



# LANCASTER MHC HVAC REPLACEMENT

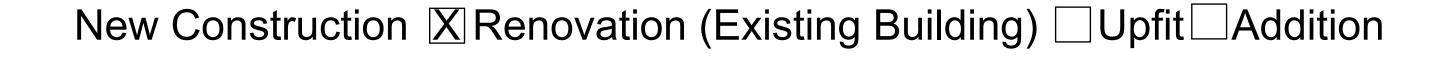
Project # SC-C-L002

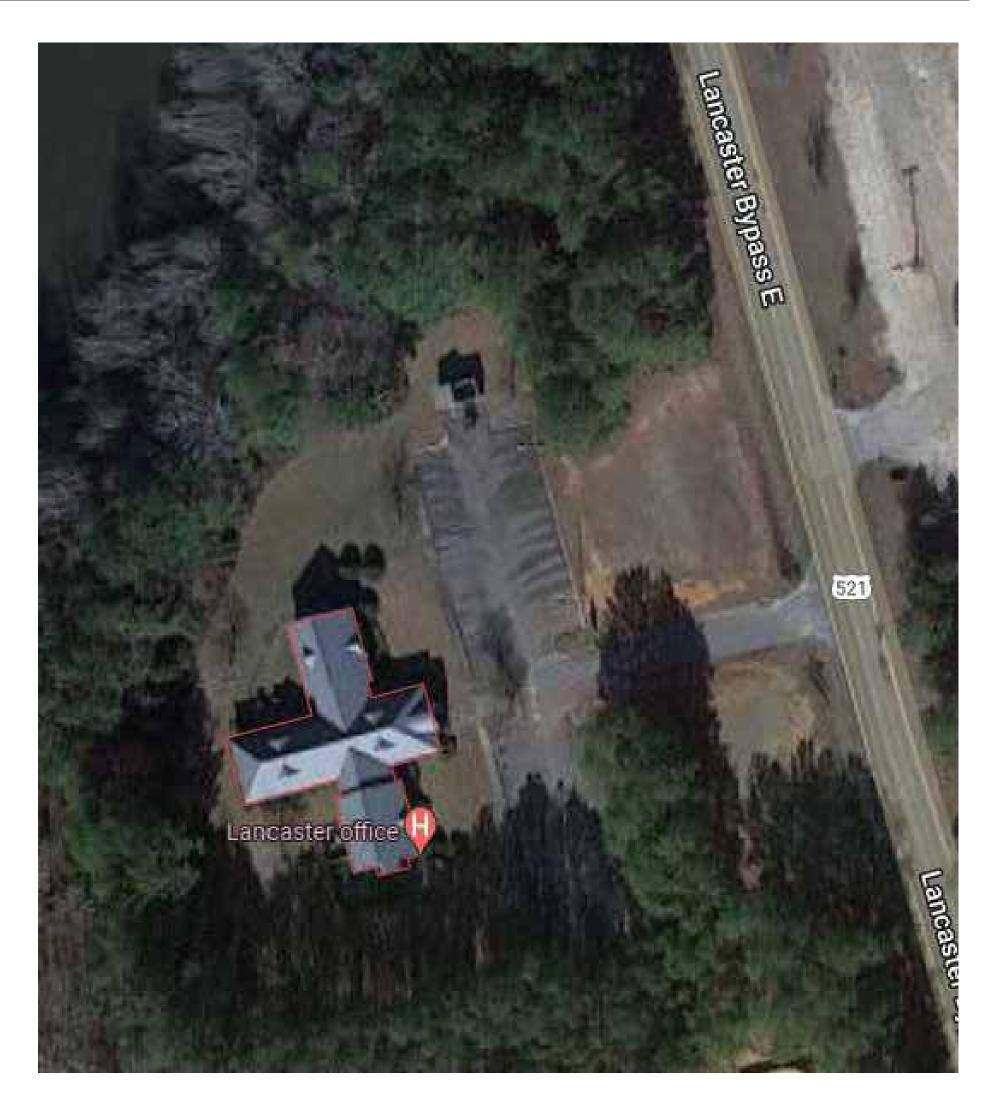
## Code Compliance:

International Existing Building Code: 2018 Edition
International Building Code: 2018 Edition
International Mechanical Code: 2018 Edition
National Electric Code: 2017 Edition
International Energy Conservation Code: 2009 Edition

## Drawing List:

CS-1 Cover Sheet
M-100 Mechanical Existing Conditions Plan
M-101 Mechanical Renovation
M-102 Mechanical Demolition Plan
M-201 Mechanical Schedules and Details

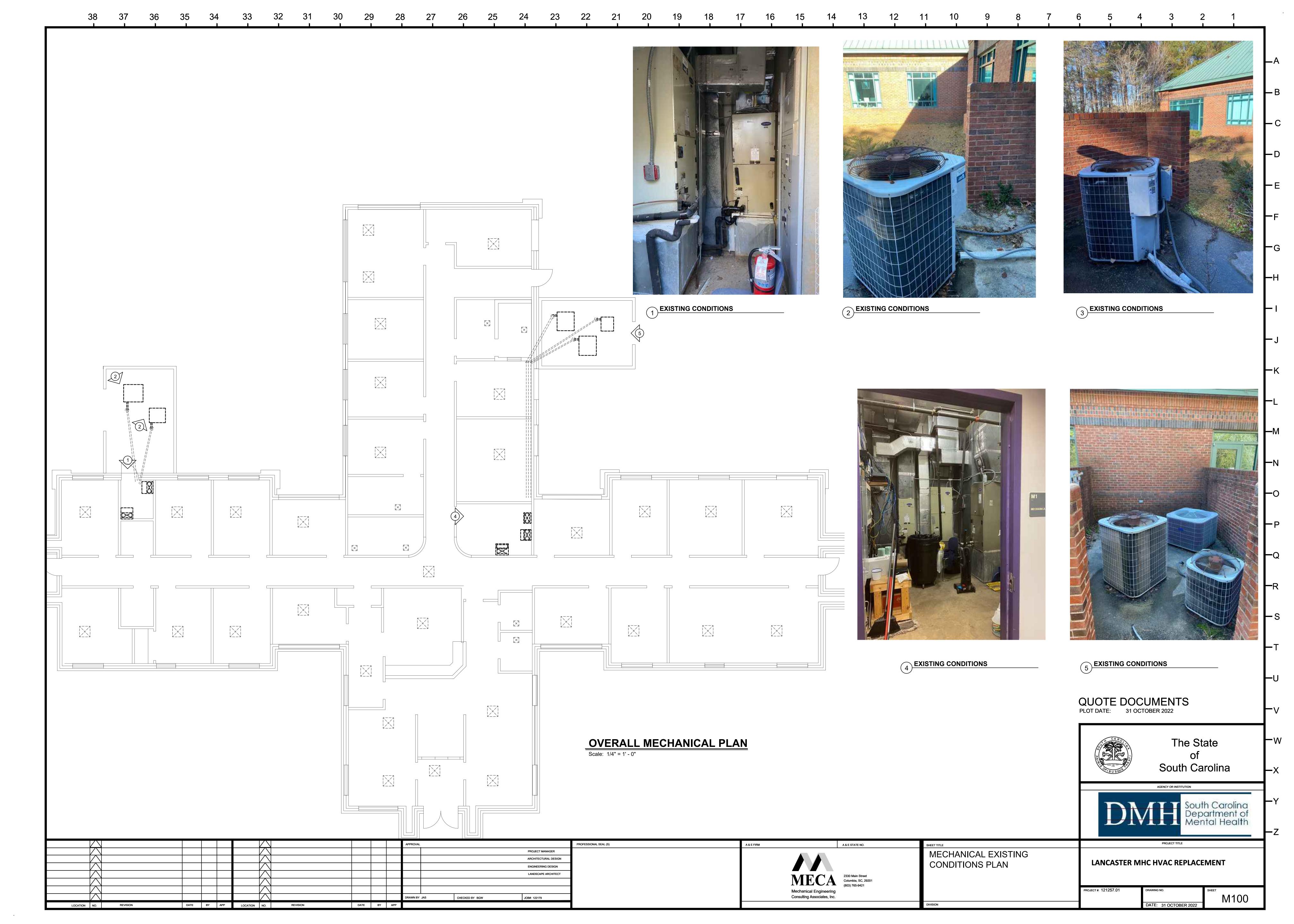


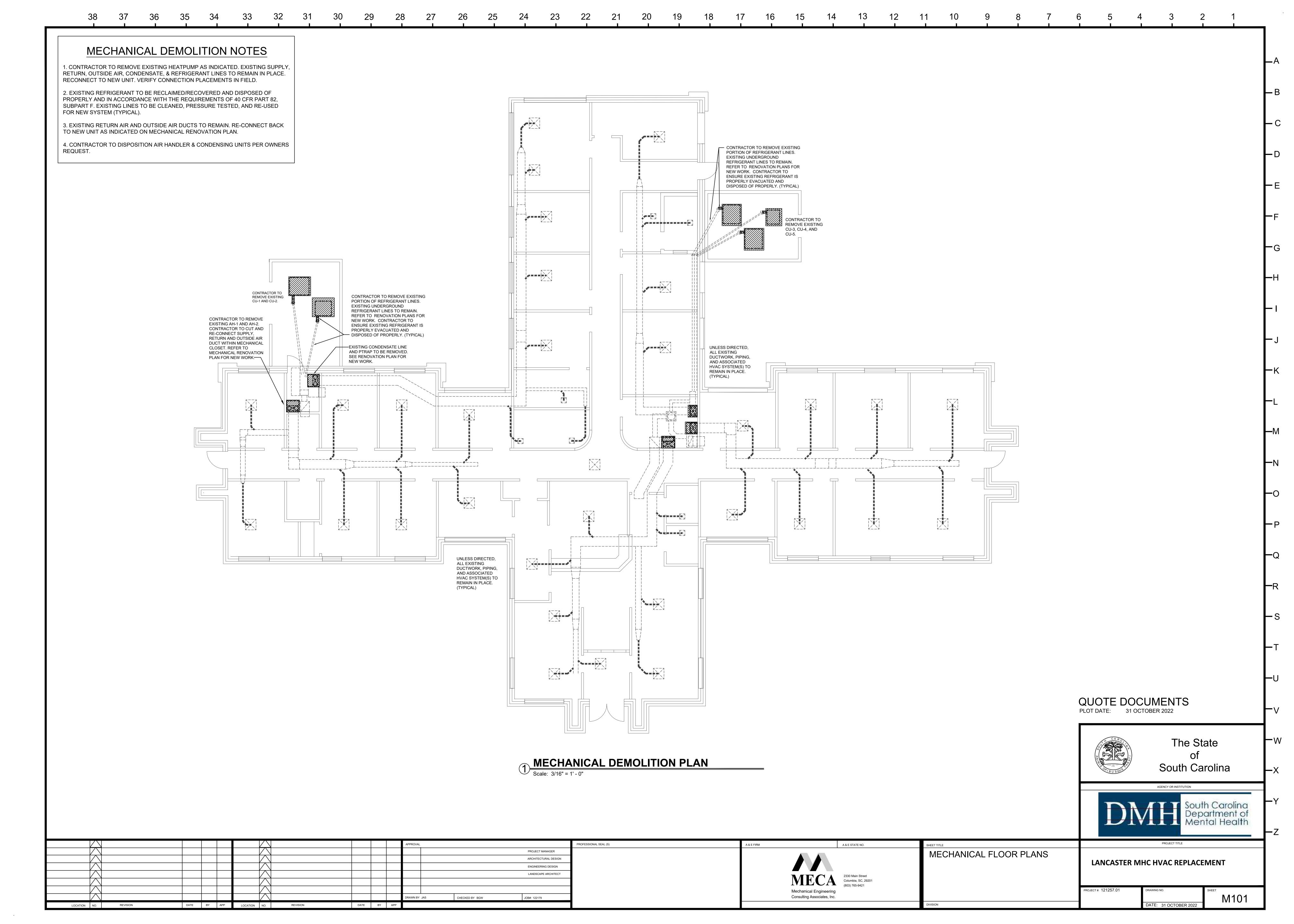


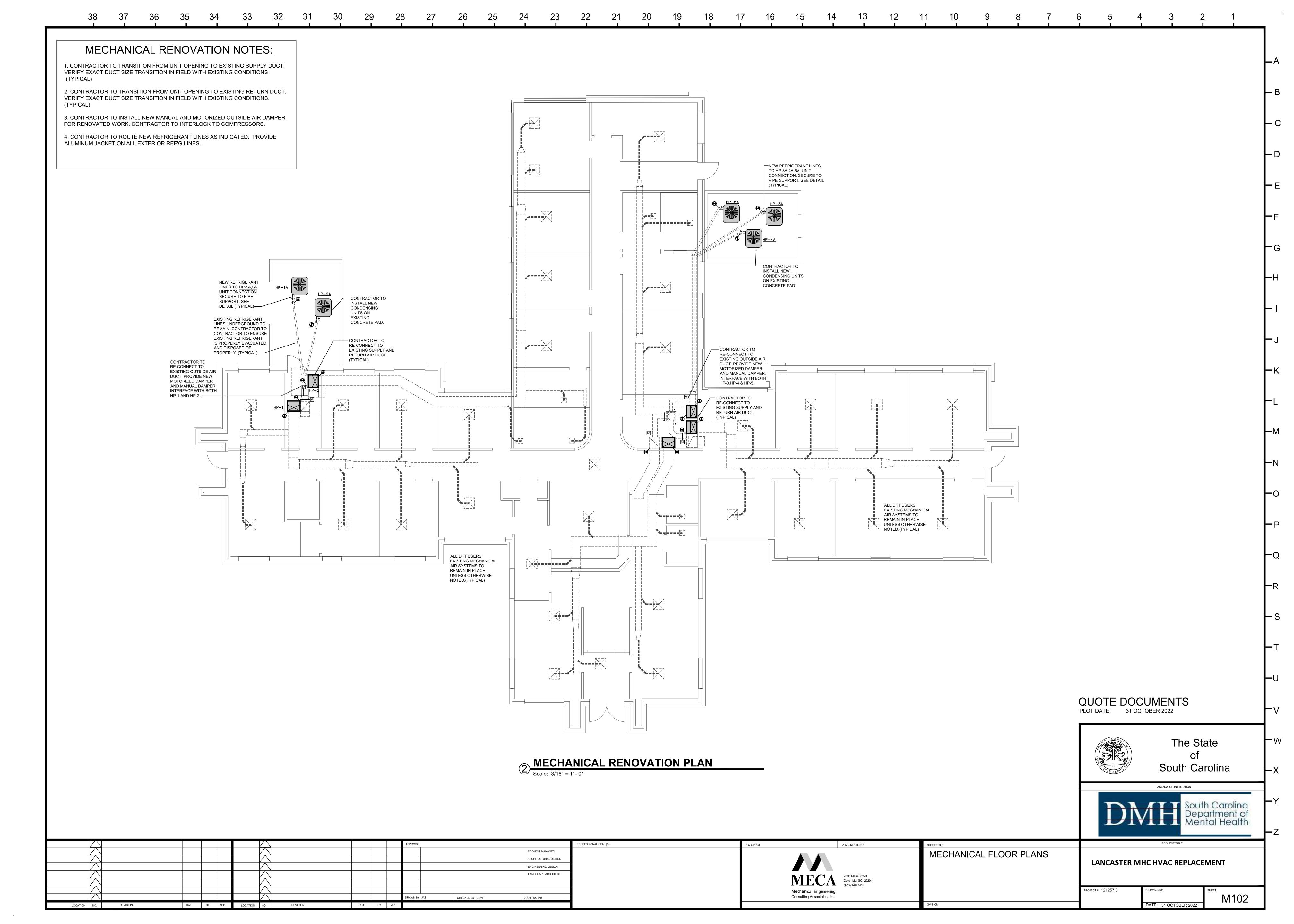
Site Location Map

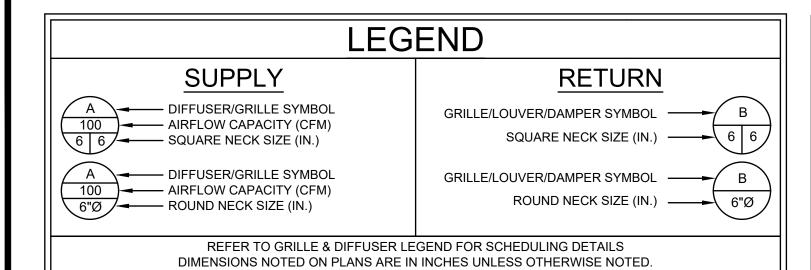
1906 HIGHWAY 521 BYPASS SOUTH
LANCASTER, SC 29721











MECHANICAL SYMBOLS						
$\boxtimes$	SUPPLY AIR DUCT SECTION	$\boxtimes$	4-WAY CEILING DIFFUSER			
	RETURN AIR DUCT SECTION		CEILING RETURN/EXHAUST GRILLE			
T	THERMOSTAT	<del>-</del>	OIDE WALL DIEFLIOED			
S	SWITCH		SIDE WALL DIFFUSER			
$\bigcirc$	UNDERCUT DOOR	]-	SIDE WALL RETURN			
-	SPLITTER DAMPER	AD	ACCESS DOOR			
<del></del>	TUDAWA (44)50	FD	FIRE DAMPER			
<del>-</del>   <u>4</u>	TURNING VANES	RFD	ROUND FIRE DAMPER			
	MANUAL DAMPER	FC	FLEXIBLE CONNECTION			
<b>−</b> M	MOTORIZED DAMPER	DAE	DUCT AIR EXTRACTOR			
		OA	OUTSIDE AIRFLOW			
<b>—</b>	CONNECT TO EXISTING	AFF	ABOVE FINISHED FLOOR			
(SD)	SMOKE DETECTOR	BFC	BELOW FINISHED CEILING			
-c-	CONDENSATE PIPING	СО	CASED OPENING			

#### MECHANICAL NOTES

PCO PIPE CLEAN-OUT

-DO NOT SCALE DRAWING. ROUGH FROM EQUIPMENT MANUFACTURER AND ARCHITECTURAL DRAWINGS.

-DIMENSIONS NOTED ON PLANS ARE IN INCHES UNLESS OTHERWISE NOTED.

-DUCT SIZES NOTED ON PLANS ARE INTERIOR DIMENSIONS.

OCCUPANCY SENSOR

-ROUTE CONDENSATE DRAIN LINES PER DETAIL.

TAPE ALLOWED ON PROJECT.

LOCATION NO. REVISION

-MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EQUIPMENT VOLTAGES, ELECTRICAL REQUIREMENTS AND DISCONNECTS WITH EXISTING CONDITIONS PRIOR TO RELEASING EQUIPMENT FROM MANUFACTURER.

-CONTRACTOR TO RE-CONNECT TO EXISTING REFRIGERANT LINES. CONTRACTOR TO ENSURE EXISTING

REFRIGERANT LINE SIZE AND REFRIGERANT IS PROPERLY EVACUATED AND DISPOSED OF PROPERLY. PROVIDE EXTERIOR COATS AND ALUMINUM JACKET. ALL LINES TO BE THOROUGHLY CLEANED TO MEET MANUFACTURES INSTALLATION REQUIREMENTS.

-ALL DUCTWORK SHOWN ON DRAWING IS DIAGRAMMATIC. ACTUAL RUN SHALL BE SHORTEST POSSIBLE WITHOUT

SHARP BENDS. ALL DUCTWORK SHALL BE GALVANIZED STEEL INSTALLED PER SMACNA, INTERNATIONAL AND

LOCAL CODES WITH 2-1/4" THICK FIBERGLASS DUCT WRAP INSULATION AND/OR AS OUTLINED IN SPECIFICATIONS.

-ALL DUCTWORK SHALL BE SEALED AIRTIGHT WITH MASTIC. NO HEAT SENSITIVE, PRESSURE SENSITIVE OR DUCT

-ALL DUCTWRAP INSULATION SHALL BE SEALED PER MANUFACTURER'S RECOMMENDATIONS FOR GLASS FABRIC AND MASTIC INSTALLATIONS. NO PRESSURE SENSITIVE TAPE SHALL BE ALLOWED.

-ENTIRE MECHANICAL SYSTEMS SHALL BE INSTALLED PER 2018 INTERNATIONAL CODES EXCEPT 2009 INTERNATIONAL ENERGY CODE. AS WELL AS PER LOCAL CODES & AUTHORITY HAVING JURISDICTION.

-COORDINATION OF ALL MECHANICAL SYSTEMS WITH OTHER DISCIPLINES IS THE RESPONSIBILITY OF THE CONTRACTOR. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO INSTALLING. CONTRACTOR SHALL NOT PROCEED WITH UNCERTAINTY.

-PROVIDE PLASTIC NAMEPLATES FOR ALL EQUIPMENT SPECIFIED ON PROJECT TO MATCH EXISTING.

-ALL PIPING SHALL BE MANUFACTURED IN THE UNITED STATES OF AMERICA. NO FOREIGN PIPING ALLOWED ON THIS PROJECT. (COORDINATE WITH OWNER)

-ALL PIPING SUPPORT SPACING SHALL BE PER MSS-SP69 AND WITHIN 18" OF CHANGE IN DIRECTION.

-ALL EQUIPMENT, PIPE AND DUCT SHALL BE SEISMICALLY RESTRAINED PER 2018 IBC. SEISMIC RESTRAINT SYSTEMS AS MANUFACTURED BY MASON INDUSTRIES, AMBER/BOOTH OR APPROVED EQUAL WHO MUST BE A MEMBER OF VISCMA. CONTRACTOR TO PROVIDE SEISMIC CALCULATIONS AND DRAWINGS CERTIFIED AND STAMPED BY AN ENGINEER EMPLOYED BY THE MANUFACTURER. CALCULATIONS TO MEET ICC, IBC, NFPA, ASCE/SEI 7-10, SMACNA AND AUTHORITY HAVING JURISDICTION (AHJ).

-PROVIDE TESTING AND BALANCING OF ALL SYSTEMS BY A THIRD PARTY NEBB CERTIFIED T&B CONTRACTOR. SUBMIT T&B FORMS PRIOR TO PERFORMING WORK FOR APPROVAL.

-MECHANICAL CONTRACTOR SHALL REVIEW AND APPROVE ALL SHOP DRAWINGS PRIOR TO SUBMITTING TO ENGINEER WITH "APPROVED" OR "APPROVED AS NOTED" STAMPS FOR ENGINEER'S 10 CALENDAR DAY REVIEW.

SPLIT SYSTEM HEAT PUMP SCHEDULE						
MANUFACTURER		TRANE				
INDOOR UNIT	SYMBOL	HP-1,2,4,5	HP-3			
	MODEL NUMBER	TEM6B0C60H51	TEM6A0B24H21			
	SUPPLY AIRFLOW	1750	700			
	EXTERNAL S.P. (IN)	0.7	0.7			
	FAN MOTOR HP	0.75	0.33			
	EAT (DB/WB) (°F)	77 / 64.10	77 / 64.1			
	UNIT LAT (DB/WB/DP) (°F)	55.5 / 53.0 / 51.15	54.7 / 52.9 / 51.5			
	OUTSIDE AIR (CFM)	210	70			
	AUX. HTR K.W.	10.8	5.76			
	M.C.A.	51	38			
	M.O.P.	80	40			
	UNIT VOLTAGE	208 / 1/ 60	208/1/60			
	WEIGHT (LBS.)	185	126			
OUTDOOR . UNIT .	SYMBOL	HP-1A,2A,4A,5A	HP-3A			
	MODEL NUMBER	4TWA4060A3	4TWR4024			
	FAN QUANTITY/HP	1 / 0.2	1 / 0.125			
	COMP. QUANTITY	1	1			
	M.C.A.	21	14			
	M.C.B.	35	25			
	UNIT VOLTAGE	208/3/60	208/1/60			
	WEIGHT (LBS.)	315	208			
LCOOLING F	AMBIENT (°F)	95	95.0			
	TOTAL (NET BTUH)	54,520	22,173			
	SENS. (NET BTUH)	41,306	16,693			
INTEGRATED HTG. CAP. @ 17°F		34,800	14,600			
SEER/EER RATING @ ARI		14.50 / 12.5	14.6 / 12.0			
HSPF/COP RATING @ 47°F		9.25 / 4	7.8 / 3.9			

REMARKS:

-PRIOR TO ORDERING, CONTRACTOR SHALL VERIFY VOLTAGE AND ALL ELECTRICAL REQUIREMENTS WITH EXISTING CONDITIONS PRIOR TO SHOP DRAWINGS OR ORDERING EQUIPMENT

-ALL CAPACITIES ARE NET TO INCLUDE INDOOR FAN HEAT.

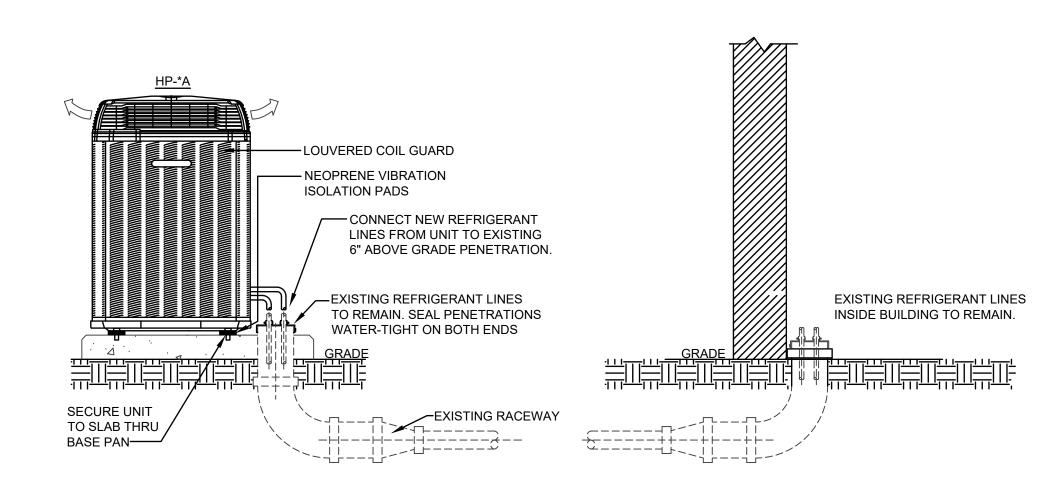
-UNIT LEAVING AIR CONDITION INCLUDES INDOOR FAN HEAT AND IS THE TEMPERATURE (DB/WB/DP) AT UNIT DISCHARGE.

- PROVIDE WITH ECM INDOOR FAN MOTOR WITH COMFORT R MODE. SET AIRFLOW CONTROL DIP SWITCHES FOR CONSTANT CFM PER SCHEDULE AND ENHANCED MODE FOR DEHUMIDIFICATION.

-EXTERNAL S.P. IS EXTERIOR TO UNIT/ HEATER CABINET.

-PROVIDE SINGLE ENTRY POWER, COIL GUARD, COMPRESSOR SUMP HEATERS, FILTER RACK W/MERV 8 PLEATED FILTERS AND 5 YR. COMPRESSOR WARRANTY.

-PROVIDE DIGITAL THERMOSTAT WITH MANUAL/ AUTO/ 7 DAY PROGRAMMABLE SELECTABLE OPTIONS AND DEHUMIDIFICATION FEATURE. SET FOR 7 DAY PROGRAMMABLE MODE AND 50% RH. NEW THERMOSTAT TO BE INSTALLED IN CURRENT LOCATION. VERIFY IN FIELD



PROFESSIONAL SEAL (S)

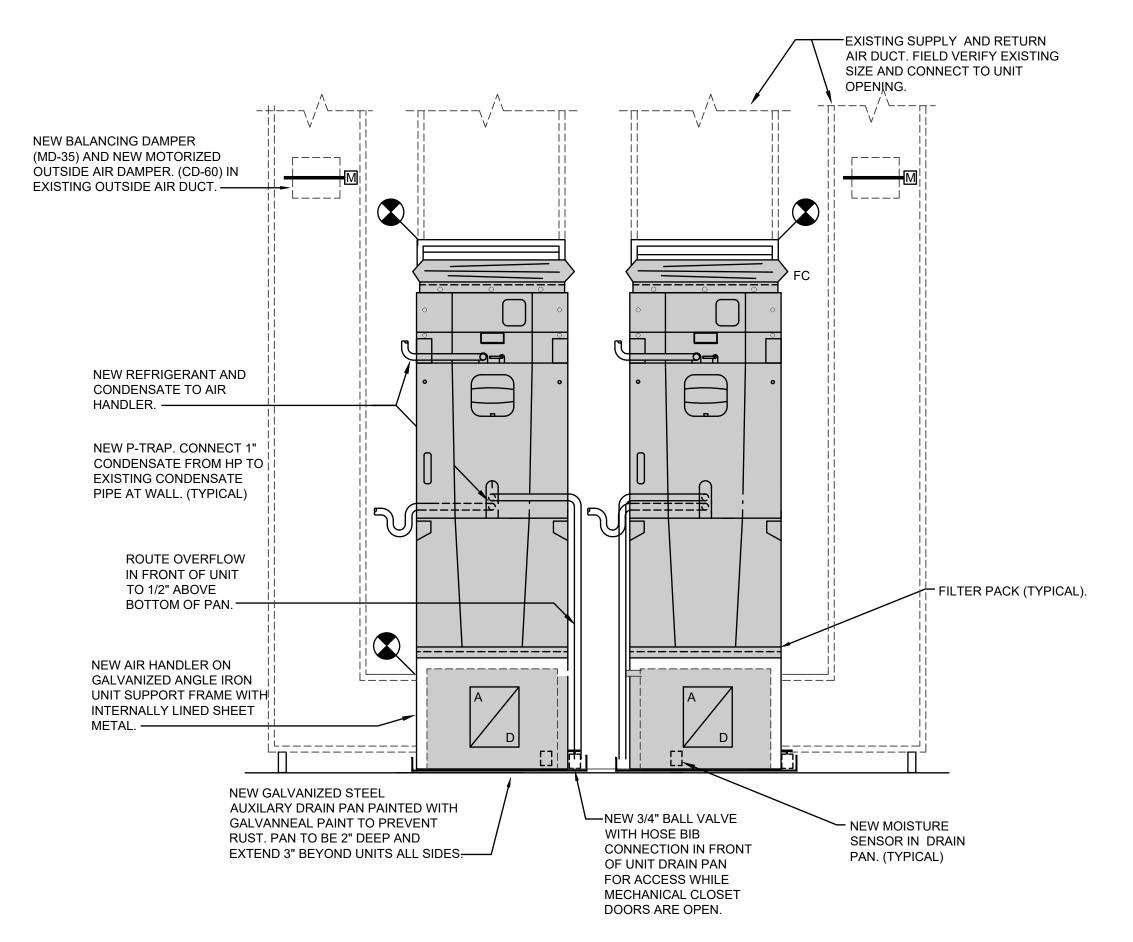
REFRIGERANT RACEWAY PIPING DETAIL
NO SCALE

RAWN BY JAS

DATE BY APP

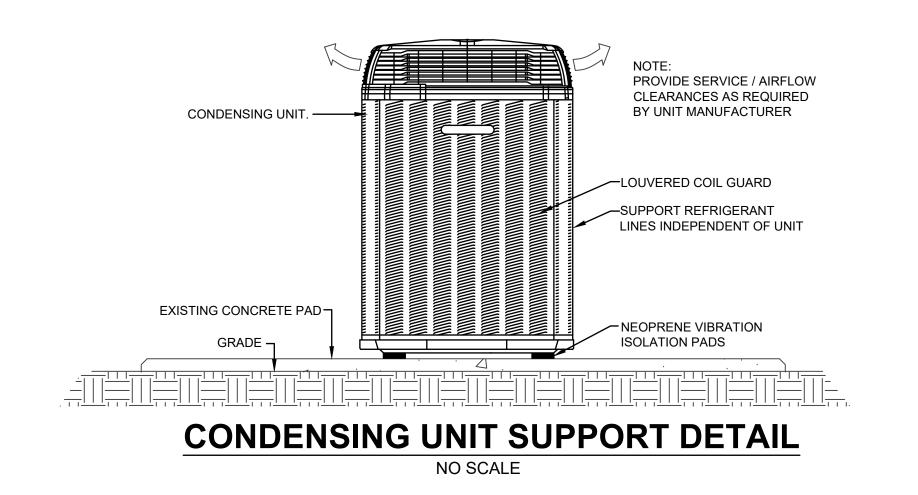
CHECKED BY BGW

JOB#: 122179



#### **VERTICAL AIR HANDLER DETAIL**

NO SCALE



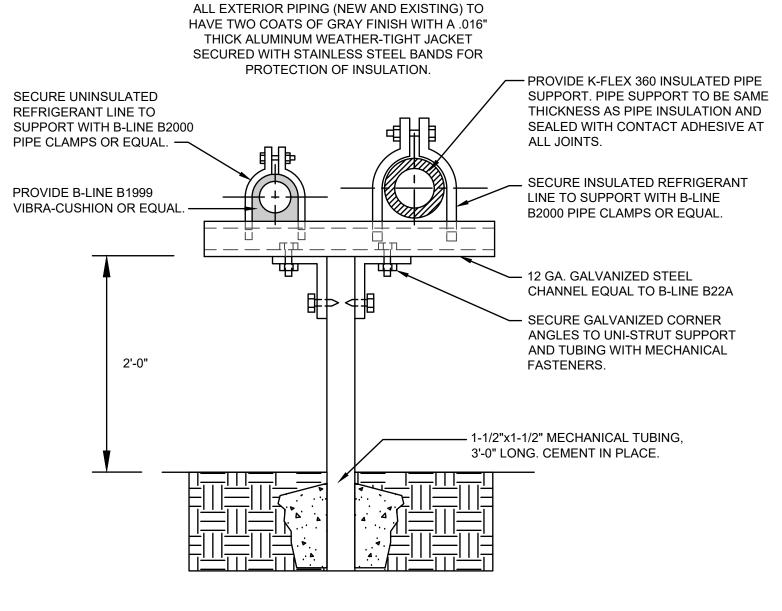
CLEAN OUT UNION (TYP.)

PRIMARY CONDENSATE

DRAIN OVERFLOW DETECTION-

PRIMARY PROBE SENSORS-

CAPPED CLEAN OUT TEE-



### REFRIGERANT PIPE SUPPORT DETAIL

NO SCALE

QUOTE DOCUMENTS
PLOT DATE: 31 OCTOBER 2022



The State of South Carolina



CONDENSATE "P-TRAP" DETAIL
NO SCALE

ROUTE INSULATED

— SENSOR WIRE TO MOISTURE

UNIT AUXILIARY DRAIN PAN.

- SIZE PER FLOOR PLANS.

SENSOR CONTROL UNIT IN INDOOR

TO AIR HANDLING UNIT

CONTROL CIRCUIT

AIR HANDLING

MOISTURE SENSOR

H = TWO PIPE DIAMETERS

J = SCHEDULE FAN STATIC + 1"

DIVISION

UNIT

CONDENSATE DRAIN PER L = H + J + ONE PIPE DIAMETER

APPROVAL
PROJECT MANAGER
ARCHITECTURAL DESIGN
ENGINEERING DESIGN
LANDSCAPE ARCHITECT

DATE BY APP LOCATION NO. REVISION

A & E STATE NO.

2330 Main Street
Columbia, SC, 29201
(803) 765-9421

Mechanical Engineering
Consulting Associates, Inc.

MECHANICAL SCHEDULES & DETAILS

— AUXILIARY CONDENSATE

DRAIN PAN

LANCASTER MHC HVAC REPLACEMENT

PROJECT #: 121257.01 DRAWING DATE:

M201

DATE: 31 OCTOBER 2022