WILL ROGERS AIR NATIONAL GUARD BASE

1052 MDST MINI SPLIT
YZEU 262005

PROJECT LOCATION

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B1052 MSDT MINI SPLIT INSTALLATION

COVER SHEET

REVISIONS

NO.	BY	DATE	DESCRIPTION

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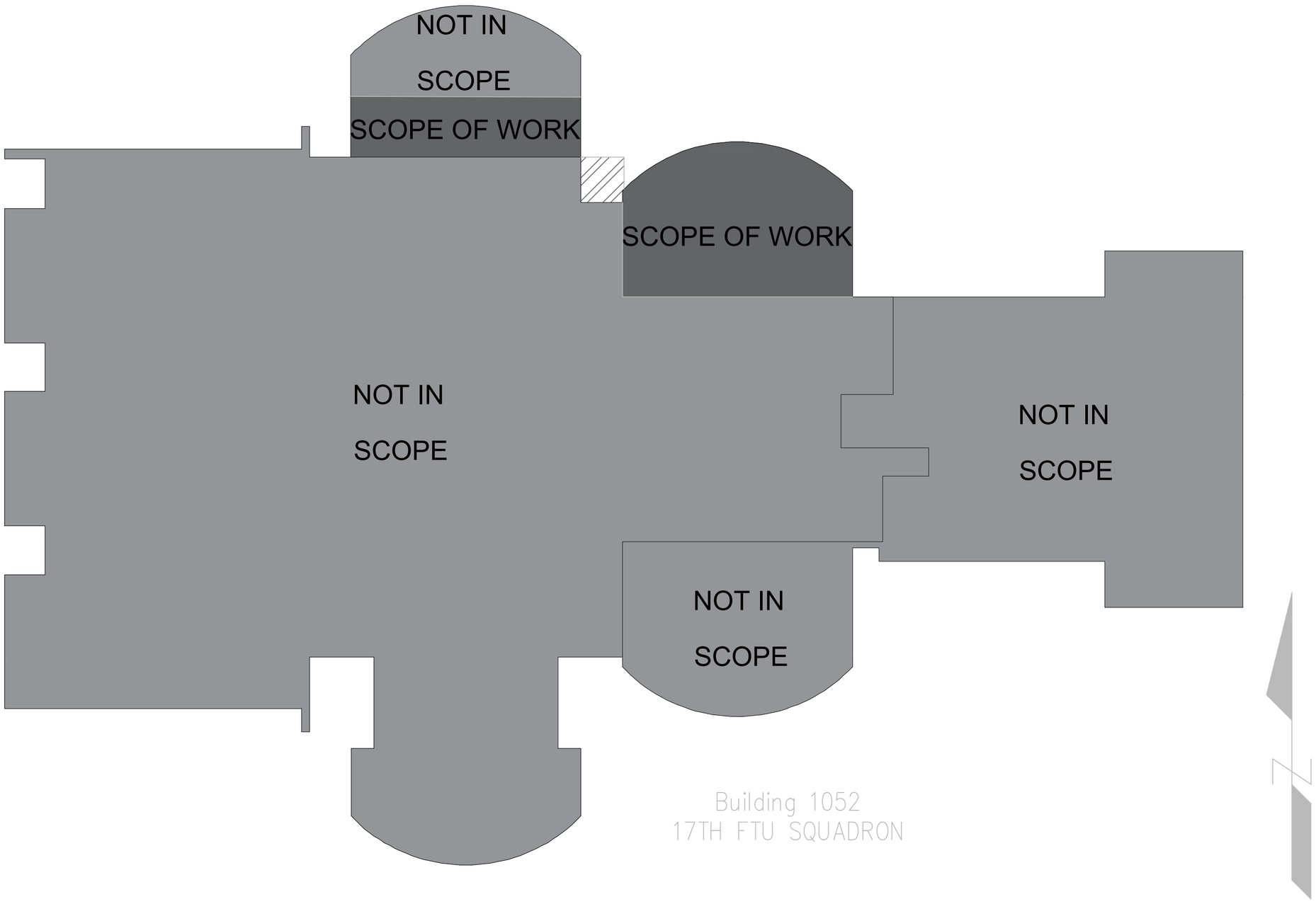
G-100



B1052 MSDT MINI SPLIT INSTALLATION

SITE PLAN

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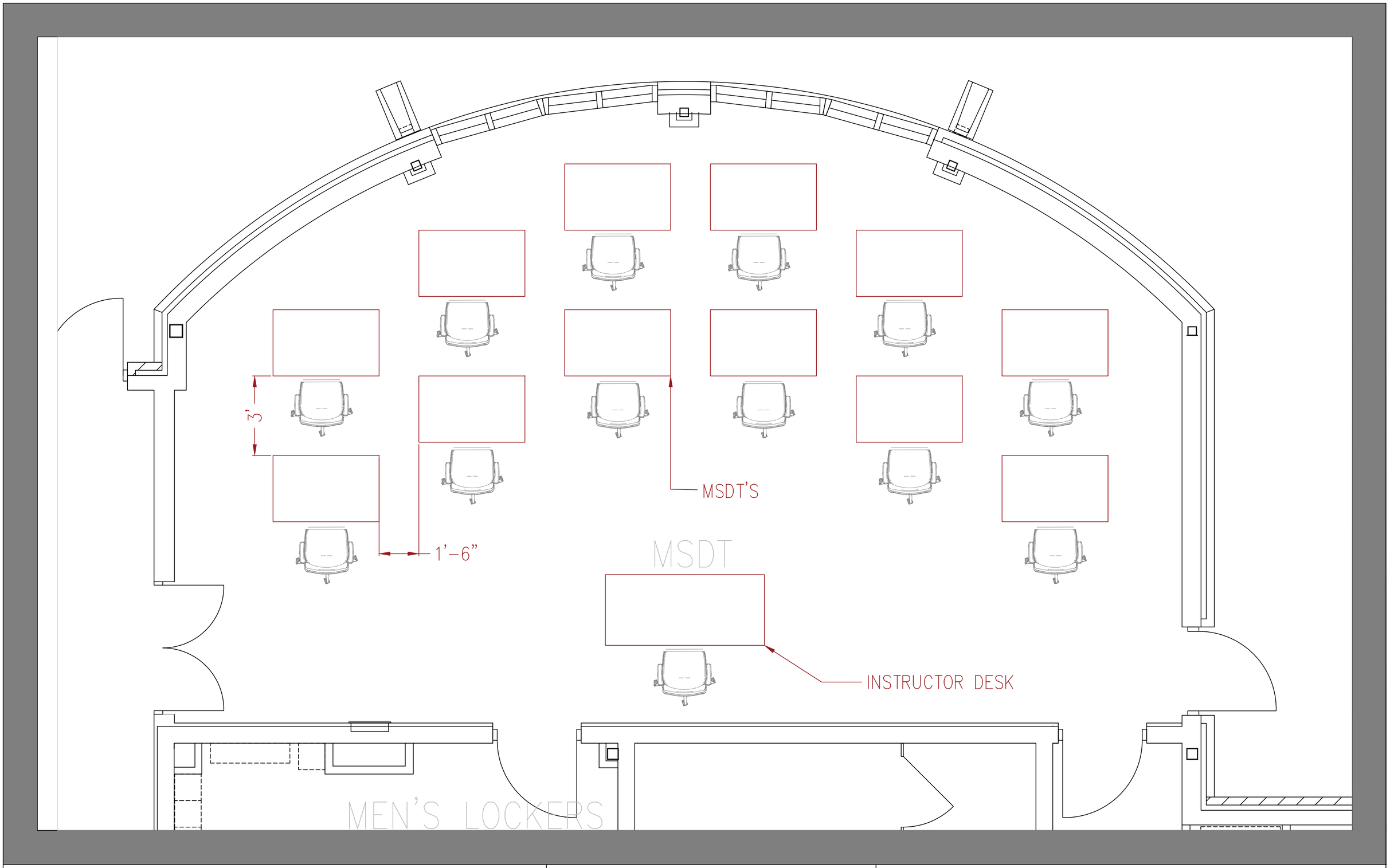
G-101



B1052 MSDT MINI SPLIT INSTALLATION

MSDT LAYOUT

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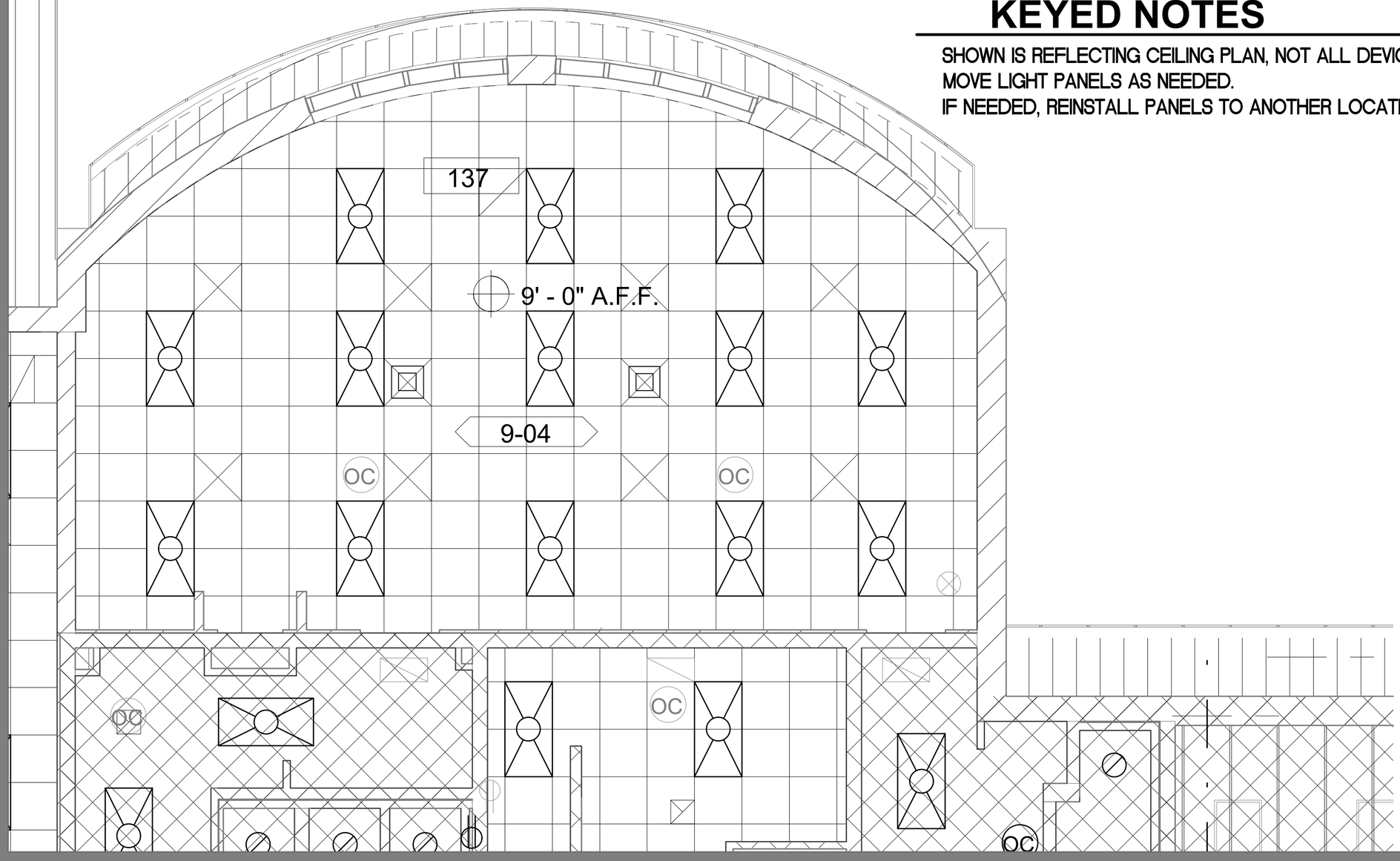
G-102



KEYED NOTES

SHOWN IS REFLECTING CEILING PLAN, NOT ALL DEVICES AND SPRINKLERS ARE SHOWN
MOVE LIGHT PANELS AS NEEDED.
IF NEEDED, REINSTALL PANELS TO ANOTHER LOCATION WITH NOTIFICATION/APPROVAL

B1052 MSDT MINI SPLIT INSTALLATION

REFLECTED CEILING PLAN

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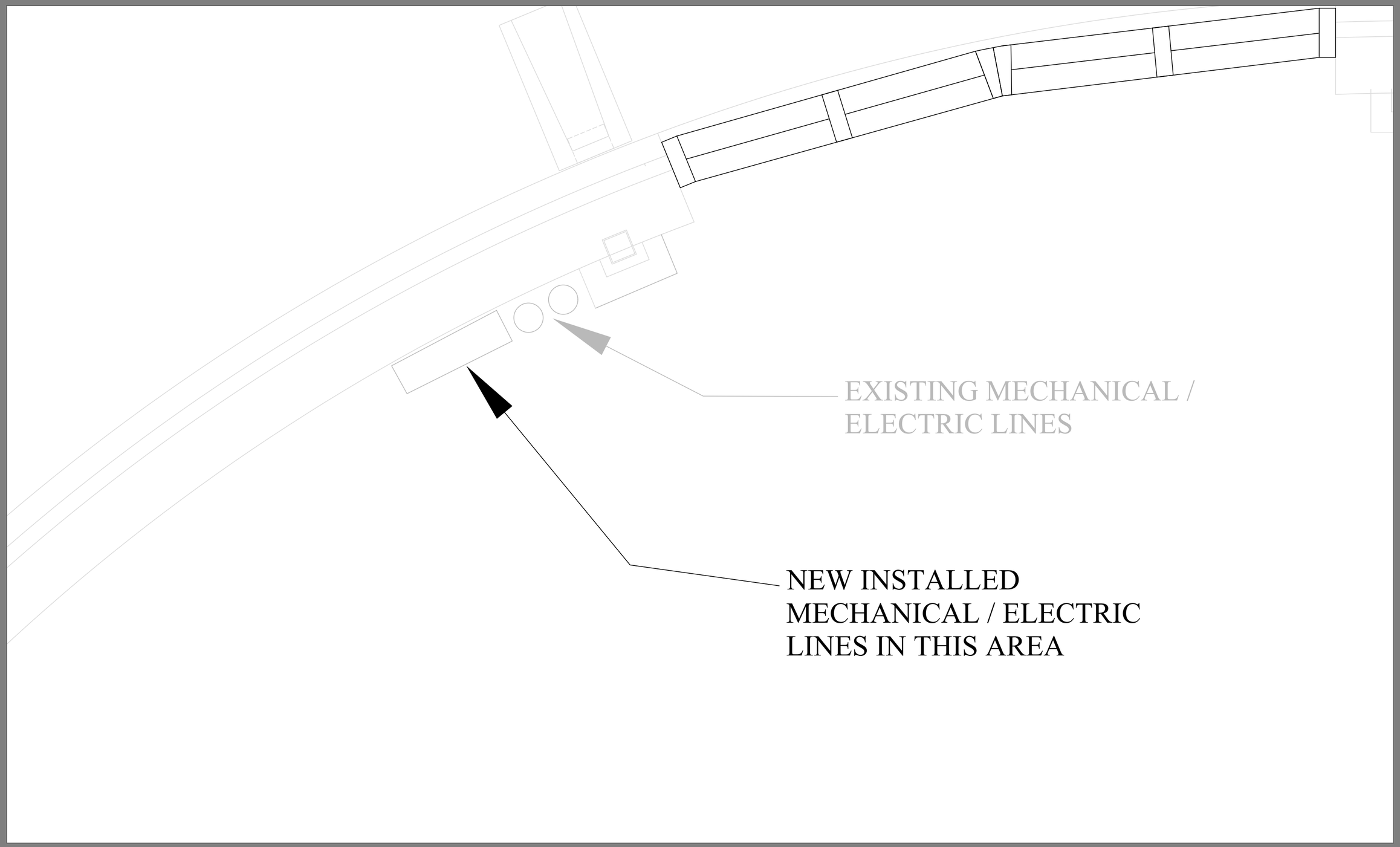
A-101



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DETAIL DRAWING PLAN

REVISIONS

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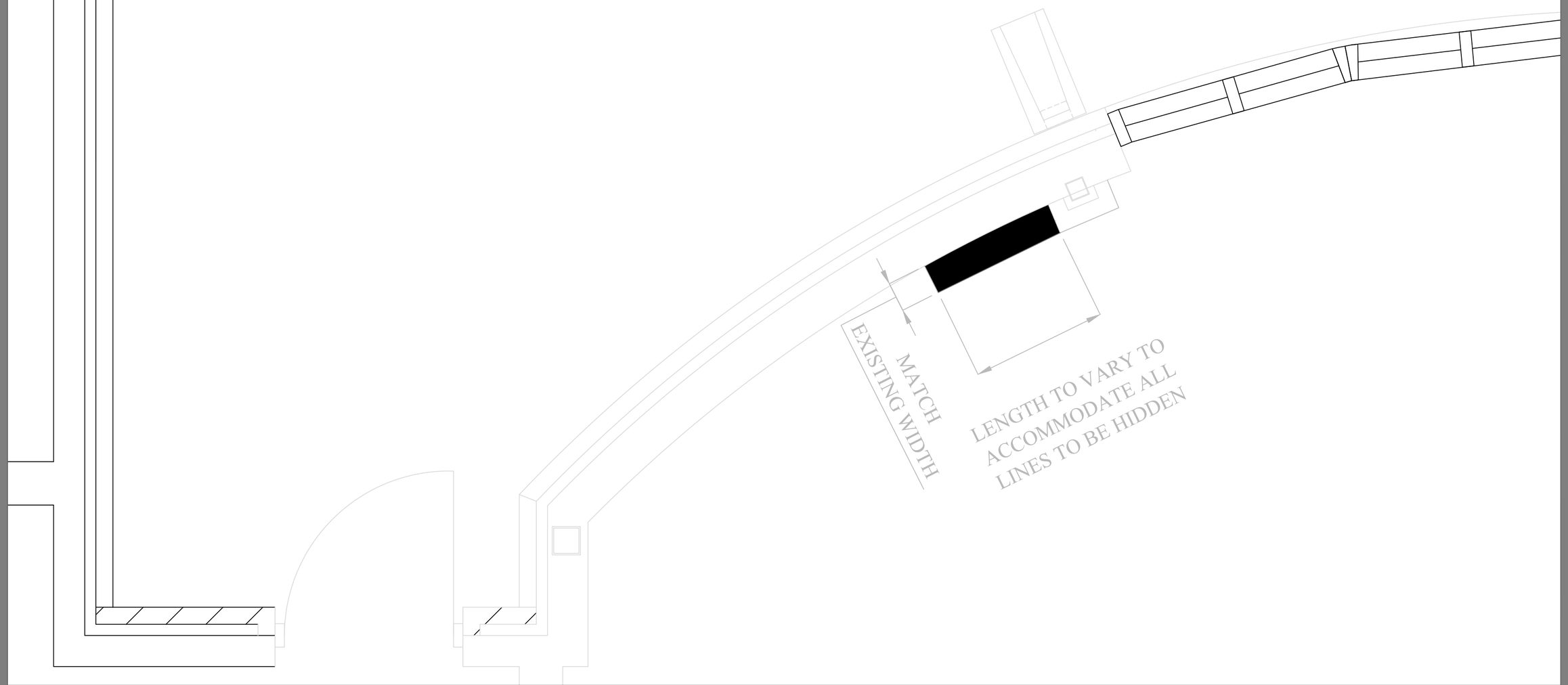
A-102

KEYED NOTES

FUR OUT WALL TO HIDE THE EXISTING AND NEW PIPE / LINES.



B1052 MSDT MINI SPLIT INSTALLATION

DETAIL FUR OUT DRAWING PLAN

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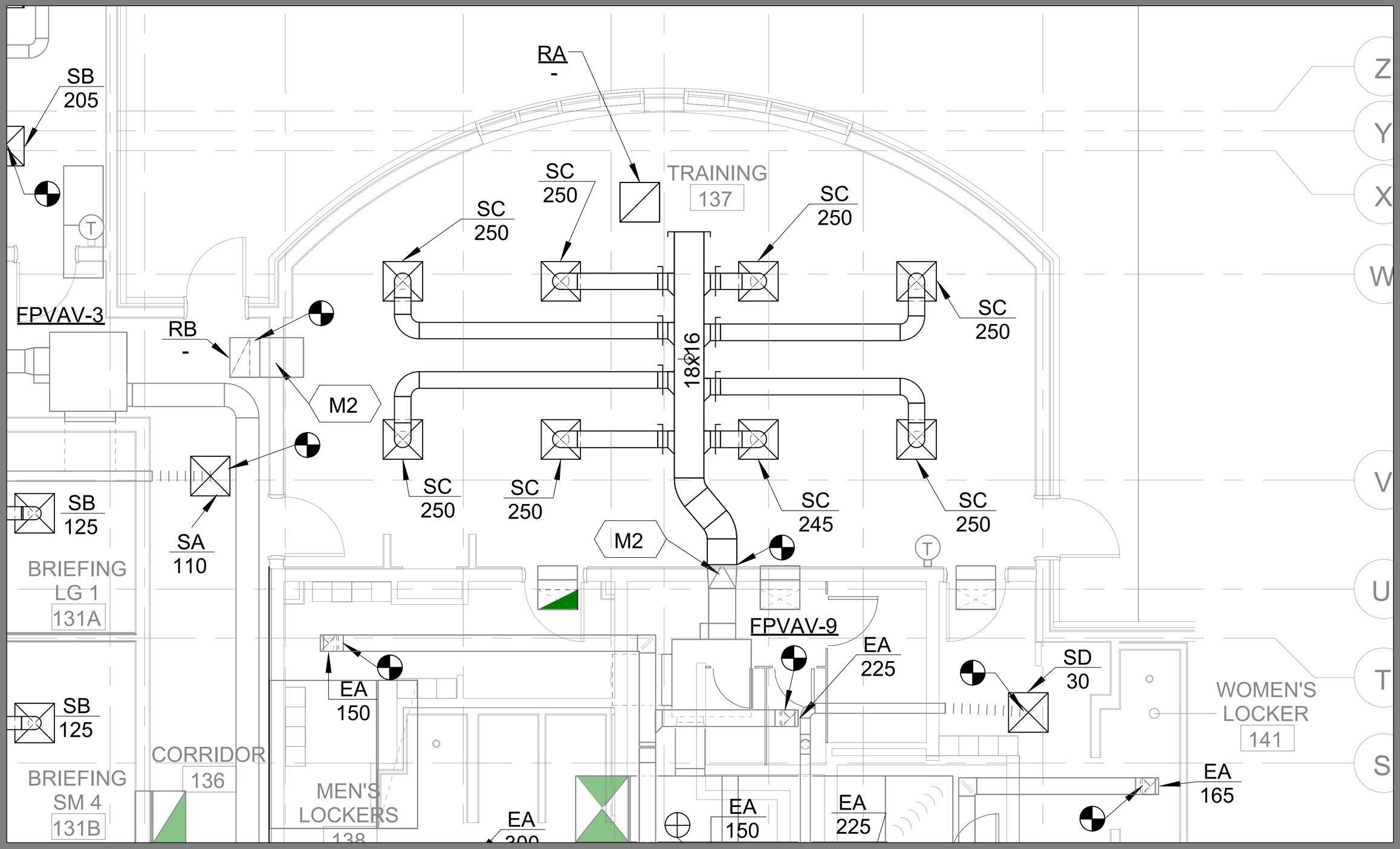
A-103



B1052 MSDT MINI SPLIT INSTALLATION

EXISTING MECHANICAL PLAN

REVISIONS

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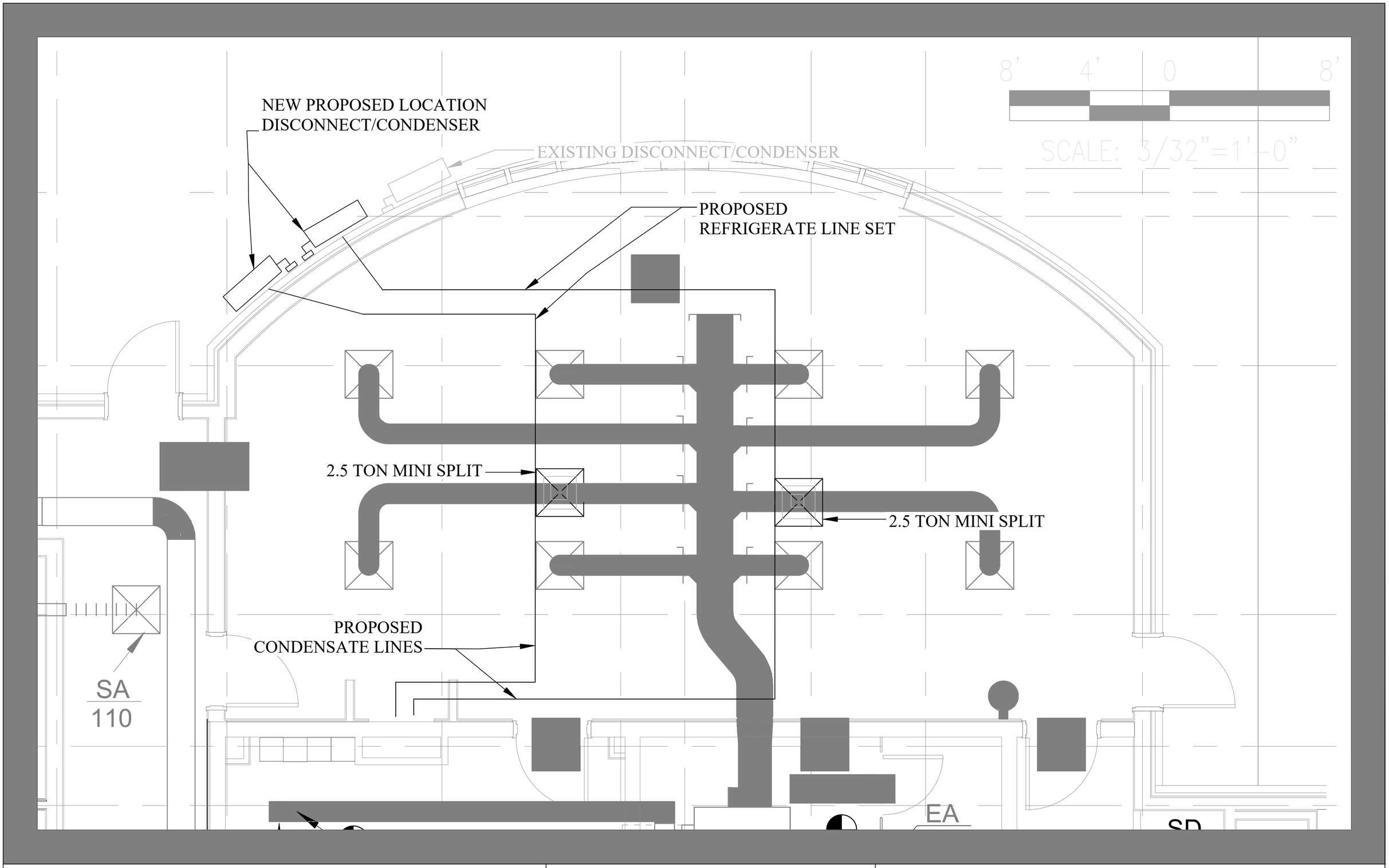
M-101



B1052 MSDT MINI SPLIT INSTALLATION

NEW MECHANICAL INSTALLATION

REVISIONS

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M-102

MECHANICAL DEMOLITION NOTES

1. THIS DRAWING DIAGRAMMATICALLY REPRESENTS THE LAYOUT OF EXISTING CONDITIONS WITH MAJOR MECHANICAL AND ELECTRICAL COMPONENTS. THEY ARE NOT INTENDED TO SHOW ACCESSORIES OR INCIDENTALS COMMON TO EQUIPMENT INDICATED. THROUGH THESE ITEMS ARE TO BE REMOVED, ACCESSIBILITY TO DEMOLITION ITEMS SHALL NOT BE INFERRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF BUILDING AND EXISTING CONDITIONS, PRIOR TO BID SUBMISSION.

2. DEMOLITION SHALL INCLUDE ALL HANGERS, FITTINGS, DAMPERS, VALVES, ETC.

3. REPAIR ANY INSULATION DAMAGED DURING REMOVAL. REPAIR WORK TO BE SAME AS NEW.

4. COORDINATE WALL AND FLOOR PATCHING REQUIREMENTS WITH THE GENERAL CONTRACTOR. PATCHWORK SHALL MATCH MATERIALS, FINISH AND TEXTURE OF ADJACENT SURFACES. REFERENCE ARCHITECTURAL PLANS.

5. CONTRACTOR SHALL PATCH/REPAIR ALL UNUSED OPENINGS AND MODIFIED FINISH SURFACES. PATCH SHALL MATCH MATERIALS, FINISH AND TEXTURE AND ADJACENT SURFACES.

6. OWNER SHALL RETAIN FIRST SALVAGE RIGHTS TO ALL REMOVED EQUIPMENT AND MATERIALS. UNLESS NOTED OTHERWISE, CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER AND TIMELY DISPOSAL OF ALL CONSTRUCTION DEBRIS INCLUDING BUT NOT LIMITED TO EQUIPMENT AND MATERIALS NOT CLAIMED BY OWNER TO AN EPA APPROVED, ENVIRONMENTALLY RESPONSIBLE, RECYCLE FACILITY OR LANDFILL.

7. IT IS ESSENTIAL TO MINIMIZE DISRUPTIONS. COORDINATE ALL DEMOLITION WITH OWNER, GENERAL CONTRACTOR OR CONSTRUCTION MANAGER BEFORE SHUTTING DOWN ANY UTILITY OR SIMILAR SYSTEM. SHUTDOWNS FOR UTILITIES OR SIMILAR SYSTEMS SHALL BE REQUESTED WELL IN ADVANCE AND PRE-APPROVED BY THE PROPER AUTHORITY (S) HAVING JURISDICTION BEFORE BEGINNING WORK.

8. ALL WORK WITHIN THE CONTRACT DOCUMENTS, WHICH INCLUDE THIS DRAWING, SHALL BE COMPLETED IN A SAFE WORKMANLIKE MANNER AND IN ACCORDANCE WITH ALL APPLICABLE STATE, LOCAL AND NATIONAL CODES, REGULATIONS AND ORDINANCES. IF ANY CONFLICTS ARISE BETWEEN THE CONTRACT DOCUMENTS AND THE APPLICABLE CODE, REGULATIONS OR ORDINANCE, THE CONTRACTOR SHALL BE RESPONSIBLE TO HAVE ALL WORK CONFORM TO THE STRICTER OF SAID REQUIREMENTS.

9. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS AS REQUIRED FOR ELECTRICAL, FIRE PROTECTION, PLUMBING, MECHANICAL AND BACKFLOW PREVENTION INSTALLATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE BOTH A COMPLETE AND COMPLIANT INSTALLATION AS MAY BE DETERMINED BY THE AUTHORITY (S) HAVING JURISDICTION.

10. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE WATERTIGHT AND WEATHER-PROOF INTEGRITY OF ROOFS, WALLS AND FLOORS DURING CONSTRUCTION. EACH TRADE SHALL LOCATE/DIMENSION/COORDINATE THEIR ROOF, FLOOR AND WALL OPENINGS WITH THE GC OR CONSTRUCTION MANAGER.

STANDARD MOUNTING HEIGHTS

(AFF, AFG, UNLESS NOTED OTHERWISE)

THERMOSTATS (USER ADJUSTABLE)(TOP OF DEVICE)	48"
CONTROLS (TOP OF DEVICE)	48"

MECHANICAL GENERAL NOTES

1. ALL DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENTS OR GEOMETRICAL RELATIONSHIPS OF DUCTWORK, PIPING, AND EQUIPMENT. DO NOT SCALE DRAWINGS. THE EXACT LOCATION AND ROUTING OF EQUIPMENT DUCTWORK PIPING ETC. UNLESS SPECIFICALLY DIMENSIONED ON THE DRAWINGS, SHALL BE DETERMINED IN THE FIELD. THEY ARE NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, SEQUENCE, DEVICE, OPTION, FITTING, OR COMPONENT. MAKE REASONABLE MODIFICATIONS IN THE INSTALLATION SO ALL DUCTWORK AND PIPING FITS PROPERLY AND EQUIPMENT CAN BE SERVICED.

2. MATERIALS AND EQUIPMENT SHALL BE NEW AND INSTALLED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATIONS. THEY SHALL BE INSTALLED PLUMB LEVEL AND TRUE-TO-LINE WITH ADJACENT WORK WHERE INSTALLATION METHODS ARE NOT SPECIFICALLY COVERED BY THE DRAWINGS AND/OR SPECIFICATIONS, FIRST CLASS TRADE PRACTICES AND MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS SHALL GOVERN.

3. CAREFULLY EXAMINE ALL ARCHITECTURAL, STRUCTURAL, PLUMBING, HVAC, FIRE PROTECTION, AND ELECTRICAL DRAWINGS PERTAINING TO CONSTRUCTION PRIOR TO BID. COOPERATE WITH OTHER TRADES IN LOCATING DUCTWORK, PIPING, EQUIPMENT, ETC. IN ORDER TO AVOID CONFLICT WITH OTHER TRADE'S WORK. NO CLAIM FOR COSTS WILL BE ALLOWED FOR RELOCATING EQUIPMENT, PIPING, DUCTWORK, ETC. WHICH INTERFERES WITH OTHER TRADE'S WORK.

4. HVAC EQUIPMENT, DUCTS AND INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION, BUILDING DEPARTMENTS, APPLICABLE TO THE LATEST EDITION OF THE APPROVED BUILDING CODES, APPLICABLE OSHA AND NFPA STANDARDS, COUNTRY AND CITY BUILDING REGULATIONS AND CODES.

5. FABRICATION AND INSTALLATION OF DUCTWORK SHALL BE IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS, STATE MECHANICAL CODE AND APPLICABLE NFPA STANDARDS.

6. ALL DUCT SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS.

7. PROVIDE AIR TURNING VANES IN ALL SQUARE ELBOWS IN ALL SYSTEM TYPES, EXHAUST, SUPPLY AND RETURN.

8. REFER TO TYPICAL DETAILS FOR PIPING AND INSTALLATION OF EQUIPMENT.

9. PERSONNEL SHALL BE THOROUGHLY TRAINED AND EXPERIENCED IN THE PRODUCTS INVOLVED AND RECOMMENDED METHODS FOR THEIR FABRICATION AND INSTALLATION SHALL BE MADE FOR LACK OF SKILL ON THE PARK OF THE WORKMAN IN THE ACCEPTANCE AND/OR REJECTION OF COMPLETED WORK.

10. MECHANICAL CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL, TOOLS, AND EQUIPMENT TO INSTALL ALL HVAC SYSTEMS AS INDICATED ON THESE DRAWINGS.

11. INFORMATION AND COMPONENTS SHOWN ON RISER DIAGRAMS OR DETAILS, BUT NOT SHOWN ON PLANS, AND VICE VERSA, SHALL BE PROVIDED AS IF EXPRESSLY REQUIRED BY BOTH.

12. MECHANICAL CONTRACTOR SHALL ARRANGE AND PAY FOR MECHANICAL PERMITS AND INSPECTIONS AS REQUIRED BY LOCAL ORDINANCES.

13. DELIVER MATERIALS TO PROJECT IN GOOD CONDITION. STORE MATERIALS OFF OF GROUND AND PROTECT FROM WEATHER AND THE ELEMENTS.

14. VERIFY DIMENSIONS IN THE FIELD. VERIFY STRUCTURAL DETAILS BEFORE INSTALLING DUCTWORK. NO EXTRA COMPENSATION WILL BE CONSIDERED BECAUSE OF DIFFERENCED BETWEEN ACTUAL MEASURED DIMENSIONS AND THOSE INDICATED ON THE DRAWINGS.

15. ALL PENETRATIONS THROUGH WALLS SHALL BE PROVIDED WITH PROPERLY SIZED SLEEVES. SEAL ALL PIPE SLEEVES WITH APPROPRIATE CAULKING. ALL PENETRATIONS THROUGH FIRE RATED WALLS AND/OR FLOORS SHALL BE INSTALLED IN ACCORDANCE WITH APPROPRIATE 3M FIRE STOP SYSTEM (OR APPROVED EQUAL). ALL PIPING SLEEVES SHALL BE SCHEDULE 40, CARBON STEEL ASTM A53, GRADE B.

16. ANY CUTTING OR PATCHING OF NEW OR EXISTING SURFACES THAT IS REQUIRED SHALL BE BY THIS CONTRACTOR AND SHALL BE REPLACED WITH MATERIAL OF THE SAME QUALITY AND THICKNESS AS THE EXISTING SURFACE. ANY DAMAGES TO EXISTING MATERIALS SHALL BE REPAIRED OR REPLACED TO MATCH EXISTING.

17. ALL DUCTWORK SHALL BE IDENTIFIED AFTER INSULATION WITH PLASTIC DUCT SIGNAGE/MARKERS. THESE MARKERS SHALL BE MANUFACTURER'S STANDARD LAMINATED PLASTIC IN THE FOLLOWING COLOR CODES INDICATING BACKGROUND COLOR THEN LETTER COLOR: A. BLUE/ WHITE: SUPPLY AIR B. RED/ WHITE: RETURN AIR C. GREEN/ WHITE: OUTSIDE AIR/ INTAKE AIR D. YELLOW/ BLACK: RELIEF AIR/ EXHAUST AIR.

18. ENGAGE AN INDEPENDENT TESTING, ADJUSTING AND BALANCING (TAB) AGENT CERTIFIED BY EITHER AABC OR NEBB FOR ALL TESTING, ADJUSTING AND BALANCING. SEE THE TAB SPECIFICATION FOR MORE INFORMATION.

19. THERMOSTATS/HUMIDISTATS/CO2 SENSORS SHALL BE LOCATED AS PER PLANS 48 INCHES ABOVE FINISHED FLOOR. ANY THERMOSTAT THAT IS REQUIRED TO EB MOUNTED ON AN EXTERIOR WALL MUST BE MOUNTED ON AN INSULATED BASE. INSTALL WIRING IN CONDUIT PROVIDED BY DIVISION 26. AT A MINIMUM, PROVIDE CONDUIT IN THE WALL FROM THE JUNCTION BOX TO 6"ABOVE THE CEILING.

20. MECHANICAL CONTRACTOR SHALL HAVE THE FINAL START-UP OR ALL HVAC EQUIPMENT SUPERVISED AND MONITORED BY A FACTOR AUTHORIZED TECHNICIAN.

21. HOUSEKEEPING PADS: EXCEPT WHERE STRUCTURAL EQUIPMENT SUPPORT PADS ARE CALLED FOR ON THE PLANS, PROVIDE CONCRETE HOUSEKEEPING PADS FOR ALL GROUND AND/OR FLOOR MOUNTED EQUIPMENT. UNLESS OTHERWISE INDICATED, PADS MUST BE MINIMUM OF 6 INCHES THICK WITH CHAMFERED EDGES. WHERE PADS ARE INSTALLED ON CONCRETE FLOORS, DOWEL RODS PENETRATING INTO BOUT THE PAD AND THE FLOOR (MINIMUM 4 RODS PER PAD) MUST BE USED TO ANCHOR PADS IN POSITION.

22. ALL WIRING INSTALLED FOR CONTROLS, POWER, INTERLOCKS, ETC WHICH ARE TO BE INSTALLED IN OCCUPIED SPACES OR IN RETURN PLENUMS MUST BE PLENUM RATED OR INSTALLED IN CONDUIT UNLESS OTHERWISE INDICATED. ALL SUCH INSTALLATIONS MUST MEET NFPA AND NEC REQUIREMENTS AND LOCAL CODES.

23. SEAL ALL ROOF AND WALL PENETRATIONS. FLASH AND COUNTER-FLASH ALL ROOF PENETRATIONS. MINIMUM ACCEPTABLE HEIGHT OF FLASHING IS EIGHT (8) INCHES ABOVE ROOF.

24. MAINTAIN A MINIMUM OF 15'-0"BETWEEN ALL FRESH AIR INTAKES AND PLUMBING VENTS, EXHAUST FAN DISCHARGE FLUE, ETC. COORDINATE WITH ALL OTHER CONTRACTORS ON SITE.

25. EXTERIOR DUCTWORK EXPOSED TO WEATHER: CROWN TOP SURFACE FOR WATER RUNOFF AND COMPLETELY SEAL ALL JOINTS WITH UV RESISTANT WEATHERPROOF SEALANT.

26. DURING CONSTRUCTION, AFTER START-UP OF HVAC SYSTEMS, CONTRACTOR MUST MAINTAIN AND/OR REPLACE ON A REGULAR SCHEDULE ALL FILTERS IN THE HVAC SYSTEM. ON (1) WEEK BEFORE THE FACILITY IS OCCUPIED, THE CONTRACTOR MUST REPLACE ALL AIR FILTERS WITH NEW FILTERS. DO NOT OPERATE HVAC SYSTEMS WITHOUT FILTER.

27. INDOOR AIR QUALITY MEASURERS: PROTECT INSIDE OF (INSTALLED AND DELIVERED) DUCTWORK AND HVAC UNITS FROM EXPOSURE TO DUST, DIRT, PAINT, AND MOISTURE. REPLACE INSULATION THAT HAS GOTTEN WET AT ANY TIME DURING CONSTRUCTION, DRYING THE INSULATION IS NOT ACCEPTABLE. SEAL ANY TEARS OR JOINTS OF INTERNAL FIBERGLASS INSULATION. REMOVE DEBRIS FROM CEILING/RETURN AIR PLENUM INCLUDING DUST.

28. COORDINATE LOCATION OF ROOF MOUNTED HVAC EQUIPMENT AND ROOF PENETRATIONS WITH THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.

29. INSTALL DUCTWORK AND PIPING PARALLEL TO BUILDING COLUMN LINES UNLESS OTHERWISE SHOWN OR NOTED.

30. COORDINATE LOCATION OF EQUIPMENT SUPPORTS WITH LOCATION OF EQUIPMENT ACCESS PANELS/DOORS TO ENABLE SERVICE OF EQUIPMENT AND/OR FILTER REPLACEMENT.

31. PROVIDE WALL OR DUCT ACCESS PANELS OR DOOR FOR ACCESS TO FIRE AND FIRE/SMOKE DAMPERS. ACCESS PANEL OR DOOR SHALL BE MINIMUM SIZE OF 10"X10"AND SHALL BE INSTALLED WITHIN 12"OF DAMPER. PROVIDE A REMOVABLE DUCT SECTION WHERE DUCT SIZE IS TOO SMALL FOR A 10"X10" ACCESS DOOR.

32. PROVIDE A MANUAL BALANCING DAMPER IN EACH BRANCH DUCT TAKEOFF FROM MAIN SUPPLY, RETURN, OUTDOOR AND EXHAUST AIR DUCTS.

33. PROVIDE A PREFABRICATED 45 DEGREE, HIGH EFFICIENCY, RECTANGULAR/ROUND BRANCH DUCT TAKE-OFF FITTING WITH MANUAL BALANCING DAMPER AND LOCKING QUADRANT FOR BRANCH DUCT CONNECTIONS AND TAKE-OFFS TO INDIVIDUAL DIFFUSERS, REGISTERS AND GRILLES.

34. BRANCH DUCTWORK TO AIR OUTLETS SHALL BE SAME SIZE AS OUTLET NECK SIZE UNLESS OTHERWISE INDICATED.

35. FLEXIBLE DUCTWORK SHALL NOT EXCEED 5'-0"IN LENGTH AND SHALL BE INSTALLED AND SUPPORTED TO AVOID SHARP BENDS AND SAGGING. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

36. SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL CEILING MOUNTED AIR DEVICES.

37. MECHANICAL CONTRACTOR SHALL SUPPLY SMOKE DETECTOR IN RETURN DUCT OF AIR HANDLERS OVER 2000 CFM AND FOR UNITS WHICH SERVE AREAS OF EGRESS FOR INSTALLATION BY ELECTRICAL CONTRACTOR. DETECTORS SHALL BE MOUNTED, PHOTOELECTRIC TYPE COMPATIBLE WITH EXISTING FIRE ALARM SYSTEM WITH INTEGRAL RELAY FOR SHUTDOWN OF UNIT UPON ACTIVATION OF DETECTOR.

38. ALL DUCT OFF-SETS ARE TO BE MADE WITH RADIUS ELBOWS.

39. PROVIDE TRANSITIONS FOR ALL EQUIPMENT CONNECTIONS.

40. THE CONTRACTOR SHALL COORDINATE AND VERIFY THE FOLLOWING DIVISIONS 23 AND 26 PRIOR TO BID:
DISCONNECTS:
WHERE NOT FURNISHED WITH EQUIPMENT: FURNISHED UNDER DIVISION 26, INSTALLED UNDER DIVISION 26. WHERE FURNISHED WITH EQUIPMENT: FURNISHED UNDER DIVISION 23, INSTALLED UNDER DIVISION 26.

B1052 MSDT MINI SPLIT INSTALLATION

MECHANICAL NOTES

REVISIONS

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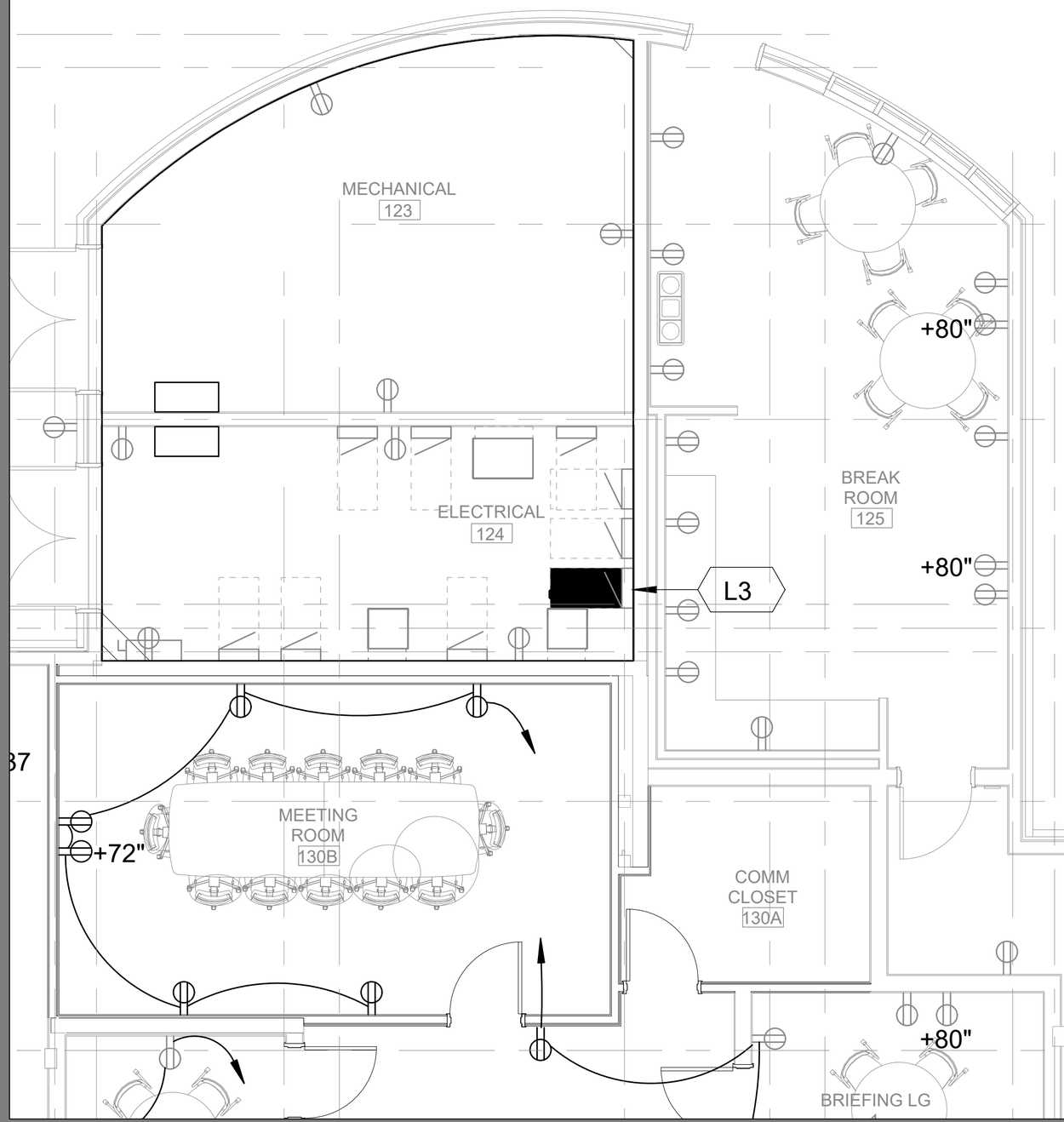
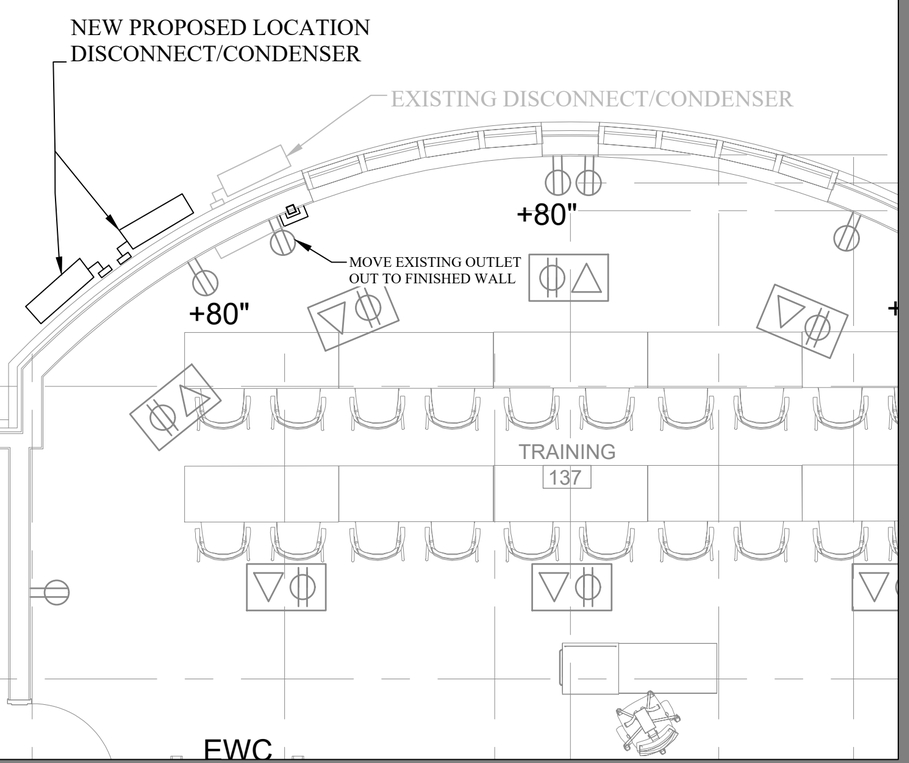
M-103



KEYED NOTES

USE EXISTING PANEL L3

INSTALL NEW DISCONNECTS IN APPROPRIATE AREA SHOWN



B1052 MSDT MINI SPLIT INSTALLATION

ELECTRICAL PANEL

REVISIONS

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E-101