MECHANICAL GENERAL NOTES:

1. ALL WORK SHALL BE PERFORMED IN A CLEAN AND WORKMANLIKE MANNER. CARE SHALL BE EXERCISED TO MINIMIZE ANY INCONVENIENCE OR DISTURBANCE TO OTHER AREAS OF THE BUILDING WHICH ARE TO REMAIN IN OPERATION. ISOLATE WORK AREAS BY MEANS OF TEMPORARY PARTITIONS AND/OR TARPS TO KEEP DUST AND DIRT WITHIN THE CONSTRUCTION AREA.
2. NO PIPING, EQUIPMENT, ETC. SHALL BE REMOVED, DISCONNECTED OR SHUT DOWN WITHOUT PRIOR REVIEW WITH THE LANDLORD AND/OR ENGINEER TO CONFIRM THAT AREAS TO REMAIN IN OPERATION WILL NOT BE AFFECTED. IF ANY AREAS NOT WITHIN THE SCOPE OF WORK ARE AFFECTED BY ANY SHUTDOWN, REMOVAL OR DISCONNECTION, SUFFICIENT ADVANCE NOTICE MUST BE GIVEN TO THE LANDLORD INDICATING WHICH AREAS WILL BE AFFECTED, WHEN THE PROPOSED SHUTDOWN WILL OCCUR, AND FOR HOW LONG A PERIOD OF TIME.
3. ALL ITEMS REMOVED SHALL BECOME PROPERTY OF THE LANDLORD AND SHALL BE DISPOSED OF AS PER THE LANDLORD'S INSTRUCTIONS, UNLESS INDICATED OTHERWISE. ALL ITEMS WHICH ARE NOT TO BE STORED ON SITE BY OWNERS SHALL BE REMOVED FROM THE BUILDING IMMEDIATELY.
4. THIS CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO PROCEEDING WITH ANY WORK. WHERE DISCREPANCIES OCCUR BETWEEN THESE DOCUMENTS AND EXISTING CONDITIONS, THE DISCREPANCY SHALL BE REPORTED TO THE LANDLORD AND/OR ENGINEER FOR EXPEDITING AND THE RESOLUTION.
5. CLEAN THE JOB SITE DAILY AND REMOVE FROM THE PREMISES ANY DIRT AND DEBRIS CAUSED BY THE PERFORMANCE OF THE WORK INCLUDED IN THIS CONTRACT.
6. USE OF THE LANDLORD'S ELEVATORS AND BUILDING CORRIDORS FOR HANDLING OF THE LANDLORD'S AND REMOVED EQUIPMENT AND MATERIALS SHALL BE AT THE DIRECTION OF THE LANDLORD AND SHALL BE COORDINATED WITH HIS OPERATIONS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFEKEEPING OF HIS OWN PROPERTY ON THE JOB SITE. OWNER ASSUMES NO RESPONSIBILITY FOR PROTECTION OF PROPERTIES AGAINST FIRE, THEFT AND ENVIRONMENTAL CONDITIONS.
8. EXISTING MATERIALS THAT ARE REMOVED SHALL NOT BE REUSED IN NEW SYSTEMS, EXCEPT WHERE INDICATED AS BEING RELOCATED.
9. PROVIDE ALL NECESSARY TEMPORARY OR PERMANENT CAPS OR PLUGS FOR PIPING. DO NOT LEAVE PIPING OPEN ENDED.
10. WHERE USED, THE TERM "PROVIDE" SHALL MEAN "FURNISH AND INSTALL".
11. THIS CONTRACTOR SHALL COORDINATE HIS WORK WITH THE LANDLORD AND ALL OTHER TRADES PRIOR TO FABRICATION, PURCHASE AND/OR INSTALLATION OF ALL WORK.
12. SUBMISSION OF PROPOSAL DIRECTLY OR INDIRECTLY IN CONNECTION WITH THIS WORK SHALL IMPLY THAT THE BIDDER HAS EXAMINED THE JOB SITE UNDER WHICH HE WILL BE OBLIGATED TO OPERATE SHOULD HE BE AWARDED THE WORK UNDER THIS CONTRACT. NO EXTRA CHARGE WILL BE ALLOWED FOR FAILURE OF ANY BIDDER TO EXAMINE THE SITE PRIOR TO BID.
13. ALL WORK SHALL CONFORM TO ALL STATE AND LOCAL CODES, RULES AND REGULATIONS AND ORDINANCES.
14. CONTRACTOR SHALL SECURE AND PAY ALL FEES AND PERMITS PERTAINING TO THE CONTRACT.
15. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS. THE CONTRACTOR SHALL PROVIDE ALL HANGERS AND SUPPORTS REQUIRED FOR A COMPLETE INSTALLATION.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR WORKMEN'S IDENTIFICATION AND BADGING, SAFETY AND FIRE PROTECTION, CONTRACTOR'S LIABILITY INSURANCE, BARRICADES, WARNING SIGNS, TRASH REMOVAL, CUTTING AND PATCHING.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RIGGING, HANDLING AND PROTECTION OF MATERIALS.
18. CONTRACTOR SHALL PROVIDE LABOR TO RECEIVE, UNLOAD, STORE, PROTECT AND TRANSFER TO POINT OF INSTALLATION, OWNER FURNISHED ITEMS.
19. WHERE CONDUIT, CABLES, DUCTWORK OR PIPING PASSES THROUGH FIRE RATED FLOORS OR WALLS, THE SLEEVES SHALL BE COMPLETELY SEALED WITH A FIRE STOP MATERIAL THAT IS UL LISTED AND ACCEPTED BY THE BUILDING DEPARTMENT AND FIRE DEPARTMENT AS BEING SUITABLE FOR THIS SERVICE.
20. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CORING AS IT RELATES TO HIS WORK.
21. CONTRACTOR SHALL REFER TO BUILDING MANAGEMENT'S RULES AND REGULATIONS' TO COMPLY WITH BUILDING STANDARDS.
22. FLEXIBLE DUCTWORK LENGTHS SHALL NOT EXCEED 5'–0". USE INSULATED RIGID ROUND DUCTWORK WHERE REQUIRED. ALL NEW FLEXIBLE DUCTWORK CONNECTIONS TO AIR DEVICES SHOWN ON THE DRAWING SHALL BE SIZED ACCORDING TO THE NECK SIZE SCHEDULE.
23. THE ENTIRE AIR SUPPLY SYSTEM SHALL BE RE–BALANCED TO THE AIR QUANTITIES INDICATED ON THIS DRAWING BY AN INDEPENDENT AIR BALANCE CONTRACTOR. THE AIR BALANCE CONTRACTOR SHALL SUBMIT NEBB CERTIFIED AIR BALANCE REPORTS FOR ENGINEERING REVIEW AND TO BUILDING MANAGEMENT. PROVIDE AHU DRIVE ADJUSTMENTS AS REQUIRED.
24. REFER TO DRAWING MEP FOR SPECIFICATIONS THAT APPLY TO THIS SHEET.
25. CONTRACTOR SHALL VERIFY THAT SUFFICIENT RETURN AIR OPENINGS ARE PROVIDED IN EXISTING WALLS ABOVE CEILING. AIR IS RETURNED TO THE CEILING PLENUM AND THEN TO THE AIR HANDLING UNITS THROUGH RETURN AIR GRILLES, ARCHITECTURAL CEILING OPENING AND LIGHT FIXTURES.
26. EXISTING TAPS TO SUPPLY DUCTWORK SHALL BE USED WHERE POSSIBLE. ANY UNUSED TAPS TO EXISTING SUPPLY DUCTWORK SHALL BE CAPPED, SEALED AIRTIGHT, AND INSULATED.
27. EXISTING MAIN TRUNK SUPPLY DUCTWORK SHALL REMAIN. CONTRACTOR SHALL VERIFY EXISTING LOCATION AND LIGHTING FIXTURE CLEARANCES AND INCLUDE IN THEIR COST THE RELOCATION OR REMOVAL OF EXISTING EQUIPMENT REQUIRED TO COMPLY WITH THIS DRAWING.
28. CONTRACTOR SHALL PROVIDE TO BUILDING OWNER THE AS–BUILT RECORD DRAWINGS AND THE OPERATING AND MAINTENANCE MANUALS WITHIN 90 DAYS OF SYSTEMS ACCEPTANCE. RECORD DRAWINGS SHALL INCLUDE PERFORMANCE DATA FOR EQUIPMENT, DUCT AND PIPE DISTRIBUTION SYSTEMS, AND AIR AND WATER FLOW RATES. O&M MANUALS SHALL INCLUDE EQUIPMENT AND ASSOCIATED OPTIONS REQUIRING SERVICE, REQUIRED MAINTENANCE ACTIVITIES, CONTACT INFO OF SERVICE AGENCIES, HVAC CONTROLS CALIBRATION INFORMATION AND SET–POINTS, AND DESCRIPTION OF EQUIPMENTS' INTENDED OPERATIONS.
29. FOR RETURN AIR PLENUMS, ALL MATERIALS LOCATED WITHIN A RETURN AIR PLENUM SHALL BE RATED AND APPROVED FOR INSTALLATION IN A RETURN AIR PLENUM.

ROOFTOP UNIT SCHEDULE

DESIGNATION	RTU–4	–	–	–
SERVES	–	–	–	–
TOTAL CFM	720	–	–	–
O.A. CFM	85	–	–	–
EXT. S.P. IN. WC	0.8	–	–	–
FAN HP	1/3	–	–	–
COOLING				
EAT (DB/WB)	77.39/64.54	–	–	–
LAT (DB/WB)	55.00/54.23	–	–	–
SEN. HT. KBTU/HR	17,812	–	–	–
TOTAL HT. KBTU/HR	22,810	–	–	–
AMB. TEMP.	105	–	–	–
HEATING	ELECTRIC			
kW	6.0	–	–	–
VOLTS/PHASE/CYCLES	208/1/60	–	–	–
MCA/MOCP	36/40	–	–	–
EER2/SEER2	11.0/14.3	–	–	–
MANUFACTURER	TRANE	–	–	–
MODEL NO.	5TCC4024A	–	–	–
WEIGHT (LBS)	362	–	–	–
NOTES	–	–	–	–

NOTES:

1. SUBMITTAL EQUIPMENT MUST MEET AND ACHIEVE THE LOW DEWPOINT REQUIRED ABOVE. SUBMITTAL EQUIPMENT MEETING ONLY THE TOTAL AND SENSIBLE LOADS SHOWN IN THE SCHEDULE IS NOT ACCEPTABLE REGARDING ITS PERFORMANCE.
2. PROVIDE 2" MERV 11. FILTER. AND HINGED ACCESS PANELS.
3. PROVIDE FACTORY BOTTOM DISCHARGE CURB AT LEAST 14" HIGH WITH R–8 INSULATION.
4. PROVIDE FACTORY INSTALLED DISCONNECT AND SINGLE POINT ELECTRICAL CONNECTION.
5. PROVIDE WITH LOW AMBIENT KIT, FREEZSTAT, CRANKCASE HEATER, HIGH PRESSURE CONTROL AND FAN DELAY RELAY KIT.
6. PROVIDE 2021 IECC COMPLIANT THERMOSTAT FOR EACH ZONE. THERMOSTAT SHALL BE CALIBRATED TO DISPLAY SPACE TEMPERATURE AT +/– 1°F. THE CONTROL SYSTEM SHALL CONTROL ECONOMIZER, DISCHARGE AIR TEMPERATURE CONTROL, SPACE TEMPERATURE.
   - 6.1. THERMOSTAT SHALL INCLUDE A DEADBAND NOT LESS THAN 5°F.
   - 6.2. PROVIDE THERMOSTATIC SETBACK CONTROLS THAT ARE CONTROLLED BY TIME CLOCK OR PROGRAMMABLE SYSTEM.
   - 6.3. SETBACK CONTROLS SHALL BE CONFIGURED TO SET BACK OR TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURE DOWN TO 55°F AUTOMATIC SETBACK.
   - 6.4. AUTOMATIC TIME CLOCK OR PROGRAM CONTROLS SHALL BE CAPABLE OF STARTING AND STOPPING THE SYSTEM FOR SEVEN DIFFERENT DAILY SCHEDULES PER WEEK AND RETAINING THEIR PROGRAMMING AND TIME SETTINGS DURING A LOSS OF POWER FOR NOT FEWER THAN 10 HOURS. ADDITIONALLY, THE CONTROLS SHALL HAVE A MANUAL OVERRIDE THAT ALLOWS TEMPORARY OPERATION OF THE SYSTEM FOR UP TO 2 HOURS; A MANUALLY OPERATED TIMER CONFIGURED TO OPERATE THE SYSTEM FOR UP TO 2 HOURS.
   - 6.5. PROVIDE AUTOMATIC START CONTROLS TO EACH SYSTEM. CONTROLS SHALL BE CONFIGURED TO AUTOMATICALLY ADJUST THE DAILY START TIME OF THE HVAC SYSTEM IN ORDER TO BRING EACH SPACE TO THE DESIRED TEMPERATURE IMMEDIATELY PRIOR TO SCHEDULED OCCUPANCY
7. PROVIDE CORROSION RESISTANT BIRD SCREEN WITHIN THE OUTDOOR AIR INTAKE.
8. PROVIDE MOTORIZED DAMPER FOR OUTSIDE AIR INTAKE. DAMPER SHALL CLOSE WHEN UNIT IS DE–ENERGIZED.
9. PROVIDE SUPPLY FAN WITH PREMIUM EFFICIENCY (MINIMUM 2021 IECC REQUIREMENT), ECM, VARIABLE–SPEED MOTOR.
10. PROVIDE FACTORY INSTALLED DUAL 115 VOLT GFCI SERVICE OUTLET.

AIR DEVICE SCHEDULE

MARK	MANUF. + MODEL	TYPE	REMARKS
	TITUS PCS OR EQUAL	CEILING SUPPLY	24x24 PERFORATED FACE. FACE SHALL BE ALUMINUM WITH A STEEL BACK PAN. PROVIDE AIR PATTERN CONTROLS. FACE AND FRAME SHALL HAVE AN OFF–WHITE ENAMEL FINISH. COORDINATE CEILING MOUNTING TYPE WITH ARCHITECTURAL CEILING TYPE. PROVIDE REMOTE DAMPER OPERATORS IN AREAS WITH INACCESSIBLE CEILINGS.
	TITUS PAR OR EQUAL	CEILING RETURN	24x24 PERFORATED FACE. FACE SHALL BE ALUMINUM WITH A STEEL BACK PAN. FACE AND FRAME SHALL HAVE AN OFF– WHITE ENAMEL FINISH. COORDINATE CEILING MOUNTING TYPE WITH ARCHITECTURAL CEILING TYPE.

OUTSIDE AIR ANALYSIS

OUTSIDE AIR SHALL BE PROVIDED IN ACCORDANCE WITH THE MECHANICAL CODES:

(Rp x Pz) + (Ra x Az) = Vbz

OFFICE SPACE: (5 CFM/PER x 6 PPL) + (0.06 CFM/SQFT x 654 SQFT) = 69 CFM
CORRIDOR: (5 CFM/PER x – PPL) + (0.06 CFM/SQFT x 202 SQFT) = 12 CFM

TOTAL = 81 CFM

OVERALL: Vbz / Ez = Voz
81 CFM / 1 = 81 CFM

TOTAL OUTSIDE AIR REQUIRED = 81 CFM

TOTAL OUTSIDE AIR PROVIDED VIA RTU–1 = 85 CFM

TOTAL OUTSIDE AIR REQUIRED = 81 CFM

RETURN DIFFUSER NECK SIZE SCHEDULE

CFM RANGE	SQUARE NECK SIZE	ROUND NECK SIZE
0 – 90	6 X 6	6"ø
95 – 140	8 X 8	8"ø
145 – 220	10 X 10	10"ø
225 – 315	12 X 12	12"ø
320 – 430	–	14"ø
435 – 560	–	16"ø

DIFFUSER NECK SIZE SCHEDULE

CFM RANGE	SQUARE NECK SIZE	ROUND NECK SIZE
0 – 120	6 X 6	6"ø
125 – 220	8 X 8	8"ø
225 – 330	10 X 10	10"ø
335 – 450	12 X 12	12"ø
455 – 530	15 X 15	14"ø
540 – 700	16 X 16	16"ø

LEGEND OF MECHANICAL SYMBOLS

SYMBOL	DESCRIPTION
	SUPPLY DUCT VIEW INTO DUCT
	SUPPLY DUCT VIEW HEEL OF ELBOW
	RETURN OR EXHAUST DUCT VIEW INTO DUCT
	RETURN OR EXHAUST DUCT VIEW HEEL OF ELBOW
	SQUARE TO ROUND TRANSITION
	SQUARE ELBOW WITH TURNING VANES.
	RADIUS ELBOW WITHOUT TURNING VANES.
	SUPPLY SIDEWALL REGISTER
	RETURN OR EXHAUST SIDEWALL REGISTER
	ROUND S.A. DIFFUSER
	EXISTING FLEX DUCT
	NEW FLEX DUCT
	EXISTING DUCTWORK
	NEW DUCTWORK
	DUCTWORK TO BE REMOVED
	SQUARE CEILING DIFFUSER
	RETURN AIR GRILLE
	RETURN OR EXHAUST AIR REGISTER W/ SQUARE NECK
	PLENUM SLOT DIFFUSER
MD	MANUAL DAMPER
	FIRE DAMPER WITH ACCESS DOOR
D	DRAIN LINE
	PIPE RISING
	PIPE TURNING DOWN
S	EXHAUST FAN SPEED CONTROL
T	THERMOSTAT
(E)	EXISTING TO REMAIN
(R)	RELOCATED
R.A.	RETURN AIR
S.A.	SUPPLY AIR
C.F.M.	CUBIC FEET PER MINUTE
AHU	AIR HANDLER UNIT

NOTES:

1. ALL SYMBOLS MAY NOT BE USED ON THIS DRAWINGS.

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E/B/E PROJECT NUMBER: 25028.00

ISSUED FOR CLIENT APPROVAL	DATE
ISSUED FOR BIDDING	04/30/2026
ISSUED FOR PERMIT	04/30/2026
ISSUED FOR CONSTRUCTION	

REVISIONS

MARK	DESCRIPTION	DATE
	REVIEW SET	03-27-2026
	90% REVIEW SET	04-13-2026
	BID AND PERMIT	04-30-2026

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DESIGN TEAM
PM: JG
MECHANICAL: CC
ELECTRICAL: JG
PLUMBING: JG
CHECKED-BY: JG

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LICENSED PROFESSIONAL ENGINEER
04/30/2026

DRAWING TITLE
MECHANICAL INFORMATION

SHEET NO.
M-1.00