



FAIRLANDS ELEMENTARY SCHOOL ROOFING & HVAC REPLACEMENT

4151 W. LAS PASITAS BLVD, PLEASANTON, CA. 94588

PLEASANTON UNIFIED SCHOOL DISTRICT

GENERAL NOTES

PRE-BID SITE VISIT
CONTRACTOR SHALL VISIT THE PROJECT AREA IN ORDER TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND THE REQUIREMENTS OF THE PROJECT. THE CONTRACTOR MAY CONTACT THE ARCHITECT DURING THE BIDDING PHASE REGARDING CLARIFICATIONS AND PROJECT REQUIREMENTS.

SAFETY
IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

DAMAGE TO STRUCTURE OR SYSTEMS TO REMAIN
CONTRACTOR SHALL REIMBURSE THE OWNER FOR REPAIR AND REPLACEMENT, INCLUDING ARCHITECT'S FEES, FOR ANY DAMAGE CAUSED TO STRUCTURES, LANDSCAPE, SITE WORK, OR EXISTING SYSTEMS TO REMAIN, AS THE RESULT OF CONSTRUCTION OPERATIONS.

EXISTING CONDITIONS
ALL EXISTING CONDITIONS ARE SHOWN BASED ON THE BEST INFORMATION AVAILABLE AT THE TIME, BUT WITHOUT GUARANTEE OF ACCURACY. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, AND BUILDING DATA AT THE JOB SITE. ANY DISCREPANCIES REQUIRING MODIFICATION TO THE CONSTRUCTION DOCUMENTS SHALL BE REPORTED TO THE ARCHITECT IMMEDIATELY. NO MODIFICATIONS MADE BY THE CONTRACTOR WITHOUT PRIOR APPROVAL FROM THE ARCHITECT.

CONTRACTOR'S EQUIPMENT
COORDINATE WITH OWNER'S REPRESENTATIVE FOR APPROVED LOCATION OF JOB SITE ACCESS, PARKING, AND LOCATION OF CONTRACTOR'S EQUIPMENT AND MATERIAL STORAGE AREA. SEE SITE PLAN FOR ADDITIONAL NOTES.

UTILITY SHUT-DOWNS AND CONNECTIONS
ALL REQUIRED UTILITY SHUT DOWNS SHALL HAVE PRIOR APPROVAL FROM THE OWNER'S REPRESENTATIVE. REQUEST SHALL BE SUBMITTED WITH ADEQUATE ADVANCE NOTICE PER PROJECT REQUIREMENTS.

ASBESTOS AND ASBESTOS PRODUCTS
THE OWNER/OPERATOR AND CONTRACTOR SHALL BE AWARE THAT BUILDINGS CONSTRUCTED PRIOR TO 1978 (OR THEREABOUTS) POSSIBLY CONTAIN ASBESTOS IN SOME EXISTING CONSTRUCTION MATERIALS, AND WILL LIKELY BE ENCOUNTERED DURING ALTERATIONS OR REMODELING.

UNDER CALIFORNIA TITLE 8, THE OWNER AND CONTRACTOR BOTH HAVE RESPONSIBILITIES TO DETERMINE THE EXISTENCE OF ASBESTOS CONTAINING MATERIALS IN AREAS TO BE ALTERED OR REMODELED PRIOR TO COMMENCEMENT OF WORK AND TO TAKE APPROPRIATE MEASURES TO PROTECT PERSONNEL. CAL-OSHA HAS JURISDICTION OVER ASBESTOS RELATED WORK. ASBESTOS RELATED WORK SHALL BE DONE IN ACCORDANCE WITH CALIFORNIA GENERAL INDUSTRIAL SAFETY ORDERS, TITLE 8, SECTION 341.6 THROUGH 341.14. ASBESTOS IN THE WORK ENVIRONMENT IS REGULATED BY TITLE 8, SECTION 5208.

THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT AND DISTRICT REGULATION 11-2-401.3 REQUIRES EVERY RENOVATION INVOLVING THE REMOVAL OF 100 SQ. FT., LN.FT. OR GREATER OF REGULATED ASBESTOS CONTAINING MATERIAL, AND FOR EVERY DEMOLITION (EVEN WHEN NO ASBESTOS IS PRESENT), A NOTIFICATION MUST BE SENT TO THE BAAQMD AT LEAST 10 WORKING DAYS PRIOR TO COMMENCEMENT OF DEMOLITION/RENOVATION.

ALL BUILDING MATERIALS MUST BE ASBESTOS FREE.

THESE DOCUMENTS DO NOT ADDRESS CONTAINMENT FOR EXISTING AREAS OF ASBESTOS WHICH MAY BE DISCOVERED DURING CONSTRUCTION. THE OWNER'S ABATEMENT SUBCONTRACTOR IS SOLELY RESPONSIBLE FOR THE DETECTION, REMOVAL, AND THE DISPOSAL OF ANY EXISTING ASBESTOS MATERIAL, ARCHITECTURAL AND ENGINEERING FEES FOR DESIGN EFFORT TO OBTAIN STATE APPROVALS, AS WELL AS THE COST OF ANY REPAIRS, FOR DAMAGE CAUSED OR REPLACEMENT OF EXISTING SYSTEMS TO REMAIN, DUE TO WORK PERFORMED BY THE ASBESTOS ABATEMENT SUBCONTRACTOR, SHALL BE THE RESPONSIBILITY OF SAID SUBCONTRACTOR.

CONSTRUCTION SCHEDULING
CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION OPERATIONS WITH OWNER'S REPRESENTATIVE PRIOR TO SCHEDULING AND START OF THE WORK. CONTRACTOR SHALL PROVIDE PROTECTION TO ALL EXISTING SPACES AND SYSTEMS WHICH ARE IN USE, ADJOINING THE PROJECT, AND NOT PART OF THE PROJECT.

INTERIOR FINISHES
INTERIOR FINISHES AND ALL WALL COVERING MATERIAL SHALL CONFORM TO CCR TITLE 24, PART 2, CHAPTER 6.

PIPES, DUCTS AND CONDUIT - SUPPORT AND BRACING

PIPES, DUCTS, AND CONDUITS SHALL BE SUPPORTED AND BRACED PER THE SMACNA "GUIDELINES" FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING PIPING SYSTEMS, OPM 0062-13 SEISMIC BRACING AND SUPPORT SYSTEMS.

DRILLED-IN EXPANSION ANCHORS

WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWDER DRIVEN PINS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. WHEN INSTALLING THEM INTO EXISTING PRESTRESSED CONCRETE (PRE- OR POST-TENSIONED), LOCATE THE PRESTRESSED TENDONS BY USING A NON-DESTRUCTIVE METHOD PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE TENDONS DURING INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN.

TITLE 24 COMPLIANCE

THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS (2019 CBC), SHOULD ANY EXISTING CONDITIONS SUCH AS DETRIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK, SHALL BE SUBMITTED TO AND APPROVED BY THE DSA BEFORE PROCEEDING WITH THE WORK.

ABBREVIATIONS

(REFER TO CONSULTANT DRAWINGS FOR ADDITIONAL ABBREVIATIONS)

A.F.F.	ABOVE FINISHED FLOOR	LAM.	LAMINATE
A.P.	ACCESS PANEL	LAV.	LAVATORY
ACT	ACOUSTIC TILE	M.B.	MACHINE BOLT
ADJ.	ADJUSTABLE	M.S.	MACHINE SCREW
ALUM.	ALUMINUM	MANH.	MANHOLE
ANCH.	ANCHOR BOLT	MFG.	MANUFACTURER
APPROX.	APPROXIMATELY	M.B.	MARKER BOARD
ARCH.	ARCHITECT	MATL.	MATERIAL
AC	ASPHALTIC CONCRETE	MAX.	MAXIMUM
@	AT	MECH.	MECHANICAL
B.M.	BENCH MARK	MTL.	METAL
BLKG.	BLOCKING	MIN.	MINIMUM
BD.	BOARD	MISC.	MISCELLANEOUS
B.W.	BOTH WAYS	MJTD.	MOUNTED
BOT.	BOTTOM	(N)	NEW
BLDG.	BUILDING	NOM.	NOMINAL
B.U.R.	BUILT-UP ROOFING	N.I.C.	NOT IN CONTRACT
C.B.	CATCH BASIN	N.T.S.	NOT TO SCALE
C.L.	CEILING	NO. or #	NUMBER
C.E.M.	CEMENT	OCC.	OCCUPANT(CY)
C.C. or O.C.	CENTER TO CENTER	O.C.	ON CENTER
CER. TILE	CERAMIC TILE	OPNG.	OPENING
C.O.	CLEANOUT	OPP.	OPPOSITE
C.O.T.G.	CLEANOUT TO GRADE	O.H.	OPPOSITE HAND
CLR.	CLEAR	O.F.O.S.	OUTSIDE FACE OF STUD
C.A.H.R.	CLEAR ALL HEART REDWOOD	O.H.W.S.	OVAL HEAD WOOD SCREW
C.W.	COLD WATER	O.D.	OVERFLOW DRAIN and/or OUTSIDE DIAMETER
COL.	COLUMN	O.F.C.I.	OWNER FURNISHED and CONTRACTOR INSTALLED
COM.	COMMON	PR	PAIR
CONC.	CONCRETE	PART.	PARTITION
CONST.	CONSTRUCTION	PL.	PLATE
C.H.	CONSTRUCTION HEART	P.L.	PLASTER (NAILS)
C.J.	CONSTRUCTION JOINT	P	PLYWOOD
CONT.	CONTINUOUS	P.V.C.	POLY VINYL CHLORIDE
CONTR.	CONTRACTOR	P.P.T.	PRESSURE TREATED PROPERTY LINE
CTR.	COUNTER	P.T.R.	POLYURETHANE THIOUREA
CTS.K.	COUNTER SUNK	P.L.	PROPERTY LINE
DET.	DETAIL	R. or RAD.	RADIUS
DIA. or Ø	DIAMETER	R.W.L.	RAIN WATER LEADER
DIM.	DIMENSION	R.W.D.	REDWOOD
D.A.	DISABLED ACCESS	REINF.	REINFORCING
DR.	DOOR	R.A.G.	RETURN AIR GRILLE
D.S.	DOWNSPOUT	R.E.	RM ELEVATION
DWG.	DRAWING	R.O.D.	ROOM DRAIN
D.F.	DRINKING FOUNTAIN and/or DRINKING FOUNTAIN	R.M.	ROOM
EA.	EACH	R.O.	ROUGH OPENING
E.W.	EACH WAY	RND.	ROUND
ELEC.	ELECTRIC OR ELECTRICAL	R.H.M.S.	ROUND HEAD METAL SCREW
EL.	ELEVATION	R.H.W.S.	ROUND HEAD WOOD SCREW
ENCL.	ENCLOSURE	SSD.	SEE STRUCTURAL DRAWINGS
EQ.	EQUAL	S.T.S.M.S.	SELF TAPPING SHEET METAL SCREW
EQUIP.	EQUIPMENT	SHEATH.	SHEATHING
(E)	EXISTING	S.M.	SHEET METAL
EXP.	EXPANSION	S.M.S.	SHEET METAL SCREW
EX.	EXPOSED	S.O.V.	SHUT OFF VALVE
EXT.	EXTERIOR	S.C.	SOLID CORE
F.O.C.	FACE OF CONCRETE	SPEC.	SPECIFICATION
F.O.M.	FACE OF MASONRY	T.O.C.	TOP OF CURB OR CONCRETE
F.O.S.	FACE OF STUD	T.O.S.	TOP OF STEEL OR SHEATHING
F.O.F.	FACE OF FINISH	T.O.W.	TOP OF WALK
FIN.	FINISH	TYR	TYPICAL
F.F.	FINISHED FLOOR	U.O.N.	UNLESS OTHERWISE NOTED
F.S.	FINISH SLAB	U.O.S.	UNLESS OTHERWISE SHOWN
F.E.	FIRE EXTINGUISHER	V.T.R.	VENT THROUGH ROOF
F.E.C.	FIRE EXTINGUISHER CABINET	VERT.	VERTICAL
F.H.	FIRE HYDRANT	V.G.	VERTICAL GRAIN
F.H.M.S.	FLAT HEAD METAL SCREW	V.C.T.	VINYL COMPOSITION TILE
F.H.W.S.	FLAT HEAD WOOD SCREW	V.W.C.	VINYL WALL COVERING
FL. or FLR.	FLOOR	V.O.I.P.	VOICE OVER INTERNET PROTOCOL
F.D.	FLOOR DRAIN	W.C.	WATER CLOSET
FTG.	FOOTING	W.H.	WATER HEATER
FDI.	FOUNDATION	WP.	WATERPROOF
GALV.	GALVANIZED	W.R.	WATER RESISTANT
G.I.	GALVANIZED IRON	W.W.M.	WELDED WIRE MESH
GA.	GAUGE	W.D.	WINDOW DIMENSION
GLASS	GLASS	W.	WITH
GLUE-LAM	GLUE-LAMINATED	W/O	WITHOUT
GRD.	GRADE	WD.	WOOD
GYP. BD.	GYP-SUM BOARD		
HDW.	HARDWARE		
HT.	HEIGHT		
H.C.	HOLLOW CORE		
H.M.	HOLLOW METAL		
HORIZ.	HORIZONTAL		
H.B.	HORSE BRIB		
I.D.	INSIDE DIAMETER		
INSUL.	INSULATION		
INT.	INTERIOR		
INV.	INVERT		
JT	JOINT		
J.H.	JOIST HANGER		
K.D.	KILN DRIED		

BUILDING CODES AND STANDARDS:

2019	CALIFORNIA ADMINISTRATIVE CODE, PART 1, TITLE 24, C.C.R.	
2019	CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24, C.C.R.	
2019	(2018 INTERNATIONAL BUILDING CODE, VOLUMES 1 AND 2, WITH 2019 CALIFORNIA AMENDMENTS.)	
2019	CALIFORNIA ELECTRIC CODE (CEC), PART 3, TITLE 24, C.C.R.	
2019	(2018 NATIONAL ELECTRIC CODE WITH 2019 CALIFORNIA AMENDMENTS.)	
2019	CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24, C.C.R.	
2019	(2018 UNIFORM MECHANICAL CODE WITH 2019 CALIFORNIA AMENDMENTS.)	
2019	CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24, C.C.R.	
2019	(2018 UNIFORM PLUMBING CODE WITH 2019 CALIFORNIA AMENDMENTS.)	
2019	CALIFORNIA ENERGY CODE (CENC), PART 6, TITLE 24, C.C.R.	
2019	CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24, C.C.R.	
2019	(2018 INTERNATIONAL FIRE CODE WITH 2019 CALIFORNIA AMENDMENTS.)	
2019	CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24, C.C.R.	
2019	CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24, C.C.R.	
2019	ASME A17.1 (W/17-1) (ASCSA B448-08 ADDENDA) SAFETY CODE FOR ELEVATORS AND ESCALATORS	
2010	ADA STANDARDS FOR ACCESSIBLE DESIGN (28 CFR PART 36 FOR TITLE II ENTITIES)	
	CCR TITLE-19, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.	
NFPA 13	INSTALLATION OF SPRINKLER SYSTEMS (CA AMENDED)	2016 EDITION
NFPA 14	INSTALLATION OF STANDPIPE & HOSE SYSTEMS (CA AMENDED)	2016 EDITION
NFPA 17	DRY CHEMICAL EXTINGUISHING SYSTEMS	2017 EDITION
NFPA 17A	WET CHEMICAL EXTINGUISHING SYSTEM	2017 EDITION
NFPA 20	STATIONARY FIRE PUMPS TO FIRE PROTECTION	2016 EDITION
NFPA 22	WATER TANKS FOR PRIVATE FIRE PROTECTION	2013 EDITION
NFPA 24	PRIVATE FIRE SERVICE MAINS (CA AMENDED)	2016 EDITION
NFPA 25	INSPECTION, TESTING AND MAINTENANCE OF WATER BASED FIRE PROTECTION SYSTEMS (CA AMENDED)	2013 CALIFORNIA EDITION 2016 EDITION
NFPA 72	NATIONAL FIRE ALARM CODE (CA AMENDED)	2016 EDITION
NFPA 80	FIRE DOORS AND OTHER OPENING PROTECTIVES (CA AMENDED)	2016 EDITION
NFPA 92	STANDARD FOR SMOKE CONTROL SYSTEMS	2015 EDITION
NFPA 110	EMERGENCY AND STANDBY POWER SYSTEMS	2016 EDITION
NFPA 117	STANDARD FOR FIRE SAFETY AND EMERGENCY SYMBOLS	2018 EDITION
NFPA 253	CRITICAL RADIANT FLUX OF FLOOR COVERING SYSTEMS	2015 EDITION
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS	2015 EDITION
ICC 300	STANDARDS FOR BLEACHERS, FOLDING AND TELESCOPIC SEATING, AND GRANDSTANDS	2017 EDITION
SFM 12-10-1	POWER OPERATED EXIT DOORS	
SFM 12-10-2	SINGLE POINT LATCHING OR LOCKING DEVICES	
SFM 12-10-3	EMERGENCY EXIT & PANIC HARDWARE	
UL 38	MANUAL OPERATING SIGNAL BOXES	1999/2005 EDITION
UL 268	SMOKE DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS	2009 EDITION
UL 268A	SMOKE DETECTORS DUCT APPLICATIONS	1998/2003 EDITION
UL 500	FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF COMMERCIAL COOKING EQUIPMENT	2005 (R2010)
UL 305	PANIC HARDWARE	2012 EDITION
UL 464	AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, AND ACCESSORIES	2003 EDITION
UL 521	HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS	1999 EDITION
UL 864	CONTROL UNITS FOR FIRE PROTECTIVE SIGNALING SYSTEMS (W/ REVISIONS THROUGH DEC. 2014)	2003 EDITION
UL 1971	SIGNALING DEVICES FOR THE HEARING IMPAIRED	2002 EDITION
	COMPLIANCE WITH CFC CHAPTER 33, FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION AND CBC CHAPTER 33, SAFETY DURING CONSTRUCTION WILL BE ENFORCED.	

SYMBOLS LEGEND

1	SECTION / EXTERIOR ELEVATION SECTION IDENTIFICATION SHEET WHERE SECTION IS DRAWN
4	DETAIL DETAIL IDENTIFICATION SHEET WHERE DETAIL IS DRAWN
1	INTERIOR ELEVATION INDICATES ELEVATION SHOWN SHEET WHERE ELEVATION IS DRAWN
CLASSROOM 102	ROOM IDENTIFICATION ROOM NAME ROOM NUMBER
3	SPECIFIC NOTE
102A	DOOR DESIGNATION
A	WINDOW DESIGNATION
1	ADDENDUM REVISION CLOUD AROUND REVISION
CCD	CCD REVISION CLOUD AROUND REVISION
127	FINISH NUMBER SEE SPECS AND I.E. DWGS.
A	EQUIPMENT LETTER SEE EQUIPMENT SCHEDULE
8'-0"	CEILING HEIGHT
1	WALL TYPE
8'-0"	ELEV. HEIGHT
	CENTER OF
	FACE OF

PROJECT SUMMARY

BUILDING A - REMOVE EXISTING AC SHINGLE SLOPED PORTION OF ROOF. ADD BUILT-UP ROOFING SYSTEM TO SLOPED PORTION OF ROOF AND ADD METAL PANEL ROOFING ABOVE. SET OFF ABOVE NEW B.U.R. REPLACE B.U.R. ROOFING SYSTEM AT PERIMETER OF BUILDING WITH NEW SIMILAR B.U.R. ROOFING SYSTEM. ALL EXISTING ROOF DRAINS TO BE REPLACED. REPLACE EXISTING HVAC SYSTEMS WITH NEW. NEW THERMOSTATS WILL BE PROVIDED AND CONNECTED TO SITES EXISTING ENERGY MANAGEMENT SYSTEM. FIRE ALARM SYSTEM WILL BE EVALUATED.

THERE ARE NO DEFERRED SUBMITTALS FOR THIS PROJECT.

DESIGN TEAM

ARCHITECT
SUGIMURA FINNEY ARCHITECTS
2155 SOUTH BASCOM AVENUE SUITE 200
CAMPBELL, CALIFORNIA 95008
(408) 879-0600
(408) 377-6066 FAX
ATTN: MARK FINNEY, MARK@SUGIMURA.COM

MECHANICAL AND PLUMBING ENGINEER
CYPRESS ENGINEERS GROUP
9 HARRIS COURT, SUITE A8
MONTEREY, CALIFORNIA 93940
(831) 218-1802

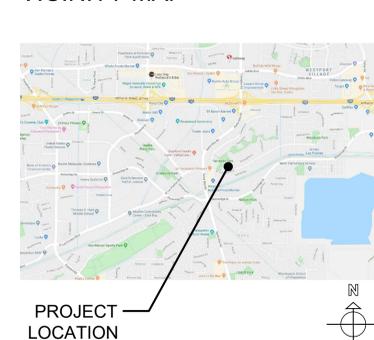
ELECTRICAL AND FIRE ALARM ENGINEER
AURUM CONSULTING ENGINEERS
1798 TECHNOLOGY DRIVE, SUITE 242
SAN JOSE, CA 95110
(408) 564-7925

DRAWING INDEX

T1	TITLE SHEET
ARCHITECTURAL	
A0.1	SITE PLAN
A4.1	DEMO ROOF PLAN
A4.2	NEW ROOF PLAN
A9.1	ROOF DETAILS
MECHANICAL & PLUMBING	
MP0.1	SYMBOL LEGENDS, ABBREVIATIONS, NOTES - MECHANICAL & PLUMBING
MP0.2	SCHEDULES & DETAILS - MECHANICAL & PLUMBING
MP3.1	DEMOLITION ROOF PLAN - BUILDING A - WEST - MECHANICAL & PLUMBING
MP3.2	DEMOLITION ROOF PLAN - BUILDING A - EAST - MECHANICAL & PLUMBING
MP3.3	NEW ROOF PLAN - BUILDING A - WEST - MECHANICAL & PLUMBING
MP3.4	NEW ROOF PLAN - BUILDING A - EAST - MECHANICAL & PLUMBING
MP7.1	BUILDING A - WEST - MECHANICAL / TAB WORK
MP7.2	BUILDING A - EAST - MECHANICAL / TAB WORK
MP8.1	TITLE 24 FORMS - MECHANICAL
MP8.2	TITLE 24 FORMS - MECHANICAL
ELECTRICAL & FIRE ALARM	
E0.1	SYMBOLS, ABBREVIATIONS, CODES, STANDARDS, EQUIPMENT ANCHORAGE, NOTES & SHEET INDEX
E1.1	ELECTRICAL SINGLE LINE DIAGRAM, DETAILS & PANELBOARD SCHEDULES
E2.1	ELECTRICAL SITE PLAN
E3.1	ELECTRICAL DEMOLITION PLAN - BUILDING A
E4.1	ELECTRICAL ROOF PLAN - BUILDING A
E4.2	ELECTRICAL PLAN - BUILDING A
FA0.1	FIRE ALARM SYMBOLS, ABBREVIATIONS, EQUIPMENT LIST, BATTERY CALCULATION, OPERATIONAL MATRIX, NOTES & FIRE ALARM RISER DIAGRAM
FA4.1	FIRE ALARM PLAN - BUILDING A

SHEET TOTAL = 23

VICINITY MAP



PROJECT LOCATION

TITLE SHEET

REVISIONS	NO.	ITEM	DATE
-----------	-----	------	------

DRAWN BY: KNU
CHECKED BY: MB
SFA JOB NO: 21071
DATE: 11/15/2021

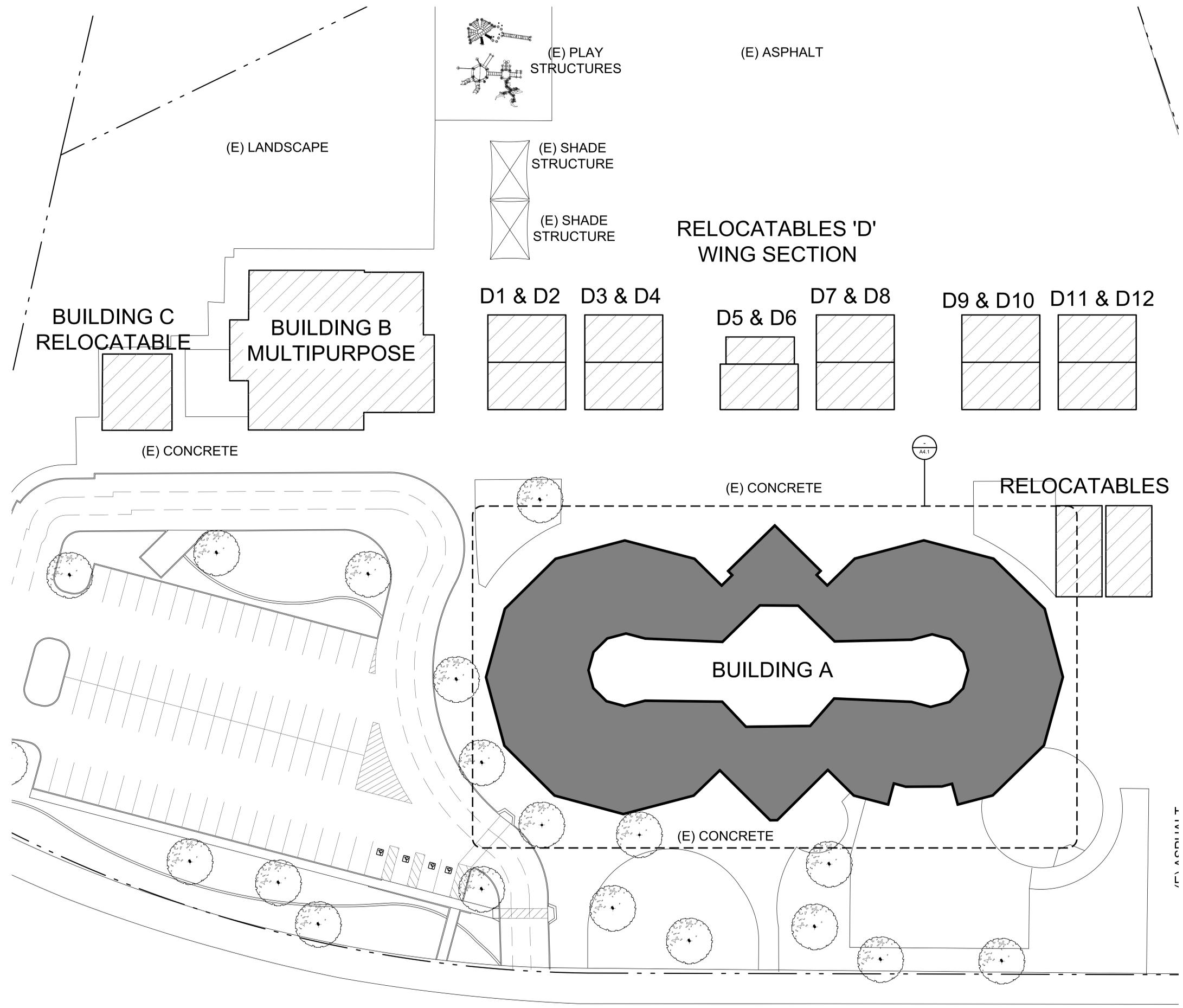
T1

(DSA STAMP AREA)

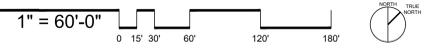


ROOFING AND HVAC REPLACEMENT
FAIRLANDS ELEMENTARY SCHOOL
4151 W. LAS PASITAS BLVD, PLEASANTON, CA. 94588
PLEASANTON UNIFIED SCHOOL DISTRICT

- GENERAL NOTES**
- A. REFER TO MECHANICAL, PLUMBING, ELECTRICAL AND FIRE ALARM DRAWINGS FOR EXTENT OF OTHER RELATED WORK
 - B. CONTRACTOR TO VERIFY PORTABLE BUILDING NUMBERS WITH THE DISTRICT PRIOR TO SIGNAGE.
 - C. CONTRACTOR TO VERIFY ALL BARRIERS IN P.O.T. HAVE BEEN REMOVED.



1 SITE PLAN



SITE PLAN

ROOFING AND HVAC REPLACEMENT
FAIRLANDS ELEMENTARY SCHOOL
4151 W. LAS PASITAS BLVD, PLEASANTON, CA. 94588
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS NO.	ITEM	DATE

DRAWN BY: KNU
CHECKED BY: MB
SFA JOB NO: 21071 DATE: 11/15/2021

A0.2

COPYRIGHT © 2019

(DSA STAMP AREA)



GENERAL NOTES

- A. NOT ALL ROOF APPURTENANCES ARE SHOWN ON DRAWINGS. CONTRACTOR TO FIELD VERIFY QUANTITIES AND LOCATIONS OF ALL DEVICES AND EQUIPMENT. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL SCOPE OF WORK.
- B. CONTRACTOR TO REMOVE AND REINSTALL MECHANICAL UNITS, DUCTWORK AND ALL OTHER ROOF TOP APPURTENANCES AS REQUIRED FOR INSTALLATION OF ROOFING. CONTRACTOR TO REINSTALL AND RECONNECT ALL DEVICES AND RETURN THEM TO WORKING ORDER. CONTRACTOR TO NOTIFY DISTRICT AND ARCHITECT OF ANY DEVICES NOT FUNCTIONING PRIOR TO REMOVAL.
- C. COORDINATE SLEEPER LOCATIONS WITH MECHANICAL, PLUMBING, AND/OR ELECTRICAL AS REQUIRED. SEE DETAIL S/A9.1.
- PM VERIFY THE FOLLOWING:
 - D. PORTIONS OF EXISTING ROOF SYSTEM, INSULATION, FLASHING, ETC. ARE TO BE REMOVED AS NEEDED FOR EXTENTS OF NEW WORK.
 - E. CONTRACTOR TO ASSUME 10% OF EXISTING ROOF DECKING, FASCIA AND RIM JOIST IS DAMAGED AND WILL NEED REPLACEMENT. REPLACEMENT IS TO BE IN KIND, IN LOCATION.

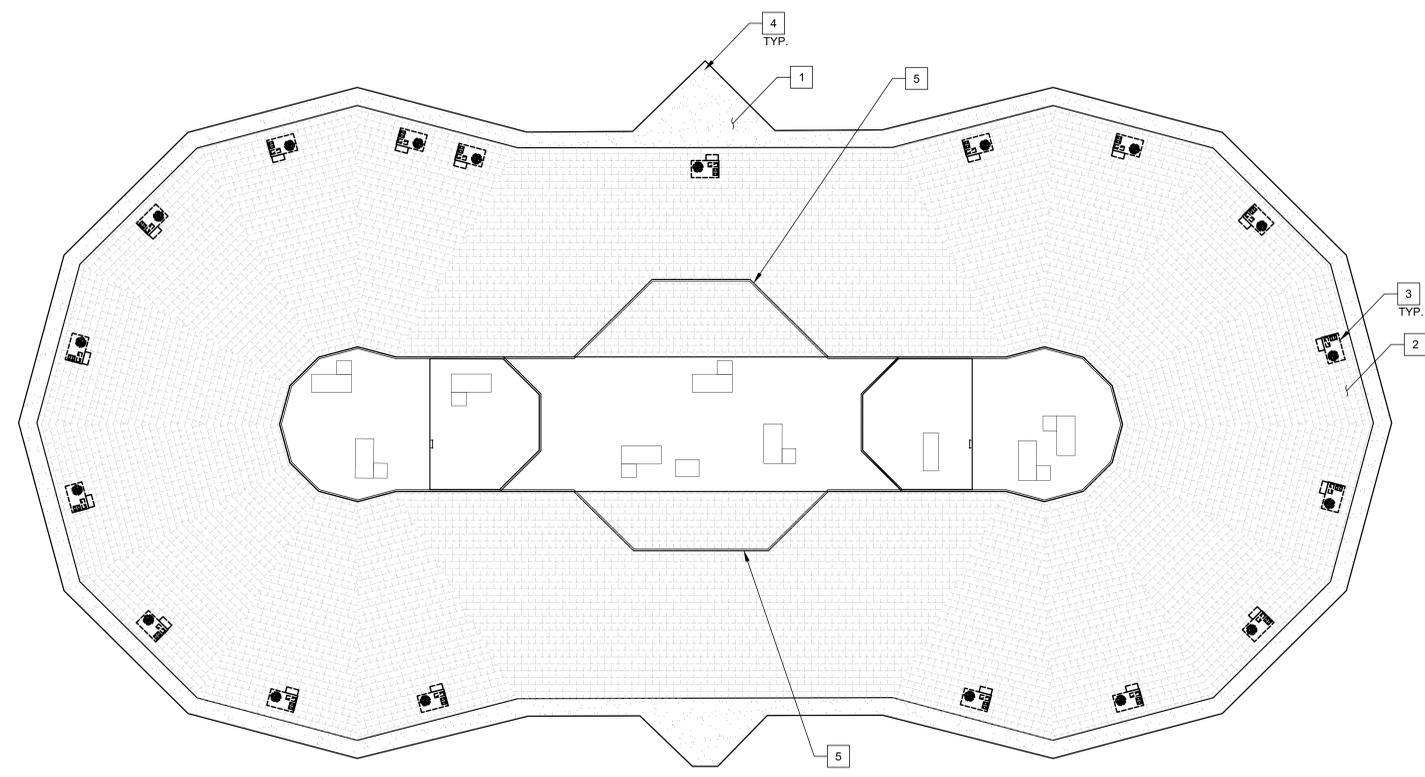
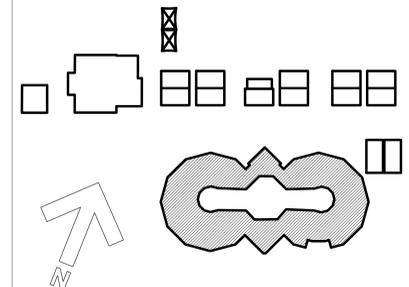
DEMOLITION ROOF PLAN NOTES

1. EXISTING ROOFING SYSTEM TO REMAIN. PREPARE TO RECEIVE NEW TOP LAYER AND COATING.
2. REMOVE EXISTING COMPOSITION ROOFING TO EXPOSED ROOF SHEATHING.
3. EXISTING HVAC UNITS TO BE REMOVED. EXISTING CURB TO BE MODIFIED FOR NEW HVAC UNITS.
4. REMOVE EXISTING ROOF DRAINS. CONTRACTOR RESPONSIBLE TO CLEAR ALL DRAINS OF DEBRIS AND TO ENSURE DRAINS FLOW FREELY.
5. PORTION OF EXISTING ROOF SCREEN MAY NEED TO BE DISASSEMBLED FOR NEW ROOFING SYSTEM AND THEN RE-ASSEMBLED AFTER NEW ROOFING SYSTEMS INSTALL.

GRAPHIC KEY

-  EXISTING ASPHALT SHINGLE ROOFING TO BE REMOVED.
-  EXISTING BUILT-UP ROOF TO RECEIVE NEW TOP LAYER.

BUILDING KEY



1 DEMOLITION ROOF PLAN - BLDG A

1/16" = 1'-0"
0 4' 8' 16' 32' 48'

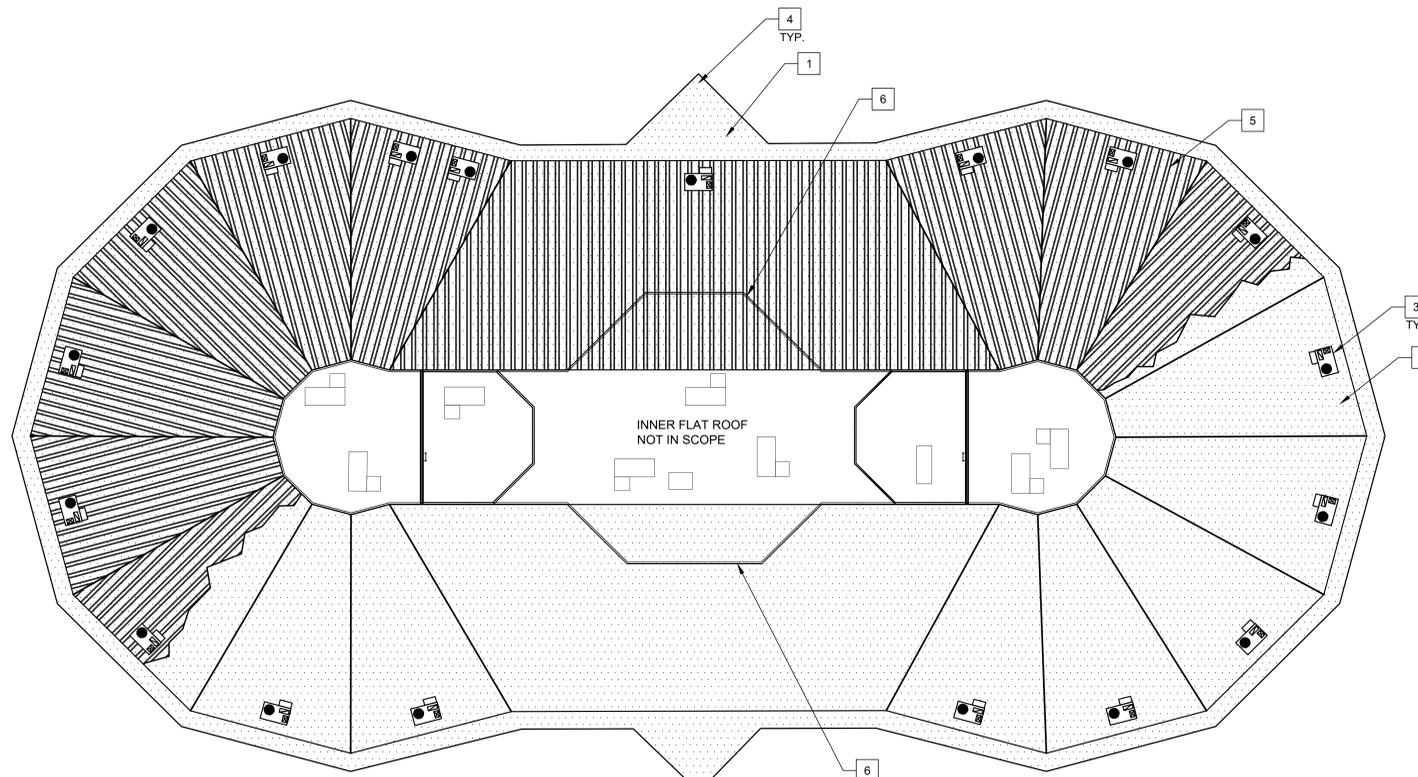


DEMOLITION ROOF PLAN
ROOFING AND HVAC REPLACEMENT
FAIRLANDS ELEMENTARY SCHOOL
 4151 W. LAS PASTAS BLVD, PLEASANTON, CA. 94588
 PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS		
NO.	ITEM	DATE

DRAWN BY: KNU
 CHECKED BY: MB
 SFA JOB NO: 21071
 DATE: 11/15/2021

A4.1



1 NEW ROOF PLANS - BLDG A

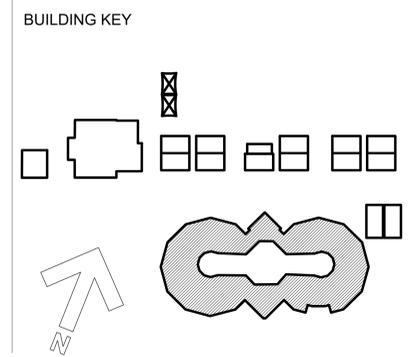
1/16" = 1'-0"



- GENERAL NOTES**
- A. NOT ALL ROOF APPURTENANCES ARE SHOWN ON DRAWINGS. CONTRACTOR TO FIELD VERIFY QUANTITIES AND LOCATIONS OF ALL DEVICES AND EQUIPMENT. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL SCOPE OF WORK.
 - B. CONTRACTOR TO REMOVE AND REINSTALL MECHANICAL UNITS, DUCTWORK AND ALL OTHER ROOF TOP APPURTENANCES AS REQUIRED FOR INSTALLATION OF ROOFING. CONTRACTOR TO REINSTALL AND RECONNECT ALL DEVICES AND RETURN THEM TO WORKING ORDER. CONTRACTOR TO NOTIFY DISTRICT AND ARCHITECT OF ANY DEVICES NOT FUNCTIONING PRIOR TO REMOVAL.
 - C. COORDINATE SLEEPER LOCATIONS WITH MECHANICAL, PLUMBING, AND/OR ELECTRICAL AS REQUIRED. SEE DETAIL S/A9.1
- PM VERIFY THE FOLLOWING:
- D. PORTIONS OF EXISTING ROOF SYSTEM, INSULATION, FLASHING, ETC. ARE TO BE REMOVED AS NEEDED FOR EXTENTS OF NEW WORK.
 - E. CONTRACTOR TO ASSUME 10% OF EXISTING ROOF DECKING, FASCIA AND RIM JOIST IS DAMAGED AND WILL NEED REPLACEMENT. REPLACEMENT IS TO BE IN KIND, IN LOCATION.

- NEW ROOF PLAN NOTES**
1. (N) TOP LAYER AND COATING OVER EXISTING ROOFING SYSTEM.
 2. (N) LIQUID APPLY ROOFING SYSTEM OVER EXPOSED SHEATHING.
 3. (N) HVAC UNITS INSTALLED ON NEW CURBS. SEE DETAIL X/A9.1 AND MECHANICAL DRAWINGS.
 4. NEW ROOF DRAINS. CONTRACTOR RESPONSIBLE TO CLEAR ALL DRAINS OF DEBRIS AND TO ENSURE DRAINS FLOW FREELY.
 5. (N) METAL PANEL ROOFING SYSTEM OVER NEW PREVIOUSLY APPLIED LIQUID ROOFING SYSTEM.
 6. RE-ASSEMBLE ROOF SCREEN IF PREVIOUSLY REMOVED.

- GRAPHIC KEY**
- NEW TOP LAYER AND LIQUID APPLIED ROOFING SYSTEM OVER EXISTING LIQUID APPLIED ROOFING SYSTEM AND EXPOSED ROOF SHEATHING.
 - NEW METAL PANEL OVER NEW LIQUID APPLY ROOF SYSTEM.



(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
ARCHITECTURE INTERIORS PLANNING

2105 SOUTH BASCOM AVE
SUITE 203
CAMPBELL, CA 95008
PHONE: 408-879-6500
FAX: 408-377-6595



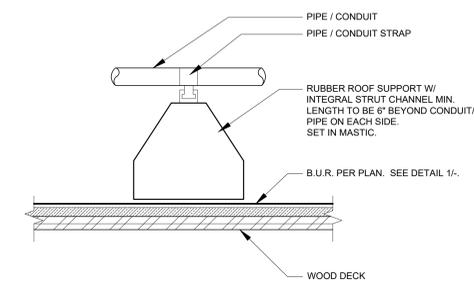
NEW ROOF PLAN

ROOFING AND HVAC REPLACEMENT
FAIRLANDS ELEMENTARY SCHOOL
4151 W. LAS PASTAS BLVD, PLEASANTON, CA. 94588
PLEASANTON UNIFIED SCHOOL DISTRICT

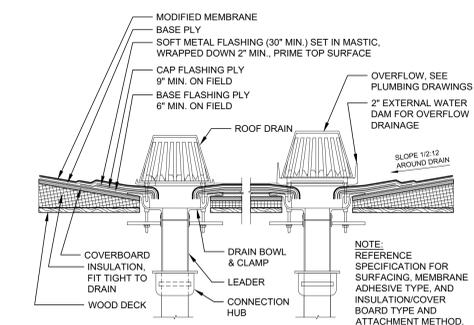
REVISIONS NO.	ITEM	DATE

DRAWN BY: KNU
CHECKED BY: MB
SFA JOB NO: 21071
DATE: 11/15/2021

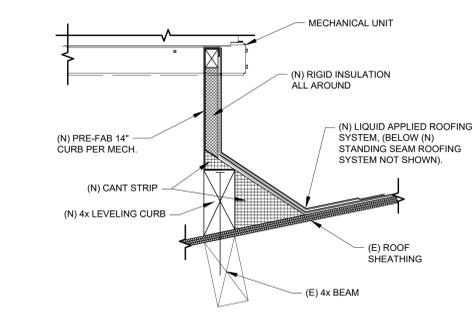
A4.2



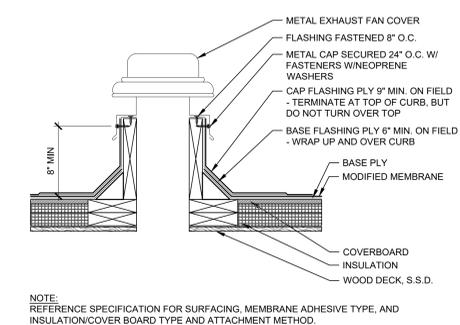
4 FLOATING SLEEPER
3"=1'-0"



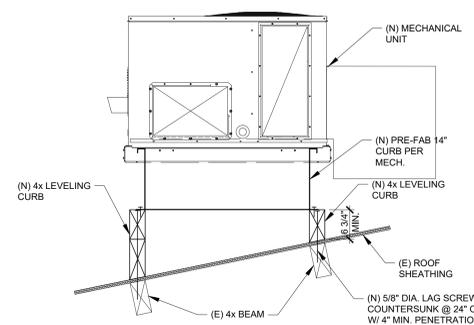
3 ROOF DRAIN AND OVERFLOW
1-1/2"=1'-0"



2 AC UNIT FLASHING
1-1/2"=1'-0"



5 FLASHING DETAIL @ EXHAUST FAN
1-1/2"=1'-0"



1 MECHANICAL LEVELING CURB @ SLOPE ROOF - 2.5 : 12
3/4"=1'-0"

12

8

11

7

10

6

9

5

1

(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
ARCHITECTURE INTERIORS PLANNING

2155 SOUTH BASCOM AVE.
SUITE 209
CAMPBELL, CA 95003
PHONE: 408-878-6009
FAX: 408-277-6959

REGISTERED ARCHITECT
MARK C FINNEY
NO. C-24673
9-30-29
STATE OF CALIFORNIA

TYPICAL DETAILS

**ROOFING AND HVAC REPLACEMENT
FAIRLANDS ELEMENTARY SCHOOL
4151 W. LAS PASTAS BLVD, PLEASANTON, CA. 94588
PLEASANTON UNIFIED SCHOOL DISTRICT**

REVISIONS NO.	ITEM	DATE

DRAWN BY: KNU
CHECKED BY: MB
SFA JOB NO: 21071 DATE: 11/15/2021

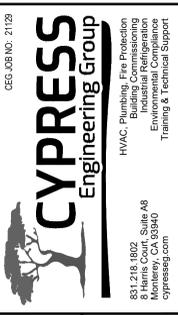
A9.1

		ABBREVIATIONS		LIST OF GOVERNING CODES	
&	AND	EQ	EQUAL	OD	OUTSIDE DIAMETER
°F	DEGREES FAHRENHEIT	EQIP	EQUIPMENT	PD	PRESSURE DROP
AAV	AUTOMATIC AIR VENT	ESP	EXTERNAL STATIC PRESSURE	PH	PHASE
AC	AIR CONDITIONER	EW	ENTERING WATER	PLF	POUNDS PER LINEAR FOOT
AD	ACCESS DOOR	EWB	ENTERING WET BULB	POC	POINT OF CONNECTION
AF	ABOVE FINISH FLOOR	EWV	ENTERING WATER TEMPERATURE	PRV	PRESSURE REDUCING VALVE
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY	EXT	EXTERIOR	PSI (G)	(G) POUNDS PER SQUARE INCH (GAUGE)
AL	ACOUSTICALLY LINED	FD	FLOOR DRAIN	(ABSOLUTE)	
AMP	AMPERE	FPE	FINISHED FLOOR ELEVATION	PIT	PRESSURE/TEMPERATURE
AP	ACCESS PANEL	FLA	FULL LOAD AMPS	QTY	QUANTITY
APPROX	APPROXIMATE	FLEX	FLEXIBLE	RA	RETURN AIR
ARCH	ARCHITECT/ARCHITECTURAL	FS	FEET PER MINUTE	RAD	RETURN AIR DAMPER
BDD	BACK DRAFT DAMPER	FS	FLOOR SINK	RH	RELATIVE HUMIDITY
BFP	BACK FLOW PREVENTER	FT	FEET	RL	REFRIGERANT LIQUID
BHP	BRAKE HORSEPOWER	FT HD	FEET HEAD	RM	ROOM
BLDG	BUILDING	FTR	FLUTE THRU ROOF	RPM	REVOLUTIONS PER MINUTE
BOD	BOTTOM OF DUCT	GAL	GALLON	RS	REFRIGERANT SUCTION
BOP	BOTTOM OF PIPE	GAL	GALLON	SA	SUPPLY AIR
BTU	BRITISH THERMAL UNIT	GPM	GALLONS PER MINUTE	SC	SENSIBLE COOLING
BTUH	BRITISH THERMAL UNITS PER HOUR	HP	HORSEPOWER	SEER	SEASONAL ENERGY EFFICIENCY RATIO
BTWN	BETWEEN	HTG	HEATING	SD	SMOKE DAMPER
CA	COMBUSTION AIR	HZ	HERTZ	SM	SHEET METAL
CFH	CUBIC FEET PER HOUR	IE	INVERT ELEVATION	SOV	SHUT-OFF VALVE
CFM	CUBIC FEET PER MINUTE	IN	INCH	SP	STATIC PRESSURE
CHWR	CHILLED WATER RETURN	IN	INCH	SP	SPECIFICATION
CHWS	CHILLED WATER SUPPLY	INV	INVERT	SQ	SQUARE
CIRC	CIRCULATING	KW	KILOWATTS	SQFT	SQFT SQUARE FEET
CL	CENTERLINE	KWH	KILOWATT HOUR	SQIN, IN'	SQ INCHES
CLG	COOLING CEILING	LAT	LEAVING AIR TEMPERATURE	STRUCT	STRUCTURAL
CLR	CLEAR	LBS	POUNDS	T	THERMOSTAT, "X" INDICATES DEVICE CONTROLLED, "48" AFF (TO TOP OF STAT)
CONC	CONCRETE	LVR	LOUVER	TC	TOTAL COOLING
CONN	CONNECTION	LWT	LEAVING WATER TEMPERATURE	TDH	TOTAL DYNAMIC HEAD
CONT	CONTINUED, CONTINUATION	LWB	LEAVING WET BULB	TEMP	TEMPERATURE
COOL	COOLING	MAD, MD	MANUAL AIR DAMPER	THRU	THROUGH
COP	COEFFICIENT OF PERFORMANCE	MAV	MANUAL AIR VENT	TSP	TOTAL STATIC PRESSURE
DB	DRY BULB	MBH	1000 BTU PER HOUR	TV	TURNING VANES
DF	DRINKING FOUNTAIN	MCA	MINIMUM CIRCUIT AMPS	TYP	TYPICAL
DL	DOOR LOUVER	MCP	MECHANICAL CONTROL PANEL	UL	UNDERWRITERS LABORATORIES
DN	DOWN	MECH	MECHANICAL	UCN	UNLESS OTHERWISE NOTED
DP	DIFFERENTIAL PRESSURE	MFR	MANUFACTURER	V	VOLT
DWGS	DRAWINGS	MIN	MINIMUM	VFD	VARIABLE FREQUENCY DRIVE
(E)	EXISTING	MOOP	MAXIMUM OVERCURRENT PROTECTION	W	WATTS
EA	EXHAUST AIR	(N)	NEW	WB	WET BULB
EAD	EXHAUST AIR DAMPER	NC	NORMALLY CLOSED	WC	WATER COLUMN
EAT	ENTERING AIR TEMPERATURE	NC	NORMALLY CLOSED	WH	WATER HEATER
EDB	ENTERING DRY BULB	NO	NORMALLY OPEN	WT	WEIGHT
EER	ENERGY EFFICIENCY RATIO	NTS	NOT TO SCALE		
EFF	EFFICIENCY	OA	OUTSIDE AIR		
ELEC	ELECTRICAL	OAD	OUTSIDE AIR DAMPER		
ELEV	ELEVATION	OC	ON CENTER		
ENT	ENTERING				

DSA GENERAL NOTES		SYMBOL LEGEND		GENERAL NOTES	
<p>1. THE INTENT OF THE CONTRACT DOCUMENTS IS TO MODERNIZE THE SCHOOL'S CAMPUS. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS, A CONSTRUCTION CHANGE DOCUMENT DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK.</p> <p>2. THE SEISMIC SUPPORT AND ANCHORAGE OF THE EQUIPMENT DESCRIBED ON THESE DRAWINGS HAVE BEEN ENGINEERED BY THE ENGINEER OF RECORD FOR CONFORMANCE WITH APPROPRIATE BUILDING CODES. THE ENGINEER OF RECORD WAS NOT RESPONSIBLE FOR THE EQUIPMENT DESIGN.</p> <p>3. ALL MECHANICAL AND PLUMBING EQUIPMENT SHALL BE BRACED OR ANCHORED TO RESIST A HORIZONTAL FORCE ACTING IN ANY DIRECTION USING THE CRITERIA FROM CHAPTER 16A CALIFORNIA BUILDING CODE (CBC) 2019.</p> <p>4. WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER AND THE FIELD REPRESENTATIVE OF THE DIVISION OF THE STATE ARCHITECT.</p> <p>5. NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING THE DEMOLITION WORK HAVE BEEN APPROVED BY DSA.</p>		<p>SINGLE LINE SYMBOL</p>  <p>LONG 90° ELBOW - RECTANGULAR, ROUND OR OVAL</p>  <p>45° ELBOW - RECTANGULAR, ROUND OR OVAL</p>  <p>30° ELBOW - RECTANGULAR, ROUND OR OVAL</p>  <p>90° ELBOW - RECTANGULAR DUCT WITH TURNING VANES</p>  <p>45° LATERAL - ROUND TO ROUND OR OVAL TO OVAL</p>  <p>90° TAKEOFF WITH 45° TAPER - RECTANGULAR TO RECTANGULAR (FOR BRANCH TAKEOFF LONGER THAN 50'-0", USE 15)</p>  <p>90° TAKEOFF WITH 45° ELONGATED TEE - ROUND TO ROUND</p>  <p>Y BRANCH - ROUND OR OVAL DUCT</p>  <p>90° RADIUS SPLIT - RECTANGULAR DUCT, PROVIDE SPLITTER DAMPER, XY PROPORTIONAL SPLIT</p>  <p>90° RECTANGULAR SPLIT - RECTANGULAR DUCT, PROVIDE SPLITTER DAMPER, XY PROPORTIONAL SPLIT</p>  <p>TRANSITION - RECTANGULAR TO ROUND OR RECTANGULAR TO OVAL</p>  <p>FLEXIBLE DUCT - ROUND</p>  <p>FLEXIBLE DUCT - RECTANGULAR</p> <p>DOUBLE LINE SYMBOL</p>  <p>SECTION AT SUPPLY AIR OR MAKE-UP AIR DUCT UP</p>  <p>SECTION AT RETURN AIR OR COMBUSTION AIR DUCT UP</p>  <p>SECTION AT EXHAUST AIR OR RELIEF AIR DUCT UP</p>  <p>SUPPLY AIR DUCT DOWN</p>  <p>RETURN AIR DUCT DOWN</p>  <p>EXHAUST AIR DUCT DOWN</p>  <p>ROUND DUCT UP - SUPPLY, RETURN OR EXHAUST</p>  <p>ROUND DUCT DOWN - SUPPLY, RETURN OR EXHAUST</p>  <p>CEILING DIFFUSER - ONE, TWO, THREE AND FOUR WAY THROW</p>  <p>CEILING - RETURN AND EXHAUST REGISTERS</p>  <p>SIDEWALL - SUPPLY DIFFUSER, RETURN AND EXHAUST REGISTERS</p>  <p>MANUAL BALANCE DAMPER WITH DUCT ACCESS DOOR</p>  <p>MOTORIZED BALANCE DAMPER WITH DUCT ACCESS DOOR</p>  <p>FIRE DAMPER WITH DUCT ACCESS DOOR</p>  <p>FIRE/SMOKE DAMPER WITH DUCT ACCESS DOOR</p>  <p>ACOUSTICALLY LINED DUCT. DIMENSIONS ARE INSIDE</p>  <p>REGISTER NECK SIZE AND TAG DESIGN CFM</p> <p>PANEL AT T-BAR CEILING</p>		<p>1. CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMISSION OF FINAL BID TO VERIFY ALL EXISTING SITE CONDITIONS WHICH MAY AFFECT THE COMPLETION OF THE INSTALLATION. ALL METHODS AND REQUIREMENTS FOR INSTALLATION SHALL BE DETERMINED PRIOR TO BID DATE. CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF RECORD OF ANY REQUIRED MODIFICATIONS WHICH ARE NOT REFERENCED ON THESE PLANS PRIOR TO SUBMITTING BID. SUBMITTAL OF THE CONTRACTOR'S BID DEMONSTRATES THE CONTRACTOR'S AWARENESS OF ALL SITE CONDITIONS AND REQUIRED WORK TO BE PERFORMED.</p> <p>2. CONTRACTOR SHALL INCLUDE AND PROVIDE IN BID ALL LABOR AND MATERIALS NECESSARY FOR A COMPLETE AND OPERATIONAL INSTALLATION OF ALL SYSTEMS.</p> <p>3. THE DRAWINGS INCLUDED IN THIS SET ARE DIAGRAMMATIC. THEY ARE REPRESENTATIVE OF THE ENGINEER OF RECORD'S DESIGN INTENT FOR ALL EQUIPMENT AND RELATED PIPING ETC. INDIVIDUAL POWER NEEDS, CONTROLS AND OTHER CONNECTIONS SHALL BE COORDINATED AND COMPLETED/ PROVIDED FOR COMPLETE SYSTEM OPERATION BY CONTRACTOR.</p> <p>4. EQUIPMENT LOCATIONS AND PIPE ROUTING ARE NOT PRECISE AND SHALL BE COORDINATED, VERIFIED, AND DETERMINED IN THE FIELD. CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND ROUTE PIPING IN LOCATIONS WHICH MEET CODE REQUIREMENTS AND DO NOT INTERFERE WITH ANY BUILDING STRUCTURES, UTILITIES, OR OTHER TRADE EQUIPMENT.</p> <p>5. (E) DUCTWORK AND ITEMS TO BE REMOVED ARE SHOWN HATCHED. SEE LEGEND. COORDINATE CLOSELY WITH (N) DUCTWORK AND P.O.C.'S SHOWN. ALL OTHER (E) DUCTWORK, ETC. TO REMAIN.</p> <p>6. ALL EQUIPMENT, EQUIPMENT CONNECTIONS, PIPING, MOUNTING LOCATIONS ETC. ARE TO BE VERIFIED WITH OWNER'S REPRESENTATIVE AND EQUIPMENT SUPPLIER PRIOR TO BEGINNING OF THE ROUGH-IN.</p> <p>7. ALL WORK SHALL BE PERFORMED TO STATE, LOCAL, NATIONAL AND DISTRICT STANDARDS AND CODES. COORDINATE SPECIFIC REQUIREMENTS WITH DISTRICT STANDARDS AND AUTHORITY HAVING JURISDICTION.</p> <p>8. ALL EQUIPMENT SHALL BE NEW AND CLEARLY LABELED AND IDENTIFIED. LABELS SHALL NOT BE COVERED BY OTHER CONSTRUCTION ELEMENTS.</p> <p>9. UNLESS OTHERWISE NOTED IN CONTRACT DOCUMENTS, CONTRACTOR SHALL GUARANTEE ALL EQUIPMENT AND WORK FOR A PERIOD OF ONE YEAR.</p> <p>6. UNLESS OTHERWISE NOTED OR REFERENCED ON THE DRAWINGS, EVERYTHING IS NEW.</p> <p>7. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED SAW CUTTING, CORE DRILLING, PATCHING, REFINISHING, ETC. AS REQUIRED FOR INSTALLATION OF SYSTEMS. ANY PENETRATIONS OR OPENINGS MADE IN WALLS OR STRUCTURES SHALL BE PATCHED AND/OR SEALED AS REQUIRED TO MAINTAIN THE INTEGRITY OF THE WALL OR STRUCTURE.</p> <p>8. CONTRACTOR IS RESPONSIBLE FOR COMPLETING ALL FINAL CONNECTIONS TO OWNER FURNISHED EQUIPMENT AND SHALL INCLUDE THE PRICE OF INSTALLING ALL CONNECTIONS AS REQUIRED IN THEIR BIDS.</p> <p>9. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE APPROVAL OF THE ENGINEER OF RECORD. ALL APPROVALS BY THE ENGINEER OF RECORD MUST BE SECURED PRIOR TO COMPLETION OF ANY PURCHASE ORDERS OR ROUGH-IN WORK.</p> <p>10. THESE DRAWINGS AND ASSOCIATED SPECIFICATIONS ARE TO BE CONSIDERED CONTRACT DOCUMENTS FOR AGENCY REVIEW APPROVAL AND CONTRACTOR BIDDING PURPOSES.</p> <p>11. AT THE COMPLETION OF THE PROJECT THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A COMPLETE SET OF AS-BUILT DRAWINGS.</p> <p>12. ANY AND ALL WORK THAT REQUIRES AN INTERRUPTION TO BUILDING SERVICE(S) (ELECTRICAL/HVAC/PLUMBING ETC.) MUST BE COORDINATED WITH THE DISTRICT A MINIMUM OF 48 HOURS IN ADVANCE. ANY SERVICE DOWNTIME SHALL NOT OCCUR DURING SCHOOL OPERATION HOURS.</p> <p>13. IN INSTANCES WHERE A CONFLICT BETWEEN THE DRAWINGS AND THE SPECIFICATIONS AND INSTALLATION MANUALS FOR THE PROJECT EXISTS, THE CONTRACTOR SHALL ADHERE TO THE MORE STRINGENT REQUIREMENT.</p> <p>14. ANY EXISTING BUILDING STRUCTURES OR SURFACES DAMAGED BY DEMOLITION OR DURING INSTALLATION ACTIVITIES SHALL BE REPAIRED, PATCHED, AND/OR REFINISHED TO THE SATISFACTION OF THE OWNER.</p> <p>15. FURNISH AND INSTALL MANUAL AIR DAMPERS AT ALL DUCT BRANCH TAKEOFFS TO A SINGLE SUPPLY DIFFUSER.</p> <p>16. FOR ALL VOLUME DAMPERS LOCATED ABOVE CEILINGS, PROVIDE 12" LONG 1/2" WIDE FLUORESCENT ORANGE TAPE TO MARK DAMPER LOCATIONS.</p> <p>17. ALL DUCTWORK, CONDUITS, BOXES, SURFACE MOUNTED RACEWAYS, SUPPORT DEVICES, AND ASSOCIATED FITTINGS SHALL BE MOUNTED IN CONCEALED LOCATIONS ABOVE CEILINGS, DUCTS, TRUSSES, BEAMS, ETC. WHERE WORK HAS TO BE INSTALLED IN EXPOSED LOCATIONS, IT SHALL BE PAINTED TO MATCH THE ADJACENT SURFACES OR PER ARCHITECT'S DIRECTION.</p> <p>18. CONTRACTOR SHALL PREPARE AND SUBMIT THE CALIFORNIA ENERGY COMMISSION TITLE 24 CERTIFICATE OF ACCEPTANCE FORMS RELATED TO INSTALLED EQUIPMENT AND SYSTEMS.</p> <p>19. SAFETY: IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.</p> <p>20. CONTRACTOR'S EQUIPMENT, COORDINATE WITH OWNER'S REPRESENTATIVE FOR APPROVED LOCATION OF JOB SITE ACCESS, PARKING, AND LOCATION OF CONTRACTOR'S EQUIPMENT AND MATERIAL STORAGE AREA. COORDINATE WITH OWNER FOR LOCATION AND PROCEDURES.</p> <p>21. ALL BUILDING MATERIALS MUST BE ASBESTOS FREE.</p> <p>22. CONSTRUCTION SCHEDULING: CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION OPERATIONS WITH OWNER'S REPRESENTATIVE PRIOR TO SCHEDULING AND START OF THE WORK. CONTRACTOR SHALL PROVIDE PROTECTION TO ALL EXISTING SPACES AND SYSTEMS WHICH ARE IN USE, ADJOINING THE PROJECT, AND NOT PART OF THE PROJECT.</p> <p>23. TITLE 24 COMPLIANCE: THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK IS TO BE IN ACCORDANCE WITH TITLE 24 CALIFORNIA CODE OF REGULATIONS (2019 CBC). SHOULD ANY CONDITIONS BE DISCOVERED NOT COVERED BY THE CONTRACT DOCUMENTS WHERE IN THE FINISHED WORK DOES NOT COMPLY WITH 2019 CBC, A CONSTRUCTION CHANGE DOCUMENT OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK, SHALL BE SUBMITTED TO AND APPROVED BY THE DSA BEFORE PROCEEDING WITH THE WORK.</p>	

MEP COMPONENT ANCHORAGE NOTE		DRAWING INDEX	
<p>ALL MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC, SECTIONS 1617A.1.16 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTER 13, 26 AND 30.</p> <p>1. ALL PERMANENT EQUIPMENT AND COMPONENTS.</p> <p>2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.</p> <p>3. TEMPORARY, MOVABLE, OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.</p> <p>THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCED NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS.</p> <p>A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.</p> <p>B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.</p> <p>THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL, AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.</p>		<p>SINGLE LINE SYMBOL</p> <p>CONT CONTINUATION</p> <p>UNION UNION</p> <p>LINE BREAK LINE BREAK</p> <p>CKV CHECK VALVE</p> <p>T&PRV TEMP. & PRESS. RELIEF VALVE</p> <p>VALVE VALVE</p> <p>CONCENTRIC & ECCENTRIC REDUCERS CONCENTRIC & ECCENTRIC REDUCERS</p> <p>AD, AP ACCESS DOOR, ACCESS PANEL</p> <p>MAV MANUAL AIR VENT</p> <p>T THERMOSTAT MOUNTED @ 48" AFF. MAX.</p> <p>CO2 CARBON DIOXIDE (CO2) SENSOR</p> <p>DOUBLE LINE SYMBOL</p> <p>P.O.C. POINT OF CONNECTION</p> <p>REMOVE EXISTING REMOVE EXISTING</p> <p>TEE DOWN TEE DOWN</p> <p>90 DOWN 90 DOWN</p> <p>EQUIPMENT DESIGNATION EQUIPMENT DESIGNATION</p> <p>TAG NUMBER TAG NUMBER</p> <p>SECTION 1 SHEET M2.1</p>	

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE		DRAWING INDEX	
<p>PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8, AND 2019 CBC, SECTIONS 1617A.1.24, 1617A.1.25, AND 1617A.1.26.</p> <p>THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PRE-APPROVED INSTALLATION GUIDE (E.G., OSHPD OPM FOR 2013 BC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOB SITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGING AND BRACE LOADS.</p> <p>MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):</p> <p>MP [] MD [] PP [] E [] - OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.</p> <p>MP [X] MD [X] PP [X] E [X] - OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVED (OPM #) #0295-13, "UNISTRUT" OR #0052-13, "B-LINE/TOLCO"</p>		<p>MP0.1 SYMBOL LEGENDS, ABBREVIATIONS, NOTES - MECHANICAL & PLUMBING</p> <p>MP0.2 SCHEDULES & DETAILS - MECHANICAL & PLUMBING</p> <p>MP1.1 DEMOLITION ROOF PLAN - BUILDING A - WEST - MECHANICAL & PLUMBING</p> <p>MP1.2 DEMOLITION ROOF PLAN - BUILDING A - EAST - MECHANICAL & PLUMBING</p> <p>MP2.1 NEW ROOF PLAN - BUILDING A - WEST - MECHANICAL & PLUMBING</p> <p>MP2.2 NEW ROOF PLAN - BUILDING A - EAST - MECHANICAL & PLUMBING</p> <p>MP3.1 BUILDING A - WEST - MECHANICAL / TAB WORK</p> <p>MP3.2 BUILDING A - EAST - MECHANICAL / TAB WORK</p> <p>MP4.1 TITLE 24 DOCUMENTS - MECHANICAL</p> <p>MP4.2 TITLE 24 DOCUMENTS - MECHANICAL</p>	



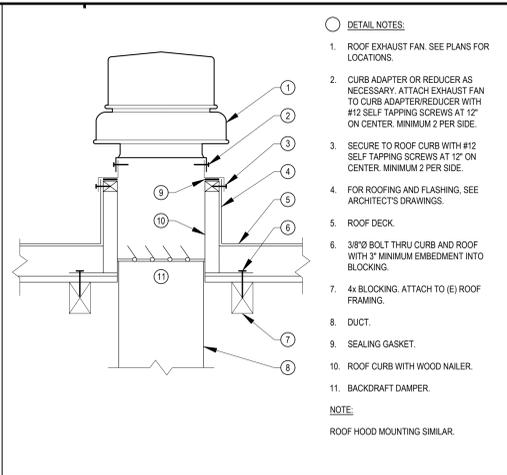
SYMBOL LEGENDS, ABBREVIATIONS, NOTES - MECHANICAL & PLUMBING

ROOFING AND HVAC REPLACEMENT FAIRLANDS ELEMENTARY SCHOOL
 4151 W. LAS PASITAS BLVD, PLEASANTON, CA. 94588
 PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS NO.	ITEM	DATE

DRAWN BY: CAD
 CHECKED BY: CS
 SFA JOB NO.: DATE:
 21071 11/05/2021

MP0.1



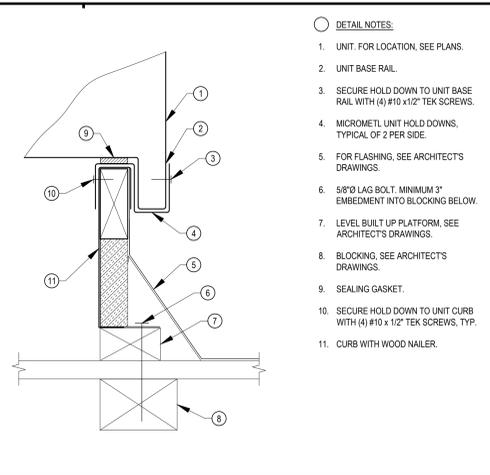
DETAIL NOTES:

1. ROOF EXHAUST FAN. SEE PLANS FOR LOCATIONS.
2. CURB ADAPTER OR REDUCER AS NECESSARY. ATTACH EXHAUST FAN TO CURB ADAPTER/REDUCER WITH #12 SELF TAPPING SCREWS AT 12" ON CENTER. MINIMUM 2 PER SIDE.
3. SECURE TO ROOF CURB WITH #12 SELF TAPPING SCREWS AT 12" ON CENTER. MINIMUM 2 PER SIDE.
4. FOR ROOFING AND FLASHING, SEE ARCHITECT'S DRAWINGS.
5. ROOF DECK.
6. 3/8" Ø BOLT THRU CURB AND ROOF WITH 3" MINIMUM EMBEDMENT INTO BLOCKING.
7. 4x BLOCKING ATTACH TO (E) ROOF FRAMING.
8. DUCT.
9. SEALING GASKET.
10. ROOF CURB WITH WOOD NAILER.
11. BACKDRAFT DAMPER.

NOTE:

ROOF HOOD MOUNTING SIMILAR.

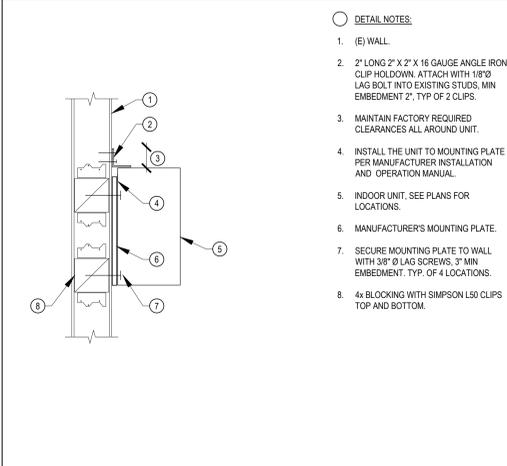
4 ROOF MOUNTED FAN N.T.S.



DETAIL NOTES:

1. UNIT. FOR LOCATION, SEE PLANS.
2. UNIT BASE RAIL.
3. SECURE HOLD DOWN TO UNIT BASE RAIL WITH (4) #10 x 1/2" TEK SCREWS.
4. MICROMETL UNIT HOLD DOWNS, TYPICAL OF 2 PER SIDE.
5. FOR FLASHING, SEE ARCHITECT'S DRAWINGS.
6. 5/8" Ø LAG BOLT. MINIMUM 3" EMBEDMENT INTO BLOCKING BELOW.
7. LEVEL BUILT UP PLATFORM. SEE ARCHITECT'S DRAWINGS.
8. BLOCKING. SEE ARCHITECT'S DRAWINGS.
9. SEALING GASKET.
10. SECURE HOLD DOWN TO UNIT CURB WITH (4) #10 x 1/2" TEK SCREWS, TYP.
11. CURB WITH WOOD NAILER.

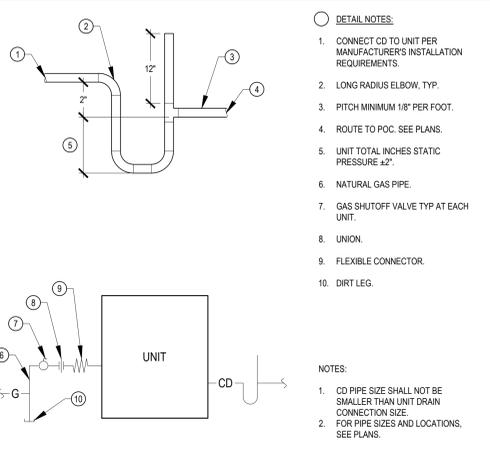
1 ROOFTOP AIR CONDITIONER MOUNTING ON NEW CURB N.T.S.



DETAIL NOTES:

1. (E) WALL.
2. 2" LONG 2" X 2" X 16 GAUGE ANGLE IRON CLIP. HOLD DOWN ATTACH WITH 1/8" Ø LAG BOLT INTO EXISTING STUDS. MIN EMBEDMENT 2". TYP OF 2 CLIPS.
3. MAINTAIN FACTORY REQUIRED CLEARANCES ALL AROUND UNIT.
4. INSTALL THE UNIT TO MOUNTING PLATE PER MANUFACTURER INSTALLATION AND OPERATION MANUAL.
5. INDOOR UNIT. SEE PLANS FOR LOCATIONS.
6. MANUFACTURER'S MOUNTING PLATE.
7. SECURE MOUNTING PLATE TO WALL WITH 3/8" Ø LAG SCREWS. 3" MIN EMBEDMENT. TYP. OF 4 LOCATIONS.
8. 4x BLOCKING WITH SIMPSON L50 CLIPS TOP AND BOTTOM.

5 SPLIT SYSTEM FAN COIL MOUNTING N.T.S.



DETAIL NOTES:

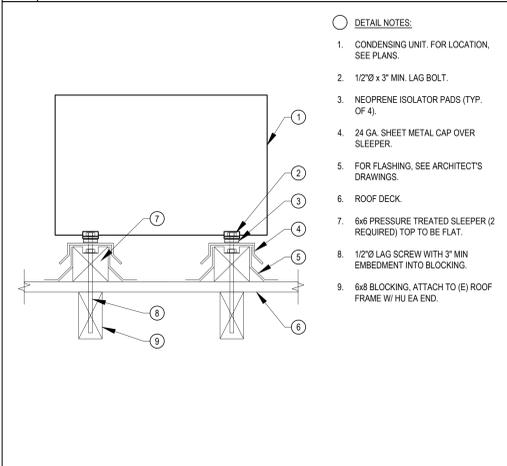
1. CONNECT CD TO UNIT PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
2. LONG RADIUS ELBOW, TYP.
3. PITCH MINIMUM 1/8" PER FOOT.
4. ROUTE TO POC. SEE PLANS.
5. UNIT TOTAL INCHES STATIC PRESSURE ±2".
6. NATURAL GAS PIPE.
7. GAS SHUTOFF VALVE TYP AT EACH UNIT.
8. UNION.
9. FLEXIBLE CONNECTOR.
10. DIRT LEG.

NOTES:

1. CD PIPE SIZE SHALL NOT BE SMALLER THAN UNIT DRAIN CONNECTION SIZE.
2. FOR PIPE SIZES AND LOCATIONS, SEE PLANS.

6 SPLIT SYSTEM HEAT PUMP/CONDENSING UNIT MOUNTING ON SLEEPER N.T.S.

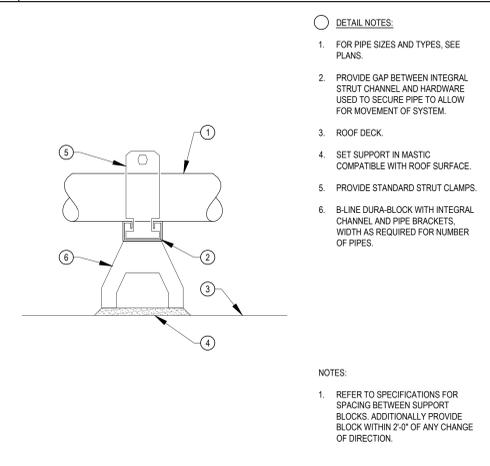
3 PIPE SUPPORT ON ROOF N.T.S.



DETAIL NOTES:

1. CONDENSING UNIT. FOR LOCATION, SEE PLANS.
2. 1/2" Ø x 3" MIN. LAG BOLT.
3. NEOPRENE ISOLATOR PADS (TYP. OF 4).
4. 24 GA. SHEET METAL CAP OVER SLEEPER.
5. FOR FLASHING, SEE ARCHITECT'S DRAWINGS.
6. ROOF DECK.
7. 6#6 PRESSURE TREATED SLEEPER (2 REQUIRED) TOP TO BE FLAT.
8. 1/2" Ø LAG SCREW WITH 3" MIN EMBEDMENT INTO BLOCKING.
9. 6#8 BLOCKING ATTACH TO (E) ROOF FRAME WITH EA END.

6 SPLIT SYSTEM HEAT PUMP/CONDENSING UNIT MOUNTING ON SLEEPER N.T.S.



DETAIL NOTES:

1. FOR PIPE SIZES AND TYPES, SEE PLANS.
2. PROVIDE GAP BETWEEN INTEGRAL STRUT CHANNEL AND HARDWARE USED TO SECURE PIPE TO ALLOW FOR MOVEMENT OF SYSTEM.
3. ROOF DECK.
4. SET SUPPORT IN MASTIC COMPATIBLE WITH ROOF SURFACE.
5. PROVIDE STANDARD STRUT CLAMPS.
6. BLUNE DURA-BLOCK WITH INTEGRAL CHANNEL AND PIPE BRACKETS. WIDTH AS REQUIRED FOR NUMBER OF PIPES.

NOTES:

1. REFER TO SPECIFICATIONS FOR SPACING BETWEEN SUPPORT BLOCKS. ADDITIONALLY PROVIDE BLOCK WITHIN 2" OF ANY CHANGE OF DIRECTION.

6 SPLIT SYSTEM HEAT PUMP/CONDENSING UNIT MOUNTING ON SLEEPER N.T.S.

3 PIPE SUPPORT ON ROOF N.T.S.

(E) SITE PELICAN WIRELESS GATEWAY SHALL BE USED. CONTRACTOR SHALL PROVIDE ADDITIONAL REPEATERS IF NEEDED FOR CONNECTIVITY.

(E) PELICAN WIRELESS THERMOSTATS SHALL BE RE-USED AND WIRED TO NEW UNITS.

CONTRACTOR SHALL PROVIDE PELICAN WIRELESS SUPPLY AIR TEMPERATURE SENSOR AT ALL UNITS.

ROOFTOP PACKAGED UNITS:

1. EACH UNIT SHALL BE CONTROLLED BY PELICAN WIRELESS THERMOSTAT. COORDINATE WITH DISTRICT REPRESENTATIVE FOR NETWORK SETTINGS, OCCUPANCY SCHEDULES, SETPOINTS, SETBACK, ETC.
2. PELICAN WIRELESS THERMOSTAT SHALL BE CONNECTED TO NEW WIRELESS GATEWAY ON CAMPUS. COORDINATE WITH DISTRICT REPRESENTATIVE FOR IP ADDRESS AND NETWORK SETTINGS.
3. UNIT SHALL OPERATE UNDER ITS OWN INTERNAL SEQUENCE TO PROVIDE HEATING OR COOLING BASED ON ROOM SETPOINT.
4. PELICAN WIRELESS PEARL ECONOMIZER CONTROLLER SHALL MODULATE OUTSIDE AIR DAMPER TO PROVIDE FREE COOLING WHEN OUTSIDE AIR IS BELOW 75°F (HIGH TEMPERATURE LIMIT) AND OUTSIDE AIR TEMP IS 2°F BELOW ROOM TEMPERATURE (MINIMUM TEMPERATURE DIFFERENTIAL).
5. PELICAN WIRELESS PEARL ECONOMIZER CONTROLLER SHALL MODULATE OUTSIDE AIR DAMPER OPEN IF ROOM CO2 LEVEL RISES ABOVE 1000 PPM.
6. UNIT SHALL OPERATE CONTINUOUSLY DURING SCHEDULED OCCUPIED HOURS.
7. MOTORIZED OUTSIDE AIR DAMPER SHALL OPEN TO MINIMUM POSITION WHEN UNIT IS OPERATING. BALANCE CONTRACTOR SHALL DETERMINE DAMPER SETPOINT.
8. WHEN UNIT IS OFF, OUTSIDE AIR DAMPER SHALL BE CLOSED.
9. POWER EXHAUST WILL BE CONTROLLED BY MANUFACTURER PROVIDED PRESSURE CONTROLS. CONTRACTOR TO INSTALL PRESSURE TUBING IN SPACE TO READ ROOM PRESSURE. POWER EXHAUST SHALL MODULATE TO MAINTAIN A ROOM PRESSURE OF 0.03 IN.W.G.

EXHAUST FANS:

1. EACH FAN SHALL BE CONTROLLED BY ROOM LIGHTS/OCCUPANCY SENSOR.
- (E) FAN CONTROLS SHALL BE RECONNECTED TO NEW FANS.

PELICAN CONTROLS AND SEQUENCE OF OPERATION

TAG	MANUFACTURER	MODEL NO.	POWER EXHAUST	COOLING MBH		GAS HEATING MBH		AIRFLOW CFM	ESP IN. W.G.	OUTSIDE AIR CFM	FAN RPM	MOTOR BHP	SEER	AFUE %	ELECTRICAL			WEIGHT LBS	MOUNTING DETAIL	NOTES
				TOTAL	SENSIBLE	INPUT	OUTPUT								V / PH	MCA	MOCP			
AC-1	CARRIER	48GCDM06	PE-1	61.92	45.58	50.67	40.54	1800	1.0	450	2137	1.05	16.1	81	460/3	14	20	918	1MP0.2	1, 2, 3, 4, 5, 6, 7
AC-2	CARRIER	48GCDM06	PE-2	61.92	45.58	50.67	40.54	1800	1.0	450	2137	1.05	16.1	81	460/3	14	20	918	1MP0.2	1, 2, 3, 4, 5, 6, 7
AC-3	CARRIER	48GCDM06	PE-3	61.92	45.58	50.67	40.54	1800	1.0	450	2137	1.05	16.1	81	460/3	14	20	918	1MP0.2	1, 2, 3, 4, 5, 6, 7
AC-4	CARRIER	48GCDM06	PE-4	61.92	45.58	50.67	40.54	1800	1.0	450	2137	1.05	16.1	81	460/3	14	20	918	1MP0.2	1, 2, 3, 4, 5, 6, 7
AC-5	CARRIER	48GCDM06	PE-5	61.92	45.58	50.67	40.54	1800	1.0	450	2137	1.05	16.1	81	460/3	14	20	918	1MP0.2	1, 2, 3, 4, 5, 6, 7
AC-6	CARRIER	48GCDM06	PE-6	61.92	45.58	50.67	40.54	1800	1.0	450	2137	1.05	16.1	81	460/3	14	20	918	1MP0.2	1, 2, 3, 4, 5, 6, 7
AC-7	CARRIER	48GCDM06	PE-7	61.92	45.58	50.67	40.54	1800	1.0	450	2137	1.05	16.1	81	460/3	14	20	918	1MP0.2	1, 2, 3, 4, 5, 6, 7
AC-8	CARRIER	48GCDM06	PE-8	61.92	45.58	50.67	40.54	1800	1.0	450	2137	1.05	16.1	81	460/3	14	20	918	1MP0.2	1, 2, 3, 4, 5, 6, 7
AC-9	CARRIER	48GCDM06	PE-9	61.92	45.58	50.67	40.54	1800	1.0	450	2137	1.05	16.1	81	460/3	14	20	918	1MP0.2	1, 2, 3, 4, 5, 6, 7
AC-13	CARRIER	48GCDM06	PE-13	61.92	45.58	50.67	40.54	1800	1.0	450	2137	1.05	16.1	81	460/3	14	20	918	1MP0.2	1, 2, 3, 4, 5, 6, 7
AC-14	CARRIER	48GCDM06	PE-14	61.92	45.58	50.67	40.54	1800	1.0	450	2137	1.05	16.1	81	460/3	14	20	918	1MP0.2	1, 2, 3, 4, 5, 6, 7
AC-15	CARRIER	48GCDM06	PE-15	61.92	45.58	50.67	40.54	1800	1.0	450	2137	1.05	16.1	81	460/3	14	20	918	1MP0.2	1, 2, 3, 4, 5, 6, 7
AC-16	CARRIER	48GCDM06	PE-16	61.92	45.58	50.67	40.54	1800	1.0	450	2137	1.05	16.1	81	460/3	14	20	918	1MP0.2	1, 2, 3, 4, 5, 6, 7
AC-17	CARRIER	48GCDM06	PE-17	61.92	45.58	50.67	40.54	1800	1.0	450	2137	1.05	16.1	81	460/3	14	20	918	1MP0.2	1, 2, 3, 4, 5, 6, 7
AC-18	CARRIER	48GCDM06	PE-18	61.92	45.58	50.67	40.54	1800	1.0	450	2137	1.05	16.1	81	460/3	14	20	918	1MP0.2	1, 2, 3, 4, 5, 6, 7
AC-19	CARRIER	48GCDM06	PE-19	61.92	45.58	50.67	40.54	1800	1.0	450	2137	1.05	16.1	81	460/3	14	20	918	1MP0.2	1, 2, 3, 4, 5, 6, 7
AC-20	CARRIER	48GCDM05	PE-20	49.96	37.06	50.67	40.54	1600	1.0	450	2114	1.02	16.1	81	460/3	12	15	873	1MP0.2	1, 2, 3, 4, 5, 6, 7
AC-24	CARRIER	48GCDM05	PE-24	49.11	35.12	50.67	40.54	1450	1.0	375	2026	0.90	16.1	81	460/3	12	15	873	1MP0.2	1, 2, 3, 4, 5, 6, 7

1. WEIGHT INCLUDES ALL OPTIONS AND ACCESSORIES.
2. PROVIDE WITH ULTRA LOW LEAK ECONOMIZER WITH POWER EXHAUST.
3. PROVIDE WITH COVERED HALL GUARDS, UN POWERED CONVENIENCE OUTLET, AND HINGED ACCESS PANELS.
4. PROVIDE WITH MERV 13 FILTERS.
5. PROVIDE WITH PELICAN WIRELESS PEARL ECONOMIZER CONTROLLER. CONTROLLER TO BE FIELD INSTALLED. COORDINATE WITH MANUFACTURER.
6. VERTICAL DISCHARGE CONFIGURATION.
7. PROVIDE WITH MANUFACTURER'S ROOF CURB.

HOSE BIBB SCHEDULE

TAG	MANUFACTURER	MODEL	NOTES
HB-1	WOODFORD	RHHC	1

1. PROVIDE WITH MOUNTING SYSTEM.

POWER EXHAUST SCHEDULE

TAG	MANUFACTURER	MODEL NO.	AC UNIT SERVED	AIRFLOW CFM	ESP IN. W.G.	MOTOR HP	ELECTRICAL			WEIGHT LBS	NOTES
							V / PH	MCA	MOCP		
PE-1	MICROMETL	PECD-SRT12CA-D00B-4LH	AC-1	1800	0.5	0.5	460/3	1.9	3.4	SEE NOTE 2	1
PE-2	MICROMETL	PECD-SRT12CA-D00B-4LH	AC-2	1800	0.5	0.5	460/3	1.9	3.4	SEE NOTE 2	1
PE-3	MICROMETL	PECD-SRT12CA-D00B-4LH	AC-3	1800	0.5	0.5	460/3	1.9	3.4	SEE NOTE 2	1
PE-4	MICROMETL	PECD-SRT12CA-D00B-4LH	AC-4	1800	0.5	0.5	460/3	1.9	3.4	SEE NOTE 2	1
PE-5	MICROMETL	PECD-SRT12CA-D00B-4LH	AC-5	1800	0.5	0.5	460/3	1.9	3.4	SEE NOTE 2	1
PE-6	MICROMETL	PECD-SRT12CA-D00B-4LH	AC-6	1800	0.5	0.5	460/3	1.9	3.4	SEE NOTE 2	1
PE-7	MICROMETL	PECD-SRT12CA-D00B-4LH	AC-7	1800	0.5	0.5	460/3	1.9	3.4	SEE NOTE 2	1
PE-8	MICROMETL	PECD-SRT12CA-D00B-4LH	AC-8	1800	0.5	0.5	460/3	1.9	3.4	SEE NOTE 2	1
PE-9	MICROMETL	PECD-SRT12CA-D00B-4LH	AC-9	1800	0.5	0.5	460/3	1.9	3.4	SEE NOTE 2	1
PE-13	MICROMETL	PECD-SRT12CA-D00B-4LH	AC-13	1800	0.5	0.5	460/3	1.9	3.4	SEE NOTE 2	1
PE-14	MICROMETL	PECD-SRT12CA-D00B-4LH	AC-14	1800	0.5	0.5	460/3	1.9	3.4	SEE NOTE 2	1
PE-15	MICROMETL	PECD-SRT12CA-D00B-4LH	AC-15	1800	0.5	0.5	460/3	1.9	3.4	SEE NOTE 2	1
PE-16	MICROMETL	PECD-SRT12CA-D00B-4LH	AC-16	1800	0.5	0.5	460/3	1.9	3.4	SEE NOTE 2	1
PE-17	MICROMETL	PECD-SRT12CA-D00B-4LH	AC-17	1800	0.5	0.5	460/3	1.9	3.4	SEE NOTE 2	1
PE-18	MICROMETL	PECD-SRT12CA-D00B-4LH	AC-18	1800	0.5	0.5	460/3	1.9	3.4	SEE NOTE 2	1
PE-19	MICROMETL	PECD-SRT12CA-D00B-4LH	AC-19	1800	0.5	0.5	460/3	1.9	3.4	SEE NOTE 2	1
PE-20	MICROMETL	PECD-SRT12CA-D00B-4LH	AC-20	1600	0.5	0.5	460/3	1.9	3.4	SEE NOTE 2	1
PE-24	MICROMETL	PECD-SRT12CA-D00B-4LH	AC-24	1450	0.5	0.5	460/3	1.9	3.4	SEE NOTE 2	1

1. PROVIDE WITH MODULATING SPEED POWER EXHAUST AND PRESSURE TRANSDUCER TO CONTROL TO BUILDING PRESSURE.
2. POWER EXHAUST WEIGHT INCLUDED IN AC UNIT TOTAL WEIGHT. SEE AC UNIT SCHEDULE.

SPLIT SYSTEM AC UNIT SCHEDULE

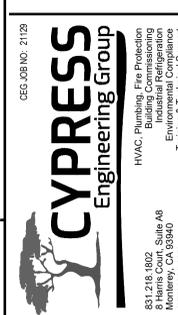
TAG	MANUFACTURER	MODEL	LOCATION	COOLING TOTAL MBH	AIRFLOW CFM	REFRIGERANT PIPING		SEER	ELECTRICAL			WEIGHT LBS	MOUNTING DETAIL	NOTES
						LIQUID	GAS		V / PH	MCA	MOCP			
FC-1	MITSUBISHI	TRKAA012	ELECTRICAL CLOSET	12	455	1/4"	1/2"	21	-	-	-	28	5MP0.2	1, 2
CU-1	MITSUBISHI	TRUYA012	ROOF	1900					208/1	11	28	92	6MP0.2	1, 3

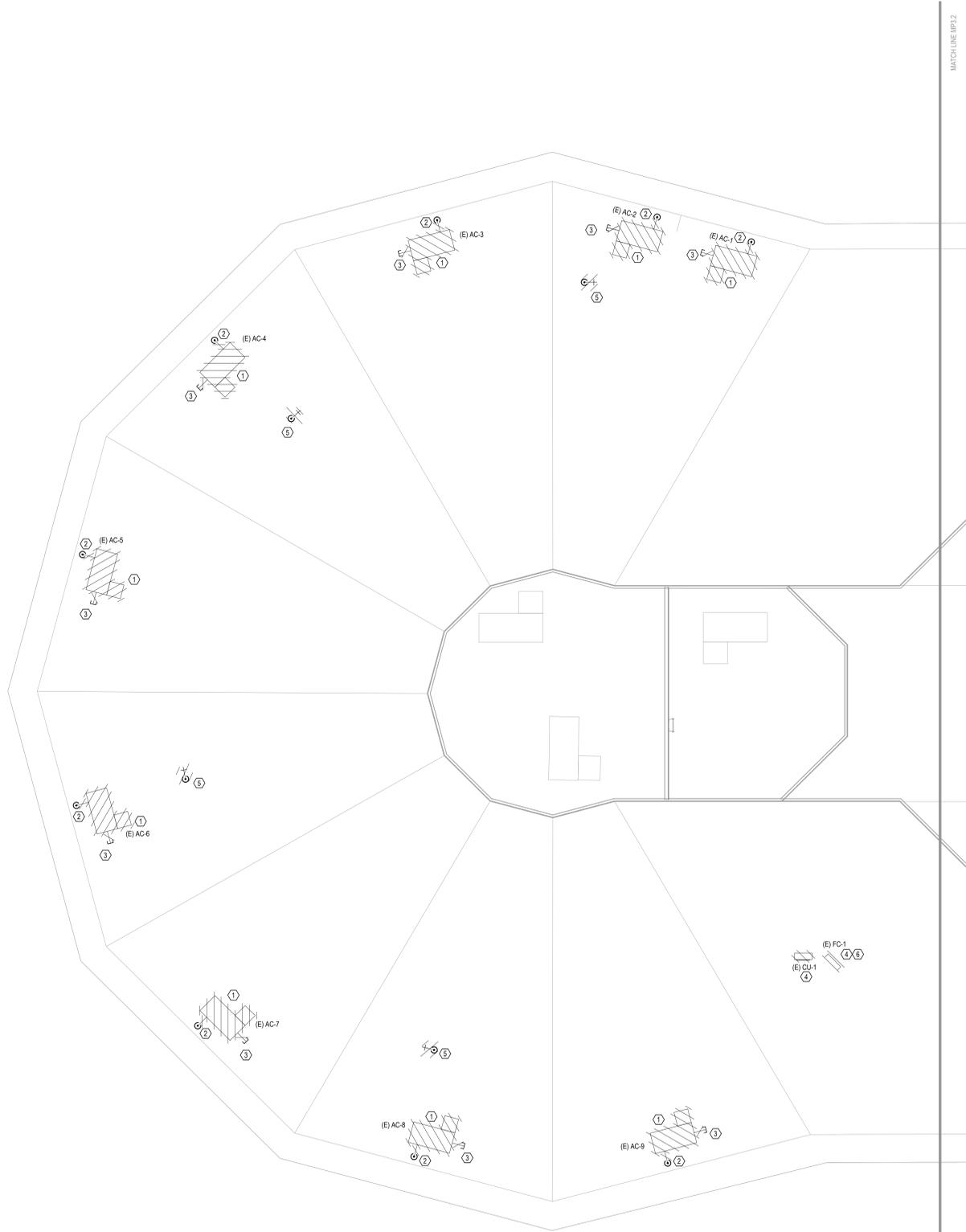
1. MOUNT SIMILAR TO EXISTING UNIT. UTILIZE EXISTING CONNECTIONS. VERIFY IN FIELD.
2. INDOOR UNIT POWERED BY OUTDOOR UNIT.
3. OUTDOOR CONDENSING UNITS TO BE LOCATED WITH PROPER CLEARANCES AND MUST PREVENT RE-CIRCULATION OF AIR. COORDINATE WITH MANUFACTURER AND ARCHITECT.

ROOF EXHAUST FANS SCHEDULE

TAG	MANUFACTURER	MODEL NO.	AIRFLOW CFM	ESP IN. W.G.	FAN RPM	SOUND POWER SONES	MOTOR		WEIGHT LBS	MOUNTING DETAIL	NOTES
							HP	V / PH			
REF-1	GREENHECK	G-070-VG	140	0.367	1473	3.8	1/15	115/1	37	4MP0.2	1, 2, 3
REF-2	GREENHECK	G-100-VG	450	0.375	991	3.4	1/4	115/1	56	4MP0.2	1, 2, 3
REF-3	GREENHECK	G-100-VG	600	0.375	1066	4.4	1/4	115/1	56	4MP0.2	1, 2, 3
REF-4	GREENHECK	G-100-VG	600	0.375	1066	4.4	1/4	115/1	56	4MP0.2	1, 2, 3
REF-5	GREENHECK	G-070-VG	140	0.367	1473	3.8	1/15	115/1	37	4MP0.2	1, 2, 3

1. PROVIDE WITH ROOF CURB TO MATCH EXISTING OPENING. PROVIDE CURB CAP ADAPTER OR REDUCER AS REQUIRED.
2. PROVIDE WITH BACK DRAFT DAMPER AND BIRD SCREEN.
3. INTERCONNECT EXHAUST FAN WITH LIGHTS.





1 DEMOLITION ROOF PLAN - BUILDING A - WEST
 MP3.1 SCALE: 1/8" = 1'-0"

MATCHLINE MP3.2

MATCHLINE MP3.2

GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING AND NEW BUILDING STRUCTURES, SERVICES AND OWNER'S PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION.
2. COORDINATE THE LOCATIONS OF ROOF WALL OPENINGS, PENETRATIONS, DUCTWORK AND ALL MECHANICAL EQUIPMENT WITH RESPECT TO BUILDING STRUCTURE AND OTHER BUILDING SERVICES TO AVOID CONFLICT.
3. CONTRACTOR SHALL CONNECT (E) PELICAN THERMOSTATS TO NEW UNITS AND PELICAN ECONOMIZER CONTROLLER.
4. CONTRACTOR TO VERIFY ALL EXISTING CURB DIMENSIONS BEFORE SUBMITTAL PROCESS / ORDERING EQUIPMENT AND PROVIDE CURB ADAPTERS AS REQUIRED.
5. ALL PLUMBING VENTS TO STAY IN PLACE. EXTEND VENTS ABOVE NEW ROOF LEVEL WHERE REQUIRED.
6. PLANS ARE DRAWN FROM AVAILABLE RECORD DRAWINGS AND LIMITED FIELD VERIFICATION. CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS AND MAKE ADJUSTMENTS PRIOR TO ORDERING/FABRICATION.

DEMOLITION SHEET NOTES

1. REMOVE (E) AC UNIT. REMOVE (E) ROOF CURB. PRESERVE ROOF OPENING FOR NEW AC UNIT.
2. REMOVE (E) GAS PIPING ON ROOF. PROTECT ROOF OPENING FOR NEW GAS PIPING CONNECTION TO NEW AC UNIT.
3. REMOVE (E) CD PIPING ON ROOF. CAP PIPING GOING THRU ROOF.
4. REMOVE (E) SPLIT AC UNIT. REMOVE (E) REFRIGERANT PIPING. REMOVE (E) SUPPORTS. PRESERVE ROOF OPENING FOR NEW REFRIGERANT PIPING.
5. REMOVE (E) HOSE BIBBS ON ROOF. CAP (E) CW PIPE FOR CONNECTION TO NEW.
6. (E) FC-1 SHOWN IS LOCATED IN ELECT A-X ROOM AND NOT ON THE ROOF. CONTRACTOR TO FIELD VERIFY EXACT LOCATION.
7. REMOVE (E) EXHAUST CAP. PROTECT OPENING FOR CONNECTION TO NEW CAP.

(DSA STAMP AREA)



CEG JOB NO: 21129

CYPRESS
Engineering Group

HVAC, Plumbing, Fire Protection
 Building Commissioning
 Environmental Compliance
 Training & Technical Support

831.218.11802, Suite 46
 Monterey, CA 93940
 cypresseg.com

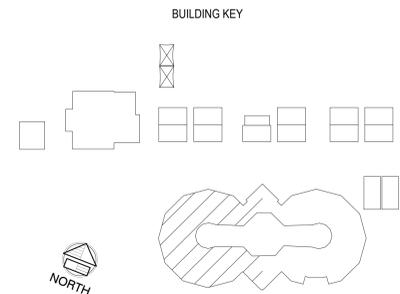
**DEMOLITION ROOF PLAN - BUILDING A - WEST -
 MECHANICAL & PLUMBING**

**ROOFING AND HVAC REPLACEMENT
 FAIRLANDS ELEMENTARY SCHOOL
 4151 W. LAS PASITAS BLVD, PLEASANTON, CA. 94588
 PLEASANTON UNIFIED SCHOOL DISTRICT**

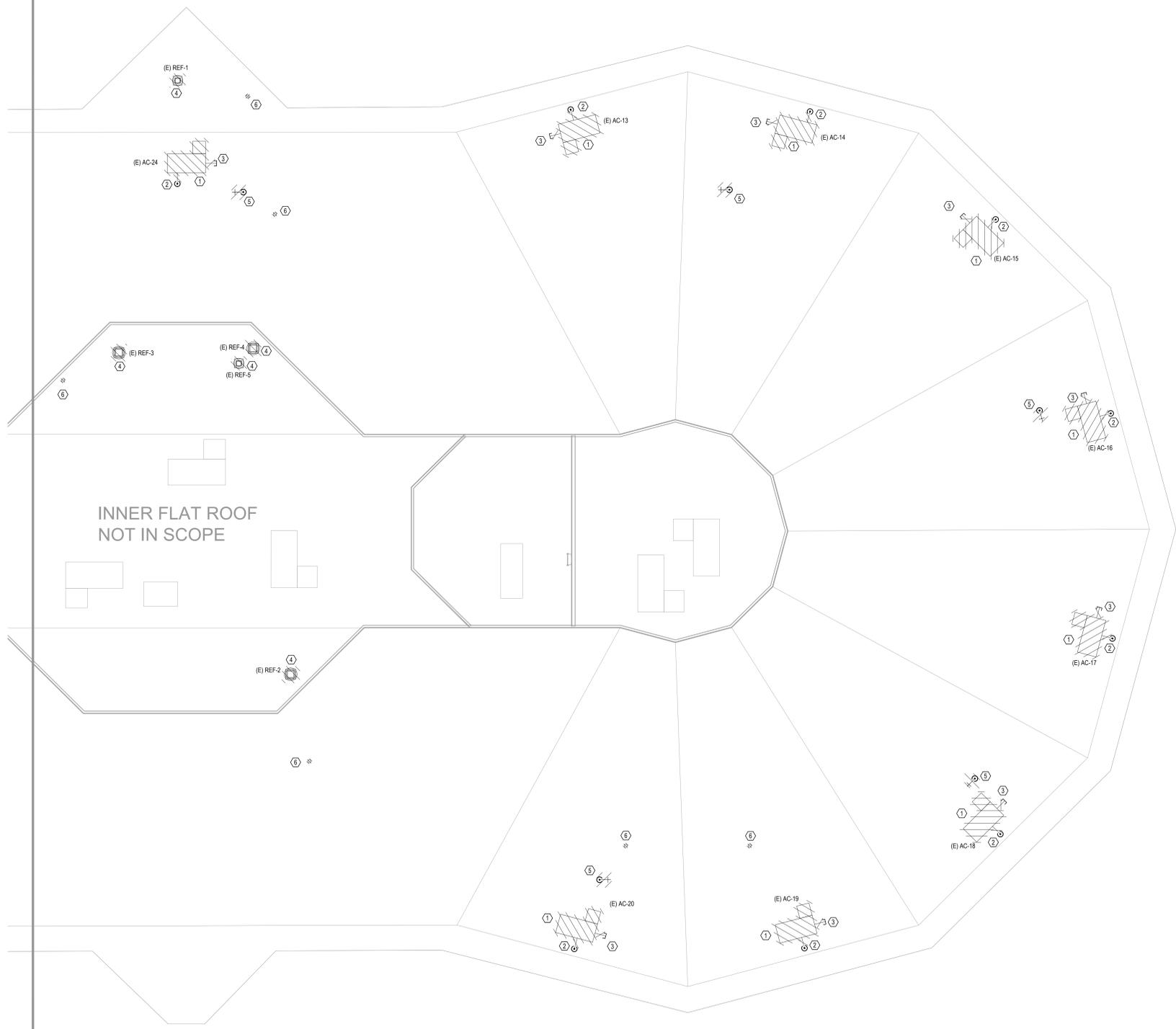
REVISIONS NO.	ITEM	DATE

DRAWN BY: CAD
 CHECKED BY: CS
 SFA JOB NO: 21071
 DATE: 11/05/2021

MP3.1



MATCHLINE MP3.1



MATCHLINE MP3.1

1
MP3.2
 DEMOLITION ROOF PLAN - BUILDING A - EAST
 SCALE: 1/8" = 1'-0"

- GENERAL NOTES**
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING AND NEW BUILDING STRUCTURES, SERVICES AND OWNER'S PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION.
 - COORDINATE THE LOCATIONS OF ROOF WALL OPENINGS, PENETRATIONS, DUCTWORK AND ALL MECHANICAL EQUIPMENT WITH RESPECT TO BUILDING STRUCTURE AND OTHER BUILDING SERVICES TO AVOID CONFLICT.
 - CONTRACTOR SHALL CONNECT (E) PELICAN THERMOSTATS TO NEW UNITS AND PELICAN ECONOMIZER CONTROLLER.
 - CONTRACTOR TO VERIFY ALL EXISTING CURB DIMENSIONS BEFORE SUBMITTAL PROCESS / ORDERING EQUIPMENT AND PROVIDE CURB ADAPTERS AS REQUIRED.
 - ALL PLUMBING VENTS TO STAY IN PLACE. EXTEND VENTS ABOVE NEW ROOF LEVEL WHERE REQUIRED.
 - PLANS ARE DRAWN FROM AVAILABLE RECORD DRAWINGS AND LIMITED FIELD VERIFICATION. CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS AND MAKE ADJUSTMENTS PRIOR TO ORDERING/FABRICATION.

- DEMOLITION SHEET NOTES**
- REMOVE (E) AC UNIT. REMOVE (E) ROOF CURB. PRESERVE ROOF OPENING FOR NEW AC UNIT.
 - REMOVE (E) GAS PIPING ON ROOF. PROTECT ROOF OPENING FOR NEW GAS PIPING CONNECTION TO NEW AC UNIT.
 - REMOVE (E) CD PIPING ON ROOF. CAP PIPING GOING THRU ROOF.
 - REMOVE (E) ROOF EXHAUST FAN. REMOVE (E) ROOF CURB. PRESERVE ROOF OPENING FOR NEW ROOF EXHAUST FAN UNIT.
 - REMOVE (E) HOSE BIBBS ON ROOF. CAP (E) CW PIPE FOR CONNECTION TO NEW.
 - REMOVE (E) EXHAUST CAP. PROTECT OPENING FOR CONNECTION TO NEW CAP.

(DSA STAMP AREA)

SFA
 SUGIMURA
 FINNEY
 ARCHITECTS

2175 SOUTH BARRLOW AVE
 SUITE 300
 CARROLL, CA 95957
 PHONE: 925-274-5500
 FAX: 925-274-5500

REGISTERED PROFESSIONAL ENGINEER
 BID SET
 11-05-2021
 ARCHITECTURAL
 STATE OF CALIFORNIA

CEG JOB NO: 21129

CYPRESS
 Engineering Group

HVAC, Plumbing, Fire Protection
 Building Commissioning
 Environmental Compliance
 Training & Technical Support

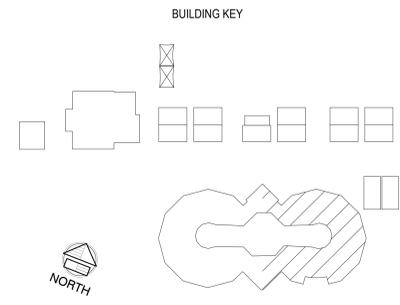
831.218.1802, Suite 46
 Monterey, CA 93940
 cypresseg.com

**DEMOLITION ROOF PLAN - BUILDING A - EAST -
 MECHANICAL & PLUMBING**

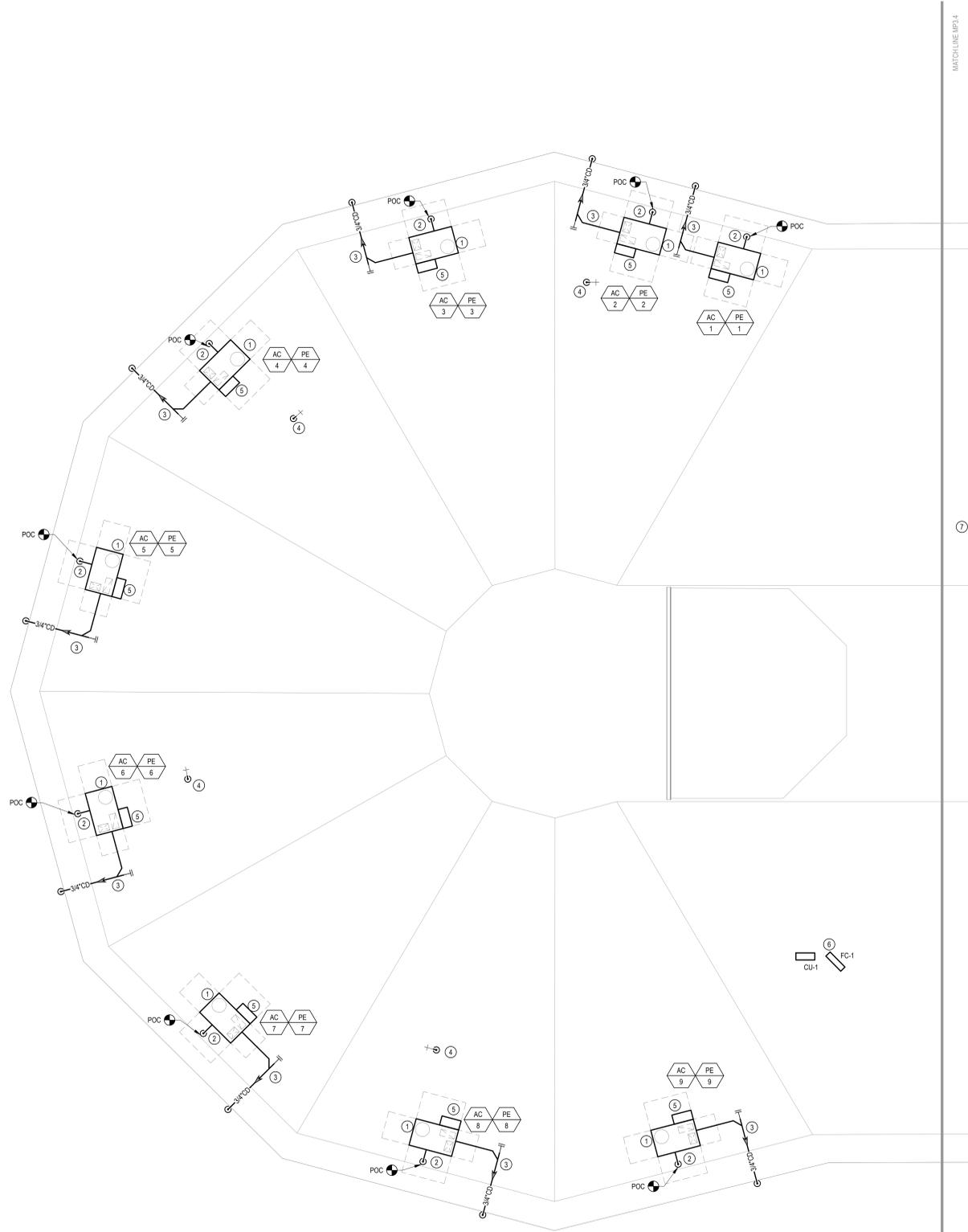
**ROOFING AND HVAC REPLACEMENT
 FAIRLANDS ELEMENTARY SCHOOL
 4151 W. LAS PASITAS BLVD, PLEASANTON, CA. 94588
 PLEASANTON UNIFIED SCHOOL DISTRICT**

REVISIONS NO.	ITEM	DATE

DRAWN BY: CAD
 CHECKED BY: CS
 SFA JOB NO: DATE:
 21071 11/05/2021

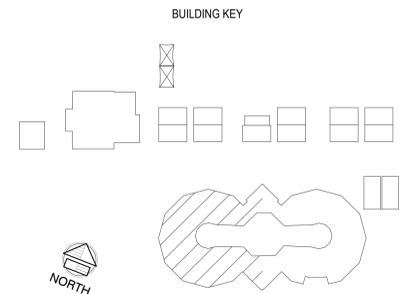


MP3.2



1 NEW ROOF PLAN - BUILDING A - WEST
 MP3.3 SCALE: 1/8" = 1'-0"

- GENERAL NOTES**
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING AND NEW BUILDING STRUCTURES, SERVICES AND OWNER'S PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION.
 - COORDINATE THE LOCATIONS OF ROOF WALL OPENINGS, PENETRATIONS, DUCTWORK AND ALL MECHANICAL EQUIPMENT WITH RESPECT TO BUILDING STRUCTURE AND OTHER BUILDING SERVICES TO AVOID CONFLICT.
 - CONTRACTOR SHALL CONNECT (E) PELICAN THERMOSTATS TO NEW UNITS AND PELICAN ECONOMIZER CONTROLLER.
 - CONTRACTOR TO VERIFY ALL EXISTING CURB DIMENSIONS BEFORE SUBMITTAL PROCESS / ORDERING EQUIPMENT AND PROVIDE CURB ADAPTERS AS REQUIRED.
 - ALL PLUMBING VENTS TO STAY IN PLACE. EXTEND VENTS ABOVE NEW ROOF LEVEL WHERE REQUIRED.
 - PLANS ARE DRAWN FROM AVAILABLE RECORD DRAWINGS AND LIMITED FIELD VERIFICATION. CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS AND MAKE ADJUSTMENTS PRIOR TO ORDERING/FABRICATION.
 - CHECK THE UNITS FOR HEATING, COOLING, ECONOMIZER, AND CONTINUOUS FAN OPERATION. COORDINATE WITH SCHOOL DISTRICT TO PROGRAM THERMOSTATS FOR OCCUPIED SCHEDULE HOURS.
- NEW SHEET NOTES**
- INSTALL NEW AC UNIT ON NEW ROOF CURB. ENSURE CORRECT UNIT ORIENTATION AND CONNECT TO (E) SUPPLY AND RETURN DUCTWORK.
 - INSTALL NEW GAS PIPING WITH SHUTOFF VALVE, DIRT LEG, AND FLEX CONNECTION AT NEW AC UNIT. NEW GAS PIPE SIZE TO MATCH SIZE OF EXISTING PIPE AT POC. CONNECT GAS PIPING TO AC UNIT PER DETAIL 2MP0.2. FOR PIPE SUPPORT SEE DETAIL 3MP0.2.
 - INSTALL NEW 3/4" CD PIPING WITH P-TRAP TO NEW AC UNIT. ROUTE TO NEAREST ROOF GUTTER AND SPILL WITH 1" AIR GAP. CONNECT CD PIPING TO AC UNIT PER DETAIL 2MP0.2. FOR PIPE SUPPORT SEE DETAIL 3MP0.2.
 - CONNECT NEW HOSE BIBB ON ROOF TO EXISTING WATER PIPING.
 - INSTALL NEW POWER EXHAUST ON NEW AC UNIT.
 - CONTRACTOR TO PROVIDE AND INSTALL NEW SPLIT SYSTEM. ALTHOUGH THIS IS ROOF PLANS, FC-1 SHOWN IS LOCATED IN ELECT A-X ROOM. NOT ON THE ROOF.
 - INSTALL NEW EXHAUST CAP AND CONNECT TO (E) DUCTWORK. MATCH (E) SIZE. VERIFY IN FIELD.



(DSA STAMP AREA)

SFA
 SUCIHOVA
 SUTNER ARCHITECTS

2175 SOUTH BARRLOW AVE
 SUITE 100
 CHANESSEL, CA 94588
 PHONE: 925.274.8100
 FAX: 925.274.8101

BID SET
 11-05-2021

REGISTERED PROFESSIONAL ENGINEER
 ARCHITECT
 STATE OF CALIFORNIA

CEG JOB NO: 21129

CYPRESS
 Engineering Group

HVAC, Plumbing, Fire Protection
 Building Commissioning
 Environmental Compliance
 Training & Technical Support

831.218.1802, Suite 46
 7700 S. Bascom Ave.
 Menlo Park, CA 94028
 cypresseg.com

**NEW ROOF PLAN - BUILDING A - WEST -
 MECHANICAL & PLUMBING**

**ROOFING AND HVAC REPLACEMENT
 FAIRLANDS ELEMENTARY SCHOOL
 4151 W. LAS PASITAS BLVD, PLEASANTON, CA. 94588
 PLEASANTON UNIFIED SCHOOL DISTRICT**

REVISIONS NO.	ITEM	DATE

DRAWN BY: CAD
 CHECKED BY: CS
 SFA JOB NO: DATE:
 21071 11/05/2021

MP3.3

GENERAL NOTES

- EXISTING FLOOR PLANS FROM RECORD DRAWINGS SHOWN FOR REFERENCE ONLY.
- ADJUST AND BALANCE AIR FLOW TO CFMS SHOWN ON AIR BALANCE SCHEDULE FOR EACH BUILDING.

(DSA STAMP AREA)



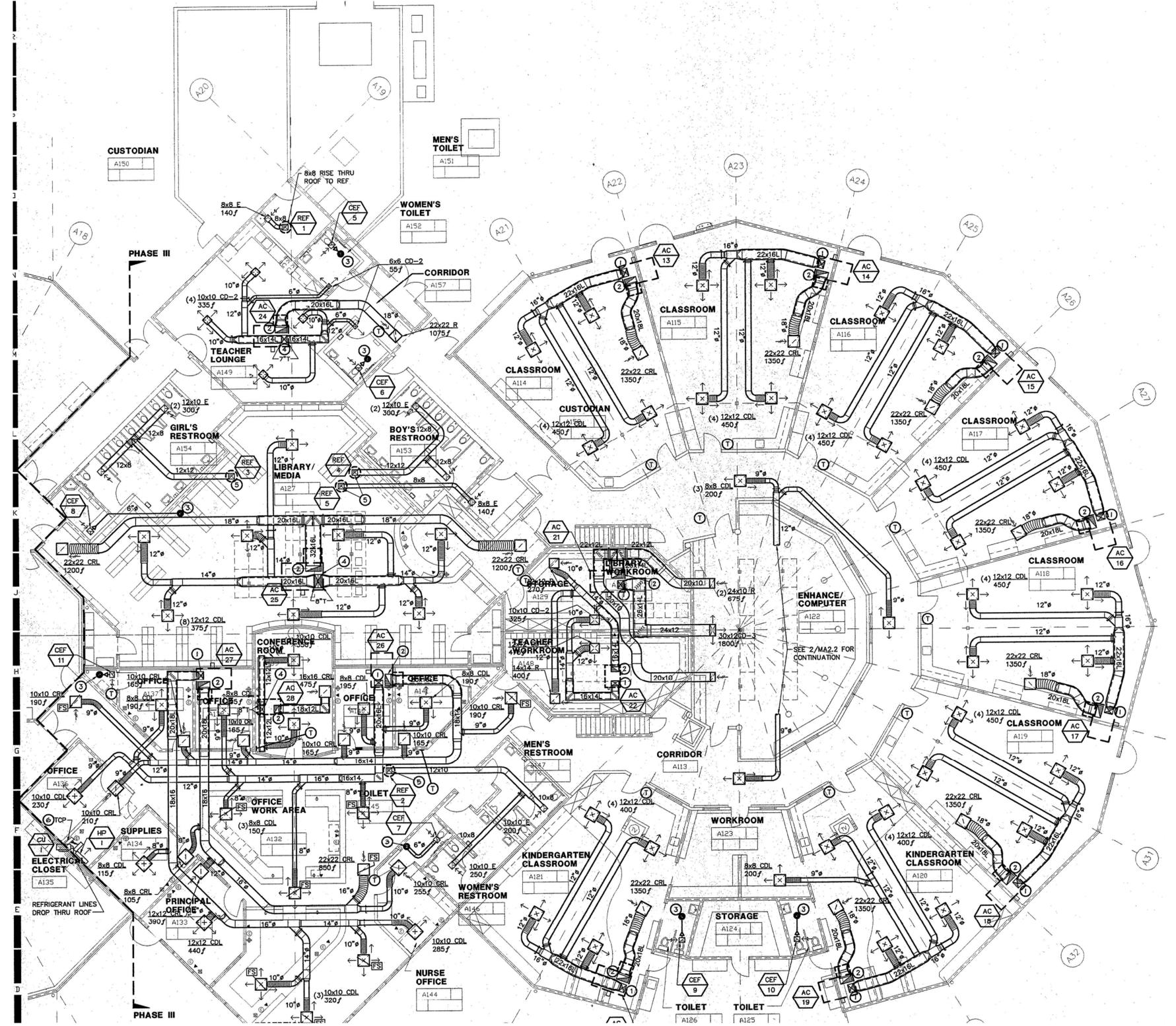
AIR BALANCE SCHEDULE - BLDG A			
UNIT NUMBER	LOCATION SERVED	SUPPLY CFM	RETURN CFM
AC-13	CLASSROOM A114	1800	1330
AC-14	CLASSROOM A115	1800	1330
AC-15	CLASSROOM A116	1800	1330
AC-16	CLASSROOM A117	1800	1330
AC-17	CLASSROOM A118	1800	1330
AC-18	CLASSROOM A119	1800	1330
AC-19	KINDERGARTEN A120	1800	1330
AC-20	KINDERGARTEN A121	1600	1150
AC-24	TEACHER LOUNGE A149	1450	1075



BUILDING A - EAST - MECHANICAL / TAB WORK
ROOFING AND HVAC REPLACEMENT
FAIRLANDS ELEMENTARY SCHOOL
4151 W. LAS PASITAS BLVD, PLEASANTON, CA. 94588
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS NO.	ITEM	DATE

DRAWN BY: CAD
CHECKED BY: CS
SFA JOB NO: DATE:
21071 11/05/2021



1 BUILDING A-EAST-MECHANICAL/TAB WORK
MP7.1 SCALE: 1/8" = 1'-0"

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-E (Created 09/2020)
 CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: Roofing and HVAC Replacement Fairlands Elementary School
 Project Address: 4151 W Las Pastas Blvd, Pleasanton, CA 94588
 Report Page: Page 7 of 11
 Date Prepared: 2021-11-03

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

YES	NO	Form/Title	Systems To Be Field Verified	Field Inspector	
				Pass	Fail
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.		<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-03-A Constant Volume Single Zone HVAC. NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-04-A Air Distribution Duct Leakage		<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-05-A Air Economizer Controls		<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-06-A Demand Control Ventilation Systems Acceptance must be submitted for all systems required to employ demand controlled ventilation (refer to §120.1(c)(3)) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints.		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-07-A Supply Fan Variable Flow Controls		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-08-A Valve Leakage Test		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-09-A Supply Water Temperature Reset Controls		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-10-A Hydronic System Variable Flow Controls		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-11-A Automatic Demand Shed Controls		<input type="checkbox"/>	<input type="checkbox"/>

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards/> September 2020

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-E (Created 09/2020)
 CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: Roofing and HVAC Replacement Fairlands Elementary School
 Project Address: 4151 W Las Pastas Blvd, Pleasanton, CA 94588
 Report Page: Page 8 of 11
 Date Prepared: 2021-11-03

<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance. NOTE: This form does not automatically move to "Yes". If Distributed Energy Storage DX AC Systems are included in the scope, permit applicant should move this form to "Yes".		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance. NOTE: This form does not automatically move to "Yes". If Chilled Water Storage, Ice-on-Coil Internal Melt, Ice-on-Coil External Melt, Ice Harvester, Brine, Ice Slurry, Eutectic Salt, Clostrate Hydrate Slurry (CHS), Cryogenic or Encapsulated (Ice Ball) Systems are included in the scope, permit applicant should move this form to "Yes".		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-16-A Supply Air Temperature Reset Controls		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-17-A Condenser Water Temperature Reset Controls		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-18 Energy Management Control Systems		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-19 Occupancy Sensor Controls		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-20 Multi-Family Ventilation		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-21 Multi-Family Envelope Leakage		<input type="checkbox"/>	<input type="checkbox"/>

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards/> September 2020

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-E (Created 09/2020)
 CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: Roofing and HVAC Replacement Fairlands Elementary School
 Project Address: 4151 W Las Pastas Blvd, Pleasanton, CA 94588
 Report Page: Page 9 of 11
 Date Prepared: 2021-11-03

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION
 Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E, Additional Remarks. These documents must be completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Providers registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCC/.

YES	NO	Form/Title	Systems To Be Field Verified	Field Inspector	
				Pass	Fail
<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRVC-MCH-04-H Duct Leakage Test. NOTE: Must be completed by a HERS Rater.		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRVC-MCH-24 Enclosure Air Leakage Worksheet. NOTE: Must be completed by a HERS Rater.		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRVC-MCH-27 High-rise Residential. NOTE: Must be completed by a HERS Rater.		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRVC-MCH-32 Local Mechanical Exhaust. NOTE: Must be completed by a HERS Rater.		<input type="checkbox"/>	<input type="checkbox"/>

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards/> September 2020

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-E (Created 09/2020)
 CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: Roofing and HVAC Replacement Fairlands Elementary School
 Project Address: 4151 W Las Pastas Blvd, Pleasanton, CA 94588
 Report Page: Page 4 of 11
 Date Prepared: 2021-11-03

I. SYSTEM CONTROLS
 Table Instructions: Complete the following Table to demonstrate compliance with mandatory controls in §110.2 and §120.2 and prescriptive controls in §140.4(i) and (j) or requirements in §141.0(b)(2) for altered space conditioning systems.

System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats §110.2(b) & (c)¹ §120.2(a) or §141.0(b)(2)	Shut-Off Controls §120.2(c)	Isolation Zone Controls §120.2(g)	Demand Response §110.12 and §120.2(b)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(n)
AC	single zone	≤ 25,000 ft²	Setback + DR Tstat per §110.12	NA: 7 day per §120.2(e)(1)	NA: Single Zone	DR Tstat per §110.12	NA: Single Zone	NA: Alteration project

¹ FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.
² NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.
 EX-System 1: SA Temp Reset: Exempt because zones compliant with §140.4(d); EXCEPTION 1 to §140.4(f)

J. VENTILATION AND INDOOR AIR QUALITY
 Table Instructions: Complete the following Table to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(c)(3) for all nonresidential, high-rise residential and hotel/motel occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflow may be shown on the plans or the calculations can be presented in a spreadsheet.

O1	O2	O3	O4	O5	O6	O7	O8	O9
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check this box if the project includes Nonresidential or Hotel/Motel spaces								
Check this box if the project includes new or altered high-rise residential dwelling units								
Check this box if the project is using natural ventilation in any spaces to meet required ventilation rates per §120.1(c)(2).								

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards/> September 2020

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-E (Created 09/2020)
 CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: Roofing and HVAC Replacement Fairlands Elementary School
 Project Address: 4151 W Las Pastas Blvd, Pleasanton, CA 94588
 Report Page: Page 5 of 11
 Date Prepared: 2021-11-03

¹ FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system.
² Air filtration requirements apply to the following three system types per §120.1(c)(1): space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.
³ Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.
⁴ See Standards Tables 120.1-A and 120.1-B.
⁵ For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.
⁶ §120.2(a)(2) requires systems serving rooms that are required by §120.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices, 250ft² or smaller, multipurpose rooms less than 1,000ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by §120.1(c).

K. TERMINAL BOX CONTROLS
 This Section Does Not Apply

L. DISTRIBUTION (DUCTWORK AND PIPING)
 Table Instructions: Complete the following tables to show compliance with mandatory pipe insulation requirements found in §120.3 and prescriptive requirements found in §140.4(i) for duct leakage testing.

Duct Leakage Sealing
 The answers to the questions below apply to the following duct system(s):

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11
11	No	The scope of the project includes only duct systems serving healthcare facilities.								
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.								
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.								
14	No	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system: <input type="checkbox"/> Outdoors <input type="checkbox"/> In a space directly under a roof that has a U-factor greater than the U-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)(1) or if the roof has fixed vents or openings to the outside/unconditioned spaces. <input type="checkbox"/> In an unconditioned crawlspace. <input type="checkbox"/> In other unconditioned spaces.								
15	No	The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.								
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference: Nonresidential Appendix NA2.								

Table Continued

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards/> September 2020

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-E (Created 09/2020)
 CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: Roofing and HVAC Replacement Fairlands Elementary School
 Project Address: 4151 W Las Pastas Blvd, Pleasanton, CA 94588
 Report Page: Page 6 of 11
 Date Prepared: 2021-11-03

Table Continued

17 Duct system shall be sealed in accordance with the California Mechanical Code.

M. COOLING TOWERS
 This Section Does Not Apply

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

YES	NO	Form/Title	Systems To Be Field Verified	Field Inspector	
				Pass	Fail
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCC-MCH-01-E - Must be submitted for all buildings.		<input type="checkbox"/>	<input type="checkbox"/>

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards/> September 2020

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-E (Created 09/2020)
 CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: Roofing and HVAC Replacement Fairlands Elementary School
 Project Address: 4151 W Las Pastas Blvd, Pleasanton, CA 94588
 Report Page: Page 1 of 11
 Date Prepared: 2021-11-03

A. GENERAL INFORMATION
 O1 Project Location (city): Pleasanton
 O2 Climate Zone: 12
 O3 Occupancy Types Within Project:
 Office (B) Retail (M) Non-refrigerated Warehouse (S)
 Hotel/Motel Residential (R-1) School (E) Healthcare Facility (I)
 High Rise Residential (R-2/R-3) Relocatable Class Bldg (E) Other (Write In:)
¹ FOOTNOTES: climate zone can be determined on the California Energy Commission's website at http://www.energy.ca.gov/maps/renewable/building_climate_zones.html

B. PROJECT SCOPE
 Table Instructions: Include any mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4 or §141.0(b)(2) for alterations.

My project consists of (check all that apply)		
O1	O2	O3
Air System(s)	Wet System Components	Dry System Components
<input checked="" type="checkbox"/> Heating Air System	<input type="checkbox"/> Water Economizer	<input checked="" type="checkbox"/> Air Economizer
<input checked="" type="checkbox"/> Cooling Air System	<input type="checkbox"/> Pumps	<input type="checkbox"/> Electric Resistance Heat
<input checked="" type="checkbox"/> Mechanical Controls (existing to remain, altered or new)	<input checked="" type="checkbox"/> Hydronic System Piping	<input type="checkbox"/> Fan Systems
	<input type="checkbox"/> Cooling Towers	<input checked="" type="checkbox"/> Ductwork (existing to remain, altered or new)
	<input type="checkbox"/> Chillers	<input type="checkbox"/> Ventilation
	<input type="checkbox"/> Boilers	<input type="checkbox"/> Zonal Systems/ Terminal Boxes

C. COMPLIANCE RESULTS
 Table Instructions: If any cell in this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D, for guidance.

O1	O2	O3	O4	O5	O6	O7	O8	O9	Compliance Results
System Summary §110.1, §110.2, §140.4	Pumps §140.4(a)	Fans/Economizers §140.4(a), §140.4(e)	System Controls §110.2, §120.2, §140.4(f)	Ventilation §120.1	Terminal Box Controls §140.4(d)	Distribution §120.3, §140.4(i)	Cooling Towers §110.2(e)(2)		
Yes AND	Yes AND	Yes AND	Yes AND	Yes AND	Yes AND	Yes AND	Yes AND	Yes AND	COMPLIES

Mandatory Measures Compliance (See Table Q for Details) COMPLIES

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards/> September 2020

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-E (Created 09/2020)
 CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: Roofing and HVAC Replacement Fairlands Elementary School
 Project Address: 4151 W Las Pastas Blvd, Pleasanton, CA 94588
 Report Page: Page 2 of 11
 Date Prepared: 2021-11-03

D. EXCEPTIONAL CONDITIONS
 This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.
 Table H indicates a Fan Power System Index that exceeds the maximum allowed per §140.4(c). Please revise to demonstrate compliance. Selections made in Table D have been changed by the permit applicant. See Table E, Additional Remarks for permit applicant's explanation.

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

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)
 Table Instructions: Complete the following equipment schedules to show compliance with mandatory requirements found in §110.1 and §120.2(a) and prescriptive requirements found in §140.4(a), §140.4(b) and §140.4(i) or §141.0(b)(2) for alterations.

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

O1	O2	O3	O4	O5	O6	O7	O8	O9	O10	O11
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available ¹ §140.4(a)	Per Design (kBtu/h)	Rated (kBtu/h)	Sapp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
AC	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	54	67		46	60		

¹ FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per §140.4(a). Healthcare facilities are exempt.
² It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.
³ If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.
⁴ Authority Having Jurisdiction may ask for load calculations used for compliance per §140.4(b).
 Table Continued

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards/> September 2020

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-E (Created 09/2020)
 CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: Roofing and HVAC Replacement Fairlands Elementary School
 Project Address: 4151 W Las Pastas Blvd, Pleasanton, CA 94588
 Report Page: Page 3 of 11
 Date Prepared: 2021-11-03

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

O1	O2	O3	O4	O5	O6	O7	O8	O9
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency	Efficiency Unit	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency
AC	<65,000				0.8	SEER	13	16

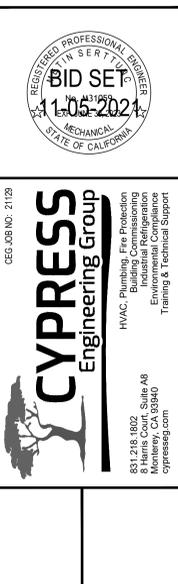
G. PUMPS
 This Section Does Not Apply

H. FAN SYSTEMS & AIR ECONOMIZERS
 Table Instructions: Complete the following Table for fan systems to demonstrate compliance with prescriptive requirements found in §140.4(a), §140.4(e) and §140.4(m). First document the system details, then add fans within that system to document compliance with fan power requirements. Fan systems serving only process loads are exempt from these requirements and do not need to be included in Table H.

System Name:	AC	Economizer: ¹	Differential Temperature	Economizer Controls:	Designed per §140.4(e) and (m)	System Fan Type:	Constant Volume
O1	O2	O3	O4	O5	O6	O7	O8
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit ²	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B	Design Airflow through Device (CFM)
AC	Supply	1	1,800	BHP	1.05	None used Calculated Adjustment (in H ₂ O)	
Total System Design Supply Airflow (CFM):		1,800	Total System Design (BHP):		1.05	Maximum System Fan Power (BHP):	

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

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards/> September 2020



TITLE 24 FORMS - MECHANICAL

ROOFING AND HVAC REPLACEMENT
 FAIRLANDS ELEMENTARY SCHOOL
 4151 W. LAS PASTAS BLVD., PLEASANTON, CA. 94588
 PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS
 NO. ITEM DATE

DRAWN BY: CAD
 CHECKED BY: CS
 SFA JOB NO.: DATE:
 21071 11/05/2021

MP8.1

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-4 (Created 06/2020) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: Roofing and HVAC Replacement Fairlands Elementary School Report Page: Page 10 of 11
 Project Address: 4151 W Las Pasitas Blvd, Pleasanton, CA 94588 Date Prepared: 2021-11-03

Q. MANDATORY MEASURES DOCUMENTATION LOCATION
 Table Instructions: Indicate where mandatory measures are documented in the plan set or construction documentation. For any mandatory measures that do not apply, mark the plan sheet or construction document location as "N/A", any active cells that are left blank will result in non-compliance in Table C.

D1		D2	
Compliance with Mandatory Measures documented through		Plan sheet or construction document location	
MCH Mandatory Measures Note Block:			
D3		D4	
Mandatory Measure		Plan sheet or construction document location	
Heating Equipment Efficiency per §110.1	MP8.2		
Cooling Equipment Efficiency per §110.1	MP8.2		
Furnace Standby Loss Control per §110.2(d)	NA		
Duct Insulation per §120.4	230500		
Heating Hot Water Equipment Efficiency per §110.1	NA		
Cooling Chilled and Condenser Water Equipment Efficiency per §110.1	NA		
Open and Closed Circuit Cooling Towers conductivity of flow-based controls per §110.2(e)1	NA		
Open and Closed Circuit Cooling Towers Flow Meter with analog output per §110.2(e)3	NA		
Open and Closed Circuit Cooling Towers Overflow Alarm per §110.2(e)4	NA		
Open and Closed Circuit Cooling Towers Efficient Drift Eliminators per §110.2(e)5	NA		
Pipe Insulation per §120.3(b)	NA		
Combustion air shut-off, combustion air fan controls and stack design and controls for boilers per §120.9	NA		
Heat Pump with Supplementary Electric Resistance Heater Controls per §110.2(b)	NA		
The air duct and plenum system is designed per §120.4(a)-(f)	NA		
Kitchen range hoods shall be rated for sound in accordance with Section 7.2 of ASHRAE 62.2	NA		

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards> September 2020

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-4 (Created 06/2020) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: Roofing and HVAC Replacement Fairlands Elementary School Report Page: Page 11 of 11
 Project Address: 4151 W Las Pasitas Blvd, Pleasanton, CA 94588 Date Prepared: 2021-11-03

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

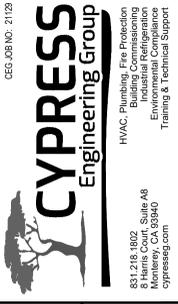
Documentation Author Name: Chahan Shah Documentation Author Signature: *Chahan S. Shah*
 Company: Cypress Engineering Group Signature Date: 11/3/21
 Address: 8 Harris Court, Suite A8 CEJA/HERS Certification Identification (if applicable):
 City/State/Zip: Monterey, CA 93940 Phone: 8312181802

RESPONSIBLE PERSON'S DECLARATION STATEMENT
 I certify the following under penalty of perjury, under the laws of the State of California:

- The information provided on this Certificate of Compliance is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Metin Serttunc Responsible Designer Signature: *Metin Serttunc*
 Company: Cypress Engineering Group Date Signed: 11/3/21
 Address: 8 Harris Court, Suite A8 License: M31059
 City/State/Zip: Monterey, CA 93940 Phone: 8312181802

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



TITLE 24 FORMS - MECHANICAL

ROOFING AND HVAC REPLACEMENT
 FAIRLANDS ELEMENTARY SCHOOL
 4151 W. LAS PASITAS BLVD, PLEASANTON, CA. 94588
 PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS NO.	ITEM	DATE

DRAWN BY: CAD
 CHECKED BY: CS
 SFA JOB NO: DATE:
 21071 11/05/2021

MP8.2

GENERAL CONSTRUCTION NOTES

- CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS. MATERIALS AND EQUIPMENT SHALL BE U.L. LISTED AND LABELED FOR THE APPLICATION.
- THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, LICENSES AND INSPECTION FEES REQUIRED BY THIS CONTRACT WORK.
- CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO BIDDING AND ALLOW FOR ALL FIELD CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ELECTRICAL WORK NOTED AND CALLED OUT ON ALL CONTRACT DOCUMENTS. THE CONTRACTOR SHALL OBTAIN INFORMATION AND BE FAMILIAR WITH ALL OTHER TRADES WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN OTHER TRADES ON PROJECT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONS AND PROPERTY AND SHALL PROVIDE INSURANCE COVERAGE AS NECESSARY FOR LIABILITY AND PERSONAL PROPERTY DAMAGE, TO FULLY PROTECT THE OWNER, ARCHITECT AND ENGINEER FROM ANY AND ALL CLAIMS RESULTING FROM THIS WORK.
- CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS AT THE PROJECT SITE INDICATING ALL MODIFICATIONS TO ELECTRICAL SYSTEMS. THE CONTRACTOR SHALL AT THE CONCLUSION OF THE PROJECT PROVIDE ACCURATE "AS-BUILT" DRAWINGS ACCEPTABLE TO THE ARCHITECT.
- ALL MATERIALS PROVIDED TO THE PROJECT SHALL BE NEW. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL ALL INCIDENTAL MATERIALS REQUIRED FOR A COMPLETE INSTALLATION.
- CONTRACTOR SHALL PROVIDE TO THE ARCHITECT A CONSTRUCTION SCHEDULE OF ELECTRICAL WORK. THE CONSTRUCTION SCHEDULE SHALL IDENTIFY ALL SIGNIFICANT MILESTONES WITH COMPLETION DATES.
- CONTRACTOR SHALL PROVIDE ALL REQUIRED CUTTING, PATCHING, EXCAVATION, BACKFILL AND REPAIRS NECESSARY TO RESTORE DAMAGED SURFACES TO EQUAL OR BETTER THAN ORIGINAL CONDITIONS EXISTING AT START OF WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PAINTING ALL EXPOSED CONDUITS AND ELECTRICAL EQUIPMENT. REFER TO ARCHITECT'S PAINTING SECTION FOR REQUIREMENTS.
- ALL ELECTRICAL EQUIPMENT INSTALLED OUTDOORS SHALL BE WEATHERPROOF. EXTERIOR CONDUITS RUN INTO BUILDINGS SHALL BE INSTALLED WITH FLASHING, CAULKED AND SEALED. CONDUITS FOR EXTERIOR ELECTRICAL DEVICES SHALL BE RUN INSIDE BUILDING UNLESS OTHERWISE NOTED ON DRAWINGS.
- ALL CONDUITS UNLESS OTHERWISE NOTED ON DRAWINGS SHALL HAVE AS A MINIMUM TWO (2) #12s WITH ONE (1) #12 GROUND. "TICK" MARKS SHOWN ON CIRCUITRY ARE FOR ROUGH ESTIMATING ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WIRES AND WIRE SIZES REQUIRED BY LATEST CODE.
- ALL BRANCH CIRCUITS SHALL HAVE INDIVIDUAL NEUTRALS. SHARED NEUTRALS ON MULTIWIRE CIRCUITS IS NOT ALLOWED.
- COORDINATE ALL CONDUIT RUNS, ELECTRICAL EQUIPMENT AND PANELS WITH ALL OTHER WORK TO AVOID CONFLICTS.
- CONTRACTOR SHALL PROVIDE IN EVERY NEW EMPTY CONDUIT A DRAW STRING FOR USE IN FUTURE CONSTRUCTION.
- ALL CONDUIT SHALL BE CONCEALED WHERE POSSIBLE. CUT AND PATCH EXISTING WALLS WHERE NECESSARY. WHERE IT IS NECESSARY TO CUT OR BORE EXISTING STRUCTURAL WALLS FOR NEW ELECTRICAL WORK OBTAIN PERMISSION FROM THE ARCHITECT PRIOR TO STARTING WORK. REUSE EXISTING CONDUIT WHERE POSSIBLE.
- WHERE IT IS NOT POSSIBLE TO REUSE EXISTING CONDUIT OR RUN NEW CONCEALED CONDUIT USE NON-METALLIC SURFACE RACEWAY AND BOXES. ROUTING OF ALL NON-METALLIC RACEWAYS SHALL BE APPROVED BY THE ARCHITECT OR OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO EXISTING UNDERGROUND SYSTEMS (GAS, WATER, TELEPHONE, ELECTRICAL, SEWER, ETC.). THE CONTRACTOR SHALL REPAIR & PAY ALL EXPENSES FOR DAMAGE TO EXISTING UNDERGROUND SYSTEMS AS A RESULT OF NEW WORK. REPAIR TO DAMAGED UNDERGROUND SYSTEMS SHALL BE TO THE OWNER'S SATISFACTION WITHOUT EXTRA EXPENSE TO THE OWNER.
- WHERE NON-METALLIC SHEATHED CONDUCTORS ARE FOUND, THE CONTRACTOR SHALL REMOVE TO FULLEST EXTENT PER THE GENERAL DEMOLITION NOTES AND REPLACE WITH CONDUIT. METAL CLAD CABLE WILL BE PERMITTED ON A CASE-BY-CASE BASIS ONLY BY WRITTEN APPROVAL FROM THE ARCHITECT.
- ALL INSTALLATION OF EXPOSED SURFACE MOUNTED RACEWAY IN PUBLIC AREAS SHALL BE REVIEWED BY ARCHITECT BEFORE ROUGH-IN. CONTRACTOR IS TO DETERMINE THE ACCESSIBILITY OF ATTIC, FURRED SPACE, HOLLOW WALLS, ETC. IN EACH AREA AND REVIEW WITH ARCHITECT. IF SYSTEM CAN BE ROUTED CONCEALED EITHER BY FISHING OR ACCESSIBILITY, CONTRACTOR IS TO DO SO. IF INACCESSIBILITY IS DETERMINED, CONTRACTOR SHALL INSTALL SURFACE MOUNTED RACEWAY IN THE MOST AESTHETICALLY PLEASING MANNER AS DETERMINED BY THE ARCHITECT. NO ALLOWANCE FOR ADDITIONAL COMPENSATION DUE TO ROUTING AS DIRECTED BY THE ARCHITECT WILL BE MADE.

GENERAL DEMOLITION NOTES

- CONTRACTOR SHALL FIELD VERIFY EXTENT OF ELECTRICAL DEMOLITION AND QUANTITIES OF ELECTRICAL TO BE REMOVED AS DICTATED BY THE REQUIREMENTS OF THE PROJECT.
- REMOVAL SHALL INCLUDE WIRING, RACEWAY, BOXES, SWITCHES, LIGHT FIXTURES, ETC. AS INDICATED ON THE PLANS AND AS REQUIRED BY THESE DEMOLITION NOTES.
- RACEWAYS ASSOCIATED WITH ELECTRICAL BEING DEMOLISHED WHICH ARE CONCEALED IN EXISTING REMAINING WALLS MAY BE ABANDONED IN PLACE. REMOVE WIRING FROM CONDUIT.
- RACEWAYS ASSOCIATED WITH ELECTRICAL BEING DEMOLISHED WHICH ARE EXPOSED SHALL BE REMOVED.
- WHERE REMOVAL OF EQUIPMENT OR WIRING IS INDICATED, IT SHALL INCLUDE ALL ASSOCIATED WIRING BACK TO LAST ACTIVE REMAINING OUTLET, DEVICE, FIXTURE OR PANEL.
- ELECTRICAL CONTRACTOR SHALL INSURE THAT ALL REMAINING ACTIVE CIRCUITS, DEVICES, OUTLETS, LIGHT FIXTURES, ETC. HAVE NOT BEEN DISCONNECTED OR MADE INOPERATIVE DURING DEMOLITION. ELECTRICAL CONTRACTOR SHALL RESTORE ALL INTERRUPTED OR DISCONNECTED CIRCUITS TO OPERATION.
- ELECTRICAL CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL REMOVED ELECTRICAL EQUIPMENT AND MATERIAL.
- NO REMOVED EQUIPMENT OR MATERIAL SHALL BE REUSED AS PART OF NEW WORK, U.O.N.
- EXISTING REMAINING CONCEALED RACEWAYS MAY BE REUSED FOR NEW WORK PROVIDED THEY MEET ALL REQUIREMENTS OF THE SPECIFICATION FOR NEW WORK.
- EXISTING FLUSH OUTLETS MAY BE REUSED FOR NEW WORK PROVIDED THEY MEET ALL REQUIREMENTS OF THE SPECIFICATION FOR NEW WORK. MEET THE REQUIREMENTS OF THE CURRENT C.E.C. FOR VOLUME AND COINCIDE WITH LOCATION SHOWN FOR THE NEW WORK.
- FLUSH OUTLET BOXES IN EXISTING WALLS TO REMAIN MAY BE ABANDONED IN PLACE. REMOVE DEVICES AND WIRING, PLUG OPENING AND PROVIDE AND INSTALL A BLANK DEVICE PLATE.
- EXISTING WIRING SHOWN HAS BEEN TAKEN FROM OLD PLANS AND IS ASSUMED TO BE CORRECT. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY ACTUAL CONDITIONS AND MAKE ADJUSTMENTS TO SUIT ACTUAL CONDITIONS AND TO MEET THE INTENT OF THE CONTRACT DOCUMENTS.
- WHERE TELEPHONE, COMPUTER DATA, FIBER OPTICS, FIRE ALARM OR OTHER COMMUNICATIONS OUTLETS OR WIRING IS TO BE DEMOLISHED IT SHALL BE REMOVED BACK TO THE NEXT TERMINAL POINT. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OWNER OR HIS REPRESENTATIVE TO HAVE EQUIPMENT AND WIRING DESIGNATED FOR REMOVAL OR PRESERVATION PRIOR TO REMOVAL OF OUTLET BOXES, CONDUIT OR WIRING BY ELECTRICAL CONTRACTOR.
- COORDINATE WITH OWNER PRIOR TO START OF DEMOLITION TO MINIMIZE POWER INTERRUPTIONS. WORK MAY HAVE TO OCCUR DURING NON-REGULAR BUSINESS HOURS. COORDINATE IN WRITING WITH OWNER ONE WEEK PRIOR TO PLANNED POWER INTERRUPTIONS.

ELECTRICAL SYMBOLS & ABBREVIATIONS

SYMBOLS & ABBREVIATIONS SHOWN ARE FOR GENERAL USE. DISREGARD THOSE WHICH DO NOT APPEAR ON THE PLANS.

SECURITY DOOR CONTACTS SECURITY MOTION DETECTOR CCTV CAMERA SECURITY SYSTEM KEYPAD DOOR BELL PUSHBUTTON DOOR CHIME WITH LED RECEPTACLE - DUPLEX * DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT GFCI CONVENIENCE RECEPTACLE - DUPLEX * GFCI CONVENIENCE DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT RECEPTACLE - DOUBLE DUPLEX * HALF SWITCHED DUPLEX RECEPTACLE * SINGLE RECEPTACLE * DUPLEX RECEPTACLE - CEILING MOUNTED LETTER INDICATES DUPLEX HALF CONTROLLED RECEPTACLE * LETTER INDICATES DUPLEX FULLY CONTROLLED RECEPTACLE * FLOOR MOUNTED DUPLEX RECEPTACLE FLOOR MOUNTED BOX POWER OUTLET - SEE PLANS FOR NEMA TYPE * WALL TELEPHONE OUTLET * VOICE/DATA WALL OUTLET * VOICE/DATA OUTLET MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT SURFACE MOUNTED VOICE/DATA WALL OUTLET * SURFACE MOUNTED VOICE/DATA OUTLET MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT WIRELESS ACCESS POINT (WAP) - CEILING MOUNTED WIRELESS ACCESS POINT (WAP) - WALL MOUNTED - FIELD VERIFY HEIGHT VOICE/DATA OUTLET - FLOOR MOUNTED TV OUTLET * VOICE/DATA OUTLET - CEILING MOUNTED INTERIOR SPEAKERS CEILING MOUNTED INTERIOR SPEAKERS WALL MOUNTED CLOCK 48-0 AFF U.O.N. VERIFY BEFORE INSTALLATION	PANELBOARD - FLUSH MOUNTED EQUIPMENT PANEL - FLUSH MOUNTED PANELBOARD - SURFACE MOUNTED EQUIPMENT PANEL - SURFACE MOUNTED METER W/ CURRENT TRANSFORMER JUNCTION BOX - CEILING OR WALL MOUNTED, SIZE PER CODE, TAPE AND TAG WIRES MOTOR CONNECTION NON-FUSED DISCONNECT SWITCH FUSED DISCONNECT SWITCH; FUSED WITH DUAL-ELEMENT FUSES SIZED PER EQUIPMENT MFG'S NAMEPLATE DATA COMBINATION STARTER/FUSED DISCONNECT SWITCH; FUSED DISCONNECT SWITCH ELEMENT FUSES SIZED PER EQUIPMENT MFG'S NAMEPLATE DATA MAGNETIC STARTER - NEMA SIZE INDICATED NEMA 3R ENCLOSURE UNLESS OTHERWISE SPECIFIED CIRCUIT BREAKER GROUND ROD WITH GROUNDWELL BOX GROUND ELECTRODE NORMALLY OPEN CONTACT NORMALLY CLOSED CONTACT TRANSFORMER - SEE SINGLE LINE FOR SIZE PULLBOX FLEX CONDUIT WITH CONNECTION CONDUIT - UP CONDUIT - DOWN SURFACE METAL OR NON-METALLIC RACEWAY CONDUIT - EXISTING CONDUIT - CONCEALED IN WALLS OR CEILING
--	---

ABBREVIATIONS

A	AMPERE	GFCI	GROUND FAULT INTERRUPTING	NTS	NOT TO SCALE
AFF	ABOVE FINISHED FLOOR	GFI	GROUND FAULT INTERRUPTING	OH	OVERALL HEIGHT ON CENTER
ALUMAL	ALUMINUM	GND, G	GROUND	OH	OVERHEAD
ARCH	ARCHITECT	GRS	GRAVELIZED RIGID STEEL	PA	PUBLIC ADDRESS
AWG	AMERICAN WIRE GAUGE	HT	HEIGHT	PB	PULL BOX
BKR	BREAKER	IC	INTERCOM	PF	POWER FACTOR
C	CONDUIT	IDF	INTERMEDIATE DISTRIBUTION FRAME	PH	PHASE
CATV	CABLE TV	INCAND	INCANDESCENT	PIR	PASSIVE INFRARED
CB	CIRCUIT BREAKER	JB	JUNCTION BOX	PNL	PANEL
CCTV	CLOSED CIRCUIT TV	KV	KILOVOLT	PV	PHOTOVOLTAIC
CKT	CIRCUIT	KVA	KILOVOLT AMPERES	PVC	POLYVINYL CHLORIDE
CL	CENTER LINE	KW	KILOWATT	REO	REQUIRED
CLD	CEILING	KV	KILOVOLT	REPT	REMOVABLE POLE RECEPTACLES
C.O.	CONDUIT ONLY	LCP	LIGHTING CONTROL PANEL	REQD	REQUIRED
CTR	CENTER	LTG	LIGHTING	REQM'S	REQUIREMENT(S)
D	DIMMER	LV	LOW VOLTAGE	SHT	SHEET
DM	DIMENSION	KCM	THOUSAND CIRCULAR MILS	SLD	SINGLE LINE DIAGRAM
(E)	EXISTING	M.B.	MAIN CIRCUIT BREAKER	SW	SWITCH
EC	ELECTRICAL CONTRACTOR	MCA	MINIMUM CIRCUIT AMPS	SWB	SWITCHBOARD
(EL)	EVENING LIGHT	MDF	MECHANICAL DISTRIBUTION FRAME	TTB	TELEPHONE TERMINAL BOARD
EM	EMERGENCY	MH	METAL HALIDE	TYP	TYPICAL
EMT	ELECTRICAL METALLIC TUBING	MLO	MAIN LUGS ONLY	UNO	UNLESS OTHERWISE NOTED
EQUIP	EQUIPMENT	MPE	MAIN POINT OF ENTRANCE	UG	UNDERGROUND
EV	ELECTRICAL VEHICLE	MTG	MOUNTING	V	VOLT
FA	FIRE ALARM	MCP	MAXIMUM OVER CURRENT PROTECTION	VD	VOLTAGE DROP
FACP	FIRE ALARM CONTROL PANEL	(N)	NEW	W	WATT
FC	FOOT CANDLE	NIC	NOT IN CONTRACT	W/	WITH
FIN	FINISH	NEC	NOT IN ELECTRICAL CONTRACT	WP	WEATHERPROOF
FL	FLOOR	(NL)	NIGHT LIGHT	XFMR	TRANSFORMER
FLA	FULL LOAD AMPS	NO	NUMBER		
FLOOR	FLOURESCENT FUTURE	NOM	NOMINAL		
(F)	FUTURE				
GC	GENERAL CONTRACTOR				

FIRE ALARM

NOTE: SEE FIRE ALARM DRAWINGS FOR QUANTITIES AND MOUNTING HEIGHTS.

	MANUAL PULL STATION		DUCT SMOKE DETECTOR		AUXILIARY POWER SUPPLY
	STROBE ONLY		TAMPER SWITCH		FIRE SYSTEM ANNUNCIATOR
	HORN ONLY		FLOW SWITCHING VALVE		FIRE ALARM TRANSDUCER OR TRANSMITTER
	MINI HORN		HORN/STROBE		ELEVATOR STATUS/RECALL
	CHIME/STROBE		BELL (GONG)		FIRE ALARM COMMUNICATOR
	HEAT DETECTOR		FIRE ALARM CONTROL PANEL		REMOTE ANNUNCIATORS
	SMOKE DETECTOR		END OF LINE		
	CARBON MONOXIDE ALARM				

**15" A.F.F. TO BOTTOM OF BOX, U.O.N.
 **48" A.F.F. TO TOP OF BOX, U.O.N.
 (#) NUMBER IN BRACKETS DENOTES NUMBER OF CABLE DROPS WHEN MORE THAN (2).

EQUIPMENT ANCHORAGE

MEIP COMPONENT ANCHORAGE NOTES:
 ALL MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC, SECTION 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTER 13, 26 & 30:

- ALL PERMANENT EQUIPMENT AND COMPONENTS.
- TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (e.g. HARD WIRE) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 120 / 220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
- TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT BE DETAILED IN THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS.

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

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

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

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON PRE-APPROVED INSTALLATION GUIDE (e.g. OSHPD OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):
 MP □ MD □ PP □ E ■ - OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.
 MP □ MD □ PP □ E □ - OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVED (OPM #) # _____

APPLICABLE CODES & STANDARDS

- CODES:**
- 2019 CALIFORNIA ADMINISTRATIVE CODE C.C.R., TITLE 24, PART 1.
 - 2019 CALIFORNIA BUILDING CODE (CBC) C.C.R., TITLE 24, VOL. 1 & 2 BASED ON THE 2018 INTERNATIONAL BUILDING CODE (IBC) WITH CALIFORNIA AMENDMENTS.
 - 2019 CALIFORNIA ELECTRICAL CODE (CEC) C.C.R., TITLE 24, PART 3 BASED ON THE 2017 NATIONAL ELECTRICAL CODE (NEC) WITH CALIFORNIA AMENDMENTS.
 - 2019 CALIFORNIA MECHANICAL CODE (CMC) C.C.R., TITLE 24, PART 4 BASED ON THE 2018 UNIFORM MECHANICAL CODE (UMC) WITH CALIFORNIA AMENDMENTS.
 - 2019 CALIFORNIA PLUMBING CODE (CPC) C.C.R., TITLE 24, PART 5 BASED ON THE 2018 UNIFORM PLUMBING CODE (UPC) WITH CALIFORNIA AMENDMENTS.
 - 2019 CALIFORNIA ENERGY CODE C.C.R., TITLE 24, PART 6.
 - 2019 CALIFORNIA FIRE CODE (FC) C.C.R., TITLE 24, PART 9 BASED ON THE 2018 INTERNATIONAL FIRE CODE (IFC) WITH CALIFORNIA AMENDMENTS.
 - 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE C.C.R., TITLE 24, PART 11.
 - 2019 CALIFORNIA REFERENCED STANDARDS CODE C.C.R., TITLE 24, PART 12.
 - TITLE 19 C.C.R. - PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.
 - NATIONAL FIRE ALARM CODE (NFPA 72) 2016.
- STANDARDS:**
- AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
 - ELECTRONICS INDUSTRIES ASSOCIATION (EIA)
 - INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)
 - NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
 - NATIONAL ELECTRICAL TESTING ASSOCIATION (NETA)
 - UNDERWRITER LABORATORIES (UL)
 - CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ACT STANDARDS (CAL/OSHA)

SHEET INDEX

- | | |
|-------|---|
| E0.1 | SYMBOLS, ABBREVIATIONS, CODES, STANDARDS, EQUIPMENT ANCHORAGE, NOTES & SHEET INDEX. |
| E1.1 | PARTIAL ELECTRICAL SINGLE LINE DIAGRAM, DETAILS & PANELBOARD SCHEDULES. |
| E2.1 | ELECTRICAL SITE PLAN. |
| E3.1 | ELECTRICAL DEMOLITION ROOF PLAN - BUILDING A. |
| E4.1 | ELECTRICAL ROOF PLAN - BUILDING A. |
| E4.2 | ELECTRICAL PLAN - BUILDING A. |
| FA0.1 | FIRE ALARM SYMBOLS, ABBREVIATIONS, EQUIPMENT LIST, BATTERY CALCULATION, OPERATIONAL MATRIX, NOTES & FIRE ALARM RISER DIAGRAM. |
| FA4.1 | FIRE ALARM PLAN - BUILDING A. |

(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
 ARCHITECTS & ENGINEERS INCORPORATED
 2155 SOUTH BASCOM AVE. SUITE 100
 CAMPBELL, CA 95008
 PH: 925.851.1000
 FAX: 925.851.1001

REGISTERED ARCHITECT
 MARK C. FINNEY
 NO. C-24673
 STATE OF CALIFORNIA
 9-30-20

REGISTERED ELECTRICAL ENGINEER
 STATE OF CALIFORNIA
 9-30-20

AURUM CONSULTING ENGINEERS
 MONTEREY BAY, INC.
 Project No. 21-382-00
 60 Garden Court • Suite 210 • Monterey, CA 93940
 T: 831.946.3339 • F: 831.946.3338 • www.aecm.com

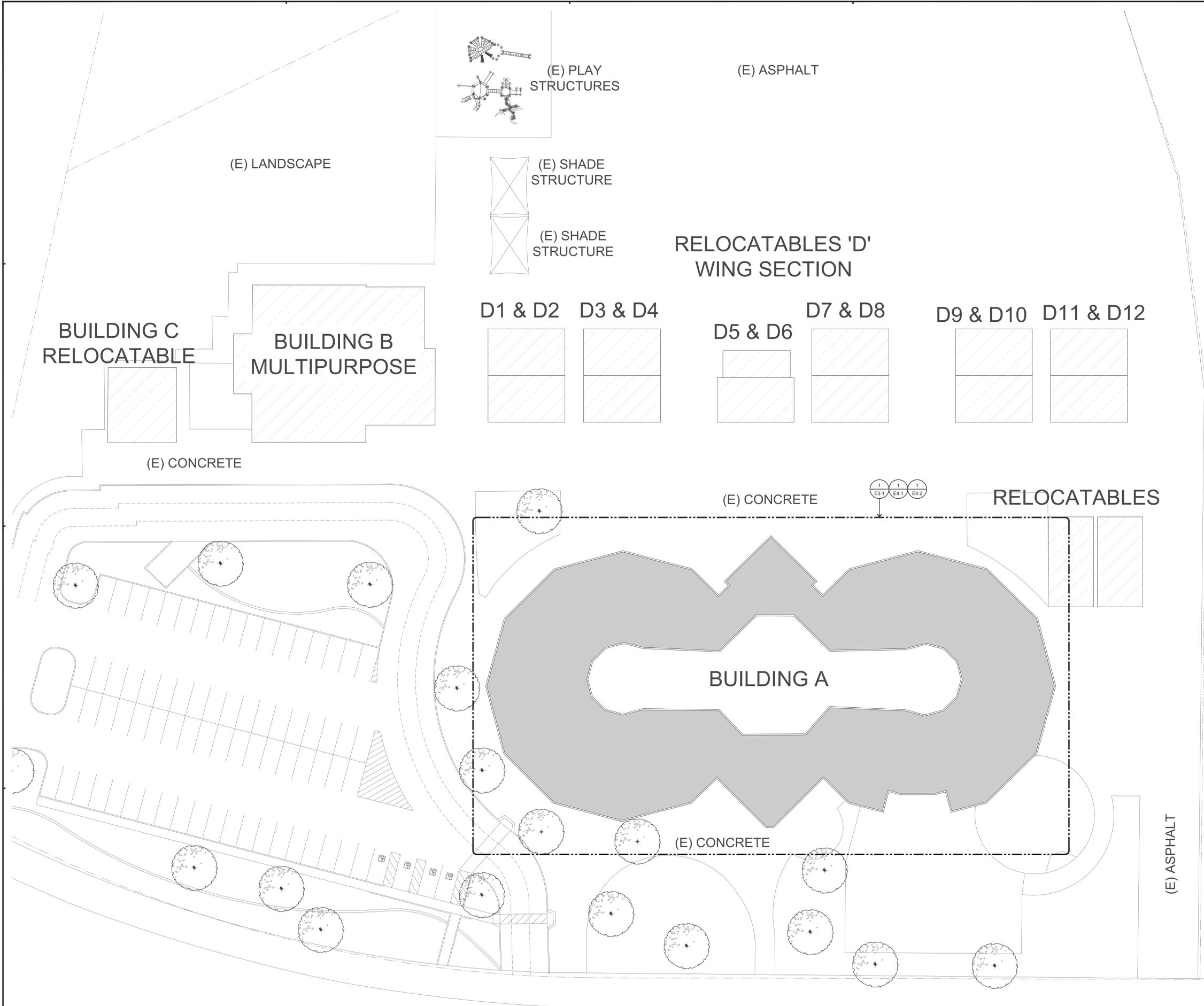
SYMBOLS, ABBREVIATIONS, CODES, STANDARDS, EQUIPMENT ANCHORAGE, NOTES & SHEET INDEX

ROOFING AND HVAC REPLACEMENT
 FAIRLANDS ELEMENTARY SCHOOL
 4151 W. LAS PASITAS BLVD., PLEASANTON, CA. 94588
 PLEASANTON UNIFIED SCHOOL DISTRICT

NO.	ITEM	DATE

DRAWN BY: GP
 CHECKED BY: NA
 SFA JOB NO: 21071
 DATE: 08/16/2021

E0.1



(DSA STAMP AREA)

SUGIMURA
FINNEY
ARCHITECTS
SFA
ARCHITECTURE INTERIORS PLANNING
2175 SOUTH BASCOM AVE.
SUITE 201
CAMPBELL, CA 95008
PHONE: 408.227.0479
FAX: 408.277.4814

LICENSED ARCHITECT
MARK C. FINNEY
NO. C-24673
EXPIRES 9-30-23
STATE OF CALIFORNIA

LICENSED ARCHITECT
STATE OF CALIFORNIA
No. 21045
EXPIRES 9-30-23

AURUM CONSULTING
ENGINEERS
MONTEREY BAY, INC.

Project No: 21-352.00
60 Garden Court • Suite 210 • Monterey, CA 93940
T: 831.946.3338 • F: 831.946.5338 • www.aecmb.com

These drawings are instruments of service and are the property of Aurum Consulting Engineers, Monterey Bay, Inc. No design or other information in the drawings or for use on the specified project, and shall not be used otherwise without the express written approval of Aurum Consulting Engineers, Monterey Bay, Inc.

ELECTRICAL SITE PLAN

ROOFING AND HVAC REPLACEMENT
FAIRLANDS ELEMENTARY SCHOOL
4151 W. LAS PASITAS BLVD, PLEASANTON, CA. 94588
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS

NO.	ITEM	DATE

DRAWN BY: GP

CHECKED BY: NA

SFA JOB NO: DATE:

21071 08/16/2021

E2.1

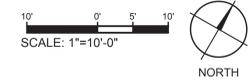
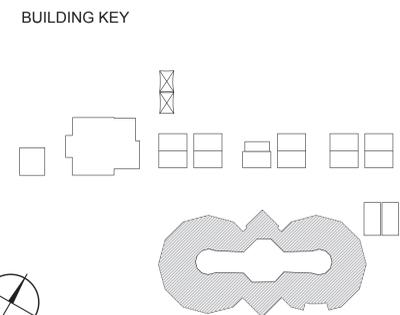
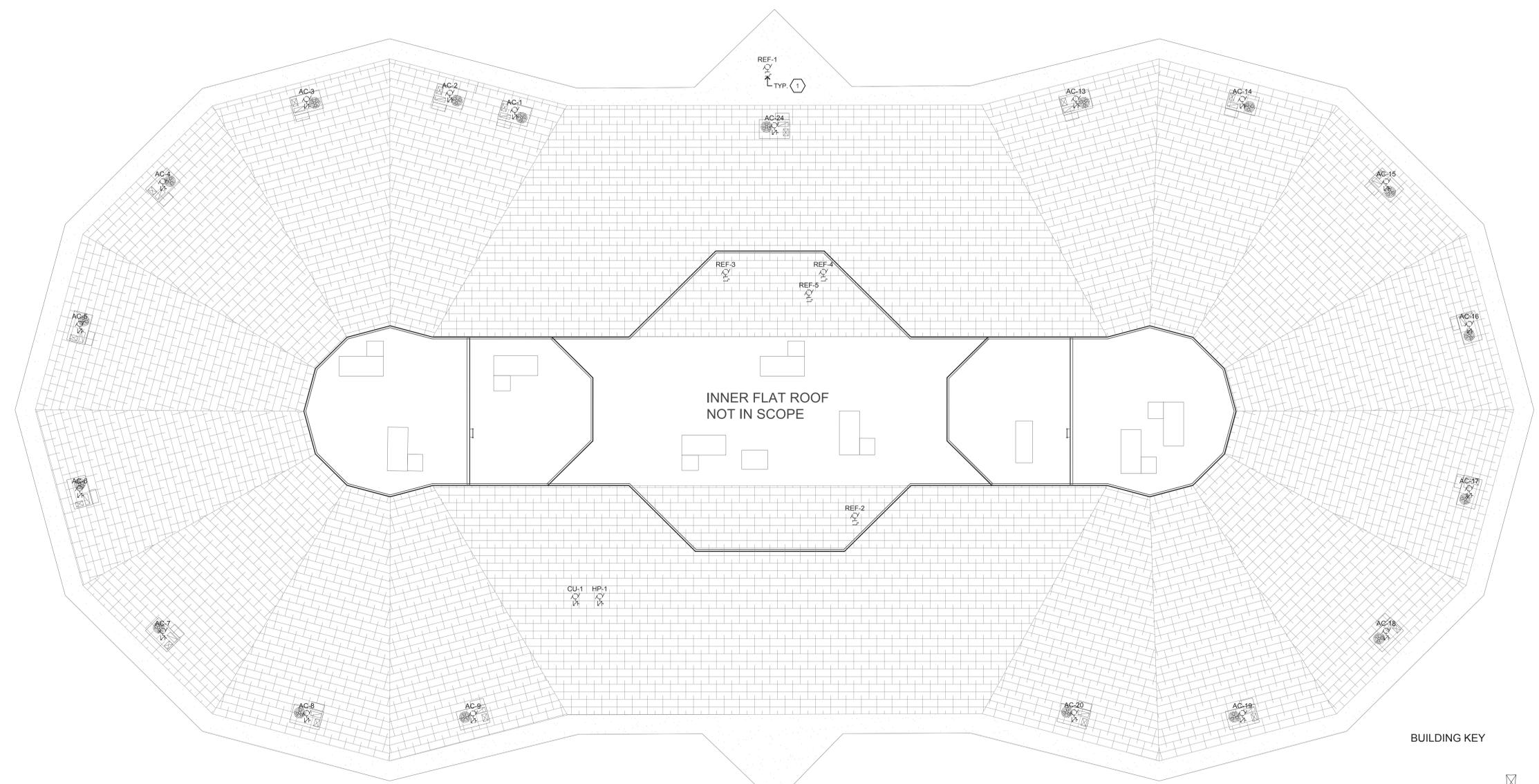
SHEET NOTES

1. CONTRACTOR SHALL DEMOLISH EXISTING MECHANICAL UNIT, ASSOCIATED FEEDER CONDUITS AND CIRCUIT BREAKER PER GENERAL DEMOLITION NOTES ON SHEET ED.1.



AURUM CONSULTING ENGINEERS
MONTEREY BAY, INC.
Project No: 21-382.00
60 Garden Court • Suite 210 • Monterey, CA 93940
TEL: 831.946.3338 • F: 831.946.5338 • www.aurem.com

These drawings are instruments of service and are the property of Aurum Consulting Engineers, Monterey Bay, Inc. for use on the specified project and shall not be used elsewhere without the expressed written permission of Aurum Consulting Engineers, Monterey Bay, Inc.



ELECTRICAL DEMOLITION PLAN - BUILDING A

**ROOFING AND HVAC REPLACEMENT
FAIRLANDS ELEMENTARY SCHOOL
4151 W. LAS PASITAS BLVD, PLEASANTON, CA. 94588
PLEASANTON UNIFIED SCHOOL DISTRICT**

REVISIONS NO.	ITEM	DATE

DRAWN BY: GP
CHECKED BY: NA
SFA JOB NO: 21071
DATE: 08/16/2021

E3.1

BRANCH CIRCUIT CONDUCTOR SIZING TABLE

CIRCUIT CAPACITY/VOLTAGE	CIRCUIT LENGTH	REQUIREMENT
20/120	56'-90'	3/4" C. 2 #10 & 1 #10 GND.
20/120	91'-140'	3/4" C. 2 #8 & 1 #10 GND.
20/277	131'-205'	3/4" C. 2 #10 & 1 #10 GND.
20/277	206'-330'	3/4" C. 2 #8 & 1 #10 GND.

NOTE:
CONTRACTOR SHALL SIZE BRANCH CIRCUIT CONDUCTORS PER THE TABLE ABOVE AS DETERMINED BY THE CIRCUIT CONDUCTOR LENGTH. U.O.N. CONTRACTOR SHALL SPLICE TO #12 AWG WITHIN TERMINATION BOX FOR DEVICE CONNECTION IF NECESSARY.

SHEET NOTES

- AIR CONDITIONING UNIT; 12 MCA, 480V, 3Ø.
- AIR CONDITIONING UNIT; 14 MCA, 480V, 3Ø.
- POWER EXHAUST FAN; 1.9 MCA, 480V, 3Ø.
- CONDENSING UNIT; 11 MCA, 208V, 1Ø.
- EXHAUST FAN; 1/15 HP, 120V, 1Ø. CONNECT VIA EXISTING LIGHTING CONTROLS.
- EXHAUST FAN; 1/4 HP, 120V, 1Ø. CONNECT VIA EXISTING LIGHTING CONTROLS.
- 3/4" C. 3 #6 & 1 #10 GND.
- PROVIDE AND INSTALL 8" SQ. X 4" DEEP NEMA 3R PULLCAN FOR SPLICE OF NEW CIRCUIT TO MECHANICAL UNITS.
- 3/4" C. 2 #8 & 1 #10 GND. TO EXISTING PANEL AS INDICATED. AT EXISTING PANEL CONTRACTOR SHALL PROVIDE AND INSTALL (1) 15 AMP, 1-POLE BREAKER WITH ASSOCIATED MOUNTING HARDWARE. NEW BREAKER SHALL MATCH EXISTING IN RATING AND TYPE.
- 3/4" C. 2 #8 & 1 #10 GND. TO EXISTING PANEL AS INDICATED. AT EXISTING PANEL CONTRACTOR SHALL PROVIDE AND INSTALL (1) 20 AMP, 1-POLE BREAKER WITH ASSOCIATED MOUNTING HARDWARE. NEW BREAKER SHALL MATCH EXISTING IN RATING AND TYPE.
- 3/4" C. 2 #8 & 1 #10 GND. TO EXISTING PANEL AS INDICATED. AT EXISTING PANEL CONTRACTOR SHALL PROVIDE AND INSTALL (1) 30 AMP, 1-POLE BREAKER WITH ASSOCIATED MOUNTING HARDWARE. NEW BREAKER SHALL MATCH EXISTING IN RATING AND TYPE.
- CONNECT ALL CONVENIENCE RECEPTACLES FURNISHED WITH NEW AIR CONDITIONING UNITS; (10) RECEPTACLES MAX. PER 120V CIRCUIT.
- CONTRACTOR SHALL PROVIDE AND INSTALL 8" SQ. X 4" DEEP NEMA 3R PULLCAN. CONTRACTOR SHALL INSTALL MINIMUM (2) AS NECESSARY TO NOT EXCEED 270 DEGREES OF CONDUIT BENDS.

GENERAL NOTES:

- SEAL ALL EXTERIOR/INTERIOR BUILDING PENETRATIONS. CUT AND PATCH WALLS/CeilINGS FOR CONDUIT ROUTING AS NECESSARY. PAINT/FINISH EXPOSED CONDUITS/BOXES TO MATCH BUILDING FINISH. COORDINATE WITH DISTRICT & ARCHITECT FOR EXACT REQUIREMENTS.
- CONTRACTOR SHALL ROUTE ALL CONDUITS FOR MECHANICAL UNITS AND ROOF EQUIPMENT IN ACCESSIBLE CEILING SPACE BELOW.

(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
 ARCHITECTS - REGISTERED PLANNERS

2155 SOUTH BASCOM AVE.
 SUITE 100
 CAMPBELL, CA 95008
 PHONE: 408.734.0101
 FAX: 408.734.0102

LICENSED ARCHITECT
 MARK C. FINNEY
 NO. C-24673
 STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
 NEW TO AIRBORNE
 21045
 FAIRLANDS
 STATE OF CALIFORNIA

AURUM CONSULTING ENGINEERS
 MONTEREY BAY, INC.

Project No: 21-352.00
 60 Garden Court • Suite 210 • Monterey, CA 93940
 T: 831.946.3338 • F: 831.946.5338 • www.aecm.com

These drawings are instruments of service and are the property of Aurum Consulting Engineers, Monterey Bay, Inc. for use on the specified project and shall not be used otherwise without the expressed written permission of Aurum Consulting Engineers, Monterey Bay, Inc.

ELECTRICAL ROOF PLAN - BUILDING A

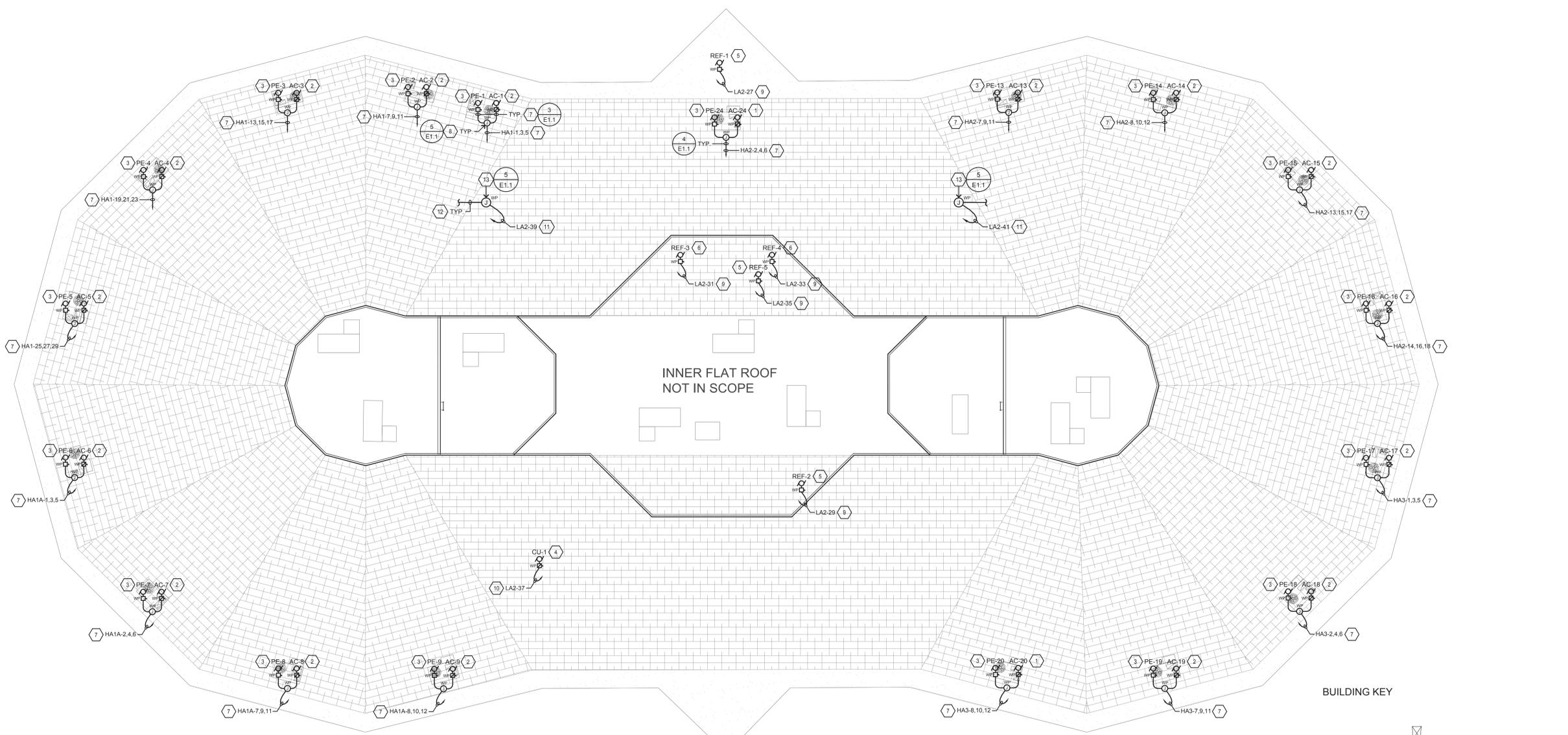
**ROOFING AND HVAC REPLACEMENT
 FAIRLANDS ELEMENTARY SCHOOL
 4151 W. LAS PASITAS BLVD, PLEASANTON, CA. 94588
 PLEASANTON UNIFIED SCHOOL DISTRICT**

REVISIONS

NO.	ITEM	DATE

DRAWN BY: GP
 CHECKED BY: NA
 SFA JOB NO: 21071
 DATE: 08/16/2021

E4.1



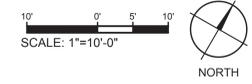
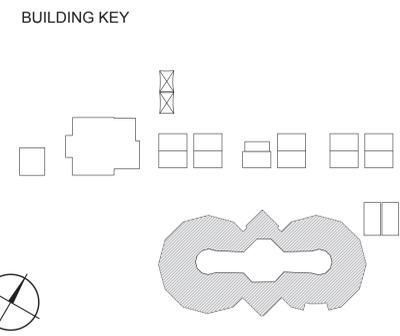
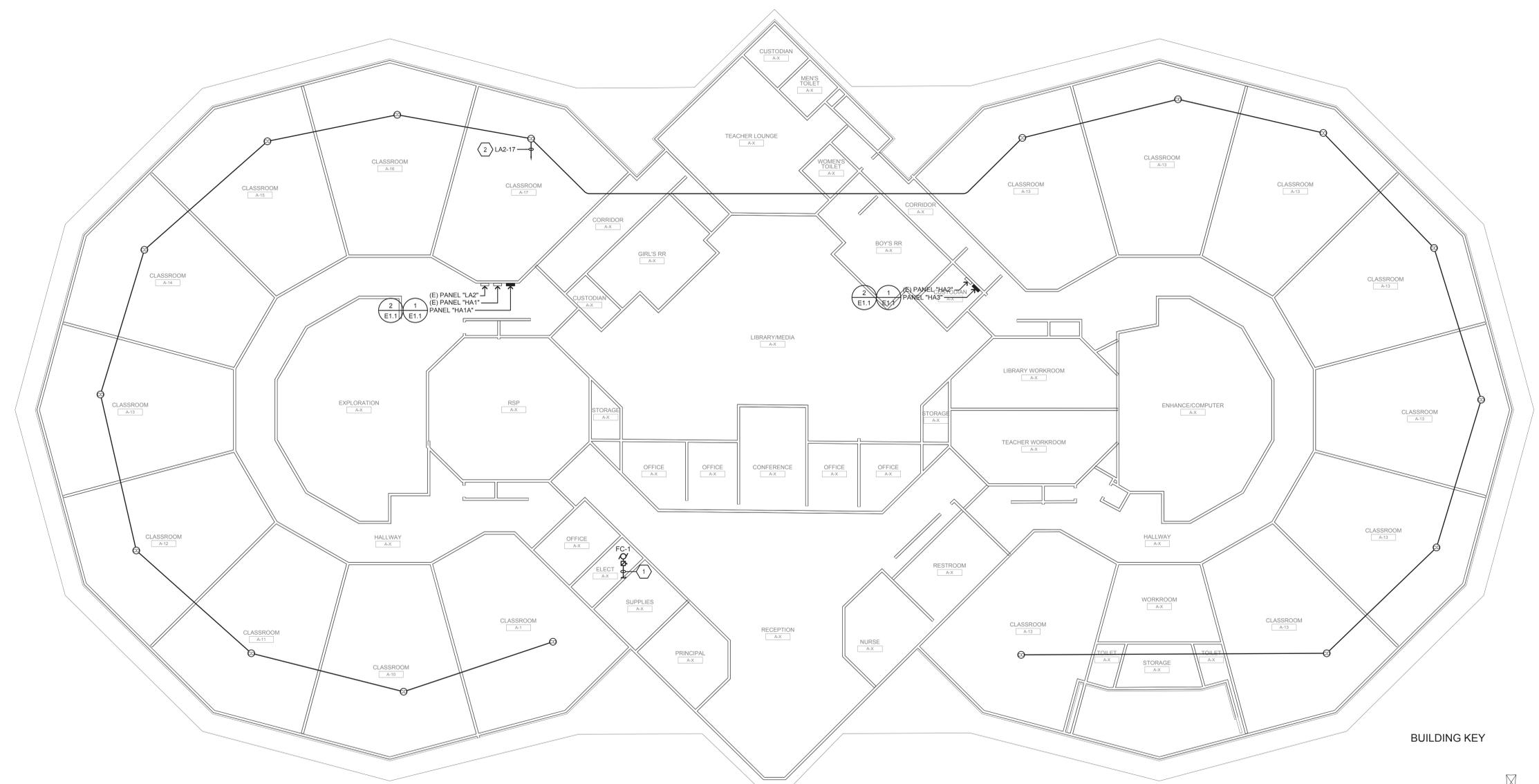
CIRCUIT AMPACITY/VOLTAGE	CIRCUIT LENGTH	REQUIREMENT
20/120	56'-90'	1/2" C., 2 #10 & 1 #10 GND.
20/120	91'-140'	1/2" C., 2 #8 & 1 #10 GND.
20/277	131'-205'	1/2" C., 2 #10 & 1 #10 GND.
20/277	206'-330'	1/2" C., 2 #8 & 1 #10 GND.

NOTE:
CONTRACTOR SHALL SIZE BRANCH CIRCUIT CONDUCTORS PER THE TABLE ABOVE AS DETERMINED BY THE CIRCUIT CONDUCTOR LENGTH, U.O.N. CONTRACTOR SHALL SPLICE TO #12 AWG WITHIN TERMINATION BOX FOR DEVICE CONNECTION IF NECESSARY.

SHEET NOTES

- PROVIDE AND INSTALL 1/2" CONDUIT WITH CIRCUIT WIRES TO CONDENSING UNIT "CU-1" LOCATED ON ROOF. SEE SHEET E4.1 FOR LOCATION. SEE MECHANICAL DRAWINGS FOR EXACT REQUIREMENTS.
- CONTRACTOR SHALL PROVIDE AND INSTALL 20 AMP, 1-POLE BREAKER WITH ASSOCIATED MOUNTING HARDWARE AND LOCK ON DEVICE, RED IN COLOR, NEW BREAKER SHALL MATCH EXISTING IN RATING AND TYPE.

GENERAL NOTE:
SEAL ALL EXTERIOR/INTERIOR BUILDING PENETRATIONS, CUT AND PATCH WALLS/CEILING FOR CONDUIT ROUTING AS NECESSARY. PAINT/FINISH EXPOSED CONDUITS/BOXES TO MATCH BUILDING FINISH. COORDINATE WITH DISTRICT & ARCHITECT FOR EXACT REQUIREMENTS.



AURUM CONSULTING ENGINEERS
MONTEREY BAY, INC.
Project No. 21-352.00
60 Garden Court • Suite 210 • Monterey, CA 93940
T: 831.946.3338 • F: 831.946.5338 • www.aecm.com

These drawings are instruments of service and are the property of AURUM CONSULTING ENGINEERS MONTEREY BAY, INC. No part of these drawings may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the expressed written permission of AURUM CONSULTING ENGINEERS MONTEREY BAY, INC.

ELECTRICAL PLAN - BUILDING A
ROOFING AND HVAC REPLACEMENT
FAIRLANDS ELEMENTARY SCHOOL
4151 W. LAS PASITAS BLVD, PLEASANTON, CA. 94588
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS NO.	ITEM	DATE

DRAWN BY: GP
CHECKED BY: NA
SFA JOB NO: 21071
DATE: 08/16/2021

E4.2

FIRE ALARM EQUIPMENT LIST			
SYMBOL	DESCRIPTION AND MODEL NUMBER	MFGR'S PART No.	CSFM LISTING
[FACP]	(E) ADDRESSABLE FIRE ALARM CONTROL PANEL, NOTIFIER AM2020 SERIES.	AM2020	7165-0028-0141
[M]	ADDRESSABLE MONITOR MODULE, NOTIFIER FMM SERIES.	FMM-1	7300-0028-0219
[C]	CARBON MONOXIDE DETECTOR WITH CONTACT RELAY, GENTEX CO1209.	CO1209	5276-0659-0143

- ### FIRE ALARM GENERAL NOTES
- WIRING MUST BE LISTED FOR USE AS REQUIRED BY TITLE 24/CEC, ARTICLE 760.
 - WIRE USED IN WET LOCATIONS SHALL BE OF AN APPROVED TYPE IN ACCORDANCE WITH 3-310-8, T24/CEC (I.E. THHW OR EQUAL).
 - UNDER GROUND AND EXTERIOR CONDUITS TO HAVE WATERTIGHT FITTINGS AND WIRES APPROVED FOR WET LOCATION.
 - ALL CONDUCTORS SHALL BE ROUTED IN CONDUIT UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS. MINIMUM CONDUIT SIZE SHALL BE 3/4".
 - THE CONDUIT AND WIRE SHOWN ON THESE PLANS ARE SHOWN DIAGRAMMATICALLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD TO SUIT FIELD CONDITIONS. "AS-BUILT" PLANS SHALL BE MAINTAINED AND BE PROVIDED AS REQUIRED BY THE PROJECT INSPECTOR OF RECORD.
 - PENETRATIONS OF FIRE RATED WALLS SHALL BE PROTECTED IN ACCORDANCE WITH CALIFORNIA BUILDING CODE, CHAPTER 7, TITLE 24. PROVIDE DETAILS OF THROUGH PENETRATION FIRE STOP SYSTEMS FOR ALL PIPE/CABLE/CONDUIT PASSING THROUGH FIRE RATED WALLS/FLOORS REQUIRING PROTECTED OPENINGS.
 - ALL DEVICES SHALL BE "CSFM" LISTED.
 - EXTERIOR DEVICES SHALL BE LISTED FOR EXTERIOR USE BY "CSFM."
 - AUDIBLE ALARM PRODUCED BY "FACP" SHALL SOUND THE CALIFORNIA UNIFORM SIGNAL IN TEMPORAL MODE.
 - AUDIBLE FIRE ALARM SOUND LEVEL SHALL BE AT LEAST 15DBA ABOVE THE AVERAGE SOUND LEVEL.
 - AUDIBLE SIGNALS INTENDED FOR OPERATION IN THE PUBLIC SHALL HAVE A SOUND LEVEL OF NOT LESS THAN 75DBA AT 10 FEET OR MORE THAN 110DBA AT THE MINIMUM HEARING DISTANCES FROM THE AUDIBLE APPLIANCE.
 - WHERE VISUAL DEVICES ARE REQUIRED, VISUAL DEVICE SHOULD NOT EXCEED 2 FLASHES PER SECOND AND SHOULD NOT BE SLOWER THAN 1 FLASH EVERY SECOND. THE DEVICE SHALL HAVE A PULSING LIGHT SOURCE NOT LESS THAN 15 CANDELA. NO PLACE IN ANY ROOM SHALL BE MORE THAN 50 FEET FROM A DEVICE.
 - APPROVED BY THE "DIVISION OF THE STATE ARCHITECT/OFFICE OF REGULATION SERVICES," CONTRACTOR SHALL PROVIDE COPIES OF APPROVED PLANS TO THE PROJECT INSPECTOR OF RECORD PRIOR TO BEGINNING WORK. THE CONTRACTOR SHALL SUBMIT SHOP DRAWING TO ENGINEER PRIOR TO PURCHASE FOR REVIEW. THE FIRE PROTECTION SYSTEM SHALL NOT BE INSTALLED UNTIL SHOP DRAWINGS HAVE BEEN SUBMITTED TO AND RECEIVED BY THE ENGINEER OF RECORD.
 - FINAL ALARM TEST SHALL BE WITNESSED BY THE DSA INSPECTOR OF RECORD (OR) BOTH THE DSA INSPECTOR OF RECORD (OR) AND THE LOCAL FIRE AUTHORITY SHALL BE NOTIFIED OF DATE AND TIME OF FINAL FIRE ALARM TESTING BY THE FIRE ALARM CONTRACTOR. FIRE ALARM CONTRACTOR SHALL PROVIDE "RECORD OF COMPLETION" TO THE INSPECTOR OF RECORD (OR)/DSA AFTER COMPLETION OF OPERATIONAL ACCEPTANCE TEST.
 - POWER SERVICE SHALL BE ON A DEDICATED, 120V BRANCH CIRCUIT, WITH A RED MARKING AND IDENTIFIED AS "FIRE ALARM CIRCUIT CONTROL."
 - AUTOMATIC FIRE ALARM SYSTEM SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION AS REQUIRED BY NFPA 72 AS AMENDED BY CFC CHAPTER 80. THE SUPERVISING STATION SHALL BE LISTED AS EITHER ULFPC OR ULJIS BY UNDERWRITERS LABORATORY OR SHALL MEET THE REQUIREMENTS OF FACTORY MUTUAL RESEARCH APPROVAL STANDARD 3011.

SYMBOLS & ABBREVIATIONS

SYMBOLS

— CONDUIT - CONCEALED IN WALLS OR CEILING.
 - - - - - CONDUIT - IN OR BELOW FLOOR: 3/4" MIN.
 --- CONDUIT CONTINUATION.
 201 ROOM NUMBER.
 2 SHEET NOTE REFERENCE SYMBOL; SEE ASSOCIATED NOTE ON SAME SHEET.
 2 E1 DETAIL OR SECTION DESIGNATION.

ABBREVIATIONS

ARCH	ARCHITECT	FSD	FIRE SMOKE DAMPER
AWG	AMERICAN WIRE GAUGE	IDC	INITIATING DEVICE CIRCUITS
BKR	BREAKER	(N)	NEW
C	CONDUIT	NAC	NOTIFICATION APPLIANCE CIRCUITS
CB	CIRCUIT BREAKER		
CKT	CIRCUIT	NIC	NOT IN CONTRACT
CLG	CEILING	NO	NUMBER
(E)	EXISTING	SLC	SIGNALING LINE CIRCUITS
EOL	END OF LINE	TYP	TYPICAL
FA	FIRE ALARM	UON	UNLESS OTHERWISE NOTED
FACP	FIRE ALARM CONTROL PANEL	WP	WEATHERPROOF
FBO	FURNISHED BY OTHERS		

TYPICAL ZONE NOMENCLATURE

75 "S2" DENOTES SIGNAL CIRCUIT #2
 75CD' DENOTES CANDELA RATING
 "4" DENOTES DEVICE #4
 "M" DENOTES MODULE DEVICE; "D" DENOTES DETECTOR DEVICE
 "1" DENOTES LOOP#
 M1-5 "5" DENOTES DEVICE #5
 CROSSHATCH INDICATES NUMBER OF WIRES REQUIRED. SUBSCRIPT LETTER INDICATES TYPE OF CIRCUIT. SEE GENERAL NOTES THIS SHEET FOR NUMBER & TYPE OF WIRES AND CIRCUIT TYPE.

(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
 ARCHITECTS - INTERIORS - PLANNERS
 2155 SOUTH BASCOM AVE. SUITE 100
 CAMPBELL, CA 95008
 PH: 415-497-8888
 FAX: 415-497-8888

REGISTERED ARCHITECT
 MARK C. FINNEY
 NO. C-24673
 EXPIRES 9-30-2019
 STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
 NAJIB ANWARY PE
 NO. 51045
 EXPIRES 12-31-2019
 STATE OF CALIFORNIA

BATTERY CALCULATIONS

EXISTING FIRE ALARM CONTROL PANEL "FACP"						
QTY	PRODUCT ID	DESCRIPTION	STANDBY		ALARM	
			EACH	TOTAL	EACH	TOTAL
1	AM2020	(E) PRIMARY INPUT POWER UNIT	0.1300	0.1300	0.0000	0.0000
1	CPU-2020	(E) PRIMARY DISPLAY	0.1200	0.1200	0.1200	0.1200
1	SLC	(E) SLC DEVICE ACTIVATION CURRENT	0.2000	0.2000	0.2000	0.2000
1	LCD-80	(E) LIQUID CRYSTAL DISPLAY MODULE	0.0500	0.0500	0.1000	0.1000
		PANEL STANDBY CURRENT		0.5000		0.5000
		PANEL ALARM CURRENT				0.4120

FIELD DEVICES						
QTY	PRODUCT ID	DESCRIPTION	STANDBY		ALARM	
			EACH	TOTAL	EACH	TOTAL
17	FMM-1	ADDRESSABLE MONITOR MODULE	0.0004	0.0068	0.0004	0.0068
		CONTROL PANEL		0.0000		0.0000
		FIELD DEVICES		0.0068		0.0068
		TOTAL STANDBY CURRENT		0.5068		0.5068
		24 HOUR STANDBY		12.1632		12.1632
		TOTAL ALARM CURRENT		0.4120		0.4120
		15 MINUTES OF ALARM (X 20)		8.2400		8.2400
		TOTAL BATTERY REQUIREMENT		20.4032		20.4032
		SAFETY MARGIN (20%)		4.0806		4.0806
		BATTERY SUPPLIED		24.4838		24.4838

PROJECT DESCRIPTION

SCOPE OF WORK:
 EXTENSION OF INITIATION DETECTION CIRCUIT FOR ADDITION OF CARBON MONOXIDE DEVICES EXISTING CLASSROOMS IN EXISTING BUILDING "A".

SYSTEM DESCRIPTION:
 SLC = CLASS B
 IDC = CLASS B
 NAC = CLASS B

FIRE ALARM SYSTEM DESIGN BY:
 NAJIB ANWARY PE.

FIRE ALARM SYSTEM OPERATIONAL MATRIX

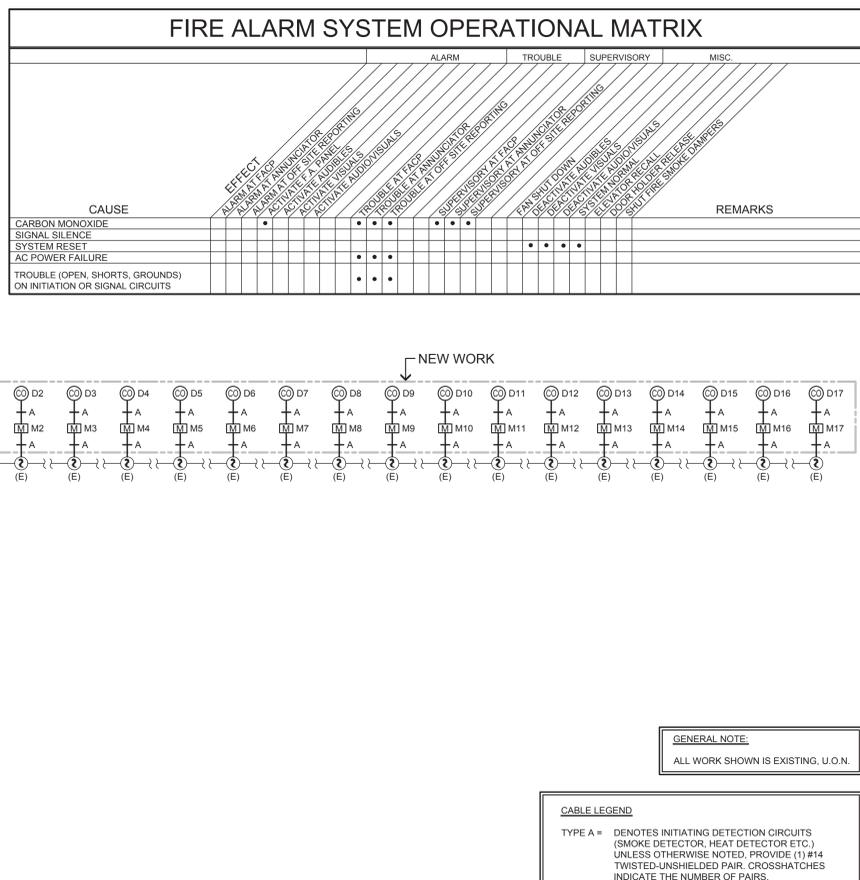
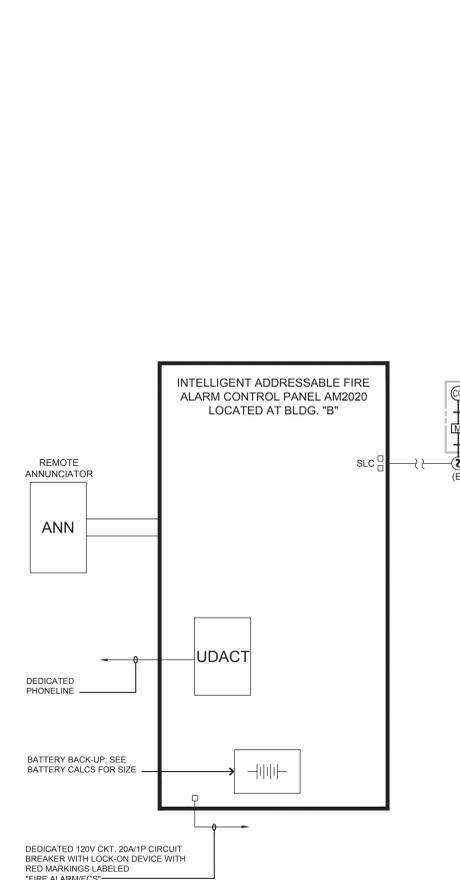
CAUSE	EFFECT				REMARKS
	ALARM	TROUBLE	SUPERVISORY	MISC.	
CARBON MONOXIDE	•				
SIGNAL SILENCE					
SYSTEM RESET					
AC POWER FAILURE					
TROUBLE (OPEN, SHORTS, GROUNDS) ON INITIATION OR SIGNAL CIRCUITS					

PROJECT NO. 21-382-00

60 Garden Court • Suite 210 • Monterey, CA 93940
 T: 831-946-3330 • F: 831-946-5338 • www.aacem.com

These drawings are instruments of service and are the property of AURUM CONSULTING ENGINEERS. ANY REUSE, REPRODUCTION, OR ALTERATION OF THESE DRAWINGS FOR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF AURUM CONSULTING ENGINEERS IS STRICTLY PROHIBITED.

AURUM CONSULTING ENGINEERS
 MONTEREY BAY, INC.



1 EXISTING FIRE ALARM RISER DIAGRAM
 NO SCALE

NEW WORK
 CABLE LEGEND
 TYPE A = DENOTES INITIATING DETECTION CIRCUITS (SMOKE DETECTOR, HEAT DETECTOR ETC.) UNLESS OTHERWISE NOTED. PROVIDE (1) #14 TWISTED-UNSHIELDED PAIR. CROSSHATCHES INDICATE THE NUMBER OF PAIRS.

FIRE ALARM SYMBOLS, ABBREVIATIONS, EQUIPMENT LIST, BATTERY CALCULATION, OPERATIONAL MATRIX, NOTES & FIRE ALARM RISER DIAGRAM

ROOFING AND HVAC REPLACEMENT
 FAIRLANDS ELEMENTARY SCHOOL
 4151 W. LAS PASITAS BLVD, PLEASANTON, CA. 94588
 PLEASANTON UNIFIED SCHOOL DISTRICT

NO.	ITEM	DATE

DRAWN BY: GP
 CHECKED BY: NA
 SFA JOB NO: 21071
 DATE: 08/16/2021

FA0.1

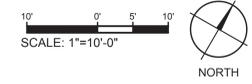
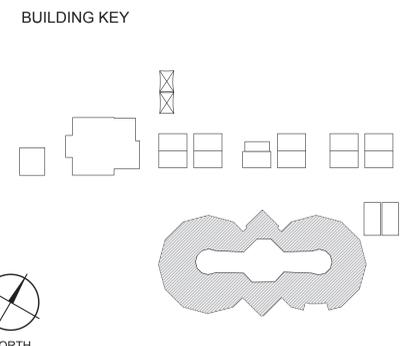
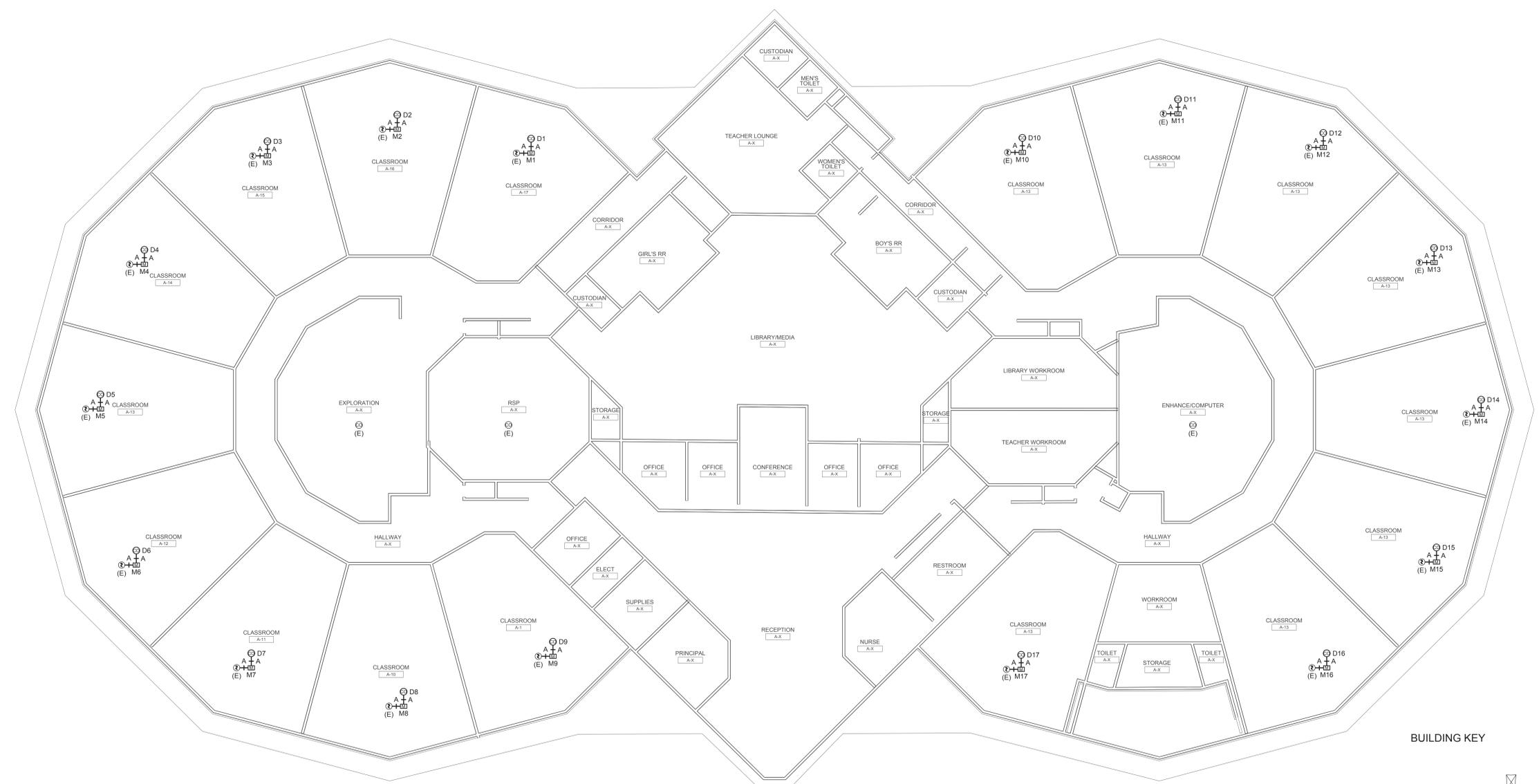
CABLE LEGEND
 TYPE A = DENOTES INITIATING DETECTION CIRCUITS (SMOKE DETECTOR, HEAT DETECTOR ETC.) UNLESS OTHERWISE NOTED. PROVIDE (1) #14 TWISTED-UNSHIELDED PAIR. CROSSHATCHES INDICATE THE NUMBER OF PAIRS.

(DSA STAMP AREA)
SUGIMURA FINNEY ARCHITECTS
SFA
 ARCHITECTURE INTERIORS PLANNING
 2195 SOUTH BASCOM AVE.
 SUITE 201
 CAMPBELL, CA 95008
 PHONE: 408.271.8279
 FAX: 408.271.8955



AURUM CONSULTING ENGINEERS
 MONTEREY BAY, INC.
 Project No. 21-352.00
 60 Garden Court • Suite 210 • Monterey, CA 93940
 T: 831.946.3330 • F: 831.946.5338 • www.aecm.com

These drawings are instruments of service and are the property of Aurum Consulting Engineers, Monterey Bay, Inc. No part of these drawings may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the expressed written permission of Aurum Consulting Engineers, Monterey Bay, Inc.



FIRE ALARM PLAN - BUILDING A
ROOFING AND HVAC REPLACEMENT
FAIRLANDS ELEMENTARY SCHOOL
 4151 W. LAS PASITAS BLVD, PLEASANTON, CA. 94588
 PLEASANTON UNIFIED SCHOOL DISTRICT

NO.	ITEM	DATE

DRAWN BY: GP
 CHECKED BY: NA
 SFA JOB NO: 21071
 DATE: 08/16/2021

FA4.1