

MIDLOTHIAN INDEPENDENT SCHOOL DISTRICT WALNUT GROVE MIDDLE SCHOOL

990 Walnut Grove Rd, Midlothian TX 76065

CHILLER REPLACEMENT JULY 03, 2024



SHEET INDEX

SHEET NO. DESCRIPTION

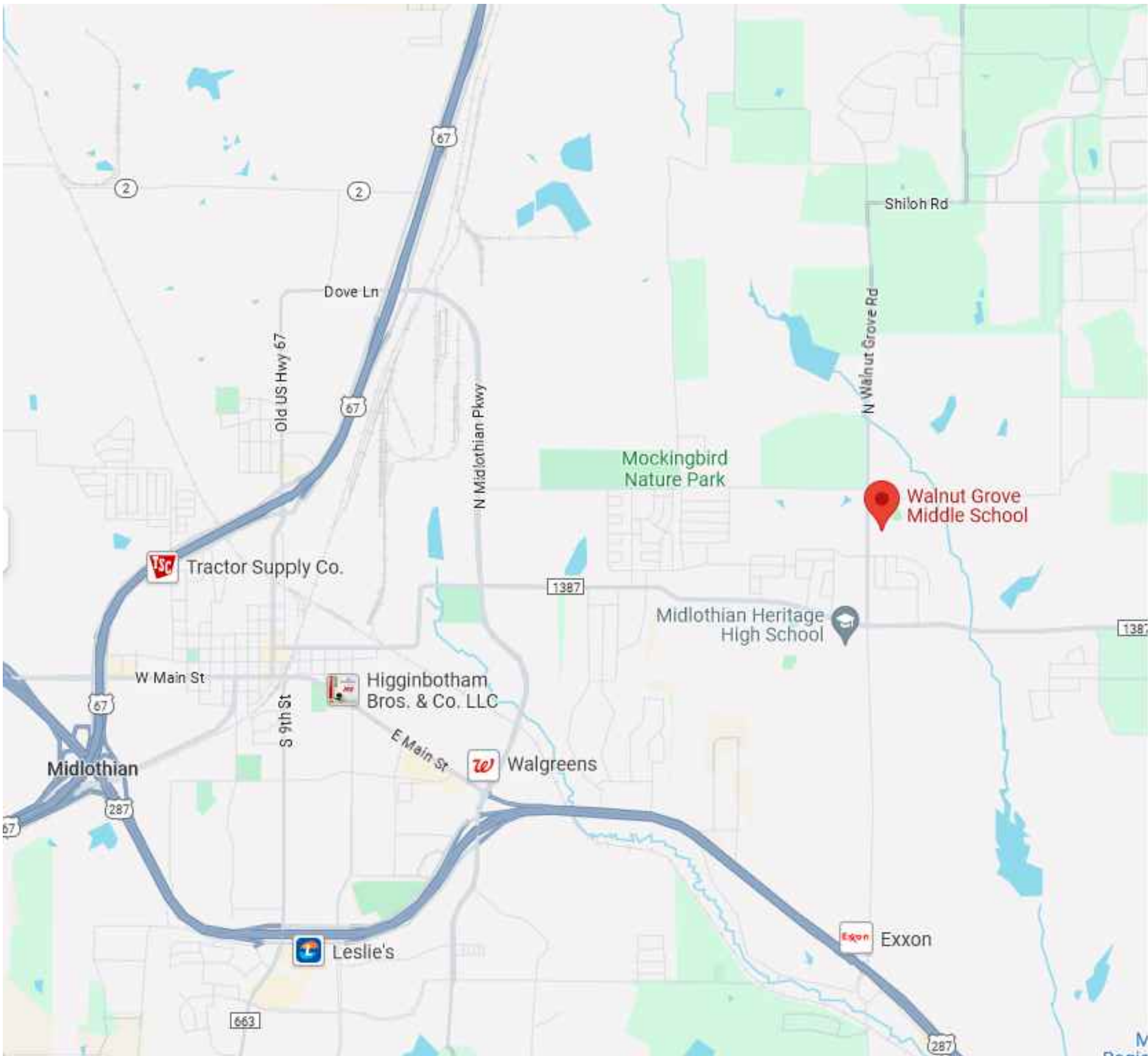
M1.00	ORIENTATION FLOOR PLAN - LEVEL 1 - HVAC
M2.00	ORIENTATION FLOOR PLAN - LEVEL 2 - HVAC
DMP1.01	DEMOLITION FLOOR PLAN - CENTRAL UTILITY PLANT - MECHANICAL
DM1.02	ENLARGED DEMOLITION FLOOR PLANS - LEVEL 1 - HVAC
DM2.01	ENLARGED DEMOLITION FLOOR PLANS - LEVEL 2 - HVAC
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MP1.01	FLOOR PLAN - CENTRAL UTILITY PLANT - MECHANICAL
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E2.00	ORIENTATION FLOOR PLAN - LEVEL 2 - ELECTRICAL
E2.01	ENLARGED FLOOR PLANS - LEVEL 2 - ELECTRICAL



Reed, Wells, Benson & Company
Consulting Engineers #F-2176

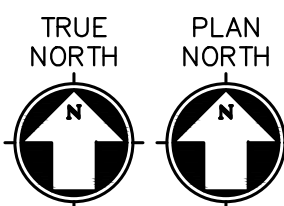
MERIT TOWER, 12222 MERIT DRIVE, SUITE 400 DALLAS, TX 75251
PHONE: (972) 788-4222 FAX: (972) 788-0002 WWW.RWB.NET

RWB PROJECT # 24040.00



Location Map

Drawing: 24040 - MIDLOTHIAN ISD WALNUT GROVE MS CHILLER REPLACEMENT. P&H BY BAKER MARKS. Plot Date: 7/9/2024 5:56 PM. Plot Scale: 1"= 30'-0". Paper Size: 30" x 30" (A1)



01

ORIENTATION FLOOR PLAN - LEVEL 1 - HVAC
SCALE: 1/16" = 1'-0"

2024.07.03

ISSUES

01

REVISIONS



**WALNUT GROVE MS
CHILLER REPLACEMENT**
MIDLOTHIAN I.S.D.
990 Walnut Grove Rd, Midlothian, TX 76065

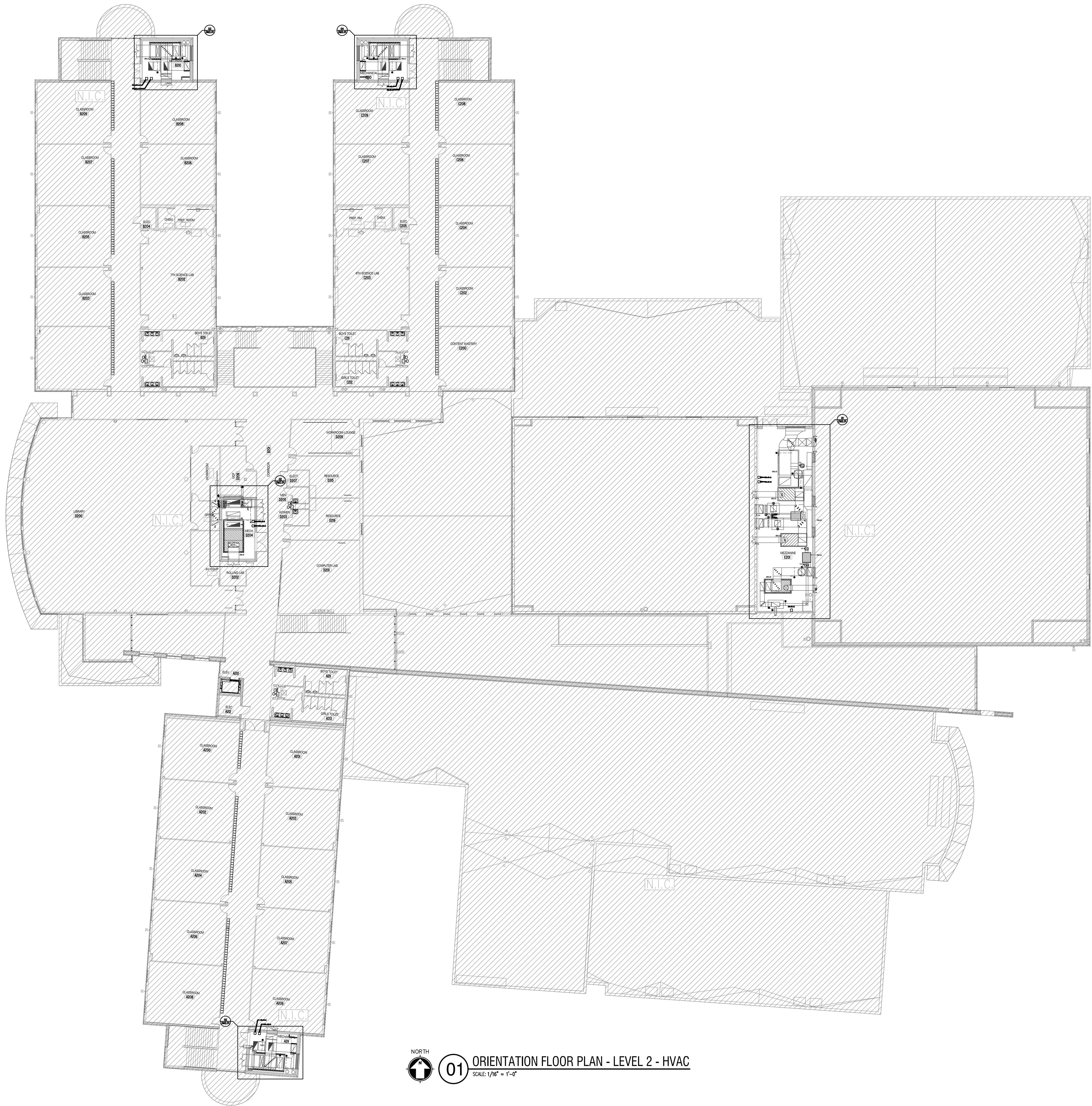
ORIENTATION FLOOR
PLAN - LEVEL 1 - HVAC

JOB NO.: 24040-00
DRAWN BY: BM
CHECKED BY: HV

SHEET NO.

M1.00

Drawing: 24040 - MIDLOTHIAN I.S.D. WALNUT GROVE MS CHILLER REPLACEMENT; File: 24040.dwg; Plot Date: 7/7/2024 5:06 PM; Plot Scale: 1/16" = 1'-0"; Paper Size: 30" x 42" N



01

ORIENTATION FLOOR PLAN - LEVEL 2 - HVAC
SCALE: 1/16" = 1'-0"

2024.07.03

ISSUES

01

REVISIONS



**WALNUT GROVE MS
CHILLER REPLACEMENT**
MIDLOTHIAN I.S.D.
990 Walnut Grove Rd, Midlothian, TX 76065

ORIENTATION FLOOR
PLAN - LEVEL 2 - HVAC

JOB NO.: 24040-00
DRAWN BY: BM
CHECKED BY: HV

SHEET NO.

M2.00

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**WALNUT GROVE MS
CHILLER REPLACEMENT**
MIDLOTHIAN I.S.D.
990 Walnut Grove Rd, Midlothian, TX 76065

DEMOLITION FLOOR
PLAN - CENTRAL
UTILITY PLANT -
MECHANICAL

JOB NO.: 24040-00
DRAWN BY: BM
CHECKED BY: HV

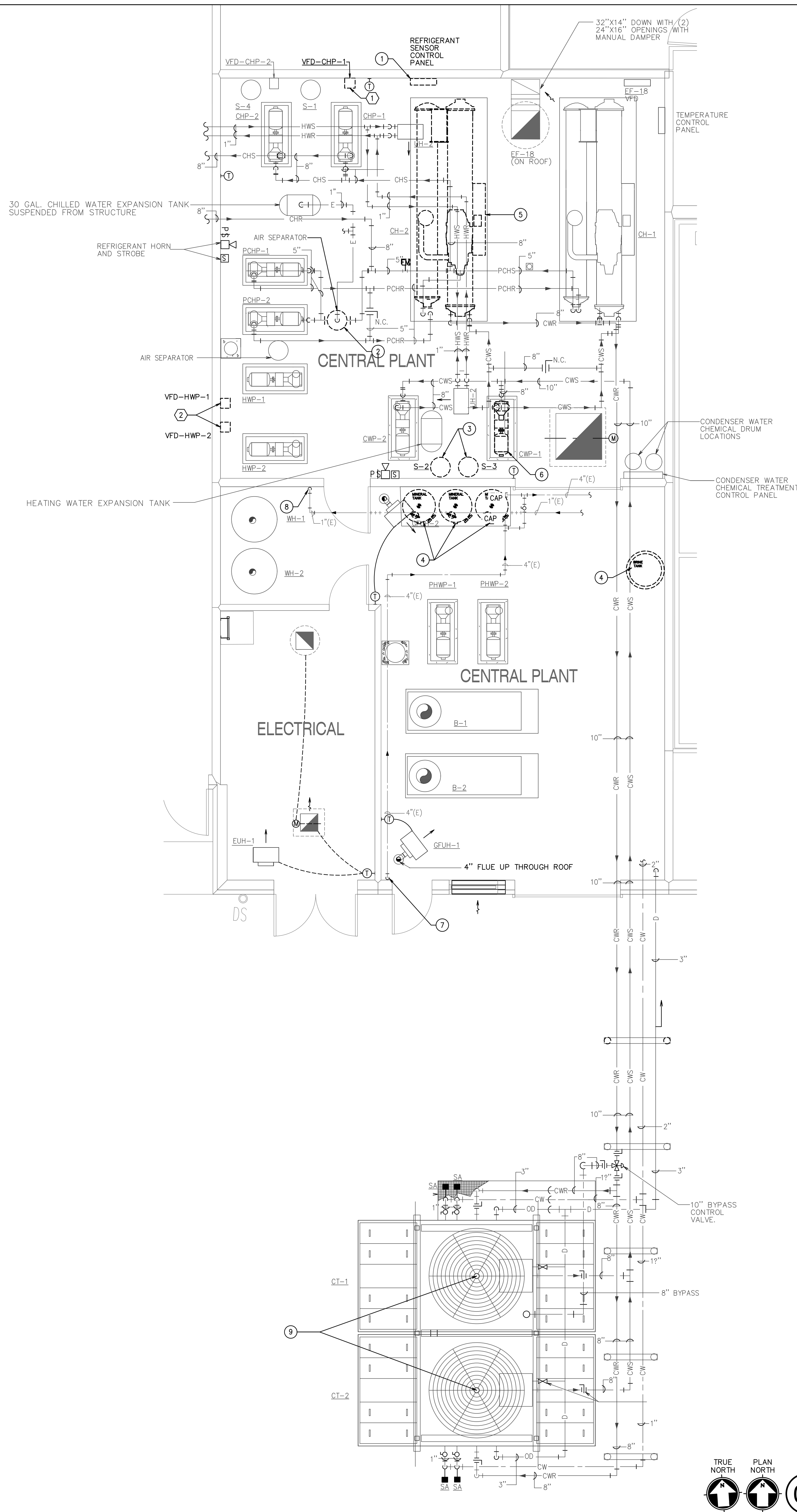
DMP1.01

1. THE INFORMATION ON THE DEMOLITION DRAWINGS ARE NOT FROM "AS-BUILT" DRAWINGS BUT FROM ORIGINAL DRAWINGS. THIS INFORMATION IS INCLUDED FOR REFERENCE ONLY.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE EXISTING BUILDING. IT IS TO DETERMINE THE AMOUNT OF WORK THAT WILL BE REQUIRED, CONTRACTOR SHALL EXAMINE THE EXISTING BUILDING AND GENERALLY VERIFY THE LOCATION OF ALL EXISTING WORK AND BECOME FAMILIAR WITH THE BUILDING. IT IS TO BE THE RESPONSIBILITY OF THE CONTRACTOR TO SUBMITTING A BID. SUBMISSION OF A BID WILL CONSTITUTE EVIDENCE THAT THE CONTRACTOR HAS INSPECTED THE SITE OF THE PROPOSED WORK.
3. EXISTING MPE ITEMS TO BE REMOVED SHALL BE RETURNED TO THE OWNER OR DISPOSED OF AS DIRECTED BY THE DESIGNATED OWNER'S REPRESENTATIVE.
4. COORDINATE DEMOLITION WORK WITH THE BUILDING MAINTENANCE PERSONNEL AND OTHER TRADES PERFORMING WORK IN THE BUILDING PRIOR TO THE REMOVAL OF ANY ITEMS OF EQUIPMENT OR SYSTEMS THAT ARE TO BE REMOVED. THE LIMIT OF WORK FOR THE CONSTRUCTION OR OTHER AREAS OF THE BUILDING. THE BUILDING WILL BE OCCUPIED DURING CONSTRUCTION, AND THEREFORE, UTILITIES MUST REMAIN IN OPERATION AT ALL TIMES. ANY REQUIRED OUTAGES MUST BE COORDINATED WITH THE OWNER.
5. PRIOR TO THE REMOVAL OF ANY MPE ITEMS OR EQUIPMENT, CONTRACTOR MUST VERIFY THE LOCATION AND TERMINATION OF THESE SYSTEMS AND CONFIRM THAT THE ITEMS BEING REMOVED DO NOT SERVE ANY ITEMS THAT ARE TO REMAIN (INCLUDING THOSE IN AREAS OUTSIDE THE CONTRACT LIMITS).
6. CONTRACTOR SHALL CONTACT CONTROLS SYSTEM INSTALLER BEFORE ANY DEMOLITION WORK IS STARTED TO ALLOW THEM TO TAG & IDENTIFY ITEMS TO REMAIN AND BE PROTECTED AND ITEMS TO BE REMOVED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE OWNER FOR ELEMENTS OF THE EXISTING CONTROLS SYSTEM THAT SHALL BE CAREFULLY REMOVED AND GIVEN TO THE OWNER SUCH AS EXISTING TEMPERATURE SENSORS THAT WILL NOT BE RE-USED. ALL REMOVED MATERIALS, WIRING, AND EQUIPMENT SHALL BE CAREFULLY REMOVED, BE CAREFULLY REMOVED, SHRINK WRAPPED, PALLETIZED, AND PROVIDED TO OWNER FOR THEIR USE.
7. DO NOT ABANDON ANY ITEMS IN PLACE. REMOVE ALL COMPONENTS ASSOCIATED WITH EACH ITEM CALLED OUT TO BE REMOVED. WHERE ITEMS ARE REMOVED PATCH/REPLACE ROOF, WALLS, CEILING, FLOOR, PARTITION, OR CEILING TO MATCH EXISTING FINISHES, WHERE NEW FINISHES ARE CALLED FOR PATCHING SHALL MATCH THE EXISTING FINISH.
8. ALL EXISTING FIRE ALARM, SECURITY AND OTHER CEILING MOUNTED DEVICES TO REMAIN IN OPERATION DURING DEMOLITION WORK AND BE RE-INSTALLED AS NEEDED. TEMPORARILY SUPPORT AS NEEDED.
9. ALL EXISTING LIGHTS ARE TO BE REUSED AND REMAIN IN PLACE, UNLESS NOTED OTHERWISE. CONTRACTOR TO SUPPORT LIGHTS ABOVE CEILING DURING ANY CEILING DEMOLITION.
10. THE MECHANICAL CONTRACTOR / DEMOLITION CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR REGARDING THE SCOPE OF DEMOLITION FOR ELECTRICAL CONNECTIONS. THOSE UNITS BEING REMOVED SHALL BE SAFELY DISCONNECTED FROM EXISTING POWER.
11. CONTRACTOR SHALL COORDINATE REMOVAL OF EXISTING UNITS WITH DISTRICT, ALLOWING THE DISTRICT TO REMOVE ANY EXISTING UNIT COMPONENTS FOR SPARE STOCK.
12. PROVIDE FLOOR PROTECTION IN ALL AREAS OF DEMOLITION AND NEW WORK THROUGH OUT THE BUILDING FROM WORK AREA TO EXTERIOR. FLOORING PROTECTION TO BE FULL WIDTH OF THE CORRIDOR AND BE RAM BOARD OR EQUIVALENT TYPE FLOOR PROTECTION.

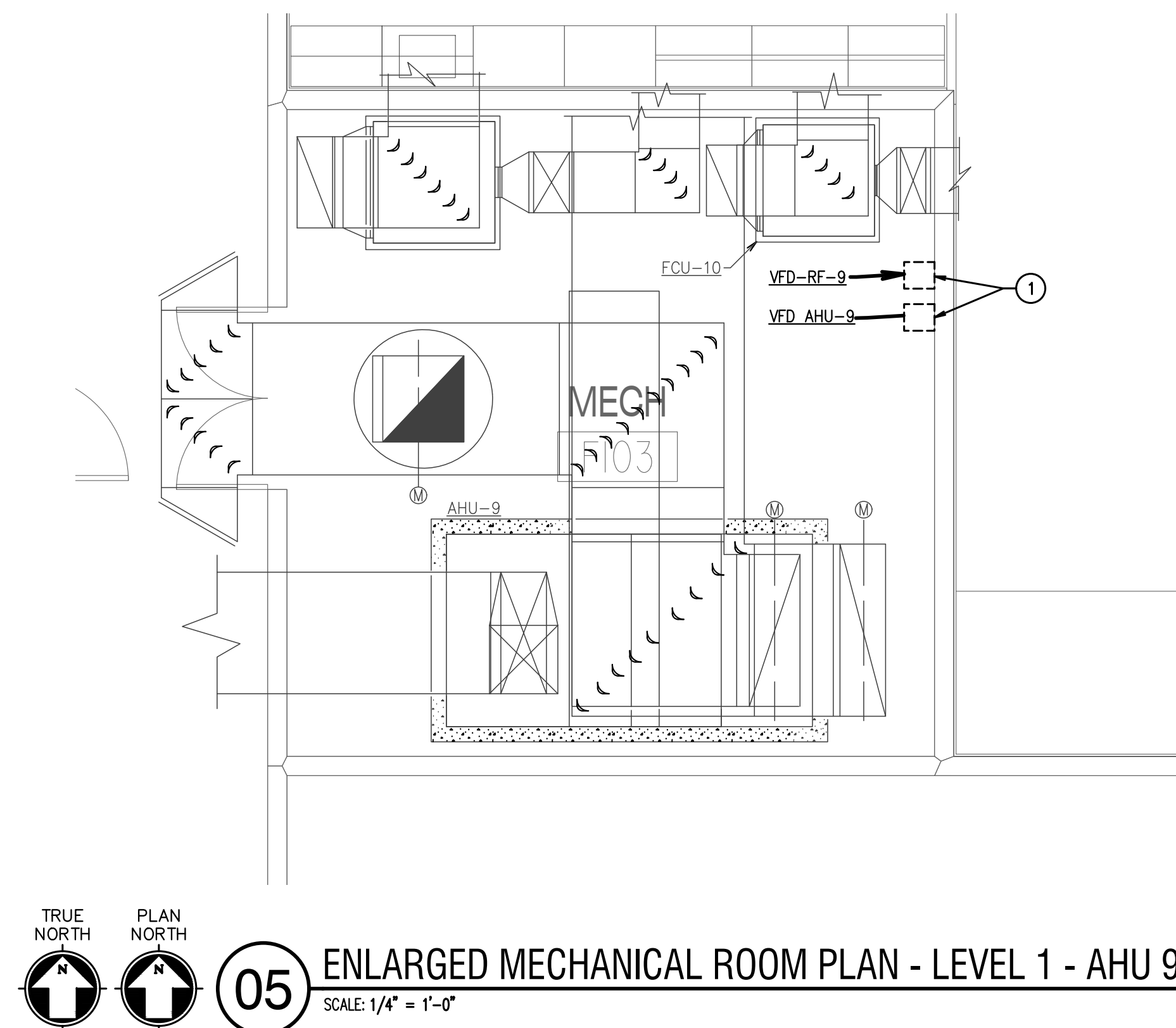
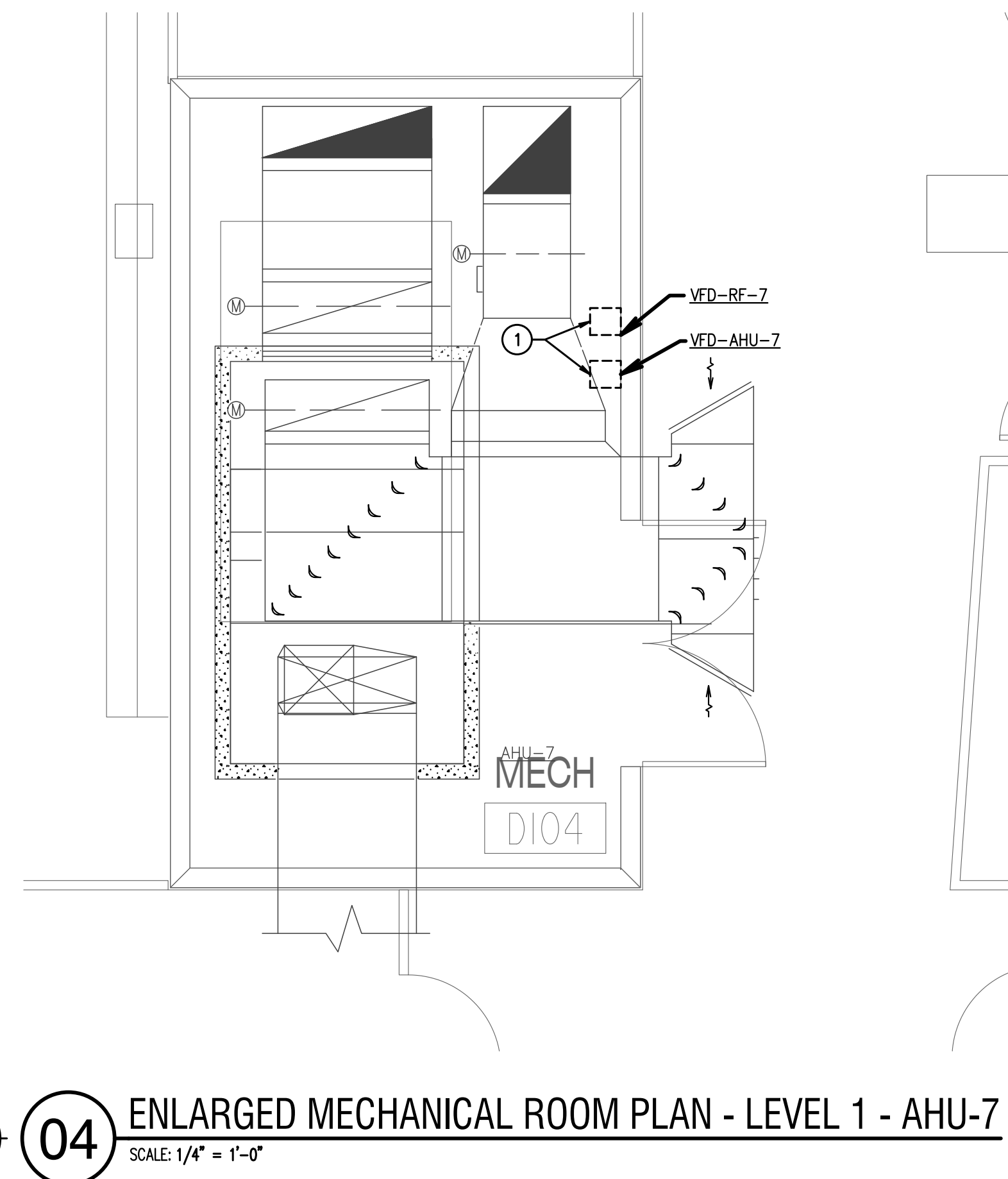
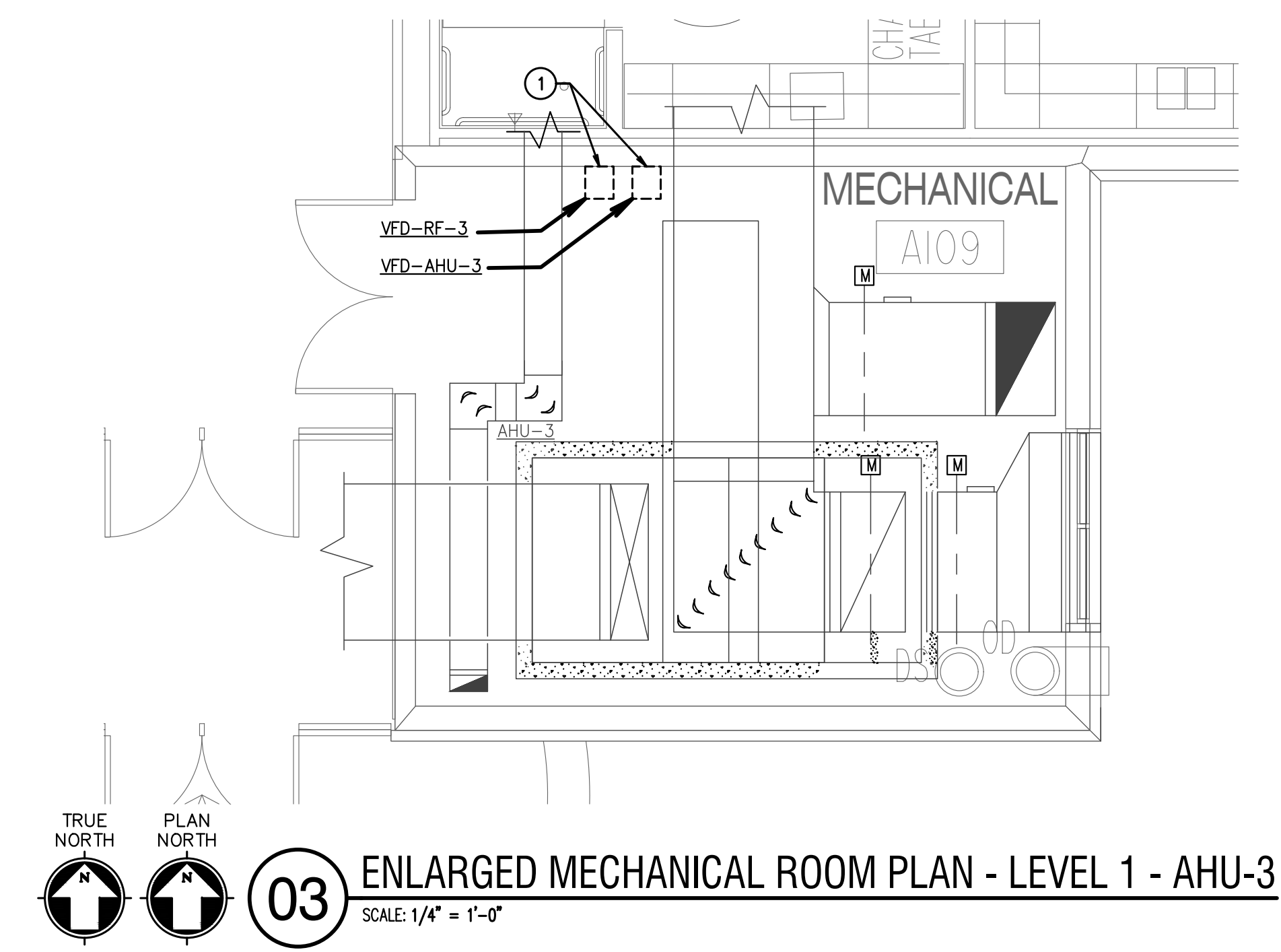
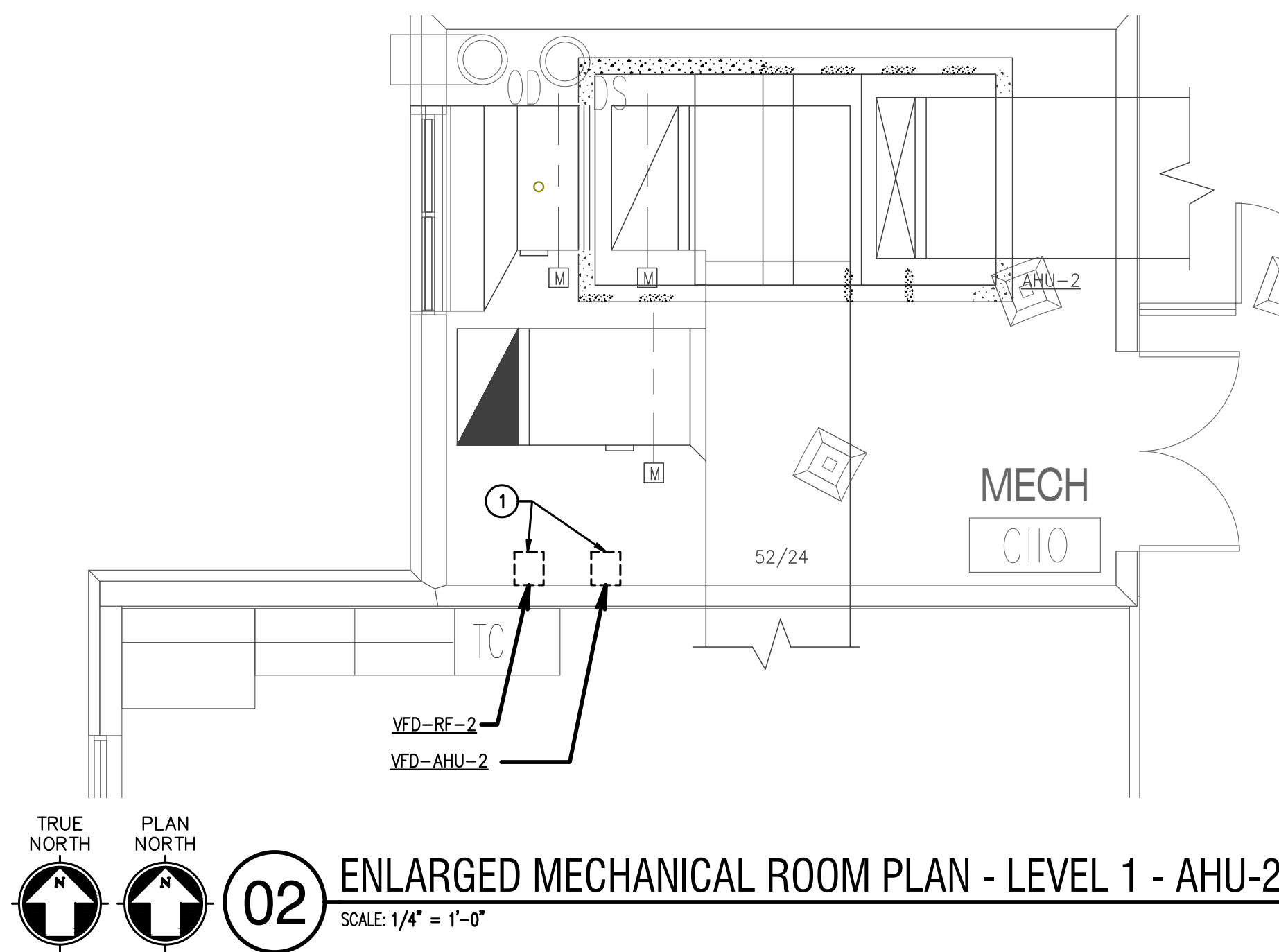
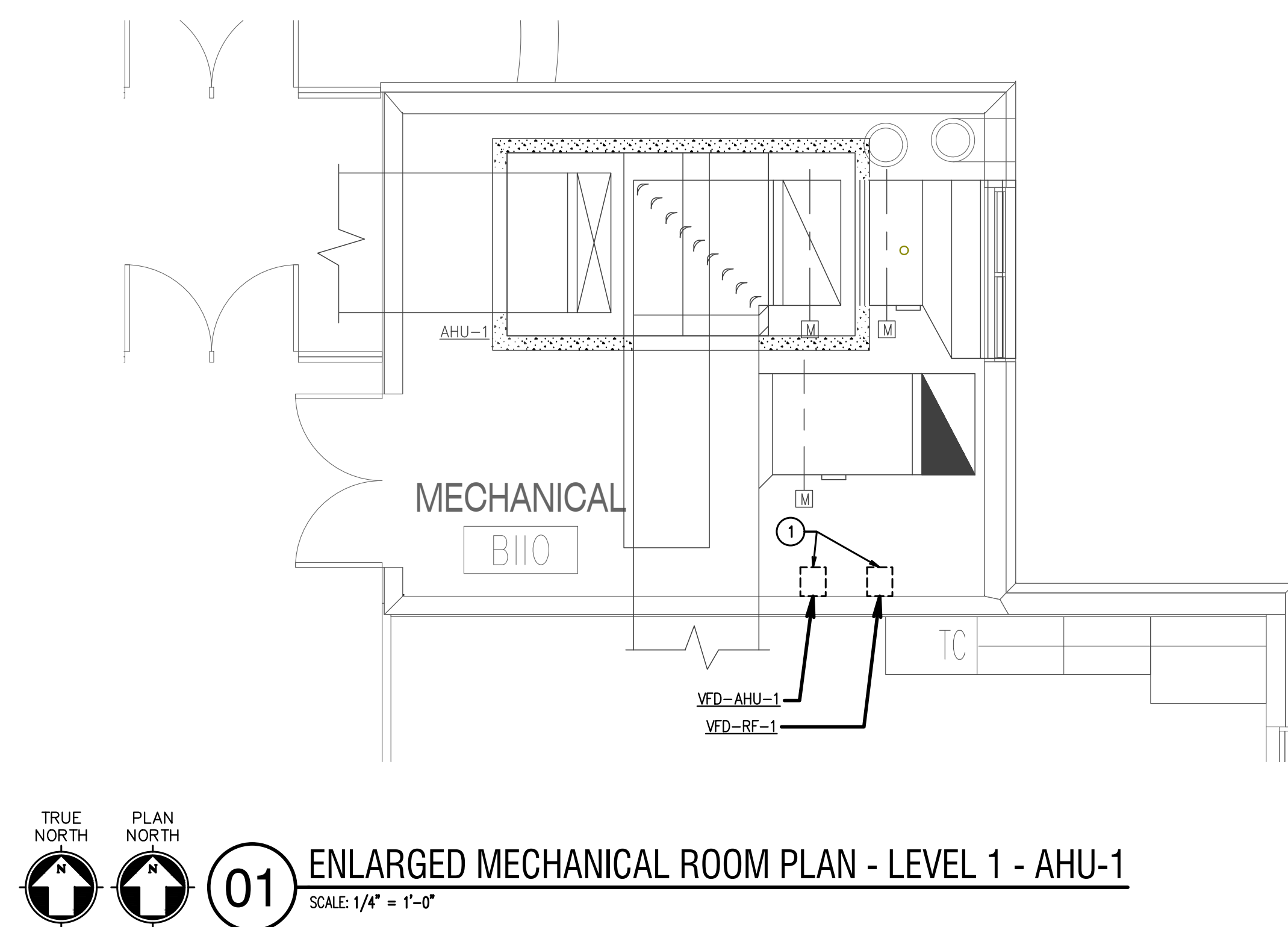
- 1 EXISTING REFRIGERANT MONITORING STATION TO BE DEMOLISHED AND REPLACED WITH NEW.
- 2 EXISTING AIR SEPARATOR TO BE REMOVED AND REPLACED WITH NEW.
- 3 EXISTING CENTRIFUGAL SEPARATOR TO BE REMOVED AND REPLACED WITH NEW.
- 4 EXISTING WATER SOFTENER SYSTEM AND ASSOCIATED INTERCONNECTED PIPING TO BE REMOVED. CAP PIPING JUST DOWNSTREAM OF THE SYSTEM BY-PASS AND OPEN BY-PASS.
- 5 EXISTING SCREW CHILLER TO BE DEMOLISHED AND REPLACED WITH A NEW CENTRIFUGAL CHILLER.
- 6 EXISTING CWP-1 TO BE REMOVED TO ALLOW FOR THE REMOVAL OF THE EXISTING CHILLER AND THE INSTALLATION OF THE NEW CHILLER.
- 7 EXISTING 4" DOMESTIC COLD WATER RISER WITH SHUT-OFF VALVE IN RISER.
- 8 EXISTING 1" DOMESTIC HOT WATER DN. TO CIRCULATION PUMP.
- 9 REMOVE EXISTING COOLING TOWER FAN MOTORS AND REPLACE WITH NEW VFD COMPATIBLE FAN MOTORS.

① EXISTING CHP-1 VFD TO BE REMOVED AND REPLACED WITH NEW.

② EXISTING HWP-1 & HWP-2 VFDs TO BE REMOVED AND REPLACED WITH NEW.



01 DEMOLITION FLOOR PLAN - CENTRAL UTILITY PLANT - MECHANICAL
SCALE: 1/4" = 1'-0"



- GENERAL DEMOLITION NOTES:**

1. THE INFORMATION ON THE DEMOLITION DRAWINGS ARE NOT FROM "AS-BUILT" DRAWINGS BUT FROM ORIGINAL DRAWINGS. THIS INFORMATION IS INCLUDED FOR REFERENCE ONLY. CONTRACTOR WILL BE RESPONSIBLE FOR VISITING THE SITE PRIOR TO SUBMITTING A BID TO THE CITY OF THE AMOUNT OF THE AMOUNT OF THE DEMOLITION. CONTRACTOR SHALL EXAMINE THE EXISTING BUILDING AND GENERALLY VERIFY THE LOCATION OF ALL EXISTING WORK AND BECOME INFORMED AS TO THE RELATION TO, AND EFFECT ON, THE WORK REQUIRED BEFORE SUBMITTING A BID FOR DEMOLITION. CONTRACTOR HAS EVIDENCE THAT THE CONTRACTOR HAS INSPECTED THE SITE OF THE PROPOSED WORK.
2. EXISTING MEP ITEMS TO BE REMOVED SHALL BE RETURNED TO THE OWNER OR DISPOSED OF AS DIRECTED BY THE DESIGNATED OWNER'S REPRESENTATIVE.
3. COORDINATE DEMOLITION WORK WITH THE BUILDING MAINTENANCE PERSONNEL AND OTHER TRADES PERFORMING WORK IN THE BUILDING PRIOR TO THE REMOVAL OF ANY ITEMS OF EQUIPMENT OR SYSTEMS THAT ARE NOT TO BE REMOVED. CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION OR OTHER AREAS OF THE BUILDING. THE BUILDING WILL BE OCCUPIED DURING DEMOLITION, AND, THEREFORE, UTILITIES MUST REMAIN IN OPERATION AT ALL TIMES. ANY REQUIRED OUTAGES MUST BE COORDINATED WITH THE OWNER.
4. PRIOR TO THE REMOVAL OF ANY MEP ITEMS OR EQUIPMENT, CONTRACTOR MUST VERIFY THE STATUS AND TERMINATION OF THOSE SYSTEMS AND CONFIRM THAT THE ITEMS BEING REMOVED DO NOT SERVE ANY ITEMS THAT ARE TO REMAIN (INCLUDING THOSE IN AREAS OUTSIDE THE CONTRACT LIMITS).
5. CONTRACTOR SHALL CONTACT CONTACTS SYSTEM INSTALLER BEFORE ANY DEMOLITION WORK IS STARTED TO ALLOW THEM TO TAG & IDENTIFY ITEMS TO REMAIN AND BE PROTECTED AND ITEMS TO BE REMOVED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE OWNER FOR ELEMENTS OF THE EXISTING CONTACTS SYSTEM THAT SHALL BE CAREFULLY REMOVED AND GIVEN TO THE OWNER SUCH AS EXISTING TEMPERATURE SENSORS THAT WILL NOT BE RE-USED. ALL EXISTING TEMPERATURE SENSORS SHALL BE CAREFULLY REMOVED, SHIPMENT, PALLETIZED, AND PROVIDED TO OWNER FOR THEIR USE.
6. DO NOT ABANDON ANY ITEMS IN PLACE, REMOVE ALL COMPONENTS ASSOCIATED WITH EACH ITEM CALLED OUT TO BE REMOVED. WHERE ITEMS ARE REMOVED PATCH/REPLACE ROOF, WALLS, CEILING OR FLOOR, AS APPLICABLE, TO MATCH EXISTING FINISHES, WHERE NEW FINISHES ARE REQUIRED, THE CONTRACTOR SHALL PATCH/REPAIR TO MATCH EXISTING FINISHES.
7. CONTRACTOR SHALL REMOVE ALL EXISTING ITEMS TO BE REMOVED.
8. ALL EXISTING FIRE ALARM, SECURITY AND OTHER CEILING MOUNTED DEVICES TO REMAIN IN OPERATION DURING DEMOLITION SHALL BE RE-INSTALLED AS NEEDED, TEMPORARILY SUPPORT AS NEEDED.
9. ALL EXISTING LIGHTS ARE TO BE REUSED AND REMAIN IN PLACE, UNLESS NOTED OTHERWISE. CONTRACTOR TO SUPPORT LIGHTS ABOVE CEILING DURING ANY CEILING DEMOLITION.
10. THE MECHANICAL CONTRACTOR / DEMOLITION CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR REGARDING THE SCOPE OF DEMOLITION FOR ELECTRICAL CONNECTIONS. THOSE UNITS BEING REMOVED SHALL BE SAFELY DISCONNECTED FROM EXISTING POWER.
11. CONTRACTOR SHALL COORDINATE REMOVAL OF EXISTING UNITS WITH DISTRICT, ALLOWING THE DISTRICT TO REMOVE ANY EXISTING UNIT COMPONENTS FOR SPARE STOCK.
12. PROVIDE FLOOR PROTECTION IN ALL AREAS OF DEMOLITION AND NEW WORK THROUGH OUT THE BUILDING FROM WORK AREA TO EXTERIOR. FLOORING PROTECTION TO BE FULL WIDTH OF CORRIDOR AND BE RAM BOARD OR EQUAL TYPE FLOOR PROTECTION.

ALTERNATE NOTES BY SYMBOL '○':

- ① EXISTING VFD TO BE REMOVED AND REPLACED WITH NEW.



2024.07.03

QUESTIONS

10

VISIONS



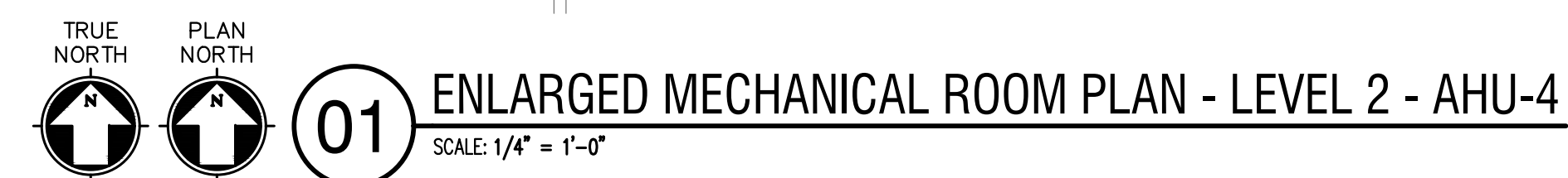
WALNUT GROVE MS
CHILLER REPLACEMENT
MIDLOTHIAN I.S.D.
990 Walnut Grove Rd, Midlothian, TX 76065

ENLARGED
DEMOLITION FLOOR
PLANS - LEVEL 1 -
HVAC

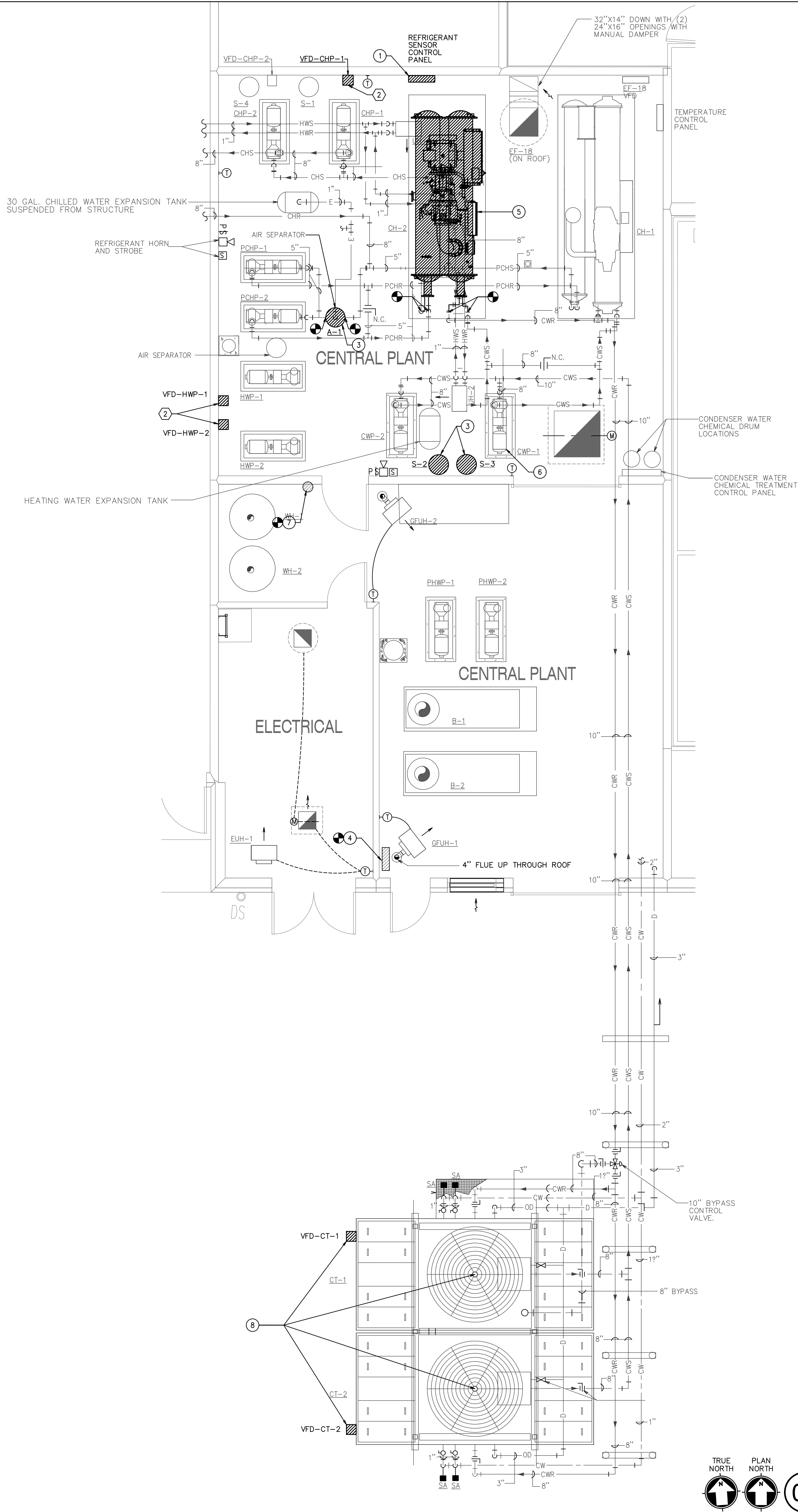
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SHEET NO.

DM1.02



DM2.01



GENERAL MECHANICAL NOTES:

1. RECTANGULAR SUPPLY AIR DUCTWORK IS TO BE UNIED WITH 1½" THICK ACoustICAL AND THERMAL LINER FOR THE FIRST 10'-0" FROM THE UNID AND EXTERNALLY WRAPPED WITH 2" INSULATION. AFTER THE FIRST 10'-0" TO MEET THE 2016 IECC REQUIREMENTS, RECTANGULAR RETURN AIR DUCT SHALL BE UNIED WITH 1" LINER FOR THE FIRST 10'-0" FROM THE UNID AND EXTERNALLY WRAPPED WITH MINIMUM 2" INSULATION AFTER THE FIRST 10'-0" FROM THE UNID. TRANSFER AIR DUCT SHALL BE UNIED WITH 1" LINER FOR THE FIRST 10'-0" FROM THE UNID. AIR DUCTS ARE NET INTERNAL AIR STREAM DIMENSIONS. SHEET METAL SIZES ARE TO BE INCREASED IN SIZE TO MAINTAIN THESE INTERNAL CLEAR DIMENSIONS. ROUND DUCTWORK IS TO BE EXTERNALLY WRAPPED. FLEXIBLE ROUND DUCT SHALL HAVE A MINIMUM R-VALUE OF 6.0.
2. BRANCH RUN-OUTS TO CEILING MOUNTED AIR DEVICES SHALL BE SAME SIZE AS NECK, UNLESS NOTED OTHERWISE. PROVIDE A TWIST-IN FLARED PAI WITH MANUAL WULF, DAMPER AT MAIN DUCT PAI, AND EXTEND AS SHOWN. EXTEND FLEXIBLE DUCTWORK A MINIMUM OF 15'-0" FROM THE MAIN DUCT. INSTALL STRAIGHT AS POSSIBLE WITH LONG RADII BENDS WITH CLAMPS TO BE USED AT BOTH ENDS.
3. ALL DUCTWORK AND PIPING SHALL BE RUN CONCEALED ABOVE CEILINGS AS HAS POSSIBLE & CONCEALED IN WALLS, CHASES, OR FURRUTOS IN GENERAL LOCATIONS SHOWN, UNLESS NOTED OTHERWISE.
4. LOCATE CEILING MOUNTED AIR DEVICES APPROXIMATELY WHERE SHOWN. VERIFY EXISTING CEILING TYPES TO CONFIRM FAN MOUNTING TYPES REQUIRED. ALL CEILING DIFFUSERS TO BE OF THE FOUR-WAY TYPE UNLESS NOTED OTHERWISE BY AIR FLOW ARROWS ON FLOOR PLAN.
5. EXISTING AND NEW DIFFUSERS FOR ALL DUCTWORK CONNECTED TO UNIS REPLACED OR ADDED TO BE BALANCED TO NEW AIRFLOW VALUES SHOWN. TAB FIRM CONTRACTED DIRECTLY WITH OWNER.
6. WHERE EXISTING DUCTWORK IS REMOVED AND NOT REUSED, INSTALL INSULATED CAPS AND SEAL AIR TIGHT.
7. REMOVE EXISTING CEILING GRID AND TILE AS NEEDED TO REMOVE EXISTING AND INSTALL NEW DUCTWORK, PIPING, AND UNIS. REUSE EXISTING CEILING TILE AND GRID WHERE POSSIBLE. REMOVE AND REPAIR EXISTING CEILING AND PROTECT WHERE NEW CEILING TILE IS REQUIRED. IT SHALL BE ALL NEW THROUGH THE ROOMS. DO NOT MIX NEW CEILING TILE AND CEILING GRID IN THE SAME ROOM. ALL NEW CEILING HEIGHTS MUST MATCH EXISTING CEILING HEIGHTS. REMOVE EXISTING STRAIGHT CONTRACTOR WITH PRODUCTS AND MATERIALS THAT MATCH EXISTING.
8. EXISTING LIGHTS TO BE REUSED AND REMAIN IN PLACE. CONTRACTOR TO SUPPORT LIGHTS ABOVE CEILING DURING ANY CEILING REMOVAL.
9. WHERE ITEMS ARE REMOVED PATCH WALLS, CEILING, OR FLOOR AS APPLICABLE TO MATCH EXISTING FINISHES.
10. EXISTING SECURITY SYSTEM AND DEVICES TO REMAIN IN PLACE AND ACTIVE DURING CONSTRUCTION. ANY DEVICES IN CEILINGS TO BE REMOVED AND REPLACED TO BE TEMPORARILY SUPPORTED. ALL SECURITY SCOPE OF WORK TO BE CONTRACTED WITH SAS.
11. CLEAN ALL EXISTING REUSED SUPPLY, RETURN, AND EXHAUST AIR GRILLES FREE OF ALL DUST AND DEBRIS. PAINT ALL EXISTING SUPPLY AND RETURN AIR GRILLES WHERE SIGNS OF RUST ARE NOTED ON EXISTING GRILLES TO MATCH EXISTING COLOR OF GRILLE.
12. NEW TEMPERATURE SENSOR TO BE INSTALLED WHERE OLD SENSOR WAS REMOVED, WHEN IN COMPLIANCE WITH ADA HEIGHT REQUIREMENTS; WHEN NOT IN COMPLIANCE PROVIDE NEW AT ADA HEIGHT AND REMOVE STAINLESS STEEL COVER PLATE OVER EXISTING WALL OPENING. RE-USE EXISTING WIRING PATHWAY TO ACCESSIBLE CEILING, UP TO ROOF. PATCH, REPAIR AND PAINT WALL AS NEEDED.
13. PROVIDE FLOOR PROTECTION IN ALL AREAS OF THE DEMOLITION AND NEW WORK THROUGHOUT BUILDING FROM WORK AREA TO EXTERIOR. FLOORING PROTECTION TO BE FULL WIDTH OF CORRIDOR AND STAIRWELL TO BE RAM BOARD OR EQUAL TYPE FLOOR PROTECTION.

GENERAL PLUMBING NOTE:

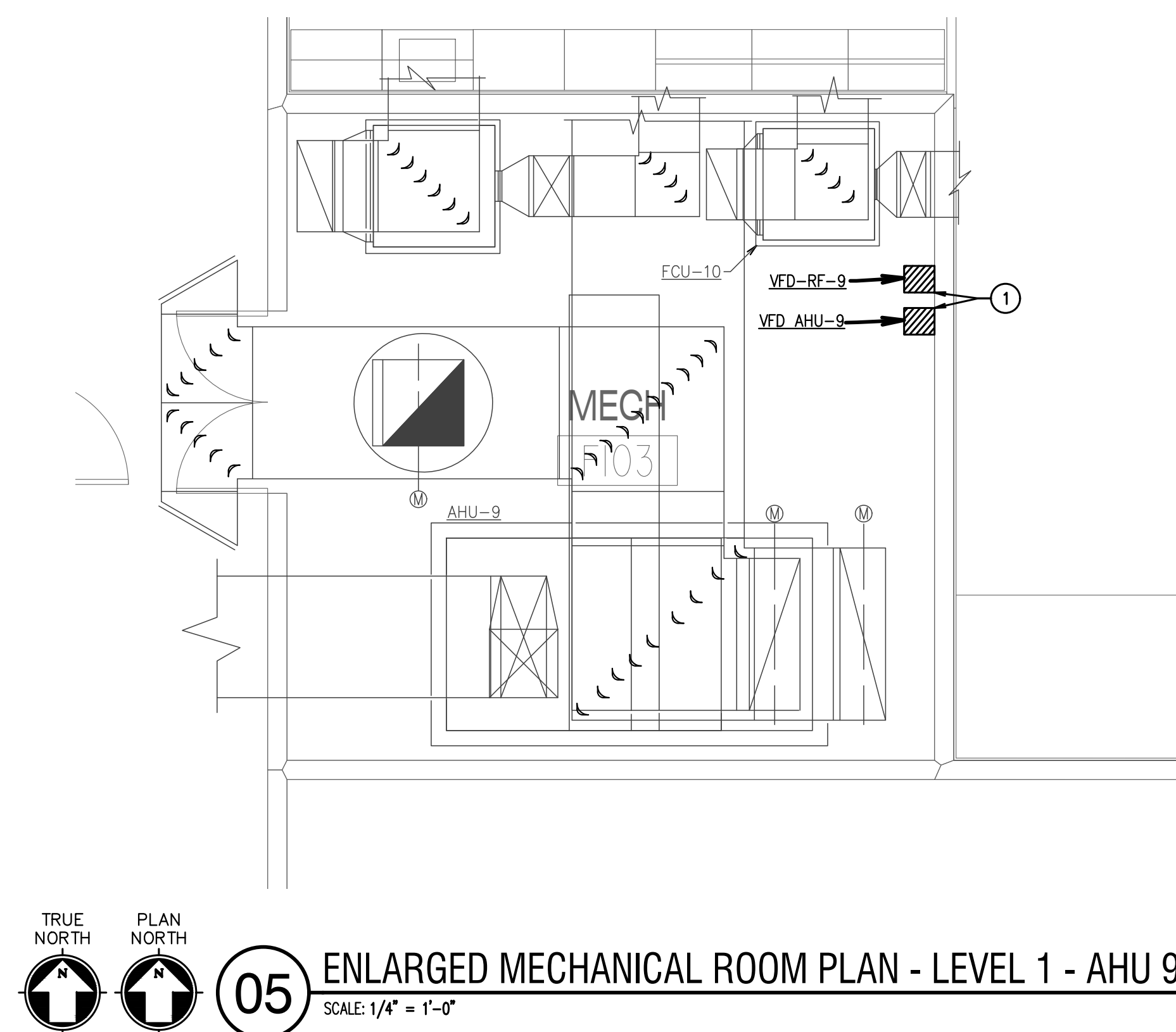
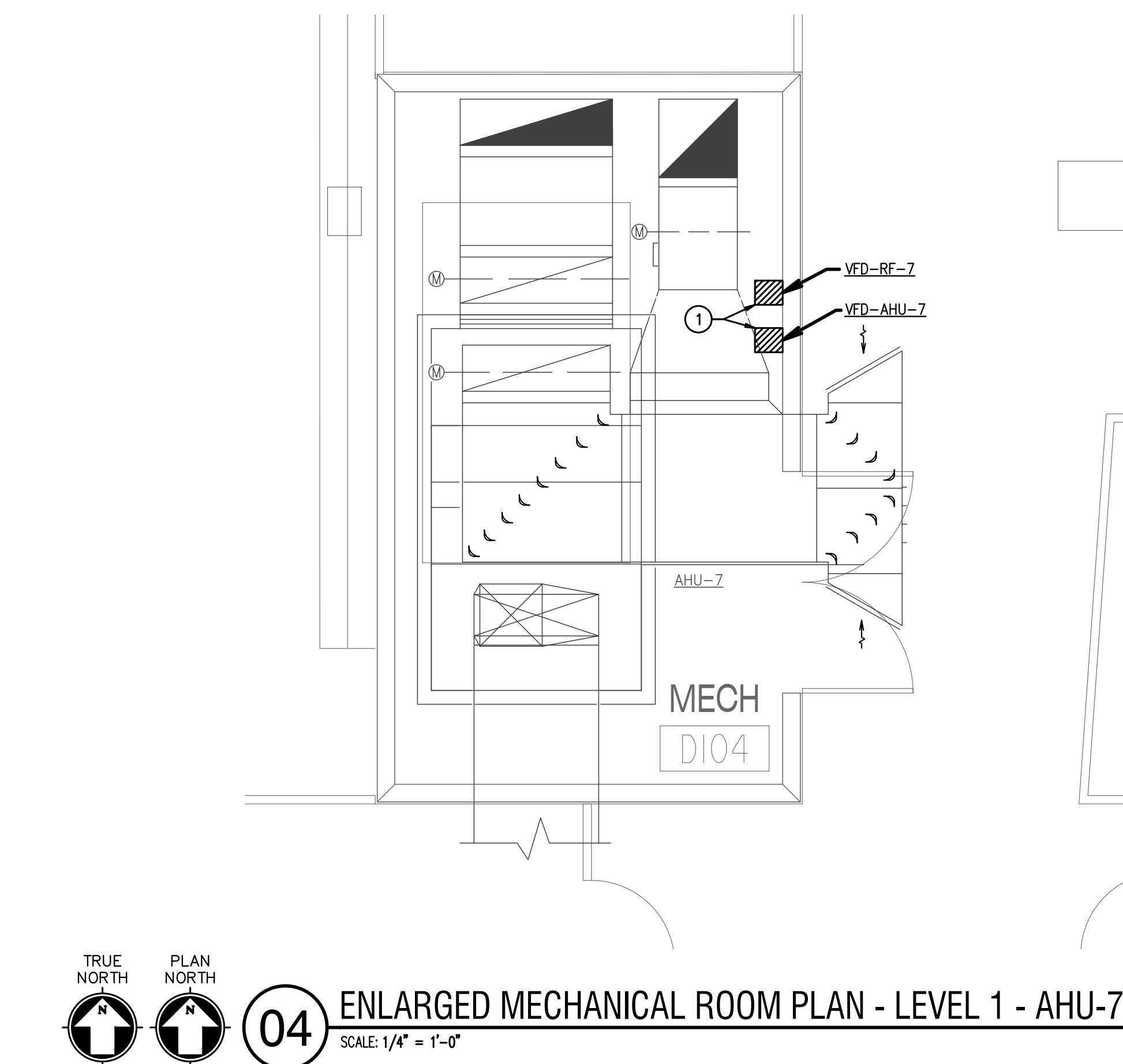
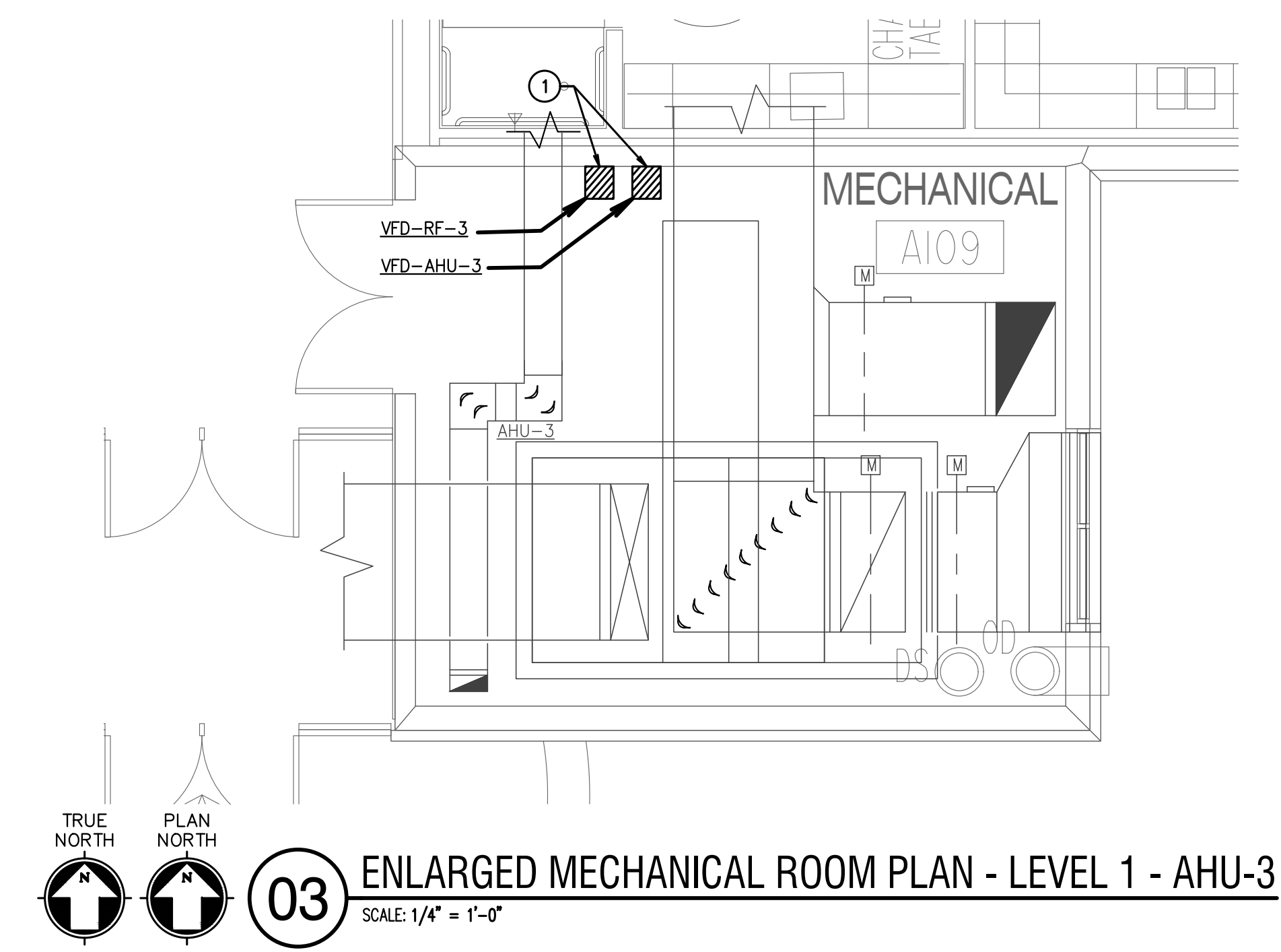
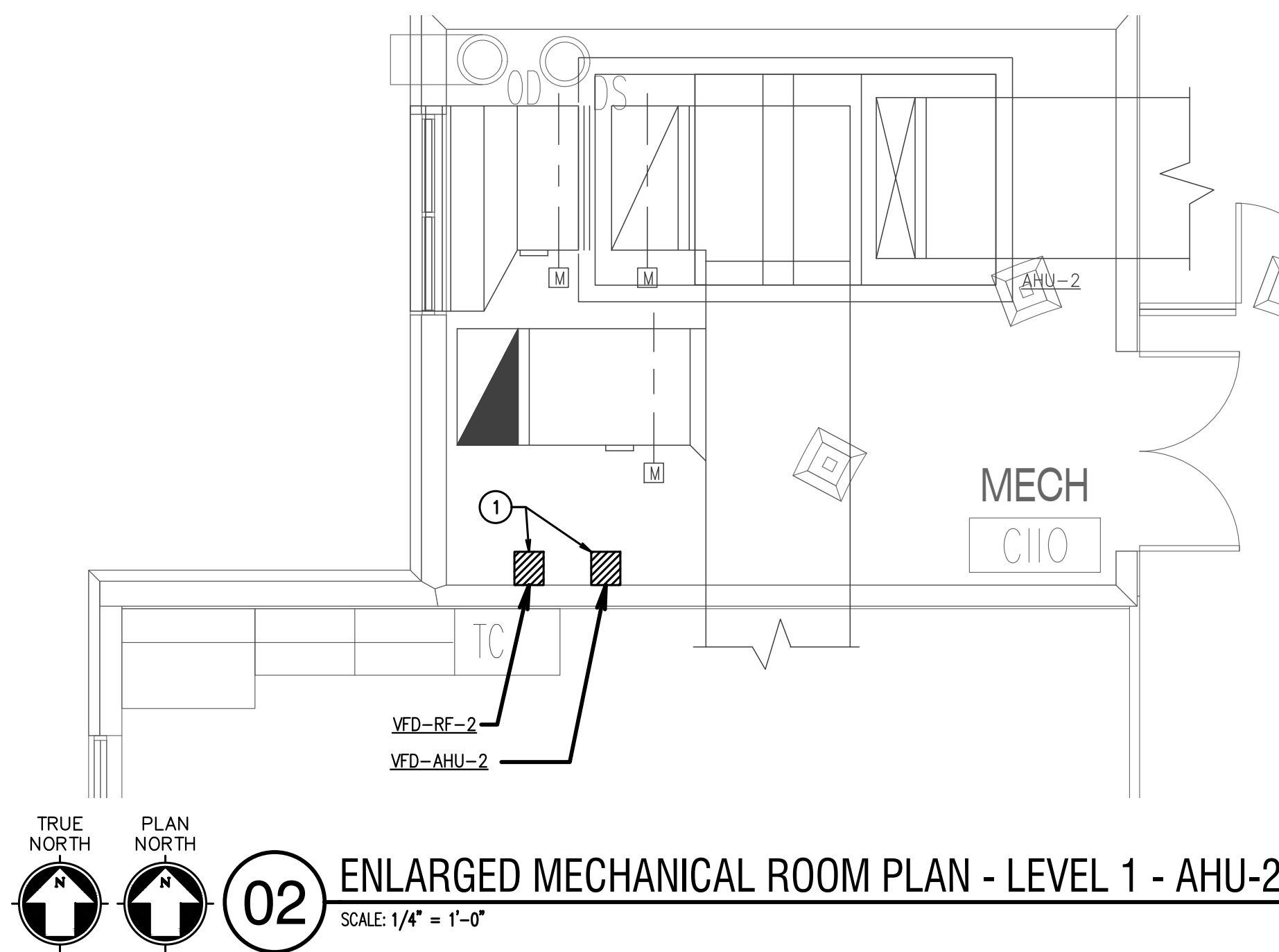
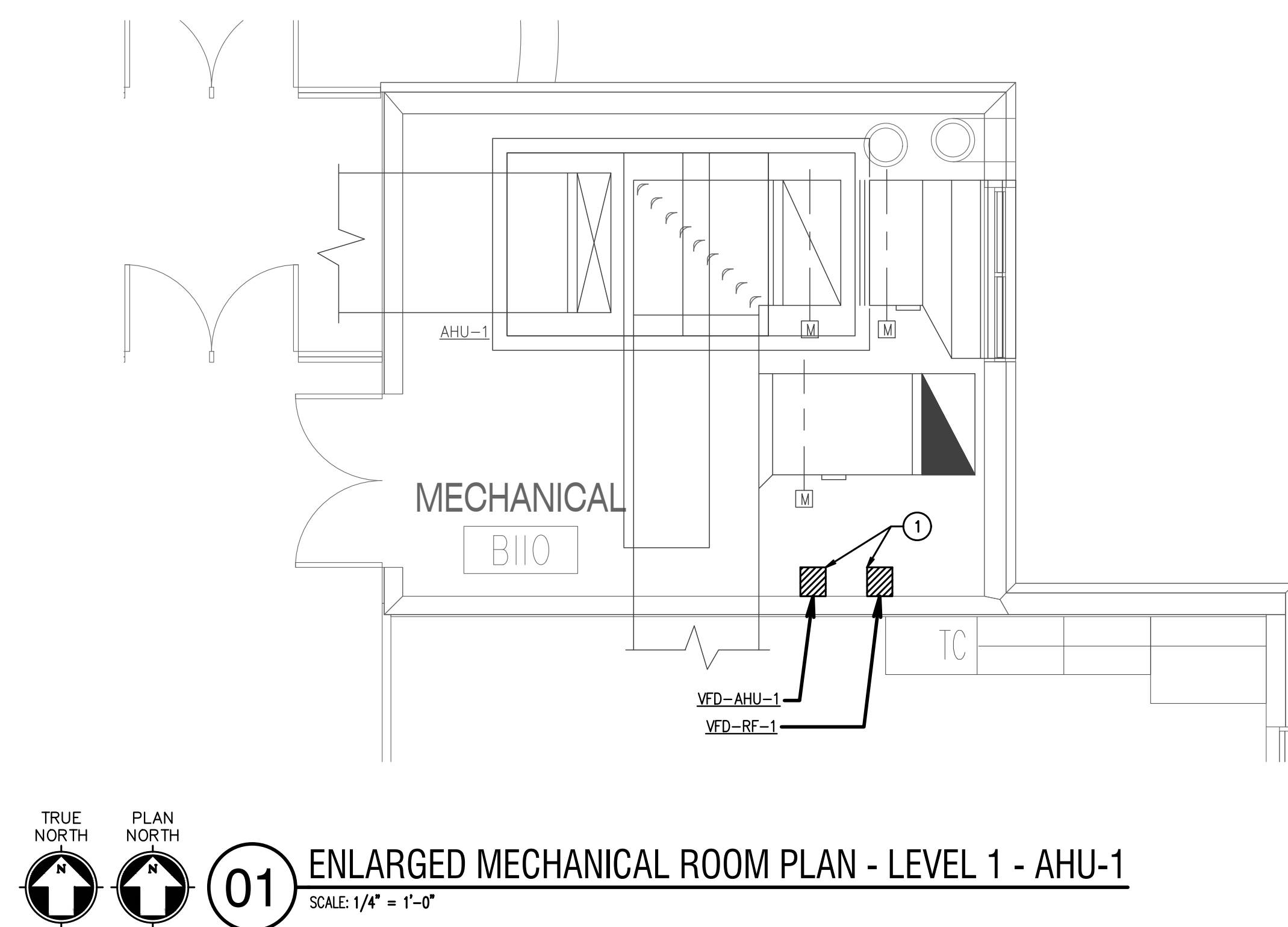
1. CONTRACTOR SHALL PROVIDE AN EASY WATER SYSTEM AND CONTROLLER ON ALL DOMESTIC HOT WATER RETURN PIPING DOWNSTREAM OF THE CIRCULATION PUMP AND INSTALLED PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

NOTES BY SYMBOL '○':

- ① NEW REFRIGERANT MONITORING STATION TO BE INSTALLED.
- ② NEW AIR SEPARATOR TO BE INSTALLED.
- ③ NEW CENTRIFUGAL SEPARATOR TO BE INSTALLED UNDER ALTERNATE SCOPE.
- ④ NEW EASY WATER SYSTEM, EF-50-IN W/ TWS-4 & 4-IN CONTROLLER.
- ⑤ NEW CENTRIFUGAL CHILLER TO BE INSTALLED.
- ⑥ EXISTING CWP-1 TO BE RE-INSTALLED AFTER THE INSTALLATION OF THE NEW CENTRIFUGAL CHILLER.
- ⑦ NEW EASY WATER SYSTEM, CS500 W/ TWS-1 AND CONTROLLER.
- ⑧ REPLACE EXISTING FAN MOTORS WITH NEW 10HP FAN MOTORS. CONFIRM NEW FAN MOTOR POWER TO BE THE SAME AS EXISTING. MOTORS TO BE VFD COMPATIBLE. VFD'S TO BE NEMA 3P, 480V/2PH, 40A/3P SHELLS AND TO BE MOUNTED IN PLACE OF EXISTING FAN MOTOR STARTERS. CONTRACTOR TO REMOVE EXISTING 2-SPEED STARTERS AND REPLACE WITH VFD DRIVES. ELECTRICAL CONTROLLER SHALL PROVIDE PROTECTION FROM EXISTING 480V/2PH, 40A/3P CIRCUIT BREAKER IN EXISTING PANEL. *HAF TO NEW VFD'S FOR COOLING TOWER FAN MOTORS. IT IS THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO FIELD TRACE ALL EXISTING FEEDERS AND BRANCH CIRCUIT WIRING FOR COOLING TOWERS FROM EXISTING ELECTRICAL DISTRIBUTION EQUIPMENT. ANY ABANDONED EQUIPMENT, RACEWAYS, AND CONDUCTORS SHALL BE REMOVED IN THEIR ENTIRETY AS REQUIRED BY CODE. CONTRACTOR TO PROVIDE NEW PULLBOXES, RACEWAYS, AND CONDUCTORS AS REQUIRED TO CONNECT ALL NEW REPLACEMENT HVAC EQUIPMENT, INCLUDING THEIR RESPECTIVE ACCESSORIES, TO EXISTING ELECTRICAL CIRCUITS MADE AVAILABLE BY DEMOLITION OF OLD HVAC EQUIPMENT.

ALTERNATE NOTES BY SYMBOL '⬡':

- ① NEW CHP-1 VFD TO BE INSTALLED.
- ② NEW HWP-1 & HWP-2 VFDS TO BE INSTALLED



- GENERAL MECHANICAL NOTES:**

1. RECTANGULAR SUPPLY AIR DUCTWORK IS TO BE UNIED WITH 1/2" THICK ACoustICAL AND THERMAL LINER FOR THE FIRST 10'-0" FROM THE UN AND INTERNALLY WRAPPED WITH MINIMUM 2" INSULATION AFTER THE FIRST 10'-0" TO MEET THE 2018 IECC REQUIREMENTS. RETURN AIR RETURN DUCT SHALL BE UNIED WITH 1" LINER FOR THE FIRST 10'-0" FROM THE UN AND INTERNALLY WRAPPED WITH MINIMUM 2" INSULATION AFTER THE FIRST 10'-0". ALL TRANSFER AIR DUCTS TO BE INTERNALLY UNIED WITH 1" LINER. DUCTWORK TO BE UNIED ARE NOT TO BE UNIED. UNIED SHALL BE UNIED. UNIED SHALL BE UNIED TO BE INCREASED IN SIZE TO MAINTAIN THESE INTERNAL CLEAR DIMENSIONS. ROUND DUCTWORK IS TO BE EXTERNALLY WRAPPED. FLEXIBLE ROUND DUCT SHALL HAVE A MINIMUM R-VALUE OF 2.0.
2. BRANCH RUN-OUTS TO CEILING MOUNTED AIR DEVICES SHALL BE SAME SIZE AS NECK. UNIED NOTED OTHERWISE. UNIED A TWIST-IN FLARED PANT WITH MANUAL VOLUME DAMPER AT MAIN DUCT PANT, AND EXTEND AS SHOWN. EXTEND FLEXIBLE DUCTWORK A MAXIMUM 5'-0" FROM DIFFUSERS. INSTALL STRAIGHT AS POSSIBLE WITH LONG RADII BENT WITH CLAMPS TO MAINTAIN DIMENSIONS.
3. ALL DUCTWORK AND PIPING SHALL BE RUN CONCEALED ABOVE CEILINGS AS HIGH AS POSSIBLE & CONCEALED IN WALLS, CHASES, OR FURROUTS IN GENERAL LOCATIONS SHOWN, UNLESS NOTED OTHERWISE.
4. LOCATE CEILING MOUNTED AIR DEVICES APPROXIMATELY WHERE SHOWN. VERIFY EXISTING CEILING TYPES TO CONFIRM FRAME MOUNTING TYPES REQUIRED. ALL CEILING DIFFUSERS TO BE OF A FOUR-WAY TYPE UNLESS NOTED OTHERWISE BY AIR FLOW ARROWS ON FLOOR PLAN.
5. EXISTING AND NEW DIFFUSERS FOR ALL DUCTWORK CONNECTED TO UN UNIED OR ADDED TO BE BALANCED TO NEW AIRFLOW VALUES SHOWN. TAB FIRM CONTRACTED DIRECTLY WITH OWNER.
6. WHERE EXISTING DUCTWORK IS REMOVED AND NOT REUSED, INSTALL INSULATED CAPS AND SEAL AIR TIGHT.
7. REMOVE EXISTING CEILING GRID AND TILE AS NEEDED TO REMOVE EXISTING AND INSTALL NEW DUCTWORK, PIPING, AND UNIES. REUSE EXISTING CEILING TILE AND GRID WHERE POSSIBLE. WHERE MORE AND/OR DIFFERENT TYPES OF CEILING AND/OR MATERIALS ARE REQUIRED, CEILING TILE IS REQUIRED. IT SHALL BE ALL NEW THROUGH THE HEIGHT. DO NOT MIX NEW AND EXISTING CEILING TILE IN THE SAME SPACE. ALL NEW CEILING HEIGHTS TO MATCH EXISTING CEILING HEIGHT. ANY CEILING SCOPE OF WORK TO BE CONTRACTED DURING CONSTRUCTION SHALL BE REPEATED BY THE CONTRACTOR WITH PRODUCTS AND MATERIALS THAT MATCH EXISTING.
8. EXISTING LIGHTS TO BE REUSED AND REMAIN IN PLACE. CONTRACTOR TO SUPPORT LIGHTS ABOVE CEILING DURING ANY CEILING REMOVAL.
9. WHERE ITEMS ARE REMOVED PATCH WALLS, CEILING, OR FLOOR AS APPLICABLE TO MATCH EXISTING FINISHES.
10. EXISTING SECURITY SYSTEM AND DEVICES TO REMAIN IN PLACE AND ACTIVE DURING CONSTRUCTION. ANY DEVICES IN CEILING TO BE REMOVED AND REPLACED TO BE TESTED AND SUPPORTED BY THE CONTRACTOR TO REMAIN TIGHT TO THE CEILING WITH SAS.
11. CEILING ALL EXISTING REUSED SUPPLY, RETURN, AND EXHAUST AIR GRILLES FREE OF ALL DUST AND DEBRIS. PAINT ALL EXISTING SUPPLY AND RETURN AIR GRILLES WHERE SIGNS OF RUST ARE NOTED ON EXISTING GRILLES TO MATCH EXISTING COLOR OF GRILLE.
12. NEW TEMPERATURE SENSOR TO BE INSTALLED WHERE OLD SENSOR WAS REMOVED, WHEN IN COMPLIANCE WITH ADA HEIGHT REQUIREMENTS. WHEN NOT IN COMPLIANCE PROVIDE ADA COMPLIANT ADA HEIGHT AND PROVIDE STAINLESS STEEL COVER PLATE OVER EXISTING WALL OPENING. RE-USE EXISTING WIRING WPATHWAY TO ACCESSIBLE CEILING, UP TO ROOF. PATCH, REPAIR AND PAINT WALL AS NEEDED.
13. PROVIDE FLOOR PROTECTION IN ALL AREAS OF THE DEMOLITION AND NEW WORK THROUGHOUT BUILDING FROM WORK AREA TO EXTERIOR. FLOORING PROTECTION TO BE FULL WIDTH OF CORRIDOR AND STAIRWELL TO BE RAM BOARD OR EQUAL TYPE FLOOR PROTECTION.

ALTERNATE NOTES BY SYMBOL '○':

① NEW VFD IN PLACE OF EXISTING. PATCH, REPAIR, AND PAINT WALL TO MATCH EXISTING AS NEEDED AFTER NEW VFD INSTALLATION.

2024.07.03

ISSUES

01

[illegible]

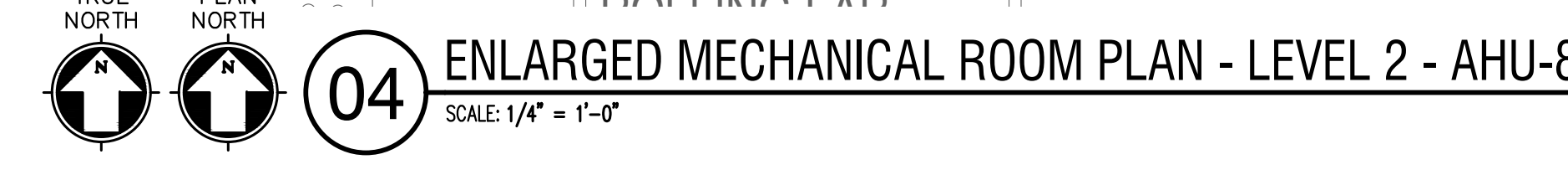
**WALNUT GROVE MS
CHILLER REPLACEMENT**
MIDLOTHIAN I.S.D.
990 Walnut Grove Rd, Midlothian, TX 76065

ENLARGED FLOOR
PLANS - LEVEL 1 -
HVAC

JOB NO.: 24040-00
DRAWN BY: BM
CHECKED BY: HV

SHEET NO.

M1.02



1. RECTANGULAR SUPPLY AIR DUCTWORK IS TO BE LINED WITH 1/2" THICK ACOUSTICAL AND THERMAL LINER FOR THE FIRST 10'-0" FROM THE UNIT AND EXTERNALLY WRAPPED WITH MINIMUM 2" INSULATION AFTER THE FIRST 10'-0" TO MEET THE 2018 IECC REQUIREMENTS. RECTANGULAR RETURN DUCT SHALL BE LINED WITH 1" LINER FOR THE FIRST 10'-0" FROM THE UNIT AND EXTERNALLY WRAPPED WITH MINIMUM 2" INSULATION AFTER THE FIRST 10'-0". ALL TRANSFER AIR DUCTS ARE TO BE INTERNALLY LINED WITH 1" LINER. DUCTWORK SECTIONS SHOWN ARE NET INTERNAL AIR STREAM DIMENSIONS. SHEET METAL SIZES ARE TO BE INCREASED IN SIZE TO MAINTAIN THESE INTERNAL CLEAR DIMENSIONS. ROUND DUCTWORK IS TO BE EXTERNALLY WRAPPED. FLEXIBLE ROUND DUCT SHALL HAVE A MINIMUM R-VALUE OF 5.0.
2. BRANCH RUN-OUTS TO CEILING MOUNTED AIR DEVICES SHALL BE SAME SIZE AS NECK, UNLESS NOTED OTHERWISE. PROVIDE 1/2" MINIMUM FLARED END WITH MINIMUM 2" INSULATION. CLEAN AND WASH AIR DEVICES. EXTEND FLEXIBLE DUCTWORK A MAXIMUM OF 5'-0" FROM DIFFUSERS, INSTALL STRAIGHT AS POSSIBLE WITH LONG RADII BENDS WITH CLAMPS TO BE USED AT BOTH ENDS.
3. ALL DUCTWORK AND PIPING SHALL BE RUN CONCEALED ABOVE CEILINGS AS HIGH AS POSSIBLE & CONCEALED IN WALLS, CHASES, OR FURRUTS IN GENERAL LOCATIONS SHOWN, UNLESS NOTED OTHERWISE.
4. LOCATE CEILING MOUNTED AIR DEVICES APPROXIMATELY WHERE SHOWN. VERIFY EXISTING CEILING TYPES TO CONFIRM FRAME MOUNTING TYPES REQUIRED. ALL CEILING DIFFUSERS TO BE FOUR-WAY TYPE UNLESS NOTED OTHERWISE BY AIR FLOW ARROWS ON FLOOR PLAN.
5. EXISTING AND NEW DIFFUSERS FOR ALL DUCTWORK CONNECTED TO UNITS REPLACED OR ADDED TO BE BALANCED TO NEW AIR FLOW VALUES SHOWN. TAB FIRM CONTRACTED DIRECTLY WITH OWNER.
6. WHERE EXISTING DUCTWORK IS REMOVED AND NOT REUSED, INSTALL INSULATED CAPS AND SEAL AIR TIGHT.
7. REMOVE EXISTING CEILING GRID AND TILE AS NEEDED TO REMOVE EXISTING AND INSTALL NEW DUCTWORK, PIPING, AND PIPING. EXISTING CEILING TILE AND GRID WHERE POSSIBLE, STORE AND STACK EXISTING TILE FOR REUSE AND PROTECT. WHERE NECESSARY, REMOVE AND DISPOSE OF EXISTING TILE. REUSE EXISTING TILE WHERE NOT NEW AND EXISTING CEILING TILE IN THE SAME SPACE. ALL NEW CEILING HEIGHTS TO MATCH EXISTING CEILING HEIGHTS. ANY CEILINGS TO REMAIN THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR WITH PRODUCTS AND MATERIALS THAT MATCH EXISTING.
8. CEILING LIGHTS TO BE REUSED AND REMAIN IN PLACE. CONTRACTOR TO SUPPORT LIGHTS ABOVE CEILING DURING CEILING REMOVAL.
9. WHERE ITEMS ARE REMOVED PATCH WALLS, CEILING, OR FLOOR AS APPLICABLE TO MATCH EXISTING FINISHES.
10. EXISTING SECURITY SYSTEM AND DEVICES TO REMAIN IN PLACE AND ACTIVE DURING CONSTRUCTION. ANY DEVICES IN CEILINGS TO BE REMOVED AND REPLACED TO BE TEMPORARILY SUPPORTED. ALL SECURITY SCOPE OF WORK TO BE CONTRACTED WITH S&S.
11. CLEAN ALL EXISTING REUSED SUPPLY, RETURN, AND EXHAUST AIR GRILLES FREE OF ALL DUST AND DEBRIS. PAINT ALL EXISTING SUPPLY AND RETURN AIR GRILLES WHERE SIGNS OF RUST ARE NOTED ON EXISTING GRILLES TO MATCH EXISTING COLOR OF GRILLE.
12. NEW TEMPERATURE SENSOR TO BE INSTALLED WHERE OLD SENSOR WAS REMOVED, WHEN IN COMPLIANCE WITH ADA HEIGHT REQUIREMENTS, WHEN NOT IN COMPLIANCE PROVIDE NEW SENSOR AT ADA HEIGHT AND PROVIDE STAINLESS STEEL COVER PLATE OVER EXISTING WALL OPENING. RE-USE EXISTING WIRING PATHWAY TO ACCESSIBLE CEILING, UP TO ROOF. PATCH, REPAIR AND PAINT WALL AS NEEDED.
13. PROVIDE FLOOR PROTECTION IN ALL AREAS OF THE DEMOLITION AND NEW WORK THROUGHOUT BUILDING FROM WORK AREA TO EXTERIOR. FLOOR PROTECTION TO BE FULL WIDTH OF CORRIDOR AND STAIRWELL TO BE RAIN BOARD OR EQUIV. TYPE FLOOR PROTECTION.

① NEW VFD IN PLACE OF EXISTING. PATCH, REPAIR, AND PAINT WALL TO MATCH EXISTING AS NEEDED AFTER NEW VFD INSTALLATION.

[illegible]

**WALNUT GROVE MS
CHILLER REPLACEMENT**
MIDLOTHIAN I.S.D.
990 Walnut Grove Rd, Midlothian, TX 76065

SHEET NO.

M2.01

- ① NEW AIR SEPARATOR TO BE INSTALLED.
- ② NEW CENTRIFUGAL CHILLER TO BE INSTALLED

01 CHILLED WATER FLOW DIAGRAM
SCHEMATIC ONLY

02 CONDENSER WATER FLOW DIAGRAM



VFD SCHEDULE -- RELIEF FANS														
DATA GENERAL	DESIGNATION	VFD-RF-1	VFD-RF-2	VFD-RF-3	VFD-RF-4	VFD-RF-5	VFD-RF-6	VFD-RF-7	VFD-RF-8	VFD-RF-9	VFD-RF-10	VFD-RF-11	VFD-RF-12	
	EQUIPMENT SERVED	RF-1	RF-2	RF-3	RF-4	RF-5	RF-6	RF-7	RF-8	RF-9	RF-10	RF-11	RF-12	
	LOCATION	MECH B110	MECH C210	MECH A109	MECH B210	MECH A210	MECH A211	MECH D104	MCH D204	MECH F103	MEZZANINE E201	MEZZANINE E201	MEZZANINE E201	
	MODEL	ACH580-VCR-03A5-4	ACH580-VCR-03A5-4	ACH580-VCR-03A5-4	ACH580-VCR-03A5-4	ACH580-VCR-03A5-4	ACH580-VCR-03A5-4	ACH580-VCR-03A5-4	ACH580-VCR-03A5-4	ACH580-VCR-04A8-4	ACH580-VCR-03A5-4	ACH580-VCR-04A8-4	ACH580-VCR-07A6-4	ACH580-VCR-02A1-4
	MANUFACTURER	ABB	ABB	ABB	ABB	ABB	ABB	ABB	ABB	ABB	ABB	ABB	ABB	ABB
EQUIPMENT SERVED DATA	POWER (HP)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	3.0	5.0	1.0	
	VOLTS/Ph/Hz	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	
REMARKS		1	1	1	1	1	1	1	1	1	1	1	1	
1. PROVIDE VFD WITH MANUFACTURER FURNISHED SERVICE SWITCH.														

VFD SCHEDULE –COOLING TOWER FANS			
DATA GENERAL	DESIGNATION	VFD–CT–1	VFD–CT–2
	EQUIPMENT SERVED	CT–1 FAN MOTOR	CT–2 FAN MOTOR
	LOCATION	COOLING TOWER YARD	COOLING TOWER YARD
	MODEL	ACH580–VCR–014A–4	ACH580–VCR–014A–4
	MANUFACTURER	ABB	ABB
EQUIPMENT SERVED DATA	POWER (HP)	10.0	10.0
	VOLTS/Ph/Hz	460/3/60	460/3/60
REMARKS		1, 2, 3	1, 2, 3
1. PROVIDE VFD WITH MANUFACTURER FURNISHED SERVICE SWITCH. 2. VFD TO BE OF NEMA 3R CONSTRUCTION RATED FOR OUTDOOR INSTALLATION. 3. PROVIDE SUN SHIELD FOR VFD.			

AIR SEPARATOR SCHEDULE	
DESIGNATION	A-1
LOCATION	CENTRAL PLANT
SERVICE	CHILLED WATER
ORIENTATION	VERTICAL
TYPE	BLADDER
SYSTEM FLOW, GPM	353
WEIGHT, LBS	570
MAXIMUM WATER PRESSURE DROP, FT	0.4
MANUFACTURER	BELL & GOSSETT
MODEL	RL-6F
COMMENTS	
1. AIR SEPARATOR TO BE SUSPENDED FROM CEILING.	

MECHANICAL/PLUMBING LEGEND	
	CHILLED WATER SUPPLY
	CHILLED WATER RETURN
	HEATING WATER SUPPLY
	HEATING WATER RETURN
	CONDENSER WATER SUPPLY
	CONDENSER WATER RETURN
	DOMESTIC HOT WATER SUPPLY
	DOMESTIC HOT WATER RETURN
	DOMESTIC COLD WATER
	REFRIGERANT SUCTON
	REFRIGERANT LIQUID
	CONDENSATE DRAIN
	AUXILIARY DRAIN LINE
	DRAIN LINE
	EXPANSION LINE
	CHEMICAL SUPPLY
	CHEMICAL RETURN
	FLOW IN DIRECTION OF ARROW
	SLOPE DOWN IN DIRECTION OF ARROW
	RISE AND DROP IN PIPING
	STRAINER WITH BLOWDOWN VALVE
	GATE VALVE
	BUTTERFLY VALVE
	UNION
	BALL VALVE
	PLUG VALVE
	CHECK VALVE
	FLOW SWITCH
	AUTOMATIC 3-WAY CONTROL VALVE
	AUTOMATIC 2-WAY VALVE
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	GAUGE COCK
	PRESSURE GAUGE WITH GAUGE COCK
	THERMOMETER
	P/T PORT
	CAP
	AUTOMATIC AIR VENT
	RISE AND DROP IN PIPING
	THERMOWELL
	THERMOSTAT/TEMPERATURE SENSOR
	HUMIDITY SENSOR
	CARBON DIOXIDE SENSOR
	DUCT SMOKE DETECTOR
	WALL SWITCH
	WALL SWITCH WITH PUSH BUTTON
	SUPPLY AIR ARROW
	RETURN AIR ARROW
	RISE IN DUCT
	DROP IN DUCT
	SUPPLY DUCT
	RETURN OR EXHAUST DUCT
	MANUAL DAMPER
	MOTORIZED DAMPER
	CONNECT TO EXISTING
	EXISTING WORK TO REMAIN
	EXISTING WORK TO BE REMOVED
	NEW WORK
	DOMESTIC COLD WATER (CW)
	DOMESTIC HOT WATER (HW)
	DOMESTIC HOT WATER RETURN (HWR)
	140°F DOMESTIC HOT WATER (HW)
	140°F DOMESTIC HOT WATER RETURN (HWR)
	GAS PIPE
	FLOOR DRAIN
	ROOF PIPE SUPPORT
	GAS COCK
NOTE: NOT ALL SYMBOLS ARE USED	



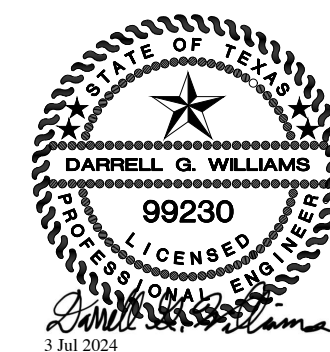
RWB
Consulting Engineers
12222 Merit Dr
Suite 400
Dallas, TX 75251
TX Firm # F-2176
(972) 788-4222
Project 240-00.00

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**WALNUT GROVE MS
CHILLER REPLACEMENT**
MIDLOTHIAN I.S.D.
990 Walnut Grove Rd, Midlothian, TX 76065

JOB NO.: 24040-00 DRAWN BY: BM CHECKED BY: HV
SHEET NO.

M4.01



ISSUES

[illegible]

	REVISIONS
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**WALNUT GROVE MS
CHILLER REPLACEMENT**
MIDLOTHIAN I.S.D.
990 Walnut Grove Rd, Midlothian, TX 76065

DEMOLITION FLOOR
PLAN - CENTRAL
UTILITY PLANT -
ELECTRICAL

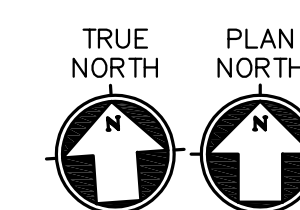
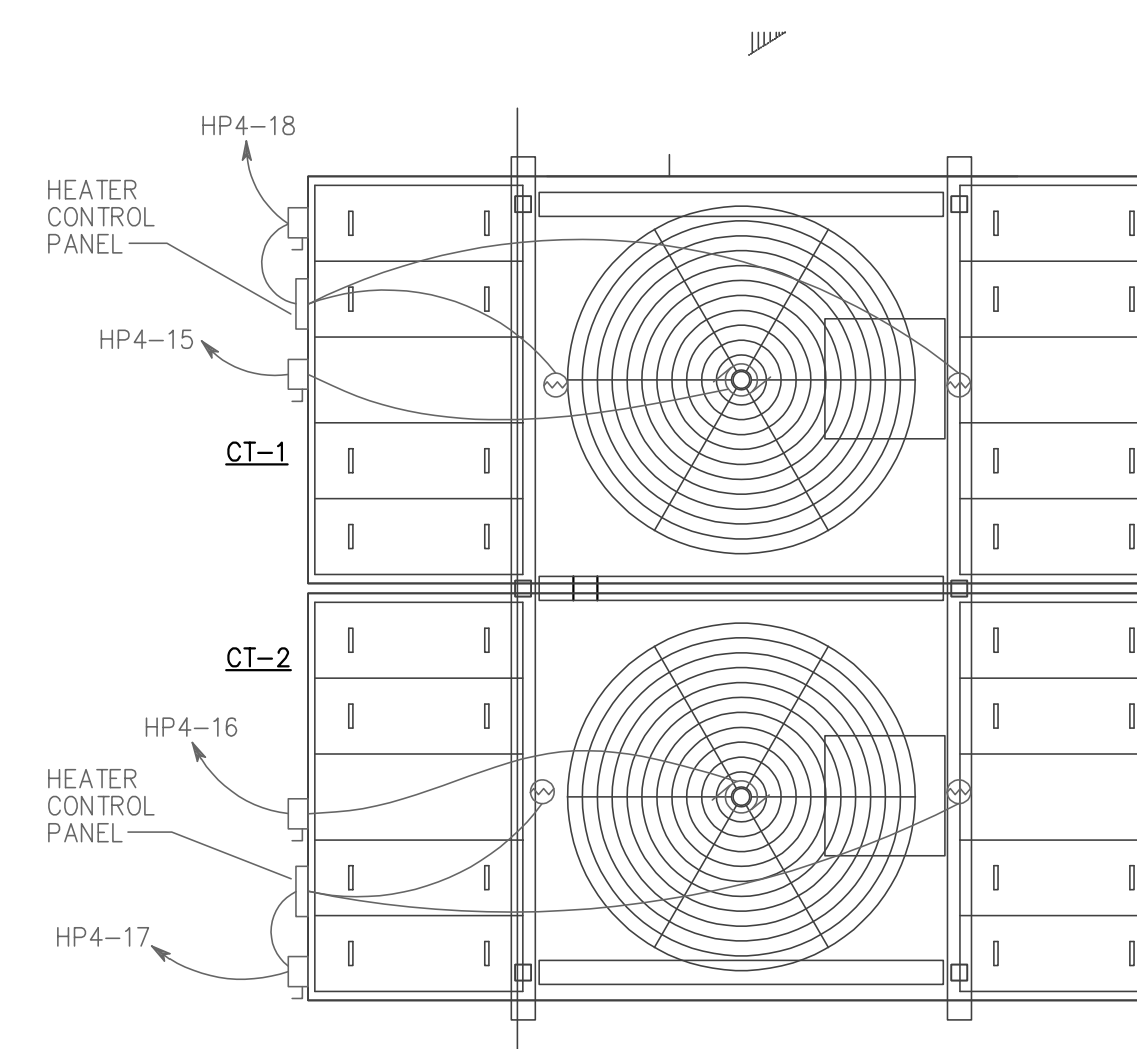
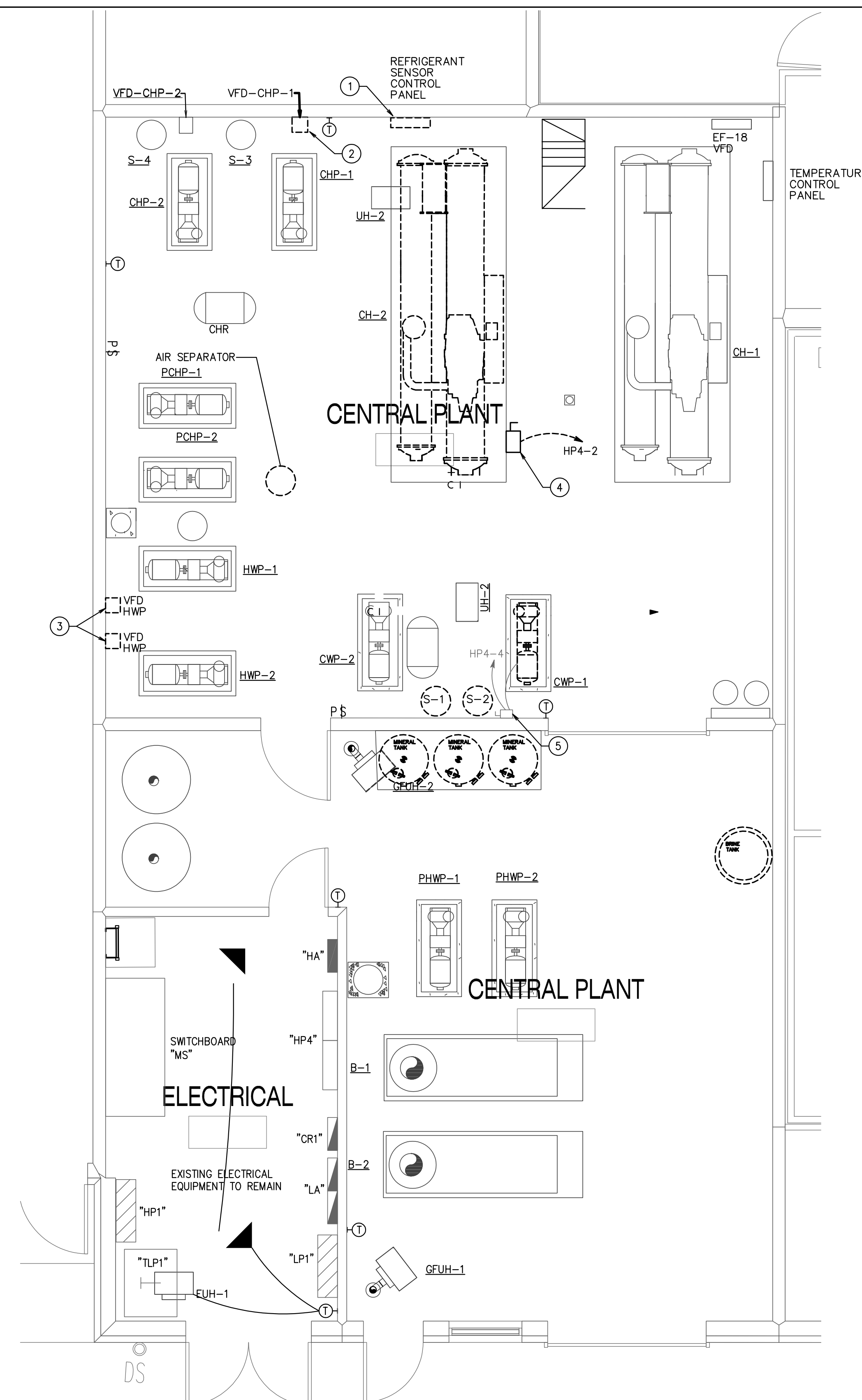
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DRAWN BY: BM
CHECKED BY: HV

SHEET NO.

DE1.01

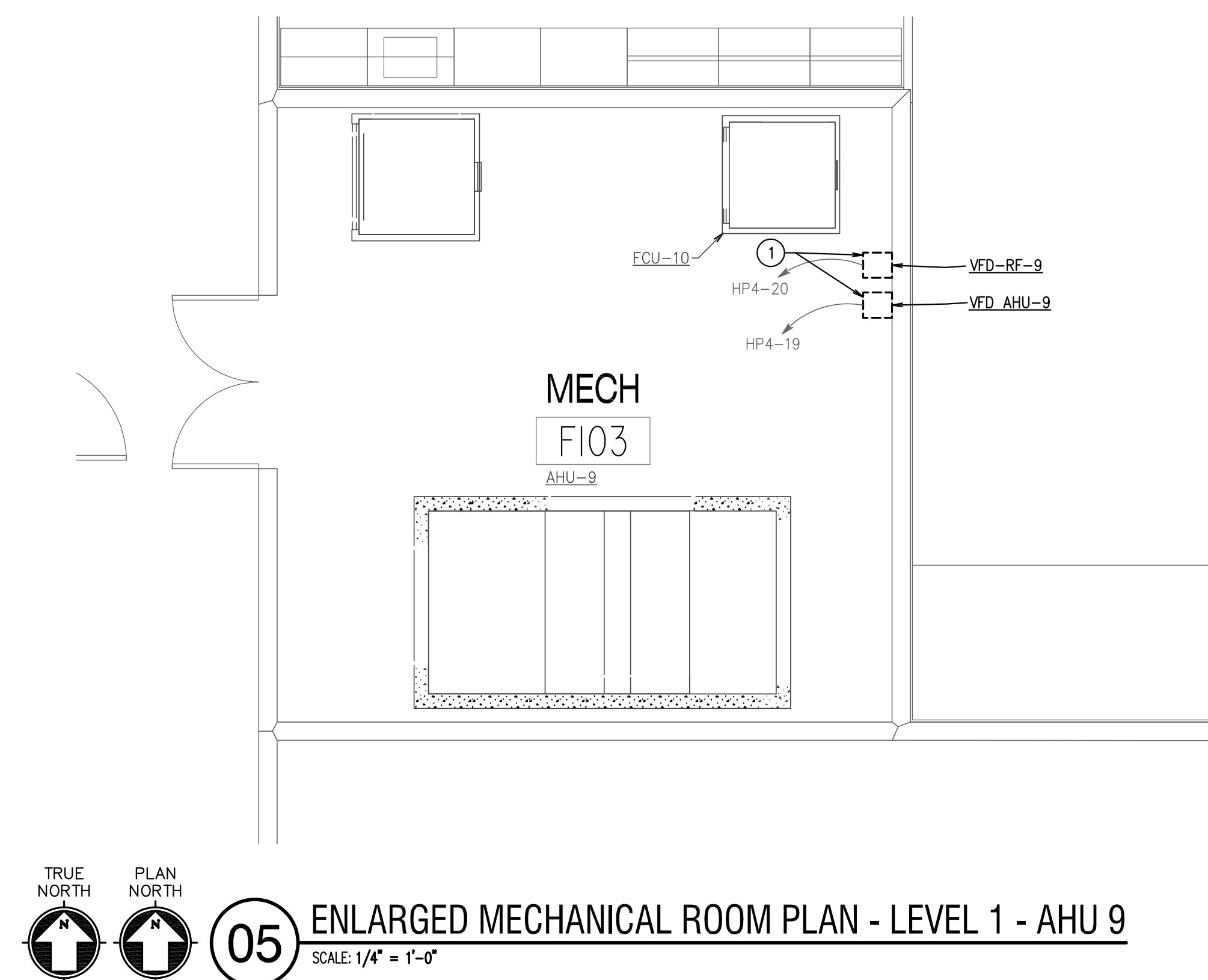
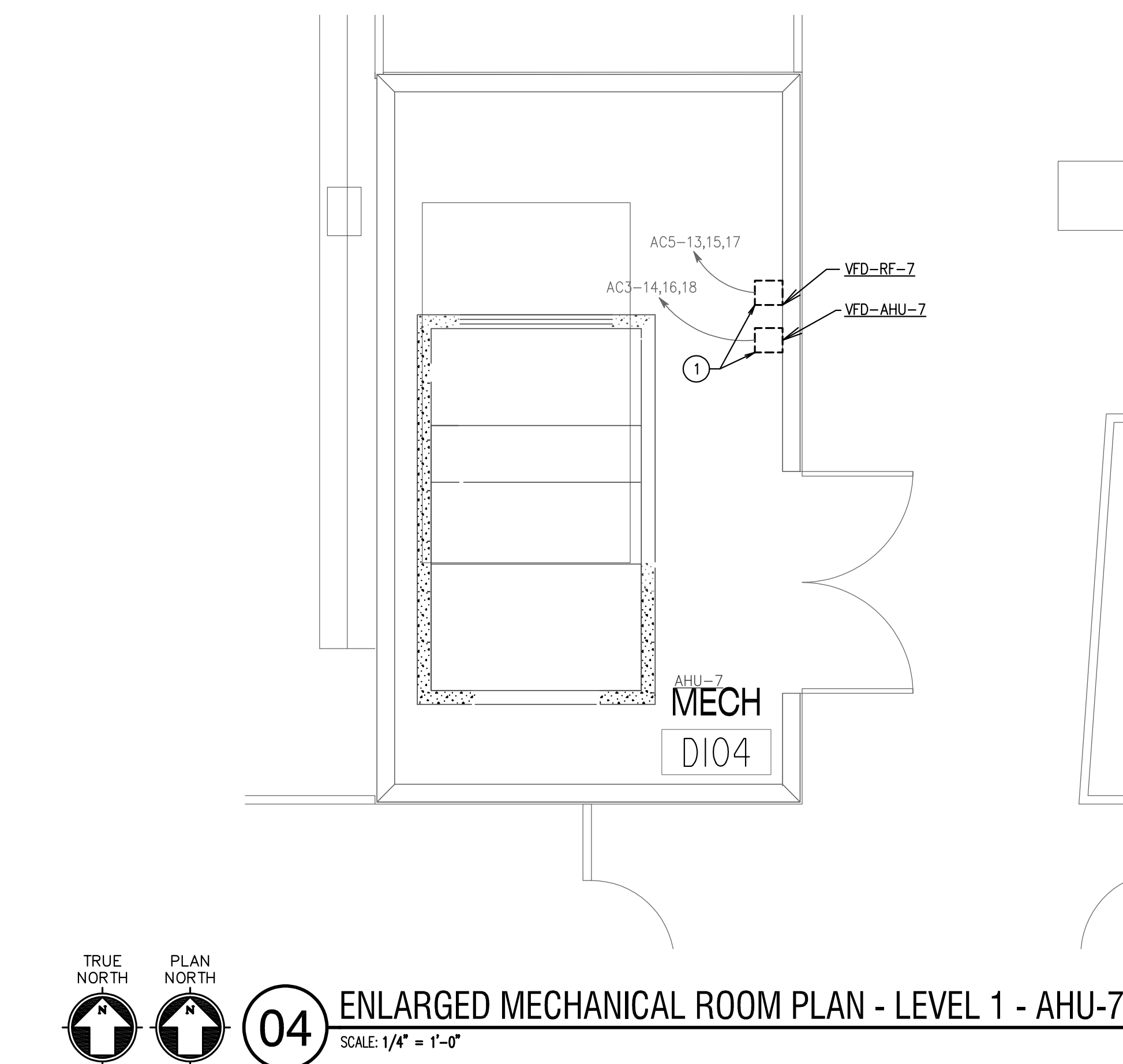
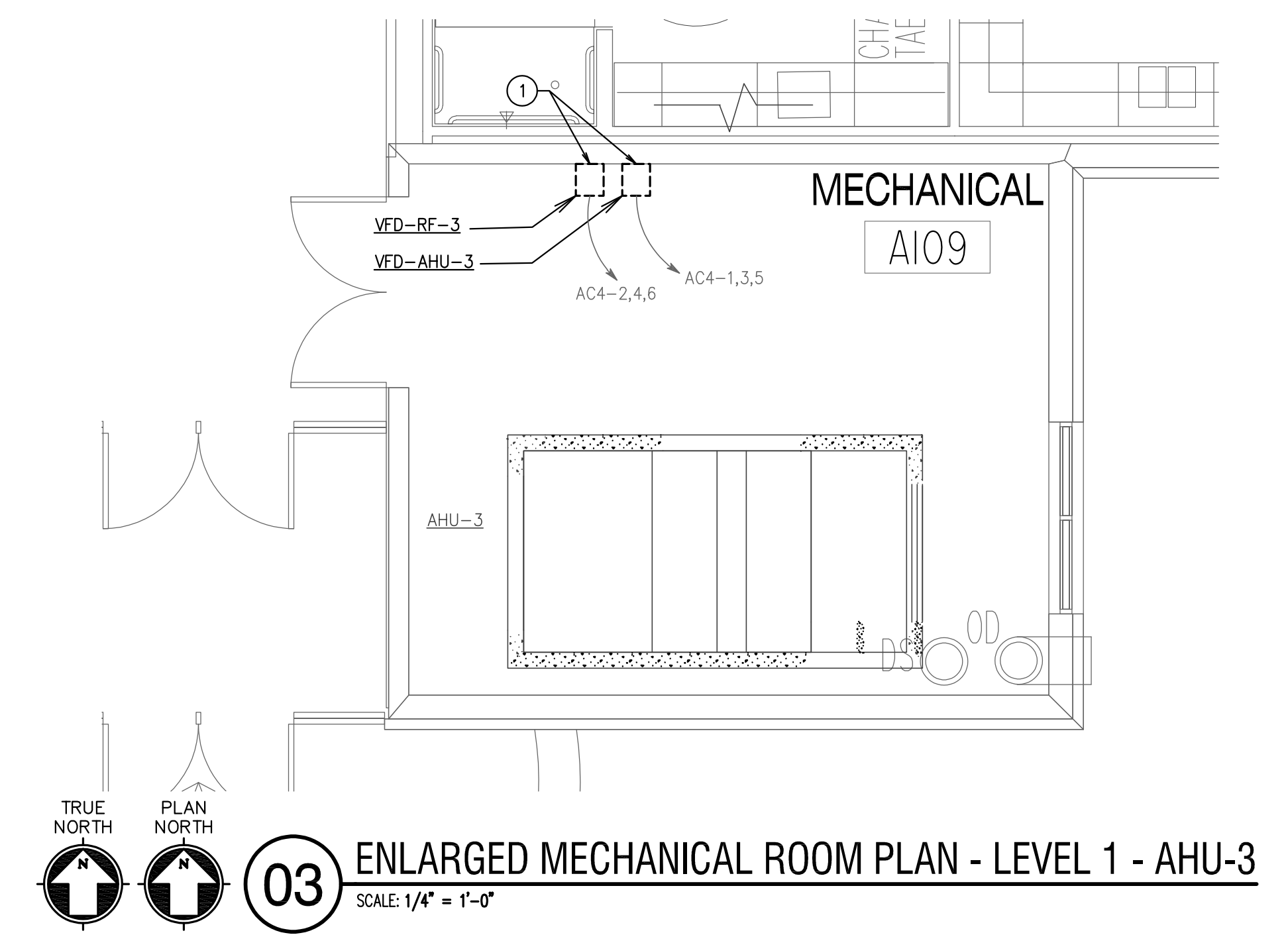
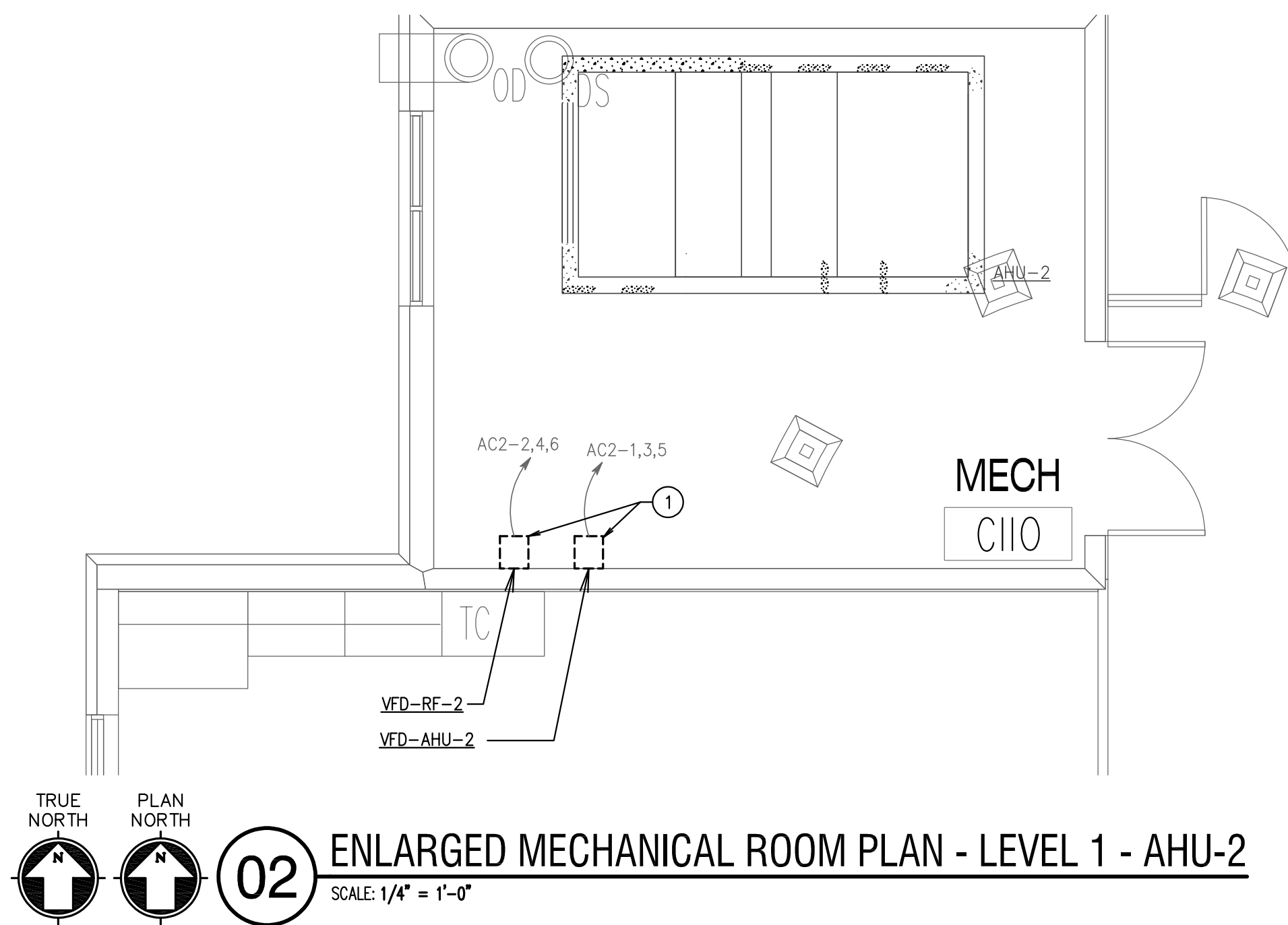
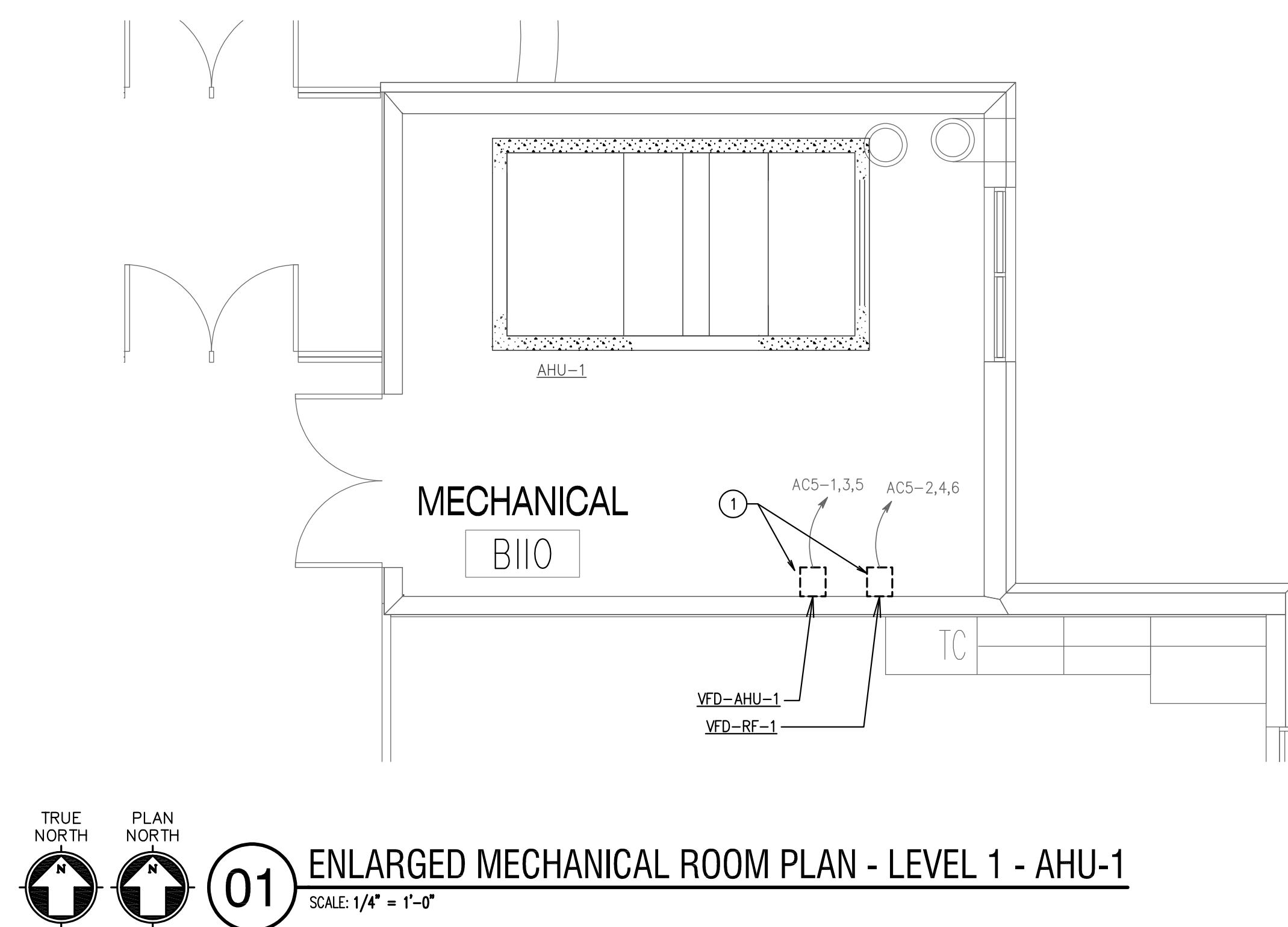
1. THE INFORMATION ON THE DEMOLITION DRAWINGS ARE NOT FROM "AS-BUILT" DRAWINGS BUT FROM ORIGINAL DRAWINGS. THIS INFORMATION IS INCLUDED FOR REFERENCE ONLY. THE CONTRACTOR WILL BE RESPONSIBLE FOR VISITING THE SITE PRIOR TO SUBMITTING A BID TO DETERMINE THE AMOUNT OF WORK TO BE DONE. THEREAFTER, CONTRACTOR SHALL EXAMINE THE EXISTING BUILDING AND GENERALLY VERIFY THE LOCATION OF ALL EXISTING WORK AND BECOME INFORMED AS TO THE RELATION TO, AND EFFECT ON, THE WORK REQUIRED BEFORE SUBMITTING AN OFFER FOR ADMISSION. THERE SHALL BE NO EVIDENCE THAT THE CONTRACTOR HAS INSPECTED THE SITE OF THE PROPOSED WORK.
2. EXISTING MPE ITEMS TO BE REMOVED SHALL BE RETURNED TO THE OWNER OR DISPOSED OF AS DIRECTED BY THE DESIGNATED OWNER'S REPRESENTATIVE.
3. COORDINATE DEMOLITION WORK WITH THE BUILDING MAINTENANCE PERSONNEL AND OTHER TRADES PERFORMING WORK IN THE BUILDING PRIOR TO THE REMOVAL OF ANY ITEMS OF EQUIPMENT OR SYSTEMS THAT ARE TO BE REMOVED. THE SYSTEMS WITHIN THE BUILDING UNDER CONSTRUCTION OR OTHER AREAS OF THE BUILDING, THE BUILDING WILL BE OCCUPIED DURING CONSTRUCTION, AND, THEREFORE, UTILITIES MUST REMAIN IN OPERATION AT ALL TIMES. ANY REQUIRED OUTAGES MUST BE COORDINATED WITH THE OWNER.
4. PRIOR TO THE REMOVAL OF ANY MPE ITEMS OR EQUIPMENT, CONTRACTOR MUST VERIFY THE LOCATION OF TERMINATION OF THOSE SYSTEMS AND CONFIRM THAT THE ITEMS BEING REMOVED DO NOT SERVE ANY ITEMS THAT ARE TO REMAIN (INCLUDING THOSE IN AREAS OUTSIDE THE CONTRACT LIMITS).
5. CONTRACTOR SHALL CONTACT CONTROLS SYSTEM INSTALLER BEFORE ANY DEMOLITION WORK IS STARTED TO ALLOW THEM TO TAG & IDENTIFY ITEMS TO REMAIN AND BE PROTECTED AND ITEMS TO BE REMOVED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL ELEMENTS OF THE EXISTING CONTROLS SYSTEM THAT SHALL BE CAREFULLY REMOVED AND GIVEN TO THE OWNER SUCH AS EXISTING TEMPERATURE SENSORS THAT WILL NOT BE RE-USED. ALL EXISTING CONTROLS EQUIPMENT, INCLUDING TEMPERATURE SENSORS SHALL BE CAREFULLY REMOVED, SHRINK WRAPPED, PALLETIZED, AND PROVIDED TO OWNER FOR THEIR USE.
6. DO NOT ABANDON ANY ITEMS IN PLACE. REMOVE ALL COMPONENTS ASSOCIATED WITH EACH ITEM CALLED OUT TO BE REMOVED. WHERE ITEMS ARE REMOVED PATCH/REPLACE ROOF, WALLS, CEILING OR FLOOR, AS APPLICABLE, TO MATCH EXISTING FINISHES, WHERE NEW FINISHES ARE REQUIRED, MATCH EXISTING PATCH/REPAIR FINISHES.
7. ALL EXISTING FIRE ALARM, SECURITY AND OTHER CEILING MOUNTED DEVICES TO REMAIN IN OPERATION DURING CONSTRUCTION AND BE RE-INSTALLED AS NEEDED. TEMPORARILY SUPPORT AS NEEDED.
8. ALL EXISTING LIGHTS ARE TO BE REUSED AND REMAIN IN PLACE, UNLESS NOTED OTHERWISE. CONTRACTOR TO SUPPORT LIGHTS ABOVE CEILING DURING ANY CEILING DEMOLITION.
9. THE MECHANICAL CONTRACTOR / DEMOLITION CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR REGARDING THE SCOPE OF DEMOLITION FOR ELECTRICAL CONNECTIONS. THOSE UNITS BEING REMOVED SHALL BE SAFELY DISCONNECTED FROM EXISTING POWER.
10. CONTRACTOR SHALL COORDINATE REMOVAL OF EXISTING UNITS WITH DISTRICT, ALLOWING THE DISTRICT TO REMOVE ANY EXISTING UNIT COMPONENTS FOR SPARE STOCK.
11. PROVIDE FLOOR PROTECTION IN ALL AREAS OF DEMOLITION AND NEW WORK THROUGHOUT THE BUILDING FROM WORK AREA TO EXTERIOR. FLOORING PROTECTION TO BE FULL WIDTH OF CORRIDOR AND BE RAM BOARD OR EQUAL TYPE FLOOR PROTECTION WORK.

- ① DISCONNECT POWER TO EXISTING REFRIGERANT MONITORING STATION TO BE DEMOLISHED AND REPLACED WITH NEW. PREPARE CIRCUIT FOR REUSE.
- ② DISCONNECT POWER TO EXISTING CHP-1 VFD TO BE DEMOLISHED AND REPLACED WITH NEW. PREPARE CIRCUIT FOR REUSE.
- ③ EXISTING HWP-1 & HWP-2 VFDs TO BE DEMOLISHED AND REPLACED WITH NEW.
- ④ DISCONNECT POWER TO EXISTING SCREW CHILLER TO BE DEMOLISHED AND REPLACED WITH A NEW CENTRIFUGAL CHILLER. PREPARE CIRCUIT FOR REUSE.
- ⑤ DISCONNECT POWER TO EXISTING CWP-1 TO BE REMOVED TO ALLOW FOR THE REMOVAL OF THE EXISTING CHILLER AND THE INSTALLATION OF THE NEW CHILLER. PREPARE CIRCUIT FOR RECONNECTION.



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DEMOLITION FLOOR PLAN - CENTRAL UTILITY PLANT - ELECTRICAL



Drawing: 240400 - MIDLOTHIAN I.S.D. WALNUT GROVE MS CHILLER REPLACEMENT SHEETS 001-006, 008-012, 014-015, 017-018, 020-021, 023-024, 026-027, 029-030, 032-033, 035-036, 038-039, 041-042, 044-045, 047-048, 050-051, 053-054, 056-057, 059-060, 062-063, 065-066, 068-069, 071-072, 074-075, 077-078, 080-081, 083-084, 086-087, 089-090, 092-093, 095-096, 098-099, 101-102, 104-105, 107-108, 110-111, 113-114, 116-117, 119-120, 122-123, 125-126, 128-129, 131-132, 134-135, 137-138, 140-141, 143-144, 146-147, 149-150, 152-153, 155-156, 158-159, 161-162, 164-165, 167-168, 170-171, 173-174, 176-177, 179-180, 182-183, 185-186, 188-189, 191-192, 194-195, 197-198, 200-201, 203-204, 206-207, 209-210, 212-213, 215-216, 218-219, 221-222, 224-225, 227-228, 230-231, 233-234, 236-237, 239-240, 242-243, 245-246, 248-249, 251-252, 254-255, 257-258, 260-261, 263-264, 266-267, 269-270, 272-273, 275-276, 278-279, 281-282, 284-285, 287-288, 290-291, 293-294, 296-297, 299-300, 302-303, 305-306, 308-309, 311-312, 314-315, 317-318, 320-321, 323-324, 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SUES

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REVISIONS



ORIENTATION FLOOR
PLAN - LEVEL 1 -
ELECTRICAL

NO.: 24040-00

SHEET NO.

E1.00

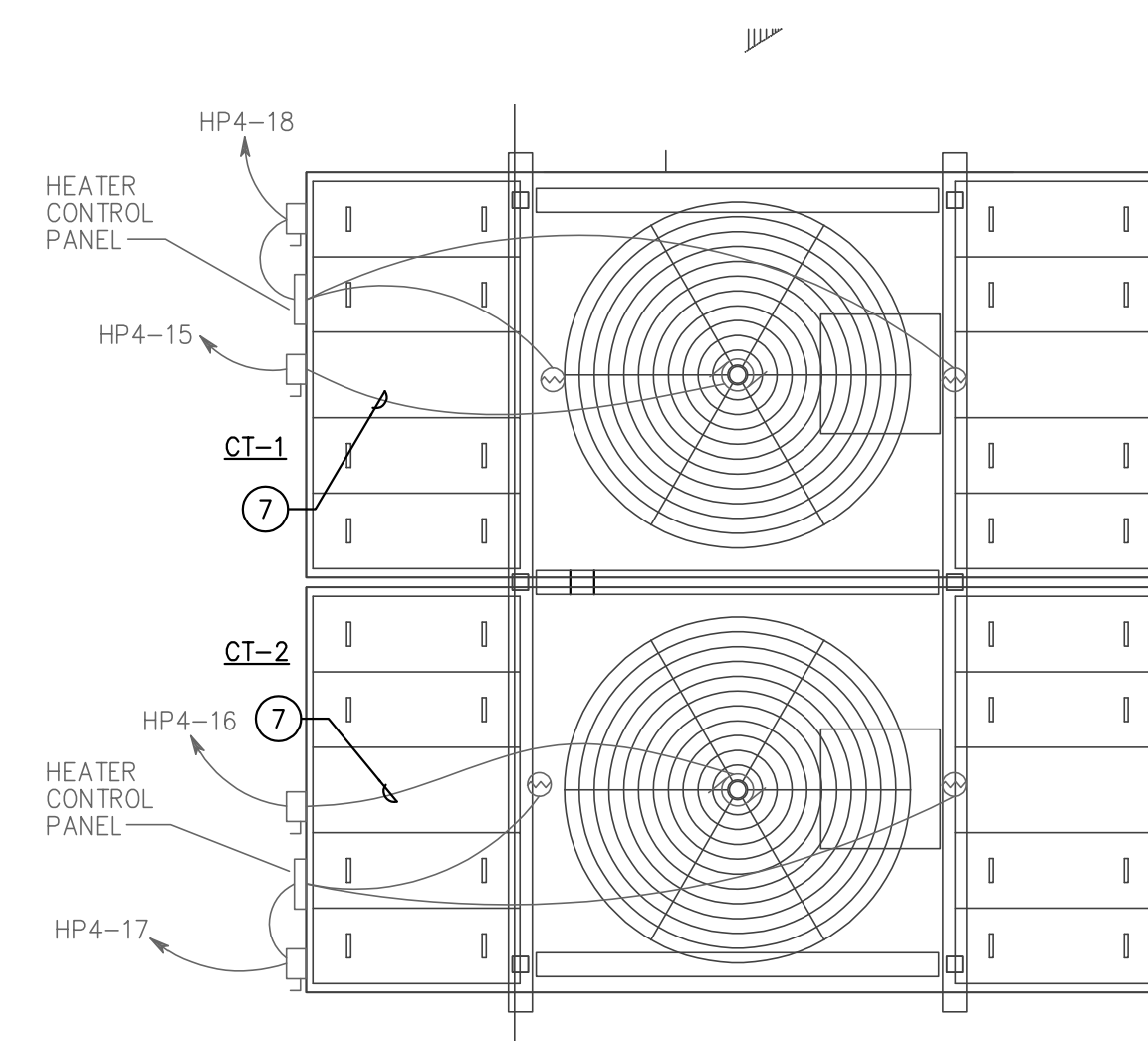


Drawing P: \24040 - MIDLOTHIAN ISD WALNUT GROVE MS CHILLER\DRAWINGS\CAD\SHEETS\ET.00.DWG; Plot By PEDRO TREJO; Plot Date: 7/3/2024 4:12 PM; Plot Scale: 1:1; Paper Size: OCE 30" 30x42 IN

[illegible]

FLOOR PLAN -
CENTRAL UTILITY
PLANT - ELECTRICAL

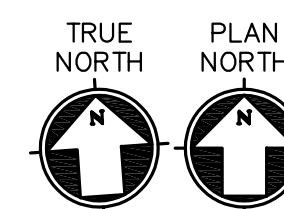
E1.01



1. ALL WORK SHALL COMPLY WITH APPLICABLE NATIONAL, STATE AND LOCAL CODES, RULES, REGULATIONS AND REQUIREMENTS OF THE SERVICE UTILITY COMPANY.
2. ALL WORK SHALL COMPLY WITH THE BUILDING OWNER'S CONSTRUCTION GUIDELINES.
3. ALL CIRCUITS SHOWN SHALL BE 120V, 20A CIRCUITS UNLESS NOTED OTHERWISE.
4. ALL CONDUCTORS SHALL BE #12 AWG UNLESS NOTED OTHERWISE.
5. ALL 120V RUNS LONGER THAN 60' SHALL BE #10 AWG UNLESS NOTED OTHERWISE ON THE PLANS.
6. ALL CONDUCTORS SHALL BE COPPER (#10 AND SMALLER SHALL BE SOLID).
7. WHERE CONDUIT SIZES ARE NOTED ON DRAWINGS, THAT CONDUIT SIZE SHALL BE THROUGH THE ENTIRE RUN UNLESS NOTED OTHERWISE.
8. PANELBOARD DIRECTORIES SHALL BE COMPLETELY FILLED OUT TO ACCURATELY IDENTIFY EACH CIRCUIT (EXISTING AND NEW CIRCUITS) IN ALL PANELS WITHIN SCOPE OF WORK. DIRECTORIES SHOULD BE TYPEDWRITTEN.
9. REFER TO MECHANICAL FLOOR PLANS FOR WALL MOUNTED THERMOSTAT, SENSOR AND ALL OTHER CONTROL DEVICE LOCATIONS. PROVIDE FLUSH, GALVANIZED STEEL WALL MOUNTED JUNCTION BOX WITH 3/4" EMT CONDUIT AND NYLON PULL-STRAIGHT TO 4' ABOVE ACCESSIBLE CEILING FOR EACH DEVICE.
10. ALL RECEPTACLES MOUNTED IN KITCHENS, RESTROOMS, AT COUNTERS CONTAINING SINKS, OUTSIDE THE BUILDING OR SERVING VENDING MACHINES SHALL BE GROUND FAULT CIRCUIT INTERRUPTER(GFCI) PROTECTION.
11. ELECTRIC CONNECTIONS TO PANELBOARDS AND BUS DUCTS SHALL BE MADE ONLY WHEN PANELBOARDS OR BUS DUCT HAS BEEN DE-ENERGIZED.
12. ALL ELECTRICAL PANELS AND TRANSFORMERS SHALL HAVE PERMANENT ENGRAVED LABELS ON COVER INDICATING PANEL OR TRANSFORMER DESIGNATION.
13. ELECTRICAL CONTRACTOR SHALL X-RAY SLAB PRIOR TO ANY CORE-DRILLING.
14. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR ALL MOTOR STARTERS AND CONTROL, PANEL LOCATIONS.
15. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL NOTES, SYMBOLS AND DETAILS.

- ① REUSE EXISTING 120 CIRCUIT POWER FOR NEW REFRIGERANT MONITORING STATION.
- ② RECONNECT NEW CHP-1 VFD TO EXISTING 480V/3PH, 80A/3P CIRCUIT BREAKER IN EXISTING PANEL "HP4".
- ③ RECONNECT NEW HWP-1 & HWP-2 VFDs TO EXISTING 480V/3PH, 40A/3P CIRCUIT BREAKERS IN PANEL "HP4". TO BE INSTALLED UNDER ALTERNATE SCOPE.
- ④ GFI DUMP RECEPTACLE MOUNTED AT 36" AFF FOR NEW EASY WATER SYSTEM CONTROLLER. USE AVAILABLE SPACE IN EXISTING PANEL "LA" AND PROVIDE 20A/1P CIRCUIT BREAKER WITH 2P(1.1)20-3/4"C.
- ⑤ RECONNECT NEW CENTRIFUGAL CHILLER TO EXISTING 480V/3PH, 450A/3P CIRCUIT BREAKER IN PANEL "HP4". REUSE EXISTING CONDUIT AND WIRE. ADJUST CONDUIT AND WIRE FOR FINAL CONNECTION TO CHILLER.
- ⑥ RECONNECT EXISTING POWER FOR EXISTING CHP-1 TO BE RE-INSTALLED AFTER THE INSTALLATION OF THE NEW CENTRIFUGAL CHILLER.
- ⑦ RECONNECT NEW 1HP 4P FAN MOTOR TO EXISTING 480V/3PH, 40A/3P CIRCUIT BREAKER IN EXISTING PANEL "HP4". REUSE EXISTING CONDUIT AND WIRE.
- ⑧ ELECTRICAL CONTRACTOR SHALL PROVIDE POWER FROM EXISTING 480V/3PH, 40A/3P CIRCUIT BREAKER IN EXISTING PANEL "HP4" TO NEW VFDs FOR COOLING TOWER FAN. IT IS THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO FIELD TRACE ALL EXISTING FEEDERS AND BRANCH CIRCUIT WIRING FOR COOLING TOWER(S) FROM EXISTING ELECTRICAL DISTRIBUTION EQUIPMENT. CONTRACTOR SHALL FIELD DETERMINE THE BEST LOCATION TO ACCOMMODATE ANY OBSTRUCTIONS PRIOR TO BID OR ROUGH-IN. REPAIR OF EXISTING CABLES TO REMAIN THAT ARE DAMAGED DURING WORK SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. ANY ABANDONED EQUIPMENT, WIRING, AND CONDUITS SHALL BE REMOVED IN THEIR ENTIRETY AS REQUIRED BY CODE. THE CONTRACTOR SHALL PROVIDE NEW PULLBOXES, RACEWAYS, AND CONDUITORS AS REQUIRED TO CONNECT ALL NEW REPLACEMENT HVAC EQUIPMENT. PROVIDE THEIR RESPECTIVE PORTION OF THE ELECTRICAL CIRCUITS MADE AVAILABLE BY DEMOLITION OF OLD HVAC EQUIPMENT.

90% REVIEW - NOT FOR CONSTRUCTION



01

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

Drawing: 24040 - MIDLOTHIAN I&S WALNUT GROVE MS CHILLER REPLACEMENT SHEETS: 01-04, 05-08, 09-12, 13-16, 17-20, 21-24, 25-28, 29-32, 33-36, 37-40, 41-44, 45-48, 49-52, 53-56, 57-60, 61-64, 65-68, 69-72, 73-76, 77-80, 81-84, 85-88, 89-92, 93-96, 97-100, 101-104, 105-108, 109-112, 113-116, 117-120, 121-124, 125-128, 129-132, 133-136, 137-140, 141-144, 145-148, 149-152, 153-156, 157-160, 161-164, 165-168, 169-172, 173-176, 177-180, 181-184, 185-188, 189-192, 193-196, 197-200, 201-204, 205-208, 209-212, 213-216, 217-220, 221-224, 225-228, 229-232, 233-236, 237-240, 241-244, 245-248, 249-252, 253-256, 257-260, 261-264, 265-268, 269-272, 273-276, 277-280, 281-284, 285-288, 289-292, 293-296, 297-300, 301-304, 305-308, 309-312, 313-316, 317-320, 321-324, 325-328, 329-332, 333-336, 337-340, 341-344, 345-348, 349-352, 353-356, 357-360, 361-364, 365-368, 369-372, 373-376, 377-380, 381-384, 385-388, 389-392, 393-396, 397-400, 401-404, 405-408, 409-412, 413-416, 417-420, 421-424, 425-428, 429-432, 433-436, 437-440, 441-444, 445-448, 449-452, 453-456, 457-460, 461-464, 465-468, 469-472, 473-476, 477-480, 481-484, 485-488, 489-492, 493-496, 497-500, 501-504, 505-508, 509-512, 513-516, 517-520, 521-524, 525-528, 529-532, 533-536, 537-540, 541-544, 545-548, 549-552, 553-556, 557-560, 561-564, 565-568, 569-572, 573-576, 577-580, 581-584, 585-588, 589-592, 593-596, 597-600, 601-604, 605-608, 609-612, 613-616, 617-620, 621-624, 625-628, 629-632, 633-636, 637-640, 641-644, 645-648, 649-652, 653-656, 657-660, 661-664, 665-668, 669-672, 673-676, 677-680, 681-684, 685-688, 689-692, 693-696, 697-700, 701-704, 705-708, 709-712, 713-716, 717-720, 721-724, 725-728, 729-732, 733-736, 737-740, 741-744, 745-748, 749-752, 753-756, 757-760, 761-764, 765-768, 769-772, 773-776, 777-780, 781-784, 785-788, 789-792, 793-796, 797-800, 801-804, 805-808, 809-812, 813-816, 817-820, 821-824, 825-828, 829-832, 833-836, 837-840, 841-844, 845-848, 849-852, 853-856, 857-860, 861-864, 865-868, 869-872, 873-876, 877-880, 881-884, 885-888, 889-892, 893-896, 897-900, 901-904, 905-908, 909-912, 913-916, 917-920, 921-924, 925-928, 929-932, 933-936, 937-940, 941-944, 945-948, 949-952, 953-956, 957-960, 961-964, 965-968, 969-972, 973-976, 977-980, 981-984, 985-988, 989-992, 993-996, 997-1000, 1001-1004, 1005-1008, 1009-1012, 1013-1016, 1017-1020, 1021-1024, 1025-1028, 1029-1032, 1033-1036, 1037-1040, 1041-1044, 1045-1048, 1049-1052, 1053-1056, 1057-1060, 1061-1064, 1065-1068, 1069-1072, 1073-1076, 1077-1080, 1081-1084, 1085-1088, 1089-1092, 1093-1096, 1097-1100, 1101-1104, 1105-1108, 1109-1112, 1113-1116, 1117-1120, 1121-1124, 1125-1128, 1129-1132, 1133-1136, 1137-1140, 1141-1144, 1145-1148, 1149-1152, 1153-1156, 1157-1160, 1161-1164, 1165-1168, 1169-1172, 1173-1176, 1177-1180, 1181-1184, 1185-1188, 1189-1192, 1193-1196, 1197-1200, 1201-1204, 1205-1208, 1209-1212, 1213-1216, 1217-1220, 1221-1224, 1225-1228, 1229-1232, 1233-1236, 1237-1240, 1241-1244, 1245-1248, 1249-1252, 1253-1256, 1257-1260, 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ISSUES

[illegible]

ORIENTATION FLOOR
PLAN - LEVEL 2 -
ELECTRICAL

OB NO.: 24040-00
DRAWN BY: BM
CHECKED BY: HV

SHEET NO.

E2.00

