ABOVE AIR CONDITION ABOVE FINISH F ANNUAL FUEL U ANALOG INPUT ANALOG OUTPU ACCESS PANEL
BACKDRAFT DA BELOW BUILDING BRITISH THERM
CEILING DIFFUS CUBIC FEET PE CARBON MONO COMPRESSOR CONTINUATION
DIRECT DIGITAL DEGREE DIGITAL INPUT DIAMETER DOWN DIGITAL OUTPU DOWN THRU RC DOUBLE WALL I DRAWING DIRECT EXPANS
EXISTING EXHAUST AIR EXHAUST AIR D ENTERING AIR T ENERGY EFFICI EFFICIENCY EXHAUST GRILL ENERGY MANAG EQUIPMENT EXTERNAL STAT ENTERING WAT
FRESH AIR INTA FLOOR FINS PER INCH FOOT, FEET
GAUGE GALVANIZED IR GALLONS PER M
HORSEPOWER HOUR HEATING VENTI HOT WATER HERTZ
INCHES
KILOWATT
LINED DUCT LEAVING AIR TE POUND LEAVING WATEI

		MECHAN
\boxtimes	CD	CEILING DIFFUSER - SUPPLY
	SAD	SUPPLY AIR DUCT - RISER
\times	SAD	SUPPLY AIR DUCT - DROP
	RAG	RETURN AIR GRILLE
	RAD	RETURN AIR DUCT - RISER
/	RAD	RETURN AIR DUCT - DROP
\square	EAG	EXHAUST AIR GRILLE
	EAD	EXHAUST AIR DUCT - RISER
\leq	EAD	EXHAUST AIR DUCT - DROP
K	SWS	SIDE WALL SUPPLY GRILLE
┨╍┷	SWR	SIDE WALL RETURN/EXHAUST GRIL
UP->		DUCT OFFSET UP
		DOUBLE WALL DUCT
//////		DUCT OR EQUIPMENT TO BE REMO
ન		EXISTING DUCT TO REMAIN
'ı		DUCT
→		DUCT TRANSITION
<u> </u>	MVD	MANUAL VOLUME DAMPER
BDD	BDD	BACKDRAFT DAMPER
-		AUTOMATIC FIRE DAMPER
	CSFD	COMBINATION SMOKE/FIRE DAMPE
–chws–		CHILLED WATER SUPPLY PIPE
–CHWR–-		CHILLED WATER RETURN PIPE
—HWS—₹		HOT WATER SUPPLY PIPE
—HWR— ∖		HOT WATER RETURN PIPE
–cws–-∖		CONDENSER WATER SUPPLY PIPE
–CWR–− \		CONDENSER WATER RETURN PIPE
—MPS—∖		MEDIUM PRESSURE STEAM
—мрс—і		MEDIUM PRESSURE CONDENSATE

MECHANICAL ABBREVIATIONS

	- M -	
ABOVE	MA	MIXED AIR
AIR CONDITIONER	MAX	MAXIMUM
ABOVE FINISH FLOOR	MB	MACHINE BOLT
ANNUAL FUEL UTILIZATION EFFICIENCY	MBH	1000 BRITISH THERMAL UNITS PER HOUR
ANALOG INPUT	MCA	MINIMUM CIRCUIT AMPACITY
ANALOG OUTPUT	MECH	MECHANICAL
ACCESS PANEL	MFR	MANUFACTURER
	MIN	MINIMUM
BACKDRAFT DAMPER	MOCP	MAXIMUM OVERCURRENT PROTECTION
BELOW	MS	MOTOR STARTER
BUILDING	MTD	MOUNTED
BRITISH THERMAL UNITS PER HOUR	- N -	
	NC	NOISE CRITERIA
CEILING DIFFUSER	NC	NORMALLY CLOSED
CUBIC FEET PER MINUTE	NG	NATURAL GAS
CARBON MONOXIDE	NIC	NOT IN CONTRACT
COMPRESSOR	NO	NORMALLY OPEN
CONTINUATION	NPS	NOMINAL PIPE SIZE
	NTS	NOT TO SCALE
DIRECT DIGITAL CONTROL	- 0 -	
DEGREE	OA	OUTSIDE AIR
DIGITAL INPUT	OC	ON CENTER
DIAMETER	ODP	OUTDOOR DRIP PROOF
DOWN	OPER	OPERATING
DIGITAL OUTPUT	OSA	OUTSIDE AIR
DOWN THRU ROOF	- P -	
DOUBLE WALL DUCT	P.D.	PRESSURE DROP
DRAWING	PH	PHASE
DIRECT EXPANSION	PSI	POUNDS PER SQUARE INCH
	- Q -	
EXISTING	QTY	QUANTITY
EXHAUST AIR	- R -	
EXHAUST AIR DUCT	RA	RETURN AIR
ENTERING AIR TEMPERATURE	RAD	RETURN AIR DUCT
ENERGY EFFICIENCY RATIO	RG	RETURN GRILLE
EFFICIENCY	RL	REFRIGERATION LIQUID
EXHAUST GRILLE	RPM	REVOLUTIONS PER MINUTE
ENERGY MANAGEMENT SYSTEM	RS	REFRIGERATION SUCTION
EQUIPMENT	- S -	
EXTERNAL STATIC PRESSURE	SA	SUPPLY AIR
ENTERING WATER TEMPERATURE	SAD	SUPPLY AIR DUCT
	SENS	SENSIBLE
FRESH AIR INTAKE	SF	SUPPLY FAN
FLOOR	SMS	SHEET METAL SCREW
FINS PER INCH	S.P.	
FOOT, FEET	SQ	SQUARE
	S/S	STAINLESS STEEL
GAUGE	SWR	SIDEWALL RETURN GRILLE
GALVANIZED IRON	SWS	SIDEWALL SUPPLY GRILLE
GALLONS PER MINUTE	SYM	SYMBOL
	- T -	
HORSEPOWER	TDH	TOTAL DYNAMIC HEAD
HOUR	TG	TRANSFER GRILLE
HEATING VENTILATING AND AIR CONDITIONING	TSTAT	THERMOSTAT
HOT WATER	TYP	TYPICAL
HERTZ	- U -	
	UNO	UNLESS NOTED OTHERWISE
INCHES	UTR	UP THRU ROOF
	- V -	
KILOWATT	VAC	VOLTS ALTERNATING CURRENT
	VFD	VARIABLE FREQUENCY DRIVE
LINED DUCT	- W -	
LEAVING AIR TEMPERATURE	WT	WEIGHT
POUND	W/	WITH
LEAVING WATER TEMPERATURE	-	

MECHANICAL SYMBOLS

NG DIFFUSER - SUPPLY	X -		PRESSURE REDUCING VALVE
PLY AIR DUCT - RISER			ISOLATION VALVE (BALL)
PLY AIR DUCT - DROP	IL		ISOLATION VALVE (BUTTERFLY)
IRN AIR GRILLE			MOTORIZED CONTROL VALVE
IRN AIR DUCT - RISER	N		CHECK VALVE
IRN AIR DUCT - DROP			THERMOMETER
UST AIR GRILLE	P		PRESSURE GAUGE
AUST AIR DUCT - RISER	2">		SMACNA DUCT STATIC PRESSURE
UST AIR DUCT - DROP	\bigcirc	POD	POINT OF DEMOLITION
WALL SUPPLY GRILLE	•	POC	POINT OF CONNECTION
WALL RETURN/EXHAUST GRILLE	М	мото	RIZED DAMPER
OFFSET UP			
BLE WALL DUCT	(T)/(TS)		THERMOSTAT / SENSOR. MOUNT @ +48" AFF (IF MOUNTED OVER CASEWORK OR OTHER OBSTRUCTION
OR EQUIPMENT TO BE REMOVED			46" TO TOP OF DEVICE).
TING DUCT TO REMAIN	(TC)		TIME CLOCK
г	DD		DUCT SMOKE DETECTOR (MOUNT BELOW ROOF)
TRANSITION			CARBON DIOXIDE SENSOR FOR OUTSIDE AIR MODULATION
JAL VOLUME DAMPER			
(DRAFT DAMPER	<u>D,</u> 1.0 └_ →	DL	DOOR LOUVER W/ MINIMUM FREE AREA (SQ. FT.)
DMATIC FIRE DAMPER	U/ _C ►	UC	UNDER CUT DOOR
BINATION SMOKE/FIRE DAMPER	X	– DETAIL NUMBE	
ED WATER SUPPLY PIPE		NOND	DETAIL DESIGNATION
ED WATER RETURN PIPE		- DRAWI NUMBE	-
WATER SUPPLY PIPE		- EQUIPI	
WATER RETURN PIPE	$\langle \downarrow \downarrow \rangle$	DESCH	RIPTION EQUIPMENT DESIGNATION
DENSER WATER SUPPLY PIPE	T	- EQUIPI NUMBE	
DENSER WATER RETURN PIPE			
UM PRESSURE STEAM			

MECHANICAL MANDATORY MEASURES

EQUIPMENT AND SYSTEMS EFFICIENCY ANY APPLICANCE FOR WHICH THERE IS A CALIFORNIA STANDARD ESTABLISHED IN THE APPLIANCE EFFICIENCY STANDARDS SHALL COMPLY WITH THAT STANDARD.

PIPING, EXCEPT THOSE CONVEYING LIQUIDS WITH A DESIGN OPERATING TEMPERATURE BETWEEN 60 DEG F AND 105 DEG F, OR WITHIN SPACE CONDITIONING EQUIPMENT CERTIFIED UNDER STD. 110.1 OR STD. 110.2, SHALL BE INSTALLED IN ACCORDANCE WITH STD 120.2.

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

VENTILATION

CONTROLS SHALL BE PROVIDED TO ALLOW OUTSIDE AIR DAMPERS OR DEVICES TO BE OPERATED AT THE VENTILATION RATES AS SPECIFIED IN THESE PLANS.

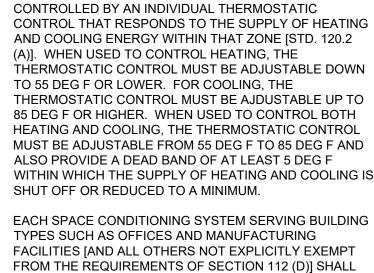
ALL GRAVITY VENTILATING SYSTEMS SHALL BE PROVIDED WITH AUTOMATIC OR READILY ACCESSIBLE MANUALLY OPERATED DAMPERS IN ALL OPENINGS TO THE OUTSIDE.

AIR BALANCING: ALL SPACE CONDITIONING AND VENTILATION SYSTEMS SHALL BE BALANCED TO THE QUANTITIES SPECIFIED IN THESE PLANS, IN ACORDANCE WITH THE ASSOCIATED AIR BALANCE COUNCIL (AABC) NATIONAL STANDARDS.

GRAVITY OR AUTOMATIC DAMPERS INTERLOCKED AND CLOSED ON FAN SHUTDOWN SHALL BE PROVIDED ON THE OUTSIDE AIR INTAKES AND DISCHARGES OF ALL SPACE CONDITIONING AND EXHAUST SYSTEMS.

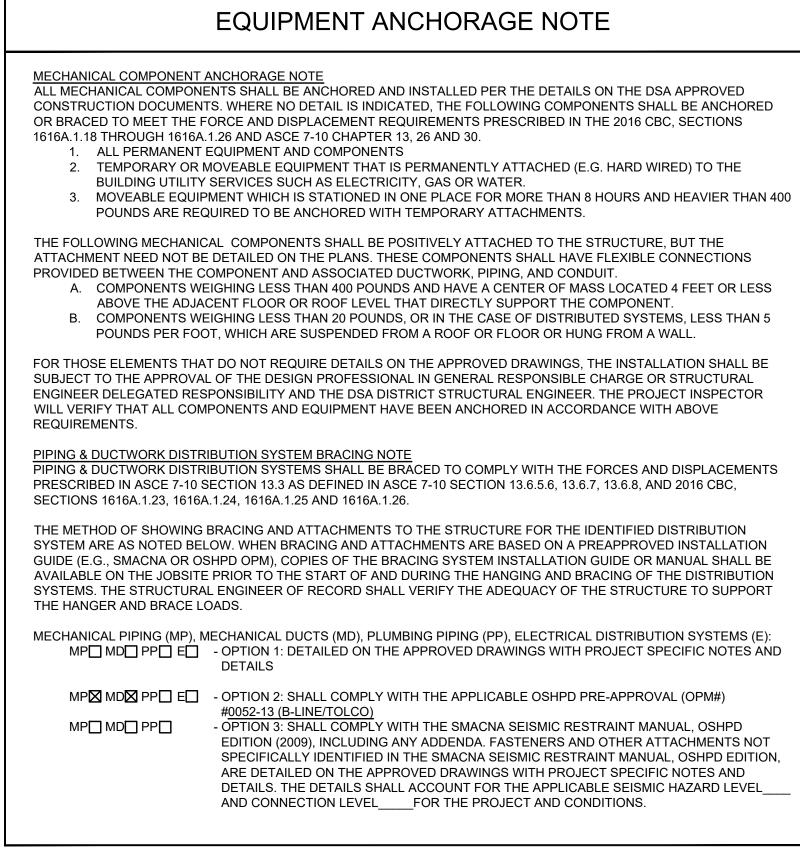
FANS USED FOR VENTILATION SHALL OPERATE CONTINUOUSLY DURING OCCUPIED HOURS.

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



INTERRUPTED.

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



ACCEPTANCE TESTING

MANDATORY ACCEPTANCE TESTING PER TITLE 24, PART 6 SHALL BE AS FOLLOWS: AN AABC AGENCY SHALL ACT AS THE ACCEPTANCE AGENT AND PERFORM WORK REQUIRED IN THE FOLLOWING ACCEPTANCE TESTS AS DESCRIBED IN CHAPTER 13 OF THE 2016 NONRESIDENTIAL COMPLIANCE MANUAL. THIS SHALL INCLUDE FILLING OUT, SIGNING, AND SUBMITTING APPLICABLE FORMS LISTED. SPECIFIC REQUREMENTS AND ACCEPTANCE TESTING FORMS ARE AVAILABLE IN THE 2016 NONRESIDENTIAL COMPLIANCE MANUAL WHICH CAN BE DOWNLOADED FROM www.energy.ca.gov/title24/2016standards/.

CONTROLS

EACH SPACE CONDITIONING ZONE SHALL BE CONTROLLED BY AN INDIVIDUAL THERMOSTATIC CONTROL THAT RESPONDS TO THE SUPPLY OF HEATING AND COOLING ENERGY WITHIN THAT ZONE [STD. 120.2 (A)]. WHEN USED TO CONTROL HEATING, THE THERMOSTATIC CONTROL MUST BE ADJUSTABLE DOWN TO 55 DEG F OR LOWER. FOR COOLING. THE THERMOSTATIC CONTROL MUST BE AJDUSTABLE UP TO 85 DEG F OR HIGHER. WHEN USED TO CONTROL BOTH HEATING AND COOLING, THE THERMOSTATIC CONTROL MUST BE ADJUSTABLE FROM 55 DEG F TO 85 DEG F AND ALSO PROVIDE A DEAD BAND OF AT LEAST 5 DEG F WITHIN WHICH THE SUPPLY OF HEATING AND COOLING IS SHUT OFF OR REDUCED TO A MINIMUM.

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

SYSTEMS WITH DDC TO THE STD 110.2(C) ARE ALSO REQUIRED TO HAVE AUTOMATIC DEMAND SHED

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

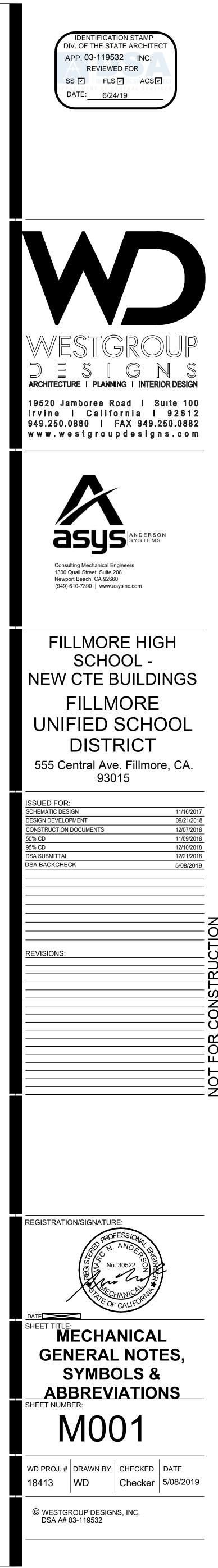
MECHANICAL GENERAL NOTES

ALL DUCT INSULATION TO HAVE MINIMUM 8.0 INSTALLED R-VALUE.

DUCT CONSTRUCTION SHALL BE GALVANIZED STEEL IN ACCORDANCE W/ CHAPTER 6 OF THE C.M.C., SUSPENSION SHALL CONFORM TO 006-2006 SMACNA STANDARDS. SEAL ALL SEAMS AND JOINTS AIR AND WATERTIGHT. FLEXIBLE ALUMINUM DUCTWORK IS NOT ALLOWED, DUCT TAPE IS NOT ALLOWED.

- THIS CONTRACTOR SHALL FURNISH LABOR, MATERIALS, EQUIPMENT, AND TRANSPORTATION AS REQUIRED TO PROPERLY INSTALL ALL NEW HVAC SYSTEMS OR RELATED COMPONENTS AS INDICATED ON PLANS AND SPECIFIED HEREIN.
- THIS CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES PRIOR TO FABRICATION, PURCHASE, AND/OR INSTALLATION OF ALL WORK.
- AIR FILTERS SHALL BE STATE FIRE MARSHALL APPROVED AND LISTED TYPE. PREFORMED FILTERS HAVING COMBUSTIBLE FRAMING SHALL BE TESTED AS A COMPLETE ASSEMBLY. AIR FILTERS IN ALL OCCUPANCIES SHALL BE CLASS 2 OR BETTER (AS SHOWN IN THE STATE FIRE MARSHALL LISTING). AIRFILTERS SHALL BE ACCESSIBLE FOR CLEANING OR REPLACEMENT PER 2016 CMC 304.0.
- LINE VOLTAGE WIRING, LINE VOLTAGE CONDUIT, UNDERGROUND LOW VOLTAGE CONDUIT, DISCONNECT SWITCHES AND FINAL CONNECTION BY ELECTRICAL CONTRACTOR. LOW VOLTAGE WIRING, ABOVE GROUND LOW VOLTAGE CONDUIT, AND FINAL CONNECTION BY CONTROLS CONTRACTOR.
- SYSTEM AIR BALANCE SHALL BE PERFORMED BY AN INDEPENDENT AGENCY CERTIFIED BY THE AABC. THIS WORK SHALL CONFORM TO CURRENT AABC SPECIFICATIONS AND STANDARDS.
- PROVIDE WRITTEN WARRANTY TO REPLACE ALL FAULTY MATERIALS AND/OR LABOR, AT NO COST TO OWNER, FOR A PERIOD OF ONE YEAR FROM DATE OF OWNER ACCEPTANCE.
- FOR THE PURPOSE OF CLEARNESS AND LEGIBILITY. THE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND ALTHOUGH SIZES AND LOCATION OF EQUIPMENT IS DRAWN TO SCALE WHEREVER POSSIBLE, THE CONTRACTOR SHALL MAKE USE OF ALL DATA IN ALL OF THE CONTRACTOR DOCUMENTS AND VERIFY THIS INFORMATION BEFORE ORDERING, FABRICATING OR INSTALLING OF ANY MATERIALS.
- UNLESS SPECIFICALLY SHOWN ON THESE PLANS, NO STRUCTURAL MEMBERS SHALL BE CUT, 10 DRILLED, NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND DSA.
- ALL DUCT SIZES SHOWN ARE NET INSIDE DIMENSIONS AND DO NOT ACCOUNT FOR DUCT LINER THICKNESS WHERE APPLICABLE. ALL PIPE DIMENSIONS SHOWN ARE NOMINAL SIZES.
- 12. ALL BRANCH DUCTS SHALL BE PROVIDED WITH ACCESSIBLE MANUAL VOLUME DAMPERS.
- 13. PROVIDE FLEXIBLE CONNECTIONS TO ALL HVAC EQUIPMENT (A/C UNIT, FANS, ETC.)
- INSTALLATION AND MATERIALS SHALL CONFORM TO THE 2016 EDITION OF THE CALIFORNIA 14 MECHANICAL CODE (CMC) AND TITLE 24 PARTS 4 & 6.
- CONTRACTOR SHALL PROVIDE AS-BUILTS, CAD GENERATED AND DRAWN TO 1/4" = 1'-0" SCALE. SUBMIT 15. 6 SETS OF HARD COPIES AND 1 ELECTRONIC COPY. CAD DRAWINGS SHALL BE AUTOCAD LATEST VERSION. COORDINATE CLOSE OUT REQUIREMENTS WITH ARCHITECT AND OWNER.

	MECHANICAL SHEET INDEX
SHEET NO.	DESCRIPTION
M001	MECHANICAL GENERAL NOTES, SYMBOLS, & ABBREVIATIONS
M002	MECHANICAL SCHEDULES
M003	MECHANICAL DETAILS
M004	MECHANICAL DETAILS
M005	MECHANICAL DETAILS & DIAGRAMS
M006	MECHANICAL DETAILS & DIAGRAMS
M007	TITLE 24 ENERGY COMPLIANCE FORMS BUILDING A
M008	TITLE 24 ENERGY COMPLIANCE FORMS BUILDING A
M009	TITLE 24 ENERGY COMPLIANCE FORMS BUILDING A
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M012	TITLE 24 ENERGY COMPLIANCE FORMS BUILDING B
M013	VIBRATION ISOLATION CURB STRUCTURAL CALCULATIONS
M014	VIBRATION ISOLATION CURB STRUCTURAL CALCULATIONS
M2-1.1-A	MECHANICAL FLOOR PLAN - BLDG. A
M2-2.1-A	MECHANICAL ROOF PLAN - BLDG. A
M2-1.1-B	MECHANICAL FIRST FLOOR PLAN - BLDG. B
M2-2.0-B	MECHANICAL SECOND FLOOR PLAN - BLDG. B
M2-2.1-B	MECHANICAL ROOF PLAN - BLDG. B



										ROC	OFTC)P A/	CUN	NIT S	CHEDUL	E	
SYM.	MFR/MODEL	AREA SERVED		G (MBH) @ RI 360	EER/IEER		HEATING		CEM	EVAPORATOR	ESP (INCHES)	MIN. OSA		ELEC	TRICAL	OPER WT.	REMARKS
51M.	MITANODEL		TOTAL	SENSIBLE		INPUT MBH	OUTPUT MBH	AFUE		FAN BHP	W.G.	CFM	MCA	МОСР	VOLTAGE/PHASE	(LBS) *	
AC 1	CARRIER 48LCD007	ENGINE LAB & CLASSROOM (106)	74	58	13.0 20.3	72	59	82%	2400	0.93	0.75	670	20	25	460 3	1047	PROVIDE COMPLETE WITH SPRING ISOLATION ROOF CURB, 100% OSA MODULATING DRY-BULB INTEGRATED DIFFERENTIAL ECONOMIZER WITH POWER EXHAUST, STAINLESS STEEL GAS HEAT EXCHANGER, STAINLESS STEEL CONDENSATE PAN, DEMAND CONTROL VENTILATION, AND SHUTDOWN OF UNIT TRIGGERED BY AREA SMOKE DETECTOR. PROVIDE FDD (FAULT DETECTION AND DIANOSTIC) PER 2016 CMC.
AC 2	CARRIER 48LCL004	CLASS ROOM (130)	37	28	12.0 15.5 SEER	60	49	80.6%	1200	0.55	0.75	400	12	15	460 3	535	PROVIDE COMPLETE WITH SPRING ISOLATION ROOF CURB, 100% OSA MODULATING DRY-BULB INTEGRATED DIFFERENTIAL ECONOMIZER WITH POWER EXHAUST, STAINLESS STEEL GAS HEAT EXCHANGER, STAINLESS STEEL CONDENSATE PAN, AND DEMAND CONTROL VENTILATION. PROVIDE FDD (FAULT DETECTION AND DIANOSTIC) PER 2016 CMC.
AC 3	CARRIER 48LCL006	FAB LAB (133)	62	48	12.3 16.2 SEER	60	49	80.6%	2000	1.34	0.75	680	15	20	460 3	630	PROVIDE COMPLETE WITH SPRING ISOLATION ROOF CURB, 100% OSA MODULATING DRY-BULB INTEGRATED DIFFERENTIAL ECONOMIZER WITH POWER EXHAUST, STAINLESS STEEL GAS HEAT EXCHANGER, AND STAINLESS STEEL CONDENSATE PAN. UNIT EXEMPT FROM AUTOMATIC SHUTDOWN BY 2016 CMC 608.1, EXCEPTION (2). PROVIDE FDD (FAULT DETECTION AND DIANOSTIC) PER 2016 CMC.
AC 4	CARRIER 48LCL004	STAFF WORK ROOM (203)	35	24	12.0 15.5 SEER	60	49	80.6%	900	0.35	0.75	125	12	15	460 3	535	PROVIDE COMPLETE WITH SPRING ISOLATION ROOF CURB, 100% OSA MODULATING DRY-BULB INTEGRATED DIFFERENTIAL ECONOMIZER WITH POWER EXHAUST, STAINLESS STEEL GAS HEAT EXCHANGER, AND STAINLESS STEEL CONDENSATE PAN. PROVIDE FDD (FAULT DETECTION AND DIANOSTIC) PER 2016 CMC.
AC 5	CARRIER 48LCD008	WOOD SHOP (129)	94	71	12.8 19.0	150	120	80%	3000	1.31	0.75	700	23	25	460 3	1651	PROVIDE COMPLETE WITH SPRING ISOLATION ROOF CURB, 100% OSA MODULATING DRY-BULB INTEGRATED DIFFERENTIAL ECONOMIZER WITH POWER EXHAUST, STAINLESS STEEL GAS HEAT EXCHANGER, STAINLESS STEEL CONDENSATE PAN, AND SHUTDOWN OF UNIT TRIGGERED BY AREA SMOKE DETECTOR. PROVIDE FDD (FAULT DETECTION AND DIANOSTIC) PER 2016 CMC.
AC 6	CARRIER 48LCD007	AG SCIENCE CLASSROOM (202)	72	53	13.0 20.3	72	59	82%	2000	0.72	0.75	565	20	25	460 3	1047	PROVIDE COMPLETE WITH SPRING ISOLATION ROOF CURB, 100% OSA MODULATING DRY-BULB INTEGRATED DIFFERENTIAL ECONOMIZER WITH POWER EXHAUST, STAINLESS STEEL GAS HEAT EXCHANGER, DEMAND CONTROL VENTILATION, AND STAINLESS STEEL CONDENSATE PAN. UNIT EXEMPT FROM AUTOMATIC SHUTDOWN BY 2016 CMC 608.1, EXCEPTION (2). PROVIDE FDD (FAULT DETECTION AND DIANOSTIC) PER 2016 CMC.

* DOES NOT INCLUDE WEIGHT OF ROOF CURBS

														S	PLIT	SYSTEN	/ HEAT F	PUMP	UNI	T SCH	HEDUL	.E	
			COOLIN	IG (MBH)	EER/	HEATI	NG (MBH)			OSA		ELECTR	RICAL	OPER.				E	ELECTRICA	L	OPER		
S	ΥM. Ν	MFR./MODEL	TOTAL	SENSIBLE	SEER	HSPF	OUTPUT	CFM	ESP	CFM	MCA	MFS	VOLT/PH	WT. LBS.	SYM.	MFR./MODEL	REFRIGERANT	MCA	MFS	VOLT	WT-LBS	REMARKS	AREA SE
F		MITSUBISHI PKA-A24KA7	24	18.5	12.2 21.4	11	26	775	-	50	1	25	208	46		MITSUBISHI PUZ-A24NHA7	R-410A	19	26	208 1	153	-PROVIDE COMPLETE W/ DDC INTERFACE, PAR-U01MEDU-K WALL T-STAT, & INTEGRAL COND. PUMP. -PIPING SIZES ARE 3/8" (LIQUID) & 5/8" (GAS) -HEATING SHALL BE DISABLED, UNIT IS PROVIDING COOLING ONLY.	BLDG. OFFICE
F	`	MITSUBISHI PKA-A18HA7	18	12.6	9.9 18.5	-	-	425	-	30	1	15	208	29	CU 2	MITSUBISHI PUY-A18NKA7	R-410A	11	28	208 1	99	-PROVIDE COMPLETE W/ DDC INTERFACE, PAR-U01MEDU-K WALL T-STAT, & INTEGRAL COND. PUMP. -PIPING SIZES ARE 1/4" (LIQUID) & 1/2" GAS -HEATING SHALL BE DISABLED, UNIT IS PROVIDING COOLING ONLY.	BLDG. TELE (1
F		MITSUBISHI PKA-A36KA7	36	25.2	10.8 18.8	-	-	920	-	30	1	30	208	46	$\left(\begin{array}{c} CU\\ 3 \end{array} \right)$	MITSUBISHI PUY-A36NKA7	R-410A	25	31	208 1	211	-PROVIDE COMPLETE W/ DDC INTERFACE, PAR-U01MEDU-K WALL T-STAT, & INTEGRAL COND. PUMP. -PIPING SIZES ARE 3/8" (LIQUID) & 7/8" (GAS) -HEATING SHALL BE DISABLED, UNIT IS PROVIDING COOLING ONLY.	BLDG. ELEC (1
F		MITSUBISHI PKA-A18HA7	18	12.6	9.9 18.5	-	-	425	-	25	1	15	208	29	$\left(\begin{array}{c} CU\\ 4 \end{array} \right)$	MITSUBISHI PUY-A18NKA7	R-410A	11	28	208 1	99	-PROVIDE COMPLETE W/ DDC INTERFACE, PAR-U01MEDU-K WALL T-STAT, & INTEGRAL COND. PUMP. -PIPING SIZES ARE 1/4" (LIQUID) & 1/2" GAS -HEATING SHALL BE DISABLED, UNIT IS PROVIDING COOLING ONLY.	BLDG. MPOE (
F		MITSUBISHI PKA-A24KA7	24	18.5	12.2 21.4	-	-	775	-	25	1	25	208	46	$\left(\begin{array}{c} CU\\ 5 \end{array} \right)$	MITSUBISHI PUY-A24NKA7	R-410A	19	26	208 1	151	-PROVIDE COMPLETE W/ DDC INTERFACE, PAR-U01MEDU-K WALL T-STAT, & INTEGRAL COND. PUMP. -PIPING SIZES ARE 3/8" (LIQUID) & 5/8" (GAS) -HEATING SHALL BE DISABLED, UNIT IS PROVIDING COOLING ONLY.	BLDG. ELECTRIC/
F	\longrightarrow I	MITSUBISHI PKA-A36KA7	36	25.2	10.8 18.8	-	-	920	-	35	1	30	208	46		MITSUBISHI PUY-A36NKA7	R-410A	25	31	208 1	211	-PROVIDE COMPLETE W/ DDC INTERFACE, PAR-U01MEDU-K WALL T-STAT, & INTEGRAL COND. PUMP. -PIPING SIZES ARE 3/8" (LIQUID) & 5/8" (GAS) -HEATING SHALL BE DISABLED, UNIT IS PROVIDING COOLING ONLY.	BLDG ELEVATOR MAC (134

	EXHAUST FAN SCHEDULE														
SYM.	MFR./MODEL	TYPE	CFM	S.P. INCHES	RPM	SONES		ELEC	TRICAL	OPER. WT. (LBS.)	REMARKS	BLDG. LOCATION			
							WATT	HP	VOLTAGE/PHASE	· · · ·					
$\left\langle \begin{array}{c} EF \\ 1 \end{array} \right\rangle$	GREENHECK CUE-161-VG	CENTRIFUGAL UPBLAST	1200	0.5	944	8.9	-	1/2	208	98	PROVIDE COMPLETE WITH BDD, BIRDSCREEN, VARI-GREEN MOTOR, AND PITCHED ROOF CURB FOR LEVEL INSTALLATION.	BLDG. A RESTROOMS			
EF 2	CAR-MON CMB-14	CENTRIFUGAL UTILITY SET	1350	4.5	2752	71 dBA	-	1.4	460 3	200	VEHICLE EXHAUST DUTY FAN (CARBON MONOXIDE AND FUME REMOVAL). PROVIDE COMPLETE WITH FOUR CAR-MON # TSR-S TUBING STORAGE REELS WITH HOSE AND EPDM TAILPIPE ADAPTER. INTERLOCK WITH MUA-1.	BLDG. A AUTO REPAIR LAB			
$\overbrace{\frac{EF}{3}}^{EF}$	GREENHECK G-070-VG	CENTRIFUGAL UPBLAST	200	0.3	1461	3.8	-	1/15	115 1	33	FAN SHALL BE UPBLAST CONFIGURATION WITH DRAIN, BDD, AND VARI GREEN ECM MOTOR.	BLDG. A TOILET/JANITOR			
$\left(\begin{array}{c} EF \\ 4 \end{array} \right)$	GREENHECK G-095-VG	CENTRIFUGAL DOWNBLAST	500	0.3	1224	5.7	-	1/6	208 1	43	PROVIDE COMPLETE WITH BDD, BIRDSCREEN, VARI-GREEN MOTOR, AND PITCHED ROOF CURB FOR LEVEL INSTALLATION. INTERLOCK WITH EF-4.	BLDG. A COMPRESSOR			
EF 5	GREENHECK CSW-40-BI-21-10	CENTRIFUGAL UTILITY SET	24000	1	705	40	-	10	460 3	1304	WELDING FUME EXHAUST DUTY FAN W/ VFD. FILTER SHALL BE LINCOLN ELECTRIC STATIFLEX FB-36-STD/CPC (MERV-16). INTERLOCK WITH MUA-2.	BLDG. B METAL/WELD SHOP			
EF 6	GREENHECK G-060-VG	CENTRIFUGAL DIRECT DRIVE	100	0.3	1590	3.8	-	1/10	115 1	35	FAN SHALL BE UPBLAST CONFIGURATION WITH DRAIN, BDD, AND VARI GREEN ECM MOTOR.	BLDG. B STAFF RR			
EF 7	GREENHECK G-133-VG	CENTRIFUGAL DOWNBLAST	1000	0.5	1055	7.7	-	1/4	208 1	61	PROVIDE COMPLETE WITH BDD, BIRDSCREEN, VARI-GREEN MOTOR, AND PITCHED ROOF CURB FOR LEVEL INSTALLATION.	BLDG. B GAS STORAGE/ COMPRESSOR			

							D	UST COLLECTOR SCHE
SYN	1 MFR./MODEL	AREA SERVED	CFM	S.P. INCHES	MOTOR HP	MOTOR RPM	ELECTRICAL VOLT/ PHASE	
	STERNVENT DKPD 36010-2	AG WOODSHOP	3,300	10	10	1750	460 / 3 PH	UNIT SHALL BE 65" X 38" X 135" TALL. PROVIDE CO DUST COLLECTOR TO SHUT DOWN UPON SIGNAL

														MAł	<Ε-L	JP A		SC	HED	ULE	<u>.</u>	
SYN	1 MFR./MODEL	AREA	CFM	E.S.P.			EVAPORATI	VE COOLING				HEATING					FILTERS	El	ECTRICA	AL.	OPER WT.	REMARKS
		SERVED		(IN)	(HP)	ENT. DB (°F)	ENT. WB (°F)	MEDIA	LVG. DB (°F)	TYPE	INPUT (MBH)	OUTPUT (MBH)	AFUE	ENT.	LVG.*	NO.	SIZE	MCA	MOCP	VOLT	(LBS.)	
	AIR 20 S-CRS-7500	BLDG A AUTO REPAIR LAB	6600	1.15	5.9	96	71	GLASDEK	66	NAT. GAS	400	320	0.80	32	60	1	MERV-8	18	30	460 3	5123	INTERLOCK WITH EF-2
	AIR 20 S-CRS-7500	BLDG B METAL WELD SHOP	6500	0.96	5.9	96	71	GLASDEK	66	NAT GAS	200	160	0.80	32	60	1	MERV-8	18	30	460 3	5024	INTERLOCK WITH EF-5
	GREENHECK MSX-P1222-H22- MF	BLDG B - GREEN HOUSE	4000	0.30	1.5	88	70	GLASDEK	72	-	-	-	-	-	-	1	2" ALUM MESH.	4.8	15	460 3		INTERLOCK W/ MOTORIZED RELIEF DAMPERS PROVIDE W/ GLASDEK MEDIA, PITCHED CURB FOR LEVEN CONSTRUCTION AUTOMATIC DRAIN & FLUSH, RECIRC. PUMP, & SHUTDOWN OF UNIT TRIGGERED BY AF
* IN H	EATING MODE, UN	ITS SHALL BE LI	IMITED V	IA CONI	ROLS TO	O DISCHARGE A	IR NO HIGHER T	HAN 60 DEG F ((PER SECTION 1	40.9 OF ⁻	THE 2016 BUILD	ING ENERGY EFF	ICIENCY	STAND	ARDS).							

	POWER EXHAUST SCHEDULE														
SYM	MFR./MODEL	UNIT SERVED	WEIGHT (LBS.)	REMARKS											
PE 1	MICROMETL PECD-SRT34TA-4M1	AC-1	2697	825	0.75	1.0	MCA 2.4	MOCP 4.3	VOLTAGE/PHASE 460 3	267					
PE 2	MICROMETL PECD-SRT12TA-4M1	AC-2	2400	975	0.75	1.0	2.4	4.3	460 3	189					
$\left(\begin{array}{c} PE \\ 3 \end{array} \right)$	MICROMETL PECD-SRT12TA-4M1	AC-3	2400	975	0.75	1.0	2.4	4.3	460 3	189					
$\left(\begin{array}{c} PE \\ 4 \end{array} \right)$	MICROMETL PECD-SRT12TA-4M1	AC-4	2400	975	0.75	1.0	2.4	4.3	460 3	189					
PE 5	MICROMETL PECD-SRT05TA-4M2	AC-5	4000	884	0.75	2.0	3.4	6.1	460 3	326					
$\left(\begin{array}{c} PE \\ 6 \end{array} \right)$	MICROMETL PECD-SRT34TA-4M1	AC-6	2697	825	0.75	1.0	2.4	4.3	460 3	267					

IEDULE

REMARKS

COMPLETE WITH TEFC MOTOR, VARIABLE SPEED DRIVE, AFTER-FILTER, AND TWO DRUM COLLECTOR. INTERLOCK IAL FROM FIRE ALARM.

				AIR D	ISTRIB	SUTION SC	HEDULE
	SYM.	CFM	MAX. P.D. INCHES	MAX. NC	NECK SIZE	MFR/MODEL	REMARKS
AND	CD-1	50-200	0.10	30	6"	PRICE # SPD	SQUARE PLAQUE CEILING DIFFUSER, STEEL CONSTRUCTION, WHITE POWDER COAT FINISH, TYPE 3P FRAME FOR LAY-IN CEILINGS, 24"x24"
N AND		201-300	0.10	30	8"		FACE SIZE.
DEMAND		301-400	0.10	30	10"		
UNIT) PER 2016		401-500	0.10	30	12"		
PROVIDE		501-600	0.10	30	14"		
MC.		601-700	0.10	30	15"		
NLESS ULT	RG-1/ EG-1/ TG-1	50-125	0.10	30	6"x6"	PRICE #530	SQUARE LOUVERED FACE CEILING RETURN / EXHAUST / TRANSFER AIR GRILLE, STEEL CONSTRUCTION, 30 TO 45 DEGREE BLADES, WHITE
		126-250	0.10	30	8"x8"		POWDER COAT FINISH, 1.25" SURFACE MOUNT BORDER FOR HARD CEILINGS, TYPE 3P FOR LAY-IN CEILINGS.
		251-375	0.10	30	10"x10"		
		376-550	0.10	30	12"x12"		
		551-700	0.10	30	14"x14"		
AREA SERVED BLDG. A		701-950	0.10	30	16"x16"		
OFFICE (107)	SWS-1	951-1100	0.10	30	18"x18"	PRICE #520	DOUBLE DEFLECTION SIDEWALL SUPPLY GRILLE,
BLDG. A TELE (103)		50-200	0.10	30	8"x4"		STEEL CONSTRUCTION, WHITE POWDER COAT FINISH, 3/4 INCH BLADE SPACING.
BLDG. A ELEC (113)		201-400	0.10	30	12"x6"		
BLDG. B MPOE (121)		401-600	0.10	30	14"x8"		
BLDG. B ELECTRICAL(126)		601-800	0.10	30	18"x8"		
BLDG. B /ATOR MACHINE ROOM (134)		801-1000	0.10	30	20"x10"		
		1001-1400	0.10	30	24"x12"		
		1401-1700	0.10	30	24"x14"		
	SWR-1	1701-2150	0.10	30	30"x16"	DDICE #520	
	SWR-1	50-150	0.10	ID 30 8"x4" PRICE #530 FIXED SIDEWALL RET DEFLECTION, STEEL 0	DEFLECTION, STEEL CONSTRUCTION, WHITE POWDER COAT FINISH, 3/4 INCH LOUVER SPACING		
		151-250	0.10	30	12"x6"		
		251-450	0.10	30	14"x8"		
		451-700	0.10	30	20"x10"		
		701-1000	0.10	30	24"x12"		
		1001-1400	0.10	30	24"x18"		
		1401-1800	0.10	30	34"x16"		
		1801-2150	0.10	30	32"x20"		
		2151-2800	0.10	30	42"x20"		
		1300	0'-10"	30	36"x12"	PRICE HCD	HIGH CAPACITY DRUM LOUVER WITH ADJUSTABLE ALUMINUM VANES, WHITE POWDER COAT FINISH.
	DL-1	3000	0'-10"	30	60"x12"		

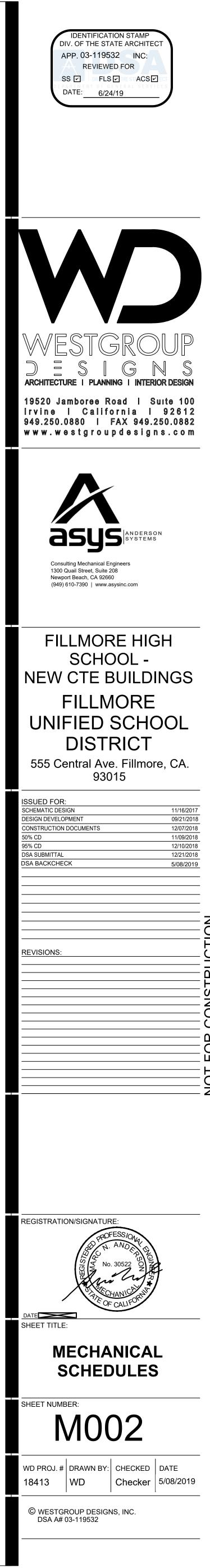
NOTE: • CEILING DIFFUSER THROWS SHALL BE 4-WAY UNLESS OTHERWISE NOTED. • PROVIDE REMOTE CABLE OPERATED DAMPER AT HARD CEILINGS.

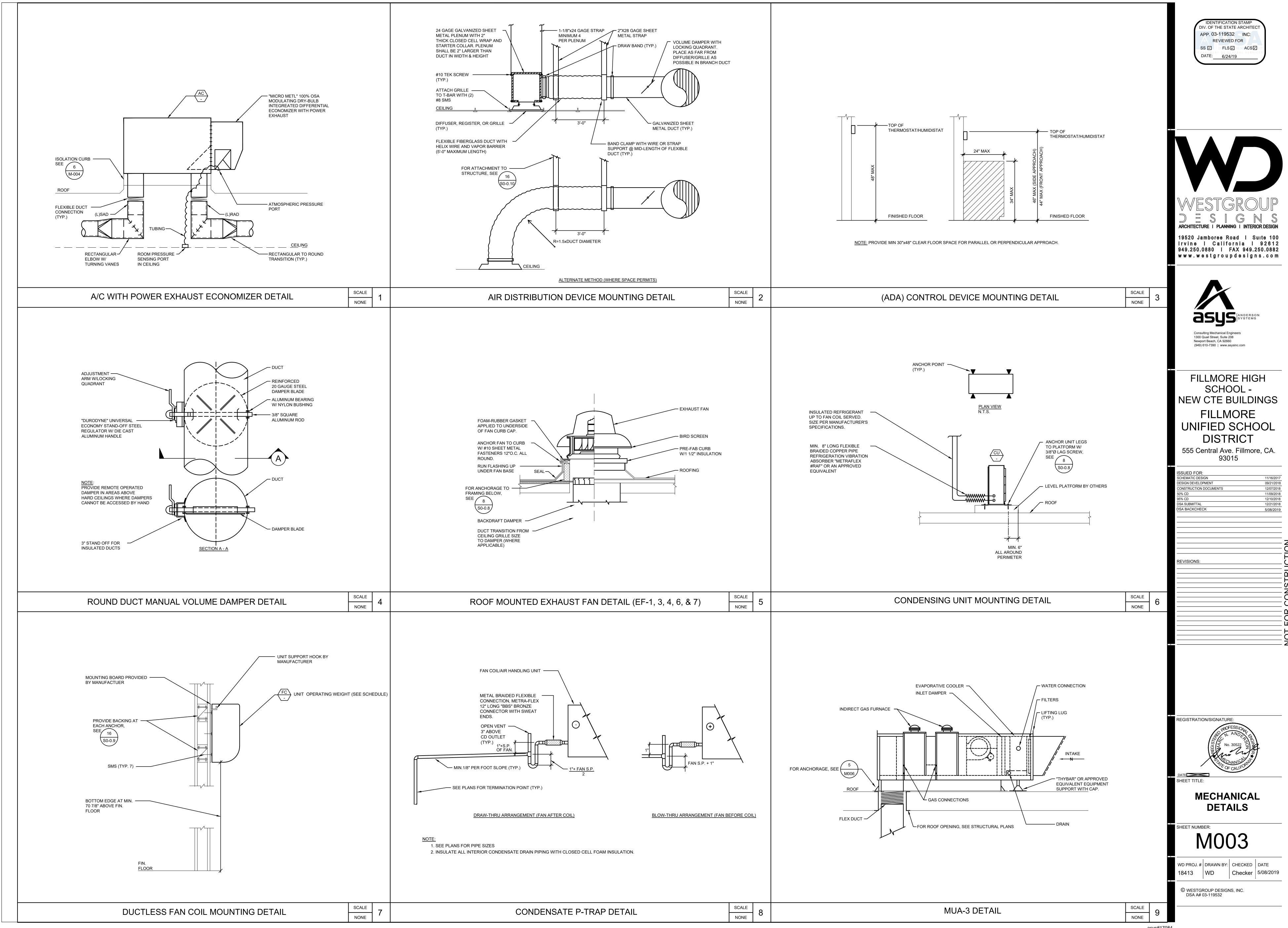
 ALL AIR DISTRIBUTION DEVICES TO HAVE CONCEALED MOUNTING OPTION. • PROVIDE FILLER PANEL FOR AIR DISTRIBUTION INSTALLED IN LAY-IN CEILINGS.

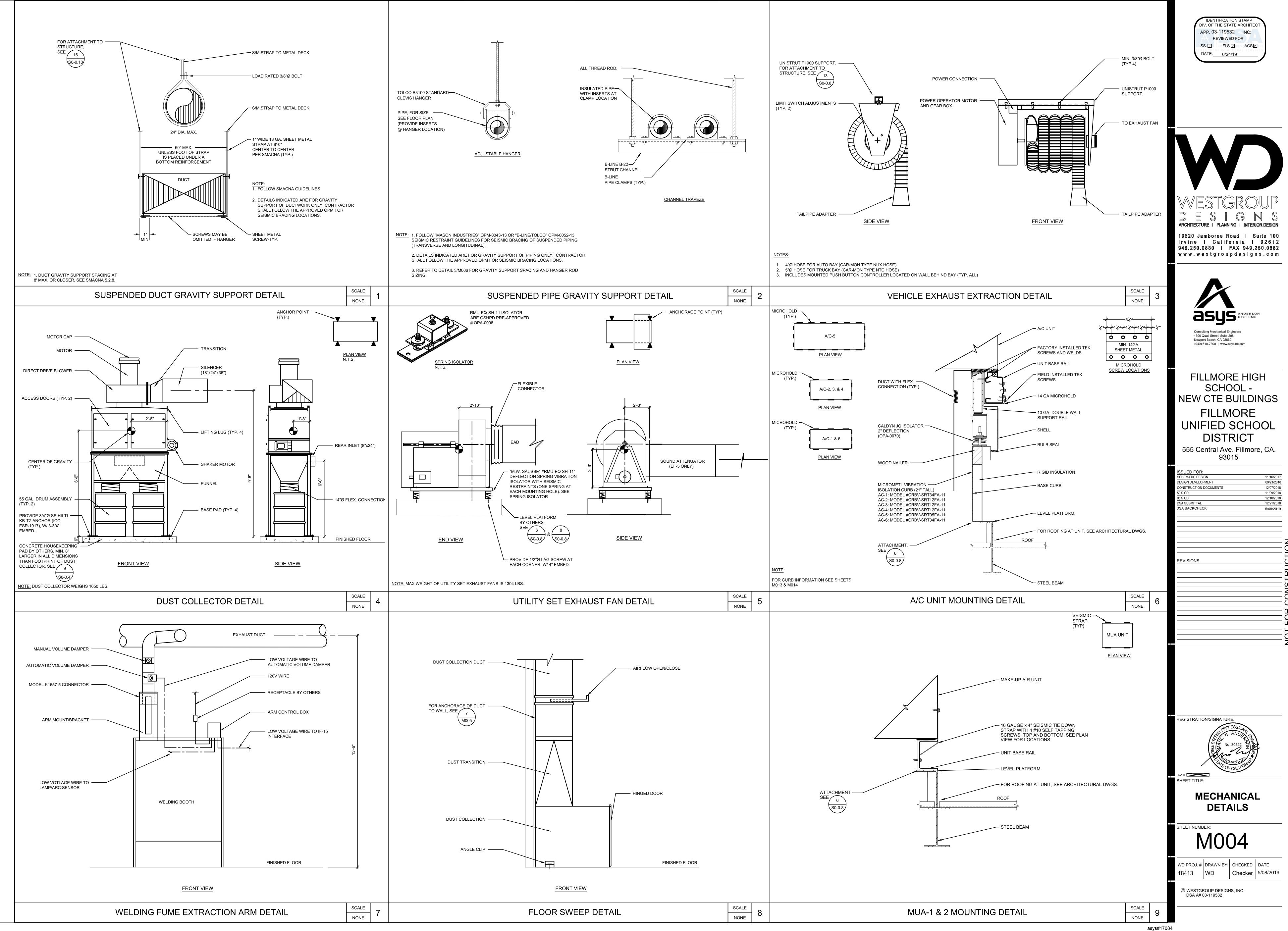
ALL AIR DISTRIBUTION TO PERFORM AT NC-30 OR LOWER SOUND LEVELS.

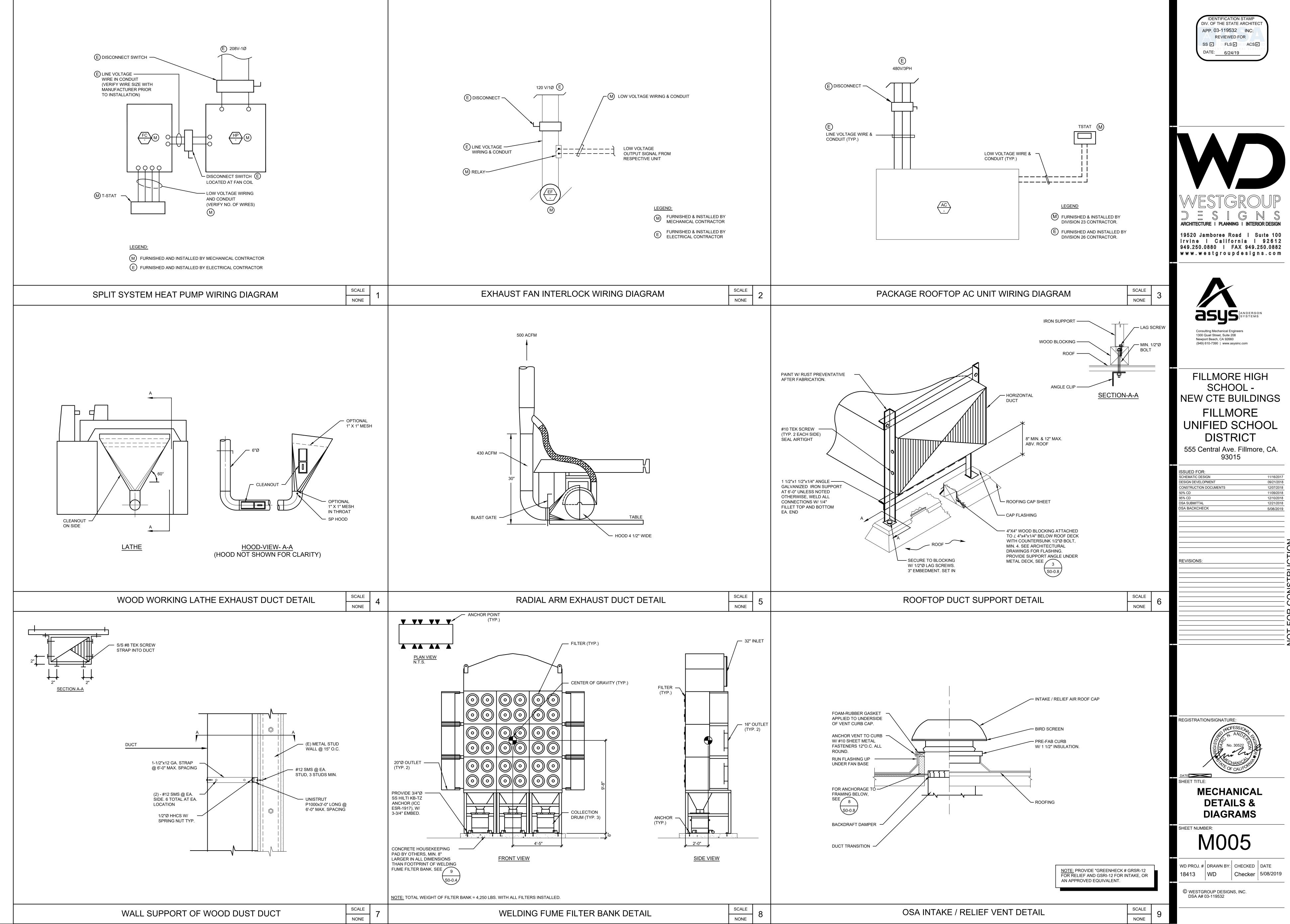
FOR 1, 2, OR 3-WAY PATTERN INDICATED ON FLOOR PLANS, ADJUST CORES OR INSTALL QUADRANT BL	ANKS.

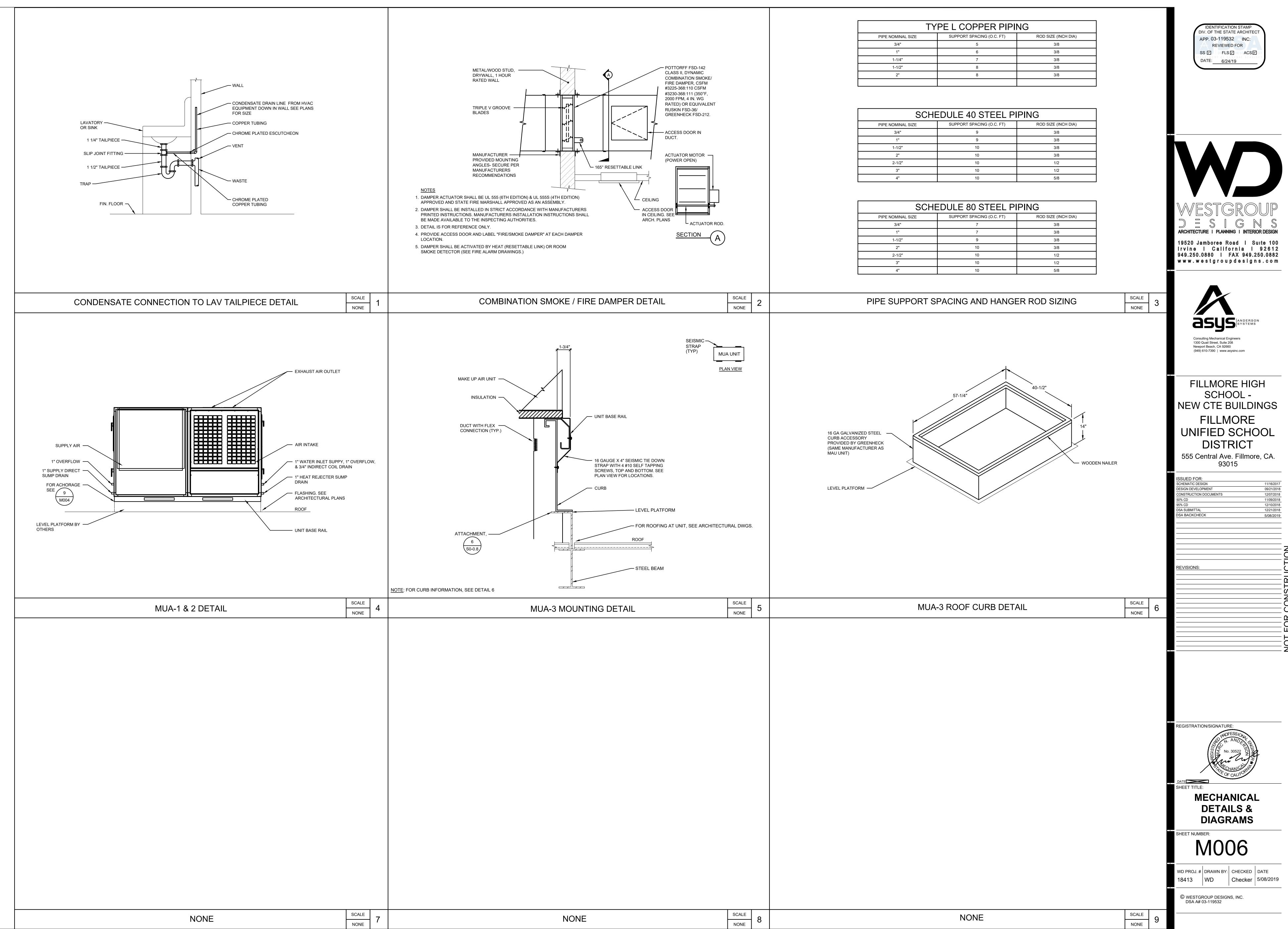
EVEL MOUNTING, PERMATECTOR FINISH, DOUBLE-WALL BY AREA SMOKE DETECTOR.











		<u> </u>					. <u> </u>						
	ct Name:	-	с с				NRCC-PRF-01-		Page 1 of 22	-			
	ct Address:	555 Central Ave	e. Fillmore	93015			Calculation Da	•	· · ·	Dec 18, 2018			
Com	bliance Scope:	NewComplete					Input File Nan	ne:	Fillmore Hig	gh School CTE -	- Building A.cibd16	K	
A. PI	ROJECT GENERAL I	NFORMATION											
1. Project Location (city)		ty)	Fillmore			8.	Standards Ver	rsion		Compliance2	ce2016		
2.	CA Zip Code			93015		9.	Compliance S	oftware (ve	rsion)	EnergyPro 7.	2		
3.	Climate Zone			9		10.	Weather File			VAN-NUYS_7	722886_CZ2010.ep	w	
4.	Total Conditioned F	loor Area in Sco	ре	7,531 ft ²		11.	Building Orier	ntation (deg	;)	(E) 90 deg			
5.	Total Unconditione	d Floor Area		0 ft ²		12.	Permitted Sco	pe of Work	:	NewComplet	te		
6.	Total # of Stories (H	labitable Above	Grade)	1		13	Building Type	(s)	Nonresidential				
7.	Total # of dwelling	units		0		14	Gas Type			NaturalGas			
Б. СС	B. COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft ² -yr) § 140.1												
	BUILDING COMPLIES												
	1. Energy Compo	nent	2. Standard Design (TDV) 3. Proposed I		Desigr	gn (TDV) 4. Com		npliance Margin (TDV)		5. Percent Better than Standar			
Space	e Heating		70.28			20.63		49.65		70.6			
Space	e Cooling			141.92	141.92			39.84		102.08		71.9%	
Indoo	or Fans			161.00			134.59		26.41		. 1		
Heat	Rejection									-			
Pump	os & Misc.												
Dom	estic Hot Water			5.66		3.07			2.59		45.		
Indoo	or Lighting			57.10		24.85				32.25		56.5%	
сом	PLIANCE TOTAL			435.96		222.98				212.98		48.9%	
Rece	otacle			74.13			74.13			0.0		0.0%	
Proce													
Othe	r Ltg												
Proce	ess Motors												
ΤΟΤΑ	L			510.09			297.11			213.0		41.8%	

Project Nam	ie:	Fillmore High School CTE -	illmore High School CTE - Building A			Page 4 of 22	Page 4 of 22		
Project Add	ress:	555 Central Ave. Fillmore 9	93015	Calcula	ation Date/Tim	ne: 11:30, Tue, Dec 18, 2018			
Compliance Scope:		NewComplete		Input F	-ile Name:	Fillmore High School CTE - Bu	uilding A.cibd16x		
G. COMPLIANCE PATH & CERTIFICATE OF COMPLIANCE SUMMARY									
The followi	ng building	components are only eligible relevant to the	for prescriptive compliance. Indicate which are e project.	The following building components may have mandatory requirements per Part 6. Indicate which are relevant to the project.					
Yes	NA	Prescriptive Requirement	Compliance Forms	Yes	NA	Mandatory Requirement	Compliance Forms		
		Lighting (Indoor Unconditioned) §140.6	NRCC-LTI-01 / 02 / 03 / 04 / 05-E		X X	Commissioning: §120.8 Simple Systems Complex Systems	NRCC-CXR-01 / 02 / 03 / 05-E NRCC-CXR-01 / 02 / 04 / 05-E		
	\boxtimes	Lighting (Outdoor) §140.7	NRCC-LTO-01 / 02 / 03-E			Electrical: §130.5	NRCC-ELC-01-E		
	\boxtimes	Lighting (Sign) §140.8	NRCC-LTS-01-E			Solar Ready: §110.10	NRCC-SRA-01 / 02-E		
		Solar Thermal Water Heating: §140.5	NRCC-STH-01-E		XXXX	Covered Process: §120.6 Parking Garage Commercial Refrigeration Warehouse Refrigeration Compressed Air Process Boilers	NRCC-PRC-01-E NRCC-PRC-02-E NRCC-PRC-05-E NRCC-PRC-06/07/08-E NRCC-PRC-10-E NRCC-PRC-11-E		

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CA Building Energy Efficiency Standards- 2016 Nonresidential Compliance

CA Building Energy Efficiency Standards- 2016 Nonresidential Compliance

Project Name:	Fillmore High School CTE - Building A	Page 7 of 22					
Project Address:	555 Central Ave. Fillmore 93015	Calculation Date/Time:	11:30, Tue, Dec 18, 2018				
Compliance Scope:	NewComplete	Input File Name:	Fillmore High School CTE - Build	ling A.cibd16x			
Documentation Autho (Retain copies and ver	STALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFIC or to indicate which Certificates must be submitted for the features to ify forms are completed and signed to post in field for Field Inspector on MCH and LTI Details Sections for Acceptance Tests and forms by equ	be recognized for complia to verify).		Conf	irmed		
Building Component	Compliance Forms (required for submittal)			Pass	Fail		
	NRCI-PRC-01-E Covered Processes	NRCI-PRC-01-E Covered Processes					
	NRCA-PRC-01-F- Compressed Air Systems	NRCA-PRC-01-F- Compressed Air Systems					
	NRCA-PRC-02-F- Kitchen Exhaust						
	NRCA-PRC-03-F- Garage Exhaust						
Covered Process	NRCA-PRC-04-F- Refrigerated Warehouse- Evaporator Fan Motor	NRCA-PRC-04-F- Refrigerated Warehouse- Evaporator Fan Motor Controls					
	NRCA-PRC-05-F- Refrigerated Warehouse- Evaporative Condense	r Controls					
	NRCA-PRC-06-F- Refrigerated Warehouse- Air Cooled Condenser	Controls					
	NRCA-PRC-07F- Refrigerated Warehouse- Variable Speed Compression						

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1.	Total Conditioned Floor Area	7,531 ft ²	7,531 ft ² 5.		1	Confi	rme
2. Total Unconditioned Floor Area		0 ft ²	6.	Number of Floors Below Grade	0		
 Addition Conditioned Floor Area Addition Unconditioned Floor Area 		0 ft ²				P	
		0 ft ²				Pass	
7. Opaqu	ue Surfaces & Orientation	8. Total Gross Sur	8. Total Gross Surface Area		10. Window to Wall Ratio		
North W	all	1,161 ft²		80 ft ²	06.9%		Γ
East Wal	l	2,790 ft ²		1,172 ft ²	42.0%		
South W	all	1,164 ft ²		81 ft ²	07.0%		
West Wa	all	1,327 ft ²		286 ft ²	21.6%		
	Total	6,442 ft ²		1,619 ft ²	25.1%		
Roof			7,531 ft ²	0 ft ²	00.0%		

CA Building Energy Efficiency Standards- 2016 Nonresidential Compliance	Report Version: NRCC-PRF-01-E-09132018-5583

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		1			1					
Project Name:		Fillmore High School CTE - Building A		NRCC-PRF-01-E	Page 2 of 22					
Project Address:		555 Central Ave. Fillmore 93015		Calculation Date/Time:	11:30, Tue, Dec 18, 2018					
Complian	ce Scope:	NewComplete		Input File Name:	Fillmore High School CTE - Building A.cibd16x					
C. PRIOR	RITY PLAN CH	ECK/ INSPECTION ITEMS (in order of high	est to lowest TDV energy savir	ngs)						
1st	Space Coolin	g: Check envelope and mechanical	Com	Compliance Margin By Energy Component (from Table B column 4)						
2nd	Space Heatir	ng: Check envelope and mechanical	Space	e Cooling						
3rd	Indoor Lighting: Check lighting			Heating						
4th	Indoor Fans: Check envelope and mechanical			Lighting						
5th	Domestic Hot Water: Check mechanical		Ind Domestic H	oor Fans						
6th	Heat Rejection: Check envelope and mechanical			Rejection						
7th	th Pumps & Misc.: Check mechanical			s & Misc.						
D. EXCEP					Penalty Energy Credit					
This proje requireme required.	ect uses the Sin ents are met. F	nplified Geometry Performance Modeling Appr PRESCRIPTIVE COMPLIANCE documentation (for	rm NRCC-LTI-02-E) for the require	ments of section 140.6(d)	and assumes the prescriptive Secondary Daylit Control Automatic Daylighting Controls in Secondary Daylit Zones is					
This proje	ect includes Do	mestic Hot Water in the analysis. Please verify	that Domestic Hot Water is inclue	led in the design for the pe	ermitted scope of work.					
E. HERS	VERIFICATION	N								
This Section	on Does Not A	pply								
F. ADDIT	IONAL REMA	IRKS								
None Prov	vided									

CA Building Energy Efficiency Standards- 2016 Nonresidential Compliance

CA Building Energy Efficiency Standards- 2016 Nonresidential Compliance

N/A

of verification. Site-built fenestration values are calculated per Nonresidential Appendix NA6 and are used in the analysis.

¹ Status: N - New, A – Altered, E – Existing

CA Building Energy Efficiency Standards- 2016 Nonresidential Compliance

Project Name:	Fillm	ore High School CTE - Building A	NRCC-PRF-01-E	Page 5 of 22			
Project Address:	555 (Central Ave. Fillmore 93015	Calculation Date/Time:	11:30, Tue, Dec 18, 2018			
Compliance Scope:	New	Complete	Input File Name:	Fillmore High School CTE - Build	uilding A.cibd16x		
Documentation Auth (Retain copies and ve	hor to in erify for	ATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICA dicate which Certificates must be submitted for the features to b ms are completed and signed to post in field for Field Inspector to and LTI Details Sections for Acceptance Tests and forms by equip	e recognized for compliano verify).		Confi	irmed	
Building Component		Compliance Forms (required for submittal)			Pass	Fail	
Envelope		NRCI-ENV-01-E - For all buildings					
		NRCA-ENV-02-F- NFRC label verification for fenestration					
		NRCI-MCH-01-E - For all buildings with Mechanical Systems					
		NRCA-MCH-02-A- Outdoor Air					
		NRCA-MCH-03-A – Constant Volume Single Zone HVAC					
		NRCA-MCH-04-H- Air Distribution Duct Leakage					
		NRCA-MCH-05-A- Air Economizer Controls					
		NRCA-MCH-06-A- Demand Control Ventilation					
		NRCA-MCH-07-A – Supply Fan Variable Flow Controls					
		NRCA-MCH-08-A- Valve Leakage Test					
		NRCA-MCH-09-A – Supply Water Temp Reset Controls					
Mechanical		NRCA-MCH-10-A- Hydronic System Variable Flow Controls					
		NRCA-MCH-11-A – Auto Demand Shed Controls					
		NRCA-MCH-12-A- Packaged Direct Expansion Units					
		NRCA-MCH-13-A- Air Handling Units and Zone Terminal Units					
		NRCA-MCH-14-A- Distributed Energy Storage					
		NRCA-MCH-15-A – Thermal Energy Storage					
		NRCA-MCH-16-A- Supply Air Temp Reset Controls					
		NRCA-MCH-17-A – Condensate Water Temp Reset Controls					
		NRCA-MCH-18-A- Energy Management Controls Systems					
		NRCV-MCH-04-H- Duct Leakage Test					

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Project Name:	oject Name: Fillmore High School CTE - Building A			NRCC-PRF-01-E	Page 8 of 2	2					
Project Address:	555 Cent	Calculation Date/Time:	11:30, Tue,	Dec 18, 20	18						
Compliance Scope:	NewCom	plete		Input File Name:	Fillmore Hig	gh School C	TE - Buildi	ng A.cibd1	6x		
J. FENESTRATION AS	SEMBLY SU	IMMARY						§ 110.6		Confi	rmed
1.		2.	3.	4.	4. 5. 6. 7.			8.	9.		1
Fenestration Assem Tag or I.D.	• •	Fenestration Type / Product Type / Frame Type	Certification Method ¹	Assembly Method	Area ft ²	Overall U-factor	Overall SHGC	Overall VT	Status ²	Pass	Fail
(Win. Glass) Non-Residential Prescriptive		VerticalFenestration FixedWindow N/A	NFRC Rated	Manufactured	909	0.36	0.25	0.42	N		
(Door Glass) Non-Residential Prescriptive		VerticalFenestration GlazedDoor N/A	NFRC Rated	Manufactured	110	0.36	0.25	0.42	N		
Glass Autoshop Doors		VerticalFenestration		Manufactured	600	0.33	0.39	0.72	N		

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A. OPAQUE SURFACE ASSEMBLY SUMMARY § 120.7/ § 140.3									
1.	2.	3.	4.	5.	6.	7.	8.		
Surface Name	Surface Type	Area (ft ²)	Framing Type			U-Factor / F-Factor / C-Factor	Status ¹	Pass	Fail
Slab On Grade8	UndergroundFloor	7531	NA	0	NA	F-Factor: 0.730	N		
(Membrane) Metal Roof10	Roof	3215	NA	30	NA	U-Factor: 0.070	N		
Laminate Panel Wall12	ExteriorWall	2021	Metal	19	10	U-Factor: 0.060	N		
(Corrugate) Insulated 828	ExteriorWall	1598	NA	0	10	U-Factor: 0.079	N		
(Int) Wall Metal Stud44	InteriorWall	1816	Metal	13	NA	U-Factor: 0.184	N		
Metal Roof82	Roof	4316	NA	30	NA	U-Factor: 0.072	N		
(Plaster) Insulated 8 CM84	ExteriorWall	2823	NA	0	10	U-Factor: 0.079	N		E

¹ Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Center of Glass (COG) values are for the glass-only, determined by the manufacturer, and are shown for ease

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Project Name: Fillmore High Schoo			Building A		NRCC-PRF-01-E	Page 3 of 22	
Project Address:	555 Central Ave. Fill	nore 9	93015		Calculation Date/Time:	11:30, Tue, Dec 18, 2018	
Compliance Scope:	NewComplete			Input File Name: Fillmore High School			uilding A.cibd16x
G. COMPLIANCE PATH	& CERTIFICATE OF	СОМІ		ARY			
	Ident	ify wh	ich building compo	onents use the performance or pre	escriptive path for complia	nce. "NA"= not in project	
	For con	nponei	nts that utilize the	performance path, indicate the sh	neet number that includes	mandatory notes on plans.	
Building Component		Com	pliance Path	Compliance Forms (required for	submittal)		Location of Mandatory Notes on Plans
			Performance	NRCC-PRF-ENV-DETAILS (section	of the NRCC-PRF-01-E)		
Envelope			Prescriptive	NRCC-ENV-01 / 02 / 03 / 04 / 05	/ 06-E		
			NA				
Mechanical			Performance	NRCC-PRF-MCH-DETAILS (section			
			Prescriptive	NRCC-MCH-01 / 02 / 03 / 04 / 05	5 / 06 / 07-Е		1
			NA				
			Performance	NRCC-PRF-PLB-DETAILS (section			
Domestic Hot Water			Prescriptive	NRCC-PLB-01-E			
			NA				
			Performance	NRCC-PRF-LTI-DETAILS (section of			
Lighting (Indoor Condition	oned)		Prescriptive	NRCC-LTI-01 / 02 / 03 / 04 / 05-E			1
			NA				1
			Performance	S2 (section of the NRCC-PRF-01-	E)		
Covered Process: Commercial Kitchens			Prescriptive	NRCC-PRC-01/03-E			
commercial Attenens			NA				1
			Performance	S3 (section of the NRCC-PRF-01-	E)		
Covered Process:			Prescriptive	NRCC-PRC-01/04-E			1
Computer Rooms			NA				1
			Performance	S4 (section of the NRCC-PRF-01-	E)		
Covered Process: Laboratory Exhaust			Prescriptive	NRCC-PRC-01/09-E			1
			NA				1

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NRCC-PRF-01-E Fillmore High School CTE - Building A Page 6 of 22 Project Name: Calculation Date/Time: 11:30, Tue, Dec 18, 2018 555 Central Ave. Fillmore 93015 Project Address: Fillmore High School CTE - Building A.cibd16x Compliance Scope: NewComplete Input File Name: H. CERTIFICATE OF INSTALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICATION SUMMARY (NRCI/NRCA/NRCV) -Documentation Author to indicate which Certificates must be submitted for the features to be recognized for compliance Confirmed (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify). See Tables G. and H. in MCH and LTI Details Sections for Acceptance Tests and forms by equipment. Building Component Compliance Forms (required for submittal) Pass Fail NRCI-PLB-01-E - For all buildings with Plumbing Systems NRCI-PLB-02-E - required on central systems in high-rise residential, hotel/motel application. □ NRCI-PLB-03-E - Single dwelling unit systems in high-rise residential, hotel/motel application. NRCI-PLB-21-E - HERS verified central systems in high-rise residential, hotel/motel application. □ NRCI-PLB-22-E - HERS verified single dwelling unit systems in high-rise residential, hotel/motel application. NRCV-PLB-21-H- HERS verified central systems in high-rise residential, hotel/motel application.] NRCV-PLB-22-H - HERS verified single dwelling unit systems in high-rise residential, hotel/motel application. NRCI-STH-01-E - Any solar water heating NRCI-LTI-01-E - For all buildings □ NRCI-LTI-02-E - Lighting control system, or for an Energy Management Control System (EMCS)] NRCI-LTI-03-E - Line-voltage track lighting integral current limiter, or for a supplementary overcurrent protection panel used to energize only line-voltage track lighting] NRCI-LTI-04-E - Two interlocked systems serving an auditorium, a convention center, a conference room, or a theater Indoor Lighting □ NRCI-LTI-05-E - Lighting Control Credit Power Adjustment Factor (PAF) · _ · NRCI-LTI-06-E - Additional wattage installed in a video conferencing studio NRCA-LTI-02-A - Occupancy sensors and automatic time switch controls. NRCA-LTI-03-A - Automatic daylighting controls □ NRCA-LTI-04-A - Demand responsive lighting controls NRCI-LTO-01-E – Outdoor Lighting NRCI-LTO-02-E- EMCS Lighting Control System Outdoor Lighting NRCA-LTO-02-A - Outdoor Lighting Control Sign Lighting NRCI-LTS-01-E – Sign Lighting NRCI-ELC-01-E - Electrical Power Distribution Electrical

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□ NRCI-SPV-01-E Photovoltaic Systems

Photovoltaic

CA Building Energy Efficiency Standards- 2016 Nonresidential Compliance

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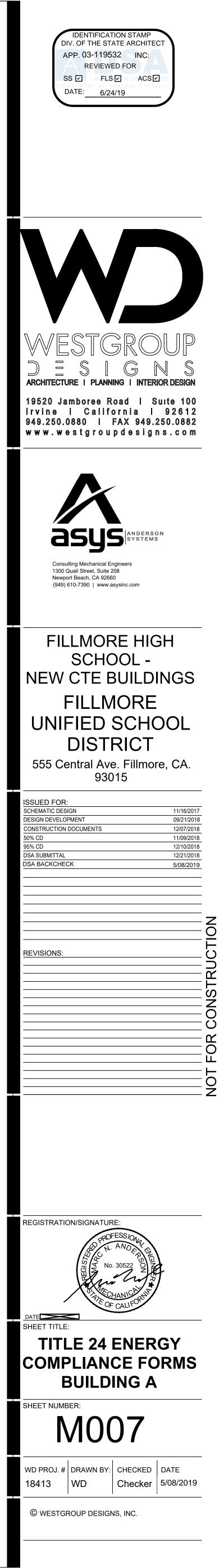
										<u>.</u>						
Project Name:	Fillmore High	School CTE -	Buildir	ng A				NRCC-PI	RF-01-E	Page 9 of 2	2					
Project Address:	555 Central Av	ve. Fillmore 9	93015					Calculat	ion Date/Time:	11:30, Tue,	Dec 18, 2018					
Compliance Scop	e: NewComplete	2						Input Fil	le Name:	Fillmore Hi	gh School CTE	- Building A.	cibd16>	(
L. ROOFING PR	ODUCT SUMMARY												§ 14	0.3	Confi	rmed
	1.			2.	3.		4.		5.		6.	7.				
	Product Type			uct Dei lb/ft²)	nsity Aged Reflect		Thermal mittanc	- I	SRI		l Roof redit	Roofing P Descrip			Pass	Fail
(Men	nbrane) Metal Roof10			4.759	0.0	8	0.75		NA		No	NA				
	Metal Roof82			2.543	0.0	8	0.75		NA		No	NA				
M. HVAC SYSTE	M SUMMARY (see N	IRCC-PRF-M	ICH-D	FTAIL	S for more info	rmation)						§ 110.1 /	§ 110.3	2		
					Equipment ¹ (Fa	-	er info in	cluded be	low in Table N)			3 ,	<u> </u>		Confi	rmed
1.	2.	3.		4.	5.	6.		7.	8.		9.	10.		11.		
Equip Name	Equip Type	System Ty (Simple ²	² or	Qty	Total Heating Output	Supp Heat Source (Y/N	0	op Heat Output	Total Cooling Output	Effic	iency	Accepta Testin Required?	g	Status ⁵	Pass	Fail
		Complex	(³)		(kBtu/h)		' (k	(Btuh)	(kBtu/h)	Cooling	Heating	4	(1),	S ²		
AC-1	SZAC (Split3Phase)	Simple	9	1	59	No		0	71	EER-12.2	AFUE-82.0	Yes		Ν		
Restroom Zone18	Exhaust ()	Simple	e	1	0	No		0	0	NA	NA	No		N		
Office Zone38	Exhaust ()	Simple	ē	1	0	No		0	0	NA	NA	No		Ν		
Tele./Compr. Room Zone53	Exhaust ()	Simple	e	1	0	No		0	0	NA	NA	No		N		
MUA-1	HV (NA)	Simple	e	1	320	No		0	0	NA	ThrmlEff- 80.0	Yes		N		
Auto Repair Lab Zone75	Exhaust ()	Simple	e	1	0	No		0	0	NA	NA	No		N		
CU-1/FC-1	MiniSplitHP (Split1Phase)	Simple	9	1	27	Yes		7	23	SEER- 21.400 / EER-12.200	HSPF- 11.000	Yes		N		
CU-2/FC-2	MiniSplitHP (Split1Phase)	Simple	9	1	0	No		0	17	SEER- 18.500 / EER-9.900	HSPF- 11.000	Yes		N		
CU-3/FC-3	MiniSplitHP (Split1Phase)	Simple	9	1	0	No		0	35	SEER- 18.800 / FFR-10.800	HSPF- 11.000	Yes		N		

¹ Dry System Equipment includes furnaces, air handling units, heat pumps, etc.

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Project Name:	Fillmore High School CTE - Building A	NRCC-PRF-01-E	Page 10 of 22
Project Address:	555 Central Ave. Fillmore 93015	Calculation Date/Time:	11:30, Tue, Dec 18, 2018
Compliance Scope:	NewComplete	Input File Name:	Fillmore High School CTE - Building A.cibd16x
² Simple Systems must complete I	NRCC-CXR-D3-E commissioning design review form		

 ² Simple Systems must complete NRCC-CXR-03-E commissioning design review form
 ³ Complex Systems must complete NRCC-CXR-04-E commissioning design review form ⁴ A summary of which acceptance tests are applicable is provided in NRCC-PRF-MCH-DETAILS

12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. Equip Name Equip Type Qty Vol (gal) Rated Capacity (kBtu/h) Efficiency Standby Loss Tank Ext. R Value Qty GPM HP VSD (Y/N) Standby Loss Value				Wet	System Eq	uipment ¹					Pur	nps			Conf	irmed
Function Names Function Trans Const Viel (con) Rated Capacity Function Strengthy Loss Function Const Up VSD St St		12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.		
		Equip Name	Equip Type	Qty	Vol (gal)	• •	Efficiency	Standby Loss	Ext. R	Qty	GPM	НР		a	as	Fail
Bradford White EF-60T-1502 Storage 1 60.00 150 Thrml. Eff.: 0.93 SBLF: 0.005 NA NA No N I	В	Bradford White EF-60T-1502	Storage	1	60.00	150	Thrml. Eff.: 0.93	SBLF: 0.005	NA		NA		No	Ν		

¹ Wet System Equipment includes boilers, chillers, cooling towers, water heaters, etc. ² Status: N - New, A – Altered, E – Existing

⁵ Status: N - New, A – Altered, E – Existing

. ECONOMIZE	R & FAN S	YSTEMS S	SUMMAR	Y1								§ 140.4	Conf	irm
1.	2.				3.					4.		5.		Г
	Outside Air			Sup	ply Fan				Retu	urn Fan		F	Pass	
Equip Name	CFM	CFM	HP	внр	TSP (inch WC)	Control	CFM	НР	внр	TSP (inch WC)	Control	Economizer Type (if present)	SS	
AC-1	728	2400	0.930	0.930	1.48	ConstantVolume	NA	NA	NA	NA	NA	DifferentialEnthalp y		Γ
MUA-1	6930	7000	5.900	5.900	3.21	ConstantVolume	NA	NA	NA	NA	NA	DifferentialEnthalp y		
CU-1/FC-1	0	775	0.043	0.043	0.18	ConstantVolume	NA	NA	NA	NA	NA	NA		Π
CU-2/FC-2	0	450	0.023	0.023	0.16	ConstantVolume	NA	NA	NA	NA	NA	NA		Π
CU-3/FC-3	0	920	0.043	0.043	0.15	ConstantVolume	NA	NA	NA	NA	NA	NA		

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Project Name:	Fillmore High	h School CTE - Building A				NRCC-PRF-0)1-Е	Page 13	of 22			
Project Address:	555 Central	Ave. Fillmore 93015				Calculation I	Date/Time:	11:30, Tu	ie, Dec 18, 2018			
Compliance Scope:	NewComplet	te				Input File Na	ame:	Fillmore	High School CTE	- Building A.cibd16x		
R. INDOOR CONDITIC	NED LIGHTIN	IG SCHEDULE (Adapted	from NRCC-LT	ГІ-01-Е) ¹							§ 13	30.0
Luminaire Schedule (inc conditioned space, and offices)		anent installed lighting in ng over 0.3 w/ft ² in				Installed	Watts (Cond	itioned)			Confi	rme
	Complete Lu	iminaire Description (i.e.,			How Wat	tage is Deter	rmined	Tatal	Number			
Name or Item Tag		orescent troffer, F32T8, able electronic ballast)	Watts per lu	uminaire	CEC Defau from NA8		ording to 30.0(c)		Number inaires	Installed Watts	Pass	F
R2		LED Module	35		Yes		No		2	70		
S1		LED Module	35		Yes		No		10	350		
S3		LED Module	35		Yes		No		23	805		
S4		LED Module	35		Yes		No		9	315		
¹ If lighting power densities were	e used in the compli	iance model Building Departments	will need to check	prescriptive for	rms for Luminaire	Schedule details	5.			_		
S1. COVERED PROCES	SS SUMMARY	- ENCLOSED PARKING	GARAGES							§ 140.9		
This Section Does Not A	pply											
S2. COVERED PROCES	S SUMMARY	– COMMERCIAL KITCHI	ENS							§ 140.9		
This Section Does Not A	pply											
S3. COVERED PROCES	S SUMMARY	– COMPUTER ROOMS							§ 140.9			
This Section Does Not A	pply											
		– LABORATORY EXHAU							81	40.9		_
			515						3 1	40.9		
This Section Does Not A	рріу											
T. UNMET LOAD HOU	RS											
Thermal Zone N	Name	Cooling Unmet Load Ho Thermal Zone		Proposed Co	ooling Unmet	Load Hours		nmet Load Thermal Z	Hour Limit for	Proposed Heating U	nmet Loac	l Ho
6-Auto Repair La	b Zone	150			89			150		4159.	75	

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Fillmore High School CTE - Building A NRCC-PRF-01-E Page 16 of 22 Project Name: Calculation Date/Time: 11:30, Tue, Dec 18, 2018 Project Address: 555 Central Ave. Fillmore 93015 Compliance Scope: NewComplete Input File Name: Fillmore High School CTE - Building A.cibd16x

NRCC-PRF-ENV-DETAILS -SECTION START-

A. OPAQUE SURFACE ASSE				Confi	rmed
1.	2.	3.	4.	Pa	
Surface Name	Surface Type	Description of Assembly Layers	Notes	Pass	Fail
Slab On Grade8	UndergroundFloor	Slab Type = UnheatedSlabOnGrade Insulation Orientation = None Insulation R-Value = R0			
(Membrane) Metal Roof10	Roof	Built-up roofing - 3/8 in. Metal Deck - 1/16 in. Metal standing seam roof, R-30			
Laminate Panel Wall12	ExteriorWall	Wood siding - 1/2 in. Vapor permeable felt - 1/8 in. Expanded Polystyrene - EPS - 2 2/5 in. R10 Gypsum Board - 1/2 in. Metal framed wall, 16in. OC, 5.5in., R-19 Gypsum Board - 1/2 in.			
(Corrugate) Insulated 828	ExteriorWall	Metal Siding - 1/16 in. Vapor permeable felt - 1/8 in. Expanded Polystyrene - EPS - 2 2/5 in. R10 Concrete - Part Grouted and Empty - 125 lb/ft3 - 8 in.			
(Int) Wall Metal Stud44	InteriorWall	Gypsum Board - 5/8 in. Metal framed wall, 16in. OC, 3.5in., R-13 Gypsum Board - 1/2 in.			
Metal Roof82	Roof	Metal Standing Seam - 1/16 in. Metal standing seam roof, R-30			
(Plaster) Insulated 8 CM84	ExteriorWall	Stucco - 3/8 in. Expanded Polystyrene - EPS - 2 2/5 in. R10 Concrete - Part Grouted and Empty - 125 lb/ft3 - 8 in.			

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This Section Does Not Apply

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Project Address:	555 Central Ave. Fillmore 9	3015		Calc	culation Da	ate/Time:	11:30,	Tue, Dec 18, 2018			
Compliance Scope:	NewComplete			Inpu	ut File Nan	ne:	Fillmor	re High School CTE -	Building A.cibd16	x	
D. EQUIPMENT CON	TROLS								§ 120.2	Confi	rmed
	1.		2.					3.		P	Ţ
Eq	uip Name		Equip Type				(Controls		Pass	Fall
	AC-1		SZAC			Differ No	rential E Supply No Op No Evap	D2Sensor Vent. Cont Inthalpy Economizer Air Temp. Control Dtimum Start Dorative Cooler eat Recovery			
Restr	oom Zone18		Exhaust					NA			
Offi	ice Zone38		Exhaust					NA			
Tele./Com	pr. Room Zone53		Exhaust					NA			
	MUA-1		HV			Sup	rential E oply Air No Oj ive Coo	ICV Controls Inthalpy Economizer Temp. Fixed at 55 otimum Start ler (Direct and Indire eat Recovery			
Auto Rep	pair Lab Zone75		Exhaust					NA			
WF	I-11 - SHW	Sei	rvice Hot Water, Primary	Only		Fixed T		ture Control, No DD eat Recovery	C		
. SYSTEM DISTRIBU								§ 120.4/ § 140.4(I)		
					Dry Syste	em Distribu	tion			Conf	firmed
1.	2.		3.	4.			5.		6.		
			Duct Leakage and	Duct Leakage	will be		Duc	ts		Pass	a
Equip Name	Equip Typ	e	Sealing Required per 140.4(I)	verified per N NA2	A1 and	Insulatio R-Value		Location	Status ¹	S	=
AC-1	SZAC		No	No		8.0		Unconditioned	Ν		
MUA-1	HV		No	No		8.0		Unconditioned	Ν		
CU-1/FC-1	MiniSplitH	IP	No	No		NA		Ductless	Ν		
CU-2/FC-2	MiniSplitH	IP	No	No		NA		Ductless	Ν		
CU-3/FC-3	MiniSplitH	IP	No	No		NA		Ductless	Ν		

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Project Name:	Fillmore High School CTE	- Building A		NRCC-PRF-01-E	Page 14 of 22		
Project Address:	555 Central Ave. Fillmore	93015		Calculation Date/Tim	ne: 11:30, Tue, Dec 18, 20	18	
Compliance Scope:	NewComplete			Input File Name:	Fillmore High School C	CTE - Building A.cibd16x	
U. ENERGY USE SUM	IMARY						
Ener	gy Component	Standard Design Site (MWh)	Proposed Design (MWh)	Site Margin (MWh)	Standard Design Site (MBtu)	Proposed Design Site (MBtu)	Margin (MBtu)
Sp	ace Heating		4.8		326.3	44.1	282.2
Sp	bace Cooling	21.0	6.6	14.4			
lı	ndoor Fans	53.7	46.2	7.5			
He	eat Rejection						
Pu	mps & Misc.						
Dome	estic Hot Water				29.6	16.0	13.6
Inc	door Lighting	17.3	7.6	9.7			
COM	PLIANCE TOTAL	92.0	65.2	26.8	355.9	60.1	295.8
F	Receptacle	21.8	21.8	0.0	8.9	8.9	0.0
	Process						
	Other Ltg						
Pro	ocess Motors						
	TOTAL	113.8	87.0	26.8	364.8	69.0	295.8

Fillmore High School CTE - Building A NRCC-PRF-01-E Project Name: Calculation Date/Time: 11:30, Tue, Dec 18, 2018 Project Address: 555 Central Ave. Fillmore 93015 Compliance Scope: NewComplete Input File Name:

C. OPAQUE DOOR SUMMAR	Y						Conf	irmed
1. Daque Door Assembly Name / Tag or I.D.	2.	3.	4.	5.	6.	7.		
Opaque Door Assembly Name / Tag or I.D.	Door Type	Certification Method	Operation	Area	Overall U-factor	Status ¹	Pass	Fail
Wood Door31	WoodGreater Than Or Equal To 1.75 in Thick Door	DefaultPerformance	Swinging	63	0.500	N		

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Fillmore High School CTE - Building A.cibd16x

¹ Status: N - New, A – Altered, E – Existing

NRCC-PRF-MCH-DETAILS -SECTION START-

CA Building Energy Efficiency Standards- 2016 Nonresidential Compliance

A. MECHANICAL V	ENTILATION		IEAI (Add		n 2016-NF	CC-MCH-	03-Е) 				LATION	(8 120 1	<u> </u>				Confi	rme T
CONDITIONED ZONE NAME	HEATING/COOLING SYSTEM ID	DESIGN PRIMARY AIR FLOW (CFM)	DESIGN PRIMARY MINIMUM AIR FLOW (CFM)	MINIMUM PRIMARY AIR FLOW FRACTION	MAXIMUM HEATING AIR FLOW (CFM)	MAXIMUM HEATING AIR FLOW FRACTION	DDC CONTROL (Y/N)	VENT SYSTEM ID	CONDITIONED AREA (ft2)	MIN. VENT PER AREA (CFM/ft2)	DESIG	MIN. VENT PER PERSON (CFM/person)	REQ'D VE	DESIGN VENT AIR FLOW (CFM)	TRANSFER AIRFLOW (CFM)	DCV (Y/N)	Operable Window Interlock § 140.4(n) (Y/N)	Pass	Fall
1-Engine Lab & Classroom Zo	AC-1	1,821	NA	0.00	NA	NA	N	AC-1	1,722	NA	43.05	15.00	646	646	NA	Y	NA		
2-Restroom Zone	AC-1	579	NA	0.00	NA	NA	N	AC-1	547	NA	2.73	30.00	82	82	NA	Ν	NA		
3-Office Zone	CU-1/FC-1	NA	NA	0.00	NA	NA	N	Office Zone38	332	NA	1.66	30.00	50	50	NA	Я	NA		
4-Tele./Compr. Room Zone	CU-2/FC-2	NA	NA	0.00	NA	NA	N	Tele./Comp r. Room Zone53	167	NA	0.25	100.0 0	25	25	NA	N	NA		
5-Elec. Zone	CU-3/FC-3	NA	NA	0.00	NA	NA	N		143	NA	0.21	100.0 0	21	NA	21	N	NA		
6-Auto Repair Lab Zone	MUA-1	7,000	NA	0.00	NA	NA	N	MUA-1	4,620	NA	23.10	300.0 0	6,930	6,930	NA	N	NA		
								TOTAL	7,531		71.00		7,754	7,733	21				

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l l			T						
Project Name:	Fillmore High School CTE - Buildin	g A		NRCC-PRF-01-E		Page 12 of 22			
Project Address:	555 Central Ave. Fillmore 93015			Calculation Date	e/Time:	11:30, Tue, Dec 18,	2018		
Compliance Scope:	NewComplete			Input File Name	:	Fillmore High Schoo	ol CTE - Building A.cibd16x		
Does the Project Include 7	onal Systems? (if "Yes", see NRC	C-DRE-MCH-DETAILS for system	n information)						/es
-	Solar Hot Water System? (if "Yes	-		formation)				-	No
-				-					
wuitifamily or Hotel/ wo	el Occupancy? (if "Yes", see NRC	C-PRF-IVICH-DETAILS for DHW	system informa	ation)				r	No
Q. INDOOR CONDITION	ED LIGHTING GENERAL INFO	(see NRCC-PRF-LTI-DETAILS	for more info)	3				§ 14	40.6
								Confi	irmed
1.	2.	3.	4	ł.		5	5.	_	
Occupancy Type ¹	Conditioned Floor Area ² (ft ²)	Installed Lighting Power (Watts)		ntrol Credits atts)		5. Additional (Custom) Allowance ategory Footnotes (Watts) Tailored Method (Watts)		Pass	Fail
					Area Ca		Tailored Method (Watts)		
Classrooms, Lecture, Training, Vocational Areas	1,722	1,470		D		0	0		
Corridors, Restrooms, Stai and Support Areas	rs, 547	420		D		0	0		
Office (250 square feet in floor area or less)	332	210	(D		0	0		
Electrical, Mechanical, Telephone Rooms	310	175	(D		0	0		
Auto Repair Area	4,620	1,085	(0		0	0		
			1					i	1

² See NRCC-LTI-01-E for unconditioned spaces ³Lighting information for existing spaces modeled is not included in the table

R. INDOOR CONDITIONED LIGHTING SCHEDULE (Adapted from NRCC-LTI-01-E)¹ Luminaire Schedule (includes all permanent installed lighting in

	•	udes all permanent installed lighting in ortable lighting over 0.3 w/ft ² in		In	stalled Watts (Con	ditioned)		Confi	irmed
		Complete Luminaire Description (i.e.,		How Wattage	is Determined	Total Number			
	Name or Item Tag	3-lamp fluorescent troffer, F32T8, one dimmable electronic ballast)	Watts per luminaire	CEC Default from NA8	According to §130.0(c)	Luminaires	Installed Watts	Pass	Fail
	P1	Linear LED Module	35	Yes	No	21	735		
[R1	LED Module	35	Yes	No	31	1,085		

§ 130.0

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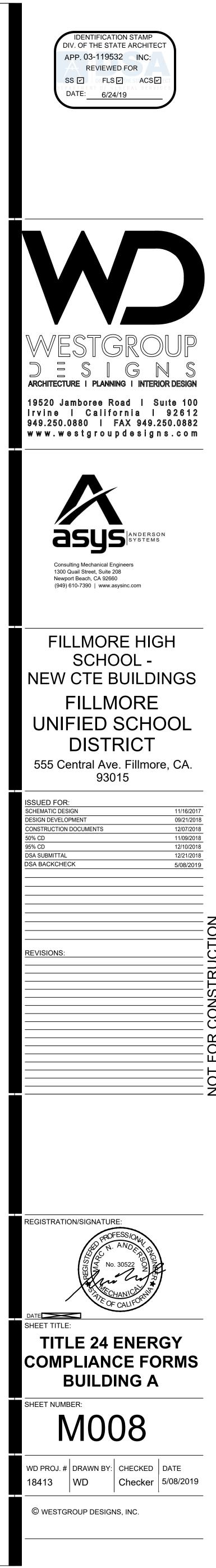
Project Name:	Fillmore High School CTE - Building A	NRCC-PRF-01-E	Page 15 of 22							
Project Address:	555 Central Ave. Fillmore 93015	Calculation Date/Tin	ne: 11:30, Tue, Dec 18, 2018							
Compliance Scope:	NewComplete	Input File Name:	Fillmore High School CTE - Building A.cibd16x							
DOCUMENTATION A	AUTHOR'S DECLARATION STATEMENT		§ 10-103							
I certify that this Certif	ficate of Compliance documentation is accurate and com	plete.	•							
Documentation Autho	r Name: Tim Bergstrom		2 = 1							
Company: asys, inc.		Signature:	Signature: Jim Becap							
Address: 1300 Quail St	t., Suite 208	Signature Date: 12/18/20	Signature Date: 12/18/2018							
City/State/Zip: Newpo	rt Beach CA 92660	CEA Identification (If applicab	le):							
Phone: 949-610-7390										
RESPONSIBLE PERSO	ON'S DECLARATION STATEMENT									
I certify the following	under penalty of perjury, under the laws of the State of C	alifornia:								
	rm that I am eligible under the provisions of Division 3 of he State of California as a civil engineer, mechanical engir		document as the person responsible for its preparation; and that I am itect.							
	I am eligible under the provisions of Division 3 of the Bus and that I am a licensed contractor performing this work		or 6737.3 to sign this document as the person responsible for its							
	I am eligible under Division 3 of the Business and Profess 9 Professions Code Sections 5537, 5538 and 6737.1.	ions Code to sign this document because it per	tains to a structure or type of work described as exempt pursuant to							
Responsible Envelope	Designer Name: David Smith	Signature:	$\wedge 20-$							
Company: WestGroup	Designs		12 T							
Address: 19520 Jambo	pree Road, Suite 100	Date Signed: 12-18 -24	846							
City/State/Zip: Irvine C	CA 92612	Declaration Statement Type:								
Phone: (949) 250-0880)	Title: Archieut of Rec	ard License #: C 20/95							
Responsible Lighting D	Designer Name: Adam Sloan	Signature:	ž							
Company: AG Desig	n Engineers, Inc.	signature:	2							
Address: 171 S. Ani	ta Drive, Suite 111	Date Signed: 12.18.2018								
City/State/Zip: Orang	je, California 92869	Declaration Statement Type:	1							
Phone: 714.769.990	00	Title: Principal	License #: E-18589							
Responsible Mechanic	al Designer Name: Marc Anderson	ci-	hance							
Company: Asys, Inc.		Signature:								
Address: 1300 Quail St	treet	Date Signed: 12/18/2018	3							
City/State/Zin: Newno	rt Beach CA 92660	Declaration Statement Type:	Declaration Statement Type: 1							

CA Building Energy Efficiency Standards- 2016 Nonresidential Compliance Report Version: NRCC-PRF-01-E-09132018-5583 Report Generated at: 2018-12-18 11:34:21

Project Name:	Fillmore Hig	gh School CTE	- Building	Α				NRCC-PRF	-01-Е		Page 18 c	of 22					
Project Address:	555 Centra	Ave. Fillmore	e 93015					Calculatio	n Date	e/Time:	11:30, Tu	e, Dec	18, 2018				
Compliance Scope:	NewCompl	ete						Input File	Name	e:	Fillmore I	ligh Sc	hool CTE - Bui	ding A.cib	d16x		
B. ZONAL SYSTEM	AND TERMINA	L UNIT SUM	IMARY													§ 14	0.4
1.	2.	3.	4	1.		5.		6.			7.			8.		Con	firmed
				Capacity tuh)					News		irflow (cfr	n)		Fan			_
System ID	System Ty	pe Qty	Heating	Cooling		omizer		Zone Name		Design	Min.	Mir Rati	I RHD	Cycles	ECM Motor	Pass	Fail
CU-1/FC-1	MiniSplit	HP 1	27.00	23.00	1	No		3-Office Zone		775	NA	NA	0.043				
CU-2/FC-2	MiniSplit	HP 1	NA	17.00	1	No	4-Te	ele./Compr. Roo Zone	om	450	NA	NA	0.023				
CU-3/FC-3	MiniSplit	HP 1	NA	35.00	1	No		5-Elec. Zone		920	NA	NA	0.043				
2-Restroom Zone-Trr	n Uncontrol	led 1	NA	NA	1	NA	2-	-Restroom Zone	2	579	NA	0.0	D NA	NA			
1-Engine Lab & Classroom Zo-Trm	Uncontrol	led 1	NA	NA	1	NA	1-Engi	ne Lab & Classr Zo	oom	1821	NA	0.0	D NA	NA			
6-Auto Repair Lab Zone-Trm	Uncontrol	led 1	NA	NA	ſ	NA	6-Aut	to Repair Lab Zo	one	7000	NA	0.0	D NA	NA			
C. EXHAUST FAN SI	UMMARY															Confirr	ned
1.				2.			3.	4.		5.			6.			P	77
System	ID		Zon	e Name		0	Qty	CFM		Motor B	HP	Total	Static Pressur	e (in H20)		Pass	Fail
Restroom Z	Zone18		2-Rest	room Zoi	ne		1	1,200		0.500			1.59				
Office Zo	ne38		3-Of	fice Zone	2		1	100		0.100			3.81				
Tele./Compr. Ro	om Zone53	4	4-Tele./Cor	npr. Roor	m Zone		1	500		0.170			1.29				
Auto Repair La	ab Zone75		6-Auto Re	epair Lab	Zone		1	1,350		1.000			2.82				
D. DHW EQUIPMEI		– (Adapted	from NRC	C-PLB-0)1)								§ 110.3			Confi	rmed
1.	2.	3.	, 	4.	5.	6.		7.		8.	9.		10.	1	1.		
DHW Name	Heater Element Type	Tank Ty	/pe	Qty	Tank Vol (gal)	Rated Ir (kBtu/		Efficiency	Insu R-1	Tank ulation •value nt/Ext)	Standby Fraction		Heat Pump Type	Tank Lo or An Cond	nbient	Pass	Fail
Bradford White EF-60T-1502	Gas	Stora	ge	1	60.00	150		Thrml. Eff.: 0.93		NA	SBLF: 0.	005	NA	N	A		

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Report Version: NRCC-PRF-01-E-09132018-5583



Project Name	:	Fillmo	re High So	chool CTE	- Building	g A				NE	RCC-PRF-0	1-E	Page	19 of 22						
Project Addre	ess:	555 C	entral Ave	e. Fillmore	93015					Ca	lculation	Date/Time	e: 11:3	0, Tue, De	ec 18, 201	8				
Compliance S	cope:	NewC	omplete							In	put File Na	ame:	Fillm	ore High	School CT	E - Buildir	ng A.cibd1	.6x		
E. MULTI-FA		NTRAL D	HW SYS		AILS															
This Section D	Does Not A	Apply																		
F. SOLAR HO					dontod f			1)												_
This Section D					dapted i		LC-31H-0	1)												
	JUES NUL	чрыу																		
G. MECHAN	ICAL HV		PTANCE	TESTS &	FORMS	Adapted	d from 20	016-NRC	с-мсн-о	1-E)									§ RA	4
Declaration o Inspector to v	-	d Accepta	ance Cert	ificates (N	IRCA) – A	cceptance	e Certifica	tes that n	nay be sul	omitted. (Retain co	pies and v	erify forn	ns are con	npleted a	nd signed	to post in	field for	Field	
Test Descri	iption	MCH-02A	MCH-03A	MCH-04A	MCH-05A	MCH-06A	MCH-07A	MCH-08A	MCH-09A	MCH-10A	MCH-11A	MCH-12A	MCH-13A	MCH-14A	MCH-15A	MCH-16A	MCH-17A	MCH-18A	Conf	irm
Equipment Requiring Testing or Verification	# of units	Outdoor Air	Single Zone Unitary	Air Dist. Ducts	Economizer Controls	DCV	Supply Fan VAV	Valve leakage	Supply Water Temp. Reset	Hyd. Variable Flow Control	Auto Demand Shed Control	FDD for DX Units	Auto FDD for Air & Zone	Dist. Energy Storage DX AC	TES Systems	Supply Air Temp. Reset	Condenser Water Reset Controls	ECMS	Pass	-
WH-11 - SHW	1																			
AC-1	1	Х	Х		Х	Х]
Restroom Zone18	1																			[
Office Zone38	1																			1
Tele./Compr . Room Zone53	1																			[
MUA-1	1	Х			Х															1
Auto Repair	1																			[
Lab Zone75	1	Х																		T

			NRCC-PRF-0	1 -	Page 22 of 22			
Project Name:	Fillmore High School CTE - Bu	liding A	NRCC-FRF-0.	I-E	Page 22 of 22			
Project Address:	555 Central Ave. Fillmore 930	15	Calculation [Date/Time:	11:30, Tue, Dec 1	8, 2018		
Compliance Scope:	NewComplete		Input File Na	ime:	Fillmore High Sch	ool CTE - Building A.cibd16x		
5. Wall Display	· · · · · · · · · · · · · · · · · · ·							
This Section Does Not A	oply							
6. Floor Display and T	ask Lighting							
This Section Does Not A								
7. Combined Orname	ntal and Special Effects Ligh	ting						
This Section Does Not A	oply							
	chandise							
8. Very Valuable Mer This Section Does Not A								
8. Very Valuable Mer This Section Does Not A	oply	TESTS & FORMS (Adapted fron	n NRCC-LTI-01-E and NRC	C-LTO-01-E)			§ 13	30.4
8. Very Valuable Mer This Section Does Not A H. INDOOR & OUTDO	oply OR LIGHTING ACCEPTANCE	A) –Acceptance Certificates that m			s and verify forms	s are completed and signed	_	
8. Very Valuable Mer This Section Does Not A H. INDOOR & OUTDO Declaration of Require	oply OR LIGHTING ACCEPTANCE Acceptance Certificates (NRC/	A) –Acceptance Certificates that m	nust be verified in the field.		s and verify forms	s are completed and signed Outdoor	to post in f	
8. Very Valuable Mer This Section Does Not A H. INDOOR & OUTDO Declaration of Require	oply OR LIGHTING ACCEPTANCE	A) –Acceptance Certificates that m	nust be verified in the field. I Inspector to verify).	(Retain copie	s and verify forms A-LTI-04-A		to post in f	ield for rmed
8. Very Valuable Mer This Section Does Not A H. INDOOR & OUTDO Declaration of Require	OR LIGHTING ACCEPTANCE	A) –Acceptance Certificates that m Field	nust be verified in the field. I Inspector to verify). Indoor	(Retain copie		Outdoor	to post in f	ield for
8. Very Valuable Mer This Section Does Not A H. INDOOR & OUTDO Declaration of Require Te: Equipment Requirin	OR LIGHTING ACCEPTANCE	A) –Acceptance Certificates that m Field NRCA-LTI-02-A Occ Sensors / Auto Time	nust be verified in the field. I Inspector to verify). Indoor NRCA-LTI-03-A	(Retain copie	A-LTI-04-A	Outdoor NRCA-LTO-02-A	to post in f	ield for rmed
8. Very Valuable Mer This Section Does Not A H. INDOOR & OUTDO Declaration of Require Tes Equipment Requirin Testing or Verificatio	OR LIGHTING ACCEPTANCE Acceptance Certificates (NRCA t Description	A) –Acceptance Certificates that m Field NRCA-LTI-02-A Occ Sensors / Auto Time Switch	A uto Daylight	(Retain copie	A-LTI-04-A d Responsive	Outdoor NRCA-LTO-02-A Outdoor Controls	to post in f	ield for rmed 퍕.
8. Very Valuable Mer This Section Does Not A H. INDOOR & OUTDO Declaration of Require Tes Equipment Requirin Testing or Verificatio Occupant Sensors	OR LIGHTING ACCEPTANCE Acceptance Certificates (NRC/ t Description 4 5 4 6 7 0 1 0 0 0	A) –Acceptance Certificates that m Field NRCA-LTI-02-A Occ Sensors / Auto Time Switch	hust be verified in the field. Inspector to verify). Indoor NRCA-LTI-03-A Auto Daylight	(Retain copie	A-LTI-04-A d Responsive	Outdoor NRCA-LTO-02-A Outdoor Controls	Confi	ield for rmed
8. Very Valuable Mer This Section Does Not A H. INDOOR & OUTDO Declaration of Require Tes Equipment Requirin Testing or Verificatio Occupant Sensors Automatic Time Swit	OR LIGHTING ACCEPTANCE I Acceptance Certificates (NRC/ I Description g # of units 0 h 0 g 0	A) –Acceptance Certificates that m Field NRCA-LTI-02-A Occ Sensors / Auto Time Switch X	Anust be verified in the field. Inspector to verify). Indoor NRCA-LTI-03-A Auto Daylight	(Retain copie	A-LTI-04-A d Responsive	Outdoor NRCA-LTO-02-A Outdoor Controls	to post in f	ield for rmed

CA Building Energy Efficiency Standards- 2016 Nonresidential Compliance Report Version: NRCC-PRF-01-E-09132018-5583

Report Generated at: 2018-12-18 11:34:21

Project Name	:	Fillmo	re High So	chool CTE	- Building	A				N	RCC-PRF-C)1-E	Pag	ge 20 of 22						
Project Addre	ess:	555 Ce	entral Ave	. Fillmore	93015					Ca	alculation	Date/Time	: 11:	30, Tue, De	ec 18, 20	18				
Compliance S	cope:	NewCo	omplete							In	put File N	ame:	Fill	more High	School C	TE - Buildir	ng A.cibd	16x		
G. MECHAN	ICAL HVAC	ACCE	PTANCE	FESTS &	FORMS (Adapted	from 20)16-NRC	с-мсн-о)1-E)									§ RA	4
Declaration o Inspector to v		Accepta	ance Certi	ficates (N	NRCA) — Ad	cceptance	e Certifica	tes that n	nay be sul	omitted.	(Retain co	pies and v	erify for	ms are cor	npleted a	ind signed	to post i	n field for	Field	
Test Descri	iption	MCH-02A	MCH-03A	MCH-04A	MCH-05A	MCH-06A	MCH-07A	MCH-08A	MCH-09A	MCH-10A	MCH-11A	MCH-12A	MCH-13A	MCH-14A	MCH-15A	MCH-16A	MCH-17A	MCH-18A	Conf	irm
Equipment Requiring Testing or Verification	# of units	Outdoor Air	Single Zone Unitary	Air Dist. Ducts	Economizer Controls	DCV	Supply Fan VAV	Valve leakage	Supply Water Temp. Reset	Hyd. Variable Flow Control	Auto Demand Shed Control	FDD for DX Units	Auto FDD for Air & Zone	Dist. Energy Storage DX AC	TES Systems	Supply Air Temp. Reset	Condenser Water Reset Controls	ECMS	Pass	
CU-2/FC-2	1	х																		
CU-3/FC-3	1	Х																		1
H. EVAPORA	TIVE COOL	ER SU	MMARY																	
1.			2.		3.		4.		5.		6.	7.		8.		9.		Conf	irmed	
Syster	m ID		Туре		Qty	Effec	tiveness		o Power /atts)		lary Fan ate (cfm)	Seconda Total Effi	-	Seconda Static Pro (in H2	essure	Secondar Sourc	· .	Pass	F	Fail
ECD-Air2O S-	CRS-750074		Direct		1	(0.95	12	07.4	1	NA .	NA		NA	`	NA				
ECD-Air2O S- 2		l I	ndirect		1		0.8		0	70	000	0.5	0	0.0011	7836	Outdo	or			

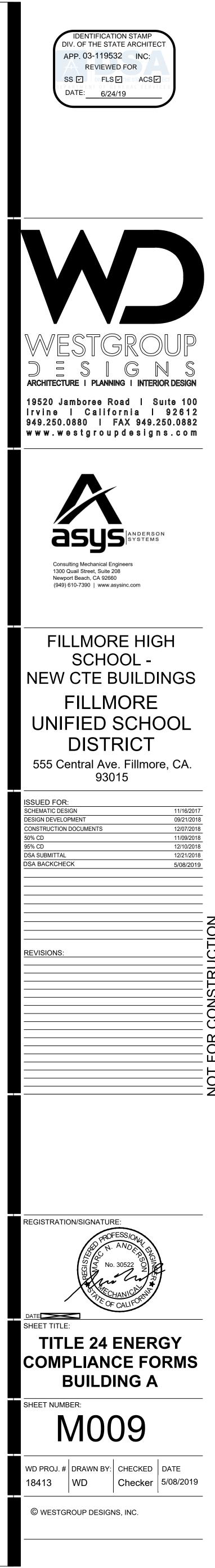
A. INDOOR CONDITIONED LIGHTING CONTROL CREDITS (Adapted from NRCC-LTI-02-E)	§ 140.6
This Section Does Not Apply	· · · · · · · · · · · · · · · · · · ·
B. INDOOR CONDITIONED LIGHTING MANDATORY LIGHTING CONTROLS (Adapted from NRCC-LTI-02-E)	§ 130.1

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§110.6(a):Standards for Sections 26§110.8(c):All Insulating Sections 26§110.8(g):Heated slab§110.7(a):All Exterior or weatherstrip§110.6(a):Manufacture window area (swinging ar§110.6(a):Fenestration applicable dr shall meet the shall meet the shall meet the wood Fram The opaque		requirements of ked, gasketed, cfm/ft. ² of ingle doors n, or the d shall be or ambient air 75.
Building Envelope Me§110.8(a):Installed ins Standards for Standards for Sections 26§110.8(c):All Insulating Sections 26§110.8(g):Heated slab§110.7(a):All Exterior of weatherstrip§110.6(a):Manufacture window area (swinging ar \$110.6(a):§110.6(a):Fenestration applicable d§110.6(b):Site Constru- weatherstrip The opaque shall meet the shall meet the wood Fram The opaque	ulating material shall have been certified by the manufacturer to comply with the California or insulating material, Title 20 Chapter 4, Article 3. 9 Materials shall be installed in compliance with the flame spread rating and smoke density 02 and 707 of Title 24, Part 2. floors shall be insulated according to the requirements in Table 110.8-A. Joints and openings in the building that are observable sources of air leakage shall be caulke ped or otherwise sealed. ad fenestration products and exterior doors shall have air infiltration rates not exceeding 0.3 a, 0.3 cfm/ft. ² of door area for residential doors, 0.3 cfm/ft. ² of door area for nonresidential si ad sliding), and 1.0 cfm/ft. ² for nonresidential double doors (swinging). In U-factor shall be rated in accordance with NFRC 100, or the applicable default U-factor. In SHGC shall be rated in accordance with NFRC 200, or NFRC 100 for site-built fenestration efault SHGC. Intered Doors, Windows and Skylights shall be caulked between the unit and the building, and ped (except for unframed glass doors and fire doors). portions of the roof/ceiling that separates conditioned spaces from unconditioned spaces on the applicable U-Factor requirements as follows: ling- The weighted average U-factor of the roof assembly shall not exceed 0.098. net and Others- The weighted average U-factor of the roof assembly shall not exceed 0.098.	requirements of ked, gasketed, cfm/ft. ² of ingle doors n, or the d shall be or ambient air 75.
§110.8(a):Installed ins Standards for Standards for Standards for Sections 26§110.8(c):All Insulating Sections 26§110.8(g):Heated slab§110.7(a):All Exterior of weatherstrip§110.6(a):All Exterior of weatherstrip§110.6(a):Fenestration applicable d§110.6(b):Site Constru- weatherstrip§110.6(b):Site Constru- weatherstrip§120.7(a):Metal Build Wood Fram The opaque	ulating material shall have been certified by the manufacturer to comply with the California or insulating material, Title 20 Chapter 4, Article 3. 9 Materials shall be installed in compliance with the flame spread rating and smoke density 02 and 707 of Title 24, Part 2. floors shall be insulated according to the requirements in Table 110.8-A. Joints and openings in the building that are observable sources of air leakage shall be caulke ped or otherwise sealed. ad fenestration products and exterior doors shall have air infiltration rates not exceeding 0.3 a, 0.3 cfm/ft. ² of door area for residential doors, 0.3 cfm/ft. ² of door area for nonresidential si ad sliding), and 1.0 cfm/ft. ² for nonresidential double doors (swinging). In U-factor shall be rated in accordance with NFRC 100, or the applicable default U-factor. In SHGC shall be rated in accordance with NFRC 200, or NFRC 100 for site-built fenestration efault SHGC. Intered Doors, Windows and Skylights shall be caulked between the unit and the building, and ped (except for unframed glass doors and fire doors). portions of the roof/ceiling that separates conditioned spaces from unconditioned spaces on the applicable U-Factor requirements as follows: ling- The weighted average U-factor of the roof assembly shall not exceed 0.098. net and Others- The weighted average U-factor of the roof assembly shall not exceed 0.098.	requirements of ked, gasketed, cfm/ft. ² of ingle doors n, or the d shall be or ambient air 75.
§110.6(a):Standards for Sections 26§110.8(c):All Insulating Sections 26§110.8(g):Heated slab§110.7(a):All Exterior weatherstrip Wanufacture window area (swinging ar \$110.6(a):§110.6(a):Fenestration Site Constru- weatherstrip The opaque shall meet the wood Fram The opaque	or insulating material, Title 20 Chapter 4, Article 3. Materials shall be installed in compliance with the flame spread rating and smoke density D2 and 707 of Title 24, Part 2. floors shall be insulated according to the requirements in Table 110.8-A. Joints and openings in the building that are observable sources of air leakage shall be caulle ped or otherwise sealed. ad fenestration products and exterior doors shall have air infiltration rates not exceeding 0.3 a, 0.3 cfm/ft. ² of door area for residential doors, 0.3 cfm/ft. ² of door area for nonresidential sind ad sliding), and 1.0 cfm/ft. ² for nonresidential double doors (swinging). In U-factor shall be rated in accordance with NFRC 100, or the applicable default U-factor. In SHGC shall be rated in accordance with NFRC 200, or NFRC 100 for site-built fenestration efault SHGC. Incted Doors, Windows and Skylights shall be caulked between the unit and the building, and ped (except for unframed glass doors and fire doors). portions of the roof/ceiling that separates conditioned spaces from unconditioned spaces of the applicable U-Factor requirements as follows: ling- The weighted average U-factor of the roof assembly shall not exceed 0.098. net and Others- The weighted average U-factor of the roof assembly shall not exceed 0.098.	requirements of ked, gasketed, cfm/ft. ² of ingle doors n, or the d shall be or ambient air
§110.8(g):Sections 26§110.8(g):Heated slab§110.7(a):All Exterior of weatherstrip§110.6(a):Manufacture§110.6(a):Fenestration§110.6(a):Fenestration§110.6(a):Site Construing§110.6(b):Site Construing§110.6(b):Site Construing§120.7(a):Metal BuildWood FramThe opaque	22 and 707 of Title 24, Part 2. floors shall be insulated according to the requirements in Table 110.8-A. Joints and openings in the building that are observable sources of air leakage shall be caulk ped or otherwise sealed. ad fenestration products and exterior doors shall have air infiltration rates not exceeding 0.3 a, 0.3 cfm/ft. ² of door area for residential doors, 0.3 cfm/ft. ² of door area for nonresidential si ad sliding), and 1.0 cfm/ft. ² for nonresidential double doors (swinging). an U-factor shall be rated in accordance with NFRC 100, or the applicable default U-factor. an SHGC shall be rated in accordance with NFRC 200, or NFRC 100 for site-built fenestration efault SHGC. Incred Doors, Windows and Skylights shall be caulked between the unit and the building, and ped (except for unframed glass doors and fire doors). portions of the roof/ceiling that separates conditioned spaces from unconditioned spaces on the applicable U-Factor requirements as follows: ling- The weighted average U-factor of the roof assembly shall not exceed 0.098. med and Others- The weighted average U-factor of the roof assembly shall not exceed 0.098. med and Others- The weighted average U-factor of the roof assembly shall not exceed 0.098. med and Others- The weighted average U-factor of the roof assembly shall not exceed 0.098.	ked, gasketed, cfm/ft.² of ingle doors n, or the d shall be or ambient air
§110.7(a): All Exterior weatherstrip §110.6(a): Manufacture §110.6(a): Window area §110.6(a): Fenestration §110.6(a): Fenestration §110.6(a): Fenestration §110.6(b): Site Construment §110.6(b): Site Construment §110.6(b): Site Construment §120.7(a): Metal Build Wood Fram The opaque	Joints and openings in the building that are observable sources of air leakage shall be caulk ped or otherwise sealed. ad fenestration products and exterior doors shall have air infiltration rates not exceeding 0.3 a, 0.3 cfm/ft. ² of door area for residential doors, 0.3 cfm/ft. ² of door area for nonresidential sind sliding), and 1.0 cfm/ft. ² for nonresidential double doors (swinging). In U-factor shall be rated in accordance with NFRC 100, or the applicable default U-factor. In SHGC shall be rated in accordance with NFRC 200, or NFRC 100 for site-built fenestration efault SHGC. Incted Doors, Windows and Skylights shall be caulked between the unit and the building, and ped (except for unframed glass doors and fire doors). In portions of the roof/ceiling that separates conditioned spaces from unconditioned spaces on the applicable U-Factor requirements as follows: ling- The weighted average U-factor of the roof assembly shall not exceed 0.098. ned and Others- The weighted average U-factor of the roof assembly shall not exceed 0.098.	o cfm/ft. ² of ingle doors n, or the d shall be or ambient air
§110.7(a). weatherstrip Manufacture Manufacture §110.6(a): window area (swinging ar §110.6(a): Fenestration §110.6(a): Fenestration §110.6(a): Fenestration §110.6(b): Site Construweatherstrip The opaque shall meet the §120.7(a): Metal Build Wood Fram The opaque	 and ped or otherwise sealed. and fenestration products and exterior doors shall have air infiltration rates not exceeding 0.3 a, 0.3 cfm/ft.² of door area for residential doors, 0.3 cfm/ft.² of door area for nonresidential sind sliding), and 1.0 cfm/ft.² for nonresidential double doors (swinging). and U-factor shall be rated in accordance with NFRC 100, or the applicable default U-factor. and SHGC shall be rated in accordance with NFRC 200, or NFRC 100 for site-built fenestration efault SHGC. be the table of the roof, windows and Skylights shall be caulked between the unit and the building, and ped (except for unframed glass doors and fire doors). be portions of the roof/ceiling that separates conditioned spaces from unconditioned spaces on the applicable U-Factor requirements as follows: be the weighted average U-factor of the roof assembly shall not exceed 0.098. be and Others- The weighted average U-factor of the roof assembly shall not exceed 0.0 	o cfm/ft. ² of ingle doors n, or the d shall be or ambient air
§110.6(a): window area (swinging area (swinging area)) §110.6(a): Fenestration applicable d §110.6(b): Site Construction weatherstrip The opaque shall meet the shall meet th	a, 0.3 cfm/ft. ² of door area for residential doors, 0.3 cfm/ft. ² of door area for nonresidential sind sliding), and 1.0 cfm/ft. ² for nonresidential double doors (swinging). In U-factor shall be rated in accordance with NFRC 100, or the applicable default U-factor. In SHGC shall be rated in accordance with NFRC 200, or NFRC 100 for site-built fenestration efault SHGC. Increde Doors, Windows and Skylights shall be caulked between the unit and the building, and ped (except for unframed glass doors and fire doors). In portions of the roof/ceiling that separates conditioned spaces from unconditioned spaces on the applicable U-Factor requirements as follows: ling- The weighted average U-factor of the roof assembly shall not exceed 0.098. ned and Others- The weighted average U-factor of the roof assembly shall not exceed 0.0	n, or the d shall be or ambient air
§110.6(a) : Fenestration applicable d §110.6(b): Site Construments §110.6(b): Site Construments §120.7(a): The opaque shall meet the the the the the the the the the	n SHGC shall be rated in accordance with NFRC 200, or NFRC 100 for site-built fenestration efault SHGC. Incred Doors, Windows and Skylights shall be caulked between the unit and the building, and ped (except for unframed glass doors and fire doors). portions of the roof/ceiling that separates conditioned spaces from unconditioned spaces on the applicable U-Factor requirements as follows: ling- The weighted average U-factor of the roof assembly shall not exceed 0.098. ned and Others- The weighted average U-factor of the roof assembly shall not exceed 0.0	d shall be or ambient air 175.
§110.6(a):applicable d§110.6(b):Site Construme weatherstripThe opaque shall meet th§120.7(a):Metal Build Wood Fram The opaque	efault SHGC. Incred Doors, Windows and Skylights shall be caulked between the unit and the building, and ped (except for unframed glass doors and fire doors). portions of the roof/ceiling that separates conditioned spaces from unconditioned spaces of the applicable U-Factor requirements as follows: ling- The weighted average U-factor of the roof assembly shall not exceed 0.098. med and Others- The weighted average U-factor of the roof assembly shall not exceed 0.0	d shall be or ambient air 175.
 §110.6(b): weatherstrip The opaque shall meet the §120.7(a): Metal Build Wood Fran The opaque 	ped (except for unframed glass doors and fire doors). portions of the roof/ceiling that separates conditioned spaces from unconditioned spaces on the applicable U-Factor requirements as follows: ling- The weighted average U-factor of the roof assembly shall not exceed 0.098. med and Others- The weighted average U-factor of the roof assembly shall not exceed 0.0	or ambient air 75.
shall meet th §120.7(a): Metal Build Wood Fran The opaque	he applicable U-Factor requirements as follows: ling- The weighted average U-factor of the roof assembly shall not exceed 0.098. ned and Others- The weighted average U-factor of the roof assembly shall not exceed 0.0	75.
Metal Build Wood Fran The opaque	ned and Others- The weighted average U-factor of the roof assembly shall not exceed 0.0	
	portions of walls that separate conditioned spaces from unconditioned spaces or ambient a	ir shall meet the
Metal Build Metal Fran Light Mass §120.7(b): Heavy Mas 0.690.	J-factor as follows: ling- The weighted average U-factor of the wall assembly shall not exceed 0.113. ned- The weighted average U-factor of the wall assembly shall not exceed 0.151. Walls- A 6 inch or greater Hollow Core Concrete Masonry Unit shall have a U-factor not s Walls- An 8 inch or greater Hollow Core Concrete Masonry Unit shall have a U-factor n	to exceed 0.440 not to exceed
Spandrel P curtain wall Demising V A. B.	ned and Others- The weighted average U-factor of the wall assembly shall not exceed 0.1 anels and Opaque Curtain Wall- The weighted average U-factor of the spandrel panels a assembly shall not exceed 0.280. Valls The opaque portions of framed demising walls shall meet the requirements of Item . Wood framed walls shall be insulated to meet a U-factor not greater than 0.099. Metal Framed walls shall be insulated to meet a U-factor not greater than 0.151.	and opaque A or B below:
shall meet th	portions of floors and soffits that separate conditioned spaces from unconditioned spaces on the applicable U-Factor requirements as follows: See Floors- Shall have a minimum of 3 inches of lightweight concrete over a metal deck or t	
	actor of the floor assembly shall not exceed 0.269. rs-The weighted average U-factor of the floor assembly shall not exceed 0.071.	_

0		0		0		0	0			
Wall Di	splay	Combined Floor Display and T Lighting		Ornamental and Speci fects Lighting	al Very	Valuable Merchandise	Allowed	Watts	Pass	Fail
1.		2.		3.		4.			Conf	irmed
G. ADDITIONAL "U	JSE IT OR LOSE I	T" (Adapted from NRCC-LTI-04	4-E)							
		n-Rectangular Spaces table								
This Section Does No	-	· · · · · · · · · · · · · · · · · · ·								
Non-Rectangular S	Spaces			I						
NA		NA	NA	NA		NA	N	IA		
Room Number	- Ta	ask/Activity Description	Room Length (ft)	Room Wie	dth (ft)	Room Cavity Height (ft)	R	CR		onfirmed Iss Fail
		,	Rect	angular Spaces						
F. ROOM CAVITY F	ATIO (Adapted	from NRCC-LTI-04-E)								
vote: Tanorea Methoa for S	pecial Function Areas I	s not currently implemented								
NA	inacial Eurotion Arcos	NA s not currently implemented	NA	NA	NA	NA	NA			
	r111		(LUX)	(Table G)				10113	Pass	Fail
Room Number	Prir	mary Function Area	Illuminance Value	Room Cavity Ratio	Allowed LP	D Floor Area (ft ²)	Allowed V	Vatts	Confi	rmed
E. GENERAL LIGHT	ING FROM SPEC	CIAL FUNCTION AREAS (Adapt	ed from NRCC-LTI-(04-E)					§ 140.6(c) 3H
This Section Does No	ot Apply									
D. GENERAL LIGH	ING POWER (A	dapted from NRCC-LTI-04-E)							§ 140.6-	D
									-	
							Total watts		0	
Additional "use it or		nction areas (see Table E)							NA 0	
General lighting pow									0	
		NED LIGHTING POWER ALLOW		AND CHECKLIST (Ad	apted from N	IRCC-LII-04-E)		§ 140		
								6 4 4 0	6	
Compliance Scope:	NewComple	ete		Input Fil	e Name:	Fillmore High School C	TE - Building A	.cibd16	x	
Project Address:	555 Central	Ave. Fillmore 93015		Calculati	on Date/Time:	11:30, Tue, Dec 18, 20	18			
Project Name:	I minore mg	h School CTE - Building A		Intec-ri	RF-01-E	Page 21 of 22				

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							1					
	ct Name:	Fillmore High		-			NRCC-PRF-01		Page 1 of 2			
	ct Address:	555 Central A		93015			Calculation D			Dec 18, 2018		
Com	bliance Scope:	NewComplete	9				Input File Nar	me:	Fillmore Hig	gh School CTE -	Building B.cibd16	x
A. PI	ROJECT GENERAL I	NFORMATIO	N									
1.	Project Location (ci	ty)		Fillmore		8.	Standards Ve	rsion		Compliance2	2016	
2.	CA Zip Code		ł	93015		9. Compliance		oftware (ve	rsion)	EnergyPro 7.	2	
3.	Climate Zone			9		10.	Weather File			VAN-NUYS_7	22886_CZ2010.ep	w
4.	Total Conditioned F	loor Area in So	cope	9,328 ft ²		11.	Building Orientation (deg		;)	(E) 90 deg		
5.	Total Unconditione	d Floor Area			12.	Permitted Sco	ope of Work	ζ.	NewComplet	te		
6.	Total # of Stories (H	labitable Abov	bitable Above Grade) 1			13	Building Type	e(s)		Nonresidenti	ial	
7.	Total # of dwelling units 0			0		14	Gas Type			NaturalGas		
						1.0.	<i>(</i> (; 2)					
B. CO	DMPLIANCE RESUL	TS FOR PERF	ORMANCE	E COMPONENTS (Annual	TDV Energy Use,	kBtu	/ft ² -yr)					§ 140.1
					BUILDING	CON	APLIES					
	1. Energy Compo	nent	2. Sta	ndard Design (TDV)	3. Proposed	Desigr	n (TDV)	4. Com	pliance Mar	gin (TDV)	5. Percent Bett	er than Standard
Space	e Heating			4.76			7.00			-2.24		-47.1%
Space	e Cooling			89.11			62.62			26.49		29.7%
Indoo	or Fans			341.86			371.52		-29.66			-8.7%
Heat	Rejection								-			
Pump	os & Misc.											
Dom	estic Hot Water			6.67			4.33			2.34		35.1%
Indoo	or Lighting			42.23			30.56			11.67		27.6%
сом	PLIANCE TOTAL			484.63			476.03			8.60		1.8%
Rece	otacle			95.01			95.01			0.0		0.0%
Proce	255											
Othe	r Ltg											
Proce	ess Motors											
ΤΟΤΑ	L			579.64			571.04			8.6		1.5%

Project Nam	ie:	Fillmore High School CTE -	Building B	NRCC-F	PRF-01-E	Page 4 of 27	
Project Addr	ress:	555 Central Ave. Fillmore	93015	Calcula	tion Date/Tim	ie: 11:37, Tue, Dec 18, 2018	
Compliance	Scope:	NewComplete		Input F	ile Name:	Fillmore High School CTE - Bu	uilding B.cibd16x
						·	
G. COMPLI	ANCE PAT	H & CERTIFICATE OF COM	PLIANCE SUMMARY				
The followin	ng building	components are only eligible relevant to the	for prescriptive compliance. Indicate which are e project.	The follo	wing building	components may have mandatory which are relevant to the pro	
Yes	NA	Prescriptive Requirement	Compliance Forms	Yes	NA	Mandatory Requirement	Compliance Forms
		Lighting (Indoor Unconditioned) §140.6	NRCC-LTI-01 / 02 / 03 / 04 / 05-E		X	Commissioning: §120.8 Simple Systems Complex Systems	NRCC-CXR-01 / 02 / 03 / 05-E NRCC-CXR-01 / 02 / 04 / 05-E
	\boxtimes	Lighting (Outdoor) §140.7	NRCC-LTO-01 / 02 / 03-E			Electrical: §130.5	NRCC-ELC-01-E
	\boxtimes	Lighting (Sign) §140.8	NRCC-LTS-01-E			Solar Ready: §110.10	NRCC-SRA-01 / 02-E
		Solar Thermal Water Heating: §140.5	NRCC-STH-01-E		N N N N N N N N N N N N N N N N N N N	Covered Process: §120.6 Parking Garage Commercial Refrigeration Warehouse Refrigeration Compressed Air Process Boilers	NRCC-PRC-01-E NRCC-PRC-02-E NRCC-PRC-05-E NRCC-PRC-06/07/08-E NRCC-PRC-10-E NRCC-PRC-11-E

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Project Name:	Fillmore High School CTE - Building B N	IRCC-PRF-01-E	Page 7 of 27		
Project Address:	555 Central Ave. Fillmore 93015 Ca	Calculation Date/Time:	11:37, Tue, Dec 18, 2018		
Compliance Scope:	NewComplete In	nput File Name:	Fillmore High School CTE - Buildi	ng B.cibd16x	
Documentation Author (Retain copies and veri	TALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICATION to indicate which Certificates must be submitted for the features to be re fy forms are completed and signed to post in field for Field Inspector to ve MCH and LTI Details Sections for Acceptance Tests and forms by equipme	ecognized for complia erify).		Confi	rmed
Building Component	Compliance Forms (required for submittal)			Pass	Fail
	NRCI-PRC-01-E Covered Processes				
	NRCA-PRC-01-F- Compressed Air Systems				
	NRCA-PRC-02-F- Kitchen Exhaust				
	NRCA-PRC-03-F- Garage Exhaust				
Covered Process	NRCA-PRC-04-F- Refrigerated Warehouse- Evaporator Fan Motor Contr	rols			
	NRCA-PRC-05-F- Refrigerated Warehouse- Evaporative Condenser Cont	trols			
	NRCA-PRC-06-F- Refrigerated Warehouse- Air Cooled Condenser Control	rols			
	NRCA-PRC-07F- Refrigerated Warehouse- Variable Speed Compressor				
	NRCA-PRC-08-F- Electrical Resistance Underslab Heating System				
L ENVELOPE GENERAL	INFORMATION (See NRCC-PRF-ENV-DETAILS for more information)				

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I. ENVE	LOPE GENERAL INFORMATION (See	NRCC-PRF-ENV-DETAILS for more i	nformati	on)			
1.	Total Conditioned Floor Area	9,328 ft ²	5.	Number of Floors Above Grade	1	Confi	rmed
2.	Total Unconditioned Floor Area	501 ft ²	6.	Number of Floors Below Grade	0		
3.	Addition Conditioned Floor Area	0 ft ²					.
4.	Addition Unconditioned Floor Area	0 ft ²				Pass	1
7. Opaq	ue Surfaces & Orientation	8. Total Gross Su	rface Area	9. Total Fenestration Area	10. Window to Wall Ratio		
North W	/all		2,156 ft ²	566 ft ²	26.3%		
East Wa	I		2,384 ft ²	287 ft ²	12.0%		
South W	/all		1,700 ft ²	48 ft ²	02.8%		
West W	all		3,678 ft ²	256 ft ²	07.0%		
	Total		9,918 ft ²	1,157 ft ²	11.7%		
Roof			6.947 ft ²	0 ft ²	00.0%		Г

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Project N	lame:	Fillmore High School CTE - Building B		NRCC-PRF-01-E	Page 2 of 27		
Project A	ddress:	555 Central Ave. Fillmore 93015		Calculation Date/Time:	11:37, Tue, Dec 18, 2	018	
Complian	nce Scope:	NewComplete		Input File Name:	Fillmore High School	CTE - Building B.cibd16x	
C. PRIOF	RITY PLAN CH	dress: 555 Central Ave. Fillmore 93015 e Scope: NewComplete TY PLAN CHECK/ INSPECTION ITEMS (in order of hi Space Cooling: Check envelope and mechanical Indoor Lighting: Check lighting Domestic Hot Water: Check mechanical Heat Rejection: Check envelope and mechanical Pumps & Misc.: Check mechanical Space Heating: Check envelope and mechanical Indoor Fans: Check envelope and mechanical	ghest to lowest TDV energy savin	gs)			
1st	Space Coolin	g: Check envelope and mechanical	Com	oliance Margin By Energy	Component (from Tab	le B column 4)	
2nd	Indoor Lighti	ng: Check lighting	Space	Cooling			
3rd	Domestic Ho	t Water: Check mechanical		Lighting			
4th	Indoor Lighting: Check lighting Domestic Hot Water: Check mechanical Heat Rejection: Check envelope and mechanical Pumps & Misc.: Check mechanical Space Heating: Check envelope and mechanical Indoor Fans: Check envelope and mechanical	Domestic H			-		
5th	Pumps & Mis	Space Cooling: Check envelope and mechanical Indoor Lighting: Check lighting Domestic Hot Water: Check mechanical Heat Rejection: Check envelope and mechanical Pumps & Misc.: Check mechanical Space Heating: Check envelope and mechanical Indoor Fans: Check envelope and mechanical		Rejection s & Misc.			
6th	Space Heatin			Heating			
7th	Indoor Fans:		Inde	oor Fans	Penalty	Energy Credit	
D. EXCEI	PTIONAL CON	DITIONS					
	-		rol credits via Power Adjustment Fa	ctors (PAFs) as outlined in S	Standards Table 140.6-	A. Review NRCC-PRF-LTI D	ETAILS Table A t
	ents are met. P						
This proje	ect includes Do	mestic Hot Water in the analysis. Please veri	fy that Domestic Hot Water is includ	ed in the design for the pe	ermitted scope of work	ζ.	
E. HERS	VERIFICATION	1					
This Secti	ion Does Not A	oply					
F. ADDIT	FIONAL REMA	RKS					
None Pro	ovided						

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Project Name:	Fillm	ore High School CTE - Building B	NRCC-PRF-01-E	Page 5 of 27		
Project Address:	555 C	Central Ave. Fillmore 93015	Calculation Date/Time:	11:37, Tue, Dec 18, 2018		
Compliance Scope:	New	Complete	Input File Name:	Fillmore High School CTE - Build	ing B.cibd16x	
Documentation Auth (Retain copies and ve	hor to in erify for	ATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICAT dicate which Certificates must be submitted for the features to be ms are completed and signed to post in field for Field Inspector to and LTI Details Sections for Acceptance Tests and forms by equip	e recognized for compliano verify).		Confi	irmed
Building Component		Compliance Forms (required for submittal)			Pass	Fail
Envelope		NRCI-ENV-01-E - For all buildings				
Envelope		NRCA-ENV-02-F- NFRC label verification for fenestration				
		NRCI-MCH-01-E - For all buildings with Mechanical Systems				
		NRCA-MCH-02-A- Outdoor Air				
		NRCA-MCH-03-A – Constant Volume Single Zone HVAC				
		NRCA-MCH-04-H- Air Distribution Duct Leakage				
		NRCA-MCH-05-A- Air Economizer Controls				
		NRCA-MCH-06-A- Demand Control Ventilation				
		NRCA-MCH-07-A – Supply Fan Variable Flow Controls				
		NRCA-MCH-08-A- Valve Leakage Test				
		NRCA-MCH-09-A – Supply Water Temp Reset Controls				
Mechanical		NRCA-MCH-10-A- Hydronic System Variable Flow Controls				
		NRCA-MCH-11-A – Auto Demand Shed Controls				
		NRCA-MCH-12-A- Packaged Direct Expansion Units				
		NRCA-MCH-13-A- Air Handling Units and Zone Terminal Units				
		NRCA-MCH-14-A- Distributed Energy Storage				
		NRCA-MCH-15-A – Thermal Energy Storage				
		NRCA-MCH-16-A- Supply Air Temp Reset Controls				
		NRCA-MCH-17-A – Condensate Water Temp Reset Controls				
		NRCA-MCH-18-A- Energy Management Controls Systems				
		NRCV-MCH-04-H- Duct Leakage Test				

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Project Name:	Fillmore	High School CTE - Building B		NRCC-PRF-01-E	Page 8 of 2	7					
Project Address:	555 Cent	ral Ave. Fillmore 93015		Calculation Date/Time:	11:37, Tue,	Dec 18, 20	18				
Compliance Scope:	NewCom	plete		Input File Name:	Fillmore Hig	gh School C	TE - Buildi	ng B.cibd16	6x		
. FENESTRATION AS	SEMBLY SU	MMARY						§ 110.6		Confi	irme
1.		2.	3.	4.	5.	6.	7.	8.	9.		
Fenestration Assemb Tag or I.D.		Fenestration Type / Product Type / Frame Type	Certification Method ¹	Assembly Method	Area ft ²	Overall U-factor	Overall SHGC	Overall VT	Status ²	Pass	Fall
(Win. Glass) Non-Re Prescriptive		VerticalFenestration FixedWindow N/A	NFRC Rated	Manufactured	434	0.36	0.25	0.42	N		
(Door Glass) Non-Re Prescriptive		VerticalFenestration GlazedDoor N/A	NFRC Rated	Manufactured	264	0.36	0.25	0.42	N		
(Skylight) Single Me	tal Clear	Skylight FixedWindow MetalFraming	Default Performance	SiteBuilt	501	1.98	0.83	0.88	N		
Greenhouse Wi	ndow	VerticalFenestration FixedWindow MetalFraming	Default Performance	SiteBuilt	735	2.26	0.83	0.77	N		
Extech (Opa	I)	VerticalFenestration FixedWindow N/A	NFRC Rated	Manufactured	459	0.39	0.28	0.30	N		

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king compliance credit for fenestration shading	devices? (if "Yes", see NRCC-PRF-ENV-DET	AILS for more in	formation)					No	
DPAQUE SURFACE ASSEMBLY SUMMARY						§ 120.7/ § 140.3		Confi	irmed
1.	2.	3.	4.	5.	6.	7.	8.		
Surface Name	Surface Type	Area (ft ²)	Framing Type	Cavity R-Value	Continuous R-Value	U-Factor / F-Factor / C-Factor	Status ¹	Pass	Fail
Slab On Grade7	UndergroundFloor	7001	NA	0	NA	F-Factor: 0.730	N		
Built Up Metal Roof9	Roof	7356	NA	30	NA	U-Factor: 0.070	Ν		
(Int) Ceiling11	Ceiling	575	Metal	19	NA	U-Factor: 0.088	Ν		
(Laminate) Insulated Meta14	ExteriorWall	4418	Metal	19	12	U-Factor: 0.053	Ν		
(Plaster) Insulated Metal37	ExteriorWall	6356	Metal	19	12	U-Factor: 0.058	Ν		
Metal Floor41	ExteriorFloor	827	Metal	19	10	U-Factor: 0.046	Ν		

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of verification. Site-built fenestration values are calculated per Nonresidential Appendix NA6 and are used in the analysis.

² Status: N - New, A – Altered, E – Existing

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Project Address:	555 Central Ave. Fill	more 9	93015		Calculation Date/Time:	11:37, Tue, Dec 18, 2018	
Compliance Scope:	NewComplete				Input File Name:	Fillmore High School CTE - E	Building B.cibd16x
G. COMPLIANCE PAT	H & CERTIFICATE OF	сомі		ARY			
	Ident	ify wh	ich building comp	onents use the performance or pre	escriptive path for complia	nce. "NA"= not in project	
	For con	npone	nts that utilize the	performance path, indicate the sl	heet number that includes	mandatory notes on plans.	
Building Component		Com	pliance Path	Compliance Forms (required for	submittal)		Location of Mandatory Notes on Plans
			Performance	NRCC-PRF-ENV-DETAILS (section	of the NRCC-PRF-01-E)		
Envelope			Prescriptive	NRCC-ENV-01 / 02 / 03 / 04 / 05	/ 06-E		1
			NA				1
			Performance	NRCC-PRF-MCH-DETAILS (section	n of the NRCC-PRF-01-E)		
Mechanical			Prescriptive	NRCC-MCH-01 / 02 / 03 / 04 / 05	5 / 06 / 07-Е		7
			NA				
		\boxtimes	Performance	NRCC-PRF-PLB-DETAILS (section	of the NRCC-PRF-01-E)		
Domestic Hot Water			Prescriptive	NRCC-PLB-01-E			
			NA				
			Performance	NRCC-PRF-LTI-DETAILS (section of	of the NRCC-PRF-01-E)		
Lighting (Indoor Conditi	ioned)		Prescriptive	NRCC-LTI-01 / 02 / 03 / 04 / 05-E	E		
			NA				
Covered Process:			Performance	S2 (section of the NRCC-PRF-01-	E)		
Commercial Kitchens			Prescriptive	NRCC-PRC-01/03-E			
			NA				
Covered Process:			Performance	S3 (section of the NRCC-PRF-01-	E)		
Computer Rooms			Prescriptive	NRCC-PRC-01/04-E			
			NA				
Covered Process:			Performance	S4 (section of the NRCC-PRF-01-	E)		4
Laboratory Exhaust			Prescriptive	NRCC-PRC-01/09-E			4
			NA				

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NRCC-PRF-01-E Fillmore High School CTE - Building B Page 6 of 27 Project Name: Calculation Date/Time: 11:37, Tue, Dec 18, 2018 555 Central Ave. Fillmore 93015 Project Address: Fillmore High School CTE - Building B.cibd16x Compliance Scope: NewComplete Input File Name: H. CERTIFICATE OF INSTALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICATION SUMMARY (NRCI/NRCA/NRCV) -Documentation Author to indicate which Certificates must be submitted for the features to be recognized for compliance Confirmed (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify). See Tables G. and H. in MCH and LTI Details Sections for Acceptance Tests and forms by equipment. Building Component Compliance Forms (required for submittal) Pass Fail NRCI-PLB-01-E - For all buildings with Plumbing Systems NRCI-PLB-02-E - required on central systems in high-rise residential, hotel/motel application. □ NRCI-PLB-03-E - Single dwelling unit systems in high-rise residential, hotel/motel application. NRCI-PLB-21-E - HERS verified central systems in high-rise residential, hotel/motel application. NRCI-PLB-22-E - HERS verified single dwelling unit systems in high-rise residential, hotel/motel application. NRCV-PLB-21-H- HERS verified central systems in high-rise residential, hotel/motel application.] NRCV-PLB-22-H - HERS verified single dwelling unit systems in high-rise residential, hotel/motel application. NRCI-STH-01-E - Any solar water heating NRCI-LTI-01-E - For all buildings □ NRCI-LTI-02-E - Lighting control system, or for an Energy Management Control System (EMCS)] NRCI-LTI-03-E - Line-voltage track lighting integral current limiter, or for a supplementary overcurrent protection panel used to energize only line-voltage track lighting] NRCI-LTI-04-E - Two interlocked systems serving an auditorium, a convention center, a conference room, or a theater Indoor Lighting NRCI-LTI-05-E - Lighting Control Credit Power Adjustment Factor (PAF) · _ · NRCI-LTI-06-E - Additional wattage installed in a video conferencing studio NRCA-LTI-02-A - Occupancy sensors and automatic time switch controls. NRCA-LTI-03-A - Automatic daylighting controls NRCA-LTI-04-A - Demand responsive lighting controls NRCI-LTO-01-E – Outdoor Lighting NRCI-LTO-02-E- EMCS Lighting Control System Outdoor Lighting NRCA-LTO-02-A - Outdoor Lighting Control Sign Lighting NRCI-LTS-01-E – Sign Lighting NRCI-ELC-01-E - Electrical Power Distribution Electrical

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□ NRCI-SPV-01-E Photovoltaic Systems

Photovoltaic

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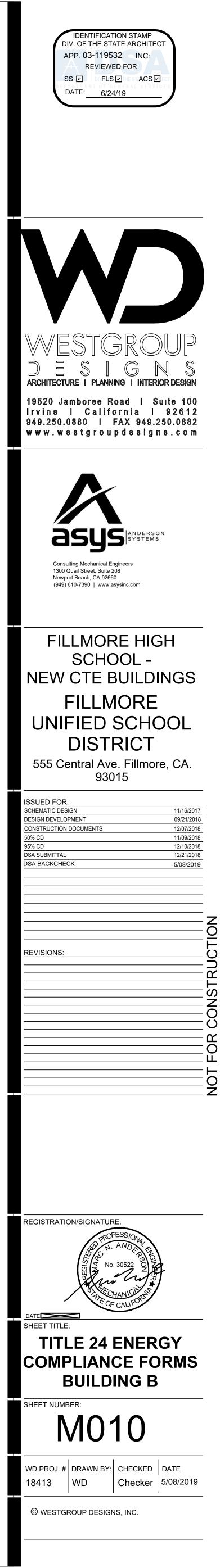
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Project Name:	Fillmore High	School CTE	- Buildi	ng B				NRC	C-PRF-01	E	Page 9 of	27										
Project Address:	555 Central Av	/e. Fillmore	93015					Calc	ulation D	ate/Time:	11:37, Tue	, Dec 18, 2	018									
Compliance Scop	e: NewComplete							Inpu	t File Na	me:	Fillmore H	igh School	CTE - B	uilding B.c	cibd16x	1						
K. OPAQUE SUF	RFACE ASSEMBLY SUI	MMARY											§ 120	.7/§140).3		Confi	rmed				
	1.				2.		3	s.	4.		5.	6.		7.		8.						
	Surface Name				Surface Type		Area	(ft²)	Frami Type			ontinuous R-Value		tor / F-Fa C-Factor		Status ¹	Pass	Fail				
	(Int) Floor66				InteriorFloor		20	01	Meta	ıl	19	NA	U-Fa	actor: 0.10	04	Ν						
(Int)	Wall Metal Stud84				InteriorWall		68	38	Meta	ıl	19	NA	U-Fa	actor: 0.14	41	Ν						
R-30	0 Concrete Roof140				Roof		9	5	NA		0	29	U-Fa	actor: 0.03	33	Ν						
¹ Status: N - New, A – A	ltered, E – Existing																					
L. ROOFING PR	ODUCT SUMMARY														§ 14	0.3	Confi	rmed				
	1.			2.	3.	.	4.			5.		6.		7.	_							
	Product Type			uct Der (lb/ft²)	nsity Aged Reflect		Thern Emitta			SRI		ol Roof Credit	F	Roofing Product Description							Pass	Fail
Bu	uilt Up Metal Roof9			4.759	0.0	8	0.75	5		NA		No		NA								
R-3	0 Concrete Roof140			70.515	0.0)8	0.75	5		NA		No		NA								
M. HVAC SYSTE	M SUMMARY (see N	RCC-PRF-I	MCH-D	ETAILS	S for more info	ormation)							ş	110.1 / §	§ 110.2	2						
			Dry S	ystem	Equipment ¹ (Fa	n & Economi	zer info	include	d below i	n Table N)							Confi	rmed				
1.	2.	3.		4.	5.	6.		7.		8.		9.		10.		11.						
Equip Name	Equip Type	System ⁻ (Simple	² or	Qty	Total Heating Output	Supp Hea Source (Y/	τ	Supp Hea Output	:	tal Cooling Output	Eff	iciency	R	Accepta Testing equired?	g	Status ⁵	Pass	Fail				
		Comple	ex 3)		(kBtu/h)		,	(kBtuh)		kBtu/h)	Cooling	Heati		. 4		°,						
AC-2	SZAC (Split3Phase)	Simp	le	1	49	No		0		36	SEER-15.5 / EER-12.0		80.6	Yes		N						
AC-3	SZAC (Split3Phase)	Simp	le	1	49	No		0		60	SEER-16.2 / EER-12.3		80.6	Yes		Ν						
AC-4	SZAC (Split3Phase)	Simp	le	1	49	No		0		36	SEER-15.5 / EER-12.0		80.6	Yes		Ν						
Staff Work Room Zone42	Exhaust ()	Simp	le	1	0	No		0		0	NA	NA		No		N						
AC-5	SZAC (Split3Phase)	Simp	le	1	120	No		0		90	EER-13.0	AFUE-8	32.0	Yes		Ν						

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Project Address:	555 Central Av	e. Fillmore 93015				Calculat	ion Date/Time:	11:37, Tue, I	Dec 18, 2018				
Compliance Scope	e: NewComplete					Input Fi	le Name:	Fillmore Hig	h School CTE	- Building B.cibd16>	<		
	M SUMMARY (see N			S for more info	rmation)					§ 110.1 / § 110.	2		
IVI. ITVAC STSTE				Equipment ¹ (Fai	•	nfo included be	low in Table N)			3 110.1 / 3 110.		Conf	irmed
1.	2.	3.	4.	5.	6.	7.	8.	9).	10.	11.		
Equip Name	Equip Type	System Type (Simple ² or	Qty	Total Heating Output	Supp Heat Source (Y/N)	Supp Heat Output	Total Cooling Output	Effici	iency	Acceptance Testing Required? (Y/N)	Status ⁵	Pass	Fail
		Complex ³)		(kBtu/h)	500100 (1714)	(kBtuh)	(kBtu/h)	Cooling	Heating	4	S ⁵		
Wood Shop Zone50	Exhaust ()	Simple	1	0	No	0	0	NA	NA	No	N		
AC-6	SZAC (Split3Phase)	Simple	1	59	No	0	69	EER-13.0	AFUE-82.0	Yes	N		
MUA-2	HV (NA)	Simple	1	160	No	0	0	NA	AFUE-80.0	Yes	N		
Metal Shop Zone97	Exhaust ()	Simple	1	0	No	0	0	NA	NA	No	N		
Compressor/Gas Storage Zo111	Exhaust ()	Simple	1	0	No	0	0	NA	NA	No	N		
MPOE Room Zone122	Exhaust ()	Simple	1	0	No	0	0	NA	NA	No	N		
Electrical Room Zone130	Exhaust ()	Simple	1	0	No	0	0	NA	NA	No	N		
Elevator Machine Room Zon136	Exhaust ()	Simple	1	0	No	0	0	NA	NA	No	N		
FC-4/CU-4	MiniSplitHP (Split1Phase)	Simple	1	0	No	0	17	SEER- 18.500 / EER-9.900	HSPF- 11.000	Yes	N		
FC-5/CU-5	MiniSplitHP (Split1Phase)	Simple	1	0	No	0	23	SEER- 21.400 / EER-12.200	HSPF- 11.000	Yes	N		
FC-6/CU-6	MiniSplitHP (Split1Phase)	Simple	1	0	No	0	35	SEER- 18.800 / EER-10.800	HSPF- 11.000	Yes	N		

¹ Dry System Equipment includes furnaces, air handling units, heat pumps, etc. ² Simple Systems must complete NRCC-CXR-03-E commissioning design review form ³ Complex Systems must complete NRCC-CXR-04-E commissioning design review form

⁴ A summary of which acceptance tests are applicable is provided in NRCC-PRF-MCH-DETAILS

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Project Address:	555 Central Ave. Fillmore 9	3015	Calculation Date/Time:	11:37, Tue, Dec 18, 2018			
Compliance Scope:	NewComplete		Input File Name:	Fillmore High School CTE - Build	ling B.cibd16	Бх	
O. EQUIPMENT CON	ITROLS				§ 120.2	Confi	irmed
	1.	2.		3.		P	
Eq	uip Name	Equip Type		Controls		Pass	Fail
	MUA-2	HV		No DCV Controls No Economizer Ipply Air Temp. Fixed at 55 No Optimum Start tive Cooler (Direct and Indirect) No Heat Recovery			
Metal	Shop Zone97	Exhaust		NA			
Compressor	/Gas Storage Zo111	Exhaust		NA			
MPOE	Room Zone122	Exhaust		NA			
Electrica	l Room Zone130	Exhaust		NA			
Elevator Ma	chine Room Zon136	Exhaust		NA			
WF	H-21 - SHW	Service Hot Water, Primary Only	Fixed	Temperature Control, No DDC No Heat Recovery			

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NRCC-PRF-01-E Fillmore High School CTE - Building B Page 16 of 27 Project Name: Project Address: 555 Central Ave. Fillmore 93015 Calculation Date/Time: 11:37, Tue, Dec 18, 2018 Compliance Scope: NewComplete Input File Name: Fillmore High School CTE - Building B.cibd16x § 140.9 S2. COVERED PROCESS SUMMARY – COMMERCIAL KITCHENS This Section Does Not Apply § 140.9 S3. COVERED PROCESS SUMMARY – COMPUTER ROOMS This Section Does Not Apply § 140.9 S4. COVERED PROCESS SUMMARY – LABORATORY EXHAUSTS This Section Does Not Apply T. UNMET LOAD HOURS Cooling Unmet Load Hour Limit for Heating Unmet Load Hour Limit for posed Cooling Unmet Load Hours Proposed Heating Unmet Load Hours Thermal Zone Name Thermal Zone Thermal Zone 9-Metal Shop Zone 150 36.75 4787 150 2332.75 150 19.25 10-Compressor/Gas Storage Zo 150 U. ENERGY USE SUMMARY Margin (MWh) Standard Design Site Proposed Design Site Standard Design Site Proposed Design Site Margin Energy Component (MBtu) (MWh) (MWh) (MBtu) (MBtu) 2.0 26.4 19.0 7.4 Space Heating ---Space Cooling 18.0 13.3 4.7 -------Indoor Fans 142.9 -14.2 157.1 --------Heat Rejection --------Pumps & Misc. -------------15.2 Domestic Hot Water 43.2 28.0 -----16.2 11.7 Indoor Lighting 4.5 -------177.1 47.0 22.6 COMPLIANCE TOTAL 184.1 -7.0 69.6 --35.3 0.0 35.3 Receptacle -----Process ------------Other Ltg ----------Process Motors ---------TOTAL 212.4 47.0 22.6 219.4 69.6 -7.0

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Project Address:	555 Central Ave. Fillmore 93015	Calculation Date/Time:	11:37, Tue, Dec 18, 2018	
Compliance Scope:	NewComplete	Input File Name:	Fillmore High School CTE - Building B.cibd16>	<
⁵ Status: N - New, A – Altered, E -	- Existing			
	Wet System Equipment ¹		Pumps	Confirmed

12. 13. 14. 15. 16.	17. 18.	19.	20.	21.	22.	23.	24.		
Equip Name Equip Type Qty Vol (gal) Rated Capacity (kBtu/h)	Efficiency Standby Loss	Tank Ext. R Value	Qty	GPM	НР	VSD (Y/N)	Status ²	Pass	Fail
Bradford White EF-60T-1502 Storage 1 60.00 150 Thrm	rml. Eff.: 0.93 SBLF: 0.005	NA		NA		No	Ν		

¹ Wet System Equipment includes boilers, chillers, cooling towers, water heaters, etc. ² Status: N - New, A – Altered, E – Existing

ECONOMIZE	R & FAN S	YSTEMS S	UMMAR	۲ı								§ 140.4	Confi	irme
1.	2.				3.					4.		5.		Γ
	Outside Air			Sup	oly Fan				Retu	ırn Fan		– Economizer Type	Pass	
Equip Name	СҒМ	CFM	НР	внр	TSP (inch WC)	Control	CFM	HP	внр	TSP (inch WC)	Control	(if present)	SS	=
AC-2	376	1200	0.550	0.550	1.45	ConstantVolume	NA	NA	NA	NA	NA	DifferentialEnthalp y		
AC-3	588	2000	1.340	1.340	2.55	ConstantVolume	NA	NA	NA	NA	NA	DifferentialEnthalp y		
AC-4	103	900	0.350	0.350	1.23	ConstantVolume	NA	NA	NA	NA	NA	DifferentialEnthalp y		[
AC-5	275	3000	1.310	1.310	1.66	ConstantVolume	NA	NA	NA	NA	NA	DifferentialEnthalp y		
AC-6	527	2400	0.720	0.720	1.14	ConstantVolume	NA	NA	NA	NA	NA	DifferentialEnthalp y		
MUA-2	383	6500	5.900	5.900	3.46	ConstantVolume	NA	NA	NA	NA	NA	NoEconomizer		
FC-4/CU-4	0	450	0.023	0.023	0.16	ConstantVolume	NA	NA	NA	NA	NA	NA		
FC-5/CU-5	0	775	0.043	0.043	0.18	ConstantVolume	NA	NA	NA	NA	NA	NA		Π
FC-6/CU-6	0	920	0.043	0.043	0.15	ConstantVolume	NA	NA	NA	NA	NA	NA		

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Project Name: Fi	illmore High School CTE - Building	g B	NRCC-PRF-	01-Е	Page 14 of 27			
Project Address: 5	55 Central Ave. Fillmore 93015		Calculation	Date/Time:	11:37, Tue, Dec 18,	2018		
Compliance Scope: N	ewComplete		Input File N	ame:	Fillmore High Scho	ol CTE - Building B.cibd16x		
P. SYSTEM DISTRIBUTION	N SUMMARY				§ 120.4/ §	140.4(I)		
			Dry Sy	vstem Distribu	ıtion		Confir	med
1.	2.	3.	4.		5.	6.		
		Duct Leakage and	Duct Leakage will be		Ducts		Pass	Fail
Equip Name	Equip Type	Sealing Required per 140.4(I)	verified per NA1 and NA2	Insulati R-Valu	l Locatio	n Status ¹	SS	=
AC-2	SZAC	No	No	8.0	Unconditio	oned N		
AC-3	SZAC	No	No	8.0	Unconditio	oned N		
AC-4	SZAC	No	No	8.0	Unconditio	oned N		
AC-5	SZAC	No	No	8.0	Unconditio	oned N		
AC-6	SZAC	No	No	8.0	Unconditio	oned N		
MUA-2	HV	No	No	8.0	Unconditio	oned N		
FC-4/CU-4	MiniSplitHP	No	No	NA	Ductles	s N		
FC-5/CU-5	MiniSplitHP	No	No	NA	Ductles	s N		
FC-6/CU-6	MiniSplitHP	No	No	NA	Ductles	s N		
Status: N - New, E - Existing								
-	onal Systems? (if "Yes", see NRCO	-	-					Yes
	Solar Hot Water System? (if "Yes							No
Multifamily or Hotel/ Mote	el Occupancy? (if "Yes", see NRC	C-PRF-MCH-DETAILS for DHW s	ystem information)					No
O. INDOOR CONDITIONE	D LIGHTING GENERAL INFO (see NRCC-PRF-LTI-DETAILS fo	or more info) ³				δ1	.40.6
			,					firmed
1.	2.	3.	4.		:	5.		
Occupancy Type ¹	Conditioned Floor Area ² (ft ²)	Installed Lighting Power (Watts)	Lighting Control Credit (Watts)	s	Additional (Cus	tom) Allowance	Pass	Fail
				Area C	ategory Footnotes (Watts)	Tailored Method (Watts)		
Classrooms, Lecture, Training, Vocational Areas	3,977	2,632	0		0	0		
Corridors, Restrooms, Stairs and Support Areas	376	235	0		0	0		

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Project N	ame:	Fillmore High School CTE - Building B		NRCC-PRF-01-E	Page 17 of 27			
Project A	ddress:	555 Central Ave. Fillmore 93015		Calculation Date/Time:	11:37, Tue, Dec 18, 2018			
Compliar	ice Scope:	NewComplete		Input File Name:	Fillmore High School CTE - Building B.cibd16x			
DOCUM	ENTATION AU	THOR'S DECLARATION STATEMENT			§ 10-103			
	nonecono mano manone man menor an ancor	te of Compliance documentation is accurate and complete.			5			
				<u>_</u>				
		ame: Tim Bergstrom	Signatu	re: Jim Ber	cap			
	: asys, inc. 1300 Quail St., S	uita 209	Cignotuu	re Date: 12/18/2018				
	e/Zip: Newport E		CEA Identification (If applicable):					
	49-610-7390		CEAIUE					
		S DECLARATION STATEMENT						
i certity t	-	ler penalty of perjury, under the laws of the State of California: that I am eligible under the provisions of Division 3 of the Business and	Drofossi	one Codo to sign this doou	ment as the person responsible for its proparation, and that I am			
1		State of California as a civil engineer, mechanical engineer, electrical eng						
2		n eligible under the provisions of Division 3 of the Business and Profess d that I am a licensed contractor performing this work.	ions Coo	le by section 5537.2 or 673	37.3 to sign this document as the person responsible for its			
3	3 I affirm that I am eligible under Division 3 of the Business and Professions Code Business and Professions Code Sections 5537, 5538 and 6737.1.			ument because it pertains	to a structure or type of work described as exempt pursuant to			
Responsi	ble Envelope De	signer Name: David Smith	Signatu		20			
Company	v: WestGroup De	signs	JEnaro		25			
Address:	19520 Jamboree	e Road, Suite 100	Date Sig	ned: 12-18 -2048				
City/Stat	e/Zip: Irvine CA 9			tion Statement Type:				
Phone: (9	949) 250-0880		Title: 🗛	childent of Record	License #: C 20/95			
Responsi	ble Lighting Desi	gner Name: Adam Sloan	Signatu					
Company	: AG Design	Engineers, Inc.	Signatu	re. Je.				
Address:	171 S. Anita	Drive, Suite 111	Date Sig	ned: 12.18.2018				
City/Stat	e/Zip: Orange,	California 92869	Declarat	tion Statement Type: 1				
Phone: 7	14.769.9900		Title: P	rincipal	License #: E-18589			
Responsi	ble Mechanical I	Designer Name: Marc Anderson	Signatu	ro.	4112			
Company	npany: Asys, Inc.							
Address:	1300 Quail Stree	et	Date Signed: 12/18/2018					
City/Stat	e/Zip: Newport E		Declaration Statement Type: 1					
Phone: (9	949) 610-7390		Title: P	rincipal CEO	License #: M-30522			

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Project Name:	Fillmore High School CTE - E	Building B	NRCC-PRF-01-E	Page 12 of 27			
Project Address:	555 Central Ave. Fillmore 93	3015	Calculation Date/Time:	11:37, Tue, Dec 18, 2018			
Compliance Scope:	NewComplete	1	nput File Name:	Fillmore High School CTE - Build	ing B.cibd16	ix	
¹ Mechanical ventilation calculat	tions and exhaust fans are included in	the NRCC-PRF-MCH-DETAILS section					
O. EQUIPMENT CONT	ROLS				§ 120.2	Confi	rmed
	1.	2.		3.		Pass	Fail
Equ	ip Name	Equip Type		Controls		ISS	<u> </u>
	AC-2	SZAC	Diffe	with CO2Sensor Vent. Control prential Enthalpy Economizer Supply Air Temp. Control No Optimum Start No Evaporative Cooler No Heat Recovery			
	AC-3	SZAC	Diffe	with CO2Sensor Vent. Control crential Enthalpy Economizer Supply Air Temp. Control No Optimum Start No Evaporative Cooler No Heat Recovery			
	AC-4	SZAC		No DCV Controls grential Enthalpy Economizer o Supply Air Temp. Control No Optimum Start No Evaporative Cooler No Heat Recovery			
Staff Work	k Room Zone42	Exhaust		NA			
	AC-5	SZAC	Diffe	with CO2Sensor Vent. Control crential Enthalpy Economizer o Supply Air Temp. Control No Optimum Start No Evaporative Cooler No Heat Recovery			
Wood S	Shop Zone50	Exhaust		NA			
	AC-6	SZAC	Diffe	with CO2Sensor Vent. Control erential Enthalpy Economizer Supply Air Temp. Control No Optimum Start No Evaporative Cooler No Heat Recovery			

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Project Name:	Fillmore High School CTE - Buildin	g B	NRCC-PF	RF-01-E	Page 15 of 27			
Project Address:	555 Central Ave. Fillmore 93015		Calculat	ion Date/Time:	11:37, Tue, Dec 18,	2018		
Compliance Scope:	NewComplete		Input Fil	e Name:	Fillmore High Schoo	ol CTE - Building B.cibd16x		
Q. INDOOR CONDITION	ED LIGHTING GENERAL INFO	(see NRCC-PRF-LTI-DETAILS	for more info) ³				§ 14	40.6
						Confi		
1.	2.	3.	4.		5	5.	_	
Occupancy Type ¹	Conditioned Floor Area ² (ft ²)	Installed Lighting Power (Watts)	Lighting Control Cre (Watts)	dits	Additional (Custom) Allowance		Pass	Fail
				Area C	Category Footnotes (Watts)	Tailored Method (Watts)		
Office (Greater than 250 square feet in floor area)	545	282	113		0	0		
All Other	4,148	2,021	0		0	0		
Electrical, Mechanical, Telephone Rooms	282	188	0		0	0		
	ls: 9,328	5,358	113		0	0	1	1

³Lighting information for existing spaces modeled is not included in the table **R. INDOOR CONDITIONED LIGHTING SCHEDULE** (Adapted from NRCC-LTI-01-E)¹ § 130.0 Luminaire Schedule (includes all permanent installed lighting in Confirmed conditioned space, and portable lighting over 0.3 w/ft² in Installed Watts (Conditioned) offices) How Wattage is Determined Complete Luminaire Description (i.e., Total Number 3-lamp fluorescent troffer, F32T8, Watts per luminaire Installed Watts Name or Item Tag CEC Default According to Pass Fai Luminaires one dimmable electronic ballast) from NA8 §130.0(c) P1 LED Module 47 Yes No 41 1,927 R1 LED Module 47 Yes No 65 3,055 LED Module Yes No 94 S1 47 2 S3 47 3 141 LED Module Yes No S4 LED Module 47 Yes No 3 141 ¹If lighting power densities were used in the compliance model Building Departments will need to check prescriptive forms for Luminaire Schedule details. S1. COVERED PROCESS SUMMARY – ENCLOSED PARKING GARAGES § 140.9

This Section Does Not Apply

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Project Address:	555 Central Ave. Fillmore 93015	Calculation Date/Time:	11:37, Tue, Dec 18, 2018
Compliance Scope:	NewComplete	Input File Name:	Fillmore High School CTE - Building B.cibd16x

NRCC-PRF-ENV-DETAILS -SECTION START-

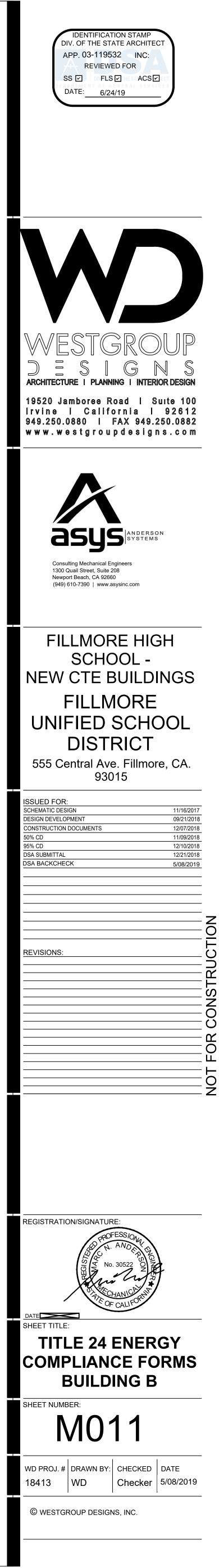
² See NRCC-LTI-01-E for unconditioned spaces

A. OPAQUE SURFACE ASS	EMBLY DETAILS			Confi	irmed
1.	2.	3.	4.	Pa	
Surface Name	Surface Type	Description of Assembly Layers	Notes	Pass	Fail
Slab On Grade7	UndergroundFloor	Slab Type = UnheatedSlabOnGrade Insulation Orientation = None Insulation R-Value = R0			
Built Up Metal Roof9	Roof	Built-up roofing - 3/8 in. Metal Deck - 1/16 in. Metal standing seam roof, R-30			
(Int) Ceiling11	Ceiling	Gypsum Board - 5/8 in. Metal framed roof, 16in. OC, 7.25in., R-19 Gypsum Board - 5/8 in.			
(Laminate) Insulated Meta14	ExteriorWall	Wood siding - 1/2 in. Vapor permeable felt - 1/8 in. Cellular polyisocyanurate (unfaced) - 2 in. R12 Metal framed wall, 24in. OC, 7.25in., R-19 Gypsum Board - 5/8 in.			
(Plaster) Insulated Metal37	ExteriorWall	Stucco - 3/8 in. Vapor permeable felt - 1/8 in. Cellular polyisocyanurate (unfaced) - 2 in. R12 Metal framed wall, 16in. OC, 5.5in., R-19 Gypsum Board - 5/8 in.			
Metal Floor41	ExteriorFloor	Stucco - 3/8 in. Expanded Polystyrene - EPS - 2 2/5 in. R10 Metal framed floor, 16in. OC, 7.25in., R-19 Plywood - 1/2 in. Carpet - 3/4 in.			
(Int) Floor66	InteriorFloor	Metal framed floor, 16in. OC, 7.25in., R-19 Plywood - 1/2 in. Slate or tile - 1/2 in.			
(Int) Wall Metal Stud84	InteriorWall	Gypsum Board - 5/8 in. Vapor permeable felt - 1/8 in. Metal framed wall, 16in. OC, 7.25in., R-19 Gypsum Board - 5/8 in.			

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Project Name:	Fillmo	re High School CTE - Build	ling B		NRCC-PRF-01-E	Page 19 of 27				
Project Address:	555 C	entral Ave. Fillmore 9301	5		Calculation Date/Time:	11:37, Tue, De	c 18, 2018			
Compliance Scope:	NewC	omplete			Input File Name:	Fillmore High S	ichool CTE - Buildi	ng B.cibd16x		
A. OPAQUE SURFAC	ASSEM	BLY DETAILS							Confirn	ned
1.		2.		3.			4.		P	
Surface Name		Surface Type		Description of Asse	mbly Layers		Notes		Pass	Fail
R-30 Concrete Roof1	40	Roof	Cel	Concrete - 140 lb/ Iular polyisocyanurate (u						
B. OVERHANG DETA This Section Does Not		oted from NRCC-ENV-C	2-E)							
	JMMAR	Y							Con	irme
C. OPAQUE DOOR S		2		3.	4.	5.	6.	7.		
C. OPAQUE DOOR SI		2	•							
	ly Name	Door		Certification Method	Operation	Area	Overall U-factor	Status ¹	Pass	Fa

NRCC-PRF-MCH-DETAILS -SECTION START-

. MECHANICAL V	ENTILATION	AND REP	IEAT (Ada	pted fron	n 2016-NR	RCC-МСН-	-03-Е,											Confi	irme
		1. DESIGN	AIR FLOW	'S						:	2. VENTI	LATION (§ 120.1)					
CONDITIONED ZONE NAME	HEATING/COOLING SYSTEM ID	DESIGN PRIMARY AIR FLOW (CFM)	DESIGN PRIMARY MINIMUM AIR FLOW (CFM)	MINIMUM PRIMARY AIR FLOW FRACTION	MAXIMUM HEATING AIR FLOW (CFM)	MAXIMUM HEATING AIR FLOW FRACTION	DDC CONTROL (Y/N)	VENT SYSTEM ID	CONDITIONED AREA (ft2)	MIN. VENT PER AREA (CFM/ft2)	DESIGN NUM. OF PEOPLE	MIN. VENT PER PERSON (CFM/person)	REQ'D VENT AIR FLOW (CFM)	DESIGN VENT AIR FLOW (CFM)	TRANSFER AIRFLOW (CFM)	DCV (Y/N)	Operable Window Interlock § 140.4(n) (Y/N)	Pass	Fall
1-Classroom 130 Zone	AC-2	1,200	NA	0.00	NA	NA	N	AC-2	1,003	NA	25.07	15.00	376	376	NA	Y	NA		
2-Fab Lab Zone	AC-3	2,000	NA	0.00	NA	NA	N	AC-3	1,568	NA	39.20	15.00	588	588	NA	Y	NA		

Report Version: NRCC-PRF-01-E-09132018-5583

CA Building Energy Efficiency Standards- 2016 Nonresidential Compliance

Report Generated at: 2018-12-18 11:42:21

Project Name:	Fillmore Hig	sh School CTE - Buildir	ng B			NRCC-P	RF-01-E	Page 22 of 27				
Project Address:	555 Central	Ave. Fillmore 93015				Calculat	tion Date/Time:	11:37, Tue, D	ec 18, 2018			
Compliance Scope:	NewComple	ete				Input Fi	le Name:	Fillmore High	School CTE - Build	ling B.cibd16x		
C. EXHAUST FAN SU	JMMARY										Coni	firmed
1.			2.		3.	4.	5.		6.		P	
System	ID	Z	one Name	9	Qty	CFM	Motor I	ЗНР То	tal Static Pressure	e (in H20)	Pass	Fail
Compressor/Gas S	torage Zo111	10-Compre	ssor/Gas	Storage Zo	1	1,000	0.250)	0.95			
MPOE Room	Zone122	11-MF	OE Room	Zone	1	100	0.100)	3.81			
Electrical Room	a Zone130	12-Elect	trical Roor	m Zone	1	100	0.100)	3.81			
Elevator Machine I	Room Zon136	13-Elevator	Machine	Room Zon	1	100	0.100	0	3.81			
D. DHW EQUIPMEN	IT SUMMARY -	- (Adapted from N	RCC-PLB-	01)					§ 110.3		Co	nfirmed
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.		
DHW Name	Heater Element Type	Tank Type	Qty	Tank Vol (gal)	Rated Input (kBtu/h)	Efficiency	Tank Insulation R-value (Int/Ext)	Standby Los Fraction	s Heat Pump Type	Tank Locatio or Ambient Condition		Fail
Bradford White EF-60T-1502	Gas	Storage	1	60.00	150	Thrml. Eff.: 0.93	NA	SBLF: 0.005	NA	NA		
E. MULTI-FAMILY C		SYSTEM DETAILS										
This Section Does Not	. Арріу											
F. SOLAR HOT WAT	ER HEATING SU	JMMARY (Adapted	from NF	RCC-STH-01)							

This Section Does Not Apply

CA Building Energy Efficiency Standards- 2016 Nonresidential Compliance Report Version: NRCC-PRF-01-E-09132018-5583

Fillmore High School CTE - Building B NRCC-PRF-01-E Page 25 of 27 Project Name: Calculation Date/Time: 11:37, Tue, Dec 18, 2018 Project Address: 555 Central Ave. Fillmore 93015 Compliance Scope: NewComplete Input File Name: Fillmore High School CTE - Building B.cibd16x H. EVAPORATIVE COOLER SUMMARY
 2.
 3.
 4.
 5.
 6.
 7.
 8.
 9.
 Confirmed
 1.

ECD-Air20 S-CRS-750096 Indirect 1 0.8 0 6600 0.50 0 Outdoor □ □	System ID	Туре	Qty	Effectiveness	Pump Power (Watts)	Secondary Fan Flow Rate (cfm)	Secondary Fan Total Efficiency	Secondary Fan Static Pressure (in H20)	Secondary Air Source	Pass	Fail
	2	Indirect	1	0.8	0	6600	0.50	0	Outdoor		

NRCC-PRF-LTI-DETAILS -SECTION START-

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A) Control Credit Calculation V If Acceptant Test Requires Location in Building Occupancy Type (must meet requirements of Table 140.6-A) Type/Description of Lighting Control (i.e., partial on occupancy sensor, manual dimming, etc.) # of Units Watts of Controlled Lighting Power Adjustment Factor Control Credit Watts Control Credit Watts Test Requires		irmed
Location in Occupancy Type (must meet Building requirements of Table 140 6-A) Type/Description of Lighting Control (i.e., partial on occupancy # of Units Controlled Adjustment Watts		
	Pass	Fa
S-4-Staff Work Room ZoneOffice (Greater than 250 square feet in floor area)OccupantSensingControls- 1to125SF10.40113X		

This Section Does Not Apply \$130.1(a) = Manual area controls; \$130.0(b) = Multi Level; \$130.1(c) = Auto Shut-Off; \$130.1(d) = Mandatory Daylight; \$130.1(e) = Demand Responsive

C. TAILORED METHOD CONDITIONED LIGHTING POWER ALLOWANCE SUMMARY AND CHECKLIST (Adapted from NRCC-LTI-04-E)	§ 1	.40.6
General lighting power (see Table D)		0
General lighting power from special function areas (see Table E)		NA
Additional "use it or lose it" (See Table G)		0
Total	watts	0
D. GENERAL LIGHTING POWER (Adapted from NRCC-LTI-04-E)		§ 140.6-D
This Section Does Not Apply		

CA Building Energy Efficiency Standards- 2016 Nonresidential Compliance Report Version: NRCC-PRF-01-E-09132018-5583 Report Generated at: 2018-12-18 11:42:21

Report Generated at: 2018-12-18 11:42:21

Project Name:	Fillmore	High Scho	ol CTE - Bu	ilding B					NRCC-PRF-	01-E		Page 20 o	of 27						
Project Address:	555 Cen	itral Ave. F	illmore 930)15					Calculation	n Date/Ti	me:	11:37, Tu	ie, Dec 1	.8, 2018					
Compliance Scope:	NewCor	nplete							Input File N	lame:		Fillmore	High Scł	nool CTE	- Buildi	ng B.c	ibd16x		
A. MECHANICAL V	ENTILATION		-		n 2016-NF	RCC-MCH	•03-E)										Confi	irme
		1. DESIGN	AIR FLOW	/S					· · · ·	1	2. VENT	ILATION	(§ 120.1)	r				
CONDITIONED ZONE NAME	HEATING/COOLING SYSTEM ID	DESIGN PRIMARY AIR FLOW (CFM)	DESIGN PRIMARY MINIMUM AIR FLOW (CFM)	MINIMUM PRIMARY AIR FLOW FRACTION	MAXIMUM HEATING AIR FLOW (CFM)	MAXIMUM HEATING AIR FLOW FRACTION	DDC CONTROL (Y/N)	VENT SYSTEM ID	CONDITIONED AREA (ft2)	MIN. VENT PER AREA (CFM/ft2)	DESIGN NUM. OF PEOPLE	MIN. VENT PER PERSON (CFM/person)	REQ'D VENT AIR FLOW (CFM)	DESIGN VENT AIR FLOW (CFM)	TRANSFER AIRFLOW (CFM)	DCV (Y/N)	Operable Window Interlock § 140.4(n) (Y/N)	Pass	Fall
3-Staff Storage/RR Zone	AC-4	186	NA	0.00	NA	NA	N	AC-4	142	NA	0.71	30.00	21	21	NA	N	NA		
4-Staff Work Room Zone	AC-4	714	NA	0.00	NA	NA	N	AC-4	545	NA	2.73	30.00	82	82	NA	N	NA		
5-Wood Shop Zone	AC-5	2,617	NA	0.00	NA	NA	Ν	AC-5	1,598	NA	7.99	30.00	240	240	NA	Υ	NA		
6-Corridor Zone	AC-5	383	NA	0.00	NA	NA	Ν	AC-5	234	NA	1.17	30.00	35	35	NA	Ν	NA		
7-AG Science Classroom Zone	AC-6	2,400	NA	0.00	NA	NA	N	AC-6	1,406	NA	35.15	15.00	527	527	NA	Y	NA		
9-Metal Shop Zone	MUA-2	6,250	NA	0.00	NA	NA	Ν	MUA-2	2,452	NA	12.26	30.00	368	368	NA	Ν	NA		
10- Compressor/Gas Storage Zo	MUA-2	250	NA	0.00	NA	NA	N	MUA-2	98	NA	0.49	30.00	15	15	NA	N	NA		
11-MPOE Room Zone	FC-4/CU-4	NA	NA	0.00	NA	NA	N	MPOE Room Zone122	58	NA	0.09	100.0 0	9	9	NA	N	NA		
12-Electrical Room Zone	FC-5/CU-5	NA	NA	0.00	NA	NA	N	Electrical Room Zone130	129	NA	0.19	100.0 0	19	19	NA	N	NA		
13-Elevator Machine Room Zon	FC-6/CU-6	NA	NA	0.00	NA	NA	N	Elevator Machine Room Zon136	95	NA	0.14	100.0 0	14	14	NA	N	NA		
								TOTAL	9,328		125.1 9		2,294	2,294	NA				

CA Building Energy Efficiency Standards- 2016 Nonresidential Compliance

Report Version: NRCC-PRF-01-E-09132018-5583

Report Generated at: 2018-12-18 11:42:21

Project Name	:	Fillmo	re High So	chool CTE	- Building	gВ				N	RCC-PRF-0	1-E	Page	23 of 27						
Project Addre	ss:	555 Ce	entral Ave	. Fillmore	93015					Ca	lculation	Date/Time	: 11:3	7, Tue, De	ec 18, 201	8				
Compliance S	cope:	NewC	omplete							In	out File Na	ame:	Fillm	ore High	School CT	E - Buildir	ng B.cibd1	6х		
G. MECHAN	ICAL HVA	AC ACCEI	PTANCE	TESTS &	FORMS	Adapted	from 20)16-NRC	с-мсн-о)1-Е)									§ RA	4
Declaration o Inspector to v	-	d Accepta	ance Cert	ificates (N	I RCA) — A	cceptance	e Certifica	tes that n	nay be sul	omitted. (Retain co	pies and ve	erify form	ns are con	npleted a	nd signed	to post in	field for	Field	
Test Descri	ption	MCH-02A	MCH-03A	MCH-04A	MCH-05A	MCH-06A	MCH-07A	MCH-08A	MCH-09A	MCH-10A	MCH-11A	MCH-12A	MCH-13A	MCH-14A	MCH-15A	MCH-16A	MCH-17A	MCH-18A	Confi	irme
Equipment Requiring Testing or Verification	# of units	Outdoor Air	Single Zone Unitary	Air Dist. Ducts	Economizer Controls	DCV	Supply Fan VAV	Valve leakage	Supply Water Temp. Reset	Hyd. Variable Flow Control	Auto Demand Shed Control	FDD for DX Units	Auto FDD for Air & Zone	Dist. Energy Storage DX AC	TES Systems	Supply Air Temp. Reset	Condenser Water Reset Controls	ECMS	Pass	Fall
WH-21 - SHW	1																			
AC-2	1	Х	Х		Х	Х														
AC-3	1	Х	Х		Х	х														
AC-4	1	х	Х		Х															
Staff Work Room Zone42	1																			
AC-5	1	Х	Х		Х	Х														
Wood Shop Zone50	1																			
AC-6	1	Х	Х		Х	Х														
MUA-2	1	Х																		
Metal Shop Zone97	1																			
Compressor /Gas Storage Zo111	1																			

CA Building Energy Efficiency Standards- 2016 Nonresidential Compliance

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Report Version: NRCC-PRF-01-E-09132018-5583

Report Generated at: 2018-12-18 11:42:21

Report Generated at: 2018-12-18 11:42:21

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Project Name:	Fillmore Hig	n School CTE - Building B		NRC	C-PRF-01-E	Ра	ge 26 of 27				
Project Address:	555 Central	Ave. Fillmore 93015		Calc	ulation Date/Ti	ne: 11	:37, Tue, Dec 18, 201	8			
Compliance Scope:	NewComple	te		Inpu	ıt File Name:	Fil	Imore High School CT	E - Building B.cibd16	ĸ		
E. GENERAL LIGHTIN	NG FROM SPEC	IAL FUNCTION AREAS (Adapt	ted from NRCC-LTI-()4-E)					§ 140.6	(c) 3H	
			Illuminance Value	Room Cavity Ra	tio					firmed	
Room Number	Prin	nary Function Area	(LUX)	(Table G)	Allowe	d LPD	Floor Area (ft ²)	Allowed Watts	Pass	Fa	il
NA		NA	NA	NA	NA	١	NA	NA]
Note: Tailored Method for Spe	ecial Function Areas is	not currently implemented	•								
F. ROOM CAVITY RA	TIO (Adapted 1	rom NRCC-LTI-04-E)									
			Rect	angular Spaces							
Room Number	Та	sk/Activity Description	Boom Longth (ft)	Boom	ı Width (ft)	Boom	Covity Hoight (ft)	RCR		Confirm	ed
Room Number	Id	sk/Activity Description	Room Length (ft)	KOOIII	i wiath (it)	Room	n Cavity Height (ft)	KCK	F	ass I	ail
		NA	NA		NA		NA	NA			
NA		NA									
NA Non-Rectangular Sp	aces					<u> </u>					
										l	
Non-Rectangular Sp	Apply			I		L					
Non-Rectangular Sp This Section Does Not A Note: All applicable spaces are	Apply e listed under the Nor									I	
Non-Rectangular Sp This Section Does Not Note: All applicable spaces are	Apply e listed under the Nor	-Rectangular Spaces table		3.			4.		Сог	firmed	
Non-Rectangular Sp This Section Does Not A Note: All applicable spaces are G. ADDITIONAL "US	Apply e listed under the Nor E IT OR LOSE I T	-Rectangular Spaces table	4-E) Task Combined C	3. Trnamental and S fects Lighting	pecial V	ery Valua	4. ble Merchandise	Allowed Watts	Cor Pass	firmed	
Non-Rectangular Sp This Section Does Not A Note: All applicable spaces are G. ADDITIONAL "US 1.	Apply e listed under the Nor E IT OR LOSE I T	-Rectangular Spaces table " (Adapted from NRCC-LTI-O 2. Combined Floor Display and	4-E) Task Combined C	rnamental and S	ipecial V	ery Valua		Allowed Watts			
Non-Rectangular Sp This Section Does Not A Note: All applicable spaces are G. ADDITIONAL "US 1. Wall Displ 0	Apply e listed under the Nor E IT OR LOSE I T	-Rectangular Spaces table T'' (Adapted from NRCC-LTI-O 2. Combined Floor Display and Lighting	4-E) Task Combined C	rnamental and S fects Lighting	pecial V	ery Valua	ble Merchandise		Pass		
Non-Rectangular Sp This Section Does Not A Note: All applicable spaces are G. ADDITIONAL "US 1. Wall Displ 0 5. Wall Display	Apply e listed under the Nor E IT OR LOSE IT lay	-Rectangular Spaces table T'' (Adapted from NRCC-LTI-O 2. Combined Floor Display and Lighting	4-E) Task Combined C	rnamental and S fects Lighting	pecial V	ery Valua	ble Merchandise		Pass		<u>.</u>
Non-Rectangular Sp This Section Does Not A Note: All applicable spaces are G. ADDITIONAL "US 1. Wall Displ	Apply e listed under the Nor E IT OR LOSE IT lay	-Rectangular Spaces table T'' (Adapted from NRCC-LTI-O 2. Combined Floor Display and Lighting	4-E) Task Combined C	rnamental and S fects Lighting	pecial V	ery Valua	ble Merchandise		Pass		
Non-Rectangular Sp This Section Does Not A Note: All applicable spaces are G. ADDITIONAL "US 1. Wall Displ 0 5. Wall Display This Section Does Not A	Apply e listed under the Nor E IT OR LOSE IT lay Apply	-Rectangular Spaces table T'' (Adapted from NRCC-LTI-O 2. Combined Floor Display and Lighting	4-E) Task Combined C	rnamental and S fects Lighting	pecial V	ery Valua	ble Merchandise		Pass		<u>.</u>
Non-Rectangular Sp This Section Does Not A Note: All applicable spaces are G. ADDITIONAL "US 1. Wall Displ 0 5. Wall Display This Section Does Not A 6. Floor Display and	Apply e listed under the Nor E IT OR LOSE IT lay Apply	-Rectangular Spaces table T'' (Adapted from NRCC-LTI-O 2. Combined Floor Display and Lighting	4-E) Task Combined C	rnamental and S fects Lighting	pecial V	ery Valua	ble Merchandise		Pass		<u>.</u>
Non-Rectangular Sp This Section Does Not A Note: All applicable spaces are G. ADDITIONAL "US 1. Wall Displ 0 5. Wall Display This Section Does Not A 6. Floor Display and	Apply e listed under the Nor E IT OR LOSE IT lay Apply	-Rectangular Spaces table T'' (Adapted from NRCC-LTI-O 2. Combined Floor Display and Lighting	4-E) Task Combined C	rnamental and S fects Lighting	pecial V	ery Valua	ble Merchandise		Pass		
Non-Rectangular Sp This Section Does Not A Note: All applicable spaces are G. ADDITIONAL "US 1. Wall Disp 0 5. Wall Display	Apply e listed under the Nor E IT OR LOSE IT lay Apply Task Lighting Apply	-Rectangular Spaces table " (Adapted from NRCC-LTI-O 2. Combined Floor Display and Lighting 0	4-E) Task Combined C	rnamental and S fects Lighting	pecial V	ery Valua	ble Merchandise		Pass		

Report Version: NRCC-PRF-01-E-09132018-5583

Project Name:	Fillmore High Sch	nool CTE	- Building	В			NRCC-PRF-01	-E	Page 21	of 27						
Project Address:	555 Central Ave.	Fillmore	93015				Calculation D	ate/Time:	11:37, 1	Tue, Dec 18,	2018					
Compliance Scope:	NewComplete						Input File Nar	ne:	Fillmore High School CTE - Building B.cibd16x							
B. ZONAL SYSTEM AN	ND TERMINAL UN	IT SUM	MARY											§ 140	0.4	
1.	2.	3.	4	1.	5.		6.		7.		8.			Conf	firmed	
Sustem ID	Suctor Tuno	Qty	Rated Capacity (kBtuh)		Feenomizer		Zone Name			fm)		Fan		P.		
System ID	System Type		Heating	Cooling	Economizer		zone Name	Design	Min.	Min. Ratio	BHP Cycles		ECM Motor	Pass	Fail	
FC-4/CU-4	MiniSplitHP	1	NA	17.00	No	11-1	MPOE Room Zone	450	NA	NA	0.023					
FC-5/CU-5	MiniSplitHP	1	NA	23.00	No	12-El	ectrical Room Zone	775	NA	NA	0.043					
FC-6/CU-6	MiniSplitHP	1	NA	35.00	No	13-	Elevator Machine Room Zon	920	NA	NA	0.043					
1-Classroom 130 Zone-Trm	Uncontrolled	1	NA	NA	NA	1-Cl	assroom 130 Zone	1200	NA	0.00	NA	NA				
2-Fab Lab Zone-Trm	Uncontrolled	1	NA	NA	NA	2	2-Fab Lab Zone	2000	NA	0.00	NA	NA				
4-Staff Work Room Zone-Trm	Uncontrolled	1	NA	NA	NA	4-Sta	ff Work Room Zone	714	NA	0.00	NA	NA				
3-Staff Storage/RR Zone-Trm	Uncontrolled	1	NA	NA	NA	3-Sta	ff Storage/RR Zone	186	NA	0.00	NA	NA				
6-Corridor Zone-Trm	Uncontrolled	1	NA	NA	NA	6	6-Corridor Zone	383	NA NA NA NA	0.00	NA	NA				
5-Wood Shop Zone-Trm	Uncontrolled	1	NA	NA	NA	5-\	Wood Shop Zone	2617			NA	NA				
7-AG Science Classroom Zone-Trm	Uncontrolled	1	NA	NA	NA	7-AG	Science Classroom Zone	2400			NA NA	NA				
10-Compressor/Gas Storage Zo-Trm	Uncontrolled	1	NA	NA	NA	10-	-Compressor/Gas Storage Zo	250				NA				
9-Metal Shop Zone-Trm	Uncontrolled	1	NA	NA	NA	9-1	Metal Shop Zone	6250	NA	0.00	NA	NA				
C. EXHAUST FAN SUN	/IMARY												c	onfirn	ned	
1.				2.		3.	4.	5.			6.			<u>,</u>	2	
System ID		Zone Name				Qty	CFM	Motor B	HP	Total Sta	tic Pressu	re (in H20)	Fass	<u>,</u>	Fail	
Staff Work Room	Zone42		4-Staff Wo	ork Room Zo	one	1	100	0.100			3.81					
Wood Shop Zo	ne50		5-Wood	d Shop Zone	2	1	3,300	10.000	C		11.54					
Metal Shop Zo	Metal Shop Zone97 9-Metal Shop Zone				1	24,000	9.730			1.54						

Report Version: NRCC-PRF-01-E-09132018-5583 CA Building Energy Efficiency Standards- 2016 Nonresidential Compliance

Report Generated at: 2018-12-18 11:42:21

Project Name	2:	Fillmo	ore High So	chool CTE	- Building	В				NF	RCC-PRF-C)1-E	Pag	e 24 of 27							
Project Addre	ess:	555 C	entral Ave	. Fillmore	93015					Ca	lculation	Date/Time	e: 11:	37, Tue, De	ec 18, 20	18					
Compliance S	cope:	NewC	omplete							Inj	out File N	ame:	Fillr	Fillmore High School CTE - Building B.cibd16x							
G. MECHAN	ICAL HV	AC ACCE	PTANCE -	TESTS &	FORMS (Adapted	d from 20)16-NRC	с-мсн-о)1-Е)									§ RA	4	
Declaration of Inspector to v	-	d Accept	ance Certi	ificates (N	IRCA) — A	cceptance	e Certifica	tes that n	nay be sul	omitted. (Retain co	pies and v	erify for	ms are con	npleted a	ind signed	to post i	n field for	Field		
Test Descri	iption	MCH-02A	MCH-03A	MCH-04A	MCH-05A	MCH-06A	MCH-07A	MCH-08A	MCH-09A	MCH-10A	MCH-11A	MCH-12A	MCH-13A	MCH-14A	MCH-15A	MCH-16A	MCH-17A	MCH-18A	Confi	irmed	
Equipment Requiring Testing or Verification	# of units	Outdoor Air	Single Zone Unitary	Air Dist. Ducts	Economizer Controls	DCV	Supply Fan VAV	Valve leakage	Supply Water Temp. Reset	Hyd. Variable Flow Control	Auto Demand Shed Control	FDD for DX Units	Auto FDD for Air & Zone	Dist. Energy Storage DX AC	TES Systems	Supply Air Temp. Reset	Condenser Water Reset Controls	ECMS	Pass	Fail	
MPOE Room Zone122	1																				
Electrical Room Zone130	1																				
Elevator Machine Room Zon136	1																				
FC-4/CU-4	1	Х																			
FC-5/CU-5	1	Х																			
FC-6/CU-6	1	Х																			
H. EVAPORA	ATIVE CO	OLER SU	MMARY	,																	
1.			2.	ľ	3.		4.		5.	6	5.	7.		8.		9.		Con	firmed		
Syste	m ID		Type Qty			Effectiveness			Pump Power Se		lary Fan Ite (cfm)	Seconda Total Effi		an Secondary Fan				Pass	F	ail	
ECD-Air2O S-	CRS-7500	96	Direct		1	(0.95	12	07.4	N	IA	NA	4	NA		NA			[

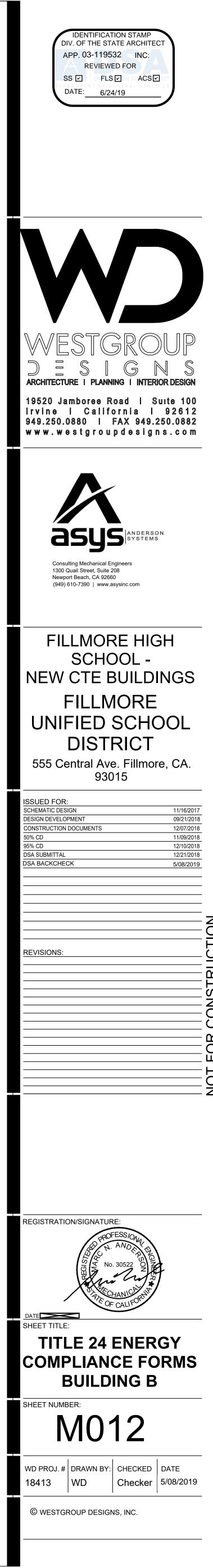
CA Building Energy Efficiency Standards- 2016 Nonresidential Compliance

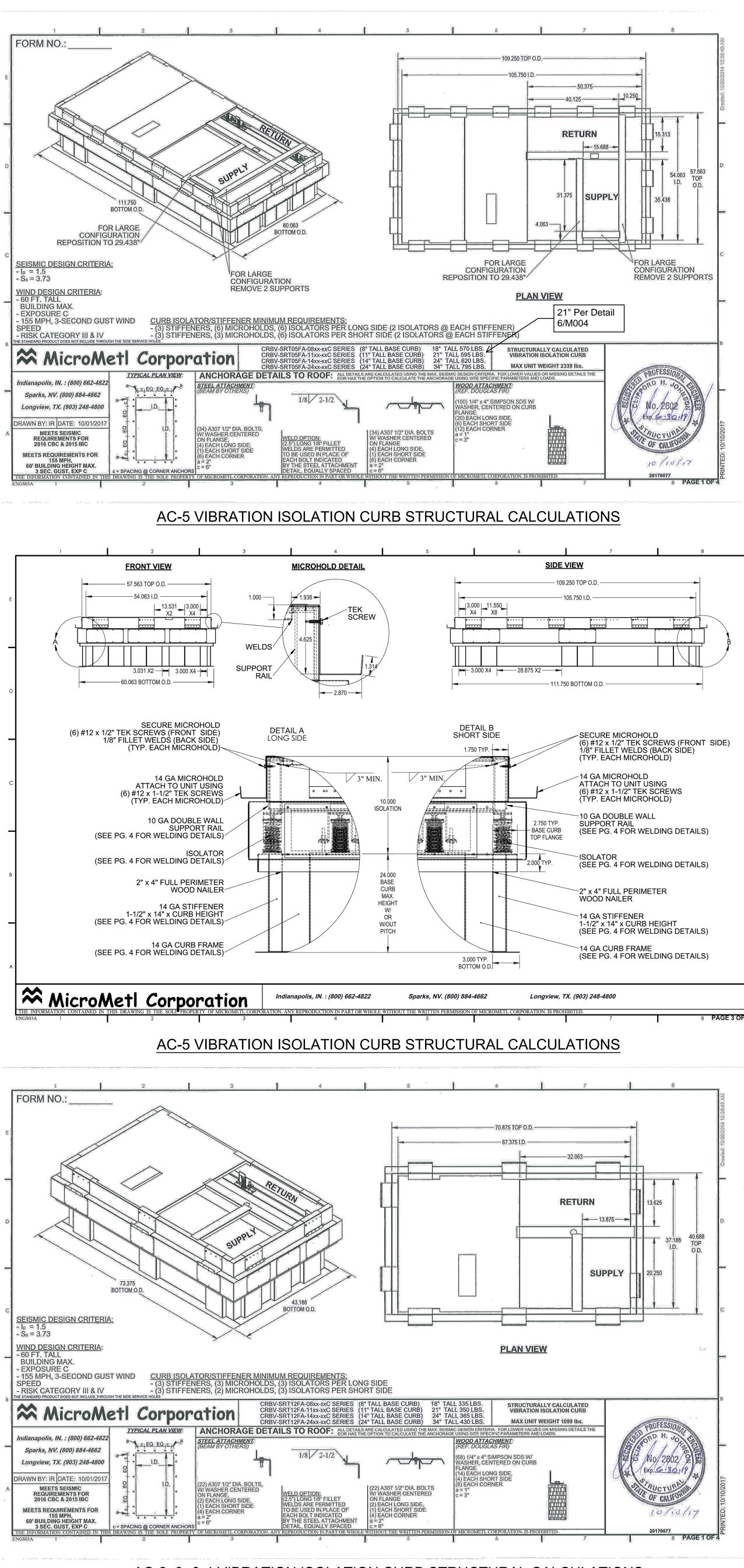
Report Version: NRCC-PRF-01-E-09132018-5583

Report Generated at: 2018-12-18 11:42:21

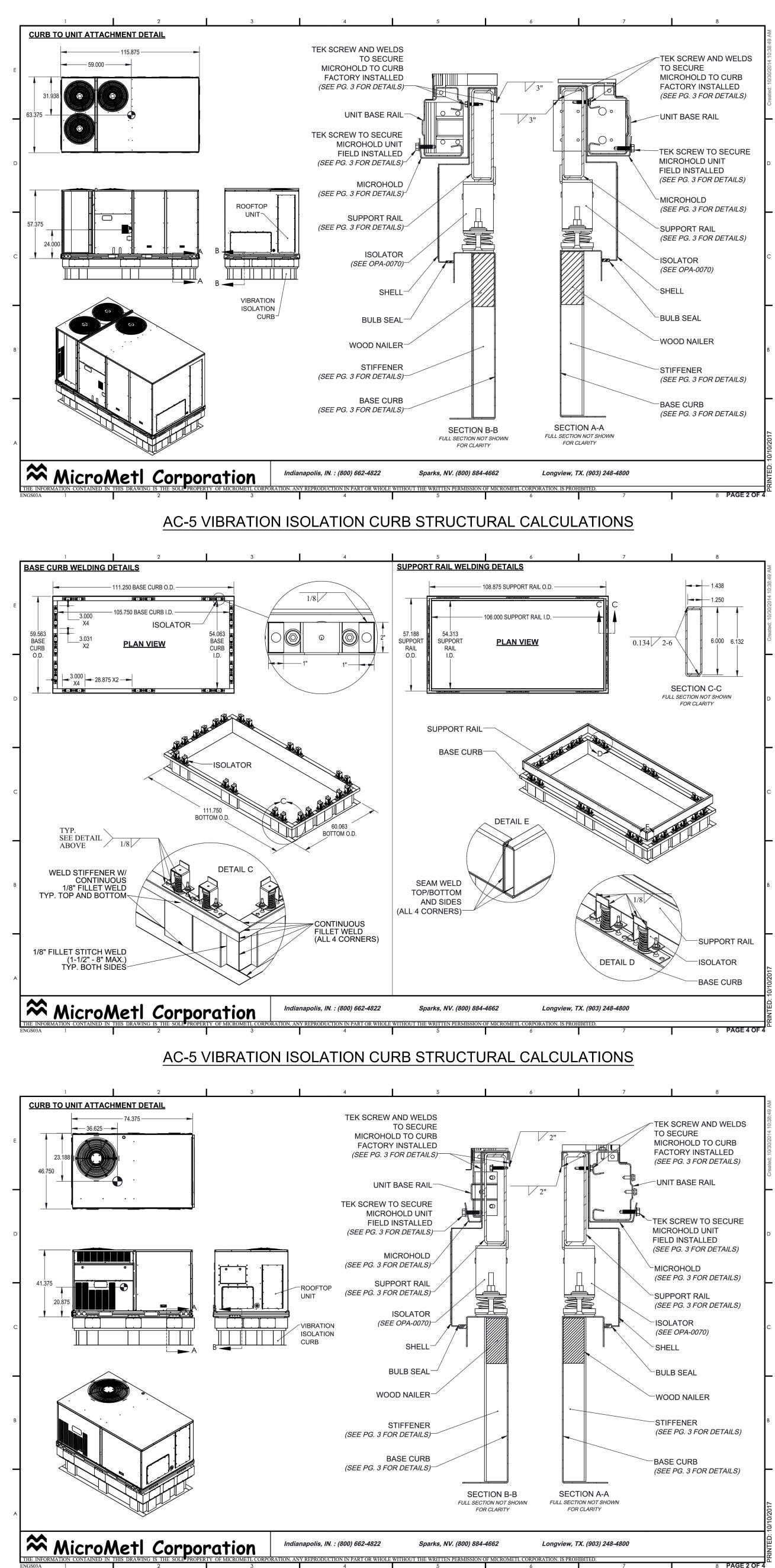
Project Name:	Fillmore High School CTE - Bui	lding B	NRCC-PRF-0)1-Е	Page 27 of 27					
Project Address:	555 Central Ave. Fillmore 9301	15	Calculation	Date/Time:	11:37, Tue, Dec 1	8, 2018				
Compliance Scope:	NewComplete		Input File N	ame:	Fillmore High Sch	hool CTE - Building B.cibd16x				
8. Very Valuable Merc	handise									
This Section Does Not Ap	ply									
H. INDOOR & OUTDOO	DR LIGHTING ACCEPTANCE T	ESTS & FORMS (Adapted from	n NRCC-LTI-01-E and NRC	CC-LTO-01-E			§ 13	30.4		
Declaration of Required	Acceptance Certificates (NRCA	–Acceptance Certificates that m Field	nust be verified in the field. I Inspector to verify).	(Retain copi	es and verify form	s are completed and signed to	o post in f	field for		
Test	Description		Indoor			Outdoor	Confi	irmed		
lest	Description	NRCA-LTI-02-A	NRCA-LTI-03-A	NR	CA-LTI-04-A	NRCA-LTO-02-A	_			
Equipment Requiring Testing or Verification		Occ Sensors / Auto Time Switch	Auto Daylight	Dema	nd Responsive	Outdoor Controls	Pass	Fail		
Occupant Sensors	0									
Automatic Time Switch	n 0									
Automatic Daylighting	0		\boxtimes							
Demand Responsive	0									
Outdoor Controls	0									

Report Version: NRCC-PRF-01-E-09132018-5583

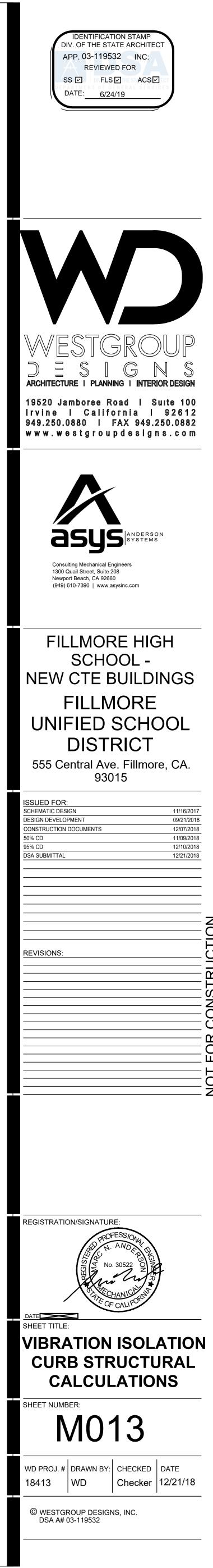


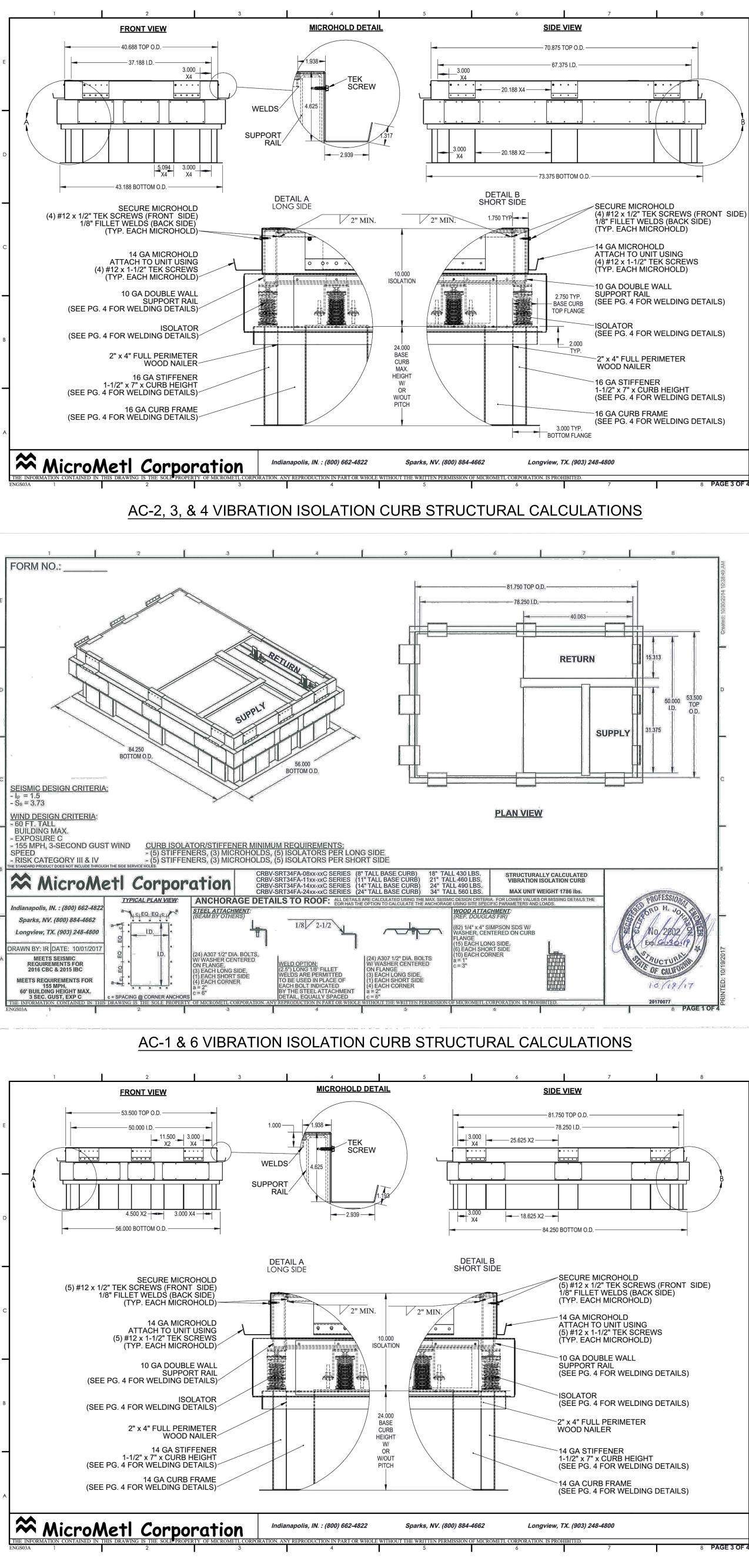


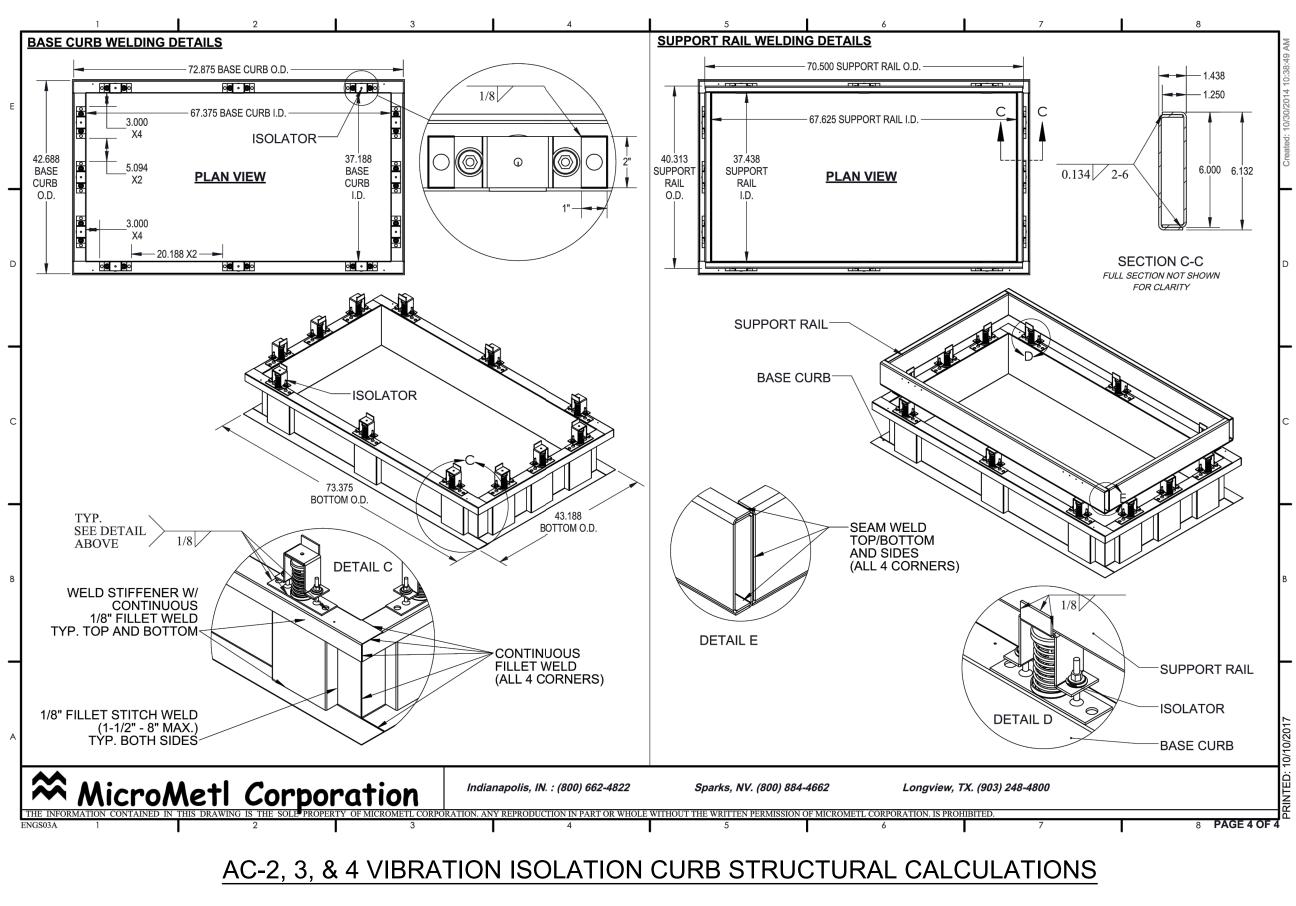
AC-2, 3, & 4 VIBRATION ISOLATION CURB STRUCTURAL CALCULATIONS

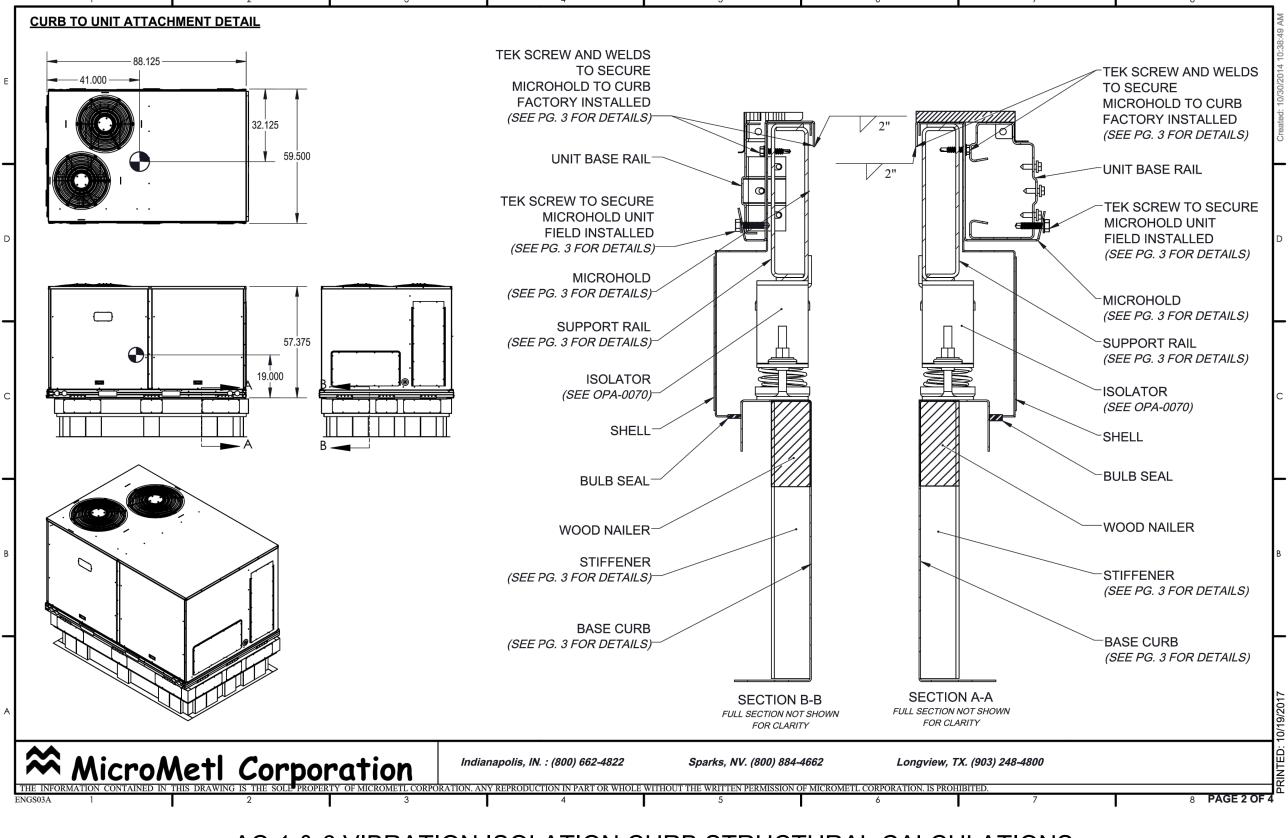


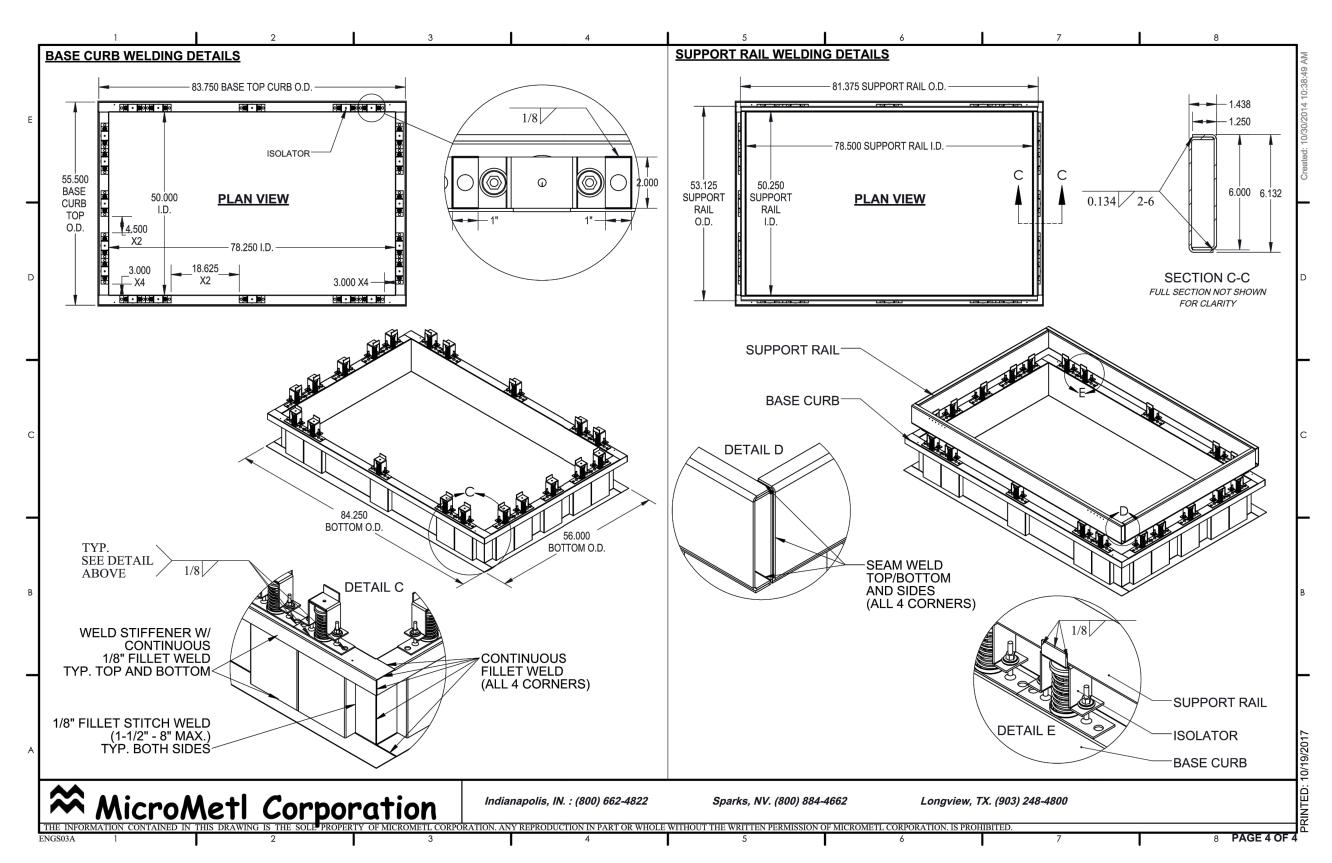
AC-2, 3, & 4 VIBRATION ISOLATION CURB STRUCTURAL CALCULATIONS







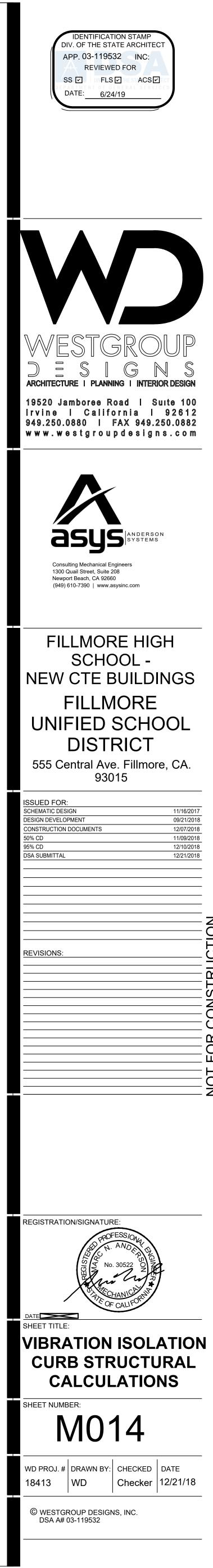


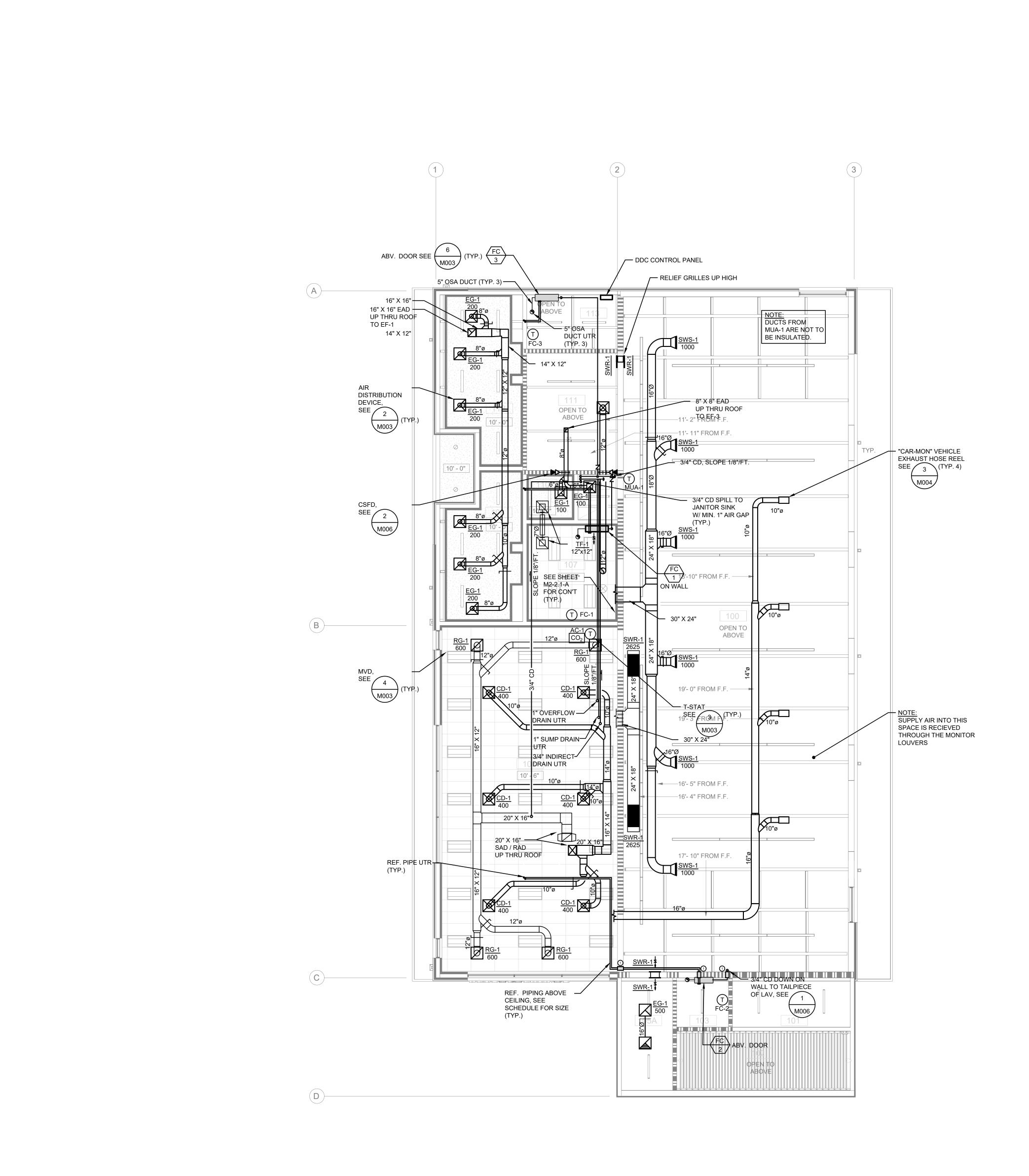


AC-1 & 6 VIBRATION ISOLATION CURB STRUCTURAL CALCULATIONS

AC-1 & 6 VIBRATION ISOLATION CURB STRUCTURAL CALCULATIONS

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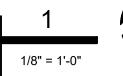


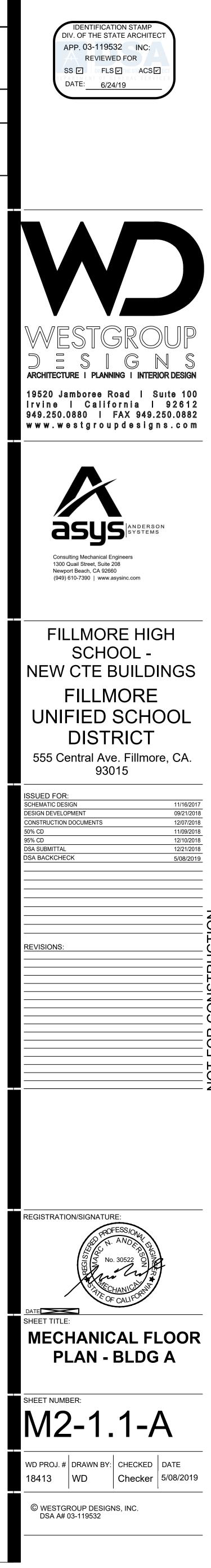
FLOOR PLAN LEGEND

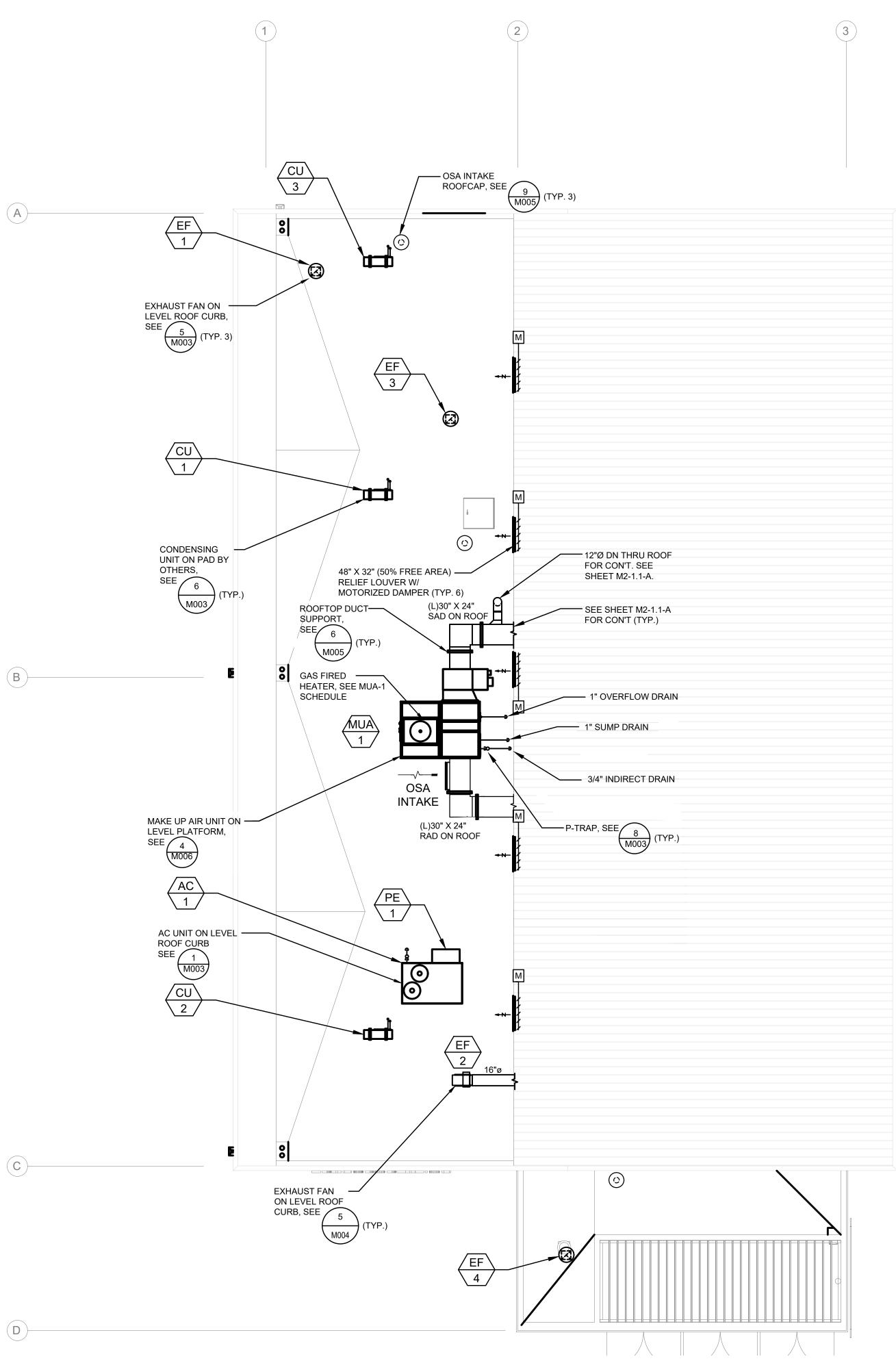
2-HR FIRE RATED WALL

NOTES

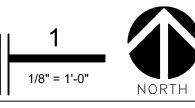
1) PROVIDE FIRESTOPPING AT RATED WALL PENETRATION. SEE ARCHITECTURAL PLANS.

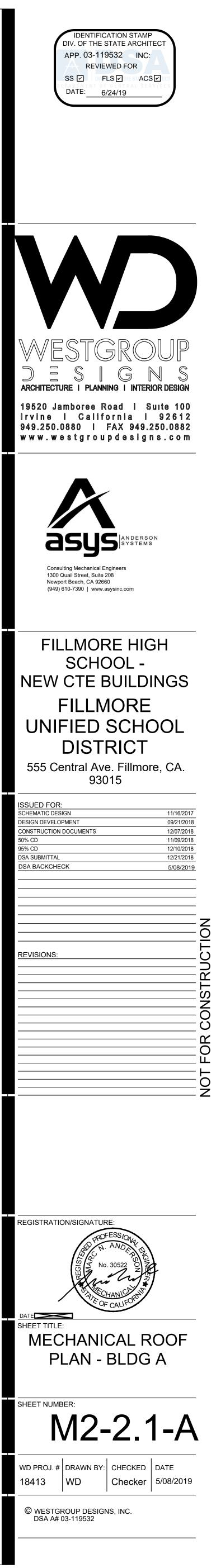


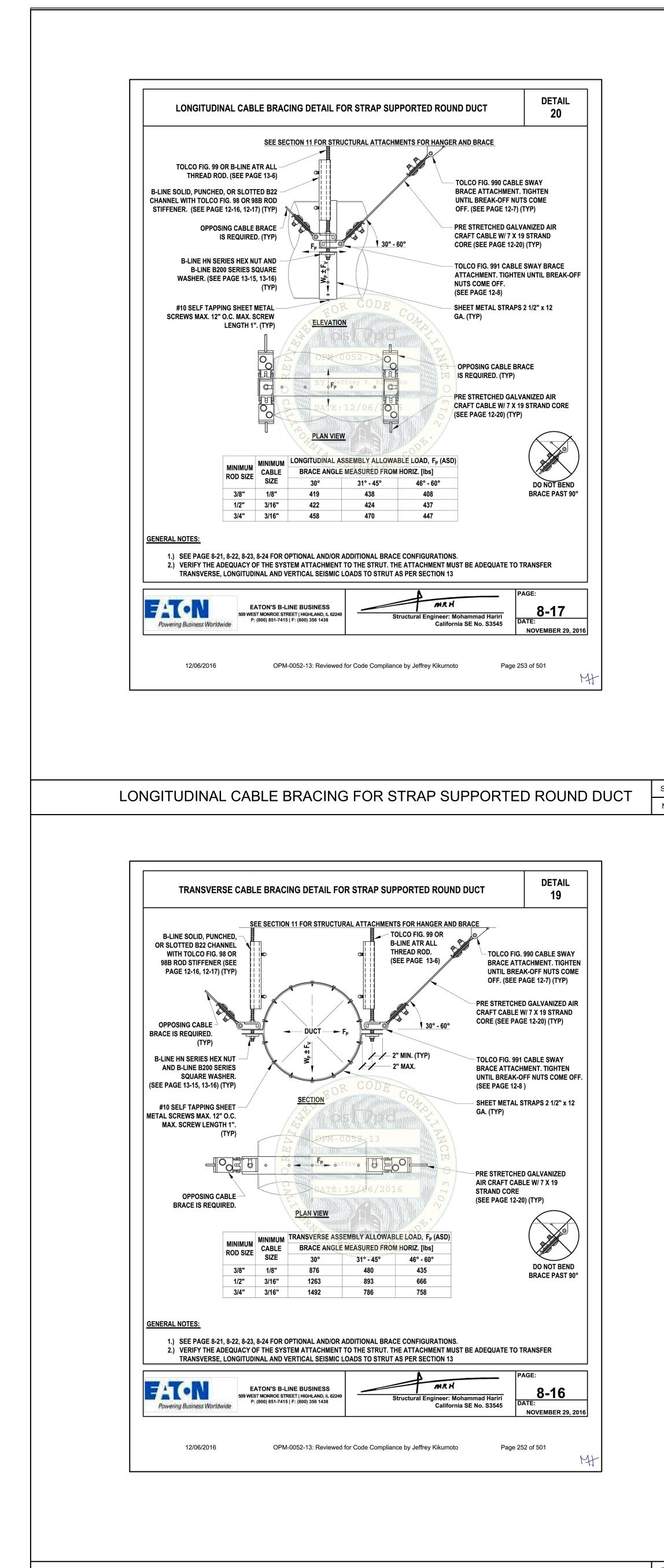


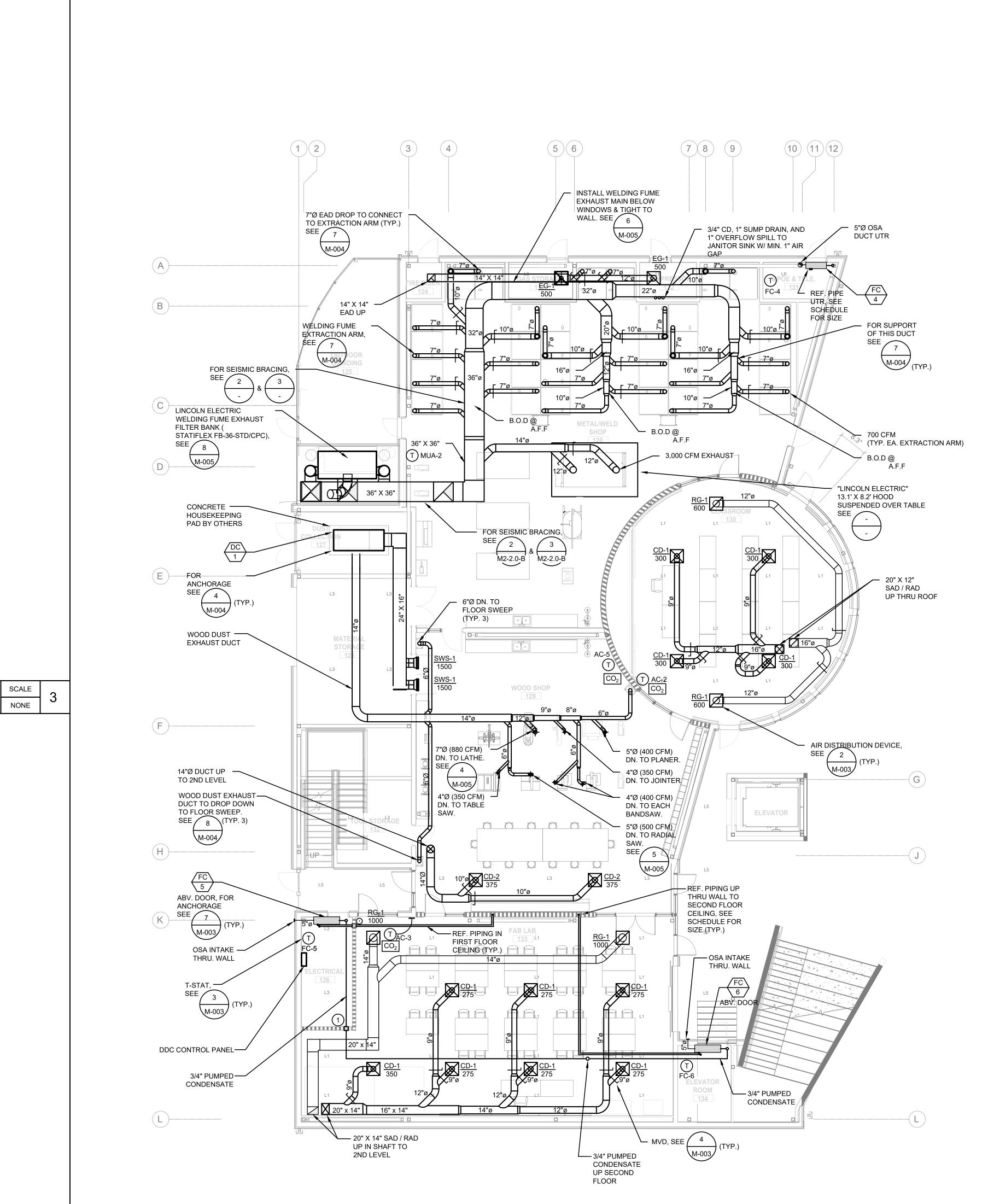


MECHANICAL ROOF PLAN - BLDG A IL





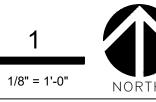


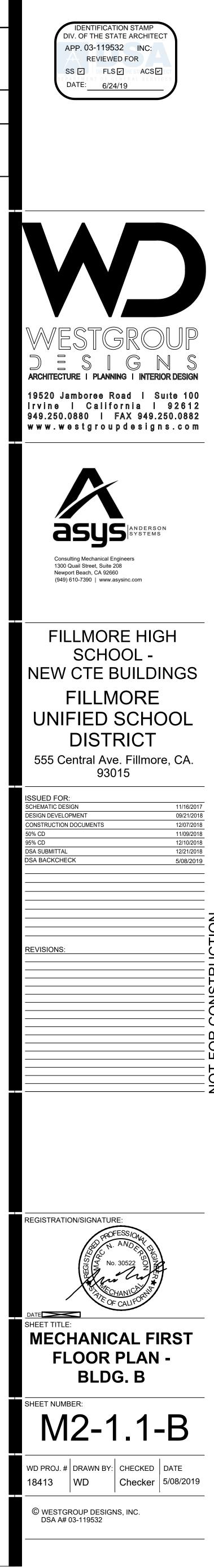


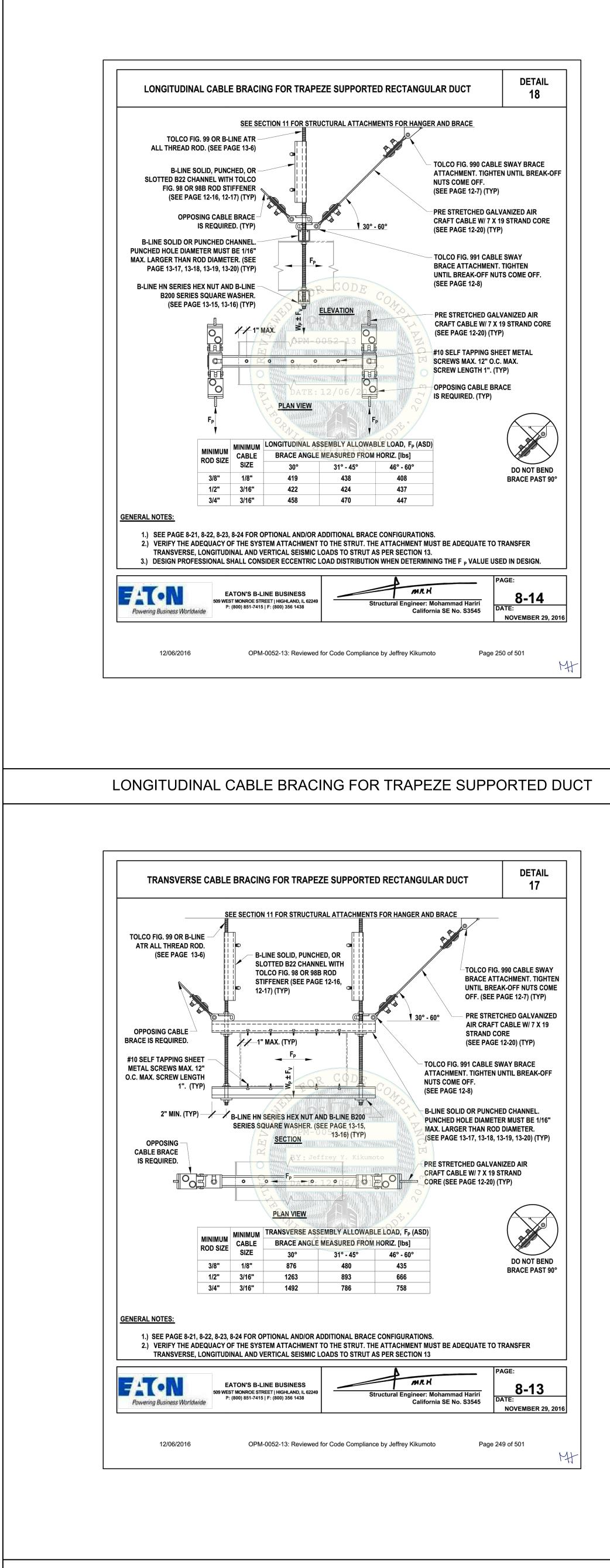
FLOOR PLAN LEGEND

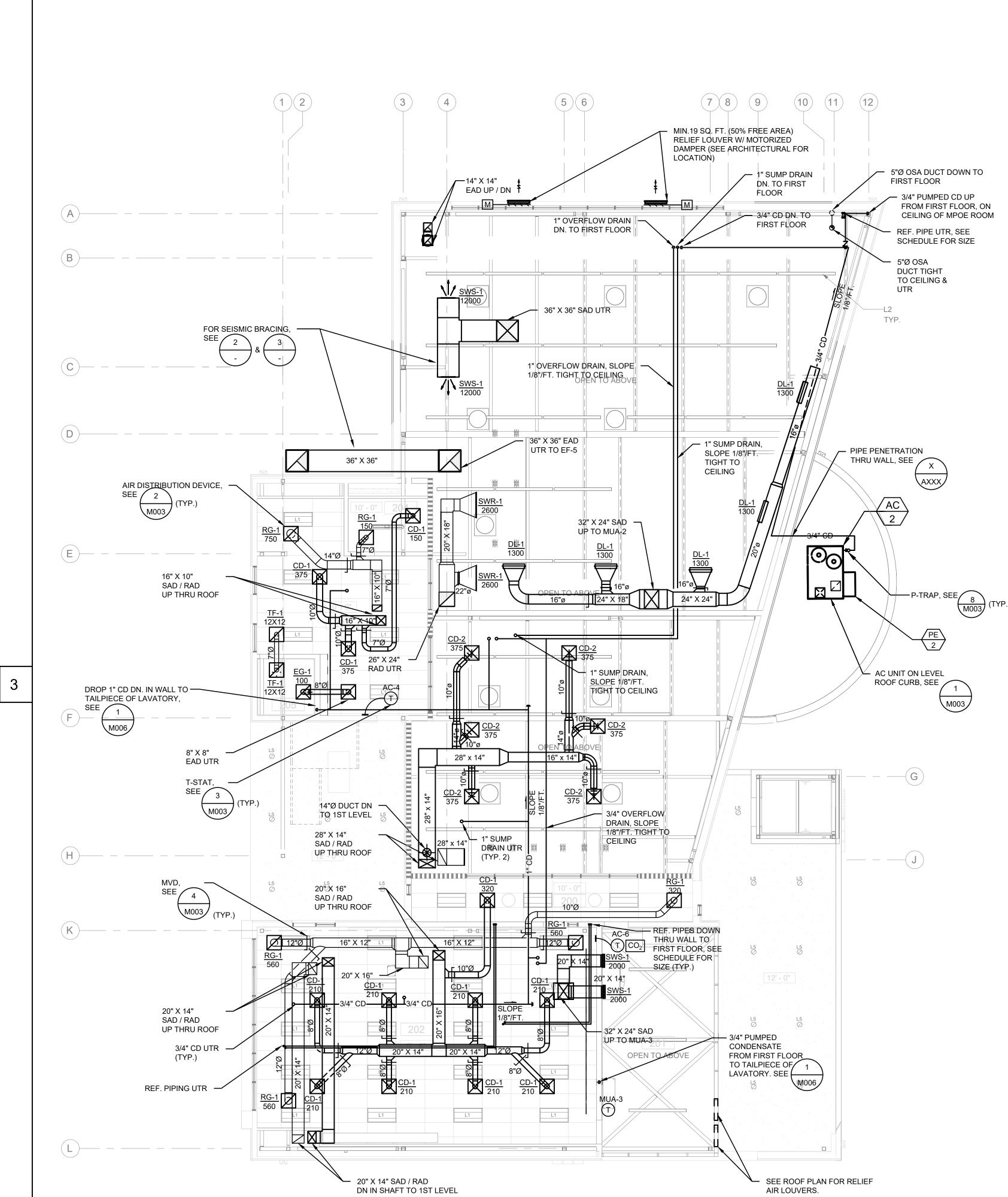
<u>NOTES</u>

1 PROVIDE FIRESTOPPING AT RATED WALL PENETRATION. SEE ARCHITECTURAL PLANS.









SCALE NONE

FLOOR PLAN LEGEND



