TRUAX EXTERIOR IMPROVEMENTS **ROOFING/HVAC/ ACCESS LADDER** OCEANSIDE UNIFIED SCHOOL DISTRICT



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LEAF ENGINEERS 11455 EL CAMINO REAL Suite 480 SAN DIEGO, CA 92130 916-695-0400 P LEAF.com





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Oceanside Unified School District 2111 Mission Avenue Oceanside, CA 92058 760-966-4006 P Oside.us



PBK-WLC Architects 11455 EL CAMINO REAL Suite 480 SAN DIEGO, CA 92130 916-695-0400 P pbk.com



IDENTIFICATION STAM PP: 04-120740 INC REVIEWED FO





NIC Structural Engineering Consultants 23 Corporate Plaza Drive Suite 150 NEWPORT BEACH, CA 92660 949-629-2529 P nic-eng.com

DSA App. 04-120740 Project: 2136900ME

NOVEMBER 29, 2021 **DSA** Submission

A.F.F.	ABOVE FINISH FLOOR	FD	FLOOR DRAIN	P. LAM / PLAM	PLASTIC LAMINATE
A.F.G.	ABOVE FINISH GRADE	FE	FIRE EXTINGUISHER	PCC	PORTLAND CEMENT CONC
A.H.J.	AUTHORITY HAVING JURISDICTION	FEC	FIRE EXTINGUISHER CABINET	FUU	
AC	ASPHALT CONCRETE PAVEMENT	FHC	FIRE HOSE CABINET	PL	PLATE
ACC	ACCESSIBLE, ACCESSIBILITY	FIN	FINISH (ED)	PLUMB	PLUMBING
ACP	ACOUSTICAL PANEL	FIXT	FIXTURE	POL	POLISHED
ACT		FLR	FLOOR (ING)		
AD		FLUOR			
ADA	AMERICANS WITH DISABILITIES ACT	FRP	FIBER-REINFORCED PLASTIC		
ADA	2010 ADA STANDARDS FOR ACCESSIBLE DESIGN	C 4	CAUCE	PTD	
	AMERICANS WITH DISABILITIES ACT	GALV		PWD / PLYWD	PLYWOOD
ADAAG	ACCESSIBILITY GUIDELINES	GCMU	GLAZED CONCRETE MASONRY UNIT	1110/121110	12111000
ADJ	ADJACENT	GEN	GENERAL	QT	QUARRY TILE
ALT	ALTERNATE	GI	GAI VANIZED IRON		
ALUM	ALUMINUM	GL	GLASS / GLAZING	R / RAD	RADIUS
ASPH	ASPHALT	GL	GLASS	RCP	REFLECTED CEILING PLAN
		GR	GRADE	RD	ROOF DRAIN
B.O.D.	BOTTOM OF DECK	GTP	GLAZED TILE PAVER	RE / REF	REFER TO / REFERENCE /
BD	BOARD	GYP	GYPSUM DRYWALL	RECP	RECEPTACLE
BLDG	BUILDING			REINF	REINFORCE (D), (ING)
BLK	BLUCK	HM	HOLLOW METAL FRAME	REQ'D	REQUIRED
BIVI		HORIZ	HORIZONTAL	RES	
BUR	BUILT-UP ROUF	HT	HEIGHT	REV	REVISION (S), REVISED
C		HVAC	HEATING, VENTILATION, AIR CONDITIONING	00	
CAB CABT	CABINET	1114/		SC	
07.8, 07.81	CALIFORNIA BUILDING CODE / TITLE 24.		HUTWATER	SCHED	
CBC	CALIFORNIA CODE OF REGULATIONS	חו			SUAP DISPENSER
CFMF	COLD-FORMED METAL FRAMING	INSUI	INSIDE DIAMETER INSULATE (ED) (ION)	SECT	SHEET
CFSF	COLD-FORMED STEEL FRAMING	INT		SIM	
CJ	CONTROL JOINT	IPS	IRON PIPE SIZE	SND	SANITARY NAPKIN DISPOS
CL	CENTERLINE			SPC	SPECIAL COATING SYSTEM
CLG	CEILING	JT	JOINT	SPEC	SPECIFICATION (S)
CLR	CLEAR			SQ	SQUARE
CMU	CONCRETE MASONRY UNIT	LA	LANDSCAPED AREA	SS	STAINLESS STEEL
COL	COLUMN	LAM	LAMINATE (D)	STL	STEEL
COMP	COMPRESSIBLE	LAV	LAVATORY	STR / STRUCT	STRUCTURAL
CONC		LT	LIGHT		
		LT WT	LIGHTWEIGHT	SUSP	SUSPENDED
CORR				SVF	SHEET VINYL FLOORING
CPT	CARPET (ED)	M.O.	MASONRY OPENING	то	
CT		MAS	MASONRY	Т.О. Т.О.М	
CTSK	COUNTER SINK	MAIL	MATERIAL (S)		
CW	COLD WATER	MAX		TOS	
••••				T.O.O. TR	
D	DRYER	MECH	MECHANICAL	TEI	TELEPHONE
D.A.	DISABLED ACCESS(IBILITY)	MEP	MECHANICAL, ELECTRICAL, PLUMBING	TERR	TERRAZZO
DF	DRINKING FOUNTAIN	MEDT	MECHANICAL, ELECTRICAL, PLUMBING,	THK	THICK (NESS)
DIA / Ø	DIAMETER	MEPT	TECHNOLOGY	TYP	TYPICAL
DIM	DIMENSION	MEZZ	MEZZANINE		
DS	DOWNSPOUT	MFR / MANUF	MANUFACTURE (R)	U.N.O.	UNLESS NOTED OTHERWI
DTL	DETAIL	MIN	MINIMUM	UR	URINAL
DWG	DRAWING	MISC	MISCELLANEOUS		
	E 4 0/1	MOD	MODULAR	V	VENT
EA		MTL	METAL	V.I.F.	VERIFY IN FIELD
EJ				VCT	VINYL COMPOSITION TILE
		N.I.C.		VENI	VENTILATING, VENTILATEL
		N.T.S.		VER	VERIFY
ELECT ELEV	ELECTRICAL ELEVATION (DRAWING)	NO.		VERI	
FQ	FOUAL		NOWINAL	VVVC	VINTE WALL COVERING
EQUIP	EQUIPMENT	0.0	ON CENTER (S)	\ <i>\\\\</i>	
EXIST	EXISTING	0.C.F.W	ON CENTER FACH WAY	WC	WATER CLOSET
EXP	EXPANSION	0.D	OUTSIDE DIAMETER	WD	WOOD
EXT	EXTERIOR	0.H.	OPPOSITE HAND	WDW	WINDOW
				WT	WEIGHT
		UFUI	OWNER FURINIONED, CONTRACTOR INSTALLED	WWF	WELDED WIRE FABRIC
		OPNG	OPENING	WWM	WOVEN WIRE MESH
		OPP	OPPOSITE	۷	ANGLE



T CONCRETE PAVING ED IG PLAN ENCE / SEE IG) SED E DISPOSAL SYSTEM	PARTIAL LIST OF APPLICABLE CODES [Part 1, Tile 24, CCR) 2019 California Administrative Code (CRC) [Part 2, Tile 24, CCR) (2018 International Building Code (Volumes 1 & 2 with 2019 California Amendments) [Part 3, Tile 24, CCR) (2017 National Electrical Code (MD) [Part 4, Tile 24, CCR) (2018 International Building Code (CeC) [Part 4, Tile 24, CCR) (2018 IAPMO Uniform Mechanical Code with 2019 California Amendments) [Part 5, Tile 24, CCR) (2018 IAPMO Uniform Mechanical Code with 2019 California Amendments) [Part 6, Tile 24, CCR) (2018 IAPMO Uniform Mechanical Code with 2019 California Amendments) [Part 10, Tile 24, CCR) (2018 International Existing Building Code (CEC) [Part 10, Tile 24, CCR) (2018 International Existing Building Code (CEC) [Part 10, Tile 24, CCR) (2018 International Existing Building Code (CEC) [Part 11, Tile 24, CCR) (2018 International Existing Building Code (CEC) [Part 11, Tile 24, CCR) (2016 International Standard Code (CALGreen) [Part 11, Tile 24, CCR) (2016 International Standard Code (CALGreen) [Part 11, Tile 24, CCR) (2016 Editor) [Part 11, Tile 24, CCR) (2016 International Standard Code (CALGreen) [Part 11, Tile 24, CCR) (2016 Editor) [Part 11, Tile 24, CCR)		IDENTIFICATION STAMP IV. OF THE STATE ARCHITECT IPP: 04.120740 INC: REVIEWED FOR SS I FLS I O303/2022 Integer 480, SAN DIEGO, CA 92130 916.927.44444 D BEAMprof.com INTEGO CA 92130 916.927.4444 D BEAMprof.com INTEGO CA 92130 INTEGO
RING	12 CODE & STANDARDS	19 GENERAL NOTES 11 STAMENT OF GENERAL CONFORMANCE	
	1. ALL WORK SHALL CONFORM TO 2019 EDITION TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)	IL III BUILDING "H" (TRUAX BUILDING)	
1	 A PROJECT INSPECTOR EMPLOYED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART I, TITLE 24, CCR A PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-32, PART 1, TITLE 24, CCR; CLASS 3. 	EXISTING LOCATIONS. - REMOVAL AND REPLACEMENT OF ROOF SYSTEM AT ROOF AREA H1, H2 & H3 - REMOVAL AND REPLACEMENT OF 5 LADDERS W/ RAILING, AT EXISTING LOCATIONS - REMOVAL AND REPLACEMENT OF 5 LADDERS W/ RAILING, AT EXISTING LOCATIONS - COVIL - COVIL - A ARCHITECTURAL S - STRUCTURAL M - MECHANICAL - SUBLICATIONS - SUBLINE - GENERAL - SUBLINE - GENERAL - SUBLINE - GENERAL - SUBLINE - GENERAL - SUBLINE - GENERAL - SUBLINE - SUBLINE - GENERAL - SUBLINE - SUBLINE - GENERAL - SUBLINE - S	Sudding Our Students to Bright Futures"
	Q DSA NOTES	7 SCOPE OF WORK 6 SHEET NUMBERING	SED ARCHING
DETAIL SEC DETAIL ENL DETAIL ENL MATCH LINE GRID / COLUM GRID / COLUM (1) REVISION / RE 1) CONSTRUCTION NORTH ARRO	IN LINE ARGEMENT IN LINE CONCRETE CONCRETE MASONRY UNITS VISION NUMBER CONCRETE MASONRY UNITS STEEL DN KEYNOTE PLYWOOD PLYWOOD (SMALL SCALE) WS FINISH WOOD FINISH WOOD FINISH WOOD WOOD FRAMING - CONTINUOUS WOOD FRAMING - INTERMITTENT	GENERAL CVR COVER SHEET G.00 GENERAL INFORMATIONMECHANICAL MECHANICAL DRAWINGS INDEX, SYMBOLS & ABBREVIATIONSBUILDING ENVELOPE A.10 SITE PLAN & NOTES A.20 ENLARGE ROOF PLAN A.30 ROOF DETAILSM.01 MECHANICAL ENERGY FORMS M.01 MECHANICAL ENERGY FORMS M.03 MECHANICAL ENERGY FORMS M.04 MECHANICAL ENERGY FORMS M.04 MECHANICAL SITE PLAN M.20 MECHANICAL SITE PLAN M.20 MECHANICAL SCHEDULES M.40 MECHANICAL DETAILS SD1 RTU DETAILS SD2 DETAILSSTRUCTURAL SN1 GENERAL NOTES SD1 RTU DETAILS SD2 DETAILSM.04 MECHANICAL DETAILS M.04 MECHANICAL DETAILS M.05 MECHANICAL DETAILSS1 ENLARGED ROOF FRAMING PLANS SD1 RTU DETAILSM.10 MECHANICAL DETAILS M.10 MECHANICAL DETAILSS1 ENLARGED ROOF FRAMING PLANS SD1 RTU DETAILSM.10 MECHANICAL DETAILS M.10 MECHANICAL DETAILSS1 ENLARGED ROOF FRAMING PLANS SD1 RTU DETAILSM.10 MECHANICAL DETAILSS1 ENLARGED ROOF FRAMING PLANS M.10 MECHANICAL DETAILSM.10 MECHANICAL DETAILSS1 ENLARGED ROOF FRAMING PLANS M.10 MECHANICAL DETAILSM.10 MECHANICAL DETAILSS1 RTU DETAILSM.11 MECHANICAL DETAILSS1 BETAILS18 TOTAL SHEETS	USE INFORMATION JUSE INFORMATION JUSE INFORMATION
	(BLOCKING)		
ING CONVEN	TIONS	2 INDEX OF DRAWINGS	G.UU
		NOT TO SCALE	



	AREA	APPROX. SQ. FT.		NCLATURE	NEW NOMENCLATURE REM	MARKS
	H1 H2	2,080 5,101	WD/ BUR- C WD/ MB		A 1 A 1	
RD	H3 TOTAL	2,080 9,366	WD/ BUR- C		A -	
I	NOTE: SQ FC FE	UARE FOOTAGE'S DR VERIFYING EX EDERAL CODES A	SHOWN ARE FOR REFERENCE ON ISTING CONDITIONS AND FOR ENSL LONG WITH INDUSTRY STANDARD (LY - (FIELD VERIFY) CONTRA IRING NEW CONDITIONS ADH GUIDELINES AND REMAIN IN J	CTOR IS RESPONSIBLE HERE TO ALL LOCAL AND A WATERTIGHT CONDITION	
	ABB	REVIAT	IONS:			
	SS: WD: MB:	SLIP SHEE WOOD DEC 2 PLY MOD	T XK IFIED BITUMEN SYSTEM			
	BUR-C	C: MULTI-PLY SYSTEM W RECOVERY	COAL TAR BUILT-UP ROOF // FLOOD AND ROCK / BOARD			
	BS: NIC: WP	BASE SHEE NOT IN CO	ET NTRACT			
	16		SCALE	INCLATUR	E	
		WALK (RE: 2	PAD 20/A.30)			
		NEW -	TAPERED	A1 ROO	OF AREA DIGNATION	
			ATION/CRICKET	— E — ELE	C. LINE (RE:19/A.30)	
		REMA	ING AREAS TO NN - NIC	FEN	H OF TRAVEL	
		BUILD	DING IN CONTRACT	———— SITE	E PROPERTY	
		Ø PLUM	BING VENT /A.30)		GE LINE	
		EXIST	. Roof Drain	BY K	WORK IDENTIFIED KEYED NOTES	
		້ (RE: 8 ຼ0FOVER	/A.30) FLOW DRAIN	ARE	A DIVIDER	
		^O (RE: 1 _{СН} COAX	(A.30)	A/C CUR (RE:	RB MOUNTED A/C 1/A.30)	
			A.30)		AX CABLE TRAY POSTS (RE: 19/A.30)	
			(A.30)	ROC	DF HATCH, NIC	
		(RE: 1	6/A.30)	OF OF S	SCUPPER 3/A.30)	
		HE ACCE	SS LADDER 8/A.30)	(RE:	DKE VENT 2/A.30)	
		⊗ BOILE (RE: 4	ER VENT 4/A.30)	← SLO	PE INDICATOR	
	11	GEN	IERAL LEGE	ND		
	COMP AWAR NOT B VISIT I ACCEI B. DIM ARE F MATEF RESP(C. ALL 1/4" PE PROJE D. REM DRAW SHEET DECK E. ALL ETC. T ON NE ALL E2 HEIGH PERF(THAT LINE T RE-TE G. REF DIVIDE (UNLE H. ENS	ONENTS RE D OF THE C E APPROVE BY THE CON PTED MANU ENSIONS, D OR INFORM RIAL AND TY DNSIBILITY NEW CRICK ER FOOT MIL ECTIONS. MOVE ALL A INGS -(PATO METAL TO (MATCH EXI HVAC AND/ HAT ARE O W CURBED (MATCH EXI HVAC AND/ HAT ARE O W CURBED (STING ELI DATEAL TO SURE ALL SO SURE ALL SO	LATED TO THE WORK D CONTRACT, CHANGE ORI DIF THE WORK COULD NTRACTOR, ALL WORK S FACTURER'S PRINTED I ETAILS, EQUIPMENT SIZ (ATION AND REFERENCE (PE OF CONSTRUCTION OF THE CONTRACTOR T (ETS AND TAPERED INS N. SLOPE. CRICKET THE BANDONED EQUIP. IDEN CH DECK) HOLES LESS T EXISTING DECK HOLES (STING) SPAN FROM JOIS (OR DX UNITS, ELECTRIC N SLEEPERS SHALL BE I PLATFORMS (RE: DETA RB MOUNTED UNITS, EC AS REQUIRED) - ALL DIS A LICENSED ELECTRICIA ECTRICAL/GAS/WATER/E RS SPECIALIZING IN HVA ORK. PERMITS AND INSF DINATE OWNER/ARCHIT RAISE (AS REQUIRED) A MOUNTED EQUIPMENT/S ED OTHER WISE ON DRA	ESCRIBED BY THES DER REQUEST FOR HAVE BEEN ANTICI SHALL BE COMPLET INSTRUCTIONS & W. E AND LOCATION S E ONLY. EXACT SIZE OF EXISTING CONE O ASCERTAIN & CO ULATION SHALL BE UP SLOPE SIDE OF ITIFIED ON ROOF TO THAN 10" WIDE- SCF GREATER THAN 10 ST TO JOIST. CAL TRANSFORMER DISCONNECTED/RE IL), AND RECONNEC UIPMENT, ETC. HAY CONNECTS AND RE N. ETC. LINES ARE MO AC, PLUMBING AND PECTIONS REQUIRE TECT WITNESS OF T ILL EXISTING EXPAN SKYLIGHTS A MIN. 1 WING.) MIN. 10" ABOVE RO	SE DOCUMENTS, AFTER ADDITIONAL MONEY SHA PATED DURING THE SITE ED IN ACCORDANCE WITH ARRANTY REQUIREMENT HOWN IN THESE DOCUME 5, LOCATION, TYPE OF DITIONS ARE THE NFIRM. INSTALLED WITH A FINIS FALL SQUARE CURBS AND OP AND AS SHOWN ON REW 22 GA. STAINLESS ST WIDE- SCREW NEW MET S, ROOF TOP EQUIPMENT MOVED, RAISED, & PLACH CTED/RE-INSTALLED. VER VE A MINIMUM 10" CURB SCONNECTS SHALL BE DIFIED- ONLY LICENSED ELECTRICAL SHALL PERF ED- PROVIDE "MERCURY" TEST), REPAIR ALL LEAKS NSION JOINTS/AREA 10" ABOVE ROOF DECK.	ALL + S. ENTS HED C FEEL T, ED IFY CORM GAS AND BOVE
	H. ENS DECK,	COUPLE C	DIL STACK FLASHING IS AST IRON PIPE UNDER D	MIN. 10" ABOVE RO ECK.		SOVE
	I. PRO At Ali Slope	VIDE SHEET _ GAS LINE E AWAY FRO	METAL HOODED (W/ME AND WATER LINE ROOF M FACE COVER.	I AL FACE CLOSURI PENETRATIONS (R	⊨), WOOD CURB, BOX CO` E: DETAILS). ENSURE LINI	√ER ES
	J. PRC SPECS AT ALI	VIDE WALK 6.) AROUND _ ROOF TOF	WAY PROTECTION PADS ALL ROOF HATCHES, A/ ACCESS LADDERS (TOP	S (AS ACCEPTABLE C UNITS, DOORS TH P & BOTTOM)	TO MANUFACTURER-RE: HAT OPEN ONTO ROOF, A	ND
	K. ISO FOR IS	LATE ALL HI SOLATED ST	EAT PIPES/FLUES AS RE ACK FLASHING- (RE:DET	COMMENDED & OU FAILS)	ITLINED IN THE NRCA MAI	NUAL
	L. ALL FROM	OUTSIDE A ENTERING	IR INTAKES SHALL BE CO	OVERED TO ELIMIN, RING WORK.	ATE ODORS AND FUMES	
NCE ING	M. EXA WATE	AMINE AND R TO ENSUF	CLEAN EXISTING DRAIN RE THAT DRAINS FLOW F	LINES OF DEBRIS A	AND BLOCKAGE, FLUSH W	/ITH
	N. OW AND A INOPE	NER WILL V FTER PROJ RABLE EQU	ERIFY CORRECT OPERA ECT. CONTRACTOR SHA IPMENT PRIOR TO RELE	TION OF ALL ROOF ALL BE RESPONSIBL ASE OF RETAINAGE	TOP EQUIPMENT BEFOR E FOR IDENTIFYING ALL E.	Έ
\oplus	O. REF	PLACE ALL F	RUSTED/DETERIORATED	EXISTING METAL \	/ENT FLASHING AND FLUI	ES.
PLAN IORTH	P. COO MANU SLOPE	DRDINATE V FACTURER' E WHICH MIC	VALK OF ENTIRE ROOF () S TECHNICAL REP. TO IE GHT REQUIRE SPECIAL I	PRIOR TO STARTIN DENTIFY AND LOCA PROCEDURES FOR	G) WITH ROOFING TE ALL AREAS OF HIGH SYSTEM ATTACHMENT.	
	1	GEN		S		
	<u> </u>					









 ALL WORK SHALL COMPLY WITH TITLE 24 CALIFORNIA BUILDING CODE, 2019 EDITION. ALL DRAWINGS AND SPECIFICATIONS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE EOR, THE ARCHITECT AND THE OWNER REPRESENTATIVE. PRIOR TO THE START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE AND AT NO EXPENSE TO THE OWNER. 	
 ALL AVARIES AND ARBITURES, UND CONTINUE CONVENTION AND THE CARACTERET PROFILE CONTINUES AND AND AND THE THE CONTINUES AND AND AND AND AND AND AND AND AND AND	ALL SAWN LUMBER SHALL BE DOUGLAS FIR RECONNEED GRADING AGENCY (WWPA OR U.N.O.: BEAMS & PURINS HEADERS POSTS AND TIMBERS PLATES STUDS @ NON-BEARING WALLS STUDS @ DAN-BEARING WALLS STUDS @ DAN-BEARING WALLS STUDS @ DAN-BEARING WALLS STUDS @ DAN-BEARING WALLS STUDS @ DEARING/SHEAR WALLS RATTERS AND ROOF JOISTS FLOOR DIST SILL PLATES PRESSURE TREATED FOR MOIST (SEE NOTE #2.3) TII OPEN WEB TRUSSES ROOF TRUSSES ROOF TRUSSES ROOF TRUSSES ROOF TRUSSES ROOF TRUSSES ROOF TRUSSES SOOT RUMOOD SHALL BE DOUGLAS FIR PRESSURE TREATED FOR MOIST WEMER WOOD DIS IN CONTACT WITH CONCR REDWOOD OR DOUGLAS FIR PRESSURE TREATED CORROSION RESISTANCE BOLTS ARE REQUID WITH ENTERIOR GLUE AND SHALL BE CADIONED WITH ENTERIOR GLUE AND SHALL BE CADIONED WITH ENTERIOR GLUE AND SHALL BE CRADIO EAVES SHALL BE EXPOSURE I GRADE PLYWOOD FLOOR DAPHIRAGING & SHEAR WALLS. OB PROPERTIES. U.N.O. ALL DAMAGED OR DETERIORATED LI SECTION AND EQUAL OR BETTER GRADE AS ALL BOLTS FOR WOOD CONNECTIONS SHALL BOLTED TO STEEL, USE A LOCK WASHER UN ALL BOLT FOR WOOD CONNECTIONS SHALL BOLTED TO STEEL, USE A LOCK WASHER UN ALL BOLT FLEOS SHALL BE DRIVOLED. BLOCKING SHALL BE INSTALLED AT THE TO PROVIDE DAUBLE FLOOR JOISTS UNDER PAR SHALL BE PREVIDED WITH METAL SQUARE Y ALL STUD WALLS SHALL BE CALLED AT THE TO PROVIDE DAUBLE FLOOR JOISTS UNDER PAR IL DOIT HOLES SHALL BE TRUCTURAL MEM COMPLY WITH THE BUILDING CODE & PROV ALL BOLT HOLES SHALL BE TRUCHAR AMILE ALL NAILS SHALL BE COLLOR AND WIRE NAILS ILOCKING SHALL BE CONTACT METAL BRIDG ILOCKING SHALL BE COMMON WIRE NAILS ALL STUD WALLS SHALL BE CALLED AT THE TO DIAMETER THAN THE NOMINAL SIZE OF BO ALL DAILS SHALL BE COMMON WIRE NAILS ILORGITUDE: -33.21 FOR SHALL BE CALLED AND WARE AND SHALL BE PREPARED PER NOTES ON THIS SHALL SHOPSON OR OTHER EQUIVALENT ICC A NOTES AND SPECIFICATIONS. SHALL

i:	MASONRY					SPECIAL INSPECTIONS
AS FIR OR WESTERN LARCH, U.N.O., GRADE MARKED BY A VPA OR WCLIB). WOOD GRADES ARE TO BE AS FOLLOWS	1. SPECIFIED COMPRE OTHERWISE.	SSIVE STRENGTH OF	MASONRY (F'M):	2,000 PSI TYPICAL UNLESS NO	ED	1. SPECIAL INSPECTION (PERIODIC OR CONTINUOUS), S SPECIAL INSPECTION SHALL BE DONE BY A SPECIAL B LOCAL AUTHORITIFS.
DL NO.1 OR BETTER	2. VERIFYING SPECIFIE	D COMPRESSIVE STR	ENGTH OF MASC	NRY (F'M): USE MASONRY PRI	SM .	2. SPECIAL INSPECTION IS REQUIRED FOR THE FOLLOWI SPECIFICATIONS FOR OTHER SPECIFIC REQUIREMENT:
NO.1	TESTING METHOD U ALLOWABLE STRESS	UNLESS OTHERWISE	ACCEPTABLE TO A	RCHITECT (STRUCTURAL ENGI SONRY PRISM DATA FOR EACH	IEER). FULL TYPE AND	3. FOR TYPE OF INSPECTION REFER TO SECTION 1705A.
NO.2	COMPRESSIVE STRE AND STATE OF CALL	NGTH OF MASONRY FORNIA SEAL, TO AR	REQUIRED, WITH CHITECT (STRUCT	A PROFESSIONAL ENGINEER'S URAL ENGINEER). COMPLIANC	SIGNATURE E WITH	 PLEASE REFER TO "TESTING & INSPECTION FORM" (D ON SPECIAL INSPECTION REQUIREMENTS.
NO.2 U.N.O.	2016 CBC 2105A.2	ED COMPRESSIVE STI	VENGTH SHALL BE	BASED ON APPLICABLE CODE	SECTION	STRUCTURAL OBSERVAT
NO.1 NO.1	3. CONCRETE BLOCK: ATTAINING A MININ	ASTM C90, MEDIUM MUM COMPRESSIVE	WEIGHT, 2016 C STRENGTH AS RE	BC CHAPTER 21A QUIRED TO MEET SPECIFIED		1. PERIODIC STRUCTURAL OBSERVATION WILL BE P
MOISTURE RESISTANCE NO.2	COMPRESSIVE STRE	NGTH OF MASONRY	(F'm).			PER SECTION 1710 OF THE CALIFORNIA BUILDIN AMENDMENTS, FOR THE WORK INDICATED BELC
PER PLAN OR EQ.	4. FACE BRICK: ASTM	C216 AND 2016 CBC	GROUT: ASTM C		NRY	MAY REQUIRE DEMOLITION OF COVERING MATE
PER PLAN & APPROVED MANUFACTURER	CEMENT OR PLASTI	C CEMENT IS NOT PE	RMITTED.			STRUCTURAL OBSERVATION SHALL BE PROVIDED
CONCRETE OR MASONRY USE FOUNDATION RE TREATED FOR MOISTURE RESISTANCE.	6. AGGREGATES FOR A	MORTAR AND GROUT	Г: I C144.			STRUCTURAL SYSTEM
REQUIRED FOR "CHEMICALLY THREATED SILLS".	7. MORTAR: ASTM C2	70. TYPF M. MIX IN	PROPORTIONS A	CORDING TO 2016 CBC 2104A		BOLTED CONNECTIONS
JNFORMING TO U.S. PRODUCT STANDARDS PS 1-83, GRADE MARKED BY APA. PLYWOOD AT EXPOSED PLYWOOD, PLYWOOD SHALL BE STRUCTURAL-LEOR	WITH A MINIMUM	28 DAYS STRENGTH	OF 2,500 psi.			2. STRUCTURAL OBSERVATIONS CONSISTS OF THE
S. OSB PANELS MAY BE USED IF HAVE EQUIVALENT	8. GROUT: ASTM C47 REQUIRED TO MEET CASE SHALL GROUT	6, COARSE TYPE, ATT SPECIFIED COMPRE COMPRESSIVE STRE	AINING A MINIM SSIVE STRENGTH NGTH BE LESS TH	UM COMPRESSIVE STRENGTH A OF MASONRY (F'M). HOWEVE AN 2,000 PSI AT 28 DAYS.	AS R, IN NO	CONSTRUCTION STAGES AND THE COMPLETED S CONFORMANCE TO THE APPROVED PLANS AND
ATED LUMBER SHALL BE REPLACED WITH EQUAL ADE AS SPECIFIED ON THESE DRAWINGS.	9. REINFORCING STEE OTHERWISE.	L: REINFORCING STE	EL SECTION OF G	ENERAL NOTES UNLESS INDICA	ſED	INSPECTIONS REQUIRED OF THE BUILDING INSP
IS SHALL BE A307, GRADE A. WHERE WOOD IS	10. COMPOSITE MASO	NRY WALL PENETRAT	TION SUBMITTAL:	SUBMIT FOR EACH WALL IND	CATING SIZE	DEPARTMENT FORM FOR EACH SIGNIFICANT ST THE ORIGINAL OF THE OBSERVATION REPORT SF
IER UNDER THE NUT ON THE STEEL SIDE.	SUBMIT TOGETHER STATEMENT FROM	WITH APPROPRIATE	REINFORCING ST	EEL SHOP DRAWINGS. SUBMI	r WRITTEN NGS WERE	INSPECTOR'S OFFICE AND THE OWNER, CONTRA
AR AGAINST THE FACE OF WOOD MEMBERS	ADDED TO THOSE S	HOWN IN PENETRAT	ION SUBMITTAL.			4. A FINAL OBSERVATION REPORT (DSA-6) MOST B STRUCTURAL SYSTEM IS COMPLETE AND GENER PLANS AND SPECIFICATIONS
UARE WASHERS AS INDICATED ON FLANS.	11. REINFORCING STEE DIAMETERS, EXCEP	L SPLICES: LAP REINF T DOWELS IN FOOTIN	ORCING STEEL A	SPLICES A MINIMUM OF 48 BA VALLS SHALL SPLICE A MINIMU	AR VI OF 72 BAR	
OCKING AT 5'-0" O.C. MAXIMUM, VERTICAL	ADJACENT SPLICES STAGGERED AT LEA	IS 3 INCHES OR LESS, ST 24 BAR DIAMETER	INCREASE LAP LE	NGTH 30 PERCENT UNLESS SPL	ICES ARE	DEMOLITION
HE TOP OF ALL BEARING AND SHEAR WALLS.	12. DOWELS FOR WALL	S, COLUMNS, PILAST	ERS, AND PIERS:	MATCH SIZE AND SPACING OF	VERTICAL	1. REFER TO ARCH. SHEETS FOR DEMOLITION NOTE
PER PARALLEL PARTITIONS.	REINFORCING STEE	L, UNLESS NOTED OT L.	HERWISE. SET DO	DWELS TO ALIGN WITH CELLS C	ONTAINING	WINDOW, CHAIN FRAME CEILINGS & OTHER ARCH TEMPORARILY AS NEEDED & REINSTALLED TO IT'S C
X SOLID BLOCKING AT A MINIMUM OF 8'-0" O.C. BRIDGING OR EQUAL MAY BE USED).	A. MINIMUM CLE 2 INCHES EXCE	ARANCES BETWEEN	REINFORCING AN	D OUTSIDE FACE OF MASONRY FSS THAN 2-1/2 BAR DIAMETEI	85	CODE STANDARDS. SUPPORTS & BRACES FOR DUCT SMACNA GUIDELINES.
	B. MINIMUM CLEA C. MINIMUM CLEA	ARANCE BETWEEN R	EINFORCING AND BETWEEN PARAL	INSIDE FACE OF GROUT CELL: LEL REINFORCING: 1 INCH OR I	1/2 INCH NOMINAL	3. DEMOLITION WORK SHALL BE FULLY COORDINAT REPRESENTATIVES FOR SEQUENCE AND TIME FRAM
& PROVIDED TYP. DETAILS. MIN: OF 1/32" TO A MAX: OF 1/16" LARGER IN	BAR DIAMETER BAR DIAMETER	, WHICHEVER IS LESS , WHICHEVER IS LESS	5. INCREASE TO 1 5, AT COLUMNS, F	1/2 INCHES OR 1-1/2 TIMES NO ILASTERS, AND PIERS ONLY.	DMINAL	4. CONTRACTOR TO PROVIDE TEMP. SHORING, AS F
OF BOLT USED.						DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN ENGINEER AND THE DISTRICT ENGINEER FROM THE
VE 2' MIN. SHEET DIMENSION UNLESS ALL EDGES PPORTED BY FRAMING MEMBERS OR BLOCKING.	14. PLACEMENT: SET CO IN VERTICAL ALIGN	OURSES IN RUNNING MENT. PROVIDE FLU:	BOND PATTERN SH MORTAR JOIN	UNLESS INDICATED OTHERWIS TS AT SURFACES TO RECEIVE W	E. SET CELLS ATERPROOFING	
S SHALL BE TURNED NOT DRIVEN INTO THE	OR DAMP-PROOFIN	G. SOUD ALL CELLS, M	IFCHANICALLY VI	BRATE GROUT IN CELLS.		
ΝΑΠΖΗΝΟ	A. GROUT HEIGHT B. HORIZONTAL C	LIMITS: APPLICABL	E CODE 2019 CBC	SECTION 2104A 1 1/2 INCHES BELOW TOP OF N	1ASONRY	
E SPECIFIED NAIL SPACING BY 20%	UNIT IF WORK B. GROUT COVER	S STOPPED ONE HOU AROUND REINFORCI	JR OR LONGER. NG STEEL, ANCHO	OR BOLTS AND INSERTS PENETR	ATING	
ATE INTO THE SHT'G	MASONRY SHE	LE: 1 INCH MINIMUN	/I. ALL ENDS AND OF	ENING JAMBS: EXTEND BARS 1	O WITHIN	
	2 INCHES OF END OF OTHERWISE.	F WALL AND PROVID	E STANDARD ACI	90-DEGREE HOOK UNLESS DET	AILED	
D, NAILS SHALL DE DRIVEN FERFENDICOLAR. FRE-DRILL						
DS SHALL BE ICC APPROVED PER NSPECTION & SHOP DRAWING NOTES	POST-INS	FALLED	ANCHOR	BOLTS		
ΙΤ ΙCC ΔΡΡΒΟΎΕΝ ΗΔΒΌΨΔΕΕ ΕΩΒ ΔΙ Ι CONNECTION PER ΡΙ ΔΝ	ANCHOR BOLTS SHALL NO DRILLED-IN ANCHO	BE ONE OF THE FOL DR IS ALLOWED IN PO	LOWING ACCEPT	ABLE PRODUCTS, OR AN EQUIV ABS TO AVOID DAMAGING/CL	ALENT. TTING STING	
	OF UNDERGROUND PE	ENETRATING RADAR	DR X-RAY. (PACHO	DIMETER READING IS NOT ACCE	PTABLE)	
& STAMPED BY MANUFACTURE'S ENGINEER. SHOP DRAWING THIS SHEET.		'E ANCHORS '3 ADHESIVE SYSTEM	, ESR#3814 (FOR			
	EXPANSION-TYP	E ANCHORS		ASONNY		
STANT USING HOT-DIPPED ZINC COATED GALVANIZED	HILTI -TZ 2(ESR#4 HILTI -TZ 2(ESR#4 HILTI - KWIK BOL	1266) (FOR CONCRET 1561) (FOR MASONR' T 3 (ESR#1385) (FOR	E) Y) MASONRY)			
ELS SHALL BE BLOCKED OR T&G AS SPECIFIED ON PLANS.	FOR EMBEDED B EQUIVALENT PRO FOR USE UNDER	OLTS & DOWELS REF DDUCTS WITH VALID SEISMIC LOADING IS	ER TO DETÁILS. & CURRENT ICC F ACCEPTABLE.	EPORT FOR		
	ADHESIVE /	ANCHORS	AND D	OWELS:		
	1. MANUFACTURER'S F			EINSTALLATION TRAINING		
	ONLY PROPERLY TRA	INED INSTALLERS SH	ALL PERFORM PC	ST INSTALLED ANCHOR		
	2. INSTALLATION OF A	DHESIVE ANCHORS IN	N HORIZONTAL TO	VERTICAL ORIENTATION		
54	SHALL BE DONE BY A ACI AND IN ACCORD	A CERTIFIED ADHESIV ANCE WITH THE CUP	E INSTALLER (AAI RENT EDITION O) AS CERTIFIED THROUGH F ACI 318.		
Ά	3. EMBEDMENT DEPTH UNLESS OTHERWISE	I FOR ANCHORS AND NOTED THE TESTING	DOWELS IS AS FO	OLLOWS, ILL PERFORM TENSION TESTS		
	ON 25% OF ANCHOF	RS AND DOWELS TO T	THE SPECIFIED TE	ST LOADS:		
D MASONRY PILASTER)	ROD DIA. OR BAR SIZE	EMBEDMENT	TEST LOAD	BASE MATERIAL		
	3/8"	4" c "	3,000#			
	5/8"	6"	6,500#	CONCRETE	1	
<u>I LIVE LOA</u> DS (L.L.): <u>D</u> ESIGN DEAD LOADS (D.L.):	3/4"	7"	9,000#	CONCRETE		
SF	//8" 1"	9" 11"	15,000#	CONCRETE		
	1-1/4"	14"	20,000#	CONCRETE	1	
	#3	5"	3,500# 5,500#	CONCRETE	-	
	#5	8"	8,500#	CONCRETE	1	

4. ANCHORS SHALL CONFIRM WITH ASTM A193 GRADE B7 THREADED RODS USING ASTM A 563 GRADE DH HEAVY HEX NUTS AND ASTM F436 WASHERS U.N.O..

12,000#

16,500#

12,500#

23,000#

26,000#

CONCRETE

CONCRETE

CONCRETE

CONCRETE

10"

12"

14"

16"

19"

#6

#7

#8

#9

#10

- 5. REPLACE ANCHORS AND DOWELS THAT FAIL DURING TESTING AND RETEST. IF MORE THAN 10% OF THE TESTED DOWELS AND ANCHORS FAIL TO ACHIEVE THE SPECIFIED TEST LOAD, TEST 100% OF THE DOWELS AND ANCHORS INSTALLED IN THE LAST 2 DAYS OF ANCHOR INSTALLATION.
- 6. CENTER BAR IN THE HOLE AND WEDGE TIGHT WITH WOODEN WEDGES TO HOLD IT IN PLACE UNTIL THE ADHESIVE SETS.
- 7. IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON AND SHIFT THE HOLE LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM OF 2 ANCHOR DIAMETERS OR 1 INCH, WHICHEVER IS LARGER, OF SOUND CONCRETE BETWEEN THE DOWEL AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT. IF THE ANCHOR OR DOWEL MAY NOT BE SHIFTED AS NOTED ABOVE. THE ENGINEER WILL DETERMINE A NEW LOCATION.
- 8. LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLES ATTACHED WITH ADHESIVE ANCHORS.



2 SD2

ENLARGED ROOF FRAMING PLAN

SCALE: 3/16" = 1'-0"

1.	THE EXACT LOCATION OF MECH.UNIT MAY BE
	ADJUSTED PER FIELD CONDITION & FRAMING
	LAY OUT.

- 2. THE MAXIMUM OPERATIONAL WEIGHTS OF NEW UNITS ARE LISTED IN THE ANCHORAGE SCHEDULE IN DETAIL 3/SD2. EXACT SIZE AND WEIGHT OF UNITS MAY SLIGHTLY DIFFER FROM THE ONES SPECIFIED ON THESE DRAWINGS/SCHEDULE. SHOULD THE ACTUAL WEIGHT OF ANY UNITS EXCEED MORE THAN 10% OF THE LISTED WEIGHTS, IMMEDIATELY NOTIFY SE OR AND DSA DISTRICT ENGINEER FOR FURTHER INSTRUCTION.
- 3. THE OPERATABLE WEIGHT OF UNITS SHALL BE LESS OR EQUAL TO THE VALUES SHOWN.CONTRACTOR TO NOTIFY STRUCTURAL ENGINEER ABOUT HEAVIER UNITS. (MORE THAN 5% OF LISTED VALUES)
- 4. THE EXISTING FRAMING MAY NEED TO BE FURTHER ADJUST DEPENDING ON THE EXACT SIZE AND LOCATION OF THE DOWN DRAFT OPENINGS INSIDE ROOFTOP UNITS.
- 5. IF EXISTING MEMBERS ARE SMALLER THAN WHAT IS SHOWN IN DRAWINGS AND CONSIDERED IN CALCULATIONS, PLEASE NOTICE SEOR FOR DETAIL OR FURTHER INFO

		EQUIPMEN	NT SCHEDULE (*)			
GROUP	UNIT DESCRIPTION	EXISTING WEIGHT (LBS)	NEW WEIGHT (LBS)	DIMENSIONS	DETAIL REF.	(N) SISTERS REQD.
AC 3	AIR CONDITIONER	1,050	1,036 + STEEL CURB	88"L x 59.5"W x 49.4"H	4/SD1	YES
AC 4	AIR CONDITIONER	1,150	1,020 + STEEL CURB	88"L x 59.5"W x 49.4"H	4/SD1	NO (**)
AC 5	AIR CONDITIONER	1,250	1,564 + STEEL CURB	115.9"L x 63.4"W x 57.4"H	4/SD1	NO (**)
	AIR CONDITIONER	2,750	2,528 + STEEL CURB	127.9"L x 86.4"W x 49.4"H	4/SD1	YES

(*) SUBJECT TO CHANGE REFER TO LATEST MECHANICAL PACKAGE. (**) PROVIDED THAT NONE OF (E) RAFTERS ARE DEGRADED OR DAMAGED. VERIFY AT THE FIELD.





SCALE: 3/16" = 1'-0"









17	
18	
10	
10	
19	
10	
19	





MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC, SECTIONS

2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (e.g. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRIC, 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

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

1. COMPONENTS 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 COMPONENT.

2. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUND PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

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



			IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
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ANGULAR) SOR RE SENSOR	 M.00 MECHANICAL DRAWIN M.01 MECHANICAL GENERA M.02 MECHANICAL ENERGY M.03 MECHANICAL ENERGY M.10 MECHANICAL SITE PL/ M.20 MECHANICAL ROOF PI M.30 MECHANICAL SCHEDL M.40 MECHANICAL DETAILS M.50 MECHANICAL DETAILS 	GS INDEX, SYMBOLS AND ABBREVIATIONS L NOTES FORMS FORMS N AN LES	DATE: 03/03/2022
DN	ABF	REVIATIONS	DER
	ABBREVIATION DESCRIPTION	ABBREVIATION DESCRIPTION	

ABOVE AIR CONDITIONING UNIT ALUMINUM	LAT LBS	LEAVING AIR TEMPERATURE POUNDS
	MAX	MAXIMUM
BELOW	MBH	THOUSAND BTU PER HOUR
BREAK HORSEPOWER	MC	MECHANICAL CONTRACTOR
BUILDING	MCA	MINIMUM CIRCUIT AMPS
BRITISH THERMAL UNIT		
	MIN	MINIMUM
CUBIC FEET PER MINUTE	MOCP	MAXIMUM OVERLOAD CIRCUIT
CAST IRON	MTD	PROTECTION
CENTER LINE	MID	MOUNTED
CONSTANT VOLUME BOX		
DRAIN	NIC	NOT IN CONTRACT
DEGREES	OC	ON CENTER
DIAMETER	OSA	OUTSIDE AIR
DOWN		
DIRECT EXPANSION	PD	PRESSURE DROP
	PH	PHASE
EACH	PSID	POUNDS PER SQUARE INCH
ENTERING AIR TEMPERATURE		DIFFERENTIAL
	PSIG	POUNDS PER SQUARE INCH GAUGE
EFFICIENCY	PVC	POLYVINYL CHLORIDE
EQUAL		
EXTERNAL STATIC PRESSURE	RA	RETURN AIR
EXISTING	RLA	RATED LOAD AMPS
	RPM	REVOLUTIONS PER MINUTE
FULL LOAD AMPS		
	SA	SUPPLY AIR
FEET / FOOT	SMBH	SENSIBLE MBH
	SPEC	SPECIFICATION
GAUGE	SS	STAINLESS STEEL
GALVANIZED	STD	STANDARD
GENERAL CONTRACTOR		
GALLONS PER HOUR	TEMP	TEMPERATURE
GALLONS PER MINUTE	ТМВН	TOTAL MBH
	TSP	TOTAL STATIC PRESSURE
HORSEPOWER HERTZ	TYP	TYPICAL
INCHES	UUN	UNLESS OTHERWISE NOTED
	V	VOLTS
	VFD	VARIABLE FREQUENCY DRIVE
	WB	WEI BULB

WATER COLUMN

WATER GAUGE

DEGREES FAHRENHEIT

WEIGHT

WC

WG

WΤ

°F

ABV

ALUM

AC

BEL

BHP

BLDG

BTU

CFM

CI

CL CV

DB

DEG

DIA

DN

DX

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INDEX, SYMBOLS AND ABBREVIATIONS

- THROUGH 110.2-K.
- 2. ALL AIR-COOLED, UNITARY, DX UNITS (PACKAGED, SPLIT-SYSTEM, HEAT PUMPS AND VRF) WITH ECONOMIZERS SHALL BE EQUIPPED WITH FAULT DETECTION AND DIAGNOSTICS SYSTEMS
- 3. PIPE INSULATION FOR SPACE CONDITIONING AND SERVICE WATER-HEATING WITH FLUID TEMPERATURES LISTED IN TABLE 120.3-A SHALL HAVE INSULATION LEVELS AS SPECIFIED IN SUBSECTION (A) AND (B).
- 4. MECHANICAL HEATING AND COOLING 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, AS CALCULATED ACCORDING TO THE REQUIREMENTS OF SECTION 140.4(B).
- 5. HVAC MOTORS FOR FANS THAT ARE LESS THAN 1 HP AND 1/12 HP OR GREATER SHALL BE ECM OR HAVE A MINIMUM MOTOR EFFICIENCY OF 70%. MOTORS SHALL ALSO HAVE MEANS TO ADJUST MOTOR SPEED FOR BALANCING OR REMOTE CONTROL. 6. ELECTRIC RESISTANCE HEATING SYSTEMS ARE NOT PROVIDED FOR SPACE
- HEATING. 7. IN DRIER CLIMATES AND WHEN LARGE OUTDOOR AIR FRACTIONS ARE REQUIRED, EVAPORATIVE PRE-COOLING PACKAGES WERE EVALUATED TO PRE-COOL OUTSIDE AIR AND COOL THE AIR FLOWING OVER THE DX CONDENSING UNIT.
- 8. ZONE EACH AIR HANDLER TO SERVE ONLY AREAS WITH COMMON LOADS TO ALLOW MORE AGGRESSIVE CONTROL STRATEGIES AND IMPROVE COMFORT. HAVE DIFFERENT AHU'S SERVING CORE VS. PERIMETER AREAS. 9. THE DESIGN ACCOMMODATES PARTIAL OCCUPANCY ENERGY SAVINGS WHEN THE OWNER'S REQUIREMENTS OR NARRATIVE DESCRIBE ANY POSSIBLITY OF PARTIAL OCCUPANCY, BY ZONING AIR HANDLERS BY FLOOR OR BY PART OF A
- FLOOR, OR BY INCORPORATING CONTROLLED FLOOR DAMPERS, OR VAV AIR
- TERMINALS GOING TOTALLY SHUT WHEN NOT OCCUPIED, ETC. 10. EACH ZONE IS CONTROLLED BY AN INDIVIDUAL THERMOSTATIC CONTROL. CONTROLS SHALL BE CAPABLE OF SETTING TEMPERATURES TO 55 DEG F FOR HEATING AND 85 DEG F FOR COOLING AND PROVIDE A TEMPERATURE
- DEADBAND OF AT LEAST 5 DEG F IF CONTROLLING BOTH HEATING AND COOLING. 11. EACH SPACE CONDITIONING SYSTEM SHALL BE EQUIPPED WITH CONTROLS TO SHUT THE SYSTEM OFF DURING PERIODS OF NONUSE AND WILL TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN SETBACK AND SETUP TEMPERATURES WHILE KEEPING VENTILATION
- DAMPERS CLOSED. 12. SYSTEMS SERVING MULTIPURPOSE ROOMS LESS THAN 100 SF AND CLASSROOMS, CONFERENCE, AUDITORIUM OR MEETING CENTER ROOMS GREATER THAN 750 SF SHALL HAVE OCCUPANCY SENSORS THAT INTERFACE WITH HVAC CONTROLS TO AUTOMATICALLY SETUP THE COOLING SETPOINT BY 2F OR MORE AND AUTOMATICALLY RESET THE MINIMUM REQUIRED VENTILATION RATE. THESE OCCUPANT SENSOR VENTILATION CONTROL DEVICES MUST MEET THE REQUIREMENTS OF SECTION 120.1(C)5.
- 13. OUTDOOR AIR SUPPLY AND EXHAUST EQUIPMENT SHALL BE INSTALLED WITH DAMPERS THAT AUTOMATICALLY CLOSE UPON ZFFAN SHUTDOWN. 14. HVAC SYSTEMS WITH DDC TO THE ZONE LEVEL SHALL BE
- PROGRAMMED TO ALLOW CENTRALIZED DEMAND SHED FOR NON-CRITICAL ZONES. 15. ZONE CONTROLS PREVENT REHEATING, RECOOLING AND SIMULTANEOUS PROVISIONS OF HEATING AND COOLING TO THE
- SAME ZONE 16. EACH WALL MOUNTED THRMOSTAT SHALL BE LOCATED AWAY FROM POTENTIAL SOURCES THAT WOULD ADVERSELY AFFECT THE READING (CLOSE TO COPIERS, DIRECT SUNLIGHT, BELOW OR ABOVE A SUPPLY AIR DIFFUSER OR CONVECTOR, ETC.). ANY THERMOSTATS MOUNTED ON EXTERIOR WALLS SHALL BE INSTALLED IN SEALED AND
- INSULATED JUNCTION BOXES. 17. CORNER OFFICE SHALL ALWAYS HAVE THEIR OWN THERMOSTATS AIR TERMINAL BOXES OR FIN-TUBE RADIATORS. 18. CONTROL SEQUENCES SHALL BE LISTED FOR EQUIPMENT OPERATED
- SHALL BE INCLUDED.
- 19. CONTROL SEQUENCES SHALL BE PROVIDED FOR EACH PIECE OF EQUIPMENT LISTED IN THE EQUIPMENT SCHEDULE THAT IS MONITORED OR CONTROLLED BY THE BUILDING AUTOMATION SYSTEM (BAS). UNOCCUPIED SEQUENCES SHALL BE INCLUDED. 20. OUTSIDE AIR TEMPERATURE SENSORS SHALL BE IN A COMMERCIALLY
- DESIGNED SOLAR SHIELD LOCATED ON A NORTH WALL OR SOME OTHER LOCATION OUT OF DIRECT SUNLIGHT AND AWAY FROM BUILDING EXHAUST OR HEAT REJECTION EQUIPMENT.
- 21. THE OUTDOOR AIR-VENTILATION RATE AND AIR-DISTRIBUTION ASSUMPTIONS MADE IN THE DESIGN OF THE VENTILATING SYSTEM ARE CLEARLY IDENTIFIED ON THE PLANS. 22. EACH SPACE IS DESIGNED TO HAVE NATURAL VENTILATION OR
- MECHANICAL VENTILATION THAT IS NO LESS THAN THE LARGER OF CONDITIONED FLOOR AREA TIMES THE REQUIREMENTS IN TABLE 120.1-A OR 15 CFM TIMES THE EXPECTED NUMBER OF OCCUPANTS 23. THE MINIMUM AND MAXIMUM OUTDOOR AIR RATES FOR EACH AIR HANDLER ARE LISTED ON THE EQUIPMENT SCHEDULES.
- 24. THE OUTDOOR AIR-VENTILATION RATES ARE BASED ON PLANNED
- ARE NOT BASED ON MAXIMUM EGRESS OCCUPANCY RATES.
- WITH DCV CONTROLS.
- B. CO2 SENSORS ARE LOCATED BETWEEN 3 FT AND 6 FT ABOVE THE FLOOR. C. CO2 CONCENTRATIONS MAINTAINED AT LESS THAN OR EQUAL TO 600 PPM PLUS OUTDOOR PPM. D. DURING HOURS OF EXPECTED OCCUPANCY, CONTROLS MAINTAIN
- THE SYSTEM VENTILATION RATE.
- 26. EACH COOLING FAN SYSTEM THAT HAS A DESIGN MECHANICAL COOLING CAPACITY OVER 54,000 BTU/H SHALL HAVE AN AIR ECONOMIZER OR A WATER ECONOMIZER. AIR ECONOMIZERS MUST COMPLY WITH THE HIGH LIMIT SHUTOFF CONTROLS SHOWN IN TABLE 140.4-B.
- COOLING IS PROVIDED BY THE ECONOMIZER EVEN WHEN ADDITIONAL MECHANICAL COOLING ID REQUIRED.
- MALFUNCTION.
- 29. BAROMETRIC RELIEF IS USED, IF POSSIBLE. IF NOT, RELIEF FANS (RATHER THAN RETURN FANS) SHALL BE USED IN MOST CASES. 30. OUTDOOR AND RETURN AIR SENSORS SHALL BE PROPERLY SELECTED PROPERLY LOCATED TO PROVIDE ACCURATE AND REPEATABLE MEASUREMENTS
- FOR CONTROLLING ECONOMIZER OPERATION. AVERAGING SENSORS COVER THE ENTIRE DUCT OR COIL FACE AREAS. 31. ALL AIR DISTRIBUTION SYSTEM DUCTS AND PLENUMS MUST BE INSTALLED, SEALED AND INSULATED AS REQUIRED BY 120.4(A).
- 32. DUCT SEALING LEAKAGE RATES SHALL BE NO MORE THAN 6% OF AIR FLOW FOR NEW DUCT SYSTEMS AND NO MORE THAN 15% OF AIR FLOW FOR ALTERED EXISTING DUCT SYSTEMS.
- 33. DUCT SHALL UTILIZE LOW STATIC PRESSURE DESIGN. IDENTIFY THE MOST RESTRICTIVE BRANCH FROM THE FAN TO THE LAST AIR TERMINAL UNIT. IDENTIFY POSSIBLE MEANS OF SIGNIFICANTLY REDUCING THE PRESSURE DROP. BRANCH DUCT SYSTEMS SHALL DESIGNED FOR EQUAL PRESSURE DROP, WHEN POSSIBLE.
- 34. DUCT BRANCHES WITH SIGNIFICANTLY DIFFERING STATIC PRESSURE REQUIREMENTS SHALL HAVE VOLUME CONTROL STRATEGICALLY PLACED TO AID IN TAB WORK.
- 35. FAN SHALL DISCHARGE INTO DUCT SECTIONS THAT REMAIN STRAIGHT FOR AS LONG AS POSSIBLE (IDEALLY 10 DUCT DIAMETERS) TO REDUCE FAN INEFFICIENCIES FROM SYSTEM EFFECTS.

TITLE 24 NOTES

THE FOLLOWING SHALL BE REQUIRED WHETHER OR NOT SPECIFICALLY SHOWN OR MENTIONED IN DRAWINGS AND/OR SPECIFICATIONS:

1. EQUIPMENT SHALL MEET EFFICIENTY REQUIREMENTS OF TABLES 110.2-A

- BY STAND-ALONE PACKAGED CONTROLS. UNOCCUPIED SEQUENCES
- OWNER OCCUPANCY AS DEFINED IN OWNER'S DESIGN INTENT AND
- 25. HVAC SYSTEMS THAT HAVE AN ECONOMIZER, SERVE A SPACE WITH A DESIGN OCCUPANT DENSITY GREATER THAN OR EQUAL TO 25 PEOPLE PER 1000 SF, AND ARE EITHER A SINGLE ZONE SYSTEM WITH ANY CONTROLS OR MULTIPLE ZONE SYSTEM WITH DDC CONTROLS TO THE ZONE LEVEL MUST HAVE DEMAND CONTROL VENTILATION CONTROLS. THE FOLLOWING MUST BE MET:
- A. CO2 SENSORS INSTALLED IN EACH ROOM SERVED BY SYSTEMS
- 27. INTEGRATED ECONOMIZER CONTROLS SHALL BE SET UP SUCH THAT PARTIAL
- 28. ECONOMIZER DAMPERS SHALL BE DRIVEN BY DIRECT DRIVE ACTUATORS RATHER THAN ROD LINKAGES, WHICH CAN BE A MAJOR CAUSE OF ECONOMIZER

- 36. DUCT VELOCITIES SHALL GENERALLY BE BELOW 2,000 FPM FOR DUCTS IN CEILING PLENUMS, 1500 FPM FOR EXPOSED DUCTS AND 3500 FPM IN MECHANICAL ROOMS AND NON-NOISE SENSITIVE SHAFTS AND DO NOT REDUCE
- ANY DUCT SIZES LISTED ON PLANS 37. DUCT FRICTION RATES SHALL GENERALLY BE LESS THAN 0.25" WC PER 100 LINEAL FEET NEARER THE FAN, 0.15 TO 0.20" IN THE MAIN DUCTS AND 0.08 TO 0.12" WC/100' NEARER THE END OF THE SYSTEM. DESIGNS OVER THESE RATES SHALL BE QUESTIONED. VERY ENERGY EFFICIENT DESIGN CAN LOWER THESE VALUES BY UP TO 40%.
- 38. CONTRACTOR SHOP DRAWINGS SHALL BE SUFFICIENTLY DETAILED TO ENSURE THAT DISTRIBUTION SYSTEM DESIGN INTENT IS ADEQUATELY CONVEYED TO MATCH PLANS, IF SUFFICIENT DETAIL IS NOT INCLUDED IN DRAWINGS. INSTALLATIONS MAY RESULT IN SIGNIFICANTLY HIGHER PRESSURE DROPS AND HENCE HIGHER ENERGY CONSUMPTION AND OTHER OPERATING ISSUES. 39. ACCEPTANCE REQUIREMENTS ARE CLEARLY IDENTIFIED IN CONSTRUCTION
- DOCUMENTS 40. COMMISSIONING MEASURES OR REQUIREMENTS ARE REFLECTED IN THE CONSTRUCTION DOCUMENTS.
- 41. REQUIREMENTS FOR FUNCTIONAL PERFORMANCE TESTS ARE REFLECTED IN THE CONSTRUCTION DOCUMENTS.
- 42. COOLING SYSTEMS IDENTIFIED IN TABLE 140.4-D SHALL HAVE FAN CONTROLS TO VARY THE INDOOR FAN AIRFLOW AS A FUNCTION OF LOAD: A. DX AND CHILLED WATER COOLING SYSTEMS THAT CONTROL CAPACITY BASED ON OCCUPIED SPACE TEMPERATURE SHALL HAVE A MINIMUM OF
- 2 STAGES OF CONTROL. B. SYSTEMS THAT CONTROL SPACE TEMPERATURE BY MODULATING AIRFLOW TO THE SPACE SHALL HAVE PROPORTIONAL FAN CONTROL. C. SYSTEMS WITH AIR SIDE ECONOMIZER SHALL HAVE A MINIMUM OF
- 2 SPEEDS OF FAN CONTROL DURING ECONOMIZER OPERATION. 43. FAN CABINET ENCLOSURE AND INTERNAL COMPONENTS SHALL BE ELECTED TO
- MINIMIZE PRESSURE DROP, E.G. FACE VELOCITY IS LESS THAN 500 FPM, LOW PRESSURE DROP COILS, FILTERS, ETC. 44. FAN WHEEL SHALL BE SELECTED FOR EFFICIENT OPERATION, E.G. LARGER
- DIAMETER ROTATING AT LOWER SPEED. 45. SYSTEMS THAT SERVE MULTIPLE ZONES SHALL HAVE CONTROLS THAT AUTOMATICALLY RESET SUPPLY AIR TEMPERATURE. ZONES WITH HIGH
- INTERNAL LOADS WITH NEAR CONSTANT AIRFLOW SHALL BE DESIGNED FOR THE ELEVATED RESET SUPPLY AIR TEMPERATURE. RESET CONTROLS SHALL BE IN RESPONSE TO BUILDING LOADS OR TO OUTDOOR AIT TEMPERATURE AND SHALL BE AT LEAST 25% OF THE DIFFERENCE BETWEEN SUPPLY AIR AND DESIGN ROOM AIR TEMPERATURE. CONTROL SEQUENCES ARE IDENTIFIED IN CONSTRUCTION DOCUMENTS.
- 46. SAT RESET SHALL BE ESTABLISHED WITH AN AGGRESSIVE RESET SCHEDULE OF 10F, E.G. 55F DURING WARM WEATHER AND 65F DURING COOL WEATHER.



- ADDITION OR ALTERATION SUBJECT TO SECTION 303.1
- AS APPLICABLE TO THE PROJECT: A. HVAC SYSTEMS AND CONTROLS. B. INDOOR AND OUTDOOR LIGHTING AND CONTROLS. C. WATER HEATING SYSTEMS.
- APPROVED BY THE ENFORCING AGENCY.
- PERFORMING THESE SERVICES.
- OTHER RELATED REGULATIONS.
- COVERING OF DUCT OPENINGS AND PROTECTION OF MECHANICAL EQUIPMENT DURING
- **B. EXISTING MECHANICAL EQUIPMENT.**
- 5.508.1.1 AND 5.508.1.2. B. HALONS. INSTALL HVAC, AND REFRIGERATION EQUIPMENT THAT DO NOT CONTAIN HALONS.

MOUNTING OVER OBSTRUCTION DETAIL



1. THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE: TEMPERATURE AND HUMIDITY SENSORS).

CAL GREEN NOTES

TESTING AND ADJUSTING. TESTING AND ADJUSTING OF SYSTEMS SHALL BE REQUIRED FOR NEW BUILDING LESS THAN 10,000 SQUARE FEET OR NEW SYSTEMS TO SERVE AN

2. SYSTEMS. DEVELOP A WRITTEN PLAN OF PROCEDURES FOR TESTING AND ADJUSTING SYSTEMS. SYSTEMS TO BE INCLUDED FOR TESTING AND ADJUSTING SHALL INCLUDE.

- D. RENEWABLE ENERGY SYSTEMS. E. LANDSCAPE IRRIGATION SYSTEMS.
- F. WATER REUSE SYSTEMS.

3. PROCEDURES. PERFORM TESTING AND ADJUSTING PROCEDURES IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND APPLICABLE STANDARDS ON EACH

A. HVAC BALANCING. IN ADDITION TO TESTING AND ADJUSTING, BEFORE A NEW SPACE-CONDITIONING SYSTEM SERVING A BUILDING OR SPACE IS OPERATED FOR NORMAL USE, BALANCE THE SYSTEM IN ACCORDANCE WITH THE PROCEDURES DEFINED BY THE TESTING ADJUSTING AND BALANCING BUREAU NATIONAL STANDARDS; THE NATIONAL ENVIRONMENTAL BALANCING BUREAU PROCEDURAL STANDARDS; ASSOCIATED AIR BALANCE COUNCIL NATIONAL STANDARDS OR AS

REPORTING. AFTER COMPLETION OF TESTING, ADJUSTING AND BALANCING, PROVIDE A FINAL REPORT OF TESTING SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR

5. OPERATION AND MAINTENANCE (O & M) MANUAL. PROVIDE THE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND COPIES OF GUARANTIES/WARRANTIES FOR EACH SYSTEM. O & M INSTRUCTIONS SHALL BE CONSISTENT WITH OSHA REQUREMENTS IN CCR, TITLE 8, SECTION 5142, AND

A. INSPECTIONS AND REPORTS. INCLUDE A COPY OF ALL INSPECTION VERIFICATIONS AND REPORTS REQUIRED BY THE ENFORCING AGENCY.

6. <u>TEMPORARY VENTILATION.</u> THE PERMANENT HVAC SYSTEM SHALL ONLY BE USED DURING CONSTRUCTION IF NECESSARY TO CONDITION THE BUILDING WITHIN THE REQUIRED TEMPERATURE RANGE FOR MATERIAL AND EQUIPMENT INSTALLATION. IF THE HVAC SYSTEM IS USED DURING CONSTRUCTION, USE RETURN AIR FILTERS WITH A MINIMUM REPORTING VALUE (MERV) OF 8, BASED ON ASHRAE 52.2-1999 OR AN AVERAGE EFFICIENCY OF 30 PERCENT BASED ON ASHRAE 52.1-1992. REPLACE ALL FILTERS IMMEDIATELY PRIOR TO OCCUPANCY, OR, IF THE BUILDING IS OCCUPIED DURING ALTERATIONS, AT THE CONCLUSION OF CONSTRUCTION.

CONSTRUCTION. AT THE TIME OF ROUGH INSTALLATION AND DURING STORAGE ON THE CONSTRUCTION SITE UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATION EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION OMPONENT OPENINGS SHALL BE COVERED WITH WRAP, PLASTIC, SHEET METAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST. WATER AND DEBRIS WHICH MAY ENTER THE SYSTEM.

8. FILTERS. IN MECHANICALLY VENTILATED BUILDINGS, PROVIDE REGULARLY OCCUPIED AREAS OF THE BUILDING WITH AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR PRIOR TO OCCUPANCY THAT PROVIDE AT LEAST A MINIMUM EFFICIENCY REPORTING VALUE (MERV) OF 8. MERV 8 FILTERS SHALL BE INSTALLED PRIOR TO OCCUPANCY AND RECOMMENDATIONS FOR MAINTENANCE WITH FILTERS OF THE SAME VALUE SHALL BE INCLUDED IN THE OPERATION AND MAINTENANCE MANUAL.

A. AN ASHRAE 10-PERCENT TO 15-PERCENT EFFICIENCY FILTER SHALL BE PERMITTED FOR AN HVAC UNIT MEETING THE 2019 CALIFORNIA ENERGY CODE HAVING 60,000 BTU/H OR LESS CAPACITY PER FAN COIL. IF THE ENERGY USE OF THE AIR DELIVERY SYSTEM IS 0.4 W/CFM OR LESS AT DESIGN AIR FLOW.

OZONE DEPLETION AND GREENHOUSE GAS REDUCTIONS. INSTALLATIONS OF HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT SHALL COMPLY WITH SECTIONS A. CHLOROFLOUROCARBONS (CFCS). INSTALL HVAC, AND REFRIGERATION EQUIPMENT THAT DO NOT CONTAIN CFCS.

10. ADHESIVES, ADHESIVE BONDING PRIMERS, ADHESIVE PRIMERS, SEALANTS, SEALANT PRIMERS AND CAULKS SHALL COMPLY WITH LOCAL OR REGIONAL AIR POLLUTION CONTROL OR AIR QUALITY MANAGEMENT DISTRICT RULES WHERE APPLICABLE, OR SCAQMD RULE 1168 VOC LIMITS, AS SHOWN IN TABLES 5.504.4.1



	TRUAX THEATER 400 Rancho del O	HVAC REPLACEMI Pro Dr, Oceanside	ENT 92057			Report Pa Date Prep	ge: ared:		Page 1 of 13 2021-11-29
A. GENERAL IN	FORMATION ation (city)		Oceanside		04 Total Conc	litioned Floc	or Area	19,476	?
02 Climate Zoi 03 Occupancy Office (B)	ne Types Within Proje	ect:	7 ail (M)		05 Total Unco 06 # of Storie	onditioned F s (Habitable rated Wareł	Above Grade)	0	
Hotel/ Mote	l Guest Rooms (R-1 sidential (R-2/R-3)	L) 🖌 Scho	pool (E) Docatable Class Bldg (E))	Healthcare	Facility (I) e In):	.,		
B. PROJECT SC	limate zone can be	determined on th	e California Energy C	ommission's we	ebsite at <u>http://v</u>	www.energy	.ca.gov/maps/renewable	e/building_climate	<u>zones.html</u>
Table Instruction §140.4, or <u>§141.</u>	ns: Include any mec 0(b)2 for alteration	hanical systems t ns.	hat are within the sca	ppe of the perm	it application an	are demoi	nstrating compliance usin	g the prescriptive	path outlined in
	01 Air System(s)		02 Wet System C	2 Components	арріу)	Dry Sys	03 stem Components	;
 ✓ Heating Air S ✓ Cooling Air S 	System System		Water Ecor	nomizer			Air Economizer	leat	
Mechanical (new)	Mechanical Con Controls (existing to	trols o remain, altered	or Cooling Toy	vstem Piping wers			Fan Systems Ductwork (existing t Ventilation	o remain, altered	or new)
	F RESULTS		Boilers				Zonal Systems/ Tern	ninal Boxes	0
Table Instruction	ns: If any cell on thi	s table says "DOE 03	S NOT COMPLY" or "C	COMPLIES with	Exceptional Con	ditions" refe	r to Table D. for guidance	08	09
System Summary <u>§110.1</u> , Al	ND Pumps A	Fans/ Economizers	System Controls AND <u>§110.2</u> ,	AND Ventilatio	on AND Con	nal Box trols AND	Distribution Co §120.3, AND To	ooling owers	l'an Davida
<u>§110.2,</u> <u>§140.4</u> (See Table F)	(See Table G)	<u>§140.4(c)</u> <u>§140.4(e)</u> (See Table H)	<u>§120.2,</u> §140.4(f) (See Table I)	(See Table	e J) (See T	<u>).4(d)</u> able K)	§140.4(l) §11 (See Table L) (See	<u>L0.2(e)2</u>	
Yes Ar	ND A	ND Yes	AND Yes	AND Yes	AND Mandatory M	AND	AND AND AND	r Details)	COMPLIES COMPLIES
CA Building Energy	y Efficiency Standard	s - 2019 Nonresider	ntial Compliance: <u>http://</u>	/www.energy.ca.	.gov/title24/2019	standards/			September 2020
STATE OF CALIFORNI	A Systems								
NRCC-MCH-E (Create CERTIFICATE OF	COMPLIANCE		ENT			Report Pa	ge:	California Energy C	OMMISSION NRCC-MCH-E
Project Address:	400 Rancho del O	other than Packs	92057	litioners (PTAC) and Package T	Date Prep	ared: at Pumps (PTHP))		2021-11-29
01	02			04 Heating M	ode	06	07	08 Cooling Mode	09
Name or Item Tag	Size Category (Btu/h)	Ra	iting Condition	fficiency Unit	Min Efficiency Required per Tables 110.2/	, Desi Efficie	gn Efficiency Unit	Min Efficiency Required per Tables 110.2/	Design Efficiency
AC-7 >	135,000 and <240 (000			<u>Title 20</u>		EER	<u>Title 20</u> 10.8	12
							IEER	12.2	13.5
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G. PUMPS This Section Doe This Section Doe H. FAN SYSTEM Table Instruction document the sy these requireme System Name: O1 Fan Name or Item Tag AC-3 Total System AC-3 Total System System Name: Table Continued CA Building Energy STATE OF CALIFORNI Mechanical NRCC-MCH-E (Create CERTIFICATE OF Project Name: Project Name: Project Address: O1 System Name AC-5 AC-6 AC-7 TOTNOTES: G required to have NOTES: Contro EX: System 1: SA I. VENTILATION Table Instruction resident of this tab O1 O2 O3	s Not Apply AS & AIR ECONOL S: Complete the forestern details, then ints and do not neerest. AC-3 AC-3 Complete the forestern details, then ints and do not neerest. Complete the forestern details, then ints and do not neerest. Complete the forestern details, then ints and do not neerest. Supply Complete the forestern details, then ints and do not neerest. A A Systems Complete the forestern details, then ints and do not neerest. A A A A A A A A A A A A A	MIZERS Ilowing Table for add fans within the d to be included in conomizer:1 iconomizer:1	fan systems to demon hat system to docume n Table H. Differential Enthalp 3 04 Maximum Desi Supply Airflov (CFM) 2,250 Differential Enthalp 2,250 To Differential Enthalp ntial Compliance: http:// Differential Enthalp ENT 92057 ENT 92057 04 Thermostats §110.2(b) & (c) ² §120.2(a) or §141.0 EMCS EMCS EMCS EMCS EMCS cheaters, gravity room ce below explaining ha compliant with §140 Emonstrate complian inst only centilation fat on a second for the second for the second compliant with §140 Entransformer and the second for the seco	Image: and compliance and compliance by Econor by Image: Control by Image: Control gn HP Unit ² gn Econor otal System Description Econor by Econor otal System Description Econor by Econor control Control dwww.energy.ca. Econor f(b)2E Shut (b)2E Shut control Shut f(b)2E EMC acont EMC	Ince with fan power mizer Designer mizer Designer ols Designer bis 0.58 ols 0.58 sign (B)HP: Image: Compare mizer Designer sign (B)HP: Image: Compare mizer Designer ols: Designer gov/title24/2019: Image: Compare gov/title24/2019: Image: Compare <td< td=""><td>ptive require ptive require requirement ed per §140 and (m) Far 0.58 ed per §140 0.58 ed per §140 and (m) 6 0.58 ed per §140 and (m) 6 0.58 ed per §140 and (m) standards 0.58 ed per §140 and (m) standards 0.58 ed per §140 o.58 ed per §140 and (m) standards standards <</td><td>ements found in §140.4(c, s. Fan systems serving on 4(e) System Fan Type: 07 0 Device Device Device Device Device Device 0 Maximum System 4(e) System Fan Type: 0 Maximum System 4(e) System Fan Type: 0 Maximum System 6 1000 0 1000 0 1</td><td>), <u>§140.4(e)</u> and <u>§</u> by process loads a Variable Ai 08 djustment - <u>Table</u> sign Airflow throu Variable Ai Variable Ai Variable Ai Variable Ai Supply Air Temp. Reset <u>§140.4(f)</u> NA: Single Zone NA: Single Zone NA: Single Zone NA: Single Zone NA: Single Zone NA: Single Zone NA: Single Zone NA: Single Zone NA: Single Zone NA: Single Zone Suppliances, wood s</td><td>Ido.4(m). First re exempt from 140.4-B gh Device (CFM) Ido.4-B gh Device (CFM) September 2020 OMMISSION September 2020 OMMISSION NRCC-MCH-E Page 7 of 13 2021-11-29 09 Window Interlocks per §140.4(n) NA: No operable windows Nator operable windows Nator operable windows Nator operable windows <!--</td--></td></td<>	ptive require ptive require requirement ed per §140 and (m) Far 0.58 ed per §140 0.58 ed per §140 and (m) 6 0.58 ed per §140 and (m) 6 0.58 ed per §140 and (m) standards 0.58 ed per §140 and (m) standards 0.58 ed per §140 o.58 ed per §140 and (m) standards standards <	ements found in §140.4(c, s. Fan systems serving on 4(e) System Fan Type: 07 0 Device Device Device Device Device Device 0 Maximum System 4(e) System Fan Type: 0 Maximum System 4(e) System Fan Type: 0 Maximum System 6 1000 0 1000 0 1), <u>§140.4(e)</u> and <u>§</u> by process loads a Variable Ai 08 djustment - <u>Table</u> sign Airflow throu Variable Ai Variable Ai Variable Ai Variable Ai Supply Air Temp. Reset <u>§140.4(f)</u> NA: Single Zone NA: Single Zone NA: Single Zone NA: Single Zone NA: Single Zone NA: Single Zone NA: Single Zone NA: Single Zone NA: Single Zone NA: Single Zone Suppliances, wood s	Ido.4(m). First re exempt from 140.4-B gh Device (CFM) Ido.4-B gh Device (CFM) September 2020 OMMISSION September 2020 OMMISSION NRCC-MCH-E Page 7 of 13 2021-11-29 09 Window Interlocks per §140.4(n) NA: No operable windows Nator operable windows Nator operable windows Nator operable windows </td

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

STATE OF CALIFORNIA		
Mechanical Systems		
NRCC-MCH-E (Created 09/2020)		CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: TRUAX THEATER HVAC REPLACEMENT	Report Page:	Page 2 of 13
Project Address: 400 Rancho del Oro Dr, Oceanside 92057	Date Prepared:	2021-11-29
D. EXCEPTIONAL CONDITIONS		?
This table is auto-filled with uneditable comments because of selections made or data enter	ed in tables throughout the form.	
Table H indicates a Fan Power System Index that exceeds the maximum allowed per §140.4 Selections made in Table O have been changed by the permit applicant. See Table E. Additio	(c). Please revise to demonstrate compliance. onal Remarks for permit applicant's explanation.	

E. ADDITIONAL REMARKS

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

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Table Instructions: Complete the following equipment schedules to show compliance with mandatory requirements found in <u>§110.1</u> and <u>§110.2(a)</u> and prescriptive requirements											
found in <u>§</u>	<u>140.4(a), §140.4(b)</u> and <u>§14</u>	<u>40.4(k)</u> or <u>§141.0(b)2</u> for alterations.									
Dry Syster	n Equipment Sizing (includ	es air conditioners, condensers, heat pump	s, VRF, furnaces and	unit heate	rs)						
01	02	03	04	05	06	07	08	09	10	11	
				Equip	ment Sizing	g per Mecł	nanical Sche	edule (kBtu	ı/h) <u>§140.4</u>	(a&b)	
				Hea	ating Outpu	ut ^{2,3}	Cooling (Output ^{2,3}	Load Calc	Load Calculations ^{3,4}	
Name or Item Tag	Equipment Category per <u>Tables 110.2</u>	Equipment Type per Tables 110.2 & <u>Title 20</u>	Smallest Size Available ¹ <u>§140.4(a)</u>	Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)	
AC-3	Unitary AC/ Cond. (no elec. resistance)	AC, air cooled, package (3 phase)	Yes	103	103	0	69.2	69.2	112.4	79.9	
AC-4	Unitary AC/ Cond. (no elec. resistance)	AC, air cooled, package (3 phase)	Yes	103	103	0	69.2	69.2	112.4	79.9	
AC-5	Unitary AC/ Cond. (no elec. resistance)	AC, air cooled, package (3 phase)	Yes	120	120	0	129.95	129.95	254	146	
AC-6	Unitary AC/ Cond. (no elec. resistance)	AC, air cooled, package (3 phase)	Yes	178	178	0	159.53	159.53	385	281.3	
Table Cont	tinued										

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

ERTIFICATE OF	COMPLIANCE								NRCC-MCH-	
roject Name:	TRUAX THEAT	ER HVAC REPLA	CEMENT				Report Pag	ge:	Page 5 of 1	
oject Address:	400 Rancho d	el Oro Dr, Ocea	nside 920	57			Date Prepa	ared:	2021-11-2	
01	0	2	03	04	05	06		07	08	
Fan Name or	Fan Fu	nction	Qty	Maximum Design Supply Airflow	HP Unit ²	Design	Fan Power Pressure Dro		op Adjustment - <u>Table 140.4-B</u>	
Item Tag			5.	(CFM)		HP	l	Device	Design Airflow through Device (CFM)	
AC-4	Sup	ply	1	3,110	внр	1.4	Nor	e used		
							Calculated A	djustment (in H ₂ O)		
Total System	Design Supply	Airflow (CFM):	3,110	D Total	System Design	B)HP:	1.4	Maximum Sys	tem Fan Power (B)HP:	
/stem Name:	AC-5	Economizer:	1 Di	fferential Enthalpy	Economize Controls:	r Desigi	ned per §140.4 and (m)	l(e) System Fan Type:	Variable Air Volume	
01	0.	2	03	04	05	06		07	08	
an Name or Item Tag	Fan Fu	nction	Qty	Maximum Design Supply Airflow	HP Unit ²	Design HP	Fan Power Pressure Dro		pp Adjustment - <u>Table 140.4-B</u>	
							Device			
AC-5	Sup	ply	1	4,200	ВНР	1.41	Calculated A	diustment (in H ₂ O)		
						i				
Total System	Design Supply	Airflow (CFM):	4,200	D Total	System Design	B)HP:	1.41	Maximum Sys	tem Fan Power (B)HP:	
stem Name:	AC-6	Economizer:	1 Di	fferential Enthalpy	Economize Controls:	r Desigi	ned per §140.4 and (m)	(e) System Fan Type:	Variable Air Volume	
01	0	2	03	04	05	06		07	08	
an Name or	Fan Fu	nction	Qty	Maximum Design Supply Airflow	HP Unit ²	Design	Fan	Power Pressure Dro	Prop Adjustment - <u>Table 140.4-B</u>	
Item Tag				(CFM)		нр		Device	Design Airflow through Device (CFM)	
AC-6	Sup	ply	1	6,000	ВНР	3.81	Nor	e used		
							Calculated Adjustment (in H ₂ O)			
ble Continued										
Building Energy	/ Efficiency Stand	lards - 2019 Nonr	residential (Compliance: <u>http://ww</u>	/w.energy.ca.gov/	itle24/201	<u>9standards</u>		September 202	

NRCC-MCH-E (Created 09/2020)	C	CALIFORNIA ENERGY COMMISSION			
CERTIFICATE OF COMPLIANCE		NRCC-MCH-E			
Project Name: TRUAX THEATER HVAC REPLACEMENT	Report Page:	Page 8 of 13			
Project Address: 400 Rancho del Oro Dr, Oceanside 92057	Date Prepared:	2021-11-29			

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

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

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

September 2020

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 determined in accordance with the California Building Code. 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 250ft² or smaller, multipurpose rooms less than 1,000ft², 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 <u>§130.1(c)</u>.

K. TERMIN	AL BOX CO	NTROLS			?		
This Section	Does Not Ap	ply					
L. DISTRIB	UTION (DUG	TWORK AND PIPING)			?		
This Section	Does Not Ap	ply					
M. COOLIN	M. COOLING TOWERS						
This Section	This Section Does Not Apply						
N. DECLAR	ATION OF F	EQUIRED CERTIFICATES OF INSTALLATION			?		
Table Instru Table E. Add title24/2019	ctions: Select ditional Remo Əstandards/2	ions have been made based on information provided in previous tables of this document. rks. These documents must be provided to the building inspector during construction and D19_compliance_documents/Nonresidential_Documents/NRCI/	If any selection needs to be changed can be found online at <u>https://www</u>	d, please expla v.energy.ca.go	nin why in		
VEC	NO	Form/Title	Systems To Bo Field Varified	Field In	spector		
TES	NO	Formy fille	Systems to be rield verified	Pass	Fail		
۲		NRCI-MCH-01-E - Must be submitted for all buildings.	AC-3 THRU 7				

TATE OF CA	LIFORNIA	
Mechar	nical Systems	
RCC-MCH-E	(Created 09/2020)	
CERTIFICA	TE OF COMPLIANCE	
Project Na	me: TRUAX THEATER H\	/AC REPL
Project Ad	dress: 400 Rancho del Orc	Dr, Oce
Dry Syster	n Equipment Sizing (includ	les air co
01	02	
Name or Item Tag	Equipment Category per <u>Tables 110.2</u>	
AC-7	Unitary AC/ Cond. (no elec. resistance)	AC,

building per <u>§140.4(a)</u>. Healthcare facilities are excepted. ⁴ Authority Having Jurisdiction may ask for load calculations used for compliance per <u>§140.4(b)</u>.

by system equipment enciency (other than rackage reminiar Air Conditioners (FTAC) and rackage reminiar heat runnys (FTAF))									
01	02	03	04	05	06	07	08	09	
			Heating M	ode			Cooling Mode		
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Min Efficiency Required per <u>Tables 110.2</u> / <u>Title 20</u>	Design Efficiency	Efficiency Unit	Min Efficiency Required per <u>Tables 110.2</u> / <u>Title 20</u>	Design Efficiency	
٨٢-3	>65 000 and <135 000					EER	11	12	
AC-5	205,000 and <155,000					IEER	12.7	13.8	
	>65 000 and <125 000					EER	11	12	
AC-4	205,000 and <155,000					IEER	12.7	13.8	
	>125 000 and <240 000					EER	10.8	12.2	
AC-5	2155,000 and <240,000					IEER	12.2	13.9	
10.6	>125,000 and <240,000					EER	10.8	12	
AC-0	≥135,000 and <240,000					IEER	12.2	13.5	
Table Cont	tinued								

STATE OF CALIFORNIA	

September 2020

Aechanical Systems					
RCC-MCH-E (Create	ed 09/2020)				
CERTIFICATE OF	COMPLIANCE				
Project Name:	TRUAX THEATER HVAC REPL				

roject Address:	400 Rancho del Oro Dr, Oc
able Continued	
Total System I	Design Supply Airflow (CFM

System Name:	AC-7	Economize			
01	02				
Fan Name or Item Tag	Fan Function				
AC-7	Suppl	ý			

Total System	Design	Supply	Airflow	(CFM)

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

I. SYSTEM CONT	. SYSTEM CONTROLS											
Table Instruction	Table Instructions: Complete the following Table to demonstrate compliance with mandatory controls in §110.2 and §120.2 and prescriptive controls in §140.4(f) and (n) or											
requirements in <u>§</u>	requirements in <u>§141.0(b)2E</u> for altered space conditioning systems.											
01	02	03	04	05	06	07	08	09				
System Name	System Zoning	Conditioned Floor Area Being Served (ft ²)	Thermostats <u>§110.2(b) & (c)¹,</u> <u>§120.2(a)</u> or <u>§141.0(b)2E</u>	Shut-Off Controls <u>§120.2(e)</u>	Isolation Zone Controls <u>§120.2(g)</u>	Demand Response §110.12 and §120.2(b)	Supply Air Temp. Reset <u>§140.4(f)</u>	Window Interlocks per <u>§140.4(n)</u>				
AC-3	single zone	≤ 25,000 ft²	EMCS	EMCS	NA: Single Zone	EMCS	NA: Single Zone	NA: No operable windows				
AC-4	single zone	≤ 25,000 ft²	EMCS	EMCS	NA: Single Zone	EMCS	NA: Single Zone	NA: No operable windows				
Table Continued		•			•	•	•	•				

CA Building Energy Efficiency Standards - 2019 No

STATE OF CAL	IFORNIA				
Mechan	ical Syste	ems			
NRCC-MCH-E	(Created 09/202	20)	CALIFORI	NIA ENERGY COMI	
CERTIFICAT	TE OF COMPI	LIANCE			NRCC-MCH-
Project Name: TRUAX THEATER HVAC REPLACEMENT Report Page:					Page 9 of 1
Project Add	dress: 400 R	ancho del Oro Dr, Oceanside 92057 Dat	e Prepared:		2021-11-2
		RECHURED CERTIFICATES OF ACCEPTANCE			୭
Table Insta	wational Cal	actions have been made based on information provided in providue tables of this desur	ant If any coloction poods to be about	and planes and	
Table F Ad	lditional Rem	ections have been made based on injormation provided in previous tables of this docum parks. These documents must be provided to the building inspector during construction	and can be found online at https://www	yeu, pieuse exp w energy ca a	
title24/201	9standards/	2019 compliance documents/Nonresidential Documents/NRCA/	and can be jound on me at <u>maps.//ww</u>	w.energy.cu.g	01/
11102-1/201	Jocunation				
YES	NO	Form/Title	Systems To Be Field Verified	Field In	ispector
125		i oni i nic	Systems to be field vermed	Pass	Fail
		NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units			
\bigcirc	0	Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VED	AC-3 THRU 7		
		Acceptance (if applicable) since testina activities overlap.			
		NPCA MCH 02 A Constant Valume Single Zone HVAC			
		NOTE: This form does not automatically move to "Ves" If Constant Volume Single Zore			
0	۲	HVAC Systems are included in the scope nermit applicant should move this form to			
		"Yes".			
-	-				
0	۲	NRCA-MCH-04-A Air Distribution Duct Leakage			
۲	0	NRCA-MCH-05-A Air Economizer Controls	AC-3 THRU 7		
		NRCA-MCH-06-A Demand Control Ventilation Systems Acceptance must be submitte	d		
۲	0	for all systems required to employ demand controlled ventilation (refer to §120.1(c)	AC-3 THRU 7		
		can vary outside ventilation flow rates based on maintaining interior carbon dioxide			
		(CO2) concentration setpoints.			
	0	NPCA MCH 07 A Supply For Variable Flow Controls			
U		NKCA-MCH-07-A Supply Fail variable Flow Controls	AC-3 THRO 7		
\sim					
0		NRCA-MCH-08-A Valve Leakage Test			
~	-				
O	۲	NRCA-MCH-09-A Supply Water Temperature Reset Controls			
0	۲	NRCA-MCH-10-A Hydronic System Variable Flow Controls			
0	۲	NRCA-MCH-11-A Automatic Demand Shed Controls			

CA Buildi	ng Energy Efficiency Standar	ds - 2019 Nonresidential Co	ompliance: <u>http://www</u>	v.energy.ca.gov/title24/2019standards

					CALIF	ORNIA ENERG	GY COMMISSI	
							NR	CC-MCH-E
ACEMENT		Report	Page:				Pa	age 3 of 13
anside 92057		Date P	repared:				2	021-11-29
onditioners, condensers, heat pumps, VRF, furnaces and unit heaters)								
03	04	05	06	07	08	09	10	11
		Equip	ment Sizing	g per Mech	anical Sche	dule (kBtu	/h) <u>§140.4</u>	(a&b)
		Heating Output ^{2,3} Co			Cooling C	Output ^{2,3}	Load Calc	ulations ^{3,4}
Equipment Type per Tables 110.2 & <u>Title 20</u>	Smallest Size Available ¹ <u>§140.4(a)</u>	Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
air cooled, package (3 phase)	Yes	178	178	0	159.53	159.53	385	281.3

¹ FOOTNOTES: 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 ² It 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.

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

									CALIFORNIA ENERGY COI		
									4	NRCC-MC	I-E
AC	CEMENT			1	Report Pag	ge:				Page 6 of	13
an	side 92057	,			Date Prepa	ared:				2021-11	-29
]						
	6,000	Tot	al System Design	(B)HP:	3.81	N	/laximum Sys	tem	Fan Power (B)HP:		
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	Otv	Maximum Desigr	HP Lipit ²	Design	Fan	n Power	r Pressure Dr	op Ac	djustment - <u>Table 14</u>	<u>10.4-B</u>	
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¹ FOOTNOTE: Computer room economizers must meet requirements of $\frac{§140.9(a)}{a}$ and will be documented on the NRCC-PRC-E document.

onresidential Compliance: http://www.energy.ca.gov/title24/2019standards

September 2020

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	roject Address: 4	100 Rancho d	el Oro Dr, Oceanside 92057	Date P	repared:		2021-11-29
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Topole America used that DD US DE Contraction State State AC Date Prepared 2021-112 December 2010 Compliance documentation is accurate and complete. Documentation Author Signature: Documentation Author Si	roject Name: T	RUAX THEAT	ER HVAC REPLACEMENT	Report	Page:		Page 13 of 13
Lording that this Certificate of Compliance documentation is accurate and complete. Documentation Author Name: TEQUAS PERSION Documentation Author Signature Documentation Author Signature Signapay: ELAR EXEMPTED Signature Davie Documentation Author Signature Documentation Author Signature Signapay: ELAR EXEMPTED Signature Davie Documentation Signature Documentation Name: Documentation Name: Signature Davie Signature Davie Documentation Name: Do	OCUMENTATIO	N ALITHOP	ei Uro Dr, Uceanside 92057	Date P	repared:		2021-11-29
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	OF COMPLIA	NCF			NRCC-MCH-F	
roject Name:	TRUAX	HEATER HVAC REPLACEMENT	Report Page:		Page 11 of 13	Project Name: TRUAX THEATER HV/
roject Addre	ss: 400 Rar	cho del Oro Dr, Oceanside 92057	Date Prepared:		2021-11-29	Project Address: 400 Rancho del Oro
DECLARAT		OUIRED CERTIFICATES OF VERIFICATION			2	O. MANDATORY MEASURES DOCL
able Instruct	ions: Selecti	ons have been made based on information provided in previou	is tables of this document. If any selection needs to	o be changed, please expl	ain why in	Table Instructions: Indicate where mai
able E. Addit	ional Rema	ks. These documents must be completed by a HERS Rater and	provided to the building inspector during construc	tion. The final document	s must be	the plan sheet or construction docume
reated by a H	IERS Provide	rs registry, but drafts can be found online at <u>https://www.end</u>	ergy.ca.gov/title24/2019standards/2019_complian	nce_documents/		
onresidentia	I_Documen	<u>s/nrcv/</u>		Ciald In		
YES	NO	For	n/Title	Field Ir	ispector	Compliance with Mandatory Measure
				Pass	Fail	MCH Mandatory Measures Note Block
0	۲	NRCV-MCH-04-H Duct Leakage Test				
		NOTE: Must be completed by a HERS Rater				
0	۲	NRCV-MCH-24 Enclosure Air Leakage Worksheet NOTE: Must be completed by a HERS Rater				
		NRCV-MCH-27 High-rise Residential				
0	۲	NOTE: Must be completed by a HERS Rater				
~		NRCV-MCH-32 Local Mechanical Exhaust	· · · · · · · · · · · · · · · · · · ·			
0		NOTE: Must be completed by a HERS Rater				

			NRCC-MCH-E	
ACEMENT		Report Page:	Page 12 of 13	
anside 92057		Date Prepared:	2021-11-29	
ATION LOCATI	ON		?	
measures are do	ocumented in the plan set or	construction documentation. For any mandate	ory measures that do not apply, mark	
tion as "N/A", an	y active cells that are left bla	nk will result in non-compliance in Table C.		
1		02		
J1		Plan sheet or construction document location		
mented through				
Ŭ	Yes	M0.3	1	

nresidential Compliance: <u>http://www.energy.ca.gov/title24/2019standards</u>

September 2020



EL CAMINO HIGH SCHOOL MECHANICAL ENERGY FORMS





	IDENTIFICATION STAMP DIV. OF THE STATE ARCHIT APP: 04-120740 INC: REVIEWED FOR SS ☑ FLS ☑ ACS DATE: 03/03/2022	ECT
	11455 EL CAMINO REAL SUITE 480, SAN DIEGO, CA 92130 916.095.0400 P 916.927.44444 D LEAFengineers.com BEAMprof.com	OCEANSIDE UNIFIED SCHOOL DISTRICT
	Diffied School Dis "Guiding Our Students to Bright Futures	le
	No. M 36155 Exp. 09-30-2022	DINEER
CL PF	IENT OCEANSIDE USD	
DA	P2136900ME NTE OCTOBER 15, 2021	
DF CF	AAMN BY AA IECKED BY	
RE No.	SWL VISIONS Description	Date
	REVIEW SET EL CAMINO HIGH SCHOOL MECHANICAL SITE PLAN	



		(IDENTIFICATION STA DIV. OF THE STATE ARC APP: 04-120740 INC	MP HITECT
1.	CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND SIZES OF ALL EXISTING EQUIPMENT, DUCTWORK CURPS FIRE ALARM SHUTOFF DELAYS ACCESSORIES FOR DESCRIPTIONS	ļ	SS I FLS I A DATE: 03/03/2022	.cs 🗹
2.	(E) AC-3, (E) AC-4, (E) AC-5, (E) AC-6 & (E) AC-7 SHALL BE DEMOLISHED WITH ALL ASSOCIATED			
3.	DUCTWORK, PLENUM, WIRING, PIPING, ACCESSORIES, ETC. EXISTING ROOF CURB TO REMAIN. REPLACE (E) BREAKER AND DISCONNECT. CONFIRM EXISTING WIRE SIZE IS ADEQUATE FOR NEW A/C UNIT. PULL NEW WIRE FROM MAIN PANEL IF REQUIRED.		11455 EL CAMINO REA SUITE 480, SAN DIEGO, CA 92130 916.695.0400 P 916.927.44444 D LEAFengineers.com BEAMprof.com	L)
	KEY NOTES		ROVEMENTS ESS LADDER	OL DISTRICT
1	(N) A/C UNIT. (E) ROOF CURB SHALL BE REPAIRED AND PAINTED FOR INSTALLATION OF NEW A/C UNIT.			SCHO
2	DISCONNECT (E) DUCT AT POINT OF DISCONNECT (@ EXISTING WALL) AND RECONNECT TO (N) LINED DUCT WITH A LINED TRANSITION.		A Z	IED (
3	DISCONNECT (E) DUCT AT POINT OF DISCONNECT (ABOVE EXISTING ROOF) AND RECONNECT TO (N) DUCT WITH A TRANSITION.			UNIF
4	(N) 24"x20" LINED SA & RA DUCT ON ROOF.			IDE
6	DISCONNECT (E) GAS LINE AT POINT OF DISCONNECT AND RECONNECT TO NEW A/C UNIT.			ANS
7	DISCONNECT (E) CONDENSATE DRAIN LINE AT POINT OF DISCONNECT AND RECONNECT TO NEW A/C UNIT.		AX H	OCE
8	DISCONNECT, PROTECT IN PLACE AND RECONNECT TO (E) FIRE ALARM SHUT DOWN RELAY.			
			$\vdash \mathbf{c}$	
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			Oceans	ide
			*Guiding Our Students to Bright F	utures"
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		Г	PROFESS/ON	
			DAVID WAY	ENGIN
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		C R	HECKED BY SWL EVISIONS	
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			REVIEW SET	
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			HIGH SCHOO	L -
			ROOF PLAN	
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No.	Description	Date
	REVIEW SET	
	EL CAMINO	
	HIGH SCHOOL	
	MECHANICAL	
	ROOF PLAN	

	ROOFTOP PACKAGED AIR CONDITIONING UNIT (GAS/ELECTRIC) SCHEDULE																																			
UNIT	MANUFACTURER & MODEL NO.		SERVICE	SIZE (TONS) CFM ESP (IN. WG)	ESD	CO	OLING CAP (MBH)	EVAP. E AIR TEMI	ENT. EVAP. LEAV. R AIR (°F) IP. TEMP.				HEATING CAPACITIES		AFUE	INDOOR FAN			С	COMPRESSOR				ELECTRICAL						OP W (LE	ER. T. 3S)	000				
		TYPE			N. WG)	EER SEER TOTA	AL SENS.	(°F) DB	WB	(°F DB	⁼) WB	SUMMER	WINTER DB	INPUT OUTPUT (MBH) (MBH)	OUTPUT (MBH)	(%)	NO. F	RPM	BHP	DRIVE	NO.	RLA	LRA	OI NO.	FM IFI (FLA) (FL	M A)	MBUSTION MOTOR (FLA)	VF	PHASE HZ	POWER SUPPLY MCA	POWER SUPPLY MCOP	DIMENSIONS	EXISTING NEW	NEW	CFM	REMARKS
$\left(\begin{array}{c} AC \\ 3 \end{array} \right)$	CARRIER 48HCDD08A1A5	HORIZONTAL DISCHARGE	FOYER B102	7.5 2,250	0.5	12.0 13.8 91 -	69	81.1	65.0	52.6	52.1 8	5.0 67.0	37.0	90.0 125.0	73.0 103.0	82.0	1	620	0.58	BELT	2	13.6 EA	83.0 EA	2	1.5 5.8 EA	8	0.48	208	3 60	40.0	50	MERV 13 (4) 20"x20"x2"	1,050	925+111	1270	SEE NOTES #1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
$\left(\begin{array}{c} AC \\ 4 \end{array} \right)$	CARRIER 48HCDD08A2A5	VERTICAL DISCHARGE	GREEN RM. B112 DRAMA CL B113	7.5 3,110	0.75	12.0 13.8 94 -	74	80.0	67.0	58.1	57.5 80	0.0 67.0	37.0	90.0 125.0	73.0 103.0	82.0	1	818	1.40	BELT	2	13.6 EA.	83.0 EA.	2	1.5 EA. 7.	1	0.48	208	3 60	41.0	50	MERV 13 (4) 20"x20"x2"	1,150	960+60	730	SEE NOTES #1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15
$\left(\begin{array}{c} AC \\ 5 \end{array} \right)$	CARRIER 48HCDD14A1A5	HORIZONTAL DISCHARGE	STAGE B110	12.5 4,200	0.6	12.2 13.9 155 -	130	85.0	67.0	56.3	55.1 8	5.0 67.0	37.0	120.0 150.0	96.0 120.0	80.0	1	600	1.41	BELT	2	19.6 EA.	136 EA.	3	1.5 8.0 EA.	6	0.48	208	3 60	58.0	70	MERV 13 (4) 20"x20"x2"	1,250	1430+134	4200	SEE NOTES #1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
$\left(\begin{array}{c} AC \\ 6 \end{array} \right)$	CARRIER 48HCDD17A3A5	VERT. SUPPLY HORIZ. RETURN	AUDITORIUM B108	15.0 6,000	1.25	12.0 13.5 190 -	160	85.0	67.0	57.9	56.0 8	5.0 67.0	37.0	176.0 220.0	142.0 178.0	81.0	1	920	3.81	BELT	2	25.0 EA.	164 EA.	3	1.5 EA. 13	3.6	0.52	208	3 60	74.4	90	MERV 13 (6) 20"x25"x2"	2,750	1923+275+330	4357	SEE NOTES #1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16
AC 7	CARRIER 48HCDD17A3A5	VERT. SUPPLY HORIZ. RETURN	AUDITORIUM B108	15.0 6,000	1.25	12.0 13.5 190 -	160	85.0	67.0	57.9	56.0 8	5.0 67.0	37.0	176.0 220.0	142.0 178.0	81.0	1	920	3.81	BELT	2	25.0 EA.	164 EA.	3	1.5 EA. 13	3.6	0.52	208	3 60	74.4	90	MERV 13 (6) 20"x25"x2"	2,750	1923+275+330	4357	SEE NOTES #1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16

NOTES:

1. SCHEDULED LOADS INCLUDE FAN AND MOTOR HEAT. 2. RECONNECT ALL EXISTING FIRE ALARM DEVICES.

RECONNECT ALL LAISTING TIRE ALARM DEVICES.
 PROVIDE FACTORY "MICROMETL" MODULATING ECONOMIZER. PROVIDE WITH LOCKING MESH COVER.
 PROVIDE DEMAND CONTROL VENTILATION (DCV) WITH CO2 SENSORS AS PER T24.
 PROVIDE UNIT WITH NEW CURB ADAPTER.
 PROVIDE NEW EQUIPMENT PLATFORM
 NOT UPED

7. NOT USED

PROVIDE FACTORY MOUNTED NON-FUSED DISCONNECT SWITCH.
 PROVIDE FACTORY MOUNTED, NON-POWERED CONVENIENT OUTLET.
 PROVIDE FACTORY CONDENSER COIL GUARDS.

11. UNIT SHALL BE CONTROLLED BY EXISTING EMS. 12. HORIZONTAL & VERTICAL DISCHARGE DUCTS CONNECTIONS TO UNIT SHALL BE PROVIDED WITH DUCT FLEX CONNECTIONS.

13. ALL AC UNITS SHALL HAVE R-410A REFRIGERANT.

PROVIDE FLUE EXTENSION UP TO TOP OF UNIT.
 PROVIDE 2-SPEED INDOOR FAN VFD WITH CONTROLLER.

16. PROVIDE UNIT WITH MICROMETL HORIZONTAL RETURN AIR CONVERSION KIT.







	SUBMITTAL MicroMet
	FORM NO. 10457-2P DATE: 1/10
	SUBMITTED TO:
	 USE FOR: New Unit - 48/50TC 17-28; 50TCQ 17,24; 48/50HC 17 Existing Unit - 48/50 TJ,HJ,HJQ,DP,DR 016-028 using CRRFCURB012A00 or CRRFCURB013A00 curb
	48/50TC 24-28; 50TCQ 24; 48/50HC 20-24 Unit
	Existing – curb MicroMetl Kit Includes KIT-HE1825-HORZCNV CA-CAR-HE3F-CAR-528
	 Option #2 Changeout Process: 1. Install standard curb adaptor on existing side discharg 2. Modify existing return duct to attach to new MRT unit, to curb adaptor. 3. Kit converts vertical return to horizontal return, and in return opening and bottom cover panel. MicroMetl PI 4. Contractor to reinforce existing curb as required.
	THIS DOCUMENT IS THE PROPERTY OF MICROMETL CORPORATIO MICROMETL CORP 3035 NORTH SHADELAND AVE
2	AC 6 & 7 RETURN AIR DISC
	MicroMetl Date: 10/2019 WEIC SUBMITTED TO: COMPANY: EXISTING UNIT: Company:
	CURB ADAPTER INFORMATION: 1. BEFORE ORDERING CURB ADAPTER, CONTRACTOR MUST CONFIRM THE
	DIMENSIONS OF THE EXISTING CURB ON THIS DRAWING 2. BEFORE NEW HVAC UNIT IS SET IN PLACE, INSPECT STRUCTURAL STABILITY OF EXISTING CURB AND BUILDING'S ROOF LOAD CARAPHILITY DEINEOPCE IE
	3. ALL CURB ADAPTERS WILL INCREASE THE SYSTEM'S EXTERNAL STATIC PRESSURE AND MUST BE INCLUDED WHEN CALCULATING UNIT REQUIREMENTS
	11/16"
	THIS DOCUMENT IS THE PROPERTY OF MICROMETL CORPOR MANUFACTURER RESERVES THE RIGHT TO DISCONTINUE, OR CHANGE AT MICROMETL CORP * 3035 N. SHADELAND AVE., STE 300 * INDIANAPOLIS, I
1	AC 6 & 7 CURB ADAPTER
	NOT TO SCALE



