CAL-GREEN NOTES

- A. ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, OR SHEET METAL UNTIL THE FINAL STARTUP OF THE HVAC EQUIPMENT (CGGSC 5.504.3).
- B. IF THE NEW HVAC SYSTEM IS USED DURING CONSTRUCTION, USE RETURN AIR FILTERS WITH A MERV 8 RATING. REPLACE ALL FILTERS IMMEDIATELY PRIOR TO OCCUPANCY (CGBSC 5.504.1.
- C. THE HVAC, REFRIGERATION, AND FIRE SUPPRESSION EQUIPMENT SHALL NOT CONTAIN CFCS OR HALONS (CGBSC 5.508.1).
- D. A FINAL REPORT FOR THE TESTING AND ADJUSTING OF ALL NEW SYSTEMS SHALL BE COMPLETED PRIOR TO FINAL APPROVAL BY THE FIELD INSPECTOR. THIS REPORT SHALL BE SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR PERFORMING THESE SERVICES (CGBSC 5.410.4.4).
- E. AN OPERATION & SYSTEMS MANUAL SHALL BE PROVIDED TO THE OWNER OR REPRESENTATIVE AND TO THE FIELD INSPECTOR AT THE TIME OF FINAL INSPECTION (CGBSC 5.410.4.5

APPLICABLE CODES & STANDARDS

- 2019 CALIFORNIA BUILDING CODE WITH STATEWIDE AMENDMENTS
- 2019 CALIFORNIA MECHANICAL CODE WITH STATEWIDE AMENDMENTS
- 2019 CALIFORNIA PLUMBING CODE WITH STATEWIDE AMENDMENTS
- 2019 CALIFORNIA ENERGY CONSERVATION CODE
- 2019 CALIFORNIA GREEN BUILDING STANDARDS
- ICC/ANSI A117.1-09, ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES, WITH STATEWIDE AMENDMENTS.
- NFPA 90

HGT

HP

HR

IEER

RATIO

IN WG

HORIZ

HVAC

HEIGHT

HORIZONTAL

HORSEPOWER

CONDITIONING

INSIDE DIAMETER

INCH / INCHES

INCHES WATER GAUGE

HEATING, VENTILATING AND AIR

INTEGRATED ENERGY EFFICIENCY

HVAC	ABBREVIATIO	NS	
AAV ABV	AUTOMATIC AIR VENT ABOVE	KW	KILOWATT
AP	ACCESS PANEL	IXVV	NIE C VV/ VII
AC	AIR CONDITIONING	LB	POUND
AFF	ABOVE FINISHED FLOOR	LRA	LOCKED ROTOR AMPERES
APPROX	APPROXIMATELY	LVG	LEAVING
ARCH AS	ARCHITECTURAL AIR SEPARATOR	MAX	MAXIMUM
@	AT	MCC	MOTOR CONTROL CENTER
&	AND	MD	MOTORIZED DAMPER
AUTO	AUTOMATIC	MECH	MECHANICAL
D	BOILER	MFR MIN	MANUFACTURER MINIMUM
B BDD	BACKDRAFT DAMPER	MISC	MISCELLANEOUS
BEL	BELOW	MTD	MOUNTED
BRD	BAROMETRIC RELIEF DAMPER	MTG	MOUNTING
BFF	BELOW FINISHED FLOOR	MVD	MANUALLY OPERATED
BFV BHP	BUTTERFLY VALVE BRAKE HORSEPOWER		VOLUME DAMPER
BLDG	BUILDING	NC	NORMALLY CLOSED
BOP	BOTTOM OF PIPE	NO	NORMALLY OPEN
BTUH	BRITISH THERMAL UNITS PER HOUR	NTS	NOT TO SCALE
CA	COMBUSTION AIR	OA / OSA	OUTSIDE AIR
CFM	CUBIC FEET PER MINUTE	DD	
CH CHP	CHILLER CHILLED WATER PUMP	PD POC	PRESSURE DROP POINT OF CONNECTION
СПГ	COEFFICIENT OF PERFORMANCE	POD	POINT OF CONNECT
CONC	CONCRETE	POS	POSITIVE
CONN	CONECTION	PRESS	PRESSURE
CONT	CONTINUATION	PSI	POUNDS PER SQUARE INCH
CPF CT	CHEMICAL POT FEEDER COOLING TOWER	RA	RETURN AIR
CT CTF	COOLING TOWER COOLING TOWER FILTER	REF	REFERENCE
CWP	CONDENSER WATER PUMP	REL	RELIEF
CWR CWS	CONDENSER WATER RETURN CONDENSER WATER SUPPLY	RELA REQD/REQ'D RET	RELIEF AIR REQUIRED RETURN
DB	DRY BULB (TEMPERATURE)	RH	RIGHT HAND
DDC	DIRECT DIĞITAL CONTROL	RLA	RATED LOAD AMPERES
DET	DETAIL	RM RPM	ROOM REVOLUTIONS PER MINUTE
DIA Det	DIAMETER DETAIL	KPIVI	REVOLUTIONS PER MINUTE
DN	DOWN	SA	SUPPLY AIR
DTF	DUCT/DOWN THRU FLOOR	SCBA	SELF CONTAINED BREATHING
DTR	DUCT/DOWN THRU ROOF		APPARATUS
DWG	DRAWING	SCHR	SECONDARY CHILLED WATER
(E)	existing	SCHR	SECONDART CHILLED WATER
EA	EACH / EXHAUST AIR		RETURN
EAG	EXHAUST AIR GRILLE	SCHS	SECONDARY CHILLED WATER
EAR	EXHAUST AIR REGISTER		SUPPLY
eer Ef	ENERGY EFFICIENCY RATIO EXHAUST FAN	SECT	SECTION
EL	ELEVATION	SEER	SEASONAL ENERGY EFFICIENCY
ENT	ENTERING	RATIO	
EQUIP	EQUIPMENT	SHT	SHEET ALETAL COREW
ET	EXPANSION TANK	SMS SOV	SHEET METAL SCREW SHUT-OFF VALVE
°F	DEGREES FAHRENHEIT	SP	STATIC PRESSURE
FD	FIRE DAMPER	SPEC	SPECIFICATION
FIN	FINISHED	SQ	SQUARE
FLEX	FLEXIBLE	SS	STAINLESS STEEL
FLR FPM	FLOOR FEET PER MINUTE	STD Struct	STANDARD STRUCTURAL
FSD	FIRE SMOKE DAMPER	SW	SWITCH
FS	FLOOR SINK		
FT	FOOT / FEET	TEFC	TOTALLY ENCLOSED FAN COOL
FV	FACE VELOCITY	TEMP TOS	TEMPERATURE TOP OF STEEL
GA	GAUGE	TYP	TYPICAL
GAL	GALLON		
GALV	GALVANIZED	UON	UNLESS OTHERWISE NOTED
GPM	GALLONS PER MINUTE	UTR	UP THROUGH ROOF

VENT

VERTICAL

WEIGHT

VFD

VERT

VARIABLE FREQUENCY DRIVE

WET BULB (TEMPERATURE)

WIRE MESH SCREEN FIRST FLOOR

SECOND FLOOR

THIRD FLOOR (ETC)

HVAC NOTES

- . ALL NOTES, INSTRUCTIONS, DIRECTIVES AND REQUIREMENTS NOTED IN THESE DRAWINGS ARE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. IN THE ABSENCE OF A GENERAL CONTRACTOR ASSOCIATED WITH THE PROJECT, SAID NOTES, INSTRUCTIONS, DIRECTIVES AND REQUIREMENTS SHALL BECOME THE RESPONSIBILITY OF THE MECHANICAL
- ALL EQUIPMENT, DEVICES AND DUCTWORK SHOWING ON THESE DRAWINGS ARE NEW UNLESS SPECIFICALLY CALLED OUT AS EXISTING (E) TO REMAIN.
- MECHANICAL EQUIPMENT AND INSTALLATIONS SHALL CONFORM WITH THE REQUIREMENTS OF THE CODES AS NOTED IN THE "APPLICABLE CODES" SECTION NOTED EITHER ON THESE DRAWINGS, ON THE ARCHITECTURAL DRAWINGS OR ON THE PROJECT COVER SHEET.
- PRIOR TO SUBMITTING BID. PURCHASING MATERIALS OR STARTING WORK, FIELD VERIFY EXISTING CONDITIONS, DUCTWORK SIZES AND LOCATIONS, EQUIPMENT, ETC. SHOWN ON THE DRAWINGS OR AFFECTING THIS WORK AND REPORT DEVIATIONS TO THE ARCHITECT.
- SHOP DRAWINGS SHALL BE SUBMITTED TO AND APPROVED BY THE ARCHITECT PRIOR TO ORDERING, PURCHASING, OR FABRICATING ANY MECHANICAL EQUIPMENT. SHOP DRAWINGS SHALL INCLUDE: EQUIPMENT SCHEDULED, SHOWN OR SPECIFIED ON THE DRAWINGS; DUCTWORK DRAWN TO 1/4" SCALE MINIMUM. REFRIGERANT PIPING AND CONTROL WIRING SCHEMATICS CERTIFIED BY THE AIR CONDITIONING EQUIPMENT MANUFACTURER. FAILURE TO SUBMIT REFRIGERANT PIPING DRAWINGS SHALL BE CAUSE FOR REJECTION OF THE ENTIRE SUBMITTAL. LONG LINE REFRIGERANT PIPING APPLICATIONS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S CURRENT SPLIT SYSTEM LONG-LINE APPLICATION GUIDELINE.
- MECHANICAL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- MECHANICAL EQUIPMENT AND SYSTEMS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE BY OWNER.
- HVAC COMPRESSORS SHALL HAVE EXTENDED 4-YEAR MANUFACTURER'S WARRANTY FOR A 5-YEAR TOTAL WARRANTY.
- UNLESS OTHERWISE NOTED, EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, ETC. SHOWN AS BEING REMOVED AS PART OF THIS CONTRACT SHALL BECOME THE PROPERTY OF THE HVAC CONTRACTOR AND SHALL BE REMOVED FROM THE PROJECT SITE PRIOR TO PROJECT
- 10. WORK SHALL BE COORDINATED AND PERFORMED WITH PRIOR APPROVAL FROM THE OWNER TO SUIT HIS OPERATING CONDITIONS.
- A. EXISTING WALL, FLOOR, OR CEILING SURFACES DISTURBED OR DAMAGED DURING THE COURSE OF THE HVAC WORK SHALL BE REPAIRED TO MATCH NEW AND/OR EXISTING
- B. ROOF PENETRATIONS/REPAIR TO BE CONTRACTED THRU LANDLORD APPROVED ROOFER TO MAINTAIN WARRANTY.
- 10. AFTER CONSTRUCTION, THE ENTIRE HVAC SYSTEM SHALL BE TESTED, ADJUSTED, AND BALANCED TO DELIVER THE AIR QUANTITIES SHOWN ON THE DRAWINGS. SUBMIT CERTIFIED (AABC , NEBB OR TABB) TEST AND BALANCE REPORT TO THE ARCHITECT FOR APPROVAL.
- 1. COORDINATE THE INSTALLATION OF MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC. TO FIT WITHIN THE SPACE ALLOWED BY THE ARCHITECTURAL AND STRUCTURAL CONDITIONS. CUTTING OR OTHERWISE ALTERING ANY STRUCTURAL MEMBERS SHALL NOT BE PERMITTED WITHOUT WRITTEN PERMISSION FROM THE STRUCTURAL ENGINEER.
- 12. MECHANICAL EQUIPMENT SHALL BE LABELED WITH A SEMI-RIGID PLASTIC LAMINATE NAMEPLATE WITH 2" HIGH WHITE LETTERS ON A BLACK BACKGROUND SECURELY AFFIXED TO THE EQUIPMENT. THE NAMEPLATE SHALL SHOW THE EQUIPMENT TAG USED ON THESE
- 13. THE LOCATIONS, ARRANGEMENT AND EXTENT OF EQUIPMENT, DEVICES, CONDUIT AND OTHER APPURTENANCES RELATED TO THE INSTALLATION OF THE ELECTRICAL WORK SHOWN ON DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL NOT SCALE DRAWINGS, BUT SHALL REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT DIMENSIONS OF BUILDING COMPONENTS. SHOULD A CONFLICT EXIST BETWEEN THE ARCHITECTURAL AND ENGINEERING DRAWINGS REGARDING DIMENSIONS AND SCALE, NOTIFY THE ARCHITECT OF
- 4. MATERIALS, EQUIPMENT OR LABOR NOT INDICATED BUT WHICH CAN BE REASONABLY INFERRED TO BE NECESSARY FOR A COMPLETE INSTALLATION SHALL BE PROVIDED. DRAWINGS AND SPECIFICATIONS DO NOT UNDERTAKE TO INDICATE EVERY ITEM OF MATERIAL, EQUIPMENT OR LABOR REQUIRED TO PRODUCE A COMPLETE AND PROPERLY OPERATING INSTALLATION.
- 15. THE DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY DEPICT EXACT CONDITIONS. THE LOCATION OF EQUIPMENT, DUCTWORK, ETC. IS APPROXIMATE ONLY. THE DRAWINGS ARE SCHEMATIC IN NATURE AND ARE NOT TO BE SCALED. SCALES ARE SHOWN FOR REFERENCE AND APPROXIMATION ONLY. REFER TO THE ARCHITECTURAL DRAWINGS FOR DIMENSIONAL DATA OF BUILDING COMPONENTS.
- 16. PROVIDE AND INSTALL ROOM SENSORS. MOUNT AT 60" AFF.

EQUIPMENT CALLOUTS

DEVICE I.D. DESIGNATION —

REFER TO DIFFUSER SCHEDULE

REFER TO DIFFUSER SCHEDULE

AIRFLOW CHARACTERISTICS

NUMBER OF TYPICAL SYSTEM DIFFUSERS

WITH IDENTICAL SPECIFICATIONS AND

MECHANICAL/ELECTRICAL COORDINATION:

- COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF MECHANICAL EQUIPMENT WITH ELECTRICAL DRAWINGS PRIOR TO ORDERING EQUIPMENT OR SUBMITTING SHOP DRAWINGS. FURNISH EQUIPMENT WIRED FOR THE VOLTAGES SHOWN THEREIN. SHOP DRAWING SUBMITTALS SHALL CLEARLY STATE THAT THE ELECTRICAL CHARACTERISTICS OF ALL EQUIPMENT HAS BEEN COORDINATED WITH THE ELECTRICAL CONTRACT DOCUMENTS AND THE ELECTRICAL CONTRACTOR.
- MECHANICAL EQUIPMENT REQUIRING ELECTRICAL POWER SHALL BE INSTALLED WITH DISCONNECT SWITCHES AT EACH PIECE OF EQUIPMENT. COORDINATE SWITCH TYPE (FUSED OR NON-FUSED) WITH EQUIPMENT CHARACTERISTICS, MANUFACTURER'S RECOMMENDATIONS AND THE ELECTRICAL DRAWINGS.
- REQUIRED CONTROL WIRING (INCLUDING POWER WIRING REQUIRED FOR CONTROL PANELS, DEVICES, ETC.) NOT SHOWN ON THE ELECTRICAL DRAWINGS SHALL BE INCLUDED AS PART OF THE MECHANICAL WORK. WIRING IN HVAC PLENUM SPACES SHALL BE INSTALLED ACCORDING TO CODE REQUIREMENTS.
- UNLESS NOTED OTHERWISE, TRANSFORMERS, CONTROLS AND CONTROL WIRING REQUIRED FOR ALL MECHANICAL SYSTEMS SHALL BE FURNISHED WITH THE EQUIPMENT IT SERVES AND INSTALLED PER MANUFACTURER'S REQUIREMENTS AND SPECIFICATIONS. MOTOR STARTERS FOR HVAC EQUIPMENT SHALL BE FURNISHED WITH THE MOTOR OR APPARATUS WHICH IT OPERATES AND SIZED PER THE MANUFACTURER'S RECOMMENDATIONS. IF MOTOR STARTERS ARE NOT AVAILABLE WITH EQUIPMENT PURCHASED, STARTERS TO BE SIZED PER CURRENT EDITION OF NEC AND INSTALLED PER MANUFACTURER'S RECOMMENDATION.

HVAC UNIT CALL-OUT

SINGLE TERMINAL DEVICE CALL-OUT

MULTIPLE TERMINAL DEVICE CALL-OUT

S1 6"Ø ■ DIFFUSER NECK &

RUNOUT SIZE

RUNOUT SIZE

- AIRFLOW (CFM)

- AIRFLOW (CFM)

HVAC LEGEND

SYMBOL	DESCRIPTION
	EQUIPMENT TO REMAIN
	EQUIPMENT TO BE DEMOLISHED
	NEW EQUIPMENT
$\leftarrow \rightarrow \Sigma \supset$	PIPE, DUCT TO REMAIN
4++3 \$ T/3	PIPE, DUCT TO BE DEMOLISHED
├ ├	NEW PIPE, DUCT
	ACOUSTICAL LINING
	DUCT RISER OR DROP (SA)
	DUCT RISER OR DROP (RA)
	DUCT RISER OR DROP (EA)
<u></u> — → —	duct transition
\boxtimes	CEILING DIFFUSER,4 WAY THROW
$\leftarrow \boxtimes \rightarrow$	CEILING DIFFUSER,2 WAY THROW
\bigcirc	CEILING DIFFUSER, ROUND
	RETURN AIR GRILLE/REGISTER
	CEILING EXHAUST AIR GRILLE/REGISTER
	SIDE WALL SUPPLY REGISTER
	SIDE WALL RETURN REGISTER
<u>4</u> [] < }	SIDE WALL EXHAUST REGISTER
	ROOM THERMOSTAT
HS	HUMIDISTAT
BP)	BY-PASS CONTROLLER
(CO2)	CO2 SENSOR
TS	TEMPERATURE SENSOR
HS	humidity sensor
SW	SWITCH
[D]	duct smoke detector
→ DL V	DOOR LOUVER
<u> </u>	UNDERCUT DOOR
FSD ■	AUTOMATIC FIRE/SMOKE DAMPER
MVD [MANUAL VOLUME DAMPER
AFD —●	AUTOMATIC FIRE DAMPER
M	MOTORIZED DAMPER
	BACKDRAFT DAMPER
— RL—	REFRIGERANT LIQUID LINE
— RS——	REFRIGERANT SUCTION LINE
— CHS—	CHILLED WATER SUPPLY PIPING
— CHR—	CHILLED WATER RETURN PIPING
— CS —	CONDENSER WATER SUPPLY PIPING
— CR —	CONDENSER WATER RETURN PIPING
— нѕ —	HEATING HOT WATER SUPPLY PIPING
— HR —	HEATING HOT WATER RETURN PIPING
— CD—	COOLING COIL CONDENSATE OR EQUIPMENT DRAIN PIPING
•	POINT OF CONNECTION
•	POINT OF DISCONNECTION

REGULATORY NOTES

FIRE RESISTIVE BUILDING MATERIALS

SCOPE OF WORK

RESIDENTIAL BUILDING.

- A. INSULATION MATERIALS INSTALLED IN BUILDINGS OF ANY TYPE OF CONSTRUCTION, SHALL HAVE A FLAME-SPREAD RATING OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 IN ACCORDANCE WITH APPLICABLE CODES LISTED ON THIS SHEET OR ON THE PROJECT COVER SHEET.
- INSULATION, INSULATION JACKET, ADHESIVES, TAPES, ETC. SHALL BE APPLIED PER MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS.

EQUIPMENT TYPE / SPECIFICATION —— → RTU-1 → DEVICE OR SEQUENCE NUMBER

- PROVIDE HVAC SYSTEMS WITH FRESH AIR VENTILATION CAPABILITIES FOR 6-STORY
- PROVIDE AND INSTALL ALL REQUIRED HVAC EQUIPMENT, ANCHORAGE AND ASSOCIATED MATERIALS.

30 THOMAS, IRVINE, CA 92618-2703 PHONE: (949) 716-9990 | FAX: (949) 716-9997

STAMP:



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CLIENT:

JAIME PARTNERS OF CALIFORNIA, INC.

1050 S. FLOWER STREET LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD

LOS ANGELES, CA 90016

	C-JAIME-001	
	C 37 (1111 C 00 1	
#	DESCRIPTION	DATE
	1ST SUBMITTAL	10/04/21
	UTILITY COORDINATION	04/08/22
$\overline{\Lambda}$	PC RESUBMITTAL	05/18/22
2	PC RESUBMITTAL	10/28/22
3	HCD REVISION 1	12/16/22
4	PC RESUBMITTAL	02/02/23
<u>5</u>	HCD & PC RESUBMITTAL	06/06/23
	HCD RESUBMITTAL	06/14/23
$\overline{\mathbb{A}}$	PC RESUBMITTAL	07/10/23
8	CLIENT REVISIONS	07/11/23
	CLIENT REVISIONS	08/04/23
10	PC RESUBMITTAL (ELEC)	09/12/23
$\overline{\mathbb{A}}$	PC RESUBMITTAL (ELEC)	10/05/23
	CLIENT REVISIONS	10/12/23

Plot Date: 10/12/2023 9:20:29 AM

SHEET TITLE:

MECHANICAL **GENERAL**

SHEET NO:

MODULAR PERMANENT SUPPORTIVE HOUSING PROJECT

2853 WEST BLVD. LOS ANGELES, CA 90013

SCOPE OF REVIEW LOCAL AUTHORITY HAVING JURISDICTION (LAHJ) CITY OF LOS ANGELES DEPT. OF BUILDING & SAFETY (LADBS) STATE OF CALIFORNIA HOUSING & COMMUNITY DEVELOPMENT (HCD) DESIGN APPROVAL AGENCYNTA LOCAL FIRE DEPARTMENT CITY OF LOS ANGELES FIRE DEPARTMENT (LAFD) **INSPECTION** PLAN REVIEW

APPLICABLE CODES SCOPE SECTION/DESCRIPTION HCD LAHJ LAFD HCD LAHJ LAFD LEVEL 01: HVAC FOR COMMON AREAS AND RESTROOM EXHAUST Χ Χ 2019 CALIFORNIA MECHANICAL CODE LEVELS 02-06: HVAC SYSTEMS FOR LIVING SPACE AND RESTROOM EXHAUST FOR RESIDENTIAL UNITS LEVELS 02-06: RESIDENTIAL UNITS (MODULAR)

HVAC SPECIFICATIONS

- 0.00 GENERAL PROVISIONS
- 0.01 DEFINITIONS: THE TERMS LISTED BELOW ARE DEFINED AS FOLLOWS WHEN USED IN MECHANICAL AND PLUMBING WORK.
- 1. WORK: LABOR AND MATERIALS OF THE CONTRACTOR AND/OR SUBCONTRACTOR.
- 2. FURNISH: OBTAIN, COORDINATE, SUBMIT THE NECESSARY DRAWINGS, DELIVER
- TO THE JOBSITE IN NEW CONDITION AND GUARANTEE.

 3. INSTALL: RECEIVE AT THE JOB-SITE, UNLOAD, STORE, SET IN PLACE, CONNECT,
- 4. PROVIDE: FURNISH AND INSTALL.

PLACE IN OPERATION AND GUARANTEE.

- 5. CONNECT: BRING SERVICE TO THE EQUIPMENT AND MAKE FINAL ATTACHMENTS
- INCLUDING NECESSARY PIPE FITTINGS, DUCTWORK, TRANSITIONS, ETC.

 6. CONCEALED: HIDDEN FROM SIGHT IN CHASES, FURRED SPACES, SHAFTS, ABOVE
- CEILING, EMBEDDED IN CONSTRUCTION, IN CRAWL SPACES OR BURIED.

 7. EXPOSED: NOT INSTALLED UNDERGROUND NOR CONCEALED AS DEFINED ABOVE.
- 0.02 PERFORMANCE: THE CONTRACTOR SHALL PERFORM ALL WORK SPECIFIED, INDICATED AND REQUIRED UNLESS OTHERWISE NOTED, INCLUDING FINAL CONNECTIONS, IN A WORKMANLIKE MANNER USING WORKERS SKILLED AND EXPERIENCED IN THE TRADE.
- 0.03 SITE EXAMINATION: EXAMINE SITE BEFORE BIDDING. CLAIM NO EXTRAS
 RESULTING FROM LACK OF KNOWLEDGE OF SITE CONDITIONS. IF SITE
 CONDITIONS REQUIRE MODIFICATION OF THE SYSTEMS INDICATED IN THESE
 DOCUMENTS, SO ADVISE ENGINEER, AND IF ACCEPTED BY ENGINEER, INCLUDE
 COST OF SUCH MODIFICATIONS IN BID.
- 0.04 JOBSITE CONDITIONS: ACCEPT SOLE AND COMPLETE RESPONSIBILITY FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK.
- 0.05 FULL FUNCTION: PROVIDE ALL MINOR ITEMS NECESSARY FOR A COMPLETE AND FULLY FUNCTIONAL INSTALLATION.
- 0.06 ADMINISTRATION: PROVIDE EVIDENCE OF LICENSING, BONDING, AND INSURANCE, AND PERFORM OTHER ADMINISTRATIVE FUNCTIONS, AS REQUIRED.
- 0.07 PERMITS: PROCURE AND PAY FOR ALL REQUIRED PERMITS AND SERVICE CHARGES.
- 0.08 COORDINATION: CONFORM TO GENERAL CONSTRUCTION CONTRACT DOCUMENTS EXCEPT AS MODIFIED HEREIN. REFER ALSO TO ARCHITECTURAL STRUCTURAL AND ELECTRICAL CONTRACT DOCUMENTS. COORDINATE ALL WORK WITH OTHER TRADES.
- 0.09 CUTTING AND PATCHING: CUT AND PATCH AS REQUIRED. CUT OR WELD STRUCTURAL MEMBERS ONLY WITH APPROVAL OF STRUCTURAL ENGINEER. PATCHING SUBJECT TO APPROVAL BY ARCHITECT.
- 0.10 EXISTING FLOORS: TRENCH OR CORE BORE EXISTING FLOORS PER LANDLORD REQUIREMENTS.
- 0.11 ROOF PENETRATIONS: COORDINATE WITH LANDLORD.
- O.12 EQUIPMENT SUBSTITUTIONS: SUBSTITUTIONS TO SCHEDULED MECHANICAL EQUIPMENT SHALL BE REVIEWED FOR CAPACITY, PERFORMANCE AND FUNCTIONALITY ONLY. CONTRACTOR IS RESPONSIBLE FOR FITTING SUBSTITUTED EQUIPMENT INTO SPACE. CONTRACTOR TO SUBMIT EQUIPMENT SUBSTITUTIONS TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO ORDERING. REIMBURSE ELECTRICAL CONTRACTOR, AT NO CHARGE TO TENANT, FOR HIS COSTS INCURRED DUE TO SUBSTITUTION OF MECHANICAL EQUIPMENT HAVING ELECTRICAL REQUIREMENTS DIFFERING FROM THOSE INDICATED.
- 0.13 ADJUSTMENTS: MAKE MINOR ADJUSTMENTS TO WORK WHERE REQUESTED BY TENANT, WHEN SUCH ADJUSTMENTS ARE NECESSARY TO PROPER OPERATION AND WITHIN THE INTENT OF THE CONTRACT.
- 0.14 REFERENCE STANDARDS: COMPLY WITH APPLICABLE STANDARDS OF NFPA, ANSI, UL, ASHRAE, AND SMACNA, EXCEPT AS SUPERSEDED BY LOCAL AUTHORITY. CONFORM WITH CONTRACT DOCUMENTS WHERE THEY EXCEED CODE MINIMUM REQUIREMENTS.
- 0.15 LOCAL REQUIREMENTS: COMPLY WITH THE REQUIREMENTS OF APPLICABLE CODES, LANDLORD, OWNER, SERVING UTILITIES, AND THE LOCAL AUTHORITY HAVING JURISDICTION. SECURE APPROVAL OF INSTALLATION BY LANDLORD, OWNER, LOCAL AUTHORITY, AND OTHERS AS REQUIRED.
- 0.16 MATERIALS AND EQUIPMENT: PROVIDE NEW, UL LISTED, COMMERCIAL GRADE MATERIALS, DEVICES, EQUIPMENT, AND FIXTURES, SUITABLE FOR ENVIRONMENT. REUSE EXISTING ONLY WHEN COMPLIANT WITH THE CONTRACT DOCUMENTS, IN GOOD CONDITION, AND APPROVED BY THE ENGINEER. CLEAN AND PAINT ALL REUSED EQUIPMENT AND/OR DEVICES, AS APPLICABLE.
- 0.17 SHOP DRAWINGS: BEFORE ORDERING EQUIPMENT AND MATERIALS, SUBMIT NOT LESS THAN FIVE CERTIFIED COPIES OF ALL SHOP AND EQUIPMENT DRAWINGS FOR ENGINEER'S REVIEW, WHO WILL RETAIN TWO COPIES. ONLY FURNISH SYSTEMS AND EQUIPMENT IN COMPLIANCE WITH ACCEPTED SHOP DRAWINGS.
- 0.18 INSTALLATION: INSTALL ALL MATERIALS, EQUIPMENT AND SYSTEMS IN FULL ACCORD WITH MANUFACTURERS' INSTRUCTIONS.
- 0.19 LAYOUT: INSTALL ALL PIPING AND DUCTWORK TO PRESENT A NEAT AND ORDERLY APPEARANCE. RUN ALL LINES PARALLEL WITH BUILDING CONSTRUCTION. MAINTAIN HEADROOM AND EQUIPMENT CLEARANCE, AND GRADIENT WHERE REQUIRED. ALLOW FOR EXPANSION AND CONTRACTION.
- O.20 ACCESS DOORS: PROVIDE ACCESS DOORS OR PANELS FOR ALL VALVES, CLEANOUTS, DAMPERS, CONTROLS, DEVICES, AND OTHER ITEMS REQUIRING INSPECTION OR MAINTENANCE. ACCESS PANELS SERVING HVAC COMPONENTS SHALL BE 12-INCHES BY 12-INCHES MINIMUM OR LARGER TO PROVIDE SUFFICIENT WORKING CLEARANCE FOR COMPONENT BEING ACCESSED.
- 0.21 COMMISSIONING: THOROUGHLY TEST AND DEMONSTRATE PROPER OPERATION OF ALL SYSTEMS AND EQUIPMENT FURNISHED OR INSTALLED UNDER THIS CONTRACT.

- O.22 O & M MANUALS: FOUR COPIES OF OPERATION AND MAINTENANCE MANUAL SHALL BE PROVIDED TO THE BUILDING OWNER OR OPERATOR. THE MANUAL SHALL INCLUDE BASIC DATA RELATING TO THE OPERATION AND MAINTENANCE OF HVAC SYSTEMS AND EQUIPMENT. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED. WHERE APPLICABLE, HVAC CONTROLS INFORMATION SUCH AS DIAGRAMS, SCHEMATICS, CONTROL SEQUENCE DESCRIPTIONS, AND MAINTENANCE AND CALIBRATION INFORMATION SHALL BE INCLUDED.
- 0.23 WARRANTY: UNCONDITIONALLY WARRANT ALL WORK TO BE FREE OF DEFECTS IN MATERIALS AND WORKMANSHIP FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE, EXCEPT WARRANT AIR CONDITIONING COMPRESSORS FOR FIVE YEARS AND GAS-FIRED HEAT EXCHANGERS FOR TEN YEARS. DURING WARRANTY PERIOD, REPAIR OR REPLACE DEFECTIVE MATERIALS, EQUIPMENT OR WORKMANSHIP WITHOUT COST TO TENANT.
- 0.24 EQUIPMENT IDENTIFICATION: IDENTIFY ALL APPLICABLE ROOFTOP EQUIPMENT WITH TENANT'S NAME AND SPACE NUMBER, USING 2" PAINTED CHARACTERS OR STAMPED METAL TAG.
- 0.25 DRAWINGS ARE DIAGRAMMATIC: VERIFY ALL DIMENSIONS AND LENGTHS, AND ADJUST EQUIPMENT, PIPE AND DUCT LOCATIONS TO AVOID CONFLICTS WITH OTHER CONSTRUCTION AND TRADES.
- 0.26 DOCUMENT PRIORITY: DRAWING INDICATIONS AND NOTATIONS SUPERSEDE THESE SPECIFICATIONS.
- 0.27 RATINGS: REFER TO DRAWINGS AND SCHEDULES FOR ADDITIONAL RATINGS AND REQUIREMENTS.
- 0.28 PROJECT REQUIREMENTS: REFER TO DRAWINGS FOR PARTICULAR PROJECT REQUIREMENTS, AS NOT ALL ITEMS INCLUDED IN THESE SPECIFICATIONS MAY BE REQUIRED FOR THIS PROJECT.
- 0.29 DOCUMENT ERRORS: NOTIFY THE ENGINEER OF ERRORS, DISCREPANCIES OR OMISSIONS BEFORE CONSTRUCTION OR FABRICATION OF AFFECTED WORK, OR, FAILING OF SUCH NOTICE, BE RESPONSIBLE FOR CORRECTING SAME WITHOUT COST TO THE OWNER, ARCHITECT OR ENGINEER.
- 1.00 PIPE AND FITTINGS
- 1.10 PIPE HANGERS AND SUPPORTS: PROPERLY SUPPORT ALL PIPING FROM JOISTS (TOP CHORD) OR OTHER STRUCTURAL MEMBERS. FOR PIPES UP TO 4" O.D., USE GRINNELL FIG. 260 CLEVIS HANGERS WITH 3/8" ROD, OR FIG. 195 BRACKETS.
- 1.20 INSULATION SHIELDS: PROVIDE 18 GAUGE X 12" LONG GALVANIZED INSULATION SHIELDS AT SUPPORT POINTS FOR INSULATED PIPES.
- 1.30 PIPE SUPPORT SPACING: SUPPORT PIPE NOT LESS THAN 6 FT. ON CENTER FOR COPPER PIPE UP TO 2" O.D., OR NOT LESS THAN 10 FT. ON CENTER FOR STEEL PIPE UP TO 4" O.D.
- 1.40 COPPER CONTACT: PROVIDE COPPER PLATED HANGERS AND SUPPORTS WHERE IN CONTACT WITH COPPER PIPE.
- 1.50 PIPE SLEEVES: SLEEVE ALL HORIZONTAL PIPING WHICH PENETRATES WALLS WITH STANDARD WEIGHT STEEL PIPE OF 1" GREATER DIAMETER THAN PIPE OR INSULATION O.D. CUT SLEEVE FLUSH WITH WALL FINISH BOTH SIDES.
- 1.60 SEALANT: SEAL PIPE SLEEVES WITH ROPE AND EXPANDO NON-SHRINK SEALANT. FIRE/SMOKE SEAL PENETRATIONS OF RATED CONSTRUCTION TO MAINTAIN RATING.
- 1.70 WALL PLATES: FIT UNCOVERED PIPE PASSING THROUGH WALLS WITH WALL PLATES, CRANE NO. 10 OR EQUAL.
- 1.80 PRIMARY CONDENSATE FROM ALL AIR CONDITIONING EQUIPMENT SHALL BE TRAPPED AND ROUTED AS NOTED ON THE PLANS. CONDENSATE PIPING SHALL BE SCHEDULE 40 PVC (EXCEPT INSULATED COPPER IN HVAC PLENUMS).
- 1.90 ALL PIPING ABOVE GRADE SHALL BE SUPPORTED BY THE BUILDING STRUCTURE AND SHALL NOT REST ON CEILING TILES OR CEILING STRUCTURE. PIPING HUNG FROM JOISTS SHALL BE HUNG FROM THE TOP CHORDS OF THE JOISTS.
- 2.00 THERMAL AND ACOUSTIC INSULATION
- 2.10 VIBRATION ISOLATION: PROVIDE EFFECTIVE VIBRATION ISOLATION DEVICES, AND FLEXIBLE CONNECTIONS, FOR ALL MOVING MACHINERY. PROVIDE DEVICES IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE ASHRAE HANDBOOK, HVAC APPLICATIONS (LATEST EDITION), CHAPTER "NOISE AND VIBRATION CONTROL".
- 2.20 NOISE TRANSMISSION: INSTALL PIPING AND DUCTWORK FREE FROM CONTACT WITH STRUCTURE OR EQUIPMENT TO PREVENT NOISE TRANSMISSION.
- 2.30 INSULATION REQUIREMENTS: INSULATE SYSTEMS AS SPECIFIED ONLY AFTER THEY HAVE BEEN TESTED AND INSPECTED. CLEAN ALL SURFACES THOROUGHLY OF MOISTURE, FOREIGN MATERIAL, GREASE, AND RUST. INSTALL INSULATION CONTINUOUS THROUGH PENETRATIONS.
- 2.31 INSULATION HAZARDS: USE ONLY INSULATION ADHESIVES, SEALERS, AND COATINGS WITH FIRE HAZARD RATING NOT TO EXCEED 25/50/50 FLAME SPREAD, FUEL CONTRIBUTED, AND SMOKE DEVELOPED, IN ACCORDANCE WITH UL 723 AND ASTM E84.
- 2.33 INSULATED HVAC PIPING SYSTEMS: INSULATE REFRIGERANT SUCTION PIPING AND COOLING COIL CONDENSATE PIPING WITH 3/4-IN. THICK CLOSED CELL FOAM INSULATION, RUBATEX OR EQUAL.
- 2.34 ACOUSTICALLY LINED SUPPLY AND RETURN DUCT: UNLESS OTHERWISE INDICATED ON THE PLANS, LINE SUPPLY AND RETURN DUCTWORK WITHIN 10-FEET OF THE DISCHARGE OF FAN-POWERED VAV BOXES AND DISCHARGE AND INTAKE OF AIR HANDLING UNITS WITH 1" THICK GLASS FIBER ACOUSTICAL DUCT LINER BOARD, OWENS-CORNING QUIETR, OR ENGINEER-APPROVED EQUAL. INCREASE DUCT SIZE INDICATED ON PLANS 2" IN EACH DIMENSION TO ACCOMMODATE DUCT LINER. MATERIALS SHALL HAVE A MOLD-, HUMIDITY-, AND CORROSION-RESISTANT SURFACE THAT MEETS THE REQUIREMENTS OF UL

- 2.35 EXTERNALLY INSULATED SUPPLY AND RETURN DUCT: INSULATE SHEET METAL DUCTWORK WITH 1 AND 1/2-INCH FIBERGLASS BLANKET DUCT WRAP WITH AN INTEGRAL VAPOR BARRIER FACING, OWENS-CORNING, OR EQUAL. THE INSULATION SHALL HAVE MINIMUM R = 6.0 HR-SQ.FT.-DEG. F/BTU-IN. THERMAL RESISTANCE. DO NOT INSULATE PORTIONS OF DUCTWORK WHICH ARE INTERNALLY LINED. DO NOT INSULATE SUPPLY AIR DUCTWORK IN CONDITIONED SPACES UNLESS OTHERWISE INDICATED ON THE DRAWINGS. IF DUCTWORK IN CONDITIONED SPACE MUST BE INSULATED, INSULATION SHALL BE INTERNAL AND NOT VISIBLE FROM THE OCCUPIED SPACE.
- 2.36 INSULATED EXHAUST AIR DUCT: EXTERNALLY INSULATE EXHAUST AIR DUCT WITH 1-1/2" THICK GLASS FIBER INSULATION WITH KRAFT FOIL VAPOR BARRIER, OWENS-CORNING, OR EQUAL.
- 2.40 INSULATED FLEXIBLE DUCT: FLEXIBLE DUCTWORK SHALL BE THERMAFLEX M-KE (U.L. 181 LISTED, CLASS 1 FLEXIBLE AIR DUCT). PROVIDE MINIMUM INSULATION VALUE OF R-6, R-8 WHEN LOCATED OUTSIDE THE THERMAL ENVELOPE OF THE BUILDING, OR GREATER WHERE REQUIRED BY APPLICABLE ENERGY CODE. AIR CONNECTORS ARE NOT ACCEPTABLE. FLEX DUCT DIAMETER SHALL MATCH DEVICE NECK DIAMETER. PROVIDE ROUND GALVANIZED STEEL DUCT RUNOUTS TO MAINTAIN A MAXIMUM FLEXIBLE DUCT LENGTH OF 5'-0". FLEXIBLE DUCTWORK SHALL BE INSTALLED AS STRAIGHT AS POSSIBLE AND SHALL BE ROUTED AND SUPPORTED WITHOUT FORMING CRIMPS OR OTHER AIR FLOW RESTRICTIONS. PROVIDE SQUARE TO ROUND ADAPTERS OR BOOTS TO CONNECT TO AIR DEVICE NECK WHEN REQUIRED.
- 2.50 INSULATED EXTERIOR DUCTWORK: RIGID DUCTWORK INSTALLED EXTERIOR TO THE BUILDING ENVELOPE SHALL BE INSULATED WITH ARMACELL ARMATUFF LAMINATED INSULATION (SHEETS OR ROLLS, AS APPLICABLE), OR SUBMIT DESIRED SUBSTITUTION TO ENGINEER OF RECORD FOR WRITTEN APPROVAL. INSULATION SHALL BE MINIMUN 2" ARMAFLEX FLEXIBLE ELASTOMERIC THERMAL INSULATION WITH WHITE 17.5 MIL LAMINATED COVERING. CONTRACTOR TO SPECIFY INCLUSION OR EXCLUSION OF PRESSURE-SENSITIVE ADHESIVE WHEN ORDERING PRODUCT.
- 8.00 DUCTWORK AND APPURTENANCES
- 8.10 SHEET METAL DUCTWORK:
- 8.20 ALL DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEETMETAL IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE OR UL 181, DUCT CONSTRUCTION STANDARDS, LATEST EDITION.

 JOINTS AND SEAMS IN SHEETMETAL DUCTWORK SHALL BE SEALED WITH DUCT SEALER. DUCT WRAP INSULATION ON SUPPLY, RETURN AND OUTSIDE AIR DUCT SHALL BE JOHNS MANVILLE MICROLITE XG OR EQUAL UL LISTED FIBERGLASS BLANKET INSULATION WITH FOIL VAPOR BARRIER. ANY PUNCTURES OR TEARS IN THE FOIL JACKET SHALL BE PATCHED WITH FOIL TAPE TO MAINTAIN THE INTEGRITY OF THE VAPOR BARRIER. INSULATE SHEET METAL DUCTWORK IN THE THICKNESSES AND DENSITIES LISTED BELOW:
- 8.21 SHEET METAL SUPPLY AND OUTSIDE AIR DUCTWORK : 2" THICK, 1 LB/FT3 DENSITY, R-8 MINIMUM INSTALLED.
- 8.22 INDOOR EXPOSED SPIRAL SUPPLY AIR DUCT SHALL BE LINED WITH 1-1/2" THICK ROUND DUCT LINER (MINIMUM R-8), JOHNS MANVILLE SPIRACOUSTIC PLUS OR EQUAL.
- 8.23 LINE ALL SHEETMETAL DUCTWORK A MINIMUM OF 10'-0" DOWNSTREAM OF ALL AIR HANDLING UNITS. DUCT LINER SHALL BE 1-1/2" THICK (R-6 OR GREATER WHERE REQUIRED BY APPLICABLE ENERGY CODE), JOHNS MANVILLE PERMACOTE LINACOUSTIC R-300. THE LEADING EDGE OF THE DUCT LINER SHALL HAVE A SHEETMETAL NOSING.
- 8.25 ROUND, SPIRAL DUCTWORK LEFT EXPOSED AND VISIBLE WHICH IS TO BE PAINTED SHALL BE CONSTRUCTED OF "PAINT-GRIP" TYPE DUCT.
- 8.30 FIRE DAMPERS: AIR BALANCE, INC., LOUVERS & DAMPERS, RUSKIN, OR EQUAL. GALVANIZED STEEL CURTAIN TYPE WITH INTERLOCKING BLADES, STAINLESS STEEL CLOSURE SPRINGS AND LATCHES FOR HORIZONTAL OR VERTICAL INSTALLATION, BLADES OUT OF AIR STREAM, FUSIBLE LINKS RATED AT 160-165 DEGREES F. PER UL 33. FIRE DAMPERS SHALL BE UL-555 LISTED, MEETING OR EXCEEDING NFPA GUIDELINES. FIRE DAMPERS SHALL HAVE MAXIMUM STATIC PRESSURE DROP OF 0.05+IN. W.G. AT DESIGN DUCT VELOCITY. DAMPER SHALL HAVE CALIFORNIA STATE FIRE MARSHAL APPROVAL.
- 8.35 FIRE/SMOKE DAMPERS: AIR BALANCE, INC., LOUVERS & DAMPERS, RUSKIN, OR EQUAL. GALVANIZED STEEL CURTAIN TYPE WITH INTERLOCKING BLADES, STAINLESS STEEL CLOSURE SPRINGS AND LATCHES FOR HORIZONTAL OR VERTICAL INSTALLATION, FUSIBLE LINKS RATED AT 160-165° F. PER UL 33. FIRE/SMOKE DAMPERS SHALL BE UL-555/UL-555S LISTED, MEETING OR EXCEEDING NFPA GUIDELINES. FIRE/SMOKE DAMPERS SHALL HAVE MAXIMUM STATIC PRESSURE DROP 0.05 IN. W.G. AT DESIGN DUCT VELOCITY. REFER TO SECTION 9.14 FOR SMOKE DETECTOR SPECIFICATION.
- 8.40 AIR OUTLETS AND INLETS: PROVIDE TITUS, KRUEGER, PRICE OR ENGINEER-APPROVED EQUAL, AS SCHEDULED. DAMPER SHALL HAVE CALIFORNIA STATE FIRE MARSHAL APPROVAL ON PLANS. PROVIDE MISCELLANEOUS ITEMS AS NECESSARY FOR A COMPLETE AND PROPER INSTALLATION IN THE TYPES OF WALLS AND CEILINGS USED ON THE PROJECT. THIS SHALL INCLUDE SUCH ITEMS AS FASTENERS, PLASTER RINGS, SUPPORTS, ETC.
- 8.50 DUCT ACCESS PANELS: AIR BALANCE, INC., VENTFABRICS, RUSKIN, OR EQUAL. PROVIDE DUCT ACCESS PANELS AT EACH FIRE DAMPER SIZED TO PERMIT MAINTENANCE AND RESETTING OF THE DAMPER. PANELS SHALL BE CONSTRUCTED OF THE SAME OR GREATER GAUGE AS DUCTWORK SERVED. PROVIDE INSULATED DOORS FOR INSULATED DUCTWORK. PROVIDE FLUSH FRAMES FOR UNINSULATED DUCTWORK AND EXTENDED FRAMES FOR EXTERNALLY INSULATED DUCTWORK. PROVIDE REMOVABLE DOORS FOR SIZES UP THROUGH 18-IN. (LARGEST DIMENSION) AND HINGED, TWO-HANDLE TYPE LATCHES FOR LARGER DOORS.
- 8.60 ALL INTAKE OPENINGS AND RELIEF/EXHAUST OPENINGS LOCATED OUTSIDE OF BUILDING SHALL BE COVERED WITH 1/4" TO 1/2" WELDED WIRE BIRD SCREEN OF GALVANIZED STEEL. ALL INTAKES LOCATED IN OPEN CEILING AREAS WHICH ARE VISIBLE FROM BELOW SHALL BE COVERED WITH 1/4" WELDED WIRE SCREEN OF GALVANIZED STEEL AND THE INSIDE OF THE DUCTWORK AND/OR ACOUSTICAL LINING SHALL BE PAINTED FLAT BLACK FOR A MINIMUM DISTANCE OF 4' FROM THE OPENING OF THE DUCTWORK OR BELL MOUTH.
- 8.70 DUCTWORK SHALL BE SUPPORTED BY THE BUILDING STRUCTURE AND SHALL NOT REST ON CEILING TILES OR CEILING STRUCTURE. DUCT SUPPORTS AND ATTACHMENT TO STRUCTURE SHALL BE PER SMACNA STANDARDS.

- 8.80 ROUND AND FLEXIBLE SUPPLY AIR DUCTWORK SHALL BE CONNECTED TO MAIN DUCTS WITH A SPIN-IN FITTING WITH SCOOP AND BALANCING DAMPER.
- 8.90 DUCTWORK DIMENSIONS SHOWN ON THE DRAWINGS ARE CLEAR INSIDE DIMENSIONS. ENLARGE DUCTWORK AS REQUIRED TO ACCOMMODATE INTERNAL DUCT LINER.
- 8.95 LOCATIONS OF GRILLES, REGISTERS, AND DIFFUSERS SHOWN ON THE DRAWINGS ARE APPROXIMATE. COORDINATE EXACT LOCATIONS WITH LIGHTS, CEILING GRID, ETC. AND ARCHITECTURAL REFLECTED CEILING PLAN.
- 8.96 FACTORY-MADE FLEXIBLE DUCTWORK AND CONNECTORS SHALL NOT BE USED IN LIEU OF RIGID ELBOWS OR FITTINGS.
- 9.00 SYSTEM CONTROL AND OPERATION
- 9.10 SPACE TEMPERATURE CONTROL: FURNISH AND INSTALL, UNLESS NOTED OTHERWISE, ALL THERMOSTATS, SENSORS, CONTROLLERS, RELAYS, CONTACTORS, DAMPERS, ACTUATORS, TUBING, CONTROL WIRING AND ALL OTHER ITEMS AND MATERIALS NECESSARY FOR A COMPLETE AND PROPERLY OPERATING TEMPERATURE CONTROL SYSTEM AS SPECIFIED ON THE PLANS. ALL THERMOSTATS AND OTHER CONTROL COMPONENTS SHALL BE HONEYWELL, OR ENGINEER-APPROVED EQUAL, UNLESS SPECIFIED OTHERWISE. ALL CONTROL WIRING SHALL BE INSTALLED IN CONDUIT.
- 9.11 THERMOSTAT: REFER TO "HVAC CONTROLS" ON PLANS. THERMOSTATS SHALL BE ADA COMPLIANT AND SHALL HAVE OCCUPANT CONTROLLED SMART THERMOSTAT (OCST) PER REFERENCE JOINT APPENDIX JA5 (IEC 120.2). MOUNT TOP OF THERMOSTATS 46" AFF UNLESS NOTED OTHERWISE. COORDINATE THERMOSTAT LOCATIONS WITH OTHER TRADES. PROVIDE LOCKOUT CONTROLS OR CLEAR LOCKING COVERS FOR ALL PUBLIC AREA THERMOSTATS.
- 9.12 CO2 SENSOR FOR DEMAND-CONTROL VENTILATION SEQUENCE: REFER TO "HVAC CONTROLS" ON PLANS.
- 9.13 DUCT SMOKE DETECTOR FOR AIR-MOVING EQUIPMENT: PROVIDE COMPATIBLE DUCT SMOKE DETECTORS IN SUPPLY DUCTS AS INDICATED (BOSCH MODEL D341/D342 CSFM LISTING #: 3240-1615:0181 WITH D286 IONIZATION-TYPE SMOKE DETECTION HEAD, OR ENGINEER-APPROVED EQUAL). CONNECT TO DE-ENERGIZE FAN UPON SMOKE DETECTION. CONNECT TO REMOTE TEST STATION AND/OR FIRE ALARM SYSTEM, AS REQUIRED. ALL FANS SUPPLYING MORE THAN 2000 CFM OF AIR TO ANY SPACE SHALL BE INSTALLED WITH A SMOKE DETECTOR. DUCT SMOKE DETECTORS SHALL BE INSTALLED IN THE SUPPLY AIR PATH OF ANY AIR DISTRIBUTION SYSTEMS UTILIZING A COMMON SUPPLY AIR PLENUM WITH A COMBINED DESIGN CAPACITY GREATER THAN 2000 CFM. THE SMOKE DETECTOR SHALL BE WIRED TO STOP THE FAN UPON DETECTION OF SMOKE, AND SIGNAL THE BUILDING FIRE ALARM CONTROL PANEL.
- 9.14 DUCT SMOKE DETECTOR FOR SMOKE DAMPER / COMBINATION FIRE/SMOKE DAMPER ACTUATION: PROVIDE COMPATIBLE PHOTOELECTRIC TYPE DUCT SMOKE DETECTORS IN AIR DUCTS IMMEDIATELY UPSTREAM OF EACH DUCT-MOUNTED SMOKE OR COMBINATION FIRE/SMOKE DAMPER. REFER TO DRAWINGS FOR DAMPER LOCATIONS (RUSKIN MODEL DSDF-D4120, OR ENGINEER-APPROVED EQUAL). CONNECT TO CLOSE DAMPER UPON SMOKE DETECTION. REFER TO ELECTRICAL DRAWINGS FOR ACTUATOR POWER REQUIREMENTS. PROVIDE REMOTE RESET DEVICE RTS2-AOS.
- 9.20 SEQUENCE OF CONTROLS: REFER TO "HVAC CONTROLS" ON PLANS.
- 9.30 TESTING, ADJUSTING, BALANCING
- 9.31 AABC, NEBB, TABB OR NBC/NCI CERTIFIED TESTING AND BALANCING CONTRACTOR SHALL BE RESPONSIBLE FOR THE TESTING AND BALANCING OF EVERY HEATING, VENTILATING AND AIR CONDITIONING SYSTEM. THE PERSON OR AGENCY RESPONSIBLE FOR BALANCING OF THE SYSTEMS SHALL DOCUMENT IN WRITING THE AMOUNT OF OUTDOOR AIR BEING PROVIDED AND DISTRIBUTED FOR THE BUILDING OCCUPANTS AND ANY OTHER SPECIALTY VENTILATION. SEE PLANS FOR FURTHER REQUIREMENTS. TWO (2) COPIES OF A WRITTEN REPORT IN NEBB, AABC, OR TABB FORMAT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
- 9.32 AIR SYSTEMS SHALL BE BALANCED IN A MANNER TO MINIMIZE LOSSES FROM DAMPER THROTTLING BY FIRST ADJUSTING FAN SPEED THEN ADJUSTING DAMPERS TO MEET DESIGN FLOW CONDITIONS. DAMPER THROTTLING ALONE MAY BE USED FOR AIR SYSTEM BALANCING WITH FAN MOTORS OF 1 HP OR LESS, OR IF THROTTLING RESULTS IN NO GREATER THAN 1/3 HP FAN HORSEPOWER DRAW ABOVE THAT REQUIRED IF THE FAN SPEED WERE ADJUSTED.
- 9.33 HVAC CONTROL SYSTEMS SHALL BE TESTED TO ASSURE THAT CONTROL ELEMENTS ARE CALIBRATED, ADJUSTED, AND IN PROPER WORKING CONDITION.
- 9.34 IN SYSTEMS WHERE VAV BOXES ARE PART OF THE CENTRAL AIR SYSTEM AND SOME VAV BOXES SERVED BY THE SAME CENTRAL STATION AIR HANDLING UNIT / ROOFTOP UNIT AS SERVES THIS TENANT'S SPACE ARE LOCATED IN OTHER DEMISED SPACE(S), BALANCING CONTRACTOR SHALL ENSURE ALL VAV BOXES NOT IN THIS TENANT'S SPACE HAVE BEEN OPENED TO THEIR RELATIVE MAXIMUM POSITION BEFORE BALANCING OPERATION COMMENCES.



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CLIENT:

JAIME PARTNERS OF CALIFORNIA, INC.

1050 S. FLOWER STREET LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD

LOS ANGELES, CA 90016

	C-JAIME-001	
#	DESCRIPTION	DATE
	1ST SUBMITTAL	10/04/21
	UTILITY COORDINATION	04/08/22
$\overline{\triangle}$	PC RESUBMITTAL	05/18/22
2	PC RESUBMITTAL	10/28/22
3	HCD REVISION 1	12/16/22
4	PC RESUBMITTAL	02/02/23
<u></u>	HCD & PC RESUBMITTAL	06/06/23
<u></u>	HCD RESUBMITTAL	06/14/23
\triangle	PC RESUBMITTAL	07/10/23
8	CLIENT REVISIONS	07/11/23
$\overline{\Diamond}$	CLIENT REVISIONS	08/04/23
10	PC RESUBMITTAL (ELEC)	09/12/23
$\overline{\mathbb{A}}$	PC RESUBMITTAL (ELEC)	10/05/23
<u>/\delta</u>	CLIENT REVISIONS	10/12/23
Plot	Date: 10/12/2023	9:20:33 AN

HVAC

SHEET NO:

SHEET TITLE:

SCHEDULES

PACKAGED HEAT PUMP SCHEDULE WEIGHT ELECTRICAL DATA MOTOR EFFICIENCY RATINGS COOLING HEATING CAPACITY CAPACITY REFRIGERANT CFM OSA CFM EER HSPF (COP) ACCESSORIES JNIT NO. MAKE MODEL AREA SERVING (LBS.) VOLTAGE MCA MOCP (WATTS) EPHOCA HP82HGSN RESIDENTIAL UNITS 10.5 11:5 R 410A 174 272 85 146 208/1/60 4.0 15 1:2 12:2 13:0 SEE BELOW GE AZ65H12DAD RESIDENTIAL UNITS 11.8 10.4 R-410A 449 - 300 20 91 208/1/60 15 15 (2430W) 11.5 (3.5) SEE BELOW

- REFER TO MANUFACTURER'S GUIDELINES FOR CONTROLS AND SEQUENCE OF OPERATION.
- 2. INCLUDES FACTORY CLEANABLE MERV 13 FILTERS.
- . PROVIDE WITH FACTORY WALL MOUNTED THERMOSTAT CONTROLLER, TITLE-24 COMPLIANT.
- PROVIDE WITH NON-FUSED DISCONNECT FOR UNITS THAT ARE HARDWIRED.
- 5. PROVIDE WITH SUNVENT CONNECTOR VENT "SVIN7" PLENUM BOX AND LOUVER ASSEMBLY (FOR <u>HPAC-1</u> UNITS ONLY).

	AIR COOLED OUTDOOR VRF HEAT PUMP SCHEDULE															
	UNIT NO.	CARRIER MODEL	AREA SERVING	ASSOCIATED INDOOR UNIT	COOLING CAPACITY (MBH)	REFRIGERANT	AMBIE1 LOW		INTEGRATED	WEIGHT (LBS.)	ELECTR VOLTAGE	MCA	MOCP	EFFICIENC' EER (SEER)	Y RATINGS HSPF	ACCESSORIES
4	HP-1	38VMB036HDS3-1	1F COMMON AREA	VRF-1 / VRF-2	36.0	R-410A	23	115	40.0	220	230/1/60	36	40	(18.0)	9.2	SEE BELOW
ı	ACCESSO	ORIES:												-		

- 1. COMPRESSOR CYCLE DELAY PACKAGE. AUTOMATIC RESET.
- 3. LOW AMBIENT CONTROL PACKAGE.
- 4. HEAD PRESSURE CONTROL PACKAGE.

				INDOOR '	VRF	FAN (COIL (INIT SC	CHEC	DULE						
			BASIC	CUNIT			SUPPL	Y FAN SECTIO	N	EL	ECTRIC/	٩L		Р	ERFORMANC	E
	UNIT NO.	MANUFACTURER	MODEL	AREA SERVING	TON	WEIGHT LBS.	CFM SUPPLY AIR	CFM OUTSIDE AIR	ESP IN. W.C.	system Voltage	WATTS	МСА	моср	TOTAL COOLING CAPACITY		HEATING CAPACITY
	VRF-1	CARRIER	40VMF009A3	1F COMMON AREA	0.75	54	330 - 460	50	0.0	230/1/60	40	0.73	15	9.13	7.44	10.0
	VRF-2	CARRIER	40VML0183	1F COMMON AREA	1.5	48.5	353 - 530	50	0.2	230/1/60	56	0.95	15	18.25	11.6	21.0
\			·													

- . PROVIDE WITH FACTORY CLEANABLE MERV 13 FILTERS.
- 2. PROVIDE WITH FACTORY WALL MOUNTED THERMOSTAT CONTROLLER, TITLE-24 COMPLIANT.
- PROVIDE WITH NON-FUSED DISCONNECT.
- . EXTEND REFRIGERANT PIPING TO ASSOCIATED OUTDOOR CONDENSING UNIT ON ROOF. SIZE AND INSULATE REFRIGERANT PIPING PER
- MANUFACTURER'S GUIDELINES.

	EXHAUST FAN SCHEDULE													
		MAKE					ELE	CTRICAL	DATA	OPER.				
UNIT NO.	TYPE	MODEL	- AREA SERVING	DUCT SIZES	CFM	WATTS (HP)	VOLTS	PHASE	FLA	WEIGHT LBS.	REMARKS			
FF-1	ROOF	GREENHECK	ELEVATOR	8"x8"	250 @	73.0	120	1		27100	PROVIDE WITH BACKDRAFT DAMPER. INTERLOCK EXHAUST FAN WITH			
EL-1	KOOI	LD-70	HOISTWAY	0 10	.25 S.P.	/3.0	120	ļ ļ		37 LBS.	TIME CLOCK TO ACTIVATE DURING OCCUPIED HOURS.			
CEF-1	CEILING	GREENHECK	BATHROOMS	/"/CX	110 @	12.7	115	1	21	15100	PROVIDE WITH BACKDRAFT DAMPER. PROVIDE FAN SWITCH NEXT			
CEF-1	CEILING	SP-A90-130-VG	BATHKOOMS	6''Ø	.25 S.P.	12.7	115	I	.31	15 LBS.	TO LIGHT SWITCH.			
CEF-2	CEILING	GREENHECK	TRASH / RECYCLE	8"x6"	185 @	49.2	115	1	.32	17100	PROVIDE WITH BACKDRAFT DAMPER. PROVIDE FAN SWITCH NEXT			
CLI-2	CLILING	~\$P-A190~	TRASITY RECTCEE	0 X0	.25 S.P.	49.2	115	\ <u>\</u>	.32	17 LBS.	TO LIGHT SWITCH.			
CEF-3	CEILING	GREENHECK	1F TRASH ROOM	10"0	500 @	105	115	1	475	40 LDS	PROVIDE WITH BACKDRAFT DAMPER AND HANGING VIBRATION			
CLI-3	CLILING	CSP-A1050-VG	II IKASH KOOM	12''Ø	.25 S.P.	125	115		4.75	49 LBS.	ISOLATOR KIT. EXHAUST FAN TO OPERATE CONTINUOUSLY.			

				ROC	DF-M	NUC	TED S	SUPPL	Y FA	n sch	HEDULE
	0,4,45,01	TVDE	MAKE	ADEA			ELEC	TRICAL D	ATA	OPER.	DELLIBRO
	SYMBOL	TYPE	MODEL	AREA SERVING	CFM	HP	AMPS	VOLTS	PHASE	WEIGHT LBS.	REMARKS
(SF-1	BELT DRIVE	GREENHECK	CORRIDOR /	1,220 @	1/4	5.8	115	1	185 LBS.	PROVIDE WITH FACTORY ROOF CURB AND FILTER BOX. SUPPLY FAN TO
<u>λ</u> ([SAF-112	trash room	.25 S.P.				'		OPERATE CONTINUOUSLY.
<u>'</u>	PROVIDE	MIN. MERV 1	3 FILTERS ON ALL SUPP	ly air fans. Contr	ACTOR TO	CONSTR	UCT FILTE	R BOX CA	PABLE OF	HOUSING	FILTERS IF NOT INCLUDED WITH EQUIPMENT SCHEDULED. 5

	(HIGHWALL) COOLING ONLY FAN COIL UNIT SCHEDULE														
LINIIT NIO	SEDVING	CARRIER MODEL	AIRFLOW	TONIC	COOLING CAPACITY	HEATING CAPACITY	REFRIC LIQUID	SUCTION		ELECTRIC	AL DATA			WEIGHT	NOTES
UNIT NO.	SERVING	CARRIER MODEL	(CFM)	TONS	(MBH)	(MBH)	(IN)	(IN)	MCA	FLA	VOLT	PH	HZ	(lbs)	NOTES
FC-1	ELEVATOR MACHINE ROOM - 1ST FLOOR	RAV-SP180KRT-UL	400 - 409	1.5	18.0		1/4	1/2			208	1	60	31	SEE BELOW

- PROVIDE WITH FACTORY CLEANABLE MERV 13 FILTERS.
 PROVIDE WITH FACTORY WALL MOUNTED THERMOSTAT CONTROLLER,
- TITLE-24 COMPLIANT.
- 3. PROVIDE WITH FACTORY CONDENSATE PUMP WITH SEPARATE PUMP IF REQURED, AND ASSOCIATED CONTROLS.
- 4. PROVIDE WITH NON-FUSED DISCONNECT.
- 5. ROUTE REFRIGERANT PIPING TO ASSOCIATED OUTDOOR CONDENSING UNIT ON ROOF, SIZED AND INSULATED PER MFG'S RECOMMENDATIONS.
- 6. POWERED BY OUTDOOR UNIT.

	(OUTDOOR) COOLING ONLY CONDENSING UNIT SCHEDULE													
UNIT NO.	SERVING	CARRIER MODEL	TONIC	COOLING	HEATING CAPACITY (MBH)	EER/SEER	СОР		ELECTRIC	NOTES				
			TONS	(MBH)				MCA	МОСР	VOLT	РН	HZ	WEIGHT (lbs)	NOTES
CU-1	ELEVATOR MACHINE ROOM - 1ST FLOOR	38MHRBC12AA3	1.5	18.0		10.0/19.5		17	30	208	1	60	98	SEE BELOW

- 1. CONDENSING UNIT SHALL BE LISTED IN TITLE 24 CALIFORNIA CERTIFIED APPLIANCE DATABASE.
 - PROVIDE ACCESSORY TUBING KITS/VALVES, COMPATIBLE TO FAN COIL UNIT.
 - 3. PROVIDE WITH LOW AMBIENT KIT.
 - 4. PROVIDE WITH 2" NEOPRENE PAD AND ROOF CURB.

CONTROLS

HVAC CONTROLS - VRF SPLIT SYSTEM

THERMOSTAT

CARRIER 40VM900003 DIGITAL THERMOSTAT, OR APPROVED EQUAL, 7-DAY PROGRAMMABLE MULTI-STAGE HEATING/COOLING AUTOMATIC CHANGEOVER THERMOSTAT TO CONTROL THE OPERATION OF EACH UNIT. MOUNT THERMOSTAT AT 4'-0" A.F.F.

SEQUENCE OF OPERATION

SPLIT SYSTEM HEAT PUMP:

COOLING CYCLE: UPON A RISE IN SPACE TEMPERATURE ABOVE THE OCCUPIED COOLING SETPOINT OF THE THERMOSTAT, THE REFRIGERATION SYSTEM AND SUPPLY AIR FAN SHALL CYCLE AS REQUIRED TO MAINTAIN SPACE TEMPERATURE AT THE THERMOSTAT SETPOINT.

HEATING CYCLE:

UPON A DROP IN SPACE TEMPERATURE BELOW THE OCCUPIED HEATING SETPOINT OF THE THERMOSTAT, THE REFRIGERATION SYSTEM AND SUPPLY FAN SHALL CYCLE AS REQUIRED TO MAINTAIN SPACE TEMPERATURE AT THE THERMOSTAT SETPOINT.

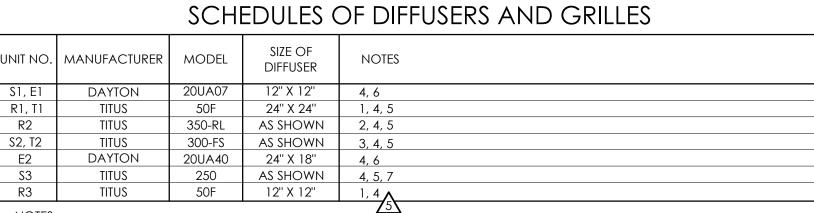
HVAC CONTROLS - HIGH WALL SPLIT SYSTEM

EACH UNIT TO BE PROVIDED WITH FACTORY THERMOSTAT.

SEQUENCE OF OPERATION

PACKAGED HIGH WALL-MOUNTED FAN COIL UNIT, DX COOLING ONLY:

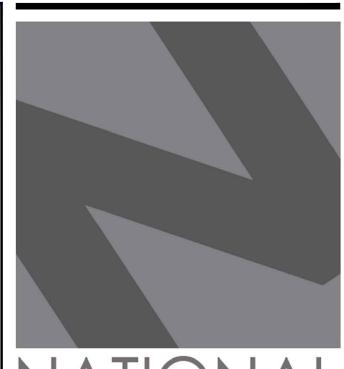
- THE SPACE WILL BE DIRECTLY CONTROLLED BY ITS OWN DEDICATED WALL-MOUNTED CONTROLLER. COOLING OPERATION: THE CONTROLLER COMPARES THE COOLING SETPOINT WITH THE SPACE TEMPERATURE AND
- DETERMINES A COOLING SIGNAL. THIS SIGNAL SHALL ACTIVATE THE LEAD AC UNIT TO MAINTAIN THE ROOM
- OPERATION: THE AC UNIT WILL OPERATE CONTINUOUSLY TO ENSURE THE ROOM MAINTAINS SETPOINT. MONITORING - THE FOLLOWING CONDITIONS SHALL BE MONITORED: ROOM TEMPERATURE, ROOM SETPOINT,
- CURRENT MODE (COOLING/FAN), FAN STATU THRU CURRENT SWITCH. ALARMS - THE FOLLOWING CONDITIONS SHALL TRIGGER A GENERAL ALARM AND AN EMAIL SHALL BE SENT TO THE
- 5.1. IF ROOM TEMPERATURE IS GREATER THAN 5° F ABOVE SETPOINT FOR 5 MINUTES.
- 5.2. IF FAN IS COMMANDED ON AND FAN CURRENT SWITCH DETECTS FAN IS OFF. 5.3. IF FAN IS COMMANDED OFF AND FAN CURRENT SWITCH DETECTS FAN IS ON.



1. 1/2" X 1/2" X 1/2" EGGCRATE RETURN / RELIEF AIR GRILLE.

- 2. ANGLED RETURN GRILLE. CEILING-MOUNTED: AIM VANES TOWARD NEAREST WALL. WALL-MOUNTED: AIM VANES UPWARD.
- 3. DOUBLE-DEFLECTION SUPPLY REGISTER.
- 4. FURNISH ALL AIR DEVICES WITH APPROPRIATE FRAME FOR CEILING / WALL CONSTRUCTION TYPE.
- 5. IF WALL-MOUNTED, PAINT TO MATCH ADJACENT FINISH AND INSTALL W/ BLADES ANGLED UPWARD. IF CEILING MOUNTED, INSTALL W/ BLADES ANGLED TOWARDS NEAREST WALL.
- 6. STATIONARY INTAKE/EXHAUST LOUVER WITH BIRD SCREEN AND FLANGE KIT.
- 7. ADJUSTABLE 4 WAY DISCHARGE SUPPLY AIR CEILING DIFFUSER.

		K	ITCHE	N HO	OD SCH	EDULE			
LINIT NIO	TYPE	MAKE	DUCT	MAX		REMARKS			
UNIT NO. TYF	IIFL	MODEL	SIZES	CFM	LENGTH	REMARKS			
KH-1	WALL	GE	N/A	200	24"	REFER TO 10/M401 FOR MANUFACTURER CUTSHEETS.			
KI I- I	MOUNTED	JVX3240SJ	IN/A	200	24				



30 THOMAS, IRVINE, CA 92618-2703 PHONE: (949) 716-9990 | FAX: (949) 716-9997

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CLIENT:

JAIME PARTNERS OF CALIFORNIA, INC.

1050 S. FLOWER STREET LOS ANGELES, CA 90015

PROJECT:

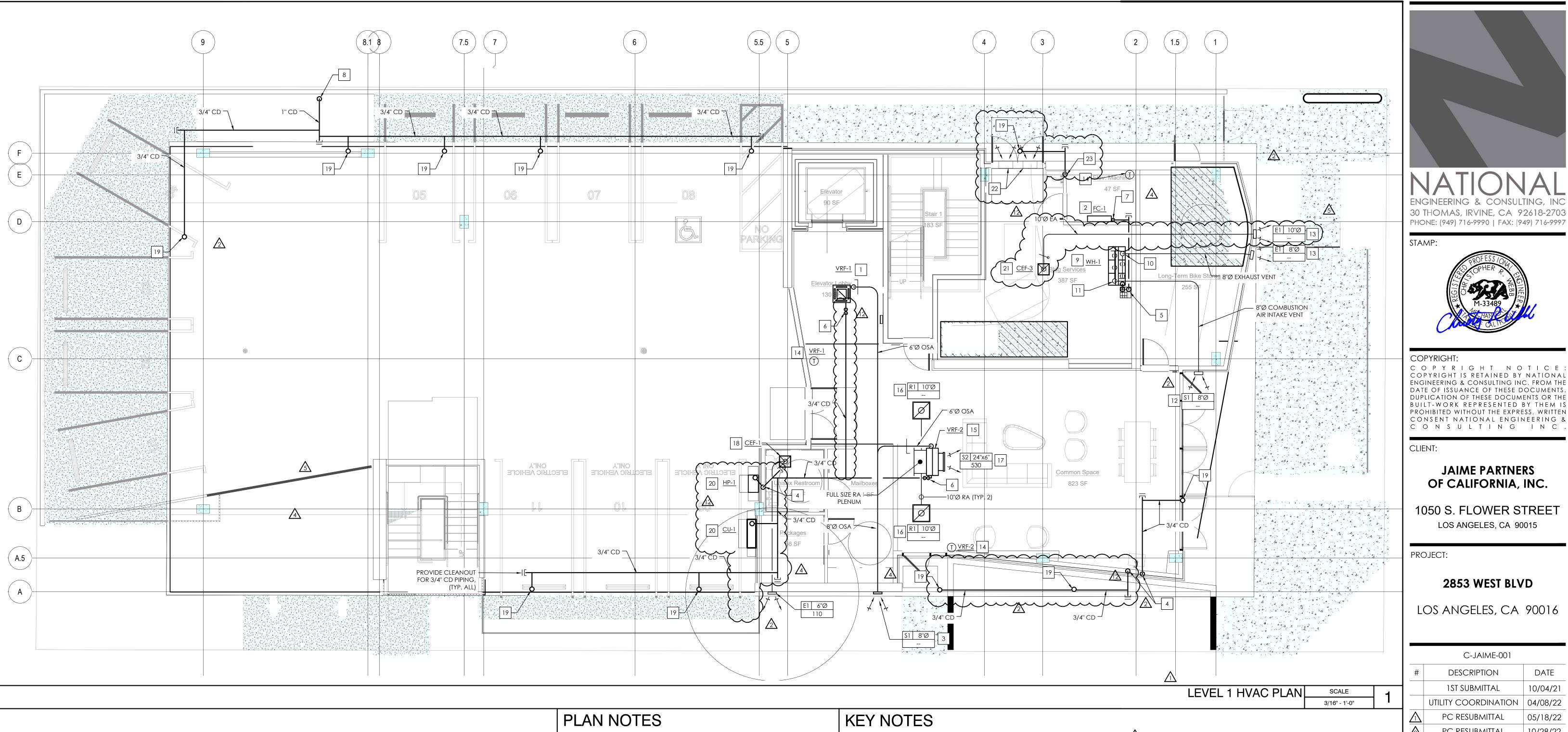
2853 WEST BLVD

LOS ANGELES, CA 90016

	C-JAIME-001	
#	DESCRIPTION	DATE
	1ST SUBMITTAL	10/04/21
	UTILITY COORDINATION	04/08/22
$\overline{\Lambda}$	PC RESUBMITTAL	05/18/22
2	PC RESUBMITTAL	10/28/22
3	HCD REVISION 1	12/16/22
4	PC RESUBMITTAL	02/02/23
<u></u>	HCD & PC RESUBMITTAL	06/06/23
	HCD RESUBMITTAL	06/14/23
\triangle	PC RESUBMITTAL	07/10/23
8	CLIENT REVISIONS	07/11/23
	CLIENT REVISIONS	08/04/23
10	PC RESUBMITTAL (ELEC)	09/12/23
$\overline{\mathbb{A}}$	PC RESUBMITTAL (ELEC)	10/05/23
<u>13</u>	CLIENT REVISIONS	10/12/23
Plot	Date: 10/12/2023	9:20:59 AM

SHEET TITLE:

SCHEDULES, SEQUENCES AND **CONTROLS**



A. REFER TO SHEET M001 FOR GENERAL MECHANICAL INFORMATION AND M002 FOR HVAC SPECIFICATIONS.

- B. REFER TO SHEET M003 FOR ALL SCHEDULES, SEQUENCES AND CONTROLS.
- C. REFER TO SHEET M401 FOR DETAILS.

SHOWN ON PLANS.

- D. REFER TO SHEET M402 FOR OSA CALCULATIONS.
- REFER TO MANUFACTURER'S GUIDELINES FOR PROPER INSTALLATION AND EQUIPMENT
- ALL CONDENSATE DRAIN PIPING TO MAINTAIN MINIMUM SLOPE OF 1/8" PER FT.
- G. PROVIDE ACCESS PANEL IN DUCT FOR INSPECTION / MAINTENANCE OF EACH FSD
- # NUMBERS INDICATE NOTES SHOWN ON PLAN
- 1. CEILING MOUNTED VRF CASSETTE SERVING CONDITIONED SPACE, AS SHOWN.
- 2. INDOOR HIGHWALL FAN COIL UNIT FOR ELEVATOR MACHINE ROOM.
- 3. ROUTE 8"Ø OSA DUCT THRU EXTERIOR WALL TO INTAKE LOUVER.
- 4. ROUTE 3/4" CONDENSATE DRAIN PIPING DOWN TO DISCHARGE INTO TAILPIECE OF SINK.
- ROUTE 3/4" CONDENSATE DRAIN PIPING DOWN TO DISCHARGE INTO FLOOR SINK WITH MIN. 2" AIR GAP.

7. 3/4" CONDENSATE DRAIN PIPING W/ NEGATIVE P-TRAP FROM HIGH WALL FAN COIL

- 6. 3/4" CONDENSATE DRAIN PIPING W/ NEGATIVE P-TRAP PUMPED UP FROM VRF CASSETTE'S INTEGRAL PUMP.
- 8. ROUTE CONDENSATE DRAIN PIPING DOWN TO DISCHARGE INTO PLANTER AREA WITH MIN. 2" AIR GAP.
- 9. CIRCULATING WATER HEATER. REFER TO PLUMBING DRAWINGS FOR SPECIFICATIONS. 10. 8"Ø COMMON EXHAUST VENT. REFER TO MANUFACTURER'S GUIDELINES FOR PROPER INSTALLATION.
- 11. 8'Ø COMMON COMBUSTION AIR INTAKE VENT. REFER TO MANUFACTURER'S GUIDELINES FOR PROPER INSTALLATION.
- 12. PROVIDE SIDEWALL INTAKE GRILLE FOR COMBUSTION AIR INTAKE VENT. PROVIDE
- WEATHERTIGHT SEALING PER MANUFACTURER'S GUIDELINES. 13. PROVIDE SIDEWALL EXHAUST GRILLE FOR EXHAUST AIR VENT. PROVIDE WEATHERTIGHT
- SEALING PER MANUFACTURER'S GUIDELINES. 14. PROGRAMMABLE THERMOSTAT WITH INSULATED BACKPLATE, VERIFY EXACT LOCATION
- WITH END USER.
- 15. CEILING MOUNTED VRF FAN COIL UNIT SERVING CONDITIONED SPACE, AS SHOWN.
- 16. RA DUCT DOWN TO LAY-IN CEILING GRILLE.
- 17. PROVIDE FULL SIZE SA DUCT TO SIDEWALL GRILLE FOR HORIZONTAL DISCHARGE.
- 18. CEILING-MOUNTED EXHAUST FAN. PROVIDE 6"Ø EA DUCT THRU EXTERIOR WALL TO EXHAUST LOUVER.
- 19. 3/4" CONDENSATE DRAIN PIPING DOWN FROM HVAC UNIT LOCATED IN LEVEL 2.

20. WALL-MOUNTED OUTDOOR CONDENSING UNIT/HEAT PUMP. PROVIDE 3/4" CONDENSATE DRAIN PIPING WITH NEGATIVE PRESSURE P-TRAP TO DISCHARGE INTO TAILPIECE OF LAVATORY. COORDINATE EXACT LOCATION W/ OWNER.

- 21. 10"Ø EA DUCT DOWN TO CEILING-SUSPENDED EXHAUST FAN.
- 22. PROVIDE LOUVERED DOOR(S) WITH A COMBINED MIN. FREE AREA OF 1.40 S.F. TO SERVE
- AS INTAKE FOR <u>CEF-3</u>.

23. 3/4" CONDENSATE DRAIN PIPING DOWN TO DISCHARGE INTO MOP SINK WITH MIN. 2"

CLIENT REVISIONS 08/04/23 PC RESUBMITTAL (ELEC) 09/12/23 PC RESUBMITTAL (ELEC) | 10/05/23

> 10/12/2023 9:22:30 AM Plot Date:

SHEET TITLE:

LEVEL 1 **HVAC PLAN**

SHEET NO:



CONSENT NATIONAL ENGINEERING & CONSULTING INC.

> **JAIME PARTNERS** OF CALIFORNIA, INC.

1050 S. FLOWER STREET LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD

LOS ANGELES, CA 90016

C-JAIME-001

UTILITY COORDINATION | 04/08/22

HCD & PC RESUBMITTAL 06/06/23

CLIENT REVISIONS 10/12/23

DESCRIPTION

1ST SUBMITTAL

PC RESUBMITTAL

PC RESUBMITTAL

HCD REVISION 1

PC RESUBMITTAL

HCD RESUBMITTAL

PC RESUBMITTAL

CLIENT REVISIONS

DATE

10/04/21

05/18/22

10/28/22

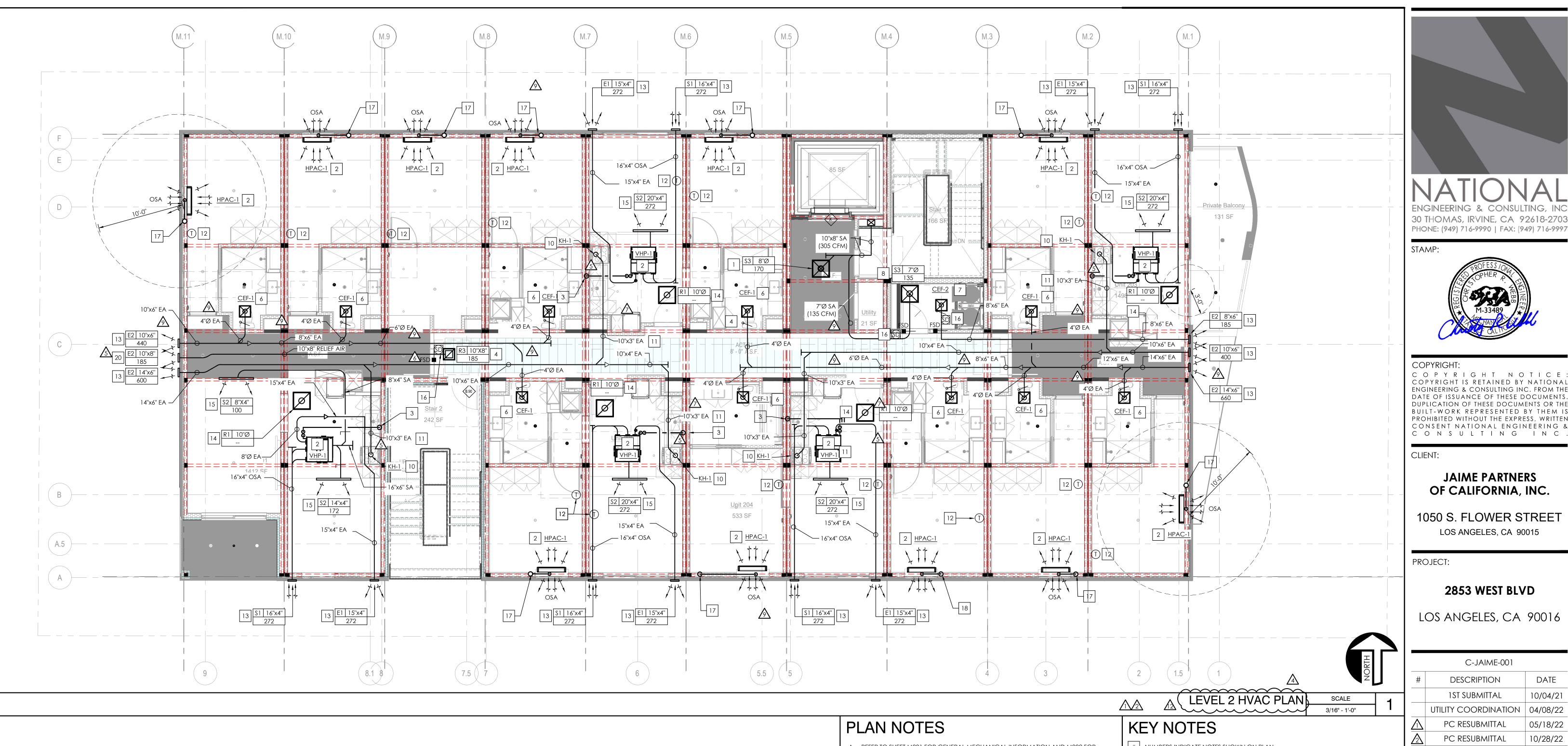
12/16/22

02/02/23

06/14/23

07/10/23

07/11/23



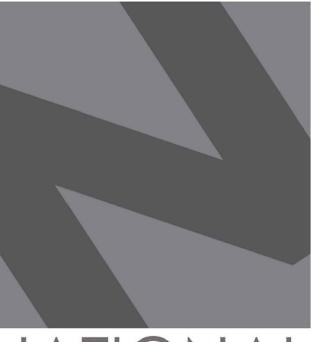
- A. REFER TO SHEET M001 FOR GENERAL MECHANICAL INFORMATION AND M002 FOR HVAC SPECIFICATIONS.
- B. REFER TO SHEET M003 FOR ALL SCHEDULES, SEQUENCES AND CONTROLS.
- C. REFER TO SHEET M401 FOR DETAILS.
- D. REFER TO SHEET M402 FOR OSA CALCULATIONS.
- E. REFER TO SHEET M101 FOR CONTINUATIONS BELOW AND SHEET M103 FOR CONTINUATIONS ABOVE.
- refer to manufacturer's guidelines for proper installation and equipment $\frac{745}{1}$ CLEARANCES.
- G. ALL CONDENSATE DRAIN PIPING TO MAINTAIN MINIMUM SLOPE OF 1/8" PER FT.
- . PROVIDE ACCESS PANEL IN DUCT FOR INSPECTION / MAINTENANCE OF EACH FSD 4SHOWN ON PLANS.
- THE BUILDING SYSTEM IS DESIGNED FOR CONTINUOUS OPERATION OF SUPPLY/EXHAUST

AIR LEAKAGE IN DWELLING UNITS SHALL BE LESS THAN OR EQUAL TO 0.3 CFM PER SQFT. OF DWELLING UNIT AT A DUCT STATIC PRESSURE OF 50 PASCALS (~0.2" W.C.).

- # NUMBERS INDICATE NOTES SHOWN ON PLAN
- 8"Ø SA DUCT DOWN TO CEILING DIFFUSER FOR COMMON CORRIDOR VENTILATION.
- INDOOR HEAT PUMP ABOVE CEILING TO SERVE CONDITIONED SPACE, AS SHOWN. UNIT TO BE PROVIDED AS A DEFERRED SUBMITTAL. COORDINATE ALL ASPECTS OF
- 3. ROUTE 3/4" CONDENSATE DRAIN PIPING DOWN TO DISCHARGE INTO TAILPIECE OF LA \checkmark 6 $^{\circ}$
- RELIEF GRILLE SERVING CORRIDOR. PROVIDE 10"X"8 RELIEF AIR DUCT (MIN. 26 GAUGE GALVANIZED STEEL) THRU FIRE-RATED WALL WITH MIN. 12" LONG BY 0.06" THICK STEEL SLEEVE, CENTERED IN EACH DUCT OPENING. DUCT PENETRATION MEETS ALL OF THE EXCEPTIONS LISTED IN SECTION 717.5.4 OF THE LABC.
- PROVIDE CLEANOUT AT EACH CHANGE IN DIRECTION.

INSTALLATION IN FIELD DURING CONSTRUCTION.

- CEILING-MOUNTED BATHROOM EXHAUST FAN. PROVIDE 6"Ø EA DUCT (MIN. 26 GAUGE GALVANIZED STEEL) THRU FIRE-RATED WALL WITH MIN. 12" LONG BY 0.06" THICK STEEL SLEEVE, CENTERED IN EACH DUCT OPENING. DUCT PENETRATION MEETS ALL OF THE EXCEPTIONS LISTED IN SECTION 717.5.4 OF THE LABC.
- . CEILING-MOUNTED TRASH ROOM EXHAUST FAN W/ FACTORY BACKDRAFT DAMPER.
- 8. 7"Ø SA DUCT DOWN TO CEILING DIFFUSER.
- 9. NOT USED.
- 10. KITCHEN HOOD WITH FACTORY BACKDRAFT DAMPER.
- 11. ROUTE 10"x3" EA DUCT FROM KITCHEN HOOD TO COMMON EXHAUST PLENUM. PROTECT PENETRATION THRU FIRE-RATED WALL W/ AN APPROVED FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E814 OR UL 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH OF WATER AND SHALL HAVE AN F RATING OF NOT
- LESS THAN THE REQUIRED FIRE-RESISTANCE RATING OF THE WALL. 12. ROOM T-STAT. COORDINATE FINAL LOCATION WITH OWNER.
- 13. ROUTE DUCT THRU EXTERIOR WALL TO INTAKE/EXHAUST/RELIEF LOUVER.
- 14. PROVIDE RA CEILING GRILLE FOR PLENUM RETURN.
- 15. PROVIDE FULL SIZE SA DUCT TO SIDEWALL GRILLE FOR HORIZONTAL DISCHARGE.
- 16. PROVIDE DUCT SMOKE DETECTOR UPSTREAM OF FIRE SMOKE DAMPER (POTTORFF MODEL FSD-341, OR OTHER UL 555/555S-RATED EQUAL) FOR 2 HR. FIRE-RATED WALL.
- 17. ROUTE 3/4" CONDENSATE DRAIN RISER DOWN TIGHT TO UNDERSIDE OF LEVEL 1 PODIUM.



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PROJECT:

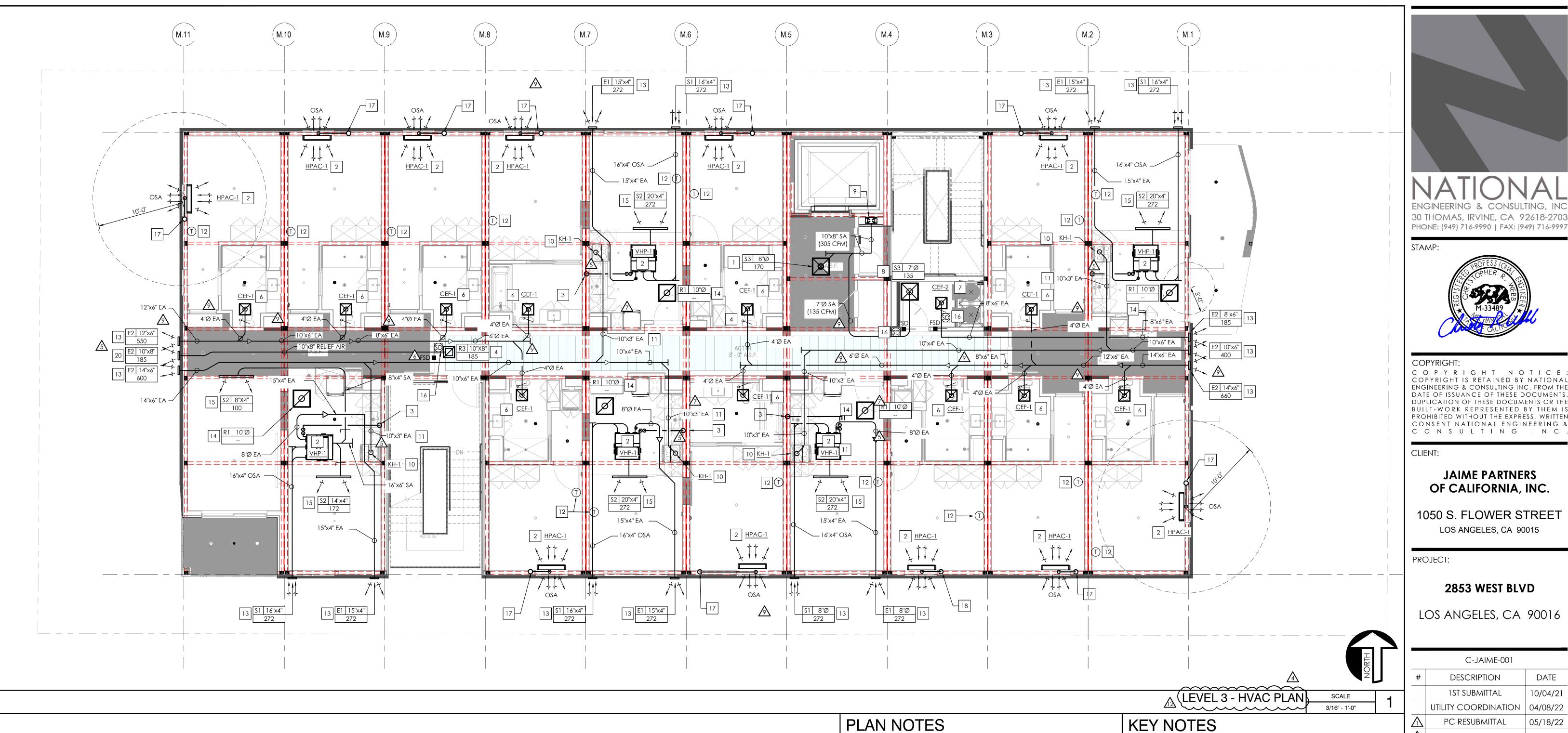
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LOS ANGELES, CA 90016

	C-JAIME-001	
#	DESCRIPTION	DATE
	1ST SUBMITTAL	10/04/21
	UTILITY COORDINATION	04/08/22
Λ	PC RESUBMITTAL	05/18/22
2	PC RESUBMITTAL	10/28/22
3	HCD REVISION 1	12/16/22
4	PC RESUBMITTAL	02/02/23
<u></u>	HCD & PC RESUBMITTAL	06/06/23
<u></u> ⟨6\	HCD RESUBMITTAL	06/14/23
$\overline{\mathbb{A}}$	PC RESUBMITTAL	07/10/23
8	CLIENT REVISIONS	07/11/23
	CLIENT REVISIONS	08/04/23
10	PC RESUBMITTAL (ELEC)	09/12/23
$\overline{\mathbb{A}}$	PC RESUBMITTAL (ELEC)	10/05/23
12	CLIENT REVISIONS	10/12/23

SHEET TITLE:

LEVEL 2 HVAC PLAN



- A. REFER TO SHEET M001 FOR GENERAL MECHANICAL INFORMATION AND M002 FOR HVAC SPECIFICATIONS.
- B. REFER TO SHEET M003 FOR ALL SCHEDULES, SEQUENCES AND CONTROLS.
- C. REFER TO SHEET M401 FOR DETAILS.
- D. REFER TO SHEET M402 FOR OSA CALCULATIONS.
- E. REFER TO SHEET M101 FOR CONTINUATIONS BELOW AND SHEET M103 FOR

SHOWN ON PLANS.

- CONTINUATIONS ABOVE.
- REFER TO MANUFACTURER'S GUIDELINES FOR PROPER INSTALLATION AND EQUIPMENT CLEARANCES.
- G. ALL CONDENSATE DRAIN PIPING TO MAINTAIN MINIMUM SLOPE OF 1/8" PER FT. H. PROVIDE ACCESS PANEL IN DUCT FOR INSPECTION / MAINTENANCE OF EACH FSD
- THE BUILDING SYSTEM IS DESIGNED FOR CONTINUOUS OPERATION OF SUPPLY/EXHAUST

AIR LEAKAGE IN DWELLING UNITS SHALL BE LESS THAN OR EQUAL TO 0.3 CFM PER SQFT. OF DWELLING UNIT AT A DUCT STATIC PRESSURE OF 50 PASCALS (~0.2" W.C.).

- # NUMBERS INDICATE NOTES SHOWN ON PLAN
- 8"Ø SA DUCT DOWN TO CEILING DIFFUSER FOR COMMON CORRIDOR VENTILATION.
- INDOOR HEAT PUMP ABOVE CEILING TO SERVE CONDITIONED SPACE, AS SHOWN. UNIT TO BE PROVIDED AS A DEFERRED SUBMITTAL. COORDINATE ALL ASPECTS OF
- 3. ROUTE 3/4" CONDENSATE DRAIN PIPING DOWN TO DISCHARGE INTO TAILPIECE OF LAV. 6
- RELIEF GRILLE SERVING CORRIDOR. PROVIDE 10"X"8 RELIEF AIR DUCT (MIN. 26 GAUGE GALVANIZED STEEL) THRU FIRE-RATED WALL WITH MIN. 12" LONG BY 0.06" THICK STEEL SLEEVE, CENTERED IN EACH DUCT OPENING. DUCT PENETRATION MEETS ALL OF THE EXCEPTIONS LISTED IN SECTION 717.5.4 OF THE LABC.
- PROVIDE CLEANOUT AT EACH CHANGE IN DIRECTION.

INSTALLATION IN FIELD DURING CONSTRUCTION.

- CEILING-MOUNTED BATHROOM EXHAUST FAN. PROVIDE 6"Ø EA DUCT (MIN. 26 GAUGE GALVANIZED STEEL) THRU FIRE-RATED WALL WITH MIN. 12" LONG BY 0.06" THICK STEEL SLEEVE, CENTERED IN EACH DUCT OPENING. DUCT PENETRATION MEETS ALL OF THE EXCEPTIONS LISTED IN SECTION 717.5.4 OF THE LABC.
- . CEILING-MOUNTED TRASH ROOM EXHAUST FAN W/ FACTORY BACKDRAFT DAMPER.
- 8. 7'Ø SA DUCT DOWN TO CEILING DIFFUSER.
- 9. PROVIDE 16"x8" SA DUCT TRANSITION TO 10"x8" SA AFTER BRANCH SERVING THIS FLOOR. 10. KITCHEN HOOD WITH FACTORY BACKDRAFT DAMPER.
- 11. ROUTE 10"x3" EA DUCT FROM KITCHEN HOOD TO COMMON EXHAUST PLENUM. PROTECT PENETRATION THRU FIRE-RATED WALL W/ AN APPROVED FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E814 OR UL 1479, WITH A MINIMUM POSITIVE

PRESSURE DIFFERENTIAL OF 0.01 INCH OF WATER AND SHALL HAVE AN F RATING OF NOT

- LESS THAN THE REQUIRED FIRE-RESISTANCE RATING OF THE WALL. 12. ROOM T-STAT. COORDINATE FINAL LOCATION WITH OWNER.
- 13. ROUTE DUCT THRU EXTERIOR WALL TO INTAKE/EXHAUST/RELIEF LOUVER.
- 14. PROVIDE RA CEILING GRILLE FOR PLENUM RETURN. 15. PROVIDE FULL SIZE SA DUCT TO SIDEWALL GPALLE FOR HORIZONTAL DISCHARGE.
- 16. PROVIDE DUCT SMOKE DETECTOR UPSTREAM OF FIRE SMOKE DAMPER (POTTORFF MODEL FSD-341, OR OTHER UL 555/555S-RATED EQUAL) FOR 2 HR. FIRE-RATED WALL.
- 17. ROUTE 3/4" CONDENSATE DRAIN RISER DOWN TIGHT TO UNDERSIDE OF LEVEL 1 PODIUM.

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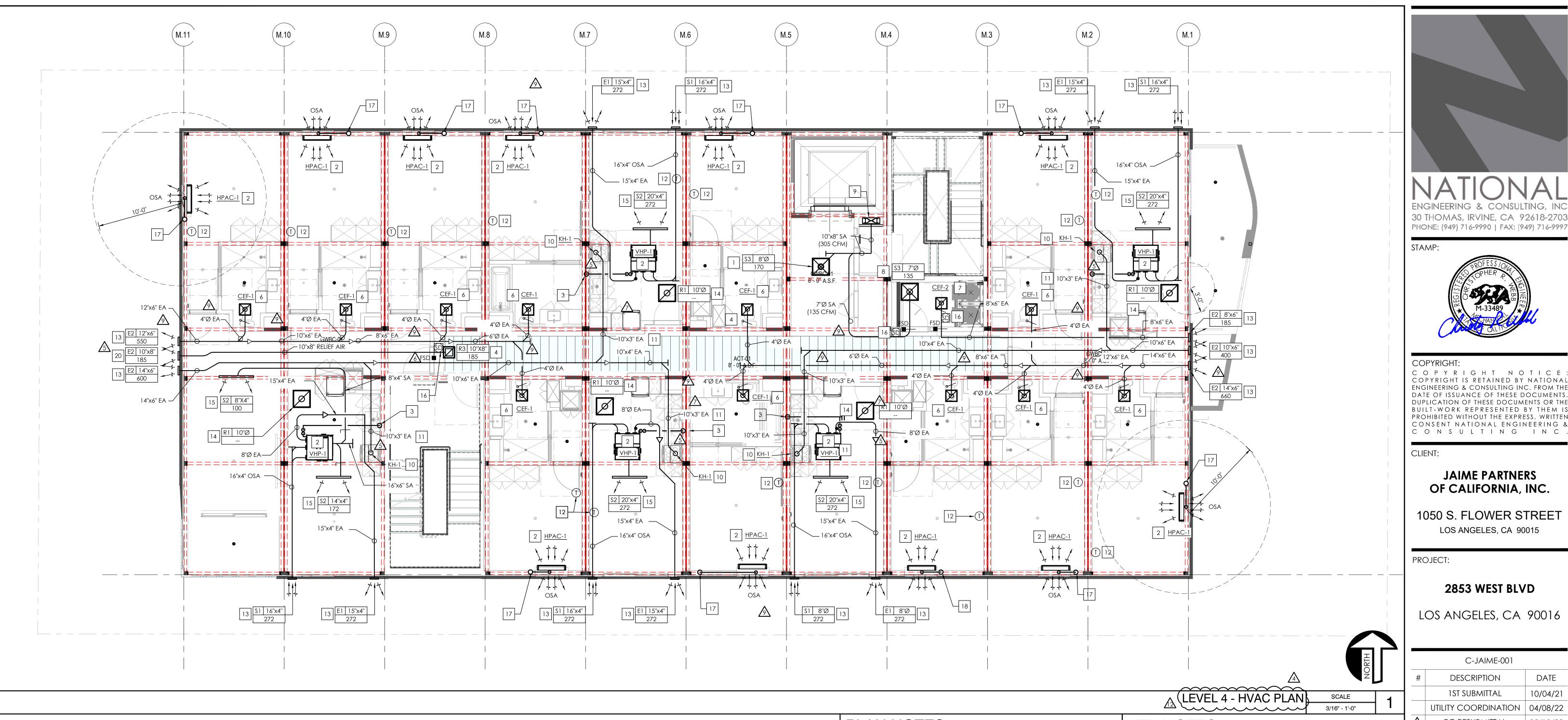
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		C-JAIME-001	
	#	DESCRIPTION	DATE
		1ST SUBMITTAL	10/04/21
		UTILITY COORDINATION	04/08/22
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,	8	CLIENT REVISIONS	07/11/23
		CLIENT REVISIONS	08/04/23
:	10	PC RESUBMITTAL (ELEC)	09/12/23
	\triangle	PC RESUBMITTAL (ELEC)	10/05/23
		CLIENT REVISIONS	10/12/23
7	Plot	Date: 10/12/2023	9:21:46 AM

SHEET TITLE:

LEVEL 3 HVAC PLAN



PLAN NOTES

- A. REFER TO SHEET M001 FOR GENERAL MECHANICAL INFORMATION AND M002 FOR HVAC SPECIFICATIONS.
- B. REFER TO SHEET M003 FOR ALL SCHEDULES, SEQUENCES AND CONTROLS.
- C. REFER TO SHEET M401 FOR DETAILS.
- D. REFER TO SHEET M402 FOR OSA CALCULATIONS.
- E. REFER TO SHEET M101 FOR CONTINUATIONS BELOW AND SHEET M103 FOR CONTINUATIONS ABOVE.
- REFER TO MANUFACTURER'S GUIDELINES FOR PROPER INSTALLATION AND EQUIPMENT $\frac{240}{100}$ CLEARANCES.
- G. ALL CONDENSATE DRAIN PIPING TO MAINTAIN MINIMUM SLOPE OF 1/8" PER FT. H. PROVIDE ACCESS PANEL IN DUCT FOR INSPECTION / MAINTENANCE OF EACH FSD $\frac{74.5}{100}$
- SHOWN ON PLANS.
- THE BUILDING SYSTEM IS DESIGNED FOR CONTINUOUS OPERATION OF SUPPLY/EXHAUST
- AIR LEAKAGE IN DWELLING UNITS SHALL BE LESS THAN OR EQUAL TO 0.3 CFM PER SQFT. OF DWELLING UNIT AT A DUCT STATIC PRESSURE OF 50 PASCALS (~0.2" W.C.).

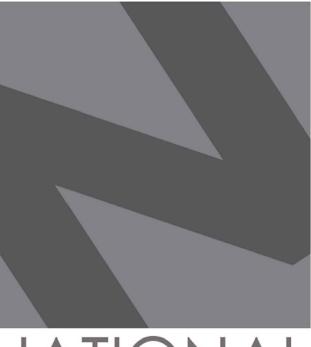
KEY NOTES

- # NUMBERS INDICATE NOTES SHOWN ON PLAN
- 8"Ø SA DUCT DOWN TO CEILING DIFFUSER FOR COMMON CORRIDOR VENTILATION.
- INDOOR HEAT PUMP ABOVE CEILING TO SERVE CONDITIONED SPACE, AS SHOWN. UNIT TO BE PROVIDED AS A DEFERRED SUBMITTAL. COORDINATE ALL ASPECTS OF INSTALLATION IN FIELD DURING CONSTRUCTION.
- 3. ROUTE 3/4" CONDENSATE DRAIN PIPING DOWN TO DISCHARGE INTO TAILPIECE OF LAV. 60
- RELIEF GRILLE SERVING CORRIOR. PROVIDE 10"X"8 RELIEF AIR DUCT (MIN. 26 GAUGE GALVANIZED STEEL) THRU FIRE-RATED WALL WITH MIN. 12" LONG BY 0.06" THICK STEEL SLEEVE, CENTERED IN EACH DUCT OPENING. DUCT PENETRATION MEETS ALL OF THE EXCEPTIONS LISTED IN SECTION 717.5.4 OF THE LABC.
- PROVIDE CLEANOUT AT EACH CHANGE IN DIRECTION.
- CEILING-MOUNTED BATHROOM EXHAUST FAN. PROVIDE 6"Ø EA DUCT (MIN. 26 GAUGE GALVANIZED STEEL) THRU FIRE-RATED WALL WITH MIN. 12" LONG BY 0.06" THICK STEEL SLEEVE, CENTERED IN EACH DUCT OPENING. DUCT PENETRATION MEETS ALL OF THE EXCEPTIONS LISTED IN SECTION 717.5.4 OF THE LABC.
- . CEILING-MOUNTED TRASH ROOM EXHAUST FAN W/ FACTORY BACKDRAFT DAMPER.
- 8. 7'Ø SA DUCT DOWN TO CEILING DIFFUSER.
- 9. PROVIDE 24"x8" SA DUCT TRANSITION TO 16"x8" SA AFTER BRANCH SERVING THIS FLOOR.
- 10. KITCHEN HOOD WITH FACTORY BACKDRAFT DAMPER. 11. ROUTE 10"x3" EA DUCT FROM KITCHEN HOOD TO COMMON EXHAUST PLENUM. PROTECT PENETRATION THRU FIRE-RATED WALL W/ AN APPROVED FIRESTOP SYSTEM INSTALLED AS

PRESSURE DIFFERENTIAL OF 0.01 INCH OF WATER AND SHALL HAVE AN F RATING OF NOT

TESTED IN ACCORDANCE WITH ASTM E814 OR UL 1479, WITH A MINIMUM POSITIVE

- LESS THAN THE REQUIRED FIRE-RESISTANCE RATING OF THE WALL.
- 12. ROOM T-STAT. COORDINATE FINAL LOCATION WITH OWNER.
- 13. ROUTE DUCT THRU EXTERIOR WALL TO INTAKE/EXHAUST/RELIEF LOUVER. 14. PROVIDE RA CEILING GRILLE FOR PLENUM RETURN.
- 15. PROVIDE FULL SIZE SA DUCT TO SIDEWALL GRILLE FOR HORIZONTAL DISCHARGE.
- 16. PROVIDE DUCT SMOKE DETECTOR UPSTREAM OF FIRE SMOKE DAMPER (POTTORFF MODEL FSD-341, OR OTHER UL 555/555S-RATED EQUAL) FOR 2 HR. FIRE-RATED WALL.
- 17. ROUTE 3/4" CONDENSATE DRAIN RISER DOWN TIGHT TO UNDERSIDE OF LEVEL 1 PODIUM.



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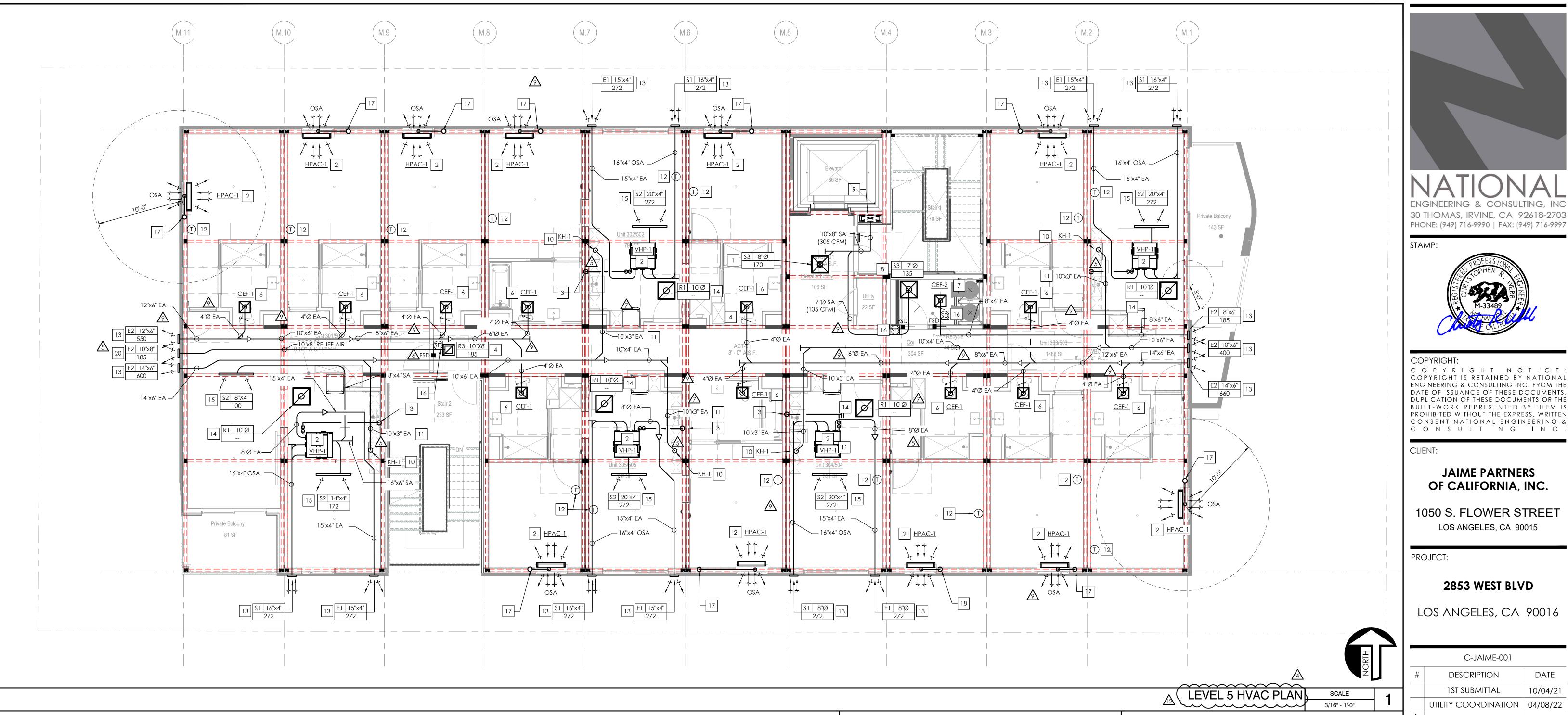
2853 WEST BLVD

LOS ANGELES, CA 90016

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	UTILITY COORDINATION	04/08/22
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2	PC RESUBMITTAL	10/28/22
3	HCD REVISION 1	12/16/22
4	PC RESUBMITTAL	02/02/23
<u></u>	HCD & PC RESUBMITTAL	06/06/23
<u></u> ⟨6\	HCD RESUBMITTAL	06/14/23
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8	CLIENT REVISIONS	07/11/23
$\overline{\Diamond}$	CLIENT REVISIONS	08/04/23
10	PC RESUBMITTAL (ELEC)	09/12/23
$\overline{\mathbb{A}}$	PC RESUBMITTAL (ELEC)	10/05/23
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SHEET TITLE:

LEVEL 4 HVAC PLAN



PLAN NOTES

- A. REFER TO SHEET M001 FOR GENERAL MECHANICAL INFORMATION AND M002 FOR HVAC SPECIFICATIONS.
- B. REFER TO SHEET M003 FOR ALL SCHEDULES, SEQUENCES AND CONTROLS.
- C. REFER TO SHEET M401 FOR DETAILS.
- D. REFER TO SHEET M402 FOR OSA CALCULATIONS.
- E. REFER TO SHEET M101 FOR CONTINUATIONS BELOW AND SHEET M103 FOR
- CONTINUATIONS ABOVE. REFER TO MANUFACTURER'S GUIDELINES FOR PROPER INSTALLATION AND EQUIPMENT
- CLEARANCES. G. ALL CONDENSATE DRAIN PIPING TO MAINTAIN MINIMUM SLOPE OF 1/8" PER FT.
- H. PROVIDE ACCESS PANEL IN DUCT FOR INSPECTION / MAINTENANCE OF EACH FSD SHOWN ON PLANS.
- THE BUILDING SYSTEM IS DESIGNED FOR CONTINUOUS OPERATION OF SUPPLY/EXHAUST

AIR LEAKAGE IN DWELLING UNITS SHALL BE LESS THAN OR EQUAL TO 0.3 CFM PER SQFT.

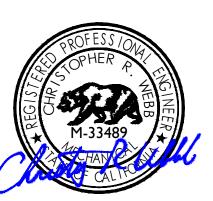
OF DWELLING UNIT AT A DUCT STATIC PRESSURE OF 50 PASCALS (~0.2" W.C.).

KEY NOTES

- # NUMBERS INDICATE NOTES SHOWN ON PLAN
- 8"Ø SA DUCT DOWN TO CEILING DIFFUSER FOR COMMON CORRIDOR VENTILATION.
- INDOOR HEAT PUMP ABOVE CEILING TO SERVE CONDITIONED SPACE, AS SHOWN. UNIT TO BE PROVIDED AS A DEFERRED SUBMITTAL. COORDINATE ALL ASPECTS OF INSTALLATION IN FIELD DURING CONSTRUCTION.
- 3. ROUTE 3/4" CONDENSATE DRAIN PIPING DOWN TO DISCHARGE INTO TAILPIECE OF LAVE
- RELIEF GRILLE SERVING CORRIDOR. PROVIDE 10"X"8 RELIEF AIR DUCT (MIN. 26 GAUGE GALVANIZED STEEL) THRU FIRE-RATED WALL WITH MIN. 12" LONG BY 0.06" THICK STEEL SLEEVE, CENTERED IN EACH DUCT OPENING. DUCT PENETRATION MEETS ALL OF THE EXCEPTIONS LISTED IN SECTION 717.5.4 OF THE LABC.
- PROVIDE CLEANOUT AT EACH CHANGE IN DIRECTION.
- CEILING-MOUNTED BATHROOM EXHAUST FAN. PROVIDE 6"Ø EA DUCT (MIN. 26 GAUGE GALVANIZED STEEL) THRU FIRE-RATED WALL WITH MIN. 12" LONG BY 0.06" THICK STEEL SLEEVE, CENTERED IN EACH DUCT OPENING. DUCT PENETRATION MEETS ALL OF THE EXCEPTIONS LISTED IN SECTION 717.5.4 OF THE LABC.
- . CEILING-MOUNTED TRASH ROOM EXHAUST FAN W/ FACTORY BACKDRAFT DAMPER.
- 8. 7'Ø SA DUCT DOWN TO CEILING DIFFUSER.
- 9. PROVIDE 30"x8" SA DUCT TRANSITION TO 24"x8" SA AFTER BRANCH SERVING THIS FLOOR.
- 10. KITCHEN HOOD WITH FACTORY BACKDRAFT DAMPER. 11. ROUTE 10"x3" EA DUCT FROM KITCHEN HOOD TO COMMON EXHAUST PLENUM. PROTECT PENETRATION THRU FIRE-RATED WALL W/ AN APPROVED FIRESTOP SYSTEM INSTALLED AS
- TESTED IN ACCORDANCE WITH ASTM E814 OR UL 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH OF WATER AND SHALL HAVE AN F RATING OF NOT LESS THAN THE REQUIRED FIRE-RESISTANCE RATING OF THE WALL.
- 12. ROOM T-STAT. COORDINATE FINAL LOCATION WITH OWNER.
- 13. ROUTE DUCT THRU EXTERIOR WALL TO INTAKE/EXHAUST/RELIEF LOUVER.
- 14. PROVIDE RA CEILING GRILLE FOR PLENUM RETURN.
- 15. PROVIDE FULL SIZE SA DUCT TO SIDEWALL GRILLE FOR HORIZONTAL DISCHARGE.
- 16. PROVIDE DUCT SMOKE DETECTOR UPSTREAM OF FIRE SMOKE DAMPER (POTTORFF MODEL FSD-341, OR OTHER UL 555/555S-RATED EQUAL) FOR 2 HR. FIRE-RATED WALL.
- 17. ROUTE 3/4" CONDENSATE DRAIN RISER DOWN TIGHT TO UNDERSIDE OF LEVEL 1 PODIUM. 18. 3/4" CONDENSATE DRAIN PIPING FROM HVAC UNIT ABOVE.



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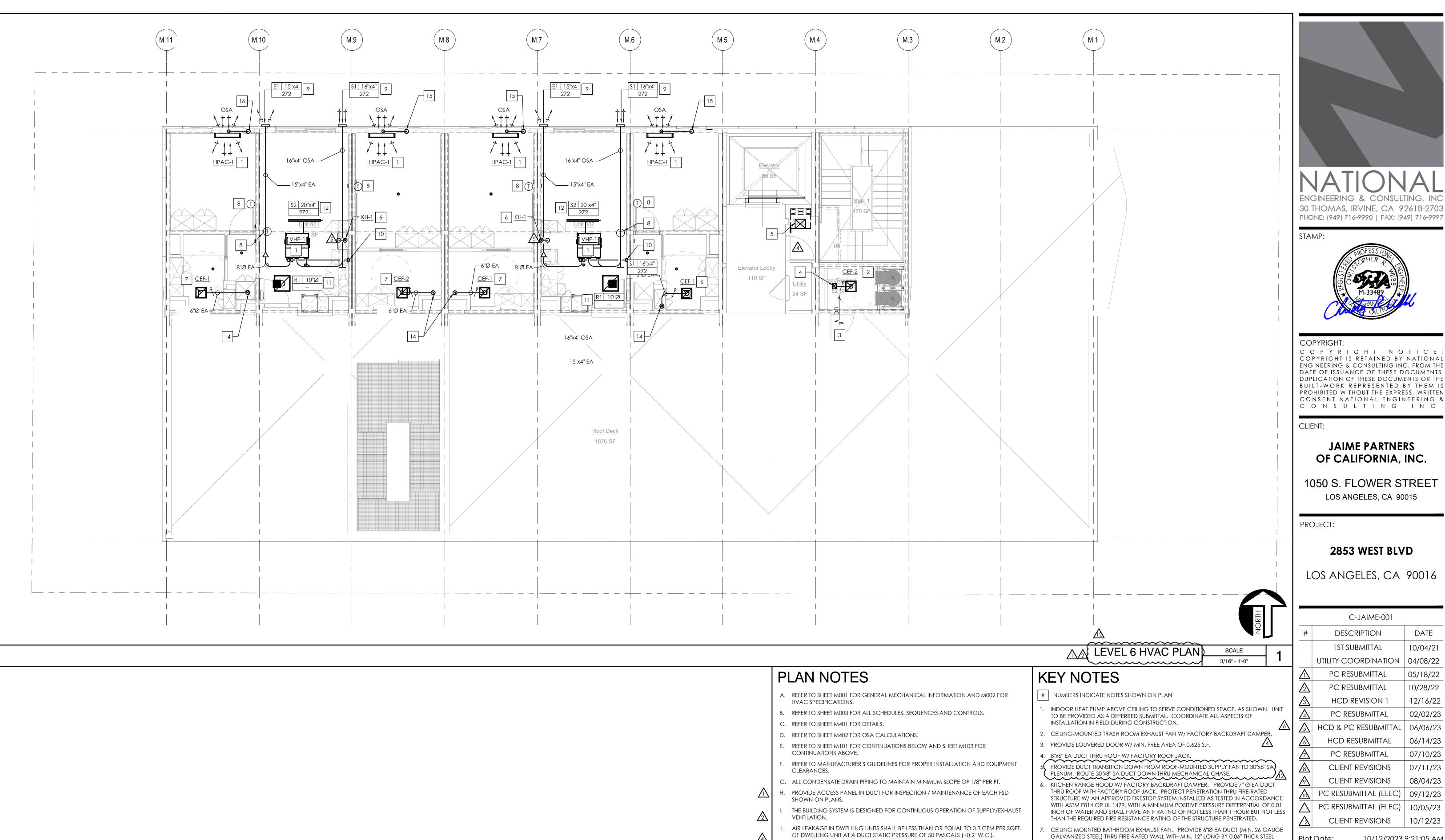
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LEVEL 5 **HVAC PLAN**



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12	CLIENT REVISIONS	10/12/23

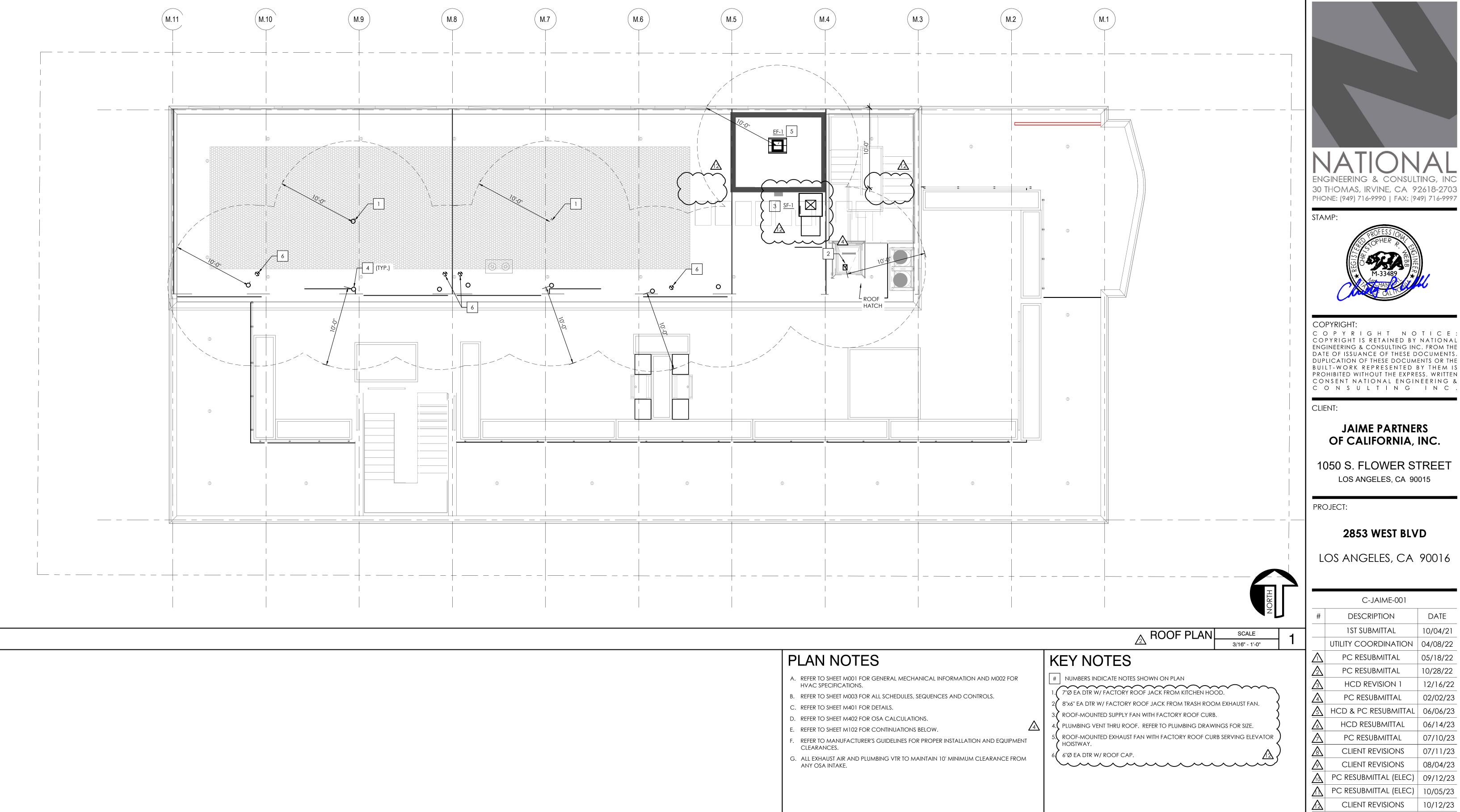
SLEEVE, CENTERED IN EACH DUCT OPENING.

- 8. ROOM T-STAT. COORDINATE FINAL LOCATION WITH OWNER.
- 9. ROUTE DUCT THRU EXTERIOR WALL TO INTAKE/EXHAUST/RELIEF LOUVER.
- 10. ROUTE 3/4" CONDENSATE DRAIN PIPING DOWN TO DISCHARGE INTO TAILPIECE OF LAV.
- 11. PROVIDE RA CEILING GRILLE FOR PLENUM RETURN.
- 12. PROVIDE FULL SIZE SA DUCT TO SIDEWALL GRILLE FOR HORIZONTAL DISCHARGE.
- 13. PROVIDE DUCT SMOKE DETECTOR DOWNSTREAM OF FIRE SMOKE DAMPER (POTTORFF MODEL FSD-341, OR OTHER UL 555/555S-RATED EQUAL) FOR 2 HR. FIRE-RATED WALL.
- 14. 6"Ø EA DTR W/ ROOF CAP.
- 15. ROUTE 3/4" CONDENSATE DRAIN RISER DOWN TO SERVE LOWER LEVELS.
- 16. ROUTE 3/4" CONDENSATE DRAIN DOWN THRU FIN. FLOOR INTO LVL 5 CEILING SPACE.

LEVEL 6 HVAC PLAN

SHEET NO:

SHEET TITLE:



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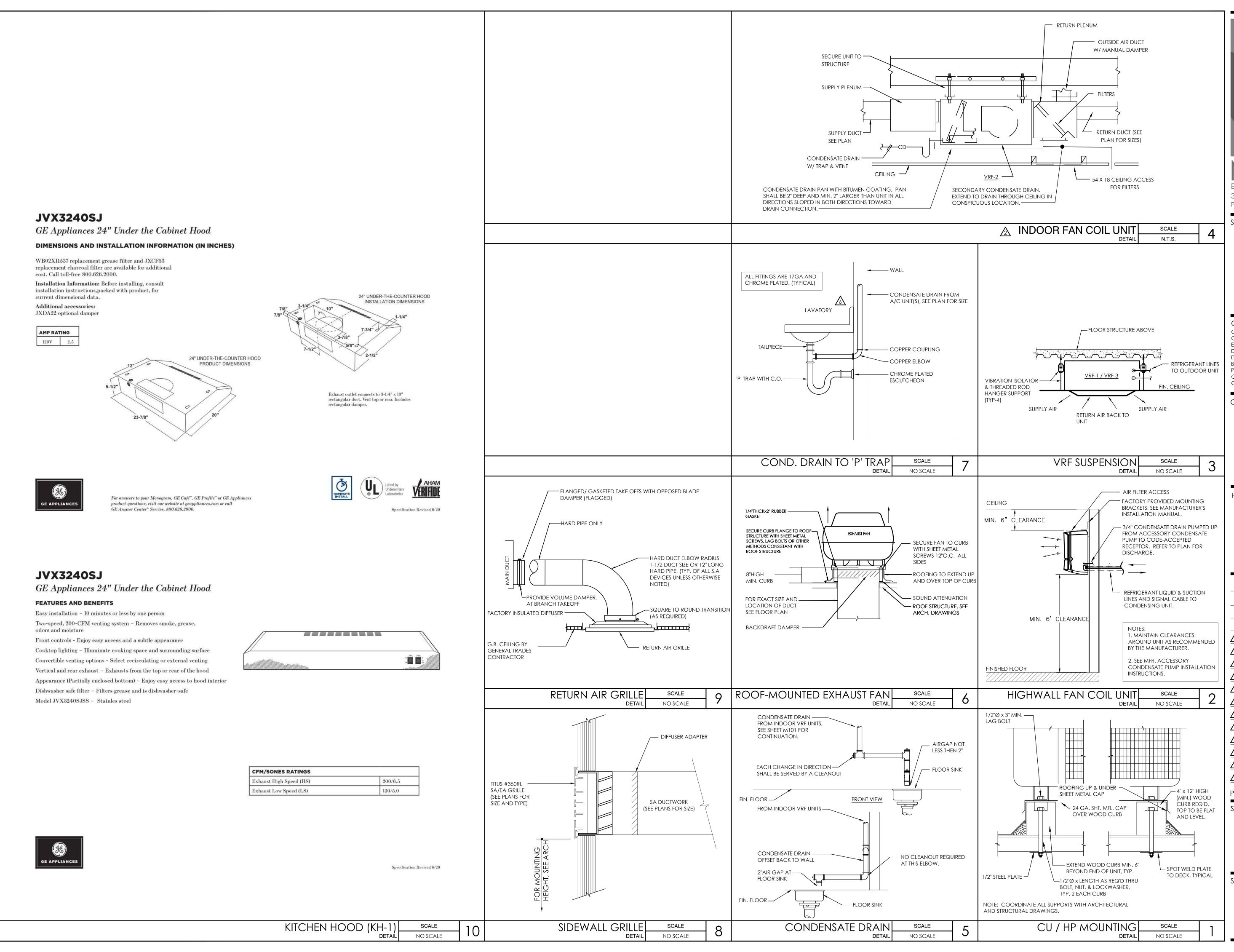
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ROOF PLAN





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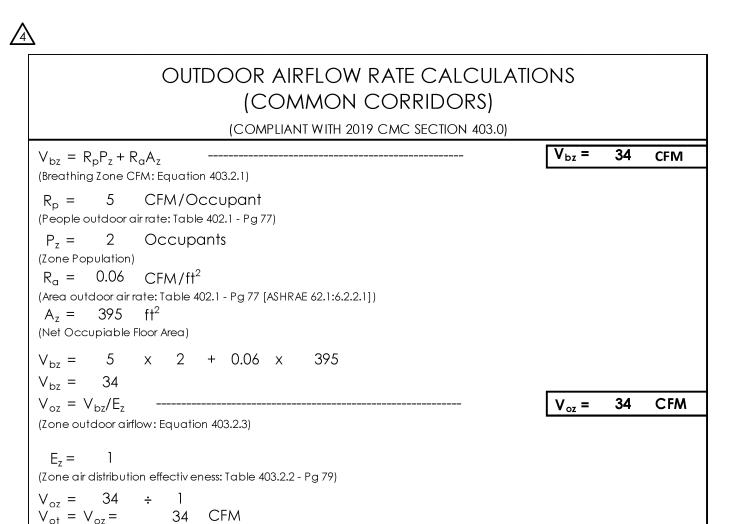
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<u></u>	HCD RESUBMITTAL	06/14/23
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8	CLIENT REVISIONS	07/11/23
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10	PC RESUBMITTAL (ELEC)	09/12/23
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<u> </u>	CLIENT REVISIONS	10/12/23
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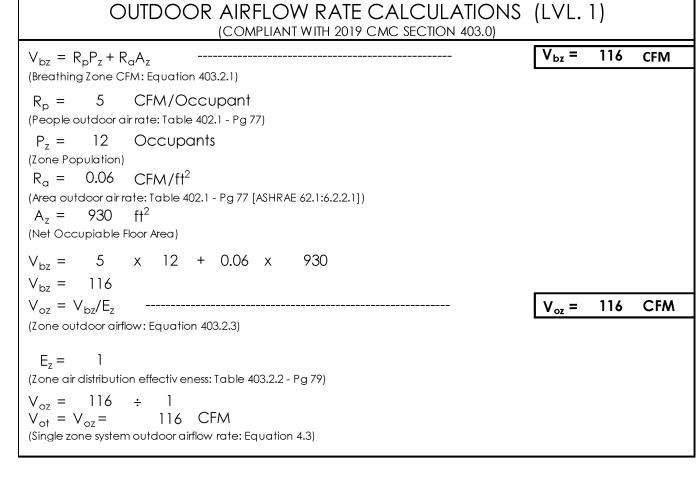
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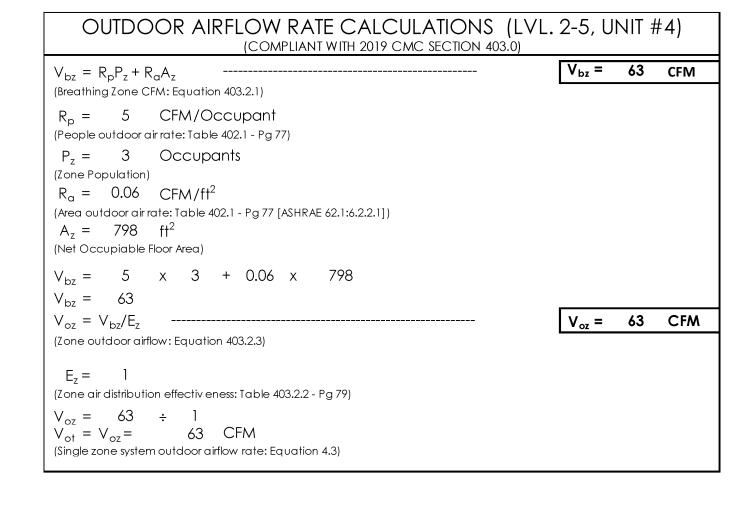
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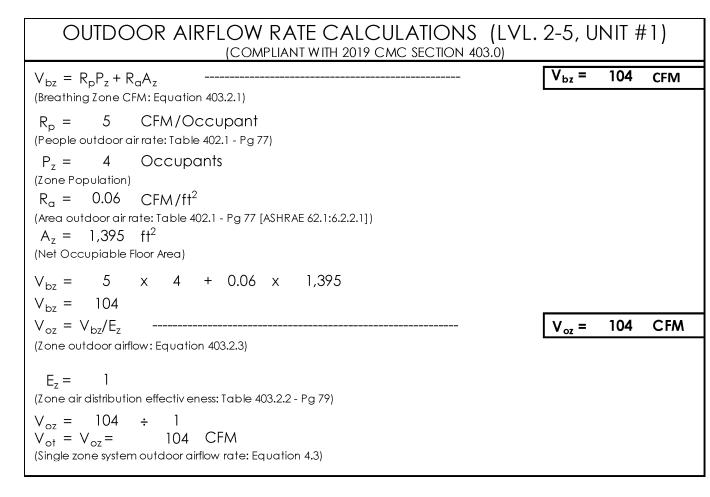
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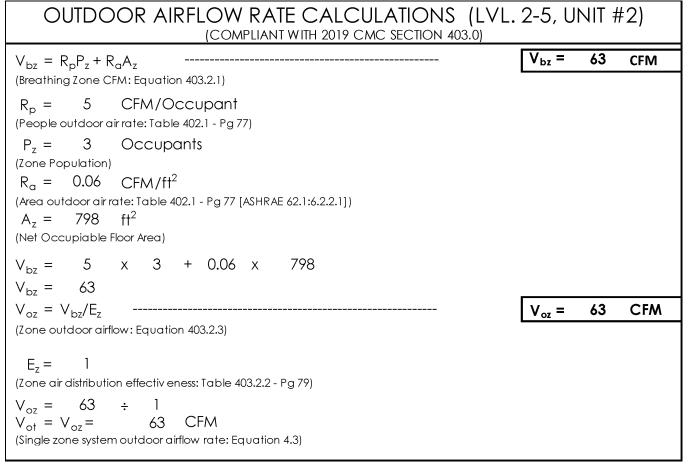
(Single zone system outdoor airflow rate: Equation 4.3)







$V_{bz} = R_p P_z + R_q A_z$	V _{bz} =	63	CFM
(Breathing Zone CFM: Equation 403.2.1)			
$R_p = 5$ CFM/Occupant			
(People outdoor air rate: Table 402.1 - Pg 77)			
$P_z = 3$ Occupants			
(Zone Population)			
$R_{\alpha} = 0.06 \text{ CFM/ft}^2$			
(Area outdoor air rate: Table 402.1 - Pg 77 [ASHRAE 62.1:6.2.2.1])			
$A_z = 801 \text{ft}^2$			
(Net Occupiable Floor Area)			
$V_{bz} = 5 \times 3 + 0.06 \times 801$			
$V_{bz} = 63$			
$V_{oz} = V_{bz}/E_z$	V _{oz} =	63	CFA
(Zone outdoor airflow: Equation 403.2.3)	▼ oz —		
(Lette Gordeor amierr. Equation 100.2.0)			
$E_{\tau} = 1$			
(Zone air distribution effectiv eness: Table 403.2.2 - Pg 79)			
$V_{oz} = 63 \div 1$			
$V_{ot} = V_{oz} = 63$ CFM			
(Single zone system outdoor airflow rate: Equation 4.3)			



OUTDOOR AIRFLOW RATE CALCULATIONS (LV (COMPLIANT WITH 2019 CMC SECTION 403.0)	′L. 6, UN	1IT #	1)
$V_{bz} = R_p P_z + R_a A_z$	V _{bz} =	63	CFM
(Breathing Zone CFM: Equation 403.2.1)			
$R_p = 5$ CFM/Occupant			
(People outdoor air rate: Table 402.1 - Pg 77)			
$P_{7} = 3$ Occupants			
(Zone Population)			
$R_a = 0.06$ CFM/ft ²			
(Area outdoor air rate: Table 402.1 - Pg 77 [ASHRAE 62.1:6.2.2.1])			
$A_z = 798 \text{ ft}^2$			
(Net Occupiable Floor Area)			
$V_{bz} = 5 \times 3 + 0.06 \times 798$			
$V_{bz} = 63$			
$V_{oz} = V_{bz}/E_z$	\(\sigma\) -	63	CFM
	V _{oz} =	- 63	CF/M
(Zone outdoor airflow: Equation 403.2.3)			
E, = 1			
(Zone air distribution effectiv eness: Table 403.2.2 - Pg 79)			
$V_{OZ} = 63 \div 1$			
$V_{ot} = V_{oz} = 63$ CFM			
(Single zone system outdoor airflow rate: Equation 4.3)			

(Zone Population) $R_{a} = 0.06 \text{CFM/ft}^{2}$ (Area outdoor air rate: Table 402.1 - Pg 77 [ASHRAE 62.1:6.2.2.1]) $A_{z} = 798 \text{ft}^{2}$ (Net Occupiable Floor Area)			
$V_{bz} = 5 \times 3 + 0.06 \times 798$ $V_{bz} = 63$			
$V_{oz} = V_{bz}/E_z$	V _{oz} =	63	CFM
(Zone outdoor airflow: Equation 403.2.3)			
$\begin{array}{lll} E_z = & 1 \\ \text{(Zone air distribution effectiv eness: Table 403.2.2 - Pg 79)} \\ V_{oz} = & 63 & \div & 1 \\ V_{ot} = & V_{oz} = & 63 & CFM \\ \text{(Single zone system outdoor airflow rate: Equation 4.3)} \end{array}$			
OUTDOOR AIRFLOW RATE CALCULATIONS (LVL. (COMPLIANT WITH 2019 CMC SECTION 403.0)	. 2-5, U	NIT #	# 3)
$V_{bz} = R_p P_z + R_a A_z$ (Breathing Zone CEM: Equation 403.2.1)	V _{bz} =	69	CFM

OUTDOOR AIRFLOW RATE CALCULATIONS (LV (COMPLIANT WITH 2019 CMC SECTION 403.0)	′L. 6, UN	VII #	2)
$P_{pz} = R_p P_z + R_a A_z$ eathing Zone CFM: Equation 403.2.1)	V _{bz} =	63	CFM
p = 5 CFM/Occupant eople outdoor air rate: Table 402.1 - Pg 77)			
$\theta_z = 3$ Occupants one Population) $\theta_a = 0.06$ CFM/ft ² $\theta_a = 0.06$ are 1 and 1 and 2			
ed oblador diriale. Table 402.1 - Fg // [ASHRAE 62.1.6.2.2.1]) $\frac{1}{2} = 799 \text{ft}^2$ et Occupiable Floor Area)			
$c_{0z} = 5 \times 3 + 0.06 \times 799$ $c_{0z} = 63$			
$v_{\rm DZ} = V_{\rm bz}/E_{\rm z}$ one outdoor airflow: Equation 403.2.3)	V _{oz} =	63	CFM
$E_z = 1$ one air distribution effectiv eness: Table 403.2.2 - Pg 79)			
$c_{oz} = 63 \div 1$ $c_{ot} = V_{oz} = 63$ CFM angle zone system outdoor airflow rate: Equation 4.3)			

(Breathing Zone CFM: Equation 403.2.1) $R_p = 5$ CFM/Occupant (People outdoor air rate: Table 402.1 - Pg 77) $P_z = 3$ Occupants (Zone Population) $R_a = 0.06 \text{ CFM/ft}^2$ (Area outdoor air rate: Table 402.1 - Pg 77 [ASHRAE 62.1:6.2.2.1]) $A_{7} = 903 \text{ ft}^{2}$ (Net Occupiable Floor Area) $V_{bz} = 5 \times 3 + 0.06 \times 903$ $V_{bz} = 69$ $V_{oz} = V_{bz}/E_z$ ------ $V_{oz} = 69$ CFM (Zone outdoor airflow: Equation 403.2.3) $E_{7} = 1$ (Zone air distribution effectiv eness: Table 403.2.2 - Pg 79) $V_{07} = 69 \div 1$ $|V_{ot} = V_{oz} = 69$ CFM (Single zone system outdoor airflow rate: Equation 4.3)

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C-JAIME-001

UTILITY COORDINATION | 04/08/22

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PC RESUBMITTAL 07/10/23

CLIENT REVISIONS 07/11/23

CLIENT REVISIONS 08/04/23

CLIENT REVISIONS 10/12/23

PC RESUBMITTAL (ELEC) 09/12/23

PC RESUBMITTAL (ELEC) 10/05/23

10/04/21

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1ST SUBMITTAL

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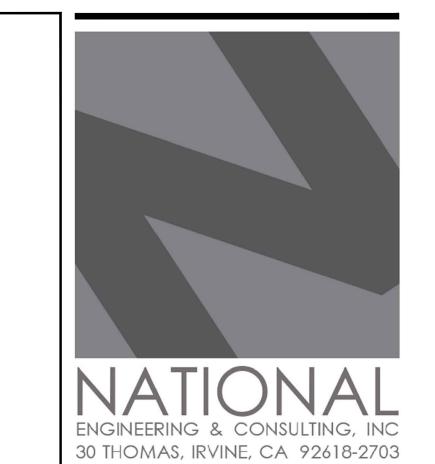
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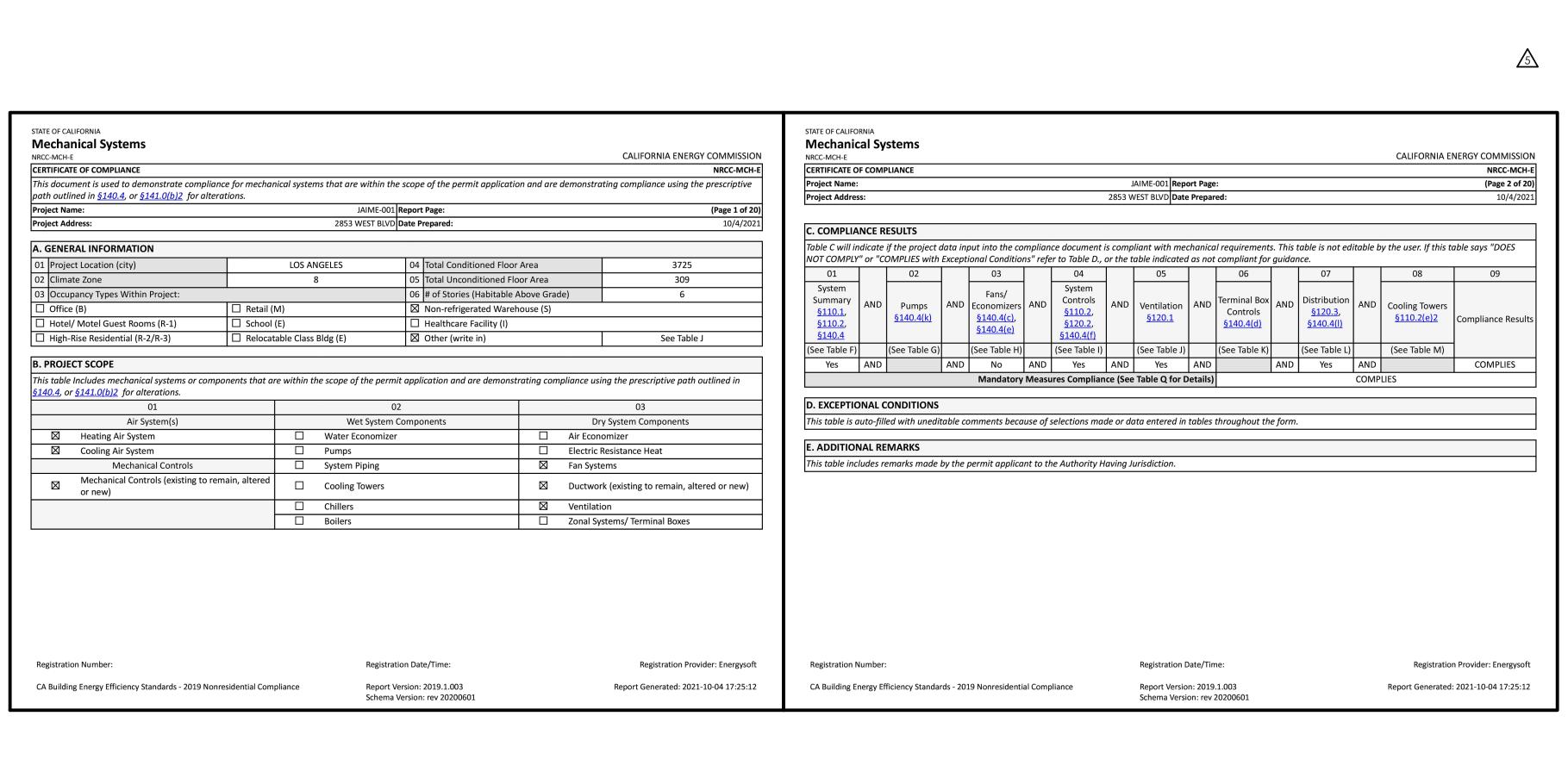
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8	CLIENT REVISIONS	07/11/23
\overline{A}	CLIENT REVISIONS	08/04/23
10	PC RESUBMITTAL (ELEC)	09/12/23
$\overline{\mathbb{A}}$	PC RESUBMITTAL (ELEC)	10/05/23
$\sqrt{\lambda}$	CLIENT REVISIONS	10/12/23

TITLE 24 COMPLIANCE

SHEET NO:

SHEET TITLE:

IRCC-MCH-E	tems							CAI	LIFORNIA	ENERGY COM	SSION	Mechanical Sy NRCC-MCH-E	ystems							CALIFORN	IA ENERGY COMM
ERTIFICATE OF COMPLIA Project Name:	IANCE		JAIME-00	1 Report Page	:					NRO	MCH-E of 20)	CERTIFICATE OF COM Project Name:	IPLIANCE			JAIME-001 Rep	port Page:				NRCC (Page
roject Address:			2853 WEST BLV								4/2021	Project Address:			28	B53 WEST BLVD Dat					10
	MMARY (DRY & WET	SYSTEMS) for mechanical equipment wi	th mandators	eguiroments f	ound in \$11	01 and 511	0.2/a) and	nrescrinting	equirem :	ents found in f) 4(a)		SUMMARY (DRY & W		Air Condition	ers (DTAC) and D	ackage Terminal	Heat Dumns (DT)	IP))		
<u>140.4(b)</u> and <u>§140.4(</u>	<u>(k)</u> or <u>§141.0(b)2</u> for al		·				v.ziu) and i	στεscriptive r	счинетен	nis jouria in <u>§</u> .	<i></i> -+(u),	01	nent Efficiency (other th	ian rackage Terminal	03	04	05	Heat Pumps (PTH	1P)) 07	08	
01	02	03	,p3, VIXE, 10	04	05	06	07	08 Mechanical	09 Schedule	10 (kBtu/h)	11	Name or Item	Size Categ	gory	Rating	неatin	Minimum Efficiency			Cooling N Minimu Efficier	ım
				mall or	Не	Equipmer 	<u>§1</u>	Mechanical S L40.4 (a&b) Cooling Ou		Load Calcula	ons ^{3,4}	Tag	(Btu/h		-	Efficiency Unit	Required per Tables 110.2 /	Design Efficiency	/ Efficiency Uni	it Required Tables 11	Design Ef
Name or Item Equ Tag	uipment Category per Tables 110.2	Equipment Type per Tables 1 20	10.2 / Title	mallest Size Available ¹ §140.4(a)	Per Design		Supp.	Sansible	Rated	Total	otal isible	HP-1 / VRF-1 /	<65,000		7 °Fdb/ 43	HSPF	7.7	10	SEER	Title 2	
				<u>3140.4(u)</u>	(kBtu/h)	(kBtu/h)	Heating Output (kBtu/h)	Jor Docidal	катеа (kBtu/h)	Load (kBtu/h)	oling oad	VRF-2 VHP-1 / HPAC-1	<65,000	0	'Fwb OSA	HSPF	7.7	13	SEER	14.0	1
HP-1 / VRF-1 / Varia	riable Refrigerant Flow	VRF heat pump, air co	oled I	NA: Load Controls	69.56	66	0	59.82	57	(2.43	VHP-1 / HPAC-1 VHP-1 / HPAC-1	<65,000 <65,000	0		HSPF HSPF	7.7	13	SEER SEER	14.0 14.0	1
	Unitary Heat Pumps	Air-cooled, pkg (1pha	(se)	NA: Load Controls	154.03	11.5	0	173.83	10	-108.54	3.92	VHP-1 / HPAC-1	<65,000	0		HSPF	7.7	13	SEER	14.0	1 1
/HP-1 / HPAC-1 U	Unitary Heat Pumps	Air-cooled, pkg (1pha	se)	NA: Load Controls	154.03	11.5	0	173.82	10	-122.51	9.69	G. PUMPS This section does no	not apply to this project.								
/HP-1 / HPAC-1 U	Unitary Heat Pumps	Air-cooled, pkg (1pha	ise) I	NA: Load Controls	154.03	11.5	0	173.81	10	-126.3	8.52		& AIR ECONOMIZERS								
/HP-1 / HPAC-1 U	Unitary Heat Pumps	Air-cooled, pkg (1pha	ISE)	NA: Load Controls	154.03	11.5	0	173.87	10	-114.85	8.45	exempt from these	o demonstrate complian requirements and do no						systems. Fan sys	stems serving (only process loa
	ent shall be the smallest facilities are excepted.	size, within the available opt	ions of the desir	red equipmen	t line, neces	sary to meet	the design i	heating and o	cooling loo	ads of the bui	ng per	Name:	VRF-2		al OA filtration	Economizer Controls:		er <u>§140.4(e)</u> and (m)	System Fa		Constant Vol
		apacity on the equipment sch utput and load blank. If equip						oles.				01 Fan Name or	02	03 Maximur	04 n Design Supp	oly Airflow .	05	06	Fan Power Pre	ssure Drop Ad	08 justment - Table
		nd calculations used for compl			<i>3</i> ,							Item Tag	Fan Function	Qty	(CFM)		HP Unit ²	Design HP	Devid	ce	Design Airflow t Device (CF
												Total System D	Design Supply Airflow (C	FM):	0	Total Systen (B)HI		0	Maximum Sy Power (I		0
Registration Number:			Registr	ration Date/Tim	ne:				Registrati	ion Provider: Er	gysoft	Registration Number	er:			Registration	n Date/Time:			Registr	ation Provider: E
CA Building Energy Effici	ciency Standards - 2019 No	onresidential Compliance		: Version: 2019 a Version: rev 2				Repor	rt Generate	ed: 2021-10-04	25:12	CA Building Energy E	Efficiency Standards - 2019	Nonresidential Complia	ince	•	ion: 2019.1.003	1		Report Genera	ated: 2021-10-04
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ate of california 1echanical Syst RCC-MCH-E	tems							CAI	LIFORNIA	ENERGY COM	SSION	STATE OF CALIFORNIA Mechanical Sy NRCC-MCH-E	ystems							CALIFORN	IA ENERGY CON
ERTIFICATE OF COMPLIA roject Name:	IANCE		JAIME-00	1 Report Page	:			CAI	2.44IA	NRO	MCH-E of 20)	CERTIFICATE OF COM Project Name:	IPLIANCE			JAIME-001 Rep	port Page:			51114	NR (Pa
roject Address:			2853 WEST BLV								4/2021	Project Address:			28	353 WEST BLVD Dat					(1.0)
. FAN SYSTEMS & A	AIR ECONOMIZERS											I. SYSTEM CONTR									
Name:	1 / HPAC-1 Economi		ling Econom	ols:	igned per <u>§1</u> (m)		Syste	em Fan Type:	:	Constant Vol	e	space conditioning									
01 an Name or	02	03 04 Maximum Design S	upply Airflow	05	_	06	Fan Pow	07 er Pressure D		08 stment - Table		01	02	03 Conditioned	04 Thermostats	05 Shut-Of	ff Isolation	07	Si	08 upply Air	09
Item Tag	Fan Function	(CFM)		HP Unit ²	D	esign HP		Device	De	esign Airflow t Device (CFI		System Nam	ne System Zoning	Reing Served §1	110.2(b) & (c) ² 2(a)or §141.0(¹ , Control	ls Zone	Demand Re §110.12 and	6120 2(b) Ter	mp. Reset	Window Interlo <u>§140.4(n</u>)
SF RF	Supply Return	16 4352 16 0		BHP BHP	-	1.2		NA NA		NA NA		HP-1 / VRF-1 / V	Multi-zone VRF-2 w/ DDC to	(π²) <= 25,000 ft²	Setback	Auto Tim	ner 4 Hour Time	er EMC		Included	Provided
Total System Desi	ign Supply Airflow (CFM	1): 4352		iystem Design (B)HP:		38.4		um System F wer (B)HP:	Fan	0.26			zone			Switch Auto Tim	ner				
System VHP-1	1 / HPAC-1 Economia	zer: ¹ NA: <=54 kBtu/h cod	ling Econom		igned per <u>§1</u> (m)	<u>140.4(e)</u> and)		em Fan Type:	:	Constant Vol	e	VHP-1 / HPAC		<= 25,000 ft ²	Setback	Switch Auto Tim	ner Hour IIme			Included	Provided
01	02	03 04		05		06		07		08		VHP-1 / HPAC	C-1 Single zone	<= 25,000 ft ²	Setback	Switch	14 Hour Time	er EMC	ا ا	Included	Provided
		1					Fan Pow	er Pressure D	Drop Adjus	stment - Table	10.4-B	\/UD 1 / UDAC	C-1 Single zone	<= 25 000 ft ²	Sethade	Auto Tim	ner / Hour Time	er EMAC	· .	Included	Droudd-d
an Name or Item Tag	Fan Function	Qty Maximum Design S (CFM)		HP Unit ²	D	esign HP	Fan Pow	er Pressure D Device			ough	VHP-1 / HPAC			Setback Setback	Switch Auto Tim	ner 4 Hour Time			Included Included	
Item Tag SF RF	Fan Function Supply Return			HP Unit ² BHP BHP	D	1.2	Fan Pow			stment - Table esign Airflow t	ough	VHP-1 / HPAC	C-1 Single zone	<= 25,000 ft ²		Switch Auto Tim Switch Auto Tim	ner 4 Hour Time	er EMC	CS I		Provided
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HP-1 / VRF-1 / VRF-2		<65,000			47 °Fdb/ 43 °Fwb OSA	HSPF		7.7	10	SEER	13.0	18.6
VHP-1 / HPAC-1		<65,000				HSPF		7.7	13	SEER	14.0	14
VHP-1 / HPAC-1		<65,000				HSPF		7.7	13	SEER	14.0	14
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System Name:	HP-1 / VRF-1 / VRF-2	Econon	nizer:1	NA: Spe	ecial OA filtrati	on Econom			er <u>§140.4(e)</u> and (m)	System Fan T	ype: Cor	nstant Volume
01	02		03		04		0.)5	06	07		08
Fan Name or Item Tag	Fan Functio	on	Qty	Maxim	num Design Su (CFM)	oply Airflow	HP U	Jnit ²	Design HP	Fan Power Pressu Device	Design	ent - Table 140.4-B n Airflow through evice (CFM)
Total Syster	n Design Supply A	Airflow (CF	M):		0		ystem De (B)HP:	esign	0	Maximum Syste Power (B)H	em Fan	0
Registration Num	ber: sy Efficiency Standa	rds - 2019 N	Vonreside	ntial Comp	oliance	-	ation Date	te/Time: 2019.1.003		R	J	rovider: Energysoft

L FAN CYCT	TAC C AID ECONO	NAIZEDC								
System Name:	VHP-1 / HPAC-1	Econom	nizer:1	NA: <=54 kBtu/h cooling	Econom		Designe	d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volume
01	02		03	04			05	06	07	08
Fan Name or				Mayimum Docian Supply	Airflow				Fan Power Pressure Drop A	Adjustment - Table 140.4-I
Item Tag	Fan Functio	n	Qty	Maximum Design Supply (CFM)	Airriow	HP	Unit ²	Design HP	Device	Design Airflow through Device (CFM)
SF	Supply		16	4352		Е	ЗНР	1.2	NA	NA
RF	Return		16	0		Е	ЗНР	1.2	NA	NA
Total Syst	em Design Supply A	irflow (CF	М):	4352		ystem [(B)HP:	Design	38.4	Maximum System Fan Power (B)HP:	0.26
System Name:	VHP-1 / HPAC-1	Econon	nizer:1	NA: <=54 kBtu/h cooling	Econom Contro		Designe	d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volume
01	02		03	04			05	06	07	08
01				Maximum Design Supply	Airflow				Fan Power Pressure Drop A	Adjustment - Table 140.4-
			O+v	Maximum Design Supply	All HOW	HP	Unit ²	Design HP	Device	Design Airflow through
	Fan Functio	n	Qty	(CFM)					Device	Device (CFM)
Fan Name or	Fan Function	n	16	(CFM) 4352		E	ЗНР	1.2	NA	Device (CFM)
Fan Name or Item Tag		n		,,			3HP 3HP	1.2	M 180 322 300	

Registration Date/Time:

Report Version: 2019.1.003

Schema Version: rev 20200601

STATE OF CALIFORNIA

Mechanical Systems

CERTIFICATE OF COMPLIANCE

Registration Number:

STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

UNIT 2 (3F)

UNIT 3 (3F)

UNIT 4 (3F)

UNIT 5 (3F)

ROOMS (3F)

System Name

08

Space Name ot item Tag

Registration Number:

Project Address:

Mechanical Systems

CERTIFICATE OF COMPLIANCE

J. VENTILATION AND INDOOR AIR QUALITY

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

All others

All others

All others

All others

All others

VHP-1 / HPAC-1

Occupancy Type⁴

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

17 Total System Required Min OA CFM

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

CERTIFICATE OF C	OMPLIANCE									NRCC-MCH-
Project Name:					JAIME-00:	1 Report Pa	ge:			(Page 8 of 20
Project Address:				285	3 WEST BLV	Date Prep	ared:			10/4/202
J. VENTILATIO	N AND INI	DOOR AIR QUALITY								
occupancies. Fo	r alteration		ns being altered	within the sc	ope of the p	permit app	lication nee	B for all nonresidential, led to be documented in the documented in the dsheet.		
01		Check the box if the pr	oject is showing	g ventilation o	calculations	on the pla	ns, or attac	ching the calculations inst	ead of completing thi	s table.
02	\boxtimes	Check this box if the p	roject included	Nonresidenti	al or Hotel/	Motel space	es			
02		Check this box if the p	roject included	new or altere	d high-rise	residential	dwelling u	nits.		
03		Check the box if the pr	oject is using n	atural ventilat	tion in any i	nonresiden	tial or hote	el/motel spaces to meet r	equired ventilation ra	tes per <u>§120.1(c)2</u> .
Nonresidential	and Hotel/	Motel Ventilation Syste	ms							
	04	4		05				06		07
System Name	HP-	1 / VRF-1 / VRF-2	System Desi Airfl		819		Design Air CFM	0	Provided per	20.1(c) and §141.0(b)2 3 §120.1(c) (NR and
00		00	10	1.4	42	12	1.1	45	Hote	l/Motel))
08		09	10	11	12	13	14	15		16
Saara Nama		Mechanical Ventil	_		<u>3</u> °	I	Exh.	Vent per <u>§120.1(c)4</u>	DCV or Sonsor Co	ntrols per §120.1(d)3,
Space Name ot item Tag	0	ccupancy Type ⁴	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM		and <u>§120.1(e)3</u> ⁶
LOBBY / COMMON		Lobbies	1103			551.5	0	0	DCV	Provided per <u>§120.1(d)4</u>
AREAS		LODDICS	1103			331.3	Ů	, and the second	Occ Sensor	NA: Not required space type
MECH / ELEC		All others	348			0	0	0	DCV	NA: Not required per §120.1(d)3
ROOMS		Allothers	340					J	Occ Sensor	NA: Not required space type
CORRIDORS /		Corridor	446			66.9	0	0	DCV	Provided per <u>§120.1(d)4</u>
LOBBY (2F)		COTTIGOT] 55.5		5	Occ Sensor	NA: Not required

JAIME-001 Report Page:
2853 WEST BLVD Date Prepared:

798

903

798

801

Mechanical Ventilation Required per §120.1(c)3 3

ystem Design OA CFM

Report Version: 2019.1.003

Schema Version: rev 20200601



30 THOMAS, IRVINE, CA 92618-2703 PHONE: (949) 716-9990 | FAX: (949) 716-9997

STAMP:

CALIFORNIA ENERGY COMMISSION

Registration Provider: Energysoft

Report Generated: 2021-10-04 17:25:12

Report Generated: 2021-10-04 17:25:12

CALIFORNIA ENERGY COMMISSION

DCV

Occ Sensor

DCV

Occ Sensor

DCV

Occ Sensor

DCV

Occ Sensor

Occ Sensor

Air Filtration per §120.1(c) and §141.0(b)2

Provided per §120.1(c) (NR and

Hotel/Motel))

DCV or Sensor Controls per §120.1(d)3,

§120.1(d)5, and §120.1(e)3 6

Registration Provider: Energysoft

Report Generated: 2021-10-04 17:25:12

0 18 Ventilation for this System Complies?

Exh. Vent per <u>§120.1(c)4</u>

System Design

Transfer Air CFM

Registration Date/Time:

Report Version: 2019.1.003

Schema Version: rev 20200601

10 11 12 13 14

NRCC-MCH-E

10/4/2021

(Page 11 of 20)

Provided per

§120.1(d)4

NA: Not required

space type

Provided per

§120.1(d)4

NA: Not required

space type

Provided per

§120.1(d)4

NA: Not required

Provided per

§120.1(d)4

NA: Not required

space type

NA: Not required per §120.1(d)3

space type



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CLIENT:

JAIME PARTNERS OF CALIFORNIA, INC.

1050 S. FLOWER STREET LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD

LOS ANGELES, CA 90016

	C-JAIME-001	
#	DESCRIPTION	DATE
	1ST SUBMITTAL	10/04/21
	UTILITY COORDINATION	04/08/22
\triangle	PC RESUBMITTAL	05/18/22
2	PC RESUBMITTAL	10/28/22
3	HCD REVISION 1	12/16/22
4	PC RESUBMITTAL	02/02/23
<u>\$</u>	HCD & PC RESUBMITTAL	06/06/23
<u></u>	HCD RESUBMITTAL	06/14/23
\triangle	PC RESUBMITTAL	07/10/23
8	CLIENT REVISIONS	07/11/23
\Diamond	CLIENT REVISIONS	08/04/23
10	PC RESUBMITTAL (ELEC)	09/12/23
$\overline{\mathbb{A}}$	PC RESUBMITTAL (ELEC)	10/05/23
<u>13</u>	CLIENT REVISIONS	10/12/23
Plot	Date: 10/12/2023	9:22:17 A <i>l</i>

TITLE 24

RTIFICATE OF Co oject Name: oject Address:	SINIT EIRIGE			281	JAIME-00: 53 WEST BLVI	Report Pa				NRCC-N (Page 12	
				283	53 WEST BLVI	Date Prep	ared:			10/4	/2021
. VENTILATION	I AND INDOOR	AIR QUALITY							DCV	Provided per	r
UNIT 1 (4F)	All ot	hers	1395			0	0	0	Occ Sensor	§120.1(d)4 NA: Not requir space type	
									DCV	Provided per §120.1(d)4	
UNIT 2 (4F)	All ot	hers	798			0	0	0	Occ Sensor	NA: Not requir	ed
									DCV	Provided per §120.1(d)4	r
UNIT 3 (4F)	All ot	hers	903			0	0	0	Occ Sensor	NA: Not requir	ed
LINUT 4 (45)	All	L	700			0		2	DCV	Provided per §120.1(d)4	r
UNIT 4 (4F)	All ot	ners	798			0	0	0	Occ Sensor	NA: Not requir space type	
UNIT 5 (4F)	All ot	hers	801			0	0	0	DCV	Provided per §120.1(d)4	
									Occ Sensor	NA: Not requir	
UTILITY ROOMS (4F)	All ot	hers	98			0	0	0	DCV	NA: Not required §120.1(d)3 NA: Not required	
17 To	otal System Requi	red Min OA CFM				0	18	Ventilation for th	Occ Sensor is System Complies?	space type Yes	
	04			05				06	Air Filtration per §12	07 20.1(c) and §141.0(b)2 ²
System Name	VHP-1/	HPAC-1	System Desi Airfl	-	0		Design Air CFM	0	Provided per	§120.1(c) (NR and I/Motel))	
08	09	9	10	11	12	13	14	15		16	
Registration Num	ber:				Registra	ation Date/T	ïme:		Regist	ration Provider: Energ	ysoft
CA Building Energ	y Efficiency Standar	ds - 2019 Nonreside	ntial Compliance	e	•	Version: 201 a Version: re			Report Gener	ated: 2021-10-04 17:2	5:12
TATE OF CALIFORNIA											
Viechanical RCC-MCH-E CERTIFICATE OF CO									CALIFORN	IA ENERGY COMMIS	
Project Name: Project Address:	STATE LIMINUE			701	JAIME-00: 53 WEST BLVI	Report Pa	-			(Page 15	
				283	DEVE	- 200 i ich				10/4	
<u>§120.2(e)3</u> req		ring rooms that are							cupancy sensing zone co		
								ns less than 1,000 ft², cl Inloading zones, unless	assrooms, conference ro excepted by <u>§130.1(c)</u> .	ooms, restrooms, ais	les
	OX CONTROLS										
nıs section doe	not apply to this	project.									
DICTRIBUTE	N (DUCTVOS:	and DIDING									
his table is used			ry pipe insulati	ion requirem	ents found i	n <u>§120.3</u> a	nd prescrip	otive requirements foun	d in <u>§140.4(I)</u> for duct le	eakage testing.	
This table is used Ouct Leakage Se	to show complia				ents found ii VHP-1 / F			otive requirements foun t leakage testing trigger		eakage testing.	
This table is used Ouct Leakage Se	to show complia	w apply to the foll	owing duct sys	stems:	VHP-1 / F	HPAC-1 ving health	Duc	t leakage testing trigger		No	
This table is used Duct Leakage Se The answers to t	to show compliant aling he questions belo	w apply to the foll The scope of the Duct system prov	owing duct sys project includ vides condition ioning system	stems: les only duct ned air to an serves less t	VHP-1 / H systems ser occupiable s than 5,000 ft	HPAC-1 ving health space for a ² of condit	Duc ncare facilit constant v	t leakage testing trigger ies rolume, single zone, spa r area.	red for these systems?	No	
This table is used Duct Leakage Se The answers to t 11 12 13	to show complianaling he questions belo No Yes Yes	w apply to the foll The scope of the Duct system prov The space condit The combined su	owing duct sys project includ vides condition ioning system irface area of t Outdoors	les only duct ned air to an serves less t the ducts in t	VHP-1 / F systems ser occupiable s than 5,000 ft the following	HPAC-1 ving health space for a c ² of condit g locations	Duc ocare facilit constant v ioned floor is more that	t leakage testing trigger ties rolume, single zone, spa r area. an 25% of the total surf	red for these systems? ce-conditioning system. ace area of the entire du	No uct system:	
This table is used Ouct Leakage Se The answers to t 11 12 13	to show complianaling he questions belo No Yes Yes	w apply to the foll The scope of the Duct system prov The space condit The combined su	owing duct sys project includ vides condition ioning system irface area of t Outdoors In a space dire	les only duct ned air to an serves less t the ducts in t ectly under a s of §140.3(a)	VHP-1 / H systems ser occupiable s than 5,000 ft the following a roof that ha)1B or if the	HPAC-1 ving health space for a conditions documents	Duc ocare facilit constant v ioned floor is more that	t leakage testing trigger ties rolume, single zone, spa r area. an 25% of the total surf	red for these systems?	No uct system:	
This table is used Duct Leakage Se The answers to t 11 12 13	to show complianaling he questions belo No Yes Yes	w apply to the foll The scope of the Duct system prov The space condit The combined su	owing duct sys project includ vides condition ioning system irface area of t Outdoors In a space dire requirements In an uncondi In other unco	les only duct ned air to an serves less t the ducts in t ectly under a s of §140.3(a) itioned crawl	VHP-1 / H systems ser occupiable s than 5,000 ft the following a roof that h)1B or if the I space oaces	HPAC-1 ving health space for a ² of condit g locations as a U-factor e roof has fi	Duc neare facilit constant v ioned floor is more that or greater	t leakage testing trigger cies rolume, single zone, spa r area. an 25% of the total surf than the u-factor of the or openings to the outs	red for these systems? ce-conditioning system. ace area of the entire du ceiling, or if the roof do	No uct system: pes not meet the ces	
This table is used Ouct Leakage Se The answers to t 11 12 13 14	to show complianaling he questions belo No Yes Yes	w apply to the foll The scope of the Duct system prov The space condit The combined su	owing duct sys project includ vides condition ioning system irface area of t Outdoors In a space dir- requirements In an uncondi In other unco project includ	stems: les only duct ned air to an serves less t the ducts in t ectly under a s of §140.3(a) itioned crawl onditioned sp les extending	VHP-1 / H systems ser occupiable s than 5,000 ft the following a roof that h 1B or if the I space baces g an existing ng duct system	HPAC-1 ving health space for a condit glocations as a U-facte roof has fi duct system	Ductor facility constant victor floor is more the fixed vents of the fixed vents of the form, which is cocumented	t leakage testing trigger cies rolume, single zone, spa r area. an 25% of the total surf than the u-factor of the or openings to the outs	ce-conditioning system. ace area of the entire du ceiling, or if the roof do ide/ unconditioned space or sealed with asbestos ly sealed as confirmed t	No Luct system: Less not meet the less	tion
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This table is used Duct Leakage Se The answers to t 11 12 13 14	to show compliants aling he questions below Yes Yes No	w apply to the foll The scope of the Duct system prov The space condit The combined su	owing duct sys project includ vides condition ioning system rface area of t Outdoors In a space dir requirements In an uncondi In other unco project includ project includ esting in accord	les only duct ned air to an serves less the ducts in the	VHP-1 / H systems ser occupiable s than 5,000 ft the following a roof that ha)1B or if the I space oaces g an existing g duct system procedures in	HPAC-1 ving health space for a ² of condit g locations as a U-factor roof has fi duct system that is do	Ductors facility constant vice or greater fixed vents on which is coumented ence Nonre	t leakage testing trigger ities rolume, single zone, spa r area. an 25% of the total surf than the u-factor of the or openings to the outs s constructed, insulated d to have been previous esidential Appendix NAZ	ce-conditioning system. ace area of the entire du ceiling, or if the roof do ide/ unconditioned space or sealed with asbestos ly sealed as confirmed t	No Luct system: Less not meet the less	ition
This table is used Ouct Leakage Se The answers to t 11 12 13 14 15 16 17	to show compliant aling he questions below Yes Yes No Yes Yes No	w apply to the foll The scope of the Duct system prov The space condit The combined su	owing duct sys project includ vides condition ioning system rface area of t Outdoors In a space dir requirements In an uncondi In other unco project includ project includ esting in accord	les only duct ned air to an serves less the ducts in the	VHP-1 / H systems ser occupiable s chan 5,000 ft the following a roof that ha)1B or if the I space paces g an existing ag duct system procedures in with the Califo	HPAC-1 ving health space for a ² of condit g locations as a U-factor roof has fi duct system that is do	Ductor of facility constant vice of floor is more that the facility or greater fixed vents of facility	t leakage testing trigger ities rolume, single zone, spa r area. an 25% of the total surf than the u-factor of the or openings to the outs s constructed, insulated d to have been previous esidential Appendix NAZ	red for these systems? ce-conditioning system. ace area of the entire du ceiling, or if the roof do ide/ unconditioned space or sealed with asbestos ly sealed as confirmed to 2.	No Luct system: Less not meet the less	
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This table is used Duct Leakage Se The answers to t 11 12 13 14 15 16 17 Registration Num CA Building Energy	to show compliant aling he questions beloe No Yes Yes No Yes Ves No	w apply to the foll The scope of the Duct system prov The space condit The combined su The scope of the The scope of the The scope of the The scope of the and diagnostic te Duct system shal	owing duct sys project includ vides condition ioning system irface area of t Outdoors In a space dir- requirements In an uncondi In other unco project includ project includ esting in accord	les only duct ned air to an serves less t the ducts in t ectly under a s of §140.3(a) itioned crawl onditioned sp les extending les an existin dance with p acordance w	VHP-1 / H systems ser occupiable s chan 5,000 ft the following a roof that h)1B or if the I space baces g an existing g duct system rith the Califo Registra Report	HPAC-1 ving health space for a space for a glocations as a U-factor roof has find the Reference or a Mechanism Mecha	Ductorare facility constant vice is more that the progression of the p	t leakage testing trigger ities rolume, single zone, spa r area. an 25% of the total surf than the u-factor of the or openings to the outs s constructed, insulated d to have been previous esidential Appendix NAZ	red for these systems? ce-conditioning system. ace area of the entire du ceiling, or if the roof do ide/ unconditioned space or sealed with asbestos ly sealed as confirmed to 2. Registi	No Luct system: Les not meet the les Lichrough field verification Provider: Energy	ysoft
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SSION ICH-E	STATE OF CALIFORI Mechanica NRCC-MCH-E CERTIFICATE OF	al Systems						CALIFORNIA	A ENERGY COMMISSION NRCC-MCH-E	STATE OF CALIFORNI Mechanical NRCC-MCH-E CERTIFICATE OF C	Systems					CALIFORNIA E	NERGY COMMISSION NRCC-MCH-E
of 20) /2021	Project Name: Project Address			JAIME-0 2853 WEST BL	001 Report Pag				(Page 13 of 20)	Project Address:	OWPLIANCE	2853	JAIME-001 Report WEST BLVD Date Pr				(Page 14 of 20) 10/4/2021
	J. VENTILATIO	ON AND INDOOR AIR QUALITY								J. VENTILATIO	N AND INDOOR AIR QUALITY						
ed	Space Name ot item Tag	Mechanical Ventila Occupancy Type ⁴	Conditioned # of Sh Floor Area (ft²) # oil	ower s/ # of	Required 5 Min OA CFM		Vent per §120.1(c)4 Provided per Design CFM		ntrols per <u>§120.1(d)3</u> , and <u>§120.1(e)3</u> ⁶	System Name	04 VHP-1 / HPAC-1	O5 System Design OA CFM Airflow ¹	() (em Design er Air CFM	0	07 Air Filtration per §120.1 Provided per §12(Hotel/M	(c) and §141.0(b)2 ² 0.1(c) (NR and
ed	UNIT 1 (5F)	All others	1395		0	0	0	DCV Occ Sensor	Provided per §120.1(d)4 NA: Not required	08 Space Name	09 Mechanical Ventil	10 11 lation Required per §120.1(c) Conditioned # of Shower	Require	od I	15 ht per <u>§120.1(c)4</u>	DCV or Sensor Contro	ols per <u>§120.1(d)3</u> ,
ed	UNIT 2 (5F)	All others	798		0	0	0	DCV Occ Sensor	space type Provided per §120.1(d)4 NA: Not required	ot item Tag	Occupancy Type ⁴	Floor Area heads/ (ft²) toilets	# of Min O CFM	Min CFM	Provided per Design CFM	<u>§120.1(d)5</u> , and	\$120.1(e)3 ⁶ Provided per \$120.1(d)4
ed	UNIT 3 (5F)	All others	903		0	0	0	DCV	Provided per \$120.1(d)4 NA: Not required	UNIT 1 (6F)	All others	798	0	0	0	Occ Sensor DCV	NA: Not required space type Provided per
ed	UNIT 4 (5F)	All others	798		0	0	0	Occ Sensor DCV	space type Provided per §120.1(d)4	UNIT 2 (6F)	All others	799	0	0	0	Occ Sensor DCV	§120.1(d)4 NA: Not required space type NA: Not required per
d per	UNIT 5 (5F)	All others	801		0	0	0	Occ Sensor DCV	NA: Not required space type Provided per §120.1(d)4	UTILITY ROOMS (6F)	All others Otal System Required Min OA CFM	98	0	0 18	0 Ventilation for this 9	Occ Sensor	§120.1(d)3 NA: Not required space type Yes
ed					H	_		Occ Sensor DCV	NA: Not required space type NA: Not required per	¹ FOOTNOTES: S ₁ ² Air filtration re	ystem CFM should include both mec quirements apply to the following th ms providing outside air to occupial	hree system types per §120.1	<u>c)1A</u> : space condit	em ioning systems u	utilizing ducts to supply	air to occupiable space;	supply-only
b)2 ²	ROOMS (5F)	All others Total System Required Min OA CFM	98		0	0	0 Ventilation for this 9	Occ Sensor	§120.1(d)3 NA: Not required space type Yes	outside air to oc ³ Uniform Mecho						gy recovery ventilation sy	scems providing
anoft.	Decistration No.	· · · · · · · · · · · · · · · · · · ·		Dogie	tration Data/T	i		Dogistos	otion Drovidov Francosch		ls with fixed seating, the expected n	umber of occupants shall be s			vith the California Build		no Descridore François soft
ysoft :5:12	Registration Nu	ergy Efficiency Standards - 2019 Nonreside	ential Compliance	Repo	rt Version: 201 ma Version: 201	9.1.003			ation Provider: Energysoft	Registration Nun	gy Efficiency Standards - 2019 Nonresid	lential Compliance	Registration Date Report Version: 2 Schema Version:	019.1.003			on Provider: Energysoft I: 2021-10-04 17:25:12
SSION	STATE OF CALIFORI Mechanica NRCC-MCH-E							CALIFORNIA	A ENERGY COMMISSION	STATE OF CALIFORNI Mechanical NRCC-MCH-E						CALIFORNIA F	NERGY COMMISSION
MCH-E of 20) /2021	CERTIFICATE OF Project Name: Project Address			JAIME-0	001 Report Pag				NRCC-MCH-E (Page 16 of 20) 10/4/2021	CERTIFICATE OF C Project Name: Project Address:	OMPLIANCE	2853	JAIME-001 Report WEST BLVD Date Pr				NRCC-MCH-E (Page 17 of 20) 10/4/2021
		ION (DUCTWORK and PIPING)									ON (DUCTWORK and PIPING)						
ı. Ies	The answers to		e project includes only	duct systems s		care facilit	t leakage testing triggered ies olume, single zone, space		No	The answers to 11 12		e project includes only duct so ovides conditioned air to an o		thcare facilities	akage testing triggered me, single zone, space	<u> </u>	No
	13 14	No The <u>combined</u> so	itioning system serves surface area of the duc Outdoors				area. an 25% of the total surface	e area of the entire dud	ct system:	13		litioning system serves less the surface area of the ducts in the Outdoors				e area of the entire duct s	system:
			In a space directly ur	<u>.3(a)1B</u> or if tl			han the u-factor of the ce or openings to the outside					In a space directly under a requirements of §140.3(a)1 In an unconditioned crawl s	B or if the roof has				not meet the
	15	The scope of the	In other uncondition e project includes exte	d spaces ding an existin			constructed, insulated or		prough field verification	15	The scope of th	In other unconditioned spa e project includes extending a e project includes an existing	ces n existing duct sys				ugh field verification
	16 17	and diagnostic to	testing in accordance wall be sealed in acordar	th procedures ce with the Cal	in the Refere	ence Nonre anical Cod	esidential Appendix NA2.		No No	16 17	and diagnostic t	testing in accordance with pro all be sealed in acordance wit	cedures in the Ref	erence Nonresid		sealed as committee thro	ugii ileiu veriileation
	11 12	No The scope of the Yes Duct system pro	e project includes only ovides conditioned air t	duct systems so an occupiable	erving health e space for a	care facilit constant v	ies olume, single zone, space		110	M. COOLING T This section doe	OWERS es not apply to this project.						
	13	No The <u>combined</u> so	Outdoors	in the followi	ing locations	is more tha	an 25% of the total surface			Selections have	ON OF REQUIRED CERTIFICATES been made based on information pi ts must be provided to the building i	rovided in previous tables of t			s to be changed, please	e explain why in Table E A	dditional Remarks.
tion				.3(a)1B or if the rawl space			han the u-factor of the ce or openings to the outside			https://www.en	ergy.ca.gov/title24/2019standards/ No	/2019_compliance_document			/		Field Inspector Pass Fail
	15 16	The scope of the and diagnostic to	e project includes an e testing in accordance w	isting duct syst th procedures	tem that is do in the Refere	ocumented ence Nonre	constructed, insulated or to have been previously esidential Appendix NA2.		nrough field verification		NRCI-MCH-01-E - Must be	e submitted for all buildings					
ysoft	17 Registration Nu		all be sealed in acordar		lifornia Mech		e	Registra	ation Provider: Energysoft	Registration Nun	nber:		Registration Date	:/Time:		Registratio	on Provider: Energysoft
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of 20) /2021	Project Name: Project Address			JAIME-C 2853 WEST BL	001 Report Pag				(Page 19 of 20) 10/4/2021	Project Name: Project Address:		2853	JAIME-001 Report WEST BLVD Date Pr				(Page 20 of 20) 10/4/2021
rks.	O. DECLARAT	NRCA-MCH-15-A Thermal Energy	y Storage (TES) System								TION AUTHOR'S DECLARATION S		nd complete.				
tor		automatically move to "Yes". If C External melt, Ice Harvester, Brin Cryogenic or Encapsulated (Ice B move this form to 'Yes".	ne, Ice-Slurry, Eutecti S	lt, Clathrate H	ydrate Slurry	(CHS),	ld			Documentation Auti Christopher Wo			Signatur	Date:	ature: Chiefly	RUH	
ail		NRCA-MCH-16-A Supply Air Temp NRCA-MCH-17-A Condenser Wat	ter Temperature Reset							Address: 30 Thomas	ernig & consuming, mc.		CEA/ HE		tification (if applicable): -5A73-54D5-D438-779	B-B1AF-5D9D-2A75-0955	6-6C99-1F9B-3987-
-		NRCA-MCH-19-A Occupancy Sen NRCA-MCH-20 Multi-Family Vent	nsor Controls tilation								PERSON'S DECLARATION STATE		Phone:	716-9990			
		NRCA-MCH-21 Multi-Family Enve	OF VERIFICATION							1. The info 2. I am elig 3. The ene	g under penalty of perjury, under the laws or prmation provided on this Certificate of Com- gible under Division 3 of the Business and Pro- grey features and performance specifications,	pliance is true and correct. ofessions Code to accept responsibili , materials, components, and manufa					
	These docume	e been made based on information pro nts must be completed by a HERS Rate ound online at https://www.energy.co	er and provided to the	ouilding inspec	tor during co	nstruction.	The final documents mus	st be created by a HERS	S Provider's registry, but	of Title : 4. The buil plans ar 5. I will en	24, Part 1 and Part 6 of the California Code o Iding design features or system design featur nd specifications submitted to the enforceme sure that a completed signed copy of this Ce	of Regulations. res identified on this Certificate of Co ent agency for approval with this buil ertificate of Compliance shall be made	mpliance are consistent ling permit application available with the buil	with the informatio	n provided on other applical	ble compliance documents, wo	rksheets, calculations, gency for all applicable
	Yes	NRCV-MCH-04-H Duct Lea		be completed			C Doub-		Field Inspector Pass Fail	inspecti Responsible Designe Christopher Wel Company:		opy or this Certificate of Compliance		ble Designer Signatu		to the building owner at occupa	ancy.
	0	NRCV-MCH-24 Enclosure / NRCV-MCH-27 High-rise R NRCV-MCH-32 Local Mech	Resdential NOTE: Must	oe completed k	by a HERS Ra	ter	. каter				ering & Consulting, Inc.		2021-1 License: M-334	0-04			
	-	DRY MEASURES DOCUMENTATION ed to indicate where mandatory meas		n the plan set (or construction	on docume	ntation.			City/State/Zip: Irvine CA 92618			Phone: 949-71	6-9990			
	Compliance wi	ith Mandatory Measures documented easures Note Block	01		Υє			02 heet or construction do M-Sheets	ocument location								
ysoft	Registration Nu				tration Date/T			_	ation Provider: Energysoft	Registration Nun			Registration Date				on Provider: Energysoft
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ENGINEERING & CONSULTING, INC 30 THOMAS, IRVINE, CA 92618-2703 PHONE: (949) 716-9990 | FAX: (949) 716-9997

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CONSENT NATIONAL ENGINEERING &
C O N S U L T I N G I N C .

CLIENT:

JAIME PARTNERS OF CALIFORNIA, INC.

1050 S. FLOWER STREET LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD

LOS ANGELES, CA 90016

	C-JAIME-001	
#	DESCRIPTION	DATE
	1ST SUBMITTAL	10/04/2
	UTILITY COORDINATION	04/08/22
\triangle	PC RESUBMITTAL	05/18/22
2	PC RESUBMITTAL	10/28/22
<u> </u>	HCD REVISION 1	12/16/2
4	PC RESUBMITTAL	02/02/2
<u></u>	HCD & PC RESUBMITTAL	06/06/2
<u></u>	HCD RESUBMITTAL	06/14/2
\triangle	PC RESUBMITTAL	07/10/2
8	CLIENT REVISIONS	07/11/2
\Diamond	CLIENT REVISIONS	08/04/2
<u>19</u>	PC RESUBMITTAL (ELEC)	09/12/2
Λ	PC RESUBMITTAL (ELEC)	10/05/2
<u>13</u>	CLIENT REVISIONS	10/12/2
Plot	Date: 10/12/2023	9:21:15 A

TITLE 24 COMPLIANCE

SHEET NO:

STATE OF CALIFORNIA Domestic Water Heating System NRCC-PLB-E CALIFORNIA ENERGY COMMISSION	STATE OF CALIFORNIA Domestic Water Heating System NRCC-PLB-E CALIFORNIA ENERGY COMMISSION	STATE OF CALIFORNIA Domestic Water Heating System NRCC-PLB-E CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE This document is used to demonstrate compliance for nonresidential occupancies with requirements in §110.1, §110.3, §120.3, and §140.5, and with requirements in §141.0 for	CERTIFICATE OF COMPLIANCE Project Name: JAIME-001 Report Page: (Page 2 of 7)	CERTIFICATE OF COMPLIANCE Project Name: JAIME-001 Report Page: (Page 3 of 7)
additions and alterations, for domestic water heating scopes using the prescriptive path. For high-rise residential and hotel/motel occupancies compliance is demonstrated with requirements in §110.1, §110.3, §120.3, §150.0 and §150.1(c)8, and with requirements §150.2 for additions. Project Name: Project Name: JAIME-001 Report Page: (Page 1 of 7)	Project Address: 2853 WEST BLVD Date Prepared: 10/4/2021	Project Address: 2853 WEST BLVD Date Prepared: 10/4/2021
Project Address: 2853 WEST BLVD Date Prepared: 10/4/2021	C. COMPLIANCE RESULTS Table C will indicate if the project data input into the compliance document is compliant with water heating requirements. If this table says "DOES NOT COMPLY" or "COMPLIES with	F. DOMESTIC HOT WATER EQUIPMENT This table is used to demonstrate compliance with mandatory equipment requirements in §110.1 and §110.3. For high-rise residential and hotel/motel occupancies, compliance with
A. GENERAL INFORMATION 01 Project Location (city) LOS ANGELES 02 Climate Zone 8	Exceptional Conditions" refer to Table D. or the table indicated as not compliant for guidance. 01 02 03 04	prescriptive requirements in §150.1(c)8 must also be demonstrated and with §150.2 for addition and alteration scopes. Equipment Schedule: Individual Systems
03 Occupancy Types Within Project (select all that apply): ☑ Nonresidential ☐ High-Rise Residential ☐ Hotel/Motel	Domestic Hot Water EquipmentDistribution SystemsControlsTable FTable GTable H Compliance Results	01 02 03 04 05 06 Name or
☐ State Building ☐ Healthcare Facility ☐ Other (Write In)	Yes Yes Yes COMPLIES	Requipment Type Volume (gal) Hour Rating Energy Factor Minimum Required Uniform Energy Factor (UEF) ¹ A.O. A.O. A.O.
B. PROJECT SCOPE This table includes domestic water heating systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive paths outlined in §140.5,	D. EXCEPTIONAL CONDITIONS This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.	SMITH Residential-Duty Commercial Gas-Fired >75 GPM >= 4.0 0.82 -0.41
\$150.1(c)8, and \$141.0(a), or \$141.0(b)2N for additions or alterations. Solar water heating systems are documented on the NRCC-SRA compliance document. Combined hydronic water heating systems are documented on the NRCC-MCH compliance document. 01 02 03	E. ADDITIONAL REMARKS This table is includes remarks made by the permit applicant to the Authority Having Jurisdiction.	1250NP 1FOOTNOTE: Compliant equipment may be found in the Modernized Appliance Efficiency Database System (MAEDBS) on the Energy Commission website:
My project consists of (check all that apply): System Type ^{1,2} System Components	This table is includes females in the permit applicant to the flatholity flathing sansaction.	https://cacertappliances.energy.ca.gov/Pages/Search/AdvancedSearch.aspx Water Heating Equipment All Occupancies Yes No Not Applicable Requirement
New system (DHW system being installed for the first time in newly constructed building) Individual System (serving nonresidential spaces) System Alteration (equipment, distribution or controls) Individual System (serving nonresidential spaces) Equipment Distribution Controls		18 Unfired storage tank insulation shall have Internal + External >=R-16 OR External >=R-12. Label required per §110.3(c)3
¹ FOOTNOTES: Point of use water heaters, or other non-central systems used to serve nonresidential spaces, are considered individual systems. ² Dwelling units refers to hotel/motel guest rooms and units in a high-rise residential occupancy.		New state buildings 60% of energy for service water heating from site solar energy or recovered energy per §110.3(c)5
		20 Solation valves for instantaneous water heater with input rating <6.8 kBTUH or 2 kW has been specified per §110.3(c)6
Registration Number: Registration Date/Time: Registration Provider: Energysoft	Registration Number: Registration Date/Time: Registration Provider: Energysoft	Registration Number: Registration Date/Time: Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2021-10-04 17:25:12 Schema Version: rev 20190401	CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2021-10-04 17:25:12 Schema Version: rev 20190401	CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2021-10-04 17:25:12 Schema Version: rev 20190401
STATE OF CALIFORNIA Domestic Water Heating System	STATE OF CALIFORNIA Domestic Water Heating System	STATE OF CALIFORNIA Domestic Water Heating System
NRCC-PLB-E CERTIFICATE OF COMPLIANCE Project Name: CALIFORNIA ENERGY COMMISSION NRCC-PLB-E NRCC-PLB-E (Page 4 of 7)	NRCC-PLB-E CERTIFICATE OF COMPLIANCE Project Name: CALIFORNIA ENERGY COMMISSION NRCC-PLB-E Report Page: (Page 5 of 7)	NRCC-PLB-E CERTIFICATE OF COMPLIANCE Project Name: CALIFORNIA ENERGY COMMISSION NRCC-PLB-E Report Page: (Page 6 of 7)
Project Address: 2853 WEST BLVD Date Prepared: 10/4/2021	Project Address: 2853 WEST BLVD Date Prepared: 10/4/2021	Project Address: 2853 WEST BLVD Date Prepared: 10/4/2021
G. DOMESTIC HOT WATER DISTRIBUTION SYSTEM	H. DOMESTIC HOT WATER CONTROLS	J.DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
This table is used to demonstrate compliance for nonresidential occupancies with distribution requirements in §120.3 and §140.5. For high-rise residential and hotel/motel occupancies, compliance is demonstrated with requirements §110.3(c), §120.3, §150.0, §150.1 Mandatory Pipe Insulation All Occupancies	This table is used to demonstrate compliance with control requirements in §110.3 for all occupancies. For high-rise residential and hotel/motel occupancies, compliance is also demonstrated with requirements in §150.1(c)8. Not	There are no Certificates of Acceptance applicable to service water heating requirements. K. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION
For systems serving nonresidential spaces, pipe insulation for the following applications is specified to comply with <u>Table 120.3-A</u> (see below) per §120.3: • Recirculating system pining, including supply and return pining of the water heater	Applicable Requirement Construction documents require manufacturer certification that service water-heating systems are equipped with automatic	Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS
The first 8 ft of hot and cold outlet piping, including between storage tank and heat trap, for a nonrecirculating storage system Pipes that are externally heated	temperature controls capable of adjusting temperature settings per §110.3(a). Systems with capacity > 167,000 BTUH equipped with outlet temperature controls per §110.3(c)1 unless covered by California	Providers registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/ Vos
Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service per §120.3(b) and §150.0(j)3	Plumbing Code 613.0. Controls for circulating pumps or electrical heat trace systems are capable of automatically turning off the system per	Pass Fail NRCV-PLB-21-H High-rise Residential Central Hot Water Distribution HERS Verification
TABLE 120.3-A PIPE INSULATION THICKNESS Conductivity Range Nominal Pipe Diameter (in)	o4	NRCV-PLB-22-H High-rise Residential Individual Dwelling Unit Hot Water Distribution HERS Verification
Fluid Temperature Range (°F) (Btu-in per hour per ft² per °F) (Btu-in per hour per hour per ft² per °F) (Btu-in per hour per hour per hour per ft² per °F) (Btu-in per hour per hour per hour per ft² per °F)	05	
105-140 0.22 - 0.28 100 1.0 in or R-7.7 1.5 in or R-12.5 1.5 in or R-11	o6	
	I. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION	
	Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/	
	Yes No Form/Title Field Inspector Pass Fail	
	NRCI-PLB-01-E - Must be submitted for all buildings NRCI PLB-02-E - Must be submitted for high rice recidential and hetel/metal central bet water distribution systems to be	
	NRCI-PLB-03-E - Must be submitted for high-rise residential and hotel/motel single dwelling unit hot water distribution systems to	
	be recognized for compliance.	
Registration Number: Registration Date/Time: Registration Provider: Energysoft CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2021-10-04 17:25:12	Registration Number: Registration Date/Time: Registration Provider: Energysoft CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2021-10-04 17:25:12	Registration Number: Registration Date/Time: Registration Provider: Energysoft CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2021-10-04 17:25:12
Schema Version: rev 20190401	Schema Version: rev 20190401	Schema Version: rev 20190401
		STATE OF CALIFORNIA Domestic Water Heating System NRCC-PLB-E CALIFORNIA ENERGY COMMISSION
		CERTIFICATE OF COMPLIANCE Project Name: JAIME-001 Report Page: (Page 7 of 7)
		Project Address: 2853 WEST BLVD Date Prepared: 10/4/2021
		DOCUMENTATION AUTHOR'S DECLARATION STATEMENT I certify that this Certificate of Compliance documentation is accurate and complete.
		Documentation Author Name: Christopher Webb Documentation Author Signature: Christopher Webb
		Company: National Engineering & Consulting, Inc. Signature Date: 2021–10-04
		Address: CEA/ HERS Certification Identification (if applicable): 8D43-009A-BE1F-B7D9-5A73-54D5-D438-779B-B1AF-5D9D-2A75-0955-6C99-1F9B-3987- 8B09
		City/State/Zip: Phone: [1rvine, CA 92618 (949) 716-9990
		RESPONSIBLE PERSON'S DECLARATION STATEMENT I certify the following under penalty of perjury, under the laws of the State of California: 1. The information provided on this Certificate of Compliance is true and correct.
		 I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer) The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements
		of Title 24, Part 1 and Part 6 of the California Code of Regulations. 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
		5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the building owner at occupancy. Responsible Designer Name: Christopher Webb
		Christopher Webb Company: National Engineering & Consulting, Inc. Date Signed: 2021-10-04
		Address: License: M-33489
		City/State/Zip: Phone: Irvine CA 92618 949-716-9990
		Registration Number: Registration Date/Time: Registration Provider: Energysoft
		CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2021-10-04 17:25:12 Schema Version: rev 20190401



NATIONAL
ENGINEERING & CONSULTING, INC
30 THOMAS, IRVINE, CA 92618-2703
PHONE: (949) 716-9990 | FAX: (949) 716-9997

STAMP:



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CLIENT:

JAIME PARTNERS OF CALIFORNIA, INC.

1050 S. FLOWER STREET LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD

LOS ANGELES, CA 90016

	C-JAIME-001	
#	DESCRIPTION	DATE
	1ST SUBMITTAL	10/04/21
	UTILITY COORDINATION	04/08/22
$\overline{\Lambda}$	PC RESUBMITTAL	05/18/22
2	PC RESUBMITTAL	10/28/22
3	HCD REVISION 1	12/16/22
4	PC RESUBMITTAL	02/02/23
<u></u>	HCD & PC RESUBMITTAL	06/06/23
6	HCD RESUBMITTAL	06/14/23
\triangle	PC RESUBMITTAL	07/10/23
8	CLIENT REVISIONS	07/11/23
$\sqrt{\Diamond}$	CLIENT REVISIONS	08/04/23
10	PC RESUBMITTAL (ELEC)	09/12/23
$\overline{\mathbb{M}}$	PC RESUBMITTAL (ELEC)	10/05/23
12	CLIENT REVISIONS	10/12/23
Plot	Date: 10/12/2023	9:20:40 AM
SHE	ET TITLE:	

TITLE 24 COMPLIANCE

SHEET NO: