BARRANCA ELEMENTARY SCHOOL 727 S. BARRANCA AVENUE. COVINA, CA 91723 COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT **100% CONSTRUCTION DOCUMENTS** 05/05/2022 DLR GROUP PROJECT NUMBER: 75-22605-00

SHEET INDEX

MECHANICAL SITE PLAN MECHANICAL DEMOLITION PLAN BUILDING B & C MECHANCIAL FLOOR PLAN BUILDINGS D,E,H & I MECHANICAL FLOOR PLAN BUILDING C MECHANICAL ROOF PLAN BUILDINGS D,E,H & I MECHANICAL ROOF PLAN CONTROLS DIAGRAMS CONTROLS DIAGRAMS MECHANICAL DETAILS MECHANICAL DETAILS MECHANICAL DETAILS MECHANICAL SCHEDULES
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.MECHANICAL.
BUILDINGS D,E,H AND I ROOF PLAN
ARCHITECTURAL SITE PLAN BUILDINGS B AND C FLOOR PLAN
.ARCHITECTURAL.
COVER SHEET GENERAL NOTES, SYMBOLS AND ABBREVIATIONS

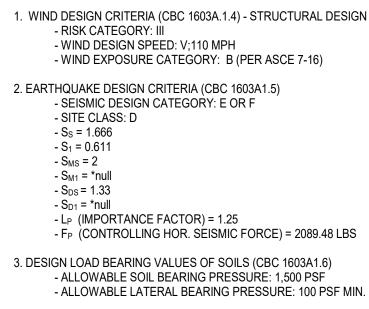
VICINITY MAP

TOTAL: 27 SHEETS



THE DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEETS THIS DRAWING, PAGE OF SPECIFICATION/CALCULATIONS 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)) ALL DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEET I FIND THAT: \rightarrow For each discipline (see sheet index for list of disciplines) THIS DRAWING OR PAGE 기 ARE IN GENERAL CONFORMAN THE PROJECT DESIGN, A HAVE BEEN COORDINATED WIT PROJECT PLANS AND SPECIFIC ARCHITECT OR ENGINEER DESIGN/ GENERAL RESPONSIBLE CHARGE JESSE MILLER PRINT NAME C-32306 LICENSE NUMBER EXPIRATION DATE LICENSE NUMBER EXPIRATION DATE

DESIGN ANALYSIS DATA



PROJECT DIRECTORY

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Statement of General Conformance

NCE WITH	ARE IN GENERAL CONFORMANCE WITH THE PROJECT DESIGN INTENT, AND	
TH THE CATIONS.	HAVE BEEN COORDINATED WITH THE PROJECT PLANS AND SPECIFICATIONS.	
05/05/2022		
DATE	SIGNATURE DATE	
ATED TO BE IN	ARCHITECT OR ENGINEER DELEGATED RESPONSIBILITY FOR THIS PORTION OF THE WORK	
	PRINT NAME	
10/31/2023		
DATION DATE		

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

DSA APPLICATION # A# 03-122224

SCOPE OF WORK

SCOPE OF WORK SHALL BE AS FOLLOWS

REMOVAL AND REPLACEMENT OF ALL EXISTING ROOF MOUNTED HVAC UNITS AT ALL CLASSROOMS BUILDINGS TO INCLUDE: NEW ADAPTER CURBS, CONTROLS, ELECTRICAL, ROOF PATCHING AND FLASHING AS REQUIRED. IN ADDITIONAL REMOVAL AND REPLACEMENT OF EXISTING MPR UNIT WITH NEW HVAC SYSTEMS.

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 (CFC), 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 NFPA 14	-	STANDARD FOR INSTALLATION OF SPRINKLERS SYSTEMS (CA AMENDED) STANDARD FOR INSTALLATION OF SAND PIPE AND HOSE SYSTEMS (CA AMENDED)	
NFPA 17	-	STANDARD FOR DRY CHEMICAL EXTINGUISHING SYSTEMS	
NFPA 17A NFPA 20	-	STANDARD FOR WET CHEMICAL EXTINGUISHING SYSTEMS STANDARD FOR INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION	
NFPA 22 NFPA 24	-	STANDARD FOR WATER TANKS FOR PRIVATE FIRE PROTECTION STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES	
NEPA 24	-	STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPORTENANCES	
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 UL 1971		STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED	
ICC 300	-	STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED STANDARD FOR BLEACHERS, FOLDING AND TELESCOPIC SEATING, AND GRANDSTANDS	

DSA GENERAL NOTES

- 1. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CONSTRUCTION CHANGE DOCUMENT APPROVED BY THE DIVISION OF THE STATE ARCHITECT (DSA), AS REQUIRED BY SECTION 4-338(b), PART 1, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR). NOT 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. CONSTRUCTION CHANGE DOCUMENTS MUST BE SIGNED BY ALL THE FOLLOWING: ARCHITECT OR ENGINEER HAVING GENERAL RESPONSIBLE CHARGE OF THE PROJECT, AND STRUCTURAL ENGINEER OF RECORD OR DELEGATED PROFESSIONAL ENGINEER (WHEN APPLICABLE). . 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 AND
- SECTION 4-338(b), PART 1, TITLE 24, CCR. SUBSTITUTIONS SHALL BE FOR ANY MATERIALS, SYSTEMS OR PRODUCT THAT WOULD OTHERWISE BE REGULATED BY DSA 4. A DSA-CERTIFIED PROJECT INSPECTOR WITH CLASS 3 CERTIFICATION. EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE ARCHITECT AND BY THE DIVISION OF THE STATE ARCHITECT, SHALL PROVIDE CONTINIOUS INSPECTION OF THE WORK. THE DUTIES OF THE PROJECT INSPECTOR ARE DEFINED 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 APPROVED BY ALL OF THE FOLLOWING: ARCHITEC OR ENGINEER HAVING GENERAL RESPONSIBLE CHARGE OF THE PROJECT; STRUCTURAL ENGINEER OF RECORD; AND 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). 8. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT
- 9. 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 DISCOVERED 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 SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK. (SECTION 4-317(C), PART 1, TITLE 24, CCR 0. 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.

2016 ADDITION 2013 ADDITION 2016 ADDITION

2017 ADDITION

2017 ADDITION 2013 ADDITION

(CA AMENDED)

2016 ADDITION 2016 ADDITION

2016 ADDITION

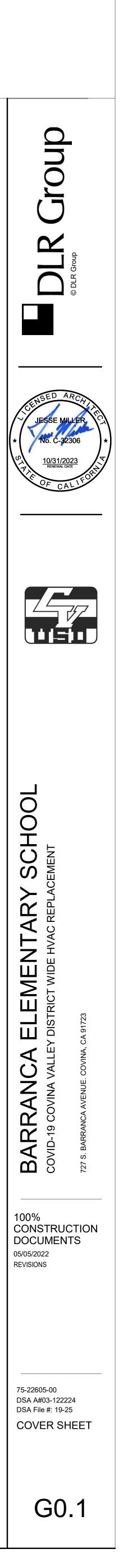
2015 ADDITION

2003 ADDITION

1999 ADDITION

2002 (R2010) 2017 ADDITION

2005 (R2010)



GENERAL ABBREVIATIONS

#	NUMBER
&	AND
@	AT
ADA	AMERICANS WITH DISABILITY ACT
ADDN	ADDITION OR ADDITIONAL
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ ALT	AUTHORITY HAVING JURISDICTION
ANSI APPROX	AMERICAN NATIONAL STANDARDS INSTITUTE
ARCH	ARCHITECTURAL
BLDG	BUILDING
BSMT	BASEMENT
)L	CENTER LINE
)LG	CEILING
CM	CENTIMETER
CONC	CONCRETE
CONN(S)	CONNECTION(S)
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACT(OR)
CTR	CENTER
)	DEPTH
DEG	DEGREE
Demo	DEMOLISH OR DEMOLITION
Dia	DIAMETER
DIM	DIMENSION
DIV	SPECIFICATION DIVISION
ON	DOWN
DTL	DETAIL
DWG(S)	DRAWING(S)
E	EAST
EA	EACH
EC	ELECTRICAL CONTRACTOR
EL	ELEVATION
	ELECTRICAL ENGINEER
EQ EQUIP	
EQUIV	EQUIVALENT
EXST	EXISTING
EXT FIN	EXTERIOR
FL	FLOOR
FT	FEET
FUT	FUTURE
GC	GENERAL CONTRACTOR
GOVT	GOVERNMENT
H	HEIGHT
HORIZ	HORIZONTAL
HT	HEIGHT
.e.	THAT IS
BC	INTERNATIONAL BUILDING CODE
IN	INCH
INT	INTERIOR
_B(S)	POUND(S)
M	THOUSAND
M	METER
л	METER
ЛАХ	MAXIMUM
ЛС	MECHANICAL CONTRACTOR
MC	MECHANICAL CONTRACTOR
MECH	MECHANICAL
MEZZ	MEZZANINE
MEZZ	MEZZANINE
MFR	MANUFACTURER
MIN	MINIMUM
MIN	MINIMUM
MISC	MISCELLANEOUS
MM	MILLIMETER
N 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)
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 W	VERIFY IN FIELD
W/	WITH
W/O	WITHOUT

ARCHITECTUAL ABBREVIATIONS

A/E

AF

AD.IT

ADMIN

ALUM

APC

ASPH

AUTO

AVG

AWP

B.O

BD

BCS

BLK

BLKG

BM(S)

BOT

BRDG

BRG

BRKT

BTWN

BT

CAB

CBD

CER

CFCI

CFMF

CLO

CLR

CMU

COL

COM COMB

COMM

COMPR

CONFIG

CORR

CS CSTJ

СТ

CTG

CTIG

CU

CU

CV

CY

CYL

DBL

DEPR

DEPT

DIAG

DR

DSN

DW

DWR

EB

EE

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ELAS

ELEV

EMER

ENCL

ENTR

ERF

EUI

EW

EWC

EXP

EXP

FΟ

FIG

FIX

FLASH

FLEX

FLG

FLM

FO

FOC

FOF

FOM

FOS

FOW

FP

FSS

FTG

FVC

FWC

GAL GALV

GB

GEN

GFA

GD

FLUOR

EJ

EEWS

DWL(S)

DPFG

DET

DC

CSWK

CONF

CF

BLKHD

В

Аг	CONTECTUAL ADDRE
	ARCHITECT/ENGINEER AIR BARRIER
	ASBESTOS
	ADA ACCESSIBLE ACRYLIC
	ACOUSTIC CEILING TILE
	ACCESS DOOR ADJUSTABLE
	ADJACENT ADMINISTRATION
	AUTOMATED EXTERNAL DEFIBRILLATORS
	ALUMINUM
	ACCESS PANEL ACOUSTIC PANEL CEILING
	ASPHALT
	AUTOMATIC AVERAGE
	ACOUSTIC WALL PANEL
	BOTTOM OF
	BABY CHANGING STATION BOARD
	BLOCK
	BLOCKING BULKHEAD
	BEAM(S)
	BOTTOM BRIDGING
	BEARING BRACKET
	BATHTUB
	BETWEEN
	CABINET CHALKBOARD
	CERAMIC
	CUBIC FEET CONTRACTOR FURNISHED CONTRACTOR INSTALLED
	COLD-FORMED METAL FRAMING
	CLEAR FLOAT GLASS CAST IRON
	CLEAR INSULATING GLASS CAST IN PLACE
	CONTROL JOINT
	CONTROL JOINT ABOVE CLOSET
	CLEAR CONCRETE MASONRY UNIT
	COLUMN
	COMMON COMBINATION
	COMMUNICATIONS COMPRESSIBLE
	CONFERENCE
	CONFIGURATION
	COVER PLATE
	CARPET CHAIR RAIL
	COUNTERSINK CONSTRUCTION JOINT
	CASEWORK
	CERAMIC TILE CLEAR TEMPERED FLOAT GLASS
	CLEAR TEMPERED INSULATING GLASS
	CONDOM VENDOR 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 SHOWER
	EFFICIENCY
	EXPANSION JOINT ELASTOMERIC
	ELEVATOR EMERGENCY
	ENCLOSURE ENTRANCE
	EPOXY RESIN FLOORING
	ENERGY USE INTENSITY EACH WAY
	ELECTRIC WATER COOLER EXPANSION
	EXPOSED
	FABRIC
	FACE OF FABRICATE(D)
	FACE BRICK FLOOR DRAIN
	FOUNDATION
	FIRE EXTINGUISHER FIRE EXTINGUISHER CABINET
	FINISH FLOOR FIRE HYDRANT
	FIRE HOSE CABINET FIGURE
	FIXTURE
	FLASHING FLEXIBLE
	FLOORING FULL LENGTH MIRROR
	FLUORESCENT
	FINISH OPENING FACE OF CONCRETE
	FACE OF FINISH FACE OF MASONRY
	FACE OF STUD FACE OF WALL
	FIREPROOFING
	FIRE RESISTANT FIBERGLASS REINFORCED PANEL
	FIRE RESISTANCE TREATED FLOOR SINK
	FOLDING SHOWER SEAT
	FOOTING FIRE VALVE CABINET
	FABRIC WALL COVERING
	GROUT
	GAUGE GALLON
	GALVANIZED GRAB BAR
	GARBAGE DISPOSAL GENERAL
	GENERAL GROSS FLOOR AREA

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

OVERALL OWNER FURNISHED CONTRACTOR INSTALLED

OFFICE

OWNER FURNISHED OWNER INSTALLED OPPOSITE HAND

OVERFLOW

OPENING(S) OPERATIONAL SAFETY AND HEALTH ADMINISTRATION OPEN TO BELOW

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

SCT

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

С

SOAP DISPENSER

SECRETARY

SQUARE FEET

WINDOW POLISHED WIRE GLASS WROUGHT IRON WALK OFF MAT WASTE RECEPTACLE WEATHER RESISTANT BARRIER WARM WHITE WELDED WIRE FABRIC YARD

GENERAL SYMBOLS

	— DETAIL NUMBER		
(?)	CROSS REFERENCE		EARTH
2112	— SHEET NUMBER	ပ္လံု ္ ္လံု	GRAVEL
XX (A4.XX)	BUILDING ELEVATION		SAND
XX		2 A A	CONCRETE
XX A12.X XX	INTERIOR ELEVATION		PRECAST CONCRETE
XX			STEEL
·	 SIMILAR OR TYPICAL REFERENCE 		STONE
? SIM			CONCRETE MASONRY UNIT
???	WALL SECTION		BRICK VENEER
?	DETAIL REFERENCE		STEEL (LARGE SCALE)
777			GYM FLOOR
\land \land			WOOD (CONTINUOUS BLOCKING)
<u> </u>	BUILDING SECTION		WOOD (NON-CONTINUOUS BLOCKING)
(\mathbf{x})	SHEET NOTE		WOOD (TRIM/FINISH)
\bigcirc		/// · · · ·	GLASS
?	REFERENCE KEYNOTE		SHINGLES
	COLUMN GRID LINE		PLYWOOD (LARGE SCALE)
(?)			GYPSUM WALL BOARD
ROOM NAME	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)
			ACOUSTIC TILE (LARGE SCALE)
<u> </u>	SPOT ELEVATION		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	OPENING AND STRUCTURAL STOOP	•CO	CLEAN OUT
100	PRIMARY CONTOUR, EXISTING]	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	¥FH	FIRE HYDRANT
	STREET CENTERLINE	ŢFH ¢	POWER POLE
	CURB, THICKENED EDGE	,~	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	•	
EJ	PAVING EXPANSION JOINT	0	SPRINKLER HEAD, 180°
-xx xx xx xx	FENCE, SECURITY	o ⊗ ^{QC}	SPRINKLER HEAD, 90°
- <u>x x x x</u>	FENCE, BARBED WIRE		
-000	FENCE, CHAIN LINK	Ø ^X "	TREE, EXISTING DECIDUOU
* * * *	FENCE, WOOD	\oslash^{X}	TREE, EXISTING CONIFER
	SEED LIMIT		SHADE TREE
	SOD LIMIT	2 mm	
	FOUNDATION DRAIN, NON-PERFORATED	Entry Mary	ORNAMENTAL TREE
 FD 	FOUNDATION DRAIN, PERFORATED		DECIDUOUS TREE
— — — PSD — — —	SUBDRAIN, PERFORATED	~~\\\\\ /~~\	
S	SANITARY SEWER	< <u>`</u> }	SHRUB
	FORCE MAIN	[]	CLIPPED SHRUB
W	WATER		
	FIRE		
G	GAS		
	HIGH PRESSURE STEAM		
MPS	MEDIUM PRESSURE STEAM		
LPS	LOW PRESSURE STEAM		
	UNDERGROUND ELEC/TELEPHONE		
— - — OHP— - —	OVERHEAD POWER		
—	LAWN SPRINKLER HOT LINE		
	LAWN SPRINKLER HOT LINE		
LAT			

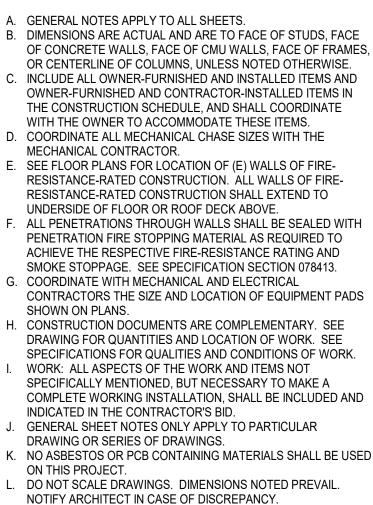
ARCHITECTURAL SYMBOLS

CASEWORK ELEVATION
DOOR NUMBER
INTERIOR WINDOW NUMBER
EXTERIOR WINDOW / CURTAIN WALL NUMBER
WALL TYPE
CEILING TYPE

]	
/ALVE		
IOLE		
360°		
270°		

DUS

GENERAL NOTES



OF DISCREPANCY.

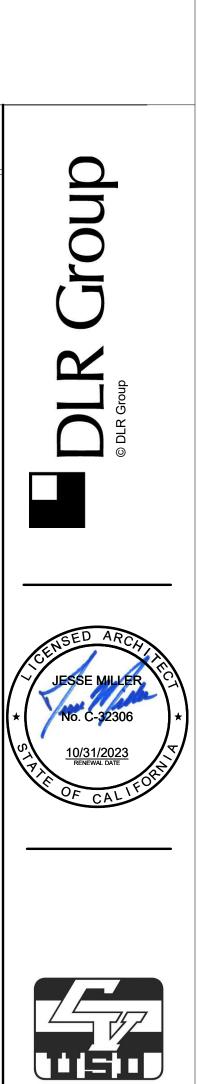
B. DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF CONCRETE WALLS, FACE OF CMU WALLS, FACE OF FRAMES, OR CENTERLINE OF COLUMNS, UNLESS NOTED OTHERWISE. C. INCLUDE ALL OWNER-FURNISHED AND INSTALLED ITEMS AND OWNER-FURNISHED AND CONTRACTOR-INSTALLED ITEMS IN THE CONSTRUCTION SCHEDULE, AND SHALL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

RESISTANCE-RATED CONSTRUCTION. ALL WALLS OF FIRE-RESISTANCE-RATED CONSTRUCTION SHALL EXTEND TO F. ALL PENETRATIONS THROUGH WALLS SHALL BE SEALED WITH PENETRATION FIRE STOPPING MATERIAL AS REQUIRED TO ACHIEVE THE RESPECTIVE FIRE-RESISTANCE RATING AND SMOKE STOPPAGE. SEE SPECIFICATION SECTION 078413.

H. CONSTRUCTION DOCUMENTS ARE COMPLEMENTARY. SEE DRAWING FOR QUANTITIES AND LOCATION OF WORK. SEE SPECIFICATIONS FOR QUALITIES AND CONDITIONS OF WORK. WORK: ALL ASPECTS OF THE WORK AND ITEMS NOT SPECIFICALLY MENTIONED, BUT NECESSARY TO MAKE A COMPLETE WORKING INSTALLATION, SHALL BE INCLUDED AND

K. NO ASBESTOS OR PCB CONTAINING MATERIALS SHALL BE USED DO NOT SCALE DRAWINGS. DIMENSIONS NOTED PREVAIL.

M. HORIZONTAL AND VERTICAL DIMENSIONS ARE MINIMUM DIMENSIONS. CLEARANCES ARE GIVEN TO FINISH SURFACES. GC TO VERIFY ALL CLEARANCES. NOTIFY ARCHITECT IN CASE



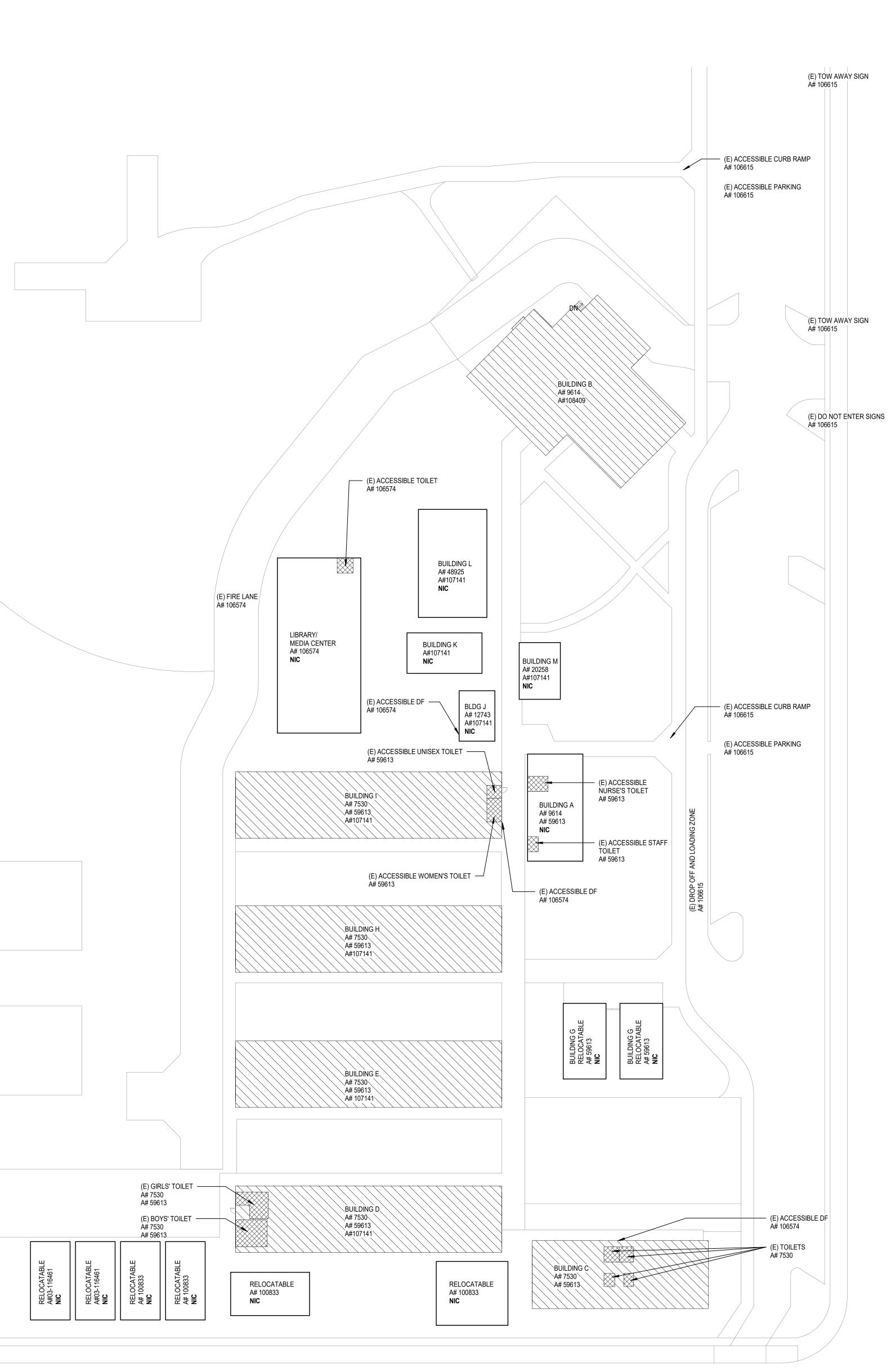
BARRANCA ELEMENTARY SCHOOL	COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT	727 S. BARRANCA AVENUE. COVINA, CA 91723
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100% CONSTRUCTION DOCUMENTS 05/05/2022 REVISIONS

75-22605-00 DSA A#03-122224 DSA File #: 19-25 GENERAL NOTES, SYMBOLS AND ABBREVIATIONS

G1.1

	A	В	
1			
2			
3			
4			
Nutodesk Docs://75-22605-00 CVUSD - District Wide HVAC Replacement/75-22605-00_CVUSD_Barranca ES_AR_2020.rvt /15/2022 12:50:11 AM G			
utodesk Docs://75-22605-00 CVUSD - District Wide HV, 15/2022 12:50:11 AM		ARCHITECTURAL SITE PLAN SCALE: 1" = 30-0"	



С

DSA Certification Record

APPLICATION #	FILE #	APPROVAL YEAR	NOTE
03-7530	19-25	1949	ORIGINAL CAMPUS BUILDINGS
03-59613	19-25	1993	MODERNIZATION
03-100833	19-25	2000	(10) RELOCATABLES
03-106615	19-25	2005	PARKING LOT SITE IMPROVEMENTS
03-108409	19-25	2005	MULTI-PURPOSE BLDG MODERNIZATION
03-106574	19-25	2006	LIB/MEDIA CTR BLDG, SITE IMPROVEMENTS
03-107141	19-25	2008	ALTERATION TO BLDGS. C,D,E,H,I,J,K,L, AND M
03-114565	19-25	2012	ALTERATIONS TO CLASSROOM BLDG (A#7530); RELOCATION OF 2-CLASSROOMS FROM ANOTHER SITE (A#03-107020)
03-116461	19-25	2016	RELOCATION OF 2-CLASSROOMS BLDG. (A#04-101310 & A# 03-11051) AND SITE WORK

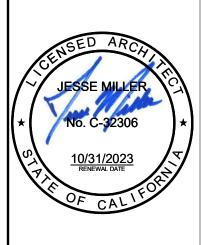
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SITE LEGEND

F

REFERENCE KEYNOTES

Group DLR





100% CONSTRUCTION DOCUMENTS 05/05/2022 REVISIONS

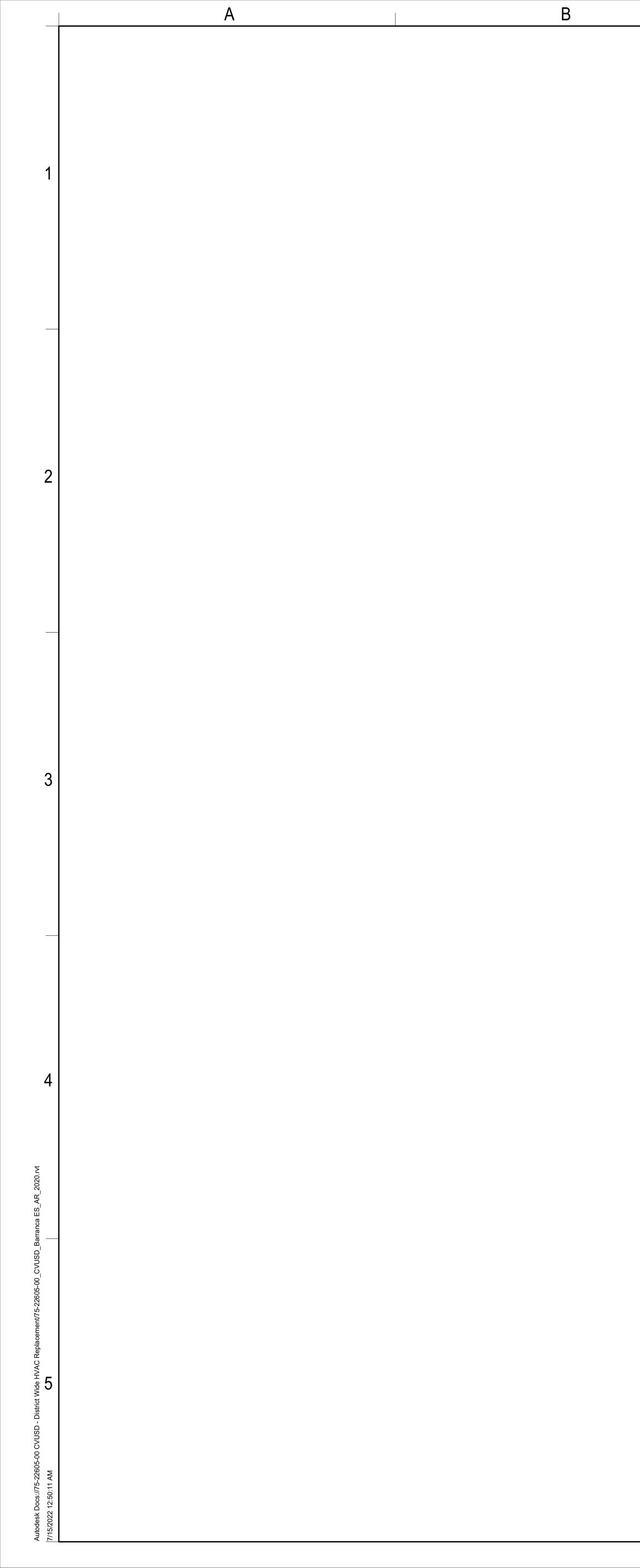
75-22605-00 DSA A#03-122224 DSA File #: 19-25 ARCHITECTURAL SITE PLAN

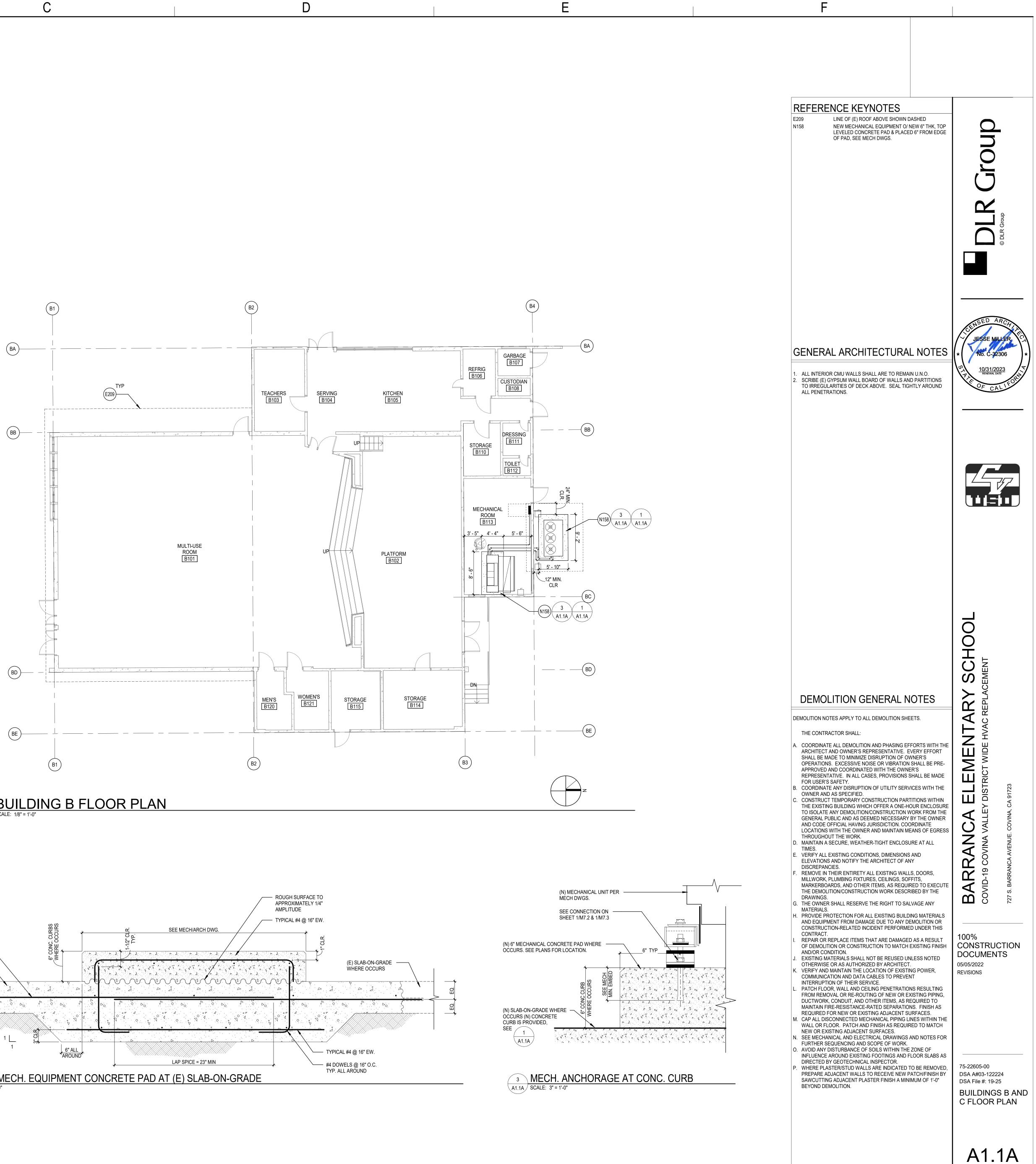
A1.1

EXISTING BUILDING NOT IN SCOPE

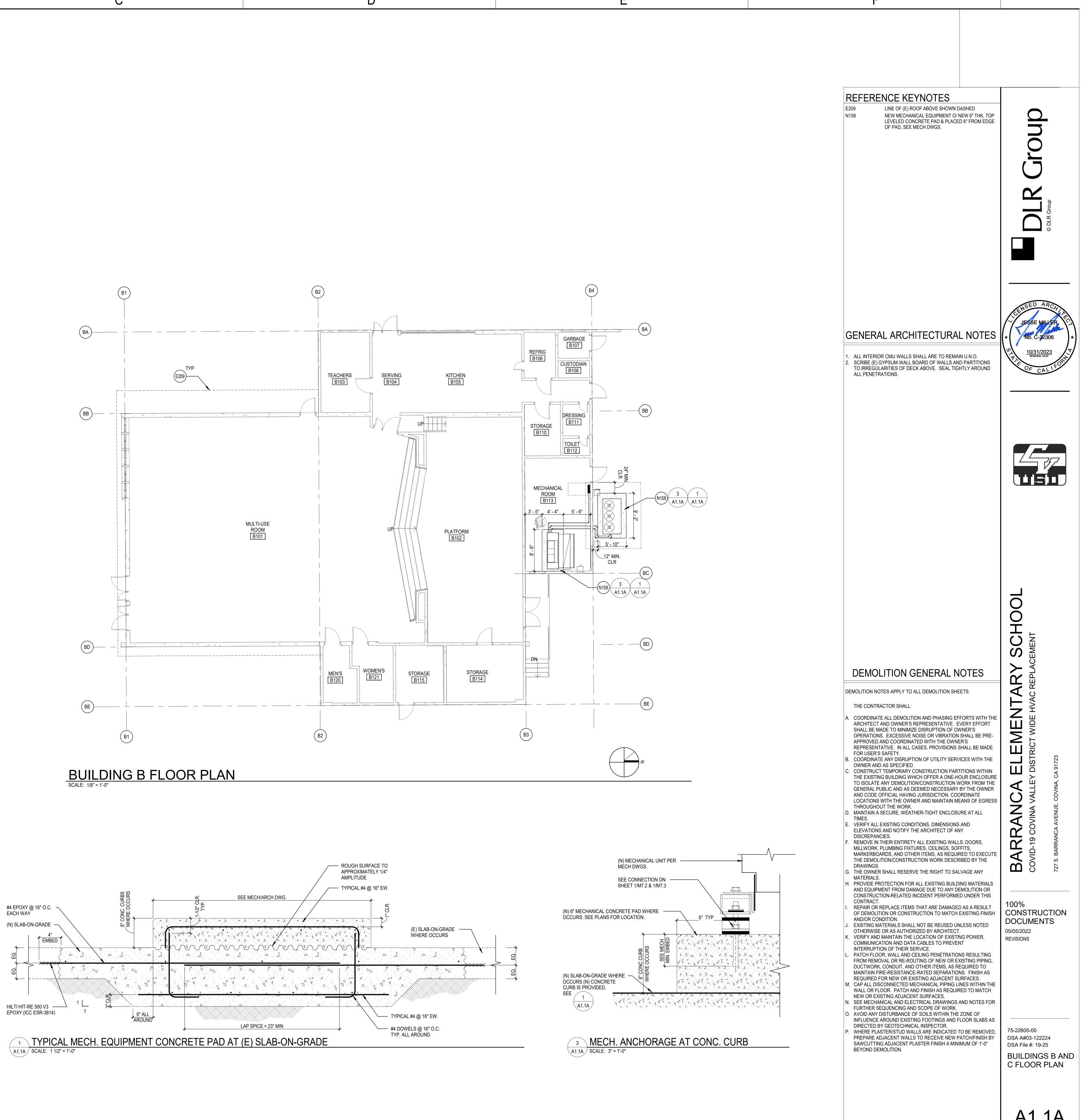
EXISTING BUILDING - SCOPE OF WORK UNDER THIS DSA APPLICATION

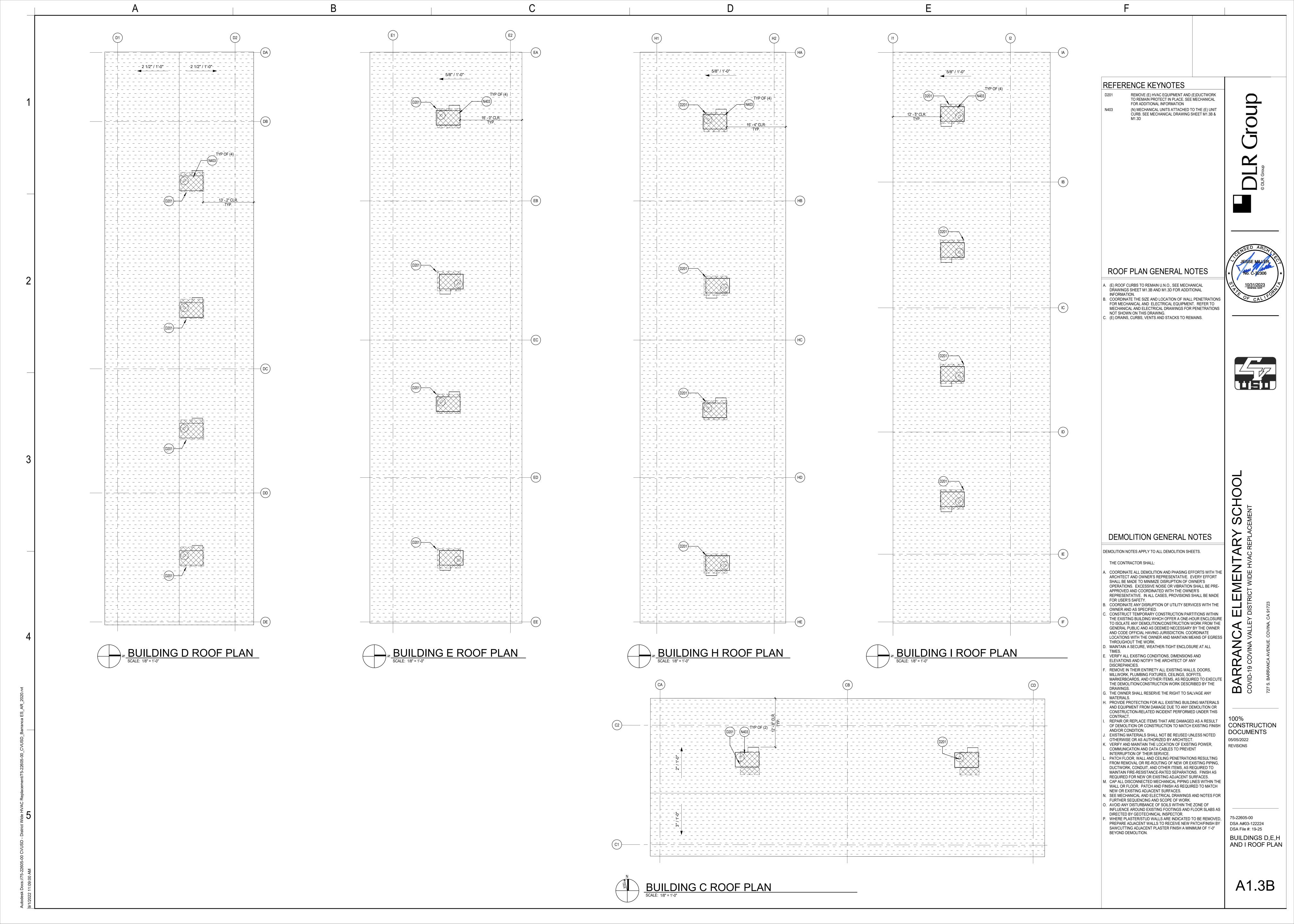
(E) RESTROOMS - NOT IN SCOPE











ABBREVIATIONS

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

ABBREVIATIONS

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

WP

WΤ

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**

STEAM WORKING PRESSURE

UNIT COOLER UNDERGROUND UNIT HEATER UNDERWRITERS LABORATORIES UNIT VENTILATOR

VOLT VOLT-AMPERE VALVE VACUUM VARIABLE AIR VOLUME VOLUME DAMPER VELOCITY VENTALATOR(TION) VARIABLE FREQUENCY DRIVE VOLUME VACUUM PUMP VARIABLE SPEED MOTOR CONTROLLER

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

WIDE

В **SHEET INDEX**

•••	
M0.1	MECHANICAL SYMBOLS, ABBR
M0.2	TITLE 24 COMPLIANCE
M0.3	TITLE 24 COMPLIANCE
M0.4	TITLE 24 COMPLIANCE
M0.5	TITLE 24 COMPLIANCE
M0.6	TITLE 24 COMPLIANCE
M1.1	MECHANICAL SITE PLAN
MD1.1	MECHANICAL DEMOLITION PLA
M1.1B	BUILDING B & C MECHANCIAL F
M1.1D	BUILDINGS D,E,H & I MECHANIC
M1.3B	BUILDING C MECHANICAL ROO
M1.3D	BUILDINGS D,E,H & I MECHANIC
M5.1	CONTROLS DIAGRAMS
M5.2	CONTROLS DIAGRAMS
M7.1	MECHANICAL DETAILS
M7.2	MECHANICAL DETAILS
M7.3	MECHANICAL DETAILS
M8.1	MECHANICAL SCHEDULES

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. 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.

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

(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.

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.

CONTROLS

COOLING IS SHUT OFF OR REDUCED TO A MINIMUM.

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.

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

THERMOSTATS SHALL HAVE NUMERIC SETPOINTS IN DEFREES FAHRENHEIT (F) AND ADJUSTABLE STOPS ACCESSIBLE ONLY BY AUTHORIZED PERSONNEL.

HTR

REVIATIONS & NOTES

AN FLOOR PLAN IICAL FLOOR PLAN OF PLAN IICAL ROOF PLAN

GENERAL SYMBOLS

 \Box

	POINT OF DISCONNECT - DEMOLITION REMOVED FRO
	POINT OF CONNECTION - NEW CONNECTS TO EXISTI
$\times\!\!\times\!\!\times\!\!\times$	AREA NOT IN CONTRACT

GENERAL NOTES

- 1 THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING, PRIOR TO FINAL BID, FOR ALL EXISTING CONDITIONS FOR PLUMBING AND MECHANICAL SYSTEMS.
- 2 WHERE FLOOR DRAINS OCCUR WITHIN THE LIMITS OF CONSTRUCTION, PREVENT CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPENING PRIOR TO START OF WORK. UNSEAL DRAINS AT COMPLETION OF CONSTRUCTION.
- 3 COORDINATE INSTALLATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE TRAY STRUCTURE, AND EQUIPMENT TO PREVENT CONFLICTS. 4 THE CONTRACTOR SHALL BE FAMILIAR WITH ALL THE CONDITIONS BOTH EXISTING AND THOSE ILLUSTRATED BY THESE DOCUMENTS AS WELL AS THOSE WHICH CAN BE REASONABLY ANTICIPATED INCLUDING, BUT NOT LIMITED TO ARCHITECTURAL, ELECTRICAL, VENTILATION, PLUMBING, AND OTHER SYSTEMS INVOLVED ON THIS
- PROJECT. 5 FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM, AND SHALL CONFORM TO ALL REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO THE CALIFORNIA BUILDING CODE AND CALIFORNIA MECHANICAL CODE.
- 6 INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF QUALITY AND WORKMANSHIP CONSISTENT WITH THE SPECIFICATIONS.
- 7 FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON THE SEGMENTS, REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS. 8 LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWING,
- ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. WORK SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN THE FIELD.
- 9 ADJUST PIPING AND DUCTWORK SIZES TO PROPERLY CONNECT TO MECHANICAL EQUIPMENT.

GENERAL HVAC NOTES

- 1 CONDENSATE DRAINS SHALL BE SUPPLIED FOR ALL COOLING EQUIPMENT. CONTRACTOR SHALL ENSURE PROPER INSTALLATION AND DRAINAGE AS REQUIRED BY
- FEDERAL, STATE, AND LOCAL CODES. CONDENSATE PIPING SHALL BE TYPE "L" COPPER. 2 ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK SHALL BE RATED FOR PRESSURE
- CLASS OF 2" W.G. UNLESS NOTED OTHERWISE. 3 THIS CONTRACTOR SHALL BE REQUIRED TO REPLACE FILTERS ON HVAC EQUIPMENT AFTER ALL DUST PRODUCING CONSTRUCTION HAS BEEN COMPLETED AND PRIOR TO THE 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 OUT, 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 & DIÀGNÓSITCS (FDD) FOR AIR HANDLING UNITS & ZONE TERMINAL UNITS ACCEPTANCE
- NRCA-MCH-16-A SUPPLY AIR TEMPERATURE RESET CONTROLS ACCEPTANCE NRCA-MCH-18-A – ENERGY MANAGEMENT CONTROL SYSTEM ACCEPTANCE

QUANTITIES SPECIFIED IN THESE PLANS, IN ACCORDANCE WITH THE ASSOCIATED AIR BALANCE COUNCIL

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

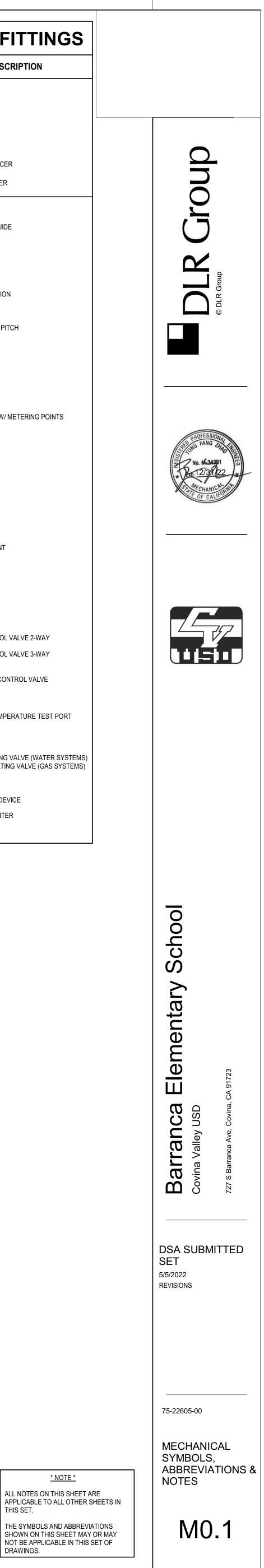
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STATE OF CALIFORNIA Mechanical Systems

Registration Number:

STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

Project Address:

01

RTU-E3

RTU-E4

RTU-H1

RTU-H2

RTU-H3

RTU-H4

RTU-I1

RTU-I2

RTU-I3

RTU-I4

Mechanical Systems

CERTIFICATE OF COMPLIANCE

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

02

Unitary Heat Pumps

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

§140.4(a). Healthcare facilities are excepted.

Α

CERTIFICATE OF COMPLIANCE									NRCC-MCH-E	
This document is used to demonstrate compliant path outlined in <u>§140.4</u> , or <u>§141.0(b)2</u> for altered	*	ical syster	ns that are within the	scope	e o	of the permit applicatio	n and are o	demonstra	ing compliance using the prescriptive	
Project Name:			CVUSD Barranca	Report	rt P	Page:			(Page 1 of 39)	
Project Address:			727 S Barranca Ave	Date P	Pre	epared:			6/28/2022	
A. GENERAL INFORMATION										
01 Project Location (city)		Cov	/ina	04	Т	otal Conditioned Floor	Area		21505	
02 Climate Zone		1	0	05	T	Total Unconditioned Flo	or Area		0	
03 Occupancy Types Within Project:				06	; #	f of Stories (Habitable A	bove Grad	e)	1	
Office (B)	🗌 Retail (I	M)			Non-refrigerated Warehouse (S)					
□ Hotel/ Motel Guest Rooms (R-1) □ School			(E) 🗌 Healthcare			lealthcare Facility (I)				
☐ High-Rise Residential (R-2/R-3)			table Class Bldg (E)			Other (write in)			See Table J	
B. PROJECT SCOPE This table Includes mechanical systems or compo <u>§140.4</u> , or <u>§141.0(b)2</u> for alterations.	onents that ar	e within ti	he scope of the permin	t appl	lic	ation and are demonsti	rating com	pliance usii	ng the prescriptive path outlined in	
01			02	2					03	
Air System(s)		Wet System 0			Components			Dry System Components		
Heating Air System			Water Economizer				\boxtimes	Air Econo	omizer	
Cooling Air System			Pumps				Electric Resistance Heat			
Mechanical Controls			System Piping				\boxtimes	Fan Systems		
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Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Total System Design Supply Airflow (CFM):

Registration Date/Time:

1600

Total System Design

(B)HP:

Report Version: 2019.1.003 Schema Version: rev 20200601

0.91

Power (B)HP:

Registration Provider: Energysoft Report Generated: 2022-06-28 11:56:10

Registration Date/Time:

Report Version: 2019.1.003

Schema Version: rev 20200601

Registration Provider: Energysoft Report Generated: 2022-06-28 11:56:10

STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

CERTIFICATE OF COMPLIANCE

Registration Number:

CVUSD Barranca Report Page: Project Name: 727 S Barranca Ave Date Prepared: Project Address: H. FAN SYSTEMS & AIR ECONOMIZERS Economizer Designed per <u>§140.4(e)</u> and System NA: <=54 kBtu/h cooling System Fan Type: RTU-C2 Constant Volume Economizer:¹ Controls: Name: 01 02 03 04 06 07 08 05 Fan Power Pressure Drop Adjustment - Table 140.4-B Maximum Design Supply Airflow Fan Name or Fan Function HP Unit² Design HP Design Airflow through Item Tag (CFM) Device Device (CFM) SF Supply 2000 BHP 0.91 1 Maximum System Fan Total System Design 0.91 2000 Total System Design Supply Airflow (CFM): (B)HP: Power (B)HP: System Economizer Designed per §140.4(e) and Economizer:¹ NA: <=54 kBtu/h cooling System Fan Type: RTU-D1 Constant Volume Name: Controls: (m) 01 03 04 06 08 02 05 07 Fan Power Pressure Drop Adjustment - Table 140.4-B Fan Name or Maximum Design Supply Airflow Fan Function HP Unit² Design HP Design Airflow through Item Tag (CFM) Device Device (CFM) SF Supply 1600 BHP 0.91 1 Maximum System Fan Total System Design Total System Design Supply Airflow (CFM): 1600 0.91 (B)HP: Power (B)HP: System Economizer Designed per §140.4(e) and RTU-D2 Economizer:¹ NA: <=54 kBtu/h cooling System Fan Type: Constant Volume Name: Controls: (m) 01 02 03 04 05 06 07 08 Fan Power Pressure Drop Adjustment - Table 140.4-B Maximum Design Supply Airflow Fan Name or Fan Function HP Unit² Design HP Design Airflow through Item Tag (CFM) Device Device (CFM) SF 1600 BHP 0.91 Supply 1 Maximum System Fan

Registration Date/Time:

Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters)

03

Air-cooled, pkg (3 phase)

³ If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.

⁴ Authority Having Jurisdiction may ask for load calculations used for compliance per <u>§140.4(b)</u>.

²It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.

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04

NA: Load

Controls NA: Load

Controls

NA: Load

Controls

NA: Load

Controls

NA: Load

Controls NA: Load

Controls NA: Load

Controls

NA: Load

Controls

NA: Load

Controls

NA: Load

Controls

05

19.86

21.16

20.14

21.07

20.04

19.93

33.62

35.83

34.1

35.67

33.92

33.74

21.02 35.58

19.86 33.62

21.02 35.58

19.97 33.81

06 07 08 09

0

0

0

0

36

36

38.7

36.15

38.22 35.83

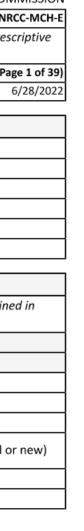
36.98 34.41

36.32

33.55

Report Generated: 2022-06-28 11:56:10

B



Registration Provider: Energysoft

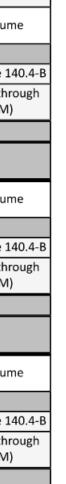
CALIFORNIA ENERGY COMMISSION NRCC-MCH-E (Page 4 of 39) 6/28/2022 10 11 33.4 43.71 36.74 37.49 34.94 46.26 38.42 39.4

46.57

43.85

44.32 37.85 33.4 43.71 36.74 37.49 34.94 46.26 38.42 46.36 39.95 36.48 33.89 44.09 37.27 36.33 33.74 43.95 37.11 36.9 ¹FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per

> CALIFORNIA ENERGY COMMISSION NRCC-MCH-E (Page 7 of 39 6/28/2022



STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

	CALIFORNIA ENERGY COMMISSION														
	TIFICATE OF COMPLIANCE														
										(Page 2 of 3					
roject Address:						7.	27 S Bar	rranca Ave Date	Prepar	ed:					6/28/202
. COMPLIANC	COMPLIANCE RESULTS														
able C will indica NOT COMPLY" or	-		-										itable b	y the user. If this t	able says "DOES
01		02		03		04		05		06		07		08	09
<u>§110.1</u> ,	ND 0	Pumps §140.4(k)	AND	Fans/ Economizers §140.4(c),	AND	System Controls <u>§110.2</u> , §120.2,	AND	Ventilation §120.1	AND	Terminal Box Controls §140.4(d)	AND	Distribution <u>§120.3</u> , §140.4(l)	AND	Cooling Towers §110.2(e)2	Compliance Resu
<u>§110.2</u> , <u>§140.4</u>				<u>§140.4(e)</u>		§140.4(f)				<u>3110.1(4)</u>		<u>3110.1(1)</u>			
		(See Table G)		<u>§140.4(e)</u> (See Table H)				(See Table J)		(See Table K)		(See Table L)		(See Table M)	-
<u>§140.4</u> See Table F)	ND	(See Table G)	AND		AND	<u>§140.4(f)</u>	AND	(See Table J) Yes	AND		AND		AND	(See Table M)	COMPLIES

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

E. ADDITIONAL REMARKS

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

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STATE OF CALIFORNIA Mechanical Systems NDCC MCH E

Weenamear Systems			
NRCC-MCH-E			CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name:	CVUSD Barranca	Report Page:	(Page 5 of 39)
Project Address:	727 S Barranca Ave	Date Prepared:	6/28/2022
		·	

F. HVAC SYSTEM	- HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)													
Dry System Equip	ment Efficiency (other than Package Term	ninal Air Conditi	ioners (PTAC) and	Package Terminal	Heat Pumps (PTH	?))								
01	02	03	04	05	06	07	08	09						
			Heat	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 Efficiend						
FCU-B1	>=135,000 and <240,000		СОР	3.2	3.4	EER IEER	10.6 11.6	12.2 12.9						
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-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-D4	<65,000		HSPF	7.7	13	SEER	13.0	14.3						
RTU-E1	<65,000		HSPF	7.7	13	SEER	13.0	14.3						
RTU-E2	<65,000		HSPF	7.7	13	SEER	13.0	14.3						
RTU-E3	<65,000		HSPF	7.7	13	SEER	13.0	14.3						
RTU-E4	<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-H4	<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-I4	<65,000		HSPF	7.7	13	SEER	13.0	14.3						

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E									CALIFOR	NIA ENERGY COMMISSION
CERTIFICATE OF	COMPLIANCE									NRCC-MCH-E
Project Name:					JSD Barranc		-			(Page 8 of 39)
Project Address	:			727 S	Barranca Av	e Date Pre	epared:			6/28/2022
H. FAN SYSTE	MS & AIR ECONO	MIZERS								
System Name:	RTU-D3	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		03	04		05	5	06	07	08
				Mawingung Design Supplu	Airflow				Fan Power Pressure Drop A	Adjustment - Table 140.4-B
Fan Name or Item Tag	Fan Functio	on	Qty	Maximum Design Supply (CFM)	AITTIOW	HP U	nit ²	Design HP	Device	Design Airflow through Device (CFM)
SF	Supply		1	1600		BHP 0.91		NA	NA	
Total Syst	Total System Design Supply Airflow (CFM): 1600 Total System Design (B)HP: 0.91				Maximum System Fan Power (B)HP:					
System Name:	RTU-D4	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		03	04		05	5	06	07	08
				Maximum Dasign Sumplu	Airflow				Fan Power Pressure Drop	Adjustment - Table 140.4-B
Fan Name or Item Tag	Fan Functio	on	Qty	Maximum Design Supply (CFM)	AITTOW	HP U	nit ²	Design HP	Device	Design Airflow through Device (CFM)
SF	Supply		1	1600		BH	IP	0.91	NA	NA
Total Syst	em Design Supply A	Airflow (CF	M):	1600		ystem De (B)HP:	esign	0.91	Maximum System Fan Power (B)HP:	
System Name:	RTU-E1	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	·	03	04		05	5	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)	AITHOW	HP U	nit ²	Design HP	Device	Design Airflow through Device (CFM)
SF	Supply		1	1600		BH	IP	0.91	NA	NA
Total System Design Supply Airflow (CEM): 1600 Total S			ystem De (B)HP:	esign	0.91	Maximum System Fan Power (B)HP:				

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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Registration Provider: Energysoft

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STATE OF CALIFORNIA Mechanical Systems

Project Name:

Project Address:

NRCC-MCH-E CERTIFICATE OF COMPLIANCE

CVUSD Barranca Report Page: 727 S Barranca Ave Date Prepared:

F. HVAC SYSTEM	M SUMMARY (DRY & WET	SYSTEMS)								
1	to demonstrate compliance 140.4(k) or <u>§141.0(b)2</u> for a	for mechanical equipment with mandato Iterations.	ry requirements ;	found in <u>§11</u>	<u>0.1</u> and <u>§1</u>	<u>10.2(a)</u> and	l prescriptive	e requireme	nts found in	<u>§1</u> 4
Dry System Equi	pment Sizing (includes air co	nditioners, condensers, heat pumps, VR	F, furnaces and ι	init heaters)						
01	02	03	04	05	06	07	08	09	10	
					Equipme		er Mechanica §140.4 (a&b)	(kBtu/h)		
			Smallest Size	Hea	ating Outpu	t ^{2,3}	Cooling C	Output ^{2,3}	Load Calc	ulati
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)	Se Co l (kl
FCU-B1	Unitary Heat Pumps	Air-cooled, split (3 phase)	NA: Load Controls	100.42	170	0	188.38	144	359.82	2
RTU-C1	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	33.55	56.8	0	41.9	39.6	49.75	4
RTU-C2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	33.55	56.8	0	41.9	39.6	49.82	4
RTU-D1	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	19.94	33.76	0	36.21	33.61	43.89	3
RTU-D2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	19.94	33.76	0	36.21	33.61	43.89	3
RTU-D3	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	19.93	33.74	0	36.15	33.55	43.85	:
RTU-D4	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	20.96	35.48	0	37.25	34.69	46.13	3
RTU-E1	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	21.16	35.83	0	38.22	35.83	46.57	
RTU-E2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	NA: Load Controls	20.14	34.1	0	36.98	34.41	44.32	3

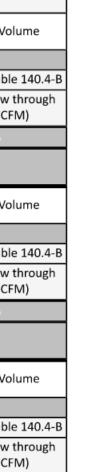
Registration Number:

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MMISSION NRCC-MCH-E Page 8 of 39) 6/28/2022



Total System Design Supply Airflow (CFM):

Fan Function

Supply

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

RTU-E4

03

Registration Number:

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

Total System Design

(B)HP:

Registration Provider: Energysoft

BHP

Maximum System Fan

Power (B)HP:

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Mechanical Systems NRCC-MCH-E

STATE OF CALIFORNIA

CERTIFICATE OF COMPLIANCE			NRCC
Project Name:	CVUSD Barranca	Report Page:	(Page
Project Address:	727 S Barranca Ave	Date Prepared:	6/2
G. PUMPS			
This section does not apply to this project.			

n. PAN SISIL	INIS & AIR LCONO	WIIZER3								
				escriptive requirements four be included in Table H.	nd in <u>§140</u>).4(c), §.	<u>140.4(e)</u> c	and <u>§140.4(m)</u> for fan :	systems. Fan systems servin	g only process loads
System Name:	FCU-B1	Econor	nizer:1	NA: Special OA filtration	EconomizerDesigned per §140.4(e)Controls:(m)				System Fan Type:	Constant Volun
01	02		03	04			05	06	07	08
Fan Name or				Maximum Design Supply	F				Fan Power Pressure Drop A	djustment - Table 1
Item Tag	Fan Functio	n	Qty	(CFM)	HP Unit ²		P Unit ² Design HP		Device	Design Airflow thr Device (CFM)
SF	Supply		1	6000	BHP 0.91		NA	NA		
Total Syst	Total System Design Supply Airflow (CFM):		M):	1 6000 1		ystem I (B)HP:	Design	0.91	Maximum System Fan Power (B)HP:	
System Name:	RTU-C1	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		03	04			05	06	07	08
Fan Name or				Maximum Design Supply	Airflow				Fan Power Pressure Drop A	djustment - Table 14
Item Tag	Fan Functio	n	Qty	(CFM)	Airnow	HP	Unit ²	Design HP	Device	Design Airflow thr Device (CFM)
SF	Supply		1	2000		E	3HP	0.91	NA	NA
Total System Design Supply Airflow (CFM):				2000	Total S	ystem l (B)HP:	Design	0.91	Maximum System Fan Power (B)HP:	

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

STATE OF CALIFORNIA

Mechanical Systems

01

Fan Name or

Item Tag

SF

System

Name:

01

Fan Name or

Item Tag

SF

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CERTIFICATE OF	COMPLIANCE									NRCC-MCH-		
Project Name:				CVU	JSD Barranc	a Repo	rt Page:			(Page 9 of 39		
Project Address	:			727 S	Barranca Av	e Date	Prepared:			6/28/2022		
H. FAN SYSTE	MS & AIR ECONO	MIZERS										
System Name:	RTU-E2	Econon	nizer:1	NA: <=54 kBtu/h cooling	Econom Contro		Designe	d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volume		
01	02	Î	03	04			05	06	07	08		
Fan Name or				Maximum Design Supply	Airflow				Fan Power Pressure Drop	Adjustment - Table 140.4-B		
Item Tag	Fan Functio	on	Qty	(CFM)	Airnow	HP	Unit ²	Design HP	Device	Design Airflow through Device (CFM)		
SF	Supply		1	1600		E	знр	0.91	NA	NA		
Total System Design Supply Airflow (CFM): 1600 Total System Design (B)HP: 0.91 Maximum System Fan Power (B)HP:												
System Name:	RTU-E3	Econon	nizer:1	NA: <=54 kBtu/h cooling	Econom Contro		Designe	d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volume		

¹⁶ Controls: (m) 03 04 05 06 07 02 Maximum Design Supply Airflow Fan Function HP Unit² Design HP (CFM) Device Supply 1600 BHP 0.91 1 Total System Design Total System Design Supply Airflow (CFM): 1600 0.91 (B)HP: Power (B)HP:

1600

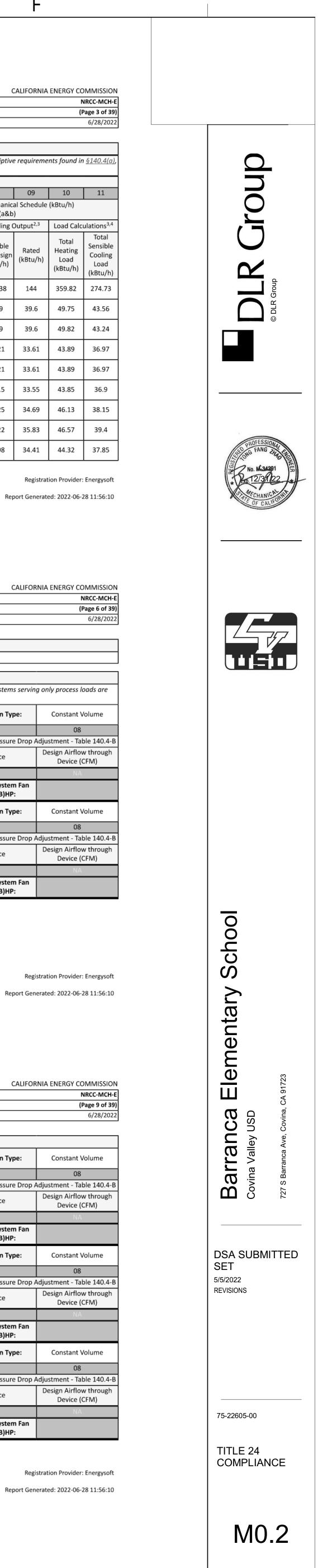
1600

08 Fan Power Pressure Drop Adjustment - Table 140.4-B Design Airflow through Device (CFM) Maximum System Fan Economizer Designed per <u>§140.4(e)</u> and Economizer:¹ NA: <=54 kBtu/h cooling System Fan Type: Constant Volume Controls: (m) 04 05 06 07 08 an Power Pressure Drop Adjustment - Table 140.4-E Maximum Design Supply Airflow HP Unit² Design HP Design Airflow through (CFM) Device Device (CFM)

0.91

0.91

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CERTIFICATE OF COMPLIANCE Project Name:

Project Address	:			727 5 1	Barranca Av	/e Date	Prepared:			6/28/2022	
H. FAN SYSTE	MS & AIR ECONO	MIZERS									
System Name:	RTU-H1	Econor	nizer:1	NA: <=54 kBtu/h cooling	Econor Contr		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				Fa		Fan Power Pressure Drop A	Adjustment - Table 140.4-B				
Item Tag	Fan Functio	'n	Qty	Maximum Design Supply (CFM)	AITTOW	HP	Unit ²	Design HP	Device	Design Airflow through Device (CFM)	
SF	Supply		1	1600		E	внр	0.91	NA	NA	
Total Syste	em Design Supply A	irflow (CF	M):	1600	1600 Total System Design 0.91 (B)HP:		Maximum System Fan Power (B)HP:				
System Name:	RTU-H2	Econor	nizer:1	NA: <=54 kBtu/h cooling	g Controls: Designed 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)	Airnow	HP	Unit ²	Design HP	Device	Design Airflow through Device (CFM)	
SF	Supply		1	1600		E	BHP	0.91	NA	NA	
Total System	em Design Supply A	irflow (CF	M):	1600	Total S	ystem l (B)HP:	Design	0.91	Maximum System Fan Power (B)HP:		
System Name:	RTU-H3	Econor	nizer:1	NA: <=54 kBtu/h cooling	Econor Contr		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)	AIIIOW	HP	Unit ²	Design HP	Device	Design Airflow through Device (CFM)	
SF	Supply		1	1600		E	BHP	0.91	NA	NA	
Total System Design Supply Airflow (CEM): 1600 Total System Design 0.91 Maxim				Maximum System Fan Power (B)HP:							

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NRCC-MCH-E

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

Project Name: Project Address:

I. SYSTEM CONTROLS

I. SYSTEM CONTROLS								
This table is used to demon space conditioning systems		nce with mand	atory controls in <u>§110.2</u> and	<u>§120.2</u> and p	prescriptive con	trols in <u>§140.4(f)</u> and (n) or	requirements i	n <u>§141.0(b)2E</u> for altered
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 §120.2(e)	Isolation Zone Controls §120.2(g)	Demand Response §110.12 and §120.2(b)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(n)
FCU-B1	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
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-D4	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-E1	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-E2	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-E3	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
RTU-E4	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

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CERTIFICATE OF COMPLIANCE

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STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

Project Name:

i roject Hamer			01	obb barrane	a neport a	50.					
Project Address:			727 S	Barranca Ave	Ave Date Prepared:						
J. VENTILATIC	ON AND INDOOR AIR QUALITY										
	04		05				06	C)7		
System Name	RTU-C2	System Desi Airfl	-	450		n Design ' Air CFM	0	Air Filtration per <u>§120</u> Provided per <u>§1</u> Hotel/	.20.1		
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	pancy Type ⁴ Conditioned # of Show Floor Area (ft ²) toilets		# of people⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Cont <u>§120.1(d)5</u> , ar			
Classroom	Lecture/ postsecondary classroom	1270		30	450	0	0	DCV			
0.000100011							-	Occ Sensor	'		
17	Total System Required Min OA CFM				450	18	Ventilation for this	System Complies?			
	04		05				06	0)7		
System Name	RTU-D1	System Desi Airfl	-	450		n Design Air CFM	0	Air Filtration per <u>§120</u> Provided per <u>§1</u> Hotel/	.20.1		
08	09	10	11	12	13	14	15	1	16		
	Mechanical Ventila	-				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 people⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Cont §120.1(d)5, ar			
Classroom	Lecture/ postsecondary classroom	930		30	450	0	0	DCV			
clubbroom	Letter of postsecondary elassicon					Ĭ	Ŭ		1		

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

17 Total System Required Min OA CFM

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

450

18

Registration Provider: Energysoft Report Generated: 2022-06-28 11:56:10

Occ Sensor

Ventilation for this System Complies?

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Single zone <= 25,000 ft²

D

CALIFORNIA ENERGY COMMISSION

STATE OF CALIFORNIA Mechanical Systems

NRCC-MCH-E
CERTIFICATE OF COMPLIANCE

CERTIFICATE OF	COMPLIANCE									NRCC-MCH-E
Project Name:				CVL	JSD Barrand	a Repor	rt Page:			(Page 11 of 39)
Project Address:				727 S I	Barranca Av	/e Date I	Prepared:			6/28/2022
H. FAN SYSTE	MS & AIR ECONO	MIZERS								
System Name:	RTU-H4	Econor	nizer:1	NA: <=54 kBtu/h cooling	Econon Contro		:: (m)		System Fan Type:	Constant Volume
01	02		03	04			05	06	07	08
Fan Nama ar				Mavimum Dasian Supply	Airflow				Fan Power Pressure Drop A	Adjustment - Table 140.4-E
Fan Name or Item Tag	Fan Functio	'n	Qty	Maximum Design Supply (CFM)	AITTIOW	НР	Unit ²	Design HP	Device	Design Airflow through Device (CFM)
SF	Supply		1	1600		ВНР		0.91	NA	NA
Total Syste	em Design Supply A	Airflow (CF	M):	1600		al System Design (B)HP: 0.91		Maximum System Fan Power (B)HP:		
System Name:	RTU-I1	Econor	nizer:1	NA: <=54 kBtu/h cooling		onomizer Designed per <u>§140.4(</u> e			System Fan Type:	Constant Volume
01	02		03	04			05	06	07	08
Fan Nama an				Maximum Dasian Gunahu	A : £1				Fan Power Pressure Drop A	Adjustment - Table 140.4-E
Fan Name or Item Tag	Fan Functio	'n	Qty	Maximum Design Supply (CFM)	AITTIOW	HP	Unit ²	Design HP	Device	Design Airflow through Device (CFM)
SF	Supply		1	1600		B	SHP	0.91	NA	NA
Total Syste	em Design Supply A	Airflow (CF	M):	1600		ystem [(B)HP:	Design	0.91	Maximum System Fan Power (B)HP:	
System Name:	RTU-I2	Econor	nizer:1	NA: <=54 kBtu/h cooling	Econon Contro		Designe	d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volume
01	02		03	04			05	06	07	08
Fan Nama ar				Maximum Dasign Sugah	Airflow				Fan Power Pressure Drop A	Adjustment - Table 140.4-I
Fan Name or Item Tag	Fan Functio	n	Qty	Maximum Design Supply (CFM)	AIITIOW	irflow HP Unit ²		Design HP	Device	Design Airflow through Device (CFM)
SF	Supply		1	1600		B	SHP	0.91	NA	NA
Total Syste	em Design Supply A			ystem [(B)HP:	Design	0.91	Maximum System Fan Power (B)HP:			

Registration	Number:

STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

Project Address:

Mechanical Systems

CERTIFICATE OF COMPLIANCE

I. SYSTEM CONTROLS

RTU-H2

RTU-H3

RTU-H4

RTU-I1

RTU-I2

RTU-I3

RTU-I4

have setback thermostats.

EXCEPTION 1 to §140.4(f)

01

Registration Number:

STATE OF CALIFORNIA

NRCC-MCH-E

Mechanical Systems

CERTIFICATE OF COMPLIANCE

02

J. VENTILATION AND INDOOR AIR QUALITY

 \bowtie

Nonresidential and Hotel/ Motel Ventilation Systems

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Registration Provider: Energysoft

Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Date/Time:

CVUSD Barranca Report Page:

727 S Barranca Ave Date Prepared:

Auto Timer

Switch

This table is used to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(e)3B for all nonresidential, high-rise residential and hotel/motel

Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.

Registration Date/Time:

Report Version: 2019.1.003

Schema Version: rev 20200601

4 Hour Time

4 Hour Tim

4 Hour Time

4 Hour Time

4 Hour Time

4 Hour Tim

4 Hour Timer

EMCS

EMCS

EMCS

EMCS

EMCS

EMCS

EMCS

Setback

Setback

Setback

Setback

Setback

Setback

Setback

outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

Check this box if the project included Nonresidential or Hotel/Motel spaces

Check this box if the project included new or altered high-rise residential dwelling units.

Report Generated: 2022-06-28 11:56:10

Included

Included

Included

Included

Included

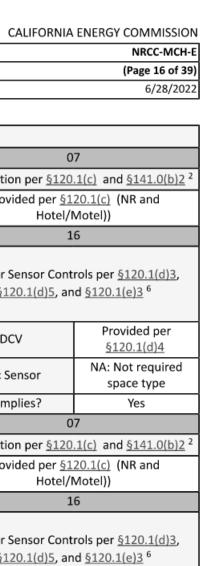
Included

Included

CALIFORNIA ENERGY COMMISSION
NRCC-MCH-E
(Page 13 of 39)
6/28/2022

Registration Provider: Energysoft

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Provided per <u>§120.1(d)4</u> NA: Not required space type

Yes

CERTIFICATE OF	COMPLIANCE								INKCC-IVI
Project Name:				USD Barranca	· · ·	-			(Page 17 c
Project Address	:		727 S	Barranca Ave	Date Prepa	ared:			6/28/
J. VENTILATIO	ON AND INDOOR AIR QUALITY								
	04		05				06	C)7
		System Desi	σn ΟΔ CEM		System	Design		Air Filtration per §120	.1(c) and <u>§141.0(k</u>
System Name	RTU-D2	Airfle	-	450		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 people⁵	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)</u> nd <u>§120.1(e)3</u> ⁶
Classroom	Lecture/ postsecondary classroom	930		30	450	0	0	DCV	Provided per <u>§120.1(d)4</u>
Classicolli	Lecture/ postsecondary classicom	930		50	430	Ū	0	Occ Sensor	NA: Not require space type
17	Total System Required Min OA CFM			°	450	18	Ventilation for this S	System Complies?	Yes
	04		05				06	C)7
		System Desi	gn OA CEM		System	Design		Air Filtration per §120	.1(c) and §141.0(b
System Name	RTU-D3	Airfle	-	450		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 people⁵	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	925		30	450	0	0	DCV	Provided per §120.1(d)4
	Lecture, postsecondary classicon	525		50	-50		0	Occ Sensor	NA: Not require space type
17	Total System Required Min OA CFM				450	18	Ventilation for this S	System Complies?	Yes

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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CALIFORNIA ENERGY COMMISSION

STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

CERTIFICATE OF (COMPLIANCE									NRCC-MCH-E		
Project Name:				CVU	JSD Barrand	ca Repo	rt Page:			(Page 12 of 39)		
Project Address:				727 S	Barranca Av	/e Date	Prepared:			6/28/2022		
H. FAN SYSTE	I. FAN SYSTEMS & AIR ECONOMIZERS											
System Name:	RTU-I3	Econor	nizer:1	NA: <=54 kBtu/h cooling Cont			Designe	d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volume		
01	02		03	04			05	06	07	08		
Fan Name or				Maximum Design Supply Airflow					Fan Power Pressure Drop	Adjustment - Table 140.4-B		
Item Tag	Fan Functio	n	Qty	(CFM)	Airnow	HP	Unit ²	Design HP	Device	Design Airflow through Device (CFM)		
SF	Supply		1	1600		1	внр	0.91	NA	NA		
Total Syste	em Design Supply A	irflow (CF	M):	1 1600		otal System Design (B)HP:		0.91	Maximum System Fan Power (B)HP:			
System Name:	RTU-I4	Econor	nizer:1	NA: <=54 kBtu/h cooling	Econon Contre			d per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volume		
01	02		03	04			05	06	07	08		
Fan Name or				Maximum Design Supply	Airflow				Fan Power Pressure Drop	Adjustment - Table 140.4-B		
Item Tag	Fan Functio	n	Qty	Maximum Design Supply Airflow (CFM)		HP	Unit ²	Design HP	Device	Design Airflow through Device (CFM)		
SF	Supply		1	1600		I	внр	0.91	NA	NA		
Total Syste	em Design Supply A	irflow (CF	M):	1600	Total S	ystem (B)HP:	Design	0.91	Maximum System Fan Power (B)HP:			

¹ FOOTNOTES: Computer room economizers must meet requirements of $\frac{§140.9(a)}{2}$ 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:

STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

System Name

08

Project Address:

Mechanical Systems

CERTIFICATE OF COMPLIANCE

J. VENTILATION AND INDOOR AIR QUALITY

04

FCU-B1

09

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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06

15

System Design

Transfer Air CFM

Registration Date/Time:

CVUSD Barranca Report Page:

727 S Barranca Ave Date Prepared:

4500

10 11 12 13 14

05

System Design OA CFM

Airflow¹

Registration Provider: Energysoft Report Generated: 2022-06-28 11:56:10

CALIFORNIA ENERGY COMMISSION

07

Provided per §120.1(c) (NR and

Hotel/Motel))

16

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

NRCC-MCH-E

6/28/2022

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Yes

Yes

CALIFORNIA ENERGY COMMISSION NRCC-MCH-E (Page 14 of 39) 6/28/2022 Provided

Provided

Provided Provided Provided Provided 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 *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);

occupancies. For alterations, only ventialtion systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required 03 Check the box if the project is using natural ventilation in any nonresidential or hotel/motel spaces to meet required ventilation rates per §120.1(c)2.

> Registration Provider: Energysoft Report Generated: 2022-06-28 11:56:10

CALIFORNIA ENERGY COMMISSION NRCC-MCH-E e 17 of 39) 28/2022 ____ (b)2² uired

> uired _____

Exh. Vent per <u>§120.1(c)4</u> Mechanical Ventilation Required per §120.1(c) DCV or Sensor Controls per §120.1(d)3, Space Name r # of Required Min OA people⁵ CFM Required Provided per Design Conditioned # of Shower ot item Tag Floor Area heads/ (ft²) toilets <u>§120.1(d)5</u>, and <u>§120.1(e)3</u> ⁶ Occupancy Type⁴ Provided per DCV §120.1(d)4 3700 300 4500 MPR Building Assembly- multiuse 0 0 NA: Not required Occ Sensor space type 17 Total System Required Min OA CFM 4500 18 Ventilation for this System Complies? 05 04 06 Air Filtration per §120.1(c) and §141.0(b)2 System Design OA CFM System Design RTU-C1 450 System Name Provided per §120.1(c) (NR and Airflow¹ Transfer Air CFM Hotel/Motel)) 08 10 11 12 13 14 09 16 15 Mechanical Ventilation Required per §120.1(c) Exh. Vent per <u>§120.1(c)4</u> 5 Min OA CFM Min CFM CFM DCV or Sensor Controls per §120.1(d)3, Space Name Conditioned # of Shower # of ot item Tag <u>§120.1(d)5</u>, and <u>§120.1(e)3</u> ⁶ Floor Area heads/ Occupancy Type⁴ people⁵ (ft²) toilets Provided per DCV <u>§120.1(d)4</u> 450 Lecture/ postsecondary classroom 1260 Classroom 30 0 0 NA: Not required Occ Sensor space type 17 Total System Required Min OA CFM 450 18 Ventilation for this System Complies? Registration Number: Registration Date/Time: Registration Provider: Energysoft CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2022-06-28 11:56:10 Schema Version: rev 20200601

STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

CERTIFICATE OF	COMPLIANCE								NRCC-MCH-I		
Project Name:			CVI	USD Barranca	a Report Pa	ge:			(Page 18 of 39		
Project Address:	:		727 S	Barranca Ave	ranca Ave Date Prepared: 6/28,						
J. VENTILATIO	ON AND INDOOR AIR QUALITY										
	04		05				06	0	7		
		System Desi			Custom	Design		Air Filtration per §120	.1(c) and §141.0(b)2		
System Name	RTU-D4	Airfl	-	450		Design 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 people⁵	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> , Id <u>§120.1(e)3</u> ⁶		
Classroom	Lecture/ postsecondary classroom	950		30	450	0	0	DCV	Provided per <u>§120.1(d)4</u>		
Classicom	Lecture, postsecondary classicom	550		50	450	0	0	Occ Sensor	NA: Not required space type		
17	Total System Required Min OA CFM			°	450	18	Ventilation for this S	System Complies?	Yes		
	04		05		06			07			
		System Desi	σn ΟΔ CFM		System	Design		Air Filtration per §120	.1(c) and §141.0(b)2		
System Name	RTU-E1	Airfl	-	450	Transfer	~ 1	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. Y	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 people⁵	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	995		30	450	0	0	DCV	Provided per §120.1(d)4		
Classicoum	Lecture/ postsecondary classroom	332		50	450	0	U	Occ Sensor	NA: Not required space type		
17	Total System Required Min OA CFM				450	18	Ventilation for this S	System Complies?	Yes		

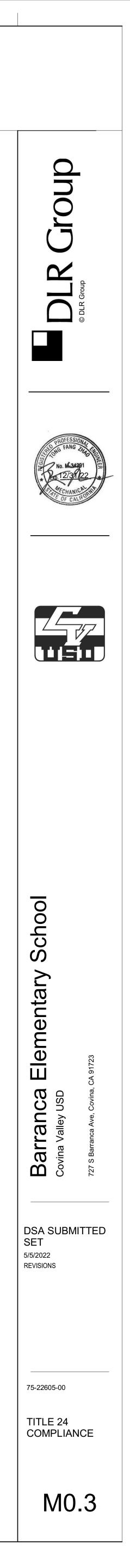
Registration Number:

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:

									(-0,
Project Address	:		727 S	Barranca Ave	Date Prep	ared:			6/28/2022
J. VENTILATIO	ON AND INDOOR AIR QUALITY								
	04		05				06	0	7
		System Desi	gn OA CFM		System	Design		Air Filtration per $\underline{\$120.1(c)}$ and $\underline{\$141.0(l)}$	
System Name	RTU-E2	Airfl	-	450		Air CFM	0	Provided per <u>§1</u> Hotel/I	<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 §120.1(d)5, an	rols per <u>§120.1(d)3</u> , 1d <u>§120.1(e)3</u> ⁶
Classroom	Lecture/ postsecondary classroom	995		30	450	0	0	DCV	Provided per <u>§120.1(d)4</u>
Classicoli	Lecture/ postsecondary classicom	222		30	430	Ŭ	0	Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				450	18	Ventilation for this S	System Complies?	Yes
	04		05				06	0	7
		System Desi	gn OA CFM		System	Design		Air Filtration per §120	.1(c) and §141.0(b)2 ²
System Name	RTU-E3	Airfl	-	450		Air CFM	0	Provided per <u>§1</u> Hotel/I	<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 people⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Cont §120.1(d)5, an	rols per <u>§120.1(d)3</u> , ad <u>§120.1(e)3</u> ⁶
Classroom	Lecture/ postsecondary classroom	915		30	450	0	0	DCV	Provided per §120.1(d)4
Classicon	Letter possecondary classicon	515		50	450	Ŭ	0	Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				450	18	Ventilation for this S	System Complies?	Yes

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727 S Barranca Ave Date Prepared:

Registration Provider: Energysoft

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NRCC-MCH-E

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В

STATE OF CALIFORNIA

Mechanical Systems NRCC-MCH-E CERTIFICATE OF COMPLIANCE

Project Name:

Project Address:

CALIFORNIA ENERGY COMMISSION

J. VENTILATION AND INDOOR AIR QUALITYOfOfOfSystem NameRTU-H4System Design OA CFM AirHow ² 450System Case Transfer Air CFMOf0809101112131415160910111213141516Space Name ot item TagMechanical Ventilation Required per \$120.1(c).3 ³ Exh. Vent per \$120.1(c).4DCV or Sensor Controls per \$120.1(c).4Space Name ot item TagOccupancy Type4Conditioned # of Shower Floor Area heads/ toilets# of people5Required CFMProvided per Design CFMDCV or Sensor Controls per \$120.1(c).4Classroom ot item TagConditioned # of Shower Floor Area heads/ toilets# of space NameRequired min OAProvided per S120.1(c).4DCV or Sensor Controls per \$120.1(c).4System Dation ot item TagConditioned # of Shower Floor Area heads/ toilets# of space NameRequired min OAProvided per S120.1(c).4DCV or Sensor Controls per \$120.1(c).4Classroom ot item TagPortConditioned # of Shower AirFlow ³ # of space NameProvided per \$120.1(c).4DCV or Sensor Controls per \$120.1(c).4System Name Space Name ot tem TagRTU-HSystem Design OA CFM AirFlow ³ 45000Air Filtration per \$120.1(c).4System Name Space Name ot tem TagRTU-HSystem Design OA CFM AirFlow ³ 450System Design Transfer Air CFM0Air Filtration per \$120.1(c).4											
System NameRTU-H4System Design 0A CFM Airflow1450System Design Transfer Air CFM0Air Filtration per \$120.1(c) and \$141.0(b)2 Provided per \$120.1(c) (NR and Hote/Motel))080910111213141516Space Name ot item TagMechanical Ventilation Required per \$120.1(c) 3 Floor Area (ft?)Conditioned # of Shower heads/ (ft?)# of Shower heads/ (ft?)# of Shower peple5# of Shower Provided per Design Min CFMProvided per Design CFMDCV or Sensor Controls per \$120.1(c)3 \$120.1(d)3. \$120.1(d)5. and \$120.1(e)3 & 6ClassroomLecture/ postsecondary classroom97030450000Ne: Not required space Name CFM17Total System Required Min OA CFM of tem TagSystem Design OA CFM Airflow1450System Design Transfer Air CFM000Ne: Not required space Name CFM080910111213141516System Name ot item TagRTU-I1System Design OA CFM Airflow1450System Design Transfer Air CFM0Air Filtration per \$120.1(c)Air Stat.0(b) 2*080910111213141516Space Name ot item TagOccupancy Type4Conditioned (ft?)# of Shower Airflow1# of Shower Heads/ (ft?)# of Shower Provided per Design Transfer Air CFMOC Sensor Controls per \$120.1(c) (NR and Hote/Motel))0809101112 </th <th>J. VENTILATIO</th> <th>ON AND INDOOR AIR QUALITY</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	J. VENTILATIO	ON AND INDOOR AIR QUALITY									
System NameRTU-H4System Design Airflow10Provided per \$120.1(c) (NR and Hote//Motel))00809101112131415160Mechanical Ventilation Required per \$120.1(c) 3Exh. Vent per \$120.1(c) 4DCV or Sensor Controls per \$120.1(a) 5DCV or Sensor Controls per \$120.1(a) 5DCV or Sensor Controls per \$120.1(a) 5Space Name ot item TagOccupancy Type4Conditioned (ft²)# of Shower heads/ toilets# of people5Required People5Provided per Design OC FMDCV or Sensor Controls per \$120.1(a) 5Classroom 17Lecture/ postsecondary classroom9703045000DCVProvided per \$120.1(a)17Total System Required Min OA CFM Airflow1System Design OA CFM Airflow145030450000017Total System Required Min OA CFM Airflow1System Design OA CFM Airflow1450System Design Transfer Air CFM0Air Flitration per \$120.1(c) (MR and Hote//Motel))080910111213141516Space Name ot item TagOccupancy Type4Conditioned (ft²)# of Shower heads/# of people5Required Min OAProvided per \$120.1(c) (MR and Hote//Motel))080910111213141516Space Name ot item TagOccupancy Type4Conditioned (ft²)for Shower heads/# of Shower people5# of Shower R		04		05				06	0	7	
System Name OBRIU-H4Airflow1450Transfer Air CFM0Provided per \$120.1(c) Hore/Motel)Provided per \$120.1(c) Hore/Motel)080910111213141516Space Name ot item TagMechanical Ventilation Required per \$120.1(c)3 $Exh. Vent per $120.1(c)4$ Provided per Design Min OA CFMProvided per Design Min CFMDCV or Sensor Controls per \$120.1(d)3. \$120.1(d)5, s120.1(d)4ClassroomLecture/ postsecondary classroom970 $III12131415DCV or Sensor Controls per $120.1(d)417Total System Required Min OA CFMIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII$			System Desi	σn ΟΔ CFM		System	Design		Air Filtration per §120	.1(c) and <u>§141.0(b)2</u> ²	
Mechanical Ventilation Required per §120.1(c) 3 *Exh. Vent per §120.1(c) 4Space Name ot item TagOccupancy Type 4Conditioned Floor Area (ft ²)# of heads/ toiletsRequired people5Required Min CA CFMProvided per Design CFMDCV or Sensor Controls per §120.1(d)3. §120.1(d)5, and §120.1(e)3 *Classroom Lecture/ postsecondary classroom970# of resultRequired people5Required Min CA CFMProvided per Design CFMDCV or Sensor Controls per §120.1(d)3. §120.1(d)4DCVProvided per §120.1(d)417Total System Required Min OA CFM970304500000NA: Not required space type17Total System Required Min OA CFM5018Ventilation for this System Complies?Yes04050607System NameRTU-I1System Design OA CFM Airflow ¹ 450System Design Transfer Air CFM0Air Filtration per §120.1(c) and §141.0(b)2 \$120.1(c) and \$141.0(b)2 \$120.1(c) and \$141.0(b)2 \$120.1(c) and \$141.0(b)2 \$120.1(c) and \$141.0(b)2080910111213141516Space Name ot item TagOccupancy Type 4Conditioned # of Shower Floor Area (ft ²)# of heads/ (ft ²)Required # of people ⁵ Provided per Design CFMDCV or Sensor Controls per §120.1(d)3. \$120.1(d)4Classroom titem TagOccupancy Type 4Conditioned # of Shower Floor Area (ft ²)# of heads/ citelts <td>System Name</td> <td>RTU-H4</td> <td></td> <td>-</td> <td>450</td> <td></td> <td>-</td> <td>0</td> <td colspan="2"></td>	System Name	RTU-H4		-	450		-	0			
Space Name ot item TagOccupancy Type4Conditioned Floor Area (ft ²)# of heads/ tilletsRequired people5Required Min CA Min CFMProvided per Design CFMDCV or Sensor Controls per §120.1(d)3, §120.1(d)5, aid §120.1(d)4ClassroomLecture/ postsecondary classroom97030450000DCVProvided per Design §120.1(d)417Total System Required Min OA CFM97097045018Ventilation for this System Comples?NA: Not required space type17Total System Required Min OA CFM0018Ventilation for this System Comples?Yes040500607System NameRTU-11System Design OA CFM Airflow ¹ 450System Design Transfer Air CFM0Air Filtration per §120.1(c) and §141.0(b)2080910111213141516Space Name ot item TagOccupancy Type4Conditioned Floor Area (ft ²)# of Shower heads/ toilets# of mover people5Exh. Vent per §120.1(c)4DCV or Sensor Controls per §120.1(c)35pace Name ot item TagOccupancy Type4Conditioned Floor Area (ft ²)# of Shower heads/ toilets# of mover people5Required Min CA Min CFMProvided per Design CFMDCV or Sensor Controls per §120.1(c)3Classroom Classroom97530450000DCVProvided per §120.1(d)4Lecture/ postsecondary classroom97530<	08	09	10	11	12	13	14	15	1	6	
ot item TagOccupancy Type4Floor Area (ft?)Hodds/ heads/ toilets# of people5Required people5Provided per Design Min CFMS120.1(d)5, and 5120.1(e)3 eClassroomLecture/ postsecondary classroom9709703045000<		Mechanical Ventila	tion Required	per <u>§120.1(c</u>)	3 ³		Exh.	Vent per <u>§120.1(c)4</u>			
$ \begin{array}{ c c c c c } \hline \begin{tabular}{ c c c c c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$		Occupancy Type ⁴	Floor Area	heads/		Min OA					
Image: Normal system Required Min DA CFMImage: Normal system Required Min DA CFMMain Normal system Required Min DA CFMMain Normal system ComplexityMain Normal system Com	Classroom	Lecture / postsocondary classroom	970		20	450	0	0	DCV		
04050607System NameRTU-I1System Design OA CFM Airflow1450System Design Transfer Air CFM0Air Filtration per §120.1(c) and §141.0(b)2 20809101112131415I0809101112131415ISpace Name ot item TagMechanical Ventilation Required per §120.1(c)3 3Exh. Vent per §120.1(c)4DCV or Sensor Controls per §120.1(d)3, §120.1(d)5, and §120.1(e)3 6DCV or Sensor Controls per §120.1(d)3, §120.1(d)5, and §120.1(d)3, §120.1(d)5, and §120.1(d)3, §120.1(d)4ClassroomLecture/ postsecondary classroom9753045000DCVProvided per §120.1(d)4ClassroomLecture/ postsecondary classroom9753045000NA: Not required space type	Classicolin	Lecture/ possecondary classicom	970		50	430	Ū	0	Occ Sensor		
System NameRTU-I1System Design OA CFM Airflow1450System Design Transfer Air CFM0Air Filtration per §120.1(c) and §141.0(b)220809101112131415	17	Total System Required Min OA CFM				450	18	Ventilation for this S	System Complies? Yes		
System NameRTU-I1System Design DA CFM Airflow1450System Design Transfer Air CFM0Provided per $\frac{5120.1(c)}{Hotel/Motel)}$ 0809101112131415		04		05				06	0	7	
System NameR10-11Airflow1450Transfer Air CFM0Provided per $\frac{5120.1(c)}{Hotel/Motel}$ (NR and Hotel/Motel)0809101112131415			System Desi	gn OA CEM		System	Design		Air Filtration per §120	.1(c) and <u>§141.0(b)2</u> ²	
Mechanical Ventilation Required per §120.1(c)3 ³ Exh. Vent per §120.1(c)4 DCV or Sensor Controls per §120.1(d)3, §120.1(d)5, and §120.1(d)3, §120.1(d)4 Space Name ot item Tag Occupancy Type ⁴ Conditioned floor Area (ft ²) # of heads/ toilets # of people ⁵ Required Min OA CFM Provided per Design CFM DCV or Sensor Controls per §120.1(d)3, §120.1(d)5, and §120.1(e)3 ⁶ Classroom Lecture/ postsecondary classroom 975 30 450 0 0 DCV Provided per §120.1(d)4 Occ Sensor NA: Not required space type 1000000000000000000000000000000000000	System Name	RTU-I1		-	450			0			
Space Name ot item Tag Occupancy Type ⁴ Conditioned Floor Area (ft ²) # of Shower heads/ toilets # of people ⁵ Required Min OA CFM Provided per Design CFM DCV or Sensor Controls per §120.1(d)3, §120.1(d)5, and §120.1(e)3 ⁶ Classroom Lecture/ postsecondary classroom 975 A 30 450 0 0 DCV DCV or Sensor Controls per §120.1(d)3, §120.1(d)4 Provided per §120.1(d)4	08	09	10	11	12	13	14	15	1	6	
ot item Tag Occupancy Type ⁴ Floor Area (ft ²) # of beads/ toilets # of people ⁵ Min OA CFM Required Min CFM Provided per Design CFM §120.1(d)5, and §120.1(e)3 ⁶ Classroom Lecture/ postsecondary classroom 975 30 450 0 0 0 DCV Provided per §120.1(d)4 NA: Not required space type		Mechanical Ventila	tion Required	per <u>§120.1(c</u>)	<u>3</u> 3		Exh.	Vent per <u>§120.1(c)4</u>			
Classroom Lecture/ postsecondary classroom 975 30 450 0 0 0 DCV §120.1(d)4 Occ Sensor NA: Not required space type		Occupancy Type ⁴	Floor Area	heads/		Min OA					
Occ Sensor NA: Not required space type	Classroom	Lecture/ postsecondary classroom	975		30	450	0	0	DCV		
17Total System Required Min OA CFM45018Ventilation for this System Complies?Yes	Classicon		575		50	450	Ŭ	U U	Occ Sensor		
	17	Total System Required Min OA CFM				450	18	Ventilation for this S	System Complies?	Yes	

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: 2022-06-28 11:56:10

STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

CERTIFICATE OF CO	MPLIANCE					NRCC-M						
Project Name:				CVUSD Barranca Report Page:		(Page 25 d						
Project Address:			72	27 S Barranca Ave Date Prepared	d:	6/28/						
L. DISTRIBUTION	(DUCTWOR	(and PIPING)										
This table is used	to show complie	ance with mandator	y pipe insulation require	ements found in <u>§120.3</u> and	prescriptive requirements found in <u>§140.4(I)</u> for duct leaka	ige testing.						
Duct Leakage Sea	ling											
The answers to th	e questions bel	ow apply to the follo	owing duct systems:	FCU-B1	Duct leakage testing triggered for these systems?	No						
11	No	The scope of the	project includes only di	uct systems serving healthcar	e facilities							
12	Yes	Duct system prov	vides conditioned air to	an occupiable space for a cor	nstant volume, single zone, space-conditioning system.							
13	Yes	The space condit	onditioning system serves less than 5,000 ft ² of conditioned floor area.									
14	No	The <u>combined</u> su	rface area of the ducts	in the following locations is n	nore than 25% of the total surface area of the entire duct s	system:						
			Outdoors									
				-	reater than the u-factor of the ceiling, or if the roof does n I vents or openings to the outside/ unconditioned spaces	ot meet the						
			In an unconditioned cr	awl space								
			In other unconditioned	spaces								
15		The scope of the	project includes extend	ling an existing duct system, v	which is constructed, insulated or sealed with asbestos.							
16				ē ,	mented to have been previously sealed as confirmed throu e Nonresidential Appendix NA2.	ugh field verifica						
17	Yes	Duct system shal	l be sealed in acordance	e with the California Mechani	cal Code							
The answers to th	e questions bel	ow apply to the follo	owing duct systems:	RTU-C1	Duct leakage testing triggered for these systems?	No						
11	No	The scope of the	project includes only d	uct systems serving healthcar	re facilities							
12	Yes	Duct system prov	ides conditioned air to	an occupiable space for a cor	nstant volume, single zone, space-conditioning system.							
13	Yes	The space condit	ioning system serves les	ss than 5,000 ft ² of condition	ed floor area.							
14	No	The <u>combined</u> su	rface area of the ducts	in the following locations is n	nore than 25% of the total surface area of the entire duct s	system:						
			Outdoors									
					reater than the u-factor of the ceiling, or if the roof does r I vents or openings to the outside/ unconditioned spaces	ot meet the						
			In an unconditioned cr	awl space								

Registration Number:

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: 2022-06-28 11:56:10 С

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CALIFORNIA ENERGY COMMISSION

NRCC-MCH-E

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E
CERTIFICATE OF COMPLIANCE
Project Name:

Project Address				USD Barranca					(Page 20 of 39)
rioject Address	:		727 S	Barranca Ave	Date Prep	ared:			6/28/2022
J. VENTILATIO	ON AND INDOOR AIR QUALITY								
	04		05				06		7
		System Desi	gn OA CFM		System	Design	_		.1(c) and §141.0(b)2 2
System Name	RTU-E4	, Airflo	-	450		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 people⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Cont §120.1(d)5, an	rols per <u>§120.1(d)3</u> , nd <u>§120.1(e)3</u> ⁶
Classroom	Lecture/ postsecondary classroom	970		30	450	0	0	DCV	Provided per §120.1(d)4
classicoli		570		50	450	Ű	0	Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				450	18	Ventilation for this S		Yes
	04		05				06	0	7
		System Desi	gn OA CFM		System	Design		-	.1(c) and §141.0(b)2 ²
System Name	RTU-H1	Airflo	-	450		Air CFM	0		<u>20.1(c)</u> (NR and Motel))
08	09	10	11	12	13	14	15	1	.6
	Mechanical Ventila			<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 people⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Cont §120.1(d)5, ar	rols per <u>§120.1(d)3</u> , nd <u>§120.1(e)3</u> ⁶
Classroom	Lecture/ postsecondary classroom	995		30	450	0	0	DCV	Provided per §120.1(d)4
Classicolli	cecture, possecondary classicom			50	450	Ŭ	0	Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				450	18	Ventilation for this S	system Complies?	Yes

Registration Number:

STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

Project Address:

Mechanical Systems

CERTIFICATE OF COMPLIANCE

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

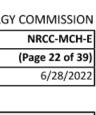
Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601

CVUSD Barranca Report Page:

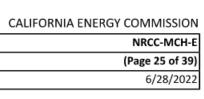
727 S Barranca Ave Date Prepared:

Registration Provider: Energysoft

Report Generated: 2022-06-28 11:56:10



: Not required space type Yes



e testing.
No
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h field verification
No
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t meet the

J. VENTILATIO	ON AND INDOOR AIR QUALITY								
	04		05				06	C	7
Custom Norma	RTU-I2	System Desi	gn OA CFM	450	System	n Design			.1(c) and §141.0(b)2 ²
System Name	KTU-IZ	Airfl	ow ¹	450	Transfer	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		rols per <u>§120.1(d)3</u> , nd <u>§120.1(e)3</u> ⁶
Classroom	Lecture/ postsecondary classroom	950		30	450	0	0	DCV	Provided per <u>§120.1(d)4</u>
Classicon	Lecture, postsecondary classicon			50	450		Ŭ	Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				450	18	Ventilation for this	System Complies?	Yes
	04		05				06	0	17
		System Desi	gn OA CEM		System	n Design		Air Filtration per §120	.1(c) and §141.0(b)2 ²
System Name	RTU-I3	Airflow ¹		450		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		rols per <u>§120.1(d)3</u> , nd <u>§120.1(e)3</u> ⁶
Classroom	Lecture/ postsecondary classroom	940		30	450	0	0	DCV	Provided per §120.1(d)4
	cecture, postecondary classicon	540			450		Ŭ	Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				450	18	Ventilation for this	System Complies?	Yes

Registration Number:

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Registration Number:

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Mechanical S	Systems					CALIFORNI	A ENERGY COMM				
CERTIFICATE OF CO	MPLIANCE						NRCC-				
Project Name:				CVUSD Barranca Report P	Page:		(Page 20				
Project Address:			7	27 S Barranca Ave Date Pre	epared	1:	6/2				
L. DISTRIBUTION	N (DUCTWORK	(and PIPING)									
			In other unconditione	d spaces							
15		The scope of the	project includes exten	project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.							
16		· · ·		2 .		mented to have been previously sealed as confirmed th e Nonresidential Appendix NA2.	rough field verific				
17	Yes	Duct system shal	Il be sealed in acordand	e with the California Mee	chani	cal Code					
The answers to th	e questions bel	ow apply to the foll	owing duct systems:	RTU-C2		Duct leakage testing triggered for these systems?	No				
11	No	The scope of the	project includes only o	luct systems serving heal	thcar	e facilities					
12	Yes	Duct system prov	vides conditioned air to	an occupiable space for	a con	stant volume, single zone, space-conditioning system.					
13	Yes	The space condit	tioning system serves le	ess than 5,000 ft ² of cond	litione	ed floor area.					
14	No	The <u>combined</u> su	urface area of the ducts	in the following location	ns is m	nore than 25% of the total surface area of the entire due	ct system:				
	•		Outdoors								
					-	reater than the u-factor of the ceiling, or if the roof doe vents or openings to the outside/ unconditioned space					
			In an unconditioned c	rawl space			,				
			In other unconditione	d spaces							
15		The scope of the	he project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.								
16						mented to have been previously sealed as confirmed th e Nonresidential Appendix NA2.	rough field verific				

The answers to the questions below apply to the following duct systems: RTU-D1 Duct leakage testing triggered for these systems? No 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. Yes The space conditioning system serves less than 5,000 ft² of conditioned floor area. 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

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

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Report Version: 2019.1.003 Schema Version: rev 20200601

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Project Address:	727 S Barranca Ave	Date Prepared:	
Project Name:	CVUSD Barranca	Report Page:	
CERTIFICATE OF COMPLIANCE			
NRCC-MCH-E			CALIFORNIA ENER
Mechanical Systems			
STATE OF CALIFORNIA			

J. VENTILATIO	ON AND INDOOR AIR QUALITY								
	04		05				06	C)7
System Name	RTU-H2	System Desi Airfl	-	450		Design Air CFM	0	· · _	<u>1.1(c)</u> and <u>§141.0(</u> 20.1(c) (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 §120.1(d)5, ar	rols per <u>§120.1(d)</u> nd <u>§120.1(e)3</u> ⁶
Classroom	Lecture/ postsecondary classroom	995		30	450	0	0	DCV	Provided pe §120.1(d)4
Classicon	Lecture/ postsecondary classicon	333		50	430	0	0	Occ Sensor	NA: Not requir space type
17	Total System Required Min OA CFM				450	18	Ventilation for this	System Complies?	Yes
	04		05				06	C)7
System Name	RTU-H3	System Desi Airfl	-	450		Design Air CFM	0		. <u>1(c)</u> and <u>§141.0(</u> 20.1(c) (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	r # of Min OA CFM Min CFM CFM		Provided per Design CFM	DCV or Sensor Controls per <u>§120.1(d)</u> <u>§120.1(d)5</u> , and <u>§120.1(e)3</u> ⁶		
Classroom	Lecture/ postsecondary classroom	915		30	450	0	0	DCV	Provided per §120.1(d)4
Classicolli		515		50	430		U	Occ Sensor	NA: Not requir space type
17	Total System Required Min OA CFM				450	18	Ventilation for this	System Complies?	Yes

Registration Number:

STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

Project Address:

Mechanical Systems

CERTIFICATE OF COMPLIANCE

J. VENTILATION AND INDOOR AIR QUALITY

04

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Registration Date/Time:

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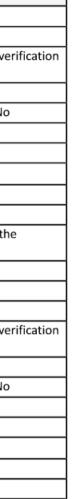
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			System Design OA CFM			System	Design		Air Filtration per §120	<u>.1(c)</u> and <u>§141</u> .
	System Name	RTU-I4	Airfl	-	450		Air CFM	0	Provided per <u>§120.1(c)</u> (NR a Hotel/Motel))	
	08	09	10	11	12	13	14	15	1	.6
		Mechanical Ventila	Mechanical Ventilation Required per §120.1(c)3 ³							
	Space Name ot item Tag	ot item Tag Occupancy Type ⁴ Eloor Area heads/ # of Min OA		Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per <u>§120.1</u> §120.1(d)5, and <u>§120.1(e)3</u> ⁶				
	Classroom	Lecture/ postsecondary classroom	925		30	450	o	0	DCV	Provided §120.1(d
			525						Occ Sensor	NA: Not req space typ
	17	Total System Required Min OA CFM				450	18	Ventilation for this	System Complies?	Yes
	¹ FOOTNOTES:	System CFM should include both mech	anical and nat	ural ventilati	on for the z	one/systen	n			
	ventilation syst	requirements apply to the following the tems providing outside air to occupiabl occupiable space.								

CVUSD Barranca Report Page:

727 S Barranca Ave Date Prepared:

³ Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.

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⁴ See Standards Tables 120.1-A and 120.1-B.

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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 this project.

Registration Number:

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

STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

CERTIFICATE OF COM	IPLIANCE						NRCC-N
Project Name:				CVUSD Barranca	Report Page:		(Page 27
Project Address:				727 S Barranca Ave	Date Prepare	d:	6/28
L. DISTRIBUTION	(DUCTWORK	and PIPING)					
			In other unconditione	ed spaces			
15		The scope of the	project includes exter	nding an existing o	duct system, v	which is constructed, insulated or sealed with asbestos.	
16						mented to have been previously sealed as confirmed the Nonresidential Appendix NA2.	nrough field verifica
17	Yes	Duct system sha	II be sealed in acordan	ce with the Califo	rnia Mechani	cal Code	
he answers to the	questions belo	w apply to the foll	owing duct systems:	RTU-C	02	Duct leakage testing triggered for these systems?	No
11	No	The scope of the	project includes only	duct systems serv	ing healthcar	re facilities	•
12	Yes	Duct system pro-	vides conditioned air to	o an occupiable s	pace for a cor	nstant volume, single zone, space-conditioning system.	
13	Yes	The space condit	tioning system serves l	ess than 5,000 ft ²	² of condition	ed floor area.	
14	No	The <u>combined</u> su	urface area of the duct	s in the following	locations is n	nore than 25% of the total surface area of the entire du	ct system:
			Outdoors				
					-	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 o	crawl space			
			In other unconditione	ed spaces			
15		The scope of the	project includes exter	nding an existing o	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.	nrough field verifica

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-D3 Duct leakage testing triggered for these systems? No No The scope of the project includes only duct systems serving healthcare facilities 11 Yes Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system. 12 Yes The space conditioning system serves less than 5,000 ft² of conditioned floor area.

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 <u>§140.3(a)1B</u> or if the roof has fixed vents or openings to the outside/ unconditioned spaces

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

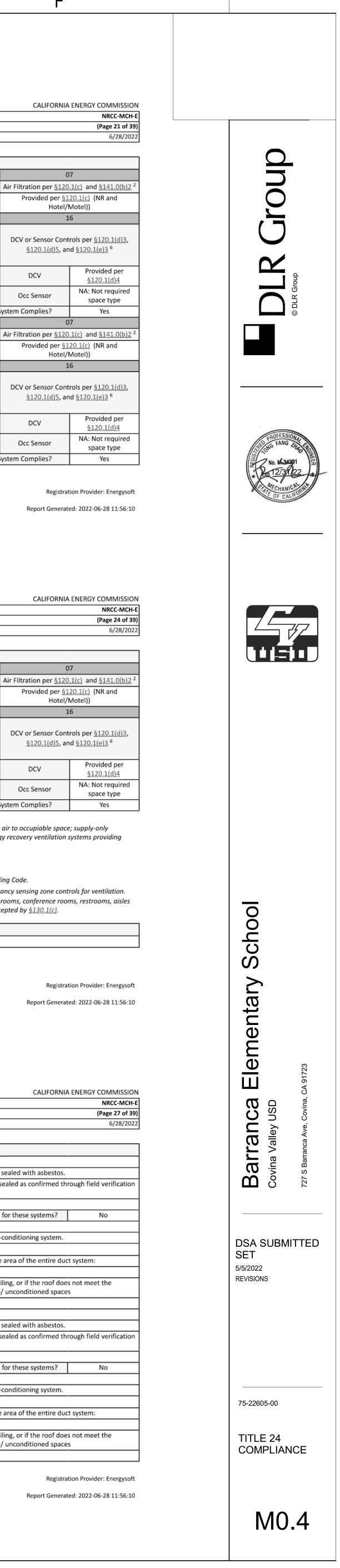
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Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Provider: Energysoft Report Generated: 2022-06-28 11:56:10

In an unconditioned crawl space Registration Date/Time:



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CERTIFICATE OF COM	PLIANCE						NRCC-MCH-	
Project Name:				CVUSD Barranca	Report Page:		(Page 28 of 39	
Project Address:			72	7 S Barranca Ave	Date Prepare	d:	6/28/202	
L. DISTRIBUTION	(DUCTWOR	K and PIPING)						
			In other unconditioned	spaces				
15		The scope of the	project includes extend	ing an existing o	duct system,	which is constructed, insulated or sealed with asbestos.		
16			e scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.					
17	Yes	Duct system shal	l be sealed in acordance	with the Califo	rnia Mechan	ical Code		
The answers to the	questions be	low apply to the follo	owing duct systems:	RTU-D	04	Duct leakage testing triggered for these systems?	No	
11	No	The scope of the	e scope of the project includes only duct systems serving healthcare facilities					
12	Yes	Duct system prov	uct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.					
13	Yes	The space condit	he 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:						
			Outdoors					
						greater than the u-factor of the ceiling, or if the roof does d vents or openings to the outside/ unconditioned spaces		
			In an unconditioned cra	awl space				
			In other unconditioned	spaces				
15		The scope of the	project includes extend	ing an existing o	duct system,	which is constructed, insulated or sealed with asbestos.		
16				- ,		imented to have been previously sealed as confirmed the e Nonresidential Appendix NA2.	ough field verification	
17	Yes	Duct system shal	l be sealed in acordance	with the Califo	rnia Mechan	ical Code		
The answers to the	questions be	low apply to the follo	owing duct systems:	RTU-E	1	Duct leakage testing triggered for these systems?	No	
11	No	The scope of the	project includes only du	ict systems serv	ving healthca	re facilities		
12	Yes	Duct system prov	vides conditioned air to a	an occupiable s	pace for a co	nstant volume, single zone, space-conditioning system.		
13	Yes	The space condit	ioning system serves les	s than 5,000 ft ²	of condition	ed floor area.		
14	No	The <u>combined</u> su	rface area of the ducts i	n the following	locations is r	nore than 25% of the total surface area of the entire duc	t system:	
			Outdoors					
						greater than the u-factor of the ceiling, or if the roof does d vents or openings to the outside/ unconditioned spaces		
			In an unconditioned cra					

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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STATE OF CALIFORNIA Mechanical Systems

CERTIFICATE OF COM	IPLIANCE					NRCC-MCH-			
Project Name:			C	VUSD Barranca Report Page:		(Page 31 of 39			
Project Address:			727	S Barranca Ave Date Prepare	d:	6/28/202			
L. DISTRIBUTION	(DUCTWORK	and PIPING)							
	•		In other unconditioned s	Daces					
15					which is constructed, insulated or sealed with asbestos.				
16		The scope of the	e scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification d diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.						
17	Yes	Duct system sha	t system shall be sealed in acordance with the California Mechanical Code						
The answers to the	questions bel		llowing duct systems:	RTU-H2	Duct leakage testing triggered for these systems?	No			
11	No	The scope of the	e project includes only duct	systems serving healthca	re facilities				
12	Yes	Duct system pro	ct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.						
13	Yes	The space cond	e space conditioning system serves less than 5,000 ft ² of conditioned floor area.						
14	No	The combined s	urface area of the ducts in	the following locations is r	nore 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 <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 s	baces					
15		The scope of the	e project includes extendin	g an existing duct system,	which is constructed, insulated or sealed with asbestos.				
16					mented to have been previously sealed as confirmed thr e Nonresidential Appendix NA2.	ough field verification			
17	Yes	Duct system sha	all be sealed in acordance w	ith the California Mechan	ical Code				
The answers to the	questions bel	ow apply to the fo	llowing duct systems:	RTU-H3	Duct leakage testing triggered for these systems?	No			
11	No	The scope of the	e project includes only duct	systems serving healthca	re facilities				
12	Yes	Duct system pro	ovides conditioned air to an	occupiable space for a co	nstant volume, single zone, space-conditioning system.				
13	Yes	The space cond	itioning system serves less	than 5,000 ft ² of condition	ed floor area.				
14	No	The <u>combined</u> s	urface area of the ducts 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				
			In an unconditioned craw	Ispace					

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Registration Number:

CERTIFICATE OF CO	MPLIANCE					NRCC-MC			
Project Name:				CVUSD Barranca Report Page:	1	(Page 34 of			
Project Address:			7	727 S Barranca Ave Date Prepare	ed:	6/28/2			
L. DISTRIBUTION	(DUCTWOR	K and PIPING)							
			In other unconditione	d spaces					
15		The scope of the p	project includes exten	ding an existing duct system,	which is constructed, insulated or sealed with asbestos.				
16			e scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification divertification divertification divertification divertification accordance with procedures in the Reference Nonresidential Appendix NA2.						
17	Yes	Duct system shall	be sealed in acordanc	e with the California Mechan	ical Code				
The answers to the	e questions be	low apply to the follo	wing duct systems:	RTU-I4	Duct leakage testing triggered for these systems?	No			
11	No	The scope of the p	project includes only d	duct systems serving healthca	re facilities				
12	Yes	Duct system provi	des conditioned air to	an occupiable space for a co	onstant volume, single zone, space-conditioning system.				
13	Yes	The space condition	oning system serves le	ess than 5,000 ft ² of conditior	ned floor area.				
14	No	The <u>combined</u> sur	face area of the ducts	in the following locations is	more than 25% of the total surface area of the entire duc	t system:			
			Outdoors						
					greater than the u-factor of the ceiling, or if the roof doe d vents or openings to the outside/ unconditioned space				
			In an unconditioned c	rawl space					
			In other unconditione	d spaces					
15		The scope of the p	oroject includes exten	ding an existing duct system,	which is constructed, insulated or sealed with asbestos.				
16			The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verifica and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.						
17	Yes	Duct system shall	be sealed in acordance	e with the California Mechan	ical Code				

M. COOLING TOWERS This section does not apply to this project.

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: 2022-06-28 11:56:10 D

NRCC-MCH-E	MPLIANCE					A ENERGY COMMISSIC NRCC-MCH		
Project Name:			CVUSD Barranca	Report Page:		(Page 29 of 3		
Project Address:			727 S Barranca Ave			6/28/202		
-								
L. DISTRIBUTIO	N (DUCTWORK	and PIPING)						
			In other unconditioned spaces					
15		The scope of the	·	duct system,	which is constructed, insulated or sealed with asbestos.			
10					mented to have been previously sealed as confirmed th	rough field verificatio		
16		and diagnostic te	sting in accordance with procedures in	the Referenc	e Nonresidential Appendix NA2.			
17	Yes	Duct system shal	I be sealed in acordance with the Califo	rnia Mechan	ical Code			
The answers to th	ne questions belo	w apply to the foll	owing duct systems: RTU-I	2	Duct leakage testing triggered for these systems?	No		
11	No	The scope of the	project includes only duct systems serv	ring healthca	re facilities			
12	Yes	Duct system prov	uct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.					
13	Yes	The space condit	he space conditioning system serves less than 5,000 ft ² of conditioned floor area.					
14	No	The <u>combined</u> su	rface area of the ducts in the following	locations is r	nore than 25% of the total surface area of the entire due	ct system:		
			Outdoors					
					greater than the u-factor of the ceiling, or if the roof doe			
				roof has fixe	d vents or openings to the outside/ unconditioned space	25		
			In an unconditioned crawl space					
45			In other unconditioned spaces					
15				-	which is constructed, insulated or sealed with asbestos.			
16			project includes an existing duct system esting in accordance with procedures in		imented to have been previously sealed as confirmed th re Nonresidential Appendix NA2	rough field verificatio		
17	Yes		I be sealed in acordance with the Califo					
		· ·	owing duct systems: RTU-I		Duct leakage testing triggered for these systems?	No		
11	No		project includes only duct systems serv	ing healthca				
12	Yes	· ·		-	nstant volume, single zone, space-conditioning system.			
13	Yes		ioning system serves less than 5,000 ft					
14	No				nore than 25% of the total surface area of the entire due	t system:		
			Outdoors					
			In a space directly under a roof that ha	s a U-factor g	greater than the u-factor of the ceiling, or if the roof doe	s not meet the		
			requirements of $\underline{\$140.3(a)1B}$ or if the	roof has fixe	d vents or openings to the outside/ unconditioned space	S		
			In an unconditioned crawl space					

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

STATE OF CALIFORNIA

NRCC-MCH-E

Mechanical Systems

CERTIFICATE OF COMPLIANCE

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Project Name:				CVUSD Barranca Report Page:		(Page 32 of 39		
Project Address:			72	27 S Barranca Ave Date Prepare	d:	6/28/202		
L. DISTRIBUTION	(DUCTWORK	and PIPING)						
			In other unconditioned	spaces				
15		The scope of the	e project includes extend	ling an existing duct system, v	which is constructed, insulated or sealed with asbestos.			
16			scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.					
17	Yes	Duct system sha	II be sealed in acordance	e with the California Mechani	ical Code			
The answers to the	questions belo	w apply to the fol	lowing duct systems:	RTU-H4	Duct leakage testing triggered for these systems?	No		
11	No	The scope of the	e project includes only di	uct systems serving healthcar	re facilities			
12	Yes	Duct system pro	vides conditioned air to	an occupiable space for a cor	nstant volume, single zone, space-conditioning system.			
13	Yes	The space condi	pace conditioning system serves less than 5,000 ft ² of conditioned floor area.					
14	No	The <u>combined</u> s	urface area of the ducts	in the following locations is n	nore than 25% of the total surface area of the entire duc	t system:		
			Outdoors					
					reater than the u-factor of the ceiling, or if the roof does d vents or openings to the outside/ unconditioned spaces			
			In an unconditioned cr	awl space				
			In other unconditioned	spaces				
15		The scope of the	e project includes extend	ling an existing duct 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	II be sealed in acordance	e with the California Mechani	ical Code			
The answers to the	questions belo	w apply to the fol	lowing duct systems:	RTU-I1	Duct leakage testing triggered for these systems?	No		
11	No	The scope of the	e project includes only d	uct systems serving healthcar	re facilities			
12	Yes	Duct system pro	vides conditioned air to	an occupiable space for a cor	nstant volume, single zone, space-conditioning system.			
13	Yes	The space condi	tioning system serves les	ss than 5,000 ft ² of condition	ed floor area.			
14	No	The <u>combined</u> s	urface area of the ducts	in the following locations is n	nore than 25% of the total surface area of the entire duc	t system:		
	-		Outdoors					
					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 cra	awl space				

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

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STATE OF CALIFORNIA

Registration Number:

Mechanical Systems				
NRCC-MCH-E			CALIFORNIA ENE	RGY COMMISSION
CERTIFICATE OF COMPLIANCE				NRCC-MCH-
Project Name:	CVUSD Barranca	Report Page:		(Page 35 of 39
Project Address:	727 S Barranca Ave	Date Prepared:		6/28/2022
N. DECLARATION OF REQUIRED CERTIFICATES OF Selections have been made based on information provide These documents must be provided to the building insp https://www.energy.ca.gov/title24/2019standards/201	ded in previous tables of this docume ector during construction and can be	found online at		
	Form/Title		Field In	spector
	,		Pass	Fail
NRCI-MCH-01-E - Must be submitted for all buildings				

Registration Date/Time:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

ERTIFICATE OF CON	IPLIANCE						NRCC-MCH
roject Name:				CVUSD Barranca			(Page 30 of 3
Project Address:			7:	27 S Barranca Ave	Date Prepared	d:	6/28/20
. DISTRIBUTION	(DUCTWORK	and PIPING)					
			In other unconditioned	spaces			
15		The scope of the	e project includes extend	ling an existing d	luct system, v	which is constructed, insulated or sealed with asbestos.	
16						mented to have been previously sealed as confirmed three Nonresidential Appendix NA2.	ough field verificatio
17	Yes	Duct system sha	II be sealed in acordance	e with the Califo	rnia Mechani	cal Code	
he answers to the	questions below	w apply to the fol	lowing duct systems:	RTU-E	4	Duct leakage testing triggered for these systems?	No
11	No	The scope of the	e project includes only d	uct systems serv	ing healthcar	e facilities	
12	Yes	Duct system pro	vides conditioned air to	an occupiable s	pace for a cor	nstant volume, single zone, space-conditioning system.	
13	Yes	The space condi	tioning system serves le	ss than 5,000 ft ²	of condition	ed floor area.	
14	No	The <u>combined</u> s	urface area of the ducts	in the following	locations is n	nore than 25% of the total surface area of the entire duct	system:
			Outdoors				
						reater than the u-factor of the ceiling, or if the roof does I vents or openings to the outside/ unconditioned spaces	
			In an unconditioned cr	awl space			
			In other unconditioned	spaces			
15		The scope of the	e project includes extend	ling an existing o	luct system, v	which is constructed, insulated or sealed with asbestos.	
16						mented to have been previously sealed as confirmed three Nonresidential Appendix NA2.	ough field verification
17	Yes	Duct system sha	Il be sealed in acordance	e with the Califo	rnia Mechani	cal Code	
he answers to the	questions below	w apply to the fol	lowing duct systems:	RTU-H	11	Duct leakage testing triggered for these systems?	No
11	No	The scope of the	e project includes only d	uct systems serv	ing healthcar	e facilities	
12	Yes	Duct system pro	vides conditioned air to	an occupiable sp	pace for a cor	nstant volume, single zone, space-conditioning system.	
13	Yes	The space condi	tioning system serves le	ss than 5,000 ft ²	of condition	ed floor area.	
14	No	The <u>combined</u> s	urface area of the ducts	in the following	locations is n	nore than 25% of the total surface area of the entire duct	system:
	-		Outdoors				
						reater than the u-factor of the ceiling, or if the roof does I vents or openings to the outside/ unconditioned spaces	
			In an unconditioned cr	awl space			

Registration Number:

STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

Project Address:

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Registration Number:

Mechanical Systems

CERTIFICATE OF COMPLIANCE

L. DISTRIBUTION (DUCTWORK and PIPING)

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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

Outdoors

Outdoors

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.

and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.

The answers to the questions below apply to the following duct systems: RTU-I3 Duct leakage testing triggered for these systems? No

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

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:

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

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:

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 extending an existing duct system, which is constructed, insulated or sealed with asbestos.

RTU-I2 Duct leakage testing triggered for these systems?

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

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

requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces

In other unconditioned spaces

In an unconditioned crawl space

In other unconditioned spaces

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

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

In an unconditioned crawl space

Yes The space conditioning system serves less than 5,000 ft² of conditioned floor area.

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

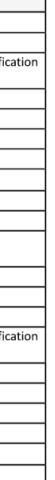
No The scope of the project includes only duct systems serving healthcare facilities

Yes The space conditioning system serves less than 5,000 ft² of conditioned floor area.

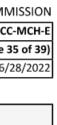
Registration Provider: Energysoft Report Generated: 2022-06-28 11:56:10

No

CALIFORNIA ENERGY COMMISSION NRCC-MCH-I 32 of 39 6/28/2022



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STATE OF CALIFORNIA						
Mechanical Systems						
NRCC-MCH-E			CALI	FORNIA ENERG		
CERTIFICATE OF COMPLIANCE					NRCC-MC	
Project Name:	CVUSD Barranca	Report Page:			(Page 36 of	
Project Address:	727 S Barranca Ave	Date Prepared:			6/28/20	
O. DECLARATION OF REQUIRED CERTIFICATES	S OF ACCEPTANCE					
Selections have been made based on information µ These documents must be provided to the building https://www.energy.ca.gov/title24/2019standards	inspector during construction and can be	found online at	changed, please explain why in	Table E Additio	nal Remarks.	
	Form/Title		Systems/Spaces To Be Field	Field In	spector	
	Formy fille		Verified	Pass	Fail	
NRCA-MCH-02-A - Outdoor Air must be submitted conjunction with MCH-07-A Supply Fan VFD Accep		-	FCU-B1; RTU-C1; RTU-C2; RTU-D1; RTU-D2; RTU-D3; RTU-D4; RTU-E1; RTU-E2; RTU-E3; RTU-E4; RTU-H1; RTU-H2; RTU-H3; RTU-H4; RTU-I1; RTU-I2; RTU-I3; RTU-I4;			
NRCA-MCH-03-A - Constant Volume Single Zone H Volume Single Zone HVAC Systems are included in			FCU-B1; RTU-C1; RTU-C2; RTU-D1; RTU-D2; RTU-D3; RTU-D4; RTU-E1; RTU-E2; RTU-E3; RTU-E4; RTU-H1; RTU-H2; RTU-H3; RTU-H4; RTU-I1; RTU-I2; RTU-I3; RTU-I4;			

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 dioxide (CO2) concentration setpoints.

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

NRCA-MCH-05-A - Air Economizer Controls

Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Date/Time:

Registration Provider: Energysoft

RTU-C1; RTU-C2; RTU-D1; RTU-D2; RTU-D3; RTU-D4;

RTU-E1; RTU-E2; RTU-E3;

RTU-E4; RTU-H1; RTU-H2;

RTU-H3; RTU-H4; RTU-I1; RTU-I2; RTU-I3; RTU-I4;

FCU-B1; RTU-C1; RTU-C2;

RTU-D1; RTU-D2; RTU-D3;

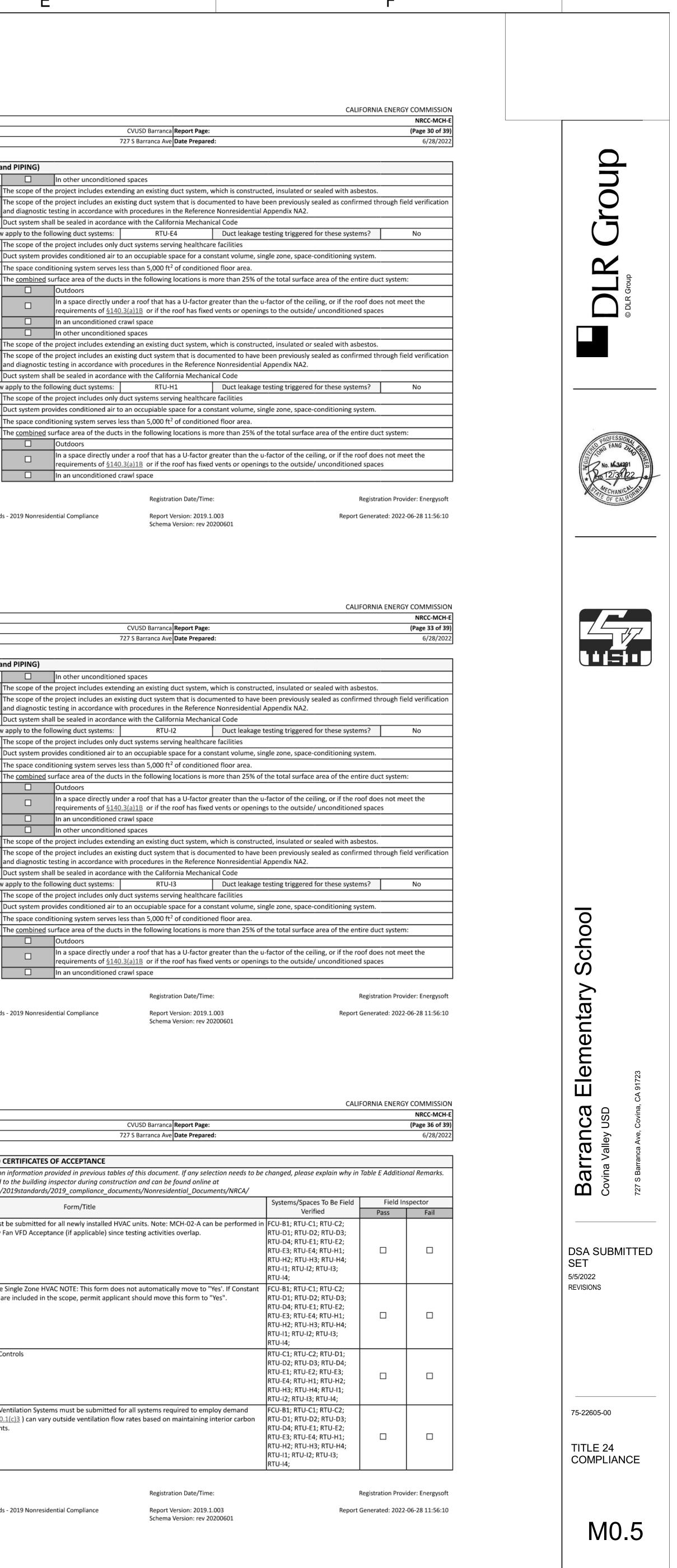
RTU-D4; RTU-E1; RTU-E2;

RTU-E3; RTU-E4; RTU-H1; RTU-H2; RTU-H3; RTU-H4;

RTU-I1; RTU-I2; RTU-I3;

RTU-I4;

Report Generated: 2022-06-28 11:56:10



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В

STATE OF CALIFORNIA	A
Mechanical	Systems

NRCC-MCH-E CERTIFICATE OF COMPLIANCE

Project Name: CVUSD Barranca Report Page: 727 S Barranca 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 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 Fie Form/Title Verified NRCA-MCH-11-A Automatic Demand Shed Controls FCU-B1; RTU-C1; RTU-C2; RTU-D1; RTU-D2; RTU-D3; RTU-D4; RTU-E1; RTU-E2; RTU-E3; RTU-E4; RTU-H1; RTU-H2; RTU-H3; RTU-H4; RTU-I1; RTU-I2; RTU-I3; RTU-I4; FCU-B1; RTU-C1; RTU-C2; NRCA-MCH-16-A Supply Air Temperature Reset Controls RTU-D1; RTU-D2; RTU-D3; RTU-D4; RTU-E1; RTU-E2; RTU-E3; RTU-E4; RTU-H1; RTU-H2; RTU-H3; RTU-H4; RTU-I1; RTU-I2; RTU-I3; RTU-I4; FCU-B1; RTU-C1; RTU-C2; RTU-D1; RTU-D2; RTU-D3; NRCA-MCH-18-A Energy Management Control Systems RTU-D4; RTU-E1; RTU-E2; RTU-E3; RTU-E4; RTU-H1; RTU-H2; RTU-H3; RTU-H4; RTU-I1; RTU-I2; RTU-I3; RTU-I4; P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION There are no NRCV forms required for this project.

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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CALI	FORNIA ENERG	
		NRCC-MCH-E (Page 37 of 39)
		6/28/2022
why in	Table E Additio	nal Remarks.
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5 1.1.1	Field In	
Field	Pass	spector Fail
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Mechanical Systems				CALIFORNIA ENERGY COMMISSIC			
CERTIFICATE OF COMPLIANCE				NRCC-MCH			
Project Name:	С	VUSD Barranca	Report Page:	(Page 38 of 3			
Project Address:	727	' S Barranca Ave Date Prepared:					
Q. MANDATORY MEASURES DOCUME	NTATION LOCATION						
Q. MANDATORY MEASURES DOCUME This table is used to indicate where manda		he plan set or c	onstruction documentation.				
		he plan set or c	onstruction documentation.	02			

Registration Provider: Energysoft Report Generated: 2022-06-28 11:56:10 **Registration Number:**

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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

	CALIFORNIA ENERGY COMMISSION
	Report Page: (Page 39 of 39)
	re Date Prepared: 6/28/2022
DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
I certify that this Certificate of Compliance documentation is accurate and comp	ete.
Documentation Author Name: TONG FANG ZHAO	Documentation Author Signature: Fre These
Company: DLR Group	Signature Date: 2022-06-28
Address: 700 FLOWER STREET	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: LOS ANGELES CA 90017	Phone: 213-444-0610
 of Title 24, Part 1 and Part 6 of the California Code of Regulations. 4. The building design features or system design features identified on this Certificate of Compliance are plans and specifications submitted to the enforcement agency for approval with this building permit 	ces for the building design or system design identified on this Certificate of Compliance conform to the requirements e consistent with the information provided on other applicable compliance documents, worksheets, calculations, application. ith the building permit(s) issued for the building, and made available to the enforcement agency for all applicable o be included with the documentation the builder provides to the building owner at occupancy.
Responsible Designer Name: TONG FANG ZHAO	Responsible Designer Signature: Fr Than
Company: DLR GROUP	Date Signed: 2022-06-28
Address: 700 FLOWER STREET	License: M-34291
City/State/Zip: LOS ANGELES CA 90017	Phone: 213-444-0610

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Registration Provider: Energysoft

Report Generated: 2022-06-28 11:56:10

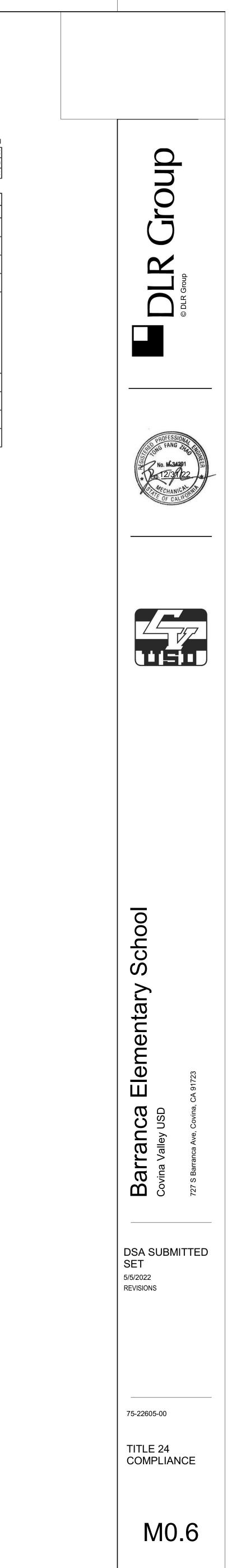
Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

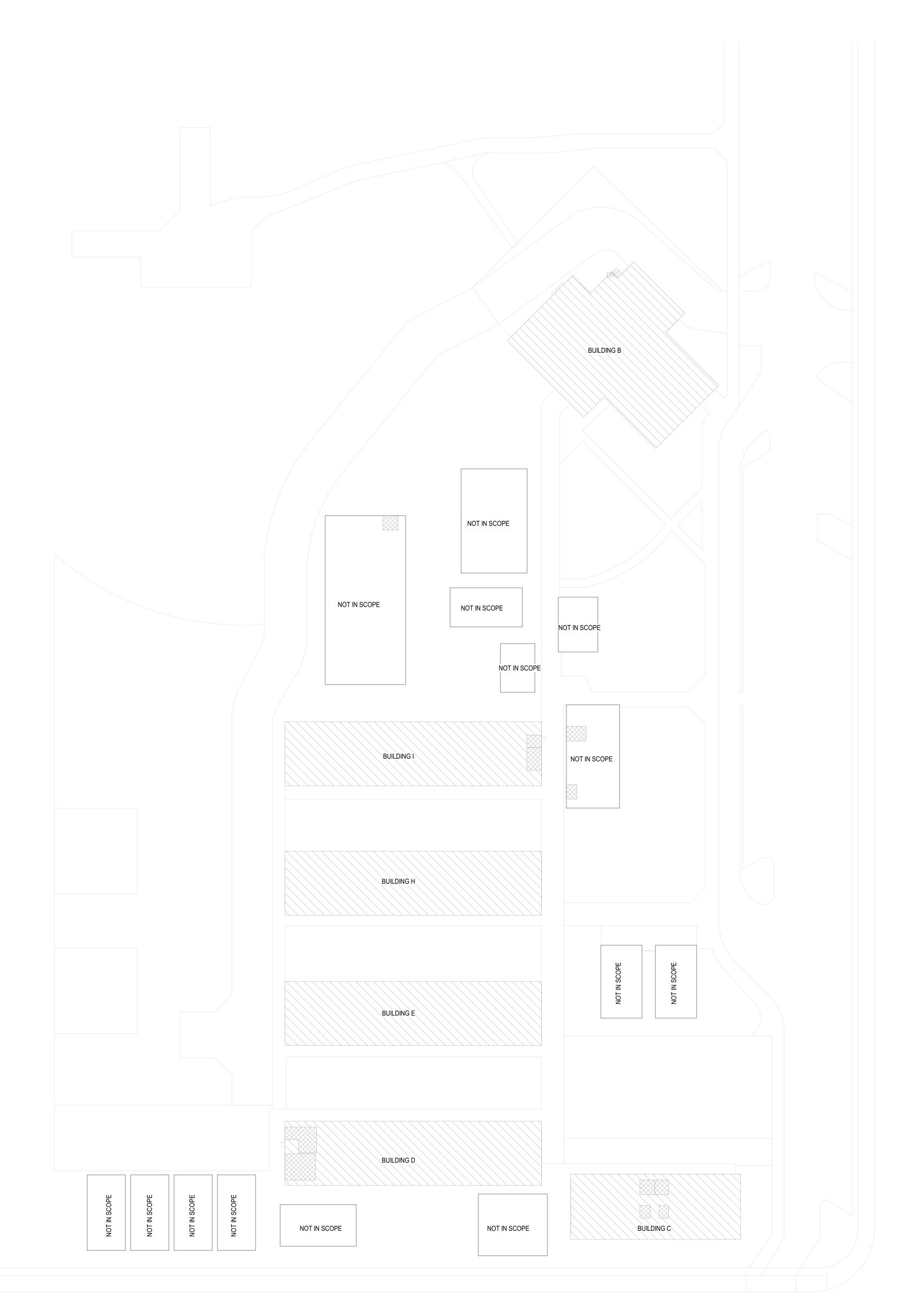
Registration Date/Time:

Registration Provider: Energysoft Report Generated: 2022-06-28 11:56:10

Report Version: 2019.1.003 Schema Version: rev 20200601



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placement/75-22605-00		
Autodesk Docs://75-22605-00 CVUSD - District Wide HVAC Replacement/75-22605-00_CVUSD_Barranca ES_MEP_2022.rvt 8/2/2022 12:59:40 PM G		
75-22605-00 CVUSD -		
Autodesk Docs://75-22 8/2/2022 12:59:40 PM		COVERALL MECHANICAL SI SCALE: 1" = 30'-0"



Е

С

ITE PLAN



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SITE LEGEND

(E) RESTROOMS - NOT IN SCOPE

A FOR SYMBOLS AND ABBREVIATIONS SEE DRAWING M0.1

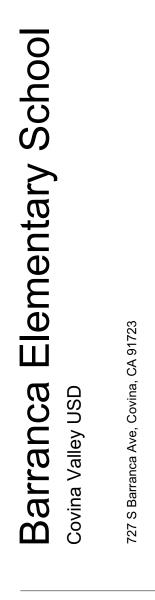
EXISTING BUILDING NOT IN SCOPE

EXISTING BUILDING - SCOPE OF WORK UNDER THIS DSA APPLICATION







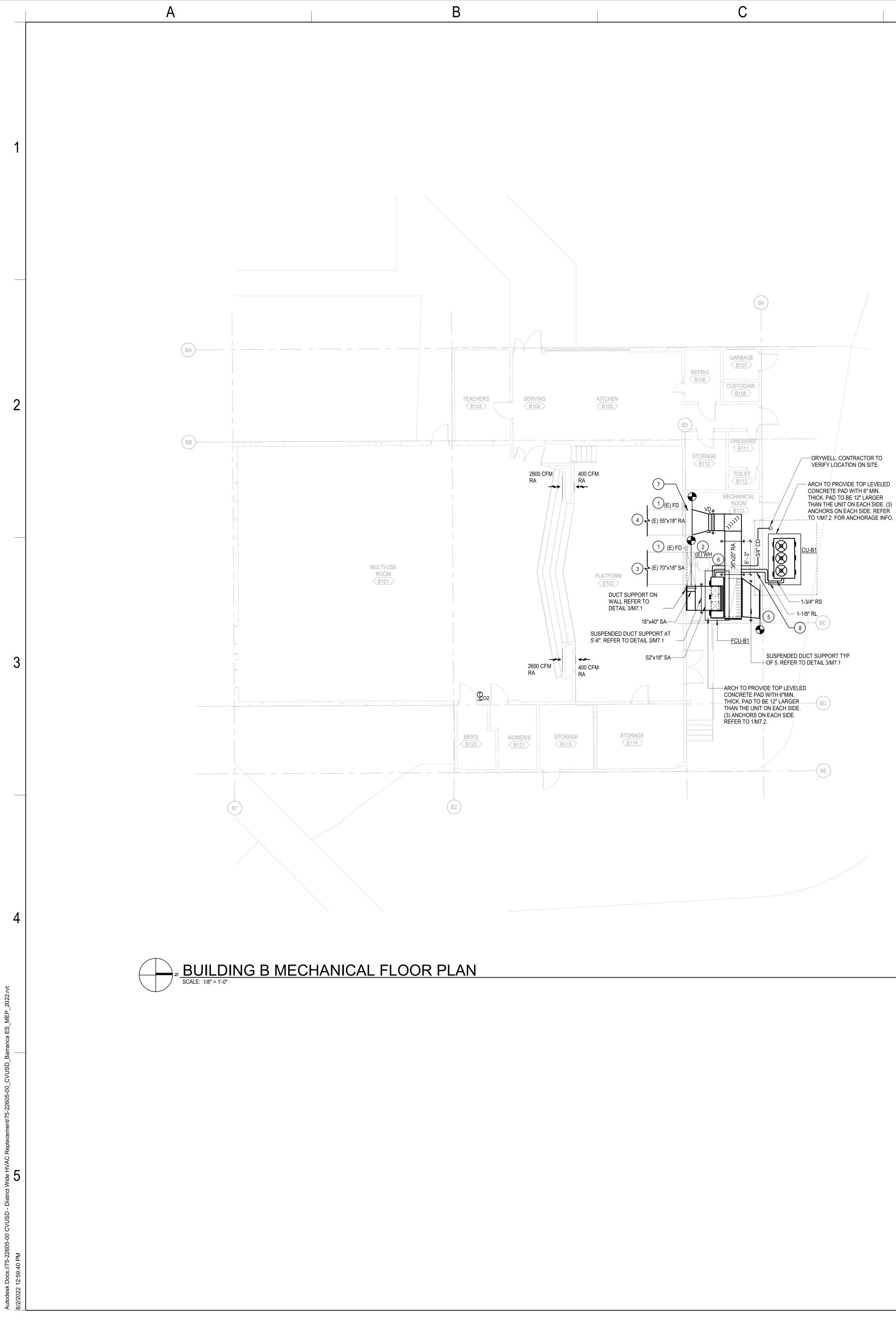


DSA SUBMITTED SET 5/5/2022 REVISIONS

75-22605-00

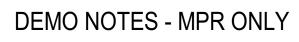
MECHANICAL SITE PLAN

M1.1







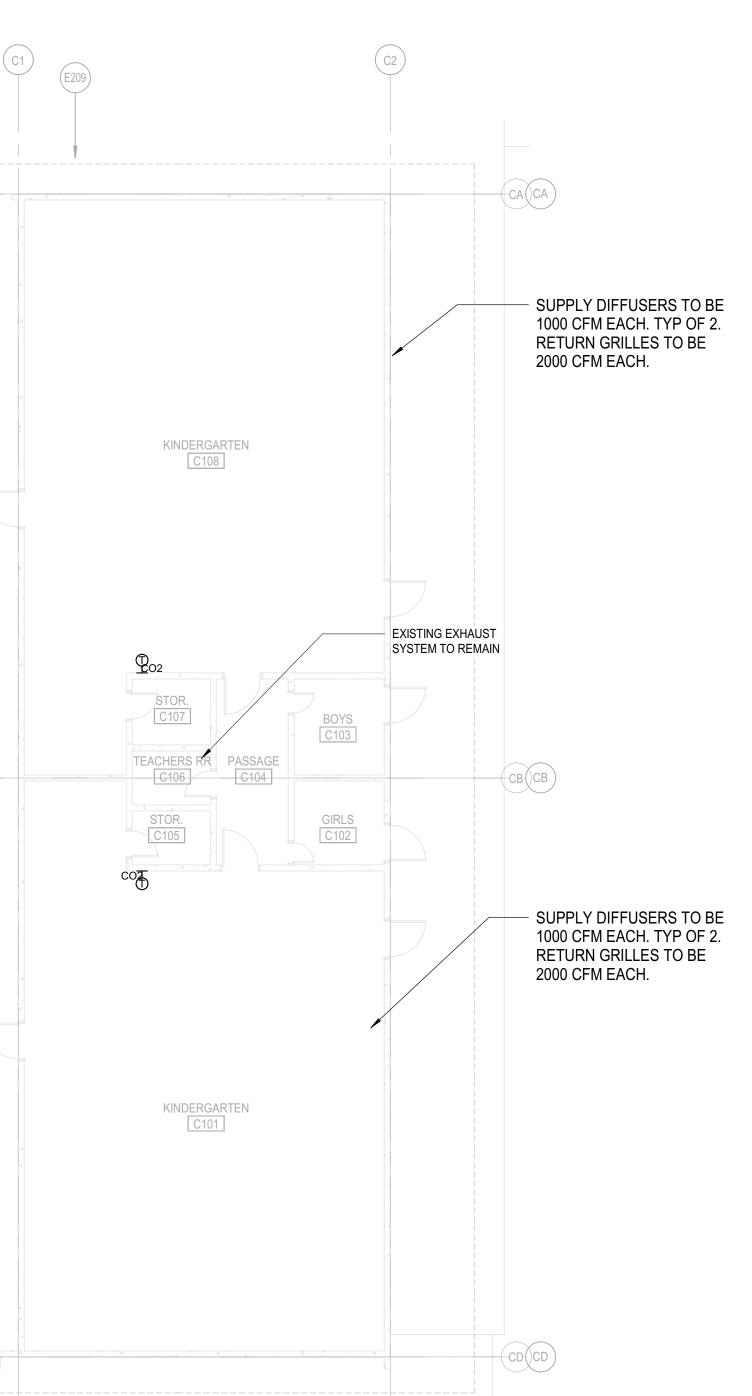


TÓ REMAIN..

GENERAL NOTES

KEY NOTES

- (E) FIRE DAMPER AND RELATED ACCESS PANEL TO REMAIN.
 POD/POC TO BE BEFORE (E) FIRE DAMPER ACCESS PANEL.
 (E) SA DUCTWORK TO REMAIN. 200 CFM FOR EACH SA DIFFUSER. TYP. OF 30.
 (E) RA DUCTWORK & ROUTE TO REMAIN. DAMPER CONDITION ON SITE PROIR TO BID. CONTRACTOR TO VERIFY PROIR TO BID.
- EXHAUST HOOD TO REMAIN.
 8. RL/RS PENETRATE WALL ABOVE GRADE. CONTRACTOR TO VERIFY LOCATION ON SITE. PROVIDE PHP PIPE SUPPORT.



Ε

BUILDING C MECHANICAL FLOOR PLAN

A. REMOVE SUPPLY FAN, FURNACE AND RELATED DUCT, A. REMOVE SOFFETTAN, FORMACE AND RELATED DOCT, WIRING, MOTOR, SUPPORTS AND OTHER APPURTENANCES TO POC. REMOVE GAS PIPING UP TO MAIN AND CAP.
B. (E) WH AND RELATED EQUIPMENT, PIPING AND FLUE DUCT

 SCOPE OF WORK IS CLASSROOMS & MPR ONLY.
 EXISTING DUCTWORK IN CLASSROOMS & MPR TO REMAIN. 2. EXISTING DUCTWORK IN CLASSROOMS & MPR TO REMAIN.
 3. DIFFUSERS AND GRILLES AIR PATH CANNOT BE BLOCK BY ANY ITEMS.
 4. PROVIDE 1" LINEAR TO NEW DUCT IN MPR.

5. (E) OSA LOUVER & DAMPER TO REMAIN TO BE READY TO CÓNNECT TO DUCTWORK. CONTRACTOR TO VERIFY 6. PROVIDE 1" CD PIPING TO DRAIN TO EXISTING FLOOR SINK. 7. RE-BALANCE (E) EXHAUST DAMPER TO 2000 CFM. (E)







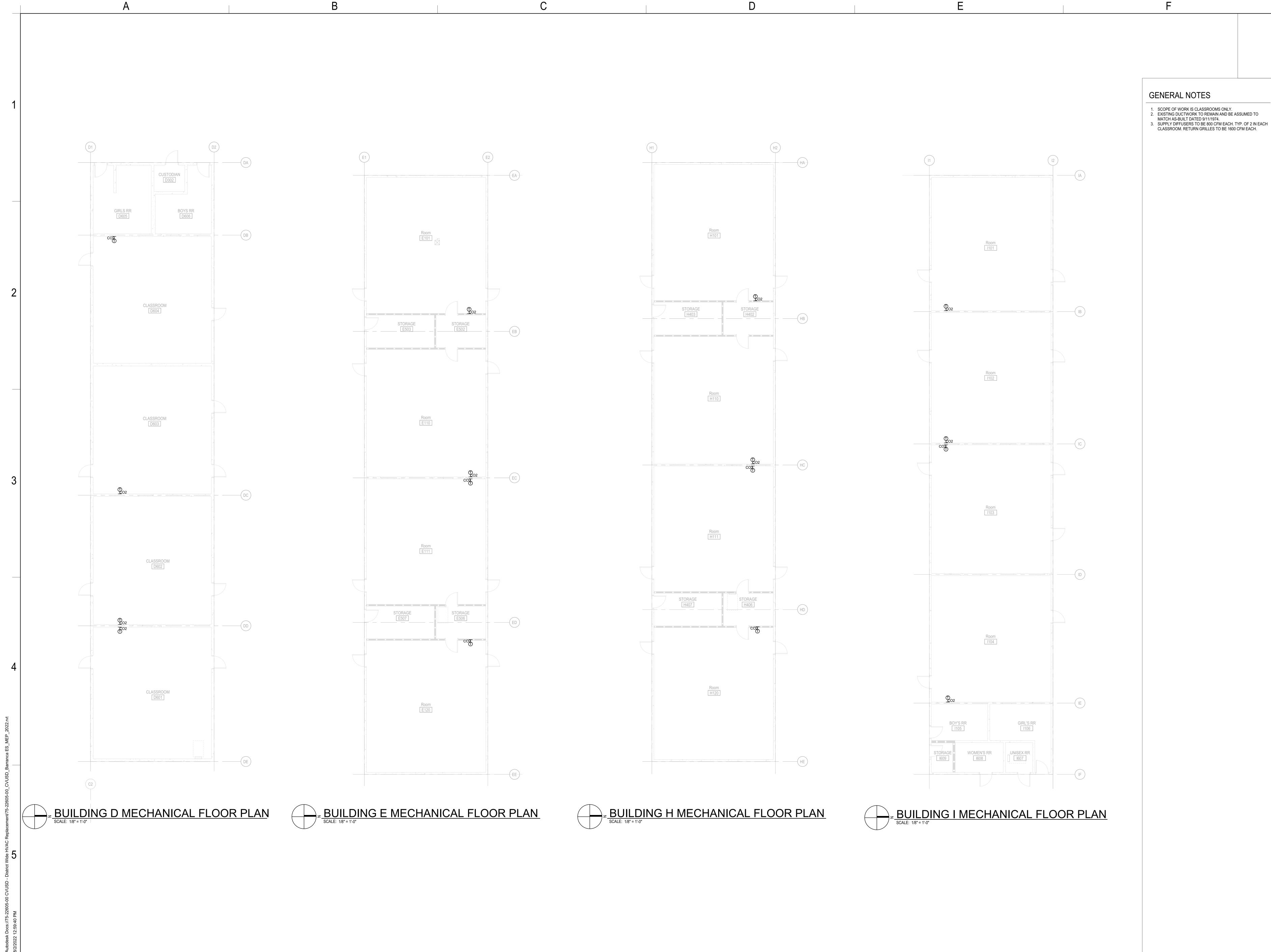


DSA SUBMITTED SET 5/5/2022 REVISIONS

75-22605-00

BUILDING B & C MECHANCIAL FLOOR PLAN

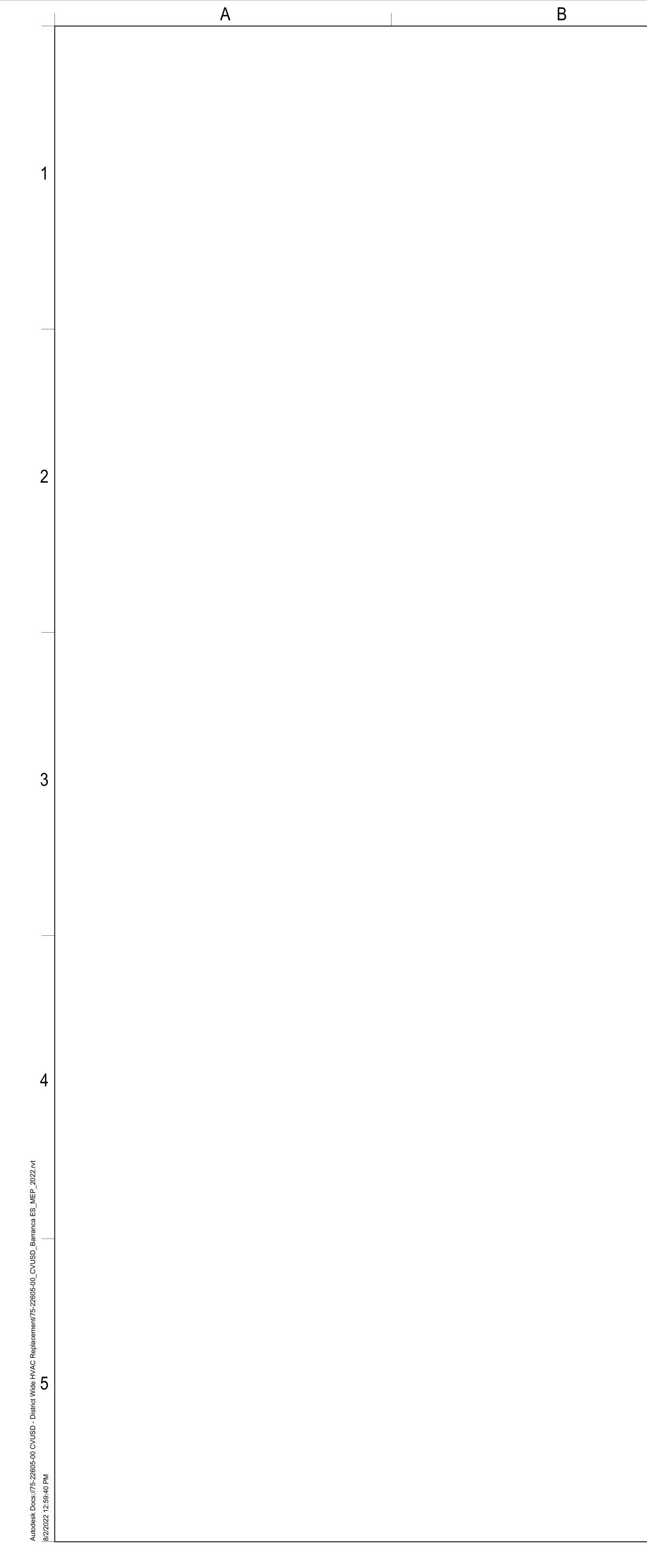
M1.1B



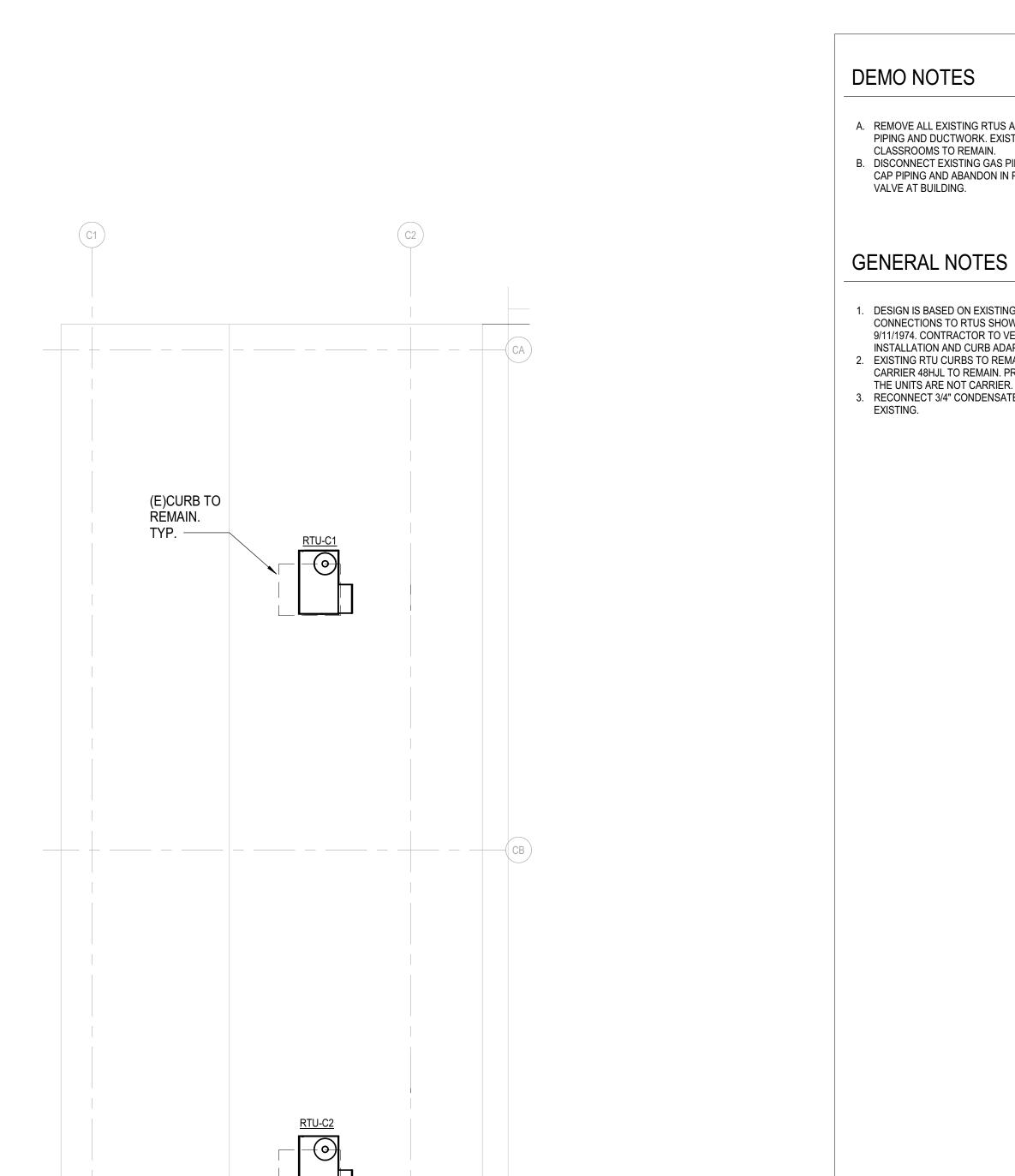


BUILDINGS D,E,H & I MECHANICAL FLOOR PLAN

M1.1D

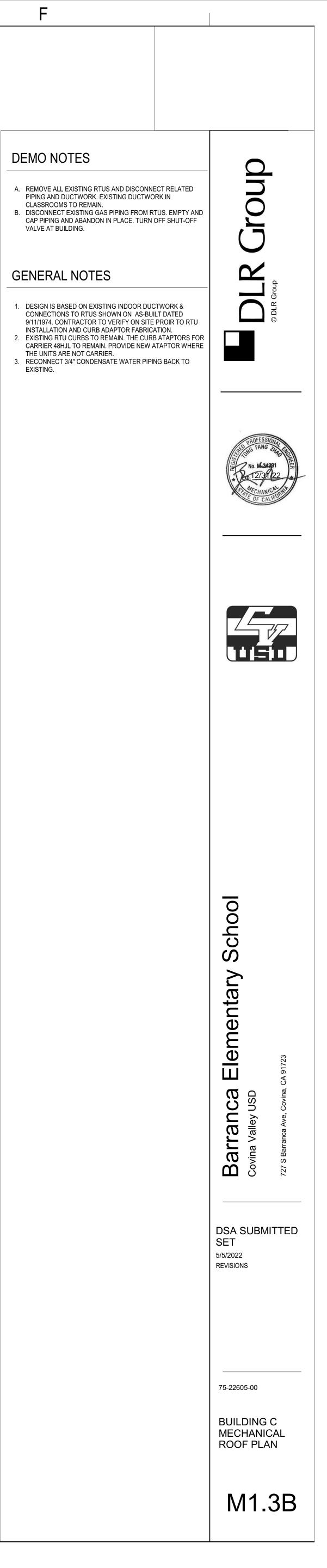




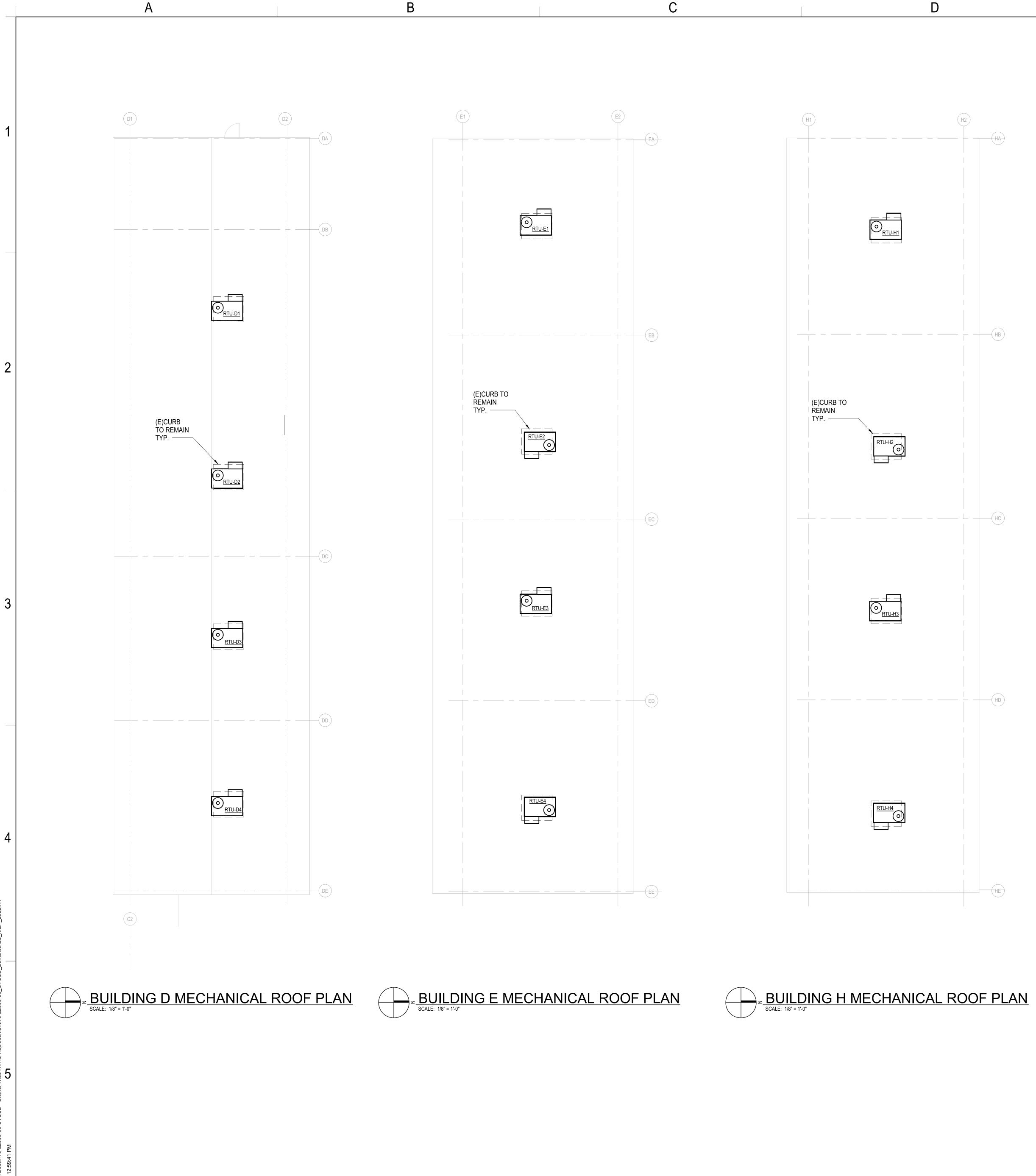


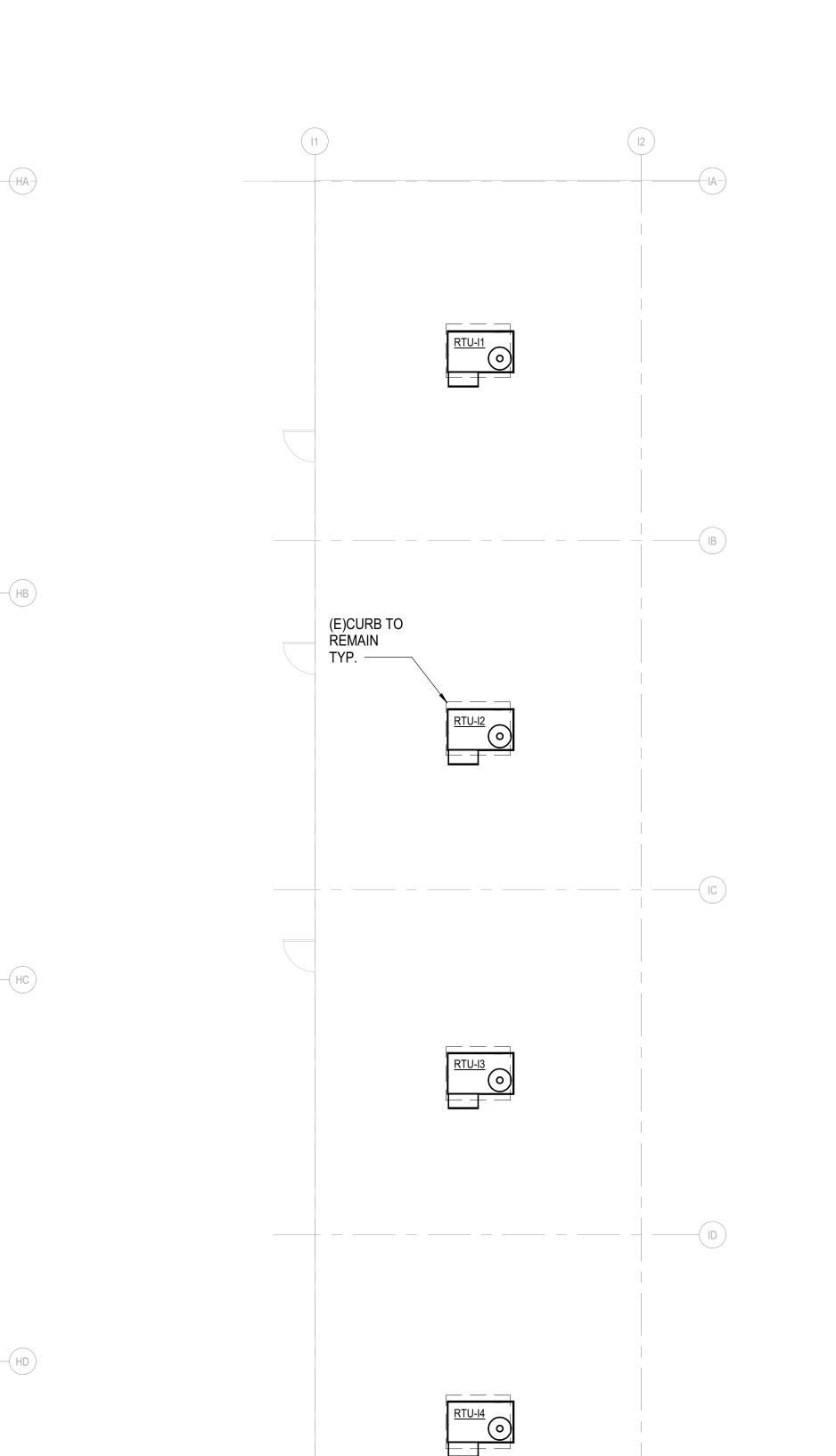
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- THAN
- **GENERAL NOTES**



 \checkmark

BUILDING I MECHANICAL ROOF PLAN

A. REMOVE ALL EXISTING RTUS AND DISCONNECT RELATED PIPING AND DUCTWORK. EXISTING DUCTWORK IN CLASSROOMS TO REMAIN. B. DISCONNECT EXISTING GAS PIPING FROM RTUS. EMPTY AND CAP PIPING AND ABANDON IN PLACE. TURN OFF SHUT-OFF VALVE AT EACH BUILDING. C. CAP DISCONDER TO AND TAKE AND THE PARTY AND THE P C. FOR EXISTING CARRIER 48HJL005 AND 48HJL006, USE THE EXISTING CURB ADAPTOR SINCE 48HJL HAS SAME FOOTPRINT AS 50FCQ. SOME OF THE EXISTING ROOF TOP UNITS ARE MADE BY LENNOX. FOR EXISTING UNITS RATHER TUAL

D. CARRIER 48HJL, PROVIDE CURB ATAPTOR. CONTRACTOR TO MEASURE THE EXISTING CURB ON SITE AND SEND THE MEASUREMENT TO CARRIER/EOR FOR NEW CURB

1. DESIGN IS BASED ON EXISTING INDOOR DUCTWORK & CONNECTIONS TO RTUS SHOWN ON AS-BUILT DATED 9/11/1974. CONTRACTOR TO VERIFY ON SITE PROIR TO RTU INSTALLATION AND CURB ADAPTOR FABRICATION.
 2. EXISTING RTU CURBS TO REMAIN. THE CURB ATAPTORS FOR CARRIER 48HJL TO REMAIN. PROVIDE NEW ATAPTOR WHERE THE UNITS ARE NOT CARRIER. RECONNECT 3/4" CONDENSATE WATER PIPING BACK TO EXISTING.







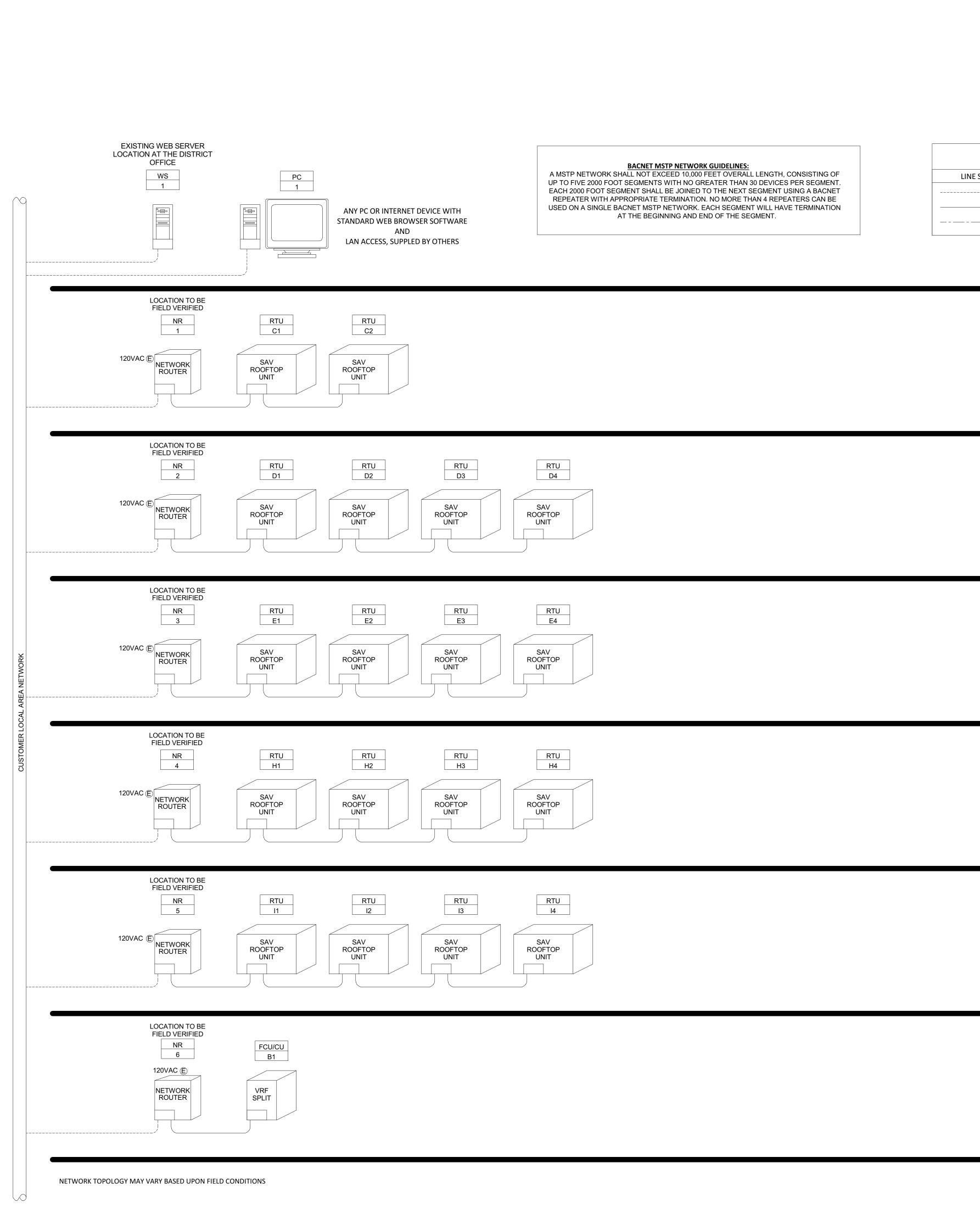


DSA SUBMITTED 5/5/2022 REVISIONS

75-22605-00

BUILDINGS D,E,H & I MECHANICAL ROOF PLAN

M1.3D



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1 BACS RISER DIAGRAM M5.1 NO SCALE D

CVUSD

BLDG C

BLDG D

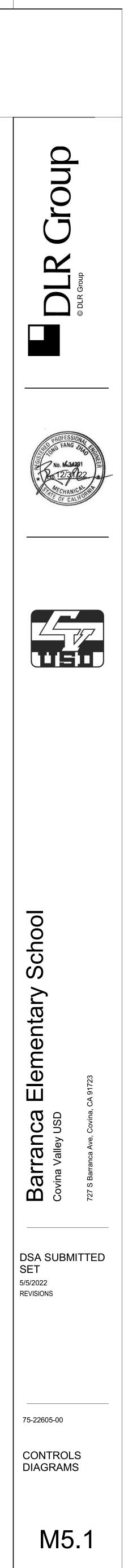
BLDG E

BLDG H

BLDG I

MPR

CONTROLS PROVIDED AND INSTALLED BY CARRIER CONTROLS EXPERT DEALER



SEQUENCES OF OPERATION

SEQUENCE OF OPERATION FOR CVUSD BARRANCA ES HEAT PUMP RTU CONTROLLER (RTU-C1 AND RTU-C2, RTU- D1 THRU RTU-D4, RTU-E1 THRU RTU-E4, RTU-H1 THRU RTU-H4, AND RTU-I1 THRU RTU-I4)

Indoor Fan 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.

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.

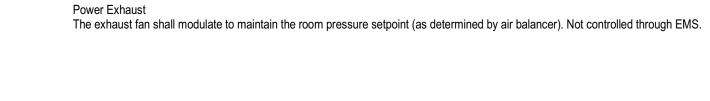
Economizer

Economizer shall close when fan is off or during a loss of power. During occupied hours when fan is energized, the economizer shall open to adjustable minimum position. When outside air temperature is below 75° and occupied space requires cooling, economizer shall open. If economizer air is not sufficient to meet the demand in the occupied space, unit shall enable available mechanical cooling stages to satisfy demand in the occupied space.

CO2 Control

Unit shall monitor space CO2 when the supply fan is energized. When CO2 is above setpoint of 1000 PPM, economizer shall modulate open toward an adjustable maximum CO2 position. As the CO2 level in the space increases above the setpoint, the minimum positions of the dampers will be increased proportionally, until the maximum ventilation setting is reached. As the space CO2 level decreases because of the increase in fresh air, the outdoor-damper will follow the higher demand condition from the DCV mode or

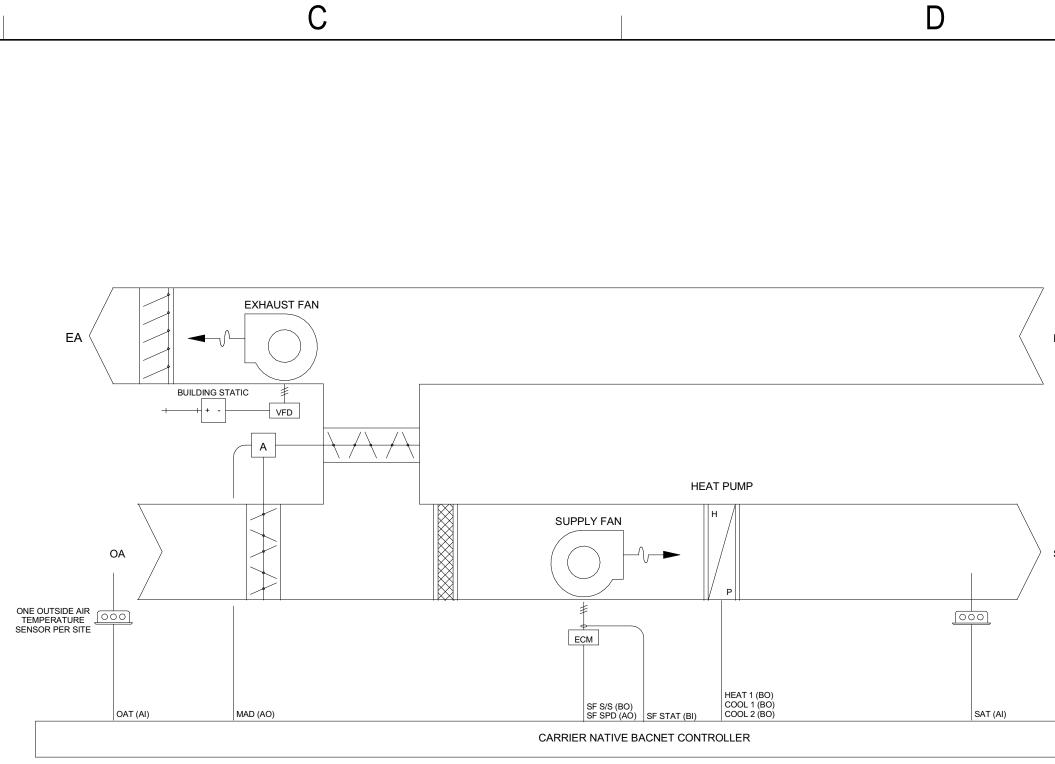
from the free-cooling mode.



1 DETAILS M5.2 NO SCALE

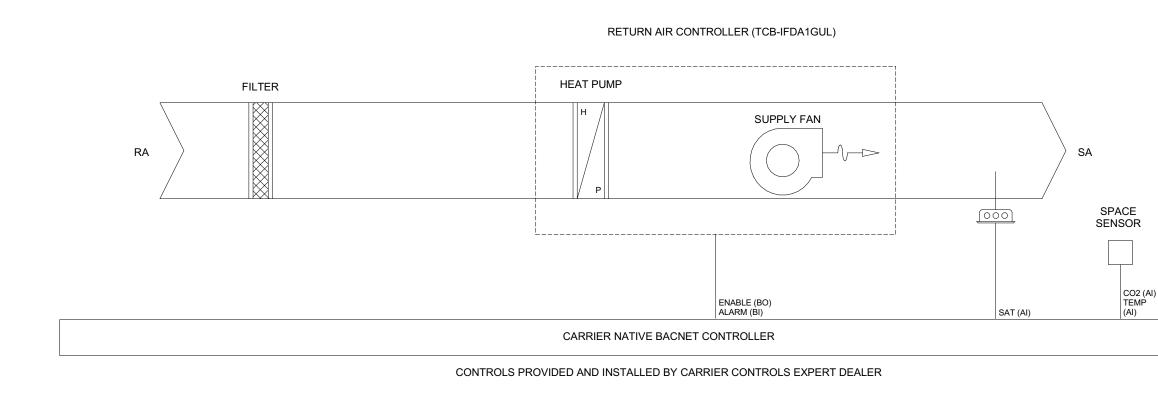
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В



CONTROLS PROVIDED AND INSTALLED BY RUSSELL SIGLER INC CONTROLS GROUP CONTROL PANEL SHALL CONFORM TO UL 508A STANDARDS

50FCQ HEAT PUMP DETAIL (RTU-C1, RTU-C2, RTU- D1 THRU RTU-D4, RTU-E1 THRU RTU-E4, RTU-H1 THRU RTU-H4, AND RTU-I1 THRU RTU-I4)

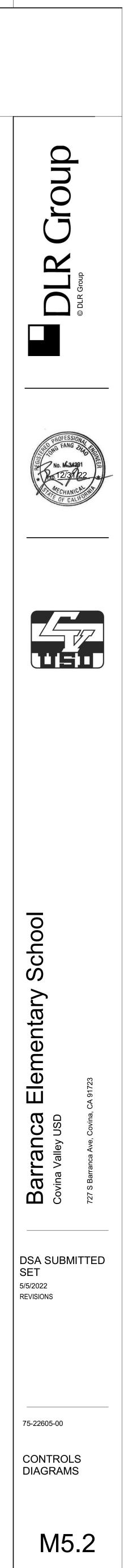


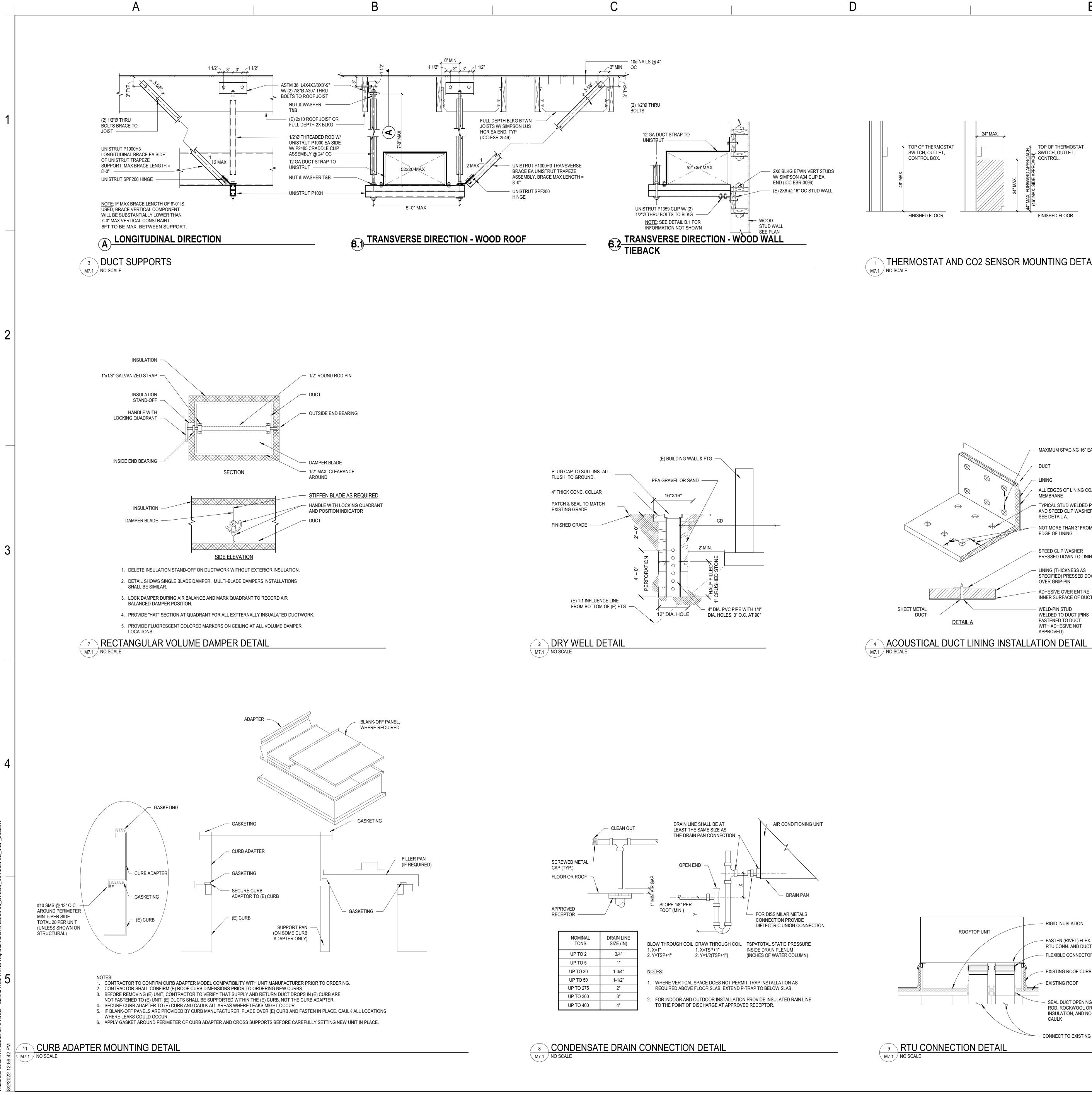
SPLIT SYSTEM DETAIL (FCU/CU-B1)

24 VAC BACNET MS/TP SCALE 1

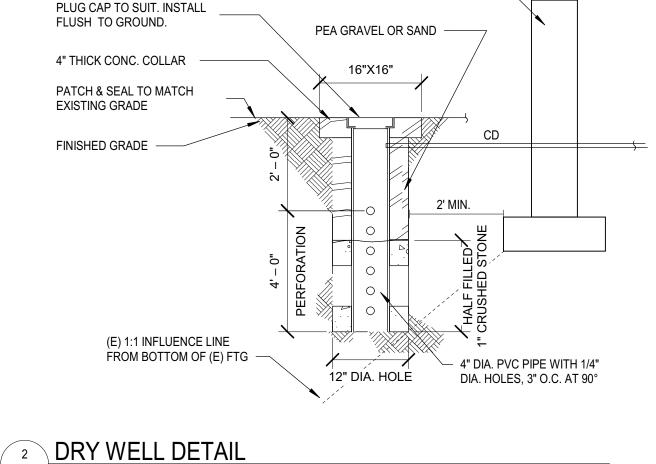
SCALE	0
NONE	2

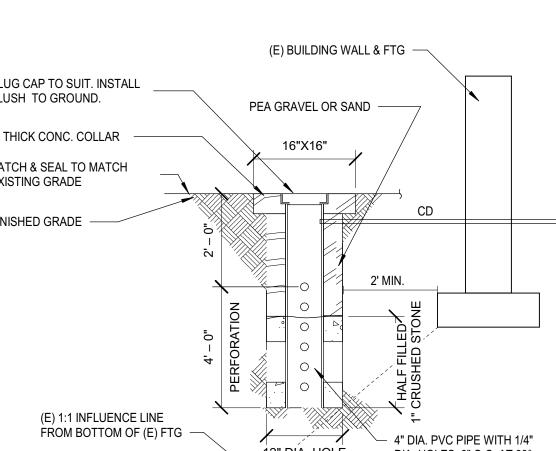
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	~	CLEAN OUT	LEAST THE SAME SIZE AS
CAF	REWED METAL		OPEN END
APF	PROVED CEPTOR		CONNECTION PROVIDE DIELECTRIC UNION CONNECTION
	NOMINAL TONS	DRAIN LINE SIZE (IN)	
	UP TO 2	3/4"	1. X=1" 1. X=TSP+1" INSIDE DRAIN PLENUM 2. Y=TSP+1" 2. Y=1/2(TSP+1") (INCHES OF WATER COLUMN)
	UP TO 5	1"	
	UP TO 30	1-3/4"	NOTES:
	UP TO 50	1-1/2"	1. WHERE VERTICAL SPACE DOES NOT PERMIT TRAP INSTALLATION AS
	UP TO 275	2"	REQUIRED ABOVE FLOOR SLAB, EXTEND P-TRAP TO BELOW SLAB.
	UP TO 300	3"	2. FOR INDOOR AND OUTDOOR INSTALLATION PROVIDE INSULATED RAIN LINE
	UP TO 400	4"	TO THE POINT OF DISCHARGE AT APPROVED RECEPTOR.
•			

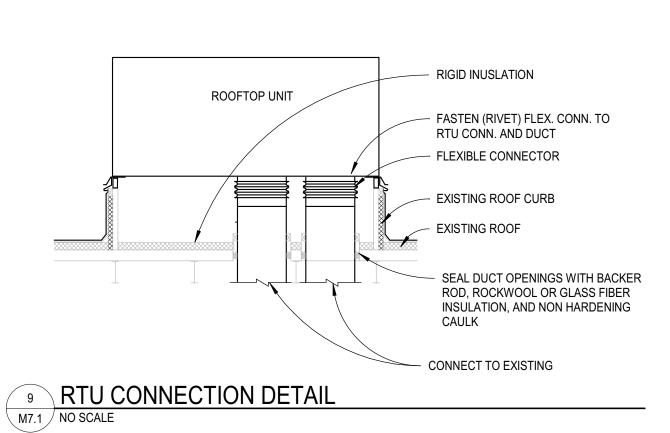


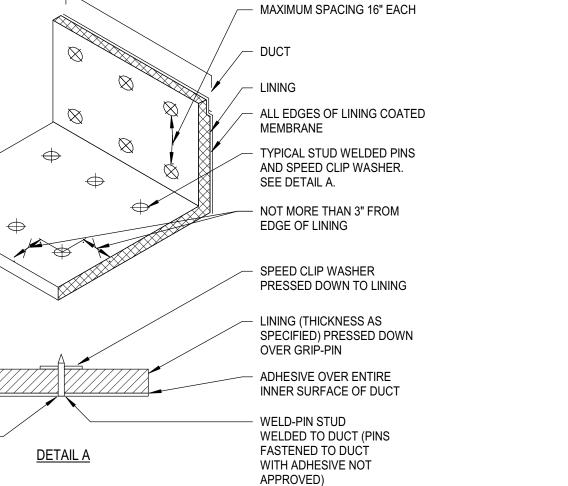


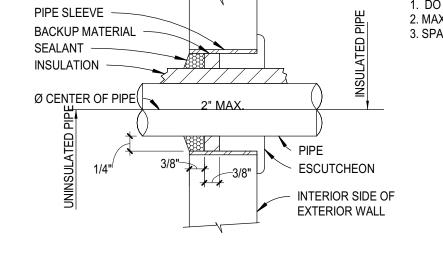


SHEET METAL

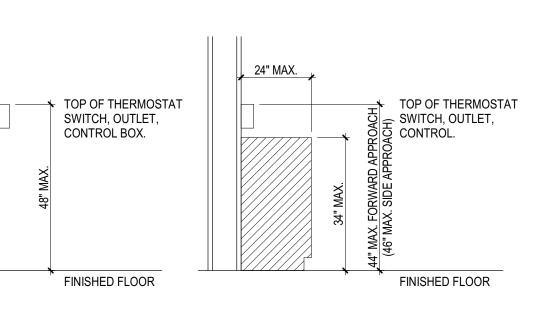
DUCT

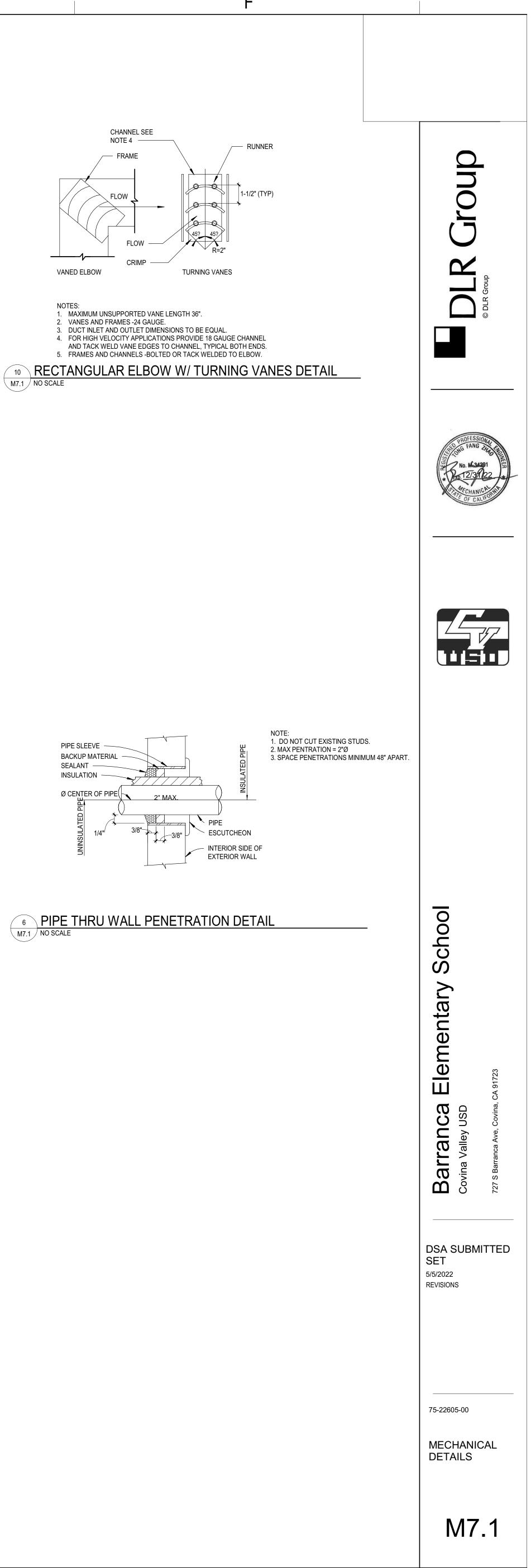


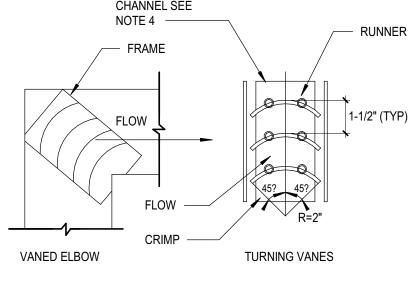


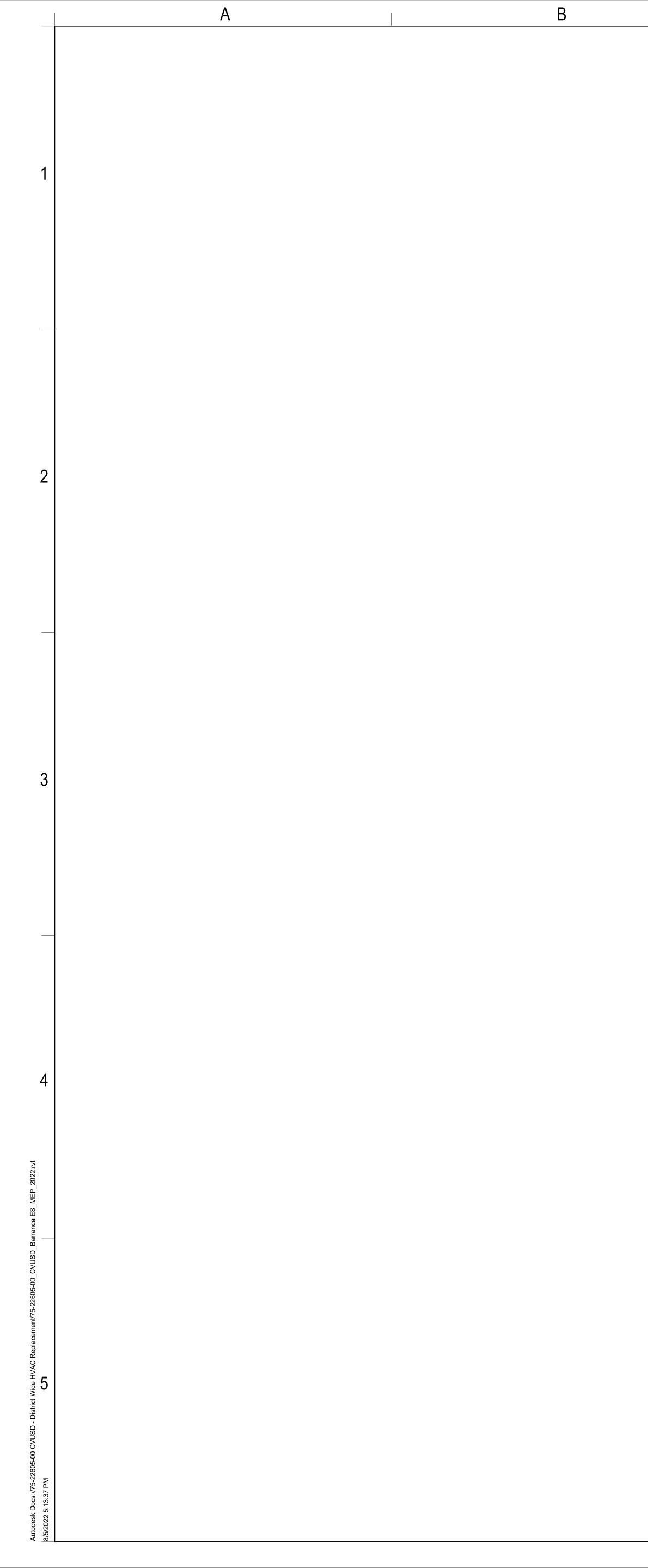


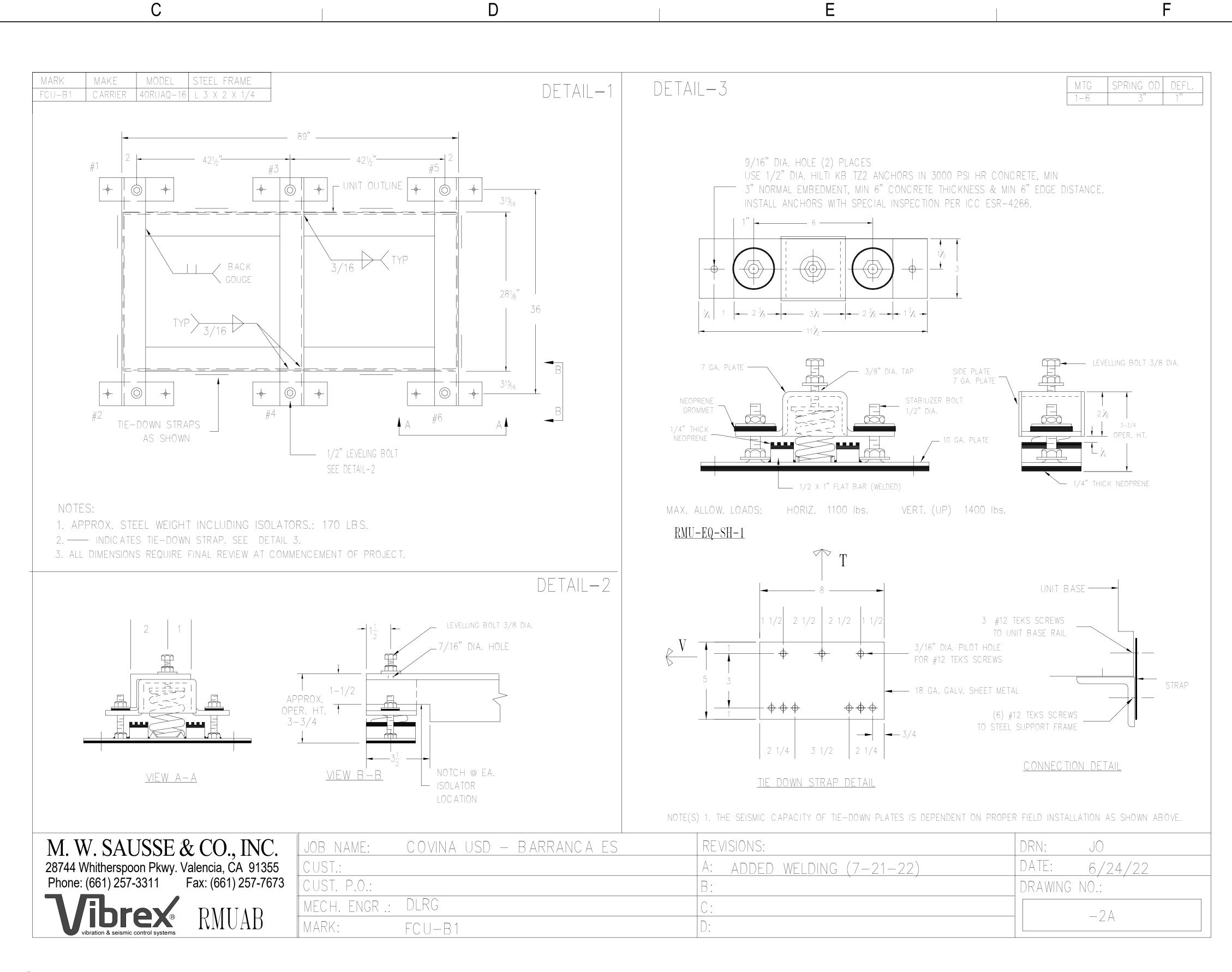
THERMOSTAT AND CO2 SENSOR MOUNTING DETAIL



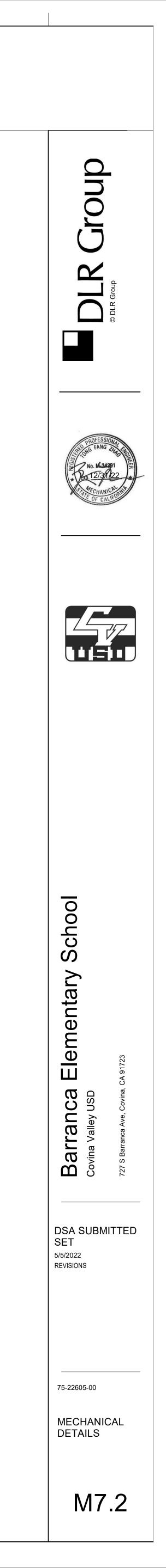


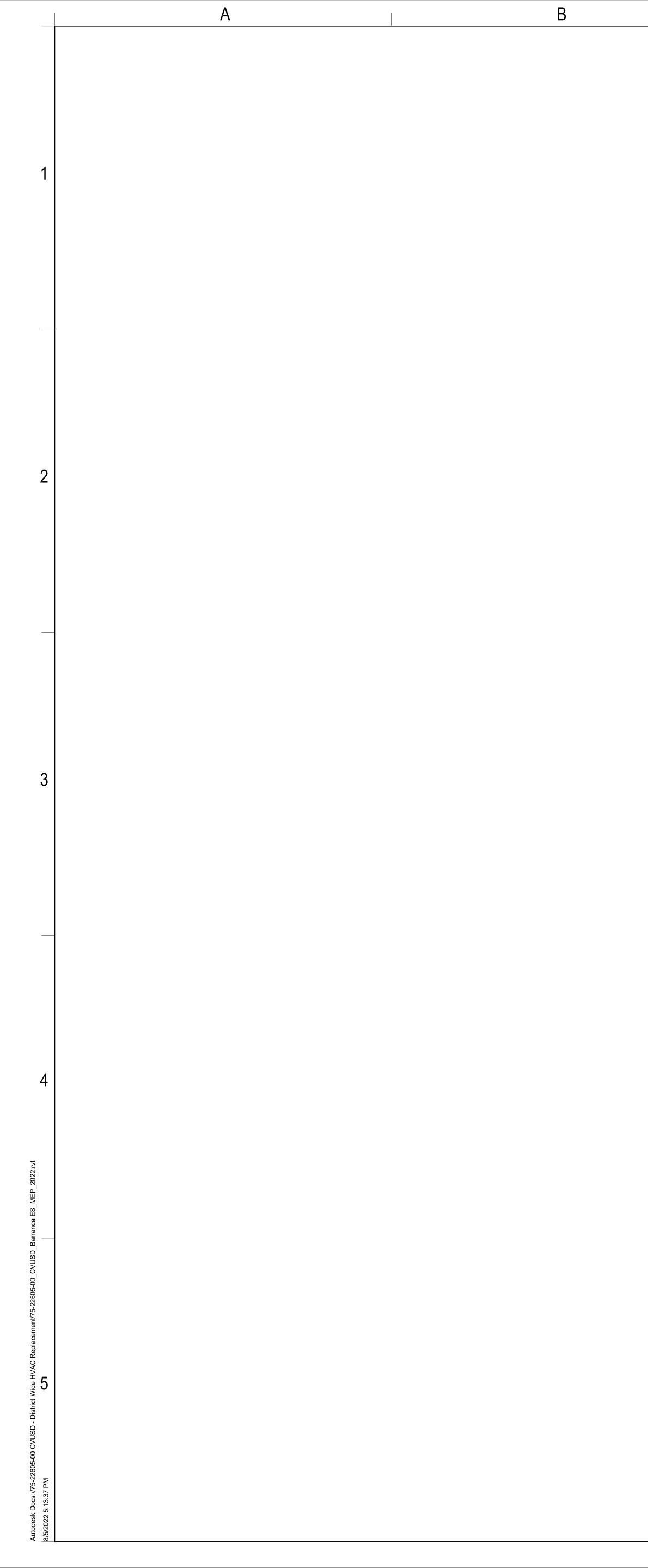


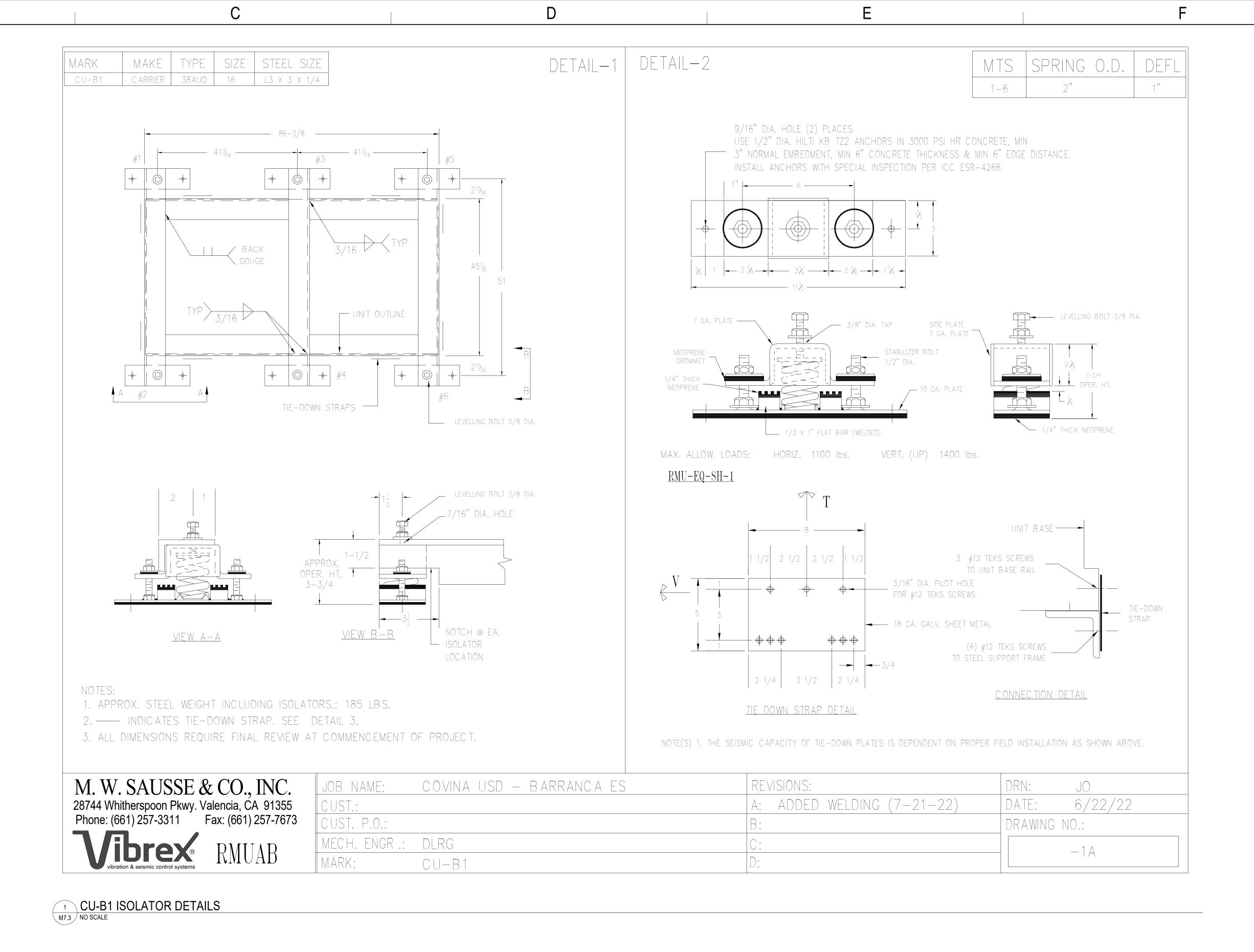


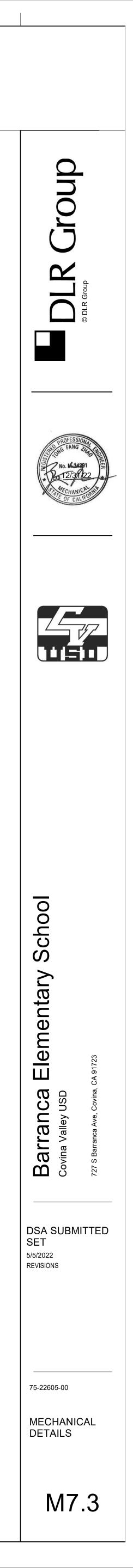


1 ISOLATOR DETAILS M7.2 NO SCALE









															BARR	RANCA E.	S. AC UNIT R	EPLAC	EMEN	IT																			
				BARRANC	CA E.S. EXIS	STING U	NIT																				٩	IEW UN	IT										
TAGS	MAKE	MODEL	ТҮРЕ	CAPACITY (TONS)	GAS INPUT/OUTPUT (BTU/HR)		CTRICAL E CIRCUIT)	WEIGHT (LBS)	ECONO	MIZER	POWER E	EXHAUST	OPERATING WEIGHT (LBS)	CURB & ADAPTER	DIRECT REPLACEMEN Y/N	CURB IT? ADAPTOR	CARRIER MODEL #	coo	LING CAPAC	CITY	AIRFLOW	ESI	P (IN SEER / /G) IEER	EER	IEATING APACITY	NEW MERV RATING	SIZE (W" X H"		CTRICAL	L WEIGH	ECONOMIZE	ER	POWER E	XHAUST		ROC CURI ADAP WEIG)F 3 & TOTAL 3 & WEIGH TER (I BS)	UNIT F DIMENSION: X W" X H	
					(,	V/PH	мса мос	Ρ	EXISTING	WEIGHT	EXISTING	WEIGHT		(LBS)				NOMINAL TON	TOTAL (BTUH)	SENSIBLE (BTUH)	SUPPLY	MIN OSA			(MBH)		D")	V-PH		MOCP LBS	REQUIRED	? REQUIRED	MODEL #	MCA			S)		
RTU-C1 & RTU-C2 (BLDG. C)	CARRIER	48HJL006	SINGLE ZONE GAS HTG/DX CLG	5.0	60000/49000	230/3	28.9 35	560	YES	47	NO	0	810	200	Y	NOTE 8	50FCQA06A2A3	5	61900	48960	2000	300	1 14.3	-	56.8	13	4 (16X16X2)	230-3	31	45 500	YES	YES	PECD-SRT12C	B 7.1	12.8 197	01 200	0 891	75x47x41	11/M7.1
RTU-D1 THRU RTU-D4 (BLDG. D)	CARRIER	48HJL005	SINGLE ZONE GAS HTG/DX CLG	4.0	60000/49000	230/3	22.5 30	540	YES	47	NO	0	790	200	Y	NOTE 8	50FCQA05A2A3	4	49920	37820	1600	300	1 14.3	10.44	46.1	13	2 (16X25X2)	230-3	26	30 475	YES	YES	PCD-SRT12C	A 4.9	8.8 19	01 20	0 866	75x47x34	11/M7.1
RTU-E1 THRU RTU-E4 (BLDG. E)	CARRIER	48HJL005	SINGLE ZONE GAS HTG/DX CLG	4.0	60000/49000	230/3	22.5 30	540	YES	47	NO	0	790	200	Y	NOTE 8	50FCQA05A2A3	4	49920	37820	1600	300	1 14.3	10.44	46.1	13	2 (16X25X2)	230-3	26	30 475	YES	YES	PCD-SRT12C	A 4.9	8.8 19	1 20	0 866	75x47x34	11/M7.1
RTU-H1 THRU RTU-H4 (BLDG. H)	CARRIER	48HJL005	SINGLE ZONE GAS HTG/DX CLG	4.0	60000/49000	230/3	22.5 30	540	YES	47	NO	0	790	200	Y	NOTE 8	50FCQA05A2A3	4	49920	37820	1600	300	1 14.3	10.44	46.1	13	2 (16X25X2)	230-3	26	30 475	YES	YES	PCD-SRT12C	4.9	8.8 19	1 20	0 866	75x47x34	11/M7.1
RTU-I1 THRU RTU-I4 (BLDG. I)	CARRIER	48HJL005	SINGLE ZONE GAS HTG/DX CLG	4.0	60000/49000	230/3	22.5 30	540	YES	47	NO	0	790	200	Y	NOTE 8	50FCQA05A2A3	4	49920	37820	1600	300	1 14.3	10.44	46.1	13	2 (16X25X2)	230-3	26	30 475	YES	YES	PCD-SRT12C	A 4.9	8.8 192	01 20	0 866	75x47x34	11/M7.1
CU-B1 (BLDG. B)	NA	NA	NA	NA	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	N/A	N	NA	MMY-AP192S6HT9P	16					22.6	12.3				230-3 4	15.4+27 5	50+30 684 + 574	NO	NO	N/A	N/A	N/A N/A	'A N/A	A 684 + 574	4 48x73x32 39x73x31	1&3/A1.1A, 1/M7.3
FCU-B1 (BLDG. B)	NA	NA	NA	NA	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	N/A	N	NA	40RUQA16T2A5-0A0A0		187000	144000	6000	2000	1		170	13	NA	230-3	14	20 713	NO	NO	N/A	N/A	N/A N/A	'A N/A	A 713	89 X 29 X 5	7 1&3/A1.1A, 1/M7.2

NOTES:

1. PROVIDE MECHANICAL UNIT WITH INTEGRAL CONVENIENCE RECEPTACLE.

Α

2. ALL ROOFTOP UNITS SHALL BE PROVIDED WITH UNPOWERED CONVENIENCE OUTLET.

3. ALL ROOFTOP UNITS ARE HORIZONTALLY DISCHARGED CONFIGURATION, UNO. FIELD VERIFY PRIOR TO ORDERING. 4. ALL ROOFTOP UNITS SHALL BE PROVIDED WITH UNPOWERED CONVENIENCE OUTLET.

5. PROVIDE HINGED ACCESS PANEL FOR ALL ROOFTOP UNITS.

6. FINAL WEIGHT (LBS) IS SUMMATION OF RTU WEIGHT, ECONOMIZER SECTION, POWER EXHAUST 14" ROOF CURB, AND 18" HIGH CURB ADAPTOR, AS APPLICABLE. 7. SCCR RATING OF RTUS AND FCU-B1 SHALL BE MINIMUM OF 10KA. CU-B1 TO BE 25KA

8. PROVIDE MODULATING POWER EXHAUST WHERE ECONOMIZER IS REQUIRED.

9. FOR EXISTING CARRIER 48HJL005 AND 48HJL006, USE THE EXISTING CURB ADAPTOR SINCE 48HJL HAS SAME FOOTPRINT AS 50FCQ. CONTRACTOR TO VERIFY ON SITE. SOME OF THE EXISTING ROOF TOP UNITS ARE MADE BY LENNOX. FOR EXISTING UNITS RATHER THAN CARRIER 48HJL, PROVIDE CURB ATAPTOR. TO MATCH CARRIER UNITS. 10. PROVIDE VFD FAN FOR FCU-B1.

DUCT SIZING SCHEDULE *** FOR LOW VELOCITY SUPPLY, RETURN AND EXHAUST

CFM RANGE	ROUND DUCT DIAMETER OR EQUIVALENT RECTANGULAR DUCT	CFM RANGE	ROUND DUCT DIAMETER OR EQUIVALENT RECTANGULAR DUCT
0-110	6" OR 8" X 4"	1400-1900	18" OR 24" X 12"
101-180	8" OR 10" X 6"	1900-2500	20" OR 24" X 14"
181-270	10" OR 10" X 8"	2500-3300	22" OR 32" X 14"
271-400	10" OR 12" X 8"	3300-4100	24" OR 36" X 14"
401-600	12" OR 12" X 10"	4100-5000	26" OR 40" X 16"
601-900	14" OR 16" X 10"	5000-6200	28" OR 48" X 16"
901-1400	16" OR 18" X 12"	6200-7500	30" OR 48" X 18"

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)													
LOCATION	NOISE CRITERIA (NC)												
LUCATION	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							

IN TONS OF REFRIGERATION UP TO 20 21 - 40 41 - 90 91 - 125 126 - 250

MINIMUM CONDENSATE PIPE

DIAMETER (IN)

3/4

1

1 1/4

1 1/2

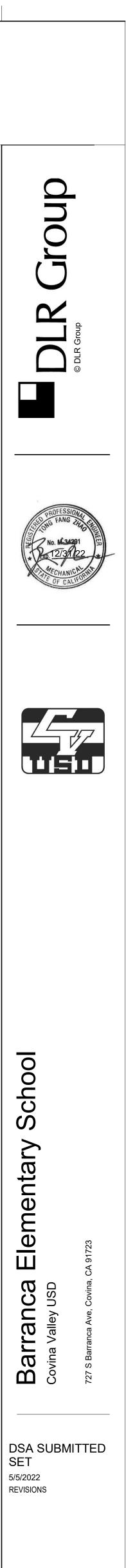
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MINIMUM CONDENSATE PIPE SIZE

EQUIPMENT CAPACITY

С

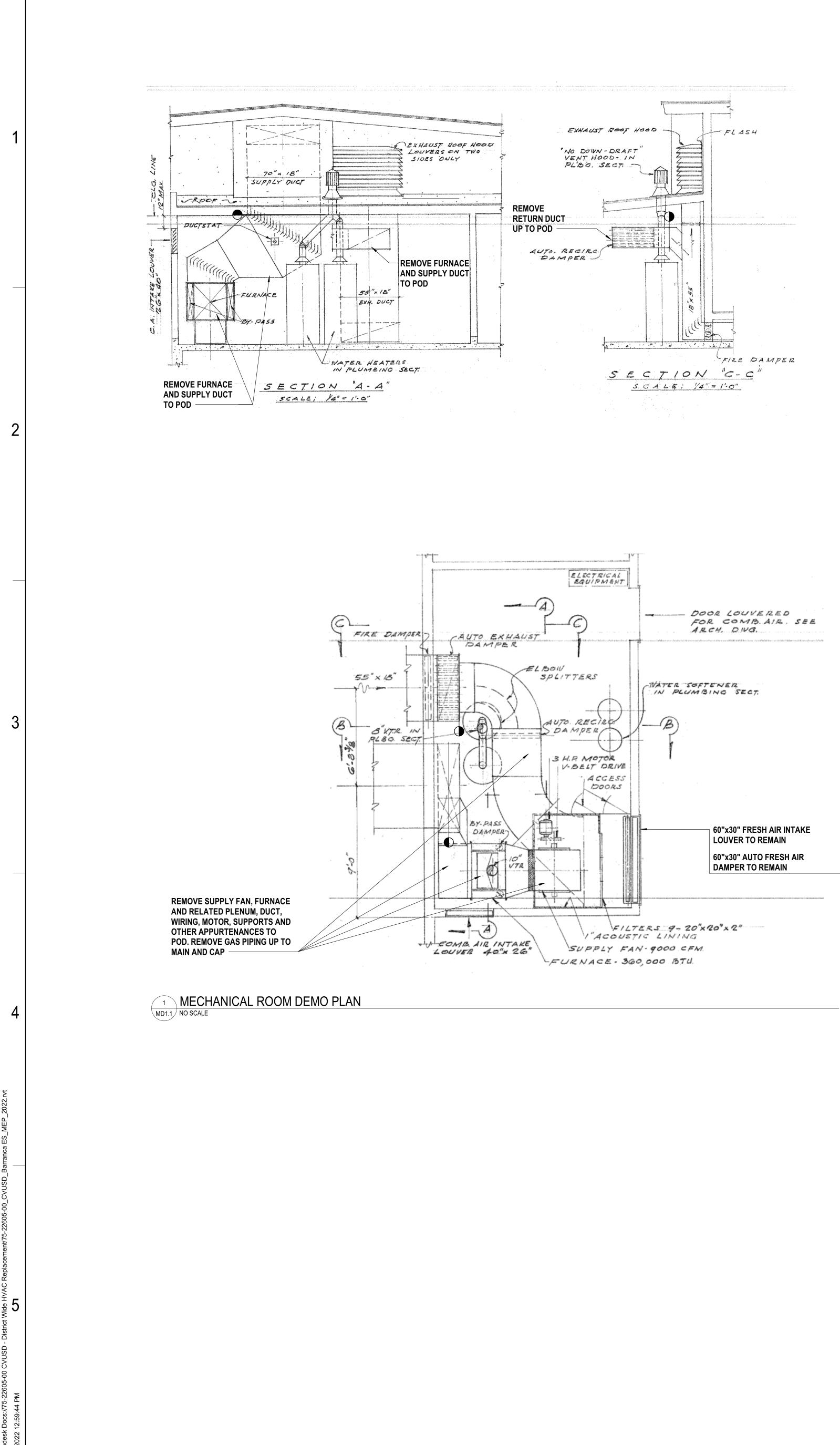
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MECHANICAL SCHEDULES





В

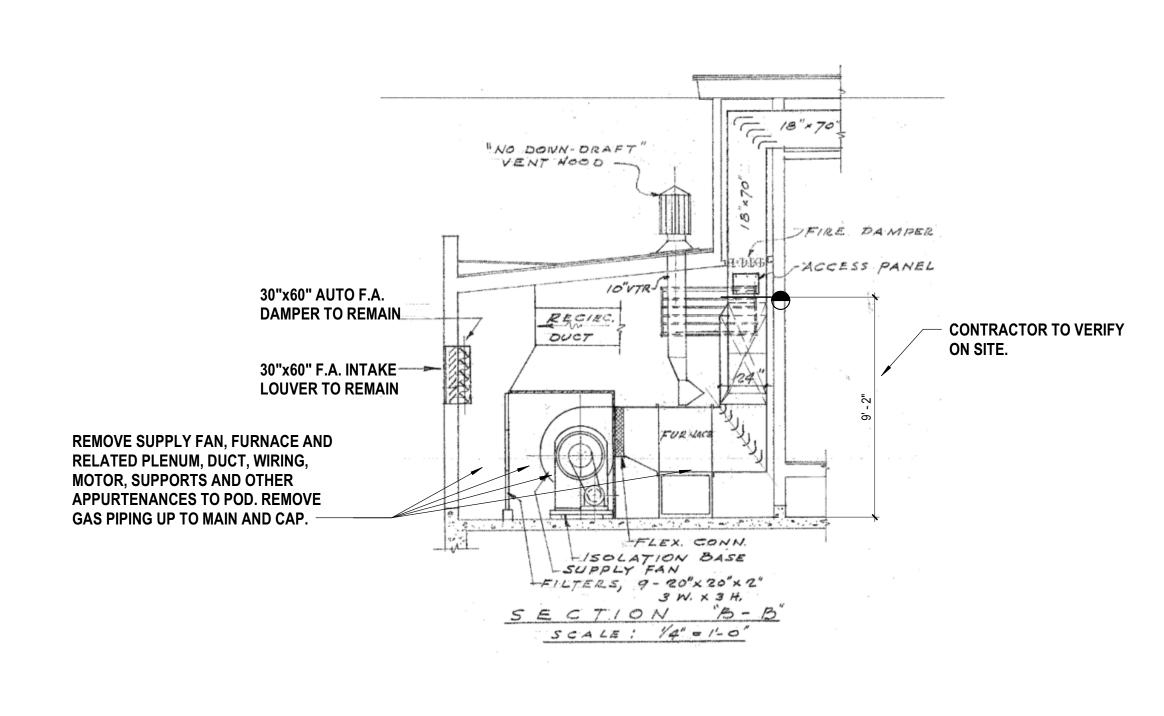
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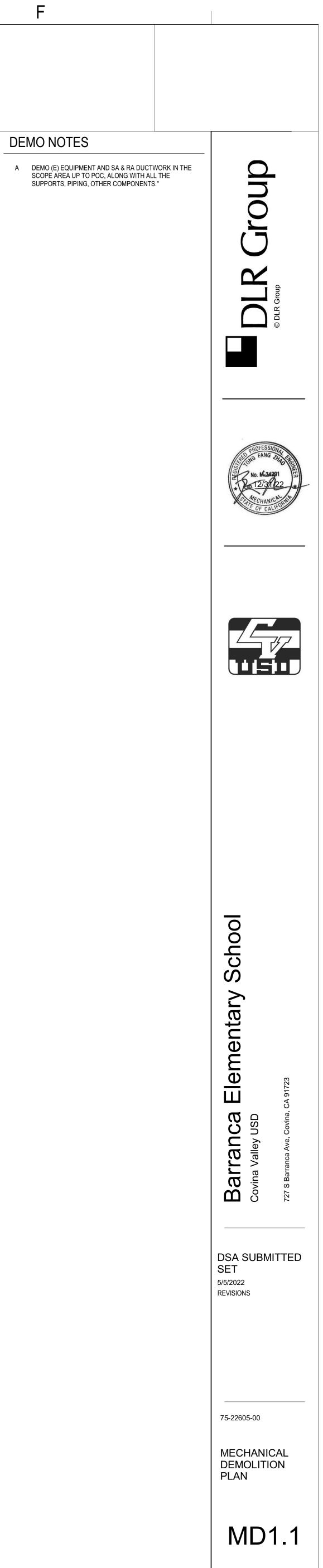


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SHEET INDEX

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

APPLICABLE CODE: 2019 CBC

A

MEP COMPONENT ANCHORAGE NOTE

REQUIREMENTS PRESCRIBED IN THE 2019 CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26, AND 30:

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.

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PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

BRACE LOAD	S.		ENGINEERO	I NEOON
MECHANICAL	PIPING (MP), M	ECHANICAL DU	JCTS (MD), PLU	JMBING F
MP	MD	PP	E	OPTI
MP	MD	PP	(E)	OPTI

GENERAL NOTES

1 PENETRATIONS IN WALLS REQUIRING PROTECTED OPENINGS MUST BE FIRESTOPPED WITH AN APPROVED MATERIAL.

STRUCTURAL ENGINEER OF RECORD AND DSA.

2 UNLESS SPECIFICALLY SHOWN ON THESE DRAWINGS, NO STRUCTURAL MEMBER SHALL BE CUT, DRILLED, OR NOTCHED WITHOUT PRIOR AUTHORIZATION IN WRITING BY THE

02/02/2020 REVISED: 02/14/2020

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

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

PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

TION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. TION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM#) #<u>00043-13</u>

GENERAL SYMBOLS

EXISTING POINT OF CONNECTION - NEW CONNECTS TO EXISTING AREA NOT IN CONTRACT

POINT OF DISCONNECT - DEMOLITION REMOVED FROM

<u>POWER</u>

FLUSH FLOOR BOX WITH DUPLEX RECEPTACLE UNO

JUNCTION BOX FOR FUTURE PROJECTOR POWER MOUNT 24-INCHES ABOVE SUSPENDED CEILING MOUNT TIGHT TO CEILING AT EXPOSED STRUCTURE

DUPLEX RECEPTACLE, HORIZ. MTD, ABOVE COUNTER

STRUCTURE WITH A WEATHERPROOF, IN-USE COVER

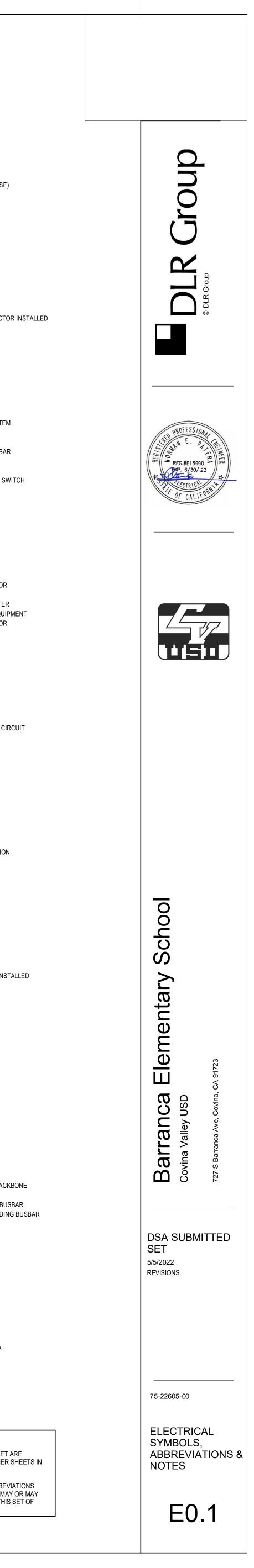
	CIRCUIT HOME RUN	RECEPT	ACLES: MOUNT 18-INCHES AFF, UNO
0	CONDUIT TURNING UP		AL LINE THROUGH SYMBOL OR DENOTED 'AC'
	CONDUIT TURNING DOWN		ES MOUNT DEVICE ABOVE COUNTER. INDICATED AS 'MOUNT ABOVE COUNTER' MOUNT
	CONDUIT STUB-UP	BOTTON	1 OF BOX 2-INCHES ABOVE TOP OF BACKSPLASH
[]	CONDUIT SLEEVE	EXISTS.	CHES ABOVE COUNTERTOP IF NO BACKSPLASH
	CONDUIT SEAL	LABELS	SHALL BE MACHINE PRINTED, UNO
	CONDUIT CONCEALED IN CEILING OR WALLS, POWER	\mapsto	SIMPLEX RECEPTACLE
*		\Rightarrow	DUPLEX RECEPTACLE
\frown	OTHER (* = SEE ABBREVIATIONS) CONDUIT CONCEALED IN FLOOR OR UNDERGROUND, POWEF		DUPLEX RECEPTACLE, GFI TYPE
*	CONDUIT CONCEALED IN FLOOR OR UNDERGROUND, OTHER (* = SEE ABBREVIATIONS)		DUPLEX RECEPTACLE, MOUNT ABOVE COUNTER DUPLEX RECEPTACLE, GFI TYPE, MOUNT ABOVE COUNTER
I	EXPOSED CONDUIT, POWER		FOURPLEX RECEPTACLE
·*	EXPOSED CONDUIT,		FOURPLEX RECEPTACLE, GFI TYPE FOURPLEX RECEPTACLE, MOUNT ABOVE COUNTE
- 530 -	OTHER (* = SEE ABBREVIATIONS)		FOURPLEX RECEPTACLE, MOUNT ABOVE COUNTER
E-FRS-∃	FIRE RATED SLEEVE		MOUNT ABOVE COUNTER
Т	TRANSFORMER	- —	DUPLEX RECEPTACLE, FLUSH IN CEILING
XXX	BRANCH CIRCUIT PANELBOARD		FOURPLEX RECEPTACLE, FLUSH IN CEILING
	MOUNT 72-INCHES TO TOP	ΗD	DUPLEX RECEPTACLE, HORIZONTALLY MOUNTED
XXX	DISTRIBUTION PANELBOARD MOUNT 72-INCHES TO TOP	ΗЩ	DUPLEX RECEPTACLE, HORIZ. MTD, GFI TYPE
		HB HB	DUPLEX RECEPTACLE, HORIZ. MTD, ABOVE COUNT DUPLEX RECEPTACLE, HORIZ. MTD, GFI TYPE,
	EQUIPMENT CABINET, AS NOTED	I UN	MOUNT ABOVE COUNTER
	SWITCHBOARD	≡ _R	WEATHER RESISTANT GFI DUPLEX RECEPTACLE, ROOF MOUNT 18-INCHES ABOVE ADJACENT
\boxtimes	MOTOR STARTER OR DRIVE		STRUCTURE WITH A WEATHERPROOF, IN-USE COV WEATHER RESISTANT GFI DUPLEX RECEPTACLE,
	DISCONNECT SWITCH	≡	MOUNT 18-INCHES AFF WITH A WEATHERPROOF, IN-USE COVER
\square	COMBINATION STARTER / DISCONNECT SWITCH	÷	STD DUPLEX RECEPTACLE TO SERVE ELECTRIC WATER COOLER, MOUNT AT HEIGHT PER
CT	CURRENT TRANSFORMER ENCLOSURE	EWC	CEQUIPMENT MANUFACTURER'S INSTALLATION GUIDELINES. WIRE TO GFCI BKR IN PANELBOARD.
M	METER		DUPLEX RECEPTACLE TO SERVE TELEVISION, MOUNT AT SAME HEIGHT AND WITHIN 8-INCHES
GEN	GENERATOR	ωŢV	OF ADJACENT TV OUTLET
ATS	AUTOMATIC TRANSFER SWITCH		
		-	DUPLEX RECEPTACLE, EMERGENCY
<u>+</u>	SYSTEM GROUND ELECTRODE	⊕	FOURPLEX RECEPTACLE, EMERGENCY
ΗŤ	THERMOSTAT	-	DUPLEX RECEPTACLE, LOWER SWITCH
Î	MUSHROOM SWITCH	Ð	DUPLEX RECEPTACLE, SWITCHED
МН	ELECTRICAL MANHOLE	ŧ	RANGE RECEPTACLE, MOUNT 8-INCHES AFF
HH	ELECTRICAL HAND HOLE	H	SPECIAL RECEPTACLE, DEEP WELL BOX
	MOTOR CONNECTION, HORSEPOWER AS INDICATED	٩	FLUSH FLOOR OUTLET BOX UNO
-	FUSE AND SWITCH ASSEMBLY	•	FLUSH FLOOR BOX WITH DUPLEX RECEPTACLE UN
SF	٨	>0 	MULTI-DEVICE FLOOR BOX WITH DUPLEX
s _T	MANUAL CONTROLLER WITH THERMAL OVERLOAD	00	RECEPTACLE AND TELECOMMUNICATIONS OUTLETS
s _M	MANUAL CONTROLLER W/O THERMAL OVERLOAD	⊢Û	USB ONLY RECEPTACLE
В	CIRCUIT BREAKER ENCLOSURE	=0	RECEPTACLE WITH USB PORTS
PB	PULL BOX	-	
	EQUIPMENT CONNECTION	J	FLUSH JUNCTION BOX, CEILING MOUNTED
	CABLE TRAY, LADDER TYPE OR RUNWAY	J _P	JUNCTION BOX FOR FUTURE PROJECTOR POWER MOUNT 24-INCHES ABOVE SUSPENDED CEILING MOUNT TIGHT TO CEILING AT EXPOSED STRUCTU
	CABLE TRAY		LABEL BOX COVER 'PROJECTOR POWER'
	MULTI-OUTLET ASSEMBLIES	S	JUNCTION BOX ABOVE SUSPENDED CEILING WITH FLEX CONNECTION
	MOUNT 18-INCHES AFF, UNO WHERE DENOTED 'AC', MOUNT ABOVE COUNTER	⊢J	FLUSH JUNCTION BOX, WALL MOUNTED
		ΗJ	SURFACE JUNCTION BOX, WALL MOUNTED
	DIVIDED SURFACE RACEWAY MOUNT 18-INCHES AFF, UNO	J	SURFACE JUNCTION BOX, CEILING MOUNTED
	WHERE DENOTED 'AC', MOUNT ABOVE COUNTER		
PUSHBUTTO	ON STATION: MOUNT 42-INCHES AFF UNO	ΗÐ	HAND DRYER, INSTALL HAND DRYER SPECIFIED IN DIV. 11
•	SWITCH, PUSH BUTTON, SINGLE		
•			

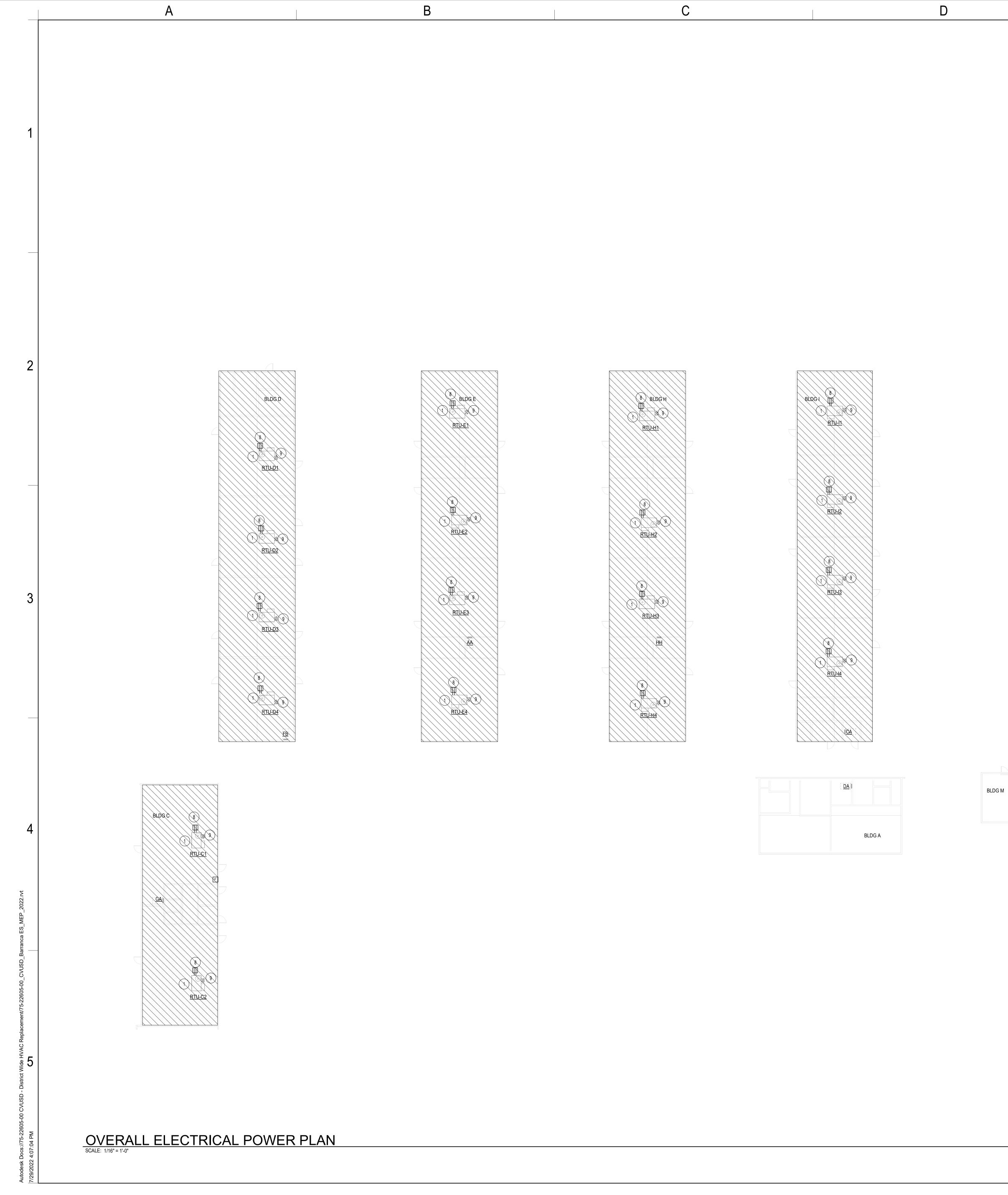
SWITCH, PUSH BUTTON, DOUBLE SWITCH, PUSH BUTTON, TRIPLE

(D)	
(E) (R) Ø	EXISTING RELOCATED PHASE
A AC AF AIC AL AMP AP AT AT ATS AV	AMPERE ABOVE COUNTER AMP FRAME (CIRCUIT BREAKER) AMPERE INTERRUPTING CAPACITY ALUMINUM AMPERE WIRELESS ACCESS POINT AMP TRIP (CIRCUIT BREAKER OR FUSE) AUTOMATIC TRANSFER SWITCH AUDIO-VIDEO, AUDIO-VISUAL
AWG BAS BJ BKR BMS	AMERICAN WIRE GAUGE BUILDING AUTOMATION SYSTEM BONDING JUMPER BREAKER BUILDING MANAGEMENT SYSTEM
C CATV CB CCTV CFCI CKT CTL CU	CONDUIT CABLE TELEVISION CIRCUIT BREAKER CLOSED CIRCUIT TELEVISION CONTRACTOR FURNISHED CONTRACTOR CIRCUIT CONTROL COPPER
DB DC DISC DP DW	DECIBEL DIRECT CURRENT DISCONNECT DISTRIBUTION PANELBOARD DISHWASHER
ECS EGB EMD EMGB EP ER ERMS EWC	EMERGENCY COMMUNICATION SYSTEM ELECTRICAL GROUNDING BUSBAR ESTIMATED MAXIMUM DEMAND ELECTRICAL MAIN GROUNDING BUSBAR EXPLOSION PROOF EXISTING (TO BE) RELOCATED ENERGY REDUCTION MAINTENANCE SWIT ELECTRIC WATER COOLER
FA FAA FACP FC FLA FS FSD	FIRE ALARM FIRE ALARM ANNUNCIATOR FIRE ALARM CONTROL PANEL FOOT CANDLE FULL LOAD AMPS FLOW SWITCH FIRE SMOKE DAMPER
G GEN GFI, GFCI GFPE GND	EQUIPMENT GROUNDING CONDUCTOR GENERATOR GROUND FAULT CIRCUIT INTERRUPTER GROUND FAULT PROTECTION OF EQUIPM EQUIPMENT GROUNDING CONDUCTOR
HH HOA HP	HANDHOLE HAND-OFF-AUTOMATIC HORSE POWER
IC IG	INTERCOM ISOLATED GROUND
JB KAIC	JUNCTION BOX
KV KVA KW	KILOVOLT KILOVOLT AMPERES KILOWATT
LT LTG	LIGHT LIGHTING
MCA MCB MCC MH MLO MOCP MRTS MSB MTD MTG MTS	MINIMUM CIRCUIT AMPACITY MAIN CIRCUIT BREAKER MOTOR CONTROL CENTER MANHOLE MAIN LUGS ONLY MAXIMUM OVERCURRENT PROTECTION MOTOR RATED TOGGLE SWITCH MAIN SWITCHBOARD MOUNTED MOUNTING MAIN TRANSFER SWITCH
N N.C. N.O. NF NL	NEUTRAL NORMALLY CLOSED NORMALLY OPEN NON-FUSED NIGHT LIGHT
OFCI OS&Y	OWNER FURNISHED CONTRACTOR INSTA OUTSIDE SCREW AND YOKE
P PA PB PH PIV PNL PWR	POLE(S) PUBLIC ADDRESS PULL BOX PHASE POST INDICATOR VALVE PANEL POWER
RCP RECPT REF RESP	REFLECTED CEILING PLAN RECEPTACLE REFERENCE RESPONSIVE
SCCR SD SEC SPD SWBD	SHORT CIRCUIT CURRENT RATING SMOKE DAMPER SECONDARY SURGE PROTECTION DEVICE SWITCHBOARD
TBB TC TGB TMGB TO TR TS TV	TELECOMMUNICATIONS BONDING BACKB TIME CLOCK TELECOMMUNICATIONS GRONDING BUSB TELECOMMUNICATIONS MAIN GRONDING TELECOMMUNICATIONS OUTLET TELECOMMUNICATIONS ROOM TAMPER SWITCH TELEVISION
UG UPS	UNDERGROUND UNINTERRUPTABLE POWER SUPPLY
V VA VFD	VOLT VOLT-AMPERE VARIABLE FREQUENCY DRIVE
W WA WG WP	WIRE TELECOMMUNICATIONS WORK AREA WIRE GUARD WEATHER-PROOF (NEMA 3R)
XFMR	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.



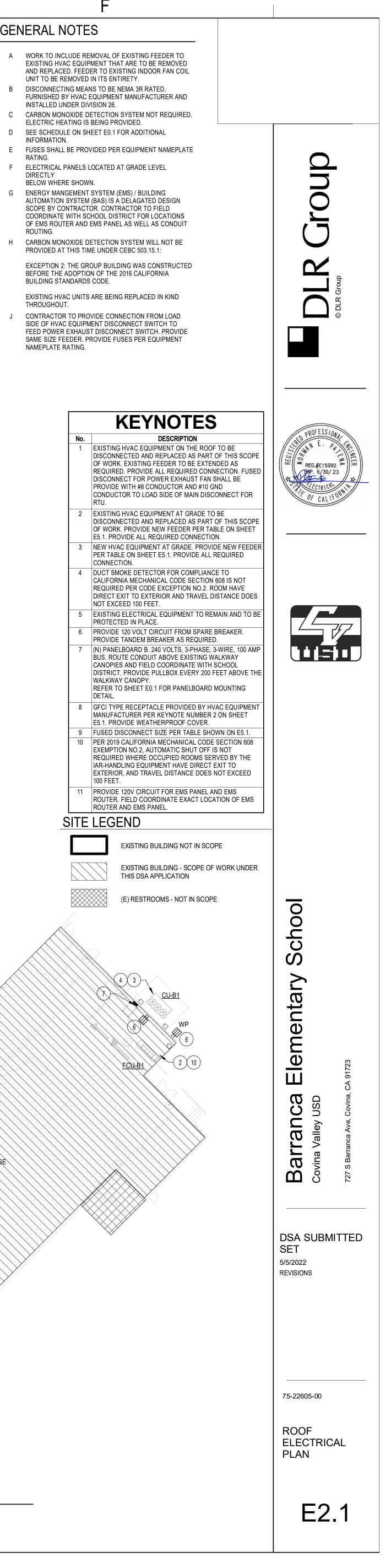


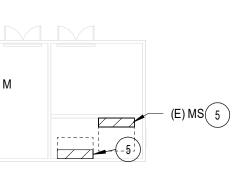
GENERAL NOTES

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- EXISTING HVAC EQUIPMENT THAT ARE TO BE REMOVED AND REPLACED. FEEDER TO EXISTING INDOOR FAN COIL
- FURNISHED BY HVAC EQUIPMENT MANUFACTURER AND INSTALLED UNDER DIVISION 26.
- C CARBON MONOXIDE DETECTION SYSTEM NOT REQUIRED. ELECTRIC HEATING IS BEING PROVIDED.
- D SEE SCHEDULE ON SHEET E0.1 FOR ADDITIONAL INFORMATION.
- E FUSES SHALL BE PROVIDED PER EQUIPMENT NAMEPLATE RATING.
- DIRECTLY BELOW WHERE SHOWN. G ENERGY MANGEMENT SYSTEM (EMS) / BUILDING
- AUTOMATION SYSTEM (BAS) IS À DELAGATED DESIGN SCOPE BY CONTRACTOR. CONTRACTOR TO FIELD COORDINATE WITH SCHOOL DISTRICT FOR LOCATIONS OF EMS ROUTER AND EMS PANEL AS WELL AS CONDUIT ROUTING.
- H CARBON MONOXIDE DETECTION SYSTEM WILL NOT BE PROVIDED AT THIS TIME UNDER CEBC 503.15.1:
- EXISTING HVAC UNITS ARE BEING REPLACED IN KIND THROUGHOUT. CONTRACTOR TO PROVIDE CONNECTION FROM LOAD
- SIDE OF HVAC EQUIPMENT DISCONNECT SWITCH TO FEED POWER EXHAUST DISCONNECT SWITCH. PROVIDE SAME SIZE FEEDER. PROVIDE FUSES PER EQUIPMENT NAMEPLATE RATING.

BLDG B MUTIPURROSE





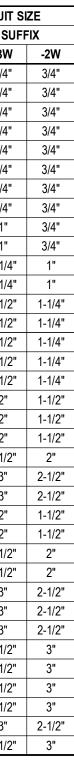
	FFF	ER SC	HEDIII	E - CO	PER			
MARK				cc	NDUIT SI			
(AMPS)	# SETS	Ø & N	GND		ARK SUFF			
15	1	12	12	-4W 3/4"	-3W 3/4"	-2W 3/4"		
15 20	1	12	12	3/4	3/4	3/4		
20	1	12	12	3/4"	3/4"	3/4"		
30	1	10	10	3/4"	3/4"	3/4"		
35	1	8	10	3/4"	3/4"	3/4"		
40	1	8	10	3/4"	3/4"	3/4"		
45	1	6	10	1"	3/4"	3/4"		
50	1	6	10	1"	3/4"	3/4"		
60	1	4	10	1-1/4"	1"	3/4"		
70	1	4	8	1-1/4"	1"	3/4"		
80	1	3	8	1-1/4"	1-1/4"	1"		
90	1	2	8	1-1/4"	1-1/4"	1"		
100	1	1	8	1-1/2"	1-1/2"	1-1/4"		
110	1	1	6	1-1/2"	1-1/2"	1-1/4"		
125	1	1	6	1-1/2"	1-1/2"	1-1/4"		
150	1	1/0	6	2"	1-1/2"	1-1/4"		
175	1	2/0	6	2"	1-1/2"	1-1/4"		
200	1	3/0	6	2"	2"	1-1/2"		
225 250	1	4/0 250	4	2-1/2" 2-1/2"	2" 2"	1-1/2" 1-1/2"		
300	1	350	4	3"	2-1/2"	2"		
350	1	500	3	3-1/2"	3"	2-1/2"		
400	1	600	3	3-1/2"	3"	2-1/2"		
400	2	3/0	3	2"	2"	1-1/2"		
450	2	4/0	2	2-1/2"	2"	1-1/2"		
500	2	250	2	2-1/2"	2-1/2"	2"		
600	2	350	1	3"	2-1/2"	2"		
700	2	500	1/0	3-1/2"	3"	2-1/2"		
800	2	600	1/0	3-1/2"	3"	2-1/2"		
1000	3	400	2/0	3"	3"	2-1/2"		
1200	3	600	3/0	3-1/2"	3-1/2"	3"		
1600	4	600	4/0	3-1/2"	3-1/2"	3"		
2000	5	600	250	4"	3-1/2"	3"		
2500	6	600	350	4"	3-1/2"	3"		
3000	8	500	400	3-1/2"	3"	2-1/2"		
4000	10	600	500	4"	3-1/2"	3"		
ABBREVIATIONS: Ø PHASE N NEUTRAL GND EQUIPMENT GROUNDING CONDUCTOR -4W FOUR WIRE + GROUND (3Ø,N,GND) -3W THREE WIRE + GROUND (3Ø,GND or 2Ø,N,GND) -2W TWO WIRE + GROUND								
NOTES:	1							
1.				ARE BAS	ED ON NE	C		
2.		10.15(B)(T SIZES A		D ON A M	AXIMUM I	FILL		
3.	RATIO C	OF 40%.		D FOR FE				
	BRANCH	I CIRCUIT	S WHERE	E APPLICA	BLE.			
4.	INCLUD	E AN EQU	IPMENT (H CIRCUI ⁻ GROUNDIN	IG COND	UCTOR.		
5.	XHHW-2		TORS. S	'YPE THH EE SPECI JIRED.				
6.	SCHEDU LFMC, H	JLE IS VA DPE, AND	LID FOR 1 D RNC-40	TYPE EMT RACEWAY CEWAY AP	S. SEE			
7.	OPTION	AL CONFI	GURATIC	NS (1 OR				
8.		OR SOME SIZES U						

В

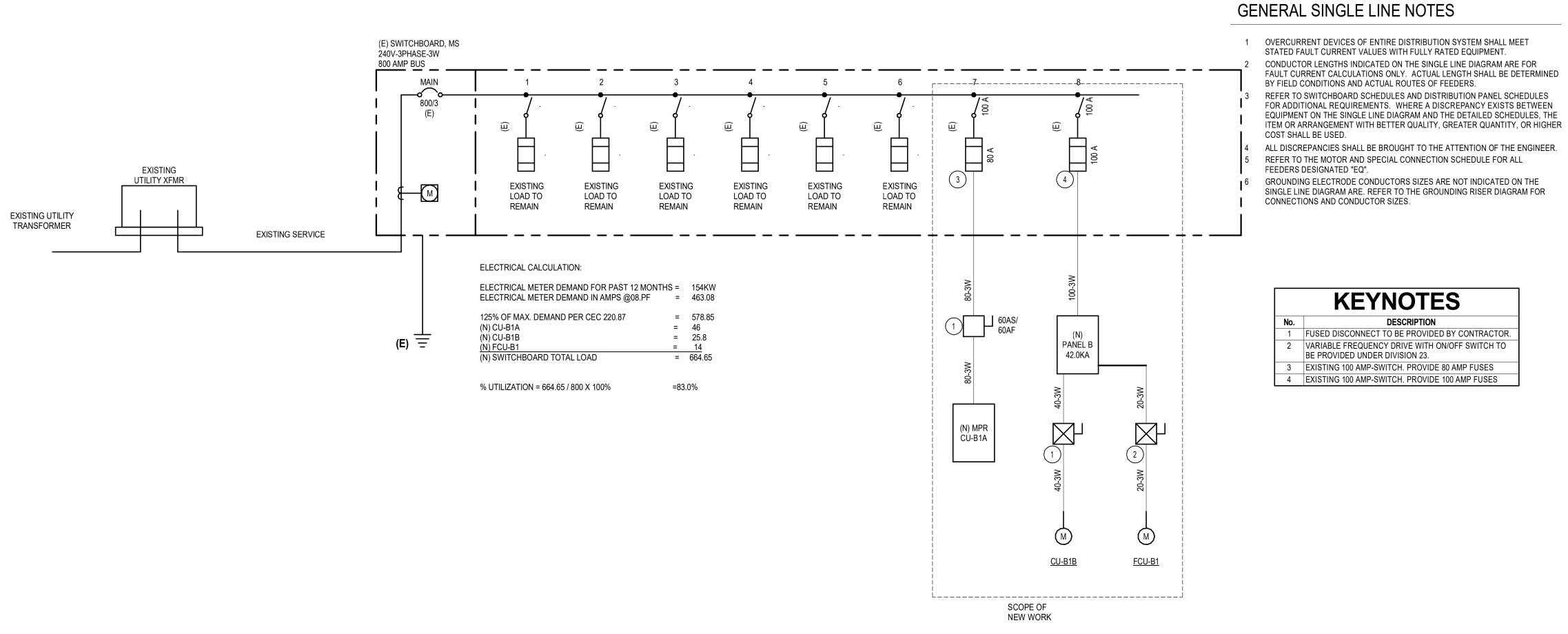
		PANEL: B																
LOCATION: MECHANICAL ROOM B113 BUS RATING: 200.0 A MAIN BREAKER: 100							VOLTS: 240 Delta PHASES: 3 WIRES: 3 SCCR:						MOUNTING: SURFACE FED FROM: INTEGRAL SPD: Type 1 LUG ACCESSORIES: SEE ONE-LINE					
СКТ	CIRCUIT D	ESCRIPTION	BKR TRIP	Р	BKR TYPE	LOAD TYPE	PHASE	A (VA)	PHASE B (VA)	PHASI	E C (VA)	LOAD TYPE	BKR TYPE	Р	BKR TRIP	CIRCUIT DESCRIPTION	CI	
1							2,860											
	CU-B1		60	3		Motor			2,860	2,960								
5 7							1,552			2,860								
9 F	CU-B1		40	3		Motor	.,		1,552								1	
11										1,552							1	
13 15																	1	
17												-						
19																		
21			_	_														
23 25																		
27				-														
29																	3	
31												_						
33 35												-						
37				+										-				
39																	4	
41					τοτ/	LIOAD:	4412		4412 VA	1/1	2 VA						4	
						AL AMPS			31.8 A		.8 A							
load Type		CONNECTED LOAD (VA)	DEMAN D		STIMATED MAND (V/			DEM	AND FACTOR NOTE	S			BKR TYPI	E		PANEL TOTALS		
L	LIGHTING	0 VA	0.00%		0 VA	CON	ITINUOUS	LOAD @	125%			G = GFC	l (5mA)					
R	RECEPTACLES	0 VA	0.00%		0 VA				REMAINDER @ 50%			GP = GF	. ,			CONNECTED LOAD: 13 kVA		
Κ	KITCHEN	0 VA	0.00%		0 VA				EN LOADS, NEC ART	r. <mark>220</mark>			JNT TRIP			ESTIMATED DEMAND: 13 kVA		
М	MOTOR	0 VA	0.00%		0 VA		GEST MOT	FOR, NEC	CART. 430			LO = LOO	LO = LOCK OUT			CONNECTED CURRENT: 31.8 A		
С	COOLING	0 VA	0.00%		0 VA											EMD CURRENT: 31.8 A		
Н	HEATING	0 VA	0.00%		0 VA													
\cap	OTHER	0 VA	0.00%		0 VA													
0 Spare	SPARE	0 VA	0.00%		0 VA													

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1 One-Line Diagram E5.1 NO SCALE

								BAR	RANCA E.S. AC UN	IT REP	PLAC	EME	ENT								
	E	(ISTINC	G UNIT												NEW U	JNIT					
TAGS					ELECTRICAL			TAGS	DIRECT REPLACEMENT? Y/N	CFM			I	ELECTRICAL				POWER EXHA	UST		NOT
TAGS	V/PH	MCA	FLA	MOCP	PANEL/ CKT#	FEEDER SIZE	DISCONNECT	1405	DIRECT REPLACEMENT? 1/N		V-PH	MCA	MOCP	PANEL/ CKT#	DISCONNECT	REQUIRED?	Model#	MCA MOCP	FEEDER SIZE	DISCONNECT	
NA	NA	NA	NA	NA	NA	NA	NA	CU-B1A	Ν	NA	230/3	46	60	MS-7	60A (60A FUSE)				NA		
NA	NA	NA	NA	NA	NA	NA	NA	CU-B1B	Ν	NA	230/3	25.8	40	B-1,3,5	60A (40A FUSE)				NA		
NA	NA	NA	NA	NA	NA	NA	NA	FCU-B1	Ν	6,000	230/3	14	20	B-2,4,6	30A (20A FUSE)				NA		
RTU-C1 (BLDG. C)	230/3	22.6	22.6	30	GA-2,4,6	3#8, 2#14GND-1"C	60	RTU-C1 (BLDG. C)	Υ	1,600	230/3	26	30	GA-2,4,6	60A (30A FUSE)	YES	PCD-SRT12CA	4.9 8.8	3#8, 2#14GND-1"C	20A (15A FUSE)	
RTU-C2 (BLDG. C)	230/3	22.6	22.6	30	GA-1,3,5	3#8, 2#14GND-1"C	60	RTU-C2 (BLDG. C)	Υ	1,600	230/3	26	30	GA-1,3,5	60A (30A FUSE)	YES	PCD-SRT12CA	4.9 8.8	3#8, 2#14GND-1"C	20A (15A FUSE)	
RTU-D1 (BLDG. D)	230/3	22.6	22.6	30	FB-2,4,6	3#8, 2#14GND-1"C	60	RTU-D1 (BLDG. D)	Υ	1,600	230/3	26	30	FB-2,4,6	60A (30A FUSE)	YES	PCD-SRT12CA	4.9 8.8	3#8, 2#14GND-1"C	20A (15A FUSE)	
RTU-D2 (BLDG. D)	230/3	22.6	22.6	30	FB-8,10,12	3#8, 2#14GND-1"C	60	RTU-D2 (BLDG. D)	Υ	1,600	230/3	26	30	FB-8,10,12	60A (30A FUSE)	YES	PCD-SRT12CA	4.9 8.8	3#8, 2#14GND-1"C	20A (15A FUSE)	
RTU-D3 (BLDG. D)	230/3	22.6	22.6	30	FB-1,3,5	3#8, 2#14GND-1"C	60	RTU-D3 (BLDG. D)	γ	1,600	230/3	26	30	FB-1,3,5	60A (30A FUSE)	YES	PCD-SRT12CA	4.9 8.8	3#8, 2#14GND-1"C	20A (15A FUSE)	
RTU-D4 (BLDG. D)	230/3	22.6	22.6	30	FB-7,9,11	3#8, 2#14GND-1"C	60	RTU-D4 (BLDG. D)	γ	1,600	230/3	26	30	FB-7,9,11	60A (30A FUSE)	YES	PCD-SRT12CA	4.9 8.8	3#8, 2#14GND-1"C	20A (15A FUSE)	
RTU-E1 (BLDG. E)	230/3	22.6	22.6	30	AA-1,3,5	3#8, 2#14GND-1"C	60	RTU-E1 (BLDG. E)	Υ	1,600	230/3	26	30	AA-1,3,5	60A (30A FUSE)	YES	PCD-SRT12CA	4.9 8.8	3#8, 2#14GND-1"C	20A (15A FUSE)	
RTU-E2 (BLDG. E)	230/3	22.6	22.6	30	AA-2,4,6	3#8, 2#14GND-1"C	60	RTU-E2 (BLDG. E)	γ	1,600	230/3	26	30	AA-2,4,6	60A (30A FUSE)	YES	PCD-SRT12CA	4.9 8.8	3#8, 2#14GND-1"C	20A (15A FUSE)	
RTU-E3 (BLDG. E)	230/3	22.6	22.6	30	AA-7,9,11	3#8, 2#14GND-1"C	60	RTU-E3 (BLDG. E)	Υ	1,600	230/3	26	30	AA-7,9,11	60A (30A FUSE)	YES	PCD-SRT12CA	4.9 8.8	3#8, 2#14GND-1"C	20A (15A FUSE)	
RTU-E4 (BLDG. E)	230/3	22.6	22.6	30	AA-8,10,12	3#8, 2#14GND-1"C	60	RTU-E4 (BLDG. E)	Υ	1,600	230/3	26	30	AA-8,10,12	60A (30A FUSE)	YES	PCD-SRT12CA	4.9 8.8	3#8, 2#14GND-1"C	20A (15A FUSE)	
RTU-H1 (BLDG. H)	230/3	22.6	22.6	30	BA-1,3,5	3#8, 2#14GND-1"C	60	RTU-H1 (BLDG. H)	γ	1,600	230/3	26	30	BA-1,3,5	60A (30A FUSE)	YES	PCD-SRT12CA	4.9 8.8	3#8, 2#14GND-1"C	20A (15A FUSE)	
RTU-H2 (BLDG. H)	230/3	22.6	22.6	30	BA-2,4,6	3#8, 2#14GND-1"C	60	RTU-H2 (BLDG. H)	Y	1,600	230/3	26	30	BA-2,4,6	60A (30A FUSE)	YES	PCD-SRT12CA	4.9 8.8	3#8, 2#14GND-1"C	20A (15A FUSE)	
RTU-H3 (BLDG. H)	230/3	22.6	22.6	30	BA-7,9,11	3#8, 2#14GND-1"C	60	RTU-H3 (BLDG. H)	Y	1,600	230/3	26	30	BA-7,9,11	60A (30A FUSE)	YES	PCD-SRT12CA	4.9 8.8	3#8, 2#14GND-1"C	20A (15A FUSE)	
RTU-H4 (BLDG. H)	230/3	22.6	22.6	30	BA-8,10,12	3#8, 2#14GND-1"C	60	RTU-H4 (BLDG. H)	Y	1,600	230/3	26	30	BA-8,10,12	60A (30A FUSE)	YES	PCD-SRT12CA	4.9 8.8	3#8, 2#14GND-1"C	20A (15A FUSE)	
RTU-I1 (BLDG. I)	230/3	22.6	22.6	30	CA-1,3,5	3#8, 2#14GND-1"C	60	RTU-I1 (BLDG. I)	Y	1,600	230/3	26	30	CA-1,3,5	60A (30A FUSE)	YES	PCD-SRT12CA	4.9 8.8	3#8, 2#14GND-1"C	20A (15A FUSE)	
RTU-I2 (BLDG. I)	230/3	22.6	22.6	30	CA-7,9,11	3#8, 2#14GND-1"C	60	RTU-I2 (BLDG. I)	Y	1,600	230/3	26	30	CA-7,9,11	60A (30A FUSE)	YES	PCD-SRT12CA	4.9 8.8	3#8, 2#14GND-1"C	20A (15A FUSE)	
RTU-I3 (BLDG. I)	230/3	22.6	22.6	30	CA-2,4,6	3#8, 2#14GND-1"C	60	RTU-I3 (BLDG. I)	Y	1,600	230/3	26	30	CA-2,4,6	60A (30A FUSE)	YES	PCD-SRT12CA	4.9 8.8	3#8, 2#14GND-1"C	20A (15A FUSE)	
RTU-I4 (BLDG. I)	230/3	22.6	22.6	30	CA-8,10,12	3#8, 2#14GND-1"C	60	RTU-I4 (BLDG. I)	γ	1,600		26	30	CA-8,10,12	60A (30A FUSE)	YES	PCD-SRT12CA	4.9 8.8	3#8, 2#14GND-1"C	20A (15A FUSE)	

GENERAL NOTES:

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CONTRACTOR TO FIELD VERIFY CIRCUITING AND FEEDER INFORMATION PRIOR TO EQUIPMENT REMOVAL. CONTRACTOR TO PROVIDE REQUIRED ADJUSTMENTS AS NEEDED. PROVIDE 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. POWER 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. CONTRACTOR TO DEMOLISH POWER CONNECTION FROM ALL ROOF TOP UNITS. DEMOLITION TO CONSIST OF REMOVAL OF POWER CONNECTION, CABLING, AND CONDUIT BACK TO SOURCE UNLESS NOTED OTHERWISE.

FIELD COORDINATE EQUIPMENT MANUFACTURER FOR FAULT CURRENT LIMITING FUSE TYPES

С





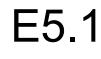


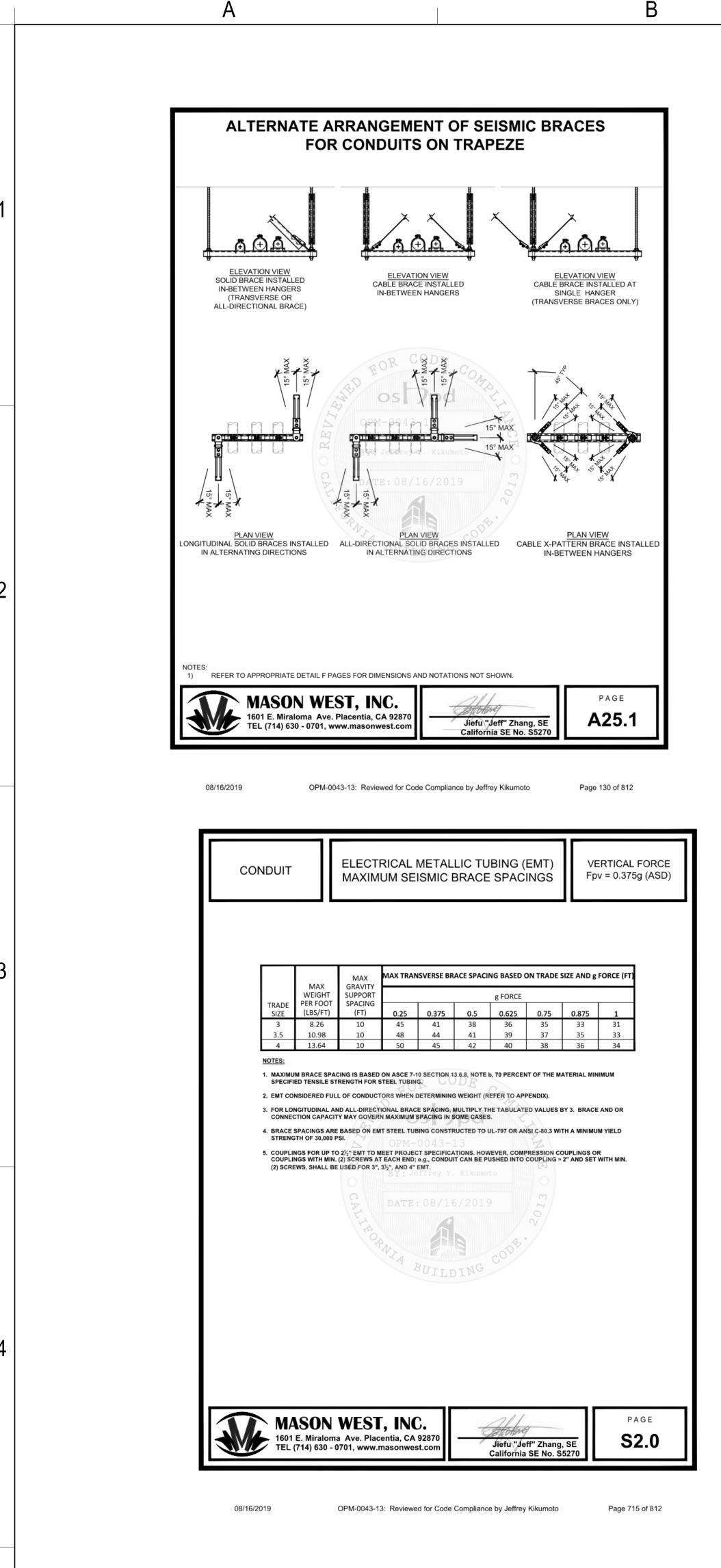


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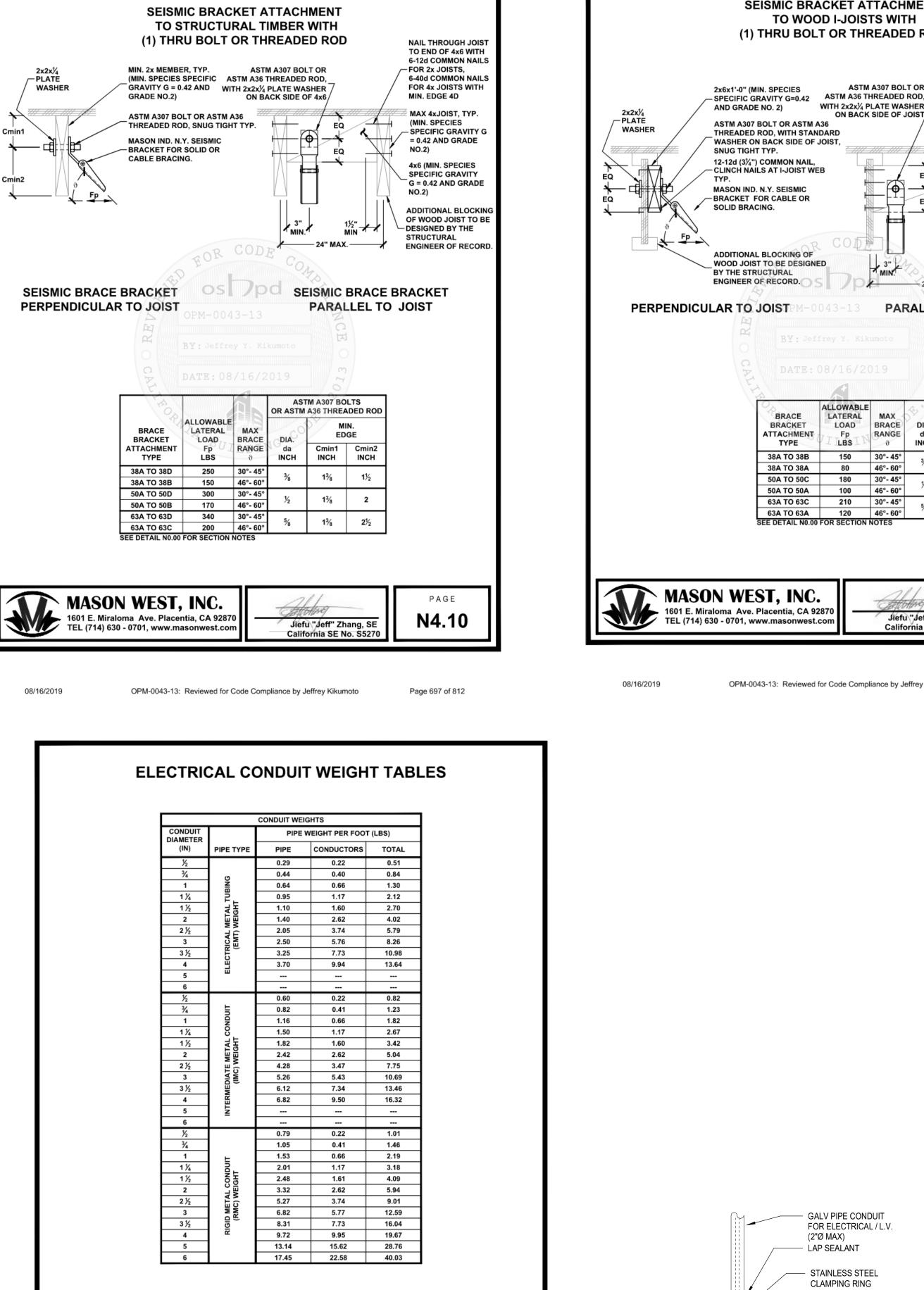
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ELECTRICAL DIAGRAMS



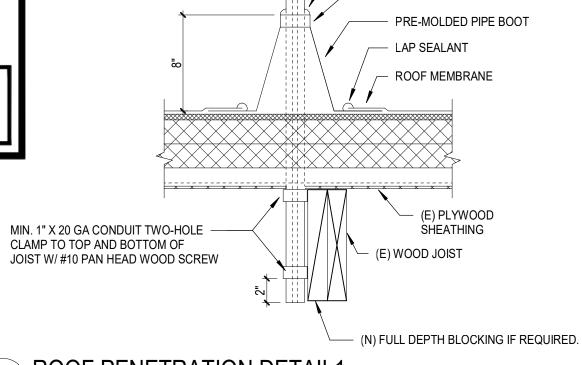






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² ROOF PENETRATION DETAIL1 E6.1 NO SCALE

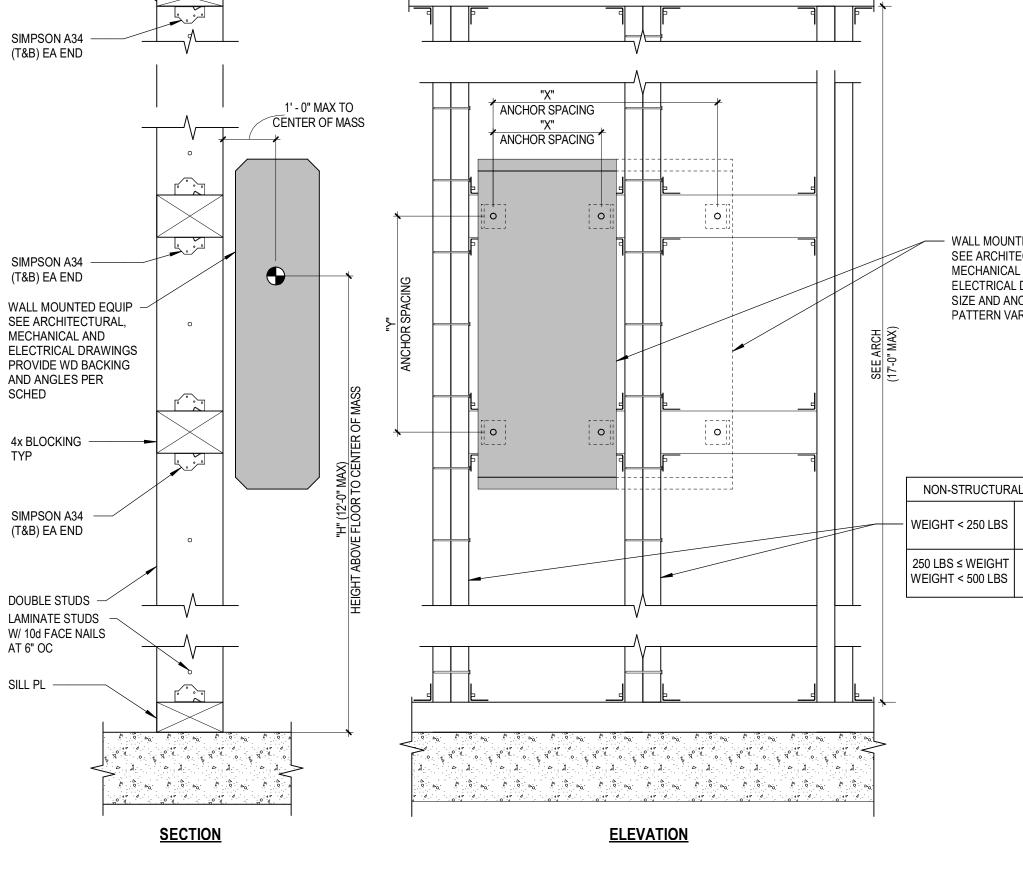
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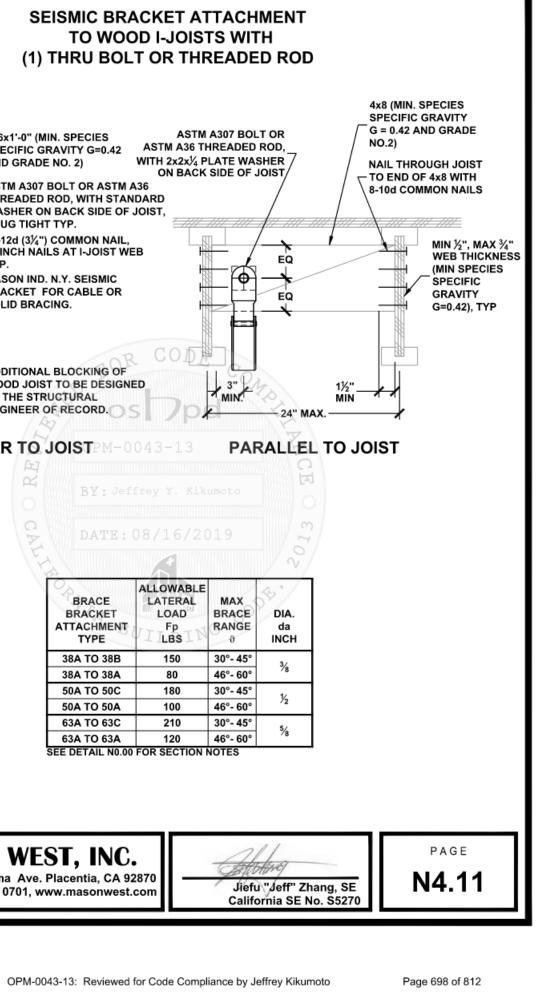
TYP WALL EQUIPMENT BACKING E6.1 NO SCALE

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



NOTES:





DOUBLE TOP PL

