DAVIDSON MIDDLE SCHOOL HVAC IMPROVEMENTS - ADMINISTRATION AND LIBRARY

280 WOODLAND AVE, SAN RAFAEL, CA 94901

SAN RAFAEL CITY SCHOOLS

PRELIMINARY NOT FOR CONSTRUCTION

CONSTRUCTION DOCUMENTS

PROJECT TEAM

OWNER

San Rafael City Schools 310 Nova Albion Way San Rafael, CA 94903 Phone: 415-492-3285 ARCHITECT

Quattrocchi Kwok Architects 636 Fifth Street Santa Rosa, CA 95404 Phone: 707-576-0829 Fax: 707-576-0295 Email: lyannes@qka.com STRUCTURAL ENGINEER

ZFA Structural Engineers 1212 Fourth Street, Suite Z Santa Rosa, CA 95404 Phone: 707-526-0992 Fax: 707-526-0217 Email: chrisw@zfa.com MECHANICAL ENGINEER

Costa Engineers
3274 Villa Lane

Napa, CA 94558 Phone: 707-252-9177 Fax: 707-252-6473 Email: cdelcore@costaengineers.com ELECTRICAL ENGINEER

O'Mahony & Myer 4340 Redwood Highway, Suite 245 San Rafael, CA 94903 Phone: 415-492-0420 Fax: 415-479-6962 Email: pcolenbrander@ommconsulting.com

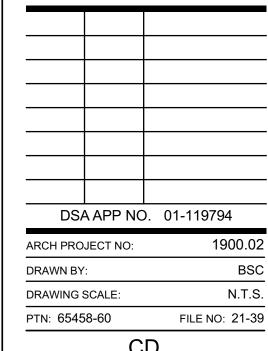


DAVIDSON MIDDLE SCHOOL

HVAC IMPROVEMENTS -ADMINISTRATION AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

> SAN RAFAEL CITY SCHOOLS



CD MARCH 1, 2022

HEET TITLE

COVER SHEET

SHEET NUMBER

G-0.1

FLOOR DRAIN

FOUNDATION

FINISH FLOOR

FINISH GRADE

FIRE HYDRANT

FIBERGLAS

FIXTURE

FLOOR LINE

FLUORESCENT

FACE OF MASONRY

FACE OF CONCRETE FACE OF FINISH FACE OF STUD

FIRE-RESISTANT

FIBERGLASS REINFORCED

FLASHING

FACE NAIL

FOOTING

FCO

FLASH

FLUOR

FLOOR CLEAN OUT

FIRE EXTINGUISHER

FIRE HOSE STATION

FLAT HEAD WOOD SCREW

FIRE EXTINGUISHER CABINET

FLAT HEAD MACHINE SCREW

ABB	REVIATIONS				
&	AND	GA	GAUGE	S	SOUTH
L	ANGLE	GALV	GALVANIZED	S.A.D.	SEE ARCHITECTURAL DRAWINGS
@	AT CENTERLINE	GB GC	GRAB BAR GENERAL CONTRACTOR	S.AV.D. SC	SEE AUDIOVIDEO DRAWINGS SOLID CORE
<u>@</u> '	FEET	GI	GALVANIZED IRON	S.C.D.	SEE CIVIL DRAWINGS
"	INCHES	GL	GLASS/ GLAZING	SCHED	SCHEDULE
d "	PENNY	GLB	GLUE LAMINATED BEAM	SD	STORM DRAIN
#	POUND/ NUMBER	GND GR	GROUND GRADE	SECT S.E.D.	SECTION SEE ELECTRICAL DRAWINGS
AB	ANCHOR BOLT	GYP BD	GYPSUM BOARD	SEP	SEPARATION
ABBREV	ABBREVIATION			S.F.PD.	SEE FIRE PROTECTION DRAWINGS
AC	ASPHALT CONCRETE	HB HC	HOSE BIBB HOLLOW CORE	SHTG SIM	SHEATHING SIMILAR
A/C ACC	AIR CONDITIONING ACCESSIBLE	HDR	HEADER	SL	SLIDING
ACOUS	ACOUSTICAL	HDWD	HARDWOOD	S.L.D.	SEE LANDSCAPE DRAWINGS
AC T	ACOUSTICAL TILE	HDWR	HARDWARE	SM	SHEET METAL
AD ADJ	AREA DRAIN ADJUSTABLE	HM HOR	HOLLOW METAL HORIZONTAL	S.M.D. SOV	SEE MECHANICAL DRAWING SHUT OFF VALVE
A.F.F.	ABOVE FINISH FLOOR	HP	HIGH POINT	S.P.D.	SEE PLUMBING DRAWINGS
A.F.G.	ABOVE FINISH GRADE	HR	HOUR	SPEC	SPECIFICATION
AGG	AGGREGATE	HSS HT	HOLLOW STEEL SECTION HEIGHT	SPKR SQ	SPEAKER SQUARE
ALUM ANOD	ALUMINUM ANODIZED	HTG	HEATING	SS	STAINLESS STEEL
APPROX	APPROXIMATE	HVAC	HEATING, VENTILATING,	S.S.D.	SEE STRUCTURAL DRAWINGS
ARCH	ARCHITECTURAL		AIR-CONDITIONING	S.TH.D. STA	SEE THEATER DRAWINGS STATION
ASPH	ASPHALT	ID	INSIDE DIAMETER	STD	STATION STANDARD
BD	BOARD	INSUL	INSULATION	STL	STEEL
BITUM	BITUMINOUS	INT	INTERIOR	STOR	STORAGE
BLDG	BUILDING	INTEG INTERMED	INTEGRAL INTERMEDIATE	STRUCT SUSP	STRUCTURAL SUSPENDED
BLK BLKG	BLOCK BLOCKING	INV	INVERT	SYM	SYMMETRICAL
BM	BEAM				
BOT	BOTTOM	JH IST	JOIST HANGER	T T&B	TREAD TOP & BOTTOM
BO BRK	BY OWNER BREAK	JST JT	JOIST JOINT	TC	TOP & BOTTOM TOP OF CURB
BRG	BEARING			TEL	TELEPHONE
BTWN	BETWEEN	KIT	KITCHEN KICK DI ATE	TER	TERRAZZO
BU	BUILT-UP	KP	KICK PLATE	T&G TH	TONGUE & GROOVE THICK
BUR	BUILT-UP ROOFING	LAB	LABORATORY	THRU	THROUGH
CAB	CABINET	LAM	LAMINATE	TJ	TOOL JOINT
СВ	CATCH BASIN	LAV LL	LAVATORY	TN	TOE NAIL
CBC	CALIFORNIA BUILDING CODE	LP	LIVE LOAD LOW POINT	T.O.D. T.O.P.	TOP OF DECK TOP OF PLATE
CEM CER	CEMENT CERAMIC	LT	LIGHT	T.O.R.	TOP OF ROOF
CI	CAST IRON	N4A T	MATERIAL	T.O.W.	TOP OF WALL
CIR	CIRCLE	MAT MAX	MATERIAL MAXIMUM	T.P. TRN	TOP OF PAVEMENT TRANSOM
CJ CORR	CONTROL JOINT CORRIDOR	MB	MACHINE BOLT	TRANS	TRANSPARENT
CL	CLOSET/ CENTER LINE	MC	MEDICINE CABINET	TS	TUBE STEEL
CLG	CEILING	MECH MED	MECHANICAL MEDIUM	TUB	TUBULAR
CLR	CLEAR	MEMB	MEMBRANE	TV TW	TELEVISION TACKWALL
CLS CMU	CLOSURE CONCRETE MASONRY UNIT	MFR	MANUFACTURER	TYP	TYPICAL
CO	CLEANOUT	MH	MANHOLE		
COL	COLUMN	MIN MIR	MINIMUM MIRROR	UNF U.O.N.	UNFINISHED UNLESS OTHERWISE NOTED
COMB COMP	COMBINATION COMPOSITION	MISC	MISCELLANEOUS	UR	URINAL
CONC	CONCRETE	MO	MASONRY OPENING	UTIL	UTILITY
CONN	CONNECTION	MOD MR	MODULAR) (D	VAROR BARRIER
CONST	CONSTRUCTION	MTD	MOISTURE RESISTANT MOUNTED	VB VCT	VAPOR BARRIER VINYL COMPOSITION TILE
CONT CONTR	CONTINUOUS CONTRACTOR	MTL	METAL	VERT	VERTICAL
CT	CERAMIC TILE	MUL	MULLION	VEST	VESTIBULE
CTR	CENTER	N	NORTH	V.I.F. VTR	VERIFY IN FIELD VENT THROUGH ROOF
CTSK CUST	COUNTERSINK CUSTODIAN	(N)	NEW	VWC	VINYL WALL COVERING
CW	COLD WATER	NAT	NATURAL		
		N.I.C. NO	NOT IN CONTRACT NUMBER	W W/	WEST
DBL	DOUBLE	NOM	NOMINAL	WC	WITH WATER CLOSET
DEPT DET	DEPARTMENT DETAIL	N.T.S.	NOT TO SCALE	WD	WOOD
DF	DRINKING FOUNTAIN	0/	OVED	WDW	WINDOW
DG	DECOMPOSED	O/ OA	OVER OVERALL	WH W/O	WATER HEATER WITHOUT
ח	GRANITE	OBS	OBSCURE	WP	WATER PROOF
DI DIA	DRAIN INLET DIAMETER	00	ON CENTER	W.P.	WORK POINT
DIAG	DIAGONAL	OD OF	OUTSIDE DIAMETER OVERFLOW	WR	WATER RESISTANT
DIM	DIMENSION	OFCI	OWNER FURNISHED/	WSCT WT	WAINSCOT WEIGHT
DISP DIV	DISPOSAL DIVISION		CONTRACTOR INSTALLED		
DN	DOWN	O.L.F. OFF	OCCUPANT LOAD FACTOR OFFICE	YD	YARD
DO	DOOR OPENING	OPNG	OPENING		
DIR DR	DIRECTLY DOOR	OPP	OPPOSITE		
DR DSA	DIVISION OF STATE ARCHITECT	OVHD	OVERHEAD		
DS	DOWN SPOUT	PC	PORTLAND CEMENT		
DSP	DRY STAND PIPE	P.C.F.	POUNDS PER CUBIC FOOT		
DT DW	DRAIN TILE DISHWASHER	PDA	POWER DRIVEN ANCHOR		
DWG	DRAWING	PERF	PERFORATED PLATE HEIGHT		
DWR	DRAWER	PH PL	PLATE HEIGHT PLATE		
E	EAST	P/L	PROPERTY LINE		
E (E)	EAST EXISTING	PLAM	PLASTIC LAMINATE		
EA	EACH	PLAS PLF	PLASTER/ PLASTIC POUNDS PER LINEAL FOOT		
EB	EXPANSION BOLT	PLYWD	PLYWOOD		
EE EF	EACH END EXHAUST FAN	P.O.C.	POINT OF CONTACT		
EF EJ	EXPANSION JOINT	PR PROP	PAIR PROPERTY		
EL	ELEVATION GRADE	PROP PSF	PROPERTY POUNDS PER SQUARE FOOT		
ELEC	ELECTRICAL ELEVATION	PSI	POUNDS PER SQUARE INCH		
ELEV EMER	ELEVATION EMERGENCY	PT	POINT		
EMT	ELECTRIC METALLIC TUBING	PTDF	PRESSURE TREATED DOUGLAS FIR		
ENCL	ENCLOSURE	PTN	PARTITION		
EP EO	ELECTRIC PANEL	PTR	PAPER TOWEL RECEPTACLE		
EQ EQUIP	EQUAL EQUIPMENT	PVC	POLYVINYL CHLORIDE		
EQUIV	EQUIVALENT	PVMT	PAVEMENT		
ES	EACH SIDE	R	RISER		
EW EXH	EACH WAY	R / RAD	RADIUS		
EXH EXIST	EXHAUST EXISTING	RD REF	ROOF DRAIN		
EXP	EXPANSION	REFR REFR	REFERENCE REFRIGERATOR		
EXT	EXTERIOR	REG	REGULAR		
F	FACE	REQD	REQUIRED		
FA	FIRE ALARM	REINF RH	REINFORCED ROOF HATCH		

ROUGH OPENING

RAIN WATER LEADER

ROOM

REDWOOD

RHWS

RM

ROUND HEAD MACHINE SCREW

ROUND HEAD WOOD SCREW

LEGEND

ALL NOTES AND SYMBOLS ARE INTENDED TO APPLY AT ALL OTHER LOCATIONS OF SIMILAR GRAPHIC REPRESENTATION. SUCH INDICATIONS MAY BE LIMITED TO PROMOTE CLARITY. NO LIMITATION OF APPLICATION IS INTENDED EXCEPT AS SPECFICALLY NOTED. COLUMN GRIDS A AND 1 IN BUILDING A DIMENSION TO FACE OF STUD OR MASONRY DIMENSION TO FACE OF FINISH DIMENSION TO CENTER LINE OR COLUMN LINE RELATIVE ELEVATION DIMENSION MECHANICAL CLOSET DOOR IN **ROOM NUMBER 101** WINDOW NUMBER 03 DETAIL NUMBER 11 ON SHEET NUMBER A-9.12 SECTION NUMBER 3 ON SHEET NUMBER A-B6.2 **ELEVATION NUMBER 2 ON SHEET NUMBER A-B5.3** FLOOR CLASSROOM ROOM NAME ROOM NUMBER 204 IN 20s WING ARCHITECTURAL LOUVER TYPE L01, SEE ELEVATIONS AND LOUVER SCHEDULE. DOOR LOUVERS ARE NOT TAGGED, SEE DOOR SCHEDULE. RELATIVE ORIGIN OR WORK POINT

Statement of General Conformance BY ARCHITECT UTILIZING PLANS (INCLUDING BUT NOT LIMITED TO SHOP DRAWINGS) PREPARED BY OTHER LICENSED DESIGN PROFESSIONALS AND/OR CONSULTANTS

listed (marked Structural, Mechanical, and Electrical), have been prepared

These drawings and/or specifications and/or calculations for the items

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

by other design professionals or consultants who are licensed

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

Architect or Engineer designated to be in general responsible charge

4-344" of Title 24, Part I. (Title 24, Part 1, Section 4-317 (b))

C20161 April 30, 2023 Steven Kwok Expiration Date License Number

GENERAL NOTES

ALL WORK IS SHOWN, DESCRIBED OR SPECIFIED IN THE DRAWINGS INDEXED ON THIS PAGE OR IN THE SPECIFICATIONS.

ALL WORK NOT INDICATED AS EXISTING (E) IS NEW.

ALL FRAMING DIMENSIONS ARE TO FACE OF STUD UNLESS NOTED OTHERWISE. •DO NOT SCALE DRAWINGS.

•VERIFY ALL DIMENSIONS WHERE WORK INVOLVES FRAMING FOR WINDOWS, DOORS, OR CABINETS.

ONLY WORK SO NOTED IS NOT IN CONTRACT (N.I.C.) ALL N.I.C. ITEMS ARE NOT PART OF DSA APPROVAL GOVERNING CODES: A COPY OF TITLE 24 PARTS 1-5 SHALL BE KEPT ON THE JOB AT ALL TIMES.

CALIFORNIA CODE OF REGULATIONS TITLE 24 BUILDING STANDARDS CODE: PART 1 2019 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR

PART 2 2019 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR (2018 INTERNATIONAL BUILDING CODE, VOL. 1 & 2, AND 2016 CALIFORNIA AMENDMENTS) PART 3 2019 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR

(2017 NATIONAL ELECTRICAL CODE AND 2016 CALIFORNIA AMENDMENTS) PART 4 2019 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR (2018 IAPMO UNIFORM MECHANICAL CODE AND 2016 CALIFORNIA AMENDMENTS)

PART 5 2019 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR (2018 IAPMO UNIFORM PLUMBING CODE AND 2016 CALIFORNIA AMENDMENTS) PART 6 2019 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR

PART 9 2019 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR (2018 INTERNATIONAL FIRE CODE AND 2016 CALIFORNIA AMENDMENTS)

PART 10 2019 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR (2018 INTERNATIONAL EXISTING BUILDING CODE AND 2016 CALIFORNIA AMENDMENTS) PART 11 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE (CAL-GREEN), PART 11, TITLE 24 CCR

PART 12 2019 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR TITLE 19 CCR, PUBLIC SAFETY CODE, STATE FIRE MARSHAL REGULATIONS

2010 ADA STANDARDS FOR ACCESSIBILITY DESIGN 2016 ASME A17.1-16/CSA B44-16 SAFETY CODE FOR ELEVATORS AND ESCALATORS

STANDARD AN	D GUIDES:	
NFPA 13	INSTALLATION OF FIRE SPRINKLER SYSTEMS (CA AMENDED)	2016 EDITION
NFPA 14	INSTALLATION OF STANDPIPE AND HOSE SYSTEMS	2016 EDITION
NFPA 17	DRY CHEMICAL EXTINGUISHING SYSTEMS	2017 EDITION
NFPA 17A	WET CHEMICAL FIRE EXTINGUISHING SYSTEMS	2017 EDITION
NFPA 20	INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION	2016 EDITION
NFPA 24	STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE	
	MAINS AND THEIR APPURTENANCES	2016 EDITION
NFPA 25	CALIFORNIA EDITION - TESTING, MAINTENANCE OF WATER-BASED	
	FIRE PROTECTION SYSTEMS	2013 EDITION
NFPA 72	NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED)	2016 EDITION
NFPA 80	STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES	2016 EDITION
NFPA 110	EMERGENCY AND STANDBY POWER SYSTEMS	2016 EDITION
NFPA 170	STANDARD FOR FIRE SAFETY AND EMERGENCY SYMBOLS	2018 EDITION
NFPA 2001	STANDARD ON CLEAN AGENT FIRE EXTINGUISHING SYSTEMS	2015 EDITION
	OTANDADD FOR FIRE TEOTING OF FIRE EXTINOLIDATION OVERTIMA	
UL 300	STANDARD FOR FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS	0005 (00040)
404	FOR PROTECTION OF COMMERCIAL COOKING EQUIPMENT	2005 (R2010)
UL 464	AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING	2002 EDITION
UL 521	SYSTEMS, INCLUDING ACCESSORIES STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE	2003 EDITION
UL 52 I	SIGNALING SYSTEMS	1999 EDITION
UL 1971	STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED	2002 EDITION
UL 2034	STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED STANDARD FOR SINGLE AND MULTIPLE CARBON MONOXIDE ALARMS	2017 EDITION
UL 2034	STANDARD FOR SINGLE AND MOLTIFLE CARBON MONOXIDE ALARMS	ZUIT EDITION
ICC 300	STANDARD FOR BLEACHERS, FOLDING AND TELESCOPIC SEATING,	
100 300	AND GRANDSTANDS	2017 EDITION
	7.110 010 1100 17.1100	ZOTT EDITION

IN ACCORDANCE WITH TITLE 24 PART 1 CHAPTER 4: THE ADMINISTRATIVE REGULATIONS FOR THE DIVISION OF THE STATE ARCHITECT STRUCTURAL SAFETY (DSA/SS) •4-331 DSA SHALL BE NOTIFIED AT THE START OF CONSTRUCTION. •4-332 WHEN CONSTRUCTION IS SUSPENDED FOR MORE THAN ONE MONTH, THE PROJECT INSPECTOR SHALL

•4-333(a) OBSERVATION OF THE WORK SHALL BE BY ARCHITECT OR REGISTERED ENGINEER. •4-333(b) THE DISTRICT MUST PROVIDE AND PAYFOR PROJECT INSPECTOR.

•4-334 SUPERVISION OF CONSTRUCTION BY DSA SHALL BE IN ACCORDANCE WITH THIS SECTION. •4-335 STRUCTURAL TESTS AND INSPECTION ARE REQUIRED IN ACCORDANCE WITH THIS SECTION. TESTS OF MATERIALS AND TESTING LAB SHALL BE IN ACCORDANCE WITH SECTION 4-335 AND THE DISTRICT SHALL EMPLOY AND PAYTHE LAB. COSTS OF RE-TEST MAY BE BACKCHARGED TO THE CONTRACTOR. ALL TESTS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 4-335 AND APPROVED T & I SHEET (DSA-103) •4-336 VERIFIED REPORTS SHALL BE SUBMITTED BY CONTRACTORS (DSA 006-C), INSPECTORS (DSA 006-PI). ARCHITECTS AND ENGINEERS (DSA 006-AE) IN ACCORDANCE WITH SECTIONS 4-336 AND 4-343. •4-337 SEMI-MONTHLY REPORTS SHALL BE SUBMITTED BY INSPECTORS (DSA - 155), IN ACCORDANCE WITH SECTIONS 4-337. •4-338 WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE APPROVED PLANS, ADDENDA AND

CONSTRUCTION DOCUMENTS. CHANGES IN THE APPROVED PLANS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENTS STAMPED AND SIGNED BY THE ARCHITECT OR REGISTERED ENGINEER IN CHARGE. ADDENDA AND CHANGE DOCUMENTS SHALL BE SUBMITTED TO AND APPROVED BY DSA PRIOR TO COMMENCEMENT OF WORK. • 4-341(a) THE ARCHITECT AND THE REGISTERED ENGINEER SHALL PERFORM THEIR DUTIES IN ACCORDANCE WITH SECTIONS 4-333(a) AND 4-341. • 4-341(d) INSPECTOR SHALL BE APPROVED BY DSA.

• 4-342 INSPECTION SHALL BE IN ACCORDANCE WITH SECTION 4-333 THE DUTY OF THE INSPECTOR SHALL BE IN ACCORDANCE WITH THIS SECTION. • .4-343 THE CONTRACTOR SHALL PERFORM HIS DUTIES IN ACCORDANCE WITH THIS SECTION.

THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, C.C.R. SHOULD ANY EXISTING CONDITIONS BE DISCOVERED WHICH ARE NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH SAID TITLE 24 C.C.R. A CONSTRUCTION CHANGE DOCUMENT DETAILING AND SPECIFYING THE REQUIRED REPAIR WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE REPAIR WORK. (TITLE 24 PART 1, SECTION 4-338(c))

COMPLIANCE WITH CFC CHAPTER 33, FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION AND CBC CHAPTER 33, SAFETY DURING CONSTRUCTION SHALL BE ENFORCED.

EMERGENCY VEHICLE ACCESS ROADS AND ON-SITE FIRE HYDRANTS SHALL BE IN SERVICE AND OPERABLE PRIOR TO LOADING THE SITE WITH COMBUSTIBLE MATERIALS.

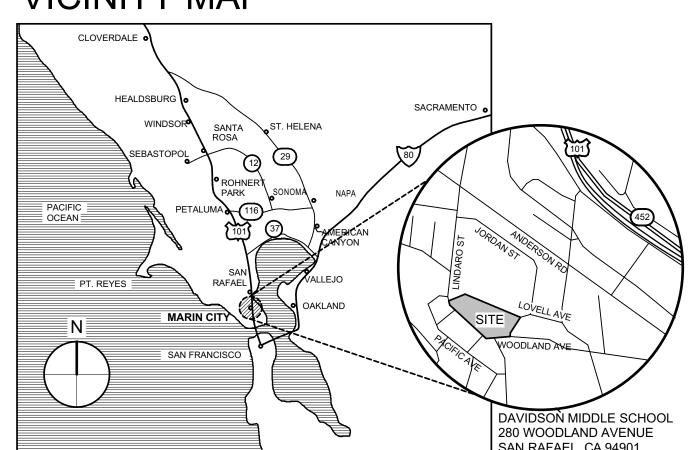
GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS, AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH APPLICABLE LOCAL ORDINANCES.

PROJECT DESCRIPTON

 UPGRADE TO MECHANICAL SYSTEMS, AND ELECTRICAL WORK IN SUPPORT OF MECHANICAL UPGRADE; INCLUDES REPLACEMENT OF EXISTING MECHANICAL UNITS AT BUILDING WING 10 ADMINISTRATION AND BUILDING WING 30 LIBRARY SPACE. INSTALLATION OF EXTERIOR GROUND MOUNTED UNIT ON HOUSEKEEPING PAD OUTSIDE THE PATH OF TRAVEL, AND SECURITY ENCLOSURE TO PROTECT THE MECHANICAL UNIT. DEMOLITION OF EXISTING BOILER AND APPURTENANCES AT WING 40. • PER IR 11B-6, THIS IS A MECHANICAL ONLY PROJECT AND DOES NOT REQUIRE ACCESS REVIEW.

DEFERRED APPROVALS

VICINITY MAP



SHEET INDEX TOTAL SHEET COUNT: 42

GENERAL

COVER SHEET ABBREVIATIONS AND NOTES G-0.2

ARCHITECTURAL

A-1.1 PROJECT SITE PLAN PARTIAL ENLARGED SITE PLAN & ELEVATIONS A-1.2 A-1.3 ARCHITECTURAL DETAILS

10s WING ADMINISTRATION RCP A-3.2 30s WING LIBRARY RCPs

10s WING ADMINISTRATION ROOF PLANS A-4.2 30s WING LIBRARY ROOF PLANS

STRUCTURAL

MECHANICAL

GENERAL NOTES AND DETAILS S-2.1 10s WING PARTIAL ROOF FRAMING PLAN

HVAC SHEDULES & LEGENDS

ADMIN HVAC DEMOLITION FLOOR PLAN LIBRARY HVAC DEMOLITION FLOOR PLAN MD-2.2

MD-3.1 ADMIN HVAC DEMOLITION ROOF PLAN MD-3.2 LIBRARY HVAC DEMOLITION ROOF PLAN

ADMIN HVAC FLOOR PLAN LIBRARY HVAC FLOOR PLAN M-2.2

ADMIN HVAC ROOF PLAN

M-3.2 LIBRARY HVAC ROOF PLAN MECHANICAL DETAILS

M-4.2 MECHANICAL DETAILS PIPING & WIRING DIAGRAMS

M-5.2 CONTROL DIAGRAMS M-5.3 CONTROL DIAGRAMS

PLUMBING

PLUMBING SCHEDULES & LEGENDS P-1.1 ADMIN PLUMBING FLOOR PLAN LIBRARY PLUMBING FLOOR PLAN P-2.2

P-3.1 ADMIN ROOF PLAN

P-4.1 PLUMBING DETAILS

ELECTRICAL SYMBOLS LIST, GENERAL NOTES & LIST OF DRAWINGS

SITE PLAN - POWER

ADMINISTRATION DEMO & RCP PLANS - POWER E-3.2 LIBRARY DEMO & RCP PLANS - POWER

ADMINISTRATION ROOF DEMO & ROOF PLANS - POWER LIBRARY ROOF DEMO & ROOF PLANS - POWER

SINGLE LINE DIAGRAM - POWER PANEL SCHEDULES

E-7.1 DETAILS FIRE ALARM EQUIPMENT LIST, NOTES, AND DETAILS

TITLE 24

E-1.1

TITLE 24 TITLE 24 TITLE 24

QUATTROCCHI KWOK ARCHITECTS 636 Fifth Street, Santa Rosa, CA 95404 East Bay: 55 Harrison Street, Suite 525, Oakland, CA 94607 (707) 576-0829 STEVEN KWOK

LICENSE # C20161 EXP APRIL 30, 2023 SIGNED: MARCH 1, 2022

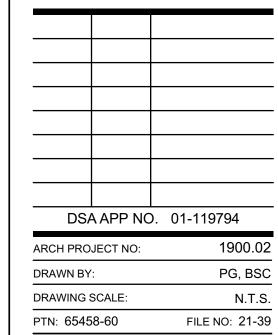
PRELIMINARY NOT FOR CONSTRUCTION

> **DAVIDSON MIDDLE SCHOOL**

IMPROVEMENTS -ADMINISTRATION AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY SCHOOLS

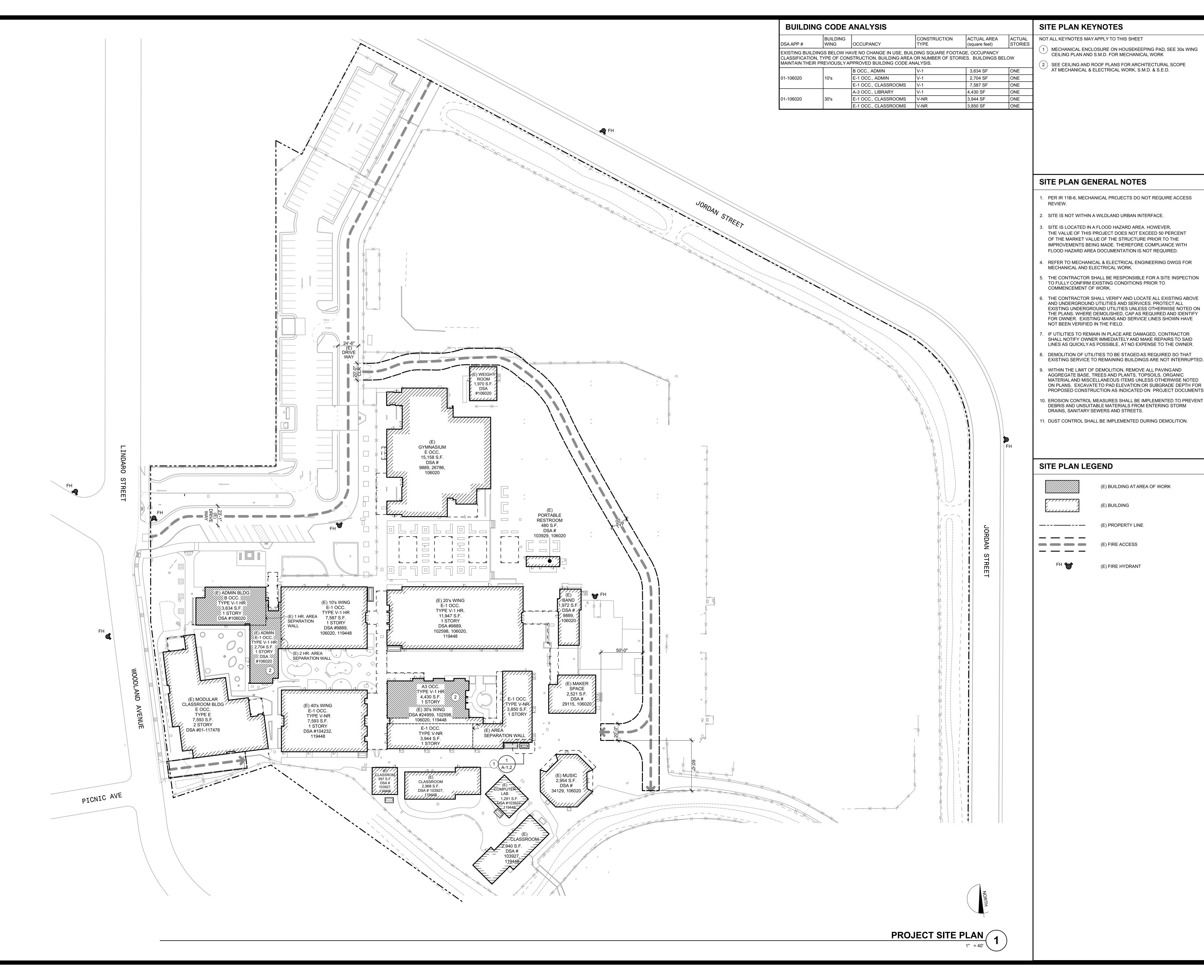


MARCH 1, 2022

ABBREVIATIONS

AND NOTES

G-0.2



- MECHANICAL ENCLOSURE ON HOUSEKEEPING PAD, SEE 30s WING
- SEE CEILING AND ROOF PLANS FOR ARCHITECTURAL SCOPE



636 Fifth Street, Santa Rosa, CA 95404 East Bay:

55 Harrison Street, Suite 525, Oakland, CA 94607 (707) 576-0829

STEVEN KWOK

LICENSE # C20161

EXP APRIL 30, 2023

SIGNED: MARCH 1, 2022

. PER IR 11B-6, MECHANICAL PROJECTS DO NOT REQUIRE ACCESS

- THE VALUE OF THIS PROJECT DOES NOT EXCEED 50 PERCENT OF THE MARKET VALUE OF THE STRUCTURE PRIOR TO THE IMPROVEMENTS BEING MADE. THEREFORE COMPLIANCE WITH
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR A SITE INSPECTION TO FULLY CONFIRM EXISTING CONDITIONS PRIOR TO
- AND UNDERGROUND UTILITIES AND SERVICES. PROTECT ALL EXISTING UNDERGROUND UTILITIES UNLESS OTHERWISE NOTED ON THE PLANS. WHERE DEMOLISHED, CAP AS REQUIRED AND IDENTIFY FOR OWNER. EXISTING MAINS AND SERVICE LINES SHOWN HAVE
- IF UTILITIES TO REMAIN IN PLACE ARE DAMAGED, CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY AND MAKE REPAIRS TO SAID
- DEMOLITION OF UTILITIES TO BE STAGED AS REQUIRED SO THAT
- WITHIN THE LIMIT OF DEMOLITION, REMOVE ALL PAVING AND AGGREGATE BASE, TREES AND PLANTS, TOPSOILS, ORGANIC MATERIAL AND MISCELLANEOUS ITEMS UNLESS OTHERWISE NOTED ON PLANS. EXCAVATE TO PAD ELEVATION OR SUBGRADE DEPTH FOR
- PROPOSED CONSTRUCTION AS INDICATED ON PROJECT DOCUMENTS 10. EROSION CONTROL MEASURES SHALL BE IMPLEMENTED TO PREVENT
- 11. DUST CONTROL SHALL BE IMPLEMENTED DURING DEMOLITION.

PRELIMINARY NOT FOR CONSTRUCTION

DAVIDSON MIDDLE SCHOOL

IMPROVEMENTS -

AND LIBRARY

ADMINISTRATION

SAN RAFAEL CITY SCHOOLS

280 WOODLAND AVE

SAN RAFAEL, CA 94901

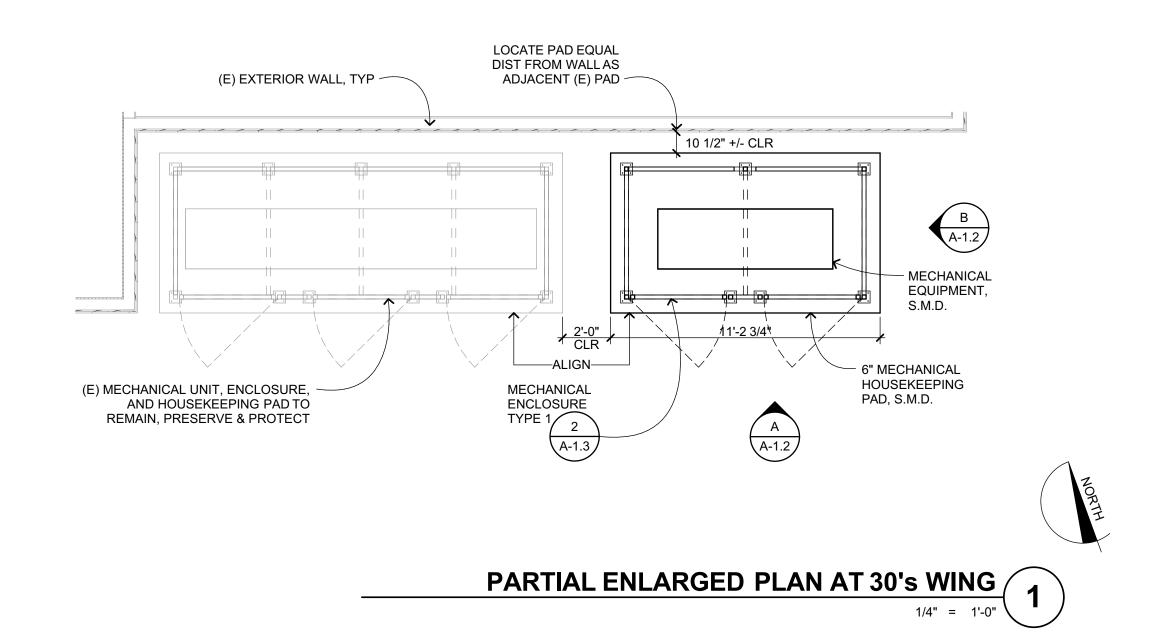
DSA APP NO. 01-119794 ARCH PROJECT NO: DRAWN BY:

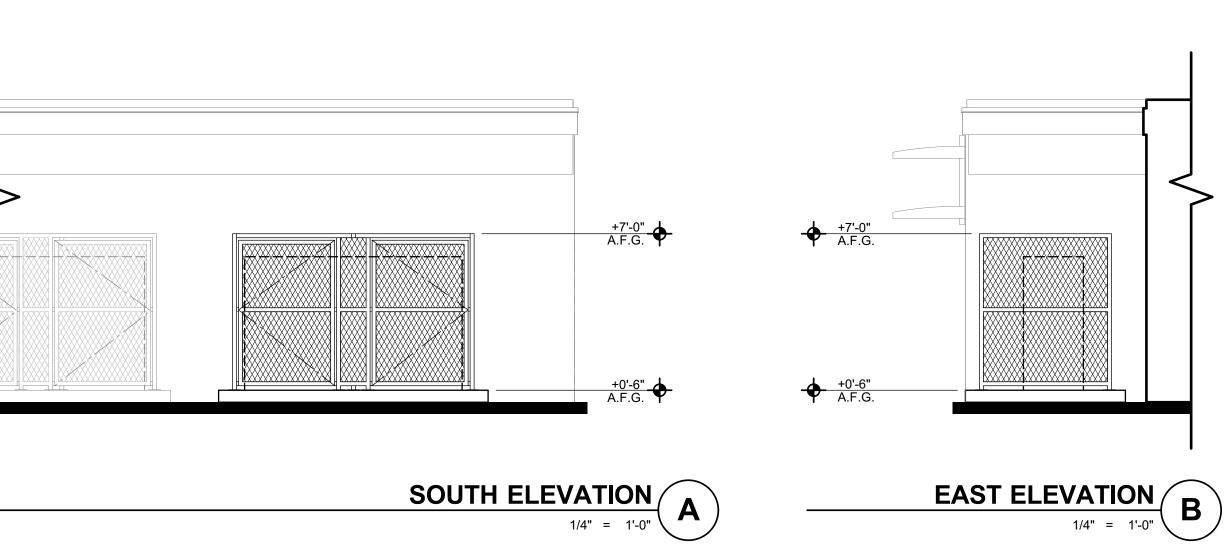
DRAWING SCALE: 1" = 40'-0" PTN: 65458-60 FILE NO: 21-39

MARCH 1, 2022

PROJECT SITE **PLAN**

A-1.1







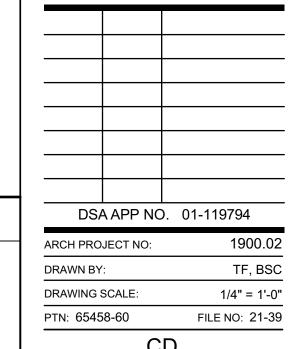
PRELIMINARY NOT FOR CONSTRUCTION

DAVIDSON MIDDLE SCHOOL

HVAC IMPROVEMENTS -ADMINISTRATION AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

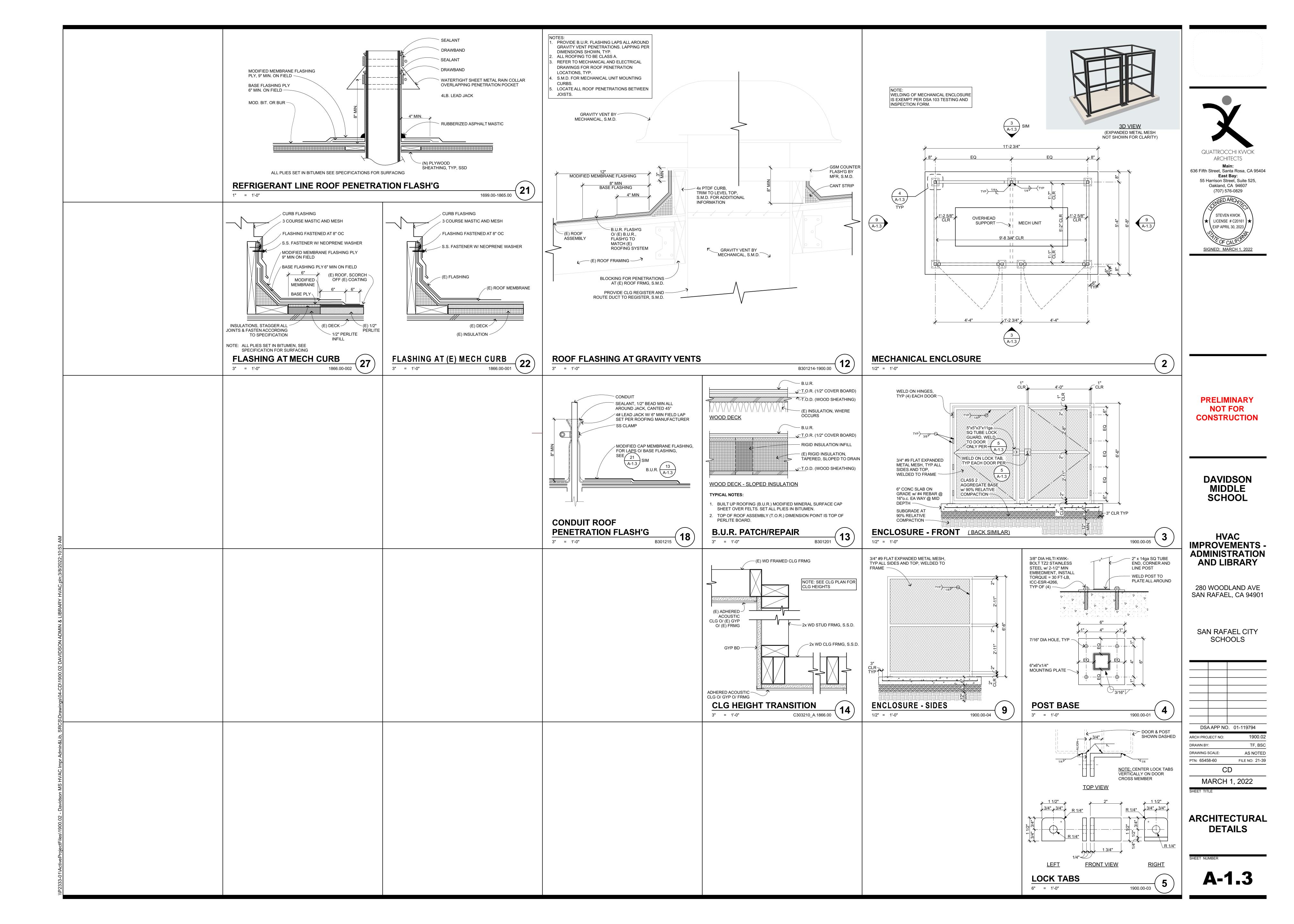
SAN RAFAEL CITY SCHOOLS

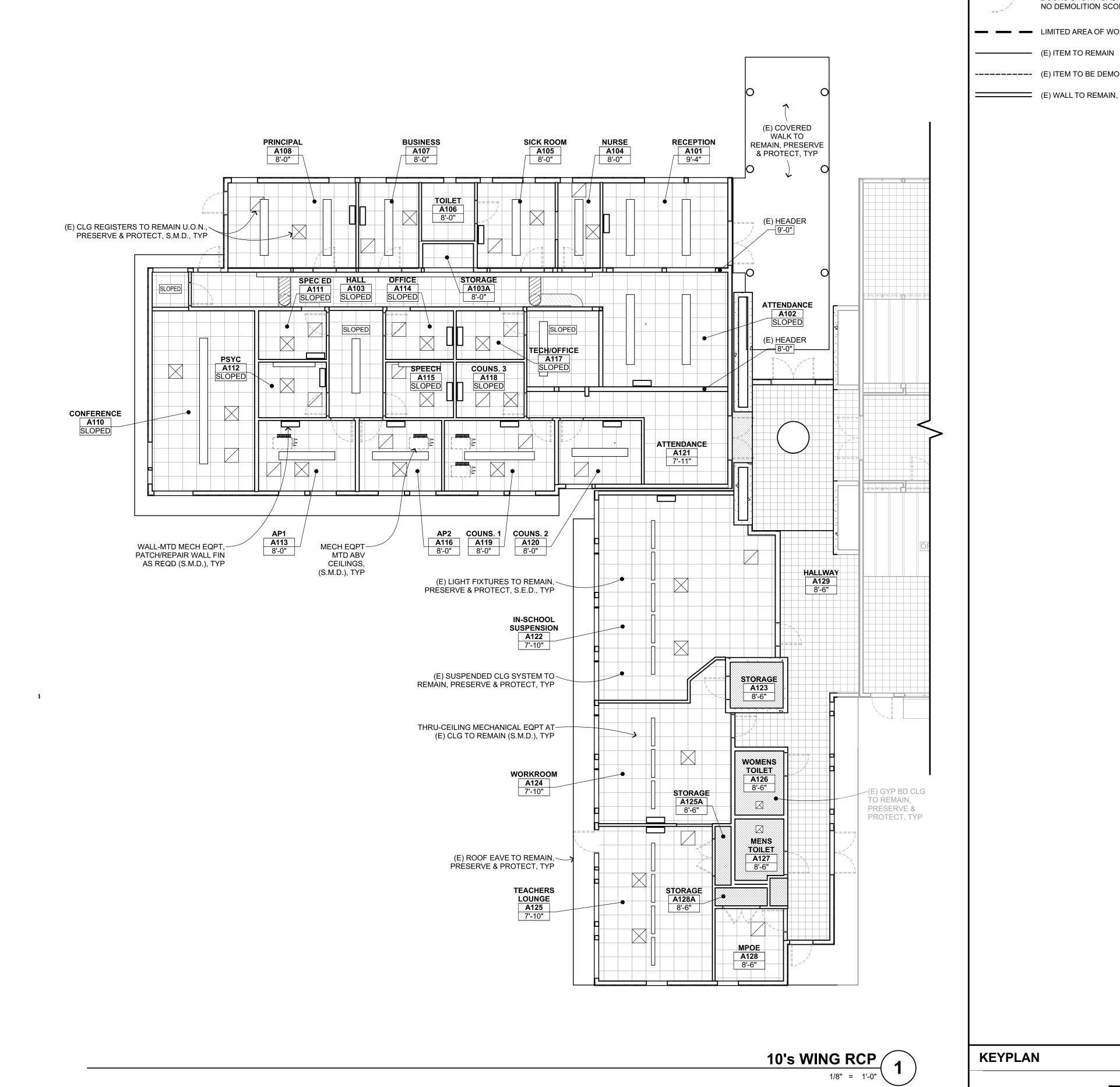


MARCH 1, 2022

PARTIAL ENLARGED SITE PLAN & ELEVATIONS

	ENLARGED SITE PLAN GENERAL NOTES	
	REFER TO MECHANICAL ENGINEERING DWGS FOR MECHANICAL UNIT INSTALLATIONS NOT OTHERWISE INDICATED.	8. DUST CONTROL SHALL BE IMPLEMENTED DURING DEM
	2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR A SITE INSPECTION TO FULLY CONFIRM EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK.	
	3. THE CONTRACTOR SHALL VERIFY AND LOCATE ALL EXISTING ABOVE AND UNDERGROUND UTILITIES AND SERVICES. PROTECT ALL EXISTING UNDERGROUND UTILITIES UNLESS OTHERWISE NOTED ON THE PLANS. WHERE DEMOLISHED, CAP AS REQUIRED AND IDENTIFY FOR OWNER. EXISTING MAINS AND SERVICE LINES SHOWN HAVE NOT BEEN VERIFIED IN THE FIELD.	
	4. IF UTILITIES TO REMAIN IN PLACE ARE DAMAGED, CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY AND MAKE REPAIRS TO SAID LINES AS QUICKLY AS POSSIBLE, AT NO EXPENSE TO THE OWNER.	
	5. DEMOLITION OF UTILITIES TO BE STAGED AS REQUIRED SO THAT EXISTING SERVICE TO REMAINING BUILDINGS ARE NOT INTERRUPTED.	
	6. WITHIN THE LIMIT OF DEMOLITION, REMOVE ALL PAVING AND AGGREGATE BASE, TREES AND PLANTS, TOPSOILS, ORGANIC MATERIAL AND MISCELLANEOUS ITEMS UNLESS OTHERWISE NOTED ON PLANS. EXCAVATE TO PAD ELEVATION OR SUBGRADE DEPTH FOR PROPOSED CONSTRUCTION AS INDICATED ON PROJECT DOCUMENTS.	
	7. EROSION CONTROL MEASURES SHALL BE IMPLEMENTED TO PREVENT DEBRIS AND UNSUITABLE MATERIALS FROM ENTERING STORM DRAINS, SANITARY SEWERS AND STREETS.	





REFLECTED CEILING PLAN LEGEND S.S.D. FOR WOOD FRAMING SIZES CLASSROOM NUMBER 11 X'-X" REFERS TO FINISHED CEILING HEIGHT A.F.F. WHERE CEILING HEIGHT IS INDICATED AS "OPEN" OR " - ", ROOM IS OPEN TO STRUCTURE ABOVE. (E) GYPSUM BOARD TO REMAIN, PRESERVE & PROTECT (E) 2'x2' SUSPENDED CEILING SYSTEM W/

ÀCOUSTIC TILE TO REMAIN, PRESERVE & PROTECT (E) 2'x4' SUSPENDED CEILING SYSTEM W/ ACOUSTIC TILE TO REMAIN, PRESERVE & PROTECT

(E) 1'x1' ADHESIVE-APPLIED ACOUSTIC TILE CEILING SYSTEM O/ WD FRMG TO REMAIN, PRESERVE & PROTECT DEMOLISH (E) 1'x1' ADHESIVE-APPLIED ACOUSTIC TILE CEILING SYSTEM AND WD FRMG 1'x1' ADHESIVE-APPLIED ACOUSTIC TILE CEILING

SYSTEM O/ WD FRMG DOORS SHOWN DASHED INDICATE DOOR BELOW, NO DEMOLITION SCOPE AT DOORS

LIMITED AREA OF WORK

---- (E) ITEM TO BE DEMOLISHED

(E) WALL TO REMAIN, PROTECT AND PRESERVE

QUATTROCCHI KWOK **ARCHITECTS** 636 Fifth Street, Santa Rosa, CA 95404 East Bay: 55 Harrison Street, Suite 525, Oakland, CA 94607 (707) 576-0829 STEVEN KWOK LICENSE # C20161 EXP APRIL 30, 2023

SIGNED: MARCH 1, 2022

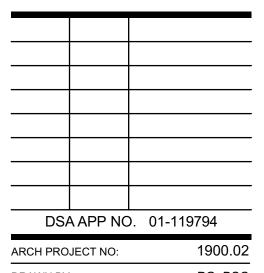
PRELIMINARY NOT FOR CONSTRUCTION

DAVIDSON MIDDLE SCHOOL

HVAC IMPROVEMENTS -ADMINISTRATION AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY SCHOOLS

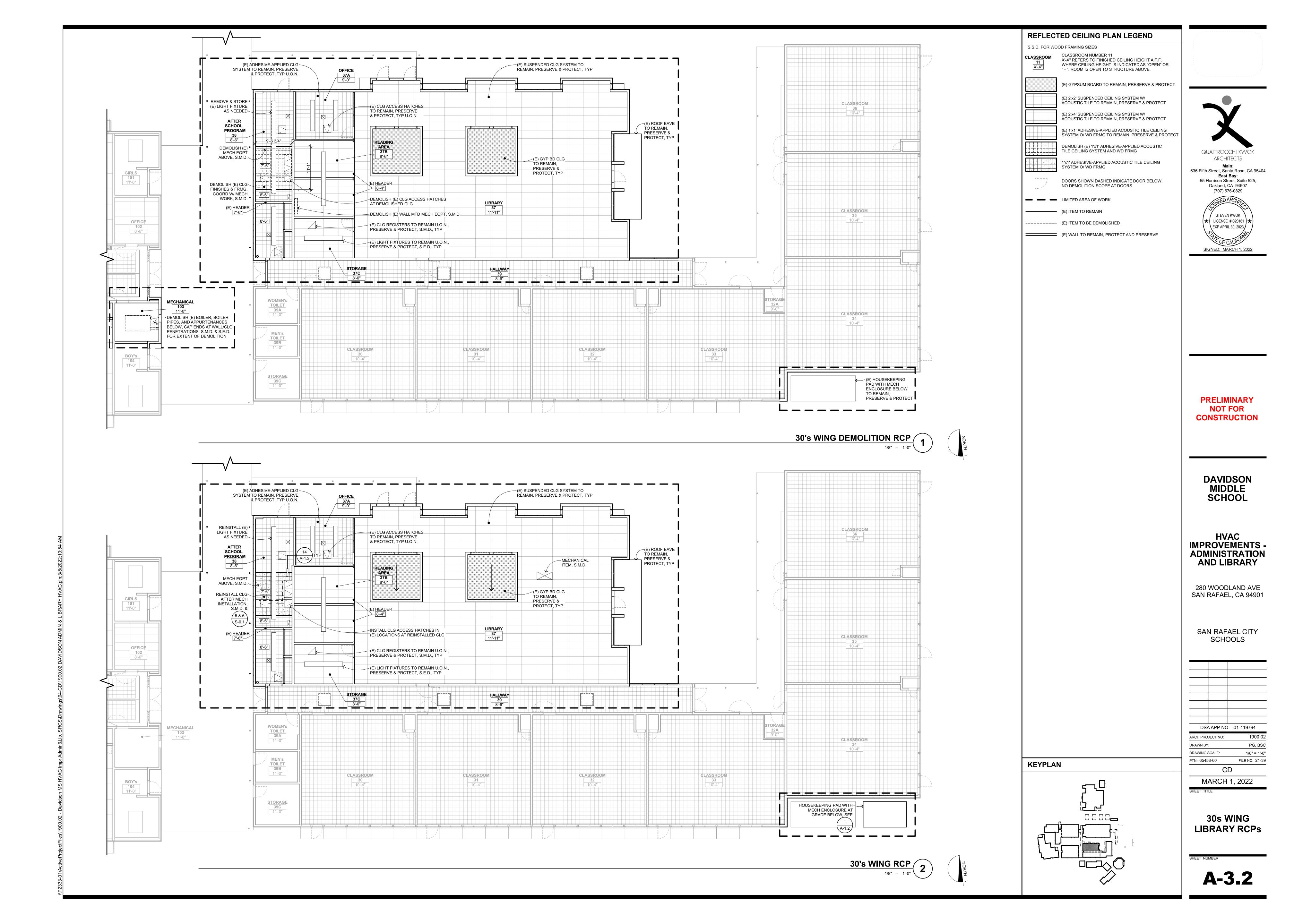


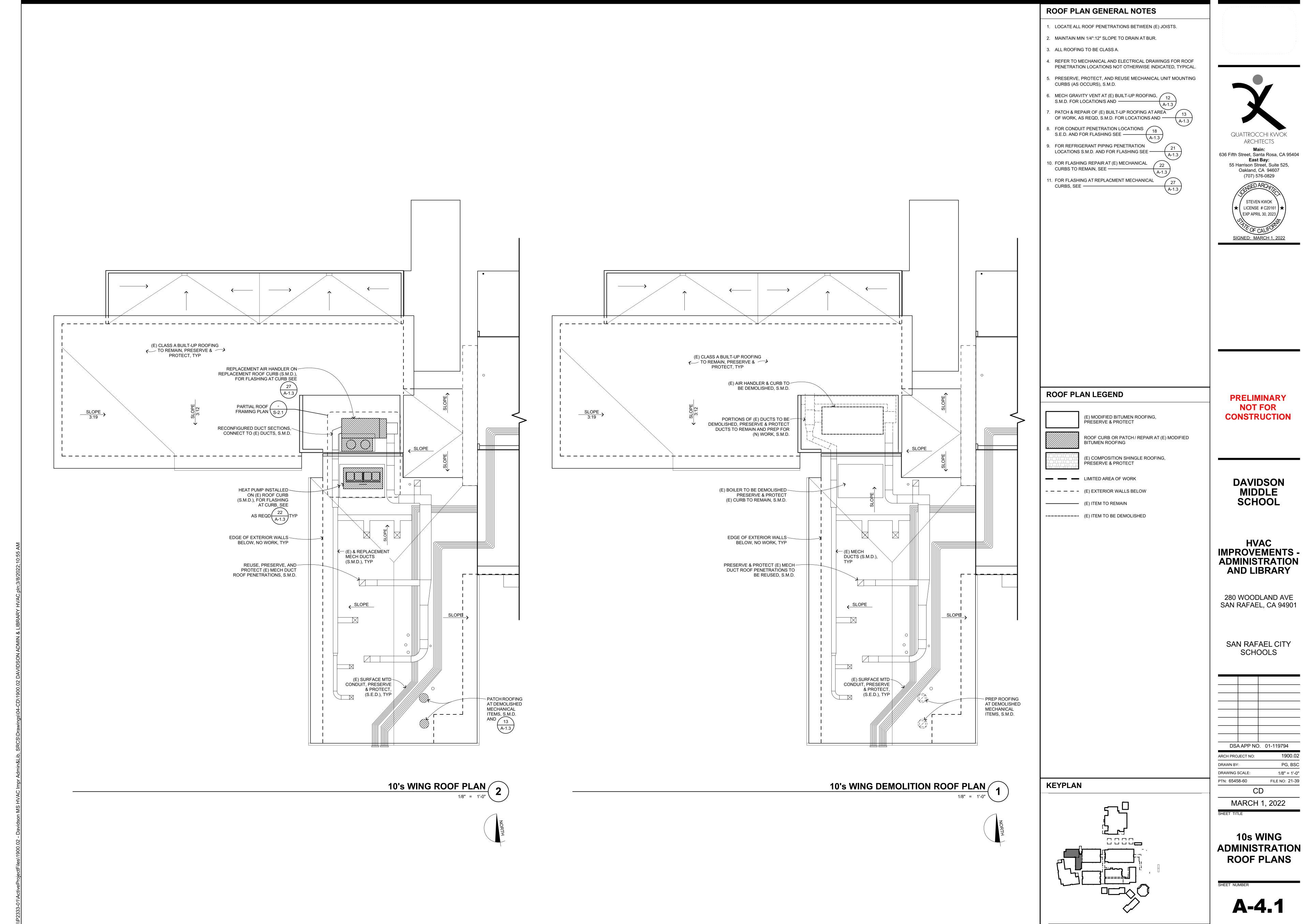
PG, BSC DRAWN BY: DRAWING SCALE: 1/8" = 1'-0" PTN: 65458-60 FILE NO: 21-39

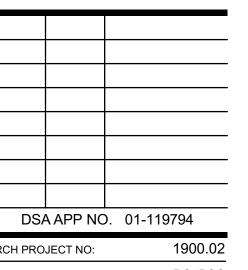
MARCH 1, 2022

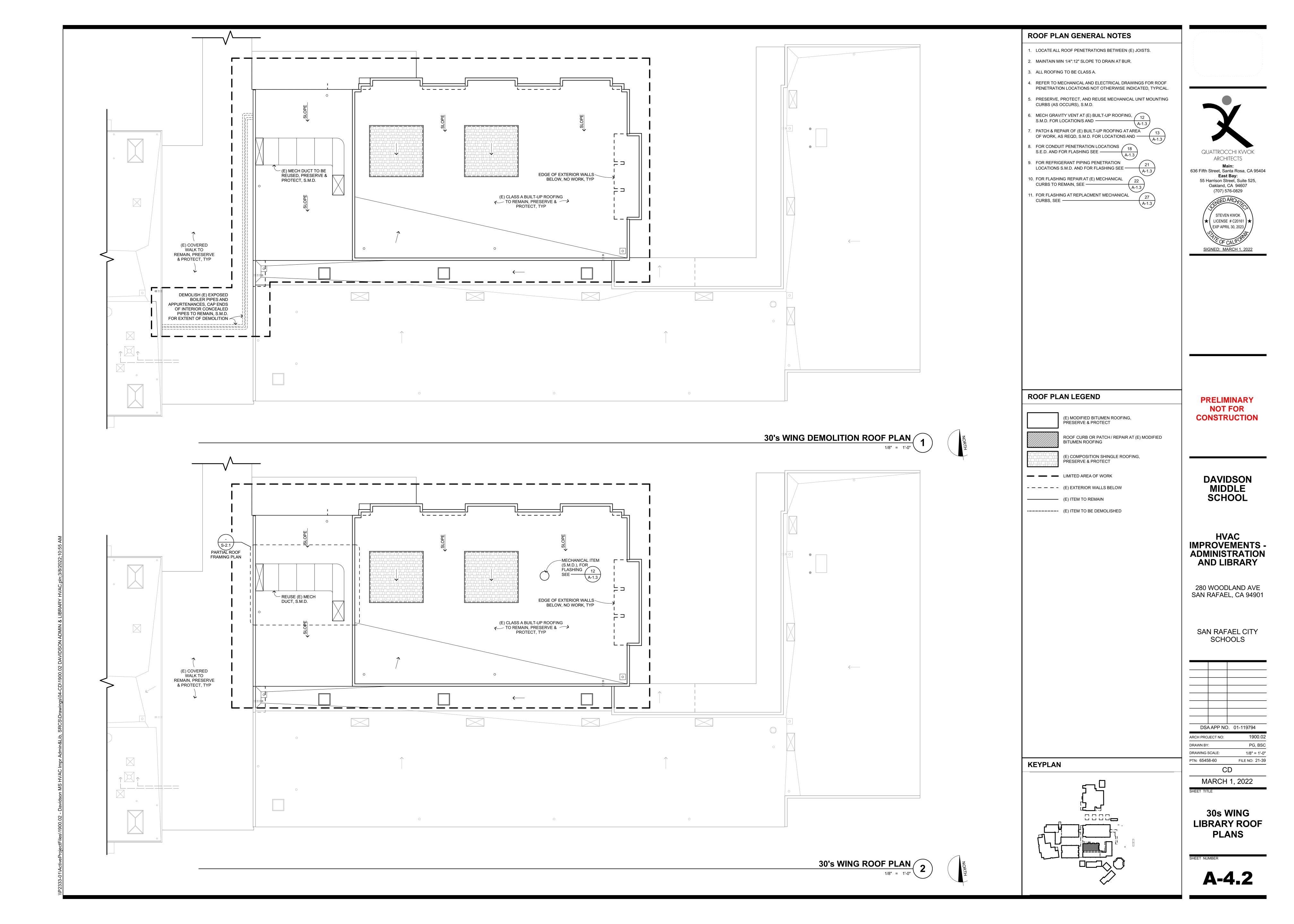
10s WING **ADMINISTRATION** RCP

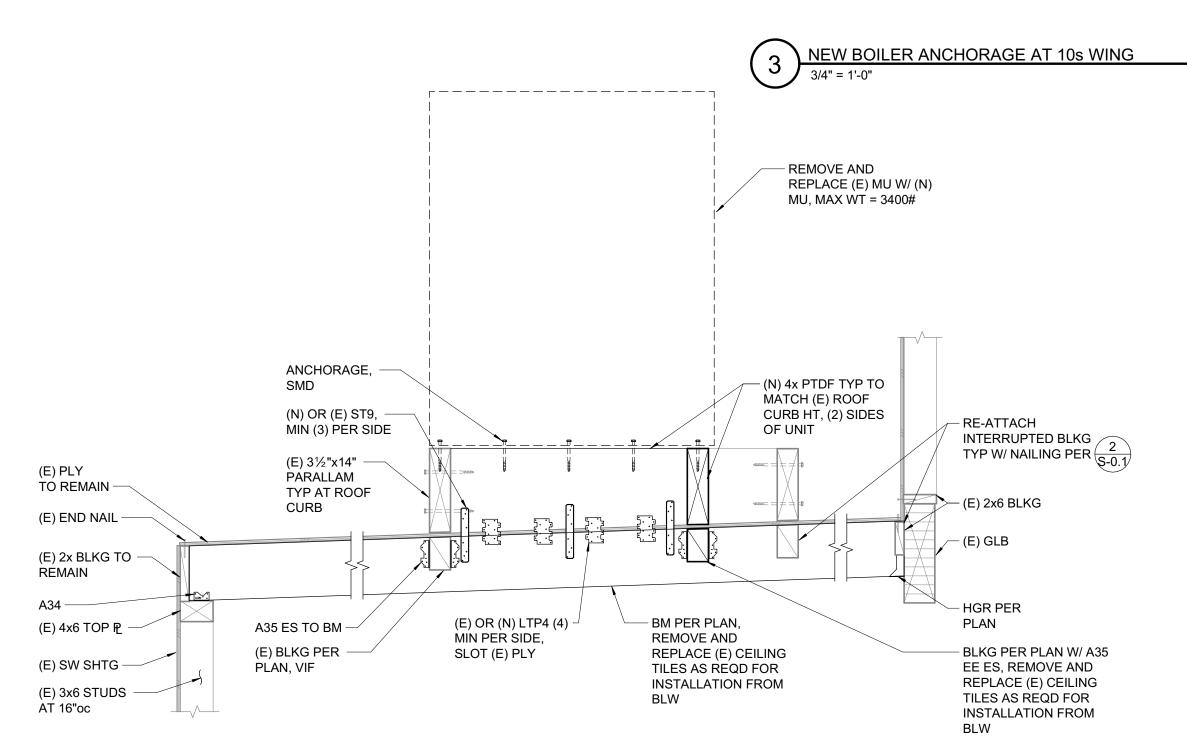
A-3.1



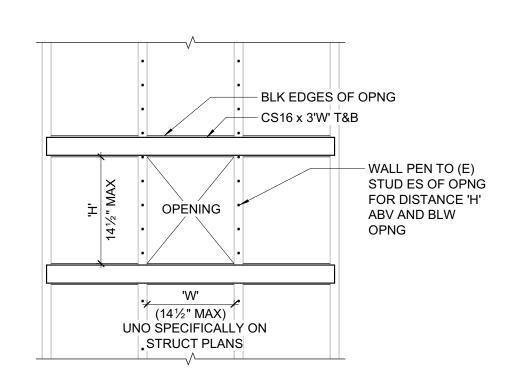








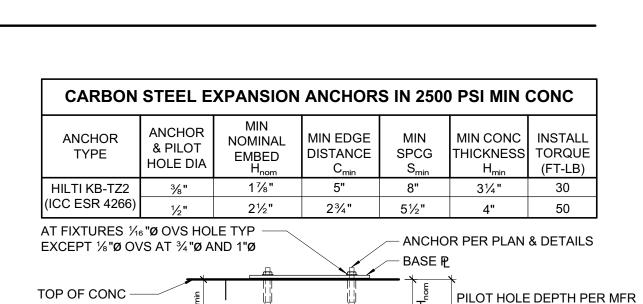
NEW DOAS UNIT ANCHORAGE AT 10s WING



1. USE ONLY WHERE SPECIFIED ON ADMIN HVAC FLOOR PLAN M-2.1 2. PROTECT IN PLACE (E) SHEAR WALL SHEATHING, STUDS, AND SHEAR WALL

SMALL OPENINGS IN SHEAR WALLS





. INSTALL EXPANSION ANCHORS PER MANUFACTURER'S INFORMATION AND ICC REPORT INSTRUCTIONS. SPECIAL INSPECTION IS REQUIRED PER SECTION 1705A AND THE REQUIREMENTS OF THE ICC REPORTS.

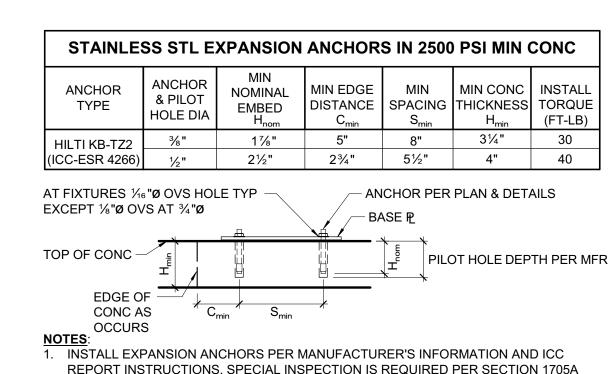
ARE IN ACCORDANCE W/ SCHEDULE PRIOR TO INSTALLING ANCHOR.

- 2. CONTRACTOR TO VERIFY MINIMUM EDGE DISTANCES, SPACING AND THICKNESS
- 3. WHEN INSTALLING DRILLED-IN ANCHORS IN EXISTING REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN A REASONABLE CLEARANCE BETWEEN REINFORCEMENT AND THE DRILLED-IN ANCHOR. FILL ABANDONED HOLES W/ HIGH
- 4. THE SPECIAL INSPECTOR SHALL PERFORM PERIODIC/CONTINUOUS INSPECTION IN ACCORDANCE WITH TABLE 1705A.3. THE SPECIAL INSPECTOR SHALL INSPECT ANCHOR TYPE, ANCHOR DIMENSIONS, HOLE CLEANLINESS, EMBEDMENT DEPTH, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, DRILL BIT DIAMETER, HOLE DEPTH, EDGE DISTANCE(S), ANCHOR SPACING(S), CONCRETE THICKNESS, AND TIGHTENING TORQUE.

5. TEST ANCHORS IN ACCORDANCE W/ CBC SECTION 1910A.5.

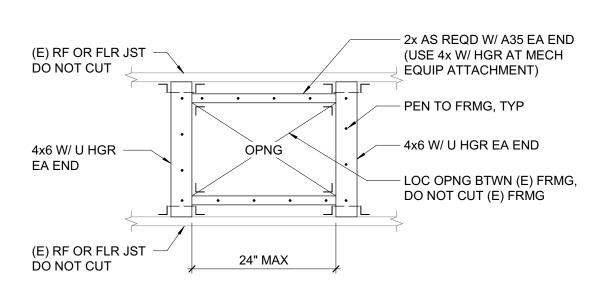
<u>CARBON STEEL EXPANSION ANCHOR IN CONCRET</u>

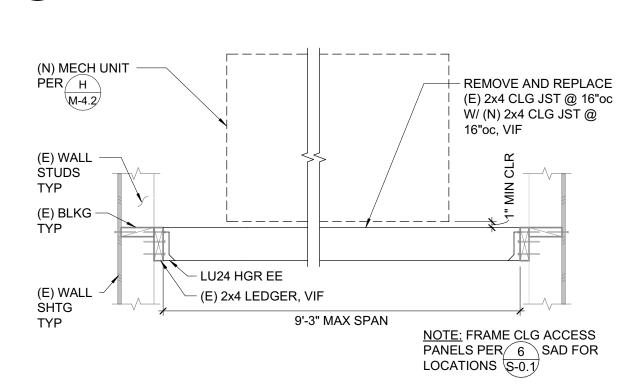
OCCURS



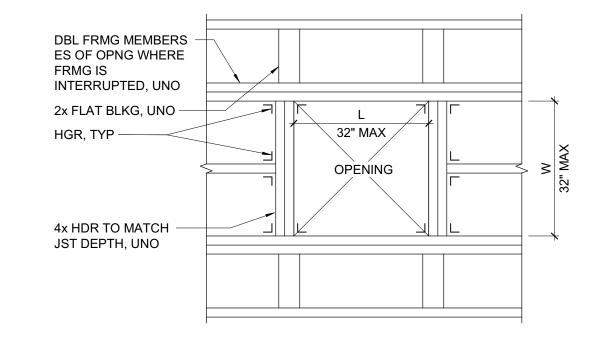
- REPORT INSTRUCTIONS. SPECIAL INSPECTION IS REQUIRED PER SECTION 1705A AND THE REQUIREMENTS OF THE ICC REPORTS.
- 2. CONTRACTOR TO VERIFY MINIMUM EDGE DISTANCES, SPACING AND THICKNESS ARE IN ACCORDANCE W/ SCHEDULE PRIOR TO INSTALLING ANCHOR.
- 3. WHEN INSTALLING DRILLED-IN ANCHORS IN EXISTING REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN A REASONABLE CLEARANCE BETWEEN REINFORCEMENT AND THE DRILLED-IN ANCHOR. FILL ABANDONED HOLES W/ HIGH STRENGTH GROUT.
- 4. THE SPECIAL INSPECTOR SHALL PERFORM PERIODIC/CONTINUOUS INSPECTION IN ACCORDANCE WITH TABLE 1705A.3. THE SPECIAL INSPECTOR SHALL INSPECT ANCHOR TYPE, ANCHOR DIMENSIONS, HOLE CLEANLINESS, EMBEDMENT DEPTH, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, DRILL BIT DIAMETER, HOLE DEPTH, EDGE DISTANCE(S), ANCHOR SPACING(S), CONCRETE THICKNESS, AND TIGHTENING TORQUE.
- 5. TEST ANCHORS IN ACCORDANCE W/ CBC SECTION 1910A.5.

STAINLESS STEEL EXPANSION ANCHOR IN CONCRETE





CEILING JOISTS AT EXISTING WALLS (LOCATION: 30s WING, AFTER SCHOOL PROGRAM ROOM 38)



- 2x4 W/ A35 EA END TYP - CEILING JST DO NOT CUT 24" MAX

B ISOLATED OPENING BETWEEN FRAMING UP TO 24" OPENING AT CEILING JOISTS (LOCATION: 30s WING, AFTER

SCHOOL PROGRAM ROOM 38)

WOOD FRAMING NOTES

1. ALL BEAMS AND JOISTS SHALL BE SEAT CUT FOR FULL UNIFORM BEARING AT SUPPORTS, INCLUDING BEAM SEATS AND COLUMN CAPS.

2. SEE 1/S-0.1 FOR SHEATHING NAILING REQUIREMENTS. ALL NAILING NOT NOTED OR DETAILED OTHERWISE SHALL BE PER 2/S-0.1 . NAIL LENGTH TO BE SUFFICIENT TO MEET CBC PENETRATION REQUIREMENTS. NAILS INTO PRESSURE TREATED MATERIAL SHALL BE HOT DIP GALVANIZED. NAILS AT BORATE TREATED LUMBER MAY BE CLEAR ZINC COATED. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AT EXTERIOR EXPOSURES.

- 3. FOR ROOF DRAINAGE, TOP OF FRAMING BETWEEN NOTED POINTS IS A STRAIGHT
- 4. ALL MECHANICAL SUPPLY AND RETURN OPENINGS TO BE BETWEEN FRAMING UNO.
- 5. JOISTS, RAFTERS, AND BLOCKING ARE PER PLAN. HANGER SIZE TO BE CORRECT FULL SIZE FOR JOIST SIZE (I.E. LU210 FOR 2x10). FILL ALL NAIL HOLES.
- 6. ROUND HOLES IN STEEL PLATES TO BE 1/16" OVERSIZE. SLOTTED HOLES IN STEEL PLATES SHALL BE 1/16" WIDER THAN THE BOLT DIAMETER AND HAVE A LENGTH OF 2 TIMES THE BOLT DIAMETER. THE DIRECTION OF THE SLOTTED LENGTH IS INDICATED ON THE DETAILS (VSH OR HSH). INSTALL BOLT AT THE CENTER LINE OF THE HOLE. BOLT HOLES IN WOOD SHALL BE ROUND AND $\frac{1}{32}$ " OVERSIZE. CUT OFF BOLT THREADED END FLUSH WITH NUT WHEN REQUIRED BY FINISHES AND 1" MAXIMUM FROM NUT OTHERWISE. PROVIDE STANDARD CUT WASHERS UNDER HEAD AND NUT WHERE BOLT BEARS ON WOOD. USE PLATE OR MALLEABLE IRON WASHERS AT EXPOSED CONDITIONS OR AS INDICATED.
- 7. ALL BOLTED OR NAILED STRAP CONNECTIONS SHALL HAVE AN EQUAL NUMBER OF BOLTS OR NAILS EACH SIDE OF THE SPLICE JOINT. THE FIRST BOLT OR NAIL FROM EACH SIDE OF THE SPLICED OR STRAPPED MEMBER SHALL BE EQUIDISTANT FROM THE SPLICE. STRAPS USING 16d NAILS ON 2x MATERIAL TO BE INSTALLED ON THE 1½" EDGE OF THE MEMBER.
- 8. THE CONTRACTOR SHALL VERIFY THAT THE MOISTURE CONTENT OF ALL FRAMING LUMBER AND SHEATHING MEET THE REQUIREMENTS OF THE SPECIFICATIONS AT THE TIME OF INSTALLATION AND AT CLOSE-IN. THE CONTRACTOR SHALL PROVIDE ALLOWANCE FOR DIFFERENTIAL SHRINKAGE BETWEEN FLOORS, ETC.
- 9. VENTING IS REQUIRED IN ENCLOSED FRAMING AREAS, SAD. DRILL BLOCKING AND LEDGERS AND PROVIDE SKIP BLOCKING AS DETAILED.
- 10. SAD FOR CEILING INFO.
- 11. ALL SHEATHING SHALL HAVE 1/8" GAP AT ALL EDGES AND JOINTS. TYPICAL
- A. ROOF SHEATHING: APA RATED SHEATHING (40/20) EXP 1 WITH THICKNESS TO MATCH EXISTING SHEATHING THICKNESS WITH 10d @ 6"oc EDGES (PEN) AND 12"oc FIELD. LAY PERPENDICULAR TO FRAMING MEMBERS. BLOCK EDGÉS WITH 2x4 LAID FLAT. NO PANELS LESS THAN 24" WIDE SHALL BE USED. STAGGER

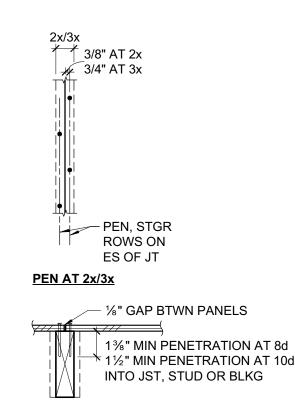
MATERIAL DATA

(INFORMATION SHOWN IS FOR STRUCTURAL DESIGN REFERENCE ONLY. SEE THE PROJECT SPECIFICATIONS FOR ALL MATERIAL SPECIFICATIONS.) FASTENERS:

MACHINE BOLTS SHALL BE ASTM A307 GRADE A ARC-WELDING ELECTRODES SHALL BE E70

WO	WOOD BASE DESIGN STRESSES (UNO):									
	SAWN LUMBER MEMBER	SPECIES AND MINIMUM GRADE, UNO	F _b (PSI)	F _v (PSI)	E (P					
	BLOCKING, ROOF RAFTER, CEILING JST	DOUGLAS FIR - #1	1000	180	1.7x1					
				-						

FOR METAL CONNECTOR DESIGNATION REFER TO SIMPSON STRONG-TIE PER



SECTION AT TYPICAL NAIL SPACING (4"oc OR MORE SPACING)

SHEATHING SHEETS ARE TO BE AS LARGE AS POSSIBLE. STAGGER SHEETS. JOINTS ARE TO BE CENTERED OVER BEARING. NAIL HEADS SHALL BE DRIVEN FLUSH W/ SHEATHING. MINIMUM SHEATHING SIZE IS 24" WIDTH x 48" LENGTH.

RIM JOIST TO TOP P., TOE NAIL	10d @ 6"oc
TRUSSES, JOISTS OR RAFTERS AT ALL BEARING POINTS	
TOE NAILS EACH SIDE	(2) 10d
EIGHT (8) INCH JOISTS OR RAFTERS TO SIDE OF STUDS EIGHT (8) INCH JOISTS OR LESS	(3) 16d
FOR EACH ADDITIONAL 4 INCHES OF DEPTH OF JOIST	(1) 16d
BLOCKING BETWEEN JOISTS OR RAFTERS:	(2) 10d
TO JOIST OR RAFTERS - TOE NAILS EA SIDE, EA END TO JOIST OR RAFTER BEARINGS - TOE NAILS EA SIDE	(2) 10d
BI OCKING BETWEEN STUDS FACH END TOE NAILS	(2) 10d OR (2) 16d
BLOCKING BETWEEN STUDS, EACH END TOE NAILS	(2) 8d
2" SUBFLOOR TO JOIST OR GIRDER, BLIND & FACE NAIL SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL	(2) 16d
SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL	
SOLE PLATE TO JOIST OR BLOCKING AT	(0) 40 1 0 40"
SOLE PLATE TO JOIST OR BLOCKING AT BRACED WALL PANELS TOP PLATE TO STUD, END NAIL STUD TO SOLE PLATE, TOE NAIL	(3) 16d @ 16"0C
STUD TO SOLE DI ATE TOE MAIL	(2) 100
DOLIRI E STUDS AT EXTERIOR WALLS FACE NAIL	16d @ 12"oc
DOUBLE STUDS AT EXTERIOR WALLS, FACE NAIL DOUBLE STUDS, FACE NAIL DOUBLE TOP PLATES, FACE NAIL	16d @ 24"oc
DOUBLE TOP PLATES, FACE NAIL	16d @ 12"oc
TOP PLATES TAPS & INTERSECTIONS FACE NAIL ************************************	· · (3) 10u
CONTINUOUS HEADER, TWO PIECES 16d @ 16	"oc ALONG EACH EDGE
DOUBLE TOP PLATE LAP AT CORNER CONTINUOUS HEADER TO STUD, TOE NAIL	(3) 16d
CONTINUOUS HEADER TO STUD, TOE NAIL	(2) 164
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	(3) 16d
CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL BUILT-UP CORNER STUDS	(3) 10d 12"0c (3) 12"0c
POST TO SILL/SOLE/TOP PLATE, EACH SIDE TOE NAIL	(4) 10d
,	. ,

DESIGN CRITERIA

<u>WIND DATA</u>:

SCOPE:

DESIGN CRITERIA: 2019 CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2 (CBC) ROOF LIVE LOAD: 20 PSF (REDUCIBLE)

> ULTIMATE WIND SPEED (3 SEC GUST) IN MPH: 98 WIND EXPOSURE: C

INTERNAL WIND PRESSURE COEFFICIENT (GCPI) = ±0.18 COMPONENTS AND CLADDING DESIGN PRESSURES FOR SYSTEMS DESIGNED BY OTHERS SHALL COMPLY WITH THE "ASCE 7-16" DESIGN STANDARD EARTHQUAKE DATA: SEISMIC IMPORTANCE FACTOR, I.: 1.25

MAPPED SPECTRAL RESPONSE ACCELERATIONS: $S_8 = 1.50$; $S_1 = 0.60$ SITE CLASS: D - DEFAULT SPECTRAL RESPONSE COEFFICIENTS: $S_{DS} = 1.20$; $S_{D1} = 0.68$ SEISMIC DESIGN CATEGORY: D

MAXIMUM ANTICIPATED STORY DRIFT = 0.02 X HEIGHT PROVIDE DEFORMATION COMPATIBILITY PER ASCE 7 SECTION 12.12.5 FOR NON-STRUCTURAL ITEMS, INCLUDING CLADDING, STAIRS, GLAZING, ETC.

MECHANICAL UNIT REPLACEMENTS AT (2) ONE-STORY WOOD-FRAMED BUILDINGS.

GENERAL NOTES

- 1. REFER TO SHEET <u>S-0.1</u> FOR STANDARD DETAILS OF CONSTRUCTION. REFER TO THE PROJECT SPECIFICATIONS FOR MATERIALS AND METHODS.
- 2. STRUCTURAL DRAWINGS SHALL NOT BE SCALED. ALL DIMENSIONS AND FIT SHALL BE DETERMINED AND VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING
- 3. DETAILS NOT FULLY OR SPECIFICALLY SHOWN SHALL BE OF SAME NATURE AS OTHER SIMILAR CONDITIONS.
- 4. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS.
- 5. COORDINATION OF MECHANICAL, ELECTRICAL, PLUMBING, AND SITE UTILITY SYSTEMS WITH THE STRUCTURAL SYSTEM IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. USE DETAILS ON SHEET **<u>\$-0.1</u>**. AT CONDITIONS WHERE THESE DETAILS DO NOT APPEAR TO APPLY, NOTIFY THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION. AT CONDITIONS WHERE FIELD MODIFICATIONS OF MECHANICAL, ELECTRICAL, PLUMBING, OR SITE UTILITIES AFFECT STRUCTURAL SYSTEMS, NOTIFY STRUCTURAL ENGINEER PRIOR TO INSTALLATION.
- 6. VERIFY WEIGHTS AND LOCATIONS OF MECHANICAL UNITS WITH MECHANICAL ENGINEER PRIOR TO PLACEMENT. UNITS VARYING OVER 10% IN WEIGHT SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION (MECHANICAL WEIGHTS SHOWN ARE MAXIMUM). CONTRACTOR TO VERIFY MECHANICAL UNIT SIZES AND WEIGHTS AS INSTALLED PRIOR TO INSTALLATION OF SPECIAL FRAMING TO ENSURE CORRECT PLACEMENT UNDER CURBS, ETC. SEE 3/S-0.1 AND 7/S-0.1.
- 7. SHORING AND BRACING DESIGN. MATERIALS AND INSTALLATION SHALL BE PROVIDED BY THE GENERAL CONTRACTOR, AND SHALL BE ADEQUATE FOR ALL LOADS. LEAVE IN PLACE AS LONG AS MAY BE REQUIRED FOR SAFETY AND UNTIL FINAL STRUCTURAL CONSTRUCTION IS COMPLETED. THE CONTRACTOR SHALL ENGAGE A LICENSED CIVIL OR STRUCTURAL ENGINEER TO PROVIDE SHORING.
- 8. SPECIAL INSPECTIONS ARE REQUIRED PER THE TESTING AND INSPECTION FORM, SEE SPECIFICATIONS.
- 9. VEHICULAR TRAFFIC, HEAVY EQUIPMENT AND MATERIAL STAGING SHALL NOT BE ALLOWED ADJACENT TO ANY RETAINING/BASEMENT WALL. NEW OR EXISTING WITHIN A HORIZONTAL DISTANCE EQUAL TO THE WALL HEIGHT MEASURED FROM THE BOTTOM OF FOOTING OR 5'-0" WHICHEVER IS GREATER, UNLESS APPROVED BY THE STRUCTURAL ENGINEER OR NOTED OTHERWISE. WITHIN THIS ZONE, ONLY HAND-OPERATED EQUIPMENT ("WHACKERS", VIBRATORY PLATES, OR PNEUMATIC COMPACTORS) SHALL BE USED TO COMPACT THE BACKFILL SOILS.
- 10. PER CBC 2019, SECTION 1705A.3.3.2, BATCH PLANT INSPECTION IS NOT REQUIRED FOR CONCRETE SLAB ON GRADE AT MECHANICAL ENCLOSURES (SAD), PROVIDED THE LICENSED WEIGHMASTER AND BATCH TICKET REQUIREMENTS OF CBC SECTION 1705A.3.3.1 ARE IMPLEMENTED.

CBC 2019 SECTION 1705A.3.3.1 WAIVER OF CONTINUOUS BATCH PLAN INSPECTION. CONTINUOUS BATCH PLANT INSPECTION MAY BE WAIVED BY THE REGISTERED DESIGN PROFESSIONAL, SUBJECT TO APPROVAL BY THE ENFORCEMENT AGENCY UNDER EITHER OF THE FOLLOWING CONDITONS:

1. THE CONCRETE PLANT COMPLIES FULLY WITH THE REQUIREMENTS OF ASTM C94. SECTIONS 9 AND 10. AND HAS A CURRENT CERTIFICATE FROM THE NATIONAL READY MIXED CONCRETE ASSOCIATION OR ANOTHER AGENCY ACCEPTABLE TO THE ENFORCEMENT AGENCY. THE CERTIFICATION SHALL INDICATE THAT THE PLANT HAS AUTOMATIC BATCHING AND RECORDING CAPABILITIES. 2. FOR SINGLE-STORY LIGHT-FRAMED CONSTRUCTION (WITHOUT BASEMENT OR

RETAINING WALLS HIGHER THAN 6 FEET IN HEIGHT MEASURED FROM BOTTOM OF FOOTING TO TOP OF WALL) AND ISOLATED FOUNDATIONS SUPPORTING EQUIPMENT ONLY, WHERE DEEP FOUNDATION ELEMENTS ARE NOT USED. WHEN CONTINUOUS BATCH PLANT INSPECTION IS WAIVED, THE FOLLOWING

CONSTRUCTION DOCUMENTS: 1. AN APPROVED AGENCY SHALL CHECK THE FIRST BATCH AT THE START OF THE DAY TO VERIFY MATERIALS AND PROPORTIONS CONFORM TO THE

REQUIREMENTS SHALL APPLY AND SHALL BE DESCRIBED IN THE

APPROVED MIX DESIGN.

2. A LICENSED WEIGHMASTER SHALL POSITIVELY IDENTIFY QUANTITY OF MATERIALS AND CERTIFY EACH LOAD BY A BATCH TICKET.

3. BATCH TICKETS, INCLUDING MATERIAL QUANTITIES AND WEIGHTS SHALL ACCOMPANY THE LOAD, SHALL BE TRANSMITTED TO THE INSPECTOR OF RECORD BY TEH TRUCK DRIVER WITH LOAD IDENTIFIED THEREON. THE LOAD SHALL NOT BE PLACED WITHOUT A BATCH TICKET IDENTIFYING THE MIX. THE INSPECTOR OF RECORD SHALL KEEP A DAILY RECORD OF PLACEMENTS, IDENTIFYING EACH TRUCK, ITS LOAD, AND TIME OF RECEIPT AT THE JOBSITE, AND APPROXIMATE LOCATION OF DEPOSIT IN THE STRUCTURE AND SHALL MAINTAIN A COPY OF THE DAILY RECORD AS REQUIRED BY THE ENFORCEMENT

11. TYPICAL SLAB ON GROUND FOR OUTDOOR MECHANICAL EQUIPMENT AND ENCLOSURE: 6" CONCRETE REINFORCED WITH #4 @ 16"oc EACH WAY AT MID-DEPTH OVER VAPOR RETARDER OVER 6" MINIMUM OF $\frac{3}{4}$ " FREE DRAINING COMPACTED ROCK OVER 12" MINIMUM COMPACTED CLASS 2 AGGREGATE BASE WITH MINIMUM 90% RELATIVE COMPACTION ON SUBGRADE OVER NATIVE, UNDISTURBED SOIL. DO NOT DRIVE CONCRETE TRUCKS OR LARGE SCREED MACHINES ON VAPOR BARRIER WITHOUT APPROVAL FROM THE STRUCTURAL

EXISTING CONSTRUCTION NOTES

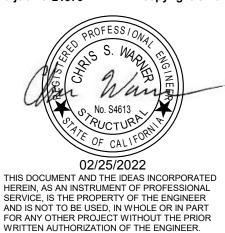
- 1. IN PREPARING THE PROJECT PLANS, THE SOURCE OF INFORMATION WAS BASED ON THE EXISTING BUILDING PLANS: DSA APPLICATION #24959 DATED 1964. DSA APPL #102958 DATED 2012, DSA APPLICATION #106020 DATED 2004, AND DSA APPLICATION #119448 DATED 2021. THE CONTRACTOR SHALL VERIFY ALL EXISTING JOB CONDITIONS, REVIEW THE PLANS AND VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ALL DISCREPANCIES AND EXCEPTIONS BEFORE PROCEEDING WITH ANY WORK. DRAWINGS FOR THE EXISTING CONSTRUCTION ARE AVAILABLE FOR REVIEW.
- 2. ALL WORK NOT INDICATED AS EXISTING (E) SHALL BE ASSUMED TO BE NEW (N)
- 3. ANY REMOVAL, CUTTING, DRILLING, ETC OF EXISTING WORK SHALL BE PERFORMED WITH GREAT CARE. SMALL TOOLS SHALL BE USED IN ORDER NOT TO JEOPARDIZE THE STRUCTURAL INTEGRITY OF THE STRUCTURE. IF STRUCTURAL MEMBERS OR MECHANICAL, ELECTRICAL, OR ARCHITECTURAL ELEMENTS NOT INDICATED FOR REMOVAL INTERFERE WITH THE NEW WORK, THE ARCHITECT/ENGINEER SHALL BE IMMEDIATELY NOTIFIED AND PRIOR APPROVAL SHALL BE OBTAINED BEFORE REMOVAL OF THE MEMBERS.
- 4. DO NOT OVER CUT EXISTING WOOD, CONCRETE, MASONRY OR OTHER WORK TO REMAIN. CUTS SHALL BE MADE NEATLY TO A CORNER, THEN ALTERNATE MEANS SHALL BE USED TO REMOVE REMAINING MATERIAL. CONTRACTOR IS RESPONSIBLE FOR REPAIR/REPLACEMENT OF OVER CUT MATERIAL AS DIRECTED BY THE ARCHITECT AND/OR ENGINEER.
- 5. EXISTING DAMAGED STRUCTURAL MEMBERS WHICH ARE UNCOVERED SHALL BE REPORTED TO THE ARCHITECT/ENGINEER FOR REVIEW AND REPAIR.
- 6. EXISTING CONCRETE SURFACE ABUTTING NEW CONCRETE SHALL BE ROUGHENED TO ¼" AMPLITUDE AND THOROUGHLY CLEANED OF DUST, LOOSE AGGREGATE, LAITANCE, ETC.
- 7. EXISTING REINFORCING AND/OR STEEL EMBEDS THAT ARE EXPOSED DURING DEMOLITION SHALL BE WIRE-BRUSHED AND FOREIGN MATERIAL REMOVED PRIOR TO PLACEMENT OF NEW CONCRETE.

SHEET INDEX 6-0.1 GENERAL NOTES AND DETAILS S-2.1 10s WING AND 30s WING PARTIAL ROOF FRAMING PLANS



636 Fifth Street, Santa Rosa, CA 95404 Pleasanton Office: 600 Main Street, Suite E Pleasanton, CA 94566 (707) 576-0829

ZFA STRUCTURAL ENGINEERS 1212 fourth street | suite z santa rosa ca 95404 707.526.0992 copyright © 2021 zfa job no. 21370



PRELIMINARY NOT FOR CONSTRUCTION

DAVIDSON SCHOOL

HVAC IMPROVEMENTS -ADMINISTRATION AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

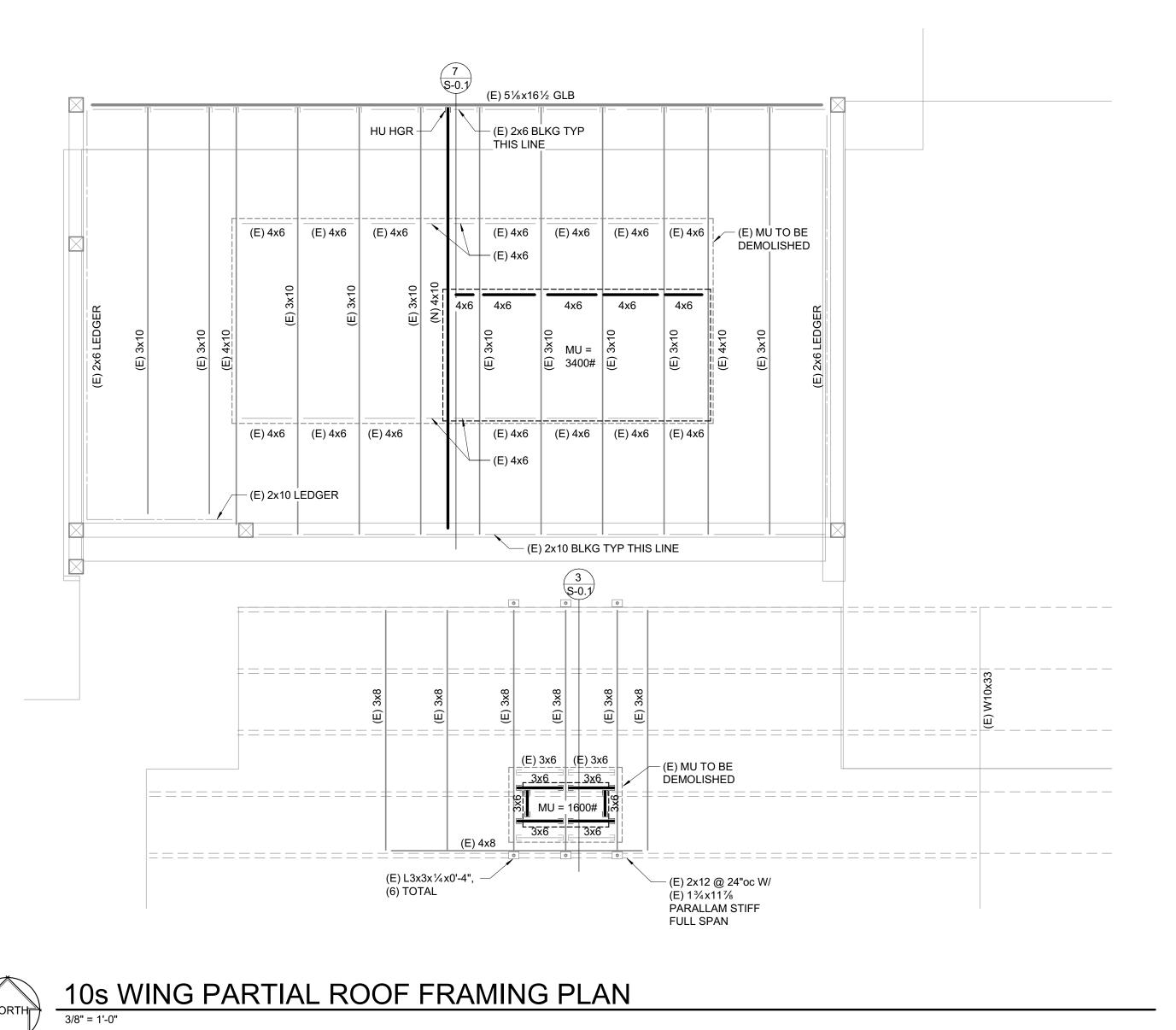
SAN RAFAEL CITY

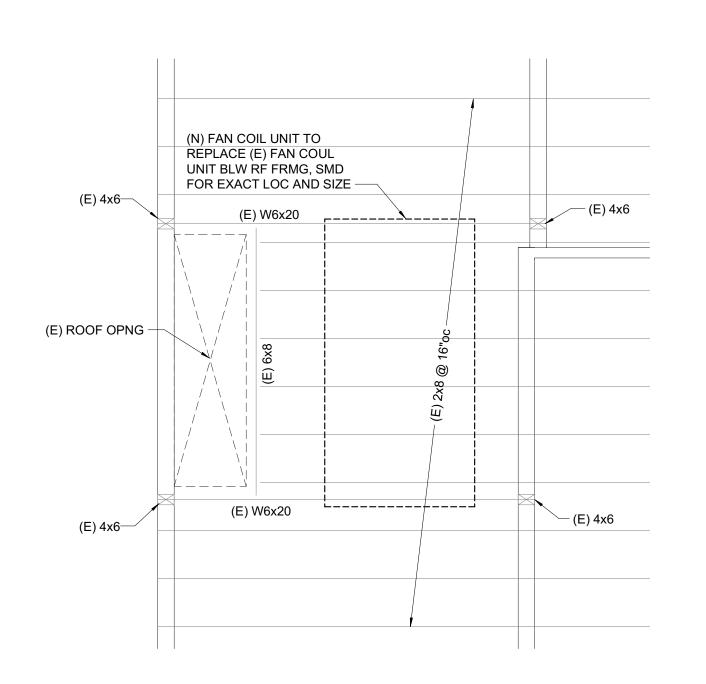
DS	A APP N	O. 01-119794	

ARCH PROJECT NO: ENGINEER: PROJECT MANAGER: FILE NO: 21-39 PTN: 65458-60

MARCH 1, 2022

GENERAL NOTES AND DETAILS





30S WING PARTIAL ROOF FRAMING PLAN
3/8" = 1'-0"

FRAMING PLAN

- REFER TO SHEETS <u>S-0.1</u> FOR GENERAL NOTES AND TYPICAL DETAILS. THE
 FOLLOWING DETAIL REFERENCES ARE PROVIDED FOR THE CONTRACTOR'S
 CONVENIENCE ONLY. ALL GENERAL NOTES AND TYPICAL DETAIL SHEETS NOTED
 ABOVE ARE APPLICABLE AND SHALL BE FOLLOWED.
- COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
- 3. MECHANICAL, ELECTRICAL AND PLUMBING PENETRATIONS THROUGH ROOFS SHALL BE PER REFERENCES BELOW UNLESS SHOWN AND DETAILED OTHERWISE ON THE STRUCTURAL PLANS. NO PENETRATIONS ARE ALLOWED THROUGH SHEAR WALLS. NOTIFY ARCHITECT/ENGINEER PRIOR TO ANY INSTALLATION NOT CONFORMING TO THESE DETAILS.

PENETRATIONS THROUGH FLOORS/ROOFS SHALL BE PER 4/S-0.1.

4. COORDINATE TOP OF FRAMING AND LEDGER HEIGHTS AS REQUIRED TO PROVIDE ROOF SLOPES AS SHOWN ON ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.

	PLAN LEGEND									
SYMBOL	DESCRIPTION									
	INDICATES STRUCTURAL WALL.									
\boxtimes	INDICATES WOOD POST.									
	INDICATES EXISTING BEAM, JOIST, OR BLOCKING.									
	INDICATES EXISTING JOIST BELOW.									
E	INDICATES HANGER.									
	INDICATES LEDGER. SEE PLAN FOR SIZE.									
[MU] [1,000#]	INDICATES APPROXIMATE LOCATION, SIZE AND MAXIMUM WEIGHT OF MECHANICAL UNIT. SEE MECHANICAL DRAWINGS FOR ANCHORAGE AND ADDITIONAL INFORMATION.									
	INDICATES APPROXIMATE LOCATION AND SIZE OF (E) MECHANICAL UNIT TO BE DEMOLISHED.									
	INDICATES EXISTING FRAMING.									



Main Office:
636 Fifth Street, Santa Rosa, CA 95404
Pleasanton Office:
600 Main Street, Suite E,
Pleasanton, CA 94566
(707) 576-0829



PRELIMINARY
NOT FOR
CONSTRUCTION

DAVIDSON MIDDLE SCHOOL

HVAC IMPROVEMENTS -ADMINISTRATION AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY SCHOOLS

DS	A APP N	Э.	01-119794	

DSA APP NO. 01-119794

RCH PROJECT NO: 1900.02

PTN: 65458-60	FILE NO: 21-39
PROJECT MANAGER:	CSW
ENGINEER:	DM
ARCH PROJECT NO:	1900.02

MARCH 1, 2022

10s WING AND 30s WING PARTIAL ROOF FRAMING PLANS

SHEET NUMBER

S-2.1

	VRV SYSTEM INDOOR UNIT SCHEDULE												
				ELE	ELECTRICAL DATA			RATED					
MARK	MFR	MODEL	CFM	V-Ø-HZ	MCA	MOCP	HEATING	COOLING	FILTER	WEIGHT	SERVICE	REMARKS	
FC A1	DAIKIN	FXAQ12PVJU	290	208/230-1-60	0.4	15	13500.0 Btu/h	8900.0 Btu/h	WASHABLE	31 lb	A108-PRINCIPAL	2,3,6	
FC A2	DAIKIN	FXAQ07PVJU	260	208/230-1-60	0.4	15	8500.0 Btu/h	7500.0 Btu/h	WASHABLE	26 lb	A107-BUSINESS	2,3,6	
FC A3	DAIKIN	FXAQ12PVJU	290	208/230-1-60	0.4	15	13500.0 Btu/h	8900.0 Btu/h	WASHABLE	31 lb	A105-SICK ROOM	2,3,6	
FC A4	DAIKIN	FXAQ18PVJU	400	208/230-1-60	0.5	15	20000.0 Btu/h	18000.0 Btu/h	WASHABLE	31 lb	A101- RECEPTION	2,3,6	
FC A5	DAIKIN	FXMQ30PBVJU	812	208/230-1-60	2.8	15	34000.0 Btu/h	30000.0 Btu/h	MERV 13	102 lb	A110- CONFERENCE	1-4	
FC A6	DAIKIN	FXAQ07PVJU	260	208/230-1-60	0.4	15	8500.0 Btu/h	7500.0 Btu/h	WASHABLE	26 lb	A111-OFFICE	2,3,6	
FC A7	DAIKIN	FXAQ07PVJU	260	208/230-1-60	0.4	15	8500.0 Btu/h	7500.0 Btu/h	WASHABLE	26 lb	A112-OFFICE	2,3,6	
FC A8	DAIKIN	FXZQ09TAVJU	317	208/230-1-60	0.3	15	10500.0 Btu/h	9500.0 Btu/h	WASHABLE	36 lb	A113-ASSISTANT PRINCIAL 1	2,3,5	
FC A9	DAIKIN	FXAQ07PVJU	260	208/230-1-60	0.4	15	8500.0 Btu/h	7500.0 Btu/h	WASHABLE	26 lb	A114-OFFICE	2,3,6	
FC A10	DAIKIN	FXAQ07PVJU	260	208/230-1-60	0.4	15	8500.0 Btu/h	7500.0 Btu/h	WASHABLE	26 lb	A117-OFFICE	2,3,6	
FC A11	DAIKIN	FXAQ07PVJU	260	208/230-1-60	0.4	15	8500.0 Btu/h	7500.0 Btu/h	WASHABLE	26 lb	A115-OFFICE	2,3,6	
FC A12	DAIKIN	FXAQ07PVJU	260	208/230-1-60	0.4	15	8500.0 Btu/h	7500.0 Btu/h	WASHABLE	26 lb	A118-OFFICE	2,3,6	
FC A13	DAIKIN	FXZQ09TAVJU	317	208/230-1-60	0.3	15	10500.0 Btu/h	9500.0 Btu/h	WASHABLE	36 lb	A116-ASSISTANT PRINCIPAL 2	2,3,5	
FC A14	DAIKIN	FXZQ09TAVJU	317	208/230-1-60	0.3	15	10500.0 Btu/h	9500.0 Btu/h	WASHABLE	36 lb	A119-COUNSELOR 1	2,3,5	
FC A15	DAIKIN	FXDQ09TAVJU	226	208/230-1-60	0.9	15	10500.0 Btu/h	9500.0 Btu/h	MERV 13	51 lb	A120-COUNSELOR 2	2-4	
FC A16	DAIKIN	FXAQ07PVJU	260	208/230-1-60	0.4	15	8500.0 Btu/h	7500.0 Btu/h	WASHABLE	26 lb	A102-ATTENDANCE	2,3,6	
FC A17A	DAIKIN	FXAQ24PBVJU	635	208/230-1-60	0.06	15	27000.0 Btu/h	24000.0 Btu/h	WASHABLE	31 lb	A122- SUSPENSION	2,3,6	
FC A17B	DAIKIN	FXAQ24PBVJU	635	208/230-1-60	0.06	15	27000.0 Btu/h	24000.0 Btu/h	WASHABLE	31 lb	A122- SUSPENSION	2,3,6	
FC A18	DAIKIN	FXAQ24PBVJU	635	208/230-1-60	0.06	15	27000.0 Btu/h	24000.0 Btu/h	WASHABLE	31 lb	A124-WORK ROOM	2,3,6	
FC A19	DAIKIN	FXAQ24PBVJU	635	208/230-1-60	0.06	15	27000.0 Btu/h	24000.0 Btu/h	WASHABLE	31 lb	A125-LOUNGE	2,3,6	
FC A20	DAIKIN	FXAQ07PVJU	260	208/230-1-60	0.4	15	8500.0 Btu/h	7500.0 Btu/h	WASHABLE	26 lb	A104-NURSE	2,3,6	

REMARKS:

1. PROVIDE OPTIONAL MERV13 FILTER ACCESSORY KIT. 5. MOUNT IN CEILING PER DETAIL H-M4.1 2. PROVIDE ALERTON TEMPERATURE SENSOR, MOUNT MAX 48" AFF. EXISTING 6. MOUNT ON WALL PER DETAIL J-M4.1

ITOUCH MANAGER TO COMMUNICATE WITH EXISTING ALERTON BACNET EMS.

3. PROVIDE FACTORY CONDENSATE PUMP. 4. MOUNT ABOVE CEILING PER DETAIL G-M4.1

	DEDICATED OUTDOOR AIR SYSTEM (DOAS)																	
			UNIT	SL	JPPLY FAN		COOLING	CAPACITY			ELECTRI	CAL DATA						
			SIZE		SUPPLY	AIRFLOW	TOTAL COOLING	SENSIBLE COOLING	HEATING					UNIT	CURB	TOTAL		
MARK	MANUFACTURER	MODEL NUMBER	TONS	ESP	FAN RPM	CFM	(MBH)	(MBH)	CAPACITY(MBH)	EER	V-Ø-Hz	MCA	MOP	WEIGHT	WEIGHT	WEIGHT	SERVICE	REMARKS
AH A1	DAIKIN	DPS10A	10	0.50 in-wg	1251	2800	120.4	99.9	80.7	11.70	460-3-60	91.3	100	2711 lb	660	3371	ADMINISTRATION	1-6

1. BOTTOM SUPPLY/RETURN CONFIGURATION WITH ACCESSORY THYCURB ADAPTER CURB BENEATH UNIT TO CONVERT TO HORIZONTAL DISCHARGE CONNECTIONS.

IONIZATIONSYSTEM MODEL FC-48. CONNECT TO LOW VOLTAGE POWER IN UNIT.

2. PROVIDE WITH MERV-13 2" PLEATED FILTER.

3. FURNISH AND FIELD INSTALL GLOBAL PLASMA SYSTEMS NEEDLEPOINT BIPOLAR

4. FURNISH DUCT MOUNTED SMOKE DETECTOR. SED 5. FURNISH WITH MICROTECH III CONTROLLER FOR BACNET COMPATIBILITY.

6. SEE C-M4.1 FOR MOUNTING DETAIL.

	VRV HEAT RECOVERY UNIT OUTDOOR SCHEDULE										
			UNIT CAPAC	ITIES (MBH)		ELECTRIC AL DATA					
MARK	MFR.	MODEL NO.	HEATING	COOLING	EER.	V-Ø-HZ	MCA	MOP	WEIGHT	SERVICE	REMARKS
VRV A1 DAIKIN REYQ336XAYDA 338.0 320.0 9.9 460-3-60 31.1+31.1 40+40 1586 1-										1-3	

1. PROVIDE WITH ALL NECESSARY REFRIGERATION PIPING & APPURTENANCES; R401A REFRIGERANT 2. SYSTEM COMPLETE WITH DAIKIN I-TOUCH INTELLIGENT CONTROLLER WITH BACNET INTERFACE, CONNECT TO CAMPUS SERVER 3. SEE A-M4.1 FOR MOUNTING DETAIL

BRANCH SELECTOR SCHEDULE							
		MODEL	ELEC [*]	TRICAL D	ATA		
MARK	MFR	NUMBER	V-Ø-HZ	MCA	MOCP	WEIGHT	REMARKS.
BS A1	DAIKIN	BS10Q54TVJ	208/230-1-60	1	15	101 lb	1-3
BS A2	DAIKIN	BS10Q54TVJ	208/230-1-60	1	15	101 lb	1-3
BS A3	DAIKIN	BS4Q54TVJ	208/230-1-60	0.4	15	49 lb	1-3

1. PROVIDE WITH ALL NECESSARY REFRIGERATION PIPING & APPURTENANCES; R401A REFRIGERANT 2. PROVIDE WITH SHUTOFF VALVES AT EACH SET OF INDOOR UNIT BRANCHES. 3. SEE G-M4.1 FOR MOUNTING DETAIL

SPLIT SYSTEM HEAT PUMP OUTDOOR UNIT SCHEDULE									
				E	LECTRICAL DATA	4			
MARK	MFR.	MODEL NO.	EER	V-Ø-HZ	MCA	MOP	WEIGHT	SERVICE	REMARKS
HP 30-2	DAIKIN	REYQ192XAYDA	13/13	460-3-60	21.1+21.1	25+25	1586	LIBRAR	1-5

2. BALL BEARING FAN MOTOR. 3. COMPRESSOR START ASSIST CAPACITOR AND RELAY. 4. INSTALL PER DETAIL F/M4.1 5. PROVIDE WITH R-410A REFRIGERANT

SPLIT SYSTEM INDOOR UNIT SCHEDULE													
				ELEC	TRICAL DA	NΤΑ	RATED	SENSIBLE	RATED MAX				
MARK	MFR	MODEL	AIRFLOW	V-Ø-HZ	MCA	MOCP	HEATING	COOLING	COOLING	FILTER	WEIGHT	SERVICE	REMARKS
SFC 30-2	DAIKIN	BCHD0501	5000 CFM	460-3-60	65.7	70	122760 Btu/h	155730 Btu/h	186561 Btu/h	MERV 13	880 lb	LIBRARY	1-8

1. PROVIDE 2310 CFM MIN/MAX OUTDOOR AIR. AND MIN/MIN 625 CFM OUTDOOR AIR

2. AUTOMATIC SHUT-OFF NOT REQUIRED PER 2019 CMC 608 EXCEPTION 3. UNIT SHALL BE SUPPORTED BY BUILT UP ECONOMIZER AS SHOWN ON PLAN. SEE SHEET M-3.2.

4. FURNISH AND FIELD INSTALL GPS NPBI IONIZATION SYSTEM MODEL FC-48. CONNECT TO LOW VOLTAGE POWER IN UNIT 5. PROVIDE DAIKIN CONTROL ENCLOSURE KIT AS SHOWN ON PLAN

(EKEXV500-US) WITH SEPARATE 208-1-60 CONNECTION, 0.2A FLA, WEIGHT. SEE SHEET M-2.3.

> **GRAVITY RELIEF SCHEDULE** MODEL NO **AIRFLOW** WEIGHT REMARKS 1. INSTALL PER DETAIL F/M4.2 2. SAD FOR EXACT LOCATION.

3. PROVIDE WITH 24" x 48" THROAT, OEM BIRD SCREEN

FROM CONTROL ENCLOSURE. SEE SHEET M-2.3.

8. FURNISH & INSTALL CONDENSATE PUMP.

6. FURNISH & INSTALL DAIKIN EXV ENCLOSURE (EKEQFCBAV3-US) IN

SEPARATE ENCLOSURE AS SHOWN ON PLAN WITH 12 VDC POWER

7. FURNISH & INSTALL FAN RELAY FOR SUPPLY FAN INTERLOCK.

02/05/2020 Revised: 02/14/2020 Applicable Code: 2019 CBC

MEP Componet Anchorage Note

with the above requirements.

All mechanical, plumbing, and electrical components shall be anchored and installed per the details on the DSAapproved 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:

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 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 trasverse 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.

per foot, which are suspended from a roof or floor or hung from a wall.

B. Components weighing less than 20 pounds, or in the case of distributed systems, less than 5 pounds

The anchorage of all mechanical, electrical and plumbing components shall be subject to the approval of the design professional in general responsible charge of structural engineer delegated responsibility and acceptance by DSA. The project inspector will verify that all components and equipment have been anchored in accordance

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 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 haging 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): MP MD PP E Option 1: Detailed on the approved drawings with project specific notes

MPX MDX PP E Option 2: Shall comply with the applicable OSHPD Pre-Approval (OPM #) #OPM-0043-13

APPLICABLE GOVERNING CODES:

2019 CALIFORNIA BUILDING CODE

2019 CALIFORNIA ELECTRICAL CODE 2019 CALIFORNIA MECHANICAL CODE

2019 CALIFORNIA PLUMBING CODE 2019 CALIFORNIA ENERGY CODE

2019 CALIFORNIA FIRE CODE 2019 CALIFORNIA GREEN BUILDING STANDARDS

AIR TERMINAL SCHEDULE MANUFACTURER: TIT (EXCEPT AS NOTED)					
D-1	- <u></u>	CEILING DIFFUSER	TDC - COMPLETE WITH EQU THROW-REDUCING VANES,		
VR	T*H_4	WALL RETURN GRILLE	350ZRL - LOUVERS ON 3/4"		

	V		
WR		WALL RETURN GRILLE	350ZRL - LOUVERS ON 3/4" CENTERS, STEEL CONSTRUCTION, LOUVERS PARALLEL WITH LONG DIMENSION
WS		WALL SUPPLY GRILLE	300FS - DOUBLE DEFLECTION. LOUVERS ON 3/4" CENTERS, ALUMINUM CONSTRUCTION, LOUVERS PARALLEL WITH LONG DIMENSION
EG	†	EXHAUST GRILLE CEILING RETURN	50F - 1/2" x 1/2" x 1/2" EGGCRATE, ALUMINUM CORE WITH ALUMINUM GRID
CR	Q -+	CEILING RETURN	50F - 1/2" x 1/2" x 1/2" EGGCRATE, ALUMINUM CORE WITH ALUMINUM GRID

NOTES: 1. ADAPTER NEEDED FOR TRANSITION FROM SQUARE NECK TO ROUND DUCT. 2. SIZE (NECK/FACE) TYPE FACE SIZE FOR T-BAR CEILING ONLY CFM (NO. OF THROW)

	HVA	CLEGEND
SYMBOL	ABBREVIATION	DESCRIPTION
X		EQUIPMENT TYPE
X		EQUIPMENT NUMBER DETAIL / DRAWING NUMBER
XX		SHEET NUMBER
6		
	SA OR OA	SECTION THRU SUPPLY AIR OR OUTSIDE AIR DUCT
		CIT OUT OIDE AIR BOOT
	RA OR EA	SECTION THRU RETURN AIR OR EXHAUST AIR DUCT
2		
Ĵ		ROUND DUCT DOWN
DN		
J DN J	DN OR UP	SLOPE DUCT DOWN OR UP IN DIRECTION OF FLOW
<u> </u>	AL	ACOUSTICAL LINING
	FC	FLEXIBLE DUCT CONNECTION
	. 5	
<i>-</i>	VD	VOLUME DAMPER
	FD	FIRE DAMPER
<u> </u>	TV	TURNING VANES
47		
		FLEXIBLE DUCT
		45° ROUND DUCT TAKE-OFF
म्		45° RECTANGULAR DUCT TAKE-OFF
5		90° TURN - ROUND DUCT
		90° RADIUS TURN - ROUND
, Ħ		OR RECTANGULAR DUCT
		SQUARE TO ROUND DUCT TRANSITION
		DUCT TRANSITION
\$ \frac{1}{200}		RECTANGULAR DUCT 90° SPLIT
Ф		THERMOSTAT @ 46" AFF MAX TO CENTER LINE
	AP	ACCESS PANEL
4	POC	POINT OF CONNECTION
$\stackrel{ullet}{ullet}$	POD	POINT OF DEMOLITION
	ВНР	BRAKE HORSEPOWER
	HP	HORSEPOWER
	SAD	SEE ARCHITECTURAL DRAWINGS
	SSD	SEE STRUCTURAL DRAWINGS
	SCD	SEE CIVIL DRAWINGS
	AFC	ABOVE FINISH CEILING

	BLDG 'MECHANICAL' SHEET LIST				
M-1.1	HVAC SHEDULES & LEGENDS				
MD-2.1	ADMIN HVAC DEMOLITION FLOOR PLAN				
MD-2.2	LIBRARY HVAC DEMOLITION FLOOR PLAN				
MD-3.1	ADMIN HVAC DEMOLITION ROOF PLAN				
MD-3.2	LIBRARY HVAC DEMOLITION ROOF PLAN				
M-2.1	ADMIN HVAC FLOOR PLAN				
M-2.2	LIBRARY HVAC FLOOR PLAN				
M-3.1	ADMIN HVAC ROOF PLAN				
M-3.2	LIBRARY HVAC ROOF PLAN				
M-4.1	MECHANICAL DETAILS				
M-4.2	MECHANICAL DETAILS				
M-5.1	PIPING & WIRING DIAGRAMS				
M-5.2	CONTROL DIAGRAMS				
M-5.3	CONTROL DIAGRAMS				



Main Office: 636 Fifth Street, Santa Rosa, CA 95404 East Bay: 55 Harrison Street, Suite 525, Oakland, CA 94607 (707) 576-0829



PRELIMINARY NOT FOR CONSTRUCTION

DAVIDSON MIDDLE

HVAC IMPROVEMENTS -ADMINISTRATION AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

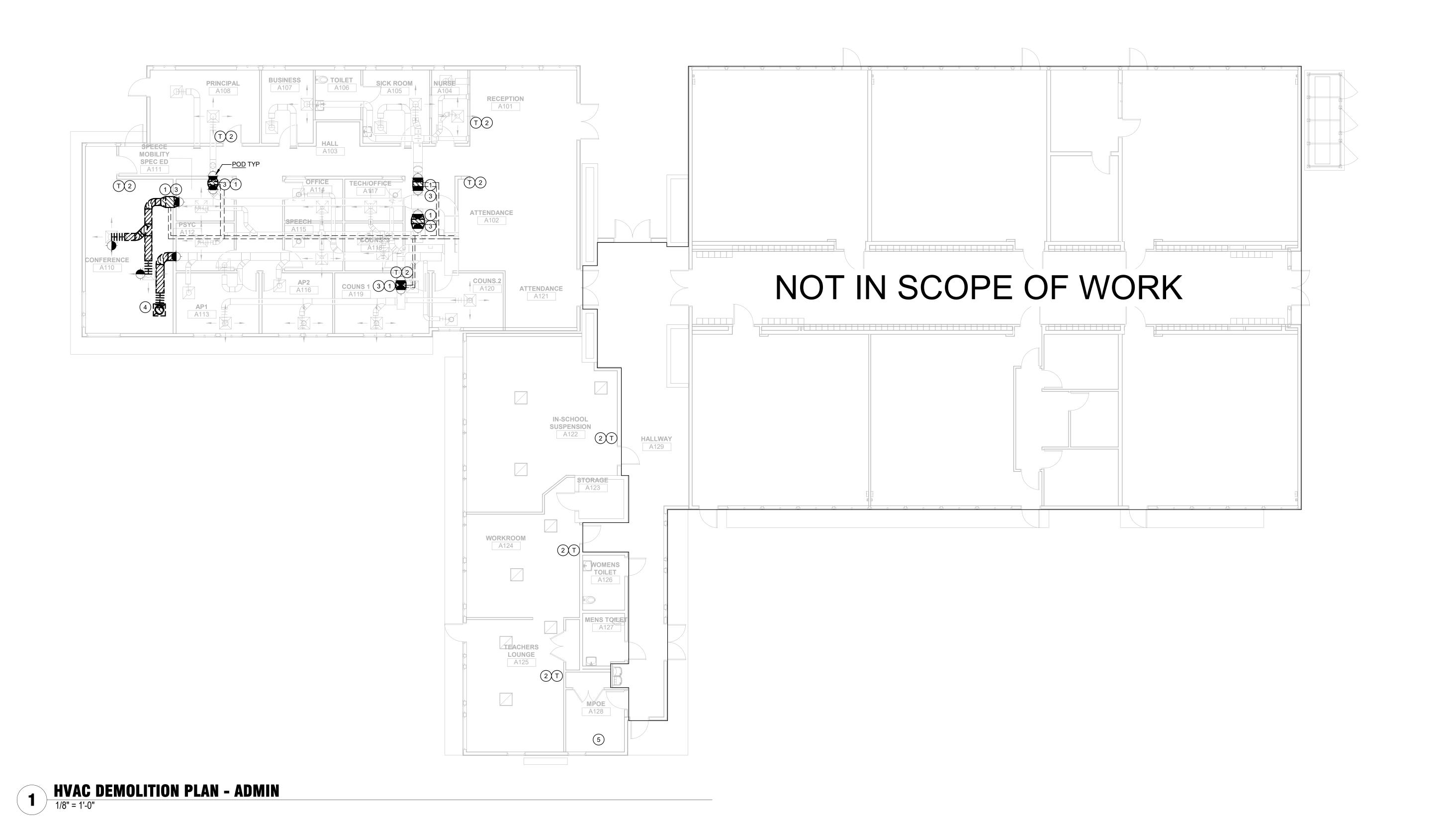
SAN RAFAEL CITY

REVISIONS DSA APP NO. 01-119794 ARCH PROJECT NO: 1900.02 Author DRAWN BY: **DRAWING SCALE:** FILE NO: 21-39 PTN: 65458-60

HVAC SHEDULES & LEGENDS

MARCH 1, 2022

M-1.1



GENERAL DEMO NOTES

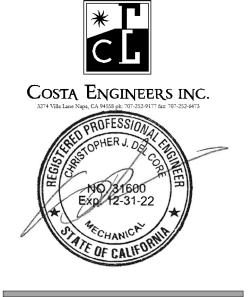
- A. FOR MECHANICAL GENERAL NOTES, LEGENDS, AND SYMBOLS, REFER TO SHEET M-1.1
- MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE MECHANICAL WORK WITH OTHER TRADES. MAKE ANY OFFSETS AS REQUIRED TO AVOID
- CONFLICT WITH PIPING, LIGHT FIXTURES, SKYLIGHTS, ETC. C. THIS CONTRACTOR SHALL RETAIN SPECIFIC EQUIPMENT AS DIRECTED BY OWNER AND DELIVER TO OWNER SPECIFIED LOCATION.
- D. ALL EQUIPMENT, MECHANICAL EQUIPMENT, PIPING, VALVING, CONTROLS, ETC. RENDERED USELESS BY THIS WORK SHALL BE DEMOLISHED AND REMOVED FROM THE SITE
- E. LOCATION OF EXISTING MECHANICAL EQUIPMENT, DUCTWORK, AIR OUTLETS, PIPING, CONTROLS, VALVING, ETC. HAS BEEN BASED ON THE BEST AVAILABLE INFORMATION OBTAINABLE AT THE SITE AND THROUGH RECORD DRAWINGS. VERIFY EXACT LOCATIONS, SIZES, AND EXTENT OF EXISTING SYSTEMS PRIOR TO START OF DEMOLITION WORK
- PATCH ALL WALLS, CEILINGS, ROOF AND OTHER SURFACES TO MATCH EXISTING CONDITIONS.
- G. ASBESTOS CONTAINING PRODUCTS MAY BE PRESENT IN THE EXISTING BUILDING CONSTRUCTION. IF SUSPECT MATERIALS ARE FOUND, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER'S REPRESENTATIVE FOR INSTRUCTIONS PRIOR TO PROCEEDING WITH ADDITIONAL WORK. THE CONTRACTOR SHALL IMMEDIATELY POST NOTICES AND TAKE PRECAUTIONS NECESSARY TO ENSURE THE HEALTH AND SAFETY OF ALL WORKERS, THE STAFF, AND THE PUBLIC.
- TEMPORARY CAP EXISTING OPEN DUCTS DURING CONSTRUCTION. PREPARE DUCT FOR RECONNECTION. DEMO AND REMOVE ALL CONTROLS CONDUCTORS, CONDUITS AND ROOF JACKS AND PREPARE FOR NEW.



Main Office: 636 Fifth Street, Santa Rosa, CA 95404 East Bay: 55 Harrison Street, Suite 525, Oakland, CA 94607 (707) 576-0829



- (1) DEMOLISH HEATING COIL
- (2) DEMOLISH THERMOSTAT
- 3 DEMOLISH HEATING HOT WATER PIPING
- 4) DEMOLISH DUCTWORK IN CONFERENCE ROOM
- (5) DEMOLISH CONTROL PANEL IN MPOE



PRELIMINARY NOT FOR CONSTRUCTION

DAVIDSON MIDDLE SCHOOL

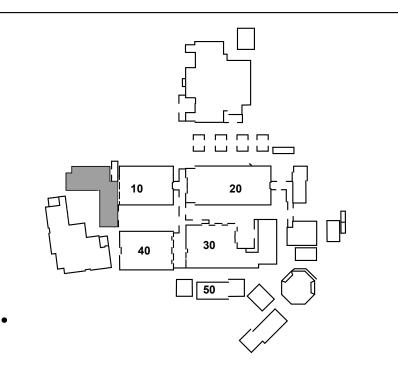
HVAC IMPROVEMENTS -ADMINISTRATION AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY SCHOOLS

REVISIONS				
DSA	A APP NO	D. 01-119794		
ARCH PRO	JECT NO:	1900.0		
DRAWN B	/ :	Auth		

KEYPLAN



MARCH 1, 2022

ADMIN HVAC DEMOLITION FLOOR PLAN

MD-2.1

Control of the contro

HVAC DEMOLITION PLAN - LIBRARY

GENERAL DEMO NOTES

- A. FOR MECHANICAL GENERAL NOTES, LEGENDS, AND SYMBOLS, REFER TO SHEET M-1.1
- B. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE MECHANICAL WORK WITH OTHER TRADES. MAKE ANY OFFSETS AS REQUIRED TO AVOID CONFLICT WITH PIPING LIGHT FIXTURES. SKYLIGHTS, ETC.
- CONFLICT WITH PIPING, LIGHT FIXTURES, SKYLIGHTS, ETC.

 C. THIS CONTRACTOR SHALL RETAIN SPECIFIC EQUIPMENT AS DIRECTED BY OWNER AND DELIVER TO OWNER SPECIFIED LOCATION.
- D. ALL EQUIPMENT, MECHANICAL EQUIPMENT, PIPING, VALVING, CONTROLS, ETC. RENDERED USELESS BY THIS WORK SHALL BE DEMOLISHED AND REMOVED FROM THE SITE
- E. LOCATION OF EXISTING MECHANICAL EQUIPMENT, DUCTWORK, AIR OUTLETS, PIPING, CONTROLS, VALVING, ETC. HAS BEEN BASED ON THE BEST AVAILABLE INFORMATION OBTAINABLE AT THE SITE AND THROUGH RECORD DRAWINGS. VERIFY EXACT LOCATIONS, SIZES, AND EXTENT OF EXISTING SYSTEMS PRIOR TO START OF DEMOLITION WORK
- F. PATCH ALL WALLS, CEILINGS, ROOF AND OTHER SURFACES TO MATCH EXISTING CONDITIONS.
- G. ASBESTOS CONTAINING PRODUCTS MAY BE PRESENT IN THE EXISTING BUILDING CONSTRUCTION. IF SUSPECT MATERIALS ARE FOUND, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER'S REPRESENTATIVE FOR INSTRUCTIONS PRIOR TO PROCEEDING WITH ADDITIONAL WORK. THE CONTRACTOR SHALL IMMEDIATELY POST NOTICES AND TAKE PRECAUTIONS NECESSARY TO ENSURE THE HEALTH AND SAFETY OF ALL WORKERS, THE STAFF, AND THE PUBLIC.
- H. TEMPORARY CAP EXISTING OPEN DUCTS DURING CONSTRUCTION. PREPARE DUCT FOR RECONNECTION.
 J. DEMO AND REMOVE ALL CONTROLS CONDUCTORS, CONDUITS AND ROOF JACKS AND PREPARE FOR NEW.



Main Office:
636 Fifth Street, Santa Rosa, CA 95404
East Bay:
55 Harrison Street, Suite 525,
Oakland, CA 94607
(707) 576-0829



DEMO SHEET NOTES

- 1 DEMOLISH SPLIT SYSTEM FAN COIL, THERMOSTAT, CD PIPING AND REFRIGERANT LINES UP TO ROOF.
- DEMOLISH BOILER, PUMPS, HYDRONIC PIPING, MAKEUP WATER & GAS PIPING TO BOILER. CAP GAS PIPING AT POINT OF ENTRY TO BOILER ROOM. SEE SHEET M-3.2 FOR CONTINUATION OF HYDRONIC PIPING.
- 3 DEMOLISH BOILER FLUE. PATCH ROOF. SAD.

 4 DEMOLISH GAS PIPING. CAP GAS PIPE AT ENTRY TO BOILE
- DEMOLISH GAS PIPING. CAP GAS PIPE AT ENTRY TO BOILER ROOM.

 DEMOLISH HHW PIPING AROUND FAN/COIL TO ALLOW MORE

SPACE FOR NEW UNIT AND APPURTENANCES. SEE SHEET

- MD-3.2 FOR CONTINUATION ON ROOF.

 6 DEMOLISH FAN COIL UNIT AND FLEXIBLE CONNECTIONS TO SUPPLY DUCTS. DEMOLISH RETURN DUCT UP TO ROOF. DUCTWORK TO REMAIN FOR CONNECTION TO NEW FAN/COIL UNIT. SEE SHEET M-2.2.
- 7 DEMOLISH HHW PIPING WITHIN FURRING AND BELOW GRADE IN VAULT. SAD
- 8 VERIFY NO PNEUMATIC CONTROL AIR USED PRIOR TO DEMOLITION OF CONTROL AIR COMPRESSOR (BELOW GIRLS RESTROOM IN 20'S WING) AND COMPRESSED AIR LINES. AFTER VERIFYING NO CONTROL AIR USED, REMOVE COMPRESSOR AND ALL PNEUMATIC LINES FROM 30 WING AND FROM BENEATH 20 WING

PRELIMINARY
NOT FOR
CONSTRUCTION

DAVIDSON MIDDLE SCHOOL

HVAC IMPROVEMENTS -ADMINISTRATION AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY SCHOOLS

REVISIO	DNS	
DSA	A APP NO	O. 01-119794
ARCH PRO	JECT NO:	1900.0
DRAWN BY	/ :	Autho
DRAWING	SCALE:	1/8" = 1'-0

PTN: 65458-60 FILE NO: 21-39

CD

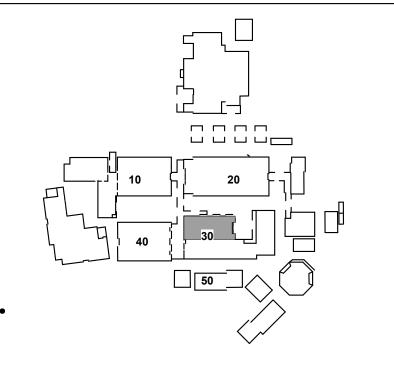
MARCH 1, 2022

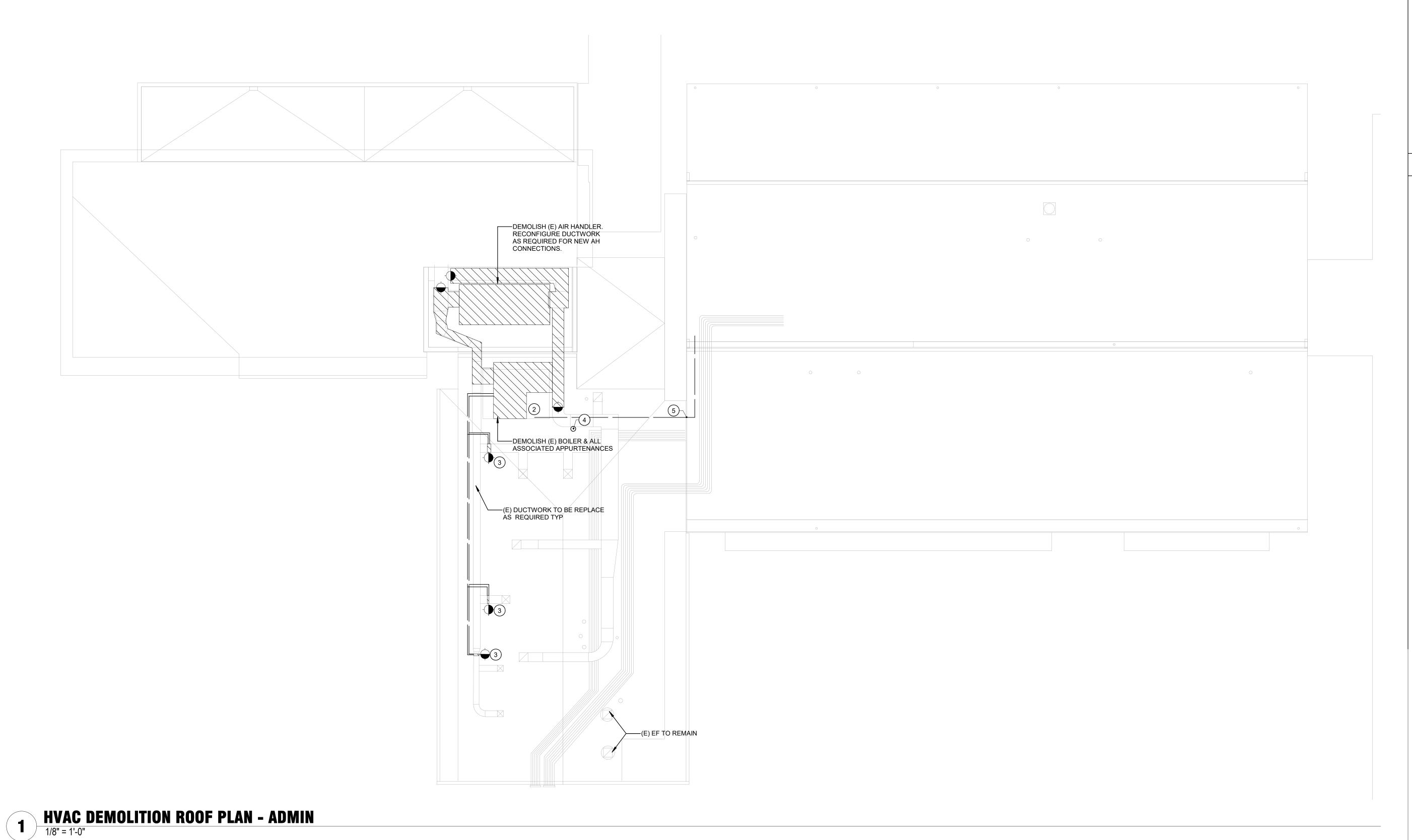
LIBRARY HVAC DEMOLITION FLOOR PLAN

HEET NUMBER

MD-2.2

KEYPLAN





GENERAL DEMO NOTES

- A. FOR MECHANICAL GENERAL NOTES, LEGENDS, AND SYMBOLS, REFER TO SHEET M-1.1
- B. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE MECHANICAL WORK WITH OTHER TRADES. MAKE ANY OFFSETS AS REQUIRED TO AVOID CONFLICT WITH PIPING, LIGHT FIXTURES, SKYLIGHTS, ETC.
- C. THIS CONTRACTOR SHALL RETAIN SPECIFIC EQUIPMENT AS DIRECTED BY OWNER AND DELIVER TO OWNER SPECIFIED LOCATION.
- D. ALL EQUIPMENT, MECHANICAL EQUIPMENT, PIPING, VALVING, CONTROLS, ETC. RENDERED USELESS BY THIS WORK SHALL BE DEMOLISHED AND REMOVED FROM THE SITE
- E. LOCATION OF EXISTING MECHANICAL EQUIPMENT, DUCTWORK, AIR OUTLETS, PIPING, CONTROLS, VALVING, ETC. HAS BEEN BASED ON THE BEST AVAILABLE INFORMATION OBTAINABLE AT THE SITE AND THROUGH RECORD DRAWINGS. VERIFY EXACT LOCATIONS, SIZES, AND EXTENT OF EXISTING SYSTEMS PRIOR TO START OF DEMOLITION WORK
- F. PATCH ALL WALLS, CEILINGS, ROOF AND OTHER SURFACES TO MATCH EXISTING CONDITIONS.
- G. ASBESTOS CONTAINING PRODUCTS MAY BE PRESENT IN THE EXISTING BUILDING CONSTRUCTION. IF SUSPECT MATERIALS ARE FOUND, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER'S REPRESENTATIVE FOR INSTRUCTIONS PRIOR TO PROCEEDING WITH ADDITIONAL WORK. THE CONTRACTOR SHALL IMMEDIATELY POST NOTICES AND TAKE PRECAUTIONS NECESSARY TO ENSURE THE HEALTH AND SAFETY OF ALL WORKERS, THE STAFF, AND THE PUBLIC.
- TEMPORARY CAP EXISTING OPEN DUCTS DURING CONSTRUCTION. PREPARE DUCT FOR RECONNECTION. DEMO AND REMOVE ALL CONTROLS CONDUCTORS, CONDUITS AND ROOF JACKS AND PREPARE FOR NEW.



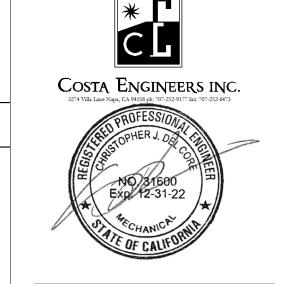
Main Office: 636 Fifth Street, Santa Rosa, CA 95404 East Bay: 55 Harrison Street, Suite 525, Oakland, CA 94607 (707) 576-0829



- DEMOLISH AIR HANDLER AND DUCTWORK AS INDICATED.
- DEMOLISH BOILER, PUMPS, EXPANSION TANK, POT FEEDER, AIR SEPARATOR, CONTROL PANELS, SUPPORTING HARDWARE. LEAVE EXISTING PAD CLEAR FOR NEW HVAC EQUIPMENT.
- 3 DEMOLISH HHW PIPING, HEATING COILS AND HYDRONIC ZONE CONTROLS. DUCTWORK TO REMAIN.
- 4) ROOF-CEPTOR TO REMAIN.

KEYPLAN

DEMOLISH GAS PIPING TO BOILER ON ROOF. REMOVE PIPING BACK TO EDGE OF ADMIN WING ROOF.



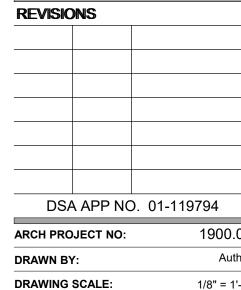
PRELIMINARY NOT FOR CONSTRUCTION

DAVIDSON MIDDLE SCHOOL

HVAC IMPROVEMENTS -**ADMINISTRATION AND LIBRARY**

280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY SCHOOLS

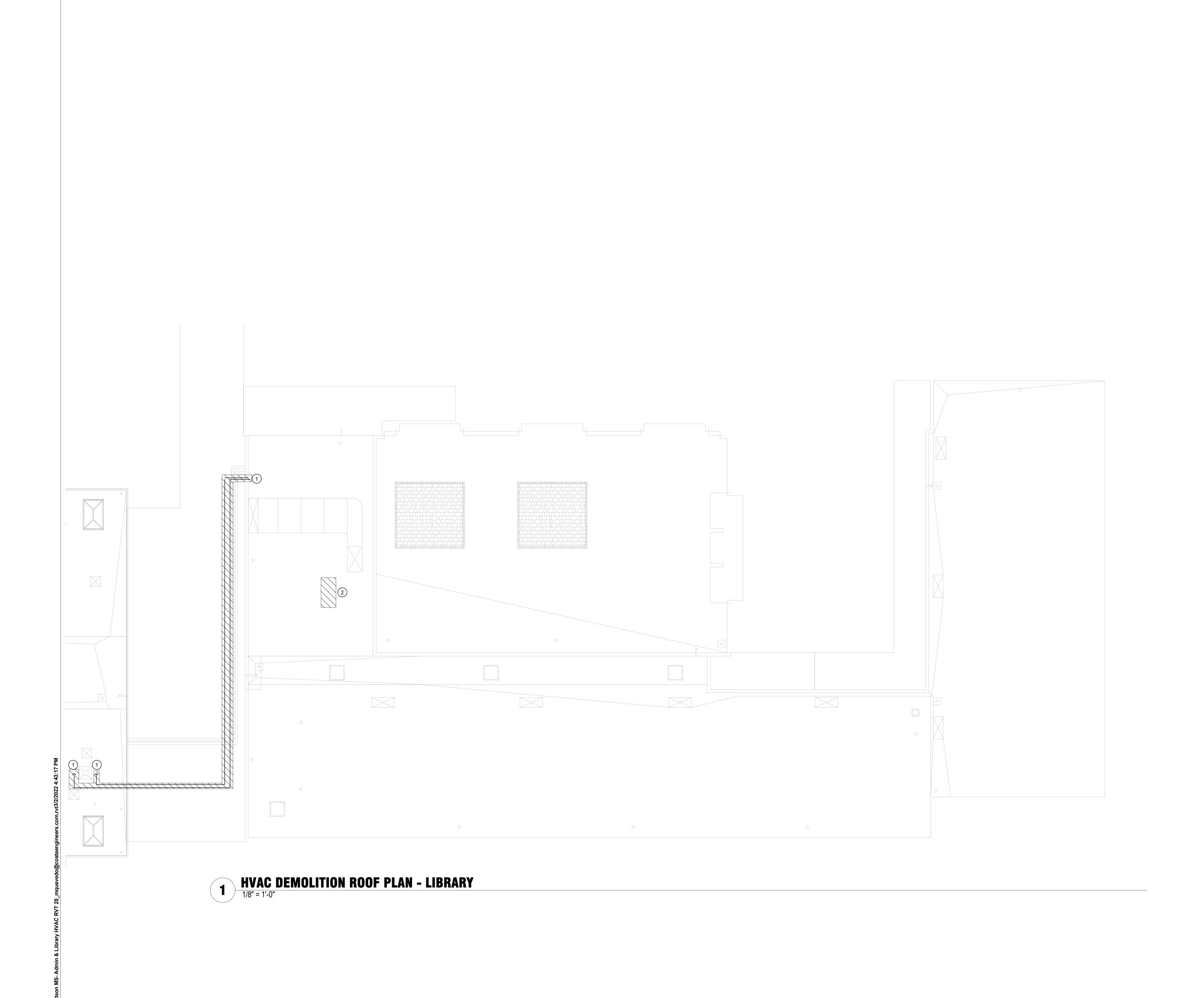


1/8" = 1'-0" FILE NO: 21-39 PTN: 65458-60

MARCH 1, 2022

ADMIN HVAC DEMOLITION ROOF PLAN

MD-3.1



GENERAL DEMO NOTES

- A. FOR MECHANICAL GENERAL NOTES, LEGENDS, AND SYMBOLS, REFER TO SHEET M-1.1
- B. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE MECHANICAL WORK WITH OTHER TRADES. MAKE ANY OFFSETS AS REQUIRED TO AVOID CONFLICT WITH PIPING, LIGHT FIXTURES, SKYLIGHTS, ETC.
- CONFLICT WITH PIPING, LIGHT FIXTURES, SKYLIGHTS, ETC.

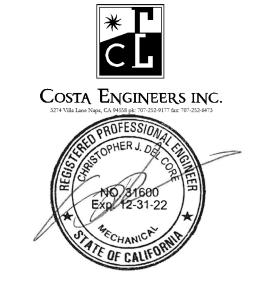
 C. THIS CONTRACTOR SHALL RETAIN SPECIFIC EQUIPMENT AS DIRECTED BY OWNER AND DELIVER TO OWNER SPECIFIED LOCATION.
- D. ALL EQUIPMENT, MECHANICAL EQUIPMENT, PIPING, VALVING, CONTROLS, ETC. RENDERED USELESS BY THIS WORK SHALL BE DEMOLISHED AND REMOVED FROM THE SITE
- E. LOCATION OF EXISTING MECHANICAL EQUIPMENT, DUCTWORK, AIR OUTLETS, PIPING, CONTROLS, VALVING, ETC. HAS BEEN BASED ON THE BEST AVAILABLE INFORMATION OBTAINABLE AT THE SITE AND THROUGH RECORD DRAWINGS. VERIFY EXACT LOCATIONS, SIZES, AND EXTENT OF EXISTING SYSTEMS PRIOR TO START OF DEMOLITION WORK
- F. PATCH ALL WALLS, CEILINGS, ROOF AND OTHER SURFACES TO MATCH EXISTING CONDITIONS.
- G. ASBESTOS CONTAINING PRODUCTS MAY BE PRESENT IN THE EXISTING BUILDING CONSTRUCTION. IF SUSPECT MATERIALS ARE FOUND, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER'S REPRESENTATIVE FOR INSTRUCTIONS PRIOR TO PROCEEDING WITH ADDITIONAL WORK. THE CONTRACTOR SHALL IMMEDIATELY POST NOTICES AND TAKE PRECAUTIONS NECESSARY TO ENSURE THE HEALTH AND SAFETY OF ALL WORKERS, THE STAFF, AND THE PUBLIC.
- H. TEMPORARY CAP EXISTING OPEN DUCTS DURING CONSTRUCTION. PREPARE DUCT FOR RECONNECTION.
 J. DEMO AND REMOVE ALL CONTROLS CONDUCTORS, CONDUITS AND ROOF JACKS AND PREPARE FOR NEW.



Main Office:
636 Fifth Street, Santa Rosa, CA 95404
East Bay:
55 Harrison Street, Suite 525,
Oakland, CA 94607
(707) 576-0829



- 1 DEMOLISH HHW PIPING ON ROOF, DOWN INTO BOILER ROOM AND THRU WALL INTO LIBRARY. SEE MD-2.2 FOR CONTINUATION.
- DEMOLISH SPLIT SYSTEM AND REFRIGERANT LINES. PATCH ROOF AS NECESSARY. SAD.



PRELIMINARY
NOT FOR
CONSTRUCTION

DAVIDSON MIDDLE SCHOOL

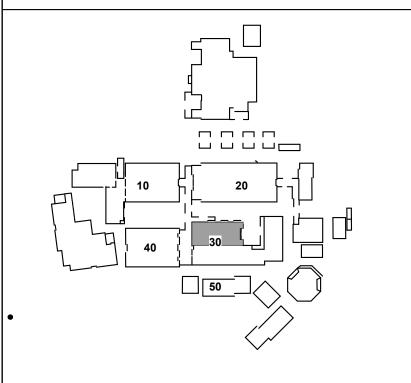
HVAC IMPROVEMENTS -ADMINISTRATION AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY SCHOOLS

REVISIO	REVISIONS			
DSA	A APP NO	D. 01-119794		
ARCH PRO	JECT NO:	1900.0		
DRAWN BY	/ :	Auth		
DRAWING	SCALE:	1/8" = 1'-		
25.47	-0.00	04.0		

KEYPLAN



 ARCH PROJECT NO:
 1900.02

 DRAWN BY:
 Author

 DRAWING SCALE:
 1/8" = 1'-0'

 PTN: 65458-60
 FILE NO: 21-39

 CD

MARCH 1, 2022

LIBRARY HVAC DEMOLITION ROOF PLAN

HEET NUMBER

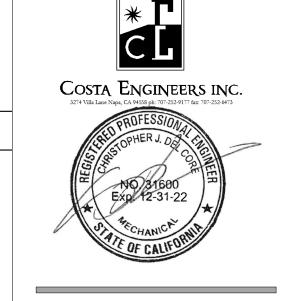
MD-3.2

GENERAL NOTES

- FOR MECHANICAL GENERAL NOTES, LEGENDS, AND SYMBOLS,
- REFER TO SHEET M-1.1 MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE MECHANICAL WORK WITH OTHER TRADES. MAKE ANY OFFSETS AS REQUIRED TO AVOID CONFLICT WITH PIPING, LIGHT FIXTURES, SKYLIGHTS, ETC.
- CONTRACTOR SHALL COORDINATE ALL GRILLE LOCATIONS AND CEILING TYPES PRIOR TO ORDERING GRILLES, SEE ARCHITECTURAL CEILING PLANS AND ELECTRICAL LIGHTING
- WHERE BRACING DETAILS ARE NOT SHOWN ON THE DRAWING OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT, MECHANICAL ENGINEER AND FIELD INSPECTOR OF THE GOVERNING AUTHORITY.



Main Office: 636 Fifth Street, Santa Rosa, CA 95404 55 Harrison Street, Suite 525, Oakland, CA 94607 (707) 576-0829



SHEET NOTES

- CONCEAL REFRIGERANT LINES AND CD PIPE RUNNING ACROSS CORRIDOR INSIDE ENCLOSURE. SAD FOR ENCLOSURE. PAINT TO MATCH.
- 2) REFRIGERANT LINES THRU WALL. FROM ROOF SEE M-3.1 FOR CONTINUATION.
- 3 ROUTE REFRIGERANT PIPING TO AVOID PENETRATING SHEAR WALL.
- 4 EXISTING MECHANICAL OPENING IN EXISTING SHEAR WALL VIF TYP 2 PLACES
- 5 SHEAR WALL OPENING PER 10/S-0.1.

KEYPLAN

PRELIMINARY NOT FOR CONSTRUCTION

DAVIDSON MIDDLE SCHOOL

HVAC IMPROVEMENTS -**ADMINISTRATION AND LIBRARY**

280 WOODLAND AVE SAN RAFAEL, CA 94901

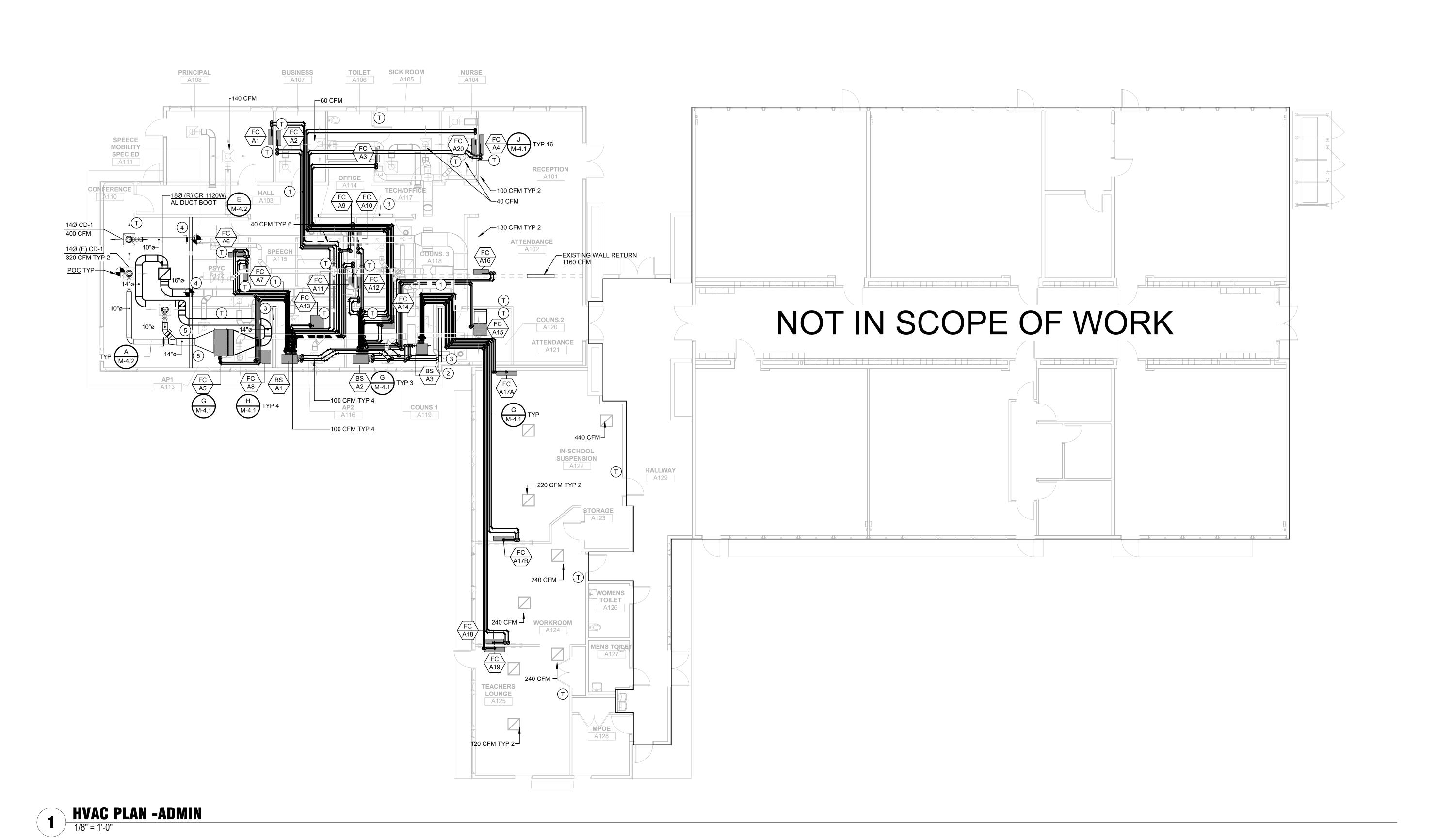
SAN RAFAEL CITY SCHOOLS

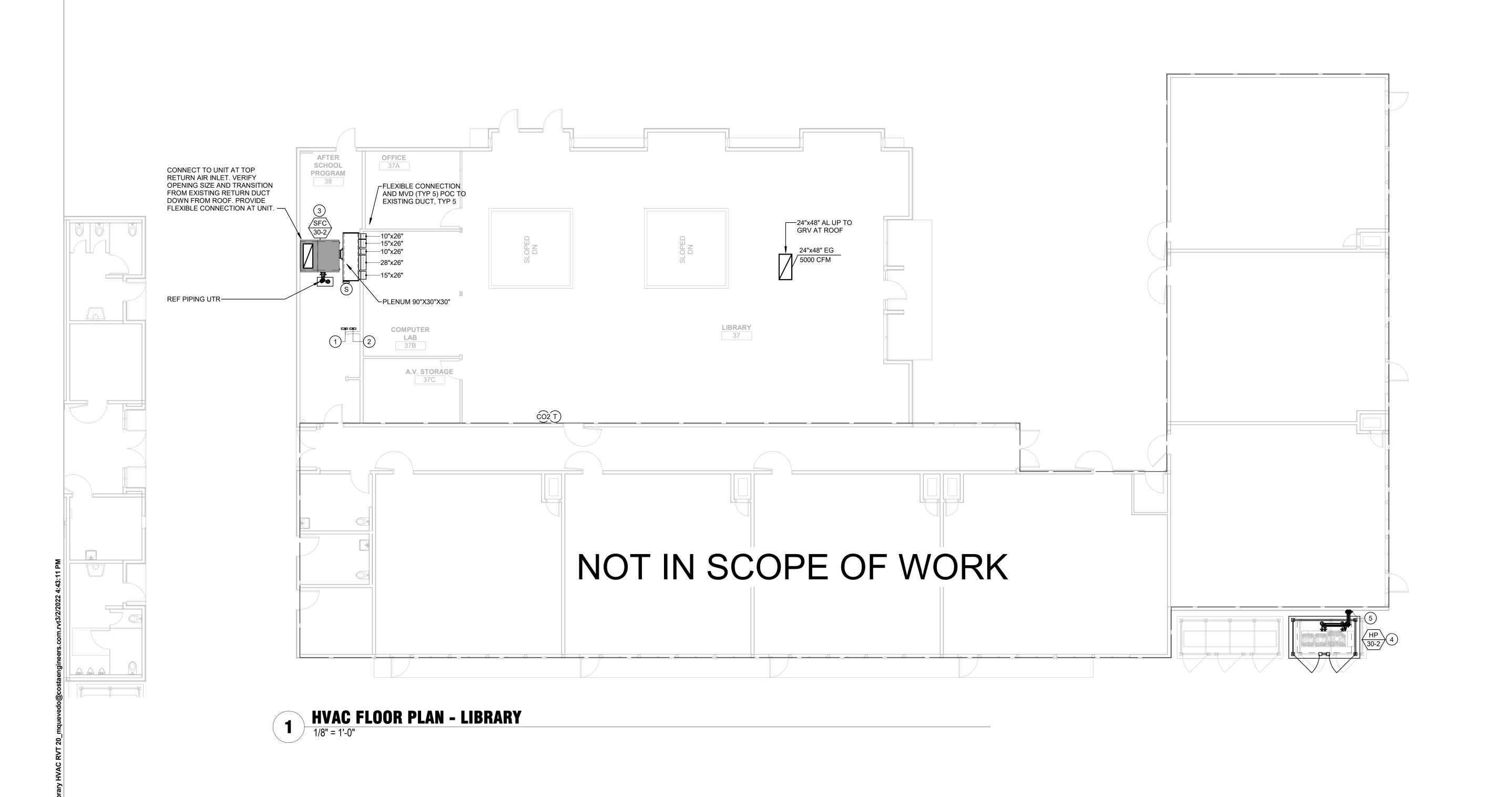
794
1900.02
Autho
1/8" = 1'-0'

PTN: 65458-60

MARCH 1, 2022

ADMIN HVAC FLOOR PLAN





GENERAL NOTES

- FOR MECHANICAL GENERAL NOTES, LEGENDS, AND SYMBOLS,
- REFER TO SHEET M-1.1 MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE MECHANICAL WORK WITH OTHER TRADES. MAKE ANY OFFSETS AS REQUIRED TO AVOID CONFLICT WITH PIPING, LIGHT FIXTURES, SKYLIGHTS, ETC. 3. CONTRACTOR SHALL COORDINATE ALL GRILLE LOCATIONS AND CEILING TYPES PRIOR TO ORDERING GRILLES, SEE
- ARCHITECTURAL CEILING PLANS AND ELECTRICAL LIGHTING 4. WHERE BRACING DETAILS ARE NOT SHOWN ON THE DRAWING OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECT

AND FIELD INSPECTOR OF THE GOVERNING AUTHORITY.

TO THE APPROVAL OF THE ARCHITECT, MECHANICAL ENGINEER



Main Office: 636 Fifth Street, Santa Rosa, CA 95404 55 Harrison Street, Suite 525, Oakland, CA 94607 (707) 576-0829



- 1) DAIKIN ACESSORY EXV & CONTROL ENCLOSURE. PROVIDE REQUIRED CLEARANCES.
- (2) REFRIGERANT LINES UP TO ROOF. SEE SHEET M-3.2.
- 3 CONTRACTOR TO VERIFY ALL DIMENSIONS IN THIS UNUSALLY TIGHT SPACE. INSTALL UNIT SUSPENDED FROM EXISTING STRUCTURE PER DETAIL H SSD SHEET S-2.1 FOR PARTIAL FRAMING PLAN
- 4) INSTALL HEAT PUMP UNIT ON CONCRETE SLAB
 PER DETAIL
 F
 M-4.1
- 5 REFRIGERANT LINES UP ALONG WALL SEE DETAIL



Costa Engineers inc.

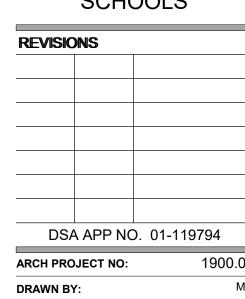
PRELIMINARY NOT FOR CONSTRUCTION

DAVIDSON MIDDLE SCHOOL

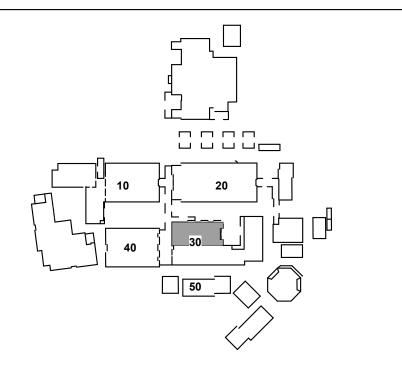
HVAC IMPROVEMENTS -ADMINISTRATION AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY

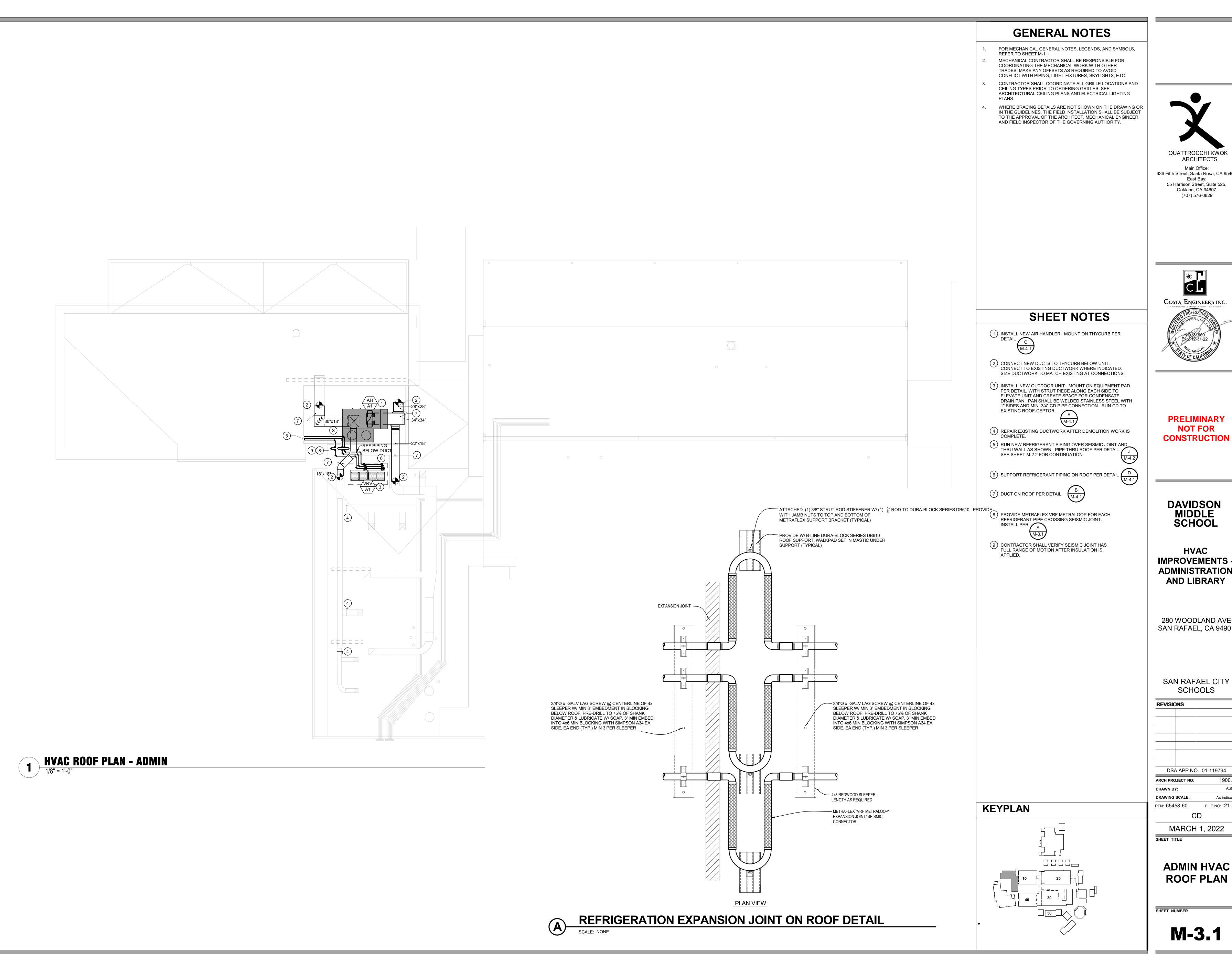


KEYPLAN



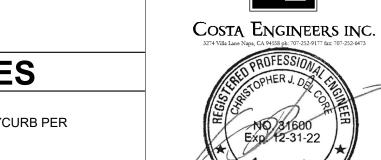
MARCH 1, 2022

LIBRARY HVAC **FLOOR PLAN**





Main Office: 636 Fifth Street, Santa Rosa, CA 95404 East Bay: 55 Harrison Street, Suite 525, Oakland, CA 94607 (707) 576-0829

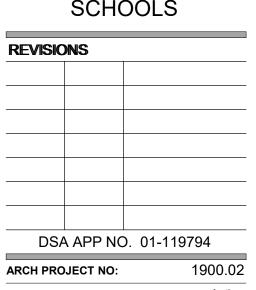


DAVIDSON MIDDLE SCHOOL

HVAC IMPROVEMENTS -ADMINISTRATION AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY

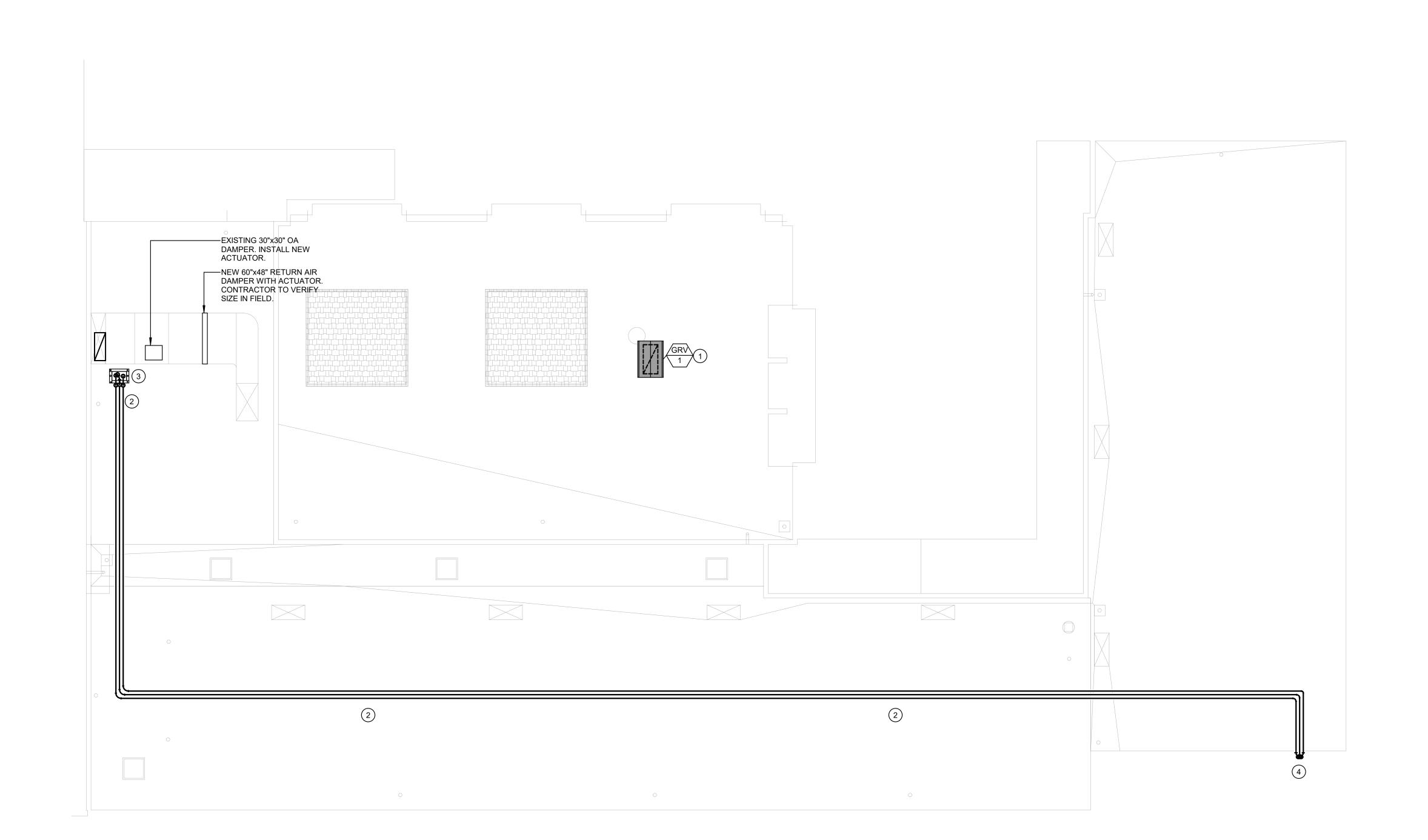


FILE NO: 21-39

MARCH 1, 2022

ADMIN HVAC ROOF PLAN

M-3.1



1 HVAC ROOF PLAN - LIBRARY
1/8" = 1'-0"

GENERAL NOTES

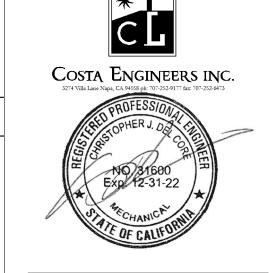
- FOR MECHANICAL GENERAL NOTES, LEGENDS, AND SYMBOLS, REFER TO SHEET M-1.1
- MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE MECHANICAL WORK WITH OTHER TRADES. MAKE ANY OFFSETS AS REQUIRED TO AVOID CONFLICT WITH PIPING, LIGHT FIXTURES, SKYLIGHTS, ETC. 3. CONTRACTOR SHALL COORDINATE ALL GRILLE LOCATIONS AND CEILING TYPES PRIOR TO ORDERING GRILLES, SEE
- ARCHITECTURAL CEILING PLANS AND ELECTRICAL LIGHTING
- 4. WHERE BRACING DETAILS ARE NOT SHOWN ON THE DRAWING OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT, MECHANICAL ENGINEER AND FIELD INSPECTOR OF THE GOVERNING AUTHORITY.



Main Office: 636 Fifth Street, Santa Rosa, CA 95404 East Bay: 55 Harrison Street, Suite 525, Oakland, CA 94607 (707) 576-0829

SHEET NOTES

- MOUNT GRAVITY RELIEF VENT PER DETAIL. FLASHING AND EXACT LOCATION PER ARCHITECTURAL. SAD. 2) REFRIGERANT LINES DOWN BELOW ROOF. SEE SHEET M-2.3 FOR CONTINUATION. SUPPORT PIPING ON ROOF PER DETAIL
- 3 REFRIGERANT LINES FROM BELOW ROOF. SEE DETAIL (M-4.1)
- 4 REFRIGERANT LINES DN ALONG WALL SEE DETAIL



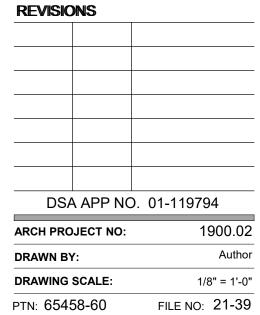
PRELIMINARY NOT FOR CONSTRUCTION

DAVIDSON MIDDLE SCHOOL

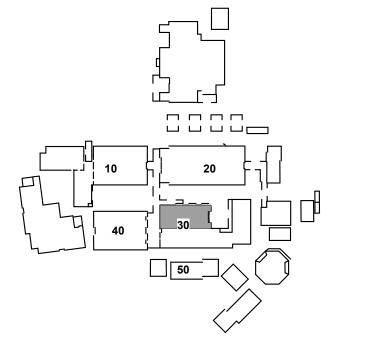
HVAC IMPROVEMENTS -ADMINISTRATION AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY SCHOOLS



KEYPLAN

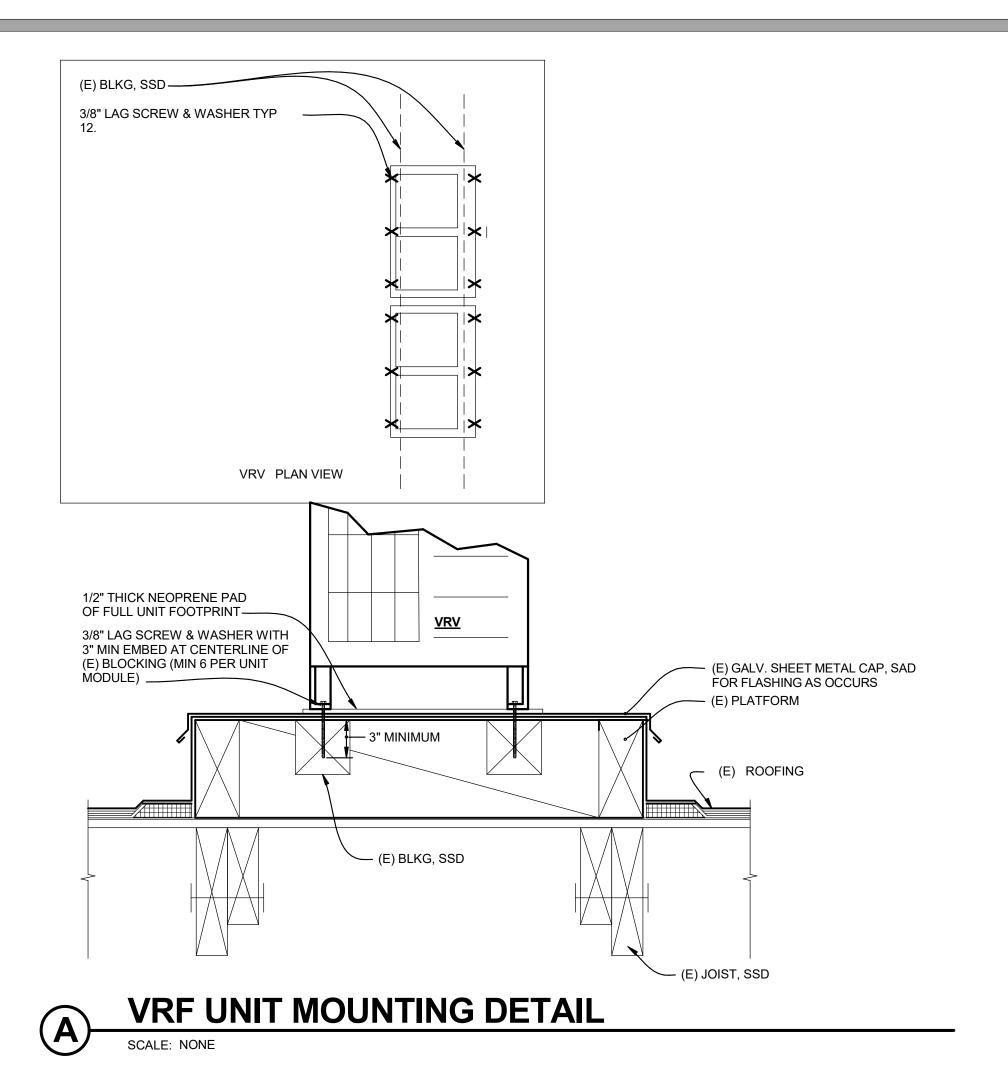


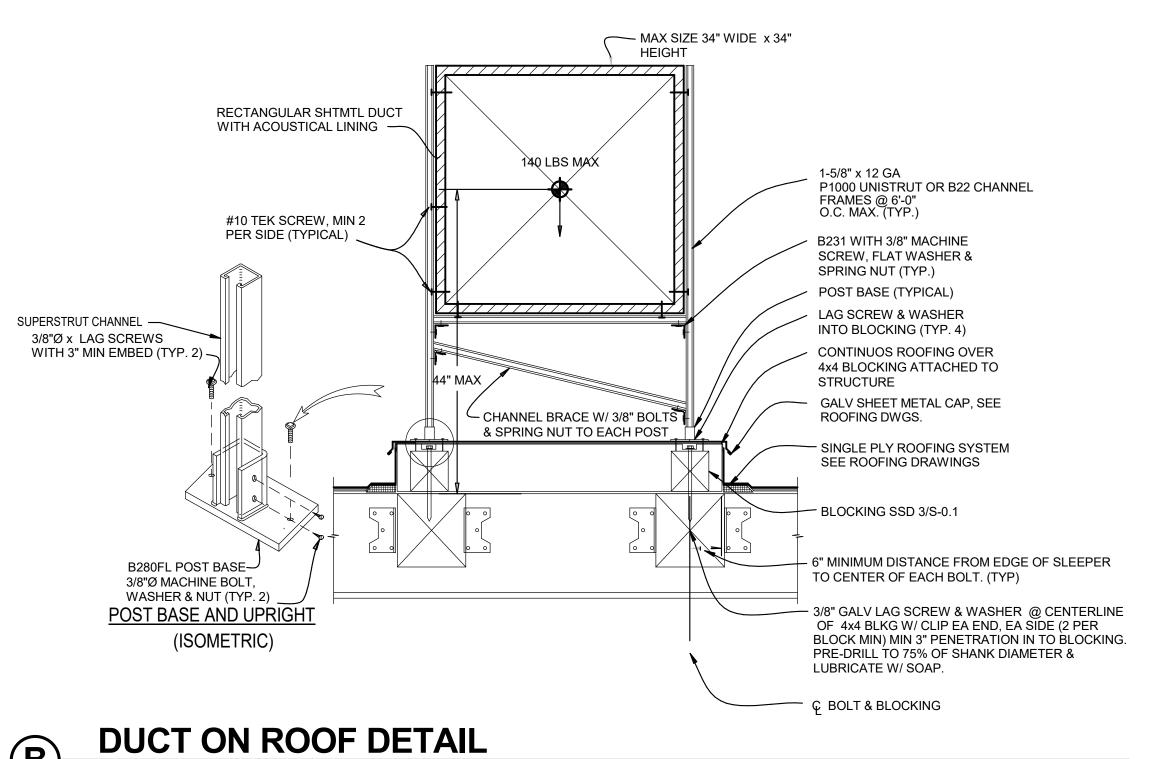
PTN: 65458-60

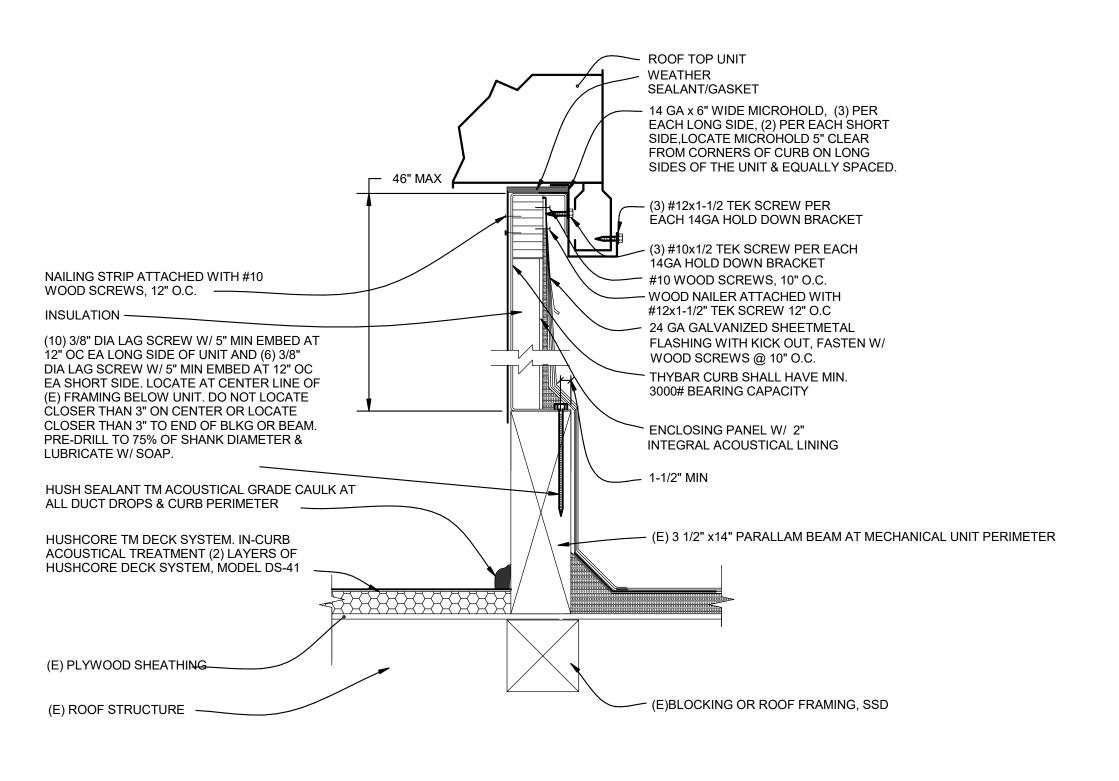
MARCH 1, 2022

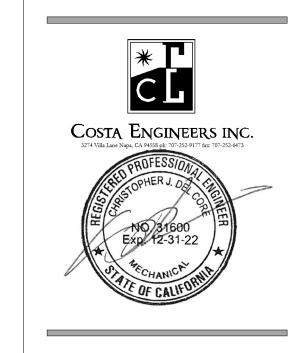
LIBRARY HVAC **ROOF PLAN**

M-3.2









QUATTROCCHI KWOK

Main Office:

636 Fifth Street, Santa Rosa, CA 95404

55 Harrison Street, Suite 525,

Oakland, CA 94607

(707) 576-0829

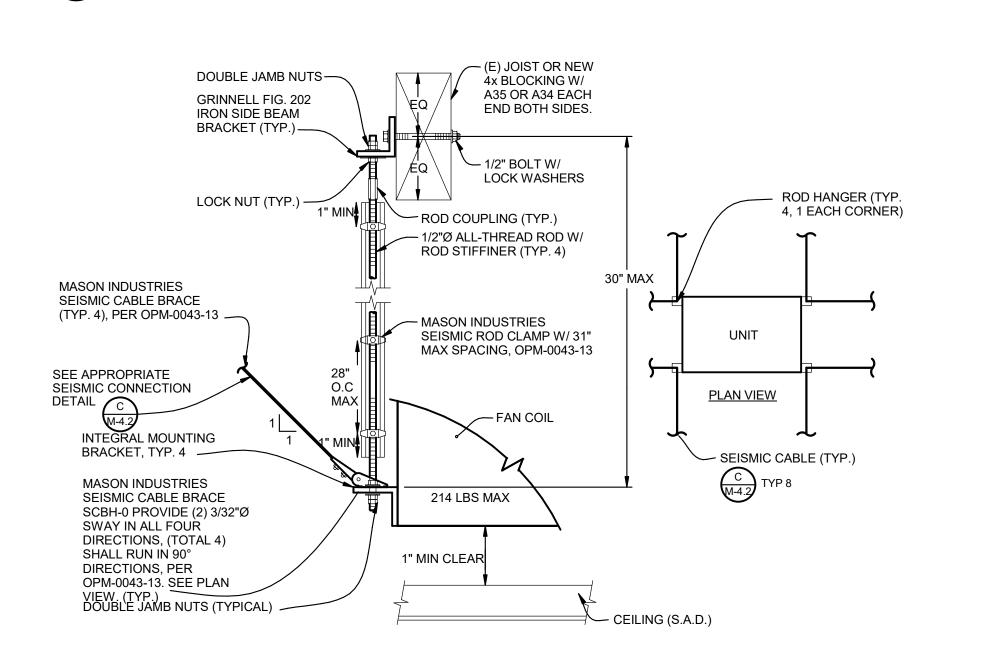
ARCHITECTS

DOAS UNIT MOUNTING DETAIL

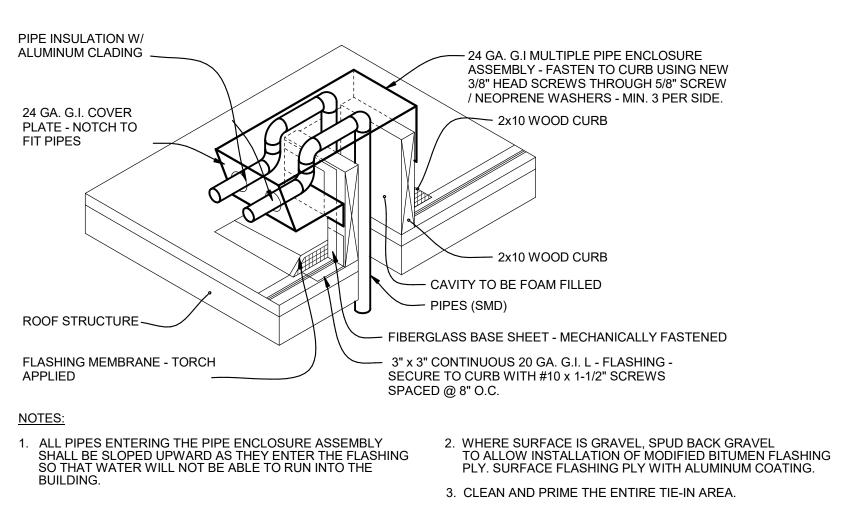
PIPE CLAMP (AS SPEC'D) TYP REFRIGERATION PIPE W/ INSULATION & ALUMINUM CLADING TYP B-LINE DURA-BLOCK DB20-20 ROOF SUPPORT W/ INTEGRAL 12 GA GALV CHANNEL BRIDGE LENGTH AS REQUIRED. — WALKPAD UNDER SUPPORT SET IN MASTIC (TYPICAL) REFRIGERANT PIPING ONLY (NOT USED FOR FUEL PIPING) ~ - PIPE CLAMP (AS SPEC'D) - REFRIGERATION PIPE W/ INSULATION & ALUMINUM CLADING TYP - B-LINE DURA-BLOCK DB20-20 ROOF SUPPORT W/ INTEGRAL 12 GA GALV CHANNEL SET IN MASTIC - WALKPAD UNDER SUPPORT (E) ROOFING SET IN MASTIC (TYPICAL) (E) ROOF STRUCT

REF ON ROOF DETAIL

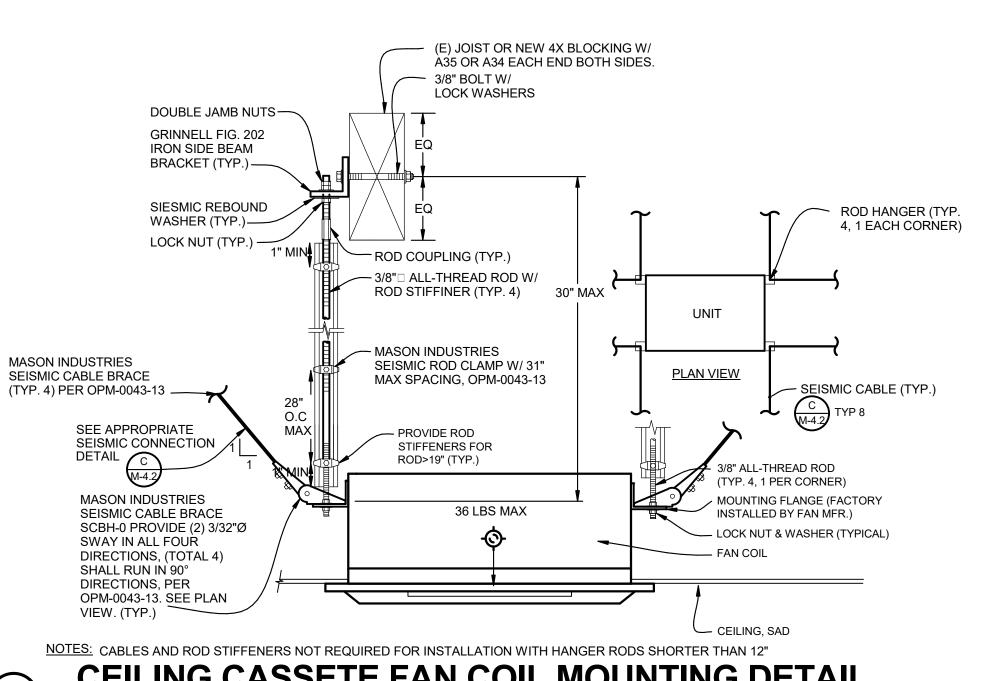
NOTE: SUPPORTS SHALL BE AT 8'-0" ON CENTER & AT ALL CHANGE OF DIRECTION



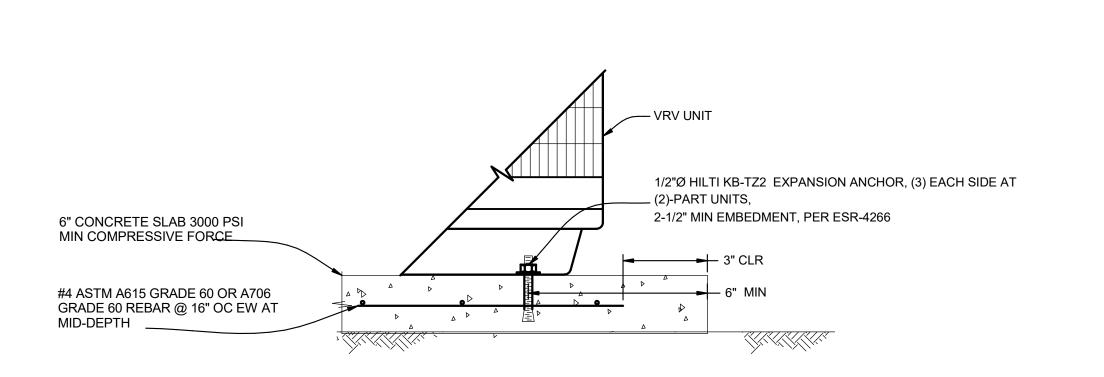
DUCTED FAN COIL & BS MOUNTING DETAIL



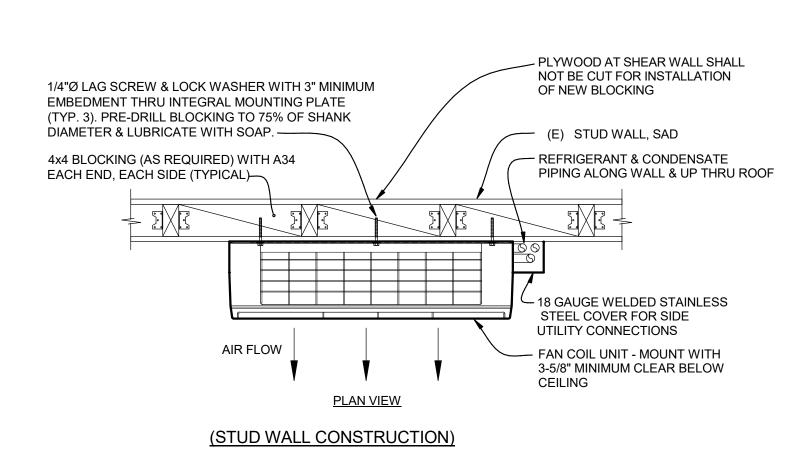
PIPE ENCLOSURE DETAIL



CEILING CASSETE FAN COIL MOUNTING DETAIL



VRV HEAT PUMP UNIT AT GRADE MOUNTING DETAIL



WALL-MOUNTED FAN COIL DETAILS

DAVIDSON MIDDLE SCHOOL

PRELIMINARY

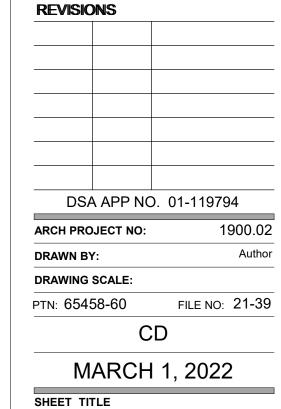
NOT FOR

CONSTRUCTION

HVAC IMPROVEMENTS -**ADMINISTRATION AND LIBRARY**

280 WOODLAND AVE SAN RAFAEL, CA 94901

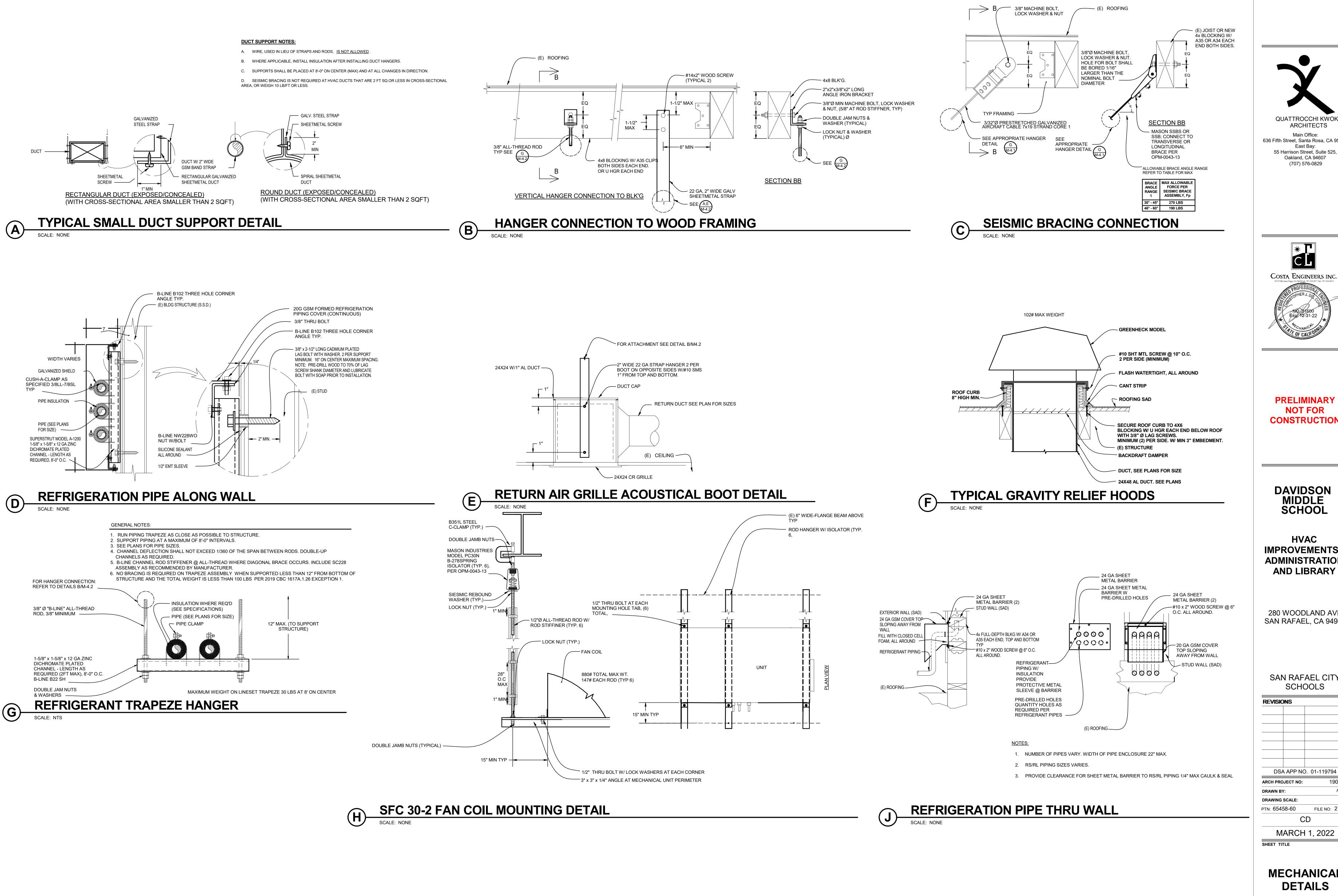
SAN RAFAEL CITY



MECHANICAL DETAILS

SHEET NUMBER

M-4.1



QUATTROCCHI KWOK ARCHITECTS Main Office: 636 Fifth Street, Santa Rosa, CA 95404 55 Harrison Street, Suite 525, Oakland, CA 94607 (707) 576-0829



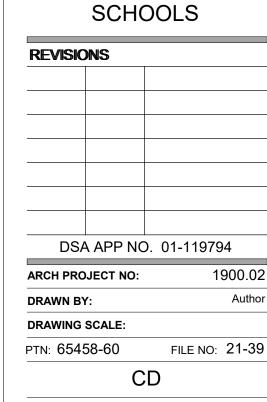
PRELIMINARY NOT FOR CONSTRUCTION

DAVIDSON MIDDLE SCHOOL

HVAC IMPROVEMENTS -ADMINISTRATION AND LIBRARY

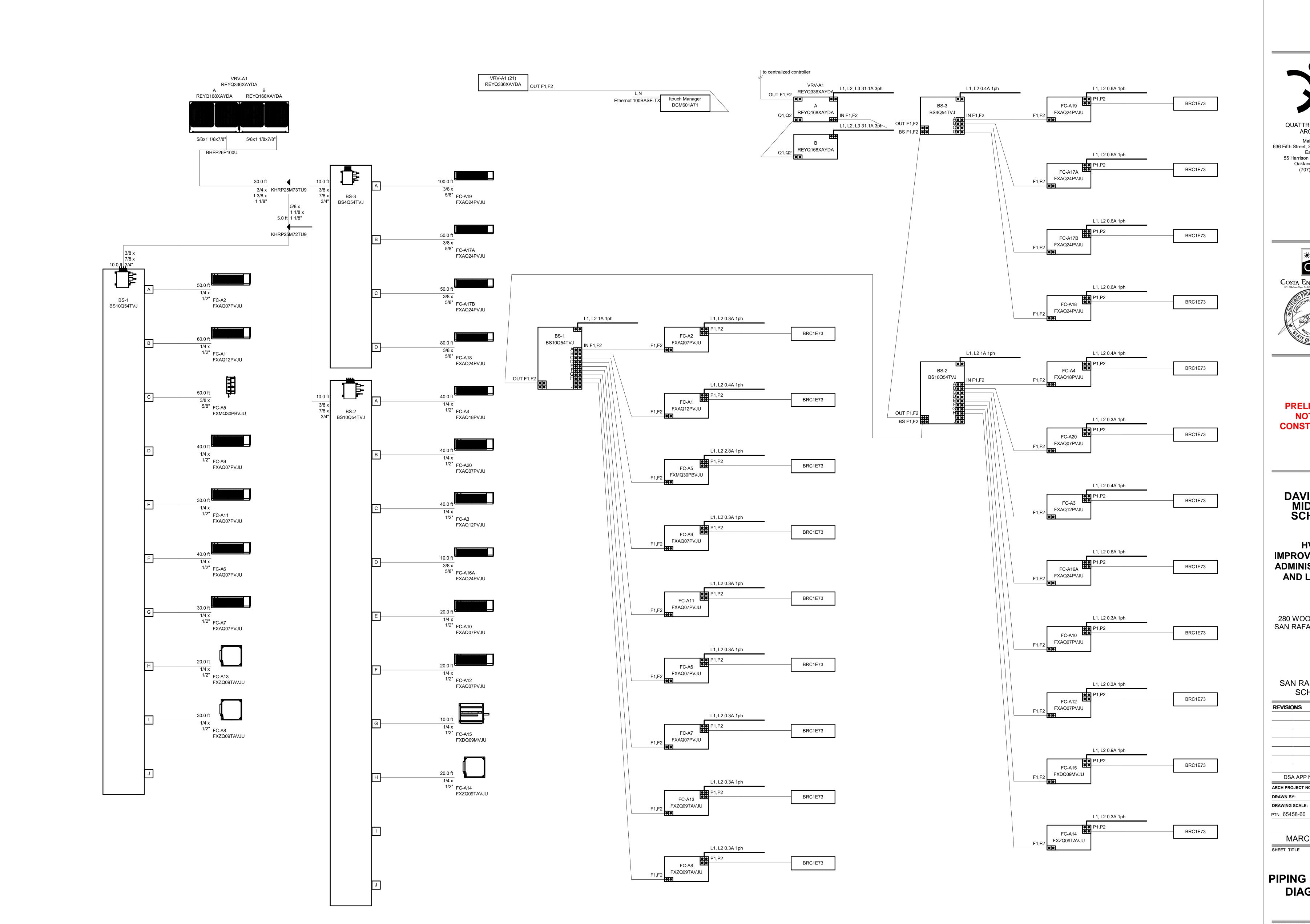
280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY

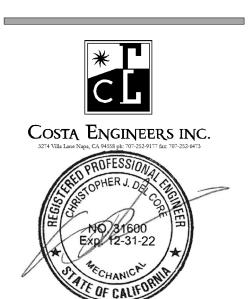


MECHANICAL DETAILS

M-4.2







PRELIMINARY NOT FOR CONSTRUCTION

DAVIDSON MIDDLE SCHOOL

HVAC IMPROVEMENTS -ADMINISTRATION AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY SCHOOLS **REVISIONS** DSA APP NO. 01-119794 1900.02 ARCH PROJECT NO: Author DRAWN BY:

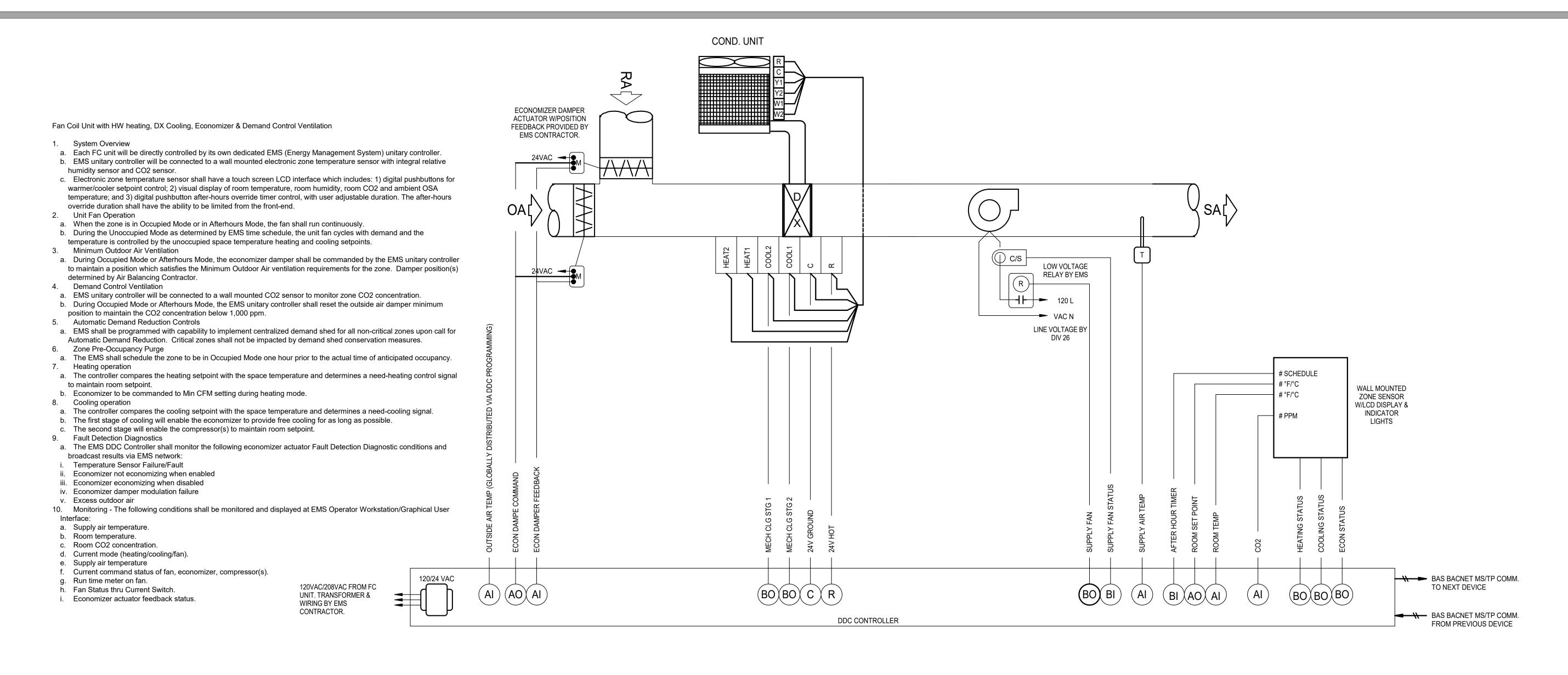
PIPING & WIRING

DIAGRAMS

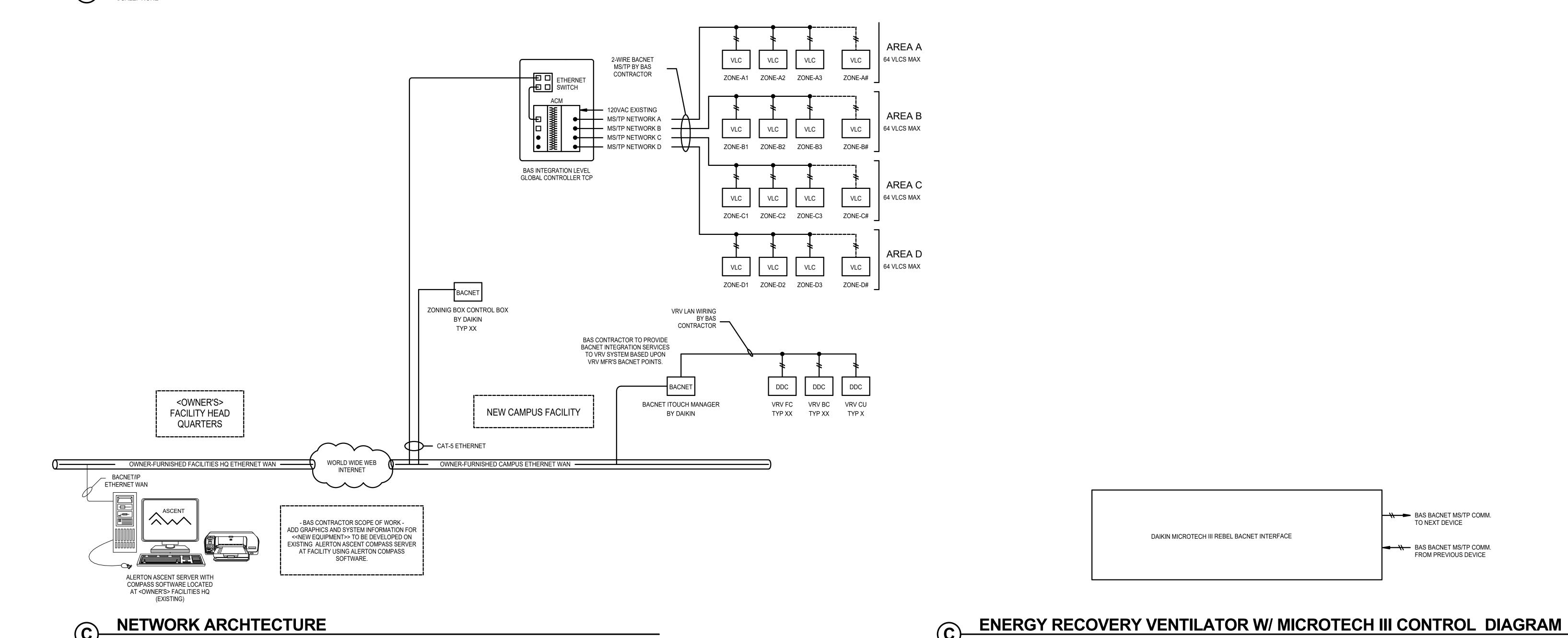
MARCH 1, 2022

FILE NO: 21-39

M-5.1

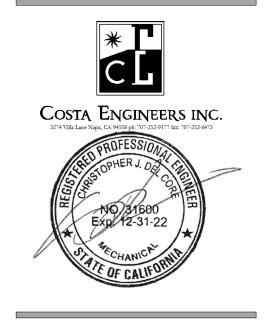








East Bay: 55 Harrison Street, Suite 525, Oakland, CA 94607 (707) 576-0829



PRELIMINARY NOT FOR CONSTRUCTION

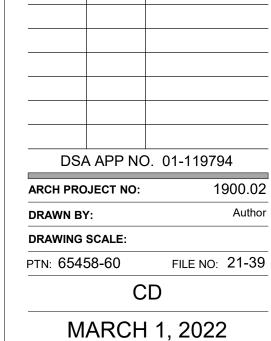
DAVIDSON MIDDLE SCHOOL

HVAC IMPROVEMENTS -ADMINISTRATION AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY SCHOOLS

REVISIONS



CONTROL **DIAGRAMS**

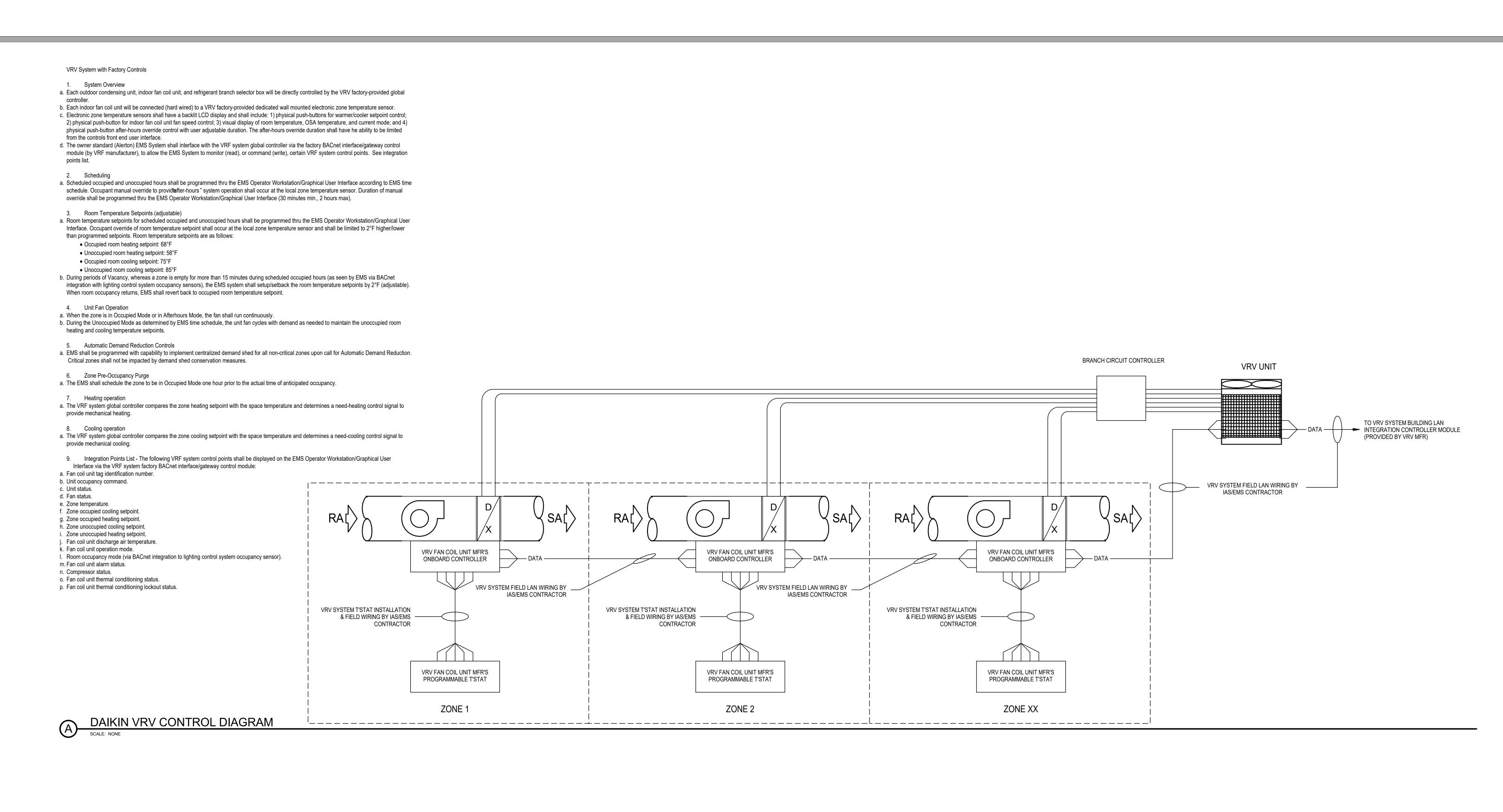
→ BAS BACNET MS/TP COMM.

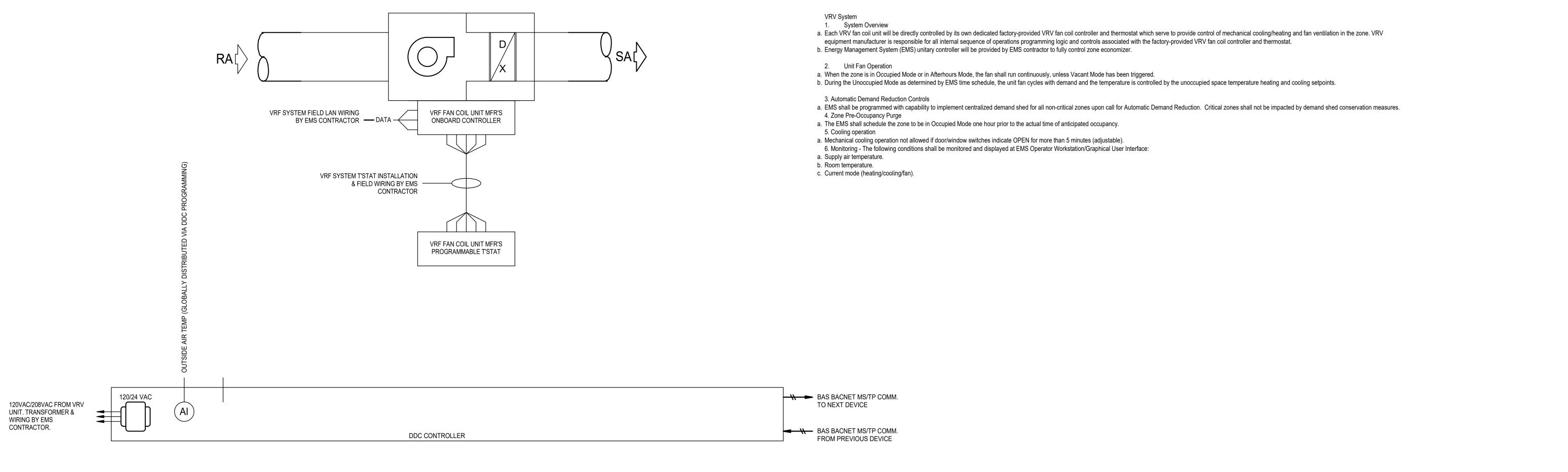
TO NEXT DEVICE

BAS BACNET MS/TP COMM.

FROM PREVIOUS DEVICE

M-5.2





B VRV ZONE UNIT
SCALE: NONE

QUATTROCCHI KWOK ARCHITECTS

Main Office:
636 Fifth Street, Santa Rosa, CA 95404
East Bay:
55 Harrison Street, Suite 525,
Oakland, CA 94607

(707) 576-0829



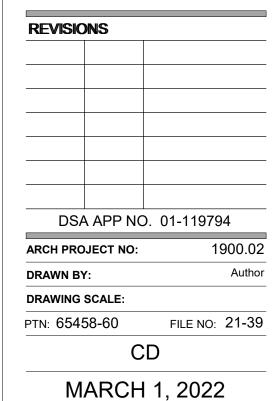
PRELIMINARY
NOT FOR
CONSTRUCTION

DAVIDSON MIDDLE SCHOOL

HVAC IMPROVEMENTS -ADMINISTRATION AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY SCHOOLS



CONTROL DIAGRAMS

SHEET NUMB

M-5.3

02/05/2020 Revised: 02/14/2020 Applicable Code: 2019 CBC MEP Componet Anchorage Note All mechanical, plumbing, and electrical components shall be anchored and installed per the details on the DSAapproved 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: 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 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 trasverse 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 of 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 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 haging 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): MP MD PP E Option 1: Detailed on the approved drawings with project specific notes MP MD PPXE Option 2: Shall comply with the applicable OSHPD Pre-Approval (OPM #) #OPM-0043-13 APPLICABLE GOVERNING CODES: 2019 CALIFORNIA BUILDING CODE

2019 CALIFORNIA ELECTRICAL CODE

2019 CALIFORNIA PLUMBING CODE

2019 CALIFORNIA ENERGY CODE 2019 CALIFORNIA FIRE CODE

2019 CALIFORNIA MECHANICAL CODE

2019 CALIFORNIA GREEN BUILDING STANDARDS

PLUMBING LEGEND				
SYMBOL	ABBREVIATION	DESCRIPTION		
$\left\langle \begin{array}{c} X \\ X \end{array} \right\rangle$		EQUIPMENT TYPE EQUIPMENT NUMBER		
(X)		DETAIL / DRAWING NUMBER SHEET NUMBER		
x-xx		FIXTURE TYPE/NUMBER		
	(N)	NEW PLUMBING AND PIPING SHOWN HEAVY		
	(E) SS	EXISTING PLUMBING AND PIPING SHOWN LIGHT SANITARY WASTE ABOVE GROUND		
	SS	SANITARY WASTE ABOVE GROUND SANITARY WASTE BELOW GROUND		
	GW	GREASE WASTE BELOW GROUND		
	V DCW	VENT PIPE DOMESTIC COLD WATER PIPE		
	DHW	DOMESTIC HOT WATER PIPE		
	DHWR CD	HOT WATER RETURN PIPE CONDENSATE DRAIN		
— G—	G	NATURAL GAS PIPE		
— RVD— —RWL—	RVD RWL	RELIEF VALVE DISCHARGE RAIN WATER LEADER		
—OD—	OD	OVER FLOW DRAIN PIPE		
—VAC—	VAC GV	VACUUM LINE GATE VALVE		
—— × —	Gν	GLOBE VALVE		
——ю——	BV	BALL VALVE		
——————————————————————————————————————	BFV CV	BUTTERFLY VALVE CHECK VALVE		
—————————————————————————————————————	O V	BALANCING VALVE		
——————————————————————————————————————	DDV	GAS COCK OR STOP		
—————————————————————————————————————	PRV TV	PRESSURE REDUCING VALVE TEMPERING VALVE		
		STRAINER		
— - 		UNION PRESSURE GAUGE AND COCK		
	Р	PUMP		
— = —	20	THERMOMETER		
	CO WCO	CLEANOUT WALL CLEANOUT		
	FCO	FLOOR CLEANOUT		
— ———	COTG	CLEANOUT TO GRADE PRESSURE GUAGE WELL ONLY (PETE'S PLUG)		
<u></u>	НВ	HOSE BIBB		
		PIPE UP		
		PIPE DOWN BRANCH TOP CONNECTION		
		BRANCH BOTTOM CONNECTION		
		BRANCH SIDE CONNECTION CAP ON END OF PIPE		
<u></u>		CONCENTRIC REDUCER		
<u>\</u>		ECCENTRIC REDUCER		
		VALVE IN RISER POINT OF CONNECTION		
<u> </u>		POINT OF DEMOLITION		
Q.	AFF	CENTER LINE ABOVE FINISHED FLOOR		
	AFG	ABOVE FINISHED GRADE		
	AFC AP	ABOVE FINISHED CEILING ACCESS PANEL		
	BFF CI	BELOW FINISHED FLOOR CAST IRON		
	COTG	CLEANOUT TO GRADE DRAIN, WASTE, AND VENT		
	DMV DN	DOWN		
	DW DWG	DISHWASHER DRAWING		
	(E) FCO	EXISTING FLOOR CLEANOUT		
	ΙΕ	INVERT ELEVATION		
	IW MFR	IN WALL MANUFACTURER		
	(N) NIC	NEW NOT IN CONTRACT		
	NTS	NOT TO SCALE		
	SA SAD	SHOCK ABSORBER SEE ARCHITECTURAL DRAWINGS		
	SCD SED	SEE CIVIL DRAWINGS SEE ELECTRICAL DRAWINGS		
	SMD SSD	SEE MECHANICAL DRAWINGS SEE STRUCTURAL DRAWINGS		
	TYP	TYPICAL		
	UMC UPC	UNIFORM MECHANICAL CODE UNIFORM PLUMBING CODE		
	UNO V	UNLESS NOTED OTHERWISE VENT		
	VTR	VENT THROUGH ROOF		
	WCO	WALL CLEANOUT		

BLDG 'PLUMBING' SHEET LIST

WALL CLEANOUT

WATER HAMMER ARRESTOR

P-1.1 PLUMBING SCHEDULES & LEGENDS P-2.1 ADMIN PLUMBING FLOOR PLAN

WCO

WA

P-2.2 LIBRARY PLUMBING FLOOR PLAN

P-3.1 ADMIN ROOF PLAN P-4.1 PLUMBING DETAILS

QUATTROCCHI KWOK 636 Fifth Street, Santa Rosa, CA 95404 55 Harrison Street, Suite 525, Costa Engineers inc. **PRELIMINARY** CONSTRUCTION

DAVIDSON MIDDLE SCHOOL

NOT FOR

ARCHITECTS

Main Office:

Oakland, CA 94607

(707) 576-0829

HVAC IMPROVEMENTS -ADMINISTRATION AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY SCHOOLS

REVISIONS DSA APP NO. 01-119794 1900.02 ARCH PROJECT NO: Author DRAWN BY: DRAWING SCALE: FILE NO: 21-39 PTN: 65458-60

MARCH 1, 2022

PLUMBING SCHEDULES & LEGENDS

P-1.1

GENERAL NOTES

- FOR PLUMBING GENERAL NOTES, LEGENDS, AND SYMBOLS, REFER TO SHEET P-1.1 2. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR
- COORDINATING THEIR WORK WITH OTHER TRADES. MAKE ANY OFFSETS AS REQUIRED TO AVOID CONFLICT WITH PIPING, LIGHT FIXTURES, SKYLIGHTS, ETC. WHERE BRACING DETAILS ARE NOT SHOWN ON THE DRAWING OR

SHEET NOTES

WALL MOUNTED FAN COIL. FOR CONDENSATE CONNECTION SEE DETAIL C

2 CEILING CASSET FAN COIL. FOR CONDENSATE CONNECTION SEE DETAIL A

3 DUCTED FAN COIL FOR CONDENSATE CONNECTION SEE

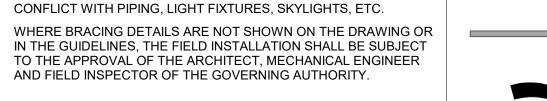
4 CONDENSATE DN IN WALL AND THRU WALL AND DN TO BG TO DRYWELL SEE DETAIL H

5 CONDENSATE ABOVE CEILING SEE DETAIL P-4.1

6 TERMINATE CONDENSATE INTO SINK TAILPIECE SEE DETAIL

7) RUN CD EXPOSED ON WALL. SLOPE PIPING TO MATCH ROOF SLOPE. COVER WITH PIPE COVER.

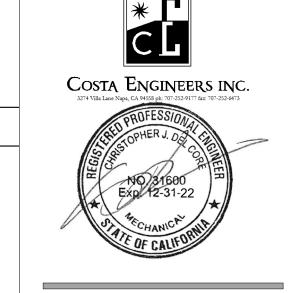
KEYPLAN



ARCHITECTS Main Office: 636 Fifth Street, Santa Rosa, CA 95404 55 Harrison Street, Suite 525, Oakland, CA 94607

(707) 576-0829

QUATTROCCHI KWOK



PRELIMINARY NOT FOR CONSTRUCTION

DAVIDSON MIDDLE SCHOOL

HVAC IMPROVEMENTS -**ADMINISTRATION AND LIBRARY**

280 WOODLAND AVE SAN RAFAEL, CA 94901

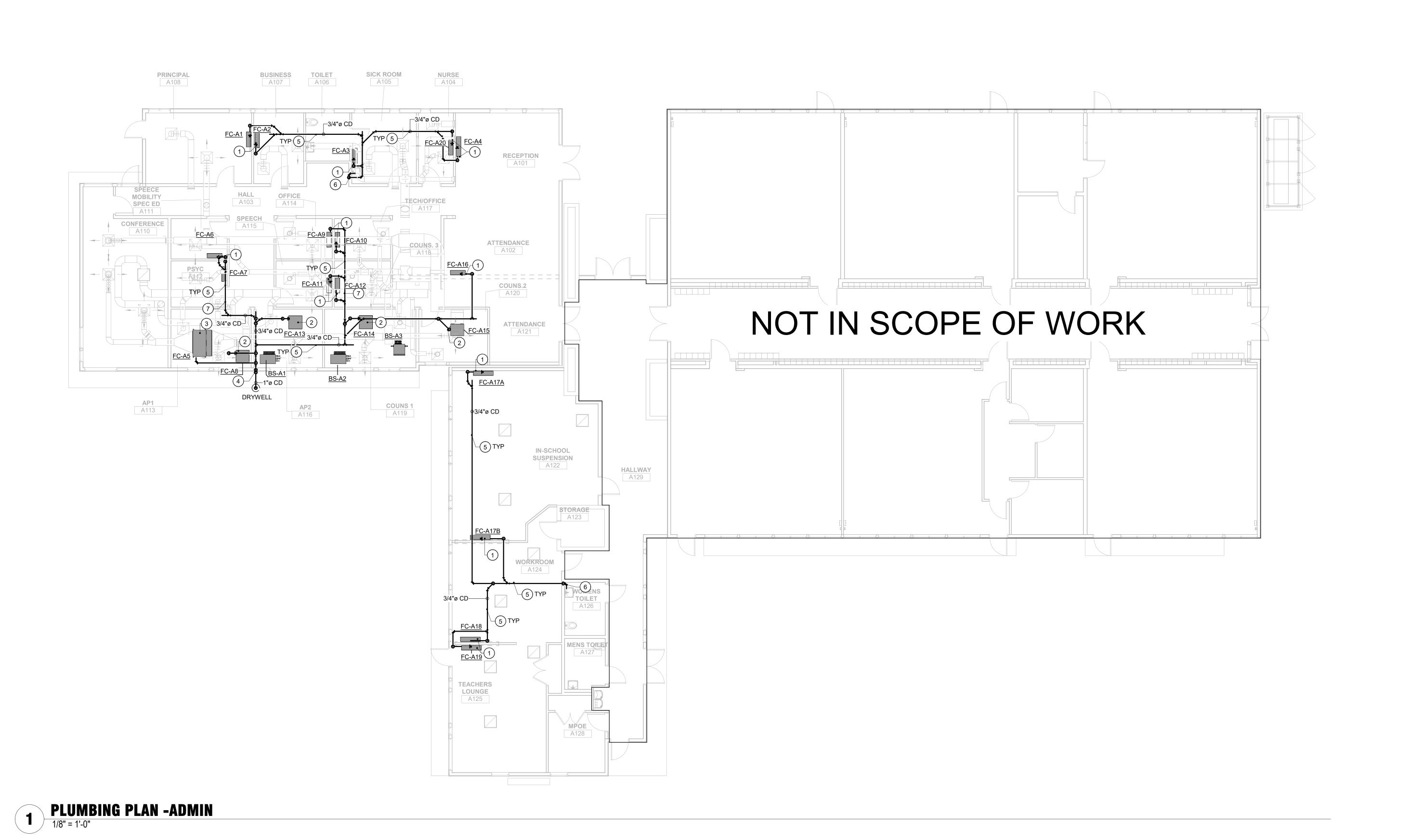
SAN RAFAEL CITY SCHOOLS **REVISIONS**

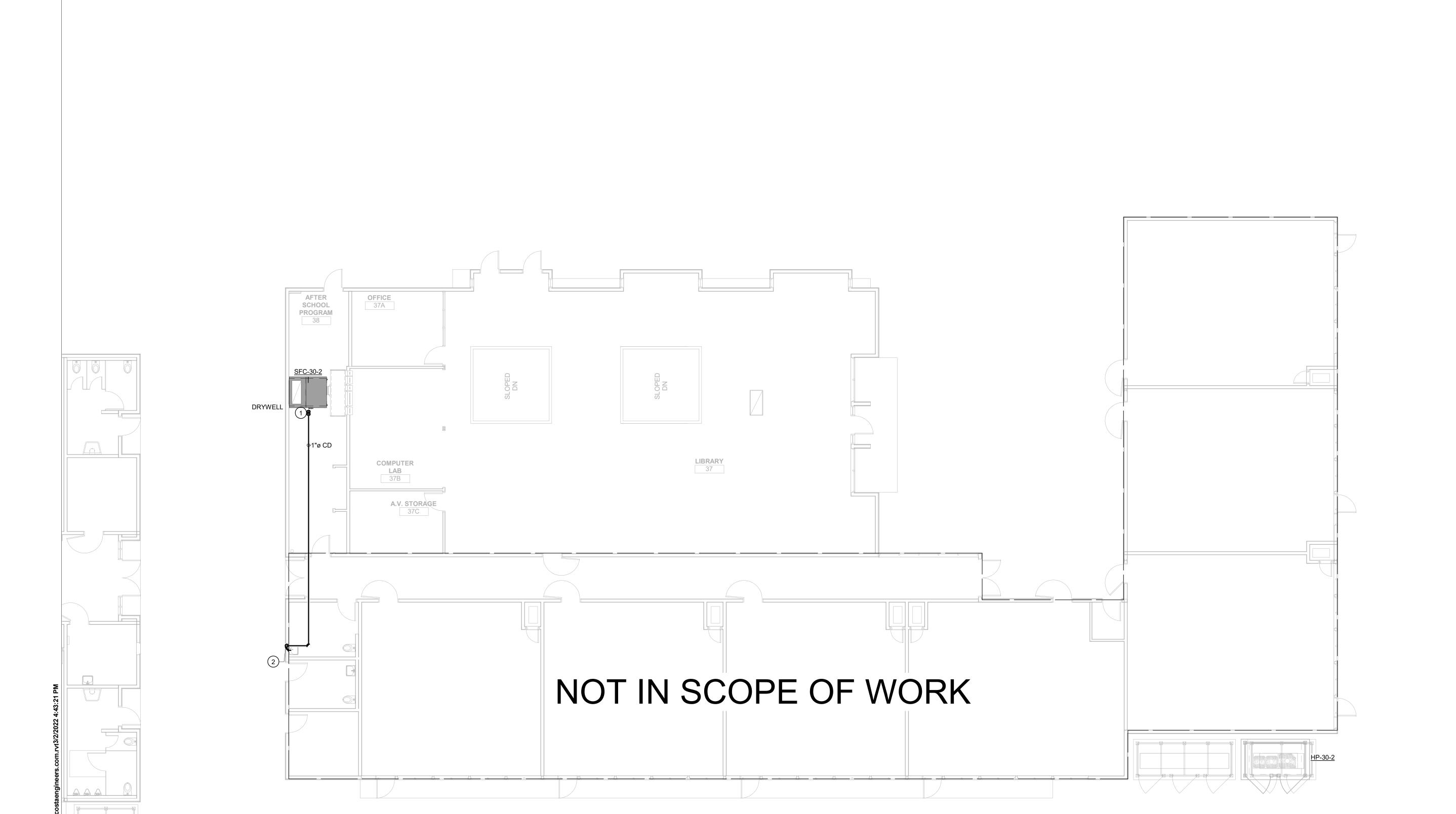
DSA APP NO. 01-119794

MARCH 1, 2022

ADMIN PLUMBING **FLOOR PLAN**

P-2.1





1 PLUMBING FLOOR PLAN - LIBRARY

1/8" = 1'-0"

GENERAL NOTES

- FOR PLUMBING GENERAL NOTES, LEGENDS, AND SYMBOLS,
- REFER TO SHEET P-1.1 2. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THEIR WORK WITH OTHER TRADES. MAKE ANY OFFSETS AS REQUIRED TO AVOID CONFLICT WITH PIPING, LIGHT FIXTURES, SKYLIGHTS, ETC.
- WHERE BRACING DETAILS ARE NOT SHOWN ON THE DRAWING OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT, MECHANICAL ENGINEER AND FIELD INSPECTOR OF THE GOVERNING AUTHORITY.



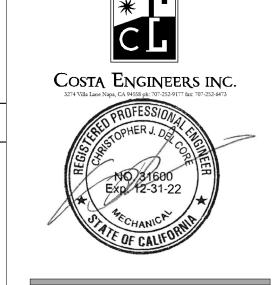
Main Office: 636 Fifth Street, Santa Rosa, CA 95404 55 Harrison Street, Suite 525, Oakland, CA 94607 (707) 576-0829



1 FAN COIL. FOR CONDENSATE CONNECTION SEE DETAIL $\frac{D}{P-4.1}$

2 CD PIPING FROM UNIT TO TAIL PIECE. TRAP AND VENT PER DETAIL. CONNECT TO TAIL PIECE PER DETAIL.

KEYPLAN



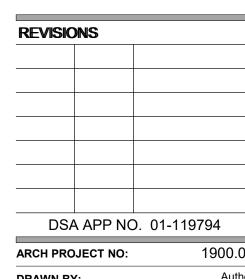
PRELIMINARY NOT FOR CONSTRUCTION

DAVIDSON MIDDLE SCHOOL

HVAC IMPROVEMENTS -**ADMINISTRATION AND LIBRARY**

280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY



MARCH 1, 2022

LIBRARY PLUMBING FLOOR PLAN

P-2.2

GENERAL NOTES

- FOR PLUMBING GENERAL NOTES, LEGENDS, AND SYMBOLS, REFER TO SHEET P-1.1
- 2. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THEIR WORK WITH OTHER TRADES. MAKE ANY OFFSETS AS REQUIRED TO AVOID CONFLICT WITH PIPING, LIGHT FIXTURES, SKYLIGHTS, ETC.
- 3. WHERE BRACING DETAILS ARE NOT SHOWN ON THE DRAWING OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT, MECHANICAL ENGINEER AND FIELD INSPECTOR OF THE GOVERNING AUTHORITY.



Main Office:
636 Fifth Street, Santa Rosa, CA 95404
East Bay:
55 Harrison Street, Suite 525,
Oakland, CA 94607
(707) 576-0829



SHEET NOTES

1 CONDENSATE CONNECTION SEE DETAIL P-4.1

2 CONDENSATE DN IN CONDENSATE RECEIVER SEE DETAIL F

3 CONDENSATE ON ROOF PER DETAIL P-4.1

FURNISH AND INSTALL WELDED SS CONDENSATE DRAIN PAN UNDER VRV-A1 WITH 1" HIGH SIDES AND MIN. 3/4" CD PIPE CONNECTION. SLOPE TO DRAIN AT 1/8" PER FOOT.

KEYPLAN

PRELIMINARY
NOT FOR
CONSTRUCTION

DAVIDSON MIDDLE SCHOOL

HVAC IMPROVEMENTS -ADMINISTRATION AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY SCHOOLS

REVISIONS		
DSA AF	P NC	D. 01-119794
ARCH PROJEC	T NO:	1900.0
DRAWN BY:		Auth

DRAWING SCALE:
PTN: 65458-60

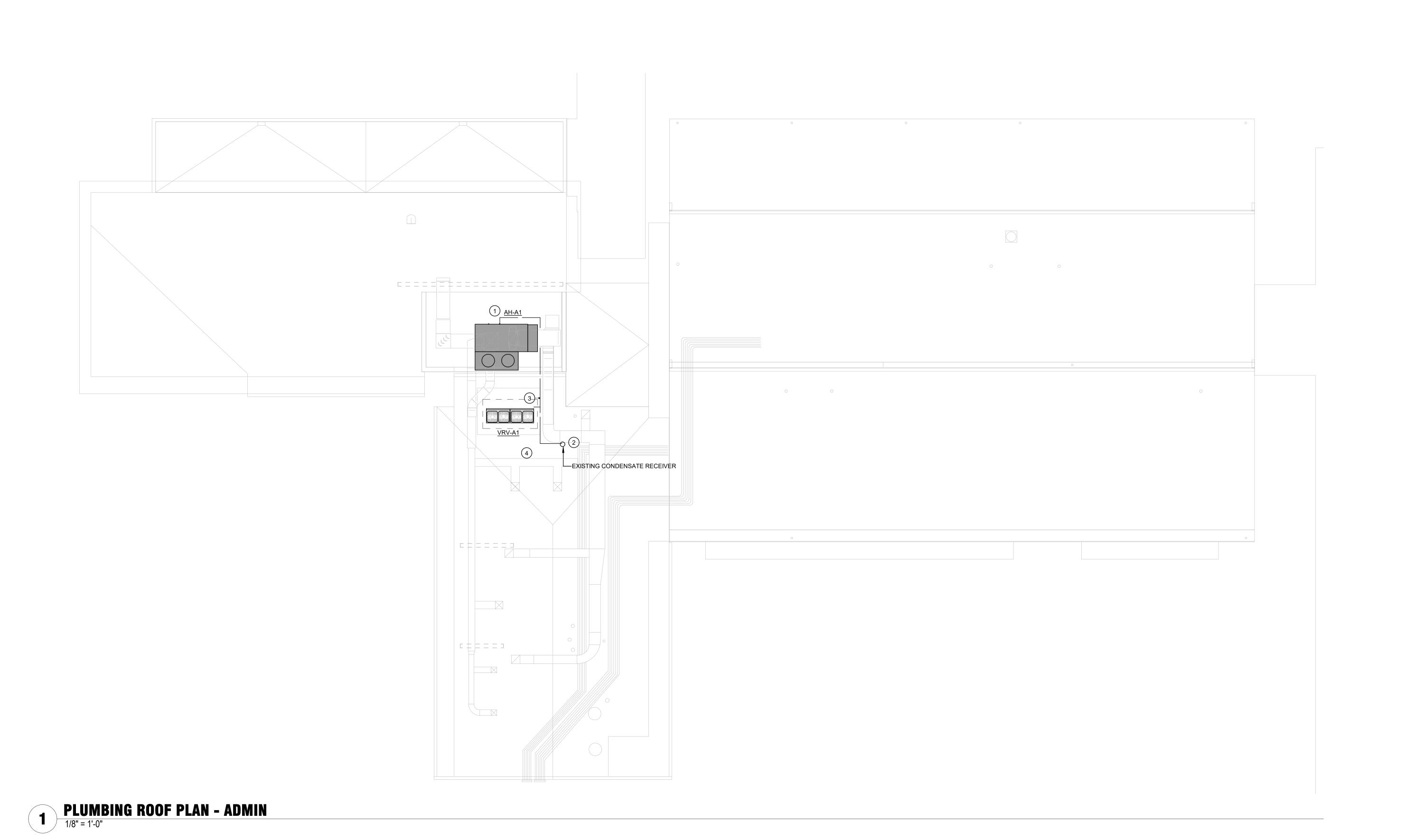
MARCH 1, 2022

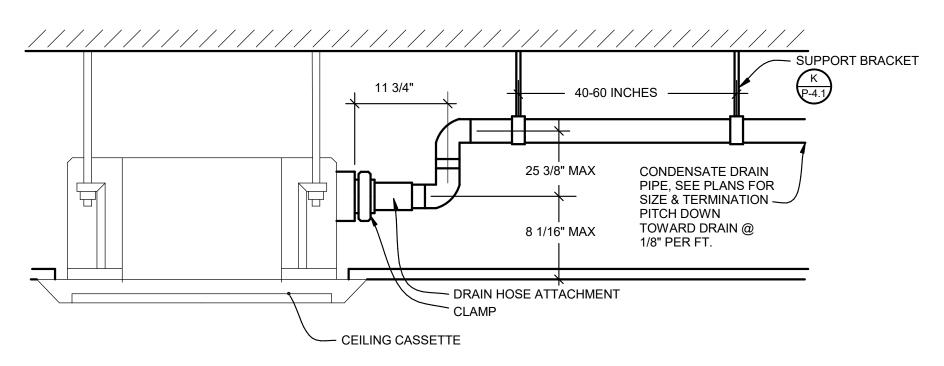
FILE NO: 21-39

ADMIN ROOF PLAN

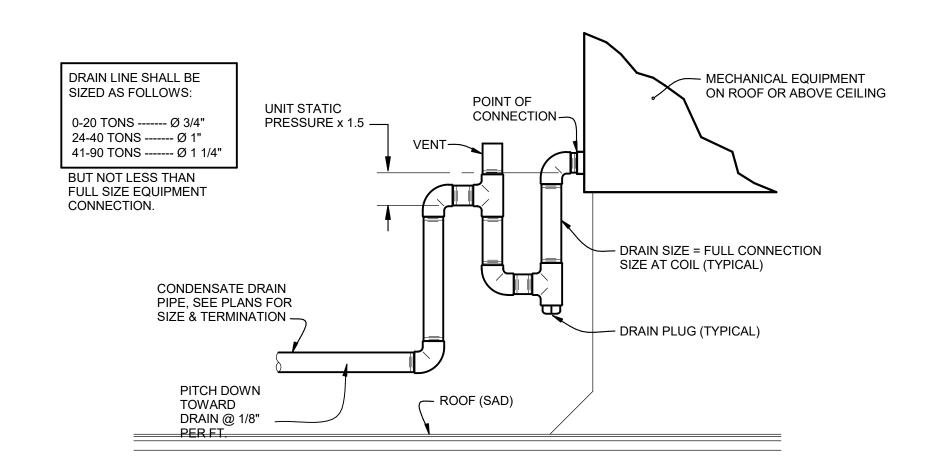
NUMBER

P-3.1

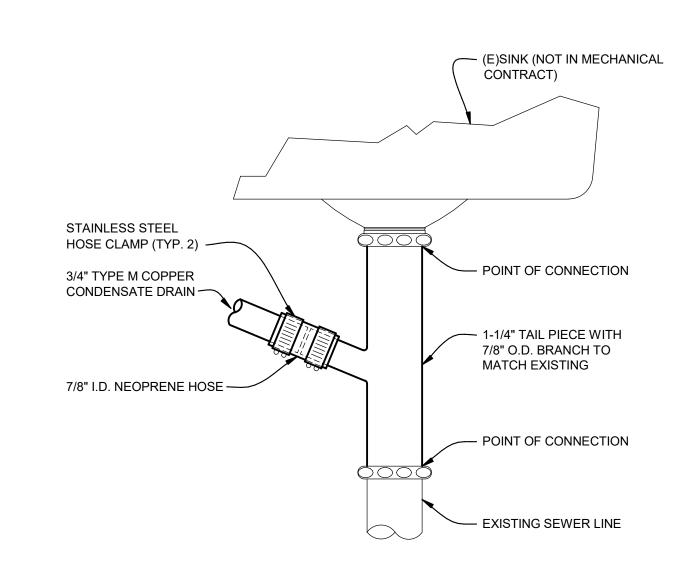




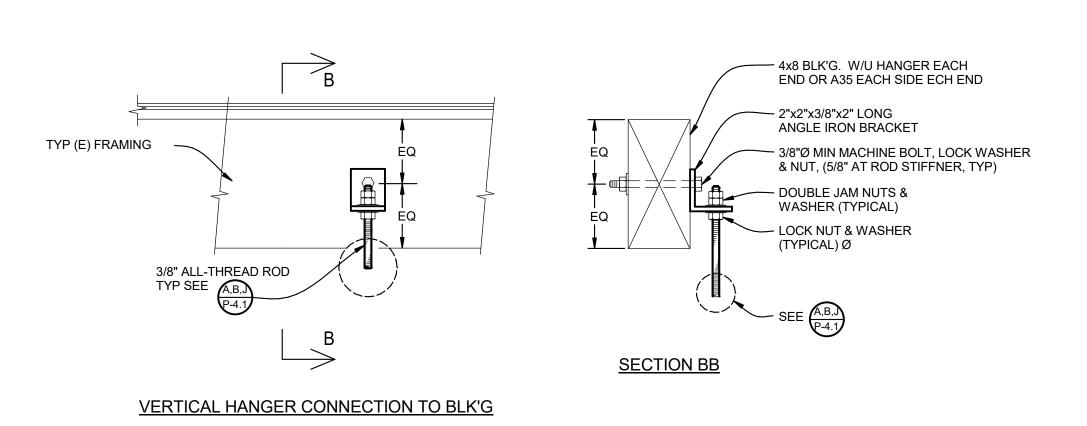
TYPICAL CONDENSATE DRAIN FOR CEILING CASSETTE



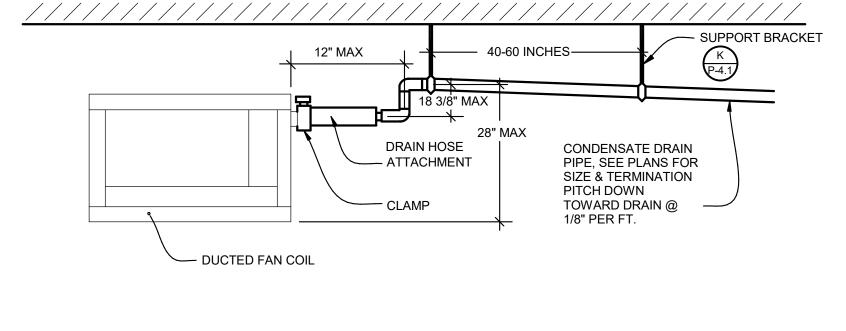
TYPICAL CONDENSATE DRAIN ON ROOF DETAIL



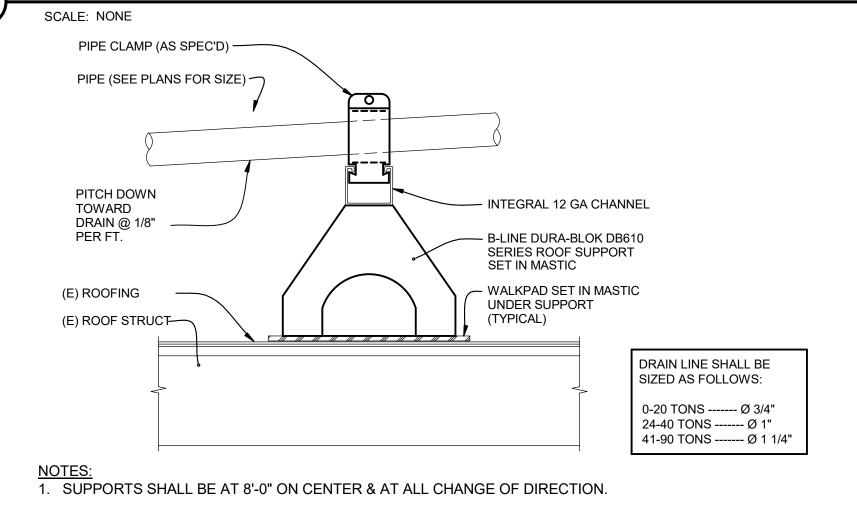
CONDENSATE TO SINK TAIL PIECE



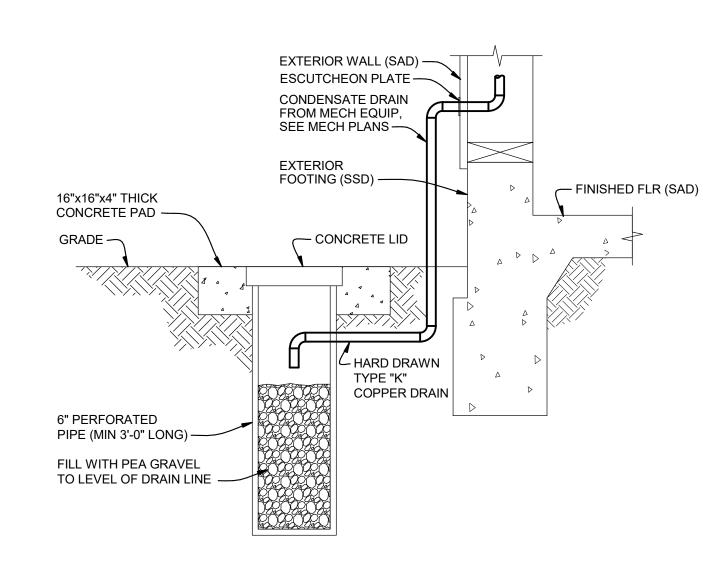
HANGER CONNECTION TO WOOD FRAMING



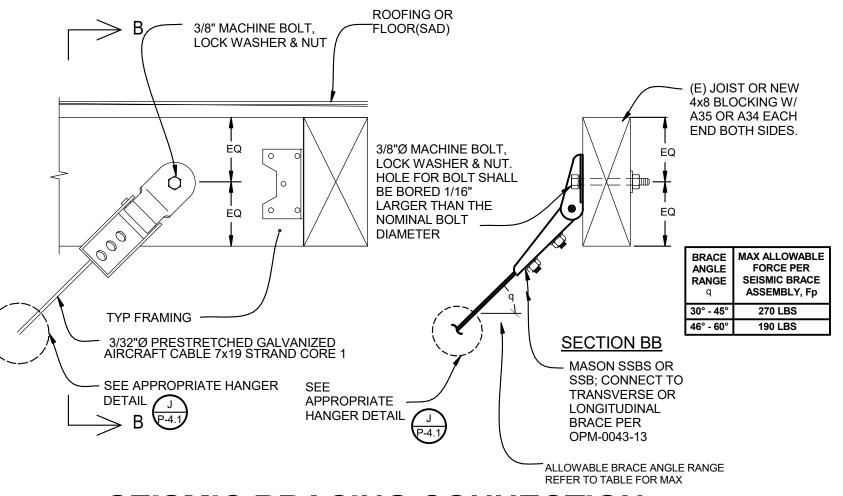
TYPICAL CONDENSATE DRAIN FOR DUCTED FAN COIL



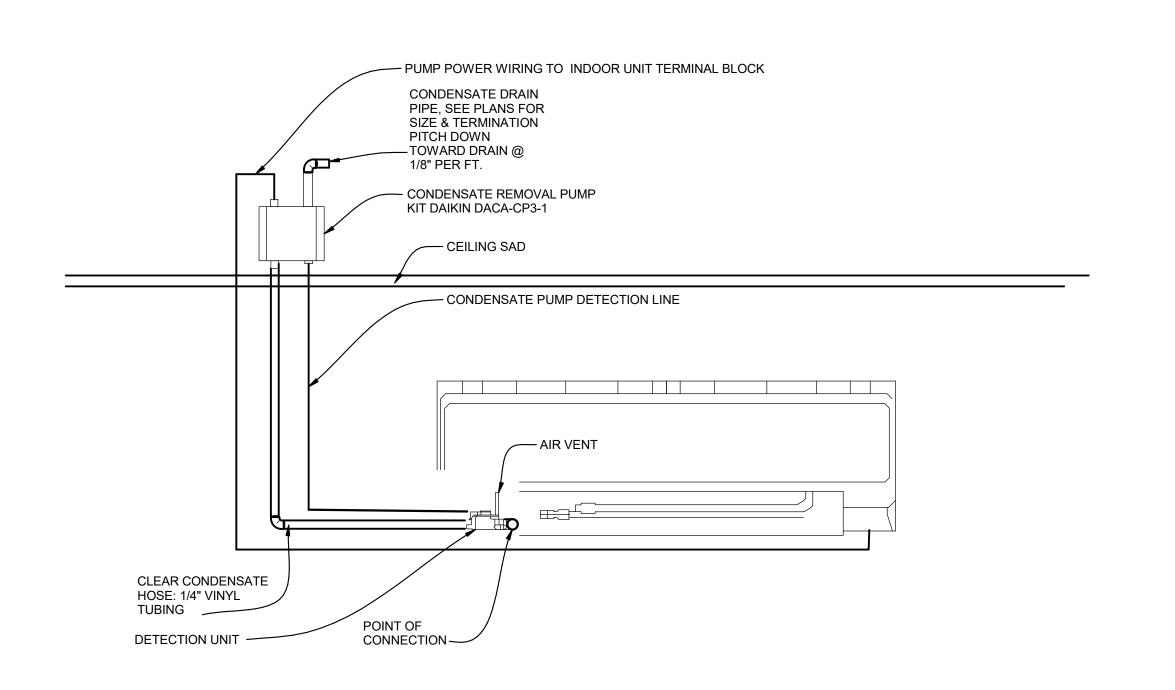
CONDENSATE SUPPORT ON ROOF DETAIL



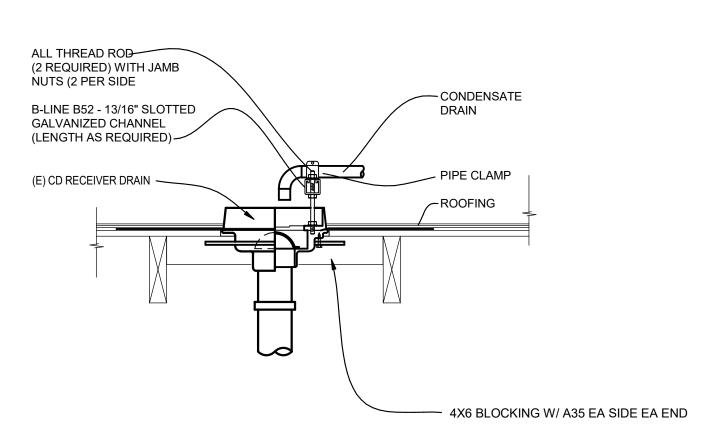
COND TO DRYWELL DETAIL



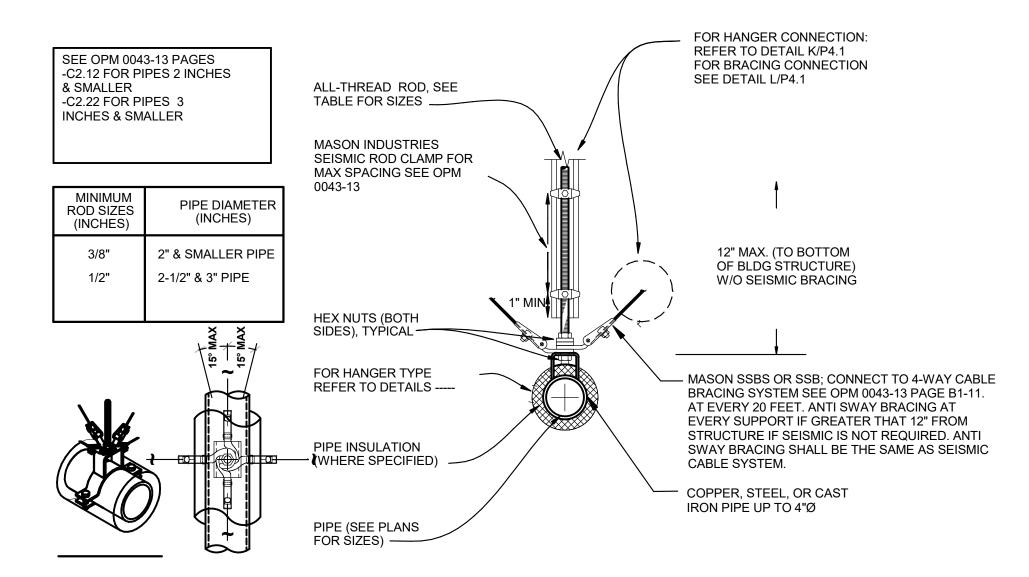
SEISMIC BRACING CONNECTION



TYPICAL WALL MOUNTED FC CONDENSATE DRAIN DETAIL



CONDENSATE TO ROOF DRAIN



GENERAL NOTES:

AT EACH SUPPORT

- 1. RUN PIPING AS CLOSE AS POSSIBLE TO STRUCTURE.
- 2. SUPPORT PIPING AT A MAXIMUM OF 8'-0" INTERVALS AND AT EVERY CHANGE IN DIRECTION. 3. SEE PLANS FOR PIPE SIZES.
- 4. MASON ROD STIFFENER @ ALL-THREAD WHERE SEISMIC BRACING OCCURS. SEE OPM-0043-13 IN TABLE ABOVE 5. NO BRACING IS REQUIRED WHEN SUPPORTED LESS THAN 12" FROM BOTTOM OF STRUCTURE AND TOTAL
- WEIGHT IS LESS THAN 50 LBS PER ROD PER 2019 CBC 1617A.1.26 EXCEPTION 2. 6. PIPING SUPPORTED MORE THAN 12" FROM STRUCTURE SHALL BE HAVE ANTI SWAY CABLE BRACING

TYPICAL SINGLE PIPE HANGER DETAIL



55 Harrison Street, Suite 525, Oakland, CA 94607 (707) 576-0829



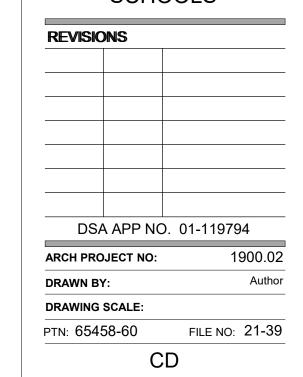
PRELIMINARY NOT FOR CONSTRUCTION

DAVIDSON MIDDLE SCHOOL

HVAC IMPROVEMENTS -ADMINISTRATION AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY



PLUMBING DETAILS

MARCH 1, 2022

SHEET TITLE

P-4.1

ELECTRICAL EQUIPMENT ANCHORAGE

ELECTRICAL ANCHORAGE NOTES:

ALL 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, CHAPTER 13, 26, AND 30.

- 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

THE FOLLOWING ELECTRICAL COMPONENTS SHALL BE 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 CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS.

- A. COMPONENT WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE
- 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 WALL.

THE ANCHORAGE OF ALL ELECTRICAL 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.

ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE:

MANNER APPROVED BY DSA.

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 SECTION 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 PREAPPROVED INSTALLATION GUIDE (eg., OSHPD OPM FOR 2013 CBC), 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.

ELECTRICAL DISTRIBUTION SYSTEMS ARE: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

LIGHT FIXTURES:

ALL LIGHT FIXTURES SHALL BE POSITIVELY ATTACHED TO THE CEILING SUSPENSION SYSTEMS BY MECHANICAL MEANS TO RESIST A HORIZONTAL FORCE EQUAL TO THE WEIGHT OF THE FIXTURE. A MINIMUM OF TWO SCREWS OR APPROVED FASTENERS ARE REQUIRED AT EACH LIGHT FIXTURE, PER ASTM E580, SECTION 5.3.1.

SURFACE-MOUNTED LIGHT FIXTURES SHALL BE ATTACHED TO THE MAIN RUNNER WITH AT LEAST TWO POSITIVE CLAMPING DEVICES. THE CLAMPING DEVICE SHALL COMPLETELY SURROUND THE SUPPORTING CEILING RUNNER AND BE MADE OF STEEL WITH A MINIMUM THICKNESS OF #14 GAGE. ROTATIONAL SPRING CATCHES DO NOT COMPLY. A #12 GAGE SLACK SAFETY WIRE SHALL BE CONNECTED FROM EACH CLAMPING DEVICE TO THE STRUCTURE ABOVE. PROVIDE ADDITIONAL SUPPORTS WHEN LIGHT FIXTURES ARE EIGHT (8) FEET OR LONGER OR EXCEED 56 LB. MAXIMUM SPACING BETWEEN SUPPORTS SHALL NOT EXCEED EIGHT (8) FEET.

LIGHT FIXTURES WEIGHING LESS THAN OR EQUAL TO 10 LB. SHALL HAVE A MINIMUM OF ONE (1) #12 GAGE SLACK SAFETY WIRE CONNECTED FROM THE FIXTURE HOUSING TO THE STRUCTURE ABOVE.

LIGHT FIXTURES WEIGHING GREATER THAN 10 LB BUT LESS THAN OR FOLIAL TO 56 LBS MAY BE SUPPORTED DIRECTLY ON THE CEILING RUNNERS, BUT THEY SHALL HAVE A MINIMUM OF TWO (2) #12 GAGE SLACK SAFETY WIRES CONNECTED FROM THE FIXTURE HOUSING AT DIAGONAL CORNERS TO THE STRUCTURE ABOVE. EXCEPTION: ALL LIGHT FIXTURES GREATER THAN TWO BY FOUR FEET WEIGHING LESS THAN 56 LBS. SHALL HAVE A #12 GAGE SLACK SAFETY WIRE AT EACH CORNER.

ALL LIGHT FIXTURES WEIGHING GREATER THAN 56 LB. SHALL BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN FOUR (4) TAUT #12 GAGE HANGER WIRES (ONE AT EACH CORNER) ATTACHED FROM THE FIXTURE HOUSING TO THE STRUCTURE ABOVE OR OTHER APPROVED HANGERS. THE FOUR (4) TAUT #12 GAGE WIRES OR OTHER APPROVED HANGERS, INCLUDING THEIR ATTACHMENT TO THE STRUCTURE ABOVE, SHALL BE CAPABLE OF SUPPORTING FOUR (4) TIMES THE WEIGHT OF THE

GENERAL DEMOLITION NOTES

- THE CONTRACTOR SHALL VERIFY IN THE FIELD ALL LINES, LEVELS, DIMENSIONS AND EXISTING CONDITIONS. THE INFORMATION ON THE DRAWINGS REGARDING EXISTING ELECTRICAL EQUIPMENT AND BRANCH CIRCUITS IS THE RESULT OF FIELD SURVEY AND IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. IT IS INTENDED, HOWEVER, AS A GUIDE FOR
- ANY EXISTING ELECTRICAL EQUIPMENT IN THE AREA OF NEW CONSTRUCTION NOT SHOWN ON THE EXISTING PLANS SHALL BE DOCUMENTED AND SUBMITTED TO THE ENGINEER FOR DETERMINATION OF ACTION REQUIRED.
- WHEREVER THE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT IS CALLED FOR AND ALL EQUIPMENT ON A PARTICULAR BRANCH CIRCUIT IS TO BE REMOVED, ALL CONDUIT AND WIRE BACK TO THE PANEL SHALL BE ENTIRELY REMOVED AND THE CIRCUIT IN PANEL SHALL BE MARKED "SPARE". THIS APPLIES TO SIGNAL AND COMMUNICATIONS SYSTEMS EQUIPMENT, CONDUIT, AND WIRE AS WELL.
- WHEREVER THE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT IS CALLED FOR AND ALL EQUIPMENT ON A PARTICULAR BRANCH CIRCUIT IS NOT TO BE REMOVED, THE CIRCUIT SHALL BE MAINTAINED CONTINUOUS TO THE EXISTING EQUIPMENT IN USE WITH MINIMUM INTERRUPTIONS OF POWER. THIS APPLIES TO SIGNAL AND COMMUNICATIONS SYSTEMS EQUIPMENT, CONDUIT, AND WIRE AS WELL.
- WHENEVER THE REMOVAL OF EXISTING CONSTRUCTION REVEALS ELECTRICAL WORK THAT IS TO REMAIN, BUT IS IN CONFLICT WITH NEW CONSTRUCTION, RELOCATE THE EXISTING ELECTRICAL WORK AS NECESSARY TO AVOID ANY CONFLICT. RELOCATION WORK SHALL BE DONE TO MINIMIZE ANY INTERRUPTIONS OF POWER.
- 6. CARE SHALL BE TAKEN IN ORDER TO IDENTIFY AND PROTECT ALL EXISTING ELECTRICAL WORK
- ENSURE RECONNECTION OF EXISTING DEVICES WHOSE CIRCUITS HAVE BEEN INTERRUPTED BY DEMOLITION BY PROVIDING NEW CONNECTION TO ANOTHER EXISTING TO REMAIN DEVICE
- . ALL EXISTING ELECTRICAL EQUIPMENT SHOWN ON THE PLANS FOR NEW WORK ARE THOSE WHICH ARE TO BE REUSED DURING SOME PHASE OF THE NEW CONSTRUCTION OR REQUIRE SOME SPECIAL CONSIDERATIONS.
- WHENEVER THE REMOVAL OF EXISTING ELECTRICAL PANELBOARDS ARE CALLED FOR AND ALL EXISTING BRANCH CIRCUITS ARE NOT TO BE REMOVED, THE EXISTING BRANCH CIRCUITS SHALL BE CONNECTED TO OTHER EXISTING ELECTRICAL EQUIPMENT OR PANELS STILL IN USE WITH MINIMUM INTERRUPTIONS OF POWER. ALSO, IF REQUIRED, THESE SAME BRANCH CIRCUITS SHALL BE RECONNECTED TO RELOCATED EXISTING OR NEW PANELBOARDS AS PART OF THE NEW CONSTRUCTION. THIS APPLIES TO SIGNAL AND COMMUNICATIONS SYSTEMS EOUIPMENT, CONDUIT AND WIRE AS WELL.
- 10. THE ELECTRICAL CONTRACTOR SHALL REVISE EXISTING PANEL SCHEDULES TO CORRESPOND TO ACTUAL CONDITIONS AFTER ALL DEMOLITION AND NEW WORK IS COMPLETED.

11. REMOVE ALL ABANDONED CONDUIT AND WIRE ABOVE CEILINGS.

- 12. WHEN ELECTRICAL EQUIPMENT OR DEVICE IS REMOVED FROM AN EXISTING WALL OR CEILING WHICH IS TO REMAIN, PATCH ABANDONED OPENINGS TO MATCH EXISTING FINISH.
- 13. IN GENERAL, THE DEMOLITION PLANS SHOW ALL EXISTING EOUIPMENT THAT IS TO BE REMOVED UNLESS NOTED OTHERWISE. HOWEVER, ELECTRICAL EQUIPMENT, WHETHER SHOWN ON THIS DRAWING OR NOT, WHERE LOCATED IN THE AREA SCHEDULED TO BE DEMOLISHED, SHALL BE REMOVED COMPLETELY (INCLUDING CONDUIT AND WIRES BACK TO THE LAST REMAINING FIXTURE, OUTLET, DEVICE, ETC.) UNLESS OTHERWISE NOTED. COORDINATE DEMOLITION WORK WITH ARCHITECT AND GENERAL CONTRACTOR.
- 14. EXISTING CONDUIT FEEDS UP THROUGH FLOOR SHALL BE CUT OFF AND PLUGGED FLUSH WITH FLOOR WHERE EXISTING WALLS, ETC., ARE REMOVED. REMOVE CONDUCTORS FROM THE POINT BACK TO LAST OUTLET REMAINING IN SERVICE.
- 15. IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO MAINTAIN CONTINUITY OF ALL ELECTRICAL SYSTEMS, EQUIPMENT, ETC. REMAINING IN OPERATION WHICH IS BEING FED BY AN ABANDONED OUTLET. MAINTAINING CONTINUITY SHALL CONSIST OF REROUTING OF CONDUIT, WIRE, ETC. AS REQUIRED.
- 16. IT SHALL BE THIS CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS OF EXISTING CIRCUITS AND ADJUST CIRCUIT NUMBERS ACCORDING TO EXISTING CONDITIONS IF
- 17. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE OWNER PRIOR TO REMOVAL OF EXISTING ELECTRICAL EQUIPMENT AND TURN OVER REMOVED EQUIPMENT THAT THE OWNER REQUESTS, IN AS-FOUND CONDITION. EQUIPMENT THAT IS TO BE TURNED OVER SHALL BE BOXED AND TAGGED TO IDENTIFY THE SPECIFIC EQUIPMENT. EQUIPMENT TO BE TEMPORARILY REMOVED DUE TO THE CONSTRUCTION SHALL BE CLEANED AND RE-INSTALLED IN ITS ORIGINAL CONDITION OR AS REQUIRED.
- 18. WHERE EXISTING WALLS HAVE BEEN REMOVED, AND THERE ARE EXISTING CONDUIT FEEDS WHICH HAVE BEEN CUT OFF AND CAPPED FLUSH WITH THE FLOOR, IT IS THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY AND DIMENSION ALL SUCH CONDUITS ON THE "AS-BUILT"
- 19. IF ANY EQUIPMENT THAT IS SCHEDULED TO REMAIN IN OPERATION IS DAMAGED BY THE CONTRACTOR, IT SHALL BE REPLACED TO ITS ORIGINAL CONDITION SATISFACTORY TO THE OWNER AT CONTRACTOR'S EXPENSE.

SYMBOLS LIST

MAIN SWITCHBOARD, DISTRIBUTION PANEL OR MOTOR CONTROL CENTER FLUSH MOUNTED PANELBOARD, 6'-6" TO TOP SURFACE MOUNTED PANELBOARD, 6'-6" TO TOP FUSED EQUIPMENT DISCONNECT SWITCH WITH FUSE SIZE AS RECOMMENDED BY EQUIPMENT MANUFACTURER

MOTOR DISCONNECT SWITCH; HORSEPOWER RATED, NON FUSE COMBINATION MAGNETIC MOTOR STARTER & MOTOR CIRCUIT PROTECTOR MAGNETIC MOTOR STARTER

VARIABLE FREQUENCY DRIVE, FURNISHED BY MECHANICAL, INSTALLED & CONNECTED COMPLETE BY ELECTRICAL MANUAL MOTOR STARTER WITH OVERLOAD PROTECTION

MOTOR WITH FLEXIBLE CONDUIT CONNECTION AND DISCONNECT LINE VOLTAGE MOTOR RATED TOGGLE SWITCH INSTALLED AT EQPT SHOWN

TRANSFORMER

CONCRETE PULLBOX, SIZE AS REQUIRED OR SHOWN - CHRISTY OR EQUAL WITH LABELED LID PER USE

COPPER GROUND ROD

FLUSH CEILING MOUNTED JUNCTION BOX, U.O.N.

20A 3PG 125V DUPLEX RECEPTACLE, UP 18" U.O.N.

FLUSH WALL MOUNTED JUNCTION BOX, UP 18" U.O.N.

20A 3PG 125V DUPLEX RECEPTACLE, WEATHERPROOF, UP 18" U.O.N. 20A 3PG 125V DUPLEX RECEPTACLE, GROUND FAULT CIRCUIT INTERRUPTER

WEATHERPROOF ENCLOSURE

TYPE, UP 18" U.O.N.

CONDUIT AND WIRE CONCEALED IN CEILING OR WALL ————— CONDUIT AND WIRE CONCEALED IN OR UNDER SLAB OR UNDERGROUND

—— – — CONDUIT AND WIRE RUN EXPOSED

CROSSMARKS INDICATE QUANTITY OF #12 CONDUCTORS PLUS PARITY SIZED GROUND CONDUCTOR, NO HASHMARKS INDICATES (2) #12 CONDUCTORS PLUS PARITY SIZED GROUND CONDUCTOR, U.O.N.

-GROUND WIRE

WIRE SIZE 10 AWG FOR ALL CONDUCTORS, INCLUDING GROUND WIRE, THROUGHOUT THE COMPLETE CIRCUIT

FLEXIBLE METALLIC CONDUIT

HOMERUN TO PANELBOARD OR TERMINAL BOARD, AS NOTED ON PLANS COMPLETE CONNECTION OF EQUIPMENT

CONDUIT STUBBED OUT, CAPPED AND MARKED

CONDUIT TURNED UP CONDUIT TURNED DOWN

—— G —— #4/0 COPPER GROUNDING ELECTRODE CONDUCTOR, U.O.N.

MECHANICAL EQUIPMENT DESIGNATION - SEE MECHANICAL PLANS NUMBERED SHEET NOTE

UTILITY METER

CURRENT TRANSFORMERS

CIRCUIT BREAKER. NUMBER INDICATES 30A 3-POLE FEEDER SIZE - <u>SEE</u> POWER SINGLE LINE DIAGRAMS & FEEDER SCHEDULE

ABBREVIATIONS

- AFF ABOVE FINISHED FLOOR
- ABOVE FINISHED GRADE CONDUIT
- CONDUIT ONLY
- COPPER
- ELECTRICAL CONTRACTOR ENERGY MANAGEMENT SYSTEM
- EXISTING
- EQUIPMENT
- EXISTING EQUIPMENT TO BE RELOCATED
- EXISTING EQUIPMENT TO BE DISCONNECTED AND REMOVED
- EXTERIOR
- FLEXIBLE METALLIC CONDUIT
- FEED THROUGH LUGS
- GROUND FAULT CIRCUIT INTERRUPTING TYPE RECEPTACLE
- LOCKABLE LOW VOLTAGE
- MAIN CIRCUIT BREAKER
- MANUFACTURER
- MAIN LUGS ONLY
- (N) NEW
- N.E.C. NATIONAL ELECTRICAL CODE
- N.I.E.C. NOT IN ELECTRICAL CONTRACT O.A.H. OVERALL HEIGHT
- O.F.C.I. OWNER FURNISHED, CONTRACTOR INSTALLED
- PNL PANEL
- S.A.D. SEE ARCHITECTURAL DRAWINGS
- STC SIGNAL TERMINAL CABINET
- TVSS TRANSIENT VOLTAGE SURGE SUPPRESSION
- U.O.N. UNLESS OTHERWISE NOTED
- VAV BOX, SEE MECHANICAL DIVISION DRAWINGS FOR LOCATIONS. PROVIDE TOGGLE TYPE DISCONNECT SWITCH
- WEATHER PROOF, NEMA 3R
- WPIU WEATHER PROOF WHILE IN USE

GENERAL NOTES

- PRIOR TO BID THE CONTRACTOR SHALL VISIT THE SITE TO ADEQUATELY DETERMINE ALL PRE-EXISTING CONDITIONS. BY THE ACT OF SUBMITTING A BID, THE CONTRACTOR WILL BE DEEMED TO HAVE COMPLIED WITH THE FOREGOING, TO HAVE ACCEPTED SUCH CONDITIONS, AND TO HAVE MADE ALLOWANCES THEREFORE IN PREPARING THE BID.
- PROVIDE PARITY SIZED GREEN GROUND WIRE IN ALL POWER CONDUITS, BRANCH CIRCUITS (LIGHTING & POWER) AND HOMERUNS. PROVIDE ADDITIONAL ISOLATED GROUND, GREEN WITH YELLOW STRIPE, TO ALL ISOLATED GROUND RECEPTACLES.
- PROVIDE PULLROPE IN ALL EMPTY CONDUITS THROUGHOUT THE PROJECT.

EOUIPMENT LOCATIONS.

- REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATION & CONNECTION REQUIREMENTS OF ALL LUMINAIRE(S) AND ALL OUTLET, SWITCH, AND ELECTRICAL RELATED DEVICE MOUNTING HEIGHTS AND LOCATIONS. COORDINATE LOCATIONS OF ALL LUMINAIRE(S) AND JUNCTION BOXES WITH MECHANICAL DIVISION PRIOR TO ROUGH-IN. COORDINATE LOCATIONS OF ELECTRICAL DEVICES WITH FURNITURE PLANS PRIOR TO ROUGH-IN.
- REFER TO MECHANICAL PLANS FOR EXACT LOCATION(S) OF ALL MECHANICAL EQUIPMENT, AND CONFIRM EXACT CONNECTION REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL DIVISION, PRIOR TO ROUGH-IN. VERIFY EXACT REQUIREMENTS FOR VOLTAGE, PHASE, HORSE-POWER, OR KVA RATINGS, OF ALL MECHANICAL DIVISION EQUIPMENT REQUIRING ELECTRICAL CONNECTION.
- VERIFY EXACT CONNECTION REQUIREMENTS, OUTLET TYPE(S), MOUNTING HEIGHT(S) AND LOCATION(S) OF ALL OWNER-SUPPLIED EQUIPMENT, AND ALL EQUIPMENT PROVIDED UNDER OTHER SECTIONS OF THE SPECIFICATIONS, PRIOR TO ROUGH-IN. REFER TO ARCHITECTURAL DRAWINGS FOR
- COORDINATE TRENCHING WITH OWNER AND OTHER TRADES BEFORE BEGINNING WORK.
- ALL CONDUIT PENETRATIONS THROUGH FIRE-RATED WALLS AND FLOORS SHALL BE SEALED AND EQUIPPED WITH U.L. LISTED FIRE PENETRATION ASSEMBLIES TO MAINTAIN FIRE SEPARATION RATING.
- DO NOT INSTALL ANY OUTLETS BACK TO BACK IN STUD WALLS OR DE-MOUNTABLE PARTITIONS.
- . THE CONTRACTOR SHALL VERIFY ALL CEILING TYPES BEFORE ORDERING OF LUMINAIRE(S). ALSO VERIFY THAT ALL FEATURES CALLED FOR IN LUMINAIRE DESCRIPTIONS ON THE LUMINAIRE SCHEDULE ARE INCLUDED WITH CATALOG NUMBERS LISTED ON THE LUMINAIRE SCHEDULE WHEN LUMINAIRE ORDERS ARE PLACED, AND ARE INCLUDED AS PART OF THE LIGHTING SUBMITTALS FOR THIS PROJECT IF A DISCREPANCY EXISTS, CONTACT THE ARCHITECT AND ELECTRICAL ENGINEER FOR CLARIFICATION PRIOR TO BID.
- CIRCUITRY AND CONDUIT ROUTING SHOWN ON THE PLANS IS DIAGRAMMATIC ONLY. THIS CONTRACTOR IS RESPONSIBLE FOR BECOMING COMPLETELY FAMILIAR WITH THE ARCHITECTURAL AND STRUCTURAL CONDITIONS AND LIMITATIONS IN THE BUILDING AND TO PROVIDE ALL LABOR, TOOLS AND MATERIALS REQUIRED TO PRODUCE A COMPLETELY CONCEALED INSTALLATION WHEREVER INDICATED ON THE PLANS.
- MAINTAIN "AS-BUILT" RECORDS AT ALL TIMES, SHOWING EXACT LOCATION OF ALL UNDERGROUND AND/OR CONCEALED CONDUITS AND SERVICES INSTALLED UNDER THIS CONTRACT, INCLUDING CIRCUIT IDENTIFICATION WHERE APPLICABLE. PROVIDE OWNER WITH "AS-BUILT" DOCUMENTS AS INDICATED IN THE SPECIFICATIONS, AND/OR CALLED FOR IN THE SPECIFICATIONS.
- DRAWINGS INDICATE THE LOCATION(S) OF DEVICES, LUMINAIRE(S) AND EQUIPMENT, AND THE CIRCUIT NUMBER AND PANEL DESIGNATED TO SUPPLY THEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETELY CONNECTING ALL ELECTRICAL DEVICES TO CIRCUITS INDICATED ON
- L4. UNLESS OTHERWISE NOTED, ALL WORK SHOWN ON DRAWINGS IS NEW AND TO BE PROVIDED AND INSTALLED COMPLETE UNDER THIS CONTRACT.
- . ALL EQUIPMENT GROUNDING SHALL CONFORM TO ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE,
- GALVANIZED RIGID STEEL. COAT ALL EXPOSED THREADS WITH GALVANIZING PAINT. PAINT ALL SURFACE MOUNTED RACEWAYS AND PULLBOXES TO MATCH SURROUNDING CONDITIONS, AS DIRECTED
- 7. ALL ELECTRICAL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE LATEST EDITION OF THE N.E.C., AS WELL AS STATE, AND LOCAL CODES AND REQUIREMENTS.

6. ALL EXTERIOR CONDUIT ABOVE GRADE, INCLUDING ALL ROOF MOUNTED CONDUIT, SHALL BE

18. ALL CONDUIT SHALL BE CONCEALED, UNLESS OTHERWISE NOTED.

IN LUMINAIRE(S).

GROUND WIRE IN ALL FLEXIBLE CONDUIT.

- 19. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE AVAILABLE SHORT CIRCUIT CURRENT AT THE MAIN SWITCHBOARD INCOMING TERMINALS WITH THE UTILITY COMPANY, AND TO VERIFY THAT ALL POWER AND SIGNAL SERVICE PROVISIONS, INCLUDING CONCRETE EQUIPMENT PADS, CONDUITS, PULLBOXES AND CLEARANCES, MEET THE UTILITY COMPANY'S REQUIREMENTS, PRIOR TO
- D. EQUIPMENT OVERLOADS AND FUSES SHALL BE PROVIDED AND INSTALLED AS PER NAME PLATE ON THE
- EQUIPMENT ACTUALLY PROVIDED. THE CONTRACTOR SHALL PAY FOR ALL REQUIRED PERMITS AND INSPECTION FEES.
- $22.\,$ THE CONTRACTOR SHALL VERIFY ALL CRITICAL DIMENSIONS WITH THE ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN.
- 23. ALL EXIT SIGNS SHALL COMPLY WITH THE RELEVANT PORTIONS OF SECTIONS 1008 AND 1013 OF THE
- 24. ALL MECHANICAL DIVISION EQUIPMENT LOW VOLTAGE CONTROL WIRING AND RACEWAY SHALL BE PROVIDED AND INSTALLED AS SPECIFIED IN MECHANICAL DIVISION U.O.N.
- 25. COORDINATE INSTALLATION OF ALL RECESSED LUMINAIRE(S) WITH MECHANICAL DIVISION PRIOR TO INSTALLATION OF HVAC DUCTS AND SPRINKLER HEADS. ENSURE AFTER INSTALLATION OF LUMINAIRE(S) THAT THERE IS NO CONTACT BETWEEN DUCTS AND LUMINAIRE(S) TO AVOID VIBRATION
- 26. USE FLEXIBLE CONDUIT FOR ALL MOTOR, TRANSFORMER, RECESSED LUMINAIRE CONNECTIONS, AND CONNECTIONS BETWEEN TWO SEPARATE STRUCTURES AND FOR ALL FINAL CONNECTIONS TO "CRITICAL EQUIPMENT" AS DEFINED IN SPECIFICATIONS. MINIMUM 1/2" DIAMETER, LIQUID TIGHT TYPE USED OUTDOORS AND IN ALL WET LOCATIONS; PROVIDE WITH CODE-SIZE (MINIMUM #12) BARE
- PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR ALL BRANCH CIRCUITS FEEDING OUTLETS AS NOTED ON THE DRAWINGS.
- 3. FOR FLUSH MOUNTED PANELBOARDS THE CONTRACTOR SHALL STUB A MINIMUM OF FOUR (4) 3/4"
- CONDUITS FROM THE PANEL UP INTO THE ACCESSIBLE CEILING ABOVE FOR FUTURE CIRCUITS. 29. ALL CONDUIT CONNECTORS TO OUTLET OR JUNCTION BOXES SHALL HAVE INSULATED THROATS (MANUFACTURED AS AN INTEGRAL PART OF THE CONNECTOR). AFTER-MARKET INSERTABLE THROATS ARE NOT ACCEPTABLE.
-). ALL CIRCUITS IN ALL JUNCTION BOXES AND DEVICES SHALL BE CLEARLY IDENTIFIED BY MEANS OF "EZ" NUMBERING TAGS OR EQUIVALENT, TO IDENTIFY THE CIRCUIT NUMBER OR RELAY SUPPLYING THE

CONDUCTOR. ALL JUNCTION BOXES SHALL BE LABELED PER SPECIFICATIONS.

- ALL SURFACE MOUNTED POWER AND SIGNAL BOXES IN FINISHED AREAS SHALL BE "WIREMOLD" TYPE, WITH MATCHING RACEWAYS. SURFACE MOUNTED STEEL JUNCTION BOXES AND/OR EMT ARE NOT ACCEPTABLE.
- 2. ALL LOCATIONS OF BARE METAL SURFACE MOUNTED CONDUIT, BOXES, PANEL COVERS, AND RELATED FITTINGS OR ACCESSORIES INSTALLED IN FINISHED AREAS (BOTH INTERIOR AND EXTERIOR) SHALL BE FINISH PAINTED TO MATCH THE SURFACE TO WHICH THEY ARE MOUNTED TO (AFTER INSTALLATION). PAINTING SHALL INCLUDE DIFFERENT COLORS AS REQUIRED TO MATCH EXISTING STRIPING OR OTHER BUILDING FEATURES TO WHICH THE EQUIPMENT IS ATTACHED AND VISIBLE. VERIFY EXACT JUNCTION BOX LOCATION(S) AND ROUTING OF EXPOSED RACEWAYS WITH THE ARCHITECT PRIOR TO ROUGH-IN.
- PROVIDE A BLANK COVER PLATE (COLOR TO MATCH ADJACENT DEVICES OR AS SPECIFICALLY CALLED FOR IN SPECIFICATIONS) FOR ALL JUNCTION BOXES (NEW AND EXISTING) ON THE PROJECT WHEN NO DEVICE IS INSTALLED. 34. FOR OUTDOOR 15 AND 20-AMPERE, 125 AND 250-VOLT RECEPTACLES: RECEPTACLES LOCATED IN

"WET" LOCATIONS SHALL HAVE "IN-USE" TYPE WEATHERPROOF COVER PLATES PROVIDED AND

WEATHERPROOF COVER PLATES IN LOCATIONS DEEMED TO BE "IN-USE" WITH CORD AND PLUG ATTACHED. 5. TWO OR THREE DIFFERENT PHASES SUPPLIED BY A 3-PHASE PANEL MAY SHARE A SINGLE NEUTRAL ONLY IF CIRCUIT POSITIONS ARE ADJACENT IN THE PANEL. PROVIDE COMMON HANDLE-TIE ON

INSTALLED; RECEPTACLES LOCATED IN "DAMP" LOCATIONS SHALL HAVE "IN-USE" TYPE

WHEN SERIES RATING IS USED ON ANY CIRCUIT BREAKER ON THIS PROJECT PROVIDE A FIELD MARKING PER CEC 110-22 ON THE EQUIPMENT COVER THAT IS VISIBLE TO MAINTENANCE PERSONNEL INDICATING THAT THE BREAKER HAS BEEN APPLIED WITH A SERIES COMBINATION RATING.

37. ALL RECEPTACLES IN LOCATIONS IDENTIFIED IN NEC 406.12 (I.E. DWELLING UNITS, HOTEL/MOTEL

GUEST ROOMS, CHILD CARE, PRESCHOOL, K-12 SCHOOLS, BUSINESS OFFICE COMMON AREAS, IN

CLINICS. MEDICAL AND OUTPATIENT FACILITIES, ASSEMBLY AREA COMMON AREAS, DORMITORY

BREAKERS FOR MULTI-WIRE BRANCH CIRCUITS, WITH COMMON NEUTRAL, PER NEC REQUIREMENTS.

LIST OF DRAWINGS

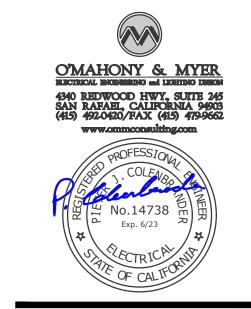
UNITS, AND ASSISTED LIVING UNITS) SHALL BE TAMPER RESISTANT.

E-0.1 SYMBOLS LIST, GENERAL NOTES & LIST OF DRAWINGS E-1.1 SITE PLAN - ELECTRICAL

E-5.1 SINGLE LINE DIAGRAM - POWER

- E-3.1 ADMINISTRATION DEMO & RCP PLANS POWER E-3.2 LIBRARY DEMO & RCP PLANS - POWER
- E-4.1 ADMINISTRATION ROOF DEMO & ROOF PLANS POWER
- E-6.1 PANEL SCHEDULES
- E-7.1 DETAILS FE-0.1 FIRE ALARM EQUIPMENT LIST, NOTES AND DETAILS





PRELIMINARY CONSTRUCTION

DAVIDSON

IMPROVEMENTS -

AND LIBRARY

280 WOODLAND AVE

SAN RAFAEL, CA 94901

SAN RAFAEL CITY

REVISIONS DSA APP NO. 01-119794 ARCH PROJECT NO: 1900.02 DRAWN BY: LN/TV/JW AS NOTED DRAWING SCALE:

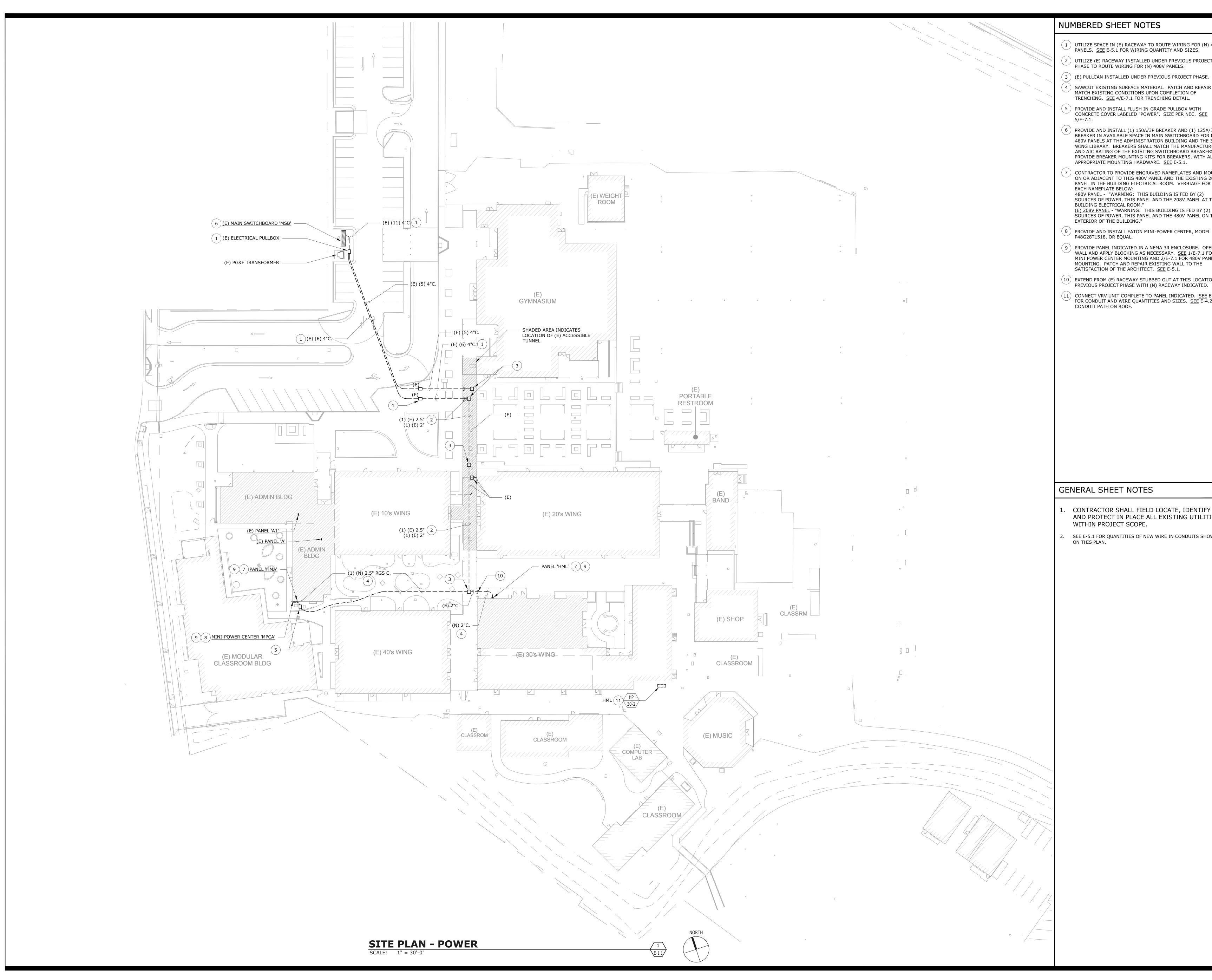
MARCH 1, 2022

FILE NO: 21-39

PTN: 65458-60

SYMBOLS LIST, **GENERAL NOTES & LIST**

OF DRAWINGS

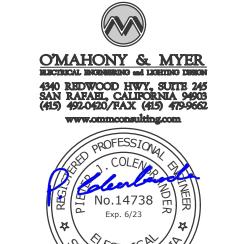




- 1 UTILIZE SPACE IN (E) RACEWAY TO ROUTE WIRING FOR (N) 480V PANELS. <u>SEE</u> E-5.1 FOR WIRING QUANTITY AND SIZES.
 - (2) UTILIZE (E) RACEWAY INSTALLED UNDER PREVIOUS PROJECT PHASE TO ROUTE WIRING FOR (N) 408V PANELS.
 - (3) (E) PULLCAN INSTALLED UNDER PREVIOUS PROJECT PHASE.
- (4) SAWCUT EXISTING SURFACE MATERIAL. PATCH AND REPAIR TO MATCH EXISTING CONDITIONS UPON COMPLETION OF
- TRENCHING. <u>SEE</u> 4/E-7.1 FOR TRENCHING DETAIL. 5) PROVIDE AND INSTALL FLUSH IN-GRADE PULLBOX WITH
- (6) PROVIDE AND INSTALL (1) 150A/3P BREAKER AND (1) 125A/3P BREAKER IN AVAILABLE SPACE IN MAIN SWITCHBOARD FOR NEW 480V PANELS AT THE ADMINISTRATION BUILDING AND THE 30'S WING LIBRARY. BREAKERS SHALL MATCH THE MANUFACTURER AND AIC RATING OF THE EXISTING SWITCHBOARD BREAKERS. PROVIDE BREAKER MOUNTING KITS FOR BREAKERS, WITH ALL
- 7) CONTRACTOR TO PROVIDE ENGRAVED NAMEPLATES AND MOUNT ON OR ADJACENT TO THIS 480V PANEL AND THE EXISTING 208V PANEL IN THE BUILDING ELECTRICAL ROOM. VERBIAGE FOR EACH NAMEPLATE BELOW: 480V PANEL - "WARNING: THIS BUILDING IS FED BY (2) SOURCES OF POWER, THIS PANEL AND THE 208V PANEL AT THE BUILDING ELECTRICAL ROOM." (E) 208V PANEL - "WARNING: THIS BUILDING IS FED BY (2) SOURCES OF POWER, THIS PANEL AND THE 480V PANEL ON THE
- (8) PROVIDE AND INSTALL EATON MINI-POWER CENTER, MODEL P48G28T1518, OR EQUAL.
- 9 PROVIDE PANEL INDICATED IN A NEMA 3R ENCLOSURE. OPEN UP WALL AND APPLY BLOCKING AS NECESSARY. SEE 1/E-7.1 FOR MINI POWER CENTER MOUNTING AND 2/E-7.1 FOR 480V PANEL MOUNTING. PATCH AND REPAIR EXISTING WALL TO THE
- (10) EXTEND FROM (E) RACEWAY STUBBED OUT AT THIS LOCATION IN PREVIOUS PROJECT PHASE WITH (N) RACEWAY INDICATED.
- (11) CONNECT VRV UNIT COMPLETE TO PANEL INDICATED. <u>SEE</u> E-5.1 FOR CONDUIT AND WIRE QUANTITIES AND SIZES. <u>SEE</u> E-4.2 FOR CONDUIT PATH ON ROOF.



(707) 576-0829



PRELIMINARY NOT FOR CONSTRUCTION

GENERAL SHEET NOTES

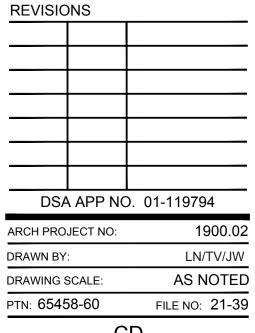
- 1. CONTRACTOR SHALL FIELD LOCATE, IDENTIFY AND PROTECT IN PLACE ALL EXISTING UTILITIES WITHIN PROJECT SCOPE.
- $\underline{\mathsf{SEE}}$ E-5.1 FOR QUANTITIES OF NEW WIRE IN CONDUITS SHOWN ON THIS PLAN.

DAVIDSON MIDDLE SCHOOL

HVAC IMPROVEMENTS -ADMINISTRATION AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY SCHOOLS



MARCH 1, 2022

SITE PLAN -**POWER**

E-1.1





NUMBERED SHEET NOTES

- 1 EXISTING FAN COIL UNIT TO BE REMOVED. DISCONNECT EXISTING POWER CIRCUITRY FROM UNIT AND REMOVE EXISTING DISCONNECT SWITCH AND ASSOCIATED WIRE AND CONDUIT BACK TO SOURCE.
- 2) EXISTING BOILER IN 40'S WING TO BE REMOVED. DISCONNECT AND REMOVE BOILER CONTROL PANEL, DISCONNECT SWITCHES, AND CONDUIT AND CONDUCTORS BACK TO NEAREST BOX TO REMAIN. ALL ELECTRICAL EQUIPMENT AND/OR COMPONENTS ASSOCIATED WITH THE EXISTING BOILER AND ANY EXISTING BOILER PUMPS TO BE REMOVED.
- 3 EXISTING CEILING IN THIS ROOM TO BE REMOVED AND REPLACED. DISCONNECT AND REMOVE EXISTING LUMINAIRES, OCCUPANCY SENSORS AND SMOKE DETECTORS MOUNTED TO THE CEILING AND PRESERVE FOR REINSTALLATION UPON COMPLETION OF CEILING REPLACEMENT. PROTECT AND PRESERVE ALL ASSOCIATED BOXES, CONDUIT AND CIRCUITRY FOR REUSE.
- (4) EXISTING RECEPTACLE ABOVE CEILING. PRESERVE AND PROTECT FOR REUSE. <u>SEE</u> NOTE 11.
- 5 TRANSITION UP EXTERIOR WALL WITH CONDUIT PAINTED TO MATCH ADJACENT SURFACES, PENETRATE BUILDING CANOPY AND PENETRATE EXTERIOR WALL ABOVE CEILING. SEE 6/E-7.1. SEAL CANOPY AND WALL PENETRATIONS WEATHER-TIGHT. CONTINUE CONDUIT RUN ABOVE CEILING, AS SHOWN.
- (6) SEE E-5.1 FOR CONDUIT AND WIRE QUANTITIES AND SIZES. SEE $\overline{E-6.1}$ PANEL SCHEDULES FOR CIRCUITRY INFORMATION.
- 7) PROVIDE PULLCAN ABOVE CEILING. SIZE PULLCAN PER NEC. 8 PENETRATE EXTERIOR WALL AND TRANSITION DOWN EXTERIOR WALL WITH CONDUIT PAINTED TO MATCH ADJACENT SURFACES.

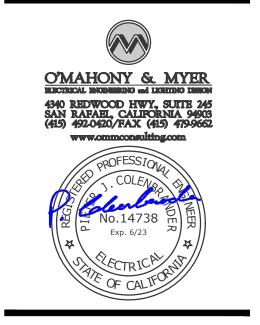
SEAL WALL PENETRATION WEATHER TIGHT. PROVIDE NEMA 3R WALL MOUNTED PULLCAN AND TERMINATE CONDUIT AT PULLCAN.

- (9) PROVIDE SURFACE MOUNTED WEATHERPROOF GFI RECEPTACLE WITH LOCKABLE COVER, ADJACENT TO MECHANICAL UNIT.
- (10) EXTEND EXISTING CIRCUITRY FROM EXISTING EXTERIOR RECEPTACLE IN WALL MOUNTED CONDUIT PAINTED TO MATCH ADJACENT SURFACES AND CONNECT COMPLETE TO NEW RECEPTACLE. SEE NOTE 9.
- ig(11ig) UTILIZED EXISTING RECEPTACLE ABOVE CEILING FOR CONDENSATE PUMP POWER.

KEYPLAN



636 Fifth Street, Santa Rosa, CA 95404 East Bay: 55 Harrison Street, Suite 525, Oakland, CA 94607 (707) 576-0829



PRELIMINARY NOT FOR CONSTRUCTION

DAVIDSON MIDDLE SCHOOL

HVAC IMPROVEMENTS -**ADMINISTRATION AND LIBRARY**

280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY SCHOOLS

REVISIO	NS	
DSA	APP NO	D. 01-119794

ARCH PROJECT NO:

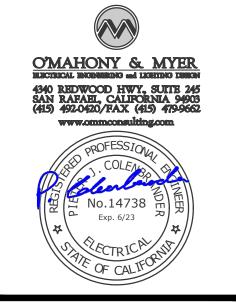
LN/TV/JW AS NOTED DRAWING SCALE: PTN: 65458-60 FILE NO: 21-39

MARCH 1, 2022

LIBRARY DEMO & RCP PLANS -**POWER**

E-3.2





REVISIO	NS	
DSA	APP NO	D. 01-119794
ARCH PRO	JECT NO:	1900.02
DRAWN BY	:	LN/TV/JW

AS NOTED

SINGLE LINE DIAGRAM - POWER

SCALE: NO SCALE

COPPER FEEDER SCHEDULE FEEDER CONDUIT CONDUCTORS (4) #3/0 & (1) #4 G. (ADJUSTED FOR VOLTAGE DROP) 1504VD 1254 (4) #1/0 & (1) #6 G. 1003 (3) #1 & (1) #6 G. 1.5" 703 (3) #4 & (1) #8 G. (3) #8 & (1) #10 G. 403 253 (3) #12 & (1) #12 G. (253VD) (3) #10 & (1) #10 G. (203VD) (3) #10 & (1) #10 G.

FEEDER TAG KEY

400 4 N

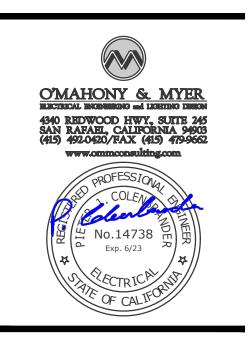
INDICATES DOUBLE NEUTRAL

WIRE QUANTITY

FEEDER AMPACITY

*: SEE E-1.1 FOR CONDUIT QUANTITY AND SIZES





PRELIMINARY
NOT FOR
CONSTRUCTION

DAVIDSON MIDDLE SCHOOL

HVAC IMPROVEMENTS -ADMINISTRATION AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY SCHOOLS

REVISIO	NS	
DSA	APP NO	0. 01-119794
ARCH PRO	JECT NO:	1900.
DRAWN BY	:	LN/TV/J
DRAWING S	SCALE:	AS NOT
PTN: 6545	58-60	FILE NO: 21-
	С	:D

MARCH 1, 2022

SHEET TITLE

SINGLE LINE DIAGRAM -POWER

SHEET NUMBER

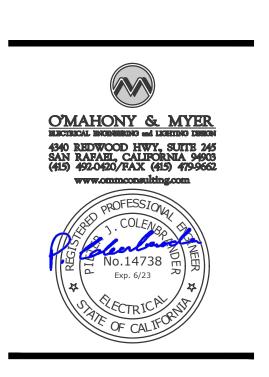
E-5.1

						PA	NE	LH	MA						
VOLTS:	277 / 480 V												MAIN B	RKR:	150A/3P
PHASE:	3 PH												FEEDE	R:	SEE SINGLE LINE
WIRE:	4 W												CONDU	IIT:	SEE SINGLE LINE
BUSSING:	150A												MOUNT	ED:	SURFACE
POLES:	30P												AIC RA	TING:	22k
LOAD DESCR	RIPTION	TYPE	Α	В	С	BRKR.	CKT.	CKT.	BRKR.	Α	В	С	TYPE		LOAD DESCRIPTION
		Н	20.22			-	1	2		1.61			М	1	
·H-A1		Н		20.22		100/3	3	4	25/3		0.81		М	PANEL'I	MPCA'
		Н			20.22	-	5	6	=			0.80	М	1	
(Н	6.89			-	7	8						SPAC	E
/RV-A1		Н		6.89		40/3	9	10						SPAC	E
1		Н			6.89	-	11	12						SPAC	E
1		H	6.89			-	13	14						SPAC	E
/RV-A1		Н		6.89		40/3	15	16						SPAC	E
1		Н			6.89	-	17	18						SPAC	E
SPACE							19	20						SPAC	E
SPACE							21	22						SPAC	E
SPACE							23	24			_			SPAC	E
SPACE							25	26						SPAC	E
SPACE							27	28						SPAC	E
SPACE							29	30						SPAC	E
			33.99	33.99	33.99					1.61	0.81	0.80			
						-							_		
DE	MAND LOAD SUM	MADV		CONN.	DEM	IAND	DEMAI	ND KVA							
DEI	WINING LOAD SOIVII	IVI/TATAT		KVA	FAC	TOR	DEIVIAI	אט ועא							
TYPE "M": NON	N-CONTINUOUS / N	MISC. LO	ADS	3.21	10	0%	3.	21				5 5 5	ASE A		
TYPE "L": LIGI	HTING / CONTINU	OUS LOA	DS	0.00	12	5%	0.	00					ASE B		80 KVA
TYPE "R": REC	CEPTACLES (FIR	ST 10KV	A)	0.00	10	0%	0.	00				PH	ASE C	34.	79 KVA
TYPE "R": REC	CEPTACLES (OVE	R 10KV	۹)	0.00	50)%	0.	00							
TYPE "H": HVA	AC / MECHANICAL	LOADS		101.97	10	0%	101	1.97						128	.51 MAX AMPS / PHAS
		Т	OTALS:	105.18			10	5.18							

						PA	NE	LH	ML					
VOLTS:	277 / 480 V												MAIN B	RKR : 125A/3P
PHASE:	3 PH												FEEDE	R: SEE SINGLE LINE
WIRE:	4 W												CONDU	IT: SEE SINGLE LINE
BUSSING:	125A												MOUNT	ED: SURFACE
POLES:	30P			•									AIC RAT	TING: 22k
LOAD DESC	RIPTION	TYPE	Α	В	С	BRKR.	CKT.	CKT.	BRKR.	Α	В	С	TYPE	LOAD DESCRIPTION
		Н	4.56		1	-	1	2						SPACE
P 30-2		Н		4.56		25/3	3	4						SPACE
		Н		-	4.56	-	5	6						SPACE
		Н	2.72		-	-	7	8				ì		SPACE
P 30-2		Н		2.72		20/3	9	10						SPACE
		H		7	2.72	-	11	12						SPACE
		Н	14.55			-	13	14						SPACE
C 30-2		Н		14.55		70/3	15	16						SPACE
		Н			14.55	-	17	18						SPACE
PACE					_		19	20						SPACE
PACE							21	22						SPACE
PACE							23	24						SPACE
PACE							25	26						SPACE
PACE							27	28						SPACE
PACE							29	30						SPACE
		,	21.83	21.83	21.83					0.00	0.00	0.00		
DE	MAND LOAD SUMI	MARY		CONN. KVA		IAND TOR	DEMAN	ND KVA						
TYPE "M": NON	N-CONTINUOUS / N	MISC. LO	ADS	0.00	10	0%	0.	00				PH	ASE A:	21.83 KVA
TYPE "L": LIGI	HTING / CONTINU	OUS LOA	DS	0.00	12	5%	0.	00				PH	ASE B:	21.83 KVA
TYPE "R": REG	CEPTACLES (FIRS	ST 10KV	۹)	0.00	10	0%	0.	00					ASE C:	
	CEPTACLES (OVE		•	0.00	50)%	0.	00						
	AC / MECHANICAL		,	65.50	10	0%	65	.50						78.82 MAX AMPS / PHAS
The section was a first one of the section			OTALS:					.50	1					

						PAN	NEL	MF	PCA						
VOLTS:	120 / 208 V												MAIN BI	RKR:	MLO
PHASE:	3 PH												FEEDE	₹:	SEE SINGLE LINE
WIRE:	4 W												CONDU	IT:	SEE SINGLE LINE
BUSSING:	40A												MOUNT	ED:	SURFACE
POLES:	24P												AIC RAT	ING:	14k
LOAD DES	CRIPTION	TYPE	Α	В	С	BRKR.	CKT.	CKT.	BRKR.	Α	В	С	TYPE		LOAD DESCRIPTION
C-A1 THRU FC-A4, FC-A	16 THRU FC-A20	Н	0.81			15/2	1	2	20/1			_		SPARE	
		Н		0.81		-	3	4	20/1					SPARE	
C-A5 THRU FC-A15, BS-	A1 THRU BS-A3	Н			0.80	15/2	5	6	20/1					SPARE	
		Н	0.80			-	7	8	20/1					SPARE	
PARE						20/1	9	10	20/1					SPARE	
PARE						20/1	11	12	20/1					SPARE	
SPARE						20/1	13	14	20/1			,		SPARE	
PARE						20/1	15	16	20/1					SPARE	
SPACE							17	18						SPACE	
SPACE] '			19	20				,		SPACE	
SPACE							21	22						SPACE	
SPACE							23	24						SPACE	
												<u>, </u>			
			1.61	0.81	0.80					0.00	0.00	0.00			
						-							_		
	DEMAND LOAD SUM	MARY		CONN. KVA		MAND TOR	DEMAI	ND KVA							
TYPF "M": N	ON-CONTINUOUS / N	MISC I O	ADS	0.00	2 5 5 7	0%	0	00	+			РН	ASE A:	1.6	1 KVA
	IGHTING / CONTINU			0.00		5%		00					ASE B:		
	RECEPTACLES (FIR:			0.00		0%		00					ASE C:		Military and Australia
	RECEPTACLES (OVE			0.00		0%		00							
	IVAC / MECHANICAL		' /	3.21		0%		21						13.3	38 MAX AMPS / PHA
111 - 11. 1	O / MEOI / MIO/LE		TOTALS:			- / -		21	+					10.	





PRELIMINARY NOT FOR CONSTRUCTION

DAVIDSON MIDDLE SCHOOL

HVAC IMPROVEMENTS -ADMINISTRATION AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY SCHOOLS

REVISIO	NS	
DSA	APP NO	D. 01-119794
ARCH PRO	JECT NO:	1900.02
DRAWN BY	:	LN/TV/JW
DRAWING S	SCALE:	AS NOTED
PTN: 6545	8-60	FILE NO: 21-39

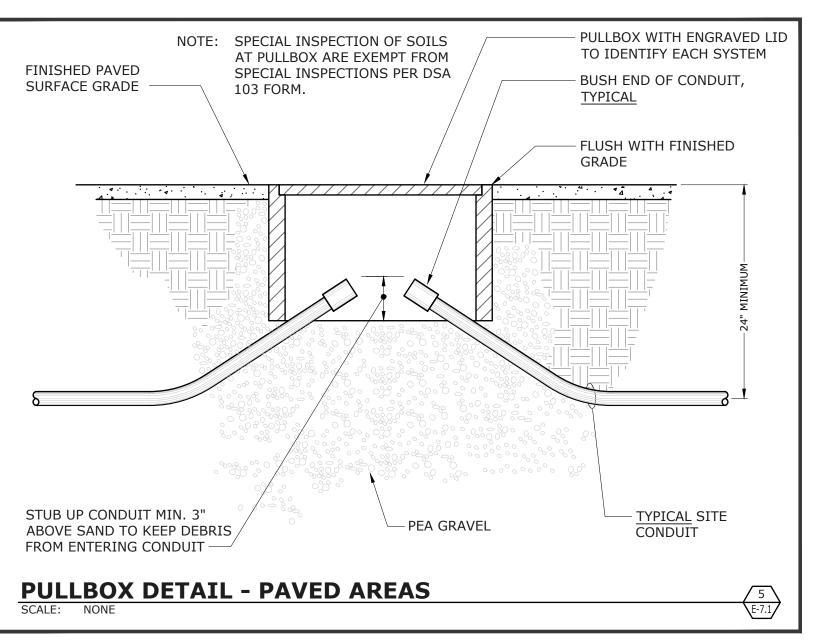
CD

MARCH 1, 2022

SHEET TITLE

PANEL SCHEDULES

E-6.1



1/2" MIN. →

ROOF PENETRATION DETAIL

TYPICAL CONDUIT. <u>DO NOT</u> FASTEN CONDUITS DIRECTLY

ROOF WALK MAT MATERIAL, HOT

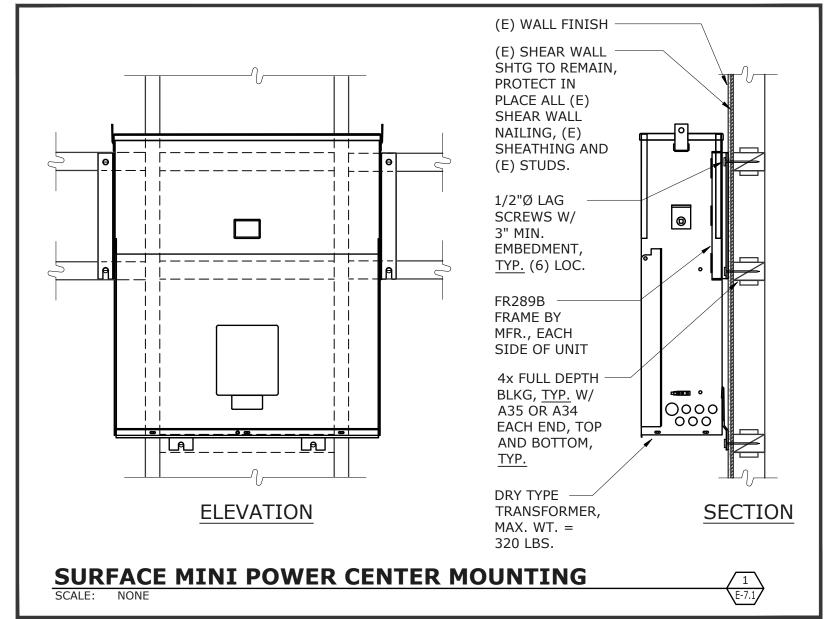
ROOF MOUNTED ELECTRICAL CONDUIT SUPPORTS

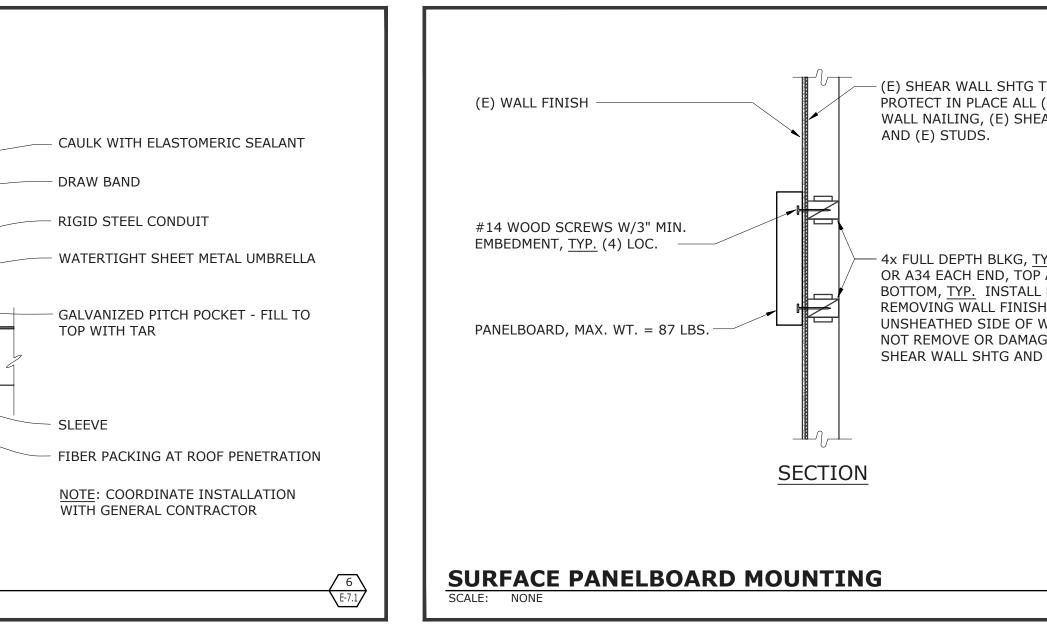
MOPPED TO ROOF SEE

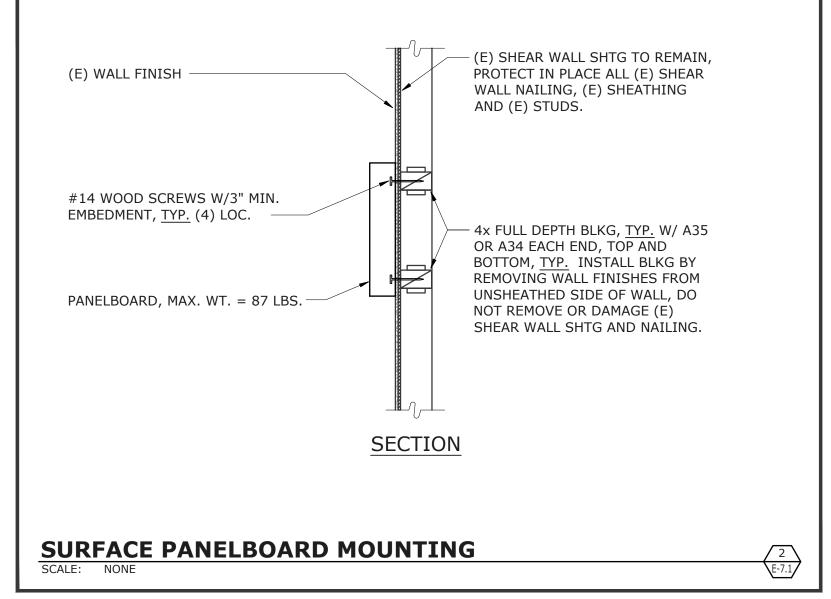
ARCHITECTURAL

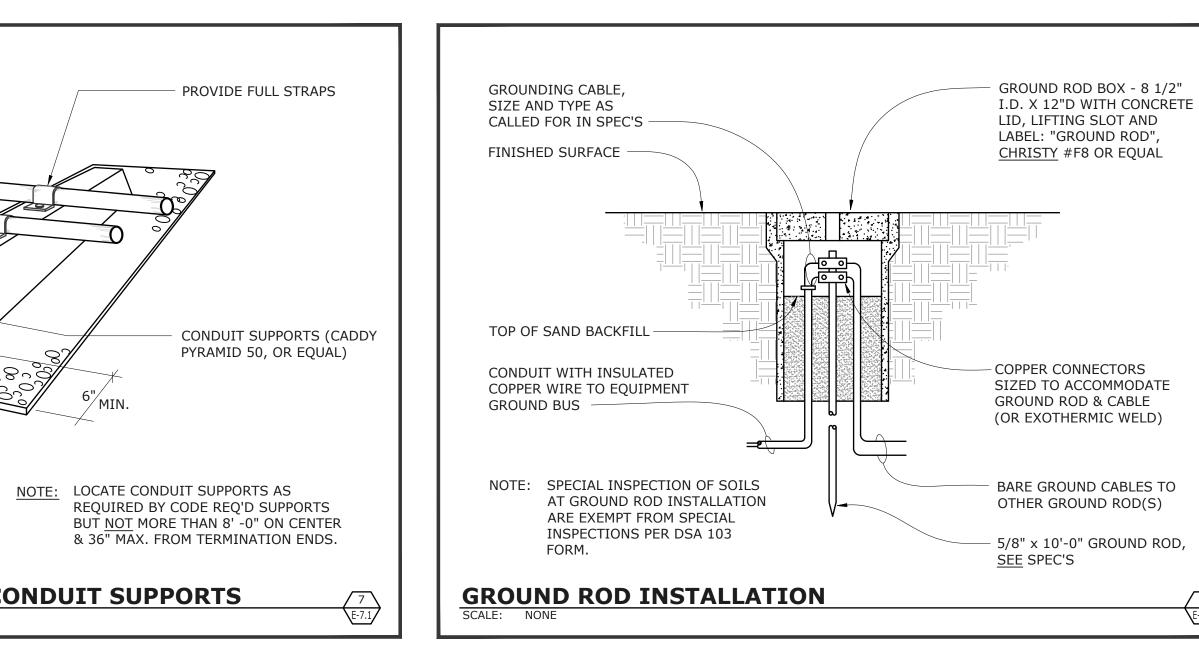
SPECIFICATIONS -

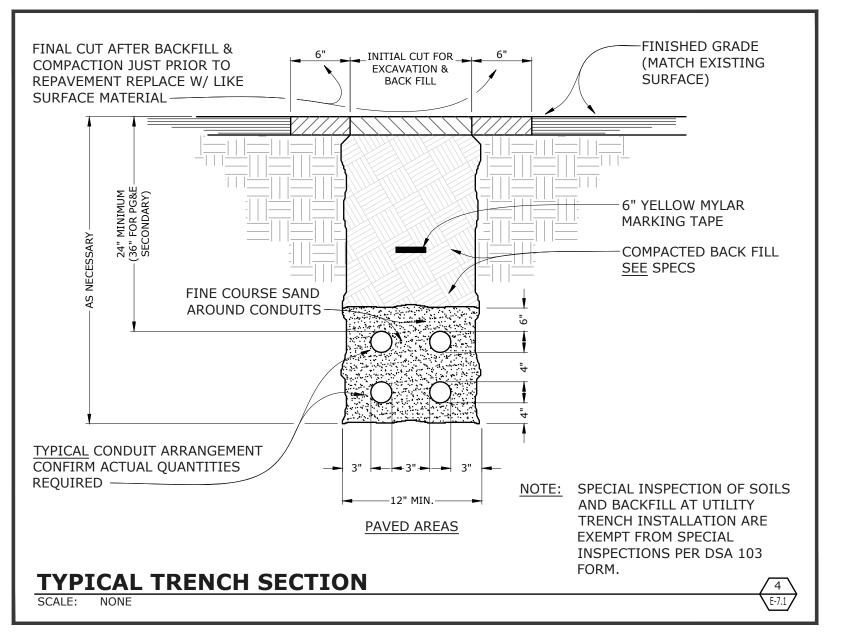
TO THE ROOF -



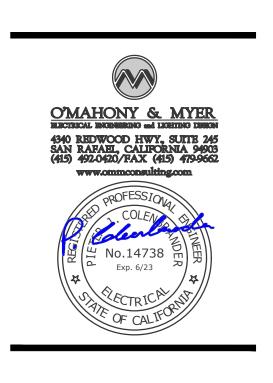












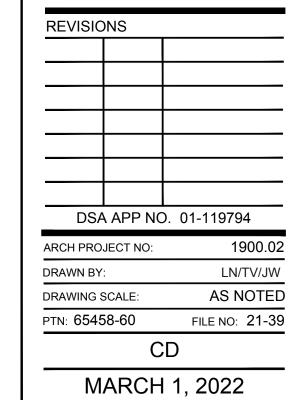
PRELIMINARY NOT FOR CONSTRUCTION

DAVIDSON MIDDLE SCHOOL

HVAC IMPROVEMENTS -ADMINISTRATION AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY SCHOOLS



DETAILS

E-7.1

	FIRE ALARM EQ	UIPMENT LIS	Τ		
SYMBOL	DESCRIPTION	MANUFACTURER & MODEL NUMBER	CSFM LISTING NUMBER	STANDBY CURRENT	ALARM CURRENT
FACP	(E) FIRE ALARM CONTROL PANEL (FOR REFERENCE ONLY)	SEIMENS XLS	-	-	-

GENERAL FIRE ALARM NOTES

- AFTER RE-INSTALLATION OF THE EXISTING DUCT DETECOR, A FIRE ALARM TEST SHALL BE MADE WITH THE DSA INSPECTOR OF RECORD (IOR). LOCAL FIRE AUTHORITY SHALL BE NOTIFIED OF DATE AND TIME OF FINAL ALARM TESTING AND SHALL ASSIST/WITNESS SUCH TESTING WHEN ABLE. DSA/ARCHITECT/ENGINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF (48) HOURS PRIOR TO THE FINAL INSPECTION AND/OR TESTING.
- . FIRE ALARM CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CBC SECTION 901.6.2. MONITORING SHALL BE TESTED AND VERIFIED AS SENDING THE CORRECT SIGNALS IN CONJUNCTION WITH FINAL ACCEPTANCE TEST. OWNER SHALL BE RESPONSIBLE FOR ESTABLISHING A FIRE SYSTEM MONITORING CONTRACT AND/OR PROVISIONS
- 3. APPLICABLE CODES:
- 4. a. CBC 2019; CEC 2019; CMC 2019; CFC 2019.
- 5. b. STATE FIRE MARSHAL TITLE 19, PUBLIC SAFETY.
- 6. c. NFPA 72, 2016 EDITION W/CA AMENDMENTS, FIRE ALARM CODE.
- 7. FIRE ALARM CONTRACTOR SHALL PROVIDE A COPY OF NFPA 72 SYSTEM RECORD OF COMPLETION, SYSTEM RECORD OF INSPECTION AND TESTING TO THE INSPECTOR OF RECORD IOR/DSA, SCHOOL DISTRICT, ARCHITECT AND LOCAL FIRE AUTHORITY.
- 8. INSTALL ALL WIRING IN CONDUIT, MIN. 3/4" CONDUIT. ALL FIRE ALARM SYSTEM WIRING SHALL BE FPL (FIRE POWER LIMITED) OR FPLP (FIRE POWER LIMITED PLENUM RATED) AS REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE GROUND MAY BE THHN OR THWN.
- 9. CONDUIT AND WIRING SHALL BE PER MANUFACTURERS REQUIREMENTS.
- 10. ALL FIRE ALARM COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURERS SPECIFICATIONS. NO SINGLE DEVICES/EQPT. SHALL EXCEED 20LBS. WITHOUT SPECIAL MOUNTING DETAILS.
- 11. INSTALLATION OF SYSTEM SHALL NOT BE STARTED UNTIL COMPLETE SET OF CONSTRUCTION DOCUMENTS (WITH DEVICE TYPES AND LISTINGS) HAVE BEEN REVIEWED AND APPROVED BY DSA.
- 12. A STAMPED SET OF APPROVED PLANS SHALL BE ON THE JOB SITE AT ALL TIMES AND SHALL BE USED FOR INSTALLATION.
- 13. ANY DISCREPANCIES BETWEEN THE CONTRACT DOCUMENTS AND CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF DSA AND ARCHITECT/ENGINEER OF RECORD.
- 14. THE CONTRACTOR SHALL INSTALL AND ADJUST ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS.
- 15. PER CEC STANDARDS, ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE ALARM DEVICE. DO NOT SPLICE WIRE. THERE MUST BE AT LEAST 6" OF WIRE LEAD FROM THE BOX TO THE DEVICE. ALL BOXES TO BE SIZED PER CEC FOR PROPER VOLUME WITH INSTALLED
- 16. ALL PENETRATIONS THROUGH RATED ASSEMBLIES REQUIRING OPENING PROTECTION SHALL BE PROVIDED WITH A PENETRATION FIRE STOP SYSTEM AS IDENTIFIED IN CBC CHAPTER 7, UL OR OTHER APPROVED LAB TESTING CRITERIA. APPROVED TYPES OF MATERIALS SHALL BE IDENTIFIED WITHIN THE PROJECT SPECIFICATIONS WITHIN THE FIRE ALARM SECTION.

FIRE ALARM SCOPE OF WORK

CHANGES).

FIRE ALARM SYSTEM DESCRIPTION

- 1. THE EXISTING FIRE ALARM SYSTEM SHALL IS AN AUTOMATIC ADDRESSABLE SYSTEM WITH STYLE 4, CLASS B WIRING FOR IDC'S, NAC'S, AND SLC'S.
- 3. THE NAME OF THE SPECIFIC PERSON RESPONSIBLE FOR THE SYSTEM DESIGN IS CHRIS LIPPINCOTT (O'MAHONY & MYER).
- 4. SYSTEM INSTALLATION SHALL BE BY A LICENSED ELECTRICAL OR FIRE ALARM CONTRACTOR WITH A CALIFORNIA C-10 LICENSE, REGULARLY ENGAGED IN THE INSTALLATION AND COMMISSIONING OF FIRE ALARM SYSTEMS TO NFPA 72 STANDARDS. FIRE ALARM CONTRACTOR SHALL BE FACTORY-AUTHORIZED

DESCRIPTION CABLING A INITIATION CIRCUIT (2) #16 TWISTED/UNSHIELDED CONSTANT 24V SUPPLY (2) #14 THHN/THWN C | CONTROL (NON RESETABLE POWER) (2) #14 THHN/THWN

CONTRACTOR SHALL VERIFY EXACT CABLE/WIRE TYPES WITH SYSTEM MANUFACTURER PRIOR TO ROUGH-IN. INSTALL WIRING IN WIREMOLD RACEWAYS (IN FINISH AREAS) AND IN 3/4" CONDUIT MIN. (IN CONCEALED

(E) SEQUENCE OF OPERATION

- L. MANUAL PULL STATION WHEN A PULL STATION IS PULLED, IT SHALL ANNUNCIATE AN ALARM AT THE FACP. ALARM SHALL ACTIVATE ALL AUDIO AND VISUAL DEVICES THROUGHOUT THE CAMPUS.
- 2. SMOKE AND HEAT DETECTORS WHEN A SMOKE OR HEAT DETECTOR IS ACTIVATED, IT SHALL ANNUNCIATE AN ALARM AT THE FACP. ALARM SHALL ACTIVATE ALL AUDIO AND VISUAL DEVICES THROUGHOUT THE
- 3. ANY BUILDING POWER FAILURE- IF THE BUILDING LOSES POWER, THE FAILURE SHALL SHOW UP AS A TROUBLE SIGNAL ON THE FACP. THE SYSTEM SHALL STAY ACTIVE ON BATTERY BACK-UP POWER IN
- ACCORDANCE WITH THE STATE FIRE CODE.

CIRCUITS, BATTERY DISCONNECT, ETC.).

5. FIRE/SMOKE DAMPERS - WHEN A FIRE/SMOKE DAMPER SMOKE DETECTOR IS ACTIVATED, IT SHALL

4. SYSTEM SHALL INDICATE TROUBLE ALARMS FOR ALL SYSTEM FAULTS (i.e. GROUND FAULTS, SHORTS, OPEN

- ANNUNCIATE AN ALARM AT THE MAIN FACP. ALARM SHALL ACTIVATE ALL AUDIO AND VISUAL DEVICES THROUGHOUT THE CAMPUS AND SHALL SHUT DOWN THE ASSOCIATED HVAC UNIT.
- 6. FIRE SPRINKLER SYSTEM WHEN A FLOW SWITCH IS ACTIVATED, IT SHALL ANNUNCIATE AN ALARM AT THE MAIN FACP. ALARM SHALL ACTIVATE ALL AUDIO AND VISUAL DEVICES THROUGHOUT THE CAMPUS. WHEN TAMPER SWITCH IS ACTIVATED, IT SHALL ANNUNCIATE A SUPERVISORY ALARM AT THE MAIN FACP.
- 7. UPON ALARM CONDITION, AUTO DIALER TO NOTIFY THE SUPERVISING STATION, AND AUTHORIZED SCHOOL PERSONNEL TO NOTIFY THE FIRE DEPARTMENT AND INITIATE EVACUATION OF STUDENTS AND FACULTY AS PER THE SCHOOL'S EVACUATION PLAN.
- 8. UPON TROUBLE CONDITION, AUTO DIALER TO NOTIFY THE SUPERVISING STATION, AND AUTHORIZED SCHOOL PERSONNEL TO NOTIFY AUTHORIZED TECHNICIAN TO CORRECT THE TROUBLE CONDITION.

1. THE FIRE ALARM SCOPE OF WORK ON THIS PROJECT ONLY INVOLVES THE DISCONNECTION OF AN EXISTING DUCT SMOKE DETECTOR FROM AN EXISTING HVAC UNIT TO BE REMOVED ON THE ROOF OF THE ADMINISTRATION BUILDING AND ITS RECONNECTION TO THE NE REPLACEMENT HVAC UNIT. ALL OTHER EXISTING SYSTEM COMPONENTS AND SEQUENCE OF OPERATION ARE TO REMAIN AS-IS (NO



- 2. CIRCUIT PATHWAY SURVIVABILITY SHALL BE LEVEL 1.
- OF THE SPECIFIED SYSTEM MANUFACTURER. INSTALLING CONTRACTOR'S NAME AND CONTACT

INFORMATION SHALL BE LISTED IN THE NFPA CLOSE OUT DOCUMENTATION AT COMPLETION OF PROJECT.

FIRE ALARM WIRING LEGEND

DAVIDSON MIDDLE SCHOOL

PRELIMINARY

NOT FOR

CONSTRUCTION

QUATTROCCHI KWOK

ARCHITECTS

636 Fifth Street, Santa Rosa, CA 95404

55 Harrison Street, Suite 525,

Oakland, CA 94607 (707) 576-0829

HVAC IMPROVEMENTS -ADMINISTRATION AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY

REVISIO	NS	
DSA	APP NO). 01-119794
ARCH PRO	JECT NO:	1900.0
DRAWN BY		LN/TV/JW
DRAWING S	SCALE:	AS NOTE
PTN: 6545	58-60	FILE NO: 21-3

MARCH 1, 2022

FIRE ALARM **EQUIPMENT** LIST, NOTES, **AND DETAILS**

FE-0.1

CALIFORNIA ENERGY COMMISSION This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive Davidson Middle School Report Page:

280 Woodland Ave. Date Prepared:

9/23/2021 San Rafael 04 Total Conditioned Floor Area 5227.2 75 Total Unconditioned Floor Area 06 # of Stories (Habitable Above Grade) Retail (M) ☐ Non-refrigerated Warehouse (S) School (E) ☐ Healthcare Facility (I) Relocatable Class Bldg (E) Other (write in) See Table J

This table Includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in Dry System Components Wet System Components ☐ Water Economizer ☐ Air Economizer Pumps ☐ System Piping

☐ Cooling Towers

Chillers

Boilers

Registration Provider: Energysoft Registration Date/Time: Report Version: 2019.1.003 Report Generated: 2021-09-23 14:43:25

Schema Version: rev 20200601

CALIFORNIA ENERGY COMMISSION (Page 4 of 15) Davidson Middle School Report Page: 280 Woodland Ave. Date Prepared:

F. HVAC SYSTEM	SUMMARY (DRY & WET	SYSTEMS)										
Dry System Equip	ment Efficiency (other than	n Package Termir	nal Air Conditi	oners (PTAC) and	Package Terminal	Heat Pumps (PTHF	P))					
01	02		03	04	05	06	07	08	09			
				Heat	ing Mode			Cooling Mode				
Name or Item Tag	Size Categor (Btu/h)	У	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 Efficiency			
AH A1 - DOAS	>=65,000 and <13	35,000		СОР	3.3	3.2	EER IEER	11 12.2	11.7 11.7			
Electric Resistance	e Heating											
	01	02	03				04					
Nam	Name or Item Tag Equipmen Descriptio			t cy	Applicable Exception to §140.4(g) Allowing Electric Resistance Heating							
	VRV-A1	99	•	•	ectric-resistance he capacity of all heat	• .	-	•				

Registration Number: Registration Date/Time: Registration Provider: Energysoft CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2021-09-23 14:43:25

Schema Version: rev 20200601

Mechanical Systems CALIFORNIA ENERGY COMMISSION NRCC-MCH-E CERTIFICATE OF COMPLIANCE NRCC-MCH-E Project Name: Davidson Middle School Report Page: (Page 7 of 15) 280 Woodland Ave. Date Prepared: 9/23/2021

08	09	10	11	12	13	14	15		16
	Mechanical Vent	lation 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 (ft²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM		ntrols per <u>§120.1(d)3</u> , and <u>§120.1(e)3</u> ⁶
FC-A1	Office space	245			36.8	0	0	DCV	NA: Not required pe §120.1(d)3
rc-A1	Office space	243			30.8	U	U	Occ Sensor	NA: Not required space type
FC-A2	Office space	121			18.2	0	0	DCV	NA: Not required po §120.1(d)3
FC-AZ	Office space	121			10.2	U	U	Occ Sensor	NA: Not required space type
FC-A3	Office space	153			23	0	0	DCV	NA: Not required pe §120.1(d)3
FC-A5	Office space	155			25	U	U	Occ Sensor	NA: Not required space type
FC-A4	Main Entry Lobby	350			175	0	0	DCV	NA: Not required po §120.1(d)3
FC-A4	Main Entry Lobby	350			1/5	U	U	Occ Sensor	NA: Not required space type
FC-A5	Conference / moeting	451			225.5	0	0	DCV	NA: Not required pe §120.1(d)3
rc-A5	Conference/ meeting	451			225.5	U	U	Occ Sensor	NA: Not required space type
FC-A6	Office space	79			11.8	0	0	DCV	NA: Not required pe §120.1(d)3
rc-A0	Office space	/9			11.0	U	U	Occ Sensor	NA: Not required space type

Registration Date/Time: Registration Number: Registration Provider: Energysoft CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2021-09-23 14:43:25 Schema Version: rev 20200601

STATE OF CALIFORNIA **Mechanical Systems**

(Page 1 of 15)

☐ Ductwork (existing to remain, altered or new)

☐ Zonal Systems/ Terminal Boxes

CALIFORNIA ENERGY COMMISSION NRCC-MCH-E CERTIFICATE OF COMPLIANCE Project Name: Davidson Middle School Report Page: (Page 2 of 15) 280 Woodland Ave. Date Prepared: 9/23/2023

C. COMPLIANCE RESULTS Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D., or the table indicated as not compliant for guidance. Summary Pumps <u>§110.1</u>, Controls §140.4(k) §140.4(c) §110.2(e)2 Compliance Results <u>§110.2</u>, §140.4 (See Table J) Yes AND Yes AND Yes AND Mandatory Measures Compliance (See Table Q for Details COMPLIES

D. EXCEPTIONAL CONDITIONS

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

E. ADDITIONAL REMARKS

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

Registration Number: Registration Date/Time: Registration Provider: Energysoft CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2021-09-23 14:43:25

STATE OF CALIFORNIA Mechanical Systems

CALIFORNIA ENERGY COMMISSION NRCC-MCH-E CERTIFICATE OF COMPLIANCE Project Name: Davidson Middle School Report Page: (Page 5 of 15) 280 Woodland Ave. Date Prepared: 9/23/202

Schema Version: rev 20200601

H. FAN SYSTE	MS & AIR ECONO	MIZERS								
				escriptive requirements fou be included in Table H.	nd in <u>§140</u>).4(c), §	<u>140.4(e)</u> a	and <u>§140.4(m)</u> for fan s	systems. Fan systems servin	g only process loads are
System Name:	VRV-A1	Econon	nizer:1	NA: Special OA filtration	Econon Contro		Designe	ed per <u>§140.4(e)</u> and (m)	System Fan Type:	Constant Volume
01	02		03	04			05 06		07	08
Fan Name or				Maximum Design Supply	Airflow				Fan Power Pressure Drop A	Adjustment - Table 140.4-B
Item Tag	Fan Functio	n	Qty	(CFM)	All llow	HP	Unit ²	Design HP	Device	Design Airflow through Device (CFM)
VRF	Other (Transfer, V	AV box)	1	7373	7373		ЗНР	3.7	NA	NA
Total Syst	Total System Design Supply Airflow (CFM):		M):	7373 Total S		ystem I (B)HP:	_	3.7	Maximum System Fan Power (B)HP:	6.93
System Name:	AH A1 - DOAS	Econon	nizer: ¹	NA: Special OA filtration	Econon Contro			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)	Maximum Design Supply Airflow (CFM)		Unit ²	Design HP	Device	Design Airflow through Device (CFM)
SF	Supply		1	2800		E	ЗНР	1.4	NA	NA
Total Syst	em Design Supply A	irflow (CF	M):	2800	Total S	ystem I (B)HP:	_	1.4	Maximum System Fan Power (B)HP:	2.63

¹ FOOTNOTES: Computer room economizers must meet requirements of $\underline{\$140.9(a)}$ and will be documented on the NRCC-PRC-E document.

Registration Number: Registration Date/Time: Registration Provider: Energysoft

STATE OF CALIFORNIA **Mechanical Systems**

² The unit used for HP must be consistent for all fans within a system.

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

CALIFORNIA ENERGY COMMISSION NRCC-MCH-E CERTIFICATE OF COMPLIANCE NRCC-MCH-E Project Name: Davidson Middle School Report Page: (Page 8 of 15) 280 Woodland Ave. Date Prepared: 9/23/2023 Project Address:

Report Version: 2019.1.003

Schema Version: rev 20200601

I. VENTILATIO	ON AND INDOOR AIR QUALITY							
FC-A7	Office space	84		12.6	0	0	DCV	NA: Not required per §120.1(d)3
FC-A7	Office space	04		12.0	0	U	Occ Sensor	NA: Not required space type
FC-A8	Office space	156		23.4	0	0	DCV	NA: Not required per §120.1(d)3
FC-Ao	Office space	130		23.4		U	Occ Sensor	NA: Not required space type
FC-A9	Office space	76		11.4	0	0	DCV	NA: Not required per §120.1(d)3
PC-A9	Office space	76		11.4	0	U	Occ Sensor	NA: Not required space type
FC-A10	Office space	76		11.4	0	0	DCV	NA: Not required per §120.1(d)3
rc-A10	Office space	76		11.4	0	U	Occ Sensor	NA: Not required space type
FC-A11	Office space	76		11.4	0	0	DCV	NA: Not required per §120.1(d)3
FC-AII	Office space	76		11.4	0	0	Occ Sensor	NA: Not required space type
FC-A12	Office space	76		11.4	0	0	DCV	NA: Not required per §120.1(d)3
FC-A12	Office space	/6		11.4	0	U	Occ Sensor	NA: Not required space type
FC A12	Office space	122		20	0	0	DCV	NA: Not required per §120.1(d)3
FC-A13	Office space	133		20	0	0	Occ Sensor	NA: Not required space type

Registration Date/Time: Registration Number: Registration Provider: Energysoft CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2021-09-23 14:43:25 Schema Version: rev 20200601

STATE OF CALIFORNIA **Mechanical Systems**

CALIFORNIA ENERGY COMMISSION NRCC-MCH-E CERTIFICATE OF COMPLIANCE Davidson Middle School Report Page: Project Name: (Page 3 of 15) Project Address: 280 Woodland Ave. Date Prepared:

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS) This table is used to demonstrate compliance for mechanical equipment with mandatory requirements found in §110.1 and §110.2(a) and prescriptive requirements found in §140.4(a), <u>140.4(b)</u> and <u>§140.4(k)</u> or <u>§141.0(b)2</u> for alterations. Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters) 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 Equipment Sizing per Mechanical Schedule (kBtu/h) Heating Output^{2,3} Cooling Output^{2,3} Load Calculations^{3,4} Smallest Size Name or Item | Equipment Category per | Equipment Type per Tables 110.2 / Title | Per Design | Rated | Heating | Per Design | Rated | Rated | Load | Load | Rated | Ra Tables 110.2 (kBtu/h) (kBtu/h) (kBtu/h) VRV-A1 Variable Refrigerant Flow VRF heat pump, air cooled AH A1 - DOAS Air-cooled, pkg (3 phase) Yes | 56 | 80.7 | 0 | 109.61 | 99.9 | 4.93 | 29.94 Unitary Heat Pumps

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 §140.4(a). Healthcare facilities are excepted.

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

Dry System Equip	ry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))											
01	02	03	04	05	06	07	08	09				
			Heati	ng Mode	Cooling Mode							
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency				
VRV-A1	>=240,000	47 °Fdb/ 43 °Fwb OSA	СОР	3.2	3.413	EER IEER	9.5 12.7	10 12.9				

Registration Number: Registration Date/Time: Registration Provider: Energysoft CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2021-09-23 14:43:25 Schema Version: rev 20200601

STATE OF CALIFORNIA Mechanical Systems

CALIFORNIA ENERGY COMMISSION NRCC-MCH-E CERTIFICATE OF COMPLIANCE Davidson Middle School Report Page: Project Name: (Page 6 of 15) 280 Woodland Ave. Date Prepared: 9/23/2021

. SYSTEM CONTROLS This table is used to demonstrate compliance with mandatory controls in \$110.2, and \$120.2, and prescriptive controls in \$140.4(f), and (n) or requirements in \$141.0(h) 2F, for altered

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats	Shut-Off Controls §120.2(e)	Isolation Zone Controls §120.2(g)	Demand Response <u>§110.12</u> and <u>§120.2(b)</u>	Supply Air Temp. Reset §140.4(f)	Window Interlocks pe §140.4(n)
VRV-A1	Multi-zone w/ DDC to zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
AH A1 - DOAS	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided

¹FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.

*Notes: Controls with a * require a note in the space below explaining how compliance is achieved. EX: system 1: SA Temp Reset: Exempt because zones compliant with §140.4(d); EXCEPTION 1 to §140.4(f)

J. VENTILATION AND INDOOR AIR QUALITY

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 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 outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet. Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table. 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. O3 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. residential and Hotel/ Motel Ventilation Systems 04 Air Filtration per §120.1(c) and §141.0(b)2 System Design OA CFM System Design VRV-A1 Provided per §120.1(c) (NR and Transfer Air CFM Hotel/Motel))

Registration Number: Registration Date/Time: Registration Provider: Energysoft CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2021-09-23 14:43:25 Schema Version: rev 20200601

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

Report Generated: 2021-09-23 14:43:25

CERTIFICATE OF COMPLIANCE NRCC-MCH-E Project Name: Davidson Middle School Report Page: (Page 9 of 15) 280 Woodland Ave. Date Prepared: Project Address: 9/23/2021

J. VENTILATIO	ON AND INDOOR AIR QUALITY							
FC-A14	Office space	179		26.8	0	0	DCV	NA: Not required per §120.1(d)3
FC-A14	Office space	1/9		20.8	U	U	Occ Sensor	NA: Not required space type
FC-A15	Office space	120		18	0	0	DCV	NA: Not required per §120.1(d)3
PC-A15	Office space	120		10	U	U	Occ Sensor	NA: Not required space type
FC-A16	Main Entry Lobby	481.3		240.6	0	0	DCV	NA: Not required per §120.1(d)3
PC-A10	Main Entry Lobby	401.5		240.6	U	U	Occ Sensor	NA: Not required space type
FC-A17A	Lecture/ postsecondary classroom	345		131.1	0	0	DCV	NA: Not required per §120.1(d)3
FC-A17A	Lecture/ postsecondary classroom	343		131.1	U	U	Occ Sensor	NA: Not required space type
FC-A17B	Lecture/ postsecondary classroom	345		131.1	0	0	DCV	NA: Not required per §120.1(d)3
FC-A17B	Lecture/ postsecondary classroom	545		151.1	U	U	Occ Sensor	NA: Not required space type
FC-A18	Office chase	434.6		65.2	0	0	DCV	NA: Not required per §120.1(d)3
FC-A18	Office space	434.0		05.2	U	U	Occ Sensor	NA: Not required space type
FC-A19	Break room	416.7		208.4	0	0	DCV	NA: Not required per §120.1(d)3
FC-A19	ыеак тоопп	410.7		200.4	U	U	Occ Sensor	NA: Not required space type

Registration Number: Registration Date/Time: Registration Provider: Energysoft Report Generated: 2021-09-23 14:43:25 CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20200601

QUATTROCCHI KWOK ARCHITECTS 636 Fifth Street, Santa Rosa, CA 95404 55 Harrison Street, Suite 525, Oakland, CA 94607 (707) 576-0829 STEVEN KWOK LICENSE # C20161 EXP APRIL 30, 2023

SIGNED: MARCH 1, 2022

PRELIMINARY CONSTRUCTION

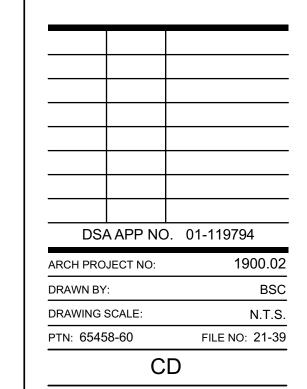
DAVIDSON MIDDLE SCHOOL

IMPROVEMENTS -AND LIBRARY

280 WOODLAND AVE SAN RAFAEL, CA 94901

CALIFORNIA ENERGY COMMISSION

SAN RAFAEL CITY SCHOOLS



TITLE 24

Mechanical Systems

STATE OF CALIFORNIA

CALIFORNIA ENERGY COMMISSION CERTIFICATE OF COMPLIANCE (Page 10 of 15) Project Name: Davidson Middle School Report Page: 280 Woodland Ave. Date Prepared: Project Address:

J. VENTILATIO	ON AND INDOOR AIR QUALITY									
FC 430	Office areas	83			12.4		0	DCV	NA: Not required per §120.1(d)3	
FC-A20	Office space	83			12.4	0	0	Occ Sensor	NA: Not required space type	
17	Total System Required Min OA CFM				1425	18	Ventilation for this S	ystem Complies? Yes		
	04		05				06	()7	
		System Desi	System Design OA CFM		Systom	Design		Air Filtration per §120	0.1(c) and §141.0(b)2 ²	
System Name	AH A1 - DOAS	Airfle	_	80		Air CFM	0	Provided per <u>§120.1(c)</u> (NR and Hotel/Motel))		
08	09	10	11	12	13	14	15	16		
	Mechanical Ventilation Required per §120.1(c)3 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		ntrols per <u>§120.1(d)3</u> , and <u>§120.1(e)3</u> ⁶	
HALL	Corridor	532.6			79.9	0	0	DCV	NA: Not required per §120.1(d)3	
HALL	Corndor	332.0			79.9		U	Occ Sensor	NA: Not required space type	
RESTROOM	Tailet private	214			0	0	0	DCV	NA: Not required per §120.1(d)3	
VESTROOM	Toilet, private	214				0	0	Occ Sensor	NA: Not required space type	
17	Total System Required Min OA CFM				80	18	Ventilation for this S	System Complies?	Yes	

frootnotes: System CFM should include both mechanical and natural ventilation for the zone/system -

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

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

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

⁵ For lecture halls with fixed seating, the expected number of occupants shall be shall be determined in accordance with the California Building Code.

Registration Provider: Energysoft Registration Number: Registration Date/Time: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2021-09-23 14:43:25

STATE OF CALIFORNIA

Mechanical Systems CALIFORNIA ENERGY COMMISSION CERTIFICATE OF COMPLIANCE Project Name: Davidson Middle School Report Page: (Page 13 of 15) 280 Woodland Ave. Date Prepared:

Schema Version: rev 20200601

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at

V	N1 -	Farm /Tikla	Contains To De Field Venified	Field In	spector
Yes	No	Form/Title	Systems To Be Field Verified	Pass	Fail
•	0	NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.			
•	0	NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes'. If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".			
		NRCA-MCH-04-A - Air Distribution Duct Leakage			
		NRCA-MCH-05-A - Air Economizer Controls			
0	•	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.			
		NRCA-MCH-07-A Supply Fan Variable Flow Controls			
		NRCA-MCH-08-A Valve Leakage Test			
		NRCA-MCH-09-A Supply Water Temperature Reset Controls			
		NRCA-MCH-10-A Hydronic System Variable Flow Controls			
		NRCA-MCH-11-A Automatic Demand Shed Controls			
		NRCA-MCH-12-A FDD for Packaged Direct Expansion Units			
		NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance			
0	•	NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance NOTE: This form does not automatically move to "Yes". If Distributed Energy System DX AC Systems are included in teh scope permit applicant should move this form to 'Yes".			

Registration Number: Registration Date/Time: Registration Provider: Energysoft CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Generated: 2021-09-23 14:43:25 Schema Version: rev 20200601

STATE OF CALIFORNIA Mechanical Systems

CALIFORNIA ENERGY COMMISSION NRCC-MCH-E CERTIFICATE OF COMPLIANCE NRCC-MCH-E This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in $\underline{\$140.4}$, or $\underline{\$141.0(b)2}$ for alterations. Davidson Middle School - Library HVAC Improvements Report Page: (Page 1 of 10)

280 Woodland Ave. Date Prepared:

Project Name:

Α.	GENERAL INFORMATION				
01	Project Location (city)	San Rafael	04	Total Conditioned Floor Area	4300
02	Climate Zone	2	05	Total Unconditioned Floor Area	0
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1
	Office (B)	Retail (M)		Non-refrigerated Warehouse (S)	
	Hotel/ Motel Guest Rooms (R-1)	☐ School (E)		Healthcare Facility (I)	

○ Other (write in)

☐ High-Rise Residential (R-2/R-3)

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

This table Includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or <u>§141.0(b)2</u> for alterations.

☐ Relocatable Class Bldg (E)

	01	02		03
	Air System(s)	Wet System Components		Dry System Components
\boxtimes	Heating Air System	Water Economizer		Air Economizer
\boxtimes	Cooling Air System	Pumps		Electric Resistance Heat
	Mechanical Controls	System Piping	\boxtimes	Fan Systems
\boxtimes	Mechanical Controls (existing to remain, altered or new)	Cooling Towers	×	Ductwork (existing to remain, altered or new)
		Chillers		Ventilation
		Boilers		Zonal Systems/ Terminal Boxes

Registration Date/Time:

Report Version: 2019.1.003

Schema Version: rev 20200601

STATE OF CALIFORNIA Mechanical Systems

CALIFORNIA ENERGY COMMISSION NRCC-MCH-E CERTIFICATE OF COMPLIANCE Project Name: Davidson Middle School Report Page: (Page 11 of 15) 280 Woodland Ave. Date Prepared: 9/23/2023

J. VENTILATION AND INDOOR AIR QUALITY

⁶ §120.2(e)3 requires systems serving rooms that are required by §130.1(c) 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 250ft^2 or smaller, multipurpose rooms less than $1,000 \text{ ft}^2$, 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

K. TERIVIINAL BO	X CONTROLS								
This section does r	not apply to this	s project.							
L. DISTRIBUTION	I (DUCTWORK	and PIPING)							
This table is used t	o show complic	ınce with mandat	tory pipe insulation requir	ements found in <u>§120.3</u> and	prescriptive requirements found in §140.4(I) for duct leak	ige testing.			
Duct Leakage Seal	ing								
The answers to the	e questions belo	ow apply to the fo	ollowing duct systems:	VRV-A1	Duct leakage testing triggered for these systems?	No			
11	No	The scope of the	ne project includes only d	uct systems serving healthca	re facilities				
12	No	Duct system pr	ystem provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.						
13	Yes	The space cond	ditioning system serves le	ss than 5,000 ft ² of condition	ed floor area.				
14	No	The <u>combined</u>	surface area of the ducts	in the following locations is r	more than 25% of the total surface area of the entire duct s	system:			
			Outdoors	<u>'</u>					
					greater than the u-factor of the ceiling, or if the roof does r d vents or openings to the outside/ unconditioned spaces	ot meet the			
			In an unconditioned cr	awl space					
			In other unconditioned	d spaces					
15		The scope of the	ne project includes extend	ding an existing duct system,	which is constructed, insulated or sealed with asbestos.	_			
16					imented to have been previously sealed as confirmed thro	ugh field verification			

Registration Number: Registration Date/Time: Registration Provider: Energysoft CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2021-09-23 14:43:25

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

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

STATE OF CALIFORNIA Mechanical Systems

CALIFORNIA ENERGY COMMISSION NRCC-MCH-E CERTIFICATE OF COMPLIANCE Project Name: Davidson Middle School Report Page: (Page 14 of 15) 280 Woodland Ave. Date Prepared: 9/23/202

Schema Version: rev 20200601

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

•	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance NOTE: This form does not automatically move to "Yes". If Chilled water Storage, Ice-on-Coil Internal Melt, Ice-on-Coil External melt, Ice Harvester, Brine, Ice-Slurry, Eutecti Salt, Clathrate Hydrate Slurry (CHS), Cryogenic or Encapsulated (Ice Ball) Systems are included in the scope, permit applicant should move this form to 'Yes".		
	NRCA-MCH-16-A Supply Air Temperature Reset Controls		
•	NRCA-MCH-17-A Condenser Water Temperature Reset Controls		
	NRCA-MCH-18-A Energy Management Control Systems		
•	NRCA-MCH-19-A Occupancy Sensor Controls		
•	NRCA-MCH-20 Multi-Family Ventilation		
•	NRCA-MCH-21 Multi-Family Envelope Leakage		

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Provider's registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019 compliance documents/Nonresidential Documents/NRCV/

No	Form/Title				
NO	Tomy nue	Pass	Fail		
	NRCV-MCH-04-H Duct Leakaage Test NOTE: Must be completed by a HERS Rater				
•	NRCV-MCH-24 Enclosure Air Leakaage Worksheet NOTE: Must be completed by a HERS Rater				
•	NRCV-MCH-27 High-rise Resdential NOTE: Must be completed by a HERS Rater				
•	NRCV-MCH-32 Local Mechanical Exhaust NOTE: Must be completed by a HERS Rater				
	•	No Form/Title NRCV-MCH-04-H Duct Leakaage Test NOTE: Must be completed by a HERS Rater NRCV-MCH-24 Enclosure Air Leakaage Worksheet NOTE: Must be completed by a HERS Rater NRCV-MCH-27 High-rise Resdential NOTE: Must be completed by a HERS Rater NRCV-MCH-32 Local Mechanical Exhaust NOTE: Must be completed by a HERS Rater	NRCV-MCH-04-H Duct Leakaage Test NOTE: Must be completed by a HERS Rater □ NRCV-MCH-24 Enclosure Air Leakaage Worksheet NOTE: Must be completed by a HERS Rater □ NRCV-MCH-27 High-rise Resdential NOTE: Must be completed by a HERS Rater □		

Q. MANDATORY MEASURES DOCUMENTATION LOCATION This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block Plan sheet or construction document location M-Sheets	01	02		
	Compliance with Mandatory Measures documented through MCH	Ves	Plan sheet or construction document location	
	Mandatory Measures Note Block	165	M-Sheets	

Registration Date/Time: Registration Number: Registration Provider: Energysoft CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Generated: 2021-09-23 14:43:25 Schema Version: rev 20200601

STATE OF CALIFORNIA **Mechanical Systems**

CALIFORNIA ENERGY COMMISSION NRCC-MCH-E CERTIFICATE OF COMPLIANCE NRCC-MCH-E Project Name: Davidson Middle School - Library HVAC Improvements Report Page: (Page 2 of 10) Project Address: 280 Woodland Ave. Date Prepared: 9/23/202

C. COMPLIANCE RESULTS

9/23/2021

See Table J

Registration Provider: Energysoft

Report Generated: 2021-09-23 14:47:12

	Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D., or the table indicated as not compliant for guidance.														
01		02		03		04		05		06		07		08	09
System Summary §110.1, §110.2, §140.4	AND	Pumps <u>§140.4(k)</u>	AND	Fans/ Economizers §140.4(c), §140.4(e)	AND	System Controls §110.2, §120.2, §140.4(f)	AND	Ventilation §120.1	AND	Terminal Box Controls §140.4(d)	AND	Distribution §120.3, §140.4(I)	AND	Cooling Towers §110.2(e)2	Compliance Results
(See Table F)		(See Table G)		(See Table H)		(See Table I)		(See Table J)		(See Table K)		(See Table L)		(See Table M)	
Yes	AND		AND	Yes	AND	Yes	AND	Yes	AND		AND	Yes	AND		COMPLIES
				Mandatory	Measu	res Complian	ce (See	Table Q for D	etails)				COMP	LIES	

D. EXCEPTIONAL CONDITIONS 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.

Registration Number: Registration Date/Time: Registration Provider: Energysoft CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2021-09-23 14:47:12 Schema Version: rev 20200601

STATE OF CALIFORNIA Mechanical Systems

CALIFORNIA ENERGY COMMISSION NRCC-MCH-E CERTIFICATE OF COMPLIANCE Project Name: (Page 12 of 15) Davidson Middle School Report Page: Project Address: 280 Woodland Ave. Date Prepared:

he answers to th	e questions be	low apply to the fo	llowing duct systems:	AH A1 - DOAS	Duct leakage testing triggered for these systems?	No				
11	No	The scope of the	e project includes only du	ict systems serving health	care facilities					
12	Yes	Duct system pro	ovides conditioned air to a	an occupiable space for a	constant volume, single zone, space-conditioning system.					
13	Yes The space conditioning system serves less than 5,000 ft ² of conditioned floor area.									
14	No	The <u>combined</u> s	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		-					
					r greater than the u-factor of the ceiling, or if the roof does need vents or openings to the outside/ unconditioned spaces	ot meet the				
			In an unconditioned cra	awl space						
			In other unconditioned	spaces	-					
15		The scope of the	e project includes extend	ing an existing duct systen	n, which is constructed, insulated or sealed with asbestos.					
16					cumented to have been previously sealed as confirmed throunce Nonresidential Appendix NA2.	gh field verification				
17	Yes	Duct system sha	all be sealed in acordance	with the California Mecha	nical Code					

M. COOLING TOWERS

This section does not apply to this project.

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Field Inspector Yes Form/Title NRCI-MCH-01-E - Must be submitted for all buildings

Registration Date/Time: Registration Provider: Energysoft Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2021-09-23 14:43:25 Schema Version: rev 20200601

STATE OF CALIFORNIA

Mechanical Systems CALIFORNIA ENERGY COMMISSION NRCC-MCH-E CERTIFICATE OF COMPLIANCE (Page 15 of 15) Project Name: Davidson Middle School Report Page: 280 Woodland Ave. Date Prepared: 9/23/2021

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT I certify that this Certificate of Compliance documentation is accurate and complete. Documentation Author Signature: - Matt Hargadori Documentation Author Name: Matt Hargadon Signature Date: 9/23/2021 Guttmann & Blaevoet Consulting Engineers CEA/ HERS Certification Identification (if applicable): 2351 Powell St San Francisco CA 94133 4156554000 RESPONSIBLE PERSON'S DECLARATION STATEMENT I certify the following under penalty of perjury, under the laws of the State of California:

The information provided on this Certificate of Compliance is true and correct. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer) The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations,

plans and specifications submitted to the enforcement agency for approval with this building permit application. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Chris Del Core	Responsible Designer Signature:
Company: Costa Engineers Inc.	Date Signed: 2021-09-23
Address: 3274 Villa Lane	License: M31600
City/State/Zip: Nana CA 94558	Phone: 7072529177

Registration Date/Time: Registration Provider: Energysoft Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2021-09-23 14:43:25

Schema Version: rev 20200601

STATE OF CALIFORNIA **Mechanical Systems**

HP 30-2/SFC

Variable Refrigerant Flow

>=135,000 and <240,000

CALIFORNIA ENERGY COMMISSION NRCC-MCH-E CERTIFICATE OF COMPLIANCE NRCC-MCH-E (Page 3 of 10) Project Name: Davidson Middle School - Library HVAC Improvements Report Page: 280 Woodland Ave. Date Prepared

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS) This table is used to demonstrate compliance for mechanical equipment with mandatory requirements found in §110.1 and §110.2(a) and prescriptive requirements found in §140.4(a), Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters) 04 05 06 07 08 09 10 11 Equipment Sizing per Mechanical Schedule (kBtu/h) §140.4 (a&b) Heating Output^{2,3} Cooling Output^{2,3} Load Calculations^{3,} Smallest Size Equipment Type per Tables 110.2 / Title **Equipment Category per** Tables 110.2 | Per Design | Rated | Heating | Per Design | Rated | Per Design | (kBtu/h) | Heating Load (kBtu/h) (kBtu/h) (kBtu/h)

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 §140.4(a). Healthcare facilities are excepted.

206.39

3.413000106811

IEER

10.6 13.9

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

VRF heat pump, air cooled

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 §140.4(b).

47 °Fdb/ 43

°Fwb OSA

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP)) Minimum Size Category Name or Item Efficiency (Btu/h) Condition Efficiency Unit Required per Required per Design Efficiency (°F) Tables 110.2 / Tables 110.2 / Title 20 Title 20

Registration Number: Registration Date/Time: Registration Provider: Energysoft CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2021-09-23 14:47:12

Schema Version: rev 20200601

COP

QUATTROCCHI KWOK ARCHITECTS 636 Fifth Street, Santa Rosa, CA 95404 55 Harrison Street, Suite 525, Oakland, CA 94607 (707) 576-0829 STEVEN KWOK LICENSE # C20161 EXP APRIL 30, 2023 SIGNED: MARCH 1, 202

> **PRELIMINARY** CONSTRUCTION

IMPROVEMENTS -

280 WOODLAND AVE SAN RAFAEL, CA 94901

DSA APP NO. 01-119794 1900.02 ARCH PROJECT NO: DRAWN BY: DRAWING SCALE: N.T.S. PTN: 65458-60 FILE NO: 21-39

MARCH 1, 2022

TITLE 24

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

Mechanical Systems

CERTIFICATE OF COMPLIANCE

Registration Date/Time:

Report Version: 2019.1.003 Schema Version: rev 20200601

Davidson Middle School - Library HVAC Improvements Report Page:

280 Woodland Ave. Date Prepared:

CALIFORNIA ENERGY COMMISSION

NRCC-MCH-E

9/23/2021

9/23/2021

Registration Provider: Energysoft

Report Generated: 2021-09-23 14:47:12

(Page 4 of 10)

PRINCE OF COMPLIANCE Thirds Table 1. Development Models School - Library HVAC Improvements Report Page: (Page 647 5/23/205 5/23/205 5/23/205 System CONTROLS Institute is used to demonstrate compliance with mandatary controls in \$110.2 and \$120.2 and prescriptive controls in \$140.4(f) and (n) or requirements in \$141.0(6)2e for othered proce conditioning systems. O1 O2 O3 O4 O5 O5 O5 O7 O8 O9 System Name System Page System Plane											
MICHAEL Device Middle School - Uservice Report Page Report P			_								
Page 16 Page 17 Page 16 Page	Vlechan IRCC-MCH-E	-	rstems						CALIFO	ORNIA ENERGY CO	MMISSION
September Sept			PLIANCE							Ņ	IRCC-MCH-I
SYSTEM CONTROLS Exercised to work for demonstrator compliance with insulationary coveragle in \$10.02 and presurptive controls in \$10.02 (conformation in \$10.02 and \$10.02 and presurptive controls in \$10.02 (conformation in \$10.02 and \$10.02 and presurptive controls in \$10.02 (conformation in \$10.02 and \$10.02 and presurptive controls in \$10.02 (conformation in \$10.02 and \$10.02 and \$10.02 and presurptive controls in \$10.02 (conformation in \$10.02 and \$10.02	-			Davidson Mide	·					(F	
Mile Deliver Service Deliver Delive	Project Addr	ress:			280 Woodl	and Ave. Date F	Prepared:				9/23/2022
Mile Deliver Service Deliver Delive											
Solition Number Part Par						161000					
System Name System Sys			•	ice with mand	latory controls in §110.2 and	a <u>§120.2</u> and _l	prescriptive con	ntrois in <u>§140.4(f)</u> and (n) o	r requirements	in <u>§141.0(b)2E</u> fo	r altered
System Name System Filter Acres System South System Syst		01	02	03	04	05	06	07	08	09	
System harms 2006 Eding Served 5410,218 KePt 1212,2010 1545,0001 Control 5410,0001 State Control 5410,0001 State Sta			_		Thermostats	Shut-Off			Supply Air		
P3 02 2/5fC 02.2 w/ DOC 10 2 x 3,000 of 2 Setback EMCS N. 5 server EMCS EMCS N. 5 server EMCS	Syste	em Name	<u> </u>					•	Temp. Reset		•
EP 80 JEC 20 JUNE to 20 JUNE to 20 JUNE to 20 JUNE 10 Settants FMCS			20111119	_	§120.2(a)or §141.0(b)2E	§120.2(e)		3110.12 und 3120.2(b)	§140.4(f)	3140.4(<i>1</i>
DOTIVOTES LIVENING DAYS CONTROLLED CONTROLLE							NA: Serves <		NΔ·		
CONTROLES Grands pas wold heteros, gravilly floor healters, gravilly room heaters, man central electric heaters, fireplaces or decorative gas appliances, wood stores are not required to extend of thermostrus. Notes: Controls with a "require and in the space below explaining how compliance is achieved. Dis system 1:50. Temp fleest: Exempt because zones compliant with \$1.00.0(d): \$2.00.0(d): \$2.00.0(HP 30-)-2/SFC 3(<= 25,000 ft ²	Setback	EMCS		EMCS		NA: No operable	e windows
Average Name Are granted in the space below explaining how compliance is achieved. CX: system 1: SA Temp Reset: Dempt because zones compliant with \$120.6(6); KCEPTON 1 to \$140.0(1); WEXTILATION AND INDOOR AIR QUAITY WEXTIL	FOOTNOTE	ES: Gravit		uvity floor hea	ters aravity room heaters n	on-central ele	ctric heaters fi	renlaces or decorative ans i	nnliances woo	d staves are not r	equired to
CVENTILATION AND INDOOR AIR QUALITY				ivity jioor ried	ters, gravity room neaters, m	ion-cential ele	ctric ricuters, jii	replaces of decorative gas t	ippnances, woo	a stoves are not n	equired to
VENTILATION AND INDOOR AIR QUALITY This bath's sixed to demonstrate complaines with mendatory ventilation requirements in \$120.1 and \$120.2(1).88 for all nonresidentials, high rise residential and hotelyhnole complaines with mendatory ventilation requirements in \$120.1 and \$120.2(1).88 for all nonresidentials in high rise residential and hotelyhnole complaines on the plants of the collusions can be presented in a spreadbase. 9.2			-	the space be	low explaining how compliar	nce is achieved	l. EX: system 1:	SA Temp Reset: Exempt be	cause zones cor	npliant with §140	<u>.4(d)</u> ;
No facility in grant of the constitute compliance with mandatory vendidation requirements in \$12.02 and \$12.02 and \$12.02 and \$12.02 and \$1.02 a	XCEPTION	I 1 to <u>§14</u>	<u>0.4(f)</u>								
No facility in grant of the constitute compliance with mandatory vendidation requirements in \$12.02 and \$12.02 and \$12.02 and \$12.02 and \$1.02 a	. VFNTII 4	ΔΤΙΟΝ Δ	ND INDOOR AIR OU	ΔΙΙΤΥ							
And Excusions. For other actions, only ventralinar systems being other and within the scape of the permit application and and to the document of this toble. In level of this toble, the required without reventral to the search of prices with perspect inclinated former stematics on the plans, or attaching the calculations instead of completing this table. Clack this box if the project included new or attered high-rise residential develling sints. Clack this box if the project included new or attered high-rise residential develling sints. Clack this box if the project included new or attered high-rise residential develling sints. Clack this box if the project included new or attered high-rise residential develling sints. Clack this box if the project included new or attered high-rise residential develling sints. Clack this box if the project included new or attered high-rise residential develling sints. Clack this box if the project included new or attered high-rise residential develling sints. Clack this box if the project included new or attered high-rise residential develling sints. Clack this box if the project included new or attered high-rise residential develling sints. Clack this box if the project included new or attered high-rise residential develling sints. Clack this box if the project included new or attered high-rise residential develling sints. Clack this box if the project sints in the project sin					latory ventilation requiremen	nts in 8120 1	and 8120 2/al2	B for all nonresidential his	h-rise residenti	al and hotel/mote	1
O3			•		•			_ ,			
CALIFORNIA ENERGY COMMISSION Consideration for the project included Remeasidential or Motel/Motel spaces Consect this box if the project included new or altered high-rise residencial dwelling units. Consect the box if the project included new or altered high-rise residencial dwelling units. Consected the box if the project is using natural verification in any nonresidential and hotel/Motel spaces to meet required ventilation rates per \$120.11c;2. Consected the second of the project is using natural verification in any nonresidential and hotel/Motel verification systems CALIFORNIA Enteror COMPATIBLE TO BOX System Design OA CFM 2380 System Design On Transfer Air CFM O Provided per \$120.11c; And \$414.002. Registration Number. Registration Number. Registration Number. Registration Provider. Registration P					·						
Deck this box if the project included new or altered high rise residential dwelling units. Check the box if the project is using natural vertilation in any nonresidential or hotel/motel spaces to meet required ventilation rates per \$120.1(c)2.	01			· · · · ·			·	hing the calculations instea	d of completing	g this table.	
California and Note Market	02			· ·		-	·				
Transfer Air CFM Transfer Air				· ·	<u> </u>						
Oct					t is using natural ventilation	in any nonresi	dential or hote	l/motel spaces to meet req	uired ventilation	n rates per <u>§120.1</u>	<u>l(c)2</u> .
System Design OA CFM Airflow* 2389 System Design OA CFM Airflow* 2389 System Design OB Registration Personal Provided per \$120.1c() (NR and \$141.0fb)z Provi	vonresider	ntial and		ion Systems	0.5			06		07	
System Name RP 30-2/SFC 30.2 System Design Use Line System Design Use Line Transfer Air CeM Transfer Air CeM Provided pre \$120.16 (NR and Hotel/Motely)			04		- 05				ir Filtration nor		141 O(b)2 2
Registration Number: Registration Poster Fair Registration Number: Registration Dute/Time: Registration Poster/Time: Registration Provider: Energyof CAB Building Energy Efficiency Standards - 2019 Nonresidential Compliance Registration Dute/Time: Registration Dute/Time: Registration Poster/Time: Registration Poster/Time: Registration Poster/Time: Registration Poster/Time: Registration Poster/Time: Registration Dute/Time: Report Version: 2019, 1.003 Schema Version: rev 20200601 Report Generated: 2021 09-23 14:47-11 ABI- OF CALIFORNIA ENERGY COMMISSIO ERTIFICATE OF COMPLIANCE CALIFORNIA ENERGY COMMISSIO RETIFICATE OF COMPLIANCE Poster To Get Schema Version: rev 20200601 Report Rage: Rep	Svstem Nar	me	HP 30-2/SFC 30.2	s		/ X X 4 1 ·	_		<u> </u>		
Registration Number: Registration Date/Time: Registration Provider: Energysof CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2021-09-23 14-47:12 Schema Version: rev 20200601 IAGT OF CALIFORNIA ARCHAINGAIN ARCHA	- ,		, , , , , , , , , , , , , , , , , , , ,		Airflow¹	Tran	ster Air (FM - I	_			
ABuilding Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: rev 20200601 Report Generated: 2021-09-23 14-47:13 Schema Version: rev 20200601 RECACHAPPE CALIFORNIA ACCLAGATICAL Systems CALIFORNIA ENERGY COMMISSIO BRITICATE OF COMPLIANCE Obvidens: Davidson Middle School - Library HVAC Improvements Report Page: Project Address: Davidson Middle School - Library HVAC Improvements Report Page: Project Address: DeCLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE Recettions have been made based on information provided in previous tables of this document. If any selection needs to be changed, please exploin why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at traps://www.energy.ca.gov/title/24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/ Yes No NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-03-A - Constant Volume Single Zone HVAC Systems are included in the scope, permit applicable) since testing activities overlap. NRCA-MCH-03-A - Constant Volume Single Zone HVAC Systems are included in the scope, permit applicants food information move to "Yes": If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicants food information maintaining interior carbon dioxide (CO1) can vary outside ventilation flow materials from to "Yes": NRCA-MCH-03-A - Air Economizer Controls NRCA-MCH-03-A - Air Economizer Controls NRCA-MCH-03-A - Air Supply Fan Variable Flow Controls NRCA-MCH-03-A - August Par Variable	NS					Han	SICI All CITY		•		
ABuilding Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: rev 20200601 Report Generated: 2021-09-23 14-47:13 Schema Version: rev 20200601 RECACHAPPE CALIFORNIA ACCLAGATICAL Systems CALIFORNIA ENERGY COMMISSIO BRITICATE OF COMPLIANCE Obvidens: Davidson Middle School - Library HVAC Improvements Report Page: Project Address: Davidson Middle School - Library HVAC Improvements Report Page: Project Address: DeCLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE Recettions have been made based on information provided in previous tables of this document. If any selection needs to be changed, please exploin why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at traps://www.energy.ca.gov/title/24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/ Yes No NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-03-A - Constant Volume Single Zone HVAC Systems are included in the scope, permit applicable) since testing activities overlap. NRCA-MCH-03-A - Constant Volume Single Zone HVAC Systems are included in the scope, permit applicants food information move to "Yes": If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicants food information maintaining interior carbon dioxide (CO1) can vary outside ventilation flow materials from to "Yes": NRCA-MCH-03-A - Air Economizer Controls NRCA-MCH-03-A - Air Economizer Controls NRCA-MCH-03-A - Air Supply Fan Variable Flow Controls NRCA-MCH-03-A - August Par Variable	- 00		09		10 11			15	•	lotel/Motel))	
ARC MACE CALIFORNIA ARC Analical Systems ACC MICH E CALIFORNIA ENERGY COMMISSION RETRIFICATE OF COMPILANCE Davidson Middle School - Library HVAC Improvements Report Page: Page 8 of 1 Page 8 of 1 Davidson Middle School - Library HVAC Improvements Report Page: Page 8 of 1 Davidson Middle School - Library HVAC Improvements Report Page: Page 8 of 1 DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE Deletchan have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. Interest documents must be provided to the building inspector during construction and can be found online at ttps://www.energy.co.gov/ttile24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/ Yes No NRCA-MCH-02-A - Outdoor Air must be submitted for all inewly installed HVAC units. Note: Page			09		10 11			15	•	lotel/Motel))	
ARC MACE CALIFORNIA ARC Analical Systems ACC MICH E CALIFORNIA ENERGY COMMISSION RETRIFICATE OF COMPILANCE Davidson Middle School - Library HVAC Improvements Report Page: Page 8 of 1 Page 8 of 1 Davidson Middle School - Library HVAC Improvements Report Page: Page 8 of 1 Davidson Middle School - Library HVAC Improvements Report Page: Page 8 of 1 DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE Deletchan have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. Interest documents must be provided to the building inspector during construction and can be found online at ttps://www.energy.co.gov/ttile24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/ Yes No NRCA-MCH-02-A - Outdoor Air must be submitted for all inewly installed HVAC units. Note: Page		n Number				12 13	14	15	H	lotel/Motel)) 16	
Accidentical Systems	Registration		:	2 Nonrecidentia		12 13 Registration Da	14 te/Time:	15	Re	dotel/Motel)) 16 egistration Provider:	Energysoft
Accidentical Systems	Registration		:) Nonresidentia	l Compliance	12 13 Registration Da Report Version:	14 te/Time:	15	Re	dotel/Motel)) 16 egistration Provider:	Energysoft
RECIMONE CALIFORNIA ENERGY COMMISSION RETRIFICATES OF COMMISSION MIDDLE Name: Davidson Middle School - Library HVAC Improvements Report Page: (Page 3 of 1 or poject Address: 280 Woodland Ave. Date Prepared: 9/23/202 DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE elections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. these documents must be provided to the building inspector during construction and can be found anline at ttps://www.energy.co.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/ Yes No Form/Title Systems To Be Field Verified Field Inspector Pass Fail NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap. NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes". NRCA-MCH-04-A - Air Distribution Duct Leakage NRCA-MCH-04-A - Air Distribution Duct Leakage NRCA-MCH-05-A - Demand Control Ventiliation 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. NRCA-MCH-03-A - Demand Control Ventiliation 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. NRCA-MCH-03-A Supply Fan Variable Flow Controls NRCA-MCH-03-A Hydronic System Variable Flow Controls NRCA-MCH-03-A Hydronic System Variable Flow Controls NRCA-MCH-03-A Hydronic System Variable Flow Controls NRCA-MCH-0	Registration		:) Nonresidentia	l Compliance	12 13 Registration Da Report Version:	14 te/Time:	15	Re	dotel/Motel)) 16 egistration Provider:	Energysoft
PRIFICATE OF COMPULANCE Davidson Middle School - Ubrary HVAC Improvements Report Page: (Page 8 of 1 roject Address: 280 Woodland Ave. Date Prepared: 9/23/202 D. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE elections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. these documents must be provided to the building inspector during construction and can be found online at tryst//www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/ Yes No Form/Title Systems To Be Field Verified Field Inspector MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap. NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes". NRCA-MCH-05-A - Air Economizer Controls NRCA-MCH-05-A - Air Economizer Controls NRCA-MCH-05-A - Supply Fan Variable Flow Controls NRCA-MCH-08-A Valve Leakage Test NRCA-MCH-08-A Valve Leakage Test NRCA-MCH-08-A Valve Leakage Test NRCA-MCH-08-A Valve Leakage Test NRCA-MCH-10-A - Hydronic System Variable Flow Controls NRCA-MCH-11-A Automatic Demand Shed Controls NRCA-MCH-11-A Automatic Demand Shed Controls	Registratior CA Building	g Energy Ef	:) Nonresidentia	l Compliance	12 13 Registration Da Report Version:	14 te/Time:	15	Re	dotel/Motel)) 16 egistration Provider:	Energysoft
Project Name: Davidson Middle School - Library HVAC Improvements Report Page: 9723/202 Date Prepared: 9923/202 Date Pre	Registration CA Building TATE OF CALII	g Energy Ei IFORNIA Nical Sy	: fficiency Standards - 2019) Nonresidentia	l Compliance	12 13 Registration Da Report Version:	14 te/Time:	15	Report Ge	dotel/Motel)) 16 egistration Provider: enerated: 2021-09-2	Energysoft 23 14:47:12
DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE elections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. hese documents must be provided to the building inspector during construction and can be found online at ttps://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/ Yes No Form/Title Systems To Be Field Verified Field Inspector Pass Fail NRCA-MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap. NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicants should move this form to "Yes". NRCA-MCH-04-A - Air Distribution Duct Leakage NRCA-MCH-05-A - Air Economizer Controls NRCA-MCH-06-A Demand Control Ventilation Systems must be submitted for all systems required to employ demand control Ventilation (refer to §120.1(c)3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints. NRCA-MCH-07-A Supply Fan Variable Flow Controls NRCA-MCH-08-A Valve Leakage Test NRCA-MCH-10-A Hydronic System Variable Flow Controls	Registration CA Building STATE OF CALII Viechan RRCC-MCH-E	g Energy Ef	: fficiency Standards - 2019 rstems) Nonresidentia	l Compliance	12 13 Registration Da Report Version:	14 te/Time:	15	Report Ge	notel/Motel)) 16 egistration Provider: enerated: 2021-09-2	Energysoft 23 14:47:12 DMMISSION
D. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE elections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. hese documents must be provided to the building inspector during construction and can be found online at the provided to the building inspector during construction and can be found online at the provided to the building inspector during construction and can be found online at the provided to the building inspector during construction and can be found online at the provided to the building inspector during construction and can be found online at the provided to the building inspector during construction and can be found online at the provided to the building inspector during construction and can be feeled Verified NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A - Can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap. NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Ves." If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Ves."	Registration CA Building STATE OF CALII VIECHAN NRCC-MCH-E CERTIFICATE	g Energy El IFORNIA NICAL SY E OF COM I	: fficiency Standards - 2019 rstems		l Compliance	12 13 Registration Da Report Version: Schema Version	14 te/Time: 2019.1.003 n: rev 20200601	15	Report Ge	notel/Motel)) 16 egistration Provider: enerated: 2021-09-2	Energysoft 23 14:47:12 DMMISSION
elections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. hese documents must be provided to the building inspector during construction and can be found online at tttps://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/ Yes No Form/Title Systems To Be Field Verified Field Inspector Pass Fail NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap. NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes'. If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes". NRCA-MCH-04-A - Air Distribution Duct Leakage	Registration CA Building TATE OF CALII Mechan IRCC-MCH-E CERTIFICATE Project Nam	g Energy Ed IFORNIA NICAL SY E OF COMI ne:	: fficiency Standards - 2019 rstems		l Compliance dle School - Library HVAC Impro	Registration Da Report Version: Schema Version	te/Time: 2019.1.003 n: rev 20200601	15	Report Ge	notel/Motel)) 16 egistration Provider: enerated: 2021-09-2	Energysoft 23 14:47:12 DMMISSION NRCC-MCH-I
elections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. hese documents must be provided to the building inspector during construction and can be found online at tttps://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/ Yes No Form/Title Systems To Be Field Verified Field Inspector Pass Fail NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap. NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes'. If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes". NRCA-MCH-04-A - Air Distribution Duct Leakage	Registration CA Building TATE OF CALII Mechan IRCC-MCH-E CERTIFICATE Project Nam	g Energy Ed IFORNIA NICAL SY E OF COMI ne:	: fficiency Standards - 2019 rstems		l Compliance dle School - Library HVAC Impro	Registration Da Report Version: Schema Version	te/Time: 2019.1.003 n: rev 20200601	15	Report Ge	notel/Motel)) 16 egistration Provider: enerated: 2021-09-2	Energysoft 23 14:47:12 DMMISSION
these documents must be provided to the building inspector during construction and can be found online at ttps://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/ Yes No Form/Title Systems To Be Field Verified Field Inspector Pass Fail NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap. NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes". NRCA-MCH-04-A - Air Distribution Duct Leakage NRCA-MCH-05-A - Air Economizer Controls NRCA-MCH-05-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. NRCA-MCH-07-A Supply Fan Variable Flow Controls NRCA-MCH-09-A Supply Water Temperature Reset Controls NRCA-MCH-10-A Hydronic System Variable Flow Controls NRCA-MCH-11-A Automatic Demand Shed Controls	Registration CA Building TATE OF CALII VIECHAN IRCC-MCH-E CERTIFICATE Project Nam	g Energy Ed IFORNIA nical Sy E OF COMI ne: ress:	: fficiency Standards - 2019 vstems PLIANCE	Davidson Mide	l Compliance dle School - Library HVAC Impro 280 Woodl	Registration Da Report Version: Schema Version	te/Time: 2019.1.003 n: rev 20200601	15	Report Ge	notel/Motel)) 16 egistration Provider: enerated: 2021-09-2	Energysoft 23 14:47:12 DMMISSION NRCC-MCH-I
ttps://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/ Yes No Form/Title Systems To Be Field Verified Field Inspector NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap. NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes". NRCA-MCH-04-A - Air Distribution Duct Leakage NRCA-MCH-05-A - Air Economizer Controls NRCA-MCH-05-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. NRCA-MCH-07-A Supply Fan Variable Flow Controls NRCA-MCH-09-A Valve Leakage Test NRCA-MCH-09-A Supply Water Temperature Reset Controls NRCA-MCH-10-A Hydronic System Variable Flow Controls NRCA-MCH-11-A Automatic Demand Shed Controls	Registration CA Building TATE OF CALII Mechan IRCC-MCH-E CERTIFICATE Project Nam Project Addr	g Energy Ed IFORNIA nical Sy E OF COMI ne: ress:	: fficiency Standards - 2019 rstems PLIANCE OF REQUIRED CERTI	Davidson Midd	dle School - Library HVAC Impro 280 Woodl	Registration Da Report Version: Schema Version vements Repor and Ave. Date F	te/Time: 2019.1.003 n: rev 20200601 t Page:		Report Ge	Hotel/Motel)) 16 egistration Provider: enerated: 2021-09-2	Energysoft 23 14:47:12 DMMISSION NRCC-MCH-I Page 8 of 10 9/23/2022
NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap. NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes'. If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes". NRCA-MCH-04-A - Air Distribution Duct Leakage 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. NRCA-MCH-07-A Supply Fan Variable Flow Controls NRCA-MCH-09-A Supply Water Temperature Reset Controls NRCA-MCH-10-A Hydronic System Variable Flow Controls NRCA-MCH-10-A Hydronic System Variable Flow Controls NRCA-MCH-11-A Automatic Demand Shed Controls	Registration CA Building TATE OF CALII VIECHAN IRCC-MCH-E CERTIFICATE Project Nam Project Addr O. DECLAF Selections I	g Energy Editions of Comments	: Fficiency Standards - 2019 FSTEMS PLIANCE OF REQUIRED CERTION In made based on inform	Davidson Midd	dle School - Library HVAC Impro 280 Woodl	Registration Da Report Version: Schema Version vements Report and Ave. Date F	te/Time: 2019.1.003 n: rev 20200601 t Page: Prepared:		Report Ge	Hotel/Motel)) 16 egistration Provider: enerated: 2021-09-2	Energysoft 23 14:47:12 DMMISSION NRCC-MCH-I Page 8 of 10 9/23/2022
NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap. NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes'. If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes". NRCA-MCH-04-A - Air Distribution Duct Leakage NRCA-MCH-05-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. NRCA-MCH-07-A Supply Fan Variable Flow Controls NRCA-MCH-08-A Valve Leakage Test NRCA-MCH-09-A Supply Water Temperature Reset Controls NRCA-MCH-10-A Hydronic System Variable Flow Controls NRCA-MCH-10-A Hydronic System Variable Flow Controls NRCA-MCH-11-A Automatic Demand Shed Controls	Registration CA Building TATE OF CALIF Wechan RCC-MCH-E CERTIFICATE Project Nam Project Addr O. DECLAF Selections h These docu	g Energy Edition of Comments o	: fficiency Standards - 2019 rstems PLIANCE OF REQUIRED CERTI In made based on informust be provided to the	Davidson Midd FICATES OF I mation provide building inspe	dle School - Library HVAC Impro 280 Woodl ACCEPTANCE led in previous tables of this dector during construction and	Registration Da Report Version: Schema Version vements Repor and Ave. Date F	te/Time: 2019.1.003 r: rev 20200601 t Page: Prepared:	eds to be changed, please e	Report Ge	Hotel/Motel)) 16 egistration Provider: enerated: 2021-09-2	Energysoft 23 14:47:12 DMMISSION NRCC-MCH-I Page 8 of 10 9/23/2022
MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap. NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes". NRCA-MCH-04-A - Air Distribution Duct Leakage NRCA-MCH-05-A - Air Economizer Controls NRCA-MCH-05-A - Air Economizer Controls 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. NRCA-MCH-07-A Supply Fan Variable Flow Controls NRCA-MCH-08-A Valve Leakage Test NRCA-MCH-09-A Supply Water Temperature Reset Controls NRCA-MCH-10-A Hydronic System Variable Flow Controls NRCA-MCH-11-A Automatic Demand Shed Controls	Registration CA Building TATE OF CALII VIECHAN IRCC-MCH-E CERTIFICATE Project Nam Project Addr D. DECLAF Gelections F These documenttps://ww	g Energy Electric Energy Electric Electric Energy Electric Electri	: fficiency Standards - 2019 rstems PLIANCE OF REQUIRED CERTI In made based on informust be provided to the	Davidson Midd FICATES OF I mation provide building inspe	dle School - Library HVAC Impro 280 Woodl ACCEPTANCE led in previous tables of this of ector during construction and 9_compliance_documents/N	Registration Da Report Version: Schema Version vements Repor and Ave. Date F	te/Time: 2019.1.003 r: rev 20200601 t Page: Prepared:	eds to be changed, please e	Report Go CALIFO	notel/Motel)) 16 egistration Provider: enerated: 2021-09-2 DRNIA ENERGY CC (F	Energysoft 23 14:47:12 OMMISSION NRCC-MCH-I Page 8 of 10 9/23/2022
applicable) since testing activities overlap. NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes'. If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes". NRCA-MCH-04-A - Air Distribution Duct Leakage NRCA-MCH-05-A - Air Economizer Controls 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. NRCA-MCH-07-A Supply Fan Variable Flow Controls NRCA-MCH-08-A Valve Leakage Test NRCA-MCH-09-A Supply Water Temperature Reset Controls NRCA-MCH-10-A Hydronic System Variable Flow Controls NRCA-MCH-11-A Automatic Demand Shed Controls	Registration CA Building TATE OF CALII VIECHAN IRCC-MCH-E CERTIFICATE Project Nam Project Addr D. DECLAF Gelections F These documenttps://ww	E OF COMINE: ress: RATION have been uments more with energy No	: Fficiency Standards - 2019 FSTEMS PLIANCE OF REQUIRED CERTI In made based on informust be provided to the process of the	FICATES OF A mation provide building inspet	dle School - Library HVAC Impro 280 Woodl ACCEPTANCE led in previous tables of this of ector during construction and 9_compliance_documents/N Form/Title	Registration Da Report Version: Schema Version vements Repor and Ave. Date F	te/Time: 2019.1.003 n: rev 20200601 t Page: Prepared: ny selection net online at Documents/NR	eds to be changed, please e	Report Go CALIFO	DRNIA ENERGY CO	Energysoft 23 14:47:12 OMMISSION IRCC-MCH-I Page 8 of 10 9/23/202:
NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes'. If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes". NRCA-MCH-04-A - Air Distribution Duct Leakage NRCA-MCH-05-A - Air Economizer Controls 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. NRCA-MCH-07-A Supply Fan Variable Flow Controls NRCA-MCH-09-A Supply Water Temperature Reset Controls NRCA-MCH-10-A Hydronic System Variable Flow Controls NRCA-MCH-11-A Automatic Demand Shed Controls	Registration CA Building TATE OF CALII VIECHAN IRCC-MCH-E CERTIFICATE Project Nam Project Addr O. DECLAR Selections h These documents://ww	E OF COMINE: ress: RATION have been siments more siments	fficiency Standards - 2019 Stems PLIANCE OF REQUIRED CERTI In made based on infor- ust be provided to the U.ca.gov/title24/2019st	FICATES OF Amation provide building inspectandards/201s	dle School - Library HVAC Impro 280 Woodl ACCEPTANCE ded in previous tables of this description and 9_compliance_documents/N Form/Title	Registration Da Report Version: Schema Version vements Repor and Ave. Date F document. If a d can be found fonresidential_	te/Time: 2019.1.003 n: rev 20200601 t Page: Prepared: ny selection neconline at Documents/NR	eds to be changed, please e	Report Go CALIFO	DRNIA ENERGY CO able E Additional I Field Pass	Energysoft 23 14:47:12 OMMISSION NRCC-MCH-I Page 8 of 10 9/23/2022
move to "Yes'. If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes". NRCA-MCH-04-A - Air Distribution Duct Leakage NRCA-MCH-05-A - Air Economizer Controls 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. NRCA-MCH-07-A Supply Fan Variable Flow Controls NRCA-MCH-08-A Valve Leakage Test NRCA-MCH-09-A Supply Water Temperature Reset Controls NRCA-MCH-10-A Hydronic System Variable Flow Controls NRCA-MCH-11-A Automatic Demand Shed Controls	Registration CA Building TATE OF CALII VIECHAN IRCC-MCH-E CERTIFICATE Project Nam Project Addr O. DECLAR Selections h These documents://ww	E OF COMINE: ress: RATION have been uments more www.energy	fficiency Standards - 2019 Stems PLIANCE OF REQUIRED CERTI In made based on informust be provided to the pr	FICATES OF A mation provide building inspetandards/201sta	dle School - Library HVAC Impro 280 Woodle ACCEPTANCE ded in previous tables of this of the cector during construction and 9_compliance_documents/N Form/Title be submitted for all newly in unction with MCH-07-A Supp	Registration Da Report Version: Schema Version vements Repor and Ave. Date F document. If a d can be found fonresidential_	te/Time: 2019.1.003 n: rev 20200601 t Page: Prepared: ny selection neconline at Documents/NR	eds to be changed, please e	Report Go CALIFO	DRNIA ENERGY CO able E Additional I Field Pass	Energysoft 23 14:47:12 OMMISSION NRCC-MCH-I Page 8 of 10 9/23/2022
NRCA-MCH-04-A - Air Distribution Duct Leakage NRCA-MCH-05-A - Air Economizer Controls NRCA-MCH-05-A - Air Economizer Controls 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. NRCA-MCH-07-A Supply Fan Variable Flow Controls NRCA-MCH-08-A Valve Leakage Test NRCA-MCH-09-A Supply Water Temperature Reset Controls NRCA-MCH-10-A Hydronic System Variable Flow Controls NRCA-MCH-11-A Automatic Demand Shed Controls	Registration CA Building TATE OF CALII VIECHAN IRCC-MCH-E CERTIFICATE Project Nam Project Addr O. DECLAR Selections h These documents://ww	g Energy Editions of the state	: Fficiency Standards - 2019 FSTEMS PLIANCE OF REQUIRED CERTI In made based on informust be provided to the provided to t	FICATES OF Amation provide building inspectandards/201s door Air must braned in conjug activities ov	dle School - Library HVAC Impro 280 Woodle ACCEPTANCE led in previous tables of this elector during construction and 9_compliance_documents/N Form/Title be submitted for all newly in unction with MCH-07-A Supperlap.	Registration Da Report Version: Schema Version Version Report Version Schema Version Vements Report and Ave. Date F document. If a dican be found donresidential_ Installed HVAC oly Fan VFD Ac	te/Time: 2019.1.003 n: rev 20200601 t Page: Prepared: ny selection net online at Documents/NR units. Note: ceptance (if	eds to be changed, please e	Report Go CALIFO	DRNIA ENERGY CO able E Additional I Field Pass	Energysoft 23 14:47:12 OMMISSION NRCC-MCH-I Page 8 of 10 9/23/2022
NRCA-MCH-05-A - Air Economizer Controls 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. NRCA-MCH-07-A Supply Fan Variable Flow Controls NRCA-MCH-08-A Valve Leakage Test NRCA-MCH-09-A Supply Water Temperature Reset Controls NRCA-MCH-10-A Hydronic System Variable Flow Controls NRCA-MCH-11-A Automatic Demand Shed Controls	Registration CA Building TATE OF CALII VIECHAN IRCC-MCH-E CERTIFICATE Project Nam Project Addr O. DECLAF Gelections h These documenttps://ww	E OF COMINE: ress: RATION have been siments more siments	fficiency Standards - 2019 Stems PLIANCE OF REQUIRED CERTI In made based on informust be provided to the p	FICATES OF Amation provide building inspectandards/201s door Air must be provided in conjugactivities over stant Volume ant Volume Sint Vo	dle School - Library HVAC Impro 280 Woodl ACCEPTANCE ded in previous tables of this of the cector during construction and 9_compliance_documents/N Form/Title be submitted for all newly in unction with MCH-07-A Supplerlap. Single Zone HVAC NOTE: This ngle Zone HVAC Systems are	Registration Da Report Version: Schema Version Vements Report and Ave. Date F document. If a d can be found conresidential enstalled HVAC oly Fan VFD Ac	te/Time: 22019.1.003 n: rev 20200601 t Page: Prepared: my selection new online at Documents/NR units. Note: ceptance (if	eds to be changed, please e	Report Go CALIFO	egistration Provider: enerated: 2021-09-2 DRNIA ENERGY CC M (F able E Additional I Field Pass	Energysoft 23 14:47:12 OMMISSION IRCC-MCH-I Page 8 of 10 9/23/202: Remarks. Inspector Fail
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. NRCA-MCH-07-A Supply Fan Variable Flow Controls NRCA-MCH-08-A Valve Leakage Test NRCA-MCH-09-A Supply Water Temperature Reset Controls NRCA-MCH-10-A Hydronic System Variable Flow Controls NRCA-MCH-11-A Automatic Demand Shed Controls	Registration CA Building TATE OF CALII VIECHAN IRCC-MCH-E CERTIFICATE Project Nam Project Addr O. DECLAF Selections F These documents://www Yes	E OF COMINE: ress: RATION have been www.energy No	fficiency Standards - 2019 Stems PLIANCE OF REQUIRED CERTI In made based on informative be provided to the v.ca.gov/title24/2019st NRCA-MCH-02-A can be performable since testing the provided to the provided to the provided to the v.ca.gov/title24/2019st NRCA-MCH-03-A - Confidence to "Yes". If Constant applicant should move	FICATES OF A mation provide building inspectandards/201s door Air must bormed in conjugg activities over stant Volume ant Volume Sing this form to "	dle School - Library HVAC Impro 280 Woodle ACCEPTANCE led in previous tables of this of the control of the control of the control of the compliance of th	Registration Da Report Version: Schema Version Vements Report and Ave. Date F document. If a d can be found conresidential enstalled HVAC oly Fan VFD Ac	te/Time: 22019.1.003 n: rev 20200601 t Page: Prepared: my selection new online at Documents/NR units. Note: ceptance (if	eds to be changed, please e	Report Go CALIFO	DRNIA ENERGY CC Able E Additional I Field Pass	Energysoft 23 14:47:12 OMMISSION RCC-MCH-I Page 8 of 10 9/23/202: Remarks. Inspector Fail
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. NRCA-MCH-07-A Supply Fan Variable Flow Controls NRCA-MCH-08-A Valve Leakage Test NRCA-MCH-09-A Supply Water Temperature Reset Controls NRCA-MCH-10-A Hydronic System Variable Flow Controls NRCA-MCH-11-A Automatic Demand Shed Controls	Registration CA Building TATE OF CALII VIECHAN IRCC-MCH-E CERTIFICATE Project Addr O. DECLAF Gelections h These documenttps://ww Yes	E OF COMINE: ress: RATION have been siments more siments	fficiency Standards - 2019 Stems PLIANCE OF REQUIRED CERTI In made based on informust be provided to the p	FICATES OF Amation provide building inspectandards/201s door Air must brimed in conjug activities over stant Volume ant Volume Sithis form to "Distribution Decided and Distribution Decided and	dle School - Library HVAC Impro 280 Woodl ACCEPTANCE led in previous tables of this of ector during construction and 9_compliance_documents/N Form/Title be submitted for all newly in unction with MCH-07-A Supplerlap. Single Zone HVAC NOTE: This ngle Zone HVAC Systems are Yes".	Registration Da Report Version: Schema Version Vements Report and Ave. Date F document. If a d can be found conresidential enstalled HVAC oly Fan VFD Ac	te/Time: 22019.1.003 n: rev 20200601 t Page: Prepared: my selection new online at Documents/NR units. Note: ceptance (if	eds to be changed, please e	Report Go CALIFO	DRNIA ENERGY CO Able E Additional I Field Pass	Energysoft 23 14:47:12 OMMISSION IRCC-MCH-I Page 8 of 10 9/23/202: Remarks. Inspector Fail
ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints. NRCA-MCH-07-A Supply Fan Variable Flow Controls NRCA-MCH-08-A Valve Leakage Test NRCA-MCH-09-A Supply Water Temperature Reset Controls NRCA-MCH-10-A Hydronic System Variable Flow Controls NRCA-MCH-11-A Automatic Demand Shed Controls	Registration CA Building TATE OF CALII VIECHAN IRCC-MCH-E CERTIFICATE Project Addr O. DECLAF Gelections h These documenttps://ww Yes	E OF COMINE: ress: RATION have been uments more wenergy No	fficiency Standards - 2019 Stems PLIANCE OF REQUIRED CERTI In made based on informust be provided to the v.ca.gov/title24/2019st NRCA-MCH-02-A can be performable since testing NRCA-MCH-03-A - Conmove to "Yes". If Constant applicant should move NRCA-MCH-04-A - Air ENRCA-MCH-05-A	FICATES OF A mation provia building inspetandards/2019 door Air must brimed in conjug activities ov stant Volume ant Volume Si this form to " Distribution De	dle School - Library HVAC Impro 280 Woodle ACCEPTANCE led in previous tables of this of the control of the c	Registration Da Report Version: Schema Version Vements Repor and Ave. Date F document. If a d can be found donresidential Installed HVAC oly Fan VFD Ac s form does no included in th	te/Time: 2019.1.003 1: rev 20200601 t Page: Prepared: my selection net online at Documents/NR units. Note: ceptance (if ot automatically e scope, permit	eds to be changed, please e	Report Go CALIFO	DRNIA ENERGY CO Able E Additional I Field Pass	Energysoft 23 14:47:12 OMMISSION IRCC-MCH-I Page 8 of 10 9/23/202: Remarks. Inspector Fail
setpoints. NRCA-MCH-07-A Supply Fan Variable Flow Controls NRCA-MCH-08-A Valve Leakage Test NRCA-MCH-09-A Supply Water Temperature Reset Controls NRCA-MCH-10-A Hydronic System Variable Flow Controls NRCA-MCH-11-A Automatic Demand Shed Controls	Registration CA Building TATE OF CALII VIECHAN IRCC-MCH-E CERTIFICATE Project Addr O. DECLAF Gelections h These documenttps://ww Yes	E OF COMINE: ress: RATION have been www.energy No	Fficiency Standards - 2019 FSTEMS PLIANCE OF REQUIRED CERTI In made based on information in the provided to the provided t	Davidson Midden FICATES OF A mation provide building inspectandards/201s and ards/201s and ards/201s art Volume ant Volume Sithis form to "Distribution Deconomizer Condition Control Vend	dle School - Library HVAC Impro 280 Woodle ACCEPTANCE led in previous tables of this of the lector during construction and general period of the lector during construction and general period with MCH-07-A Supperlap. Single Zone HVAC NOTE: This ingle Zone HVAC Systems are Yes". Luct Leakage Entitlation Systems must be second	Registration Da Report Version: Schema Version Schema Version Vements Report and Ave. Date F document. If a dican be found donresidential_ Installed HVAC oly Fan VFD Actor Section for the column of	te/Time: 2019.1.003 1: rev 20200601 t Page: Prepared: In y selection new online at Documents/NR units. Note: ceptance (if ot automatically e scope, permit	eds to be changed, please e	Report Go CALIFO	DRNIA ENERGY CO Able E Additional H Field Pass	Energysoft 23 14:47:12 OMMISSION RCC-MCH-I Page 8 of 10 9/23/2022 Remarks. Inspector Fail
NRCA-MCH-08-A Valve Leakage Test NRCA-MCH-09-A Supply Water Temperature Reset Controls NRCA-MCH-10-A Hydronic System Variable Flow Controls NRCA-MCH-11-A Automatic Demand Shed Controls	Registration CA Building TATE OF CALII VIECHAN IRCC-MCH-E CERTIFICATE Project Addr O. DECLAF Selections F These documents://ww Yes	E OF COMINE TESS: RATION have been ments movements move	fficiency Standards - 2019 Stems PLIANCE OF REQUIRED CERTI In made based on information in the provided to the provided in	Davidson Mide FICATES OF A mation provide building inspectandards/201s door Air must ormed in conjugactivities over a continue of this form to "Distribution Distribution Di	dle School - Library HVAC Impro 280 Woodl ACCEPTANCE led in previous tables of this of the lector during construction and 9_compliance_documents/N Form/Title be submitted for all newly in unction with MCH-07-A Supperlap. Single Zone HVAC NOTE: This ngle Zone HVAC Systems are Yes". uct Leakage ontrols entilation Systems must be seed ventilation (refer to §120)	Registration Da Report Version: Schema Version Schema Version Vements Report and Ave. Date F document. If a dican be found donresidential_ Installed HVAC oly Fan VFD Act s form does not included in the ubmitted for a 1.1(c)3) can val	te/Time: 2019.1.003 n: rev 20200601 t Page: Prepared: ny selection net online at Documents/NR units. Note: ceptance (if ot automatically e scope, permit	eds to be changed, please e	Report Go CALIFO	DRNIA ENERGY CO Able E Additional H Field Pass	Energysoft 23 14:47:12 OMMISSION RCC-MCH-I Page 8 of 10 9/23/2022 Remarks. Inspector Fail
NRCA-MCH-09-A Supply Water Temperature Reset Controls NRCA-MCH-10-A Hydronic System Variable Flow Controls NRCA-MCH-11-A Automatic Demand Shed Controls	Registration CA Building TATE OF CALII VIECHAN IRCC-MCH-E CERTIFICATE Project Addr O. DECLAF Selections F These documents://ww Yes	RATION have been ments morw.energy No	fficiency Standards - 2019 Stems PLIANCE OF REQUIRED CERTI In made based on informust be provided to the pr	Davidson Mide FICATES OF A mation provide building inspectandards/201s door Air must ormed in conjugactivities over a continue of this form to "Distribution Distribution Di	dle School - Library HVAC Impro 280 Woodl ACCEPTANCE led in previous tables of this of the lector during construction and 9_compliance_documents/N Form/Title be submitted for all newly in unction with MCH-07-A Supperlap. Single Zone HVAC NOTE: This ngle Zone HVAC Systems are Yes". uct Leakage ontrols entilation Systems must be seed ventilation (refer to §120)	Registration Da Report Version: Schema Version Schema Version Vements Report and Ave. Date F document. If a dican be found donresidential_ Installed HVAC oly Fan VFD Act s form does not included in the ubmitted for a 1.1(c)3) can val	te/Time: 2019.1.003 n: rev 20200601 t Page: Prepared: ny selection net online at Documents/NR units. Note: ceptance (if ot automatically e scope, permit	eds to be changed, please e	Report Go CALIFO	DRNIA ENERGY CO Able E Additional H Field Pass	Energysoft 23 14:47:12 OMMISSION RCC-MCH-I Page 8 of 10 9/23/2022 Remarks. Inspector Fail
NRCA-MCH-10-A Hydronic System Variable Flow Controls NRCA-MCH-11-A Automatic Demand Shed Controls	Registration CA Building TATE OF CALII VIECHAN IRCC-MCH-E CERTIFICATE Project Addr O. DECLAF Selections h These documents://ww Yes	RATION have been ments manywenergy No	fficiency Standards - 2019 Stems PLIANCE OF REQUIRED CERTI In made based on information in the provided to the provided in	Davidson Midden FICATES OF A mation provided building inspectandards/2015 door Air must be borned in conjugativities over the stant Volume ant Volume Sing activities over this form to "Distribution December 10 Control Vernand Control Vernand Control Vernand controll based on main	dle School - Library HVAC Impro 280 Woodle ACCEPTANCE led in previous tables of this of the sector during construction and 9_compliance_documents/N Form/Title be submitted for all newly in unction with MCH-07-A Supplerlap. Single Zone HVAC NOTE: This ngle Zone HVAC Systems are Yes". uct Leakage ontrols entilation Systems must be sued ventilation (refer to §120 taining interior carbon dioxide)	Registration Da Report Version: Schema Version Schema Version Vements Report and Ave. Date F document. If a dican be found donresidential_ Installed HVAC oly Fan VFD Act s form does not included in the ubmitted for a 1.1(c)3) can val	te/Time: 2019.1.003 n: rev 20200601 t Page: Prepared: ny selection net online at Documents/NR units. Note: ceptance (if ot automatically e scope, permit	eds to be changed, please e	Report Go CALIFO	DRNIA ENERGY CO Able E Additional I Field Pass	Energysoft 23 14:47:12 OMMISSION RCC-MCH-I Page 8 of 10 9/23/2022 Remarks. Inspector Fail
NRCA-MCH-11-A Automatic Demand Shed Controls	Registration CA Building TATE OF CALIF VIECHAN IRCC-MCH-E CERTIFICATE Project Addr O. DECLAF Gelections h These documents://ww Yes	RATION have been ments morw.energy No	fficiency Standards - 2019 Stems PLIANCE OF REQUIRED CERTI In made based on informust be provided to the pr	Davidson Mide FICATES OF A mation provia building inspectandards/201s door Air must ormed in conjug activities over stant Volume Sing activities over Sing act	dle School - Library HVAC Impro 280 Woodl: ACCEPTANCE ded in previous tables of this of the cector during construction and 9_compliance_documents/N Form/Title be submitted for all newly in unction with MCH-07-A Supperlap. Single Zone HVAC NOTE: This ingle Zone HVAC Systems are Yes". uct Leakage ontrols entilation Systems must be seed ventilation (refer to §120 taining interior carbon dioxides Flow Controls	Registration Da Report Version: Schema Version Schema Version Vements Report and Ave. Date F document. If a dican be found donresidential_ Installed HVAC oly Fan VFD Act s form does not included in the ubmitted for a 1.1(c)3) can val	te/Time: 2019.1.003 n: rev 20200601 t Page: Prepared: ny selection net online at Documents/NR units. Note: ceptance (if ot automatically e scope, permit	eds to be changed, please e	Report Go CALIFO	DRNIA ENERGY CO Able E Additional I Field Pass	Energysoft 23 14:47:12 OMMISSION RCC-MCH-I Page 8 of 10 9/23/202: Remarks. Inspector Fail
	Registration CA Building TATE OF CALII VIECHAN IRCC-MCH-E CERTIFICATE Project Nam Project Addr O. DECLAF Selections h These documents://ww Yes	RATION have been ments manyw.energy No	Fficiency Standards - 2019 FISTEMS PLIANCE OF REQUIRED CERTI In made based on informust be provided to the v.ca.gov/title24/2019si NRCA-MCH-02-A - Outomove to "Yes". If Constant should move to "Yes". If Constant should move NRCA-MCH-04-A - Air Entry of the NRCA-MCH-05-A - Air Entry of the NRCA-MCH-05-A - Air Entry of the NRCA-MCH-06-A Demove to "The NRCA-MCH-06-A Supplication flow rates be setpoints. NRCA-MCH-07-A Supplication of the NRCA-MCH-07-A Supplication flow rates be setpoints.	Davidson Midden FICATES OF A mation provide building inspectandards/201: door Air mustormed in conjug activities over the stant Volume Sing activities over this form to "Distribution Distribution Dis	dle School - Library HVAC Impro 280 Woodl: ACCEPTANCE ded in previous tables of this of the control of the compliance documents/N Form/Title be submitted for all newly in unction with MCH-07-A Supplerlap. Single Zone HVAC NOTE: This ngle Zone HVAC Systems are Yes". uct Leakage ontrols entilation Systems must be supplerlation of the controls of the controls of the controls entilation Systems must be supplerlation of the controls entilation Systems must be supplerlation of the controls	Registration Da Report Version: Schema Version Schema Version Vements Report and Ave. Date F document. If a dican be found donresidential_ Installed HVAC oly Fan VFD Act s form does not included in the ubmitted for a 1.1(c)3) can val	te/Time: 2019.1.003 n: rev 20200601 t Page: Prepared: ny selection net online at Documents/NR units. Note: ceptance (if ot automatically e scope, permit	eds to be changed, please e	Report Go CALIFO	DRNIA ENERGY CO Able E Additional H Field Pass	Energysoft 23 14:47:12 OMMISSION RCC-MCH-I Page 8 of 10 9/23/2022 Remarks. Inspector Fail
NRCA-MCH-12-A FDD for Packaged Direct Expansion Units	Registration CA Building TATE OF CALIF VIECHAN IRCC-MCH-E CERTIFICATE Project Addr O. DECLAF Gelections h These documents://www Yes	RATION have been ments movements mov	Ficiency Standards - 2019 FIGURED CERTION OF REQUIRED CERTION In made based on information of the provided to the provided	Davidson Middenstrands Provided In Conjugactivities over Stant Volume ant Volume Sithis form to "Distribution Distribution	dle School - Library HVAC Impro 280 Woodle ACCEPTANCE Ided in previous tables of this of the control of the	Registration Da Report Version: Schema Version Schema Version Vements Report and Ave. Date F document. If a dican be found donresidential_ Installed HVAC oly Fan VFD Act s form does not included in the ubmitted for a 1.1(c)3) can val	te/Time: 2019.1.003 n: rev 20200601 t Page: Prepared: ny selection net online at Documents/NR units. Note: ceptance (if ot automatically e scope, permit	eds to be changed, please e	Report Go CALIFO	DRNIA ENERGY CO Able E Additional I Field Pass	Energysoft 23 14:47:12 OMMISSION RCC-MCH-I Page 8 of 10 9/23/202: Remarks.
U U U U U U U U U U	Registration CA Building STATE OF CALIF Mechan NRCC-MCH-E CERTIFICATE Project Addr O. DECLAF Selections h These documents://www Yes	E OF COMINE RATION have been ments m www.energy No I I I I I I I I I I I I I I I I I	Ficiency Standards - 2019 FINANCE OF REQUIRED CERTI In made based on informust be provided to the provided to the provided to the provided by the provided	Davidson Midd FICATES OF A mation provial building inspectandards/201s door Air mustormed in conjugent volume Singuities over stant Volume Singuities form to "Distribution Deconomizer Condition Control Venand Co	dle School - Library HVAC Impro 280 Woodl ACCEPTANCE ded in previous tables of this of the cector during construction and geompliance_documents/N Form/Title be submitted for all newly in unction with MCH-07-A Supplerlap. Single Zone HVAC NOTE: This ngle Zone HVAC Systems are Yes". uct Leakage ontrols entilation Systems must be sued ventilation (refer to §120 taining interior carbon dioxides Flow Controls perature Reset Controls deriable Flow Controls	Registration Da Report Version: Schema Version Schema Version Vements Report and Ave. Date F document. If a dican be found donresidential_ Installed HVAC oly Fan VFD Act s form does not included in the ubmitted for a 1.1(c)3) can val	te/Time: 2019.1.003 n: rev 20200601 t Page: Prepared: ny selection net online at Documents/NR units. Note: ceptance (if ot automatically e scope, permit	eds to be changed, please e	Report Go CALIFO	DRNIA ENERGY CO Able E Additional I Field Pass DRNIA ENERGY CO M (F	Energysoft 23 14:47:12 OMMISSION RCC-MCH-I Page 8 of 10 9/23/2022 Remarks. Inspector Fail

AIR QUALITY compliance with mandatory ventilation requiventialtion systems being altered within the flows may be shown on the plans or the calculated the box if the project is showing ventilational to the plans of the project included Nonresider to this box if the project included new or altered to the box if the project is using natural ventilational ventilational systems O5	scope of the permit application need to be lations can be presented in a spreadsheed in calculations on the plans, or attaching the lation of the lation o	e documented in this table. In lieu of this he calculations instead of completing this el spaces to meet required ventilation ra Air Filtration per §1. Provided per § Hote 15 Regist Report Gener	is table, the required	³ Uniform Mechanical Code may have more stringent ventilation requit ⁴ See Standards Tables 120.1-A and 120.1-B. ⁵ For lecture halls with fixed seating, the expected number of occupant ⁶ \$120.2(e)3 requires systems serving rooms that are required by \$13(Examples of spaces which require lighting occupancy sensors include of and open areas in warehouses, library book stack aisles, corridors, stain K. TERMINAL BOX CONTROLS This section does not apply to this project. L. DISTRIBUTION (DUCTWORK and PIPING) This table is used to show compliance with mandatory pipe insulation Duct Leakage Sealing Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	s shall be shall be determined in accordance with the shall be lighting occupancy sensing controls to ffices 250ft ² or smaller, multipurpose rooms less that wells, parking garages, and loading and unloading	e California Building Code. o also have occupancy sensing zone controls for ventilation. on 1,000 ft², classrooms, conference rooms, restrooms, aisles zones, unless excepted by §130.1(c).
compliance with mandatory ventilation requiventialtion systems being altered within the flows may be shown on the plans or the calculated the box if the project is showing ventilational to the this box if the project included Nonresiderated the box if the project included new or alterated the box if the project is using natural ventilational ventilational systems OS	scope of the permit application need to be lations can be presented in a spreadsheed in calculations on the plans, or attaching the lation of the lation o	e documented in this table. In lieu of this he calculations instead of completing this el spaces to meet required ventilation ra Air Filtration per §1. Provided per § Hote 15 Regist Report Gener	is table, the required is table. tes per §120.1(c)2. 07 20.1(c) and §141.0(b)2 ² §120.1(c) (NR and el/Motel)) 16 tration Provider: Energysoft	 For lecture halls with fixed seating, the expected number of occupant for \$120.2(e)3 requires systems serving rooms that are required by \$130. Examples of spaces which require lighting occupancy sensors include of and open areas in warehouses, library book stack aisles, corridors, stail in the section does not apply to this project. L. DISTRIBUTION (DUCTWORK and PIPING) This table is used to show compliance with mandatory pipe insulation Duct Leakage Sealing Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance 	Registration Date/Time: Report Version: 2019.1.003	also have occupancy sensing zone controls for ventilation. In 1,000 ft², classrooms, conference rooms, restrooms, aisles zones, unless excepted by §130.1(c). Altirements found in §140.4(l) for duct leakage testing. Registration Provider: Energysoft
ventialtion systems being altered within the flows may be shown on the plans or the calculate the box if the project is showing ventilational to the project included Nonresider to the this box if the project included new or altered to the box if the project is using natural ventilation systems Ventilation Systems	scope of the permit application need to be lations can be presented in a spreadsheed in calculations on the plans, or attaching the lation of the lation o	e documented in this table. In lieu of this he calculations instead of completing this el spaces to meet required ventilation ra Air Filtration per §1. Provided per § Hote 15 Regist Report Gener	is table, the required is table. tes per §120.1(c)2. 07 20.1(c) and §141.0(b)2 ² §120.1(c) (NR and el/Motel)) 16 tration Provider: Energysoft	6 §120.2(e)3 requires systems serving rooms that are required by §130 Examples of spaces which require lighting occupancy sensors include of and open areas in warehouses, library book stack aisles, corridors, stail K. TERMINAL BOX CONTROLS This section does not apply to this project. L. DISTRIBUTION (DUCTWORK and PIPING) This table is used to show compliance with mandatory pipe insulation Duct Leakage Sealing Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Registration Date/Time: Report Version: 2019.1.003	also have occupancy sensing zone controls for ventilation. In 1,000 ft², classrooms, conference rooms, restrooms, aisles zones, unless excepted by §130.1(c). Altirements found in §140.4(I) for duct leakage testing. Registration Provider: Energysoft
Ck this box if the project included Nonresider Ck this box if the project included new or alte Ck the box if the project is using natural ventic Ventilation Systems O5 System Design OA CFM Airflow¹ D9 10 11 Davidson Middle School - Library HVAC	red high-rise residential dwelling units. lation in any nonresidential or hotel/mot O6 2389 System Design Transfer Air CFM 12 13 14 Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601	Air Filtration per §1. O Provided per § Hote 15 Regist Report Gener	tes per §120.1(c)2. 07 20.1(c) and §141.0(b)2 ² §120.1(c) (NR and el/Motel)) 16 ration Provider: Energysoft	K. TERMINAL BOX CONTROLS This section does not apply to this project. L. DISTRIBUTION (DUCTWORK and PIPING) This table is used to show compliance with mandatory pipe insulation Duct Leakage Sealing Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	requirements found in §120.3 and prescriptive requ Registration Date/Time: Report Version: 2019.1.003	nirements found in <u>§140.4(I)</u> for duct leakage testing. Registration Provider: Energysoft
Ck this box if the project included new or alter ck the box if the project is using natural ventil Ventilation Systems	red high-rise residential dwelling units. lation in any nonresidential or hotel/mot 06 2389 System Design Transfer Air CFM 12 13 14 Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601	Air Filtration per §12 O Provided per 9 Hote 15 Regist Report Gener	07 20.1(c) and §141.0(b)2 ² §120.1(c) (NR and el/Motel)) 16 ration Provider: Energysoft	This section does not apply to this project. L. DISTRIBUTION (DUCTWORK and PIPING) This table is used to show compliance with mandatory pipe insulation Duct Leakage Sealing Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Registration Date/Time: Report Version: 2019.1.003	Registration Provider: Energysoft
Ck the box if the project is using natural ventil Ventilation Systems O5	lation in any nonresidential or hotel/mote	Air Filtration per §12 O Provided per 9 Hote 15 Regist Report Gener	07 20.1(c) and §141.0(b)2 ² §120.1(c) (NR and el/Motel)) 16 ration Provider: Energysoft	This section does not apply to this project. L. DISTRIBUTION (DUCTWORK and PIPING) This table is used to show compliance with mandatory pipe insulation Duct Leakage Sealing Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Registration Date/Time: Report Version: 2019.1.003	Registration Provider: Energysoft
Ventilation Systems 05 System Design OA CFM Airflow¹ 09 10 11 ards - 2019 Nonresidential Compliance Davidson Middle School - Library HVAC	System Design Transfer Air CFM 12 13 14 Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601	Air Filtration per §12 O Provided per 9 Hote 15 Regist Report Gener	07 20.1(c) and §141.0(b)2 ² §120.1(c) (NR and el/Motel)) 16 ration Provider: Energysoft	L. DISTRIBUTION (DUCTWORK and PIPING) This table is used to show compliance with mandatory pipe insulation Duct Leakage Sealing Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Registration Date/Time: Report Version: 2019.1.003	Registration Provider: Energysoft
System Design OA CFM Airflow¹ 109 10 11 11 11 11 11 11 11 1	2389 System Design Transfer Air CFM 12 13 14 Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601	Air Filtration per §1. Provided per 9 Hote 15 Regist Report Gener	20.1(c) and §141.0(b)2 ² §120.1(c) (NR and el/Motel)) 16 ration Provider: Energysoft	This table is used to show compliance with mandatory pipe insulation Duct Leakage Sealing Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Registration Date/Time: Report Version: 2019.1.003	Registration Provider: Energysoft
System Design OA CFM Airflow¹ 10 11 11 11 11 11 11 11 11 1	2389 System Design Transfer Air CFM 12 13 14 Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601	Air Filtration per §1. Provided per 9 Hote 15 Regist Report Gener	20.1(c) and §141.0(b)2 ² §120.1(c) (NR and el/Motel)) 16 ration Provider: Energysoft	This table is used to show compliance with mandatory pipe insulation Duct Leakage Sealing Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Registration Date/Time: Report Version: 2019.1.003	Registration Provider: Energysoft
Airflow ¹ 19 10 11 11 11 11 11 11 11 11	Transfer Air CFM 12 13 14 Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601	0 Provided per Hote 15 Regist Report Gener	\$120.1(c) (NR and el/Motel)) 16 Tration Provider: Energysoft	Duct Leakage Sealing Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Registration Date/Time: Report Version: 2019.1.003	Registration Provider: Energysoft
Airflow ¹ 19 10 11 11 11 11 11 11 11 11	Transfer Air CFM 12 13 14 Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601	Regist Report Gener	2l/Motel)) 16 Tration Provider: Energysoft	Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.1.003	
ards - 2019 Nonresidential Compliance Davidson Middle School - Library HVAC	Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601	15 Regist Report Gener	16 ration Provider: Energysoft	CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.1.003	
ards - 2019 Nonresidential Compliance Davidson Middle School - Library HVAC	Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601	Regist Report Gener	ration Provider: Energysoft	CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.1.003	
Davidson Middle School - Library HVAC	Report Version: 2019.1.003 Schema Version: rev 20200601	Report Gener		CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.1.003	
Davidson Middle School - Library HVAC	Schema Version: rev 20200601		rated: 2021-09-23 14:47:12		·	Report Generated: 2021-09-23 14:47:12
	Improvements Report Page:	CALIFORN				
	Improvements Report Page:	CALIFORN		STATE OF CALIFORNIA Mechanical Systems		
	Improvements Report Page:		IIA ENERGY COMMISSION	NRCC-MCH-E		CALIFORNIA ENERGY COMMISSIO
	Improvements Report Page:		NRCC-MCH-E	CERTIFICATE OF COMPLIANCE		NRCC-MCH-
280			(Page 8 of 10)	Project Name: Davidson Middle School - Libr	ary HVAC Improvements Report Page:	(Page 9 of 10
	Woodland Ave. Date Prepared:		9/23/2021	Project Address:	280 Woodland Ave. Date Prepared:	9/23/202
D CERTIFICATES OF ACCEPTANCE I on information provided in previous tables of the building inspector during construction of the building inspector during construction of the building inspector during	on and can be found online at	be changed, please explain why in Table Systems To Be Field Verified	Field Inspector Pass Fail	O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE NRCA-MCH-15-A Thermal Energy Storage (TES) System automatically move to "Yes". If Chilled water Storate External melt, Ice Harvester, Brine, Ice-Slurry, Eute Cryogenic or Encapsulated (Ice Ball) Systems are in move this form to 'Yes".	tem Acceptance NOTE: This form does not ge, Ice-on-Coil Internal Melt, Ice-on-Coil cti Salt, Clathrate Hydrate Slurry (CHS),	
2-A - Outdoor Air must be submitted for all n	ewly installed HVAC units. Note:		1 4 5 1 4 1 1	NRCA-MCH-16-A Supply Air Temperature Reset Co	ntrols	
be performed in conjunction with MCH-07-	•			NRCA-MCH-17-A Condenser Water Temperature R	eset Controls	
nce testing activities overlap.				NRCA-MCH-18-A Energy Management Control Syst	ems	
3-A - Constant Volume Single Zone HVAC NOT	The state of the s			NRCA-MCH-19-A Occupancy Sensor Controls		
If Constant Volume Single Zone HVAC Syster ald move this form to "Yes".	ns are included in the scope, permit			NRCA-MCH-20 Multi-Family Ventilation		
4-A - Air Distribution Duct Leakage				NRCA-MCH-21 Multi-Family Envelope Leakage		
5-A - Air Economizer Controls						
5-A Demand Control Ventilation Systems mus	st be submitted for all systems			P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION		
nploy demand controlled ventilation (refer to w rates based on maintaining interior carbor	§ <u>120.1(c)3</u>) can vary outside			Selections have been made based on information provided in previous These documents must be completed by a HERS Rater and provided to drafts can be found online at https://www.energy.ca.gov/title24/2019	the building inspector during construction. The final	l documents must be created by a HERS Provider's registry, but
7-A Supply Fan Variable Flow Controls				Yes No	Form/Title	Field Inspector
					·	Pass Fail
	s				<u> </u>	
					· · · · · · · · · · · · · · · · · · ·	
				NRCV-MCH-32 Local Mechanical Exhaust No.	TE: Must be completed by a HERS Rater	
				O MANDATORY MEASURES DOCUMENTATION LOCATION		
1-A Distributed Energy Storage DX AC System	s Acceptance NOTE: This form does			_ `	ted in the plan set or construction documentation.	
applicant should move this form to 'Yes".	,			Compliance with Mandatory Measures documented through MCH		Plan sheet or construction document location
	Pagistration Data/Times	Dociot	vation Draviday Congress	Mandatory Measures Note Block		M-Sheets
	negistration bate/ fillie.	vegist	radon i rovider. Lileigysult	negistration raniber.	registration Date/ fille.	Registration Provider: Energysoft
ards - 2019 Nonresidential Compliance	Report Version: 2019.1.003 Schema Version: rev 20200601	Report Gener	rated: 2021-09-23 14:47:12	CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.1.003 Schema Version: rev 20200601	Report Generated: 2021-09-23 14:47:12
	B-A Valve Leakage Test D-A Supply Water Temperature Reset Control D-A Hydronic System Variable Flow Controls L-A Automatic Demand Shed Controls D-A FDD for Packaged Direct Expansion Units D-A Automatic FDD for Air Handling Units and D-A Distributed Energy Storage DX AC System ally move to "Yes". If Distributed Energy System applicant should move this form to 'Yes".	B-A Valve Leakage Test B-A Supply Water Temperature Reset Controls B-A Hydronic System Variable Flow Controls B-A Automatic Demand Shed Controls B-A FDD for Packaged Direct Expansion Units B-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance B-A Distributed Energy Storage DX AC Systems Acceptance NOTE: This form does ally move to "Yes". If Distributed Energy System DX AC Systems are included in teh applicant should move this form to 'Yes". Registration Date/Time: Registration Date/Time:	Registration Date/Time: Registration Date/Time: Report General Accounts A	Registration Date/Time: Registration Parkside Flow Compliance Report Version: 2019 Nonresidential Compliance Report Version: 2019 1.1.003 Report Version: 2019.1.003 Report Version: 2019.1.003 Report Version: 2019.1.003 Report Version: 2019.1.003 Report Generated: 2021-09-23 14:47:12	Registration Date/Time: Registration Provider: Energysoft Registration Number: Regist	A Valve Leakage Test A Supply Water Temperature Reset Controls A Supply Water Temperature Reset Controls A Supply Water Temperature Reset Controls A Hydronic System Variable Flow Controls A Automatic Demand Shed Controls A Automatic Demand Shed Controls A Automatic PDD for Packaged Direct Expansion Units A Automatic PDD for Air Handling Units and Zone Terminal Units Acceptance A Automatic PDD for Air Handling Units and Zone Terminal Units Acceptance A Automatic PDD for Air Handling Units and Zone Terminal Units Acceptance A Automatic PDD for Air Handling Units and Zone Terminal Units Acceptance A Automatic PDD for Air Handling Units and Zone Terminal Units Acceptance A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance A Compliance With Mandatory Measures DOCUMENTATION LOCATION This table is used to indicate where mandatory measures are documented in the plan set or construction documentation. This table is used to indicate where mandatory measures are documented in the plan set or construction documentation. Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block Registration Date/Time: Registration Date/Time: Registration Date/Time: Registration Number: Registration Date/Time: Report Version: 2019.1.003

STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

Space Name

ot item Tag

37 Library

Mechanical Systems

CERTIFICATE OF COMPLIANCE

J. VENTILATION AND INDOOR AIR QUALITY

Occupancy Type⁴

Library - reading room/ stacks

17 Total System Required Min OA CFM

Davidson Middle School - Library HVAC Improvements Report Page:

Mechanical Ventilation Required per §120.1(c)3³

4300

¹ FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system

Floor Area heads/

(ft²) toilets

Exh. Vent per <u>§120.1(c)4</u>

Provided per Design

CFM

2389 18 Ventilation for this System Complies?

Min OA Min CFM

people⁵ CFM

² Air filtration requirements apply to the following three system types per §120.1(c)1A: space conditioning systems utilizing ducts to supply air to occupiable space; supply-only



CALIFORNIA ENERGY COMMISSION

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

§120.1(d)5, and §120.1(e)3 ⁶

Occ Sensor

(Page 6 of 10)

NA: Not required per §120.1(d)3

NA: Not required

space type

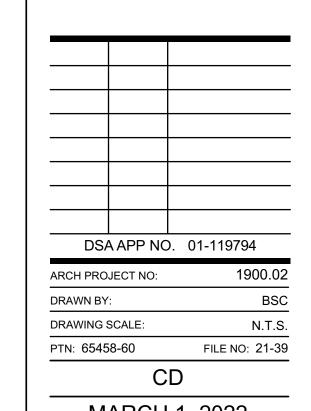
PRELIMINARY CONSTRUCTION

DAVIDSON MIDDLE SCHOOL

HVAC IMPROVEMENTS -**AND LIBRARY**

280 WOODLAND AVE SAN RAFAEL, CA 94901

SAN RAFAEL CITY



TITLE 24