

ROWLAND ELEMENTARY SCHOOL 1355 E. ROWLAND AVE. WEST COVINA, CA 91790 COVID 19- COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT **100% CONSTRUCTION DOCUMENTS** 05/05/2022 DLR GROUP PROJECT NUMBER: 75-22605-00 **DSA APPLICATION #** A# 03-122233

PROJECT DIRECTORY

OVINA VALLEY UNIFIED SCHOOL DISTRICT 519 E. BADILLO ST. COVINA. CA 91723 CONTACT: BRIAN JOHNSON PH: 626.974.7000 BJOHNSON@C-VUSD.ORG

DLR GROUF 700 S. FLOWER ST. LOS ANGELES, CA 90017 CONTACT: JESSE MILLER PH: 213.800.9400 JMILLER@DLRGROUP.COM

(Application No. 03-122233 File No. 19-25 HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE. IT HAS BEEN EXAMINED BY ME FOR: 1) DESIGN INTENT AND APPEARS TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24. CALIFORNIA CODE OF REGULATIONS, AND THE PROJECT

SPECIFICATIONS PREPARED BY ME, AND 2) COORDINATION WITH MY PLANS AND SPECIFICATIONS, AND IS ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT.

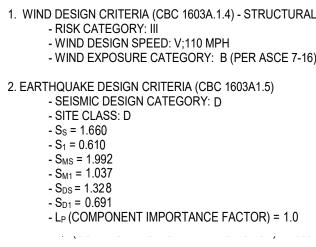
THE STATEMENT OF GENERAL CONFORMANCE "SHALL NOT BE CONSTRUED AS RELIEVING ME OF MY RIGHTS, DUTIES, AND RESPONSIBILITIES UNDER SECTIONS 17302 AND 81138 OF THE EDUCATION CODE AND SECTIONS 4-336, 4-341 AND 4-344" OF TITLE 24, PART 1. (TITLE 24, PART 1, SECTION 4-317(b))

I FIND THAT: THIS DRAWING OR PAGE 🗌 ARE IN GENERAL CONFORMAN

 \square THE PROJECT DESIGN, HAVE BEEN COORDINATED WIT igtarrow project plans and specific ARCHITECT OR ENGINEER DESIGNA GENERAL RESPONSIBLE CHARGE JESSE MILLER PRINT NAME C-32306

DESIGN ANALYSIS DATA

LICENSE NUMBER



3. DESIGN LOAD BEARING VALUES OF SOILS (CBC 1603A1.6) - ALLOWABLE SOIL BEARING PRESSURE: 1,500 PSF - ALLOWABLE LATERAL BEARING PRESSURE: 100 PSF MIN.

STRUCTURAL ENGINEER ORION STRUCTURAL ENGINEERING, INC 11305 RANCHO BERNARDO ROAD, SUITE 121 SAN DIEGO, CA 92127 CONTACT: RYAN OMER PH: 858.679.1974 RYAN@ORIONSE.COM

ELECTRICAL ENGINEER dlr group 700 FLOWER ST 22ND FLOOR LOS ANGELES, CA 90017 CONTACT: NORMAN PATENA PH: 213.800.9400 NPATENA@DLRGROUP.COM

LICENSED DESIGN PROFESSIONALS AND/OR CONSULTANTS

ALL DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEET

ORMANCE WITH	ARE IN GENERAL CONFORMANCE WITH THE PROJECT DESIGN INTENT, AND		
TED WITH THE SPECIFICATIONS.	HAVE BEEN COORDINATED WITH THE PROJECT PLANS AND SPECIFICATIONS.		
05/05/2022			
DATE	SIGNATURE	DATE	
DESIGNATED TO BE IN IARGE	ARCHITECT OR ENGINEER DELEGATED RESPONSIBILITY FOR THIS PORTION OF THE WORK		
	PRINT NAME		
10-31-23			
EXPIRATION DATE	LICENSE NUMBER	EXPIRATION DATE	

1. WIND DESIGN CRITERIA (CBC 1603A.1.4) - STRUCTURAL DESIGN PARAMETERS

MECHANICAL ENGINEER DLR GROUP 700 FLOWER ST 22ND FLOOR LOS ANGELES, CA 90017 CONTACT: TONG FANG (DONNA) ZHAO PH: 213.444.0610 DZHAO@DLRGROUP.COM

MOVAL OF EXISTING SPLIT SYSTEM UNITS INCLUDING GROUND MOUNTED CONDENSING UNITS AN ASSOCIATED CONDUITS, PIPING, SUPPORTS, ETC. REPLACEMENT WITH NEW ROOF MOUNTED HVAC UNIT FLASHING, CEILING TILES, WINDOW GLAZING, AND MISC SITE WORK AS REQUIRED

IN ADDITION REMOVAL AND REPLACEMENT OF EXISTING MPR UNIT WITH NEW HVAC SYSTEM.

REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL SCOPE AS REQUIRED

APPLICABLE CODES

2019 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR
2019 CAFILORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR
(2018 INTERNATIONAL BUILDING CODE, VOL. 1 & 2, AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR
(2017 NATIONAL ELECTRICAL CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR
(2018 IAPMO UNIFORM MECHANICAL CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 TITLE CCR
(2018 IAPMO UNIFORM PLUMBING CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR
2019 CALIFORNIA FIRE CODE (CEC), PART 9, TITLE 24 CCR
(2018 INTERNATIONAL FIRE CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR
(2018 INTERNATIONAL EXISTING BUILDING CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA GREEN BUILDING STANDARDS CODE (CAL GREEN), PART 11, TITLE 24 CCR
2019 CALIFORNIA REFERENCED STANDARDS CODE (CEBC), PART 12, TITLE 24 CCR
TITLE 19 CCR, PUBLIC SAFETY, STATE FIR MARSHAL REGULATIONS
2016 ASME A17.1/CSA B44-13 SAFETY CODE FOR ELEVATORS AND ESCALATORS
(PER 2019 CBC PART 2 CH 35)
NOTE: CAL/OSHA ELEVATOR UNIT ENFORCES CCR TITLE 8 AND USES THE 2004 ASME A17.1 BY
ADOPTION
2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
NFPA 13 - STANDARD FOR INSTALLATION OF SPRINKLERS SYSTEMS (CA AMENDED)
NFPA 14 - STANDARD FOR INSTALLATION OF SAND PIPE AND HOSE SYSTEMS (CA AMENDED)

NFPA 14	-	STANDARD FOR INSTALLATION OF SAND PIPE AND HOSE SYSTEMS (CA AMENDED)
NFPA 17	-	STANDARD FOR DRY CHEMICAL EXTINGUISHING SYSTEMS
NFPA 17A	-	STANDARD FOR WET CHEMICAL EXTINGUISHING SYSTEMS
NFPA 20	-	STANDARD FOR INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION
NFPA 22	-	STANDARD FOR WATER TANKS FOR PRIVATE FIRE PROTECTION
NFPA 24	-	STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES
NFPA 72	-	NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED)
NFPA 80	-	STANDARD FOR FIRE DOORS AND OTHER OPENINGS PROTECTIVE
NFPA 2001	-	STANDARD ON CLEAN AGENT FIRE EXTINGUISHING SYSTEMS (CA AMENDED)
UL 300	-	STANDARD FOR FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF
		COMMERCIAL COOKING EQUIPMENT
UL 464	-	AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES
UL 521	-	STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS
UL 1971	-	STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED
ICC 300	-	STANDARD FOR BLEACHERS, FOLDING AND TELESCOPIC SEATING, AND GRANDSTANDS

DSA GENERAL NOTES

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1.	CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CONSTRUCTION CHANGE DOCUMENT APPROV BY THE DIVISION OF THE STATE ARCHITECT (DSA), AS REQUIRED BY SECTION 4-338(b), PART 1, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR). NO WITH STANDING OTHER PROVISIONS OF THE PROJECT SPECIFICATIONS, COMPLY WITH ALL PROVISIONS OF THE CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE (PART 1, TITLE 24, CCR), SECTION 4-338, FOR ALL ADDENDUM AND CONSTRUCTION CHANGE DOCUMENTS.
2.	CONSTRUCTION CHANGE DOCUMENTS MUST BE SIGNED BY ALL THE FOLLOWING: ARCHITECT OR ENGINEER HAVING GENERAL RESPONSIBLE CHARGE THE PROJECT, AND STRUCTURAL ENGINEER OF RECORD OR DELEGATED PROFESSIONAL ENGINEER (WHEN APPLICABLE).
3.	SUBSTITUTIONS AFFECTING DSA REGULATED ITEMS (ACCESSIBILITY, STRUCTURAL ENGINEER, AND FIRE/LIFE/SAFETY) SHALL BE CONSIDERED AS A CONSTRUCTION CHANGE DOCUMENT, AND SHALL BE APPROVED BY DSA PRIOR TO FABRICATION AND INSTALLATION IN ACCORDANCE WITH DSA IR A-6 SECTION 4-338(b), PART 1, TITLE 24, CCR. SUBSTITUTIONS SHALL BE FOR ANY MATERIALS, SYSTEMS OR PRODUCT THAT WOULD OTHERWISE BE REGUL BY DSA.
4.	A DSA-CERTIFIED PROJECT INSPECTOR WITH CLASS 3 CERTIFICATION, EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE ARCHITECT AND THE DIVISION OF THE STATE ARCHITECT, SHALL PROVIDE CONTINIOUS INSPECTION OF THE WORK. THE DUTIES OF THE PROJECT INSPECTOR ARE DEF IN SECTION 4-342, CALIFORNIA BUILDING ADMINISTRATIVE CODE (PART 1, TITLE 24, CCR).
	A DSA-ACCEPTED TESTING LAB, EMPLOYED BY THE DISTRICT (OWNER), SHALL CONDUCT ALL REQUIRED TESTS AND INSPECTIONS OF THE WORK. THE DSA-CERTIFIED PROJECT INSPECTOR AND DSA-ACCEPTED TESTING LAB SHALL BE EMPLOYED AND PAID BYTHE OWNER (DISTRICT) AND APPROVE ALL OF THE FOLLOWING: ARCHITEC OR ENGINEER HAVING GENERAL RESPONSIBLE CHARGE OF THE PROJECT; STRUCTURAL ENGINEER OF RECORD; A
	DIVISION OF THE STATE ARCHITECT (DSA). THE INSPECTOR OF RECORD FOR THIS PROJECT SHALL BE CLASS 3 OR BETTER ALL WORK SHALL CONFORM TO 2019 TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR). A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIC FOR THE PROJECT.
	THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CCR. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERING WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMIT TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK. (SECTION 4-317(C), PART 1, TITLE 24, CCR
10.	FABRICATION AND INSTALLATION OF DEFFERED SUBMITTAL ITEMS SHALL NOT BE STARTED UNTIL CONTRACTOR'S DRAWINGS, SPECIFICATIONS, AND

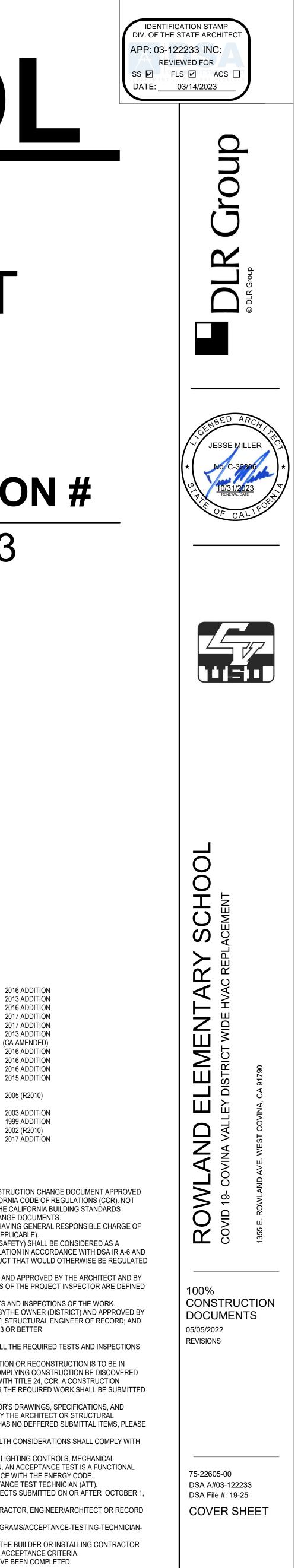
ENGINEERING CALCULATIONS FOR THE ACTURAL SYSTEMS TO BE INSTALLED HAVE ACCEPTED AND SIGNED BY THE ARCHITECT OR STRUCTURAL ENGINEER AND APPROVED BY DSA. LIST DEFFERED SUBMITTAL ITEMS FOR THIS PROJECT. (IF THIS PROJECT HAS NO DEFFERED SUBMITTAL ITEMS, PLEASE INDICATE AS SUCH. 11. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.

12. THE CALIFORNIA ENERGY CODE SECTION 10-103 REQUIRES ACCEPTANCE TESTING ON ALL NEWLY INSTALLED LIGHTING CONTROLS, MECHANICAL SYSTEMS, ENVELOPES, AND PROCESS EQUIPMENT AFTER INSTALLATION AND BEFORE PROJECT COMPLETION. AN ACCEPTANCE TEST IS A FUNCTIONAL PERFORMANCE TEST TO HELP ENSURE THAT NEWLY INSTALLED EQUIPMENT IS OPERATING AND IN COMPLIANCE WITH THE ENERGY CODE 13. LIGHTING CONTROLS ACCEPTANCE TESTS MUST BE PERFORMED BY CERTIFIED LIGHTING CONTROLS ACCEPTANCE TEST TECHNICIAN (ATT).

14. MECHANICAL SYSTEM ACCEPTANCE TEST MUST BE PERFORMED BY A CERTIFIED MECHANICAL ATT FOR PROJECTS SUBMITTED ON OR AFTER OCTOBER 1. 15. ENVELOPE AND PROCESS EQUIPMENT ACCEPTANCE TESTS SHALL BE PERFORMED BY THE INSTALLING CONTRACTOR, ENGINEER/ARCHITECT OR RECORD

OR THE OWNER'S AGENT. 16. A LISTING OF CERTIFIED ATT CAN BE FOUND AT HTTPS://WWW.ENERGY.CA.GOV/PROGRAMS-AND-TOPICS/PROGRAMS/ACCEPTANCE-TESTING-TECHNICIAN-CERTIFICATION-PROVIDER-PROGRAM/ACCEPTANCE.COM 17. THE ACCEPTANCE TESTING PROCEDURES MUST BE REPEATED, AND DEFICIENCIES MUST BE CORRECTED BY THE BUILDER OR INSTALLING CONTRACTOR

UNTIL THE CONSTRUCTION/INSTALLATION OF THE SPECIFICED SYSTEMS CONFORM AND PASS THE REQUIRED ACCEPTANCE CRITERIA. 18. PROJECT INSPECTORS WILL COLLECT THE FORMS TO CONFIRM THAT THE REQUIRED ACCEPTANCE TESTS HAVE BEEN COMPLETED.



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GENERAL ABBREVIATIONS

GENE	RAL ABBREVIATION
#	NUMBER
&	AND
@	AT
ADA	AMERICANS WITH DISABILITY ACT
ADDN	ADDITION OR ADDITIONAL
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
ALT	ALTERNATE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
BLDG	BUILDING
BSMT	BASEMENT
CL	CENTER LINE
CLG	CEILING
CM	CENTIMETER
CONC	CONCRETE
CONN(S)	CONNECTION(S)
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACT(OR)
CTR	CENTER
D	DEPTH
DEG	DEGREE
DEMO	DEMOLISH OR DEMOLITION
DIA	DIAMETER
DIM	DIMENSION
DIV	SPECIFICATION DIVISION
DN	DOWN
DTL	DETAIL
DWG(S)	DRAWING(S)
e	EAST
EA	EACH
EC	ELECTRICAL CONTRACTOR
EL	ELEVATION
ELEC	ELECTRICAL
ENG	ENGINEER
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
EXST	EXISTING
EXT	EXTERIOR
FIN	FINISHED
FL	FLOOR
FT	FEET
FUT	FUTURE
GC	GENERAL CONTRACTOR
GOVT	GOVERNMENT
H	HEIGHT
Horiz	HORIZONTAL
Ht	HEIGHT
i.e.	THAT IS
IBC	INTERNATIONAL BUILDING CODE
IN	INCH
INT	INTERIOR
LB(S) M MAX MC MECH MEZZ MFR MIN MISC MM	POUND(S) THOUSAND METER MAXIMUM MECHANICAL CONTRACTOR MECHANICAL MEZZANINE MANUFACTURER MINIMUM MISCELLANEOUS MILLIMETER
N	NORTH
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OPP	OPPOSITE
OVHD	OVERHEAD
PAR	PARALLEL
PENT	PENTHOUSE
PLYWD	PLYWOOD
QTY	QUANTITY
REQ(D)	REQUIRE(D)
REV	REVISION(S)
RM	ROOM
RND	ROUND
S	SOUTH
SCHED	SCHEDULE
SECT	SECTION
SHT	SHEET
SIM	SIMILAR
SPEC	SPECIFICATION(S)
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SYM	SYMETRICAL
TEMP	TEMPORARY
TYP	TYPICAL
UNEX	UNEXCAVATED
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
W	WEST
W/	WITH
W/O	WITHOUT

ARCHITECTURAL ABBREVIATIONS

A/E

AB

ABS

ACC

ACR

ACT

ADJ

ADJT

ADMIN

ALUM

AP

APC

ASPH

AUTO

AVG

AWP

B.O.

BCS

BD

BLK

BLKG

BLKHD

BM(S)

BRDG

BOT

BRG

BRKT

BTWN

CAB

CBD

CER

CFCI

CFMF

CJA CLO

CLR

CMU COL

COM

COMB

COMM

CONF

COMPR

CONFIG

CORR

CS CSTJ

CSWK

СТ

CTG

CTIG

CV

CY

CYL

DB

DBL

DEPR

DEPT

DET

DG

DIAG

DR

DSN

DW

DWL(S)

DWR

EEW

EFF

EJ ELAS

ELEV

EMER

ENCL

ENTR

ERF

EUI

EW

EWC

EXP

EXP

F.O.

FAB

FDN

FEC

FHC

FIG

FIX

FLASH

FLEX

FLG

FLM

FO

FOC

FOF

FOM

FOS

FRT

FSS FTG

FVC

FWC

GA

GAL

GB

GD

GFA

GEN

GALV

FOW

FLUOR

EEWS

DPFG

AEC

В

ARCHITECT/ENGINEER AIR BARRIER	
/	
ASBESTOS ADA ACCESSIBLE	
ACRYLIC ACOUSTIC CEILING TILE	
ACCESS DOOR ADJUSTABLE	
ADJACENT ADMINISTRATION	
AUTOMATED EXTERNAL ALUMINUM	DEFIBRILLATORS
ALUMINUM ACCESS PANEL	
ACOUSTIC PANEL CEILIÌ ASPHALT	NG
AUTOMATIC	
ACOUSTIC WALL PANEL	
BOTTOM OF BABY CHANGING STATIO	DN
BOARD BLOCK	
BLOCKING BULKHEAD	
BEAM(S) BOTTOM	
BRIDGING BEARING	
BRACKET BATHTUB	
BETWEEN	
CABINET CHALKBOARD	
CERAMIC CUBIC FEET	
COLD-FORMED METAL F	ED CONTRACTOR INSTALLED
CLEAR FLOAT GLASS CAST IRON	6 6
CLEAR INSULATING GLA CAST IN PLACE	33
CONTROL JOINT CONTROL JOINT ABOVE	
CLOSET CLEAR CONCRETE MASONRY U	NIT
CONCRETE MASONRY U COLUMN COMMON	1 1 1
COMMON COMBINATION COMMUNICATIONS	
COMMUNICATIONS COMPRESSIBLE CONFERENCE	
CONFERENCE CONFIGURATION CORRIDOR	
CORRIDOR COVER PLATE CARPET	
CARPET CHAIR RAIL COUNTERSINK	
CONSTRUCTION JOINT CASEWORK	
CERAMIC TILE CLEAR TEMPERED FLOA	AT GLASS
CLEAR TEMPERED INSU COPPER	-
COMBINATION UNIT	
CUBIC YARD CYLINDER	
DECIBEL	
DOUBLE DUST COLLECTOR	
DEPRESS(ION)(ED) DEPARTMENT	
DETENTION DRINKING FOUNTAIN	
DOOR GRILLE DIAGONAL	
DAMPROOFING DOOR	
DOWNSPOUT NOZZLE DISHWASHER	
DOWEL(S) DRAWER	
EXPANSION BOLT	
EACH END EMERGENCY EYE WASH	
EMERGENCY EYE WASH	I SHOWER
EFFICIENCY	
EXPANSION JOINT ELASTOMERIC ELEVATOR EMERGENCY	
EXPANSION JOINT ELASTOMERIC ELEVATOR EMERGENCY ENCLOSURE ENTRANCE	
EXPANSION JOINT ELASTOMERIC ELEVATOR EMERGENCY ENCLOSURE	
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EXPANSION JOINT ELASTOMERIC ELEVATOR EMERGENCY ENCLOSURE ENTRANCE EPOXY RESIN FLOORING ENERGY USE INTENSITY EACH WAY ELECTRIC WATER COOL EXPANSION EXPOSED FABRIC FACE OF FABRICATE(D) FACE BRICK FLOOR DRAIN FOUNDATION FIRE EXTINGUISHER FIRE EXTINGUISHER FIRE EXTINGUISHER FIRE HYDRANT FIRE HYDRANT FIRE HOSE CABINET FIGURE FLASHING FLEXIBLE FLOORING FULL LENGTH MIRROR FLUORESCENT FINISH OPENING FACE OF CONCRETE FACE OF FINISH FACE OF STUD FACE OF STUD FACE OF STUD FACE OF WALL FIREPROOFING FIRE RESISTANCE TREA FLOOR SINK FOLDING SHOWER SEAT	FD PANEL TED
EXPANSION JOINT ELASTOMERIC ELEVATOR EMERGENCY ENCLOSURE ENTRANCE EPOXY RESIN FLOORING ENERGY USE INTENSITY EACH WAY ELECTRIC WATER COOL EXPANSION EXPOSED FABRIC FACE OF FABRICATE(D) FACE BRICK FLOOR DRAIN FOUNDATION FIRE EXTINGUISHER FIRE EXTINGUISHER FIRE EXTINGUISHER FIRE HYDRANT FIRE HYDRANT FIRE HOSE CABINET FIGURE FLASHING FLEXIBLE FLOORING FULL LENGTH MIRROR FLUORESCENT FINISH OPENING FACE OF FINISH FACE OF FINISH FACE OF STUD FACE OF STUD FACE OF STUD FACE OF WALL FIREPROOFING FIRE RESISTANT FIBERGLASS REINFORC FIRE RESISTANCE TREA FLOOR SINK FOLDING SHOWER SEAT FOOTING FIRE VALVE CABINET	FD PANEL TED

GAUGE GALLON GALVANIZED GRAB BAR GARBAGE DISPOSAL GENERAL GROSS FLOOR AREA

GWF GYP HDF HDR HDWD HDWR HSS HVAC INSU LDG LKR LOC LONG LSC LTG LV LVT MAG MAINT MAN MAS MAT MEMB MH MR/S MTD MTG MUL NC NFPA NOM O to O OA OFCI OFF OFOI OH OPG(S) OSHA OTB OVFL PAN B PB PC PCD PCT PD PERF PERP PG PIC PIG PLAM PLBG PR PREFAB PROJ PS PT PT PTD PTD/R PTN PVC PWL QT QTR RND R RAD RB RC RCP RD RFF REFL REM RESIL RF RF RFM RH RI&C S SAT SAW SB SC SC

GLUE LAMINATED	SD
GLASS	SECY
GUARANTEED MAXIMUM PRICE	SF
GUARD RAIL	SG
GRADE	SGL
GALVANIZED RIGID STEEL	SH
GYPSUM WALL BOARD GYPSUM	SHM SLNT
GTPSUM	SLINT
HOLLOW CORE	SND
HAND DRYER	SNV
HIGH DENSITY FIBERBOARD	SPL
HEADER	SQ
HARDWOOD	SS
HARDWARE	SSA
HOLLOW METAL HOUR	SSS SST
HANDRAIL	ST
HARDWARE SET	ST
HOLLOW STRUCTURAL SHAPE	STAG'D
HEATING VENTILATING AND AIR CONDITIONING	STC
	STGR
IN ACCORDANCE WITH	SUBFL
	SURF
INSIDE FACE INSULATED INFILL PANEL GLASS	SUSP SVF
INSOLATED INFILL PANEL GLASS	SVF
IN JOIST SPACE	т
INCLUDE(ING)	T&G
INSULATION	T.O.
	TAN
JANITOR	TB
JOIST BEARING ELEVATION	TBD
	TCP
JOINT FILLER BOARD JOIST	TERR TFG
JOINT	TG
	TH
KEYED CONSTRUCTION JOINT	THK
KNOCKDOWN	TI
KITCHEN HOOD	TIG
KITCHEN	TMR
	TOIL
ANGLE LABORATORY	TOP TRANS
LADINATED	TT
LAVATORY	TTD
LUMBER	TTG
LOADING	TTIG
LINEAR FOOT	TW
LENGTH (LONG)	
LAMINATED GLASS	UL
LINEAR LINOLEUM	UR US
LOCKER	UTIL
LOCATION	0112
LONGITUDINAL	VB
LIFE SAFETY CODE	VB
LIGHTING	VCB
	VF
	1/00
LUXURY VINYL TILE	VOC
LUXURY VINYL TILE	VOL
LUXURY VINYL TILE MAGNETIC	VOL VP
LUXURY VINYL TILE	VOL
LUXURY VINYL TILE MAGNETIC MAINTENANCE	VOL VP VT
LUXURY VINYL TILE MAGNETIC MAINTENANCE MANUAL MASONRY MATERIAL	VOL VP VT VWC
LUXURY VINYL TILE MAGNETIC MAINTENANCE MANUAL MASONRY MATERIAL MOP BASIN	VOL VP VT VWC W
LUXURY VINYL TILE MAGNETIC MAINTENANCE MANUAL MASONRY MATERIAL MOP BASIN MARKER BOARD	VOL VP VT VWC W WB WC
LUXURY VINYL TILE MAGNETIC MAINTENANCE MANUAL MASONRY MATERIAL MOP BASIN MARKER BOARD MOP/BROOM HOLDER	VOL VP VT VWC W WB WC WC
LUXURY VINYL TILE MAGNETIC MAINTENANCE MANUAL MASONRY MATERIAL MOP BASIN MARKER BOARD MOP/BROOM HOLDER MEDICINE CABINET	VOL VP VT WWC WB WC WC WCL
LUXURY VINYL TILE MAGNETIC MAINTENANCE MANUAL MASONRY MATERIAL MOP BASIN MARKER BOARD MOP/BROOM HOLDER	VOL VP VT VWC W WB WC WC
LUXURY VINYL TILE MAGNETIC MAINTENANCE MANUAL MASONRY MATERIAL MOP BASIN MARKER BOARD MOP/BROOM HOLDER MEDICINE CABINET MEMBRANE	VOL VP VT WWC WB WC WC WCL WD
LUXURY VINYL TILE MAGNETIC MAINTENANCE MANUAL MASONRY MATERIAL MOP BASIN MARKER BOARD MOP/BROOM HOLDER MEDICINE CABINET MEMBRANE MANHOLE	VOL VP VT WWC WB WC WC WCL WD WDF
LUXURY VINYL TILE MAGNETIC MAINTENANCE MANUAL MASONRY MATERIAL MOP BASIN MARKER BOARD MOP/BROOM HOLDER MEDICINE CABINET MEMBRANE MANHOLE MIRROR WITH SHELF	VOL VP VT WWC WB WC WC WC WCL WD WDF WDW
LUXURY VINYL TILE MAGNETIC MAINTENANCE MANUAL MASONRY MATERIAL MOP BASIN MARKER BOARD MOP/BROOM HOLDER MEDICINE CABINET MEMBRANE MANHOLE MIRROR WITH SHELF MOUNTED	VOL VP VT WWC WB WC WC WC WCL WD WDF WDF WDW WG WI WOM
LUXURY VINYL TILE MAGNETIC MAINTENANCE MANUAL MASONRY MATERIAL MOP BASIN MARKER BOARD MOP/BROOM HOLDER MEDICINE CABINET MEMBRANE MANHOLE MIRROR WITH SHELF MOUNTED MOUNTING MULLION	VOL VP VT WWC WB WC WC WC WC WD WDF WDF WDF WDW WG WI WOM WR
LUXURY VINYL TILE MAGNETIC MAINTENANCE MANUAL MASONRY MATERIAL MOP BASIN MARKER BOARD MOP/BROOM HOLDER MEDICINE CABINET MEMBRANE MANHOLE MIRROR WITH SHELF MOUNTED MOUNTING MULLION	VOL VP VT VWC WB WC WC WC WC WD WDF WDW WG WI WOM WR WRB
LUXURY VINYL TILE MAGNETIC MAINTENANCE MANUAL MASONRY MATERIAL MOP BASIN MARKER BOARD MOP/BROOM HOLDER MEDICINE CABINET MEMBRANE MANHOLE MIRROR WITH SHELF MOUNTED MOUNTING MULLION	VOL VP VT VWC WB WC WC WC WC WD WDF WDW WG WI WOM WR WRB WW
LUXURY VINYL TILE MAGNETIC MAINTENANCE MANUAL MASONRY MATERIAL MOP BASIN MARKER BOARD MOP/BROOM HOLDER MEDICINE CABINET MEMBRANE MANHOLE MIRROR WITH SHELF MOUNTED MOUNTING MULLION	VOL VP VT VWC WB WC WC WC WC WD WDF WDW WG WI WOM WR WRB
LUXURY VINYL TILE MAGNETIC MAINTENANCE MANUAL MASONRY MATERIAL MOP BASIN MARKER BOARD MOP/BROOM HOLDER MEDICINE CABINET MEMBRANE MANHOLE MIRROR WITH SHELF MOUNTED MOUNTING MULLION	VOL VP VT VWC WB WC WC WC WC WD WDF WDW WG WI WOM WR WRB WW

SOAP DISPENSER SECRETARY SQUARE FEET SPANDREL GLASS SINGLE SHOWER SECURITY HOLLOW METAL SEALANT SHEET METAL SANITARY NAPKIN DISPOSAL SANITARY NAPKIN VENDOR SOUND PRESSURE LEVEL SQUARE SOLID SURFACE STORM SHELTER AREA STAINLESS STEEL SHELF STAINLESS STEEL STONE STAIR STAGGERED SOUND TRANSMISSION CLASS STRINGER SUBFLOOR SURFACE SUSPENDED SHEET VINYL FLOORING TREAD TONGUE AND GROOVE TOP OF TANGENT TOWEL BAR TACK BOARD TOILET COMPARTMENT PARTITION TERRAZZO TINTED FLOAT GLASS TEMPERED GLASS THRESHOLD THICK(NESS) TENANT IMPROVEMENT TINTED INSULATING GLASS TILT MIRROR UNIT TOILET TOP OF PAVING TRANSVERSE TERRAZZO TILE TOILET TISSUE DISPENSER TINTED TEMPERED FLOAT GLASS TINTED TEMPERED INSULATING GLASS TACK WALL UNDERWRITERS LABORATORIES URINAL UTILITY SHELF UTILITY VAPOR BARRIER VINYL BASE VENTED COVE BASE VINYL FLOOR VOLITILE ORGANIC COMPOUND VOLUME VENEER PLASTER VINYL TILE VINYL WALL COVERING WIDE WALL BASE WATER CLOSET WALL COVERING WATER CLOSET/LAVATORY COMBINATION WOOD WOOD FLOORING WINDOW POLISHED WIRE GLASS WROUGHT IRON WALK OFF MAT WASTE RECEPTACLE WEATHER RESISTANT BARRIER WARM WHITE WELDED WIRE FABRIC

YARD

С

OWNER FURNISHED CONTRACTOR INSTALLED

OFFICE OWNER FURNISHED OWNER INSTALLED

OPPOSITE HAND OPENING(S)

OPERATIONAL SAFETY AND HEALTH ADMINISTRATION OPEN TO BELOW

OVERFLOW PAINT PANIC BOLT PARTICLE BOARD PRECAST CONCRETE PAPER CUP DISPENSER PORCELAIN CERAMIC TILE PANIC DEVICE PERFORATED PERPENDICULAR PATTERN GLASS PORTABLE INSTRUMENT CONNECTION PATTERN INSULATING GLASS PLATE PROPERTY LINE PLASTIC LAMINATE PLASTIC LAMINATE PLUMBING PAIR PREFABRICATED PROJECT(OR) (ION) PROJECTION SCREEN POINT POINT OF TANGENCY

PAPER TOWEL DISPENSER COMBINATION TOWEL DISPENSER/RECEPTACLE PARTITION POLYVINYL CHLORIDE SOUND POWER LEVEL

QUARRY TILE QUARTER ROUND

RISER RADIUS RUBBER BASE REMOTE CONTROL REFLECTED CEILING PLAN ROOF DRAIN REFERENCE REFLECTED REMOVABLE RESILIENT RESILIENT FLOORING RUBBER FLOOR RECESSED FLOOR MAT ROBE HOOK ROUGH IN AND CONNECT

SINK SPRAYED ACOUSTIC TREATMENT SOUND ABSORBING WALL UNITS SPLASH BLOCK SOLID CORE SHOWER CURTAIN SEAT COVER DISPENSER SHOWER CURTAIN HOOK SHOWER CURTAIN ROD STRUCTURAL CLAY TILE

SCD

SCH

SCR

SCT

GENERAL SYMBOLS

?	DETAIL NUMBER CROSS REFERENCE		EARTH
2777	- SHEET NUMBER		GRAVEL
XX (A4.XX)	BUILDING ELEVATION		SAND
XX		à A	CONCRETE
XX A12.X XX	INTERIOR ELEVATION		PRECAST CONCRETE
			STEEL
•	- SIMILAR OR TYPICAL		STONE
? SIM	REFERENCE		CONCRETE MASONRY UNIT
777	WALL SECTION		BRICK VENEER
?	DETAIL REFERENCE		STEEL (LARGE SCALE)
2777			GYM FLOOR
			WOOD (CONTINUOUS BLOCKING)
111 111	BUILDING SECTION		WOOD (NON-CONTINUOUS BLOCKING)
X	SHEET NOTE		WOOD (TRIM/FINISH)
			GLASS
?	REFERENCE KEYNOTE		SHINGLES
(?)	COLUMN GRID LINE		PLYWOOD (LARGE SCALE)
			GYPSUM WALL BOARD
???	ROOM NUMBER/NAME		BLANKET INSULATION
xxx-xx	REVISION NUMBER		RIGID INSULATION
			SPRAY FOAM INSULATION
LEVEL XX XXX'-XX"	LEVEL ELEVATION		MINERAL WOOL INSULATION
TYP FF EL=	FINISH FLOOR		PROTECTION BOARD
100'-0"	ELEVATION		CARPET (LARGE SCALE)
100'-0"	SPOT ELEVATION		ACOUSTIC TILE (LARGE SCALE)
• •			TILE (LARGE SCALE)

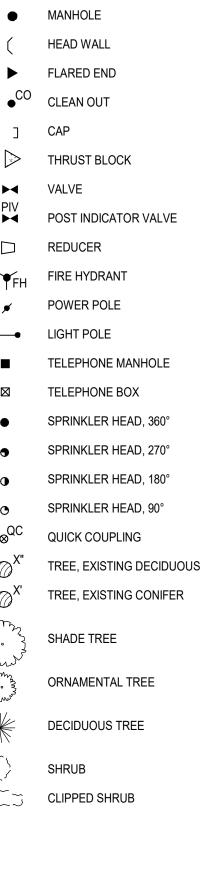
SITE SYMBOLS

	PROPERTY LINE		AREA INLET
	LOT LINE	0	CURB INLET
	EASMENT LINE	•	MANHOLE
	BUILDING LINE, EXISTING	(HEAD WALL
	BUILDING LINE, NEW W/DOOR	►	FLARED END
100		• ^{CO}	CLEAN OUT
100	PRIMARY CONTOUR, EXISTING	J	CAP
99	PRIMARY CONTOUR, NEW		THRUST BLOCK
99	SECONDARY CONTOUR, EXISTING	M	VALVE
	SECONDARY CONTOUR, NEW	PIV ►◀	POST INDICATOR VALVE
1% SLOPE DOWN	SLOPE, PAVEMENT		REDUCER
\sim	DRAINAGE DITCH OR SWALE	Y FH	FIRE HYDRANT
	STREET CENTERLINE	, i i i	POWER POLE
	CURB, THICKENED EDGE	, D•	LIGHT POLE
	CURB, EXISTING	_	TELEPHONE MANHOLE
	CURB, NEW		TELEPHONE BOX
	PAVING CONTRACTION JOINT	-	SPRINKLER HEAD, 360°
KCJ	PAVING KEYED CONSTRUCTION JOINT	•	SPRINKLER HEAD, 270°
— <u> </u>	PAVING TIED CONSTRUCTION JOINT	•	SPRINKLER HEAD, 180°
EJ	PAVING EXPANSION JOINT	0	
- XX XX XX XX XX 	FENCE, SECURITY	⊙ ⊗ ^{QC}	SPRINKLER HEAD, 90°
- x x x x	FENCE, BARBED WIRE		
-000	FENCE, CHAIN LINK	Ø ^X "	TREE, EXISTING DECIDUOL
	FENCE, WOOD	\emptyset^{X}	TREE, EXISTING CONIFER
	SEED LIMIT	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	SHADE TREE
	SOD LIMIT	Survey S	
	FOUNDATION DRAIN, NON-PERFORATED	EELEN WWW	ORNAMENTAL TREE
 FD 	FOUNDATION DRAIN, PERFORATED	\mathbf{X}	DECIDUOUS TREE
— — — PSD — — —	SUBDRAIN, PERFORATED	///\ /~\	
s	SANITARY SEWER	_/ ~~~~	SHRUB
FM	FORCE MAIN	LJ	CLIPPED SHRUB
W	WATER		
F	FIRE		
G	GAS		
	HIGH PRESSURE STEAM		
MPS	MEDIUM PRESSURE STEAM		
LPS	LOW PRESSURE STEAM		
UGE/UGT	UNDERGROUND ELEC/TELEPHONE		
<u> </u>	OVERHEAD POWER		
— НОТ — —	LAWN SPRINKLER HOT LINE		
LAT	LAWN SPRINKLER LATERAL		

ARCHITECTURAL SYMBOLS

XX XX/ A11.X XX XX/ A11.X XX	CASEWORK ELEVATION
Α110 Π	DOOR NUMBER
	INTERIOR WINDOW NUMBER
?	Exterior window / Curtain Wall Number
(XX. X. XX)	WALL TYPE
APC-1 CEILING TYPE 9' - 0" CEILING HEIGHT	CEILING TYPE

RESISTANCE-RATED RESISTANCE-RATED UNDERSIDE OF FLOO	(
G. ALL PENETRATIONS PENETRATION FIRE S ACHIEVE THE RESPE SMOKE STOPPAGE.	S' E(
H. COORDINATE WITH N CONTRACTORS THE SHOWN ON PLANS.	N S
I. CONSTRUCTION DOC DRAWING FOR QUAN SPECIFICATIONS FO	√ R
J. WORK: ALL ASPECT SPECIFICALLY MENT COMPLETE WORKING INDICATED IN THE CO	Ί(G
K. GENERAL SHEET NO DRAWING OR SERIES L. NO ASBESTOS OR PO)T S
ON THIS PROJECT. M. DO NOT SCALE DRAY NOTIFY ARCHITECT I	N
N. HORIZONTAL AND VE DIMENSIONS. CLEAF GC TO VERIFY ALL C OF DISCREPANCY.	EF R/



GENERAL NOTES

FFF1



A. GENERAL NOTES APPLY TO ALL SHEETS. B. DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF CONCRETE WALLS, FACE OF CMU WALLS, FACE OF FRAMES, OR CENTERLINE OF COLUMNS, UNLESS NOTED OTHERWISE. C. INCLUDE ALL OWNER-FURNISHED AND INSTALLED ITEMS AND OWNER-FURNISHED AND CONTRACTOR-INSTALLED ITEMS IN THE CONSTRUCTION SCHEDULE, AND SHALL COORDINATE WITH THE OWNER TO ACCOMMODATE THESE ITEMS. D. COORDINATE ALL MECHANICAL CHASE SIZES WITH THE

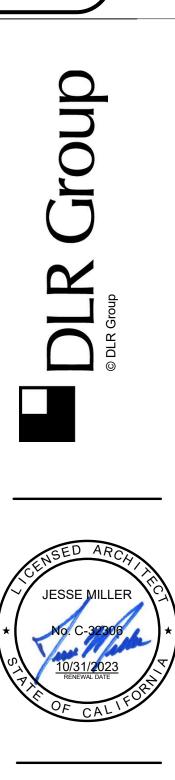
MECHANICAL CONTRACTOR. ARCHITECTURAL FINISH FLOOR ELEVATION 100'-0" EQUALS ACTUAL SITE REFERENCE ELEVATION OF FINISH FLOOR ????? F. SEE FLOOR PLANS FOR LOCATION OF (E) WALLS OF FIRE-

STANCE-RATED CONSTRUCTION. ALL WALLS OF FIRE-STANCE-RATED CONSTRUCTION SHALL EXTEND TO ERSIDE OF FLOOR OR ROOF DECK ABOVE. PENETRATIONS THROUGH WALLS SHALL BE SEALED WITH ETRATION FIRE STOPPING MATERIAL AS REQUIRED TO IEVE THE RESPECTIVE FIRE-RESISTANCE RATING AND DKE STOPPAGE. SEE SPECIFICATION SECTION 078413. RDINATE WITH MECHANICAL AND ELECTRICAL TRACTORS THE SIZE AND LOCATION OF EQUIPMENT PADS

ISTRUCTION DOCUMENTS ARE COMPLEMENTARY. SEE WING FOR QUANTITIES AND LOCATION OF WORK. SEE CIFICATIONS FOR QUALITIES AND CONDITIONS OF WORK. : ALL ASPECTS OF THE WORK AND ITEMS NOT CIFICALLY MENTIONED, BUT NECESSARY TO MAKE A IPLETE WORKING INSTALLATION, SHALL BE INCLUDED AND CATED IN THE CONTRACTOR'S BID. IERAL SHEET NOTES ONLY APPLY TO PARTICULAR

WING OR SERIES OF DRAWINGS. ASBESTOS OR PCB CONTAINING MATERIALS SHALL BE USED NOT SCALE DRAWINGS. DIMENSIONS NOTED PREVAIL. FY ARCHITECT IN CASE OF DISCREPANCY. IZONTAL AND VERTICAL DIMENSIONS ARE MINIMUM

ENSIONS. CLEARANCES ARE GIVEN TO FINISH SURFACES. O VERIFY ALL CLEARANCES. NOTIFY ARCHITECT IN CASE



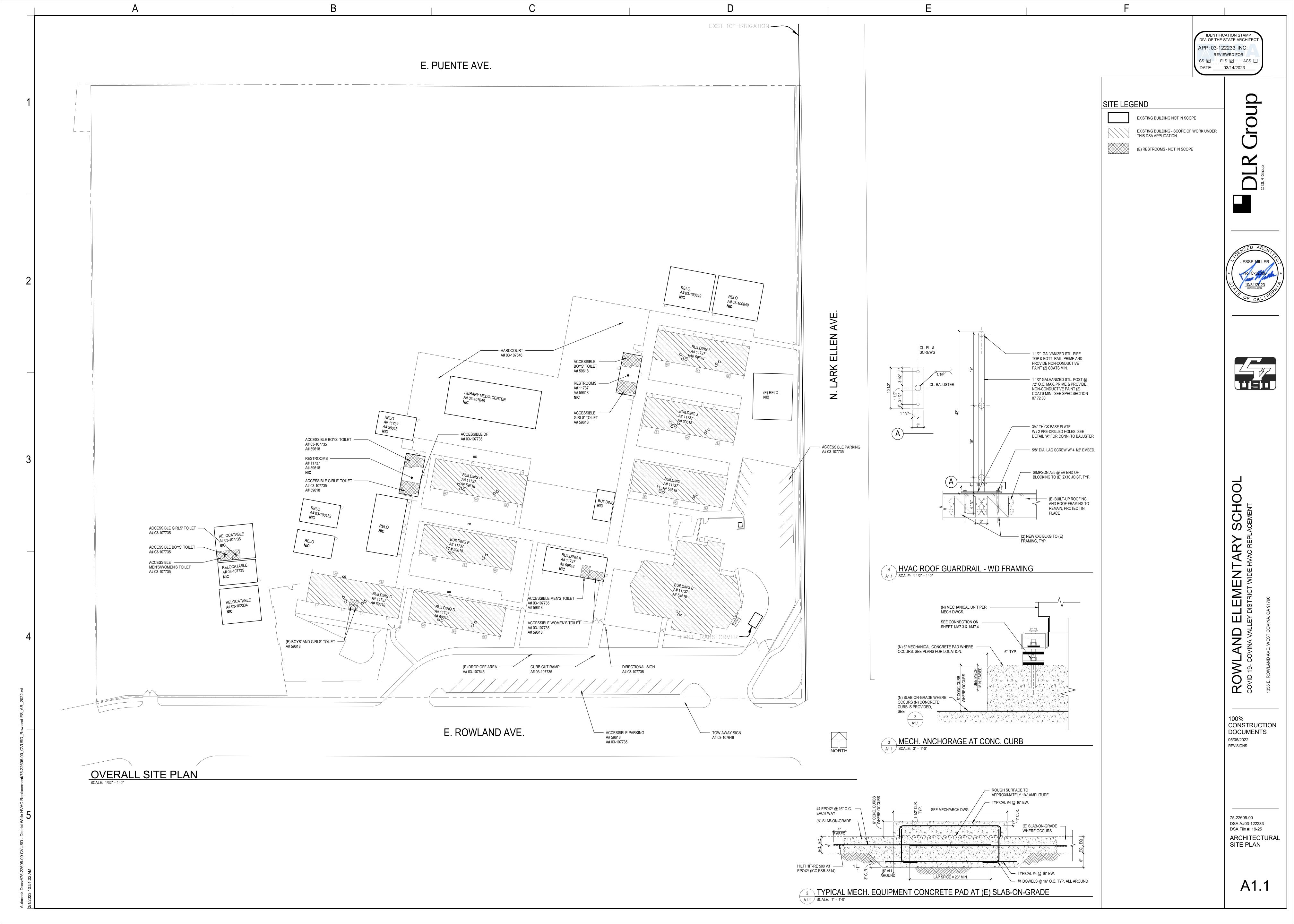


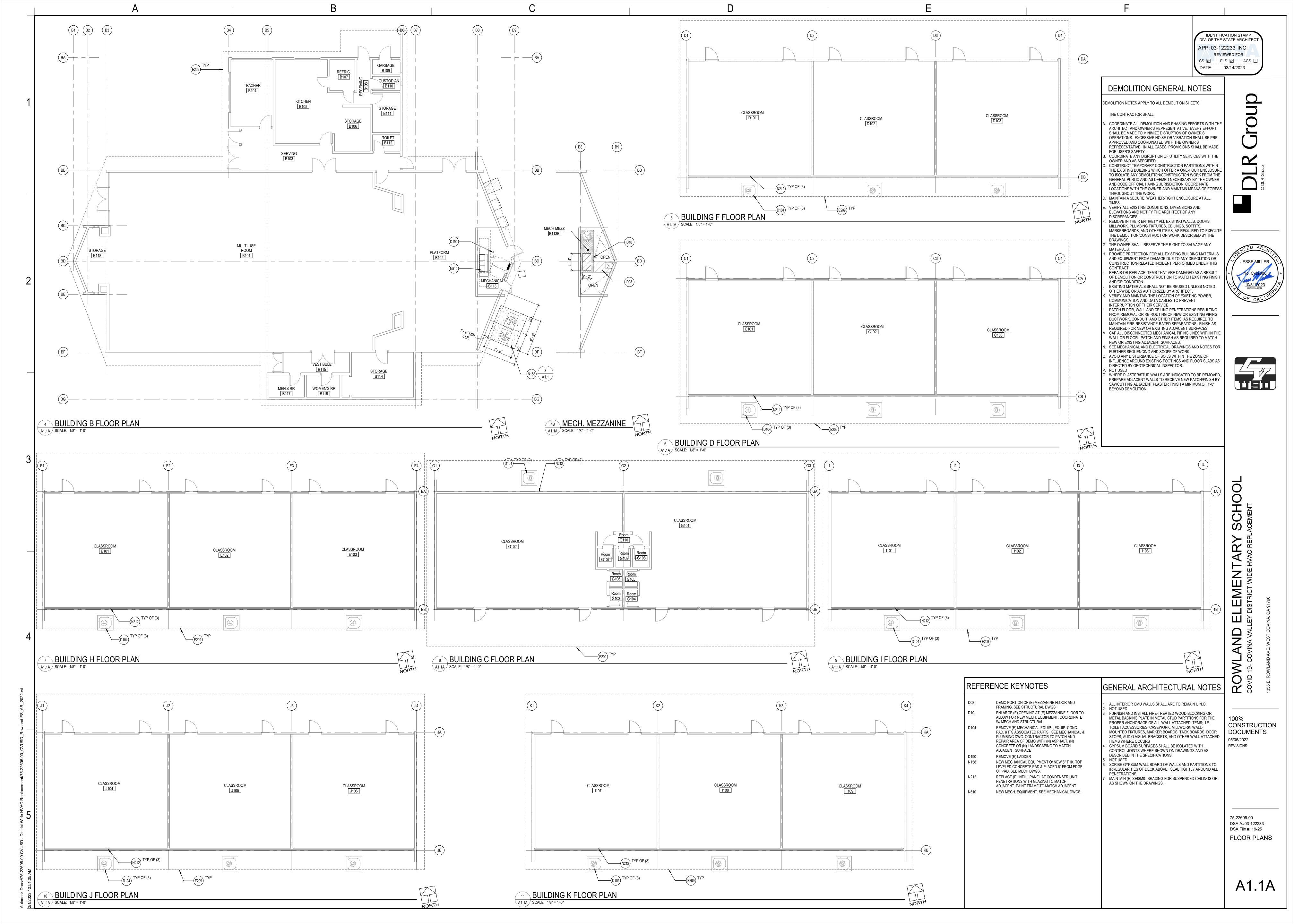


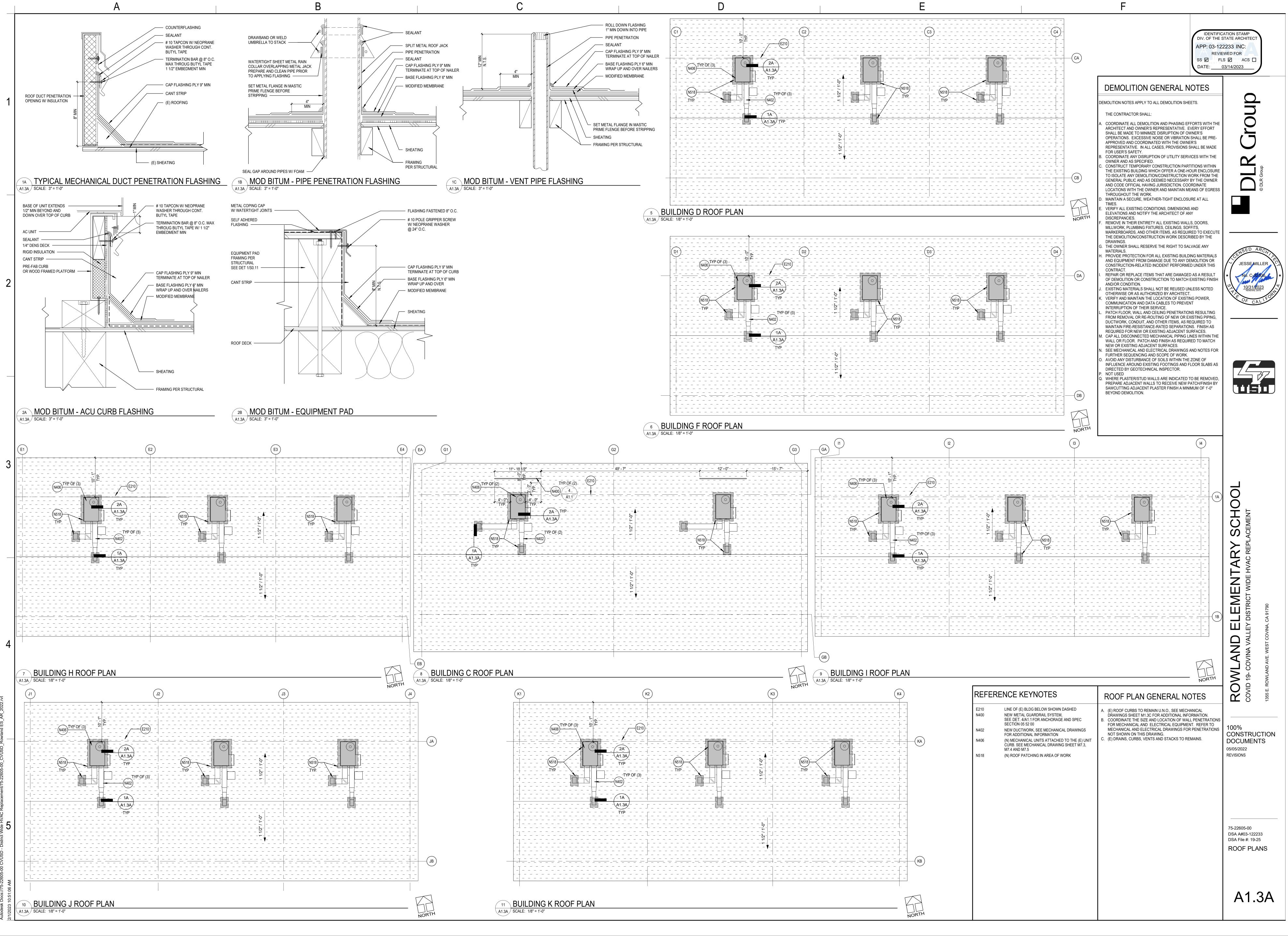
100% CONSTRUCTION DOCUMENTS 05/05/2022 REVISIONS

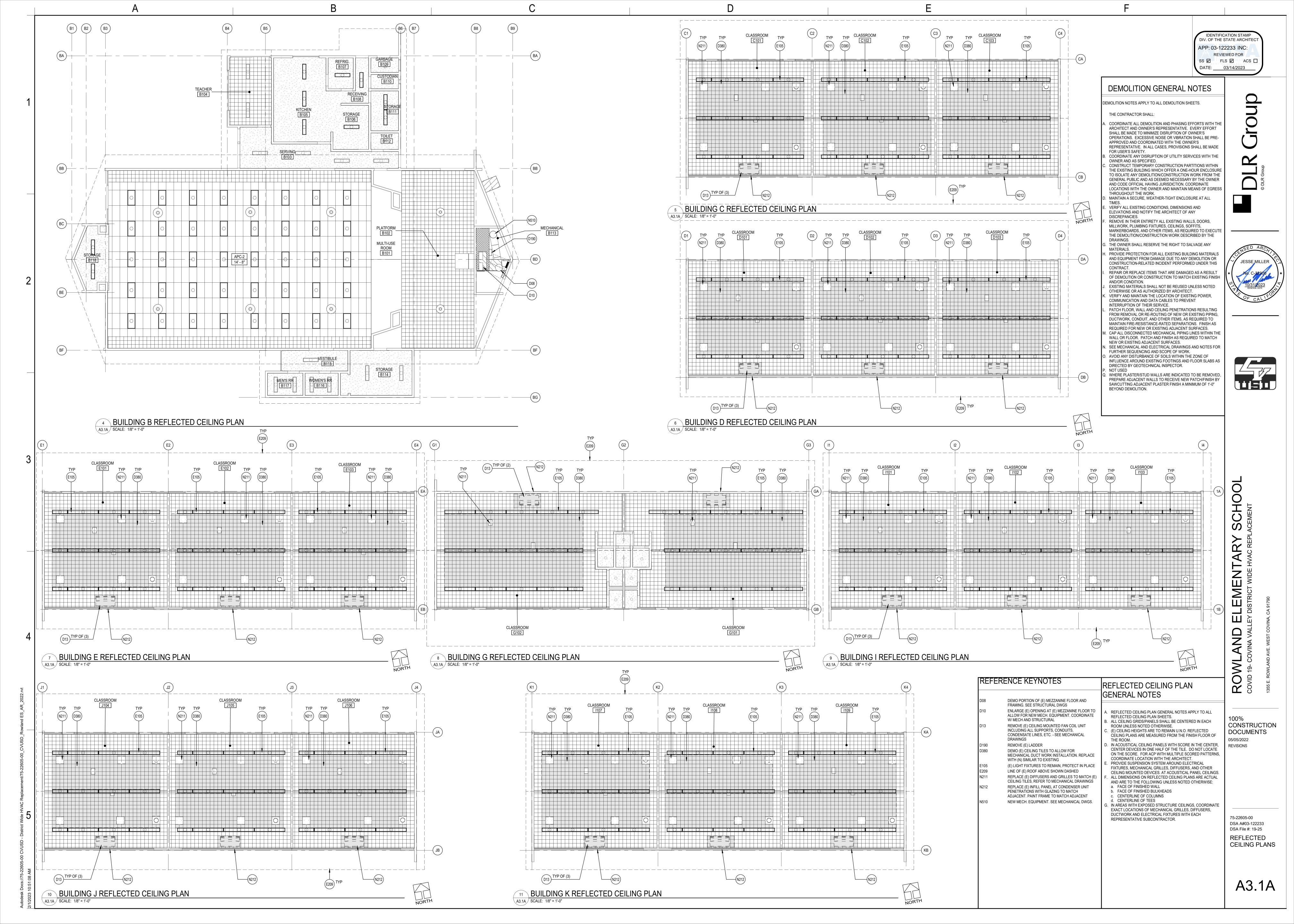
75-22605-00 DSA A#03-122233 DSA File #: 19-25 GENERAL NOTES, SYMBOLS AND ABBREVIATIONS

G1.1









ABBREVIATIONS

(D) (E)	DEMOLISHED EXISTING	HTR HTWR
(R) °C	RELOCATED DEGREES CELSIUS	HTWS HUM
°F	DEGREES FAHRENHEIT	HV
Ø		HVAC HWR
A A/C	AMPERE AIR CONDITIONING(ER)	HWS HX
AABC AAV	ASSOCIATED AIR BALANCE COUNCIL AUTOMATIC AIR VENT	HZ
ACC ACCU	ACCESSIBLE AIR COOLED CONDENSING UNIT	IAQ IAW
AD ADJ	ACCESS DOOR ADJUSTABLE	ID IH
AF	AIR FILTER AIR-CONDITIONING HEATING AND	INSUL
AHU	REFRIGERATION INSTITUTE AIR HANDLING UNIT	КН
AMB	AMBIENT	LAT
AMBA	AMERICAN BOILER MANUFACTURERS ASSOCIATION	LF LG
AMP AP	AMPERE ACCESS PANEL	LIN LOX
AS ASCE	AIR SEPARATOR AMERICAN SOCIETY OF CIVIL ENGINEERS	LPG LPR
ASHRAE	AMERICAN SOCIETY OF HEATING REFRIGERATION AND AIR CONDITIONING	LPS
ASME	ENGINEERS AMERICAN SOCIETY OF MECHANICAL	LTD LV
AUTO	ENGINEERS AUTOMATIC	LVG
AV	ACID VENT	MA MAINT
B BAS	BOILER BUILDING AUTOMATION SYSTEM	MAN MATL
BAT	BATTERY	MAU MAV
BBO BC	BOILER BLOW OFF BALANCING COCK	MBH
BC BDD	BARE COPPER BACK DRAFT DAMPER	MFRG ML
BF BFF	BOILER FEED BELOW FINISH FLOOR	MPG MTD
BFV BHP	BUTTERFLY VALVE BREAK HORSEPOWER	MTG MTWR
BLKG BLKHD	BLOCKING BULKHEAD	MTWS
BMS BOD	BUILDING MANAGEMENT SYSTEM BOTTOM OF DUCT	N.C. N.O.
BOT	BOTTOM	NEC NEMA
BPIP BTU	BOILER PLANT INSTRUMENTATION PANEL BRITISH THERMAL UNIT	NO
BTUH	BRITISH THERMAL UNIT PER HOUR	NOM
C CA	CONDUIT COMBUSTION AIR	O&M OA
CAP CD	CAPACITY CONSTRUCTION DOCUMENTS	OD
CENT CF	CENTRIFUGAL CUBIC FEET	P P/T
CFH	CUBIC FEET PER HOUR	PB PCF
CFM CH	CUBIC FEET PER MINUTE CHILLER	PD
CIRC CLR	CIRCULATING CLEAR	PERF PERP
CO CO2	CARBON MONOXIDE CARBON DIOXIDE	PG Pl
COMB CONV	COMBINATION CONVECTOR	PI PL
CP CPS	CONDENSATE PUMP CYCLES PER SECOND	PLBG PNEU
CR CR	CONDENSER WATER RETURN CORROSION RESISTANT	PNL POC
CRAC	COMPUTER ROOM AIR CONDITIONING UNIT	PR PSI
CS CS	COUNTERSINK CONDENSER WATER SUPPLY	PVC PWR
CT CTL	COOLING TOWER CONTROL	
CU CUH	CONDENSING UNIT CABINET UNIT HEATER	RA RAD
CWR CWS	CHILLED WATER RETURN CHILLED WATER SUPPLY	RAD RAD
CYL	CYLINDER	RCP RCU
D DB	DIFFUSER DECIBEL	RD REFR
DB DBL	DRY BULB DOUBLE	REG REM
DC	DUST COLLECTOR	RESP RF
DEPT DH	DEPARTMENT DUCT HEATER	RH
DI DIAG	DISTILLED WATER DIAGONAL	RHC
DIC DISCH	DISCHARGE DISCHARGE	RHG RL
DISTR DSTB	DISTRIBUTION DISTRIBUTED	RPM RS
EA	EACH	RTU
EA	EXHAUST AIR ENTERING AIR TEMPERATURE	S SA
EDH	ELECTRIC DUCT HEATER	SC SD
EER EF	ENERGY EFFICIENCY RATIO EXHAUST FAN	SD
EFF EFF	EFFICIENCY EFFICIENCY	SD SE
EH ELEV	ELECTRICAL HEATER ELEVATOR	SGL SP
EMER ENCL	EMERGENCY ENCLOSURE	SPD SQ
ENT ESP	ENTERING EXTERNAL STATIC PRESSURE	SS STOR
EST ET	ESTIMATE EXPANSION TANK	SUSP SV
ET EWT EXH	EXPANSION TANK ENTERING WATER TEMPERATURE EXHAUST	SWP
EXP	EXPOSED	T T&B
F	FAHRENHEIT	TA TB
F F.V.	FURNACE FIELD VERIFY	тс
FA FAB	FACE FABRICATE(D)	TD TEMP
FCU FD	FAN COIL UNIT FIRE DAMPER	THK TOD
FF FLEX	FINISH FLOOR FLEXIBLE	TS TSP
FME	FLOW MEASURING EQUIPMENT FEET PER MINUTE	TT
FS	FLOW SWITCH	UC UG
FSD FT	FIRE SMOKE DAMPER FIN TUBE	UH UL
G	GRILLE	UL UV
GA GAL	GAUGE GALLON	V
GALV GFI, GFCI	GALVANIZED GROUND FAULT CIRCUIT INTERRUPTER	VA VA
GHR GHS	GLYCOL-WATER HEATING RETURN GLYCOL-WATER HEATING SUPPLY	VAC VAV
GPD GPH	GALLONS PER DAY GALLONS PER HOUR	VD VEL
GPM	GALLONS PER MINUTE	VEL VENT VFD
GV		VPD VOL VP
HCR HCS	HOT/CHILLED WATER RETURN HOT/CHILLED WATER SUPPLY	VP VSMP
HGR HID	HANGER HIGH INTENSITY DISCHARGE	W
HP HP	HORSE POWER HEAT PUMP	W WB
HP HPR	HIGH PRESSURE HIGH PRESSURE STEAM RETURN	WC WCC
HPS HR	HIGH PRESSURE STEAM SUPPLY HOUR	WFMD WH
HTG	HEATING	WLR WLS
		WP WT

ABBREVIATIONS

HEATER HIGH TEMPERATURE HOT WATER RETURN HIGH TEMPERATURE HOT WATER SUPPLY HUMIDIFIER HEATING VENTILATING UNIT HEATING VENTILATING AND AIR CONDITIONING HEATING WATER RETURN HEATING WATER SUPPLY HEAT EXCHANGER HERTZ (FREQUENCY) INDOOR AIR QUALITY IN ACCORDANCE WITH INSIDE DIAMETER INTAKE HOOD INSULATION KITCHEN HOOD LEAVING AIR TEMPERATURE LINEAR FOOT LENGTH (LONG) LINEAR LIQUID OXYGEN LIQUIFIED PETROLEUM GAS LOW PRESSURE STEAM RETURN LOW PRESSURE STEAM SUPPLY LINED TRANSFER DUCT LOUVER LEAVING MIXED AIR MAINTENANCE MANUAL MATERIAL MAKEUP AIR UNIT MANUAL AIR VENT THOUSAND BTU PER HOUR MANUFACTURING MOTORIZED LOUVER MEDIUM PRESSURE GAS MOUNTED MOUNTING MEDIUM TEMP HOT WATER RETURN MEDIUM TEMP HOT WATER SUPPLY NORMALLY CLOSED NORMALLY OPEN NATIONAL ELECTRIC CODE NATIONAL ELECTRICAL MANUFACTURERS ASSN NUMBER NOMINAL **OPERATION AND MAINTENANCE** OUTSIDE AIR OUTSIDE DIAMETER PUMP PRESSURE/TEMPERATURE TEST PORT PUSH BUTTON POUNDS PER CUBIC FOOT PRESSURE DROP PERFORATED PERPENDICULAR PRESSURE GAUGE POINT OF INTERSECTION PRESSURE INDICATOR PLATE PLUMBING PNEUMATIC PANEL POINT OF CONNECTION PAIR POUNDS PER SQUARE INCH POLYVINYL CHLORIDE POWER **RETURN AIR** RADIUS RADIATOR RADIATED REFLECTED CEILING PLAN RECIPROCATING CHILLER UNIT REFRIGERANT DISCHARGE REFRIGERANT REGISTER REMOVABLE RESPONSIVE RETURN FAN RELATIVE HUMIDITY REFLIEF HOOD REHEAT COIL REFRIGERANT HOT GAS REFRIGERANT LIQUID **REVOLUTIONS PER MINUTE** REFRIGERANT SUCTION ROOF TOP UNIT SMOKE DAMPER SUPPLY AIR SECURITY SMOKE DAMPER SMOKE DETECTOR SOAP DISPENSER STEAM EXHAUST VENT SINGLE STATIC PRESSURE (H2O) SURGE PROTECTION DEVICE SQUARE STAINLESS STEEL STORAGE SUSPENDED SOLENOID VALVE STEAM WORKING PRESSURE THERMOSTAT TOP AND BOTTOM TRANSFER AIR TERMINAL BOX TEMPERATURE CONTROL TRANSFER DUCT TEMPERATURE THICK(NESS) TOP OF DUCT TEMPERATURE SENSOR TOTAL STATIC PRESSURE TEMPERATURE TRANSMITTER UNIT COOLER UNDERGROUND UNIT HEATER UNDERWRITERS LABORATORIES UNIT VENTILATOR VOLT VOLT-AMPERE VALVE VACUUM VARIABLE AIR VOLUME VOLUME DAMPER

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MECHANICAL MANDATORY MEASURES

EQUIPMENT AND SYSTEMS EFFICIENCY ANY APPLIANCE FOR WHICH THERE IS A CALIFORNIA STADARD ESTABLHISHED IN THE APPLIANCE EFFICIENCY STANDARDS SHALL COMPLY WITH THAT STANDARD. PIPING, EXCEPT THOSE CONVEYING FLUIDS WITH A DESIGN OPERATING TERMPERATURE BETWEEN 60°F AND 105°F, OR WITHIN SPACE-CONDITIONING EQUIPMENT CERTIFIED UNDER, §110.1 OR §110.2, SHALL BE INSULATED

IN ACCORDANCE WITH §120.3.

VENTILATION

CONTROLS SHALL BE PROVIDED TO ALLOW OUTSIDE AIR DAMPERS OR DEVICES TO BE OPERATED AT THE VENTILATION RATES AS SPECIFIED IN THESE PLANS. ALL GRAVITY VENTILATING SYSTEMS SHALL BE PROVIDED WITH AUTOMATIC OR READILY ACCESSIBLE MANUALLY OPERATED DAMPERS IN ALL OPENINGS TO THE OUTSIDE.

AIR BALANCING: ALL SPACE CONDITIONING AND VENTILATION SYSTEMS SHALL BE BALANCED TO THE QUANTITIES SPECIFIED IN THESE PLANS, IN ACCORDANCE WITH THE ASSOCIATED AIR BALANCE COUNCIL (AABC) NATIONAL STANDARDS. GRAVITY OR AUTOMATIC DAMPERS INTERLOCKED AND CLOSED ON FAN SHUTDOWN SHALL BE PROVIDED ON THE OUTSIDE AIR INTAKES AND DISCHARGES OF ALL SPACE CONDITIONING AND EXHAUST SYSTEMS. FANS USED FOR VENTIALATION SHALL OPERATE CONTINUOUSLY DURING OCCUPIED HOURS.

CONTROLS

COOLING IS SHUT OFF OR REDUCED TO A MINIMUM.

PROVIDES MECHANICAL COOLING.

ACCESSIBLE ONLY BY AUTHORIZED PERSONNEL.

WIDE WATT WET BULB WATER COLUMN WATER COOLED CONDENSER WATER FLOW MEASURING DEVICE WATER HEATER WATER LOOP RETURN WATER LOOP SUPPLY WEATHERPROOF

VELOCITY

VOLUME

VENTALATOR(TION)

VACUUM PUMP

VARIABLE FREQUENCY DRIVE

VARIABLE SPEED MOTOR CONTROLLER

С

GENERAL SYMBOLS

POINT OF DISCONNECT - DEMOLITION REMOVED EXISTING POINT OF CONNECTION - NEW CONNECTS TO EXI AREA NOT IN CONTRACT

GENERAL NOTES

- 1 THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYIN TO FINAL BID, ALL EXISTING CONDITIONS FOR PLUMBING AND MECHANICAL SY WHERE FLOOR DRAINS OCCUR WITHIN THE LIMITS OF CONSTRUCTION, PREVE
- CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPE PRIOR TO START OF WORK. UNSEAL DRAINS AT COMPLETION OF CONSTRUCT
- COORDINATE INSTALLATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE STRUCTURE, AND EQUIPMENT TO PREVENT CONFLICTS.
- THE CONTRACTOR SHALL BE FAMILIAR WITH ALL THE CONDITIONS BOTH EXIST THOSE ILLUSTRATED BY THESE DOCUMENTS AS WELL AS THOSE WHICH CAN E REASONABLY ANTICIPATED INCLUDING, BUT NOT LIMITED TO ARCHITECTURAL, ELECTRICAL, VENTILATION, PLUMBING, AND OTHER SYSTEMS INVOLVED ON TH PROJECT
- FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM. AND SHAL CONFORM TO ALL REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCA INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL MECHANICAL CODE.
- INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTU WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF QUALITY AND WORKMA CONSISTENT WITH THE SPECIFICATIONS. FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON TH
- SEGMENTS, REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS. LOCATIONS OF PIPING. DUCTWORK AND EQUIPMENT AS INDICATED ON THE DR ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. WOR
- BE COORDINATED WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN THE I REFER TO MECHANICAL SERIES DRAWINGS FOR GAS AND A.C. CONDENSATE D 9
- 10 ADJUST PIPING AND DUCTWORK SIZES TO PROPERLY CONNECT TO MECHANIC EQUIPMENT

GENERAL HVAC NOTES

- CONDENSATE DRAINS SHALL BE SUPPLIED FOR ALL COOLING EQUIPMENT. CO SHALL ENSURE PROPER INSTALLATION AND DRAINAGE AS REQUIRED BY FEDE
- STATE, AND LOCAL CODES. CONDENSATE PIPING SHALL BE TYPE "L" COPPER. ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK SHALL BE RATED FOR PRESS
- CLASS OF 2" W.G. UNLESS NOTED OTHERWISE. THIS CONTRACTOR SHALL BE REQUIRED TO REPLACE FILTERS ON HVAC EQUIF AFTER ALL DUST PRODUCING CONSTRUCTION HAS BEEN COMPLETED AND PRI FINAL PUNCH.

EQUIPMENT ANCHORAGE NOTE

MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC, SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26 AND 30.

- ALL PERMANENT EQUIPMENT AND COMPONENTS.
- TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. *PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
- TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE, THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

- A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
- B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2019 CBC, SECTIONS 1617A.1.24, 1617A.1.25 AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PRE-APPROVED INSTALLATION GUIDE (E.G., OSHPD OPM FOR 2019 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MPX MDX PP E OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP MD PP E OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD

PRE-APPROVAL (OPM#) #0043-13.

ACCEPTANCE TESTING

MANDATORY ACCEPTANCE TESTING PER TITLE 24, PART 6 SHALL BE AS FOLLOWS: AN AABC AGENCY SHALL ACT AS THE ACCEPTANCE AGENT AND PERFORM WORK REQUIRED IN THE FOLLOWING ACCEPTANCE TESTS AS DESCRIBED IN CHAPTER 13 OF THE 2019 NONRESIDENTIAL COMPLIANCE MANUAL. THIS SHALL INCLUDE FILLING OL SIGNING, AND SUBMITTING APPLICABLE FORMS LISTED HEREIN.

- NRCA-MCH-02-A OUTDOOR AIR ACCEPTANCE NRCA-MCH-03-A - CONSTANT VOLUME, SINGLE ZONE, UNITARY AIR CONDITIONER AND HEAT PUMP SYSTEMS. NRCA-MCH-04-A – AIR DISTRIBUTION SYSTEMS ACCEPTANCE
- NRCA-MCH-05-A AIR ECONOMIZER CONTROLS ACCEPTANCE NRCA-MCH-06-A – DEMAND CONTROL VENTILATION SYSTEMS ACCEPTANCE NRCA-MCH-07-A – SUPPLY FAN VFD ACCEPTANCE
- NRCA-MCH-08-A VALVE LEAKAGE TEST NRCA-MCH-11-A – AUTOMATIC DEMAND SHED CONTROL ACCEPTANCE
- NRCA-MCH-12-A FAULT DETECTION & DIAGNOSITCS (FDD) FOR PACKAGED DIRECT EXPANSION UNITS NRCA-MCH-13-A - AUTOMATIC FAULT DETECTION & DIAGNOSITCS (FDD) FOR AIR HANDLING UNITS & ZONE TERMINAL UNIT ACCEPTANCE
- NRCA-MCH-16-A SUPPLY AIR TEMPERATURE RESET CONTROLS ACCEPTANCE NRCA-MCH-18-A - ENERGY MANAGEMENT CONTROL SYSTEM ACCEPTANCE

ALL AIR DISTRIBUTION SYSTEM DUCTS AND PLENUMS ARE REQUIRED TO BE INSTALLED, SEALED, AND INSULATED IN ACCORDANCE WITH THE CALIFORNIA MECHANICAL CODE (CMC) SECTIONS 601, 602, 603, 604, 605, AND ANSI/SMACNA-006-2006 HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE 3RD EDITION.

THE MINIMUM OUTDOOR AIR LISTED OR THREE COMPLETE AIR CHANGES SHALL BE SUPPLIED TO THE ENTIRE BLDG. DURING THE ONE HOUR PERIOD IMMEDIATELY BEFORE THE BLDG. IS NORMALLY OCCUPIED.

EACH SPACE CONDITIONING ZONE SHALL BE CONTROLLED BY AN INDIVIDUAL THERMOSTATIC CONTROL THAT RESPONDS TO THE SUPPLY OF HEATING AND COOLING ENERGY WITHIN THAT ZONE \$120.2(a). WHEN USED TO CONTROL HEATING, THE THERMOSTATIC CONTROL MUST BE ADJUSTABLE UP TO 55°F OR LOWER. FOR COOLING, THE THERMOSTATIC CONTROL MUST BE ADJUSTABLE UP TO 85°F OR HIGHER. WHEN USED TO CONTROL BOTH HEATING AND COOLING, THE THERMOSTATIC THE CONTROL MUST BE ADJUSTABLE FROM 55°F TO 85°F AND ALSO PROVIDE A DEAD BAND OF AT LEAST 5°F WITHIN WHICH THE SUPPLY OF HEATING AND

EACH SPACE CONDITIONING SYSTEM SERVING BUILDING TYPES SUCH AS OFFICES AND MANUFACTURING FACILITIES (AND ALL OTHERS NOT EXPLICITLY EXEMPT FROM THE REQUIREMENTS OF SECTION 112 (D)) SHALL BE INSTALLED WITH AN AUTOMATIC TIME SWITCH WITH AN ACCESSIBLE MANUAL OVERRIDE THAT ALLOWS OPERATION OF THE SYSTEM DURING OFF-HOURS FOR UP TO 4 HOURS. THE TIME SWITCH SHALL BE CAPABLE OF PROFGRAMMING DIFFERENT SCHEDULES FOR WEEKDAYS OR WEEKENDS. INCORPORATE AN AUTOMATIC HOLIDAY "SHUTOFF" FEATURE THAT TURNS OFF ALL LOADS FOR AT LEAST 24 HOURS, THEN RESUMES THE NORMALLY SCHEDULED OPERATION; AND HAS PROGRAM BACKUP CAPABILITIES THAT PREVENT THE LOSS OF THE DEVICES PROGRAM AND TIME SETTING FOR AT LEAST 10 HOURS IF POWER IS INTERRUPTED.

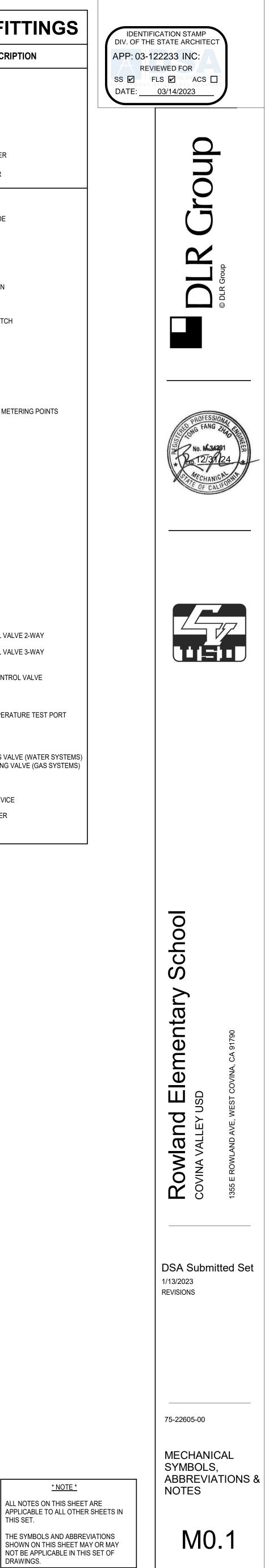
EACH SPACE CONDITIONING SYSTEM MUST BE PROVIDED WITH CONTROLS THAT CAN AUTOMATICALLY SHUT OFF THE EQUIPMENT DURING UNOCCUPIED HOURS. WHEN SHUT DOWN, THE CONTROLS SHALL AUTOMATICALLY RESTART THE SYSTEM TO MAINTAIN A SETBACK HEATING THERMOSTAT SETPOINT, IF THE SYSTEM PROVIDES MECHANICAL HEATING AND SETPU COOLING THERMOSTAT SETPOINT, IF THE SYSTEM

THERMOSTATS SHALL HAVE NUMERIC SETPOINTS IN DEFREES FAHRENHEIT (F) AND ADJUSTABLE STOPS

SYSTEM WITH DDC TO THE §110.2(c) ARE ALSO REQUIRED TO HAVE AUTOMATIC DEMAND SHED CONTROLS.

			YMBOLS
OM	SCHEMATIC	3D	DESCRIPTION
NG	→ FEA →	FEA C	GAS FLUE EXHAUST AIR
	EA		GENERAL EXHAUST AIR GREASE EXHAUST AIR
			RELIEF AIR
	∠ SEA	SEA 5	SMOKE EXHAUST AIR
Prior Ems.	→ ERA →	ERA S	ENERGY RECOVERY AIR
NG			RETURN AIR
AY, G AND			
			COMBUSTION AIR OUTSIDE AIR
	<pre></pre>		SUPPLY AIR
CODES,			
ER'S Ship			DIFFUSER (SUPPLY) GRILLE (RETURN)
VING,			GRILLE (EXHAUST)
SHALL LD.			WALL REGISTER
IN			LINEAR DIFFUSER (SLOT)
	AFMS -		AIR FLOW MEASURING STATION
	BDD F	BDD r	BACKDRAFT DAMPER BAROMETRIC RELIEF DAMPER
	DP		DIFFERENTIAL PRESSURE SENSOR
RACTOR L,			GRAVITY DAMPER
E ENT	M D PR F		MOTORIZED DAMPER PRESSURE REDUCING DAMPER
TO THE	SB	SB ●□−− SP I□−	SECURITY BARS STATIC PRESSURE SENSOR
	VD r	VD r	VOLUME DAMPER
	RVD F	RVD r	REMOTE VOLUME DAMPER FIRE DAMPER
	FS A	FSD A	COMBINATION FIRE / SMOKE DAMPER SMOKE DAMPER
		$\overline{}$	ROUND DUCT UP
			RECTANGULAR DUCT UP
		$\square $	OVAL DUCT UP
			ROUND DUCT DOWN
			RECTANGULAR DUCT DOWN
			OVAL DUCT DOWN
	(cree		MITERED ELBOW WITH VANES
		- -	
			MITERED ELBOW WITHOUT VANES
		- -	
		-J	RADIUSED ELBOW
	- 500		TEE WITH VANES
			RADIUSED TEE
			DUCT WITH INSULATION
		ا 	DUCT WITH LINING
			
			DUCT IS FABRIC
			FLEXIBLE DUCT
		©	TRANSFER DUCT DUCT SMOKE DETECTOR
		 ✓ 	SUPPLY ARROW
	*	★	RETURN ARROW
	<pre></pre>		EXHAUST ARROW
)-1 -	DIFFUSER, REGISTER OR GRILLE TAG
	12'	x12"	NECK SIZE (00"x00" - SQ / RECT) (0"Ø ROUND) AIR FLOW (CUBIC FEET PER MINUTE)
	24'	'x12"	TYPICAL DUCT - SIZE AS INDICATED (WIDTH x DEPTH) SIZE INDICATED FREE AREA
		- DDC-xx	- MECHANICAL EQUIPMENT TAG
		-	 MECHANICAL EQUIPMENT CLEARANCE
		2 D2	CARBON DIOXIDE SENSOR - WALL MOUNTED
	Q	∂2 20	CARBON DIOXIDE SENSOR - CEILING MOUNTED CARBON MONOXIDE SENSOR - WALL MOUNTED
	Č	್ರಿ	CARBON MONOXIDE SENSOR - CEILING MOUNTED HUMIDISTAT - WALL MOUNTED
]	Œ	Ð	HUMIDISTAT - CEILING MOUNTED
		02 02	NITROGEN DIOXIDE SENSOR - WALL MOUNTED NITROGEN DIOXIDE SENSOR - CEILING MOUNTED
	Ē	2	PRESSURE SENSOR - WALL MOUNTED
	(E)		PRESSURE SENSOR - CEILING MOUNTED TEMPERATURE SENSOR - WALL MOUNTED
		9	TEMPERATURE SENSOR - CEILING MOUNTED THERMOSTAT - WALL MOUNTED
			THERMOSTAT - CEILING MOUNTED

PIPING	VALVE	S AND FITTINGS
SCHEMATIC	3D	DESCRIPTION
c—∋		PIPE DROP
o		PIPE RISE
; ;		PIPE TEE DOWN
, o →		PIPE TEE UP
→ →		CONCENTRIC REDUCER
<u>}</u> }		ECCENTRIC REDUCER
]		PIPE CAP
<u> </u>	°	PIPE ALIGNMENT GUIDE
 →		PIPE ANCHOR
		FLOW DIRECTION
		EXPANSION JOINT
		FLEXIBLE CONNECTION
	۲ <u>ــــــــــــــــــــــــــــــــــــ</u>	DIRECTION OF PIPE PITCH
بے ک		AQUASTAT
		EXPANSION LOOP
, , , , , , , , , , , , , , , , , , ,		BALANCING VALVE
;; ™i ;		BALANCING VALVE W/ METERING POINTS
لي الم		BALL VALVE
, ∠II		BUTTERFLY VALVE
	:	CHECK VALVE
├─── ⊗────┤		STEAM TRAP
₩	internet interne	GATE VALVE
	·	CIRCUIT SETTER
⊢		MANUAL AIR VENT
<u> </u>		AUTOMATIC AIR VENT
, , , , , , , , , , , , , , , , , , ,		PLUG VALVE
		PRESSURE GAUGE
۔ بے لیے ا	B	SOLENOID VALVE
		ANGLE VALVE
`œ`		AUTOMATIC CONTROL VALVE 2-WAY
		AUTOMATIC CONTROL VALVE 3-WAY
~ ~		AUTOMATIC FLOW CONTROL VALVE
<		STRAINER
		PRESSURE AND TEMPERATURE TEST PORT
		THERMOMETER
	<u>Å</u>	PRESSURE REDUCING VALVE (WATER SYSTEMS)
	·iQi;	PRESSURE REGULATING VALVE (GAS SYSTEMS)
		RELIEF VALVE
		FLOW MEASURING DEVICE
	<u> </u>	BACKFLOW PREVENTER UNION



Α

Registration Number:

STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

Project Address:

NRCC-MCH-E

Project Name:

Project Address:

CERTIFICATE OF COMPLIANCE

Mechanical Systems

CERTIFICATE OF COMPLIANCE

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

CERTIFICATE OF COMPLIANCE						CALIFORNIA ENERGY COMMISSI			
This document is used to demonstrate compliance f	or mechanical system	s that are within the	scope	e of the permit applica	tion and are				
path outlined in <u>§140.4</u> , or <u>§141.0(b)2</u> for alteration		27	\$	151 6 163					
Project Name:		CVUSD Rowland	eport	t Page:		(Page 1 of			
Project Address:		1355 E Rowland Ave	ate P	repared:		7/29/2			
A. GENERAL INFORMATION	0.0			0					
01 Project Location (city)	West Co	ovina	04	Total Conditioned Flo	or Area	23160			
02 Climate Zone	10		05	Total Unconditioned	Floor Area	0			
03 Occupancy Types Within Project:	11		06	# of Stories (Habitabl	e Above Gra	de) 1			
Office (B)	Retail (M)			Non-refrigerated Wa	Narehouse (S)				
Hotel / Motel Guest Rooms (R-1)	School (E)			Healthcare Facility (I)	Ĩ.				
□ High-Rise Residential (R-2/R-3) □	Relocatable Class B	ldg (E)		Other (write in)	See Table J				
D. D.D.LECT. CO.D.E									
B. PROJECT SCOPE									
This table Includes mechanical systems or compone §140.4, or §141.0(b)2 for alterations.	nts that are within the	e scope of the permit	appl	ication and are demoi	istrating con	npliance using the prescriptive path outlined in			
01		02				03			
		Wet System C		onents	Dry System Components				
Air System(s)						Air Economizer			
Air System(s)		Water Economizer			-	Electric Resistance Heat			
		Pumps				Electric Resistance Heat			
Heating Air System						Fan Systems			
Heating Air SystemCooling Air System		Pumps			2.4				
 Heating Air System Cooling Air System Mechanical Controls Mechanical Controls (existing to remain 		Pumps System Piping				Fan Systems			

Registration Date/Time:

CVUSD Rowland Report Page:

1355 E Rowland Ave Date Prepared:

Report Version: 2019.1.003

Schema Version: rev 20200601

L	J	

§140.4(a). Healthcare facilities are excepted.	
² It is common practice to show rated output capacity on the equipment sche	edule. Sensible cooling output comes from specification sheet table.
³ If equipment is heating only, leave cooling output and load blank. If equipment	nent is cooling only, leave heating output and load blank.
Registration Number:	Registration Date/Time:
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.1.003
	Schema Version: rev 20200601
ATE OF CALIFORNIA	
1echanical Systems	

CVUSD Rowland Report Page:

1355 E Rowland Ave Date Prepared:

CALIFORNIA ENERGY COMMISSION

System Name:	RTU-D1	Economi	izer:1	NA: <=54 kBtu/h cooling	Economize Controls:			d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Vo	
01	02	<u> </u>	03	04	1			06	07	08	
Fan Name or				Maximum Design Supply	Airflow				Fan Power Pressure Drop A	djustment - Table	
Item Tag	Fan Functi	on	Qty	(CFM)	AITIOW	HP Unit ²		Design HP	Device	Design Airflow t Device (CFN	
SF	Supply		1	1200		E	знр	0.91	NA	NA	
Total Syster	n Design Supply	Airflow (CFN	1):	1200	Total Syst (B)	em (HP:	Design	0.91	Maximum System Fan Power (B)HP:		
System Name:	RTU-D2	Economi	izer:1	NA: <=54 kBtu/h cooling	Economize Controls:	Construction of the second		d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volu	
01	02	й. на селот	03	04		05		06	07	08	
Fan Name or				Maximum Design Supply	Airflow				Fan Power Pressure Drop A	djustment - Table	
Item Tag	Fan Functi	on	Qty	(CFM)	HP U		Unit ²	Design HP	Device	Design Airflow t Device (CFN	
SF	Supply		1	1200		E	BHP	0.91	NA	NA	
Total Syster	n Design Supply	Airflow (CFN	1):	1/10		I System Design (B)HP:		0.91	Maximum System Fan Power (B)HP:		
System Name:	RTU-D3	Economi	izer:1	NA: <=54 kBtu/h cooling	Economize Controls:			d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volu	
01	02	n	03	04			05	06	07	08	
Fan Name or				Maximum Design Supply	Airflow			1.1.1.1. A	Fan Power Pressure Drop A	djustment - Table	
Item Tag	Fan Functi	on	Qty	(CFM)	AITIOW	HP	Unit ²	Design HP	Device	Design Airflow t Device (CFN	
SF	Supply		1	1200		B	BHP	0.91	NA	NA	
Total Syster	n Design Supply	Airflow (CFN	1):	1200	Total Syst (B)	em (HP:	Design	0.91	Maximum System Fan Power (B)HP:		

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Provider: Energysoft Report Generated: 2022-07-29 10:57:02 STATE OF CALIFORNIA

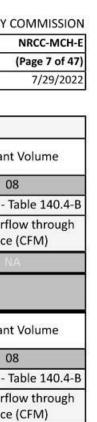
Registration Provider: Energysoft

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01	02	03	04	05	06	07	08	09	10	11
RTU-H3	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13.59	23	0	25.35	23	31.36	27.3
RTU-C1	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	15.36	26	0	30.54	30	35.91	34.1
RTU-C2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	15.36	26	0	30.54	28	35.91	33.
RTU-I1	Unitary Heat Pumps Air-cooled, pkg (3 phase)		NA: Load Controls	13.59	23	0	26.59	24	31.36	27.8
RTU-I2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	12.4	21	0	25.33	23	29.39	26.5
RTU-I3	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13.59	23	0	26.49	24	31.36	27.3
RTU-J1	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13.59	23	0	26.59	24	31.36	27.8
RTU-J2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13	22	0	25.33	23	29.39	26.5
RTU-J3	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13.59	23	0	26.49	24	31.36	27.3
RTU-K1	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13.59	23	0	25.45	23	31.36	27.8
RTU-K2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13	22	0	25.33	23	29.39	26.5
RTU-K3	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13.59	23	0	25.35	23	31.36	27.3

Registration Provider: Energysoft Report Generated: 2022-07-29 10:57:02



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NRCC-MCH-E														CALIFORNIA E	NERGY COMMISSION
CERTIFICATE O		PLIANCE								5.					NRCC-MCH-I
Project Name:								D Rowland Repo							(Page 2 of 47
Project Addres	is:					13	55 E Ro	wland Ave Date	Prepar	ed:					7/29/2023
C. COMPLIA	NCE R	ESULTS				AL									-
		if the project o OMPLIES with					1						table b	y the user. If this t	able says "DOES
01		02		03		04		05		06		07		08	09
System Summary <u>§110.1,</u> §110.2, §140.4	AND	Pumps §140.4(k)	AND	Fans/ Economizers <u>§140.4(c)</u> , <u>§140.4(e)</u>	AND	System Controls <u>§110.2</u> , <u>§120.2</u> , <u>§140.4(f)</u>	AND	Ventilation §120.1	AND	Terminal Box Controls <u>§140.4(d)</u>	AND	Distribution <u>§120.3</u> , <u>§140.4(I)</u>	AND	Cooling Towers §110.2(e)2	Compliance Result:
(See Table F)		(See Table G)		(See Table H)		(See Table I)		(See Table J)		(See Table K)		(See Table L)		(See Table M)]
Yes	AND		AND	Yes	AND	Yes	AND	Yes	AND		AND	Yes	AND		COMPLIES
				Mandatory	Measu	ures Complian	ce (See	Table Q for D	etails)				COMP	LIES	
		ONDITIONS								* /					
	1255242405														
This table is a	uto-fill	led with unedit	able co	omments beca	use of	selections ma	de or de	ata entered in	tables	throughout th	e form.	ç.			
		MADVE													
E. ADDITION		IVIAKKS													

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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Mechanical Systems			
NRCC-MCH-E			CALIFORNIA ENERGY COM
CERTIFICATE OF COMPLIANCE			NR
Project Name:	CVUSD Rowland	Report Page:	(Paj
Project Address:	1355 E Rowland Ave	Date Prepared:	~

F. HVAC SYSTEM SU	JMMARY (DRY & WET SYS	TEMS)						
Dry System Equipme	nt Sizing (includes air conditi	oners, condensers, heat	pumps, VRF, furn	aces and unit heat	ters)			
01	02	03		04 05	06	07 08	09	10 11
⁴ Authority Having Ju	risdiction may ask for load ca	culations used for compl	iance per <u>§140.4(l</u>	<u>)</u> .		•		
Dry System Equipme	ent Efficiency (other than Pacl	kage Terminal Air Condit	ioners (PTAC) and	Package Terminal	Heat Pumps (PTH	P))		
01	02	03	04	05	06	07	08	09
			Heat	ing Mode			Cooling Mode	
Name or Item Tag	Tag (Btu/h)		Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency
FCU/CU-B1	>=135,000 and <240,00	0	СОР	3.2	3.5	EER 10.6 IEER 11.6		10.7 12.5
RTU-D1	<65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-D2	<65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-D3	<65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-F1	<65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-F2	<65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-F3	<65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-H1	<65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-H2	<65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-H3	<65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-C1	<65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-C2	<65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-I1	<65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-I2	<65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-I3	<65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-J1	<65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-J2	<65,000		HSPF	7.7	13	SEER	13.0	14.3

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Registration Number:

NRCC-MCH-E		CALIFORNIA ENERGY CO
CERTIFICATE OF COMPLIANCE		r
Project Name:	CVUSD Rowland Report Page:	(1
Project Address:	1355 E Rowland Ave Date Prepared:	
H. FAN SYSTEMS & AIR ECONOMIZERS		
IT. FAIN STSTEIVIS & AIK ECONONIZERS		

System Name:	RTU-F1	Econor	mizer:1	NA: <=54 kBtu/h cooling	Econom Contro		Designe	d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant V
01	02		03	04		1	05	06	07	08
		570 D		Mauimum Dasian Cunalu	Ainflow		Q		Fan Power Pressure Drop	Adjustment - Tab
Fan Name or Item Tag	Fan Functi	on	Qty	Maximum Design Supply (CFM)	Airnow	HP	Unit ²	Design HP	Device	Design Airflow Device (C
SF	Supply		1	1200		I	BHP	0.91	NA	NA
Total Syste	em Design Supply	Airflow (CF	- M):	1200	Total S	ystem (B)HP:	Design	0.91	Maximum System Fan Power (B)HP:	
System Name:	RTU-F2	Econor	mizer:1	NA: <=54 kBtu/h cooling	Econom Contro		Designe	d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant V
01	02		03	04		05		06	07	08
Fan Name or		1		Maximum Design Supply	Airflow			Fan Power Pressure Drop	Adjustment - Tab	
Item Tag	Fan Functi	on	Qty	(CFM)	AITTOW	HP Unit ²		Design HP	Device	Design Airflow Device (C
SF	Supply	i	1	1200		I	внр	0.91	NA	NA
Total Syste	em Design Supply	Airflow (CF	M):	1200	Total S	ystem (B)HP:	Design	0.91	Maximum System Fan Power (B)HP:	
System Name:	RTU-F3	Econor	mizer:1	NA: <=54 kBtu/h cooling	Econom Contro		Designe	d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant V
01	02		03	04			05	06	07	08
Fan Name or				Maximum Design Supply	Airflow				Fan Power Pressure Drop	Adjustment - Tab
Item Tag	Fan Functi	on	Qty	(CFM)	AITIOW	HP Unit ²		Design HP	Device	Design Airflow Device (C
SF	Supply		1	1200		ł	внр	0.91	NA	NA
Total Syste	em Design Supply	Airflow (CF	: M):	1200	Total S	ystem (B)HP:	Design	0.91	Maximum System Fan Power (B)HP:	

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601

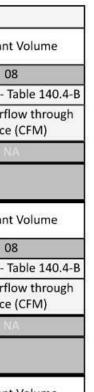
Registration Provider: Energysoft Report Generated: 2022-07-29 10:57:02

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OMMISSION NRCC-MCH-E (Page 5 of 47) 7/29/2022

14.3 14.3 14.3 Registration Provider: Energysoft

> COMMISSION NRCC-MCH-E (Page 8 of 47) 7/29/2022



t Volume 08 Table 140.4-B low through e (CFM)

STATE OF CALIFORNIA Mechanical Systems

NRCC-MCH-E CERTIFICATE OF COMPLIANCE

Project Name: Project Address:

E

CVUSD Rowland Report Page: 1355 E Rowland Ave Date Prepared:

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

ory System Equip	pment Sizing (includes air co	onditioners, condensers, heat pumps, VRI	, furnaces and ι	unit heaters)						
01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (kBtu/h) §140.4 (a&b)						
			Smallest Size	Hea	ating Outpu	t ^{2,3}	Cooling (Output ^{2,3}	Load Calc	ulations ^{3,4}
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 / Title 20	Available ¹ §140.4(a)	Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h
FCU/CU-B1	Unitary Heat Pumps	Air-cooled, split (3 phase)	NA: Load Controls	94.51	160	0	172.98	160	225.32	182.98
RTU-D1	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13	22	0	22.79	23	31.36	27.84
RTU-D2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	12.4	21	0	21.93	22	29.39	26.53
RTU-D3	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13	22	0	26.49	24	31.36	27.39
RTU-F1	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13.59	23	0	26.59	24	31.36	27.84
RTU-F2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13.59	23	0	25.33	23	29.39	26.53
RTU-F3	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13.59	23	0	25.35	23	31.36	27.39
RTU-H1	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13.59	23	0	26.59	24	31.36	27.84
RTU-H2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	13.59	23	0	25.33	23	29.39	26.53

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Registration Date/Time:

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NRCC-MCH-E
Mechanical Systems
STATE OF CALIFORNIA

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Project Name:	CVUSD Rowland	Report Page:	(Pag
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01	02	03	04	05	06	07	08	09
			Heati	ng Mode			Cooling Mode	
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Effi
RTU-J3	<65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-K1	<65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-K2	<65,000		HSPF	7.7	13	SEER	13.0	14.3
RTU-K3	<65,000		HSPF	7.7	13	SEER	13.0	14.3

G. PUMPS This section does not apply to this project.

H. FAN SYSTE	MS & AIR ECONO	OMIZERS								
1. A second statement of the second statement of th			C	escriptive requirements four be included in Table H.	nd in <u>§140</u>).4(c), §	<u>140.4(e)</u> a	nd <u>§140.4(m)</u> for fan	systems. Fan systems servin	g only process loads
System Name:	FCU/CU-B1	Econon	nizer:1	NA: Special OA filtration	Econon Contre		Designe	d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volum
01	02		03	04			05	06	07	08
Fan Name or					Fan Power Pressure Drop Adjustment - Table 14					
Fan Name or Item Tag	Fan Functio	on	Qty	(CFM)	Design Supply Airflow (CFM)		⁹ Unit ²	it ² Design HP	Device	Design Airflow thro Device (CFM)
SF	Supply		1	8000			внр	0.91	NA	NA
Total Syste	em Design Supply A	Airflow (CF	M):	8000	Total S	System (B)HP:	Design	0.91	Maximum System Fan Power (B)HP:	

Registration Number:

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STATE OF CALIFORNIA Mechanical Systems

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Project Name:	CVUSD Rowland	Report Page:	(Pag
Project Address:	1355 E Rowland Ave	Date Prepared:	7

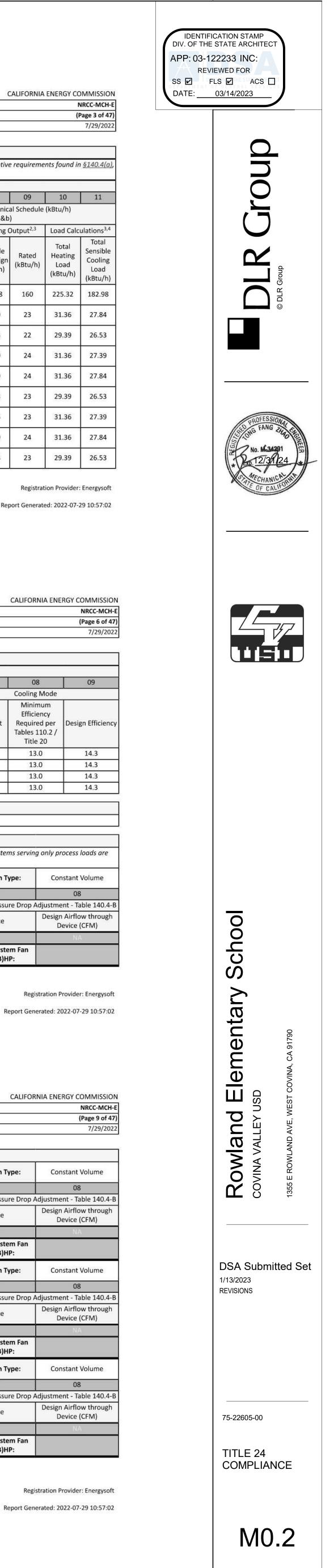
H. FAN SYSTEN	AS & AIR ECONO	OMIZERS								
System Name:	RTU-H1	Econor	nizer:1	NA: <=54 kBtu/h cooling	Econor Contro		Designe	ed per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volum
01	02		03	04		1	05	06	07	08
Fan Name or		Str. B		Maximum Design Supply	Airflow		Fan Power Pressure Drop	Adjustment - Table 14		
Item Tag	Fan Functio	on	Qty	(CFM)	AITTOW	HF	9 Unit ²	Design HP	Device	Design Airflow thr Device (CFM)
SF	Supply		1	1200		1.1.000	внр	0.91	NA	NA
Total Syste	m Design Supply /	Airflow (CF	M):	1200	Total S	System (B)HP:	Design	0.91	Maximum System Fan Power (B)HP:	
System Name:	RTU-H2	Econor	nizer:1	NA: <=54 kBtu/h cooling	Econon Contre	U 1		System Fan Type:	Constant Volum	
01	02	d e	03	04			05	06	07	08
Fan Name or				Maximum Dasign Sumplu	under Afrikans				Fan Power Pressure Drop Adjustment - Table 1	
Item Tag	Fan Functio	on	Qty	Maximum Design Supply (CFM)	AITTIOW	HF	P Unit ²	Design HP	Device	Design Airflow thr Device (CFM)
SF	Supply	i	1	1200			внр	0.91	NA	NA
Total Syste	m Design Supply	Airflow (CF	M):	1200	Total S	System (B)HP:	Design	0.91	Maximum System Fan Power (B)HP:	
System Name:	RTU-H3	Econor	nizer:1	NA: <=54 kBtu/h cooling	Econon Contre		Designe	ed per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volun
01	02	n	03	04		1	05	06	07	08
Fan Name or				Maximum Design Supply	Airflow				Fan Power Pressure Drop	Adjustment - Table 14
Item Tag	Fan Functio	on	Qty	(CFM)	AITTIOW	HP Unit ²		Design HP	Device	Design Airflow thr Device (CFM)
SF	Supply	1.	1	1200	6		внр	0.91	NA	NA
Total Syste	m Design Supply	Airflow (CF	M):	1200	Total S	System Design (B)HP:		0.91	Maximum System Fan Power (B)HP:	

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STATE OF CALIFORNIA **Mechanical Systems** NRCC-MCH-E CERTIFICATE OF COMPLIANCE

Project Name: Project Address:

System Name:	RTU-C1	Econor	nizer:1	NA: <=54 kBtu/h cooling	Econon Contro	23/27/27/2	Designe	d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volume
01	02		03	04		1	05	06	07	08
Fan Name or		й. 		Maximum Design Supply	Airflow	low			Fan Power Pressure Drop A	Adjustment - Table 140.4-
Item Tag	Fan Functio	on	Qty	(CFM)	F		P Unit ² Design HP		Device	Design Airflow through Device (CFM)
SF	Supply		1	1200		E	знр	0.91	NA	NA
Total Syster	m Design Supply /	Airflow (CF	M):	1200	Total System Design (B)HP: 0.91		Maximum System Fan Power (B)HP:			
System Name:	RTU-C2	Econor	nizer:1	NA: <=54 kBtu/h cooling	Controls:		Designe	d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volume
01	02	й	03	04			05	06	07	08
Fan Name or		* *		Maximum Docign Supply	um Design Supply Airflow				Fan Power Pressure Drop	Adjustment - Table 140.4-I
Item Tag	Fan Functio	on	Qty	(CFM)	AITTOW	HP Unit ²		Design HP	Device	Design Airflow through Device (CFM)
SF	Supply	i	1	1200		BHP		0.91	NA	NA
Total System	m Design Supply /	Airflow (CF	M):	1200		ystem l (B)HP:	Design	0.91	Maximum System Fan Power (B)HP:	
System Name:	RTU-I1	Econor	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	м ў	03	04			05	06	07	08
Fan Name or				Maximum Design Supply	Airflow				Fan Power Pressure Drop A	Adjustment - Table 140.4-I
Item Tag	Fan Functio	on	Qty	(CFM)	AITTIOW HP		Unit ²	Design HP	Device	Design Airflow through Device (CFM)
SF	Supply		1	1200		E	3HP	0.91	NA	NA
Total System	Total System Design Supply Airflow (CFM): 1200		Total System (B)HP:		Design	0.91	Maximum System Fan Power (B)HP:			

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В

STATE OF CALIFORNIA Mechanical Systems

NRCC-MCH-E CERTIFICATE OF COMPLIANCE

Project Name:

CVUSD Rowland Report Page: 1355 E Rowland Ave Date Prepared: Project Address:

System Name:	RTU-K2	Econor	nizer:1	NA: <=54 kBtu/h cooling		conomizerDesigned per §140.4(e)Controls:(m)			System Fan Type:	Constant
01	02		03	04	1	05		06	07	0
Fan Name or				Maximum Design Supply Airflow		Airflow			Fan Power Pressure Drop	Adjustment - 1
Item Tag	Fan Functi	on	Qty	(CFM)		HP Unit ²		Design HP	Device	Design Airfl Device
SF	Supply	s	1	1200		I	внр	0.91	NA	N
Total System	Total System Design Supply Airflow (CFM):		M):	1/00		/stem (B)HP:	Design	0.91	Maximum System Fan Power (B)HP:	
System Name:	RTU-K3	Econor	nizer:1	NA: <=54 kBtu/h cooling	Econom Contro				System Fan Type:	Constant
01	02	а. С	03	04			05	06	07	0
Fan Name or				Maximum Dasign Sumplu	Aisflow	1.			Fan Power Pressure Drop	Adjustment - 1
Item Tag	Fan Functi	on	Qty	Maximum Design Supply (CFM)	Airnow	HP	Unit ²	Design HP	Device	Design Airfl Device
SF	Supply	ā	1	1200		I	знр	0.91	NA	N
Total System	Total System Design Supply Airflow (CFM):		M):	1/00		Total System Design (B)HP:		0.91	Maximum System Fan Power (B)HP:	

¹ FOOTNOTES: Computer room economizers must meet requirements of <u>§140.9(a)</u> and will be documented on the NRCC-PRC-E document. ² The unit used for HP must be consistent for all fans within a system.

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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Registration Provider: Energysoft Report Generated: 2022-07-29 10:57:02

STATE OF CALIFORNIA **Mechanical Systems** NRCC-MCH-E

CERTIFICATE OF COMPLIANCE

Project Name:				CV	USD Rowlan	d Report Pa	ge:			
Project Address	•			1355 E	Rowland Av	e Date Prep	ared:			
J. VENTILATIO	ON AND INI	DOOR AIR QUALITY								
A DEVELOPMENT OF A DEVE			그는 그는 소설을 가슴다. 몸을 걸 것 같아. 몸을 걸 때 있는 것을 걸 수 있다.					B for all nonresidential,	이 이 프랑지 않는 것 같은 것 같은 것 같아? 옷을 넣는 것 같아? 이 것 같아? 것 같아?	
		s, only ventialition syste nd airflows may be sho	1.771					ed to be documented in t dsheet.	nis table. In lieu of this i	able,
01			a verde reaction de contrate			e operation is need to a	2,410,000 m W W W W W W W	ching the calculations ins	tead of completing this	table
0.2		Check this box if the	project included	Nonresidenti	ial or Hotel/	Motel spa	ces			
02		Check this box if the	project included	new or altere	ed high-rise	residentia	l dwelling u	nits.		
03		Check the box if the p	project is using n	atural ventila	tion in any	nonresider	ntial or hote	el/motel spaces to meet r	equired ventilation rate	es pe
Nonresidentia	l and Hotel/	Motel Ventilation Syst	ems							
	04	1		05				06	° (1	07
	51		System Des	ign OA CFM	erren and	System	n Design	121	Air Filtration per §120	
System Name		FCU/CU-B1	Airfl	- Tel ()	2250		Air CFM	0	Provided per <u>§120.</u> Hotel/Mo	
08		09	10	11	12	13	14	15		16
		Mechanical Vent	ilation Required	per <u>§120.1(c</u>) <u>3</u> ³		Exh.	Vent per <u>§120.1(c)4</u>		
Space Name ot item Tag	o	ccupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Con <u>§120.1(d)5</u> , a	
MPR	A.c.	sembly- multiuse	3550		150	2250	0	0	DCV	
	A3.	sembly- mainase	3330		150	2250		Ŭ	Occ Sensor	1
17	Total Systen	n Required Min OA CFM	l.			2250	18	Ventilation for this	System Complies?	
	04	4		05				06	1	07
			System Des	ign ΟΔ CEM		System	n Design		Air Filtration per §120	0.1(c)
System Name		RTU-D1	Airfl		225		Air CFM	0	Provided per <u>§.</u> Hotel/	
08		09	10	11	12	13	14	15		16

Registration Number:

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STATE OF CALIFORNIA **Mechanical Systems** NRCC-MCH-E

CERTIFICATE OF COMPLIANCE		
Project Name:	CVUSD Rowland	Report Page:
Project Address:	1355 E Rowland Ave	Date Prepared:

		a			2					Q	
H. FAN SYSTE	MS & AIR ECONO	MIZERS									
System Name:	RTU-I2	Econor	nizer:1	NA: <=54 kBtu/h cooling	Econon		Designe	d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volume	
01	02		03	04	1	1	05	06	07	08	
Fan Name ar	1	с		Maximum Design Supply	Airflow				Fan Power Pressure Drop Adjustment - Table 140.4		
Fan Name or Item Tag	Fan Functio	'n	Qty	(CFM)	AITHOW	HP Unit ²		Design HP	Device	Design Airflow through Device (CFM)	
SF	Supply		1	1200			внр	0.91	NA	NA	
Total Syst	em Design Supply A	Airflow (CF	M):	1200	200 Total System Design (B)HP:		0.91	Maximum System Fan Power (B)HP:			
System Name:	RTU-I3	Econor	nizer:1	NA: <=54 kBtu/h cooling	Economizer Controls:		Designe	d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volume	
01	02	i	03	04			05	06	07	08	
Fan Name or				Maximum Design Supply Airflow					Fan Power Pressure Drop A	Adjustment - Table 140.4-B	
Item Tag	Fan Functio	'n	Qty	(CFM)	Airflow		P Unit ²	Design HP	Device	Design Airflow through Device (CFM)	
SF	Supply		1	1200			внр	0.91	NA	NA	
Total Syst	em Design Supply A	irflow (CF	M):	1200	Total S	ystem (B)HP:	Design	0.91	Maximum System Fan Power (B)HP:		
System Name:	RTU-J1	Econor	nizer:1	NA: <=54 kBtu/h cooling	Econon Contro		Designe	ed per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volume	
01	02		03	04			05	06	07	08	
Fan Name or				Maximum Design Supply	Airflow				Fan Power Pressure Drop A	Adjustment - Table 140.4-B	
Item Tag	Fan Functio	'n	Qty	(CFM)	Airflow HP Unit ²		P Unit ²	Design HP	Device	Design Airflow through Device (CFM)	
SF	Supply		1	1200			BHP	0.91	NA	NA	
Total Syst	Total System Design Supply Airflow (CFM):		M):			System Design (B)HP:		0.91	Maximum System Fan Power (B)HP:		

Registration Number:

STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

-

Project Address:

Registration Number:

Mechanical Systems

CERTIFICATE OF COMPLIANCE

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601

CVUSD Rowland Report Page: 1355 E Rowland Ave Date Prepared:

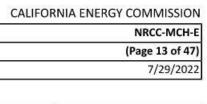
Registration Provider: Energysoft Report Generated: 2022-07-29 10:57:02

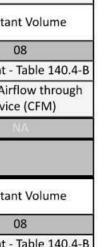
CALIFORNIA ENERGY COMMISSION

NRCC-MCH-E

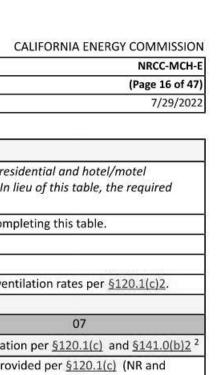
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- Table 140.4-B rflow through ice (CFM) ------



s per <u>§120.1(d)3</u>, 120.1(e)3⁶ Provided per

A: Not required space type Yes and §141.0(b)2

§120.1(d)4

(c) (NR and

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft ²)	Thermostats <u>§110.2(b)</u> & (c) ¹ , <u>§120.2(a)or</u> <u>§141.0(b)2E</u>	Shut-Off Controls <u>§120.2(e)</u>	Isolation Zone Controls §120.2(g)	Demand Response §110.12 and §120.2(b)	Supply Air Temp. Reset <u>§140.4(f)</u>	Window Interlocks per <u>§140.4(n)</u>
FCU/CU-B1	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-D1	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-D2	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-D3	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-F1	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-F2	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-F3	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-H1	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-H2	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-H3	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-C1	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-C2	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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CERTIFICATE OF	COMPLIANCE								NRCC-MCH-
Project Name:					d Report Pag				(Page 17 of 47
Project Address:	oject Address: 1355 E Rowland Ave Date Prepared: 7							7/29/202	
J. VENTILATIO	N AND INDOOR AIR QUALITY		ii ii	1					
	Mechanical Ventila	tion Required	per <u>§120.1(c)</u>	<u>3</u> ³		Exh. ۱	/ent per <u>§120.1(c)4</u>		
Space Name ot item Tag	Occupancy Type ⁴	Conditioned # of Shower Floor Area heads/ (ft ²) toilets		# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per <u>§120.1(d)3</u> , <u>§120.1(d)5</u> , and <u>§120.1(e)3</u> ⁶	
Classroom	Lecture/ postsecondary classroom	945		15	225	0	0	DCV	Provided per <u>§120.1(d)4</u>
Classicom	Lecture/ postsecondary classiooni	545		13	225	U	N	Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM	0	3		225	18	Ventilation for this	System Complies?	Yes
	04		05				06		07
		System Desi	gn OA CEM		System	Docign		Air Filtration per §120	0.1(c) and §141.0(b)2
System Name	RTU-D2	Airfl	and for a measure of	225		Air CFM	0	Provided per <u>§120.1(c)</u> (NR and Hotel/Motel))	
08	09	10	11	12	13	14	15	1	16
	Mechanical Ventila	tion Required	per <u>§120.1(c)</u>	3 ³		Exh. ۱	/ent per <u>§120.1(c)4</u>		
Space Name ot item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM		trols per <u>§120.1(d)3</u> , nd <u>§120.1(e)3</u> ⁶
		N	17.055/65777/		S8310003				

		ALCONTACT.	5453455757058777677		A CONTRACTOR OF A CONTRACTOR O				
Classroom	Lecture/ postsecondary classroom	945		15	225	0	0	DCV	Provided per §120.1(d)4
Classiconi	Lecture/ postsecondary classioon	945		15	225	U	Ŭ	Occ Sensor System Complies? Air Filtration per <u>§12</u> Provided per §	NA: Not required space type
17	Total System Required Min OA CFM		н. Н		225	18	Ventilation for this	System Complies?	Yes
	04		05				06		07
		System Desi	gn OA CEM		System	Design		Air Filtration per §12	0.1(c) and §141.0(b)2 ²
System Name	RTU-D3	Airfl	-	225		Air CFM	0	Provided per <u>§120.1(c)</u> (NR and Hotel/Motel))	
08	09	10	11	12	13	14	15		16

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601 Registration Provider: Energysoft

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STATE OF CALIFORNIA			
Mechanical Systems			
NRCC-MCH-E			CALIFORNIA ENERGY COM
CERTIFICATE OF COMPLIANCE			NF
Project Name:	CVUSD Rowland	Report Page:	(Pag
Project Address:	1355 E Rowland Ave	Date Prepared:	

H. FAN SYSTEM	VIS & AIR ECONO	MIZERS								<i></i>
System Name:	RTU-J2	Econor	nizer:1	NA: <=54 kBtu/h cooling	Econor Contr		Designe	d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volu
01	02		03	04	Ĵ	1	05	06	07	08
Fan Name or		÷		Maximum Design Supply	Airflow				Fan Power Pressure Drop	Adjustment - Table
Item Tag	Fan Functio	n	Qty	(CFM)	Aimow	HP Unit ²		Design HP	Device	Design Airflow t Device (CFN
SF	Supply		1	1200		BHP		0.91	NA	NA
Total Syste	m Design Supply A	Airflow (CF	M):	1200	Total System Desig (B)HP:		Contraction of the Contraction o	0.91	Maximum System Fan Power (B)HP:	
System Name:	RTU-J3	Econor	nizer:1	NA: <=54 kBtu/h cooling Contro				d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volu
01	02	с. — с.	03	04			05	06	07	08
Fan Name or				Maximum Docign Supply	Airflow				Fan Power Pressure Drop	Adjustment - Table
Item Tag	Fan Functio	n	Qty	Maximum Design Supply Airflow (CFM)		HP Unit ²		Design HP	Device	Design Airflow t Device (CFN
SF	Supply		1	1200		BHP		0.91	NA	NA
Total Syste	m Design Supply A	Airflow (CF	M):	1200	Total S	Total System D (B)HP:		0.91	Maximum System Fan Power (B)HP:	
System Name:	RTU-K1	Econor	nizer:1	NA: <=54 kBtu/h cooling	Econor Contr		Designe	d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volu
01	02	1	03	04			05	06	07	08
Fan Name or				Maximum Design Supply	Airflow			11.000 110 110.000	Fan Power Pressure Drop	Adjustment - Table
Item Tag	Fan Functio	n	Qty	Maximum Design Supply Airflow (CFM)		HF	² Unit ²	Design HP	Device	Design Airflow t Device (CFN
SF	Supply	1	1	1200			внр	0.91	NA	NA
Total Syste	m Design Supply A	Airflow (CF	M):	1200	Total System (B)HF			0.91	Maximum System Fan Power (B)HP:	

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Provider: Energysoft

STATE OF CALIFORNIA Mechanical Systems

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NRCC-MCH-E		

NRCC-MCH-E	ems						CALIFORM	NA ENERGY COM
CERTIFICATE OF COMPLIA	ANCE							NRO
Project Name:			CVU	ISD Rowland Report	Page:			(Page
Project Address:			1355 E R	Rowland Ave Date P	repared:			7
I. SYSTEM CONTROLS	S							
RTU-I1	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-I2	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-I3	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-J1	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-J2	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-J3	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-K1	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-K2	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-K3	Single zone	<= 25.000 ft ²	Setback	Auto Timer	4 Hour Timer	EMCS	Included	Provided

¹FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats. *Notes: Controls with a * require a note in the space below explaining how compliance is achieved. EX: system 1: SA Temp Reset: Exempt because zones compliant with §140.4(d); EXCEPTION 1 to §140.4(f)

Switch

Setback

Registration Number:

RTU-K3

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Single zone <= 25,000 ft²

Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601 EMCS

Hour Time

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Included

STATE OF CALIFORNIA Mechanical Systems

CERTIFICATE OF	COMPLIANCE								NRCC-MCH-		
Project Name:			CV	USD Rowland	wland Report Page: (Page 18 of 4						
Project Address:			1355 E	Rowland Ave	e Date Prep	ared:			7/29/202		
	IN AND INDOOR AIR QUALITY		17	<u>9</u>							
J. VENTILATIO		ation Required per <u>§120.1(c)3</u> ³				Exh.	Vent per <u>§120.1(c)4</u>				
Space Name ot item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)		# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM		trols per <u>§120.1(d)3</u> , nd <u>§120.1(e)3</u> ⁶		
Classroom	Lecture/ postsecondary classroom	945		15	225	0	0	DCV	Provided per §120.1(d)4		
Classicolli	Lecture/ possecondary classicom	945		15	225	U	0	Occ Sensor	NA: Not required space type		
17	Total System Required Min OA CFM		, 		225	18	Ventilation for this	System Complies?	Yes		
	05				06	1	07				
		System Desi	gn OA CEM		Sustam	Design		Air Filtration per §120	0.1(c) and §141.0(b)2		
System Name	RTU-F1	Airflo		225	System Design Transfer Air CFM		0		<u>120.1(c)</u> (NR and 'Motel))		
08	09	10	11	12	13	14	15	1	16		
	Mechanical Ventila	tion Required	per <u>§120.1(c</u>)	<u>3</u> ³		Exh. \	Vent per <u>§120.1(c)4</u>				
Space Name ot item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM		trols per <u>§120.1(d)3</u> , nd <u>§120.1(e)3</u> ⁶		
Classroom	Lecture/ postsecondary classroom	945		15	225	0	0	DCV	Provided per §120.1(d)4		
Classicolli	Lecture/ postsecondary classioon	545		15	225	U	U	Occ Sensor	NA: Not required space type		
17	Total System Required Min OA CFM		11		225	18	Ventilation for this	System Complies?	Yes		
	04		05				06		07		
System Name	RTU-F2	System Desi Airfle	-	225	the second se	Design Air CFM	0		0.1(c) and <u>§141.0(b)2</u> 120.1(c) (NR and		

10 11 12 13 14

Registration Number:

08

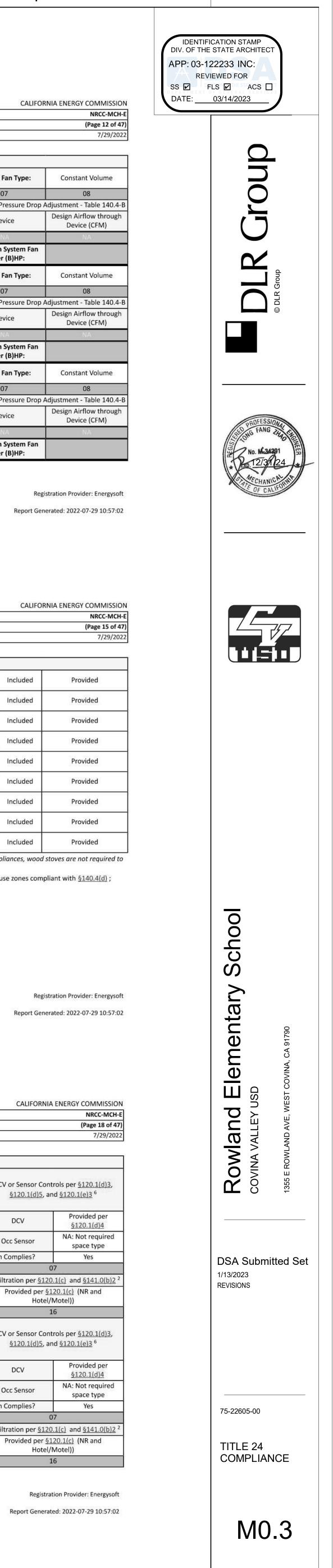
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

09

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Hotel/Motel))

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Mechanical Systems NRCC-MCH-E

CERTIFICATE OF COMPLIANCE

STATE OF CALIFORNIA

Α

Project Name: Project Address:

J. VENTILATIO	ON AND INDOOR AIR QUALITY		in i	2					
	Mechanical Ventila	tion Required	per <u>§120.1(c)</u>	<u>3</u> ³		Exh.	Vent per <u>§120.1(c)4</u>		
Space Name ot item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per <u>§120.1(d)3</u> , <u>§120.1(d)5</u> , and <u>§120.1(e)3</u> ⁶	
Classroom	Lecture/ postsecondary classroom	945		15	225	0	0	DCV	Provided per §120.1(d)4
Classicoli	Lecture/ postsecondary classicon	545		15	225	U	D	Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				225	18	Ventilation for this	System Complies?	Yes
	04		05				06	C	17
		System Design OA CFM Airflow ¹ 225			System	Design		Air Filtration per §120.1(c) and §141.0(b)2	
System Name	RTU-F3			225		Air CFM	0		<u>20.1(c)</u> (NR and Motel))
08	09	10	11	12	13	14	15	1	6
	Mechanical Ventila	tion Required	per <u>§120.1(c)</u>	<u>3</u> ³		Exh. \	Vent per <u>§120.1(c)4</u>		
Space Name ot item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Cont <u>§120.1(d)5</u> , ar	rols per <u>§120.1(d)3</u> , nd <u>§120.1(e)3</u> ⁶
Classroom	Lecture/ postsecondary classroom	945		15	225	0	0	DCV	Provided per §120.1(d)4
Classicom	Lecture/ possecondary classicon	545		15	225	Ū	0	Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				225	18	Ventilation for this	System Complies?	Yes
	04		05				06	C	17
	a Suran Anna Suran A	System Desi	gn OA CEM	°FM		Design	100	Air Filtration per §120	.1(c) and §141.0(b)2 ²
System Name	RTU-H1	Airfl	-	225		Air CFM	0	Provided per <u>§120.1(c)</u> (NR and Hotel/Motel))	
08	09	10	11	12	13	14	15	1	6

CVUSD Rowland Report Page:

1355 E Rowland Ave Date Prepared:

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CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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STATE OF CALIFORNIA **Mechanical Systems**

NRCC-MCH-E CERTIFICATE OF COMPLIANCE Project Name: CVUSD Rowland Report Page: 1355 E Rowland Ave Date Prepared: Project Address:

J. VENTILATIO	N AND INDOOR AIR QUALITY		i/i				1		
	Mechanical Ventila	tion Required	per <u>§120.1(c)</u>	<u>3</u> ³		Exh.	Vent per <u>§120.1(c)4</u>		
Space Name ot item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM		trols per <u>§120.1(d)3</u> , nd <u>§120.1(e)3</u> ⁶
Classroom	Lecture/ postsecondary classroom	1300		15	225	0	0	DCV	Provided per §120.1(d)4
Classroom	Lecture/ postsecondary classroom	1300		15	225	0	U	Occ Sensor	NA: Not required space type
17 1	Total System Required Min OA CFM				225	18	Ventilation for this	System Complies?	Yes
	04		05				06	()7
		System Desi			Suctor	Design		Air Filtration per §120).1(c) and §141.0(b)2 ²
System Name	RTU-I1	Airflo	and first a state water	225		Air CFM	0		<u>120.1(c)</u> (NR and Motel))
08	09	10	11	12	13	14	15	16	
	Mechanical Ventila	tion Required	per <u>§120.1(c)</u>	<u>3</u> ³		Exh.	Vent per §120.1(c)4		
Space Name ot item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM	0.0010.0010.0010.0010.001	trols per <u>§120.1(d)3</u> , nd <u>§120.1(e)3</u> ⁶
Classroom	Lecture/ postsecondary classroom	945		15	225	0	0	DCV	Provided per §120.1(d)4
Classicom	Lecture/ postsecondary classicom	545	c	15	225	Ū	U	Occ Sensor	NA: Not required space type
17 1	Total System Required Min OA CFM				225	18	Ventilation for this	System Complies?	Yes
	04		05				06	()7
		RTU-I2 System Design OA CFM Airflow ¹ 225		8	Suctom	Design		Air Filtration per §120).1(c) and §141.0(b)2 ²
System Name	RTU-I2				Air CFM	0	Provided per <u>§120.1(c)</u> (NR and Hotel/Motel))		
08	09	10	11	12	13	14	15		16

Registration Number:

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Registration Date/Time:

Registration Provider: Energysoft

Report Version: 2019.1.003 Schema Version: rev 20200601 Report Generated: 2022-07-29 10:57:02

STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

COMPLIANCE								
		CVI	JSD Rowland	Report Pa	ge:			(
1		1355 E	Rowland Ave	Date Prep	ared:			
ON AND INDOOR AIR QUALITY		11						
Mechanical Ventila	tion Required	per <u>§120.1(c)</u>	<u>3</u> ³		Exh. \	/ent per <u>§120.1(c)4</u>		
Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM		
Lastura (nortrocondary classroom	045		15	225		0	DCV	Prov <u>§12</u>
Lecture/ postsecondary classicom	945		15	225	U	U	Occ Sensor	NA: No spa
Total System Required Min OA CFM		St		225	18	Ventilation for this	System Complies?	
04		05				06		07
	System Desi	ign OA CEM		Suctor	Docign		Air Filtration per §12	0.1(c) and
RTU-K1		and the first second second	225			0		<u>120.1(c)</u> (N /Motel))
09	10	11	12	13	14	15	1	16
Mechanical Ventila	tion Required	per <u>§120.1(c)</u>	<u>3</u> ³		Exh. \	/ent per <u>§120.1(c)4</u>		
Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM	SP-27761.1.201.1010	
	: DN AND INDOOR AIR QUALITY Mechanical Ventila Occupancy Type ⁴ Lecture/ postsecondary classroom Total System Required Min OA CFM 04 RTU-K1 09 Mechanical Ventila	: DN AND INDOOR AIR QUALITY Mechanical Ventilation Required Occupancy Type ⁴ Conditioned Floor Area (ft ²) Lecture/ postsecondary classroom 945 Total System Required Min OA CFM 04 Conditioned Floor Area 04 Conditioned Airfl 09 10 Mechanical Ventilation Required Floor Area Conditioned Floor Area	CVU 1355 E DN AND INDOOR AIR QUALITY Mechanical Ventilation Required per §120.1(c) Mechanical Ventilation Required per §120.1(c) Conditioned # of Shower heads/ toilets Lecture/ postsecondary classroom 945 Lecture/ postsecondary classroom 945 945 945 04 05 RTU-K1 System Design OA CFM Airflow ¹ 09 10 11 Mechanical Ventilation Required per §120.1(c) Conditioned # of Shower Floor Area 4 of Shower heads/ 1355 E	CVUSD Rowland 1355 E Rowland Ave DN AND INDOOR AIR QUALITY Mechanical Ventilation Required per §120.1(c)3 ³ Occupancy Type ⁴ Conditioned Floor Area (ft ²) # of Shower heads/ toilets # of people ⁵ Lecture/ postsecondary classroom 945 15 15 Total System Required Min OA CFM 05 15 Q4 05 225 RTU-K1 System Design OA CFM Airflow ¹ 225 09 10 11 12 Mechanical Ventilation Required per §120.1(c)3 ³ Conditioned Floor Area # of Shower heads/ # of people ⁵	CVUSD Rowland Ave Date Prep 1355 E Rowland Ave Date Prep DN AND INDOOR AIR QUALITY Mechanical Ventilation Required per \$120.1(c)3 ³ Occupancy Type ⁴ Conditioned Floor Area (ft ²) # of Shower heads/ toilets # of people ⁵ Required Min OA CFM Lecture/ postsecondary classroom 945 15 225 O4 O5 225 Q4 O5 System Design OA CFM Airflow ¹ 225 System Transfer Q9 10 11 12 13 Mechanical Ventilation Required per \$120.1(c)3 ³	CVUSD Rowland Ave 1355 E Rowland Ave Date Prepared: DATE Prepared: ON AND INDOOR AIR QUALITY Exh. V Mechanical Ventilation Required per <u>\$120.1(c)3</u> ³ Exh. V Occupancy Type ⁴ Conditioned Floor Area (ft ²) # of heads/ toilets # of people ⁵ Required Min OA CFM Required Min CFM Lecture/ postsecondary classroom 945 15 225 0 Total System Required Min OA CFM 945 05 225 18 O4 05 225 18 Q System Design OA CFM Airflow ¹ 225 System Design Transfer Air CFM O9 10 11 12 13 14 Mechanical Ventilation Required per <u>\$120.1(c)3</u> ³ Exh. V Occupancy Type ⁴ Conditioned Floor Area # of heads/ # of Shower heads/ Required # of heads/ nonplo ⁵ Required Min OA	CVUSD Rowland Report Page:1355 E Rowland AveDate Prepared:ON AND INDOOR AIR QUALITYMechanical Ventilation Required per $$120.1(c)3^{-3}$ Exh. Vent per $$120.1(c)4$ Mechanical Ventilation Required $\#$ of Shower (ft ²)# of heads/ toilets# of people5Required Min OA CFMProvided per Design OC PMLecture/ postsecondary classroom94515225000Total System Required Min OA CFM 049451522518Ventilation for thisO4O506System Design Transfer Air CFM00RTU-K1System Design OA CFM Airflow1225System Design Transfer Air CFM0O9101112131415Mechanical Ventilation Required per $$120.1(c)3^{-3}$ Exh. Vent per $$120.1(c)4$ Occupancy Type4Conditioned Floor Area# of heads/ roonlo5Required Min OAProvided per Design O	$ \begin{array}{c c c c c c c c } \hline CVUSD Rowland Ave Date Prepared: \\ \hline 1355 E Rowland Ave Date Prepared: \\ \hline 1500 A read Prepared: \\ \hline 1500 A read Prepared: \\ \hline 1355 E Rowland Ave Date Prepared: \\ \hline 1355 E Rowland Ave Date Prepared: \\ \hline 1500 A read Pr$

15

225

Registration Number:

System Name

08

Classroom

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Lecture/ postsecondary classroom

RTU-K2

09

17 Total System Required Min OA CFM

04

945

05

System Design OA CFM

Airflow¹

10 11

Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601

12 13 14

225

System Design

Transfer Air CFM

0

225 18 Ventilation for this System Complies?

15

Registration Provider: Energysoft Report Generated: 2022-07-29 10:57:02

16

DCV

Occ Sensor

С

D

CERTIFICATE OF	COMPLIANCE								NRCC-MCH-E	
Project Name:			CVI	USD Rowlan	d Report Pa	ge:			(Page 20 of 47)	
Project Address:		1355 E Rowland Ave Date Prepared:								
J. VENTILATIO	ON AND INDOOR AIR QUALITY		ði í r	1		n				
	Mechanical Ventila	ation Required per <u>§120.1(c)3</u> ³				Exh. \	/ent per <u>§120.1(c)4</u>			
Space Name ot item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM		trols per <u>§120.1(d)3,</u> nd <u>§120.1(e)3</u> ⁶	
Classroom	Lecture/ postsecondary classroom	945		15	225	0	0	DCV	Provided per §120.1(d)4	
Classicolli	Lecture/ possecondary classicom	945		13	225	U	U	Occ Sensor	NA: Not required space type	
17	Total System Required Min OA CFM	Q.	3t 3		225	18	Ventilation for this	System Complies?	Yes	
	04		05				06	07		
		System Des	ign ΩΔ CEM		System	Design		Air Filtration per §120).1(c) and §141.0(b)2 ²	
System Name	RTU-H2	Airfl		225		Air CFM	0	Provided per <u>§120.1(c)</u> (NR and Hotel/Motel))		
08	09	10	11	12	13	14	15	1	16	
	Mechanical Ventila	tion Required	per §120.1(c)	3 ³		Exh. ۱	/ent per <u>§120.1(c)4</u>			
Space Name		Conditioned	# of Shower		Required			DCV or Sensor Con	trols per <u>§120.1(d)3</u> ,	

	The second se								
Space Name ot item Tag	Eloor Area beads/ # of Min OA Re		Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per <u>§120.1(d)3</u> , <u>§120.1(d)5</u> , and <u>§120.1(e)3</u> ⁶				
Classroom	Locture/ portsocondary classroom	econdary classroom 945		15	225	0	0	DCV	Provided per §120.1(d)4
Classroom	Lecture/ postsecondary classicom			15	225	U	0	Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				225	18	Ventilation for this	System Complies?	Yes
	04		05				06	C)7
		System Desi	ign OA CEM		Sustem	Design		Air Filtration per §120	.1(c) and §141.0(b)2 ²
System Name	RTU-H3	System Design OA CFM Airflow ¹ 225		225		Air CFM	0	Provided per <u>§120.1(c)</u> (NR and Hotel/Motel))	
08	09	10	11	12	13	14	15	16	

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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STATE OF CALIFORNIA **Mechanical Systems**

NRCC-MCH-E			CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name:	CVUSD Rowland	Report Page:	(Page 23 of 47)
Project Address:	1355 E Rowland Ave	Date Prepared:	7/29/2022

	Mechanical Ventila	tion Required	per <u>§120.1(c)</u>	<u>3</u> ³		Exh. \	Vent per <u>§120.1(c)4</u>			
Space Name ot item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per <u>§120.1(d)</u> §120.1(d)5, and <u>§120.1(e)3</u> ⁶		
Classroom	Lecture/ postsecondary classroom	945		15	225	0	0	DCV	Provided per §120.1(d)4	
Classroom	Lecture/ postsecondary classroom	945		15	225	U	U	Occ Sensor	NA: Not required space type	
17	Total System Required Min OA CFM				225	18	Ventilation for this	System Complies?	Yes	
	04	05					06)7	
		System Desi	σn ΟΔ CFM		System	Design		Air Filtration per §120).1(c) and <u>§141.0(b)2</u>	
System Name	RTU-I3	Airfl	an self free of the second second	225	Transfer		0		Provided per <u>§120.1(c)</u> (NR and Hotel/Motel))	
08	09	10	11	12	13	14	15	16		
	Mechanical Ventila	tion Required	per <u>§120.1(c)</u>	<u>3</u> ³	· · · · · ·	Exh. \	Vent per <u>§120.1(c)4</u>			
Space Name ot item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM		trols per <u>§120.1(d)3</u> , nd <u>§120.1(e)3</u> ⁶	
Classroom	Lecture/ postsecondary classroom	945		15	225	0	0	DCV	Provided per §120.1(d)4	
Classicolli	Lecture/ postsecondary classioon	545		15	225	U	0	Occ Sensor	NA: Not required space type	
17	Total System Required Min OA CFM				225	18	Ventilation for this	System Complies?	Yes	
	04	05					06)7	
		System Design OA CFM		System	Destan		Air Filtration per §120	0.1(c) and §141.0(b)2		
System Name	RTU-J1	Airfl	-	225	Transfer		0	Provided per <u>§120.1(c)</u> (NR and Hotel/Motel))		
08	09	10	11	12	13	14	15		16	

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Report Version: 2019.1.003

Registration Provider: Energysoft

CALIFORNIA ENERGY COMMISSION

Schema Version: rev 20200601

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Registration Date/Time:

STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

Project Name:			CV	USD Rowland	Report Pa	ge.			(Page 26 of
Project Address:	9 9			Rowland Ave	3 - 10 D			7/29/20	
			1000 -	no mond / m	June i rep				7,23,20
J. VENTILATIO	N AND INDOOR AIR QUALITY		in' i	1		i	<u>.</u>		
	Mechanical Ventila	tion Required	per <u>§120.1(c</u>	<u>3</u> ³		Exh.	Vent per <u>§120.1(c)4</u>		
Space Name ot item Tag	Occupancy Type ⁴	Conditioned # of Shower # of		# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM		trols per <u>§120.1(d)3</u> , nd <u>§120.1(e)3</u> ⁶
Classroom	Lasting (masterian dami alasman	045		15	225		0	DCV	Provided per §120.1(d)4
Classroom	Lecture/ postsecondary classroom	945		15	225	0	0	Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				225	18	Ventilation for this	System Complies?	Yes
,	04		05				06	C)7
		System Desi	gn OA CEM		Suctor	Design		Air Filtration per §120	0.1(c) and §141.0(b)
System Name	RTU-K3	Airfl	10. ST 19. ST 17. ST 19. ST 1	225		Air CFM	0		. <u>20.1(c)</u> (NR and Motel))
08	09	10	11	12	13	14	15	1	.6
	Mechanical Ventila	tion Required	per <u>§120.1(c</u>)	<u>3</u> 3		Exh.	Vent per <u>§120.1(c)4</u>		
Space Name ot item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per <u>§120.</u> §120.1(d)5, and <u>§120.1(e)3</u> ⁶	
Classroom	Lecture / nostsecondary classroom	945		15	225	0	0	DCV	Provided per §120.1(d)4
Classicolin	Lecture/ postsecondary classroom	545		15	225	U	0	Occ Sensor	NA: Not required space type
17	17 Total System Required Min OA CFM					18	Ventilation for this	Sustam Complias?	Yes

¹ FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system ² Air filtration requirements apply to the following three system types per <u>§120.1(c)1A</u> : space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing

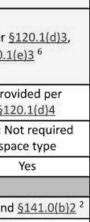
outside air to occupiable space. ³ Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence. ⁴ See Standards Tables 120.1-A and 120.1-B.

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(NR and §120.1(d)3, .1(e)3⁶

Provided per §120.1(d)4 NA: Not required space type Yes

Air Filtration per §120.1(c) and §141.0(b)2 Provided per §120.1(c) (NR and Hotel/Motel))

E

STATE OF CALIFORNIA **Mechanical Systems** NRCC-MCH-E

CERTIFICATE OF COMPLIANCE CVUSD Rowland Report Page: 1355 E Rowland Ave Date Prepared: Project Name: Project Address:

Project Address	S:		1335 E	ROWIAITU AV	e Date Prep	ared:			7/29
			ii			1			
J. VENTILATI	ON AND INDOOR AIR QUALITY Mechanical Ventila	tion Required	per 6120 1/c	2 3		Exh \	Vent per <u>§120.1(c)4</u>		
Space Name ot item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)		# of people ⁵	Required Min OA CFM	Required Provided per Design Min CFM CFM		DCV or Sensor Controls per <u>§120.1</u> §120.1(d)5, and <u>§120.1(e)3</u> ⁶	
Classical	1	945		15	225			DCV	Provided pe §120.1(d)4
Classroom	Lecture/ postsecondary classroom	945		15	225	0	0	Occ Sensor	NA: Not requi space type
17	Total System Required Min OA CFM	0;	St		225	18	Ventilation for this	System Complies?	Yes
	04	05					06		07
		System Desi	an OA CEM		Sustom	Design		Air Filtration per §12	0.1(c) and §141.0
System Name	RTU-C1	System Design OA CFM Airflow ¹		225		Air CFM	0		<u>120.1(c)</u> (NR and /Motel))
08	09	10	11	12	13	14	15	16	
	Mechanical Ventila	tion Required	per <u>§120.1(c</u>)	<u>3</u> ³		Exh. \	Vent per §120.1(c)4		
Space Name ot item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Con <u>§120.1(d)5</u> , a	trols per <u>§120.1(d</u> nd <u>§120.1(e)3</u> ⁶
Classroom	Lecture/ postsecondary classroom	1300		15	225	0	0	DCV	Provided pe §120.1(d)4
Classicolli	Lecture/ postsecondary classicon	1500		15	225	U	0	Occ Sensor	NA: Not requi space type
17	Total System Required Min OA CFM				225	18	Ventilation for this	System Complies?	Yes
	04		05				06		07
		System Design OA CFM		Sustem	Design		Air Filtration per §12	0.1(c) and §141.0	
System Name	RTU-C2				the second second second	Air CFM	0	Provided per <u>§120.1(c)</u> (NR and Hotel/Motel))	
08	09	10	11	12	13	14	15		16

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Registration Provider: Energysoft

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STATE OF CALIFORNIA Mechanical Systems

NRCC-MCH-E	N.C.							CALIFORNI	A ENERGY COMMIS
CERTIFICATE OF	COMPLIANCE								NRCC-N
Project Name:			CV	USD Rowland	Report Pa	ge:			(Page 24
Project Address			1355 E	Rowland Ave	Date Prep	ared:			7/29/
	ON AND INDOOR AIR QUALITY		ài.	-51 					
J. VENTILATIC	Mechanical Ventila	tion Poquirod	por 6120 1/c	10 3		Evb)	Vent per <u>§120.1(c)4</u>	1	
Space Name						EXII.	vent per <u>9120.1(c)4</u>	DCV or Sensor Con	trols per <u>§120.1(d)</u>
Space Name ot item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM		nd <u>§120.1(e)3</u> ⁶
Classical	[945		15	225	0	0	DCV	Provided per §120.1(d)4
Classroom	Lecture/ postsecondary classroom	945		15	225	U	0	Occ Sensor	NA: Not require space type
17	Total System Required Min OA CFM				225	18	Ventilation for this	System Complies?	Yes
	04		05				06		07
		System Desi	ian OA CEM		Custom	Design		Air Filtration per §12	0.1(c) and §141.0(l
System Name	RTU-J2	Airfl		225	System Design Transfer Air CFM		0	Provided per <u>§120.1(c)</u> (NR ar Hotel/Motel))	
08	09	10	11	12	13	14	15	1	16
	Mechanical Ventila	tion Required	per <u>§120.1(c</u>) <u>3</u> ³		Exh.	Vent per <u>§120.1(c)4</u>		
Space Name ot item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM		trols per <u>§120.1(d)</u> nd <u>§120.1(e)3</u> ⁶
Classroom	Lecture/ postsecondary classroom	945		15	225	0	0	DCV	Provided per §120.1(d)4
classroom	Lecture/ postsecondary classroom	945		15	225	U	0	Occ Sensor	NA: Not require space type
17	Total System Required Min OA CFM				225	18	Ventilation for this	System Complies?	Yes
	04	05				06		07	
		Sustam Dasi		S	Cution	Destina		Air Filtration per §12	0.1(c) and <u>§141.0(</u>
System Name	RTU-J3	System Desi Airfl		225		Design Air CFM	0		<u>120.1(c)</u> (NR and /Motel))
08	09	10	11	12	13	14	15	-	16

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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STATE OF CALIFORNIA Mechanical Systems

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NRCC-MCH-E		CALIFORNIA ENERGY COMM
CERTIFICATE OF COMPLIANCE		NRCC-
Project Name: CVUSD Rowlar	nd Report Page:	(Page 27
Project Address: 1355 E Rowland Av	ve Date Prepared:	7/2

J. VENTILATION AND INDOOR AIR QUALITY

⁵ For lecture halls with fixed seating, the expected number of occupants shall be shall be determined in accordance with the California Building Code. ⁶ <u>§120.2(e)3</u> requires systems serving rooms that are required by <u>§130.1(c)</u> to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller, multipurpose rooms less than 1,000 ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by §130.1(c).

K. TERMINAL BOX CONTROLS

This section does	not apply to th	nis project.						
L. DISTRIBUTIO	N (DUCTWOR	K and PIPING)	- X:					
This table is used	to show compl	liance with mando	atory pipe insulation requir	ements found in <u>§120.3</u> d	and prescriptive requirements found in <u>§140.4(I)</u> for duct leaka	ige testing.		
Duct Leakage Sea	ling							
The answers to th	ne questions be	elow apply to the	following duct systems:	FCU/CU-B1	Duct leakage testing triggered for these systems?	No		
11	No	The scope of	the project includes only d	uct systems serving health	ncare facilities			
12	Yes	Duct system p	provides conditioned air to	an occupiable space for a	constant volume, single zone, space-conditioning system.			
13	Yes	The space cor	nditioning system serves le	ss than 5,000 ft ² of condit	ioned floor area.			
14	No	The combined	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:					
			Outdoors					
					or greater than the u-factor of the ceiling, or if the roof does n ixed vents or openings to the outside/ unconditioned spaces	ot meet the		
			In an unconditioned cr	awl space				
			In other unconditioned	d spaces				
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.						
16			전 전 것은 것이다. 신경 안전 것이 가장 가지 않는 것이 안 가지 않았다. 것이 같아.	그는 것은 동물에 가는 것이 같은 것은 것이 많은 것은 것이 많이 많을까?	ocumented to have been previously sealed as confirmed throu ence Nonresidential Appendix NA2.	ugh field verifi		

Registration Number:

17

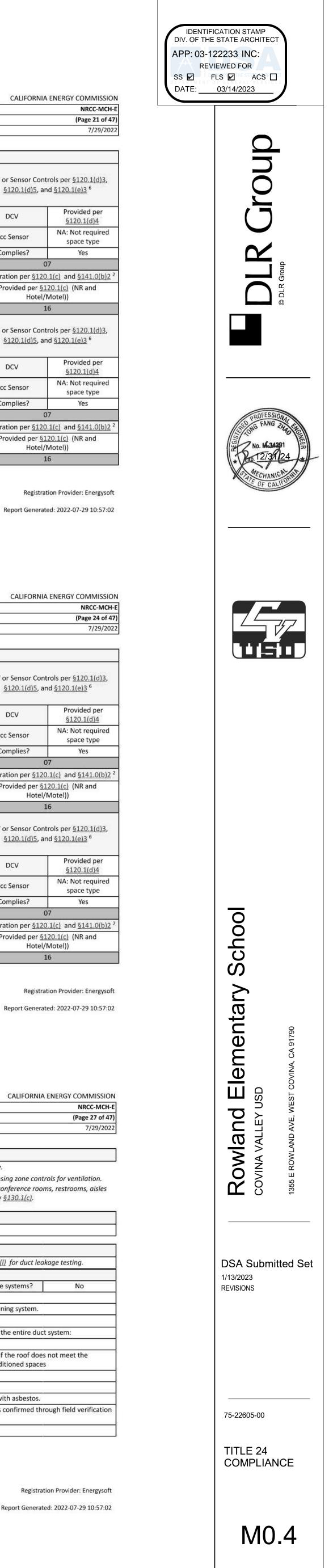
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Yes Duct system shall be sealed in acordance with the California Mechanical Code

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Registration Provider: Energysoft Report Generated: 2022-07-29 10:57:02

20.1(d)3, 2)3 6 vided per 0.1(d)4 ot required e type Yes



NRCC-MCH-E	ystems			CALIFORNIA E	ENERGY COMMISSIO			
CERTIFICATE OF COM	PLIANCE				NRCC-MCH			
Project Name:			CVUSD Rowland Report Page	:	(Page 28 of 4			
Project Address:		1:	355 E Rowland Ave Date Prepar	ed:	7/29/20			
L. DISTRIBUTION	(DUCTWOR	K and PIPING)						
The answers to the	questions be	low apply to the following duct systems:	RTU-D1	Duct leakage testing triggered for these systems?	No			
11	No	The scope of the project includes only c	luct systems serving healthca	are facilities				
12	Yes	Duct system provides conditioned air to	an occupiable space for a co	onstant volume, single zone, space-conditioning system.				
13	Yes	The space conditioning system serves le	ess than 5,000 ft ² of conditio	ned floor area.				
14	No	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:						
6	3	Outdoors						
				greater than the u-factor of the ceiling, or if the roof does ed vents or openings to the outside/ unconditioned spaces	not meet the			
		In an unconditioned c	rawl space					
		In other unconditione	d spaces					
15		The scope of the project includes exten	ding an existing duct system,	which is constructed, insulated or sealed with asbestos.				
16	8. S	The scope of the project includes an exi and diagnostic testing in accordance wi		umented to have been previously sealed as confirmed thro ce Nonresidential Appendix NA2.	ugh field verificati			
17	Yes	Duct system shall be sealed in acordance	e with the California Mecha	nical Code				
The answers to the	questions be	low apply to the following duct systems:	RTU-D2	Duct leakage testing triggered for these systems?	No			
11	No	The scope of the project includes only c	luct systems serving healthca	are facilities				
12	Yes	Duct system provides conditioned air to	an occupiable space for a co	onstant volume, single zone, space-conditioning system.				
13	Yes	The space conditioning system serves le	ess than 5,000 ft ² of conditio	ned floor area.				
14	No	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:						
		Outdoors						
				greater than the u-factor of the ceiling, or if the roof does ed vents or openings to the outside/ unconditioned spaces	not meet the			
		In an unconditioned c	rawl space					
		In other unconditione	d spaces					
15		The scope of the project includes exten	ding an existing duct system,	which is constructed, insulated or sealed with asbestos.				
16		The scope of the project includes an exi and diagnostic testing in accordance wi		umented to have been previously sealed as confirmed thro	ugh field verificati			

Yes Duct system shall be sealed in acordance with the California Mechanical Code

Registration Number:

17

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Provider: Energysoft Report Generated: 2022-07-29 10:57:02

Registration Date/Time:

CERTIFICATE OF COM	MPLIANCE					NRCC-MCH-I		
Project Name:				CVUSD Rowland Report Pag	ye:	(Page 31 of 47		
Project Address: 1355 E Rowland Ave Date Prepared:								
. DISTRIBUTION	(DUCTWOR	K and PIPING)			· · · · · · · · · · · · · · · · · · ·			
The answers to the	e questions be	low apply to the f	ollowing duct systems:	RTU-H1	Duct leakage testing triggered for these systems?	No		
11	No	The scope of t	he project includes only	duct systems serving health	care facilities			
12	Yes	Duct system p	rovides conditioned air to	o an occupiable space for a	constant volume, single zone, space-conditioning system.			
13	Yes	The space con	ditioning system serves	ess than 5,000 ft ² of conditi	oned floor area.			
14	No	The <u>combined</u>	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:					
	59		Outdoors					
					or greater than the u-factor of the ceiling, or if the roof does xed vents or openings to the outside/ unconditioned spaces			
			In an unconditioned o	rawl space				
			In other unconditione	ed spaces				
15			· · ·		n, which is constructed, insulated or sealed with asbestos.			
16			그는 이상은 그는 사람이 많은 것이 같은 것은 것을 다 가지 않는 것을 가지 않는 것이 없는 것이 없다. 것은 것이 없는 것을 다 있다. 것은 것이 없는 것을 다 있다. 것은 것이 없는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없다. 것이 없는 것 않이		ocumented to have been previously sealed as confirmed three the second sec	ough field verification		
17	Yes	Duct system sl	hall be sealed in acordan	ce with the California Mech	anical Code			
he answers to the	e questions be	low apply to the f	ollowing duct systems:	RTU-H2	Duct leakage testing triggered for these systems?	No		
11	No	The scope of t	he project includes only	duct systems serving health	care facilities			
12	Yes	Duct system p	rovides conditioned air to	o an occupiable space for a	constant volume, single zone, space-conditioning system.			
13	Yes	The space con	ditioning system serves l	ess than 5,000 ft ² of conditi	oned floor area.			
14	No	Q	surface area of the duct	s in the following locations i	s more than 25% of the total surface area of the entire duct	system:		
			Outdoors					
					or greater than the u-factor of the ceiling, or if the roof does xed vents or openings to the outside/ unconditioned spaces			
			In an unconditioned o	rawl space				
			In other unconditione	ed spaces				
15		The scope of t	he project includes exter	ding an existing duct syster	n, which is constructed, insulated or sealed with asbestos.			
16					ocumented to have been previously sealed as confirmed three the second sec	ough field verification		

Registration Date/Time:

and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2. Duct system shall be sealed in acordance with the California Mechanical Code

Registration Number:

17

Yes

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20200601

STATE OF CALIFORNIA

Mechanical Systems

Mechanical S	iystems				CALIFORNIA ENERG
CERTIFICATE OF COM	VIPLIANCE				
Project Name:				CVUSD Rowland Report	Page:
Project Address:			1	repared:	
L. DISTRIBUTION	I (DUCTWOR	K and PIPING)	19 N.		
The answers to the	e questions be	low apply to the	following duct systems:	RTU-I2	Duct leakage testing triggered for these systems?
11	No	The scope of	the project includes only	duct systems serving hea	althcare facilities
12	Yes	Duct system	provides conditioned air to	o an occupiable space fo	r a constant volume, single zone, space-conditioning system.
13	Yes	The space co	nditioning system serves l	ess than 5,000 ft ² of con	ditioned floor area.
14	No	The combine	d surface area of the duct	s in the following locatio	ns is more than 25% of the total surface area of the entire duct system
	5%		Outdoors		
					actor greater than the u-factor of the ceiling, or if the roof does not me as fixed vents or openings to the outside/ unconditioned spaces
			In an unconditioned of	crawl space	
			In other unconditione	ed spaces	
15		The scope of	the project includes exter	nding an existing duct sys	stem, which is constructed, insulated or sealed with asbestos.

The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos. The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through fi and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2. 17 Yes Duct system shall be sealed in acordance with the California Mechanical Code The answers to the questions below apply to the following duct systems: RTU-I3 Duct leakage testing triggered for these systems? 11 No The scope of the project includes only duct systems serving healthcare facilities Yes Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system. 12 13 Yes The space conditioning system serves less than 5,000 ft² of conditioned floor area. No The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system 14 Outdoors In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof does not mee

requirements of <u>§140.3(a)1B</u> or if the roof has fixed vents or openings to the outside/ unconditioned spaces In an unconditioned crawl space In other unconditioned spaces The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos. 15 The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field 16 and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2. Yes Duct system shall be sealed in acordance with the California Mechanical Code 17

Registration Number:

16

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Date/Time:

Registration Provider: Energysoft Report Generated: 2022-07-29 10:57:02

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NRCC-MCH-E		CALIFOR	NIA ENERGY COMMISS
CERTIFICATE OF CON	IPLIANCE	$\tilde{\mathbf{r}}$	NRCC-MC
Project Name:		CVUSD Rowland Report Page:	(Page 29 of
Project Address:		1355 E Rowland Ave Date Prepared:	7/29/2
L. DISTRIBUTION	(DUCTWOR	K and PIPING)	
The answers to the	questions be	low apply to the following duct systems: RTU-D3 Duct leakage testing triggered for these systems?	No
11	No	The scope of the project includes only duct systems serving healthcare facilities	80
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system	n.
13	Yes	The space conditioning system serves less than 5,000 ft ² of conditioned floor area.	
14	No	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire of	duct system:
		Outdoors	
		In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof or requirements of <u>§140.3(a)1B</u> or if the roof has fixed vents or openings to the outside/ unconditioned space.	
		In an unconditioned crawl space	
		In other unconditioned spaces	-00
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbesto	os.
16		The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.	through field verificat
17	Yes	Duct system shall be sealed in acordance with the California Mechanical Code	
The answers to the	questions be	low apply to the following duct systems: RTU-F1 Duct leakage testing triggered for these systems?	No
11	No	The scope of the project includes only duct systems serving healthcare facilities	
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system	n.
13	Yes	The space conditioning system serves less than 5,000 ft ² of conditioned floor area.	No.
14	No	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire of	duct system:
		Outdoors	
		In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof or requirements of <u>§140.3(a)1B</u> or if the roof has fixed vents or openings to the outside/ unconditioned space.	
		In an unconditioned crawl space	Y:
		In other unconditioned spaces	<i>W</i>
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbesto	05.
16		The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.	through field verificat
17	Yes	Duct system shall be sealed in acordance with the California Mechanical Code	

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

STATE OF CALIFORNIA

NRCC-MCH-E

Mechanical Systems

Report Version: 2019.1.003 Schema Version: rev 20200601

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NRCC-MCH	
(Page 34 of 4	
s not meet the s	
No	riggered for these systems?
1015-101	
	e, space-conditioning system.
stem:	I surface area of the entire duct sy
ot meet the	of the ceiling, or if the roof does n
	outside/ unconditioned spaces
ah fiald unvification	lated or sealed with asbestos.
gh field verification	viously sealed as confirmed throu
gh field verification	
	viously sealed as confirmed throu
	viously sealed as confirmed throu x NA2.
	viously sealed as confirmed throu x NA2.
	viously sealed as confirmed throu x NA2. riggered for these systems?
No	viously sealed as confirmed throu x NA2. riggered for these systems?
No	viously sealed as confirmed throu x NA2. riggered for these systems? e, space-conditioning system.
No vstem:	viously sealed as confirmed throu x NA2. riggered for these systems? e, space-conditioning system. I surface area of the entire duct sy
No vstem:	viously sealed as confirmed throu x NA2. riggered for these systems? e, space-conditioning system. I surface area of the entire duct sy
No vstem:	viously sealed as confirmed throu x NA2. riggered for these systems? e, space-conditioning system. I surface area of the entire duct sy
No vstem:	viously sealed as confirmed throu x NA2. riggered for these systems? e, space-conditioning system. I surface area of the entire duct sy of the ceiling, or if the roof does no outside/ unconditioned spaces
No rstem: ot meet the	viously sealed as confirmed throu x NA2. riggered for these systems? e, space-conditioning system. I surface area of the entire duct sy

inteo interrite										
CERTIFICATE OF CON	IPLIANCE			0 0		NF				
Project Name:				CVUSD Rowland Report Page:		(Pag				
Project Address:		1355 E Rowland Ave Date Prepared:								
. DISTRIBUTION	(DUCTWORK	and PIPING)								
The answers to the	questions belo	w apply to the fol	lowing duct systems:	RTU-H3	Duct leakage testing triggered for these systems?	No				
11	No	The scope of the	The scope of the project includes only duct systems serving healthcare facilities							
12	Yes	Duct system pro	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.							
13	Yes	The space condi	tioning system serves le	ess than 5,000 ft ² of condition	ed floor area.					
14	No	The combined s	urface area of the ducts	s in the following locations is m	nore than 25% of the total surface area of the entire due	t system:				
			Outdoors			6				
				NY 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	reater than the u-factor of the ceiling, or if the roof doe I vents or openings to the outside/ unconditioned space					
			In an unconditioned c	rawl space						
		In other unconditioned spaces								
15		The scope of the	e project includes exten	ding an existing duct system, v	which is constructed, insulated or sealed with asbestos.	8				
16					mented to have been previously sealed as confirmed th e Nonresidential Appendix NA2.	rough field ve				
17	Yes	Duct system sha	II be sealed in acordance	ce with the California Mechani	cal Code					
The answers to the	questions belo	w apply to the fol	lowing duct systems:	RTU-C1	Duct leakage testing triggered for these systems?	No				
11	No	The scope of the	e project includes only o	duct systems serving healthcar	e facilities	а.				
12	Yes	Duct system pro	vides conditioned air to	o an occupiable space for a cor	nstant volume, single zone, space-conditioning system.					
13	Yes	The space condi	tioning system serves le	ess than 5,000 ft ² of conditione	ed floor area.	0 72				
14	No	The combined s	urface area of the ducts	s in the following locations is m	nore than 25% of the total surface area of the entire due	t system:				
			Outdoors							
				이 것을 잘 하는 것 같아요. 이 것 같아요. 이 것 같아요. 이 집에 있는 것은 것을 많이 없는 것 같아. 이 것 🔽	reater than the u-factor of the ceiling, or if the roof doe I vents or openings to the outside/ unconditioned space					
			In an unconditioned c	rawl space		<i>x</i>				
			In other unconditione	ed spaces						
15		The scope of the	e project includes exten	ding an existing duct system, v	which is constructed, insulated or sealed with asbestos.					
16					mented to have been previously sealed as confirmed th e Nonresidential Appendix NA2.	rough field ve				
17	Yes	Duct system sha	II be sealed in acordand	ce with the California Mechani	cal Code	<i>a</i>				

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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NRCC-MCH-E						CALIFORNIA	ENERGY COMMISSIO		
CERTIFICATE OF CO	MPLIANCE						NRCC-MCH		
Project Name:				CVUSD Rowland	Report Page:		(Page 35 of 4)		
Project Address:			1	355 E Rowland Ave	Date Prepared	d:	7/29/202		
L. DISTRIBUTION	(DUCTWOR	(and PIPING)							
The answers to th	e questions be	ow apply to the fol	lowing duct systems:	RTU-J	1	Duct leakage testing triggered for these systems?	No		
11	No	The scope of the	project includes only	duct systems serv	ing healthcar	e facilities			
12	Yes	Duct system pro	vides conditioned air t	o an occupiable s	pace for a cor	nstant volume, single zone, space-conditioning system.			
13	Yes	The space condi	tioning system serves l	ess than 5,000 ft ²	of condition	ed floor area.			
14	No	The combined s	urface area of the duct	s in the following	locations is n	nore than 25% of the total surface area of the entire duc	t system:		
	89). 199		Outdoors						
						reater than the u-factor of the ceiling, or if the roof doe			
				the second state and second state	roof has fixed	I vents or openings to the outside/ unconditioned space	s		
			In an unconditioned						
			In other uncondition	entre brecht in der der					
15		· · · · · · · · · · · · · · · · · · ·	• • • • • • • • • • • • • • • • • • •	-		which is constructed, insulated or sealed with asbestos.			
16		이 것은 것이 집안한 집안 가지 않는 것이 같아요. 것이 같아요. 이 것은 것이 같아?	동안 이렇게 해야 하는 것 같은 것은 것을 가지 않는 것 이렇게 잘 했다. 가지 않는 것 같은 것이 같이 많이			mented to have been previously sealed as confirmed the e Nonresidential Appendix NA2.	rough field verification		
17	Yes	Duct system sha	II be sealed in acordan	ce with the Califo	rnia Mechani	cal Code			
The answers to th	e questions bel	ow apply to the fol	lowing duct systems:	RTU-J	2	Duct leakage testing triggered for these systems?	No		
11	No	The scope of the	project includes only	duct systems serv	ing healthcar	e facilities			
12	Yes	Duct system pro	vides conditioned air t	o an occupiable s	pace for a cor	nstant volume, single zone, space-conditioning system.			
13	Yes	The space condi	tioning system serves l	ess than 5,000 ft ²	of condition	ed floor area.			
14	No	The <u>combined</u> s	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:						
			Outdoors						
					같은 일상은 것은 것은 것은 것을 같이 없는 것이 없다.	reater than the u-factor of the ceiling, or if the roof does I vents or openings to the outside/ unconditioned space			
			In an unconditioned	crawl space					
			In other uncondition	ed spaces			0		
15		The scope of the	project includes exter	nding an existing o	luct system, v	which is constructed, insulated or sealed with asbestos.			
16				· · · · · · · · · · · · · · · · · · ·		mented to have been previously sealed as confirmed the Nonresidential Appendix NA2.	rough field verification		
17	Yes	Duct system sha	Il be sealed in acordan	ce with the Califo	rnia Mechani	cal Code			

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Provider: Energysoft Report Generated: 2022-07-29 10:57:02

Project Name: CVUSD Rowland Report Page: 1355 E Rowland Ave Date Prepared: Project Address: L. DISTRIBUTION (DUCTWORK and PIPING) The answers to the questions below apply to the following duct systems: RTU-F2 Duct leakage testing triggered for these systems? No No The scope of the project includes only duct systems serving healthcare facilities 11 12 Yes Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system. Yes The space conditioning system serves less than 5,000 ft² of conditioned floor area. 13 No The <u>combined</u> surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system: 14 Outdoors In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces In an unconditioned crawl space In other unconditioned spaces 15 The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos. The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification 16 and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2. Yes Duct system shall be sealed in acordance with the California Mechanical Code 17 The answers to the questions below apply to the following duct systems: Duct leakage testing triggered for these systems? RTU-F3 No No The scope of the project includes only duct systems serving healthcare facilities 11 12 Yes Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system. 13 Yes The space conditioning system serves less than 5,000 ft² of conditioned floor area. 14 No The <u>combined</u> surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system: Outdoors In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces In an unconditioned crawl space In other unconditioned spaces 15 The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos. The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification 16 and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.

Yes Duct system shall be sealed in acordance with the California Mechanical Code

Registration Number:

17

STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

Project Address:

Mechanical Systems

CERTIFICATE OF COMPLIANCE

11

12

L. DISTRIBUTION (DUCTWORK and PIPING)

STATE OF CALIFORNIA

NRCC-MCH-E

Mechanical Systems

CERTIFICATE OF COMPLIANCE

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

The answers to the questions below apply to the following duct systems:

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CVUSD Rowland Report Page:

1355 E Rowland Ave Date Prepared:

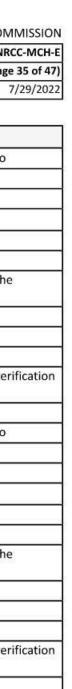
RTU-C2

Yes Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.

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Duct leakage testing triggered for these systems?

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	(Page 32 of 47
	7/29/2022
austama?	Ne
systems?	No
ing system.	
he entire duct	t system:
the roof does tioned spaces	s not meet the
th asbestos.	
	ough field verification
	ough field verification
confirmed thr systems?	
confirmed thr	
confirmed thr systems?	No
systems? ing system. he entire duct	No t system:
confirmed thr systems? ing system. he entire duct	No t system:
systems? ing system. he entire duct	No t system:



13	Yes	The space conditioning system serves less than 5,000 ft ² of conditioned floor area.							
14	No	The <u>combined</u> surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:							
	- 63%		Outdoors						
						eater than the u-factor of the ceiling, or if the roof does n vents or openings to the outside/ unconditioned spaces	ot meet the		
			In an unconditioned o	rawl space					
			In other unconditione	ed spaces					
15		The scope of	the project includes exter	nding an existing duct syste	em, w	hich is constructed, insulated or sealed with asbestos.			
16			전 옷을 위해 한 것 같아요. 아이는 것 같은 것 같은 것 같아요. 것 같아요. 정말 것 같은 것 같아요. 것 같			nented to have been previously sealed as confirmed throu Nonresidential Appendix NA2.	ugh field verifica		
17	Yes	Duct system s	shall be sealed in acordan	ce with the California Mee	chanic	al Code			
he answers to th	ne questions be	low apply to the	following duct systems:	RTU-I1		Duct leakage testing triggered for these systems?	No		
11	No	The scope of	the project includes only	duct systems serving heal	thcare	facilities			
12	Yes	Duct system p	provides conditioned air to	o an occupiable space for	a cons	stant volume, single zone, space-conditioning system.			
13	Yes	The space co	nditioning system serves l	ess than 5,000 ft ² of cond	itione	d floor area.			
14	No	The combined	d surface area of the duct	s in the following location	s is mo	ore than 25% of the total surface area of the entire duct s	ystem:		
			Outdoors						
					100000000000	eater than the u-factor of the ceiling, or if the roof does n vents or openings to the outside/ unconditioned spaces	ot meet the		
			In an unconditioned o	rawl space					
			In other unconditione	ed spaces					
15		The scope of	the project includes exter	nding an existing duct syste	em, w	hich is constructed, insulated or sealed with asbestos.			
16			cope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verifica liagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.						
17	Yes	Duct system s	shall be sealed in acordan	ce with the California Mer	hanic	al Code			

No The scope of the project includes only duct systems serving healthcare facilities

Registration Number: Registration Date/Time: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20200601

STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

CERTIFICATE OF COM	PLIANCE					NRCC-N (Page 36				
Project Name:		CVUSD Rowland Report Page:								
Project Address:			1	355 E Rowland Ave Date Prepare	d:	7/29				
. DISTRIBUTION		(and DIDING)								
	<u>.</u>			DTU ID						
		low apply to the follo		RTU-J3	Duct leakage testing triggered for these systems?	No				
11	No		e scope of the project includes only duct systems serving healthcare facilities act system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.							
12	Yes									
13	Yes			ess than 5,000 ft ² of condition						
14	No			in the following locations is r	nore than 25% of the total surface area of the entire duct	system:				
			Outdoors							
					greater than the u-factor of the ceiling, or if the roof does d vents or openings to the outside/ unconditioned spaces					
			n an unconditioned c	rawl space						
			n other unconditione	d spaces	2. A 3					
15		The scope of the p	roject includes exten	ding an existing duct system,	which is constructed, insulated or sealed with asbestos.					
16					mented to have been previously sealed as confirmed thro e Nonresidential Appendix NA2.	ough field verifica				
17	Yes	Duct system shall	pe sealed in acordance	e with the California Mechan	ical Code					
The answers to the	questions be	low apply to the follo	wing duct systems:	RTU-K1	Duct leakage testing triggered for these systems?	No				
11	No	The scope of the p	roject includes only a	luct systems serving healthca	re facilities					
12	Yes	Duct system provi	des conditioned air to	an occupiable space for a co	nstant volume, single zone, space-conditioning system.					
13	Yes	The space condition	ning system serves le	ess than 5,000 ft ² of condition	ed floor area.					
14	No	The <u>combined</u> surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:								
			Outdoors							
					greater than the u-factor of the ceiling, or if the roof does d vents or openings to the outside/ unconditioned spaces					
			n an unconditioned c	rawl space						
			n other unconditione	d spaces						
15		The scope of the p	roject includes exten	ding an existing duct system,	which is constructed, insulated or sealed with asbestos.					
16					mented to have been previously sealed as confirmed thro e Nonresidential Appendix NA2.	ough field verifica				
17	Yes			e with the California Mechan						

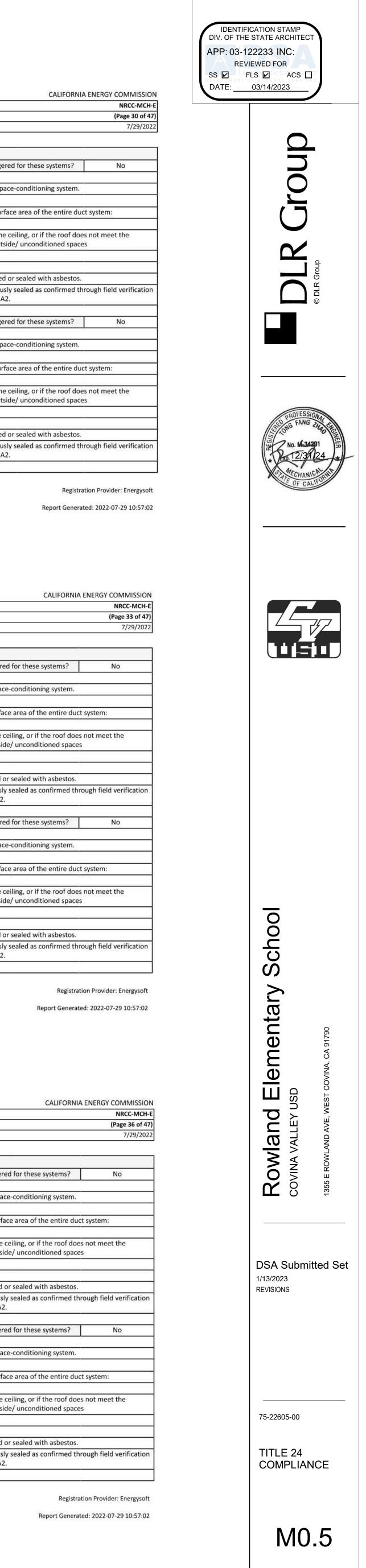
Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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Registration Date/Time:

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CERTIFICATE OF COM	DUANCE					CALI	FORNIA ENERGY	NR
Project Name: Project Address:	PLIANCE		1:	CVUSD Rowland Report Page: 355 E Rowland Ave Date Prepared	d:			(Page
L. DISTRIBUTION		and PIRING)	-1				i.	
The answers to the	questions belo	ow apply to the fol	lowing duct systems:	RTU-K2		sting triggered for these system	ms?	No
11 12	No Yes			duct systems serving healthcar an occupiable space for a cor		le zone, space-conditioning sy	stem.	
13 14	Yes No		<u> </u>	ess than 5,000 ft ² of condition s in the following locations is n		he total surface area of the ent	tire duct system:	
	2		Outdoors In a space directly und	der a roof that has a U-factor g	reater than the u-f	actor of the ceiling, or if the ro	oof does not mee	et the
			requirements of §140 In an unconditioned c		l vents or openings	to the outside/ unconditioned	d spaces	
15		The scope of the	In other unconditione project includes exten		which is constructe	d, insulated or sealed with asb	estos.	
16				isting duct system that is docu th procedures in the Reference		en previously sealed as confirm ppendix NA2.	med through fiel	ld ver
17 The answers to the	Yes questions belo		II be sealed in acordand lowing duct systems:	e with the California Mechani RTU-K3		sting triggered for these system	ms?	No
11 12	No Yes			duct systems serving healthcar o an occupiable space for a cor		le zone, space-conditioning sy	stem.	
13 14	Yes No	The space condi	tioning system serves le	ess than 5,000 ft ² of condition	ed floor area.	he total surface area of the ent		_
14	NO		Outdoors					
			requirements of §140	.3(a)1B or if the roof has fixed	일을 사람이 많은 것은 것을 위해 집에 많이	actor of the ceiling, or if the ro to the outside/ unconditioned		et the
			In an unconditioned c In other unconditione	d spaces		al familian film for the second		
15 16		The scope of the	e project includes an ex	isting duct system that is docu	mented to have be	d, insulated or sealed with asb een previously sealed as confirm		ld ve
17	Yes			th procedures in the Reference ce with the California Mechani		ppenaix NA2.	7 7	
Registration Number				Registration Date/Time	2:	1	Registration Provid	der: E
CA Building Energy E	fficiency Standa	rds - 2019 Nonreside	ential Compliance	Report Version: 2019.1 Schema Version: rev 20		Report	Generated: 2022-(07-29
			S OF ACCEPTANCE	1355 E Rowland Ave Date Prepar				
These documents	must be provi	ded to the building	inspector during const	bles of this document. If any se ruction and can be found onlin cuments/Nonresidential_Docu	ne at	e changed, please explain why i	in Table E Additio	onal
	3737		Form/Title			Systems/Spaces To Be Field Verified	Field I Pass	nspe
volume single zor	IE HVAC Syste	ins are included in	the scope, permit app	icant should move this form to	J TES .	3-TON; RTU-D2 CARRIER 3-TON; RTU-D3 CARRIER 3-TON; RTU-F1 CARRIER 3-TON; RTU-F3 CARRIER 3-TON; RTU-F3 CARRIER 3-TON; RTU-H1 CARRIER 3-TON; RTU-H3 CARRIER 3-TON; RTU-H3 CARRIER 3-TON; RTU-C1 CARRIER 3-TON; RTU-C1 CARRIER 3-TON; RTU-C2 CARRIER 3-TON; RTU-I1 CARRIER 3-TON; RTU-I1 CARRIER 3-TON; RTU-I1 CARRIER 3-TON; RTU-J1 CARRIER		
Registration Numb CA Building Energy		dards - 2019 Nonresi	dential Compliance	Registration Date/Tin Report Version: 2019 Schema Version: rev	0.1.003	3-TON; RTU-K3 CARRIER 3-TON; Repor	Registration Pro	
STATE OF CALIFORNIA Mechanical S NRCC-MCH-E	17).					CAI	LIFORNIA ENERG	
Project Name: Project Address:	VIPLIANCE			CVUSD Rowland Report Page 1355 E Rowland Ave Date Prepare				N (Pa
Selections have be	en made base	d on information p				changed, please explain why i	n Table E Additic	onal
				ruction and can be found onlin cuments/Nonresidential_Docu		Systems/Spaces To Be Field Verified	Field Ir Pass	nspe
NRCA-MCH-11-A A	utomatic Den	nand Shed Control	5			FCU/CU-B1; RTU-D1 CARRIER 3-TON; RTU-D2 CARRIER 3-TON; RTU-D3 CARRIER 3-TON; RTU-F1 CARRIER 3-TON; RTU-F1 CARRIER 3-TON; RTU-F3 CARRIER 3-TON; RTU-H1 CARRIER 3-TON; RTU-H1 CARRIER 3-TON; RTU-H3 CARRIER 3-TON; RTU-H3 CARRIER 3-TON; RTU-C1 CARRIER	A CONTRACTOR	

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601

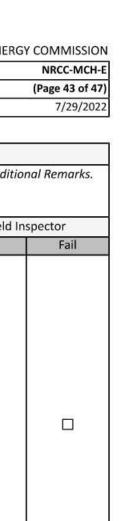
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Mechanical Systems		CAL	IFORNIA ENER	GY COMMIS
CERTIFICATE OF COMPLIANCE	Ĩ			NRCC-N
Project Name:	CVUSD Rowland Report Page:			(Page 38
Project Address: 1355	5 E Rowland Ave Date Prepared:			7/29
M. COOLING TOWERS				
This section does not apply to this project.				
N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION				
Selections have been made based on information provided in previous tables of These documents must be provided to the building inspector during construction https://www.energy.ca.gov/title24/2019standards/2019_compliance_docum	ion and can be found online at	e changed, please explain why in	n Table E Additi	onal Remai
Form/Titl	le		Field Insp Pass	pector Fail
NRCI-MCH-01-E - Must be submitted for all buildings				
Registration Number:	Registration Date/Time:		Registration Pro	ovider: En
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601		Registration Pro	
	Report Version: 2019.1.003	Report		2-07-29 10 GY COMM
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E CERTIFICATE OF COMPLIANCE	Report Version: 2019.1.003 Schema Version: rev 20200601	Report	t Generated: 202	2-07-29 10: GY COMMI NRCC-
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E CERTIFICATE OF COMPLIANCE Project Name:	Report Version: 2019.1.003	Report	t Generated: 202	2-07-29 10 GY COMM NRCC (Page 4
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E CERTIFICATE OF COMPLIANCE Project Name:	Report Version: 2019.1.003 Schema Version: rev 20200601 CVUSD Rowland Report Page:	Report	t Generated: 202	2-07-29 10 GY COMIV NRCC (Page 4
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E CERTIFICATE OF COMPLIANCE Project Name:	Report Version: 2019.1.003 Schema Version: rev 20200601 CVUSD Rowland Report Page:	Report	t Generated: 202	2-07-29 10 GY COMM
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CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E CERTIFICATE OF COMPLIANCE Project Name: CERTIFICATE OF COMPLIANCE Project Address: CONTRACT CO	Report Version: 2019.1.003 Schema Version: rev 20200601 CVUSD Rowland Report Page: E Rowland Ave Date Prepared: of this document. If any selection needs to be fon and can be found online at	Report CAL	t Generated: 202	2-07-29 10 GY COMIV NRCC (Page 4 7/2

Form/Title	Verified	Pass
NRCA-MCH-05-A - Air Economizer Controls	RTU-D1 CARRIER 3-TON;	k
novem sustanting with the event of the control of the state of the sta	RTU-D2 CARRIER 3-TON;	
	RTU-D3 CARRIER 3-TON;	
	RTU-F1 CARRIER 3-TON;	
	RTU-F3 CARRIER 3-TON;	
	RTU-F3 CARRIER 3-TON;	
	RTU-H1 CARRIER 3-TON;	
	RTU-H3 CARRIER 3-TON;	
	RTU-H3 CARRIER 3-TON;	
	RTU-C1 CARRIER 3-TON;	
	RTU-C2 CARRIER 3-TON;	
	RTU-I1 CARRIER 3-TON;	
	RTU-I2 CARRIER 3-TON;	
	RTU-K1 CARRIER 3-TON;	
	RTU-J1 CARRIER 3-TON;	
	RTU-J2 CARRIER 3-TON;	
	RTU-J3 CARRIER 3-TON;	
	RTU-K3 CARRIER 3-TON;	
	RTU-K2 CARRIER 3-TON;	
	RTU-K3 CARRIER 3-TON;	



Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

STATE OF CALIFORNIA

Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Provider: Energysoft Report Generated: 2022-07-29 10:57:02

Mechanical Systems NRCC-MCH-E CALIFORNIA ENERGY COMMISSION CERTIFICATE OF COMPLIANCE CVUSD Rowland Report Page: Project Name: 1355 E Rowland Ave Date Prepared: Project Address: O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why 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/NRCA/ Systems/Spaces To Be Field Field Inspector Form/Title Verified Pass Fail NRCA-MCH-16-A Supply Air Temperature Reset Controls FCU/CU-B1; RTU-D1 CARRIER 3-TON; RTU-D2 CARRIER 3-TON; RTU-D3 CARRIER 3-TON; RTU-F1 CARRIER 3-TON; RTU-F3 CARRIER 3-TON; RTU-F3 CARRIER 3-TON; RTU-H1 CARRIER 3-TON; RTU-H3 CARRIER 3-TON; RTU-H3 CARRIER 3-TON; RTU-C1 CARRIER 3-TON; RTU-C2 CARRIER

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Provider: Energysoft Report Generated: 2022-07-29 10:57:02

3-TON; RTU-I1 CARRIER 3-TON; RTU-I2 CARRIER 3-TON; RTU-K1 CARRIER 3-TON; RTU-J1 CARRIER 3-TON; RTU-J2 CARRIER 3-TON; RTU-J3 CARRIER 3-TON; RTU-K3 CARRIER 3-TON; RTU-K2 CARRIER 3-TON; RTU-K3 CARRIER

3-TON;

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O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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/NRCA/

NRCA-MCH-06-A Demand Control Ventilation Systems must be submitted for all systems required to employ demand

controlled ventilation (refer to §120.1(c)3) can vary outside ventilation flow rates based on maintaining interior carbon

Form/Title

OMMISSION
(Page 38 of 47)
7/29/2022

STATE OF CALIFORNIA Mechanical Systems

Registration Number:

STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

Project Address:

Mechanical Systems

CERTIFICATE OF COMPLIANCE

dioxide (CO2) concentration setpoints.

NRCC-MCH-E			CALIFORNIA ENERGY C
CERTIFICATE OF COMPLIANCE			
Project Name:	CVUSD Rowland	Report Page:	(F
Project Address:	1355 E Rowland Ave	Date Prepared:	

Form/Title	Systems/Spaces To Be Field	Field In	spector
romy nee	Verified	Pass	Fail
RCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed i onjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.	 FCU/CU-B1; RTU-D1 CARRIER 3-TON; RTU-D2 CARRIER 3-TON; RTU-D3 CARRIER 3-TON; RTU-F1 CARRIER 3-TON; RTU-F3 CARRIER 3-TON; RTU-F3 CARRIER 3-TON; RTU-H1 CARRIER 3-TON; RTU-H3 CARRIER 3-TON; RTU-H3 CARRIER 3-TON; RTU-C1 CARRIER 3-TON; RTU-11 CARRIER 3-TON; RTU-11 CARRIER 3-TON; RTU-12 CARRIER 3-TON; RTU-I1 CARRIER 3-TON; RTU-J1 CARRIER 3-TON; RTU-J2 CARRIER 3-TON; RTU-J3 CARRIER 3-TON; RTU-J3 CARRIER 3-TON; RTU-J3 CARRIER 3-TON; RTU-J3 CARRIER 3-TON; RTU-K3 CARRIER 		

Registration Date/Time:

CVUSD Rowland Report Page:

1355 E Rowland Ave Date Prepared:

Report Version: 2019.1.003

Schema Version: rev 20200601

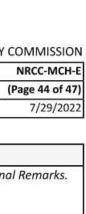
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OMMISSION NRCC-MCH-E age 41 of 47) 7/29/2022

Remarks.

ctor Fail





There are no NRCV forms required for this project.

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601 Registration Provider: Energysoft

Report Generated: 2022-07-29 10:57:02

Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Provider: Energysoft Report Generated: 2022-07-29 10:57:02

Verified

FCU/CU-B1; RTU-D1 CARRIER

3-TON; RTU-D2 CARRIER 3-TON; RTU-D3 CARRIER

3-TON; RTU-F1 CARRIER 3-TON; RTU-F3 CARRIER 3-TON; RTU-F3 CARRIER 3-TON; RTU-H1 CARRIER 3-TON; RTU-H3 CARRIER 3-TON; RTU-H3 CARRIER 3-TON; RTU-C1 CARRIER

3-TON; RTU-C2 CARRIER 3-TON; RTU-I1 CARRIER 3-TON; RTU-I2 CARRIER 3-TON; RTU-K1 CARRIER 3-TON; RTU-J1 CARRIER 3-TON; RTU-J2 CARRIER 3-TON; RTU-J3 CARRIER 3-TON; RTU-K3 CARRIER 3-TON; RTU-K2 CARRIER 3-TON; RTU-K3 CARRIER

3-TON;

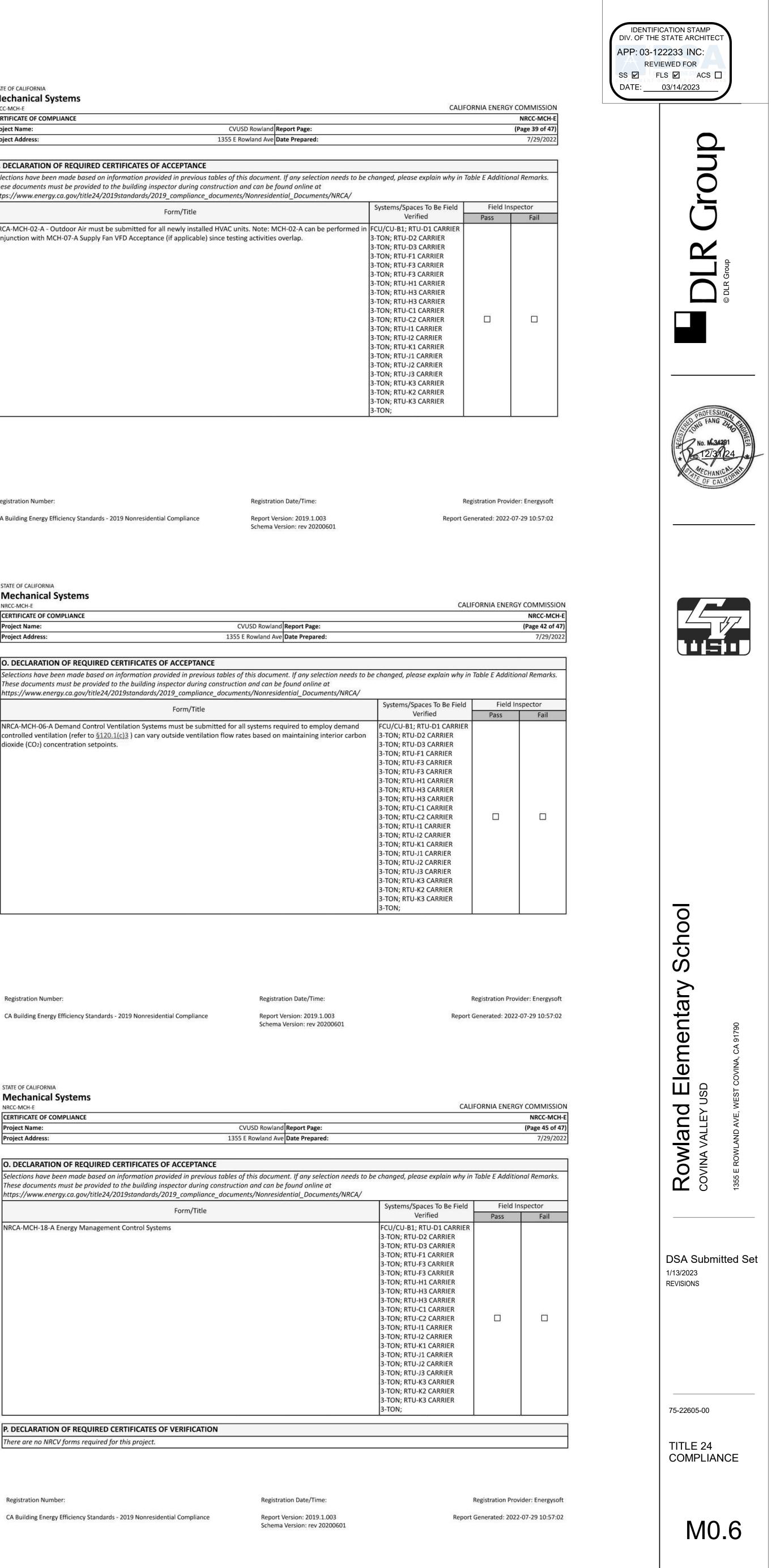
STATE OF CALIFORNIA **Mechanical Systems**

Registration Number:

NRCC-MCH-E			CALIFORNIA ENERGY COMMIS
CERTIFICATE OF COMPLIANCE			NRCC-N
Project Name:	CVUSD Rowland	Report Page:	(Page 45
Project Address:	1355 E Rowland Ave	Date Prepared:	7/29
O. DECLARATION OF REQUIRED CERTIF	ICATES OF ACCEPTANCE		

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why 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/NRCA/

Form/Title	Systems/Spaces To Be Field	Field Ins	spector
Form/ Inte	Verified	Pass	Fail
NRCA-MCH-18-A Energy Management Control Systems	FCU/CU-B1; RTU-D1 CARRIER		6
	3-TON; RTU-D2 CARRIER		
	3-TON; RTU-D3 CARRIER		
	3-TON; RTU-F1 CARRIER		
	3-TON; RTU-F3 CARRIER		
	3-TON; RTU-F1 CARRIER		
	3-TON; RTU-H1 CARRIER		
	3-TON; RTU-H3 CARRIER		
	3-TON; RTU-H3 CARRIER		
	3-TON; RTU-C1 CARRIER	10000	20102
	3-TON; RTU-C2 CARRIER		
	3-TON; RTU-I1 CARRIER		
	3-TON; RTU-I2 CARRIER		
	3-TON; RTU-K1 CARRIER		
	3-TON; RTU-J1 CARRIER		
	3-TON; RTU-J2 CARRIER		
	3-TON; RTU-J3 CARRIER		
	3-TON; RTU-K3 CARRIER		
	3-TON; RTU-K2 CARRIER		
	3-TON; RTU-K3 CARRIER		
	3-TON;		



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STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

 CREATIFICATE OF COMPLIANCE

 Project Name:
 CVUSD Rowland

 Project Address:
 1355 E Rowland Ave

 Date Prepared:

 Q. MANDATORY MEASURES DOCUMENTATION LOCATION

 This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

 01

 Compliance with Mandatory Measures documented through MCH
Mandatory Measures Note Block
 Yes

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Date/Time:

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S DECLARAT
of Complian

certify t	he following under penalty of perjury, under the
1.	The information provided on this Certificate
2.	I am eligible under Division 3 of the Business
3.	The energy features and performance specifi of Title 24, Part 1 and Part 6 of the California
4.	The building design features or system design plans and specifications submitted to the enf
5.	I will ensure that a completed signed copy of inspections. I understand that a completed si
	ble Designer Name: FANG ZHAO
Company	
ddress: 700 FLC	OWER STREET
ity/Stat	e/Zip:
	IGELES CA 90017

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

CALIFORNIA ENERGY COMMISSION
NRCC-MCH-E
(Page 46 of 47)
ed: 7/29/2022

documentation.
02
M-Sheets

Registration Provider: Energysoft Report Generated: 2022-07-29 10:57:02

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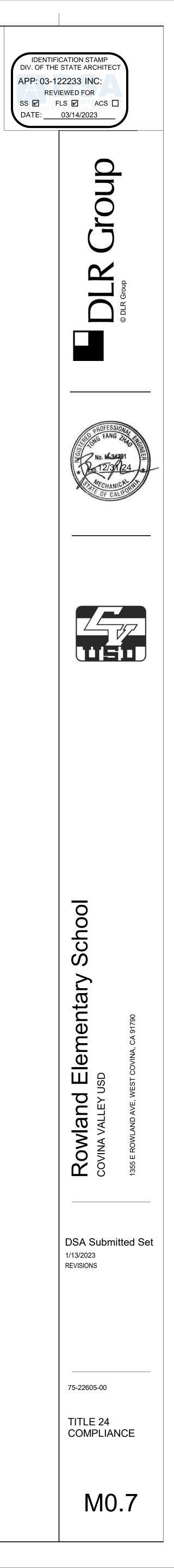
NRCC-MCH	
CVUSD Rowland Report Page: (Page 47 of 4	CVUSD Rowland
1355 E Rowland AveDate Prepared:7/29/20	1355 E Rowland Ave
ITEMENT	S DECLARATION STATEMENT
mentation is accurate and complete.	of Compliance documentation is accurate and comple
Documentation Author Signature:	
Signature Date: 2022-07-29	
CEA/ HERS Certification Identification (if applicable): 9F30-5A88-E6C4-7653-2F72-A82E-9671-A2D4-7420-7AD7-DA3E-A59B-8F3B-18A3-B88E- 17FE	
Phone:	
(949)-701-8533	LADATION STATEMENT
ENT he State of California: ance is true and correct. issions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer) naterials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requiremen legulations. identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations,	rformance specifications, materials, components, and manufactured device s of the California Code of Regulations. s or system design features identified on this Certificate of Compliance are omitted to the enforcement agency for approval with this building permit a ed signed copy of this Certificate of Compliance shall be made available wit
ENT he State of California: ance is true and correct. issions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer) naterials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requiremen legulations. identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, agency for approval with this building permit application. ficate 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	perjury, under the laws of the State of California: n this Certificate of Compliance is true and correct. 3 of the Business and Professions Code to accept responsibility for the buil rformance specifications, materials, components, and manufactured device 5 of the California Code of Regulations. 8 or system design features identified on this Certificate of Compliance are witted to the enforcement agency for approval with this building permit ap ed signed copy of this Certificate of Compliance shall be made available wit
ENT he State of California: ance is true and correct. assions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer) haterials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirement legulations. identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, agency for approval with this building permit application. ficate 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 y of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.	perjury, under the laws of the State of California: n this Certificate of Compliance is true and correct. 3 of the Business and Professions Code to accept responsibility for the buil rformance specifications, materials, components, and manufactured device 5 of the California Code of Regulations. 8 or system design features identified on this Certificate of Compliance are witted to the enforcement agency for approval with this building permit ap ed signed copy of this Certificate of Compliance shall be made available wit
ENT he State of California: ance is true and correct. ssions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer) haterials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirement legulations. identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, agency for approval with this building permit application. ficate 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 y of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy. Responsible Designer Signature: Date Signed:	perjury, under the laws of the State of California: n this Certificate of Compliance is true and correct. 3 of the Business and Professions Code to accept responsibility for the buil rformance specifications, materials, components, and manufactured device 5 of the California Code of Regulations. 8 or system design features identified on this Certificate of Compliance are witted to the enforcement agency for approval with this building permit ap ed signed copy of this Certificate of Compliance shall be made available wit

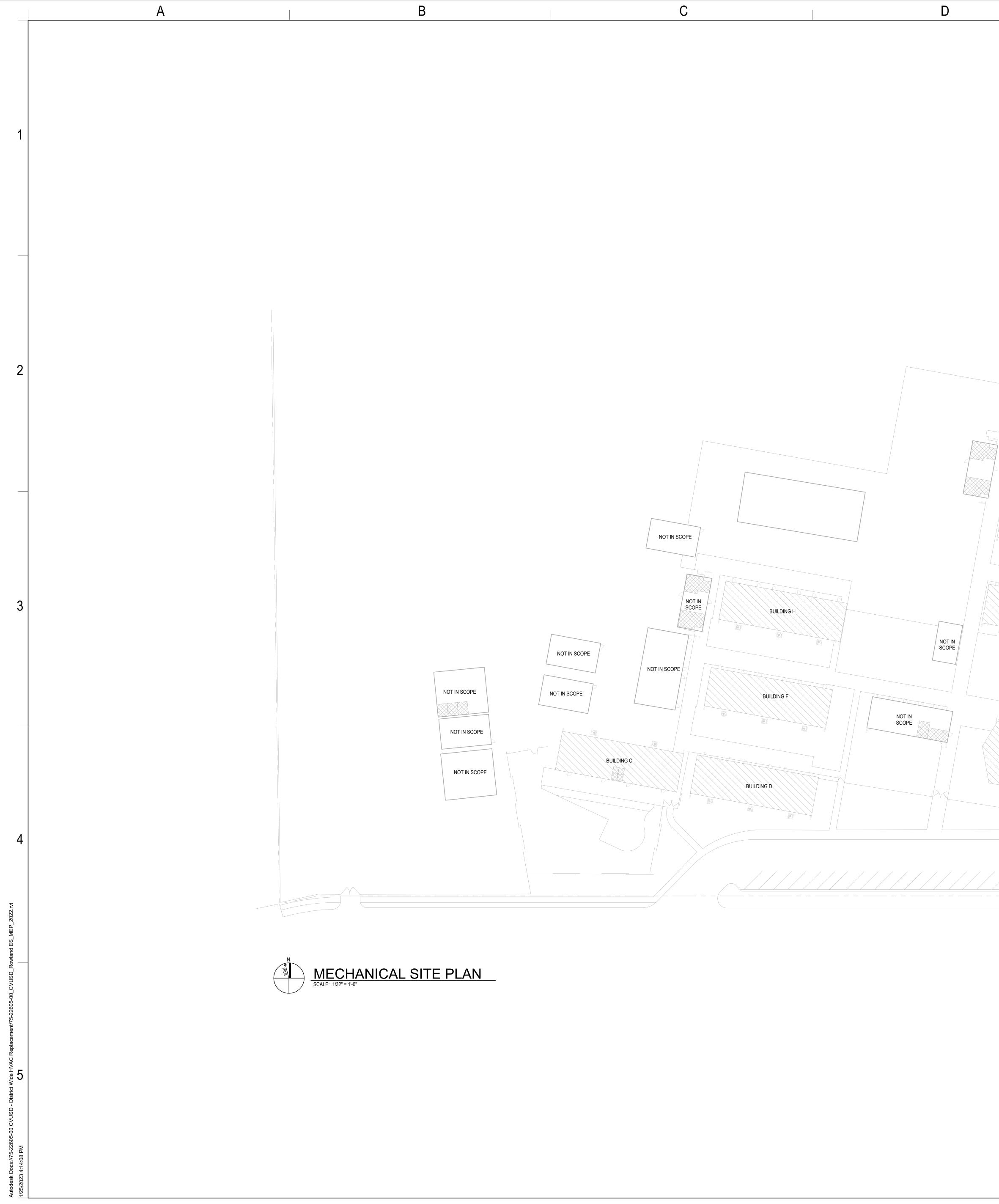
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Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Date/Time:

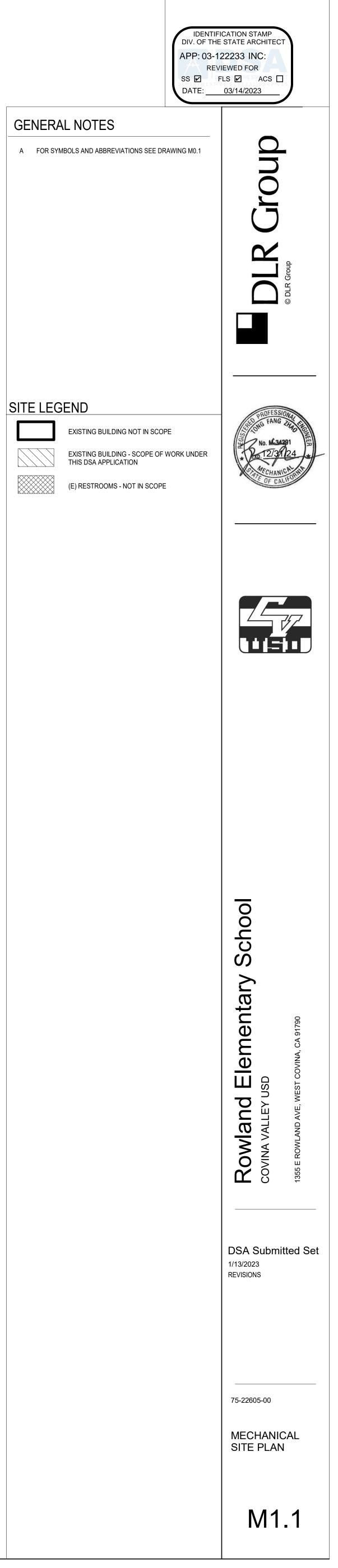
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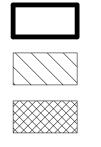


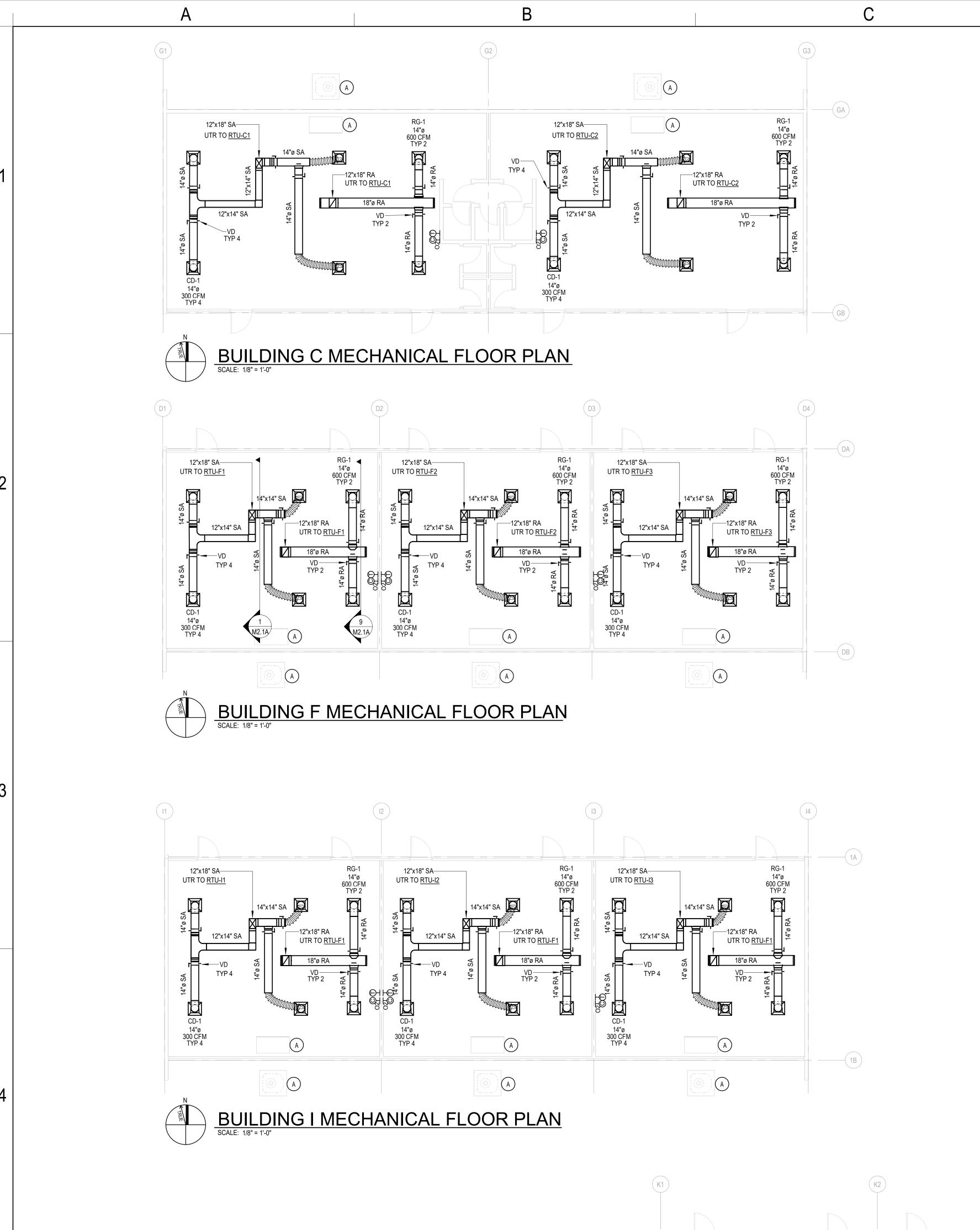


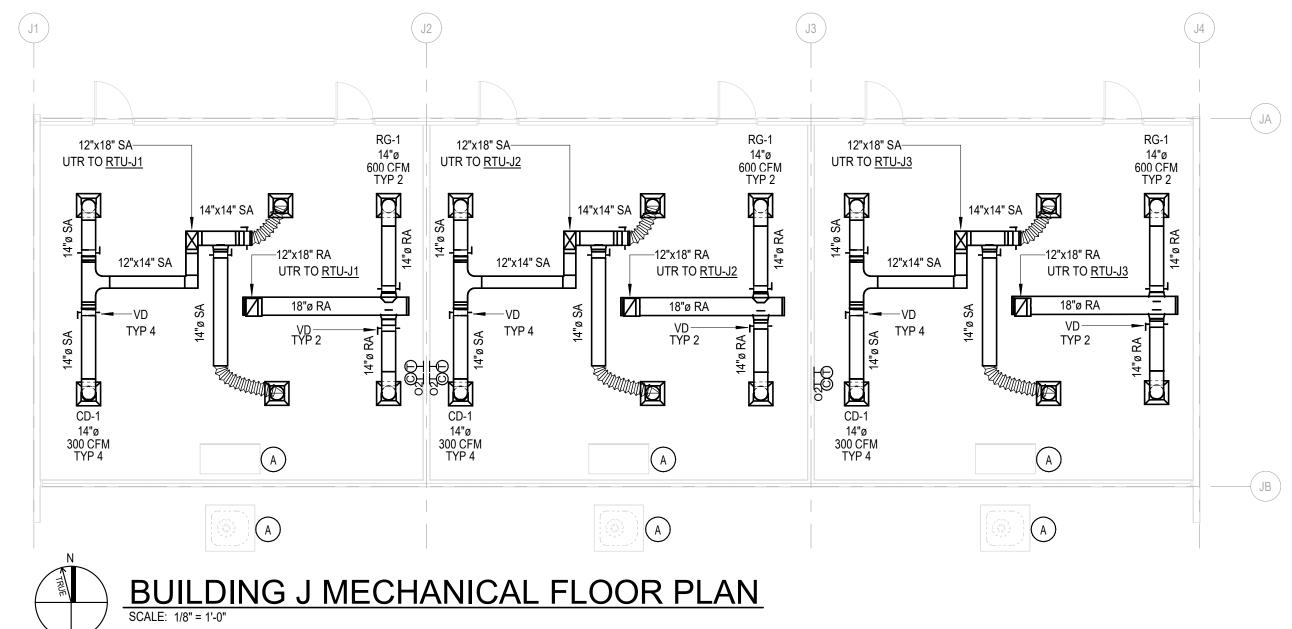
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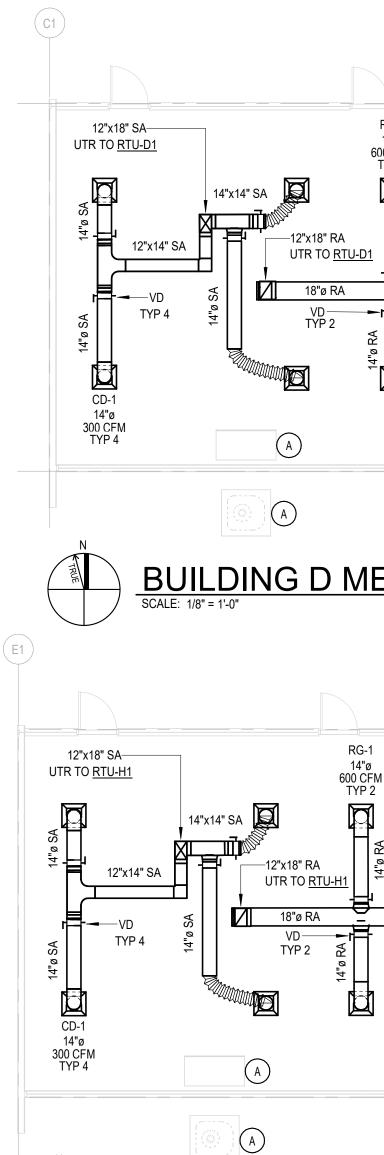
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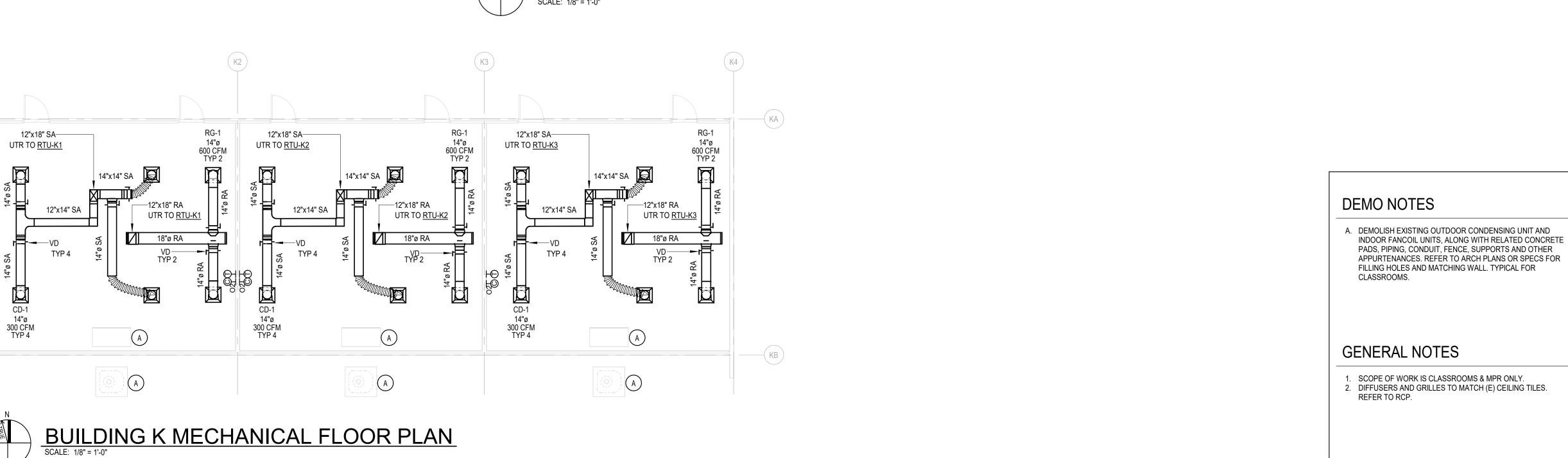


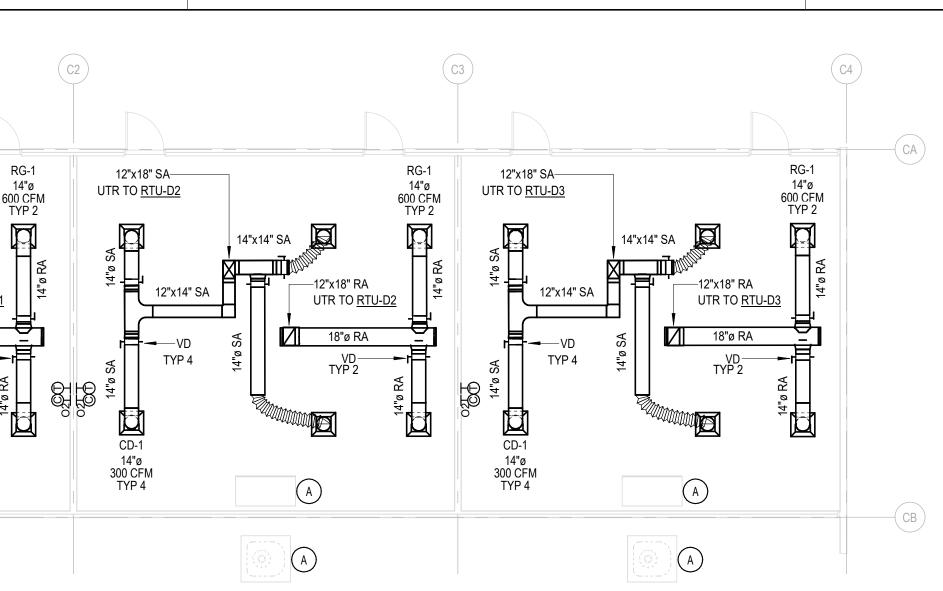






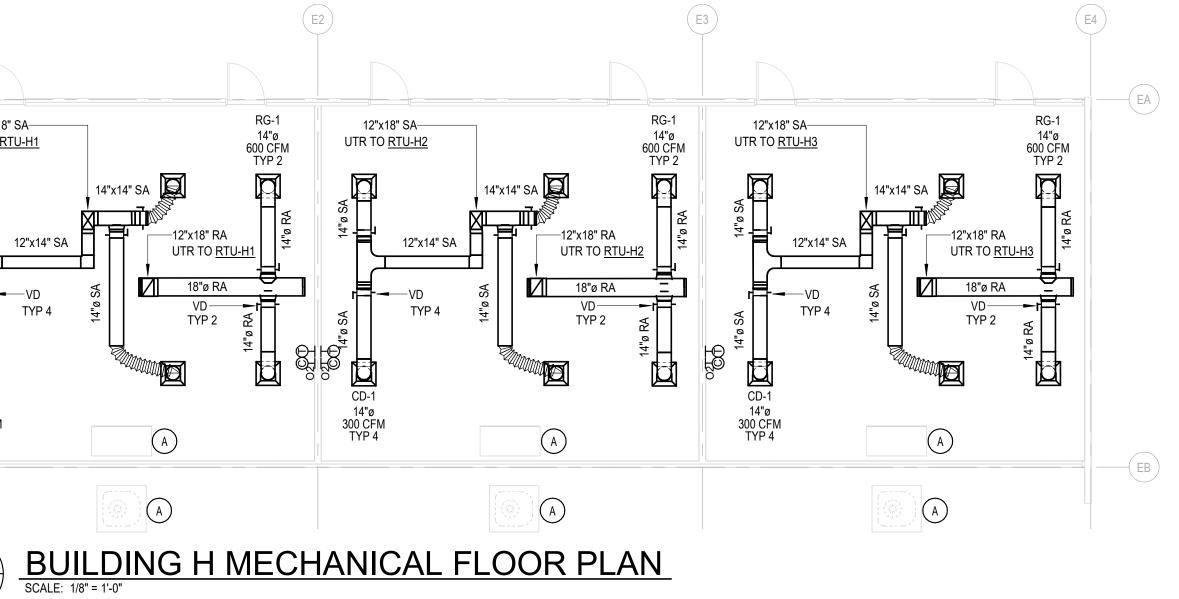
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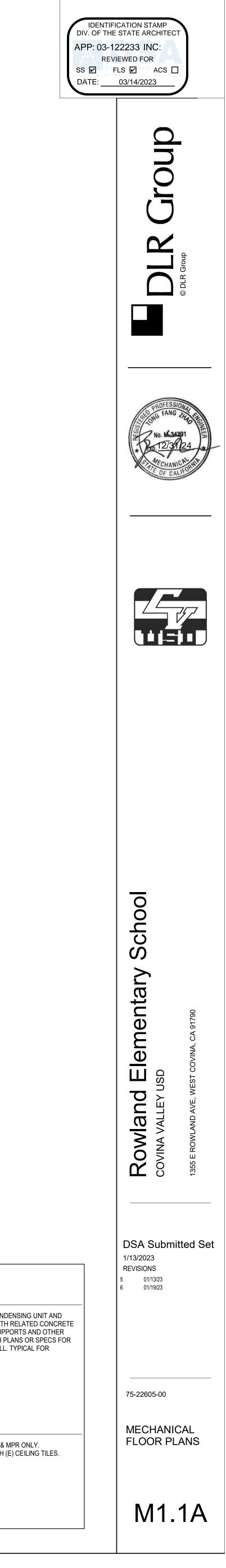


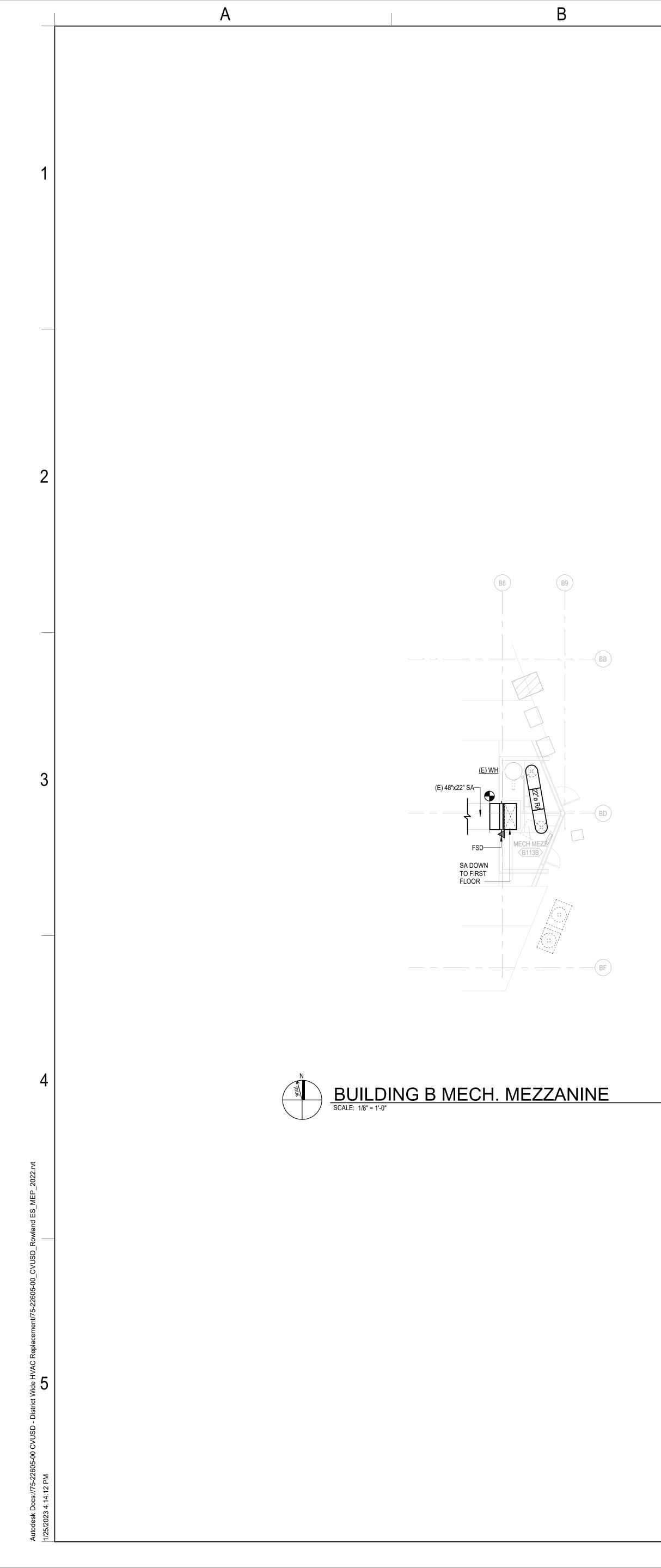


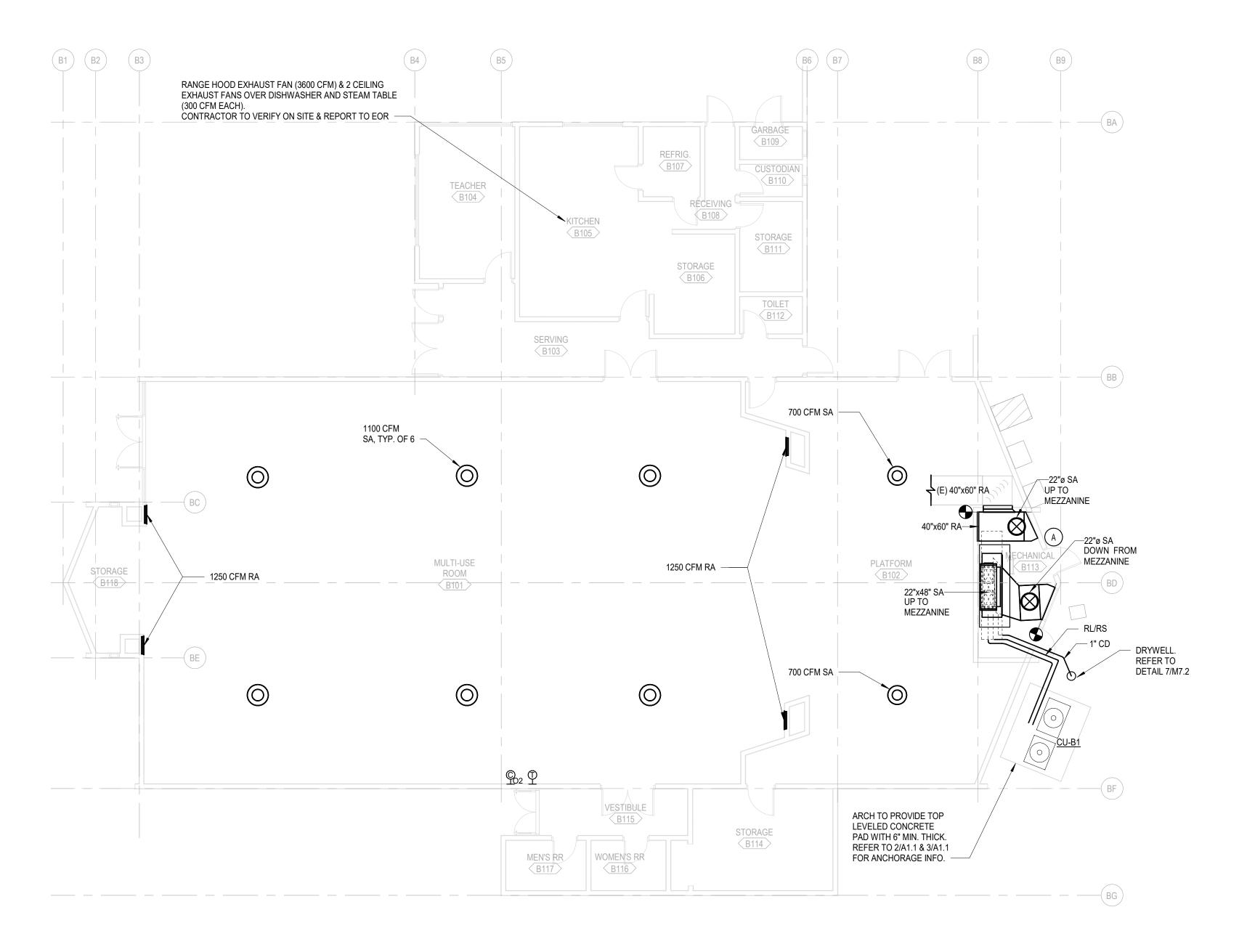
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BUILDING D MECHANICAL FLOOR PLAN









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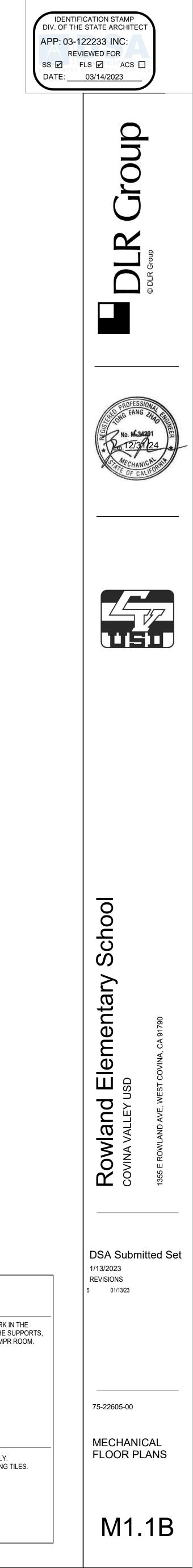
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BUILDING B MECHANICAL FLOOR PLAN

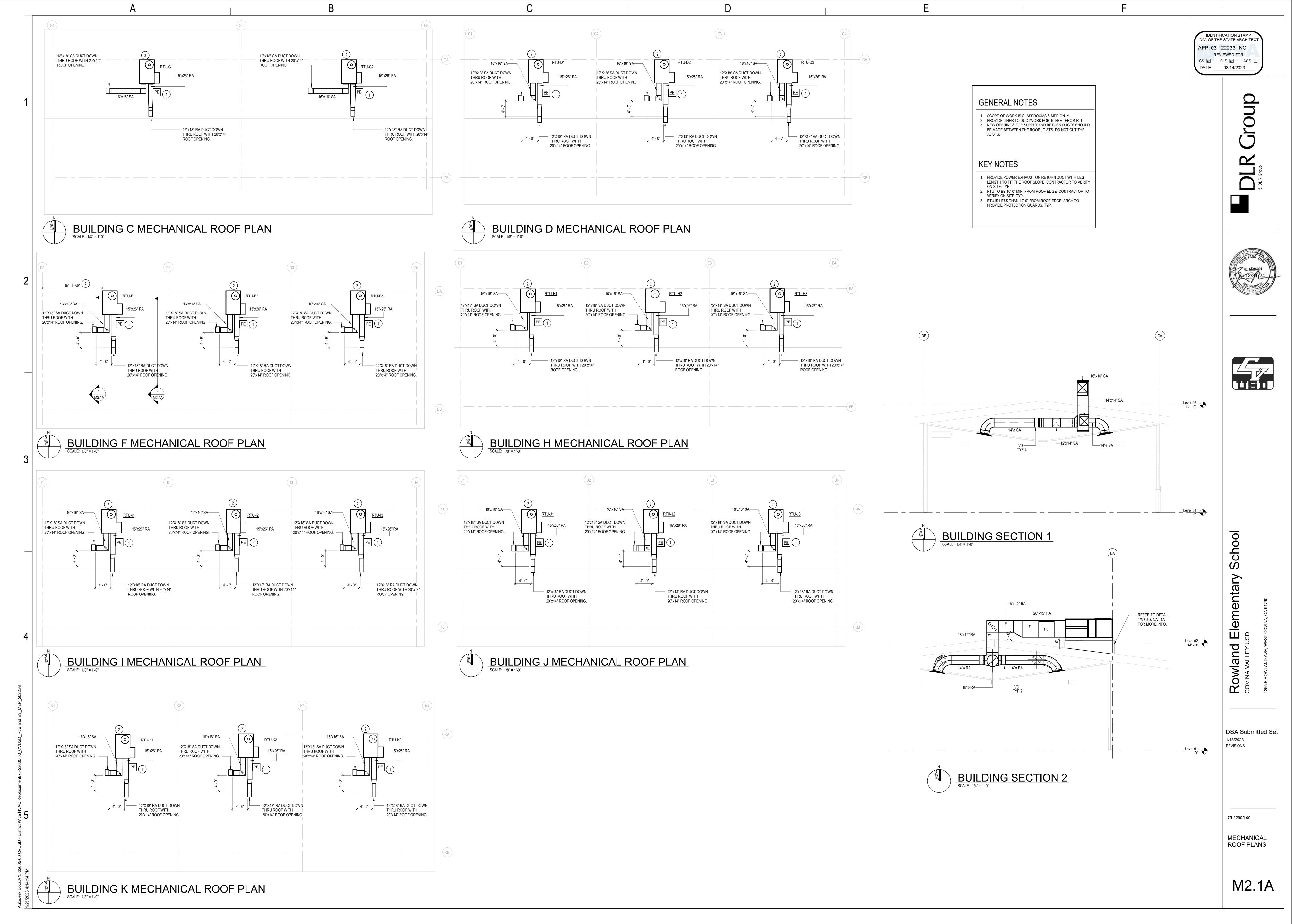
DEMO NOTES

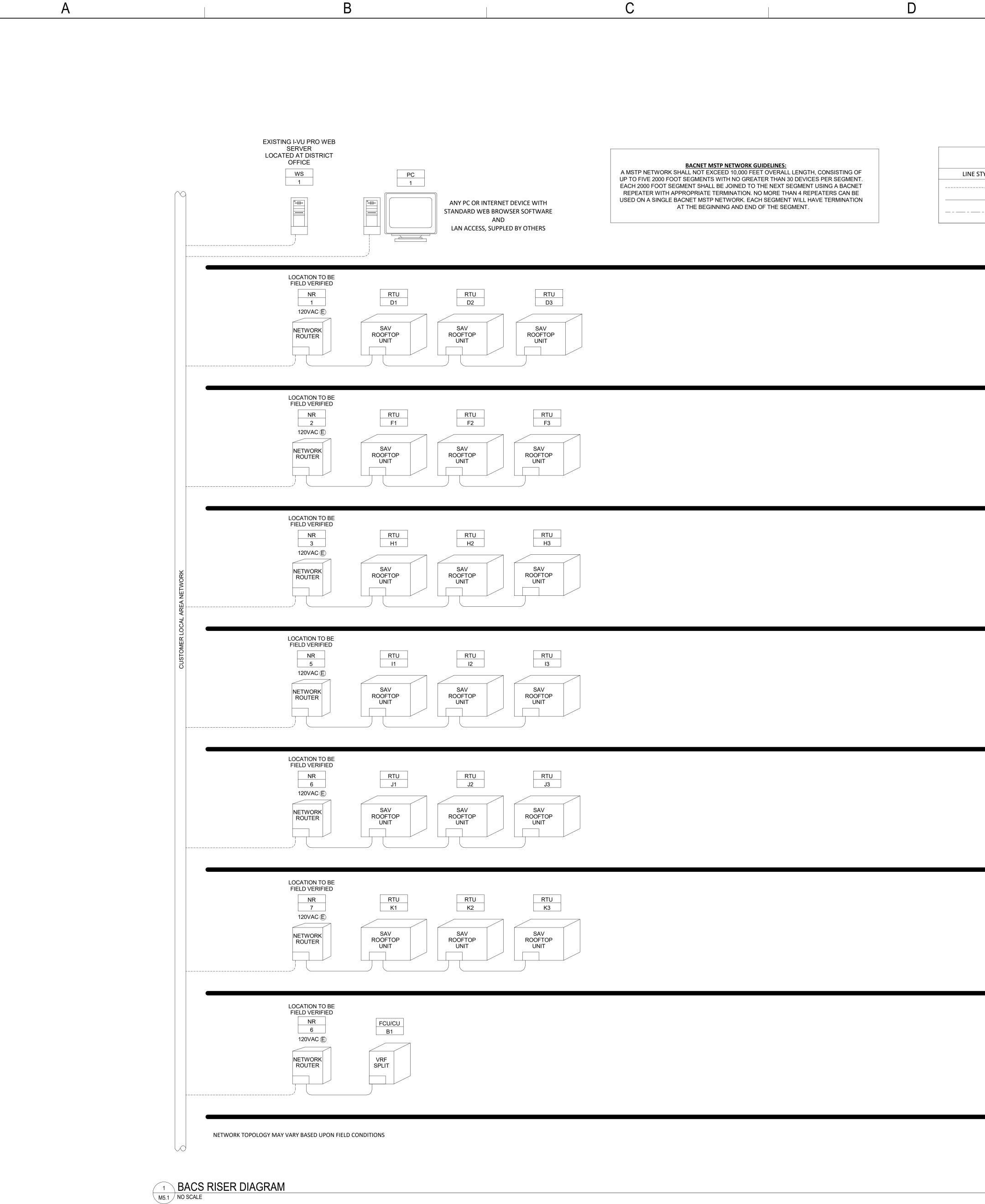
GENERAL NOTES

SCOPE OF WORK IS CLASSROOMS & MPR ONLY.
 DIFFUSERS AND GRILLES TO MATCH (E) CEILING TILES. REFER TO RCP.



A. DEMO (E) EQUIPMENT AND SA & RA DUCTWORK IN THE SCOPE AREA UP TO POC, ALONG WITH ALL THE SUPPORTS, PIPING, OTHER COMPONENTS. TYPICAL FOR MPR ROOM.

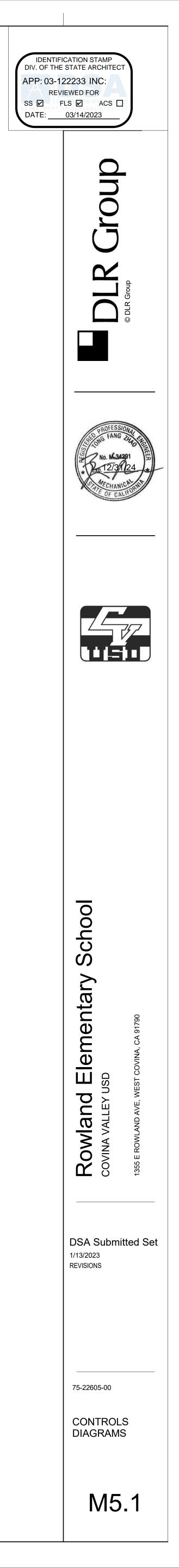






С

-	R DESCRIPTION	PART NUMBE	WIRE TYPE	ΊLE
1	PROVIDED AND INSTALLED BY OTHERS		LOCAL AREA NETWORK	
	24 AWG 2 COND SHIELDED, PLENUM, ORG	042002-S	BACNET MS/TP NETWORK WIRING	
	20 AWG 3 COND SHIELDED, PLENUM, WHT / GRN STRIPE	003336-S	CARRIER COMORT NETWORK WIRING	
┘ /USD		<u></u>		
	CV			
DG C	BLC			
DG D	BLC			
DG E	BLC			
.DG I	BL			
.DG J	BLI			
	D1 F			
DG K	BLL			
MPR	٦			





50FCQ HEAT PUMP RTU DETAIL (RTU-D1 THRU D-3, RTU-F1 THRU F3, RTU-I1 THRU I3, RTU-J1 THRU J3, RTU-K1 THRU K3, RTU-H1 AND H3)

CO2 Control Unit shall monitor space CO2 when the supply fan is energized. When CO2 is above setpoint of 1000 PPM, an alarm shall be enabled through the EMS. Power Exhaust

Heating Mode When space temperature is below the occupied heating setpoint, unit shall operate in the heating mode. Unit shall stage available heat stages to satisfy demand in the occupied space.

Cooling Mode

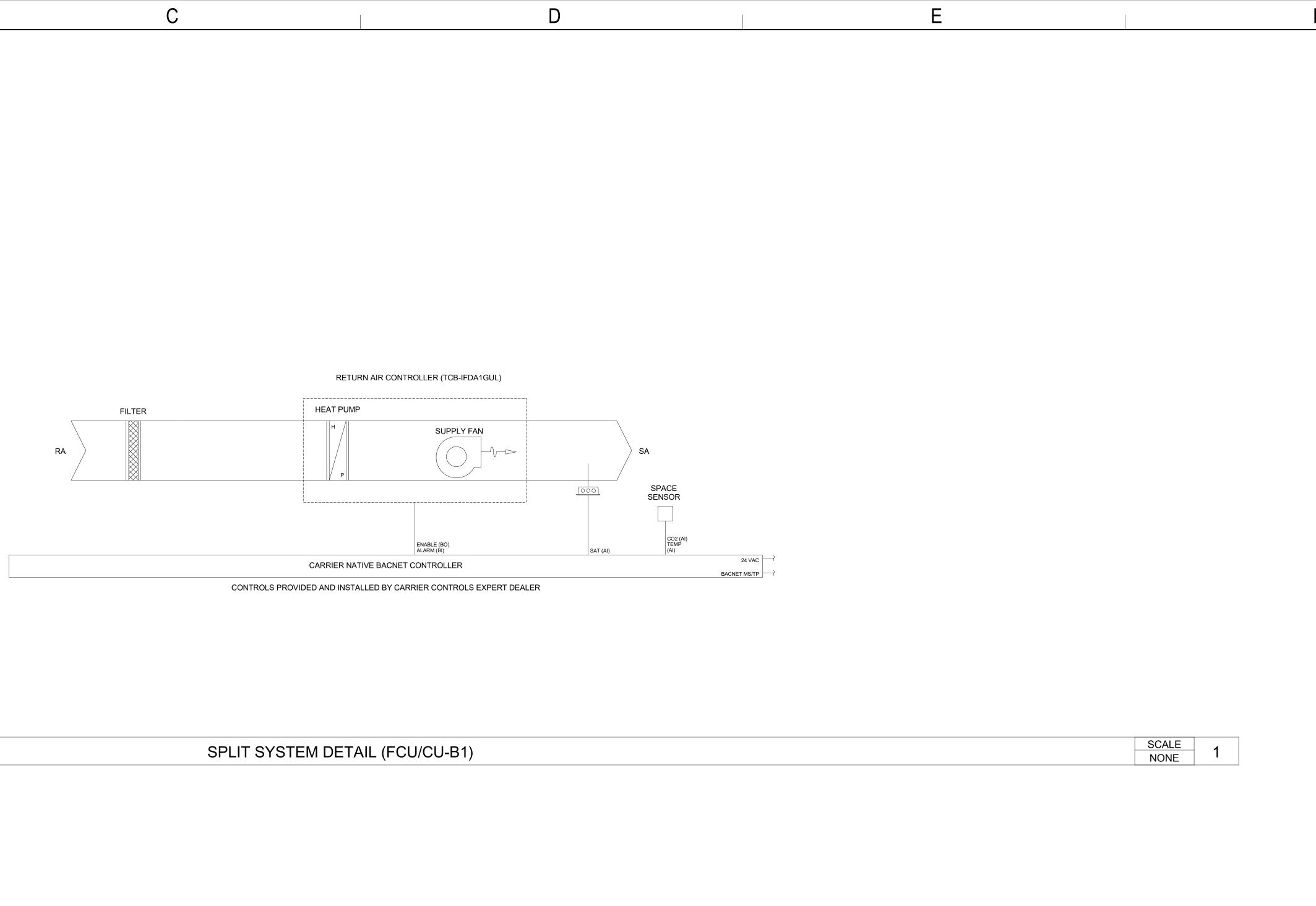
The exhaust fan shall run when the unit is occupied

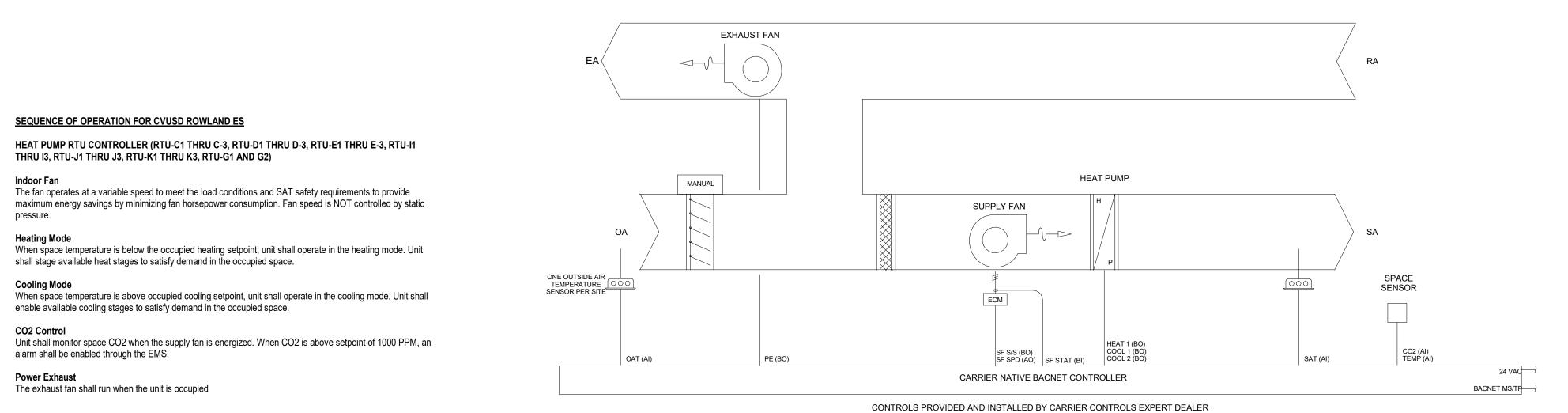
The fan operates at a variable speed to meet the load conditions and SAT safety requirements to provide maximum energy savings by minimizing fan horsepower consumption. Fan speed is NOT controlled by static pressure.

HEAT PUMP RTU CONTROLLER (RTU-C1 THRU C-3, RTU-D1 THRU D-3, RTU-E1 THRU E-3, RTU-I1 THRU I3, RTU-J1 THRU J3, RTU-K1 THRU K3, RTU-G1 AND G2) Indoor Fan

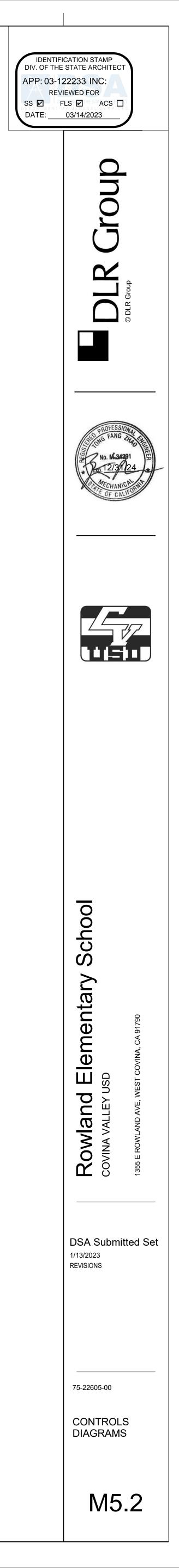
SEQUENCE OF OPERATION FOR CVUSD ROWLAND ES

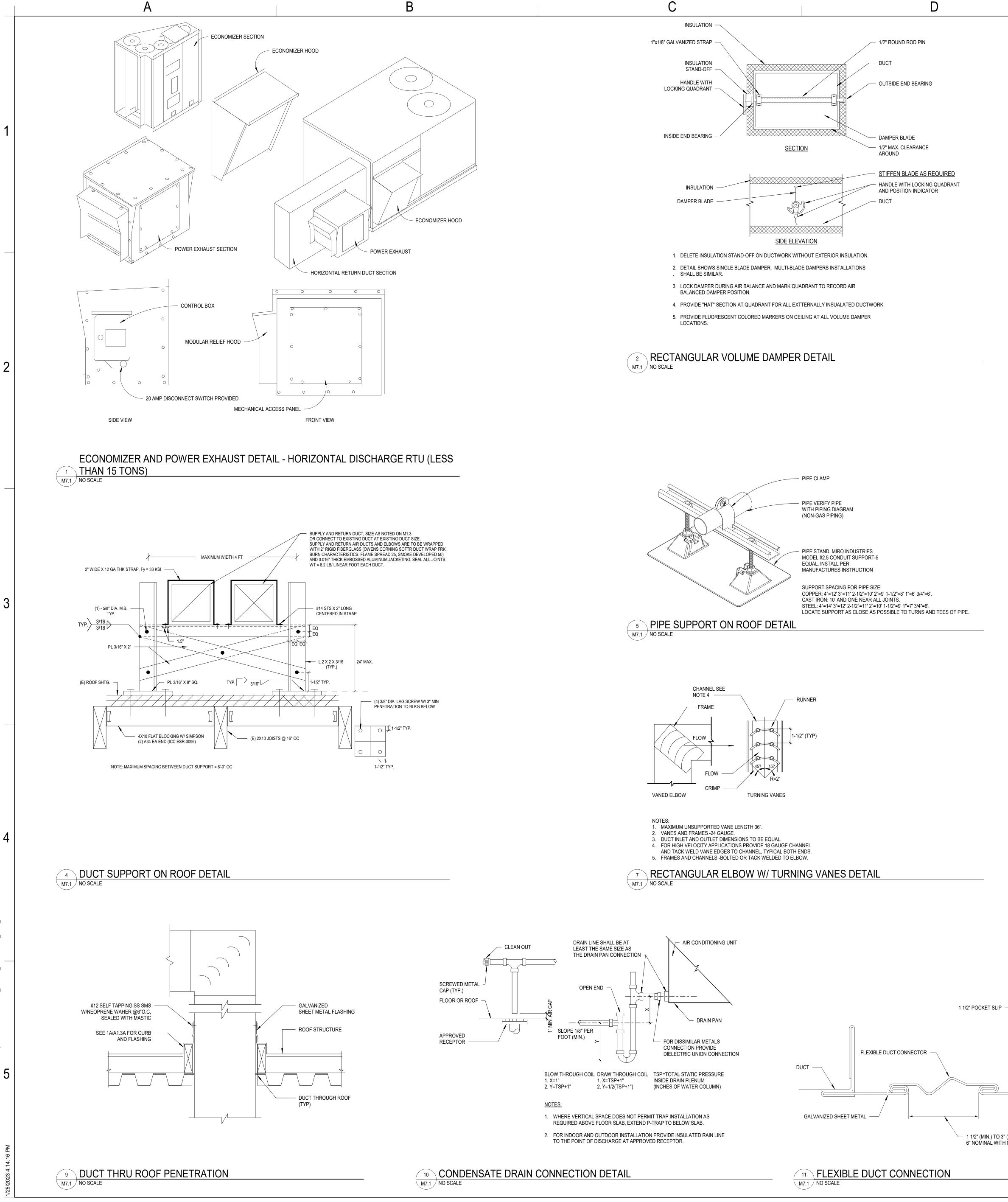
Α

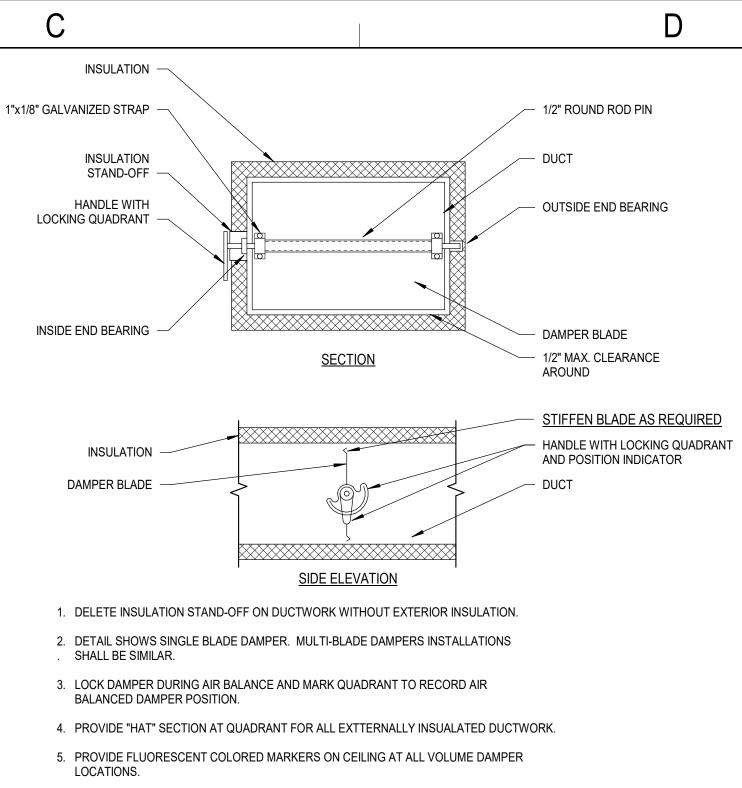


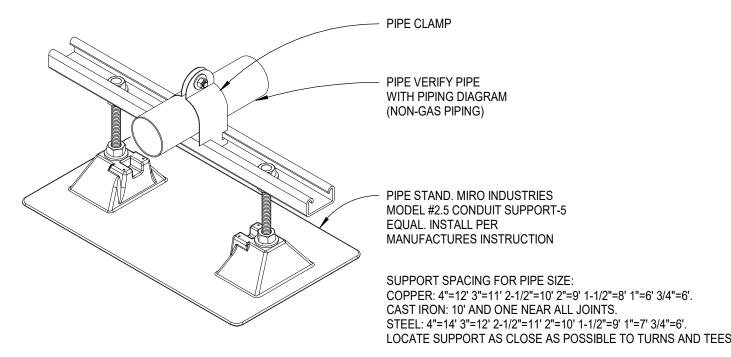


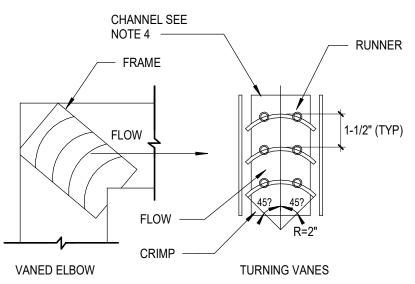
NONE 2



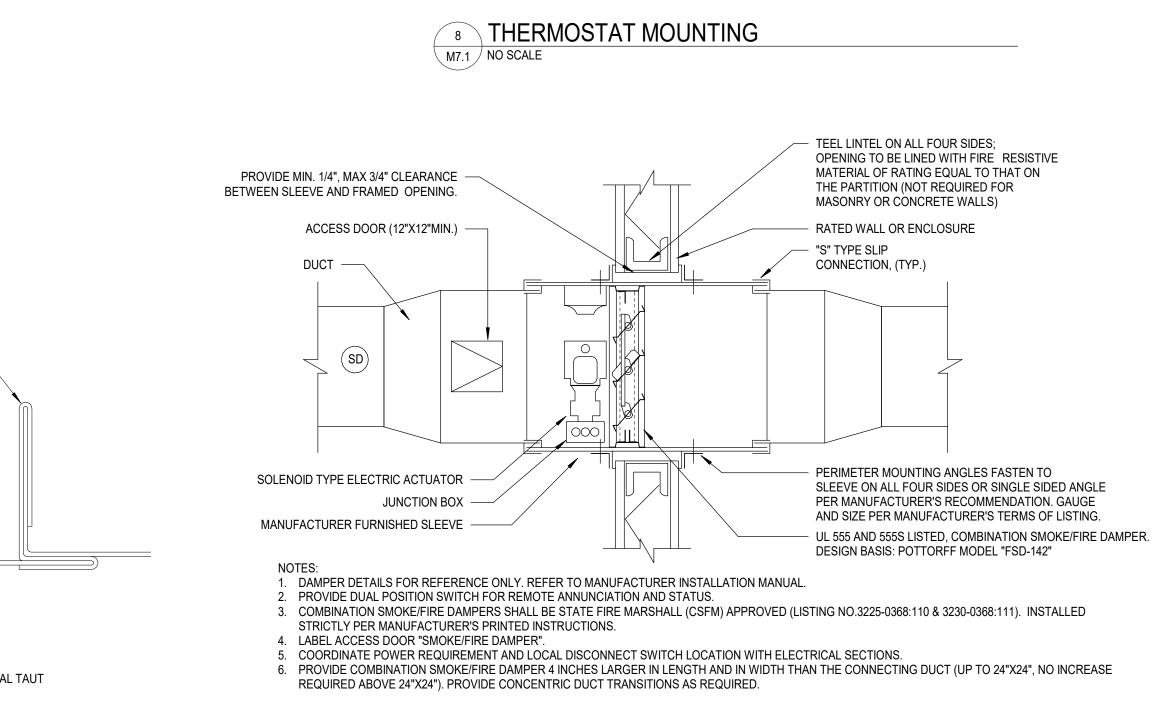


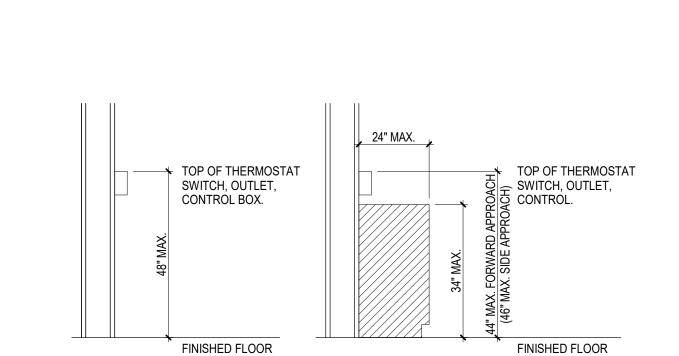




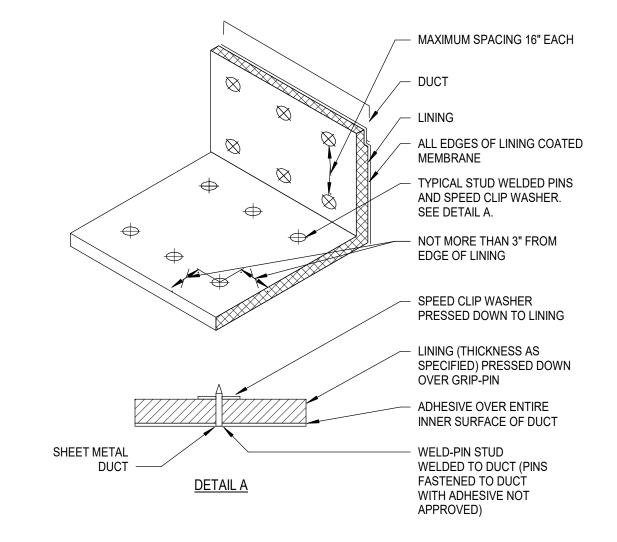


∖ M7.1 / SCALE: 12" = 1'-0"

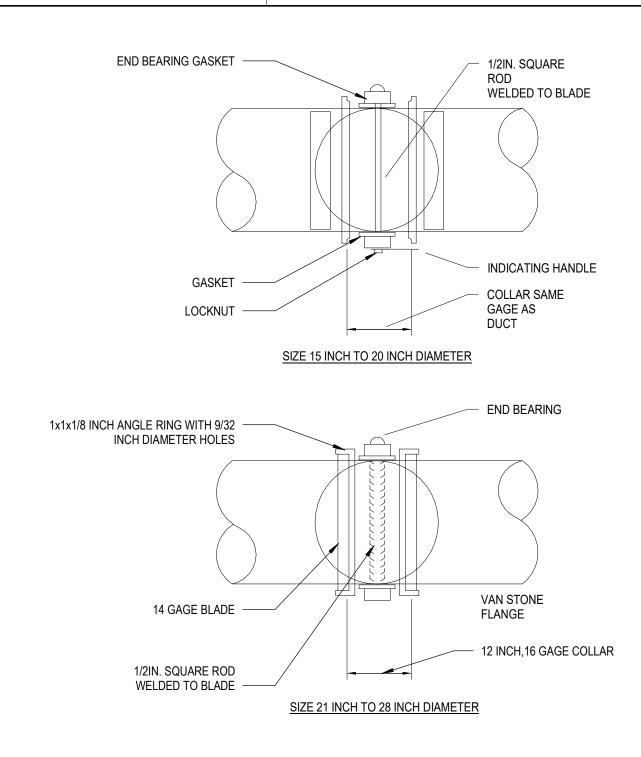


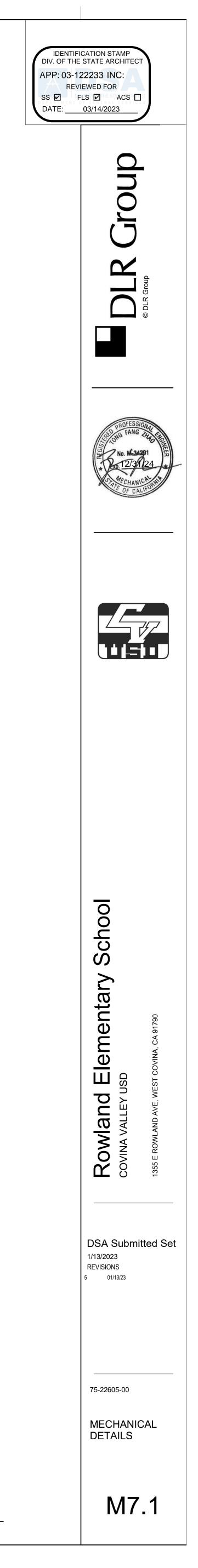


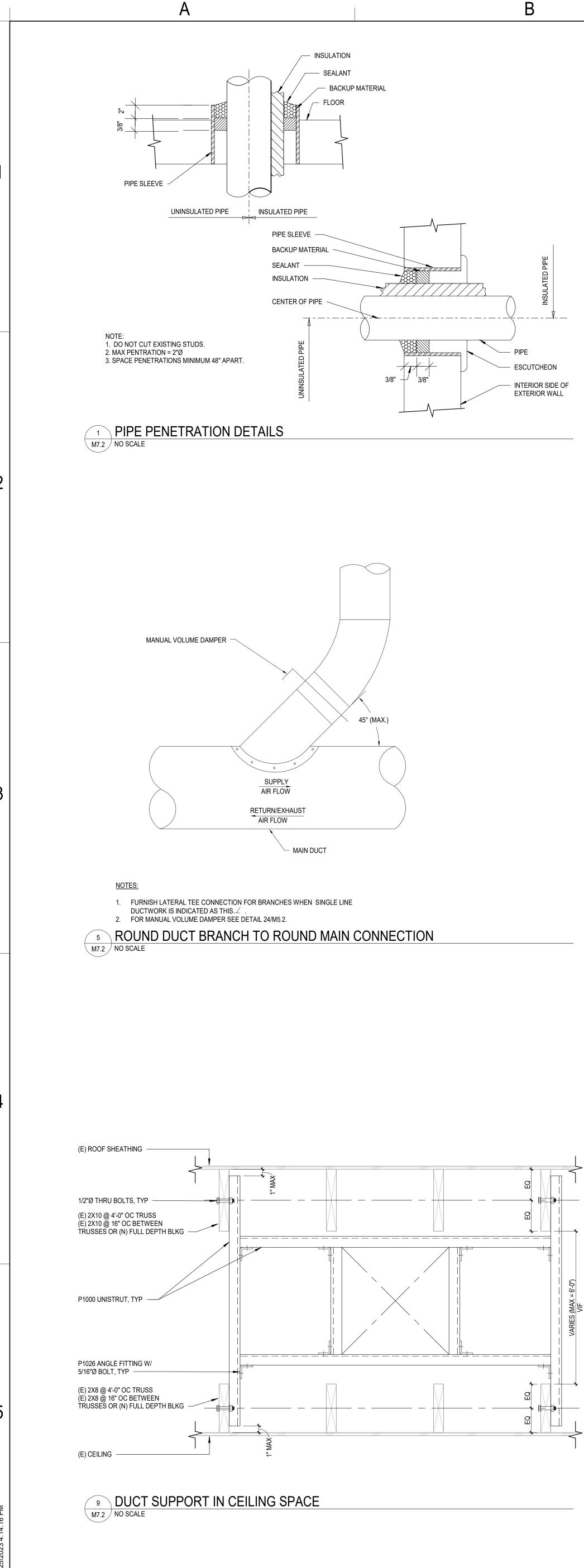
6 ACOUSTICAL DUCT LINING INSTALLATION DETAIL M7.1 NO SCALE

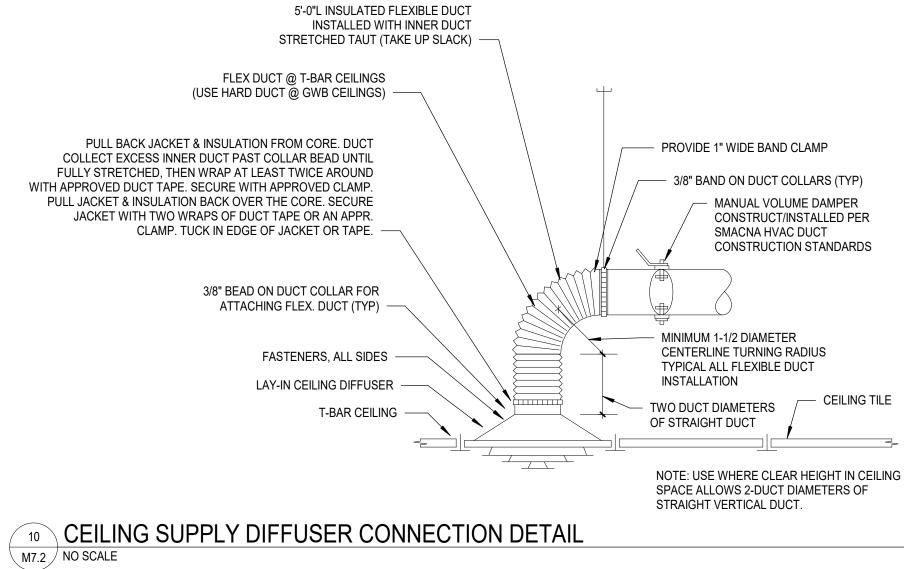


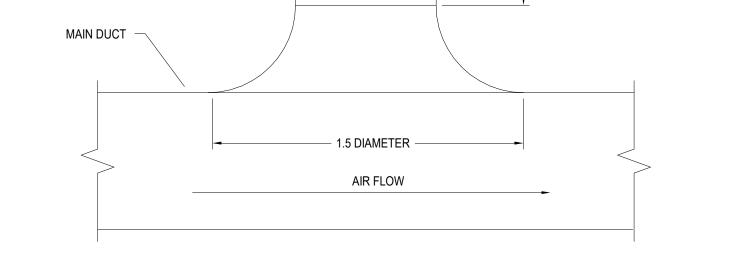
3 ROUND VOLUME DAMPER (LARGER THAN 14" DIA.) M7.1 NO SCALE











1. FURNISH THIS TYPE CONNECTION WHEN SINGLE-LINE DUCTWORK IS INDICATED AS THIS ____ FOR BRANCHES WITH

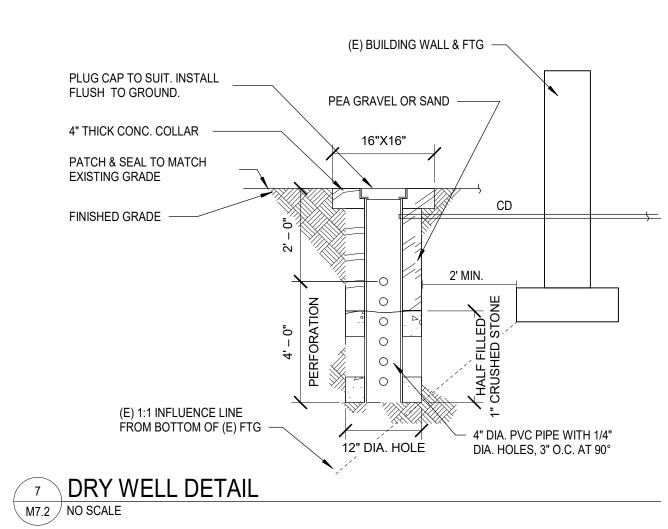
6 ROUND SUPPLY DUCT BRANCH TO RECTANGULAR DUCT

DUCT TO

SHEET

METAL AS REQUIRED

PLENUM OR DIFFUSER



2. FOR MANUAL VOLUME DAMPER SEE DETAIL 22/M5.1. 3. SLIP-IN VOLUME DAMPER HOUSING WILL NOT BE ALLOWED. RECTANGULAR DUCT BRANCH TO RECTANGULAR DUCT

M7.2 NO SCALE

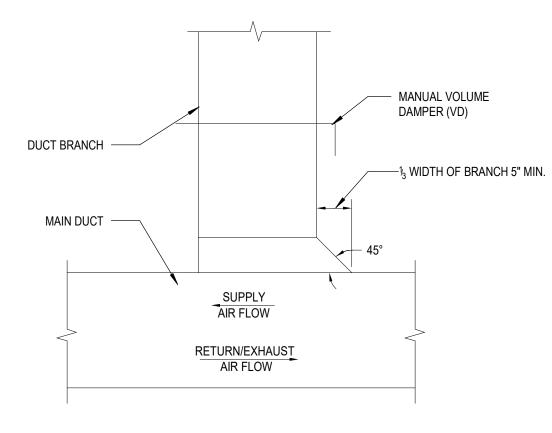
VOLUME DAMPER

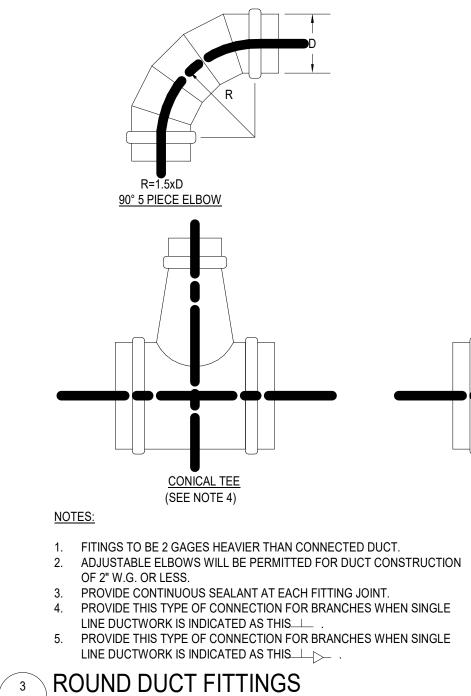
NOTES:

M7.2 NO SCALE

MORE THAN 25% OF TOTAL AIR FLOW

NOTES: 1. FURNISH THIS TYPE OF CONNECTION WHEN SINGLE-LINE DUCTWORK IS INDICATED AS THIS FOR BRANCHES WITH LESS THAN 25% OF THE TOTAL AIR FLOW, OR WHERE INDICATED ON DRAWINGS.





M7.2 NO SCALE

CEILING TILE

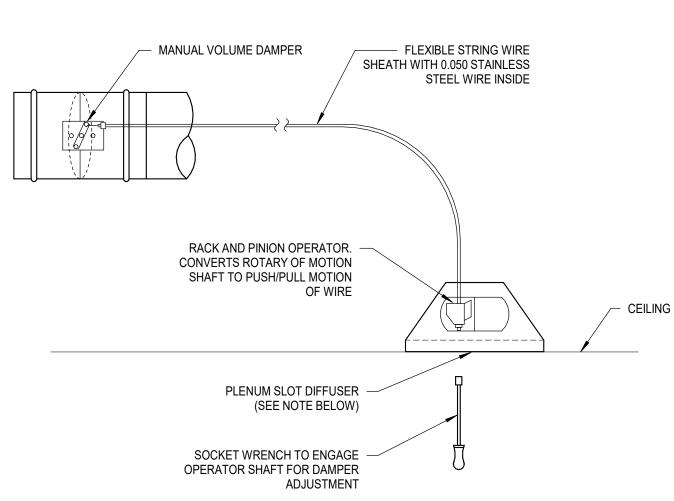
RACK AND PINION OPERATOR. -CONVERTS ROTARY OF MOTION SHAFT TO PUSH/PULL MOTION OF WIRE PLENUM SLOT DIFFUSER -(SEE NOTE BELOW) SOCKET WRENCH TO ENGAGE OPERATOR SHAFT FOR DAMPER ADJUSTMENT NOTES: 1. DIFFUSER OR REGISTER LOCATED IN GYP BOARD CEILING. 2. PROVIDE REGULATOR FOR ALL MANUAL VOLUME DAMPERS INSTALLED IN INACCESSIBLE CEILING OR

HARD TO REACH PLACES.

NOTES:

M7.2 NO SCALE

DAMPER LOCATION.



8 BOWDEN TYPE CABLE CONTROL (YOUNG'S REGULATOR) M7.2 NO SCALE

1/4" (MAX.) LESS THAN DUCT DIAMETER

SECTION A-A

PLAN

- 1"x1/8" GALVANIZED STRIP

16 GA GALVANIZED

DAMPER BLADE

CLOSED END BEARING

1"x1/8" GALVANIZED STRAP

INDICATING HANDLE

1/4" DIA. SET SCREW

SPOT WELD

3/8" SQ. ROD —

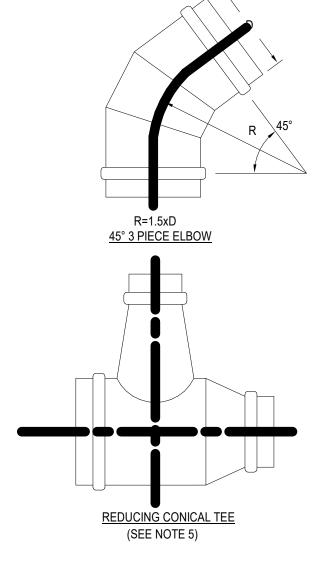
REGULATOR —

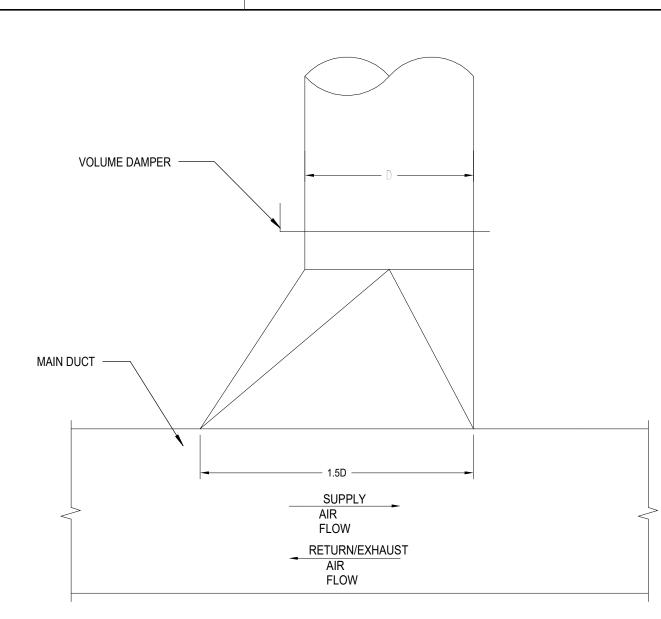
LOCKNUT -

11 ROUND VOLUME DAMPER (UP TO 14") M7.2 NO SCALE

GASKET (TYP.)

3/8" CONTINUOUS SQ. ROD



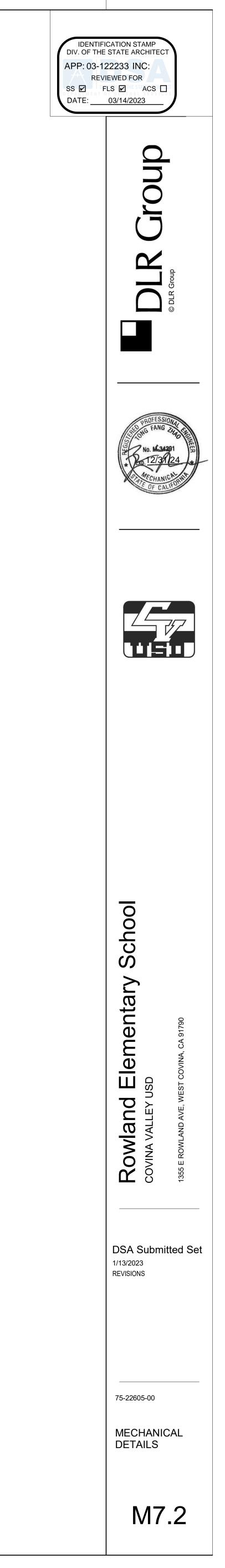


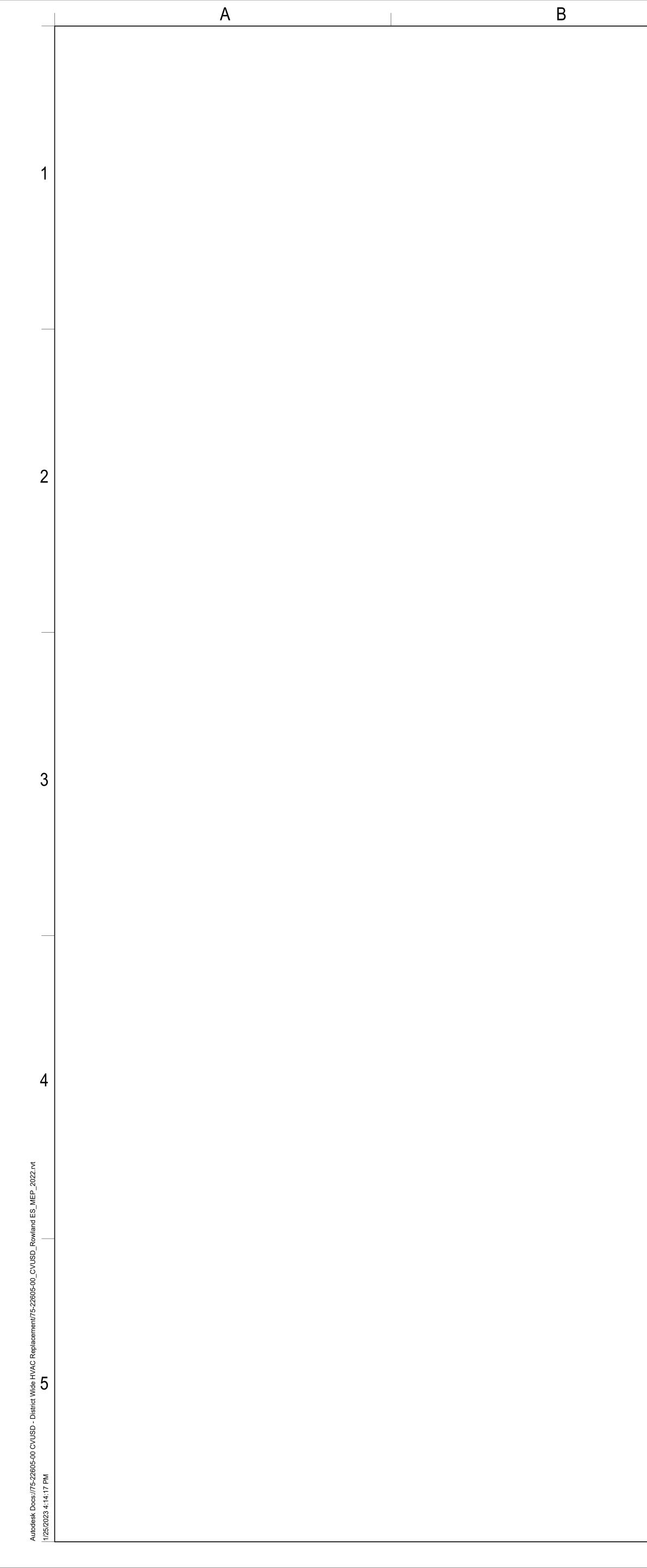
1. FURNISH THIS TYPE CONNECTION WHEN SINGLE-LINE DUCTWORK IS INDICATED AS

2. PROVIDE FLUORESCENT COLORED MARKERS ON CEILING AT ALL MANUAL VOLUME

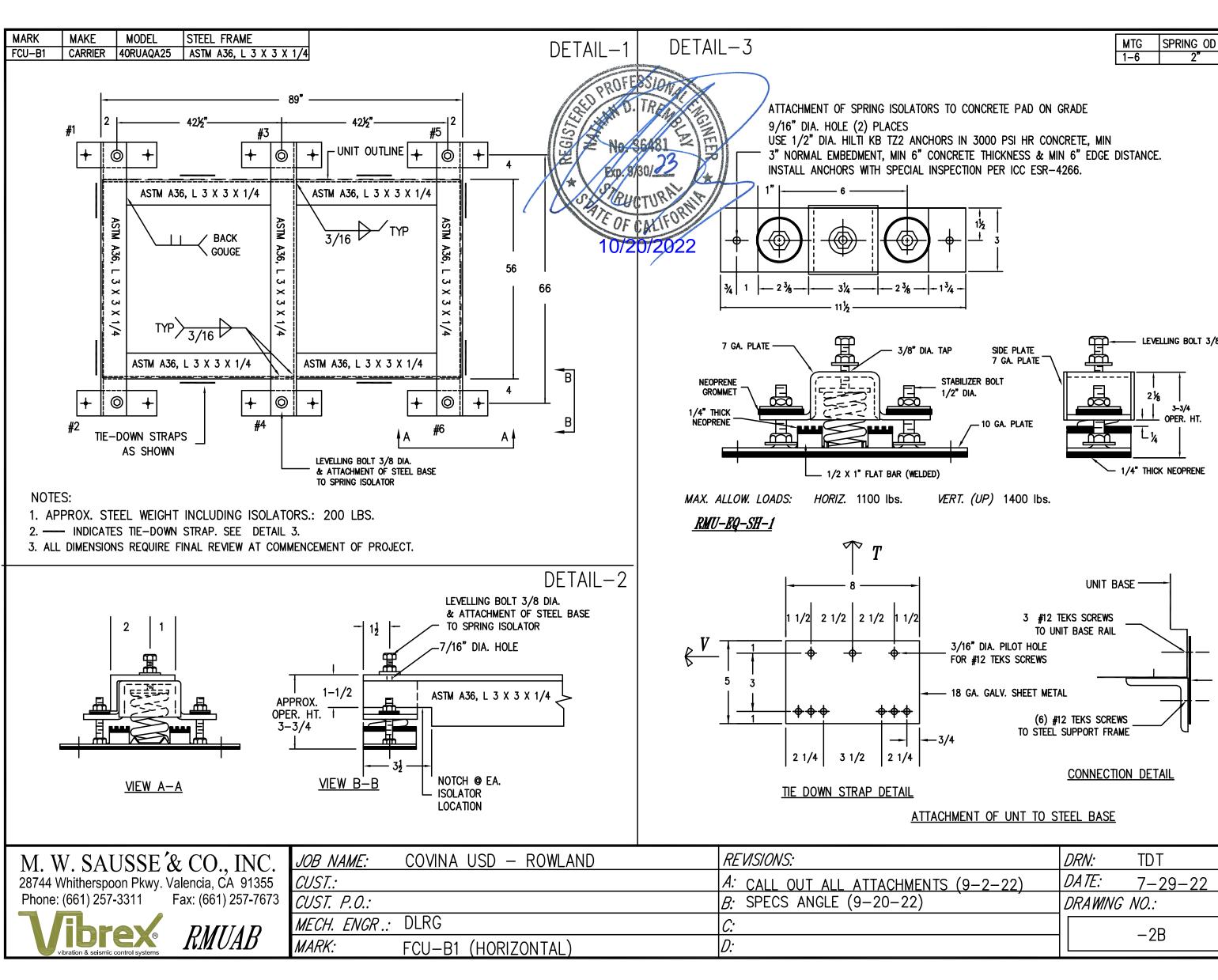
4 ROUND DUCT BRANCH TO MAIN RECT. CONNECTION

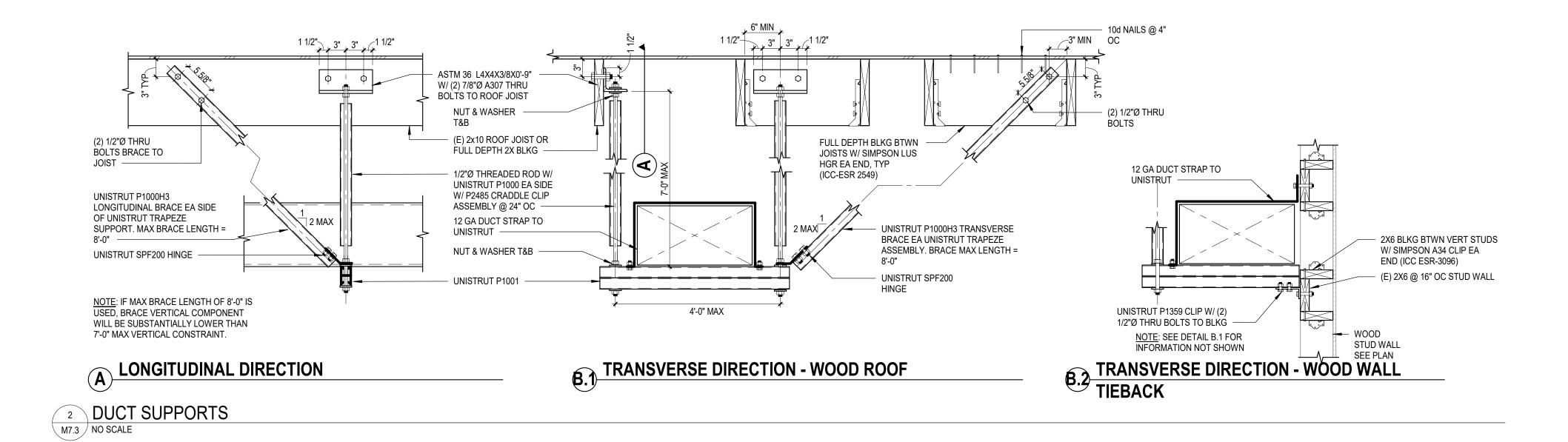
THIS $__$ FOR BRANCHES WITH LESS THAN 25% OF TOTAL AIR FLOW.





D



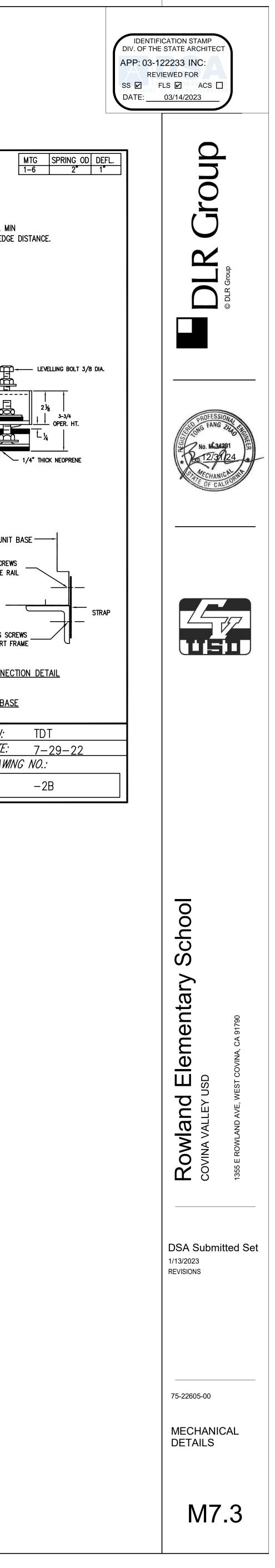


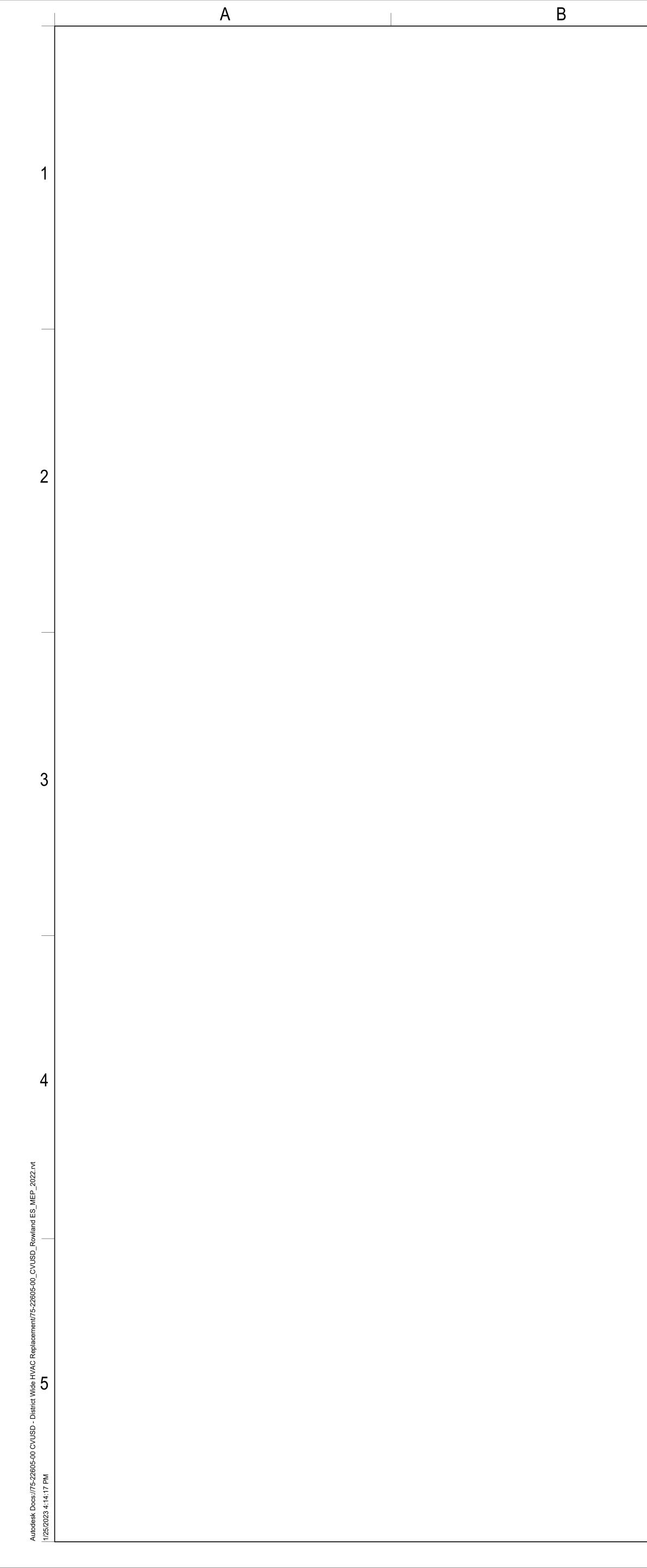
1 FCU-B1 M7.3 NO SCALE

С

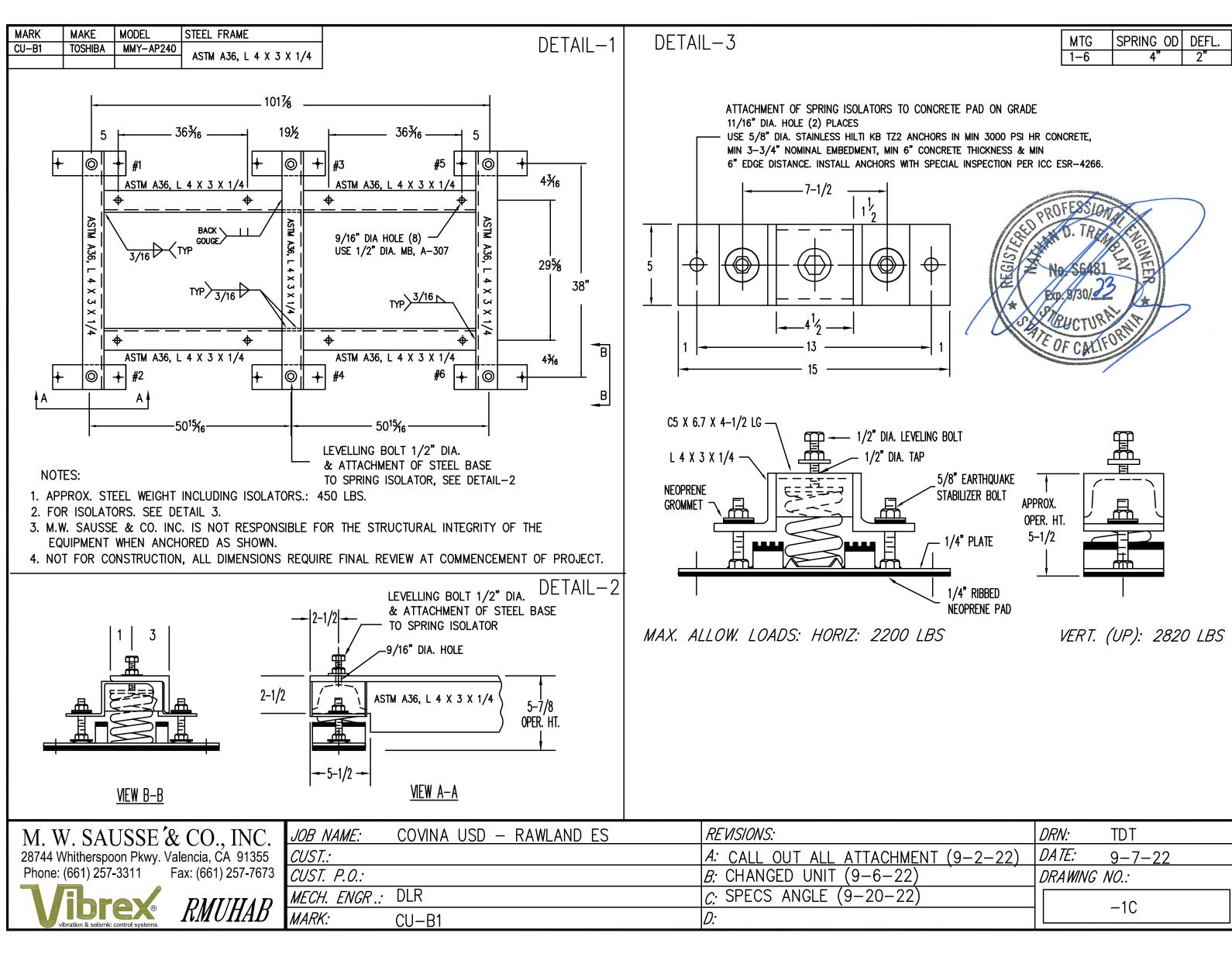
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Г



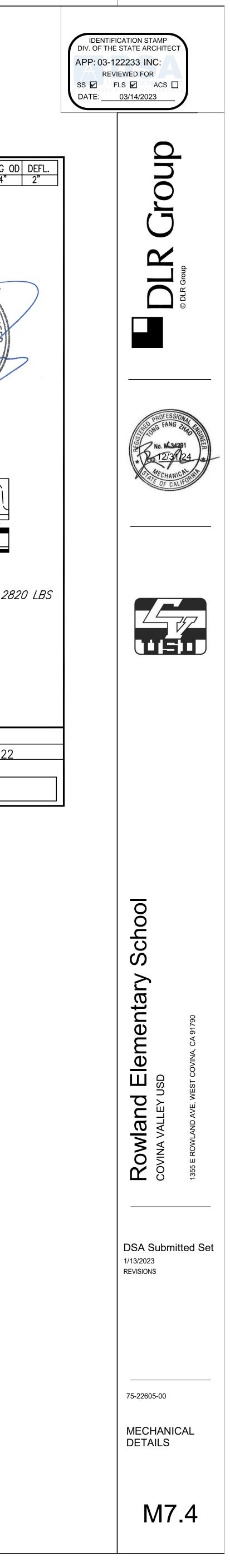


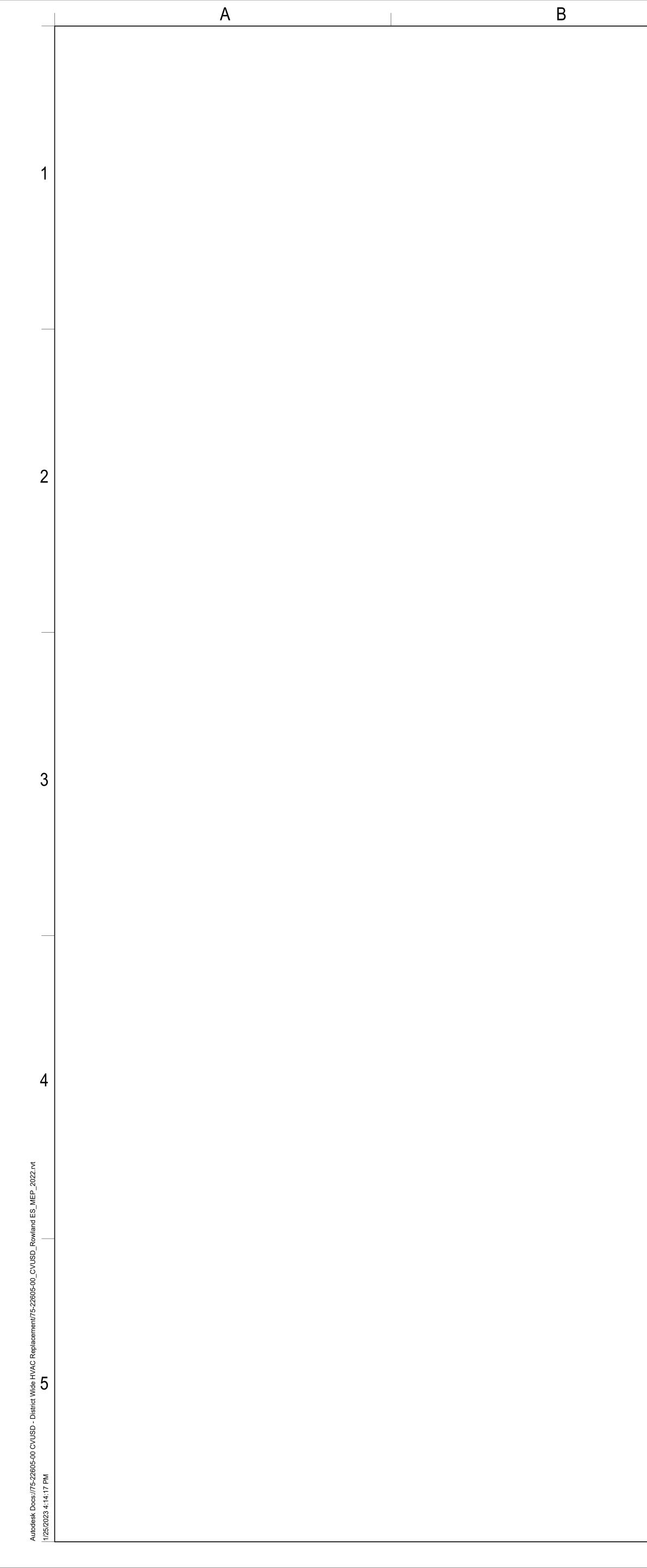


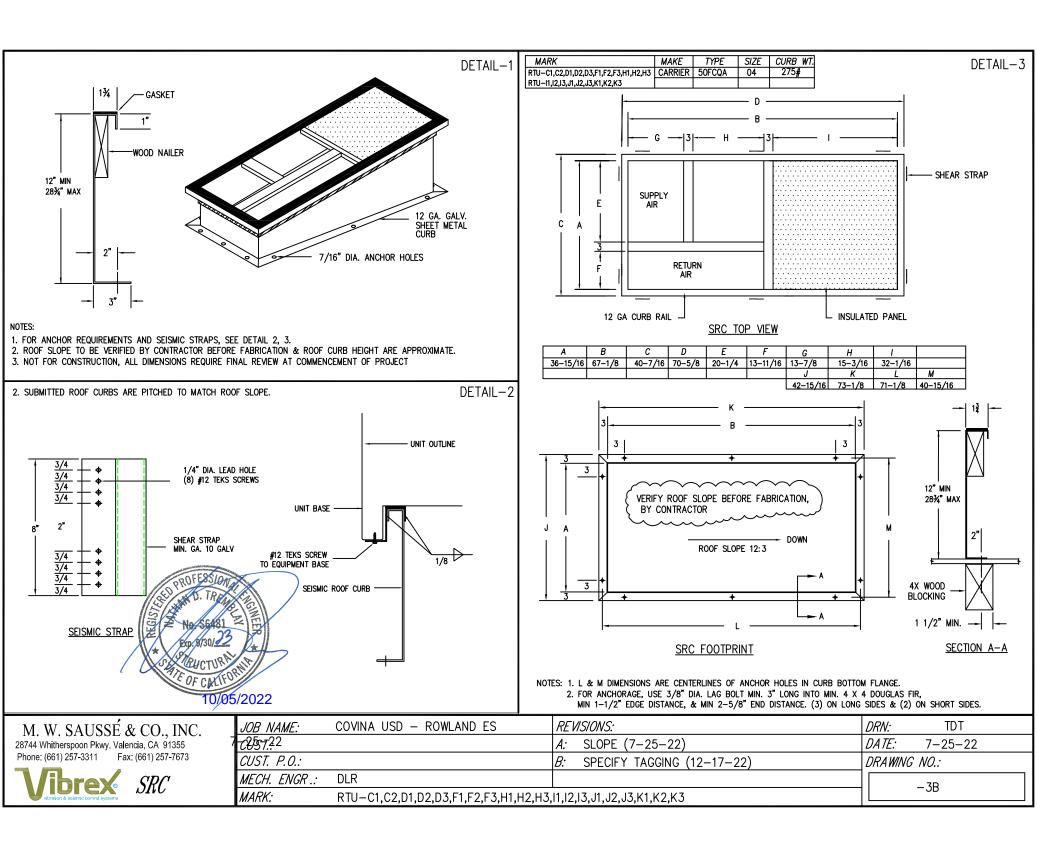


Ε

1 CU-B1 M7.4 NO SCALE





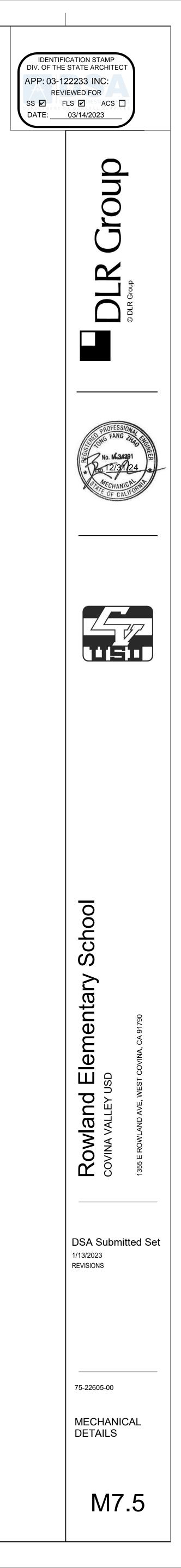


D

Ε

1 RTU ANCHORAGE DETAIL M7.5 NO SCALE

С



Α

В

		ROW	LAND A	/E. E.S. E	EXIST	ING UN	TIN																				NE		т											
TAGS	MAKE	MODEL	GAS INPUT/OUT (BTU/HF	PUT (SINGLE	CTRICAL E CIRCUI	IT) WEIG	HI	ONOMIZE	ER P	OWER EXH	HAUST	OPERATING WEIGHT R (LBS)	DIRECT EPLACEMENT? Y/N	CARRIER MODEL #	N	ET COOLING CA	PACITY	AIRFL	.OW (CFM)	ESP (IN WG) SEER	EER	HEATING CAPACIT		RV FILTER QUANTITY & SIZE (W" X H" X D")	k	ELECTRICA	L.	WEIGHT	OUTSIDE AIR HOOD WEIGHT (LBS)	ECONO	MIZER		POWER E	XHAUST			ROOF CURB WEIGHT (LBS)	TOTAL WEIGHT (LBS)	UNIT DIMENSIONS
				V/PH N	MCA FI	LA	EXIST	ING WEI	GHT EX		WEIGHT	(200)	1/1		NOMINA.	. TOTAL (BTUH) SENSIBLE	. SUPPLY		x			(MBH)			V-PH	MCA	MOCP	LBS	(200)	REQUIRED?	WEIGHT	REQUIRED?	MODEL #	MCA	MOCP	WEIGHT			
RTU-C1, RTU-C2 (BLDG. C)	SANYO	36THS22 (CHS362)	2) 36000	208/1	50 18	3.3 218	8 -		0	NO	0	218	Y	50FCQA04A2A3	3	35000	26150	1200	250	1	14.3	11.32	34.1	13	2 (16 X 25 X 2)	240-1	26	30	469	12	NO	NA	YES	PCD-SRT12CA	NA	NA	152	275	756	75 X 47 X 34
RTU-K1 THRU RTU-K3 (BLDG. K)	SANYO	36THS22 (CHS362)	2) 36000	208/1	50 18	3.3 218	8 -		0	NO	0	218	Y	50FCQA04A2A3	3	35000	26150	1200	250	1	14.3	11.32	34.1	13	2 (16 X 25 X 2)	240-1	26	30	469	12	NO	NA	YES	PCD-SRT12CA	NA	NA	152	275	756	75 X 47 X 34
RTU-J1 THRU RTU-J3 (BLDG. J)	SANYO	36THS22 (CHS362)	2) 36000	208/1	50 18	3.3 218	8 -		0	NO	0	218	Y	50FCQA04A2A3	3	35000	26150	1200	250	1	14.3	11.32	34.1	13	2 (16 X 25 X 2)	240-1	26	30	469	12	NO	NA	YES	PCD-SRT12CA	NA	NA	152	275	756	75 X 47 X 34
RTU-I1 THRU RTU-I3 (BLDG. I)	SANYO	36THS22 (CHS362)	2) 36000	208/1	50 18	3.3 218	8 -		0	NO	0	218	Y	50FCQA04A2A3	3	35000	26150	1200	250	1	14.3	11.32	34.1	13	2 (16 X 25 X 2)	240-1	26	30	469	12	NO	NA	YES	PCD-SRT12CA	NA	NA	152	275	756	75 X 47 X 34
RTU-H1 THRU RTU-H3 (BLDG. H)) SANYO	36THS22 (CHS362)	2) 36000	208/1	50 18	3.3 218	8 -		0	NO	0	218	Y	50FCQA04A2A3	3	35000	26150	1200	250	1	14.3	11.32	34.1	13	2 (16 X 25 X 2)	240-1	26	30	469	12	NO	NA	YES	PCD-SRT12CA	NA	NA	152	275	756	75 X 47 X 34
RTU-F1 THRU RTU-F3 (BLDG. F)	SANYO	36THS22 (CHS362)	2) 36000	208/1	50 18	3.3 218	8 -		0	NO	0	218	Y	50FCQA04A2A3	3	35000	26150	1200	250	1	14.3	11.32	34.1	13	2 (16 X 25 X 2)	240-1	26	30	469	12	NO	NA	YES	PCD-SRT12CA	NA	NA	152	275	756	75 X 47 X 34
RTU-D1 THRU RTU-D3 (BLDG. D)) SANYO	36THS22 (CHS362)	2) 36000	208/1	50 18	3.3 218	8 -		0	NO	0	218	Y	50FCQA04A2A3	3	35000	26150	1200	250	1	14.3	11.32	34.1	13	2 (16 X 25 X 2)	240-1	26	30	469	12	NO	NA	YES	PCD-SRT12CA	NA	NA	152	275	756	75 X 47 X 34
CU-B1 (BLDG. B)														MMY-AP240S6HT6P	20						22.7	11.95				460/3	23+23	30+30	1368		NO	NA	NO	NA	NA	NA	NA		1368	104 X 31 X 73
FCU-B1 (BLDG. B)														40RUQA25T3A6-0A0A0		234500	166000	7440	2000	1.2			234.5	13		460/3	19	30	720		NO	NA	NO	NA	NA	NA	NA		720	89 X 29 X 57

NOTES:

PROVIDE MECHANICAL UNIT WITH INTEGRAL CONVENIENCE RECEPTACLE.
 ALL ROOFTOP UNITS SHALL BE PROVIDED WITH UNPOWERED CONVENIENCE OUTLET.
 ALL ROOFTOP UNITS ARE HORIZONTALLY DISCHARGED CONFIGURATION, UNO. FIELD VERIFY PRIOR TO ORDERING.

PROVIDE HINGED ACCESS PANEL FOR ALL ROOFTOP UNITS.
 FINAL WEIGHT (LBS) IS SUMMATION OF RTU WEIGHT, AND OUTSIDE AIR HOOD, AS APPLICABLE.
 SCCR RATING OF UNITS SHALL BE MINIMUM OF 10KA FOR CLASSROOM RTUS & MPR FCU-B1 AND 25 KA FOR MPR CU-B1.

		DI	FFUSER /	AND GR	ILLE SCH	HEDL	JLE	
Mark No.	MANUFACTURER & MODEL NO.	TYPE	OVERALL DIMENSIONS	NECK SIZE	CFM RANGE	MAX NC	MAX SP	NOTES
CD-1	TITUS	CEILING	24"x24"	6"Ø	0 - 110	25	0.1	
	PAS	SUPPLY		8"Ø	111 - 190	25	0.1	-
				10"Ø	191 - 280	25	0.1	1,2,3
				12"Ø	281 - 350	25	0.1	- 1,2,3
				14Ø	351 - 450	25	0.1	-
				16"Ø	451 - 550	25	0.1	-
RG-1	TITUS	CEILING	24"x24"	6"Ø	0 - 100	20	0.1	
	PAR	RETURN		8"Ø	101 - 175	20	0.1	1
				10"Ø	176 - 275	20	0.1	102
				12"Ø	276 - 380	20	0.1	- 1,2,3
				14"Ø	381 - 500	20	0.1	
				16"Ø	501 - 570	20	0.1	1

NOTES: 1. OBTAIN ARCHITECT'S APPROVAL FOR COLOR AND FINISH. 2. MATCH THE BORDER TYPE TO THE CEILING.

С

ROWLAND AVE. E.S. AC UNIT REPLACEMENT

DUCT SIZING SCHE	DULE *** FOR LOW VEL	OCITY SUPPLY, RET	URN AND E
CFM RANGE	ROUND DUCT DIAMETER OR EQUIVALENT RECTANGULAR DUCT	CFM RANGE	ROUND E DIAMET OR EQUIV RECTANGUL
0-110	6" OR 8" X 4"	1400-1900	18" OR 24'
101-180	8" OR 10" X 6"	1900-2500	20" OR 24'
181-270	10" OR 10" X 8"	2500-3300	22" OR 32'
271-400	10" OR 12" X 8"	3300-4100	24" OR 36'
401-600	12" OR 12" X 10"	4100-5000	26" OR 40'
601-900	14" OR 16" X 10"	5000-6200	28" OR 48'
901-1400	16" OR 18" X 12"	6200-7500	30" OR 48'

REMARKS:

DUCT SIZES INDICATED ARE INSIDE DIMENSIONS WHICH MAY BE ALTERED BY CONTRACTOR TO OTHER DIMENSIONS TO AVOID INTERFERENCES AND CLEARANCE REQUIREMENTS. USE EQUAL FRICTION METHOD, 0.1"WG PER 100FT. OF DUCT TO DETERMINE DUCT SIZES.

VERIFY ALL DIMENSIONS AT THE SITE, MAKE ALL FIELD MEASUREMENTS AND SHOP DRAWINGS NECESSARY FOR FABRICATION AND ERECTION OF SHEET METAL WORK. MAKE ALLOWANCES FOR BEAMS, PIPE OR OTHER OBSTRUCTION AND FOR WORK BY OTHER TRADES AND NOTIFY THE ARCHITECT IN THE EVENT OF ANY POTENTIAL INTERFERENCE. MAKE AN INITIAL VERIFICATION OF BEAM PENETRATIONS SHOWN ON STRUCTURAL DRAWINGS AND ADVISE OF ANY POTENTIAL INTERFERENCES.

AIR VELOCITY GUIDELINES (FPM)										
	NOISE CRITERIA (NC)									
LOCATION	40	35	30	25	20	15				
MAIN SUPPLY DUCT	1700	1500	1000	800	700	600				
MAIN RETURN DUCT	1200	1000	750	600	500	400				
DUCT TO GRILLE SUPPLY	600	500	400	300	250	200				
DUCT TO GRILLE RETURN	600	500	400	300	250	200				

NEW UNIT

ID EXHAUST

ROUND DUCT	
DIAMETER	
OR EQUIVALENT	

QUIVALENT	
GULAR DUCT	

18" OR 24" X 12"	
20" OR 24" X 14"	

R 32" X 14"	

24" OR 36" X 14"	

26" OR 40" X 16"

28" OR 48" X 16"

30" OR 48" X 18"

DUCT SIZING *** MEDIUM PRESSURE DUCTWORK

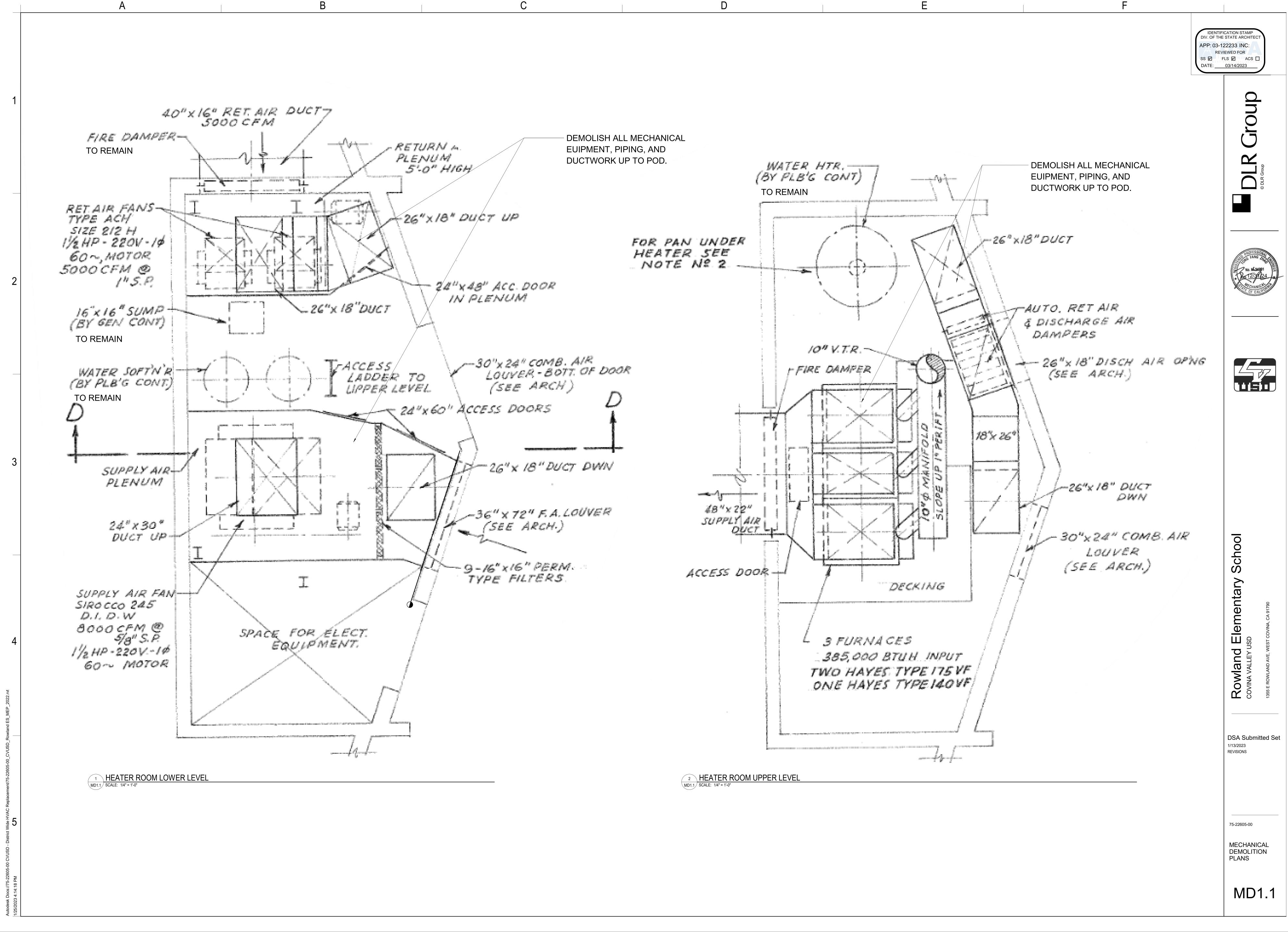
CFM	ROUND DUCT (IN)	RECTANGULAR DUCT (IN) (W IS DUCT WIDTH)								
		WX4	WX6	WX8	WX10	WX12				
UP TO 150	6	8	6	х	х	х				
151-280	8	10	10	8	х	Х				
281-500	10	х	16	12	10	Х				
501-800	12	х	х	16	12	Х				
801-1200	14	Х	Х	22	16	14				

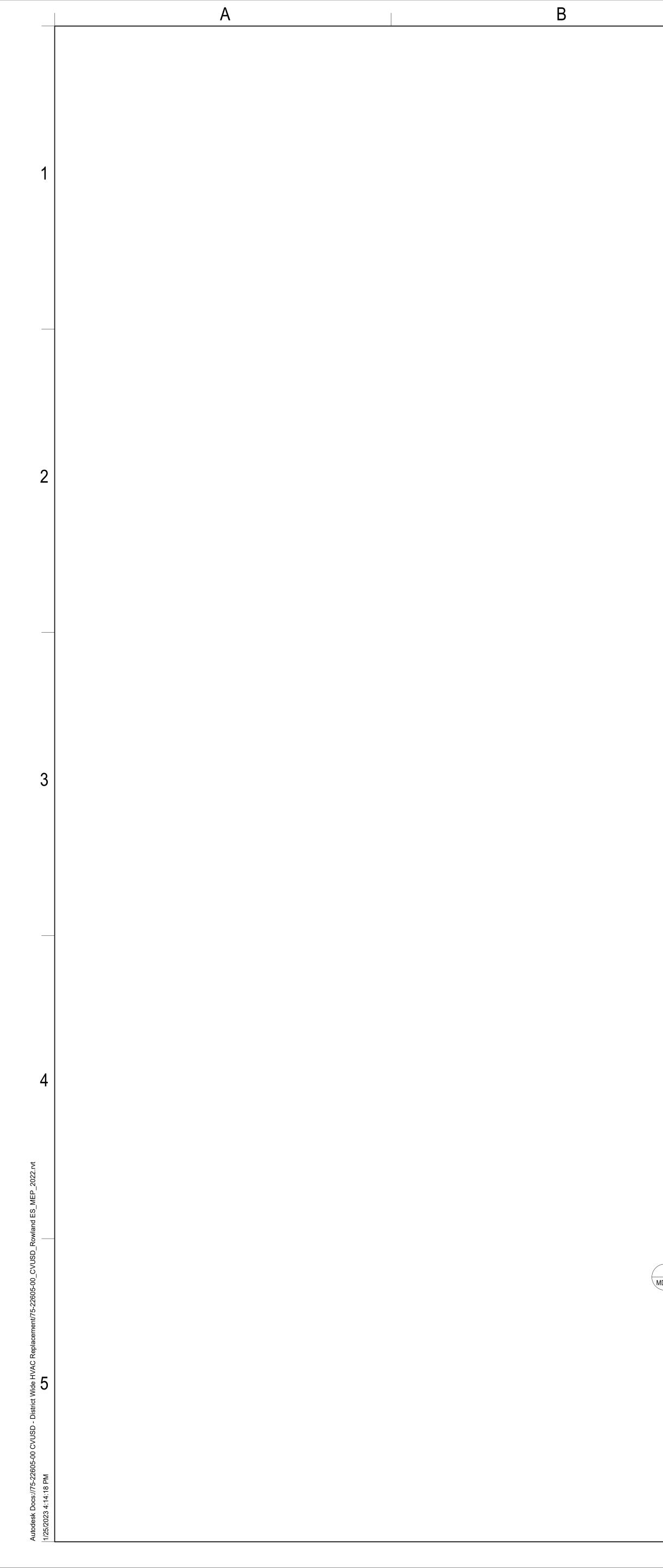
REMARKS:

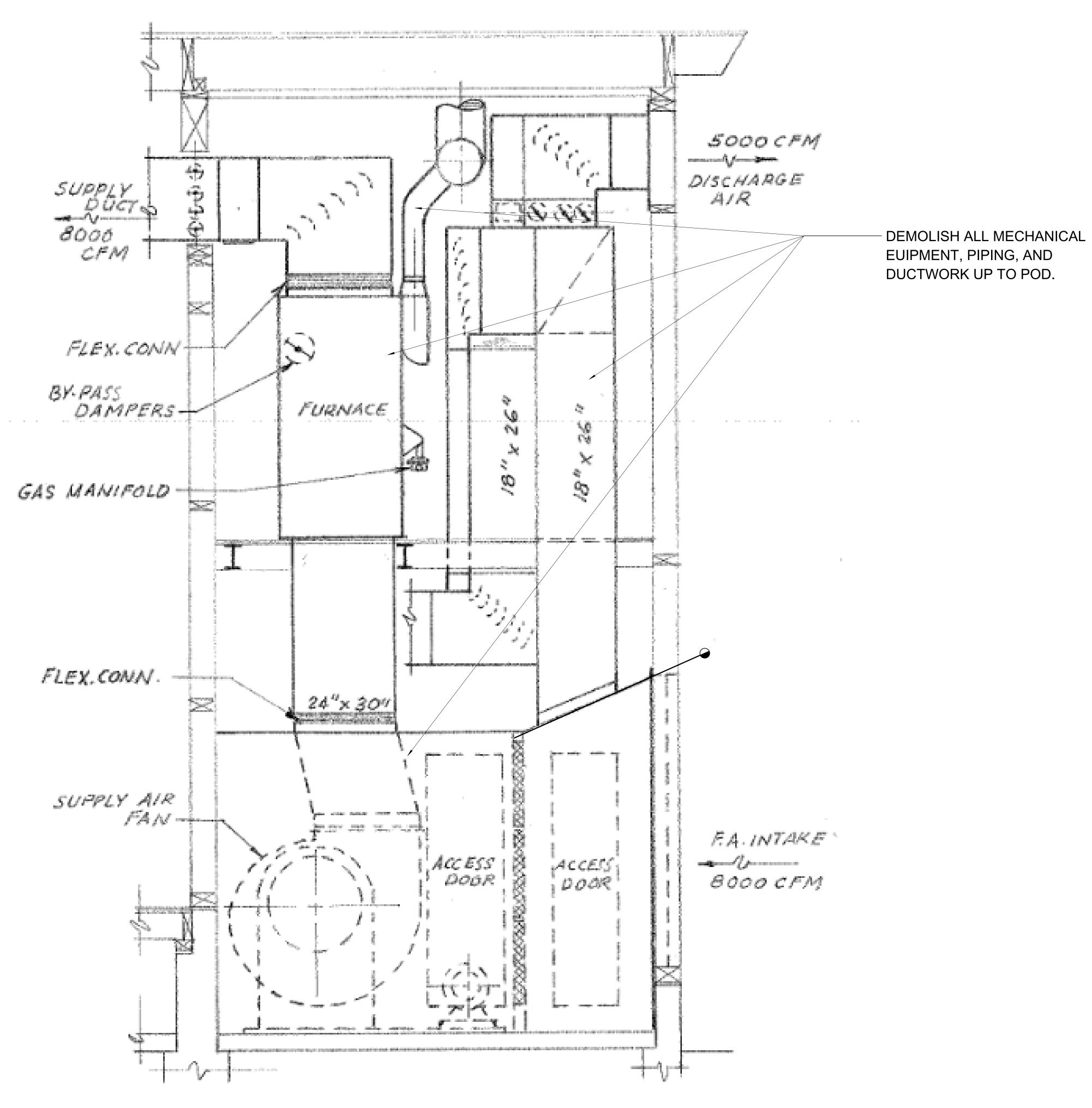
DUCT SIZES INDICATED ARE INSIDE DIMENSIONS WHICH MAY BE ALTERED BY CONTRACTOR TO OTHER DIMENSIONS TO AVOID INTERFERENCES AND CLEARANCE REQUIREMENTS. USE EQUAL FRICTION METHOD, 0.1"WG PER 100FT. OF DUCT TO DETERMINE DUCT SIZES.

VERIFY ALL DIMENSIONS AT THE SITE, MAKE ALL FIELD MEASUREMENTS AND SHOP DRAWINGS NECESSARY FOR FABRICATION AND ERECTION OF SHEET METAL WORK. MAKE ALLOWANCES FOR BEAMS, PIPE OR OTHER OBSTRUCTION AND FOR WORK BY OTHER TRADES AND NOTIFY THE ARCHITECT IN THE EVENT OF ANY POTENTIAL INTERFERENCE. MAKE AN INITIAL VERIFICATION OF BEAM PENETRATIONS SHOWN ON STRUCTURAL DRAWINGS AND ADVISE OF ANY POTENTIAL INTERFERENCES.

DIV. OF THE APP: 03-12 REV SS 🗹 F	CATION STAMP STATE ARCHITECT 22233 INC: IEWED FOR ILS I ACS I 03/14/2023
ANCHORAGE DETAIL REFERANCE 1/M7.5 1/M7.5 1/M7.5 1/M7.5 1/M7.5 1/M7.5 1/M7.3	drug und burg und bur
	Rowland Elementary School COVINA VALLEY USD 1355 E ROWLAND AVE, WEST COVINA, CA 91790
	DSA Submitted Set 1/13/2023 REVISIONS 5 01/13/23
	 75-22605-00 MECHANICAL SCHEDULES
	M8.1





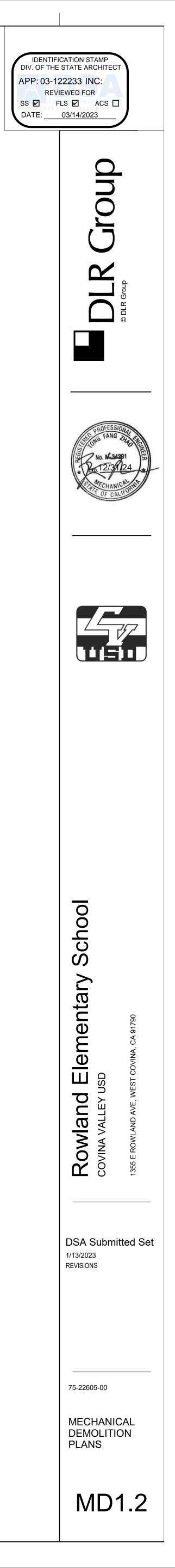


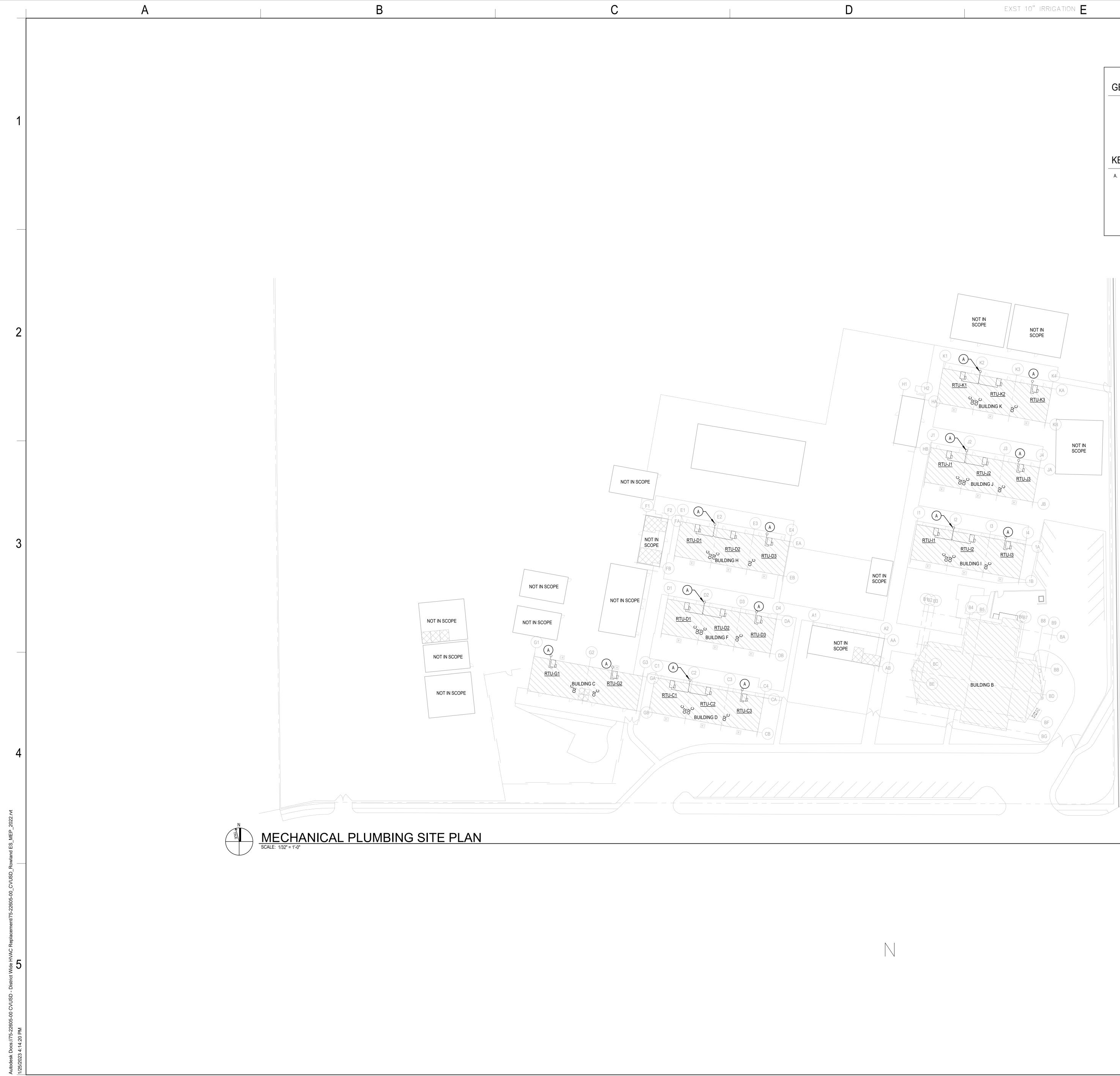
1 HEATER ROOM SECTION "D-D" MD1.2 SCALE: 1/4" = 1'-0" С

D

F

Ε



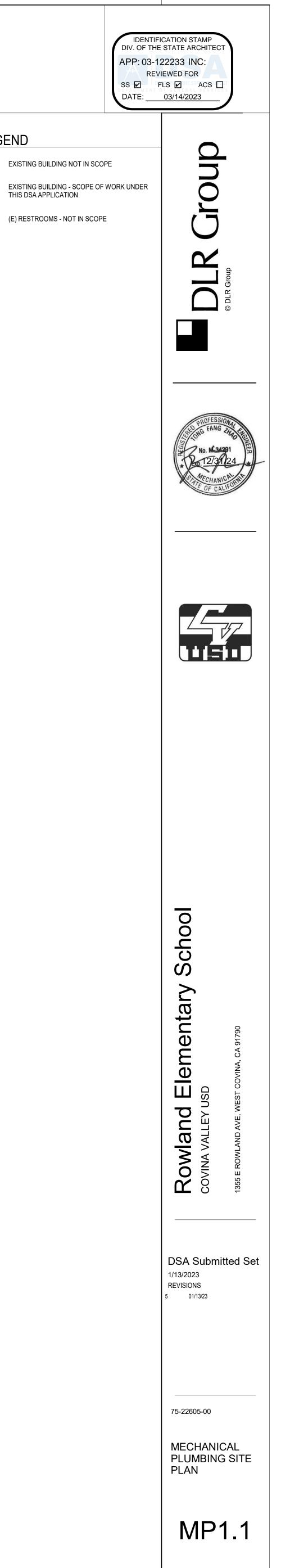




KEY NOTES

A. DRYWELL TYP. REFER TO 7/M7.2 TYP.





A

GENE	RAL SYMBOLS
)	POINT OF DISCONNECT - DEMOLITION REMOVED FROM EXISTING
	POINT OF CONNECTION - NEW CONNECTS TO EXISTING
	AREA NOT IN CONTRACT

GENERAL NOTES

- 1 PENETRATIONS IN WALLS REQUIRING PROTECTED OPENINGS MUST BE FIRESTOPPED WITH AN APPROVED MATERIAL.
- 2 UNLESS SPECIFICALLY SHOWN ON THESE DRAWINGS, NO STRUCTURAL MEMBER SHALL BE CUT, DRILLED, OR NOTCHED WITHOUT PRIOR AUTHORIZATION IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD AND DSA.

SHEET INDEX

- ELECTRICAL SYMBOLS, ABBREVIATIONS & NOTES E0.1
- ROOF ELECTRICAL PLAN E2.1
- ELECTRICAL DIAGRAMS AND SCHEDULE E5.1
- E6.1 ELECTRICAL DETAILS

REVISED: 02/14/2020

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APPLICABLE CODE: 2019 CBC MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA-APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26, AND 30:

02/02/2020

1. ALL PERMANENT EQUIPMENT AND COMPONENTS. 2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY

SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/ 220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE. 3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT. B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUND FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS. PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2019 CBC, SECTIONS 1617A.1.24, 1617A.1.25 AND 1617A.1.26. THE METHOD OF SHOWING BRACING AND ATTACHEMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., OSHPD OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. MP PP MD F (E) MP OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM#) MD PP # 00043-13

POWER

	POWE	<u>R</u>	
	CIRCUIT HOME RUN	RECEPT	ACLES: MOUNT 18-INCHES AFF, UNO
<i>,</i>	CONDUIT TURNING UP		AL LINE THROUGH SYMBOL OR DENOTED 'AC'
	CONDUIT TURNING DOWN	INDICATE	ES MOUNT DEVICE ABOVE COUNTER.
	CONDUIT STUB-UP	BOTTOM	NDICATED AS 'MOUNT ABOVE COUNTER' MOUNT OF BOX 2-INCHES ABOVE TOP OF BACKSPLASH
[]	CONDUIT SLEEVE	OR 6-INC EXISTS.	HES ABOVE COUNTERTOP IF NO BACKSPLASH
	CONDUIT SEAL	LABELS	SHALL BE MACHINE PRINTED, UNO
	CONDUIT CONCEALED IN CEILING OR WALLS, POWER		SIMPLEX RECEPTACLE
*	CONDUIT CONCEALED IN CEILING OR WALLS, OTHER (* = SEE ABBREVIATIONS)	$\stackrel{\circ}{=}$	DUPLEX RECEPTACLE
	CONDUIT CONCEALED IN FLOOR OR UNDERGROUND, POWE		DUPLEX RECEPTACLE, GFI TYPE
	CONDUIT CONCEALED IN FLOOR OR UNDERGROUND.		DUPLEX RECEPTACLE, MOUNT ABOVE COUNTER DUPLEX RECEPTACLE, GFI TYPE, MOUNT ABOVE
	OTHER (* = SEE ABBREVIATIONS)	•	COUNTER
	EXPOSED CONDUIT, POWER	₩	FOURPLEX RECEPTACLE FOURPLEX RECEPTACLE, GFI TYPE
·····*	EXPOSED CONDUIT, OTHER (* = SEE ABBREVIATIONS)		FOURPLEX RECEPTACLE, MOUNT ABOVE COUNTER
E-FRS-∃	FIRE RATED SLEEVE		FOURPLEX RECEPTACLE, GFI TYPE, MOUNT ABOVE COUNTER
-	TRANSFORMER		DUPLEX RECEPTACLE, FLUSH IN CEILING
T			FOURPLEX RECEPTACLE, FLUSH IN CEILING
XXX	BRANCH CIRCUIT PANELBOARD MOUNT 72-INCHES TO TOP	₩ HD	DUPLEX RECEPTACLE, HORIZONTALLY MOUNTED
XXX	DISTRIBUTION PANELBOARD MOUNT	ΗШ	DUPLEX RECEPTACLE, HORIZONTALLT MOUNTED DUPLEX RECEPTACLE, HORIZ. MTD, GFI TYPE
	72-INCHES TO TOP		DUPLEX RECEPTACLE, HORIZ. MTD, ABOVE COUNTER DUPLEX RECEPTACLE, HORIZ. MTD, GFI TYPE,
	EQUIPMENT CABINET, AS NOTED	ΗΣ	MOUNT ABOVE COUNTER
		_	WEATHER RESISTANT GFI DUPLEX RECEPTACLE,
	SWITCHBOARD	≡ _R	ROOF MOUNT 18-INCHES ABOVE ADJACENT STRUCTURE WITH A WEATHERPROOF, IN-USE COVER
\boxtimes	MOTOR STARTER OR DRIVE	_=	WEATHER RESISTANT GFI DUPLEX RECEPTACLE,
	DISCONNECT SWITCH	WP	MOUNT 18-INCHES AFF WITH A WEATHERPROOF, IN-USE COVER
$\boxtimes^{\!$	COMBINATION STARTER / DISCONNECT SWITCH	\Rightarrow	STD DUPLEX RECEPTACLE TO SERVE ELECTRIC WATER COOLER, MOUNT AT HEIGHT PER
CT	CURRENT TRANSFORMER ENCLOSURE	EWC	GUIDELINES. WIRE TO GFCI BKR IN PANELBOARD.
M	METER	⇒ _{TV}	DUPLEX RECEPTACLE TO SERVE TELEVISION, MOUNT AT SAME HEIGHT AND WITHIN 8-INCHES
GEN	GENERATOR	€ TV	OF ADJACENT TV OUTLET
ATS	AUTOMATIC TRANSFER SWITCH		
	SYSTEM GROUND ELECTRODE	-	DUPLEX RECEPTACLE, EMERGENCY
= ⊢①	THERMOSTAT	\Rightarrow	FOURPLEX RECEPTACLE, EMERGENCY
Î	MUSHROOM SWITCH	-	DUPLEX RECEPTACLE, LOWER SWITCH
⊥ MH	ELECTRICAL MANHOLE		DUPLEX RECEPTACLE, SWITCHED
			RANGE RECEPTACLE, MOUNT 8-INCHES AFF
HH	ELECTRICAL HAND HOLE	•	SPECIAL RECEPTACLE, DEEP WELL BOX FLUSH FLOOR OUTLET BOX UNO
\mathbb{M}	MOTOR CONNECTION, HORSEPOWER AS INDICATED	•	FLUSH FLOOR BOX WITH DUPLEX RECEPTACLE UNO
SF	FUSE AND SWITCH ASSEMBLY		MULTI-DEVICE FLOOR BOX WITH DUPLEX
ST	MANUAL CONTROLLER WITH THERMAL OVERLOAD	$\triangleright \bullet \bullet$	RECEPTACLE AND TELECOMMUNICATIONS OUTLETS
s _M	MANUAL CONTROLLER W/O THERMAL OVERLOAD	⊢Û	
В	CIRCUIT BREAKER ENCLOSURE	=0	USB ONLY RECEPTACLE RECEPTACLE WITH USB PORTS
PB	PULL BOX	-	
	EQUIPMENT CONNECTION	\bigcirc	FLUSH JUNCTION BOX, CEILING MOUNTED
$\frac{1}{1}$	CABLE TRAY, LADDER TYPE OR RUNWAY	J _P	JUNCTION BOX FOR FUTURE PROJECTOR POWER MOUNT 24-INCHES ABOVE SUSPENDED CEILING
	CABLE TRAY	P	MOUNT TIGHT TO CEILING AT EXPOSED STRUCTURE LABEL BOX COVER 'PROJECTOR POWER'
	MULTI-OUTLET ASSEMBLIES	Ś	JUNCTION BOX ABOVE SUSPENDED CEILING WITH FLEX CONNECTION
<u>_H_H_H_H_H_</u>	MOUNT 18-INCHES AFF, UNO WHERE DENOTED 'AC', MOUNT ABOVE COUNTER	ΗĴ	FLUSH JUNCTION BOX, WALL MOUNTED
	DIVIDED SURFACE RACEWAY	ΗJ	SURFACE JUNCTION BOX, WALL MOUNTED
	MOUNT 18-INCHES AFF, UNO WHERE DENOTED 'AC', MOUNT ABOVE COUNTER	J	SURFACE JUNCTION BOX, CEILING MOUNTED
PUSHRIITTO	DN STATION: MOUNT 42-INCHES AFF UNO	ΗÐ	HAND DRYER, INSTALL HAND DRYER
<u>FUSHDUTIC</u>	SWITCH, PUSH BUTTON, SINGLE		SPECIFIED IN DIV. 11
	SWITCH, PUSH BUTTON, DOUBLE		

SWITCH, PUSH BUTTON, TRIPLE

ABBF	REVIATIONS
(D)	DEMOLISHED
(E)	EXISTING
(R)	RELOCATED
Ø	PHASE
A	AMPERE
AC	ABOVE COUNTER
AF	AMP FRAME (CIRCUIT BREAKER)
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
AMP	AMPERE
AP	WIRELESS ACCESS POINT
AT	AMP TRIP (CIRCUIT BREAKER OR FUSE)
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO-VIDEO, AUDIO-VISUAL
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BJ	BONDING JUMPER
BKR	BREAKER
BMS	BUILDING MANAGEMENT SYSTEM
C	CONDUIT
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTA
CKT	CIRCUIT
CTL	CONTROL
CU	COPPER
DB	DECIBEL
DC	DIRECT CURRENT
DISC	DISCONNECT
DP	DISTRIBUTION PANELBOARD
DW	DISHWASHER
ECS	EMERGENCY COMMUNICATION SYSTEM
EGB	ELECTRICAL GROUNDING BUSBAR
EMD	ESTIMATED MAXIMUM DEMAND
EMGB	ELECTRICAL MAIN GROUNDING BUSBAR
EP	EXPLOSION PROOF
ER	EXISTING (TO BE) RELOCATED
ERMS	ENERGY REDUCTION MAINTENANCE SWITCH
EWC	ELECTRIC WATER COOLER
FA	FIRE ALARM
FAA	FIRE ALARM ANNUNCIATOR
FACP	FIRE ALARM CONTROL PANEL
FC	FOOT CANDLE
FLA	FULL LOAD AMPS
FS	FLOW SWITCH
FSD	FIRE SMOKE DAMPER
G	EQUIPMENT GROUNDING CONDUCTOR
GEN	GENERATOR
GFI, GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFPE	GROUND FAULT PROTECTION OF EQUIPMENT
GND	EQUIPMENT GROUNDING CONDUCTOR
HH	HANDHOLE
HOA	HAND-OFF-AUTOMATIC
HP	HORSE POWER
IC	INTERCOM
IG	ISOLATED GROUND
JB	JUNCTION BOX
kaic	THOUSAND AMPERE INTERRUPTING CIRCUIT
KV	KILOVOLT
KVA	KILOVOLT AMPERES
KW	KILOWATT
LT	LIGHT
LTG	LIGHTING
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MH	MANHOLE
MLO	MAIN LUGS ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
MRTS	MOTOR RATED TOGGLE SWITCH
MSB	MAIN SWITCHBOARD
MTD	MOUNTED
MTG	MOUNTING
MTS	MAIN TRANSFER SWITCH
Ν	NEUTRAL

N.C.

N.O.

NF

NL

OFCI

PA

PB

PH PIV

PNL

PWR

RCP

REF

RESP

SCCR SD

SEC

TBB

TC TGB

то

TR

TS

TV

UG

VA VFD

WA

WG

WP

XFMR

UPS

TMGB

SPD

SWBD

RECPT

OS&Y

NORMALLY CLOSED NORMALLY OPEN NON-FUSED NIGHT LIGHT

OWNER FURNISHED CONTRACTOR INSTALLED OUTSIDE SCREW AND YOKE POLE(S) PUBLIC ADDRESS

PULL BOX PHASE POST INDICATOR VALVE PANEL POWER

REFLECTED CEILING PLAN RECEPTACLE REFERENCE RESPONSIVE

SHORT CIRCUIT CURRENT RATING SMOKE DAMPER SECONDARY SURGE PROTECTION DEVICE SWITCHBOARD

TELECOMMUNICATIONS BONDING BACKBONE TIME CLOCK TELECOMMUNICATIONS GRONDING BUSBAR TELECOMMUNICATIONS MAIN GRONDING BUSBAR TELECOMMUNICATIONS OUTLET TELECOMMUNICATIONS ROOM TAMPER SWITCH TELEVISION

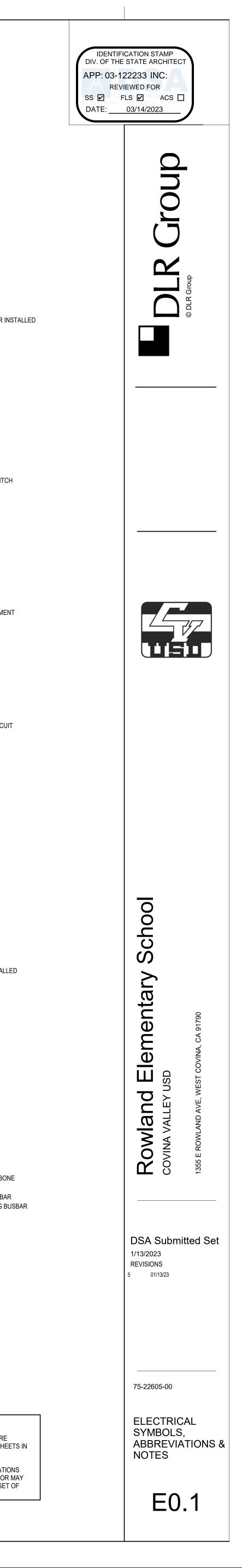
UNDERGROUND UNINTERRUPTABLE POWER SUPPLY

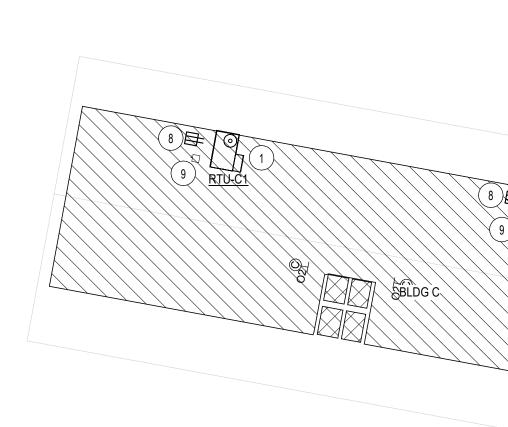
VOLT VOLT-AMPERE VARIABLE FREQUENCY DRIVE WIRE TELECOMMUNICATIONS WORK AREA

WIRE GUARD WEATHER-PROOF (NEMA 3R)

TRANSFORMER

<u>* NOTE *</u> ALL NOTES ON THIS SHEET ARE APPLICABLE TO ALL OTHER SHEETS IN THIS SET. THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE APPLICABLE IN THIS SET OF DRAWINGS.





SITE LEGEND

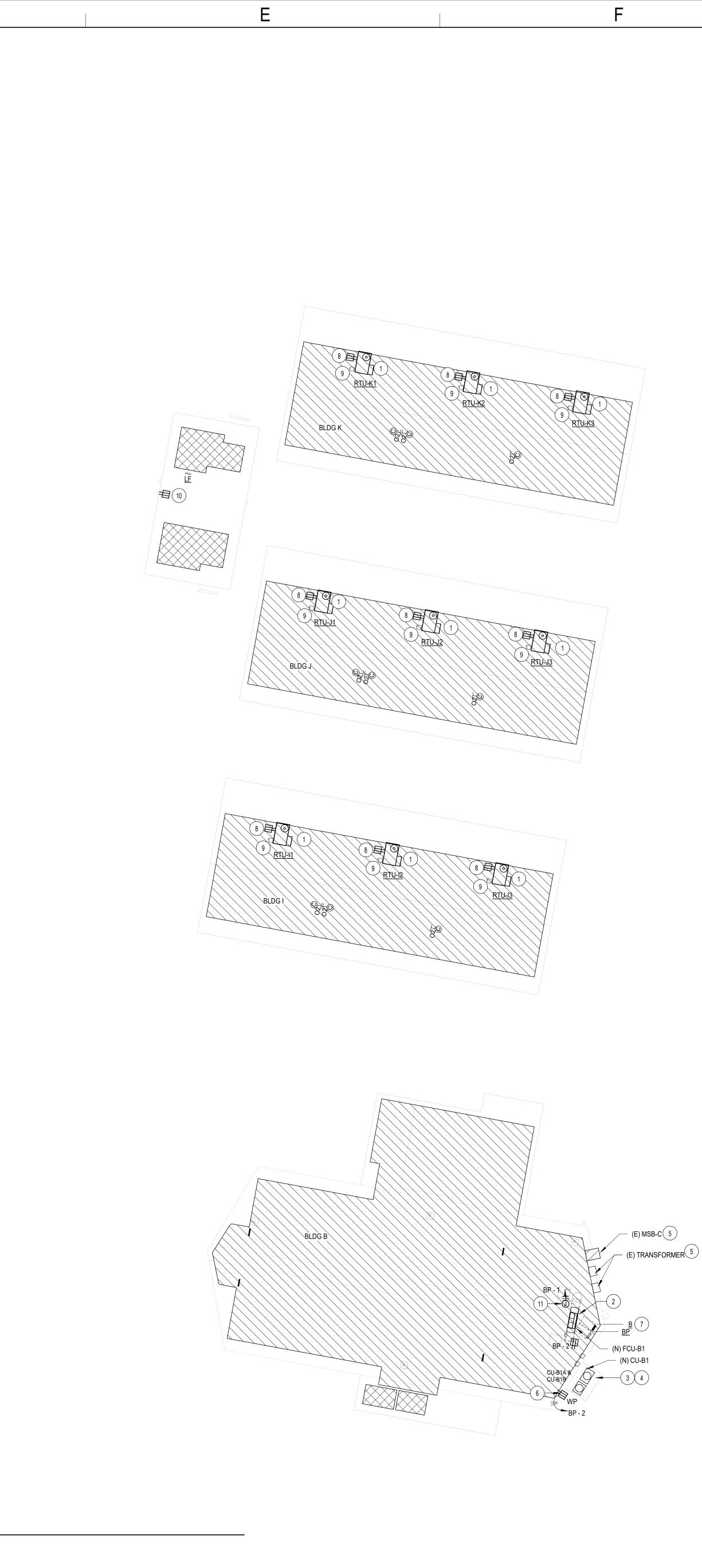
EXISTING BUILDING NOT IN SCOPE

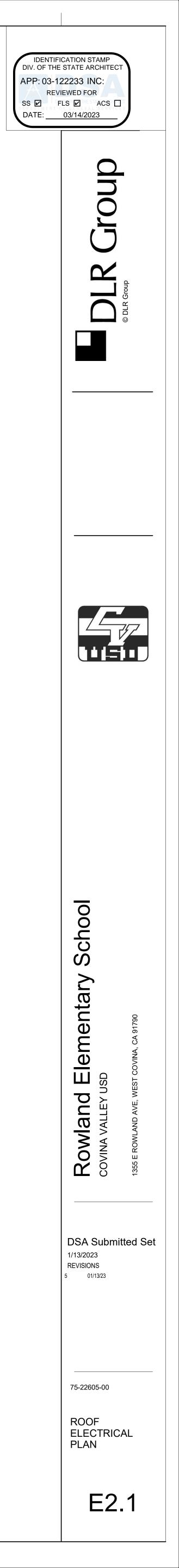
EXISTING BUILDING - SCOPE OF WORK UNDER THIS DSA APPLICATION

(E) RESTROOMS - NOT IN SCOPE









Α

В

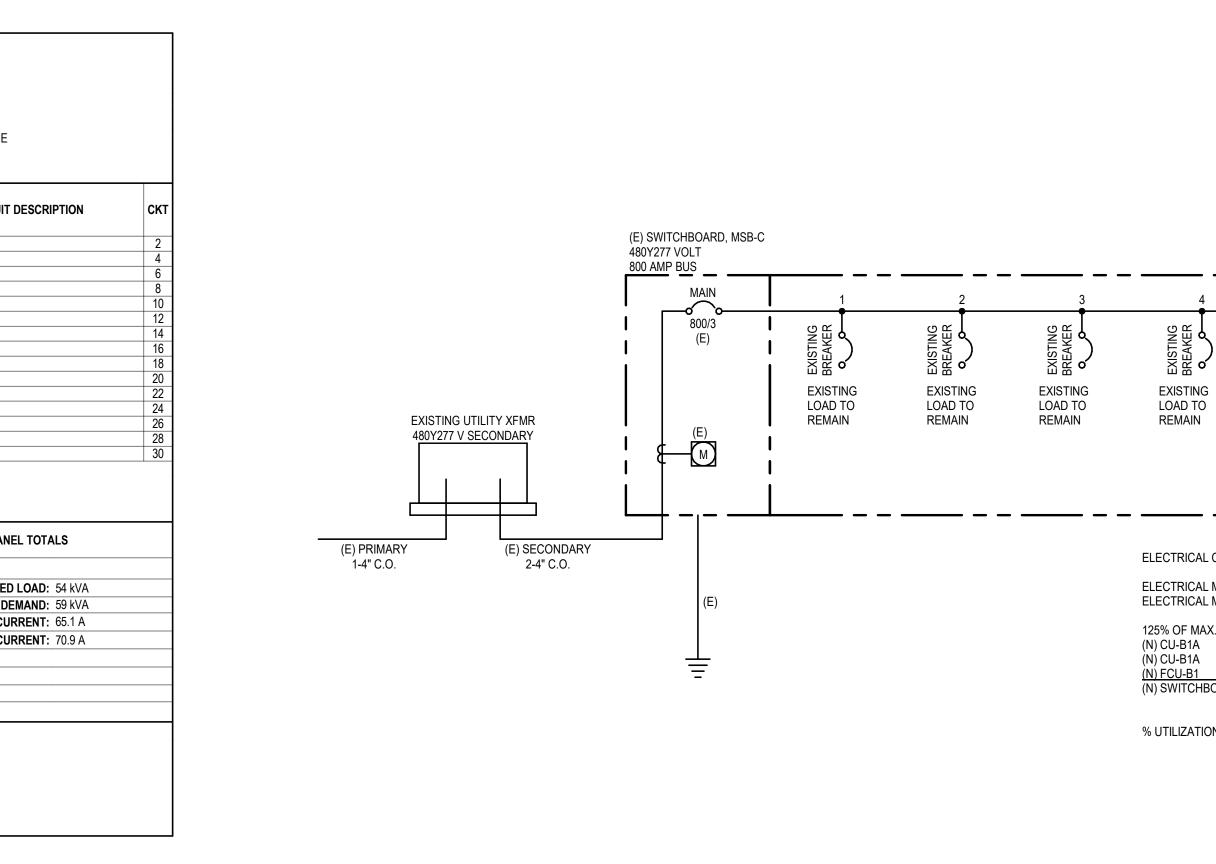
		I

		PANEL: B Location: Me Bus Rating: 229 Main Breaker: 229	5.0 A	B113					VOLTS PHASES WIRES SCCR	: 4	7			L		FED FR	NG: SURFACE DM: PD: Type 1 ES: SEE ONE-LINE
скт	CKT CIRCUIT DESCRIPTION		BKR TRIP	Р	BKR TYPE	LOAD TYPE	OAD YPE PHASE A (VA)		PHASE B (VA)		PHASE C (VA)		LOAD TYPE	BKR TYPE	Р	BKR TRIP	CIRCUI
1				_			6,374		0.074								
3 CI 5	J-B1A		30	3		М			6,374		6,374						
7							6,374				0,374						
	J-B1B		30	3		М			6,374								
11											6,374						
13			20	2			5,265		F 005				_				
15 F0 17	CU-B1		30	3		М			5,265		5,265						
10		D)	45	_		D 14	100				0,200						
21	NL BP (MINI LOAD CTI	R)	15	2		R; M			0								
23																	
25																	
27 29											-						
					ΤΟΤΑ	L LOAD	: 18113	VA	1801	3 VA	1801	3 VA					
					ΤΟΤΑ	L AMPS	5 65.4	A	65.	0 A	65	0 A	_				
			i i						IAND FACTOR NOTES				BKR TYPE				PA
LOAD TYPE	LOAD DESCRIPTION	CONNECTED LOAD (VA)	DEMAN D		STIMATED MAND (VA			DEMA	ND FACT	OR NOTES	6		I	BKR TYPE	Ξ		PAI
)	NTINUOUS L			OR NOTES	6		G = GFCI		E		
	DESCRIPTION	(VA)	D		Mand (Va) COI	NTINUOUS L ST 10KVA @	.0AD @ 1	25%		5			(5mA)	E		
TYPE L	DESCRIPTION LIGHTING	(VA) 0 VA	D 0.00%		MAND (VA 0 VA) COI FIR		.OAD @ 1) 100%, R	25% EMAINDE	R @ 50%			G = GFCI	(5mA) CI (30mA)	E 		CONNECTE ESTIMATED D
TYPE L R	DESCRIPTIONLIGHTINGRECEPTACLES	(VA) 0 VA 0 VA	D 0.00% 0.00%		MAND (VA 0 VA 0 VA) COI FIR NOI	ST 10KVA @	.0AD @ ^ 9 100%, R 9 KITCHE	25% Emaindei N Loads,	R @ 50%			G = GFCI GP = GFC	(5mA) CI (30mA) INT TRIP	E		CONNECTE
TYPE L R K	DESCRIPTIONLIGHTINGRECEPTACLESKITCHEN	(VA) 0 VA 0 VA 0 VA 0 VA 0 VA	D 0.00% 0.00% 0.00%	DE	MAND (VA 0 VA 0 VA 0 VA) COI FIR NOI	st 10kva @ N-Dwelling	.0AD @ ^ 9 100%, R 9 KITCHE	25% Emaindei N Loads,	R @ 50%			G = GFCI GP = GFC ST = SHU	(5mA) CI (30mA) INT TRIP			CONNECTE ESTIMATED D CONNECTED CI
TYPE L R K LM	DESCRIPTIONLIGHTINGRECEPTACLESKITCHENLARGEST MOTOR	(AV) AV 0 AV 0 AV 0 AV 0	D 0.00% 0.00% 0.00%	DE	MAND (VA 0 VA 0 VA 0 VA 0 VA) COI FIR NOI	st 10kva @ N-dwelling	.0AD @ ^ 9 100%, R 9 KITCHE	25% Emaindei N Loads,	R @ 50%			G = GFCI GP = GFC ST = SHU	(5mA) CI (30mA) INT TRIP	-		CONNECTE ESTIMATED D
TYPE L R K LM M	DESCRIPTIONLIGHTINGRECEPTACLESKITCHENLARGEST MOTORMOTOR	(VA) 0 VA 0 VA 0 VA 0 VA 54140 VA	D 0.00% 0.00% 0.00% 0.00% 108.83%	DE	MAND (VA 0 VA 0 VA 0 VA 0 VA 58921 VA) COI FIR NOI	st 10kva @ N-dwelling	.0AD @ ^ 9 100%, R 9 KITCHE	25% Emaindei N Loads,	R @ 50%			G = GFCI GP = GFC ST = SHU	(5mA) CI (30mA) INT TRIP	E		CONNECTE ESTIMATED D CONNECTED CI
TYPE L R K LM M C	DESCRIPTIONLIGHTINGRECEPTACLESKITCHENLARGEST MOTORMOTORCOOLING	(VA) 0 VA 0 VA 0 VA 0 VA 54140 VA 0 VA	D 0.00% 0.00% 0.00% 108.83% 0.00%	DE	MAND (VA 0 VA 0 VA 0 VA 0 VA 58921 VA 0 VA) COI FIR NOI	st 10kva @ N-dwelling	.0AD @ ^ 9 100%, R 9 KITCHE	25% Emaindei N Loads,	R @ 50%			G = GFCI GP = GFC ST = SHU	(5mA) CI (30mA) INT TRIP	E		CONNECTE ESTIMATED D CONNECTED CI

10

	D	ISTF	RIBU	TION	PANE	L: BP	
		LO	CATION:	MECHANIC	AL B113	VOLTAGE: 120/240V.1Ø3W	Ι.
		MAIN	DEVICE:	40.0 A		AIC RATING:	
		BU	S AMPS:			SPECIAL: 40	
					MAIN [DEVICE	
	FRAME	POLES	FUSE	SF	PECIAL	DESCRIPTION/NAMEPLATE	
			40.0 A				
	1			1	SECTIC	N NO. 1	
СКТ	FRAME	POLES	FUSE	LOAD		DESCRIPTION/NAMEPLATE	NOTE
1	10.0 A	1	10.0 A	100 VA	FIRE SMO	KE DAMPER	
2	400.0 A	1	20.0 A	0 VA	R		
3							
4							
5							
6							
7							
8							
9							

TAGS	V/PH
NA	NA
NA	NA
NA	NA
CU/FCU-C1 (BLDG C)	240/1
CU/FCU-C2 (BLDG C)	240/1
CU/FCU-D1 (BLDG D)	240/1
CU/FCU-D2 (BLDG D)	240/1
CU/FCU-D3 (BLDG D)	240/1
CU/FCU-F1 (BLDG F)	240/1
CU/FCU-F2 (BLDG F)	240/1
CU/FCU-F3 (BLDG F)	240/1
CU/FCU-H1 (BLDG H)	240/1
CU/FCU-H2 (BLDG H)	240/1
CU/FCU-H3 (BLDG H)	240/1
CU/FCU-I1 (BLDG I)	240/1
CU/FCU-I2 (BLDG I)	240/1
CU/FCU-I3 (BLDG I)	240/1
CU/FCU-J1 (BLDG J)	240/1
CU/FCU-J2 (BLDG J)	240/1
CU/FCU-J3 (BLDG J)	240/1
CU/FCU-K1 (BLDG K)	240/1
CU/FCU-K2 (BLDG K)	240/1
CU/FCU-K3 (BLDG K)	208/1
GENERAL NOTES:	
1	CONTRAC
	PROVIDE
2	INCOL
-	POWER N
3	CONTRAC
4	FIELD CO



С

One-Line Diagram

D

						RUVLAN	ID AVE. E.J.			CFLA										
	EXIS	STING U	INIT										NE	W UNIT						
			ELECTRICAL				DIRECT				ELEC	TRICAL				PC	WER EXHA	UST	-	NOTES
MCA	FLA	MOCP	PANEL/ CKT#	FEEDER SIZE	DISCONNECT	TAGS	REPLACEMENT? Y/N	CFM	V-PH	МСА	МОСР	PANEL/ CKT#	DISCONNECT	REQUIRED?	Model#	MCA	МОСР	FEEDER SIZE	DISCONNECT	
NA	NA	NA	NA	NA	NA	CU-B1A (BLDG. B)	N		460/3	23	30	B-1,3,5	30A (30A FUSE)	NO				NA		
NA	NA	NA	NA	NA	NA	CU-B1B (BLDG. B)	N		460/3	23	30	B-7,9,11	30A (30A FUSE)	NO				NA		1
NA	NA	NA	NA	NA	NA	FCU-B1 (BLDG. B)	N	8,000	460/3	19	30	B-13,15,17	30A (30A FUSE)	NO				NA		
22.875	18.3	30	LH-14,16	2#10, 1#10GND-0.75"C	30	RTU-C1 (BLDG C)	Y	1,200	240/1	26	30	LH-14,16	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75"C	30A (20A FUSE)	
22.875	18.3	30	LH-18,20	2#10, 1#10GND-0.75"C	30	RTU-C2 (BLDG C)	Y	1,200	240/1	26	30	LH-18,20	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75"C	30A (20A FUSE)	
22.875	18.3	30	LH-2,4	2#10, 1#10GND-0.75"C	30	RTU-D1 (BLDG D)	Y	1,200	240/1	26	30	LH-2,4	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75"C	30A (20A FUSE)	
22.875	18.3	30	LH-6,8	2#10, 1#10GND-0.75"C	30	RTU-D2 (BLDG D)	Y	1,200	240/1	26	30	LH-6,8	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75"C	30A (20A FUSE)	
22.875	18.3	30	LH-10,12	2#10, 1#10GND-0.75"C	30	RTU-D3 (BLDG D)	Y	1,200	240/1	26	30	LH-10,12	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75"C	30A (20A FUSE)	
22.875	18.3	30	LH-13,15	2#10, 1#10GND-0.75"C	30	RTU-F1 (BLDG F)	Y	1,200	240/1	26	30	LH-13,15	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75"C	30A (20A FUSE)	
22.875	18.3	30	LH-17,19	2#10, 1#10GND-0.75"C	30	RTU-F2 (BLDG F)	Y	1,200	240/1	26	30	LH-17,19	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75"C	30A (20A FUSE)	
22.875	18.3	30	LH-21,23	2#10, 1#10GND-0.75"C	30	RTU-F3 (BLDG F)	Y	1,200	240/1	26	30	LH-21,23	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75"C	30A (20A FUSE)	
22.875	18.3	30	LH-1,3	2#10, 1#10GND-0.75"C	30	RTU-H1 (BLDG H)	Y	1,200	240/1	26	30	LH-1,3	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75"C	30A (20A FUSE)	
22.875	18.3	30	LH-5,7	2#10, 1#10GND-0.75"C	30	RTU-H2 (BLDG H)	Y	1,200	240/1	26	30	LH-5,7	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75"C	30A (20A FUSE)	
22.875	18.3	30	LH-9,11	2#10, 1#10GND-0.75"C	30	RTU-H3 (BLDG H)	Y	1,200	240/1	26	30	LH-9,11	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75"C	30A (20A FUSE)	
22.875	18.3	30	LF-1,3	2#10, 1#10GND-0.75"C	30	RTU-I1 (BLDG I)	Y	1,200	240/1	26	30	LF-1,3	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75"C	30A (20A FUSE)	
22.875	18.3	30	LF-5,7	2#10, 1#10GND-0.75"C	30	RTU-I2 (BLDG I)	Y	1,200	240/1	26	30	LF-5,7	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75"C	30A (20A FUSE)	
22.875	18.3	30	LF-9,11	2#10, 1#10GND-0.75"C	30	RTU-I3 (BLDG I)	Y	1,200	240/1	26	30	LF-9,11	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75"C	30A (20A FUSE)	
22.875	18.3	30	LF-13,15	2#10, 1#10GND-0.75"C	30	RTU-J1 (BLDG J)	Y	1,200	240/1	26	30	LF-13,15	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75"C	30A (20A FUSE)	
22.875	18.3	30	LF-17,19	2#10, 1#10GND-0.75"C	30	RTU-J2 (BLDG J)	Y	1,200	240/1	26	30	LF-17,19	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75"C	30A (20A FUSE)	
22.875	18.3	30	LF-21,23	2#10, 1#10GND-0.75"C	30	RTU-J3 (BLDG J)	Y	1,200	240/1	26	30	LF-21,23	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75"C	30A (20A FUSE)	1
22.875	18.3	30	LF-2,4	2#10, 1#10GND-0.75"C	30	RTU-K1 (BLDG K)	Y	1,200	240/1	26	30	LF-2,4	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75"C	30A (20A FUSE)	
22.875	18.3	30	LF-6,8	2#10, 1#10GND-0.75"C	30	RTU-K2 (BLDG K)	Y	1,200	240/1	26	30	LF-6,8	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75"C	30A (20A FUSE)	1
22.875	18.3	30	LF-10,12	2#10, 1#10GND-0.75"C	30	RTU-K3 (BLDG K)	Y	1,200	240/1	26	30	LF-10,12	30A (30A FUSE)	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75"C	30A (20A FUSE)	

ROWLAND AVE. E.S. AC UNIT REPLACEMENT

ACTOR TO FIELD VERIFY CIRCUITING AND FEEDER INFORMATION PRIOR TO EQUIPMENT REMOVAL. CONTRACTOR TO PROVIDE REQUIRED ADJUSTMENTS AS NEEDED.

E MECHANICAL UNIT WITH INTEGRAL CONVENIENCE RECEPTACLE. FEED FROM SPARE 20A/1P BREAKER IN NEAREST PANEL. ROUTE 2#12+1#12GND IN 1/2" EMT CONDUIT FROM PANEL TO RECEPTACLE.

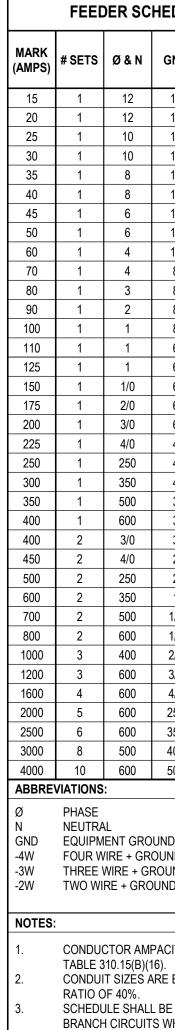
NO MORE THAN 10 RECEPTACLES ON ONE CIRCUIT. FIELD VERIFY EXACT LOCATION OF NEAREST PANEL AND ROUTE OF NEW CIRCUIT FROM PANEL TO UNIT RECEPTACLE. ACTOR TO DEMOLISH POWER CONNECTION FROM CONDENSING UNITS, FAN COIL UNITS AND CONDENSATE PUMPS. DEMOLITION TO CONSIST OF REMOVAL OF POWER CONNECTION, CABLING, AND CONDUIT BACK TO SOURCE UNLESS NOTED OTHERWISE.

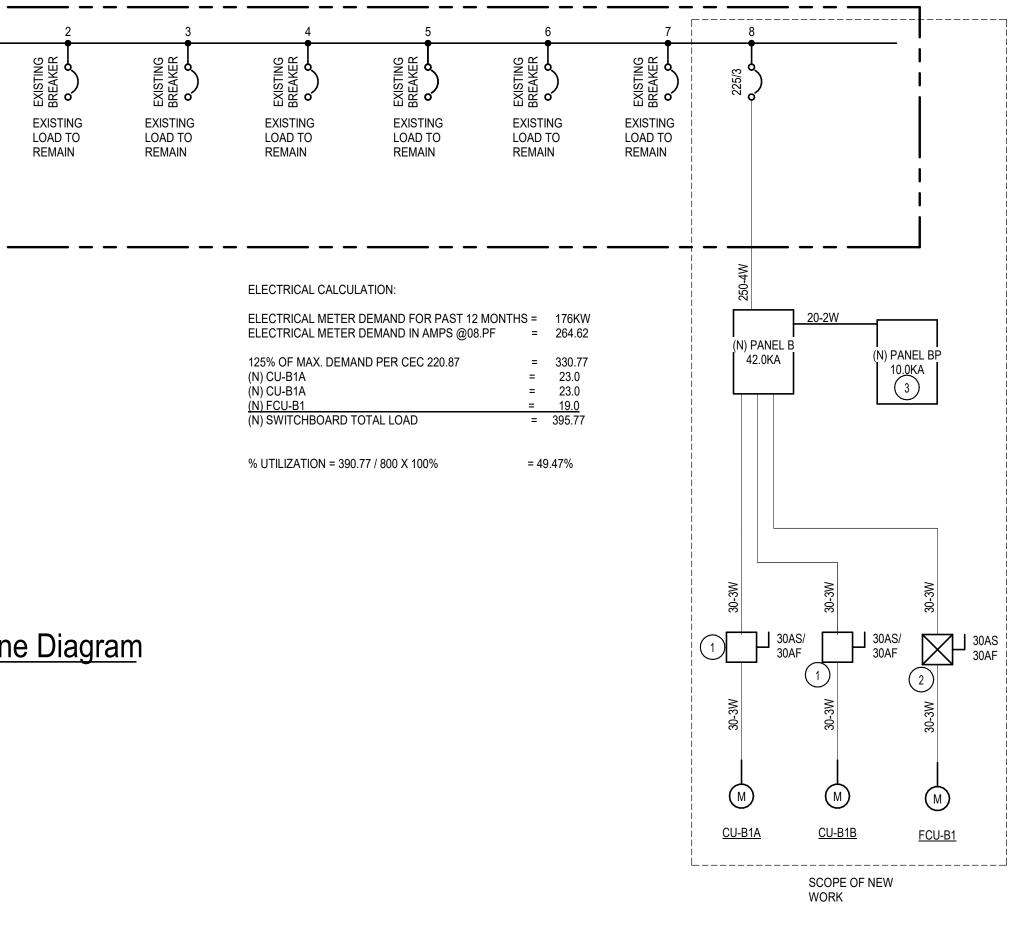
COORDINATE EQUIPMENT MANUFACTURER FOR FAULT CURRENT LIMITING FUSE TYPES

GENERAL SINGLE LINE NOTES

- 1 OVERCURRENT DEVICES OF ENTIRE DISTRIBUTION SYSTEM SHALL M STATED FAULT CURRENT VALUES WITH FULLY RATED EQUIPMENT.
- 2 CONDUCTOR LENGTHS INDICATED ON THE SINGLE LINE DIAGRAM A FAULT CURRENT CALCULATIONS ONLY. ACTUAL LENGTH SHALL BE I
- BY FIELD CONDITIONS AND ACTUAL ROUTES OF FEEDERS. 3 REFER TO SWITCHBOARD SCHEDULES AND DISTRIBUTION PANEL FOR ADDITIONAL REQUIREMENTS. WHERE A DISCREPANCY EXIST EQUIPMENT ON THE SINGLE LINE DIAGRAM AND THE DETAILED SCHE
- ITEM OR ARRANGEMENT WITH BETTER QUALITY, GREATER QUANTIT COST SHALL BE USED.
- 4 ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF TH 5 REFER TO THE MOTOR AND SPECIAL CONNECTION SCHEDULE FOR A FEEDERS DESIGNATED "EQ".
- 6 GROUNDING ELECTRODE CONDUCTORS SIZES ARE NOT INDICATED SINGLE LINE DIAGRAM ARE. REFER TO THE GROUNDING RISER DIAG CONNECTIONS AND CONDUCTOR SIZES.

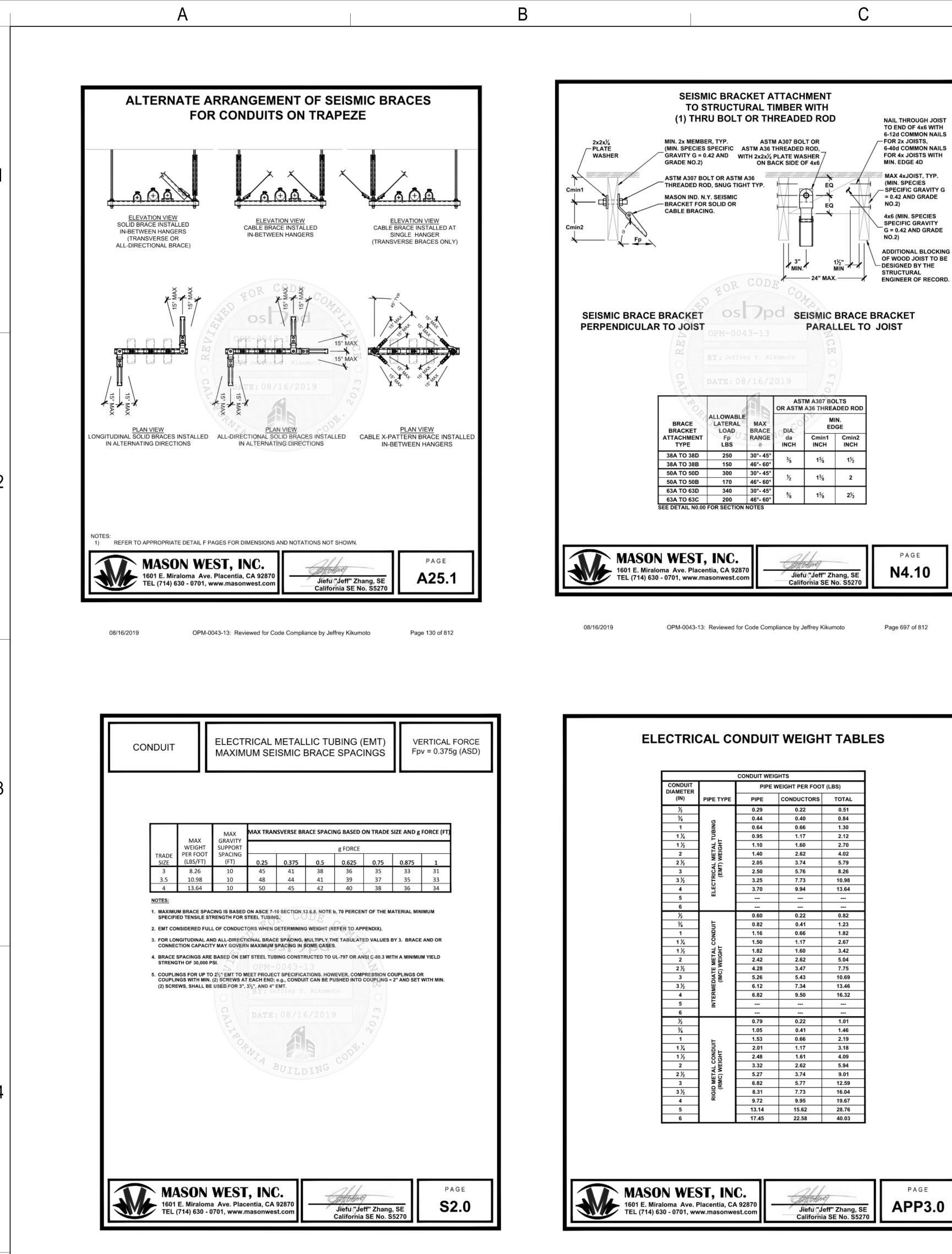
	KEYNOTES
No.	DESCRIPTION
1	FUSED DISCONNECT AND FUSES TO BE PROVIDED UNDEF DIVISION 26.
2	VARIABLE FREQUENCY DRIVE WITH ON/OFF SWITCH TO BE PROVIDED UNDER DIVISION 23.
3	MINI LOAD CENTER PANELBOARD WITH 5KVA TRANSFORMER. EQUAL TO EATON P48G11S0518CUB OR APPROVED EQUAL.





Ε

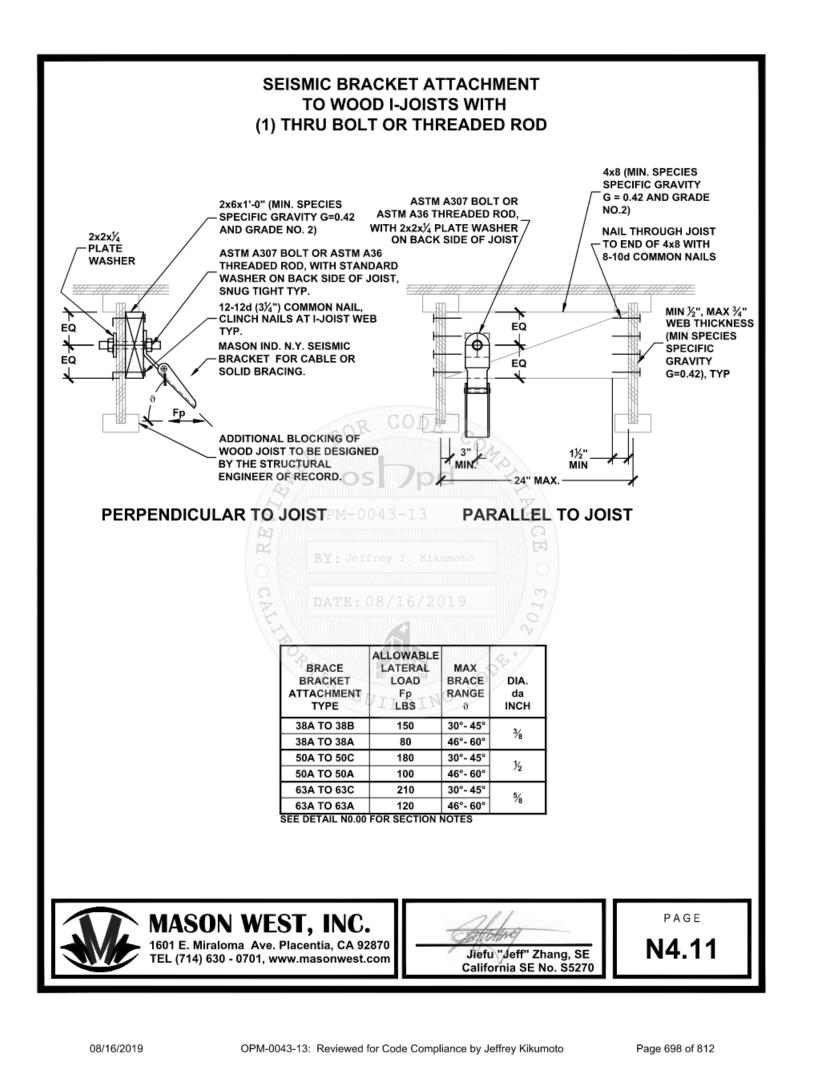
TES	TIFICATION STAMP THE STATE ARCHITECT 3-122233 INC: REVIEWED FOR FLS I ACS I 03/14/2023
OF FEDERS. DISTRIBUTION PANEL SCHEDULES A DISCREPANCY EXISTS BETWEEN ND THE DETAILED SCHEDULES, THE ITY, GREATER QUANTITY, OR HIGHER OTHE ATTENTION OF THE ENGINEER. CTION SCHEDULE FOR ALL ES ARE NOT INDICATED ON THE BROUNDING RISER DIAGRAM FOR	BLR Group
FEEDER SCHEDULE - COPPER # SETS Ø & N GONDUIT SUE	
PHASE NEUTRAL EQUIPMENT GROUNDING CONDUCTOR FOUR WIRE + GROUND (3Ø,GND or 2Ø,N,GND) THREE WIRE + GROUND (3Ø,GND or 2Ø,N,GND) TWO WIRE + GROUND S: CONDUCTOR AMPACITIES ARE BASED ON NEC TABLE 310.15(B)(16). CONDUIT SIZES ARE BASED ON A MAXIMUM FILL RATIO OF 40%. SCHEDULE SHALL BE USED FOR FEEDERS AND BRANCH CIRCUITS WHERE APPLICABLE. ALL FEEDERS AND BRANCH CIRCUITS SHALL INCLUDE AN EQUIPMENT GROUNDING CONDUCTOR. SCHEDULE IS VALID FOR TYPE THHN, THWN-2, AND XHHW-2 CONDUCTORS. SEE SPECIFICATIONS FOR CONDUCTOR TYPES REQUIRED. SCHEDULE IS VALID FOR TYPE EMT, IMC, FMC, LFMC, HDPE, AND RNC-40 RACEWAY APPLICATIONS. OPTIONAL CONFIGURATIONS (1 OR 2 SETS) ARE GIVEN FOR SOME SIZES. NOT ALL SIZES USED.	Image: Note of the set o
	75-22605-00 ELECTRICAL DIAGRAMS AND SCHEDULE



08/16/2019

OPM-0043-13: Reviewed for Code Compliance by Jeffrey Kikumoto

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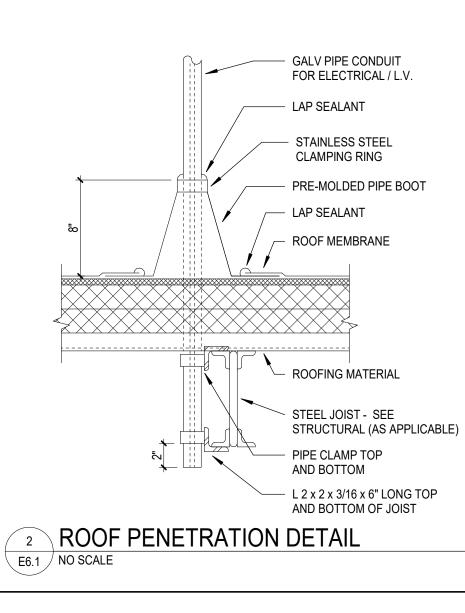


CONDUIT		CONDUIT WEIG		
CONDUIT DIAMETER		PIPE WEIGHT PER FOOT (LBS)		
(IN)	PIPE TYPE	PIPE	CONDUCTORS	TOTAL
1/2		0.29	0.22	0.51
3/4	a	0.44	0.40	0.84
1	ELECTRICAL METAL TUBING (EMT) WEIGHT	0.64	0.66	1.30
1 1⁄4		0.95	1.17	2.12
1 ½		1.10	1.60	2.70
2		1.40	2.62	4.02
2 1/2		2.05	3.74	5.79
3		2.50	5.76	8.26
3 1/2		3.25	7.73	10.98
4		3.70	9.94	13.64
5				
6				
<i>Y</i> ₂		0.60	0.22	0.82
3/4	15	0.82	0.41	1.23
1	<u>q</u>	1.16	0.66	1.82
1 1/4	INTERMEDIATE METAL CONDUIT (IMC) WEIGHT	1.50	1.17	2.67
1½		1.82	1.60	3.42
2		2.42	2.62	5.04
2 1/2		4.28	3.47	7.75
3		5.26	5.43	10.69
3 1/2		6.12	7.34	13.46
4		6.82	9.50	16.32
5				
6				
Y2		0.79	0.22	1.01
3⁄4		1.05	0.41	1.46
1	F	1.53	0.66	2.19
1 1⁄4	<u> </u>	2.01	1.17	3.18
1½	N H	2.48	1.61	4.09
2	RIGID METAL CONDUIT (RMC) WEIGHT	3.32	2.62	5.94
2 1/2		5.27	3.74	9.01
3	MM	6.82	5.77	12.59
3 1/2	(I (I	8.31	7.73	16.04
4	~	9.72	9.95	19.67
5		13.14	15.62	28.76
6		17.45	22.58	40.03

MASON WEST, INC.	- Antonios	PAGE
 1601 E. Miraloma Ave. Placentia, CA 92870 TEL (714) 630 - 0701, www.masonwest.com 		APP3.0

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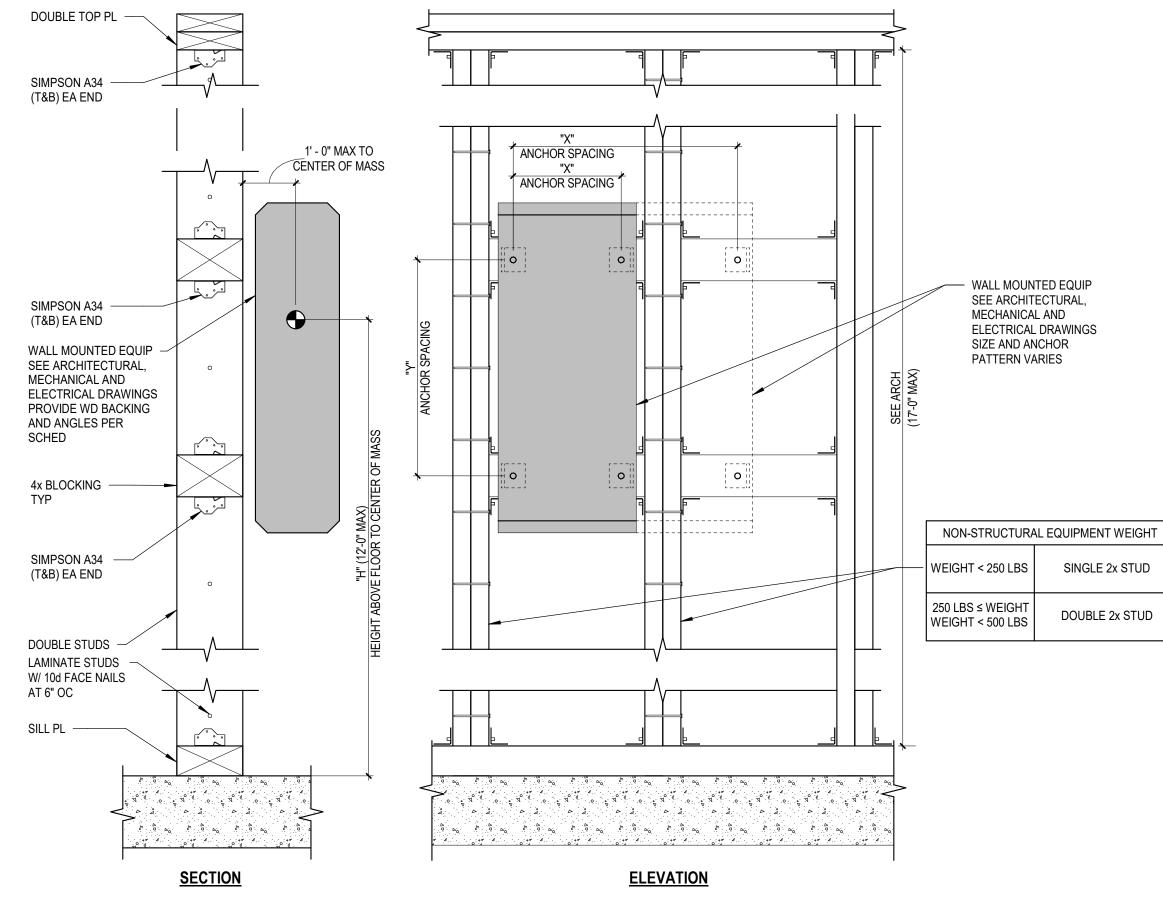
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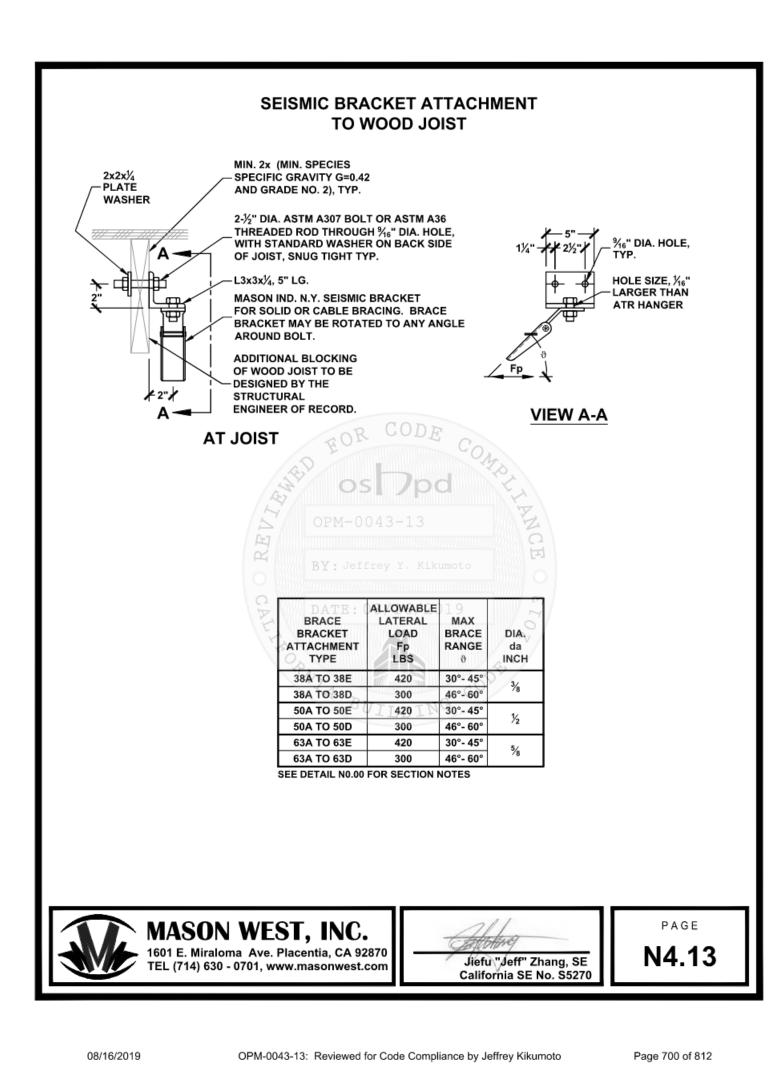


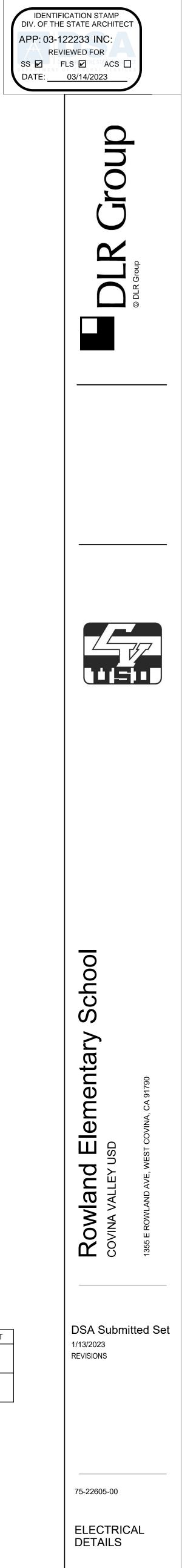


NOTES:

1. MAXIMUM WEIGHT OF EQUIPMENT UNIT NOT TO EXCEED 500 LBS. 2. COORDINATE EXACT LOCATIONS WITH MECHANICAL, ELECTRICAL AND ARCHITECTURAL DRAWINGS.







E6.1

SINGLE 2x STUD DOUBLE 2x STUD