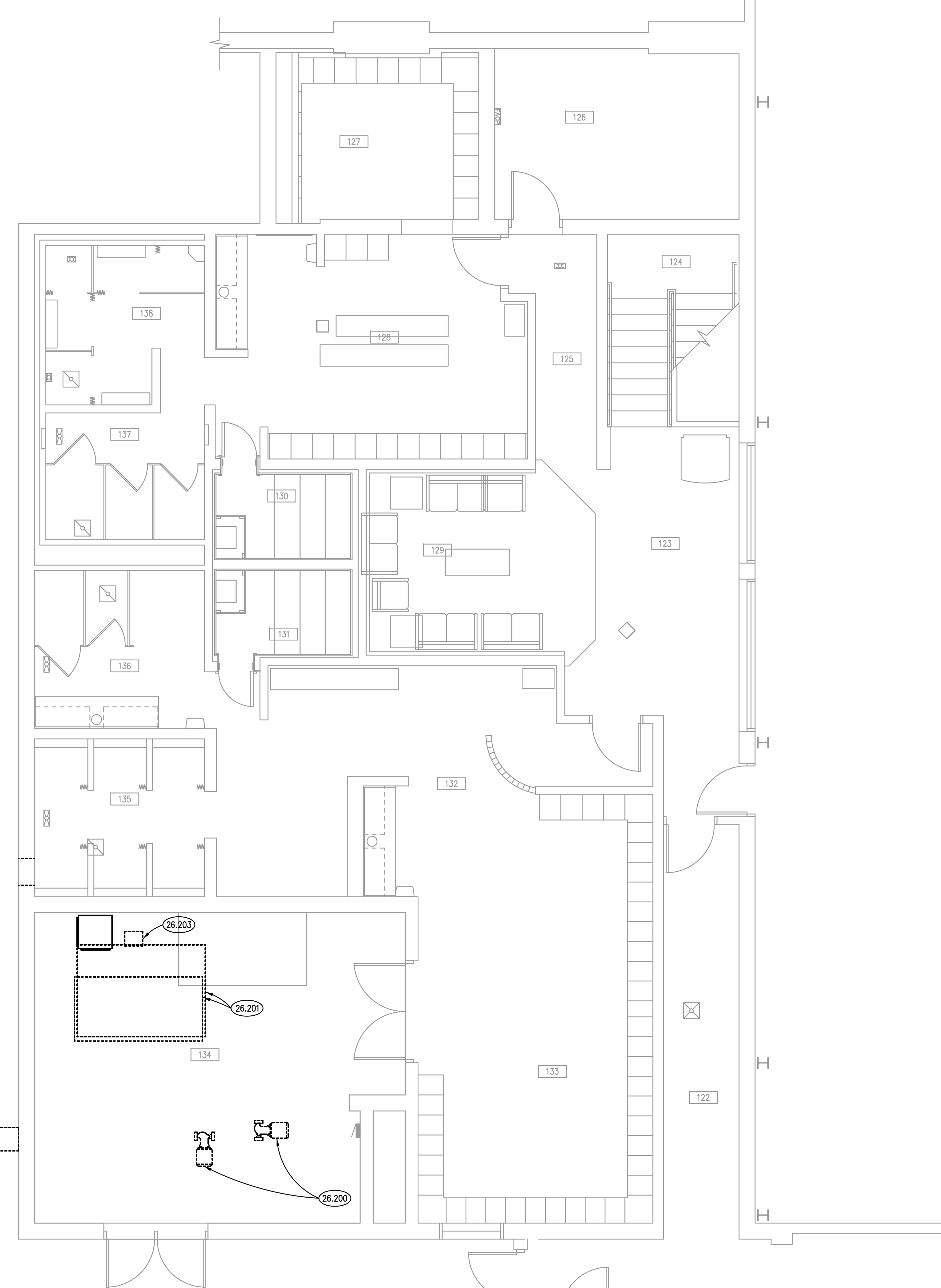
**KEY PLAN**



ISSUED	
06/06/16	BID DOCUMENTS
JOB NO.	16-310-1053
DRAWN	DDW
CHECKED	DDW
APPROVED	DDW
SHEET TITLE	
PARTIAL UPPER LEVEL FIRE PROTECTION PLANS	
SHEET NUMBER	
F310	



**PARTIAL LOWER LEVEL ELECTRICAL PLAN** ②  
SCALE: 1/4" = 1'-0"



**PARTIAL LOWER LEVEL ELECTRICAL DEMOLITION PLAN** ①  
SCALE: 1/4" = 1'-0"

**KEYNOTES**

- 26.200 DISCONNECT EXISTING PUMP. PROTECT BRANCH CIRCUITRY AND REUSE FOR NEW PUMP.
- 26.201 DEMOLISH EXISTING AIR HANDLER UNIT INCLUDING ALL BRANCH CIRCUITRY TO SOURCE.
- 26.202 DEMOLISH EXISTING CONDENSING UNIT INCLUDING BRANCH CIRCUITRY TO SOURCE.
- 26.203 DEMOLISH EXISTING EXHAUST FAN INCLUDING BRANCH CIRCUITRY TO SOURCE.
- 26.300 REUSE EXISTING BRANCH CIRCUITRY AND RECONNECT TO NEW PUMPS.
- 26.301 HOMERUN NEW AIR HANDLER UNIT TO PANEL PRL1. 3#10, #10G, 3/4" C. PROVIDE NEW 50 AMPERE 3 POLE CIRCUIT BREAKER. CONNECT TO VARIABLE FREQUENCY DRIVE (BY MC). PROVIDE FLEXIBLE CONNECTION TO UNIT.
- 26.302 HOMERUN NEW EXHAUST FAN TO PANEL PRL1. 3#12, #12G, 1/2" C. PROVIDE NEW 15 AMPERE 3 POLE CIRCUIT BREAKER. REUSE EXISTING STARTER.
- 26.303 HOMERUN NEW AIR COOLED CONDENSING UNIT TO MDP IN MAIN ELECTRICAL ROOM 126. 3#2, #6G, 1 1/2" C. PROVIDE NEW 125 AMPERE 3 POLE CIRCUIT BREAKER.
- 28.300 PROVIDE NEW DUCT MOUNTED SMOKE DETECTORS (ONE IN SUPPLY AND ONE IN RETURN) WITH REMOTE TEST STATIONS. LOCATED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND ALL APPLICABLE CODES.

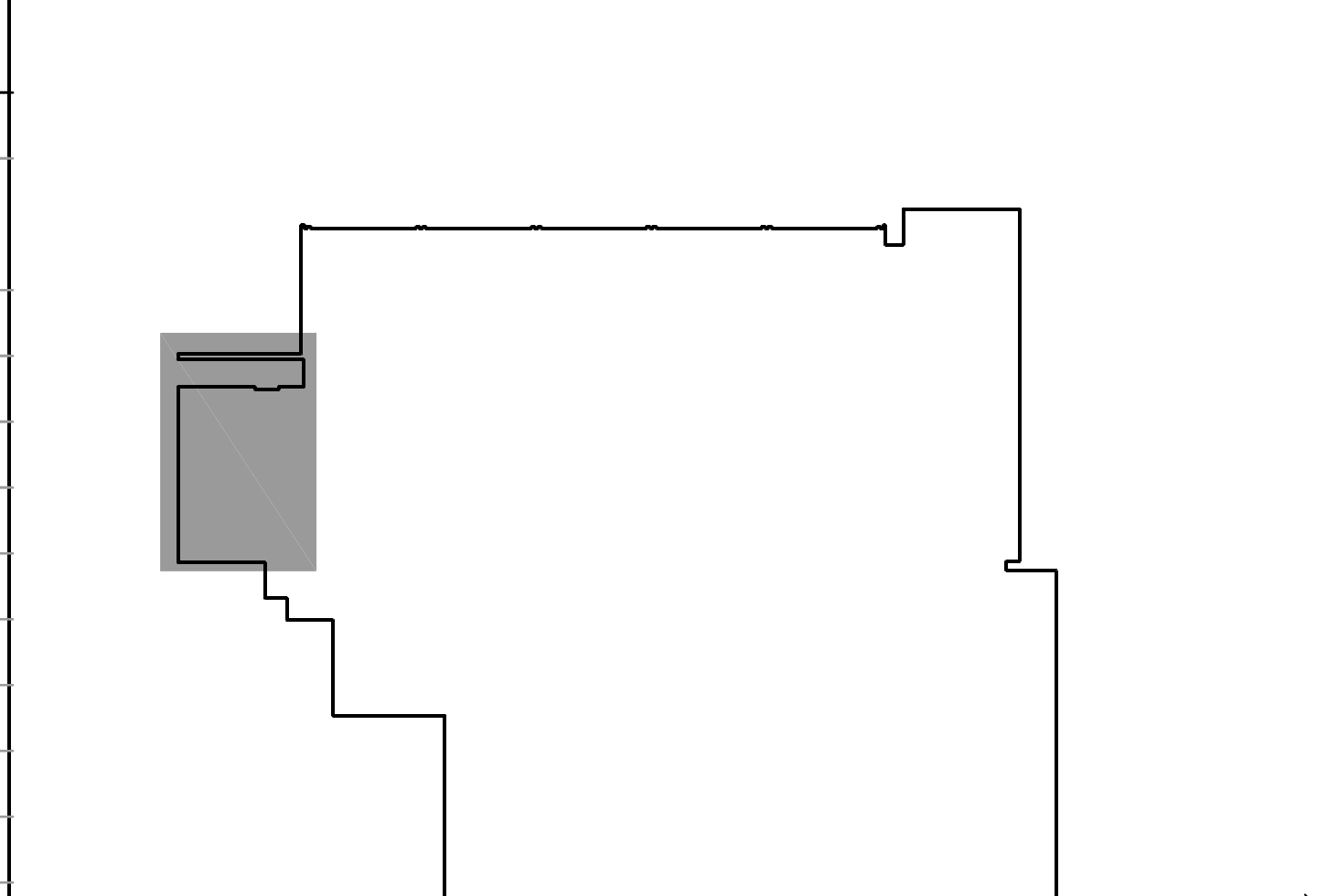
**GENERAL NOTES**

1. PERFORM SELECTIVE DEMOLITION AS NECESSARY TO ACHIEVE DESIGN INTENT. REMOVE ABANDONED BRANCH CIRCUITRY TO SOURCE OF SUPPLY.
2. PATCH ALL WALLS AFFECTED BY DEMOLITION AND REMODELING. CUT AND PATCH WALLS TO CONCEAL CONDUIT IN NEW CONSTRUCTION AND REMODELING. CUT AND PATCH FLOOR AS NEEDED FOR DEMOLITION OF PEDESTAL POWER AND DATA RECEPTACLES.
3. INTENT OF DRAWINGS: THESE DRAWINGS ARE INTENDED TO RELAY TO CONTRACTOR A DESIGN INTENT. INCLUDE IN BID ALL LABOR AND MATERIALS NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM AS REASONABLY INFERRABLE, AS DETERMINED BY ARCHITECT, TO ACCOMPLISH THE INTENT OF THESE DRAWINGS.
4. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, FIRE PROTECTION PLANS, SHOP DRAWINGS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR ADDITIONAL INFORMATION ON EXACT POWER, WIRING & ROUGH-IN REQUIREMENTS AND LOCATIONS OF DEVICES.
5. UNLESS NOTED OTHERWISE, ALL HOMERUNS SHALL CONSIST OF A MAXIMUM OF 3 CIRCUITS (PHASE A, B & C, 3 NEUTRALS & GROUND) IN 3/4" C. MINIMUM WIRE SIZE SHALL BE #12 AWG. WIRE SIZE FOR RECEPTACLE HOMERUN CIRCUITS SHALL BE 3#12, 3#12N & 1#12G. PROVIDE LARGER SIZE WIRE FOR VOLTAGE DROP WHERE REQUIRED.

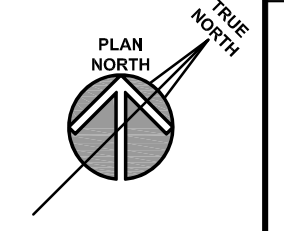
**SYMBOLS LIST**

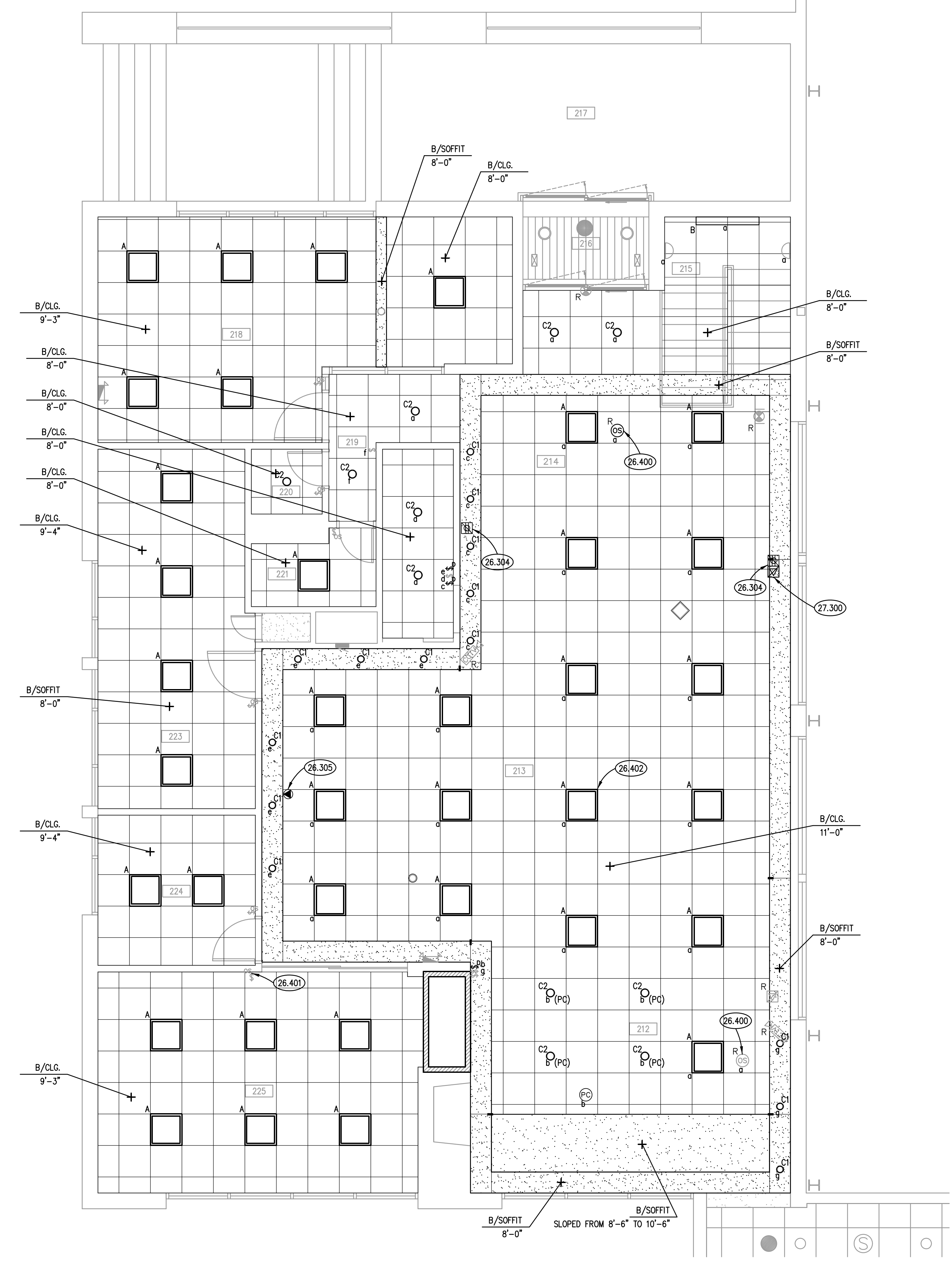
SYMBOL	DESCRIPTION	SYMBOL	DEMOLITION
	FIRE ALARM DUCT SMOKE DETECTOR WITH FAN SHUT DOWN RELAY.	N	NEW DEVICE OR EQUIPMENT.
	SAFETY SWITCH, N=NON-FUSED (AMPS/POLES/ENCLOSURE), F=FUSED (AMPS/FUSE/POLES/ENCLOSURE).	D	EXISTING ELECTRICAL OUTLET OR EQUIPMENT TO BE DEMOLISHED. REMOVE ABANDONED IN PLACE WIRING IN ITS ENTIRETY. EXTEND BRANCH CIRCUITRY AFFECTED BY THIS DEMOLITION TO ELECTRICAL OUTLET OR EQUIPMENT TO REMAIN.
	FLEXIBLE CONDUIT CONNECTION.	X	EXISTING ELECTRICAL OUTLET OR EQUIPMENT TO REMAIN. (CIRCUIT # = REROUTE EXISTING CIRCUIT TO NEW CIRCUIT NUMBER)
	WIRING IN CONDUIT CONCEALED ABOVE CEILING, IN WALL AND UNDER FLOOR OR UNDERGROUND.	R	EXISTING ELECTRICAL OUTLET OR EQUIPMENT RELOCATED. (NEW LOCATION)
	WIRING IN CONDUIT EXPOSED ON CEILING OR WALL.	XR	EXISTING ELECTRICAL OUTLET OR EQUIPMENT TO BE REMOVED & RELOCATED(OLD LOCATION).
	BRANCH CIRCUIT WIRING IN CONDUIT HOMERUN TO PANEL ONE ARROW PER HOMERUN. SLASHES INDICATE NUMBER OF CONDUCTORS.		NEW DEVICE OR EQUIPMENT.
	INDICATES GROUND CONDUCTOR.		EXISTING DEVICE OR EQUIPMENT TO BE REMOVED, RELOCATED, OR DEMOLISHED AS SPECIFIED.
			EXISTING DEVICE, OUTLET OR EQUIPMENT TO REMAIN.

**KEY PLAN**

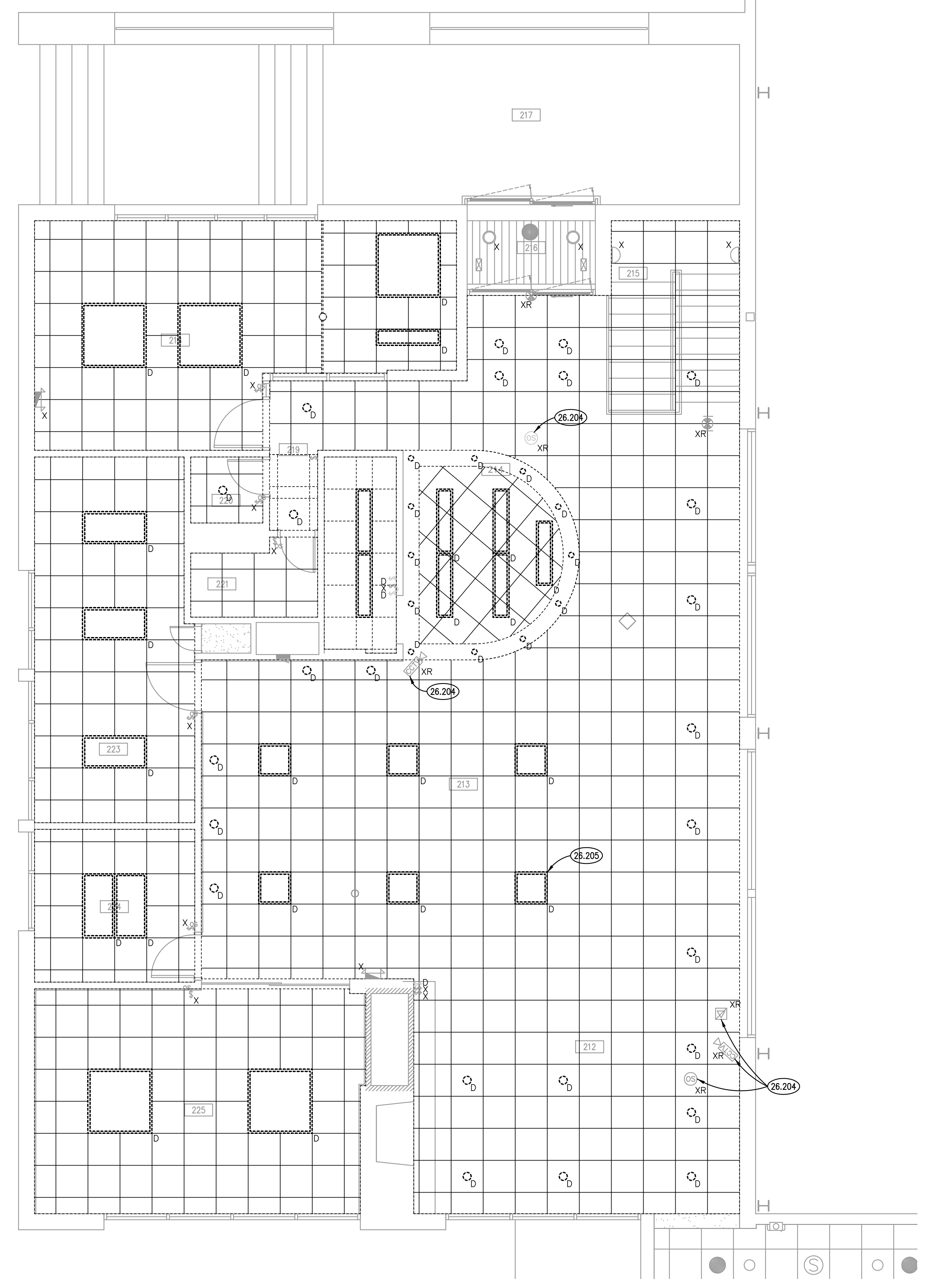


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SHEET TITLE	
LOWER LEVEL ELECTRICAL AND ELECTRICAL DEMOLITION PLANS	
SHEET NUMBER	
<b>E310</b>	





**PARTIAL UPPER LEVEL ELECTRICAL PLAN (2)**  
SCALE: 1/4" = 1'-0"



**PARTIAL UPPER LEVEL ELECTRICAL DEMOLITION PLAN (1)**  
SCALE: 1/4" = 1'-0"

KEYNOTES	GENERAL NOTES	SYMBOLS LIST	KEY PLAN																																																						
<p>26.204 REMOVE EXISTING EQUIPMENT AS NOTED. PROTECT, CLEAN AND REINSTALL IN NEW CEILING.</p> <p>26.205 DEMOLISH EXISTING FLUORESCENT LUMINAIRES. DISCONNECT AND PROTECT BRANCH CIRCUITRY. REUSE EXISTING BRANCH CIRCUITRY FOR NEW LIGHTING.</p> <p>26.304 PROVIDE AND INSTALL NEW RECEPTACLE AT BOTTOM OF SOFFIT. ROUTE TO PANEL LPA LOCATED IN PRO SHOP AREA TO EMPTY BREAKER. PROVIDE NEW 20 AMPERE SINGLE POLE BREAKER AND ROUTE ALL NEW RECEPTACLES TO BRANCH CIRCUIT.</p> <p>26.305 PROVIDE AND INSTALL NEW RECEPTACLE AT CENTER OF SOFFIT FACE, CENTERED IN THE ROOM. ROUTE TO PANEL LPA LOCATED IN PRO SHOP AREA TO EMPTY BREAKER. PROVIDE NEW 20 AMPERE SINGLE POLE BREAKER.</p> <p>26.400 REUSE EXISTING CEILING MOUNTED OCCUPANCY SENSORS FOR ALL FIXTURES LABELED SWITCH "a".</p> <p>26.401 REUSE EXISTING WALL MOUNTED OCCUPANCY SENSORS FOR NEW ROOM LIGHTING.</p> <p>26.402 REUSE EXISTING BRANCH CIRCUITRY FOR NEW LIGHTING. EXTEND AS NECESSARY. RESWITCH ANY LUMINAIRES REQUIRED AS NOTED ON THIS SHEET.</p> <p>27.300 PROVIDE EMPTY CONDUIT AND BOX TO LOCATION SHOWN FOR OWNER PROVIDED CABLE TV.</p>	<ol style="list-style-type: none"> <li>PERFORM SELECTIVE DEMOLITION AS NECESSARY TO ACHIEVE DESIGN INTENT. REMOVE ABANDONED BRANCH CIRCUITRY TO SOURCE OF SUPPLY.</li> <li>PATCH ALL WALLS AFFECTED BY DEMOLITION AND REMODELING. CUT AND PATCH WALLS TO CONCEAL CONDUIT IN NEW CONSTRUCTION AND REMODELING. CUT AND PATCH FLOOR AS NEEDED FOR DEMOLITION OF PEDESTAL POWER AND DATA RECEPTACLES.</li> <li>INTENT OF DRAWINGS: THESE DRAWINGS ARE INTENDED TO RELAY TO CONTRACTOR A DESIGN INTENT. 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**PARTIAL UPPER LEVEL ELECTRICAL AND ELECTRICAL DEMOLITION PLANS**

SHEET NUMBER  
**E320**

PLAN NORTH