



3584-003-000

3546 CONCOURS STREET ONTARIO, CA 91764

OWNER 415 492-3200

ARCHITECTURAL

408 977-9160

STRUCTURAL 650 617-5930

MECHANICAL

PLUMBING

ELECTRICAL 1209 Pleasant Grove Blvd Roseville, CA 95678 916 771-0778

FIRE ALARM LP Consulting Engineers, INC. 1209 Pleasant Grove Blvd Roseville, CA 95678 916 771-0778

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT: SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

SHEET NAME: COVER SHEET



DATE: 2024.10.01 SHEET:



CLIENT PROJ NO:

### DSA SUBMITTAL

HMC Architects 909 989 9979 / www.hmcarchitects.com **PROJECT TEAM** SAN RAFAEL CITY SCHOOLS 310 NOVA ALBION WAY SAN RAFAEL, CA 94903 HMC ARCHITECTS 333 W SAN CARLOS ST. SUITE 750 SAN JOSE, CA 95110 HOBACH-LEWIN, INC. 260 SHERIDIAN AVE PALO ALTO, CA 94306 LP Consulting Engineers, INC. 1209 Pleasant Grove Blvd Roseville, CA 95678 916 771-0778 LP Consulting Engineers, INC. 1209 Pleasant Grove Blvd Roseville, CA 95678 916 771-0778 LP Consulting Engineers, INC.



### **GENERAL NOTES**

- CONSTRUCTION DOCUMENTS DESCRIBE THE PRODUCTS, SYSTEMS, QUANTITIES, CONFIGURATION, AND PERFORMANCE SPECIFICATIONS THAT DELIVER THE OVERALL DESIGN INTENT OF THE PROJECT. THE CONSTRUCTION DOCUMENT DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY BOTH. PERFORMANCE BY THE CONSTRUCTION
- TEAM SHALL BE CONSISTENT WITH THE CONSTRUCTION DRAWINGS AND SPECIFICATIONS AS NECESSARY TO DELIVER THE INDICATED RESULTS OF THE DESIGN INTENT. VERIFY ALL DIMENSIONS, LOCATIONS OF EXISTING UTILITIES, AND CONDITIONS ON
- THE JOB SITE PRIOR TO THE START OF WORK OR PORTIONS OF THE WORK. NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN THE ACTUAL FIELD CONDITIONS AND THE CONSTRUCTION DOCUMENTS. EXISTING CONDITIONS ARE INDICATED AS A RESULT OF FIELD OBSERVATIONS, INFORMATION SHOWN ON AVAILABLE DOCUMENTS AND FIELD CONDITIONS AT THE TIME OF
- PREPARATION. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH ALL GOVERNING CODES. ORDINANCES, REGULATIONS AND LAWS. THE DESIGN ADEQUACY AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS AND
- SCAFFOLDING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. WHERE ANY CONFLICT OCCURS BETWEEN THE REQUIREMENTS OF LAWS, CODES, ORDINANCES, RULES AND REGULATIONS, THE MOST STRINGENT SHALL GOVERN. IN NO CASE SHALL WORKING DIMENSIONS BE SCALED FROM PLANS, SECTIONS OR DETAILS ON THE DRAWINGS.
- DETAILS MARKED 'TYPICAL' SHALL APPLY IN ALL CASES UNLESS SPECIFICALLY NOTED OTHERWISE ENACT ALL MEASURES TO PROTECT AND 10. SAFEGUARD ALL EXISTING ELEMENTS TO
- REMAIN FROM BEING DAMAGED. REPLACE OR REPAIR EXISTING ELEMENTS DAMAGED BY THE EXECUTION OF THIS CONTRACT TO EQUAL OR BETTER CONDITION. 11. PRIOR TO THE START OF WORK THE CONTRACTOR SHALL COORDINATE
- BETWEEN THE REQUIREMENTS OF ALL DISCIPLINES HEREIN AND BETWEEN THE REQUIREMENTS OF ALL DRAWINGS AND SPECIFICATIONS IN ORDER THAT ALL ITEMS SATISFACTORILY RELATE TO ONE ANOTHER. NOTIFY ARCHITECT IMMEDIATELY REGARDING ANY ITEMS THAT CANNOT BE COORDINATED.
- CONTRACTOR SHALL EXCERCISE EXTREME 12. CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID EXISTING DUCTS, PIPING, CONDUIT, ETC. AND TO PREVENT HAZARD TO PERSONNEL AND/OR TO EXISTING UNDERGROUND UTILITIES OR STRUCTURES. THE CONTRACTOR SHALL
- IMMEDIATELY NOTIFY THE ARCHITECT SHOULD SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED. THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. CHANGES TO THE APPROVED DRAWINGS 13.
- AND/OR SPECIFICATIONS SHALL BE MADE BY ADDENDA OR A CHANGE ORDER. CUTTING, BORING, SAWCUTTING OR 14 DRILLING THROUGH THE EXISTING OR NEW STRUCTURAL ELEMENTS SHALL NOT TO BE STARTED UNTIL THE DETAILS HAVE BEEN REVIEWED AND APPROVED BY THE ARCHITECT, AND STRUCTURAL ENGINEER

- ALL WORK SHALL CONFORM TO 2022 15. EDITION TITLE 24, CALIFORNIA CODE OF **REGULATION (CCR)** THE LIMIT OF WORK LINE SHOWS THESE DRAWINGS IS AN APPROXIMATE LIMIT OF WORK ONLY. REFER TO CONSULTANT DRAWINGS FOR ADDITIONAL WORK. INCLUDING BUT NOT LIMITED TO INSTALLATION OF CONDUIT, MANHOLES, PULLBOXES, ETC WHICH ARE TO BE PART OF THIS WORK, ALTHOUGH OCCURING OUTSIDE OF SHOWN LIMIT OF WORK LINES. FABRICATION AND INSTALLATION OF
- DEFERRED SUBMITTAL ITEMS SHALL NOT BE STARTED UNTIL CONTRACTOR'S DRAWINGS, SPECIFICATIONS, AND ENGINEERING CALCULATIONS FOR THE ACTUAL SYSTEMS TO BE INSTALLED HAVE BEEN ACCEPTED AND SIGNED BY THE ARCHITECT OR STRUCTURAL ENGINEER AND APPROVED BY THE DSA. LIST DEFERRED SUBMITTAL ITEMS FOR THIS PROJECT.
- CHANGE TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY DSA, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24 CCR.
- A "DSA CERTIFIED" PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY DSA SHALL PROVIDE CONTINUOUS INSPECTION OF WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR. INSPECTOR TO BE CLASS 1. A DSA ACCEPTED TESTING LABORATORY
- DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT. THE REPORTS SHALL BE SUBMITTED TO ARCHITECT OF RECORD, STRUCTURAL ENGINEER OF RECORD, OWNER, INSPECTOR OR RECORD, AND THE DSA FIELD ENGINEER. THE REPORTS OF ANY FAILURES OF TESTS AND INSPECTIONS ARE TO BE SUBMITTED TO DSA DISTRICT STRUCTURAL ENGINEER.
- GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
- 22. SAFETY DURING CONSTRUCTION SHALL COMPLY WITH CFC CHAPTER 33. 23. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION, OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CCR. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE DSA APPROVED CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CCR,, A CONSTRUCTION CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS DETAILING AND SPECIFYING THE REQUIRED WORK

SHALL BE SUBMITTED TO AND APPROVED

BY DSA BEFORE PROCEEDING WITH THE

CCR)

WORK. (SECTION 4-317(C), PART 1, TITLE 24,

### CONTRACTOR IS TO REVIEW AND COMPLY WITH ALL REQUIREMENTS AND MITIGATION MEASURES SET FORTH IN BOTH THE ENVIRONMENTAL IMPACT REPORT (ADDENDUM TO THE ENVIRONMENTAL IMPACT REPORT | SCH NO. 2002071120) INCLUDING ATTACHED BIOLOGICAL RESOURCES TECHNICAL REPORT. NO DUMPING OR PLACING OF ANY DIRT OR DEBRIS SHALL BE ALLOWED OUTSIDE OF

THE CONTRACTORS LIMIT OF WORK AREA.

24

| AS6A   | WALL TYPE CALLOUT<br>— WALL TYPE MARK - SEE A10.11   |   |
|--|--|---|
| AS4A<br>55*1FB   | <ul> <li>WALL STC RATING</li> <li>WALL FIRE RATING TYPE</li> </ul>   |   |
| X •<br>X •   | MATCHLINE REFERENCE<br>— LOCATION ON SHEET<br>— SHEET WHERE PLAN IS DRAWN  | ≣   |
| ? •  | <b>KEYNOTE</b> — KEYNOTE NUMBER (SEE LEGEN   | D ON SHEET)   |
| 0FFICE<br>1001<br>120 SF 0<br>0.4<br>0.7<br>0.7<br>0.7<br>2  | <ul> <li>ROOM EXITING INFORMATION AREA (SQ FT)</li> <li>OCCUPANT LOAD (AREA DIVIDE)</li> <li>OCCUPANT LOAD FACTOR (REF)</li> <li>OCCUPANCY TYPE</li> <li>NUMBER OF EXITS REQUIRED (F)</li> </ul> | ATION<br>D BY LOAD FACTOR)<br>ER TO TABLE 1004.5)<br>REFER TO TABLE 1006.2.1)             |
| WI999 L<br>WD HT DP  | <ul> <li>WIC CASEWORK TAG</li> <li>MANUFACTURER REFERENCE A</li> <li>LOCK</li> <li>CABINET DEPTH</li> <li>CABINET HEIGHT</li> <li>CABINET WIDTH</li> </ul>                                       | ND MODEL NUMBER   |
| <b>DISCIPLINE</b><br>G GENERAL<br>C CIVIL  | SHEET TYPE O CODE ANALYSIS, NOTES SITE PLAN  | BUILDING LETTER,<br>SEGMENT,<br>(USER DEFINED)  |
| L LANDSCAPE<br>A ARCHITECTURE<br>I INTERIORS<br>Q EQUIPMENT<br>S STRUCTURAL<br>P PLUMBING<br>M MECHANICAL<br>E ELECTRICAL<br>FA FIRE ALARM<br>T TELECOM<br>AV AV EQUIPMENT<br>K KITCHEN<br>FP FIRE PROTECTIO | DN   | USED ONLY IF REQUIRED.<br>IF NOT, COLUMN IS<br>OMITTED.<br>SERIES / ORDER (IF APPLICABLE) |

BULIDING LETTER FLOOR LEVEL OR SEGMENT (IF APPLICABLE) SEQUENTIAL (IF APPLICABLE)

SYMBOL LEGEND

OF RECORD.

AX.XX

4 🖣 AX.XX 🕨 A2•

A3

18/AX.XX

📥 SIM

AX.XX

(101A)

FA

09-WF1

### NORTH ARROW

TICK INDICATES PLAN NORTH

ARROW INDICATES TRUE NORTH **ELEVATION CALLOUT** LOCATION ON SHEET SHEET WHERE ELEVATION IS DRAWN

**ELEVATION CALLOUT** LOCATION ON SHEET SHEET WHERE ELEVATION IS DRAWN **ELEVATION CALLOUT - ALT.** LOCATION & SHEET WHERE

SECTION CALLOUT INDICATES A SIMILAR CONDITION LOCATION ON SHEET SHEET WHERE SECTION IS DRAWN

ELEVATION IS DRAWN

DETAIL CALLOUT INDICATES A SIMILAR CONDITION LOCATION ON SHEET SHEET WHERE SECTION IS DRAWN

CONTROL OR DATUM POINT 

 FIRST FLOOR
 NAME OF ELEVATION (IF APPLICABLE)

 +0' - 0"
 ELEVATION ABOVE FINISHED FLOOR

> **GRID BUBBLE** EXISTING BUILDING GRID SYMBOL GRID NUMBER NEW BUILDING GRID SYMBOL

DOOR CALLOUT DOOR NUMBER

INTERIOR FINISH CALLOUT MATERIAL FINISH TYPE (SEE FINISH SCHEDULE) WINDOW CALLOUT WINDOW NUMBER (SEE WINDOW SCHEDULE)

### CODES

| PARTI | AL LIST OF APPLICABLE CODES   | PARTIAL LIS | T OF APPLICABLE STANDARDS                            |                    |
|-------|---|-------------|--|--------------------|
| 2022  | CALIFORNIA ADMINISTRATIVE CODE, PART 1,<br>TITLE 24 C.C.R.                  | NFPA 13     | STANDARD FOR AUTOMATIC<br>FIRE SPRINKLER SYSTEMS (CA | 2022 ED            |
| 2022  | CALIFORNIA BUILDING CODE (CBC), PART 2,                                     |             | AMENDED)   |                    |
|       | TITLE 24 C.C.R.   | NFPA 14     | STANDARD FOR STANDPIPE                               | 2019 ED            |
|       | (2021 INTERNATIONAL BUILDING CODE   |             | AND HOSE SYSTEMS (CA                                 |                    |
|       | ΔΜΕΝDMENTS)   |             | STANDARD FOR DRY                                     | 2021 ED            |
| 2022  | CALIFORNIA ELECTRICAL CODE (CEC) PART 3                                     |             |  | ZUZILD             |
| 2022  | TITLE 24 C.C.R.   |             | SYSTEMS  |                    |
|       | (2020 NATIONAL ELECTRICAL CODE AND 2022                                     | NFPA 17A    | STANDARD FOR WET CHEMICAL                            | 2021 ED            |
|       | CALIFORNIA AMENDMENTS)  |             | EXTINGUISHING SYSTEMS                                |                    |
| 2022  | CALIFORNIA MECHANICAL CODE (CMC) PART                                       | NFPA 20     | STANDARD FOR STATIONARY                              | 2019 ED            |
|       | 4, TITLE 24 C.C.R.  |             | PUMPS FOR FIRE PROTECTION                            |                    |
|       | (2021 UNIFORM MECHANICAL CODE AND 2022                                      | NFPA 22     | STANDARD FOR WATER TANKS                             | 2013 ED            |
| 0000  | CALIFORNIA AMENDMENTS)  |             | FOR PRIVATE FIRE PROTECTION                          |                    |
| 2022  | CALIFORNIA PLUMBING CODE (CPC), PART 5,                                     | NFPA 24     |  | 2019 ED            |
|       | (2021 LINIEORM PLUMBING CODE AND 2022                                       |             | MAINS AND THEIR                                      |                    |
|       |   |             |  |                    |
| 2022  | CALIFORNIA ENERGY CODE (CEC), PART 6.                                       | NFPA 72     | NATIONAL FIRE ALARM &                                | 2022 ED            |
|       | TITLE 24 C.C.R.   |             | SIGNALING CODE (CA AMENDED)                          |                    |
| 2022  | CALIFORNIA HISTORICAL BUILDING CODE   | NFPA 80     | STANDARD FOR FIRE DOORS AND                          | 2019 ED            |
|       | (CHBC), PART 8, TITLE 24 C.C.R.   |             | OTHER OPENING PROTECTIVES                            |                    |
| 2022  | CALIFORNIA FIRE CODE, PART 9, TITLE 24                                      | NFPA 2001   | STANDARD ON CLEAN AGENT                              | 2018 ED            |
|       | C.C.R.  |             | FIRE EXTINGUISHING SYSTEMS                           |                    |
|       | (2021 INTERNATIONAL FIRE CODE AND 2022                                      |             | (CA AMENDED)   | ~~~-               |
| 0000  |   | UL 300      | STANDARD FOR FIRE TESTING OF                         | 2005               |
| 2022  | CALIFORNIA EXISTING BUILDING CODE (CEBC),                                   |             |  | (R2014)            |
|       | (2021 INTERNATIONAL EXISTING CODE AND                                       |             |  |                    |
|       | 2022 CALIFORNIA AMENDMENTS)   |             | FOUIPMENT  |                    |
| 2022  | CALIFORNIA GREEN BUILDING STANDARDS   | UL 464      | AUDIBLE SIGNAL APPLIANCES                            | 2003 ED            |
|       | CODE (CALGREEN), PART 11, TITLE 24 C.C.R.                                   |             | FOR FIRE ALARM AND SIGNALING                         |                    |
| 2022  | CALIFÒRNIA REFERENCED STANDARDS, PART                                       |             | SYSTEMS, INCLUDING                                   |                    |
|       | 12,TITLE 24 C.C.R.  |             | ACCESSORIES  |                    |
| TITLE | 19 C.C.R., PUBLIC SAFETY, STATE FIRE  | UL 521      | STANDARD FOR HEAT                                    | 1999 ED            |
| 0040  | MARSHAL REGULATIONS.  |             | DETECTORS FOR FIRE                                   | (R2005)            |
| 2019  | ASME A17.1/B44-19 SAFETY CODE FOR   |             | PROTECTIVE SIGNALING                                 |                    |
| 2020  | ASME 19 1 SAFETY STANDARD FOR   |             |  | 2002 ED            |
| 2020  | ASIVE 10.1 - SAFETY STANDARD FOR<br>PLATEORM LIETS AND STAIRWAY CHAIR LIETS |             |  | 2002 ED<br>(R2018) |
|       |   |             | IMPAIRED   | (112010)           |
|       |   | ICC 300     | STANDARD FOR BLEACHERS.                              | 2017 ED            |
|       |   |             | FOLDING AND TELESCOPING                              |                    |
|       |   |             | SEATING AND GRANDSTANDS                              |                    |
|       |   |             | Ι ΕΤΕ Ι ΙST ΟΓ ΑΡΡΙ ΙΩΑΒΙ Ε ΝΕΡΑ STAN                | ARDS               |
|       |   | REFER TO 20 | 22 CBC (SFM) CHAPTER 35 AND CALLED                   |                    |
|       |   | CODE CHAPT  | TER 80.  |                    |
|       |   | SEE CALIFOR | RNIA BUILDING CODE, CHAPTER 35 FOR                   | STATE O            |
|       |   | CALIFORNIA  | AMENDMENTS TO NFPA STANDARDS.                        |                    |
|       |   |             |  |                    |
| OT    |   |             |  |                    |

### STATEMENT OF GENERAL CONFORMANCE

### ) THE DRAWINGS OR SHEETS LISTED ON THE INDEX SHEET THIS DRAWING PAGE OF SPECIFICATIONS/CALCULATIONS

HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE. IT HAS BEEN EXAMINED BY ME FOR:

DESIGN INTENT AND APPEARS TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS PREPARED BY ME, AND COORDINATION WITH MY PLANS AND SPECIFICATIONS AND IS ACCEPTABLE FOR INCORPORATION INTO

THE STATEMENT OF GENERAL CONFORMANCE "SHALL NOT BE CONSTRUED AS RELIEVING ME OF MY RIGHTS. DUTIES, AND RESPONSIBILITIES UNDER SECTIONS 17302 AND 81138 OF THE EDUCATION CODE AND SECTIONS 4-336, 4-341 AND 4-344" OF TITLE 24, PART 1. (TITLE 24, PART 1, SECTION 4-317 (B)) I CERTIFY THAT:

ALL DRAWINGS OR SHEETS LISTED ON THE SHEET INDEX IS/ARE IN GENERAL CONFORMANCE WITH THE PROJECT DESIGN AND HAS/HAVE BEEN COORDINATED WITH THE PROJECT PLANS AND SPECIFICATIONS.

EXPIRATION DATE

SIGNATURE ARCHITECT OR ENGINEER DESIGNATED TO BE IN GENERAL RESPONSIBLE CHARGE <u>JOHN P GRAMLING</u> PRINT NAME

THE CONSTRUCTION OF THIS PROJECT.

C-32706 LICENSE NUMBER

### ABBREVIATIONS

| (E)<br>AB<br>AC PAVING | EXISTING<br>ANCHOR BOLT<br>ASPHALTIC CONCRETE PAVING | FRP<br>FRT<br>FS | FIBERGLASS REINFORCED PLASTIC<br>FIRE RETARDANT TREATED<br>FINISH SURFACE | PTC<br>PTD<br>PTN |
|------------------------|--|------------------|---|-------------------|
| ACC<br>ACP             | ACCESS/ACCESSIBLE<br>ACOUSTICAL CEILING PANEL        | GB<br>GFRC       | FOOTING<br>GRAB BAR<br>GLASS FIBER REINFORCED                             | PTS<br>PVC        |
|                        | ACOUSTICAL CEILING TILE                              | G                | CONCRETE<br>GLASS TYPE  |                   |
| AFF                    | ABOVE FINISH FLOOR                                   | GLB              | GLUE LAMINATED BEAM   | R                 |
| AGG                    |  | GYP BD           | GYPSUM BOARD  | RB                |
| ARCH                   | ARCHITECTURAL  | HB               | HOSE BIBB   |                   |
| ATT                    | ATTENUATION  | HD               | HEAVY DUTY  | REF               |
| AUTO                   | AUTOMATIC  | HDR              | HEADER  | REFL              |
| BLCG                   | BLOCKING   | HGT              | HEIGHT  | REFR              |
| BUR                    | BUILT UP ROOFING                                     | HM               | HOLLOW METAL  | REINF             |
| CABT                   |  | HP<br>HSS        | HIGH POINT<br>HOLLOW STEEL SECTION  | REM               |
| CFCI                   | CONTRACTOR FURNISHED,                                | ID               | INSIDE DIAMTER  | RH                |
|                        | CONTRACTOR INSTALLED                                 | INT              | INTERIOR  | RHS               |
| CEOL                   | CONTRACTOR FURNISHED                                 |                  | INVERT<br>LANDSCAPE   | RO                |
|                        | OWNER INSTALLED                                      | LAV              | LAVATORY  | SCH               |
| CG                     |  |                  | LONG LEG HORIZONTAL   | SCHEE             |
| CL                     | CENTER LINE  |                  | LOW POINT   | SECT              |
| CLF                    | CHAIN LINK FENCE                                     | LTWT             | LIGHT WEIGHT  | SG                |
|                        | CLEAR<br>CONCRETE MASONRY UNIT                       |                  | LOUVER<br>MACHINE   | SHI               |
| CO                     | CLEANOUT   | MB               | MACHINE BOLT  | SMS               |
| COL                    |  | MDF              | MEDIUM DENSITY FIBERBOARD   | SND               |
| COMP                   | CUBIC FEET   | MECH             | MEDIUM DENSITY OVERLAY<br>MECHANICAL                                      | SOV               |
| COORD                  | COORDINATE   | MED              | MEDIUM  | SS                |
| CORR                   |  |                  |   | STC               |
| CTSK                   | COUNTER SKUNK  | MFR              | MANUFACTORER  | STSMS             |
| CW                     | CURTAINWALL  | MO               | MASONRY OPENING   | SCREV             |
|                        | DEPRESSED / DEPRESSION                               |                  | MOUNTED   | SUSP              |
| DIM                    | DIMENSION  | NIC              | NOT IN CONTRACT   | SYM               |
| DISP                   | DISPENSER  | NR               | NON RATED   | T                 |
| DS                     | DETAIL   | NRC              | NOISE REDUCTION COEFFICIENT<br>NOT TO SCALE                               | TO                |
| DW                     | DISHWASHER   | O/               | OVER  | TOC               |
| E/W                    | EACH WAY   | O/A              |   | TOP               |
| SYSTEM                 |  | OD               | OUTSIDE DIAMTER   | TOW               |
| EJ                     | EXPANSION JOINT                                      | OFCI             | OWNER FURNISHED, CONTRACTOR   | TPD               |
|                        | ELECTRICAL<br>FLEVATION / ELEVATOR                   | OFOL             | INSTALLED<br>OWNER FURNISHED, OWNER                                       |                   |
| ENCL                   | ENCLOSE / ENCLOSURE                                  |                  | INSTALLED   | UNO               |
| EOS                    |  | OFVI             | OWNER FURNISHED, VENDOR   |                   |
| EP                     | ELECTRICAL PANEL                                     | ОН               | OPPOSITE HAND   | VAC               |
| EQ                     | EQUAL  | OPER             | OPERABLE  | VCT               |
| ESC                    | EXCUTCHEON<br>FLECTRIC WATER COOLER                  |                  | OPENING<br>OVERELOW ROOF DRAIN  |                   |
| EXP                    | EXPOSED  | P/L              | PROPERTY LINE   | VWC               |
| FA                     |  | PA               | PUBLIC ADDRESS  | W/                |
| FDC                    | FIRE DEPARTMENT CONNECTION                           |                  | POWDER ACTUATED FASTENER  | WB                |
| FE                     | FIRE EXTINGUISHER                                    | PCC              | PORTLAND CEMENT CONCRETE  | WC                |
| FEC<br>FE              | FIRE EXTINGUISHER W/ CABINET                         | PED              | PAVING<br>PEDESTRIAN  |                   |
| FG                     | FINISH GRADE   | PERF             | PERFORATED  | WGT               |
| FH                     |  | PERIM            | PERIMETER   | WH                |
| FSH                    | FIRE HUSE CABINET<br>FLAT HEAD SCREW                 |                  | PANIC HARDWARE  |                   |
| FIN                    | FINISH   | PIV              | POST INDICATOR VALVE  | WR                |
| FLR                    |  |                  | PLATE<br>PLASTIC LAMINATE   | WRGB              |
| FOF                    | FACE OF FINISH                                       | PLAN             | PLASTIC LAWINATE  | ws                |
| FOM                    | FACE OF MASONRY                                      | PLUMB            | PLUMBING  | WSCT              |
| FOS<br>FP              | FACE OF STUD<br>FIREPROOFING                         | PNL<br>  PNT     | PANEL<br>PAINT / PAINTED  | WWF               |
| FR                     | FIRE RATED   | POC              | POINT OF CONNECTION   | NOTE:             |
| FRG                    | FIRE RATED GLASS                                     | POLY ISO         | POLYISOCYANURATE  | OTHEF             |
|                        |  |                  | PREP / PREPARATION  | THF BI            |
| I                      |  |                  |   | FOR N             |

### **PROJECT DESCRIPTION**

**GENERAL DESCRIPTION OF WORK** 

| ED.        | THE SCOPE OF WORK INCLUDES:  |
|------------|--|
| ED.        | REPLACEMENT OF EXISTING MECHANICAL     UNITS WITH NEW ALL-ELECTRIC HEAT PUMP     HVAC UNITS IN BUILDINGS B AND C.                                |
| ED.        | INSTALLATION OF FENCING ENCLOSURE FOR<br>EXTERIOR UNITS, AND ASSOCIATE SITE<br>WORK FOR HVAC UNITS INSTALLED ON THE<br>GROUND OR EXTERIOR WALLS. |
| ED.<br>ED. | • UPGRADE OF EXISTING FIRE ALARM IN BUILDINGS A, B, C & MULTIPURPOSE.  |
| ED.        |  |

### **PROJECT DATA**

PROJECT ADDRESS 498 POINT SAN PEDRO ROAD SAN RAFAEL, CA 94901

### **PROJECT INFORMATION**

BUILDING NAME: A TYPE OF CONSTRUCTION: TYPE V-B OCCUPANCY: E AUTOMATIC FIRE SPRINKLER SYSTEM: NO NUMBER OF STORIES: 1 BUILDING AREA: 10,552 SQ. FT. BUILDING HEIGHT: 12'-6"

### BUILDING NAME: B

TYPE OF CONSTRUCTION: TYPE V-B OCCUPANCY: E AUTOMATIC FIRE SPRINKLER SYSTEM: NO NUMBER OF STORIES: 1 BUILDING AREA: 7,990 SQ. FT. BUILDING HEIGHT: 13'-0"

### BUILDING NAME: C

TYPE OF CONSTRUCTION: TYPE V-A OCCUPANCY: E AUTOMATIC FIRE SPRINKLER SYSTEM: NO NUMBER OF STORIES: 1 FLOOR AREA: 8,018 SQ. FT. BUILDING HEIGHT: 16'-0"

### **BUILDING NAME: MULTIPURPOSE**

TYPE OF CONSTRUCTION: TYPE V-A OCCUPANCY: A/E AUTOMATIC FIRE SPRINKLER SYSTEM: NO NUMBER OF STORIES: 1 FLOOR AREA: 7,115 SQ. FT. BUILDING HEIGHT: 25'-0"

|    | POST TENSIONED CONCRETE<br>PAPER TOWEL DISPENSER     |
|----|--|
|    | PARTITION<br>PNEUMATIC TUBE STATION /                |
|    | SYSTEM<br>POLYVINYL CHLORIDE                         |
|    | QUARRY TILE  |
|    | RADIUS, RISER<br>RESILIENT BASE                      |
| РΤ | ROOF DRAIN<br>ECEPTACLE                              |
|    | REFERENCE<br>REFLECT(ED), (IVE)                      |
|    | REFLECT(ED), (IVE)<br>REFRIGERATOR                   |
|    | REINFORCE/REINFORCED/<br>REINFORCEMENT               |
|    | REMOVE<br>ROUND HEAD                                 |
|    | ROUND HEAD SCREW<br>ROUGH OPENING                    |
|    | RIGHT OF WAY<br>SCHEDULE (FOR PIPE)                  |
| )  | SCHEDULE / SCHEDULING<br>STORM DRAIN / SOAP DISPENSE |
|    | SECTION<br>SAFETY GLASS                              |
|    | SHEET  |
|    | SHEET METAL SCREW                                    |
|    | SHUT OFF VALVE                                       |
|    | STAINLESS STEEL                                      |
|    | SOUND TRAMISSION CLASS<br>STEEL                      |
| V  |  |
|    | SUSPENDED<br>SHEET VINYL                             |
|    | TREAD  |
|    | TOP AND BOTTOM<br>TOP OF                             |
|    | TOP OF CURB / CONCRETE<br>TOP OF PARAPET             |
|    | TOP OF STEEL<br>TOP OF WALL                          |
|    | TOILET PAPER DISPENSER<br>TACKABLE SURFACE           |
|    | UNDER CABINET (OR COUNTER<br>UNLESS NOTED OTHERWISE  |
|    | URINAL<br>VACUUM                                     |
|    | VAPOR BARRIER<br>VINYL COMPOSITION TILE              |
|    | VERIFY IN FIELD<br>VENT THROUGH ROOF                 |
|    | VINYL WALL COVERING<br>WITH                          |
|    | WITHOUT<br>WOOD BASE                                 |
|    | WATER CLOSET   |
|    | WINDOW   |
|    |  |
|    |  |
|    | WATER RESISTANT GYPSUM                               |

BOARD WOOD SCREW WAINSCOT WELDED WIRE FABRIC

R ABBREVIATIONS USED ON THESE INGS ARE CONSIDERED STANDARDS IN JILDING INDUSTRY. CONTACT ARCHITECT **IECESSARY CLARIFICATION.** 

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|----------|-----|

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|                     |  |  |  |
|                     |  |  |  |
|                     |  |  |  |
|                     |  |  |  |

NUMBER NAME

STATE MAP

### VICINITY MAP



# -PROJECT LOCATION

### **OVERALL SITE PLAN**



AGENCY **APPROVAL:** DSA # 01-121955 FILE # 21-39



3584-003-000

ISSUE  $\Delta$  **DESCRIPTION** 

FACILITY:

SAN RAFAEL CA 94901

PROJECT:

SHEET NAME: **PROJECT DATA SHEET** 



DATE: 2024.10.01 SHEET:

PLEASE RECYCLE



### A NO.: 01-121955 CLIENT PROJ NO:

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

498 POINT SAN PEDRO RD









| LEGEND |                              |
|--------|------------------------------|
|        | (E) BUILDINGS TO BE UPGRADED |

EXISTING BUILDINGS / ELEMENTS TO REMAIN

(E) ASPHALT PAVING & SUBGRADE TO BE REMOVED AS REQ'D FOR NEW CONCRETE PADS, SMD.

(E) LANDSCAPE TO BE REMOVED AS REQ'D FOR NEW CONCRETE PADS, RELOCATE (E) IRRIGATION HEAD AND REROUTE (È) IRRIGATION TO ACHIEVE HEAD TO HEAD COVERAGE. SMD.

(E) CONCRETE PAVING & SUBGRADE TO BE REMOVED AS REQ'D FOR NEW CONCRETE PADS, SMD.

AGENCY APPROVAL: DSA # 01-121955 FILE # 21-39



HMC Architects 3584-003-000 3546 CONCOURS STREET ONTARIO, CA 91764 909 989 9979 / www.hmcarchitects.com

ISSUE  $\Delta$  **DESCRIPTION** 

### **KEYNOTES** 02.02

02.08 02.12 02.13 02.14 02.17 02.18 02.22 02.31

### NOTES

1. 2. INFORMATION CONTRACTOR IS RESPONSIBLE FOR REPAIR/ 3. 4. 5. 6. REMOVED OR TO REMAIN ARE ASSUMED TO REMAIN.

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT: SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

SHEET NAME: SITE DEMOLITION PLAN

DSA SUBMITTAL FILE NO.: 21-39 DATE: 2024.10.01

SHEET:

SITE DEMOLITION PLAN

1/32" = 1'-0"

PLEASE RECYCLE



A NO.: 01-121955

WHERE TRENCHING OCCURS, CONTRACTOR SHALL REPAIR AND RESTORE EXISITING PAVEMENT AND LANDSCAPE TO ORIGINAL CONDITIONS.

REPLACEMENT OF ALL HARDSCAPE AND PLANTING DUE TO DEMOLITION WORK AND OUTSIDE OF LIMIT OF WORK LINE FOR CONNECTION OF UNDERGROUND UTILITIES ALL EXCAVATIONS SPOILS, INCLUDING, BUT NOT LIMITED TO CONCRETE AND PAVEMENT EXCAVATION, SHALL BE EXPORTED AND DISPOSED OF BY THE CONTRACTOR. EXISTING STRUCTURES, CONCRETE, PAVEMENT, FENCES, CURBS, UTILITY BOXES, LIGHTS, GATES ETC. NOT CALLED OUT IN PLANS TO BE REMOVED OR TO REMAIN SHALL BE PROTECTED IN PLACE. CONTRACTOR TO PROVIDE TREE PROTECTION AS NECESSARY DURING CONSTRUCTION TO PRESERVE EXISTING TREES. TREES NOT IDENTIFIED AS TO BE

REFER TO SHEET G0.11 FOR TYPICAL SYMBOLS AND ABBREVIATIONS REFER TO MECHANICAL, ELECTRICAL, PLUMBING, STRUCTURAL AND FIRE ALARM DRAWINGS FOR MORE

(E) ASPHALT PAVING AND SUBGRADE TO BE REMOVED AS REQ'D FOR NEW UNDERGROUND PULL BOX | ELECT (E) CONCRETE PAVING AND SUBGRADE TO BE REMOVED AS REQ'D FOR NEW UNDERGROUND PULL BOX | ELECT (E) TREE TO REMAIN (E) LANDSCAPE TO BE REMOVED AS REQ'D AT NEW MÉCH YARD AND REGRADE TO LEVEL W/ ADJACENT ASPHALT PAVING. RELOCATE (E) IRRIGATION HEAD AND REROUTE (E) IRRIGATION TO ACHIEVE HEAD TO HEAD COVERAGÈ.

REQ'D FOR CONCRETE PAD | MECH (E) CONCRETE PAVING & SUBGRADE TO BE REMOVED AS REQ'D FOR CONCRETE PAD | MECH (E) SOIL & SUBGRADE TO BE REMOVED AS REQ'D FOR CONCRETE PAD | MECH (E) LANDSCAPE TO BE REMOVED AS REQ'D FOR NEW UNDERGROUND PULL BOX, RELOCATE (E) IRRIGATION HEAD AND REROUTE (E) IRRIGATION TO ACHIEVE HEAD TO HEAD COVERAGE. | ELECT

(E) LANDSCAPE TO BE REMOVED AS REQ'D FOR CONCRETE PAD | MECH (E) ASPHALT PAVING & SUBGRADE TO BE REMOVED AS









|      |         | C       | GATE SCHEDULE    | Ξ                 |                   |          |          |
|------|---------|---------|------------------|-------------------|-------------------|----------|----------|
| GATE | WIDTH   | HEIGHT  | GATE<br>MATERIAL | HARDWARE<br>GROUP | PANIC<br>HARDWARE | DETAIL   | COMMENTS |
| G-01 | 4' - 0" | 6' - 0" | CHAIN-LINK       | 1                 | NO                | 1/A10.01 |          |
| G-02 | 4' - 0" | 6' - 0" | CHAIN-LINK       | 1                 | NO                | 1/A10.01 |          |
| G-03 | 4' - 0" | 6' - 0" | CHAIN-LINK       | 1                 | NO                | 1/A10.01 |          |
| G-04 | 4' - 0" | 6' - 0" | CHAIN-LINK       | 1                 | NO                | 1/A10.01 |          |



| L | Ε | G | Ε | Ν | C |
|---|---|---|---|---|---|

(E) BUILDINGS TO BE UPGRADED

EXISTING BUILDINGS / ELEMENTS TO REMAIN

BLACK VINYL CHAINLINK FENCE AND GATE @PROPOSED MECHANICAL YARD

AGENCY APPROVAL: DSA # 01-121955 FILE # 21-39



3584-003-000



### **KEYNOTES**

26.04

### NOTES 1.

2.

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT: SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

SHEET NAME: CAMPUS SITE PLAN



DATE: 2024.10.01 SHEET:

1/32" = 1'-0"



### A NO.: 01-121955 CLIENT PROJ NO:

REFER TO SHEET G0.11 FOR TYPICAL SYMBOLS AND REFER TO SHEET G0.11 FOR TYPICAL SYMBOLS AND ABBREVIATIONS REFER TO MECHANICAL, ELECTRICAL, PLUMBING, STRUCTURAL AND FIRE ALARM DRAWINGS FOR MORE INFORMATION CONTRACTOR IS RESPONSIBLE FOR REPAIR/ REPLACEMENT OF ALL HARDSCAPE AND PLANTING DUE TO DEMOLITION WORK AND OUTSIDE OF LIMIT OF WORK LINE FOR CONNECTION OF UNDERGROUND UTILITIES

ELECTRICAL UNDERGROUND PULL BOX W/ GROUND COVER, TRENCH AS REQ'D FOR CONDUIT PATHWAY AND PATCH PAVEMENT & SUBGRADE AND LANDSCAPE TO MATCH (E) | ELEC









ŘÉMOVED | MECH. INFILL (E) OPÉNING AND PATCH WALL (E) MECHANICAL DUCT ABOVE (E) EXTERIOR SOFFIT TO BE REMOVED | MECH. INFILL (E) OPENING AND PATCH (E) MECHANICAL WALL GRILLE ABOVE TO BE REMOVED | MECH. INFILL (E) OPENING & PATCH WALL W/ 5/8" TYPE 'X' GYPSUM BOARD BOTH SIDES TO MATCH ADJACENT (E) 1-HOUR FIRE RATED WALL ASSEMBLY (GA FILE NO. WP



|                                |                          | LEGEND     |   | AGENCY   |
|--------------------------------|--------------------------|------------|---|--|
|                                |                          |            | EXISTING ELEMENTS/ NON RATED WALLS TO REMAIN  | APPROVAL:<br>DSA # 01-121955                             |
|                                |                          |            | EXISTING 1 HOUR FIRE RATED WALL<br>TO REMAIN (METAL STUD FRAMING<br>@BLDG C & MPR; WOOD STUD<br>FRAMING @BLDG A)  | FILE # 21-39   |
|                                |                          | ***<br>*** | BLACK VINYL CHAINLINK FENCE AND<br>GATE @PROPOSED MECHANICAL YARD   |  |
|                                |                          |            | IN BLDG B, 2 X 4 WOOD STUD FRAMING<br>@16" OC W/ 5/8" GYP. BD ON BOTH<br>SIDES @NEW MECHANICAL CLOSET<br>WITH CLOSET DOOR, SEE DETAIL<br>1/A10.02; IN CLASSROOM SIDE, WALL<br>FINISH & WALL BASE TO MATCH (E)<br>CLASSROOM WALL FINISH & BASE; IN<br>MECH CLOSET, WALL COLOR TO<br>MATCH CLASSROOM WALL FIELD<br>COLOR & SEMI-GLOSS, WALL BASE TO<br>MATCH CLASSROOM WALL BASE;<br>PATCH FLOORING IN CLASSROOMS AND<br>MECH CLOSETS TO MATCH (E). | S  |
|                                |                          |            |   |  |
|                                |                          |            |   | 3584-003-0   |
|                                |                          |            |   | 3546 CONCOURS ST   |
|                                |                          |            |   | 909 989 9979 / www.h                                     |
|                                |                          |            |   |  |
|                                |                          |            |   |  |
|                                |                          |            |   |  |
|                                |                          |            |   | KEYNOTE  |
|                                |                          |            |   | 02.04 (E)<br>02.95 (E)<br>09.03 WA<br>23.04 FAI          |
|                                |                          |            |   | AN<br>23.06 ME   |
|                                |                          |            |   |  |
| BLDG C 151 FLOOR - FLOOR PLAN. | <b>2</b><br>1/8" = 1'-0" |            |   |  |
|                                |                          |            |   |  |
|                                |                          |            |   |  |
|                                |                          |            |   |  |
|                                |                          |            |   |  |
|                                |                          |            |   |  |
|                                |                          |            |   |  |
|                                |                          |            |   |  |
|                                |                          |            |   | NOTES  |
|                                |                          |            |   | 1. REFER T   |
| 7                              |                          |            |   | ABBREVI<br>2. REFER T<br>STRUCTI<br>INFORMA<br>3. REMOVE |
|                                |                          |            |   | AND NEV<br>(E) CONE                                      |
|                                |                          |            |   |  |
|                                |                          |            |   |  |
|                                |                          |            |   | FACILITY:  |
|                                |                          |            |   | 498 POINT SAN<br>SAN RAFAEL C                            |
|                                |                          |            |   | PROJECT:<br>SRCS SAN PFD                                 |
|                                |                          |            |   |  |
|                                | 711                      |            |   | DSA SUBM   |
|                                |                          |            |   | FILE NO.: 21-39<br>DATE: 2024.10.01                      |
| BLDG B 1ST FLOOR - FLOOR PLAN  | PN                       |            |   | SHEET:   |
|                                | <b>-</b><br>1/8" = 1'-0" |            | σ   | 2  |



### IBMITTAL A NO.: 01-121955 CLIENT PROJ NO:

& C 1ST FLOOR - FLOOR PLAN

N PEDRO ELEMENTARY SCHOOL HVAC & FA

T SAN PEDRO RD AEL CA 94901

DTES (E) PANEL | ELECT (E) CASEWORK, TYP. WALL BASE TO MATCH (E) FAN COIL UNIT AND DUCTS AS REQ'D FOR A COMPLETE AND OPERABLE SYSTEM | MECH MECHANICAL WALL GRILLE | MECH

03-000 URS STREET A 91764 / www.hmcarchitects.com

Architects

SAN RAFAEL

DATE

REFER TO SHEET G0.11 FOR TYPICAL SYMBOLS AND ABBREVIATIONS. REFER TO MECHANICAL, ELECTRICAL, PLUMBING, AND STRUCTURAL, AND FIRE ALARM DRAWINGS FOR MORE INFORMATION. REMOVE (E) ELEMENTS AS REQUIRED FOR DEMOLITION AND NEW WORK; REINSTALL OR PATCH / PAINT TO MATCH (E) CONDITIONS.





|                              | LEGEND- RCP'S         BUILDING ELEMENTS         BUILDING ELEMENTS / NON RATED WALLS TO REMAIN         EXISTING 1 HOUR FIRE RATED WALL TO REMAIN         METAL STUD FRAMING @BLDG C & MPR; WOOD STUD         FRAMING @BLDG C & MPR; WOOD STUD         PRAMING @BLDG A)         2 X 4 WOOD STUD FRAMING @16" OC W / 5/8" GYP. BD         ON BOTH SIDES @NEW MECHANICAL CLOSET WITH CLOSET DOOR, SEE DETAIL 1/A10.02   | <section-header><section-header><text></text></section-header></section-header>   |
|------------------------------|---|---|
|                              | <ul> <li>(E) 5/8" GYPSUM BOARD<br/>O/WOOD FRAMING<br/>BELOW ROOF JOISTS OR<br/>SUSPENDED CEILING<br/>SYSTEM</li> <li>(E) 5/8" GYPSUM BOARD<br/>ATTACHED TO ROOF<br/>JOISTS</li> <li>(E) (2) LAYERS OF 5/8"<br/>TYPE 'X GYPSUM BOARD<br/>SUSPENDED CEILING<br/>SUSPENDED CEILING<br/>SUSPENDED CEILING<br/>SUSPENDED CEILING<br/>SUSPENDED CEILING<br/>SUSPENDED CEILING<br/>SUSPENDED CEILING<br/>CEILING AIR GRILLE, S.M.D.</li> <li>(E) (2) LAYERS OF 5/8"<br/>TYPE 'X GYPSUM BOARD<br/>ATTACHED TO ROOF<br/>JOISTS, 1-HOUR FIRE-<br/>RATED</li> <li>(E) (2) LAYERS OF 5/8"<br/>TYPE 'X GYPSUM BOARD<br/>ATTACHED TO ROOF<br/>JOISTS, 1-HOUR FIRE-<br/>RATED</li> <li>(E) (2) LAYERS OF 5/8"<br/>TYPE 'X GYPSUM BOARD<br/>ATTACHED TO ROOF<br/>JOIST, 1-HOUR FIRE-<br/>RATED</li> <li>(E) (2) LAYERS OF 5/8"<br/>TYPE 'X GYPSUM BOARD<br/>ATTACHED TO ROOF<br/>JOIST, 1-HOUR FIRE-<br/>RATED</li> <li>(E) (2) LAYERS OF 5/8"<br/>TYPE 'X GYPSUM BOARD<br/>ATTACHED TO ROOF<br/>JOIST, 1-HOUR FIRE-<br/>RATED</li> <li>(E) (2) LAYERS OF 5/8"<br/>TYPE 'X GYPSUM BOARD<br/>ATTACHED TO ROOF<br/>JOIST, 1-HOUR FIRE-<br/>RATED</li> <li>(E) (2) LAYERS OF 5/8"<br/>TYPE 'X GYPSUM BOARD<br/>ATTACHED TO ROOF<br/>JOIST, 1-HOUR FIRE-<br/>RATED</li> <li>(E) (2) LAYERS OF 5/8"<br/>TYPE 'X GYPSUM BOARD<br/>ATTACHED TO ROOF<br/>JOIST, 1-HOUR FIRE-<br/>RATED</li> <li>(E) (2) LAYERS OF 5/8"<br/>TYPE 'X GYPSUM BOARD<br/>ATTACHED TO ROOF<br/>JOIST, 1-HOUR FIRE-<br/>RATED</li> <li>(E) (2) LAYERS OF 5/8"<br/>TYPE 'X GYPSUM BOARD<br/>ATTACHED TO ROOF<br/>JOIST, 1-HOUR FIRE-<br/>RATED</li> <li>(E) (2) LAYERS OF 5/8"<br/>TYPE 'X GYPSUM BOARD<br/>ATTACHED TO ROOF<br/>JOIST, 1-HOUR FIRE-<br/>RATED</li> <li>(E) (2) LAYERS OF 5/8"<br/>TYPE 'X GYPSUM BOARD<br/>ATTACHED TO ROOF<br/>JOIST, 1-HOUR FIRE-<br/>RATED</li> <li>(E) (2) LAYERS OF 5/8"<br/>TYPE 'X GYPSUM BOARD<br/>ATTACHED TO ROOF<br/>JOIST, 1-HOUR FIRE-<br/>RATED</li> <li>(E) (2) LAYERS OF 5/8"<br/>TYPE 'X GYPSUM BOARD<br/>ATTACHED TO ROOF JOIST, 1-<br/>HOUR FIRE-<br/>RATED</li> <li>(E) (2) LAYERS OF 5/8"<br/>TYPE 'X GYPSUM BOARD<br/>ATTACHED TO ROOF JOIST, 1-<br/>HOUR FIRE-<br/>RATED</li> <li>(E) (2) LAYERS OF 5/8"<br/>TYPE 'X GYPSUM BOARD<br/>ATTACHED TO ROOF JOIST, 1-<br/>HOUR FIRE ATED</li> <li>(E) (2) (2) (2) (2) (2) (2) (2) (2) (2) (2</li></ul> | HMC Architects3584-003-0003586 CONCOURS STREET<br>OMARIO, CA 91764<br>90979 / www.hmcarchitects.comSSUEA DESCRIPTIONA DESCRIPTIONKEYNOTES   |
| T FLOOR - DEMOLITION<br>PLAN | (E) EXPOSED TO<br>CELING SYSTEM. 1-<br>HOUR FIRE-RATED<br>(E) EXPOSED TO<br>STRUCTURE ABOVE<br>(EX)<br>(E) EXTERIOR CEMENT<br>PLASTER SOFFIT<br>1:0"  | <ul> <li>02.25 (E) WALL LOUVER</li> <li>02.45 (E) SKYLIGHT</li> <li>02.48 (E) CEILING TILE &amp; CEILING<br/>REQUIRED</li> <li>02.72 (E) FURNACE SYSTEM &amp; C<br/>S.M.D., S.E.D.</li> </ul> <b>NOTES</b> <ol> <li>REFER TO SHEET G0.11 FOR TYPE<br/>ABBREVIATIONS.</li> <li>REFER TO MECHANICAL, ELECTF<br/>STRUCTURAL, AND FIRE ALARMINIT<br/>INFORMATION.</li> <li>REMOVE (E) ELEMENTS AS REQUAND NEW WORK; REINSTALL OR<br/>(E) CONDITIONS.</li> </ol> |
| TFLOOR - DEMOLITION<br>PLAN  |   | FACILITY:   A98 POINT SAN PEDRO RD<br>SAN RAFAEL CA 94901   PROJECT:   SRCS SAN PEDRO ELEMENTARY   SHEET NAME:   BLDG B & C 1ST FLOOR - RCP - I   DATE: 2024.08.27   SHEET:   |



| JBMITTAL |                  |
|----------|------------------|
| 39       | A NO.: 01-121955 |
| 3.27     | CLIENT PROJ NO:  |

C 1ST FLOOR - RCP - DEMOLITION PLAN

N PEDRO ELEMENTARY SCHOOL HVAC & FA

EFER TO SHEET G0.11 FOR TYPICAL SYMBOLS AND BBREVIATIONS. EFER TO MECHANICAL, ELECTRICAL, PLUMBING, AND TRUCTURAL, AND FIRE ALARM DRAWINGS FOR MORE NFORMATION. EMOVE (E) ELEMENTS AS REQUIRED FOR DEMOLITION ID NEW WORK; REINSTALL OR PATCH / PAINT TO MATCH ) CONDITIONS.

TES (E) WALL LOUVER (E) SKYLIGHT (E) CEILING TILE & CEILING GRID TO BE REMOVED AS REQUIRED (E) FURNACE SYSTEM & CIRCUIT TO BE REMOVED, S.M.D., S.E.D.

DATE







PLEASE RECYCLE



### BLDG B & C 1ST FLOOR - RCP

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

A NO.: 01-121955

CLIENT PROJ NO:

### SAN RAFAEL CA 94901

498 POINT SAN PEDRO RD

MECH EQUIPMENT MOUNTED ON EXTERIOR WALL BRACKET, PROVIDE BACKING PER DETAIL 19/A10.02 | MECH CEILING MECHANICAL EQUIPMENT | MECH SEE SHEET A10.02 FOR TYPICAL CEILING DETAILS. FIELD VERIFY CEILING EDGE FIXED END OR FREE END. 2. LOCATE ALL FIRE ALARM DEVICES, IN CENTER OF ACOUSTIC CEILING TILE IF POSSIBLE, VIF PROVIDE CEILING ACCESS PANELS AT (E) CEILINGS WHERE ACCESS IS REQUIRED TO FIRE ALARM DEVICES ABOVE 4. REFER TO SHEET G0.11 FOR TYPICAL SYMBOLS AND ABBREVIATIONS. REFER TO MECHANICAL, ELECTRICAL, PLUMBING, STRUCTURAL AND FIRE ALARM DRAWINGS FOR MORE INFORMATION. 6. (E) CEILING TYPES ARE BASED ON RECORD DRAWINGS AND VERIFY IN FIELD. REMOVE (E) ELEMENTS AS REQUIRED FOR DEMOLITION AND NEW WORK; REINSTALL OR PATCH / PAINT TO MATCH (E) CONDITIONS. (E) CEILING TILES, CEILING GRIDS AND GYPSUM BOARD CEILINGS TO BE REMOVED AS REQ'D FOR INSTALLING MECHANICAL, PLUMBING, ELECTRICAL AND FIRE ALRAM ELEMENTS AND RE-INSTALL, PATCH OR PAINT CEILINGS TO

CEILING TILE AS REQ'D AND PATCH CEILING TO MATCH (E) TO ACCOMMODATE MECH CLOSET, SEE SHEET A10.02 FOR DETAILS. MECH EQUIPMENT MOUNTED ON EXTERIOR WALL BRACKET, PROVIDE BLOCKING PER DETAIL 10/A10.02 | MECH MECHANICAL DUCT, SUBMIT PAINT COLOR SAMPLE TO ARCHITECT FOR APPROVAL; PROVIDE BACKING PER DETAIL 19/A10.02 & PATCH WALL TO MATCH (E) 1-HOUR FIRE-RATED WALL ASSEMBLY GA FILE NO. WP 1072 MECH FAN COIL UNIT AND DUCTS AS REQ'D FOR A COMPLETE AND OPERABLE SYSTEM | MECH MECHANICAL DUCT, SUBMIT PAINT COLOR SAMPLE TO ARCHITECT FOR APPROVAL; PROVIDE BLOCKING PER DETAIL 10/A10.02 & PATCH WALL TO MATCH (E) | MECH

(E) SKYLIGHT REMOVE (E) SUSPENDED ACOUSTIC TILE CEILING SYSTEM AS REQ'D FOR GYPSUM BOARD CEILING SOFFIT @8'-0" +/- AFF TO ACCOMMODATE CEILING MECHANICAL EQUIPMENT. SEE STRUCTURAL DWGS FOR SOFFIT FRAMING. VERIFY SOFFIT HEIGHT IN FIELD. REMOVE/CUT (E) CEILING GRID, HANGER WIRE AND

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02.92

32.03



AGENCY APPROVAL: DSA # 01-121955 FILE # 21-39



HMC Architects 3584-003-000 3546 CONCOURS STREET ONTARIO, CA 91764



**KEYNOTES** 02.07

02.34 02.92 02.94 03.02 23.05 26.03 26.04

26.05 32.03 32.04 32.05 33.02

1/A10.01

10/A10.01

NOTES

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT: SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

SHEET NAME: ENLARGED HVAC YARD PLANS



DATE: 2024.10.01 SHEET:



02.34

11'-6"

33.02 03.02

23.05 TYP

32.04 TYP.

32.03

TYP.

26.03

PLEASE RECYCLE



A NO.: 01-121955 CLIENT PROJ NO:

ELECTRICAL UNDERGROUND PULL BOX W/ GROUND COVER, TRENCH AS REQ'D FOR CONDUIT PATHWAY AND PATCH PAVEMENT & SUBGRADE AND LANDSCAPE TO MATCH (E) | ELEC DISCONNECT SWITCH | ELEC CHAINLINK FENCE POST AND FOOTING ADJACENT TO (E) BLDG B, SEE DETAIL 11/A10.01 CHAINLINK FENCE POST AND FOOTING, SEE DETAIL

CHAINLINK FENCE POST AND FOOTING ADJACENT TO (E)

AREA DRAIN W/ CONDENSATE PUMP BELOW, SEE DETAIL

(E) VALVE TO REMAIN CONCRETE HOUSING PAD | MECH MECHANICAL EQUIPMENT | MECH ELEC PANEL | ELEC

(E) LANDSCAPE TO REMAIN

BLDG C, SEE DETAIL 13/A10.01

COVERAGÈ. (E) HOSE BIBB & PIPE TO REMAIN

(E) TREE TRUNK & TREE TO REMAIN, V.I.F. FOR LOCATION 02.30 (E) ASPHALT PAVING 02.31 (E) LANDSCAPE TO BE REMOVED AS REQ'D AT NEW MECH YARD AND REGRADE TO LEVEL W/ ADJACENT ASPHALT PAVING. RELOCATE (E) IRRIGATION HEAD AND REROUTE (E) IRRIGATION TO ACHIEVE HEAD TO HEAD

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| DOOR TYPE LEGEND   | BLDG B DOOR SCHEDULE   |                        |
|--|--|------------------------|
| DOOR PANEL TYPE<br>- SEE BELOW   | BOOK     SIZE     DOOK     FRAME     SIZE     DETAIL       WIDTH     Image: Size     Image: Size     Image: Size     Image: Size     Image: Size   |                        |
| PNL-F- XX-<br>/FINISH<br>- SEE DOOR SCHEDULE   |  |                        |
|  | NUMBER PANEL 1 PANEL 2 HEIGHT L L L L L L L L L L L L L L L L L L L  | COMMENTS               |
|  | BLDG B 1ST FLOOR   |                        |
|  | 201A       2-6       6-6       FNL-F-HM       FNM-00HM1       2       6       6/A10.02       5/A10.02       -         202A       2'-8"       6'-8"       PNL-F-HM       FRM-00HM1       2       0"       8/A10.02       3/A10.02       -         203A       2'-8"       6'-8"       PNL-F-HM       FRM-00HM1       2       0"       8/A10.02       3/A10.02       -      |                        |
|  | 204A       2'-8"       6'-8"       PNL-F-HM       FRM-00HM1       2       0"       8/A10.02       3/A10.02       -         205A       2'-8"       6'-8"       PNL-F-HM       FRM-00HM1       2       0"       8/A10.02       3/A10.02       -         206A       2'-8"       6'-8"       PNL-F-HM       FRM-00HM1       2       0"       8/A10.02       3/A10.02       - |                        |
|  |  |                        |
|  | NOTE:<br>PAINT DOOR AND FRAME COLOR TO MATCH MECHANICAL CLOSET DOOR & FRAME IN (E) BLDG C, SEMIS-GLOSS   |                        |
|  |  |                        |
|  |  |                        |
| DOOR FRAME LEGEND  | DOOR MATERIAL/FINISH ABBREVIATIONS   |                        |
| DOOR FRAME TYPE<br>- SEE BELOW   | A ALARM CONTACT KD KNOCK DOWN FRAME  |                        |
| FRM-##XX-<br>MATERIAL / FINISH<br>- SEE DOOR SCHEDULE  | AL ALUMINUM<br>ADG-1 ACOUSTIC DOOR GASKET MHO MAGNETIC HOLD OPEN<br>AO AUTOMATIC DOOR OPERATOR   |                        |
|  | CA CLEAR ANODIZED<br>CL COMBO LOCK PH PANIC HARDWARE   |                        |
|  | CR CARD READER PL PLASTIC LAMINATE<br>CT CLEAR TEMPERED GLAZING PT PAINT<br>CW CURTAIN WALL PEY REQUEST TO EXIT MOTION SENSOR  |                        |
|  | DE DELAYED EGRESS RF RF COPPER SHIELDED NON-FERROUS<br>SYSTEM  |                        |
|  | EL ELECTRICAL LOCK<br>EMC ELECTRO MECHANICAL CLOSER ST STAIN GRADE WOOD VENEER<br>SC SOLID CORE WOOD DOOR  |                        |
|  | FAFIRE ALARM INTERFACE RELAYSGSAFETY GLAZINGFFFACTORY FINISHEDSHDSHIELDED DOOR FRAME / GLAZINGFGFIRE RATED GLASSSPSPANDREL GLAZING   |                        |
|  | FGF       FIRE RATED GLASS & FRAMING       STL       STEEL         SM       SMOKE BARRIER SEAL         HM       HOLLOW METAL       SF       STOREFRONT SYSTEM  |                        |
|  | ID INTEGRATED DOOR ASSEMBLY UC UNDERCUT<br>IGU INSULATED GLAZING UNITS   |                        |
|  | IP INFILL PANEL WD(#) WOOD<br>WS WAVE SENSOR   |                        |
|  |  |                        |
|  |  |                        |
| TYPICAL FINISH HARDWARE  |  |                        |
|  |  |                        |
| + BY HARDWARE MANUFACTURER   |  |                        |
|  |  |                        |
|  |  |                        |
|  |  |                        |
| →<br>→<br>→<br>→<br>→<br>→<br>→<br>→<br>→<br>→   |  |                        |
|  |  |                        |
| PLATE<br>PLATE<br>AINLES<br>AINLES<br>AINLES<br>CH HAR<br>CH HAR<br>L<br>LL LATC<br>CH HAR<br>L<br>CENTE<br>ADBOLT   |  |                        |
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| OOR LEAVES FOR PAIR OF DOORS.<br>E LABELED.  |  |                        |
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|  |  |                        |
| 02.26  | 02.26  |                        |
|  |  | 02.26                  |
|  |  |                        |
|  | BLDG B TYP. CLASSROOM INTERIOR 2 BLDG C T  | YP. CLASSROOM INTERIOR |
|  | LLVAIIUN 1/4" = 1'-0"  |                        |



3584-003-000



**KEYNOTES** 

| 02.26 |  |
|-------|--|
| 02.27 |  |
| 02.28 |  |
| 02.29 |  |
| 23.02 |  |
| 23.03 |  |
|       |  |
|       |  |

23.07

### NOTES

1. 2. 3.

FACILITY:

SAN RAFAEL CA 94901

PROJECT: SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

SHEET NAME:



DATE: 2024.10.01 SHEET:

= 12.3S



### A NO.: 01-121955 CLIENT PROJ NO:

INTERIOR ELEVATIONS & DOOR SCHEDULE

### 498 POINT SAN PEDRO RD



(E) CASEWORK (E) WHITEBOARD (E) SINK (E) TACK BOARD MECHANICAL DIFFUSER/GRILLE | MECH MECHANICAL DUCT, SUBMIT PAINT COLOR SAMPLE TO ARCHITECT FOR APPROVAL; PROVIDE BACKING PER DETAIL 19/A10.02 & PATCH WALL TO MATCH (E) 1-HOUR FIRE-RATED WALL ASSEMBLY GA FILE NO. WP 1072 | MECH MECHANICAL DUCT, SUBMIT PAINT COLOR SAMPLE TO ARCHITECT FOR APPROVAL; PROVIDE BLOCKING PER DETAIL 10/A10.02 & PATCH WALL TO MATCH (E) | MECH







| Autodesk Docs://3584003000 SRCS San Pedro ES HVAC and FA R22/3584003000-A-SAN_P<br>9/30/2024 2:26:11 PM | _PEDRO-HVAC_I | _FA.rvt |  | THE LINE SHOWN ABOVE IS<br>EXACTLY ONE INCH LONG AT THIS<br>SHEETS ORIGINAL PAGE SIZE |
|---|---------------|---------|--|---|
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![](_page_11_Picture_2.jpeg)

| EXPANSION BOI<br>EQUAL PRODUC<br>PRIOR TO INST.<br>INSTALLATION: I<br>GIVEN IN MANUF<br>TO NOTIFY E.O.<br>APPROVE ANCH<br>SPECIAL INSPEC<br>(1704A OF THE<br>SUCH EXPANSIC<br>OF THE ANCHOR<br>ALL SUCH EXPANSIC<br>OF THE ANCHOR<br>ALL SUCH EXPANSIC<br>OF THE ANCHOR<br>ANY ANCHOR F<br>TESTED UNTIL 2<br>CONCRETE AT<br>2,500 PSI AND<br>VERIFY MININ<br>F'C = 2500 PSI<br>DIA. MIN.<br>EMBED<br>3/8" 2 1/2"<br>1/2" 3"<br>5/8" 4 1/2"<br>3/4" 5 1/2"<br>FOR SINGLE AN<br>FOR OTHER CA<br>TENSION TEST V<br>STRENGTH IN TI<br>COPTIONAL TOR<br>VRENCH AND S<br>CBC 1910A.5.5.1<br>STRENGTH IN TI<br>COPTIONAL TOR<br>VRENCH AND S<br>CBC 1910A.5.5.1<br>STRENGTH IN TI<br>COPTIONAL TOR<br>TORQUE AND C<br>WRENCH AND S<br>CBC 1910A.5.5.1<br>STRENG TH IN TI<br>COPTIONAL TOR<br>TORQUE AND C<br>URENCH AND S<br>CBC 1910A.5.5.1<br>STRENG TH IN TI<br>COPTIONAL TOR<br>TORQUE AND C<br>URENCH AND S<br>CBC 1910A.5.5.1<br>STRENG TH IN TI<br>COPTIONAL TOR<br>TORQUE AND C<br>URENCH AND S<br>CBC 1910A.5.5.1<br>STRENG TH IN TI<br>COPTIONAL TOR<br>TORQUE AND C<br>URENCH AND S<br>CBC 1910A.5.5.1<br>STRENG TH IN TI<br>COPTIONAL TOR<br>TOR OTHER CA<br>TOR  | LTS SHALL BE HI<br>T. ALTERNATE P<br>ALLATION PER SF<br>NSTALL THE EXP<br>ACTURER'S RECO<br>R. OF ANY ANCHOR<br>HORAGE LOCATION<br>SHALL BE<br>CBC FOR DSA P<br>ON ANCHORS ARE<br>RS SHALL BE TEN<br>NSION ANCHORS ARE<br>SS SHALL BE TEN<br>NSION ANCHORS ARE<br>SHALL BE TEN<br>NSION ANCHORS ARE<br>SHALL HAVE A M<br>HOLE OF INSTALL<br>SHALL HAVE A M<br>HOLE DIST<br>IME OF INSTALL<br>SHALL HAVE A M<br>HOLE DIST<br>CONSECUTIVE<br>TIME OF INSTALL<br>SHALL HAVE A M<br>AUM EXISTING CC<br>SI (NORMAL WEIG<br>MIN.<br>HOLE DIST<br>CONSECUTIVE<br>TIME OF INSTALL<br>SHALL HAVE A<br>AUM EXISTING CC<br>SI (NORMAL WEIG<br>MIN.<br>HOLE DIST<br>CONNEC<br>SHALL ATTAIN THE<br>CONNEC<br>TO STUD A SLOP<br>ALUES ONLY ANT<br>SES, REDUCTION<br>CONNEC<br>TO STUD A SLOP<br>ALUES ONLY ANT<br>SES, REDUCTION<br>CONNEC<br>TO STUD A SLOP<br>ALUES ONLY ANT<br>SES, REDUCTION<br>CONNEC<br>TO STUD A SLOP<br>ALUES ONLY ANT<br>ALUES ONLY ANT<br>SUBC TO STALL<br>A SIGN<br>CONNEC<br>TO STUD A SLOP<br>ALUES ONLY ANT<br>ALUES ONLY<br>ANT<br>ALUES ONLY ANT<br>ALUES ONLY<br>ALUES  | LTI KWIK<br>RPE ANDRO DA<br>ADDR DA<br>PR USIONEDO<br>PR USIONEDO<br>PR USIONEDO<br>PR USIONEDO<br>PR USIONEDO<br>PR USIONEDO<br>PR USIONEDE<br>AND<br>PR USIONE<br>AND<br>PR USIONEDE<br>AND<br>PR USIONE<br>AND<br>PR USIONE<br>AND<br>AND<br>AND<br>AND<br>AND<br>AND<br>AND<br>AND<br>AND<br>AND   |
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| PRIOR TO INST.<br>INSTALLATION: I<br>GIVEN IN MANUF<br>TO NOTIFY E.O.<br>APPROVE ANCH<br>SPECIAL INSPEC<br>(1704A OF THE<br>WHEN EXPANSIC<br>OF THE ANCHOR<br>ALL SUCH EXPAN<br>USED FOR NON<br>ANY ANCHOR F<br>TESTED UNTIL 2<br>CONCRETE AT<br>2,500 PSI AND<br>VERIFY MINIF<br>F'C = 2500 PSI<br>DIA. MIN.<br>EMBED<br>3/8" 2 1/2"<br>1/2" 3"<br>5/8" 4 1/2"<br>3/4" 5 1/2"<br>FOR SINGLE AN<br>FOR OTHER CAN<br>FOR OTHER CAN<br>TENSION TEST V<br>STRENG TH IN TH<br>* OPTIONAL TOR<br>URENCH AND S<br>CBC 1910A.5.5.<br>* OPTIONAL TOR<br>0, Stud to<br>0, Stud to<br>1. Blockin<br>rafterse<br>or oth<br>2. Ceiling<br>3. Ceiling<br>1. Blockin<br>rafterse<br>or oth<br>2. Ceiling<br>3. Ceiling<br>1. Blockin<br>rafterse<br>or oth<br>2. Ceiling<br>3. Ceiling<br>1. Blockin<br>rafterse<br>or oth<br>2. Ceiling<br>3. Ceiling<br>1. Blockin<br>rafterse<br>or oth<br>2. Ceiling<br>1. Built-u<br>1. Top pla<br>1. Built-u<br>21. Built-u<br>22. Ledger<br>23. Joists<br>24. Bridgir<br>or true  | ALLATION PER SF<br>NSTALL THE EXP<br>ACTURER'S RECO<br>R. OF ANY ANCHO<br>HORAGE LOCATION<br>SHALL BE<br>CBC FOR DSA P<br>ON ANCHORS ARE<br>RS SHALL BE TEN<br>NSION ANCHORS ARE<br>S SHALL BE TEN<br>NSION ANCHORS ARE<br>S SHALL BE TEN<br>NSION ANCHORS ARE<br>S SHALL BE TEN<br>SO CONSECUTIVE<br>TIME OF INSTALL,<br>SHALL HAVE A M<br>HUM EXISTING CC<br>SI (NORMAL WEIG<br>MIN. MIN.<br>HOLE DIST<br>2 3/4" 4:<br>3 1/4" 6:<br>3 1/4" 6:<br>4 3/4" 8:<br>5 3/4"<br>CONNEC<br>MIN. MIN.<br>HOLE DIST<br>CONNEC<br>S CONSECUTION<br>CAUES ONLY ANI<br>CONNEC<br>TO FOOF TRUSS TO CONSECUTION<br>CONNEC<br>TO FOOF TRUSS TO CONSECUTION<br>CONSECUTION<br>CONNEC<br>TO FOOF TRUSS TO CONSECUTION<br>CONNEC<br>TO FOOF TRUSS TO CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUTION<br>CONSECUT  | PROJECT FICA<br>AND/ODNS PRICE<br>SANDALLATIC<br>AND/ODNS PRICE<br>PROJECT FEDENCE<br>SANDALLATIC<br>ALLON DISTRICTS<br>AND/ODNS PRICE<br>SANDALLATIC<br>ALLON SI<br>SANDALLATIC<br>ALLON SI<br>SANDALLATIC<br>SANDALLATIC<br>ALLON SI<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC<br>SANDALLATIC   |
| AFFROVE ANCH<br>SPECIAL INSPEC<br>(1704A OF THE<br>WHEN EXPANSIO<br>OF THE ANCHOR<br>ALL SUCH EXPAN<br>USED FOR NON<br>ANY ANCHOR F<br>TESTED UNTIL 2<br>CONCRETE AT<br>2,500 PSI AND<br>VERIFY MININ<br>fc = 2500 PSI<br>DIA. MIN.<br>EMBED<br>3/8" 2 1/2"<br>1/2" 3"<br>5/8" 4 1/2"<br>3/4" 5 1/2"<br>FOR SINGLE AN<br>FOR OTHER CA<br>TENSION TEST V<br>STRENGTH IN TH<br>* OPTIONAL TOR<br>TORQUE AND C<br>WRENCH AND S<br>CBC 1910A.5.5.<br>*<br>OPTIONAL TOR<br>TOR<br>*<br>OPTIONAL TOR<br>TOR<br>*<br>OPTIONAL TOR<br>TOR<br>*<br>OPTIONAL TOR<br>TOR<br>*<br>OPTIONAL TOR<br>*<br>OPTIONAL TOR<br>*<br>OPTION | CION SHALL BE<br>CBC FOR DSA P<br>ON ANCHORS ARE<br>RS SHALL BE TEN<br>NSION ANCHORS<br>STRUCTURAL AF<br>AILS TESTING, TE<br>O CONSECUTIVE<br>TIME OF INSTALL<br>SHALL HAVE A M<br>UM EXISTING CO<br>SI (NORMAL WEIG<br>MIN. MIN.<br>HOLE DIST<br>2 3/4" 4:<br>3 1/4" 6:<br>4 3/4" 8:<br>5 3/4"<br>CHORS WITH NO<br>SES, REDUCTION<br>ALUES ONLY AND<br>ENSION<br>CALUES ONLY AND<br>ENSION<br>CAUE TESTS ARE<br>BC 1910A.5.4.2 A<br>HALL ATTAIN THE<br>2.<br>CONNEC<br>is framing below<br>joist not attache<br>(or trusses to to<br>er framing below<br>joist not attache<br>(or soft russ to<br>afters to ridge v<br>f rafter to 2 incr<br>or roof truss to<br>afters to ridge v<br>f rafter to 2 incr<br>of stud (not a brac<br>or troof truss to<br>afters to ridge v<br>f rafter to 2 incr<br>o stud and abuttin<br>coting wall corner<br>o header (2" to 2<br>uous header to sta<br>ate to top plate<br>ate to stud<br>ates, laps at corr<br>o still, top plate, o<br>ist, band joist, ra<br>king at braced u<br>o bottom plate<br>ate to stud<br>ates, laps at corr<br>ching at braced u<br>o bottom plate<br>ate to stud<br>ates, laps at corr<br>ching at braced u<br>o bottom plate<br>ate to stud<br>ates, laps at corr<br>o sill, top plate, o<br>ist, band joist, ra<br>MKS (plank & beam   | PROVID TENDER<br>PROVID   |
| <ul> <li>WHEN EXPANSIC<br/>OF THE ANCHOR<br/>ALL SUCH EXPANUSED FOR NON<br/>ANY ANCHOR F<br/>TESTED UNTIL 2</li> <li>CONCRETE AT<br/>2,500 PSI AND</li> <li>VERIFY MININ<br/>F'C = 2500 PSI<br/>2,500 PSI AND</li> <li>VERIFY MININ<br/>F'C = 2500 PSI<br/>3/8" 2 1/2"</li> <li>JA" 5 1/2"</li> <li>FOR SINGLE AN<br/>FOR OTHER CAN<br/>FOR OTHER CAN<br/>FOR OTHER CAN<br/>TENSION TEST V<br/>STRENGTH IN TH<br/>* OPTIONAL TOR<br/>TORQUE AND CO<br/>WRENCH AND SO<br/>CBC 1910A.5.5.3</li> <li>NALLIN</li> <li>* OPTIONAL TOR<br/>TORQUE AND CO<br/>WRENCH AND SO<br/>CBC 1910A.5.5.3</li> <li>* OPTIONAL TOR<br/>TOR<br/>TORQUE AND CO<br/>WRENCH AND SO<br/>CBC 1910A.5.5.3</li> <li>* OPTIONAL TOR<br/>TOR<br/>TORQUE AND CO<br/>WRENCH AND SO<br/>CBC 1910A.5.5.3</li> <li>* OPTIONAL TOR<br/>TOR<br/>TOR<br/>TOR<br/>TOR<br/>TOR<br/>TOR<br/>TOR<br/>TOR<br/>TOR</li></ul>   | ANCHORS ARE<br>RS SHALL BE TEN<br>NSION ANCHOR S<br>-STRUCTURAL AF<br>AILS TESTING, TE<br>O CONSECUTIVE<br>TIME OF INSTALL,<br>SHALL HAVE A M<br>UM EXISTING CC<br>SI (NORMAL WEIG<br>MIN. MIN.<br>HOLE DIST<br>2 3/4" 4:<br>3 1/4" 6:<br>4 3/4" 8:<br>5 3/4"<br>CHORS WITH NO<br>SES, REDUCTION<br>ALUES ONLY ANI<br>ENSION<br>ALUES ONLY ANI<br>ENSION<br>ALUES ONLY ANI<br>ENSION<br>ALUES ONLY ANI<br>ENSION<br>CONNEC<br>IS SECUCTION<br>ALUES ONLY ANI<br>ENSION<br>CONNEC<br>IS STATE<br>CONNEC<br>IS DETESTS ARE<br>BC 1910A.5.4.2 A<br>HALL ATTAIN THE<br>CONNEC<br>IS DETESTS ARE<br>BC 1910A.5.4.2 A<br>HALL ATTAIN THE<br>CONNEC<br>IS DETESTS ARE<br>ISC 1910A.5.4.2 A<br>HALL ATTAIN THE<br>CONNEC<br>IS DETESTS ARE<br>IS ON<br>CONNEC<br>IS DETESTS<br>IS ON<br>CONNEC<br>IS DETESTS<br>IS ON<br>CONNEC<br>IS DETESTS<br>IS                                     | USED F<br>SIGN TE<br>SHALL B<br>PLICATIC<br>ANCHOF<br>ATION SF<br>INIMUM ,<br>EDGE<br>3/8"<br>3/4"<br>9"<br>EDGE D<br>ANCE<br>3/8"<br>3/4"<br>9"<br>EDGE D<br>ANCE<br>3/8"<br>3/4"<br>9"<br>EDGE D<br>ANCE<br>3/8"<br>3/4"<br>9"<br>EDGE D<br>ANCE<br>3/8"<br>3/4"<br>9"<br>EDGE D<br>ANCE<br>3/8"<br>3/4"<br>9"<br>EDGE D<br>ANCE<br>3/8"<br>3/4"<br>9<br>EDGE D<br>ANCE<br>3/8"<br>3/4"<br>9<br>EDGE D<br>ANCE<br>3/8"<br>3/4"<br>9<br>EDGE D<br>ANCE<br>3/8"<br>3/4"<br>9<br>EDGE D<br>ANCE<br>3/8"<br>3/4"<br>9<br>EDGE D<br>ANCE<br>3/8"<br>3/4"<br>9<br>EDGE D<br>ANCE<br>3/8"<br>3/4"<br>9<br>EDGE D<br>ANCE<br>3/8"<br>3/4"<br>9<br>EDGE D<br>ANCE<br>3/8"<br>3/4"<br>9<br>EDGE D<br>ANCE<br>10<br>N SPECIF<br>10<br>N<br>10<br>S SPECIF<br>10<br>S S SPECIF<br>10<br>S S SPECIF<br>10<br>S S SPECIF<br>10<br>S S SPECIF<br>10<br>S S S SPECIF<br>10<br>S S S S S S S S S S S S S S S S S S S  |
| CONCRETE AT<br>2,500 PSI AND<br>VERIFY MININ<br>f'c = 2500 P<br>DIA. MIN.<br>EMBED<br>3/8" 2 1/2"<br>1/2" 3"<br>5/8" 4 1/2"<br>3/4" 5 1/2"<br>FOR SINGLE AN<br>FOR OTHER CA<br>TENSION TEST V<br>STRENGTH IN TH<br>* OPTIONAL TOR<br>TORQUE AND C<br>WRENCH AND S<br>CBC 1910A.5.5.3<br>NALLIN<br>1. Blockin<br>rafters<br>or oth<br>2. Ceiling<br>3. Ceiling<br>3. Ceiling<br>3. Ceiling<br>3. Ceiling<br>3. Ceiling<br>3. Ceiling<br>3. Ceiling<br>1. Blockin<br>rafters<br>or oth<br>2. Ceiling<br>3. Ceiling<br>1. Top pla<br>1. Top pla<br>1. Built-u<br>2. Ledger<br>2. Ledger<br>2. Ledger   | TIME OF INSTALLA<br>SHALL HAVE A M<br>AUM EXISTING CO<br>SI (NORMAL WEIG<br>MIN. MIN.<br>DEPTH DIST<br>2 3/4" 4<br>3 1/4" 6<br>4 3/4" 8<br>5 3/4"<br>CHORS WITH NO<br>SES, REDUCTION<br>ALUES ONLY AND<br>ENSION<br>CALUES ONLY AND<br>ENSION<br>CALUES ONLY AND<br>ENSION<br>CONNEC<br>BC 1910A.5.4.2 A<br>HALL ATTAIN THE<br>2.<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>CONNEC<br>INSTRUCTION<br>C                      | ATION SF<br>INIMUM,<br>NCRETE<br>SHT CON<br>EDGE<br>ANCE<br>3/8"<br>3/4"<br>9"<br>EDGE D<br>OF VAL<br>D CORRI<br>BASED C<br>ND SHAI<br>SPECIF<br>D CORRI<br>SPECIF<br>TION 1<br>3 joists,<br>2 plate<br>(Roof)<br>e<br>2 d to pal<br>alley or<br>ridge b<br>2 d to pal<br>alley or<br>im joist,<br>all panel<br>ers and  |
| DIA. MIN.<br>EMBED<br>3/8" 2 1/2"<br>1/2" 3"<br>5/8" 4 1/2"<br>3/4" 5 1/2"<br>FOR SINGLE AN<br>FOR OTHER CA<br>TENSION TEST V<br>STRENGTH IN TH<br>* OPTIONAL TOR<br>TORQUE AND C<br>WRENCH AND S<br>CBC 1910A.5.5.<br>NAILIN<br>1. Blockin<br>rafters<br>or oth<br>2. Ceiling<br>3. Ceiling<br>3. Ceiling<br>3. Ceiling<br>1. Blockin<br>rafters<br>or oth<br>2. Ceiling<br>3. Ceiling<br>1. Blockin<br>rafters<br>or oth<br>2. Ceiling<br>3. Ceiling<br>1. Blockin<br>rafters<br>or oth<br>2. Ceiling<br>1. Blockin<br>rafters<br>or oth<br>1. Blockin<br>rafters<br>or oth<br>2. Ceiling<br>1. Blockin<br>rafters<br>or oth<br>2. Ceiling<br>3. Ceiling<br>1. Blockin<br>rafters<br>or oth<br>2. Ceiling<br>3. Ceiling<br>1. Top pla<br>1. Top pla<br>1. Built-u<br>21. Built-u<br>22. Ledger<br>23. Joists<br>24. Bridgin<br>or true  | MIN.<br>HOLE<br>DEPTH<br>2 3/4"<br>4 3/4"<br>5 3/4"<br>6<br>4 3/4"<br>6<br>5 3/4"<br>CHORS WITH NO<br>SES, REDUCTION<br>ALUES ONLY AND<br>ENSION<br>CALUES ONLY AND<br>ENSION<br>CALUES ONLY AND<br>ENSION<br>CONNEC<br>BC 1910A.5.4.2 A<br>HALL ATTAIN THE<br>2.<br>CONNEC<br>IN DECEMBER<br>CONNEC<br>IN DECEMBER<br>CONNEC<br>I | EDGE<br>ANCE<br>3/8"<br>3/4"<br>9"<br>EDGE D<br>OF VAL<br>D CORRI<br>BASED (<br>ND SHAL<br>SPECIF<br>D CORRI<br>SPECIF<br>D CORRI<br>SPECIF<br>D CORRI<br>SPECIF<br>1 (Roof)<br>e<br>2 d to pala<br>alley or<br>ridge b<br>2 d to pala<br>b<br>2 d to pala |
| 3/0       2 1/2         1/2"       3"         5/8"       4 1/2"         3/4"       5 1/2"         FOR SINGLE AN         FOR OTHER CA         TENSION TEST V         STRENGTH IN TH         *       OPTIONAL TOR         TORQUE AND C         WRENCH AND S         CBC 1910A.5.5.1         *       OPTIONAL TOR         1       Blockin         rafters         or oth         2.       Ceiling         3.       Ceiling         1.       Blockin         2.       Ceiling         3.       Ceiling         3.       Ceiling         1.       Collar         5.       Rafter         6.       Roof r         or bloc  | 2 3/4 4<br>3 1/4" 6<br>3 1/4" 6<br>4 3/4" 8<br>5 3/4"<br>CHORS WITH NO<br>SES, REDUCTION<br>ALUES ONLY AND<br>ENSION<br>ALUES ONLY AND<br>ENSION<br>AUE TESTS ARE<br>BC 1910A.5.4.2 A<br>HALL ATTAIN THE<br>2.<br>CONNEC<br>Ing between ceiling<br>or trusses to to<br>er framing below<br>joist to top plat<br>joist not attache<br>ver partitions<br>tie to rafter<br>or roof truss to<br>afters to ridge v<br>f rafter to 2 inch<br>o stud (not a brack<br>o stud (not a brack<br>o stud (not a brack<br>o stud and abutting<br>const o plate<br>ate to top plate<br>ate to stud<br>ates, laps at corre-<br>bottom plate<br>ates, laps at corre-<br>bottom plate<br>bottom b  | DJD<br>BASED (<br>A<br>DF VAL<br>DF VA   |
| FOR SINGLE AN<br>FOR OTHER CA<br>TENSION TEST V<br>STRENGTH IN TH<br>* OPTIONAL TOR<br>WRENCH AND S<br>CBC 1910A.5.5.3<br>I. Blockin<br>rafters<br>Or oth<br>2. Ceiling<br>3. Ceiling<br>1. Blocki<br>rafters<br>Or oth<br>2. Ceiling<br>3. Ceiling<br>3. Ceiling<br>1. Stud ta<br>8. Stud ta<br>interse<br>panels,<br>9. Built-u<br>10. Contin<br>11. Top pla<br>12. Top pla<br>13. Bottor<br>or bloc<br>14. Bottor<br>or bloc<br>14. Bottor<br>or bloc<br>15. Stud ta<br>17. Top pla<br>13. Bottor<br>or bloc<br>14. Bottor<br>or bloc<br>14. Bottor<br>or bloc<br>15. Stud ta<br>17. Top pla<br>17. Top pla<br>18. Joist t<br>19. Rim jo<br>plate, s<br>20. 2" plan<br>21. Built-u<br>22. Ledger<br>23. Joists<br>24. Bridgir<br>or true  | GHORS WITH NO<br>SES, REDUCTION<br>ALUES ONLY AND<br>ALUES O  | DEDGE D<br>OF VAL<br>DOF DOF DOF<br>DOF DOF<br>DOF<br>DOF DOF<br>DOF<br>DOF<br>DOF DOF<br>DOF<br>DOF<br>DOF<br>DOF<br>DOF<br>DOF<br>DOF<br>DOF<br>DOF  |
| * OPTIONAL TOR<br>TORQUE AND C<br>WRENCH AND S<br>CBC 1910A.5.5.1<br>1. Blockin<br>rafters<br>or oth<br>2. Ceiling<br>3. Ceiling<br>3. Ceiling<br>1aps ov<br>4. Collar<br>5. Rafter<br>6. Roof r<br>or roo<br>7. Stud ta<br>8. Stud ta<br>10. Continu<br>11. Top pla<br>12. Top pla<br>13. Bottor<br>or bloc<br>14. Bottor<br>or bloc<br>14. Bottor<br>or bloc<br>15. Stud ta<br>17. Top pla<br>13. Joist t<br>19. Rim jo<br>plate, s<br>20. 2" plan<br>21. Built-u<br>21. Built-u<br>21. Built-u  | AQUE TESTS ARE<br>BC 1910A.5.4.2 A<br>HALL ATTAIN THE<br>CONNEC<br>IN BETWEEN CEILING<br>TO TRUSSES TO TO<br>P between ceiling<br>or trusses to to<br>er framing below<br>joist to top plat<br>joist not attache<br>ver partitions<br>tie to rafter<br>or roof truss to<br>afters to ridge v<br>f rafter to 2 inch<br>o stud (not a brac<br>o stud (not a brac<br>o stud and abuttin<br>ecting wall corner<br>p header (2" to 2<br>LOUS header to si<br>ate to top plate<br>ate to top plate<br>ate to top plate<br>ate to top plate<br>ate to stud<br>ates, laps at corr<br>ist, band joist, or<br>bill or other fram<br>ks (plank & beam  | BASED (<br>ND SHA<br>SPECIF<br>DULE<br>TION 1<br>g joists,<br>pp plate<br>(Roof)<br>e<br>2d to pal<br>alley or<br>1 ridge b<br>2ed wall<br>1 g studs<br>5 ( at br<br>" header<br>2 ud<br>at end jo<br>im joist,<br>all panel<br>ers and  |
| NAILIN1.Blockin<br>rafters<br>or oth2.Ceiling<br>aps out3.Ceiling<br>aps out4.Collar5.Rafter6.Roof r<br>or rood7.Stud ta<br>stud ta<br>banels,9.Built-u10.Contine<br>11.11.Top pla<br>12.13.Bottor<br>or bloc14.Bottor<br>or bloc15.Stud ta<br>interse<br>ganels,18.Joist ta<br>17.19.Rim jo<br>plate, s20.2" plan21.Built-u22.Ledger23.Joists24.Bridgir<br>or true  | G SCHEC<br>CONNEC<br>ag between ceiling<br>or trusses to to<br>er framing below<br>joist to top plat<br>joist not attache<br>ver partitions<br>tie to rafter<br>or roof truss to<br>afters to ridge v<br>f rafter to 2 inch<br>o stud (not a brac<br>o stud and abuttin<br>ecting wall corner<br>o header (2" to 2<br>uous header to si<br>ate to top plate<br>ate to top plate<br>ate to top plate,<br>n plate to joist, r<br>cking (not at brac<br>n plate to joist, r<br>cking at braced u<br>o bottom plate<br>ate to stud<br>ates, laps at corr<br>o sill, top plate, o<br>ist, band joist, or<br>bill or other fram<br>ks (plank & beam   | DULE<br>TION 1<br>g joists,<br>p plate<br>(Roof)<br>e<br>2d to par<br>top plat<br>alley or<br>ridge b<br>2ed wall<br>ng studs<br>s ( at br<br>" header<br>:ud<br>im joist,<br>all panel<br>ers and   |
| 1.Blockin<br>rafters<br>or oth2.Ceiling3.Ceiling3.Ceiling3.Ceiling3.Ceiling3.Ceiling1.Collar5.Rafter6.Roof r<br>or roo7.Stud to<br>interse<br>panels,9.Built-u10.Continu11.Top pla12.Top pla13.Bottor<br>or bloc14.Bottor<br>or bloc15.Stud to<br>interse18.Joist t19.Rim jo<br>plate, s20.2" plan21.Built-u22.Ledger23.Joists24.Bridgir<br>or trus  | CONNEC<br>ing between ceiling<br>or trusses to to<br>er framing below<br>joist to top plat<br>joist not attache<br>ver partitions<br>tie to rafter<br>or roof truss to<br>afters to ridge v<br>f rafter to 2 inch<br>o stud (not a brac<br>o stud (not a brac<br>o stud and abuttin<br>ecting wall corner<br>p header (2" to 2<br>uous header to si<br>ate to top plate<br>ate to top plate<br>ate to top plate,<br>n plate to joist, r<br>cking (not at brac<br>n plate to joist, r<br>cking at braced u<br>o bottom plate<br>ate s, laps at corr<br>ections<br>o sill, top plate, o<br>ist, band joist, or<br>bill or other fram<br>ks (plank & beam  | TION <sup>1</sup><br>g joists,<br>pp plate<br>(Roof)<br>e<br>2d to pale<br>top plat<br>alley or<br>ridge b<br>ced wall<br>ng studs<br>s ( at br<br>" header<br>:ud<br>at end jo<br>im joist,<br>all panel<br>im joist,<br>all panel<br>ers and   |
| <ul> <li>or oth</li> <li>2. Ceiling</li> <li>3. Ceiling</li> <li>1aps ov</li> <li>4. Collar</li> <li>5. Rafter</li> <li>6. Roof r</li> <li>or roo</li> <li>7. Stud ta</li> <li>interse</li> <li>panels,</li> <li>9. Built-u</li> <li>10. Contini</li> <li>11. Top pla</li> <li>12. Top pla</li> <li>13. Bottor</li> <li>or bloc</li> <li>14. Bottor</li> <li>or bloc</li> <li>15. Stud ta</li> <li>interse</li> <li>18. Joist t</li> <li>19. Rim jo</li> <li>plate, s</li> <li>20. 2" plan</li> <li>21. Built-u</li> <li>22. Ledger</li> <li>23. Joists</li> <li>24. Bridgir</li> <li>or true</li> </ul>   | er framing below<br>joist to top plat<br>joist not attache<br>ver partitions<br>tie to rafter<br>or roof truss to<br>afters to ridge v<br>f rafter to 2 inch<br>o stud (not a brac<br>o stud and abuttin<br>ecting wall corner<br>o header (2" to 2<br>uous header to si<br>ate to top plate<br>ate to top plate<br>ate to top plate<br>ate to joist, r<br>cking at braced u<br>o bottom plate<br>ate to stud<br>ates, laps at corr<br>o sill, top plate, o<br>ist, band joist, or<br>bill or other fram<br>ks (plank & beam  | (Roof)<br>e<br>ed to pa<br>alley or<br>ridge b<br>ced wall<br>ng studs<br>s ( at br<br>" header<br>ud<br>at end jo<br>im joist,<br>all panel<br>ers and  |
| <ol> <li>5. Rafter</li> <li>6. Roof r<br/>or roo</li> <li>7. Stud ta</li> <li>8. Stud ta<br/>interse<br/>panels,</li> <li>9. Built-u</li> <li>10. Contini<br/>11. Top pla</li> <li>12. Top pla</li> <li>13. Bottor<br/>or bloc</li> <li>14. Bottor<br/>or bloc</li> <li>15. Stud ta</li> <li>16. Top pla</li> <li>17. Top pla</li> <li>17. Top pla</li> <li>18. Joist ta</li> <li>19. Rim jo<br/>plate, s</li> <li>20. 2" plan</li> <li>21. Built-u</li> <li>22. Ledger</li> <li>23. Joists</li> <li>24. Bridgir<br/>or true</li> </ol>  | or roof truss to<br>afters to ridge v<br>f rafter to 2 inch<br>o stud (not a brac<br>o stud and abuttin<br>cting wall corner<br>)<br>p header (2" to 2<br>uous header to si<br>ate to top plate<br>ate to top plate<br>ate to top plate,<br>n plate to joist, r<br>cking at braced u<br>o bottom plate<br>ate to stud<br>ates, laps at corr<br>ctions<br>o sill, top plate, o<br>sill or other fram<br>ks (plank & beam   | top pla<br>alley or<br>ridge b<br>ced wall<br>ig studs<br>s ( at br<br>" header<br>ud<br>at end jo<br>at end jo<br>im joist,<br>all panel<br>ers and   |
| <ul> <li>8. Stud ta<br/>interse<br/>panels,</li> <li>9. Built-u</li> <li>10. Contini</li> <li>11. Top pla</li> <li>12. Top pla</li> <li>13. Bottor<br/>or bloc</li> <li>14. Bottor<br/>or bloc</li> <li>15. Stud ta</li> <li>16. Top pla</li> <li>17. Top pla</li> <li>17. Top pla</li> <li>18. Joist t</li> <li>19. Rim jo<br/>plate, s</li> <li>20. 2" plan</li> <li>21. Built-u</li> <li>22. Ledger</li> <li>23. Joists</li> <li>24. Bridgir<br/>or true</li> </ul>   | p stud and abuttine<br>cting wall corner<br>p header (2" to 2<br>uous header to st<br>ate to top plate<br>ate to top plate<br>ate to top plate,<br>n plate to joist, r<br>tking (not at brace<br>n plate to joist, r<br>tking at braced u<br>to bottom plate<br>ate to stud<br>ates, laps at corr<br>o sill, top plate, of<br>ist, band joist, or<br>bill or other fram<br>ks (plank & beam   | ng studs<br>s ( at br<br>" header<br>tud<br>at end jo<br>at end jo<br>im joist,<br>ed wall<br>im joist,<br>all panel<br>ers and  |
| <ul> <li>10. Continu</li> <li>11. Top pla</li> <li>12. Top pla</li> <li>13. Bottor<br/>or bloc</li> <li>14. Bottor<br/>or bloc</li> <li>15. Stud ta</li> <li>16. Top pla</li> <li>17. Top pla</li> <li>17. Top pla</li> <li>18. Joist t</li> <li>19. Rim jo<br/>plate, s</li> <li>20. 2" plan</li> <li>21. Built-u</li> <li>22. Ledger</li> <li>23. Joists</li> <li>24. Bridgir<br/>or trus</li> </ul>   | Jous header to si<br>ate to top plate<br>ate to top plate,<br>in plate to joist, r<br>tking (not at brace<br>n plate to joist, r<br>tking at braced u<br>to bottom plate<br>ate to stud<br>ates, laps at corr<br>o sill, top plate, of<br>ist, band joist, or<br>bill or other fram<br>ks (plank & beam   | tud<br>at end jo<br>im joist,<br>ed wall p<br>im joist,<br>all panel<br>ers and  |
| <ul> <li>13. Bottor<br/>or bloc</li> <li>14. Bottor<br/>or bloc</li> <li>15. Stud to</li> <li>16. Top pla</li> <li>17. Top pla</li> <li>17. Top pla</li> <li>18. Joist t</li> <li>19. Rim jo<br/>plate, s</li> <li>20. 2" plan</li> <li>21. Built-u</li> <li>22. Ledger</li> <li>23. Joists</li> <li>24. Bridgir<br/>or true</li> </ul>  | n plate to joist, r<br>cking (not at brac<br>n plate to joist, r<br>cking at braced u<br>o bottom plate<br>ate to stud<br>ates, laps at corr<br>ctions<br>o sill, top plate, o<br>sill or other fram<br>ks (plank & beam  | im joist,<br>ed wall<br>im joist,<br>all panel<br>ers and  |
| <ul> <li>or bloc</li> <li>15. Stud to</li> <li>16. Top pla</li> <li>interse</li> <li>17. Top pla</li> <li>interse</li> <li>18. Joist t</li> <li>19. Rim jo</li> <li>plate, s</li> <li>20. 2" plan</li> <li>21. Built-u</li> <li>22. Ledger</li> <li>23. Joists</li> <li>24. Bridgir</li> <li>or true</li> </ul>  | cking at braced u<br>o bottom plate<br>ate to stud<br>ates, laps at corr<br>o sill, top plate, o<br>ist, band joist, or<br>bill or other fram<br>ks (plank & beam   | ers and  |
| <ul> <li>17. Top pla<br/>interse</li> <li>18. Joist t</li> <li>19. Rim jo<br/>plate, s</li> <li>20. 2" plan</li> <li>21. Built-u</li> <li>22. Ledger</li> <li>23. Joists</li> <li>24. Bridgir<br/>or true</li> </ul>   | ates, laps at corr<br>o sill, top plate, o<br>ist, band joist, or<br>sill or other fram<br>ks (plank & beam<br>p girders and bea  | iers and   |
| 20. 2" plan<br>20. 2" plan<br>21. Built-u<br>22. Ledger<br>23. Joists<br>24. Bridgir<br>or true  | sill or other fram<br>ks (plank ∉ beam<br>p girders and bea   | pr girder<br>blockin   |
| 21. Built-u<br>22. Ledger<br>23. Joists<br>24. Bridgir<br>or true  | p girders and bea   | ng belou<br>- floor a  |
| 22. Ledger<br>23. Joists<br>24. Bridgir<br>or true   |   | ams, 2"  1   |
| 24. Bridgir<br>or true   | strip supportin   | g joists<br>rim joist  |
| NOTES:   | ng or blocking to<br>as (floor)   | joist, ra  |
| 1. NAILING<br>SPECIF<br>SUPERC<br>2. NAIL SF   | PER SCHEDULE<br>ED ON PLANS OF<br>EDE NAILING SC<br>PECIFIED ARE CO   | ABOVE<br>R DETAIL<br>HEDULE<br>MMON:   |
| FOR AL<br>TABLE  | .TERNATE NAILING<br>CBC 2304.10.2   | 5 AND IN   |
| NAIL DESIGN  | ATION AND SIZES   | <u>}</u>   |
| NAIL<br>16d COMMON   | DIAMETER (in<br>0.162   |  |
| 100 COMMON<br>100 SHORT  | 0.148<br>0.148  |  |
|  |   |  |
| ABBR   | ARCHITECTURA  | <u>ч5</u>  |
| BLKG.<br>CBC<br>CLR.<br>CONT.  | BLOCKING<br>CALIFORNIA BL<br>CLEAR<br>CONTINUOUS  | ILDING   |
| CTR.<br>DBL<br>DET.<br>D.F.  | CENTER<br>DOUBLE<br>DETAIL<br>DOUGLAS FIR   |  |
| DIA.<br>DWG.<br>(E)<br>EA  | DIAMETER<br>DRAWINGS<br>EXISTING<br>EACH  |  |
| G.C.<br>GLB<br>HDR   | GENERAL CON<br>GLUE LAMINATE<br>HEADER  | IRACTO<br>ED (BEA  |
| HGR.<br>LSL  | HANGER<br>LAMINATED STI<br>LUMBER   | RAND   |
| MAX.<br>MECH.<br>MIN.<br>MISC.   | MAXIMUM<br>MECHANICAL<br>MINIMUM<br>MISCELLANEOU  | 15   |
|  |   |  |
| 51KU   |   | <u>د</u> ا ا   |
|  | 16d COMMON<br>16d SINKER<br>10d COMMON<br>10d SHORT<br>8d COMMON<br>ARCH.<br>BLKG.<br>CBC<br>CLR.<br>CONT.<br>CTR.<br>DBL<br>DET.<br>DBL<br>DET.<br>DIA.<br>DWG.<br>(E)<br>EA.<br>G.C.<br>GLB<br>HDR<br>HGR.<br>LSL<br>MAX.<br>MECH.<br>MIN.<br>MISC.   | INALL       Dirich Leisen         16d COMMON       0.162         16d SINKER       0.148         10d COMMON       0.148         10d SHORT       0.148         10d COMMON       0.131         ARCH.         ARCH.       ARCHITECTURA         BLKG.       BLOCKING         CBC       CALIFORNIA BL         CLR.       CLEAR         CONT.       CONTINUOUS         CTR.       CENTER         DBL       DOUBLE         DET.       DETAIL         D.F.       DOUGLAS FIR         DIA.       DIAMETER         DWG.       DRAWINGS         (E)       EXISTING         EA.       EACH         G.C.       GENERAL CON'         GLB       GLUE LAMINATE         HDR       HEADER         HGR.       HANGER         LSL       LAMINATED STR         MIN.       MINIMUM         MECH.       MECHANICAL   |

| (-BOLT TZ2-C                                  | ARBON STEEL                                    | ANCHOR (ESR-420  | DR MAX. SPAN JOIST  |
|---|--|--|---|
| ATIONS.                                       |  | E WITH THE REQUIR  | 8'-0" 2x6 AT 16" O.C.<br>12'-0" 2x8 AT 16" O.C.   |
| ANCHORS IN<br>DATIONS FOR<br>DWEL LOCATIO     | ACCORDANCE<br>THE SPECIFIC<br>DNS TO BE REF    | CANCHOR. CONTR<br>PAIR. E.O.R. TO RE                       | IZ-0         ZX0 AT 10 0.0.           OR         IZ-0           I AND                         |
| DED IN ACCOR                                  | RDANCE WITH                                    | SECTION 1704 OF 1  |   |
| TS)<br>FOR SILL PLA                           | ATE BOLTING A                                  | WAY FROM THE ED  | 10%   |
| ESTED. FOR /<br>BE TENSION TI<br>IONS, 50% OI | ALL OTHER STI<br>ESTED. WHEN E<br>F ANCHORS SH | RUCTURAL APPLICA<br>EXPANSION ANCHOR<br>HALL BE TENSION TE | IS,<br>RE<br>D. IF<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X |
| ANCHORS OF<br>RS PASS.                        | F THE SAME TY                                  | PENOT PREVIOUS   |   |
| HALL HAVE A<br>AGE OF 21 D<br>STRENGTH I      | MINIMUM COM<br>AYS<br>N FIFI D MIN             | IPRESSIVE STRENG   |   |
| NCRETE) *                                     |  |  |   |
| SPACING                                       | VALUE **                                       | ' TORQUE TEST<br>(ft-lb) *** CS                            | $ = \frac{\mathbf{X} \mathbf{X} \mathbf{X}}{\mathbf{X} \mathbf{X}} \mathbf{X} \mathbf{X} $    |
| 7 1/2"<br>11 1/4"                             | 2,413#<br>3,373#                               | 30<br>50   |   |
| 13 1/2"<br>16 1/2"<br>DISTANCE OR             | 5,525#<br>7,182#<br>SPACING RED                | 110<br>110   |   |
| LUES CALCUL                                   | ATED PER ACI<br>H 1.25x MAXIMI                 | 318 IS REQUIRED.<br>IM LRFD CONCRET                        |   |
| ON THE MANL                                   | IFACTURERS M                                   | 1AXIMUM INSTALLAT  | <b>5</b> DIAGRAMMATIC PLAN OF SUSPENDE  |
| LL BE PERFO<br>FIED TORQUE                    | ORMED WITH A<br>WITH 1/2 TURN                  | CALIBRATED TORC  |   |
|   |  |  |   |
|   |  | 2204 10 2  |   |
|   |  | 2304.10.2  | 2x6 DIAGONAL<br>BRACING AT 8'-0" O.C.<br>EA. WAY W/ (3) 16d                                   |
|   | NAILING <sup>2</sup><br>(3) 8d                 | NAILING <sup>2</sup><br>Ea. end, toenail                   |   |
|   | (3) 8d   | Toenail  | U26 HANGERS 1   |
| arallel rafter,                               | (3) 16d  | Face nail  | AS REQD.)   |
| te<br>hip rafters:                            | (3) 10d<br>(3) 10d<br>(2) 16d                  | Toenail<br>End nail  |   |
| peam.   | (3) 10d<br>16d                                 | Toenail<br>24" o.c face nail                               | H6 AT 4'-0" O.C.  |
| at<br>raced wall                              | 16d  | 16" o.c face nail  | TYP.<br>2x CONT. LEDGER SAME<br>DEPTH AS JOIST W/   |
| r)  | 16d  | 16" o.c each edge<br>face nail                             | (3) 16d AT EA. STUD<br>2x SOLID BLKG.   |
|   | (4) 8d<br>16d                                  | Toenail<br>16" o.c face nail                               | W/ A35 EA. END  |
| , band joist                                  | (8) 16d<br>16d                                 | end joint<br>12" o.c face nail                             |   |
| panels)<br>, band joist                       | (2) 16d  | 16" o.c face nail  | TYPICAL CONNECTION AT WALL  |
|   | (4) 8d<br>(2) 16d                              | Toenail<br>End nail  |   |
| r   | (2) 16d  | Face nail  | 6 TYPICAL FRAMED CEILING/ SOFFIT  |
| ng to top<br>W                                | 8d   | 6" o.c toenail   |   |
| ≰ roof)                                       | (2) 16d<br>20d                                 | Each bearing<br>32" o.c face nail<br>at top and bottor     | (6) 16d (6) 16d   |
| lumber layers                                 | (2) 204  | staggered on<br>sides.<br>Ends and at each                 |   |
| or rafters                                    | (3) 16d  | splice, face nail<br>Each joist or                         |   |
| t<br>after                                    | (3) 16d<br>(2) 8d                              | rafter, face nail<br>End nail<br>Each end toe nail         |   |
|   |  |  | DIAGONAL<br>BRACING   |
| IS TO BE USE<br>ILS. NAILING F<br>UNLESS APPI | ED WHERE NAIL<br>PER PLANS ANI<br>ROVED BY ENG | LING IS NOT<br>D DETAILS<br>GINEER.                        | SEE DET. 6/-  |
| 8d= 0.13<br>10d= 0.1<br>16d= 0.1              | 91"x2 1/2"<br>48"x3"<br>62"x3 1/2"             |  |   |
| NFORMATION                                    | NOT SHOWN, S                                   | SEE COMPLETE   | GOTING SOFFIL   |
|   |  |  |   |
|   |  |  |   |
| GTH (in)<br>3.5                               |  |  | FOR INFO. NOT<br>NOTED, SEE B   |
| 3.25<br>3                                     |  |  |   |
| 2.5<br>2.5                                    |  |  | (A) TO RAFTER (B) PARALLEL<br>TO RAFTER   |
|   |  |  |   |
|   |  |  |   |
| (N)<br>N.T.S                                  | NEM<br>5. NOT TO                               | O SCALE  |   |
| CODE O.C.<br>PLY                              | ON CE<br>PLYWC                                 | NTER<br>OOD  | 1/8" MIN. 2 3/4"<br>MAX. GAP TOP<br>FLANGE (SEE   |
| 99L<br>S.A.I                                  | DARAI<br>LUMBE<br>D. SEE AF                    | ELEL STRAND<br>ER<br>RCHITECTURAL                          |   |
| SDS   | DRAW<br>SELF-I                                 | INGS<br>DRIVING SCREW                                      | 1 3/4x7 1/4 LSL<br>(1.3E MIN. GRADE)  |
| SIM.<br>S.M.                                  | SIMILA<br>D. SEE MI<br>DRAMI                   | rk<br>ECHANICAL<br>INGS                                    | WEB STIFFENER   |
| STD<br>DR TYP.                                | . STAND<br>TYPICA                              | PARD<br>AL   |   |
| M) U.O.1<br>V.I.F                             | N. UNLES:<br>VERIFI                            | S OTHERWISE NOTE<br>Y IN FIELD                             |   |
| W/<br>W/O                                     | WITH<br>WITHOU                                 | UΤ   | UCCURS, SEE PLAN  |
|   |  |  |   |
|   |  |  | XXX<br>XXX<br>XXX   |
|   |  |  |   |
| EET IND                                       | DEX  |  | BOTT. FLANGE ——/  |
| ERAL NOTES<br>BUILDING C R                    | AND DETAILS                                    | 5<br>IG PLAN   |   |
|   |  |  |   |
|   |  |  | 8 TYPICAL I-JOIST STIFFENER   |

![](_page_12_Figure_3.jpeg)

PLEASE RECYCLE

![](_page_12_Picture_6.jpeg)

![](_page_13_Figure_0.jpeg)

### FRAMING PLAN NOTES

- 1. FOR STRUCTURAL GENERAL NOTES, SEE SHEETS S100. 2. FOR BUILDING LAYOUT AND DIMENSIONS, FINISH FLOOR ELEVATIONS, SLAB SLOPES, DEPRESSIONS, DRAINS, FINISHES, ETC., SEE ARCHITECTURAL DRAWINGS, TYP. U.O.N.
- FOR MECHANICAL, ELECTRICAL, AND PLUMBING OPENINGS, ETC., SEE DRAWINGS OTHER THAN STRUCTURAL. З.
- 4. FOR ROOF AND WALL INFILL LOCATIONS, SEE ARCHITECTURAL AND MECHANICAL DRAWINGS. SEE DETAILS 1/S100, 2/S100, AND 3/S100.

AGENCY APPROVAL: DSA # 01-121955 FILE # 21-39

PROJECT: SHEET NAME:

FACILITY:

DATE: 2024.10.01 SHEET:

![](_page_13_Picture_26.jpeg)

PLEASE RECYCLE

(650) 617-5930

**KEYNOTES** 

ISSUE

 $\Delta$  **DESCRIPTION** 

NOTES

CONSULTANT:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

![](_page_13_Picture_37.jpeg)

CLIENT PROJ NO:

### DSA SUBMITTAL

BUILDING B AND BUILDING C ROOF FRAMING PLAN

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_13_Picture_42.jpeg)

3546 CONCOURS STREET ONTARIO, CA 91764 909 989 9979 / www.hmcarchitects.com

HMC Architects

![](_page_13_Picture_45.jpeg)

![](_page_13_Picture_46.jpeg)

![](_page_14_Figure_1.jpeg)

![](_page_14_Picture_2.jpeg)

| ME                              | ECHAN                     | NICAL LE  | GENI        | C        |  |  |  |  |  |  |  |  |
|---------------------------------|---------------------------|---|-------------|----------|--|--|--|--|--|--|--|--|
| SYMPOL                          |                           |   |             | ARRD     |  |  |  |  |  |  |  |  |
|                                 |                           | IR  |             | SA       |  |  |  |  |  |  |  |  |
|                                 | RETURN                    | NR  |             | RA       |  |  |  |  |  |  |  |  |
|                                 |                           |   |             |          |  |  |  |  |  |  |  |  |
|                                 |                           |   |             |          |  |  |  |  |  |  |  |  |
|                                 | TRANSFE                   |   |             | USA      |  |  |  |  |  |  |  |  |
|                                 | IRANSFEI                  | RAIR  |             | IA       |  |  |  |  |  |  |  |  |
| 1<br>M-2                        | Detaii<br>Detaii<br>Sheet | DESIGNATION<br>NUMBER                           | OWN         |          |  |  |  |  |  |  |  |  |
| AC 1                            | EQUIP<br>UNIT A<br>NUMBI  | MENT DESIGNAT<br>BBREVIATION<br>ER              | ION         |          |  |  |  |  |  |  |  |  |
| A 10x10 -<br>120 -<br>(CRD / ED |                           | LLE DESIGNATIC<br>XK SIZE<br>1<br>5 DAMPER WHEE |             |          |  |  |  |  |  |  |  |  |
| ्तिष्ठमार्घ<br>ह्न्न्न्         |                           |   |             |          |  |  |  |  |  |  |  |  |
|                                 | ACOUSTIC                  |   |             | L        |  |  |  |  |  |  |  |  |
|                                 | TURNING                   | VANES   |             | TV       |  |  |  |  |  |  |  |  |
| <u> </u>                        | DUCT FLE                  | XIBLE CONNECT                                   | ION         |          |  |  |  |  |  |  |  |  |
|                                 | DUCT RIS                  | ER  |             |          |  |  |  |  |  |  |  |  |
|                                 | DUCT DRO                  | )P  |             |          |  |  |  |  |  |  |  |  |
| $\square$                       | RECTANGUL                 | AR TO ROUND FITTI                               | NG          |          |  |  |  |  |  |  |  |  |
|                                 | VOLUME                    |   | R           | VD       |  |  |  |  |  |  |  |  |
| $\lambda_{zzzz}$                | FIRE DAM                  | PER W/ ACCESS                                   |             | FD       |  |  |  |  |  |  |  |  |
| hezza                           | FIRE SMO                  | KE DAMPER W/ A                                  | ACCESS      | FSD      |  |  |  |  |  |  |  |  |
| CRD                             | CEILING R                 | ADIATION DAMP                                   | ER          | CRD      |  |  |  |  |  |  |  |  |
| /\/\/\/                         | OPPOSED                   | BLADE DAMPER                                    | 2           | OBD      |  |  |  |  |  |  |  |  |
| ////                            | BACKDRA                   | FT DAMPER                                       |             | BDD      |  |  |  |  |  |  |  |  |
|                                 | MOTORIZE                  |   |             |          |  |  |  |  |  |  |  |  |
|                                 | THERMOS                   | ΤΔΤ @ +48" ΔΕΕ                                  | (MAX)       |          |  |  |  |  |  |  |  |  |
| (T)                             | (TOP OF B                 | OX)   | (1917-27.)  | T-STAT   |  |  |  |  |  |  |  |  |
| (s)                             | SENSOR (                  | SOR @ +48" AFF                                  |             |          |  |  |  |  |  |  |  |  |
|                                 | STATIC PF                 |   |             |          |  |  |  |  |  |  |  |  |
| GF                              | @ +48" AF                 | 3" AFF  |             |          |  |  |  |  |  |  |  |  |
| 0                               | CARBON M<br>@ +48" AF     | 30N MONOXIDE SENSOR<br>8" AFF                   |             |          |  |  |  |  |  |  |  |  |
| ć <u>o</u> 2                    | @ +48" AF                 | BON DIOXIDE SENSOR<br>48" AFF                   |             |          |  |  |  |  |  |  |  |  |
| TC                              | TIMECLOC                  | ECLOCK @ +48" AFF                               |             |          |  |  |  |  |  |  |  |  |
| TCP                             | TEMPERA                   | PERATURE CONTROL PANEL                          |             |          |  |  |  |  |  |  |  |  |
|                                 | DUCT SMO                  | T SMOKE DETECTOR                                |             |          |  |  |  |  |  |  |  |  |
| 0                               | PIPE RISE                 | RISER / DROP                                    |             |          |  |  |  |  |  |  |  |  |
|                                 |                           | RISER / DROP                                    |             |          |  |  |  |  |  |  |  |  |
|                                 | FROMABU                   |   |             |          |  |  |  |  |  |  |  |  |
|                                 | FROM BEL                  |   |             |          |  |  |  |  |  |  |  |  |
|                                 | TO ABOVE                  | ABOVE   |             |          |  |  |  |  |  |  |  |  |
|                                 | TO BELOV                  | BELOW   |             |          |  |  |  |  |  |  |  |  |
|                                 | ABOVE FI                  | VE FINISHED FLOOR                               |             |          |  |  |  |  |  |  |  |  |
|                                 | UNLESS C                  | ESS OTHERWISE NOTED                             |             |          |  |  |  |  |  |  |  |  |
|                                 |                           |   | (TYP)       |          |  |  |  |  |  |  |  |  |
|                                 |                           |   |             |          |  |  |  |  |  |  |  |  |
|                                 |                           |   | BOD         |          |  |  |  |  |  |  |  |  |
|                                 |                           | 1 DOOK 3/4"                                     |             |          |  |  |  |  |  |  |  |  |
|                                 |                           |   |             | (N)      |  |  |  |  |  |  |  |  |
|                                 | EXISTING                  |   |             | (E)      |  |  |  |  |  |  |  |  |
| •                               | POINT OF                  |   | N           | POD/POC  |  |  |  |  |  |  |  |  |
|                                 | REFRIGEF                  | KANT LIQUID                                     |             | RL       |  |  |  |  |  |  |  |  |
|                                 | REFRIGEF                  | ANT SUCTION                                     |             | RS       |  |  |  |  |  |  |  |  |
| $\times \times$                 | DEMOLISH                  | IED/DEMO  |             | _        |  |  |  |  |  |  |  |  |
|                                 |                           |   |             |          |  |  |  |  |  |  |  |  |
|                                 |                           |   |             |          |  |  |  |  |  |  |  |  |
| C<br>ENTI                       | DEMAN<br>LATIO            | ND CONT   | ROL<br>CHEI | DULE     |  |  |  |  |  |  |  |  |
| AC UNI                          | г Л                       | IIN OSA CFM                                     | MAX O       | SA CFM   |  |  |  |  |  |  |  |  |
| FC-B1                           |                           | 140   | .3          | 50       |  |  |  |  |  |  |  |  |
| FC-B2                           |                           | 140   | 3           | 50       |  |  |  |  |  |  |  |  |
| FC-B3                           |                           | 140   | 3           | 50       |  |  |  |  |  |  |  |  |
| FC-B4<br>FC-B5                  |                           | 140   | 3           | 50<br>50 |  |  |  |  |  |  |  |  |
| 5 20                            |                           | -   | 5           |          |  |  |  |  |  |  |  |  |

| C-B6                                    | 140  | 355                        |  |  |  |  |  |  |  |  |  |  |  |
|---|--|----------------------------|--|--|--|--|--|--|--|--|--|--|--|
| C-C1 140 340                            |  |                            |  |  |  |  |  |  |  |  |  |  |  |
| C-C2                                    | 140  | 340                        |  |  |  |  |  |  |  |  |  |  |  |
| C-C3                                    | 140  | 340                        |  |  |  |  |  |  |  |  |  |  |  |
| C-C4                                    | 140  | 340                        |  |  |  |  |  |  |  |  |  |  |  |
| C-C5 140 340                            |  |                            |  |  |  |  |  |  |  |  |  |  |  |
| TO BE PER 2<br>DARDS TITLE<br>IREMENTS. | 2022 BUILDING ENER<br>E 24, PART 6, SECTIC | RGY EFFICIENCY<br>N 120.1, |  |  |  |  |  |  |  |  |  |  |  |
|   | ATION CONTROL & CI                         |                            |  |  |  |  |  |  |  |  |  |  |  |

\* DEMAND VENTILATION CONTROLS SHALL MAINTAIN CO2 CONCENTRATIONS LESS THAN OR EQUAL TO 600 PPM PLUS THE OUTDOOR AIR CO2 CONCENTRATION IN ALL ROOMS WITH CO2 SENSORS.

|     | MECHANICAL SPECIFICATIONS   | AGENCY<br>APPROVAL:    |
|-----|---|------------------------|
| 1.  | THIS CONTRACTOR SHALL COMPLY WITH ALL CODES AND REGULATIONS IN EFFECT AT THE JOB  | DSA #01-121955         |
|     | A. 2022 CALIFORNIA BUILDING CODE  | FILE #21-39            |
|     | <ul> <li>B. 2022 CALIFORNIA MECHANICAL CODE</li> <li>C. 2022 CALIFORNIA PLUMBING CODE</li> <li>D. 2022 CALIFORNIA ELECTRICAL CODE</li> </ul>                      |                        |
|     | <ul> <li>D. 2022 CALIFORNIA ELECTRICAL CODE</li> <li>E. 2022 CALIFORNIA GREEN BUILDING STANDARDS</li> <li>E. 2022 CALIFORNIA BUILDING STANDARDS</li> </ul>        |                        |
|     | <ul> <li>G. NATIONAL FIRE PROTECTION ASSOCIATION</li> <li>CALIFORNIA STATE FIRE MADOUAL</li> </ul>  |                        |
| 2.  | ALL MATERIALS AND EQUIPMENT INSTALLED UNDER THIS CONTRACT SHALL BE GUARANTEED   |                        |
|     | ONE YEAR FROM DATE OF FINAL ACCEPTANCE. THE CONTRACTOR SHALL BE RESPONSIBLE   |                        |
| •   | FOR REPAIRING OR REPLACING ALL DAMAGED ITEMS INSTALLED UNDER THIS CONTRACT<br>WITHOUT ADDITIONAL COST TO OWNER.   |                        |
| 3.  | MAINTENANCE AND PREVENTATIVE MAINTENANCE MANUALS FOR EACH MODEL AND TYPE OF   |                        |
| 4.  | CHECK AND VERIFY EXISTING CONDITIONS AT THE JOB SITE BEFORE BEGINNING WORK.   |                        |
|     | CONDITIONS AND OTHER TRADES. ANY CHANGES REQUIRED MUST FIRST BE APPROVED BY THE   |                        |
| 5.  | THE LOCATIONS OF EQUIPMENT, PIPING, DUCTWORK AND SYSTEMS SHOWN ON THE DRAWINGS  |                        |
|     | REQUIRED TO SUIT EXISTING CONDITIONS AND DUE TO COORDINATION WITH OTHER TRADES  |                        |
| 6.  | ALL EQUIPMENT IS TO BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER. USING ALL  |                        |
|     | ETC., TO MAKE A COMPLETE SYSTEM. ALL EQUIPMENT OR ACCESSORIES NEEDED AND NOT<br>SHOWN OR SPECIFIED SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR ADJUST     |                        |
|     | THE EQUIPMENT FOR PROPER OPERATION, CHECK ALL CONTROLS AND VERIFY THAT ALL<br>SAFETY DEVICES ARE FUNCTIONING PROPERLY   |                        |
| 7.  | PROVIDE ACCESS DOORS WHERE ACCESS THROUGH FLOORS, WALLS OR CEILINGS IS<br>REQUIRED TO ACCESS MECHANICAL CONTROL SYSTEM COMPONENTS, FIRE/SMOKE DAMPERS.            | HMC Arc                |
|     | SMOKE DETECTORS, ETC., OR OTHER SYSTEMS REQUIRING ACCESS FOR MAINTENANCE,<br>TESTING OR OBSERVATION. COORDINATE THE EXACT TYPE AND LOCATION OF ACCESS DOORS       |                        |
| 8.  | TO PROVIDE PROPER ACCESS TO THE ITEM CONCEALED.<br>CHECK ALL PIPE AND DUCTWORK FOR LEAKS AND EXCESSIVE AIR LOSS AND NOISE. CORRECT                                | 3584-003-00            |
|     | ANY DEFICIENCIES AS SOON AS DISCOVERED. OPERATE THE SYSTEMS AS A TEST AND DEMONSTRATE TO THE OWNER AND ARCHITECT OR ENGINEER THAT THE SYSTEM IS                   |                        |
| 9.  | FUNCTIONING PROPERLY.<br>GALVANIZED STEEL DUCTS SHALL BE ASTM A 653/A 653M GALVANIZED STEEL SHEET, FORMING  | 3546 CONCOURS STRE     |
| 10. | STEEL (FS) DESIGNATION, WITH G90/Z275 ZINC COATING.<br>FABRICATE, SUPPORT AND SEAL DUCTWORK IN ACCORDANCE WITH SMACNA HVAC DUCT                                   | 909 989 9979 / www.hmc |
|     | CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, AND AS INDICATED. PROVIDE DUCT<br>MATERIAL, GAGES, REINFORCING, AND SEALING FOR 4" STATIC PRESSURE UPSTREAM OF       | ISSUE                  |
|     | TERMINAL UNITS (VAV, CAV BOXES) AND 2" STATIC PRESSURE DOWNSTREAM OF TERMINAL UNITS (VAV, CAV BOXES).   |                        |
| 11. | CONSTRUCT DUCTWORK T'S, BENDS, AND ELBOWS WITH RADIUS OF NOT LESS THAN 1-1/2<br>TIMES WIDTH OF DUCT ON CENTERLINE. WHERE NOT POSSIBLE RECTANGULAR ELBOWS MUST     |                        |
|     | BE USED, PROVIDE AIR FOIL TURNING VANES. WHERE ACOUSTICAL LINING IS INDICATED, PROVIDE TURNING VANES OF PERFORATED METAL WITH GLASS FIBER INSULATION.             |                        |
| 12. | COMBINATION FIRE AND SMOKE DAMPERS SHALL MEET THE REQUIREMENTS OF NFPA 90A, UL 555, UL 555S, AND AS INDICATED. PROVIDE FACTORY SLEEVE AND COLLAR FOR EACH DAMPER. |                        |
| 13. | ALL INSULATION AND LINER PRODUCTS SURFACE BURNING CHARACTERISTICS: FLAME<br>SPREAD/SMOKE DEVELOPED INDEX OF 25/50, MAXIMUM, WHEN TESTED IN ACCORDANCE WITH        |                        |
| 14. | ASTM E 84, NFPA 255, OR UL 723.<br>DUCT INSULATION BLANKET (INTERIOR APPLICATIONS):   |                        |
|     | A. INSULATION: ASTM C553; FLEXIBLE, NONCOMBUSTIBLE BLANKET. 'K' ('KSI') VALUE:<br>0.31 AT 75 DEGREES F (0.045 AT 24 DEGREES C), WHEN TESTED IN ACCORDANCE         |                        |
|     | WITH ASTM C 518. MAXIMUM SERVICE TEMPERATURE: 250 DEGREES F (121<br>DEGREES C). MAXIMUM MOISTURE ABSORPTION: 0.20 PERCENT BY VOLUME.                              |                        |
|     | DUCT APPLICATION: 2" THICK, 3/4 LB. DENSITY.<br>B. VAPOR BARRIER JACKET: KRAFT PAPER WITH GLASS FIBER YARN AND BONDED   |                        |
| 45  | TO ALUMINIZED FILM. MOISTURE VAPOR TRANSMISSION: ASTM E 96; 0.02 PERM.<br>SECURE WITH PRESSURE SENSITIVE TAPE.  |                        |
| 15. | A. INSULATION: ASTM C 612; RIGID, NONCOMBUSTIBLE BLANKET. 'K' ('KSI') VALUE:  | KEYNOTES               |
|     | WITH ASTM C 518. MAXIMUM SERVICE TEMPERATURE: 250 DEGREES F (121  |                        |
|     | DEGREES C). MAXIMUM MOISTORE ABSORPTION. 0.20 PERCENT BT VOLUME.<br>DENSITY: 3.0 LB/CU FT (48 KG/CU M).   |                        |
|     | TO ALUMINIZED FILM. MOISTURE VAPOR TRANSMISSION: ASTM E 96; 0.04 PERM.  |                        |
|     | C. ALUMINUM JACKET: ASTM B 209 (ASTM B 209M). THICKNESS: 0.016 INCH (0.40 MM)<br>SHEET, FINISH: SMOOTH, JOINING: LONGITUDINAL SUP JOINTS AND 2 INCH (50           |                        |
|     | MM) LAPS. FITTINGS: 0.016 INCH (0.4 MM) THICK DIE SHAPED FITTING COVERS<br>WITH FACTORY ATTACHED PROTECTIVE LINER, METAL, JACKET BANDS: 3/8 INCH                  |                        |
| 16. | (10 MM) WIDE; 0.015 INCH (0.38 MM) THICK ALUMINUM.<br>DUCT LINER:   |                        |
|     | A. INSULATION: INCOMBUSTIBLE GLASS FIBER COMPLYING WITH ASTM C 1071;<br>FLEXIBLE BLANKET; WITH ACRYLIC POLYMER SHOWN TO BE FUNGUS AND                             |                        |
|     | BACTERIA RESISTANT BY TESTING TO ASTM G 21 IMPREGNATED SURFACE AND<br>EDGE COAT. APPARENT THERMAL CONDUCTIVITY: MAXIMUM OF 0.31 AT 75                             |                        |
|     | DEGREES F (0.045 AT 24 DEGREES C). DUCT APPLICATION: 1-1/2" THICK, 1-1/2<br>POUND DENSITY. SERVICE TEMPERATURE: UP TO 250 DEGREES F (121 DEGREES                  |                        |
|     | C). RATED VELOCITY ON COATED AIR SIDE FOR AIR EROSION: 5,000 FPM (25.4 M/S), MINIMUM.   |                        |
|     | B. LINER FASTENERS: GALVANIZED STEEL, SHEET METAL WELD PINS OR CLINCH<br>PINS AND WASHERS.  |                        |
| 17. | A. FLEXIBLE DUCTS<br>A. FLEXIBLE DUCTS SHALL BE U.L. LISTED AND SHALL COMPLY WITH UMC   |                        |
|     | STANDARD 6-1.<br>B. THE MAXIMUM LENGTH OF FLEXIBLE DUCTWORK SHALL BE 5 FEET PER CMC   |                        |
|     | POSSIBLE WITHOUT SEVERE BENDS OR KINKS. BENDS SHALL BE MADE TO  |                        |
|     | C. BLACK POLYMER FILM SUPPORTED BY HELICALLY WOUND SPRING STEEL WIRE;   | NOTES                  |
|     | a. PRESSURE RATING: 4 INCHES WG POSITIVE PRESSURE AND 1 INCH  |                        |
|     | b. INSULATION SHALL BE 1-1/2 INCH THICK FIBERGLASS.   |                        |
|     | d. TEMPERATURE RANGE: -20 DEGREES F TO 175 DEGREES F (-28 DEGREES<br>C TO 79 DEGREES C)   |                        |
| 18. | SEAL ALL STANDING SEAMS AND TRANSVERSE JOINTS IN ALL SHEETMETAL DUCTWORK WITH<br>HARDCAST IRON GRIP PREMIUM FLEXIBLE WATER BASED DUCT SEALANT.                    |                        |
| 19. | DURING CONSTRUCTION PROVIDE TEMPORARY CLOSURES OF METAL OR TAPED<br>POLYETHYLENE ON OPEN DUCTWORK TO PREVENT CONSTRUCTION DUST FROM ENTERING                      |                        |
| 20. | DUCTWORK SYSTEM.<br>ALL BRANCH DUCTS SHALL HAVE BALANCING DAMPERS WITH ACCESSIBLE LOCKING TYPE  |                        |
|     | QUADRANT. WHERE DAMPER IS INACCESSIBLE, PROVIDE YOUNG REGULATOR MODEL 270-301<br>CABLE KIT WITH EITHER 830A-CC (RECTANGULAR) OR 5020-CC (ROUND) DAMPER.           |                        |
| 21. | PERFORM TOTAL SYSTEMS BALANCE IN ACCORDANCE WITH AABC, ASHRAE STD 111, OR NEBB<br>PROCEDURAL STANDARDS FOR TESTING, BALANCING AND ADJUSTING OF ENVIRONMENTAL      |                        |
| 22. | SYSTEMS.<br>THE INSTALLATION OF DUCT SMOKE DETECTORS FOR AUTOMATIC SHUTDOWN OF AIR MOVING   |                        |
|     | SYSTEMS AS REQUIRED BY CMC SECTION 608 OR AS REQUIRED FOR THE OPERATION OF FIRE<br>SMOKE DAMPERS SHALL COMPLY WITH THE REQUIREMENTS OF THE LOCAL FIRE             |                        |
|     | DEPARTMENT'S STANDARD "FIRE PROTECTION DESIGN GUIDELINES FOR SMOKE CONTROL<br>WITHIN BUILDINGS". DUCT SMOKE DETECTORS SHALL BE SUPERVISED BY FIRE-DETECTION OR    | CONSULTANT:            |
|     | ALARM SYSTEMS WHEN PROVIDED FOR THE BUILDING IN ACCORDANCE WITH CMC 609.1/ CFC 907.3.1/NFPA 72 17.7.4. WHERE AIR DUCT SMOKE DETECTORS SERVING AIR MOVING SYSTEMS  |                        |
|     | ARE INSTALLED WITHIN CONDCEALED SPACES, AND/OR DROP CEILING AREAS, THE DETECOR<br>SHALL BE PROVIDED WITH THE UNIT SERVED. SAID REMOTE ALARM LED DEVICE SHALL BE   |                        |
|     | LABELED TO GLEARLY IDENTIFY THE UNIT SERVED (AC-1, ETC.). WHERE AIR DUCT SMOKE<br>DETECTORS SERVING AIR-MOVING SYSTEMS ARE INSTALLED IN CONCEALED SPACES, AND/OR  |                        |
|     | BE PROVIDED WITH A REMOTE TEST AND RESET SWITCH, SAID REMOTE TEST AND RESET   | CONSULTIN              |
|     | HEIGHT OF 6 FEET ABOVE FINISHED FLOOR. PRIOR TO MECHANICAL PERMIT FINAL, A SMOKE  | ENGINEER               |
| 23. | COVERING OF DUCT OPENINGS AND PROTECTION OF MECHANICAL EQUIPMENT DURING   | 1                      |
|     | CONSTRUCTION SITE UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATION<br>EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL  |                        |
|     | BE COVERED WITH TAPE, PLASTIC, SHEETMETAL OR OTHER METHODS ACCEPTABLE TO THE<br>ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST. WATER AND DEBRIS WHICH MAY         | 1                      |
|     | ENTER THE SYSTEM  |                        |

|   | MECHANICAL SHEET INDEX                         |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|
| SHEET NUMBER  | SHEET NAME                                     |  |  |  |  |  |  |
| M0.01   | MECHANICAL LEGEND AND NOTES                    |  |  |  |  |  |  |
| M0.02   | MECHANICAL SCHEDULES                           |  |  |  |  |  |  |
| M1.11   | MECHANICAL SITE PLAN                           |  |  |  |  |  |  |
| M2.11   | MECHANICAL BLDG B & C FLOOR PLANS - DEMOLITION |  |  |  |  |  |  |
| M2.12   | MECHANICAL BLDG B & C FLOOR PLANS              |  |  |  |  |  |  |
| M4.11 MECHANICAL BLDG B & C ROOF PLANS - DEMOLITION |  |  |  |  |  |  |  |
| M4.12   | MECHANICAL BLDG B & C ROOF PLANS               |  |  |  |  |  |  |
| M10.11  | MECHANICAL DETAILS                             |  |  |  |  |  |  |
| M10.12  | MECHANICAL DETAILS                             |  |  |  |  |  |  |
| M10.13  | MECHANICAL CONTROLS                            |  |  |  |  |  |  |
| M10.14  | MECHANICAL CONTROLS                            |  |  |  |  |  |  |

CLIENT PROJ NO:

### **DSA SUBMITTAL**

MECHANICAL LEGEND AND NOTES

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

### 498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

FACILITY:

PROJECT:

SHEET NAME:

DATE: 2024.10.01

SHEET:

![](_page_14_Picture_15.jpeg)

![](_page_14_Picture_16.jpeg)

CONSULTING<br/>ENGINEERSwww.lpengineers.comJob #: 24-2053

MEP & FS / Sustainability / CxA 1209 Pleasant Grove Blvd. Roseville, CA 95678 p 916-771-0778

![](_page_14_Picture_19.jpeg)

DATE

![](_page_14_Picture_20.jpeg)

|      |      |      |         |         |         |     |          |              |                        |                   |      |             |               |                       |                 |                 |                       |       | PA            | ACKAGE              | E HEA            | T PUMP             | SCHEE      | OULE                       |          |                  |                     |                    |              |                    |                                |         |                           |   |  |   |
|------|------|------|---------|---------|---------|-----|----------|--------------|------------------------|-------------------|------|-------------|---------------|-----------------------|-----------------|-----------------|-----------------------|-------|---------------|---------------------|------------------|--------------------|------------|----------------------------|----------|------------------|---------------------|--------------------|--------------|--------------------|--------------------------------|---------|---------------------------|---|--|---|
|      |      |      |         | ELECTR  | CAL     |     |          | SUPPLY FA    | N                      |                   |      | -           | С             | COOLING (R-454        | 4B)             |                 |                       |       |               | HEATING             |                  |                    |            |                            | P        | OWER EXHAUS      | ST                  |                    |              |                    |                                |         |                           |   |  |   |
| TYPE | MARK | TONS | VOLTAGI | E PHASE | мса мос |     | GN DRIVE | SUPPLY AIR C | FM E.S.P. (IN<br>W.C.) | N. MIN.OSA<br>CFM | TYPE | SEER/ CO    |               | SENSIBLE<br>COOLING E | .A. DB (°F)     | E.A. WB (°F)    | AMBIENT<br>TEMP. (°F) | TYPE  | HPSF /<br>COP | CAPACITY<br>AT 47°F | ELEC HEA<br>(KW) | AT AMBIENT         | VOLTAGE    | PHASE F                    | LA MCA   | моср             | HP MANU             | FACTURER           | MODEL        | WEIGHT             | MANUFACTURE                    | R MOD   | EL                        |   |  | NOTES   |
| PHP  | 1    | 5    | 208     | 3       | 58 60   | 1.5 | 5 DIREC  | T 2,000      | 1.08                   | 450               | DX   | 16.4/13 58, | .870 Btu/h 4  | 6,900 Btu/h           | 80              | 67              | 95                    | DX    | -             | 43,250              | 12               | 30                 | 208        | 3 3                        | 3.8 4.8  | 8.6              | 1.0 MIC             | ROMETL             | PECD-2LH     | 1,300              | TRANE                          | WHCO    | 60H FR<br>SW<br>INS<br>SY | ROVIDE TITLE 24 CO<br>ESPONSE CAPABILI<br>ODULATING CENTRI<br>ROM ROOFTOP UNIT<br>WITCH. PROVIDE CS<br>ISTALL IN STRICT AC<br>YSTEM CONTRACTO<br>ROVIDE TITLE 24 CO | MPLIANT PROGRA<br>TIES. COORDINAT<br>IFUGAL POWER EX<br>F. PROVIDE HINGE<br>SFM LISTED DUCT<br>CCORDANCE WITH<br>OR FOR COMPATIE<br>MPLIANT PROGRA | AMMABLE DIGITAL TOUCH-SCREEN THERMOSTAT WITH LOCKING COVER AND SUB-BASE AND DEMAND<br>TE REQUIREMENTS WITH POWERED EXHAUST MODULE. PROVIDE TITLE 24 COMPLIANT MICROMETL<br>SCHAUST AND ULTRA LOW LEAK ECONOMIZER. POWERED EXHAUST TO BE POWERED SEPARATELY<br>ED ACCESS PANELS. PROVIDE 14" HIGH ROOF CURB. SEE ELECTRICAL DRAWINGS FOR DISCONNECT<br>I SMOKE DETECTOR IN THE SUPPLY AIR PLENUM TO SHUT-OFF UNIT UPON DETECTION OF SMOKE.<br>TH CALIFORNIA MECHANICAL CODE, SECTION 608. COORDINATE WITH ELECTRICAL AND/OR FIRE ALARM<br>BILITY AND INSTALLATION<br>RAMMABLE DIGITAL TOUCH-SCREEN THERMOSTAT WITH |
|      | 2    | 4    | 208     | 3       | 55 60   | 1.5 | DIREC    | 1 1,600      | 1.00                   | 450               | DX   | 10.5/13 47, | ,000 Blu/II 3 | 57,340 Blu/II         | 00              | 07              | 95                    |       | -             | 32,430              | 12               |                    | 208        | 3                          | 3.0 4.0  | 0.0              | -                   |                    |              | 1,300              | TRANE                          | VINCU   | 46H LO<br>AC              | CCESS PANELS. PRO   | OVIDE 14" HIGH RO  | .OOF CURB. SEE ELECTRICAL DRAWINGS FOR DISCONNECT SWITCH.   |
|      |      |      |         |         |         |     |          |              |                        |                   |      | 1           |               |                       |                 |                 |                       |       |               |                     |                  |                    |            |                            |          | F                | AN CO               | IL UNIT            | SCHEE        | DULE               |                                |         |                           |   |  |   |
|      |      |      |         |         |         |     |          |              |                        |                   |      |             |               |                       |                 |                 |                       | ELI   | ECTRICAL      |                     |                  |                    | SUPPLY FAN |                            |          | COOL             | .ING (R410A)        |                    |              | HEATING            |                                |         |                           |   |  |   |
|      |      |      |         |         |         |     |          |              |                        |                   |      |             | TYPE          | MARK                  | NOMINAL<br>TONS | DUCT<br>CONFIG. | VOLTAGE               | PHASE |               | мса мос             |                  | R DRIVE/<br>SPEEDS | CFM ES     | P (IN OUTSIDE<br>VC) (CFM) | AIR TYPE | TOTAL<br>COOLING | SENSIBLE<br>COOLING | E.A. DB/WB<br>(°F) | TYPE A       | APACITY<br>AT 17°F | CAPACITY<br>AT 47°F<br>(BTU/H) |         | PERATING<br>WEIGHT        | MANUFACTURER  | MODEL  | NOTES   |
|      |      |      |         |         |         |     |          |              |                        |                   |      | -           | FC            | B1                    | 4               | VERTICAL        | 208                   | 1     | 52 A          | 5.63 A 15 /         | A 0.25           | VARIABLE           | 1,190 (    | 0.5 350                    | DX       | 48,000 Btu/h     | 35,700 Btu/h        | n 80 / 67          | HEAT<br>PUMP | 30,800             | 54,000 M                       | IERV 13 | 175                       | MITSUBISHI  | TPVFYP048AM141   | PROVIDE SECONDARY CONDENSATE OVERFLOW SWITCH. FAN COIL UNIT IS TO BE DIRECTLY<br>CONTROLLED BY AN ALERTON VLC CONTROLLER. SPLIT SYSTEM UNIT MANUFACTURER MUST<br>PROVIDE A 24V ADAPTER WITH DRY CONTACTS FOR DIRECT CONTROL BY THE ALERTON<br>CONTROLLER. THERMOSTAT AND CO2 SENSOR WILL BE PROVIDED BY CONTROLS CONTRACTOR.<br>SPLIT SYSTEM MANUFACTURER TO PROVIDE A CENTRAL GATEWAY FOR THE SPLIT SYSTEM.<br>PROVIDE INTEGRATION SUPPORT FOR TIE-IN TO THE ALERTON SYSTEM.   |
|      |      |      |         |         |         |     |          |              |                        |                   |      |             | FC            | B2                    | 4               | VERTICAL        | 208                   | 1     | 52 A          | 5.63 A 15 /         | A 0.25           | VARIABLE           | 1,190 (    | 0.5 350                    | DX       | 48,000 Btu/h     | 35,700 Btu/h        | n 80 / 67          | HEAT<br>PUMP | 30,800             | 54,000 N                       | IERV 13 | 175                       | MITSUBISHI  | TPVFYP048AM141   | PROVIDE SECONDARY CONDENSATE OVERFLOW SWITCH. FAN COIL UNIT IS TO BE DIRECTLY<br>CONTROLLED BY AN ALERTON VLC CONTROLLER. SPLIT SYSTEM UNIT MANUFACTURER MUST<br>PROVIDE A 24V ADAPTER WITH DRY CONTACTS FOR DIRECT CONTROL BY THE ALERTON<br>CONTROLLER. THERMOSTAT AND CO2 SENSOR WILL BE PROVIDED BY CONTROLS CONTRACTOR.<br>SPLIT SYSTEM MANUFACTURER TO PROVIDE A CENTRAL GATEWAY FOR THE SPLIT SYSTEM.<br>PROVIDE INTEGRATION SUPPORT FOR TIE-IN TO THE ALERTON SYSTEM.   |
|      |      |      |         |         |         |     |          |              |                        |                   |      | _           | FC            | B3                    | 4               | VERTICAL        | 208                   | 1     | 52 A          | 5.63 A 15 /         | A 0.25           | VARIABLE           | 1,190 (    | 0.5 350                    | DX       | 48,000 Btu/h     | 35,700 Btu/h        | n 80/67            | HEAT<br>PUMP | 30,800             | 54,000 M                       | IERV 13 | 175                       | MITSUBISHI  | TPVFYP048AM141   | <ul> <li>PROVIDE SECONDARY CONDENSATE OVERFLOW SWITCH. FAN COIL UNIT IS TO BE DIRECTLY CONTROLLED BY AN ALERTON VLC CONTROLLER. SPLIT SYSTEM UNIT MANUFACTURER MUST PROVIDE A 24V ADAPTER WITH DRY CONTACTS FOR DIRECT CONTROL BY THE ALERTON CONTROLLER. THERMOSTAT AND CO2 SENSOR WILL BE PROVIDED BY CONTROLS CONTRACTOR. SPLIT SYSTEM MANUFACTURER TO PROVIDE A CENTRAL GATEWAY FOR THE SPLIT SYSTEM. PROVIDE INTEGRATION SUPPORT FOR TIE-IN TO THE ALERTON SYSTEM.</li> </ul>  |
|      |      |      |         |         |         |     |          |              |                        |                   |      | _           | FC            | B4                    | 4               | VERTICAL        | 208                   | 1     | 52 A          | 5.63 A 15 /         | A 0.25           | VARIABLE           | 1,190 (    | 0.5 350                    | DX       | 48,000 Btu/h     | 35,700 Btu/h        | 80 / 67            | HEAT<br>PUMP | 30,800             | 54,000 M                       | IERV 13 | 175                       | MITSUBISHI  | TPVFYP048AM141   | <ul> <li>PROVIDE SECONDARY CONDENSATE OVERFLOW SWITCH. FAN COIL UNIT IS TO BE DIRECTLY CONTROLLED BY AN ALERTON VLC CONTROLLER. SPLIT SYSTEM UNIT MANUFACTURER MUST PROVIDE A 24V ADAPTER WITH DRY CONTACTS FOR DIRECT CONTROL BY THE ALERTON CONTROLLER. THERMOSTAT AND CO2 SENSOR WILL BE PROVIDED BY CONTROLS CONTRACTOR. SPLIT SYSTEM MANUFACTURER TO PROVIDE A CENTRAL GATEWAY FOR THE SPLIT SYSTEM. PROVIDE INTEGRATION SUPPORT FOR TIE-IN TO THE ALERTON SYSTEM.</li> </ul>  |
|      |      |      |         |         |         |     |          |              |                        |                   |      |             | FC            | B5                    | 4               | VERTICAL        | 208                   | 1     | 52 A          | 5.63 A 15 /         | A 0.25           | VARIABLE           | 1,190 (    | 0.5 350                    | DX       | 48,000 Btu/h     | 35,700 Btu/h        | 80 / 67            | HEAT<br>PUMP | 30,800             | 54,000 N                       | IERV 13 | 175                       | MITSUBISHI  | TPVFYP048AM141   | <ul> <li>PROVIDE SECONDARY CONDENSATE OVERFLOW SWITCH. FAN COIL UNIT IS TO BE DIRECTLY CONTROLLED BY AN ALERTON VLC CONTROLLER. SPLIT SYSTEM UNIT MANUFACTURER MUST PROVIDE A 24V ADAPTER WITH DRY CONTACTS FOR DIRECT CONTROL BY THE ALERTON CONTROLLER. THERMOSTAT AND CO2 SENSOR WILL BE PROVIDED BY CONTROLS CONTRACTOR. SPLIT SYSTEM MANUFACTURER TO PROVIDE A CENTRAL GATEWAY FOR THE SPLIT SYSTEM. PROVIDE INTEGRATION SUPPORT FOR TIE-IN TO THE ALERTON SYSTEM.</li> </ul>  |
|      |      |      |         |         |         |     |          |              |                        |                   |      |             | FC            | B6                    | 4               | VERTICAL        | 208                   | 1     | 52 A          | 5.63 A 15 /         | A 0.25           | VARIABLE           | 1,190 (    | 0.5 355                    | DX       | 48,000 Btu/h     | 35,700 Btu/h        | 80 / 67            | HEAT<br>PUMP | 30,800             | 54,000 N                       | IERV 13 | 175                       | MITSUBISHI  | TPVFYP048AM141   | <ul> <li>PROVIDE SECONDARY CONDENSATE OVERFLOW SWITCH. FAN COIL UNIT IS TO BE DIRECTLY CONTROLLED BY AN ALERTON VLC CONTROLLER. SPLIT SYSTEM UNIT MANUFACTURER MUST PROVIDE A 24V ADAPTER WITH DRY CONTACTS FOR DIRECT CONTROL BY THE ALERTON CONTROLLER. THERMOSTAT AND CO2 SENSOR WILL BE PROVIDED BY CONTROLS CONTRACTOR. SPLIT SYSTEM MANUFACTURER TO PROVIDE A CENTRAL GATEWAY FOR THE SPLIT SYSTEM. PROVIDE INTEGRATION SUPPORT FOR TIE-IN TO THE ALERTON SYSTEM.</li> </ul>  |
|      |      |      |         |         |         |     |          |              |                        |                   |      |             | FC            | C1                    | 4               | VERTICAL        | 208                   | 1     | 52 A          | 5.63 A 15 /         | A 0.25           | VARIABLE           | 1,190 (    | 0.5 340                    | DX       | 48,000 Btu/h     | 35,700 Btu/h        | n 80 / 67          | HEAT<br>PUMP | 30,800             | 54,000 N                       | IERV 13 | 175                       | MITSUBISHI  | TPVFYP048AM141   | PROVIDE SECONDARY CONDENSATE OVERFLOW SWITCH. FAN COIL UNIT IS TO BE DIRECTLY<br>CONTROLLED BY AN ALERTON VLC CONTROLLER. SPLIT SYSTEM UNIT MANUFACTURER MUST<br>PROVIDE A 24V ADAPTER WITH DRY CONTACTS FOR DIRECT CONTROL BY THE ALERTON<br>CONTROLLER. THERMOSTAT AND CO2 SENSOR WILL BE PROVIDED BY CONTROLS CONTRACTOR.<br>SPLIT SYSTEM MANUFACTURER TO PROVIDE A CENTRAL GATEWAY FOR THE SPLIT SYSTEM.<br>PROVIDE INTEGRATION SUPPORT FOR TIE-IN TO THE ALERTON SYSTEM.   |
|      |      |      |         |         |         |     |          |              |                        |                   |      | _           | FC            | C1                    | 4               | VERTICAL        | 208                   | 1     | 52 A          | 5.63 A 15 /         | A 0.25           | VARIABLE           | 1,190 (    | 0.5 340                    | DX       | 48,000 Btu/h     | 35,700 Btu/h        | n 80/67            | HEAT<br>PUMP | 30,800             | 54,000 M                       | IERV 13 | 175                       | MITSUBISHI  | TPVFYP048AM141   | <ul> <li>PROVIDE SECONDARY CONDENSATE OVERFLOW SWITCH. FAN COIL UNIT IS TO BE DIRECTLY CONTROLLED BY AN ALERTON VLC CONTROLLER. SPLIT SYSTEM UNIT MANUFACTURER MUST PROVIDE A 24V ADAPTER WITH DRY CONTACTS FOR DIRECT CONTROL BY THE ALERTON CONTROLLER. THERMOSTAT AND CO2 SENSOR WILL BE PROVIDED BY CONTROLS CONTRACTOR. SPLIT SYSTEM MANUFACTURER TO PROVIDE A CENTRAL GATEWAY FOR THE SPLIT SYSTEM. PROVIDE INTEGRATION SUPPORT FOR TIE-IN TO THE ALERTON SYSTEM.</li> </ul>  |
|      |      |      |         |         |         |     |          |              |                        |                   |      |             | FC            | C2                    | 4               | VERTICAL        | 208                   | 1     | 52 A          | 5.63 A 15 /         | A 0.25           | VARIABLE           | 1,190 (    | 0.5 340                    | DX       | 48,000 Btu/h     | 35,700 Btu/h        | 80 / 67            | HEAT<br>PUMP | 30,800             | 54,000 M                       | IERV 13 | 175                       | MITSUBISHI  | TPVFYP048AM141   | <ul> <li>PROVIDE SECONDARY CONDENSATE OVERFLOW SWITCH. FAN COIL UNIT IS TO BE DIRECTLY CONTROLLED BY AN ALERTON VLC CONTROLLER. SPLIT SYSTEM UNIT MANUFACTURER MUST PROVIDE A 24V ADAPTER WITH DRY CONTACTS FOR DIRECT CONTROL BY THE ALERTON CONTROLLER. THERMOSTAT AND CO2 SENSOR WILL BE PROVIDED BY CONTROLS CONTRACTOR. SPLIT SYSTEM MANUFACTURER TO PROVIDE A CENTRAL GATEWAY FOR THE SPLIT SYSTEM. PROVIDE INTEGRATION SUPPORT FOR TIE-IN TO THE ALERTON SYSTEM.</li> </ul>  |
|      |      |      |         |         |         |     |          |              |                        |                   |      |             | FC            | C3                    | 4               | VERTICAL        | 208                   | 1     | 52 A          | 5.63 A 15 /         | A 0.25           | VARIABLE           | 1,190 (    | 0.5 340                    | DX       | 48,000 Btu/h     | 35,700 Btu/h        | 80 / 67            | HEAT<br>PUMP | 30,800             | 54,000 N                       | IERV 13 | 175                       | MITSUBISHI  | TPVFYP048AM141   | <ul> <li>PROVIDE SECONDARY CONDENSATE OVERFLOW SWITCH. FAN COIL UNIT IS TO BE DIRECTLY CONTROLLED BY AN ALERTON VLC CONTROLLER. SPLIT SYSTEM UNIT MANUFACTURER MUST PROVIDE A 24V ADAPTER WITH DRY CONTACTS FOR DIRECT CONTROL BY THE ALERTON CONTROLLER. THERMOSTAT AND CO2 SENSOR WILL BE PROVIDED BY CONTROLS CONTRACTOR. SPLIT SYSTEM MANUFACTURER TO PROVIDE A CENTRAL GATEWAY FOR THE SPLIT SYSTEM. PROVIDE INTEGRATION SUPPORT FOR TIE-IN TO THE ALERTON SYSTEM.</li> </ul>  |
|      |      |      |         |         |         |     |          |              |                        |                   |      |             | FC            | C4                    | 4               | VERTICAL        | 208                   | 1     | 52 A          | 5.63 A 15 /         | A 0.25           | VARIABLE           | 1,190 (    | 0.5 340                    | DX       | 48,000 Btu/h     | 35,700 Btu/h        | 80 / 67            | HEAT<br>PUMP | 30,800             | 54,000 N                       | IERV 13 | 175                       | MITSUBISHI  | TPVFYP048AM141   | PROVIDE SECONDARY CONDENSATE OVERFLOW SWITCH. FAN COIL UNIT IS TO BE DIRECTLY<br>CONTROLLED BY AN ALERTON VLC CONTROLLER. SPLIT SYSTEM UNIT MANUFACTURER MUST<br>PROVIDE A 24V ADAPTER WITH DRY CONTACTS FOR DIRECT CONTROL BY THE ALERTON<br>CONTROLLER. THERMOSTAT AND CO2 SENSOR WILL BE PROVIDED BY CONTROLS CONTRACTOR.<br>SPLIT SYSTEM MANUFACTURER TO PROVIDE A CENTRAL GATEWAY FOR THE SPLIT SYSTEM.<br>PROVIDE INTEGRATION SUPPORT FOR TIE-IN TO THE ALERTON SYSTEM.   |
|      |      |      |         |         |         |     |          |              |                        |                   |      |             | FC            | C5                    | 4               | VERTICAL        | 208                   | 1     | 52 A          | 5.63 A 15 /         | A 0.25           | VARIABLE           | 1,190 (    | 0.5 340                    | DX       | 48,000 Btu/h     | 35,700 Btu/h        | 80 / 67            | HEAT<br>PUMP | 30,800             | 54,000 N                       | IERV 13 | 175                       | MITSUBISHI  | TPVFYP048AM141   | PROVIDE SECONDARY CONDENSATE OVERFLOW SWITCH. FAN COIL UNIT IS TO BE DIRECTLY<br>CONTROLLED BY AN ALERTON VLC CONTROLLER. SPLIT SYSTEM UNIT MANUFACTURER MUST<br>PROVIDE A 24V ADAPTER WITH DRY CONTACTS FOR DIRECT CONTROL BY THE ALERTON<br>CONTROLLER. THERMOSTAT AND CO2 SENSOR WILL BE PROVIDED BY CONTROLS CONTRACTOR.<br>SPLIT SYSTEM MANUFACTURER TO PROVIDE A CENTRAL GATEWAY FOR THE SPLIT SYSTEM.<br>PROVIDE INTEGRATION SUPPORT FOR TIE-IN TO THE ALERTON SYSTEM.   |

|      |      |         |                  |            |      |               |     |      |                     |                     |                                       | SPL                             | IT HEAT P           | UMP SCH                        | IEDULE   |                     |              |                |  |
|------|------|---------|------------------|------------|------|---------------|-----|------|---------------------|---------------------|---------------------------------------|---------------------------------|---------------------|--------------------------------|----------|---------------------|--------------|----------------|--|
| TYPE | MARK | VOLTAGE | ELECTRI<br>PHASE | CAL<br>MCA | MOCP | SEER /<br>EER | COP | HSPF | COOLING<br>CAPACITY | HEATING<br>CAPACITY | SUMMER<br>AMBIENT DB/WB<br>TEMP. (°F) | WINTER AMBIENT<br>DB TEMP. (°F) | REFRIGERANT<br>TYPE | REFRIG. LINE<br>SIZE (LIQ/SUC) | SERVICE  | OPERATING<br>WEIGHT | MANUFACTURER | MODEL          | NOTES  |
| HP   | B2   | 208     | 1                | 29         | 40   | 16 / 10.5     | 3.2 | 8.9  | 48,000 Btu/h        | 50,000 Btu/h        | 80 / 67                               | 47                              | R-410A              | 3/8 / 5/8                      | SEE PLAN | 300                 | MITSUBISHI   | NTXMSM48A182BA | ELECTRICAL CONTRACTOR TO PROVIDE DISCONNECT SWITCH. MAXIMUM PIPING LENGTH: 490 FT. |
| HP   | B1   | 208     | 1                | 29         | 40   | 16 / 10.5     | 3.2 | 8.9  | 48,000 Btu/h        | 50,000 Btu/h        | 80 / 67                               | 47                              | R-410A              | 3/8 / 5/8                      | SEE PLAN | 300                 | MITSUBISHI   | NTXMSM48A182BA | ELECTRICAL CONTRACTOR TO PROVIDE DISCONNECT SWITCH. MAXIMUM PIPING LENGTH: 490 FT. |
| HP   | B3   | 208     | 1                | 29         | 40   | 16 / 10.5     | 3.2 | 8.9  | 48,000 Btu/h        | 50,000 Btu/h        | 80 / 67                               | 47                              | R-410A              | 3/8 / 5/8                      | SEE PLAN | 300                 | MITSUBISHI   | NTXMSM48A182BA | ELECTRICAL CONTRACTOR TO PROVIDE DISCONNECT SWITCH. MAXIMUM PIPING LENGTH: 490 FT. |
| HP   | B4   | 208     | 1                | 29         | 40   | 16 / 10.5     | 3.2 | 8.9  | 48,000 Btu/h        | 50,000 Btu/h        | 80 / 67                               | 47                              | R-410A              | 3/8 / 5/8                      | SEE PLAN | 300                 | MITSUBISHI   | NTXMSM48A182BA | ELECTRICAL CONTRACTOR TO PROVIDE DISCONNECT SWITCH. MAXIMUM PIPING LENGTH: 490 FT. |
| HP   | B5   | 208     | 1                | 29         | 40   | 16 / 10.5     | 3.2 | 8.9  | 48,000 Btu/h        | 50,000 Btu/h        | 80 / 67                               | 47                              | R-410A              | 3/8 / 5/8                      | SEE PLAN | 300                 | MITSUBISHI   | NTXMSM48A182BA | ELECTRICAL CONTRACTOR TO PROVIDE DISCONNECT SWITCH. MAXIMUM PIPING LENGTH: 490 FT. |
| HP   | B6   | 208     | 1                | 29         | 40   | 16 / 10.5     | 3.2 | 8.9  | 48,000 Btu/h        | 50,000 Btu/h        | 80 / 67                               | 47                              | R-410A              | 3/8 / 5/8                      | SEE PLAN | 300                 | MITSUBISHI   | NTXMSM48A182BA | ELECTRICAL CONTRACTOR TO PROVIDE DISCONNECT SWITCH. MAXIMUM PIPING LENGTH: 490 FT. |
| HP   | C1   | 208     | 1                | 29         | 40   | 16 / 10.5     | 3.2 | 8.9  | 48,000 Btu/h        | 50,000 Btu/h        | 80 / 67                               | 47                              | R-410A              | 3/8 / 5/8                      | SEE PLAN | 300                 | MITSUBISHI   | NTXMSM48A182BA | ELECTRICAL CONTRACTOR TO PROVIDE DISCONNECT SWITCH. MAXIMUM PIPING LENGTH: 490 FT. |
| HP   | C5   | 208     | 1                | 29         | 40   | 16 / 10.5     | 3.2 | 8.9  | 48,000 Btu/h        | 50,000 Btu/h        | 80 / 67                               | 47                              | R-410A              | 3/8 / 5/8                      | SEE PLAN | 300                 | MITSUBISHI   | NTXMSM48A182BA | ELECTRICAL CONTRACTOR TO PROVIDE DISCONNECT SWITCH. MAXIMUM PIPING LENGTH: 490 FT. |
| HP   | C4   | 208     | 1                | 29         | 40   | 16 / 10.5     | 3.2 | 8.9  | 48,000 Btu/h        | 50,000 Btu/h        | 80 / 67                               | 47                              | R-410A              | 3/8 / 5/8                      | SEE PLAN | 300                 | MITSUBISHI   | NTXMSM48A182BA | ELECTRICAL CONTRACTOR TO PROVIDE DISCONNECT SWITCH. MAXIMUM PIPING LENGTH: 490 FT. |
| HP   | C3   | 208     | 1                | 29         | 40   | 16 / 10.5     | 3.2 | 8.9  | 48,000 Btu/h        | 50,000 Btu/h        | 80 / 67                               | 47                              | R-410A              | 3/8 / 5/8                      | SEE PLAN | 300                 | MITSUBISHI   | NTXMSM48A182BA | ELECTRICAL CONTRACTOR TO PROVIDE DISCONNECT SWITCH. MAXIMUM PIPING LENGTH: 490 FT. |
| HP   | C2   | 208     | 1                | 29         | 40   | 16 / 10.5     | 3.2 | 8.9  | 48,000 Btu/h        | 50,000 Btu/h        | 80 / 67                               | 47                              | R-410A              | 3/8 / 5/8                      | SEE PLAN | 300                 | MITSUBISHI   | NTXMSM48A182BA | ELECTRICAL CONTRACTOR TO PROVIDE DISCONNECT SWITCH. MAXIMUM PIPING LENGTH: 490 FT. |
|      |      |         |                  |            |      |               |     |      |                     |                     |                                       |                                 |                     |                                |          |                     |              |                |  |

|      |      |           |          |                  |         |          |                  |         |                |           |                     | INDO                | OOR UN              | IT SCH                       | IEDULE       |                 |   |
|------|------|-----------|----------|------------------|---------|----------|------------------|---------|----------------|-----------|---------------------|---------------------|---------------------|------------------------------|--------------|-----------------|---|
|      |      | TYPE      | MARK     | MOUNTING<br>TYPE | G VOLT  |          | AL<br>PHASE      | DRIVE   | CFM            | OSA CFM   | COOLING<br>CAPACITY | HEATING<br>CAPACITY | SERVICE             | OPERATING<br>WEIGHT          | MANUFACTURER | MODEL           | NOTES   |
|      |      | IDU       | B1       | CEILING          | i 20    | 8        | 1                | DIRECT  | 770            | 71        | 24,000 Btu/h        | 29,000 Btu/h        | SEE PLAN            | 65                           | MITSUBISHI   | TPLA0A0241EA80A | PROVIDE WITH BUILT-IN CONDENSATE PUMP.  |
|      |      |           |          |                  |         |          | ·                |         |                |           |                     |                     |                     |                              |              |                 |   |
|      |      |           |          |                  |         |          |                  |         |                |           |                     | OUTDO               | OR UN               | IT SCHI                      | EDULE        |                 |   |
|      | TYF  | PE MAR    | к мо     | UNTING           | VOLTAG  | ELECT    | TRICAL<br>SE MCA | MOCP    | SEER2/<br>EER2 | HPSF2 CA  | OOLING<br>PACITY    | HEATING<br>CAPACITY | SERVICE             | OPERATING<br>WEIGHT<br>(LBS) | MANUFACTURER | MODEL           | NOTES   |
|      | OD   | DU B1     | N        | WALL             | 208     | 1        | 19               | 26      | 24.7/14.3      | 9.3 24,0  | )00 Btu/h           | 29,000 Btu/h        | SEE PLAN            | 160                          | MITSUBISHI   | TRUZA0241HA70NA | ELECTICAL CONTRACTOR TO PROVIDE DISCONNECT SWITCH. MAXIMUM PIPING LENGTH: 165 FT. |
|      |      |           |          |                  |         |          |                  |         |                |           |                     |                     |                     |                              |              |                 |   |
|      |      |           |          |                  |         |          |                  |         |                |           | SU                  | PPLY FA             | AN SCH              | EDULE                        |              |                 |   |
|      |      |           |          |                  | E       | LECTRICA | L                |         |                | FAN       |                     |                     |                     | OPERA                        |              |                 |   |
| TYPE | MARK | FAN TYPE  | MOUN     | TING VOL         | LTAGE F | PHASE    | FLA M            | СА Н    | P DRIVI        | E FAN RPM | CFM                 | E.S.P. (IN.<br>WC.) | CONTRO              | WEIG                         | GHT          | RER MODEL       | NOTES   |
| SF   | B1`  | CENTRIFUG | AL SUSPE | NDED             | 120     | 1        | 0.1 0            | 0.5 0.0 | 01 DIREC       | т 989     | 80                  | 0.2                 | INTERLOCK<br>IDU-B1 | < W/ 25                      | Ib PANASONI  | C FV-15NLFS1    | PROVIDE WITH MERV 13 FILTER.  |

16X20

16X20

16X20

16X32

0.05

0.05

0.05

0.019

540

540

540

337

| AIR        | TYPE | MARK | HOOD TYPE | MOUNTING | CFM   | THROAT<br>AREA (SQ<br>FT.) |
|------------|------|------|-----------|----------|-------|----------------------------|
| NG.<br>IR  | RH   | B1   | RELIEF    | ROOF     | 1,200 | 2.2                        |
| IR         | RH   | B2   | RELIEF    | ROOF     | 1,200 | 2.2                        |
| гн         | RH   | B3   | RELIEF    | ROOF     | 1,200 | 2.2                        |
| ED).<br>IR | RH   | B4   | RELIEF    | ROOF     | 1,200 | 2.2                        |
|            | RH   | B5   | RELIEF    | ROOF     | 1,200 | 2.2                        |
| FOR        | RH   | B6   | RELIEF    | ROOF     | 1,200 | 2.2                        |
|            | RH   | C1   | RELIEF    | ROOF     | 1,600 | 3.56                       |
|            |      |      |           |          |       |                            |

|      |      |           |          |       |                             |                      | GRAV                          | ITY IN                      | TAKE H              | DOD SCHE     | DULE  |   |
|------|------|-----------|----------|-------|-----------------------------|----------------------|-------------------------------|-----------------------------|---------------------|--------------|-------|---|
| TYPE | MARK | HOOD TYPE | MOUNTING | CFM   | THROAT<br>AREA (SQ.<br>FT.) | THROAT<br>SIZE (IN.) | PRESSURE<br>DROP (IN.<br>WC.) | THROAT<br>VELOCITY<br>(FPM) | OPERATING<br>WEIGHT | MANUFACTURER | MODEL | NOTES   |
| IH   | B1   | INTAKE    | ROOF     | 1,200 | 2.22                        | 16X20                | 0.05                          | 540                         | 80 lb               | GREENHECK    | FGI   | PROVIDE FACTORY ROOF CURB. COORDINATE BACKDRAFT DAMPER INSTALLATION WITH HOODS INTENDED FOR AIR INTAKE AND AIR RELIEF/EXHAUST. PROVIDE INSECT SCREEN. |
| IH   | B2   | INTAKE    | ROOF     | 1,200 | 2.22                        | 16X20                | 0.05                          | 540                         | 80 lb               | GREENHECK    | FGI   | PROVIDE FACTORY ROOF CURB. COORDINATE BACKDRAFT DAMPER INSTALLATION WITH HOODS INTENDED FOR AIR INTAKE AND AIR RELIEF/EXHAUST. PROVIDE INSECT SCREEN. |
| IH   | B3   | INTAKE    | ROOF     | 1,200 | 2.22                        | 16X20                | 0.05                          | 540                         | 80 lb               | GREENHECK    | FGI   | PROVIDE FACTORY ROOF CURB. COORDINATE BACKDRAFT DAMPER INSTALLATION WITH HOODS INTENDED FOR AIR INTAKE AND AIR RELIEF/EXHAUST. PROVIDE INSECT SCREEN. |
| IH   | B4   | INTAKE    | ROOF     | 1,200 | 2.22                        | 16X20                | 0.05                          | 540                         | 80 lb               | GREENHECK    | FGI   | PROVIDE FACTORY ROOF CURB. COORDINATE BACKDRAFT DAMPER INSTALLATION WITH HOODS INTENDED FOR AIR INTAKE AND AIR RELIEF/EXHAUST. PROVIDE INSECT SCREEN. |
| IH   | B5   | INTAKE    | ROOF     | 1,200 | 2.22                        | 16X20                | 0.05                          | 540                         | 80 lb               | GREENHECK    | FGI   | PROVIDE FACTORY ROOF CURB. COORDINATE BACKDRAFT DAMPER INSTALLATION WITH HOODS INTENDED FOR AIR INTAKE AND AIR RELIEF/EXHAUST. PROVIDE INSECT SCREEN. |
| IH   | B6   | INTAKE    | ROOF     | 1,200 | 2.22                        | 16X20                | 0.05                          | 540                         | 80 lb               | GREENHECK    | FGI   | PROVIDE FACTORY ROOF CURB. COORDINATE BACKDRAFT DAMPER INSTALLATION WITH HOODS INTENDED FOR AIR INTAKE AND AIR RELIEF/EXHAUST. PROVIDE INSECT SCREEN. |

80 lb GREENHECK

80 lb GREENHECK

110 lb GREENHECK

GREENHECK

80 lb

|        | A                  | AIR DISTRIBUTION SCHEDULE   |
|--------|--------------------|---|
| SYMBOL | TYPE               | DESCRIPTION   |
| A      | CEILING<br>SUPPLY  | STEEL LOUVERED FACE DIFFUSER WITH FRAME FOR LAY-IN T-BAR MOUNTING.<br>TITUS MODEL MCD. REFER TO THE MECHANICAL PLANS FOR NECK SIZE, CFM, AIR<br>DIFFUSION PATTERN, AND FIRE DAMPER (IF REQUIRED).   |
| В      | CEILING<br>RETURN  | EGGCRATE GRILLE WITH 1/2"x1/2" GRID, FRAME FOR LAY-IN T-BAR MOUNTING.<br>TITUS MODEL 50R. REFER TO THE MECHANICAL PLANS FOR NECK SIZE, CFM, AIR<br>DIFFUSION PATTERN, AND FIRE DAMPER (IF REQUIRED).  |
| E      | CEILING<br>EXHAUST | EGGCRATE GRILLE WITH 1/2"x1/2" GRID, FRAME FOR SURFACE MOUNTING.<br>TITUS MODEL 50R. REFER TO THE MECHANICAL PLANS FOR NECK SIZE, CFM, AIR<br>DIFFUSION PATTERN, AND FIRE DAMPER (IF REQUIRED).   |
| н      | SIDEWALL<br>SUPPLY | DOUBLE DEFLECTION, ADJUSTABLE FRONT HORIZONTAL BLADE REGISTER WITH<br>3/4" BLADE SPACING. TITUS MODEL 300RL. REFER TO THE MECHANICAL PLANS<br>FOR NECK SIZE, CFM, AIR DIFFUSION PATTERN, AND FIRE DAMPER (IF REQUIRED).   |
| I      | SIDEWALL<br>RETURN | EGGCRATE GRILLE WITH 1/2"x1/2" GRID, FRAME FOR SURFACE MOUNTING.<br>TITUS MODEL 50R. REFER TO THE MECHANICAL PLANS FOR NECK SIZE, CFM, AIR<br>DIFFUSION PATTERN, AND FIRE DAMPER (IF REQUIRED).   |
| L      | WALL<br>LOUVER     | DRAINABLE STATIONARY EXTRUDED ALUMINUM LOUVER, WITH INTEGRAL<br>FLANGE, 54%FREE AREA, BIRD SCREEN, WELDED CONSTRUCTION. FINISH BY<br>ARCHITECT. RUSKIN MODEL #ELF375DXH. REFER TO THE MECHANICAL PLANS FOR<br>NECK SIZE, CFM, AIR DIFFUSION PATTERN, AND FIRE DAMPER (IF REQUIRED). |

AGENCY **APPROVAL**: DSA #01-121955 FILE #21-39

HMC Architects 3584-003-000 3546 CONCOURS STREET ONTARIO, CA 91764 909 989 9979 / www.hmcarchitects.com

DJUE

△ **DESCRIPTION** 

**KEYNOTES** 

NOTES

![](_page_15_Picture_14.jpeg)

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT:

SHEET NAME:

![](_page_15_Picture_19.jpeg)

DATE: 2024.10.01 SHEET:

| Λ | E.S.P. (<br>WC.)     | (IN. CON                      | TROL                     | OPERATING<br>WEIGHT | IANUFACTURER  | MODEL      | NOTES  |
|---|----------------------|-------------------------------|--------------------------|---------------------|---------------|------------|--|
|   | 0.2                  | INTERL<br>IDU                 | .OCK W/<br>J-B1          | 25 lb               | PANASONIC     | FV-15NLFS1 | PROVIDE WITH MERV 13 FILTER.   |
|   |                      |                               |                          |                     |               |            |  |
|   |                      | GRA\                          | /ITY F                   | RELIEF              | HOOD SCH      | IEDULE     |  |
|   | THROAT<br>SIZE (IN.) | PRESSURE<br>DROP (IN.<br>WC.) | THROA<br>VELOCI<br>(FPM) | T<br>IY<br>WEIGHT   | G MANUFACTURE | R MODEL    | NOTES  |
|   | 16X20                | 0.05                          | 540                      | 80 lb               | GREENHECK     | FGI        | PROVIDE FACTORY ROOF CURB. PROVIDE ADJUSTABLE COUNTERBALANCED BACKDRAFT DAMPER.<br>COORDINATE BACKDRAFT DAMPER INSTALLATION WITH HOODS INTENDED FOR AIR INTAKE AND AIR<br>RELIEF/EXHAUST. PROVIDE INSECT SCREEN. |
|   | 16X20                | 0.05                          | 540                      | 80 lb               | GREENHECK     | FGI        | PROVIDE FACTORY ROOF CURB. PROVIDE ADJUSTABLE COUNTERBALANCED BACKDRAFT DAMPER.<br>COORDINATE BACKDRAFT DAMPER INSTALLATION WITH HOODS INTENDED FOR AIR INTAKE AND AIR<br>RELIEF/EXHAUST. PROVIDE INSECT SCREEN. |
|   | 16X20                | 0.05                          | 540                      | 80 lb               | GREENHECK     | FGI        | PROVIDE FACTORY ROOF CURB. PROVIDE ADJUSTABLE COUNTERBALANCED BACKDRAFT DAMPER.<br>COORDINATE BACKDRAFT DAMPER INSTALLATION WITH HOODS INTENDED FOR AIR INTAKE AND AIR<br>RELIEF/EXHAUST. PROVIDE INSECT SCREEN. |
|   |                      |                               |                          |                     |               |            |  |

| PGI | RELIEF/EXHAUST. PROVIDE INSECT SCREEN.   |
|-----|--|
| FGI | PROVIDE FACTORY ROOF CURB. PROVIDE ADJUSTABLE COUNTERBALANCED BACKDRAFT DAMPER.<br>COORDINATE BACKDRAFT DAMPER INSTALLATION WITH HOODS INTENDED FOR AIR INTAKE AND AIR<br>RELIEF/EXHAUST. PROVIDE INSECT SCREEN. |
| FGI | PROVIDE FACTORY ROOF CURB. PROVIDE ADJUSTABLE COUNTERBALANCED BACKDRAFT DAMPER.<br>COORDINATE BACKDRAFT DAMPER INSTALLATION WITH HOODS INTENDED FOR AIR INTAKE AND AIR<br>RELIEF/EXHAUST. PROVIDE INSECT SCREEN. |
| FGI | PROVIDE FACTORY ROOF CURB. PROVIDE ADJUSTABLE COUNTERBALANCED BACKDRAFT DAMPER.<br>COORDINATE BACKDRAFT DAMPER INSTALLATION WITH HOODS INTENDED FOR AIR INTAKE AND AIR<br>RELIEF/EXHAUST. PROVIDE INSECT SCREEN. |
| FGI | PROVIDE FACTORY ROOF CURB. PROVIDE ADJUSTABLE COUNTERBALANCED BACKDRAFT DAMPER.<br>COORDINATE BACKDRAFT DAMPER INSTALLATION WITH HOODS INTENDED FOR AIR INTAKE AND AIR<br>RELIEF/EXHAUST. PROVIDE INSECT SCREEN. |
| FGI | PROVIDE FACTORY ROOF CURB. PROVIDE ADJUSTABLE COUNTERBALANCED BACKDRAFT DAMPER.<br>COORDINATE BACKDRAFT DAMPER INSTALLATION WITH HOODS INTENDED FOR AIR INTAKE AND AIR<br>RELIEF/EXHAUST. PROVIDE INSECT SCREEN. |
|     |  |

CLIENT PROJ NO:

MECHANICAL SCHEDULES

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_15_Picture_31.jpeg)

www.lpengineers.com Job #: 24-2053

MEP & FS / Sustainability / CxA 1209 Pleasant Grove Blvd. Roseville, CA 95678 р 916-771-0778

![](_page_15_Picture_34.jpeg)

![](_page_15_Picture_35.jpeg)

![](_page_16_Figure_0.jpeg)

![](_page_16_Picture_2.jpeg)

![](_page_16_Picture_8.jpeg)

![](_page_17_Figure_0.jpeg)

![](_page_17_Picture_4.jpeg)

![](_page_17_Picture_5.jpeg)

ISSUE

 $\Delta$  **DESCRIPTION** 

### KEYNOTES (#)

| 1 | (E) RELIEF AIR HOOD TO REMAIN UNDISTURBED.   |
|---|--|
| 2 | REMOVE AND DISCARD (E) OUTSIDE AIR DUCT AS<br>NOTED WITH HATCHES. PATCH ROOF TO MATCH<br>EXISTING. |
| 3 | REMOVE AND DISCARD (E) FURNACE, INCLUDING<br>SUPPLY AIR DUCTWORK, AS NOTED WITH<br>HATCHES.        |
| 4 | (E) DUCTWORK / DIFFUSERS TO REMAIN IN PLACE.   |

### NOTES

![](_page_17_Picture_10.jpeg)

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT:

SHEET NAME:

![](_page_17_Picture_15.jpeg)

DATE: 2024.10.01 SHEET:

### **GENERAL NOTES**

- A. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. NOTIFY ARCHITECT/ENGINEER OF ANY CONDITIONS THAT VARY FROM WHAT IS SHOWN. ALL HVAC EQUIPMENT, DUCTWORK, CONTROLS AND Β. PIPING SHALL REMAIN UNLESS NOTED OTHERWISE.
- PATCH, REPAIR, AND FINISH AS NECESSARY FOR ANY C. DAMAGES DURING DEMOLITION AND INSTALL.

![](_page_17_Picture_20.jpeg)

CLIENT PROJ NO:

### **DSA SUBMITTAL**

MECHANICAL BLDG B & C FLOOR PLANS -DEMOLITION

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_17_Picture_26.jpeg)

www.lpengineers.com Job #: 24-2053

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IEF AIR HOOD TO REMAIN UNDISTURBED. E AND DISCARD (E) OUTSIDE AIR DUCT AS WITH HATCHES. PATCH ROOF TO MATCH 'E AND DISCARD (E) FURNACE, INCLUDING Y AIR DUCTWORK, AS NOTED WITH

HMC Architects

![](_page_17_Picture_31.jpeg)

![](_page_18_Figure_0.jpeg)

![](_page_18_Picture_3.jpeg)

![](_page_18_Picture_4.jpeg)

ISSUE

 $\Delta$  **DESCRIPTION** 

### **GENERAL NOTES**

- FIELD VERIFY EXISTING CONDITIONS PRIOR TO Α. PERFORMING WORK. NOTIFY ARCHITECT/ENGINEER OF ANY CONDITIONS THAT VARY FROM WHAT IS SHOWN. ALL HVAC EQUIPMENT, DUCTWORK, CONTROLS AND Β. PIPING SHALL REMAIN UNLESS NOTED OTHERWISE.
- PATCH, REPAIR, AND FINISH AS NECESSARY FOR ANY C. DAMAGES DURING DEMOLITION AND INSTALL.

![](_page_18_Picture_8.jpeg)

- P-TRAP.
- SET
- DETAILS.

- CONSULTANT:

![](_page_18_Picture_19.jpeg)

PROJECT:

SHEET NAME:

![](_page_18_Picture_24.jpeg)

DATE: 2024.10.01 SHEET:

CLIENT PROJ NO:

### **DSA SUBMITTAL**

MECHANICAL BLDG B & C FLOOR PLANS

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_18_Picture_32.jpeg)

![](_page_18_Picture_33.jpeg)

![](_page_19_Figure_0.jpeg)

![](_page_19_Picture_6.jpeg)

ISSUE

- KEYNOTES (#)

NOTES

![](_page_19_Picture_12.jpeg)

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT:

SHEET NAME:

![](_page_19_Picture_17.jpeg)

DATE: 2024.10.01 SHEET:

### **GENERAL NOTES**

- A FIELD VERIFY EXISTING CONDITIONS PRIOR TO
- B ALL HVAC EQUIPMENT, DUCTWORK, CONTROLS AND PIPING SHALL REMAIN UNLESS NOTED OTHERWISE.
- C PATCH, REPAIR, AND FINISH AS NECESSARY FOR ANY DAMAGES DURING DEMOLITION AND INSTALL.
- D ALL THERMOSTATS IN STUDENT ACCESSIBLE AREAS TO HAVE VENTED LOCKABLE COVER.

![](_page_19_Picture_24.jpeg)

![](_page_19_Picture_26.jpeg)

CLIENT PROJ NO:

### DSA SUBMITTAL

MECHANICAL BLDG B & C ROOF PLANS -DEMOLITION

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_19_Picture_32.jpeg)

![](_page_19_Picture_33.jpeg)

1209 Pleasant Grove Blvd. Roseville, CA 95678 p 916-771-0778

![](_page_19_Picture_35.jpeg)

![](_page_19_Picture_36.jpeg)

![](_page_19_Picture_37.jpeg)

![](_page_20_Figure_0.jpeg)

## M4.12

CLIENT PROJ NO:

MECHANICAL BLDG B & C ROOF PLANS

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_20_Picture_9.jpeg)

www.lpengineers.com Job #: 24-2053

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DAMPER TO REMAIN IN PLACE. 4 LIQUID AND SUCTION REFRIGERANT PIPING LINE ROUTED ON ROOF, SIZE PER MANUFACTURER'S RECOMMENDATION. SEE DETAILS 1/M10.11 & 2/M10.11 FOR PIPE ON ROOF ATTACHMENT

PROVIDE (N) ECONOMIZER OUTSIDE AIR INTAKE HOOD AND CONNECT (N) OA DUCT FROM FAN COIL DOWN BELOW. SIZE AS NOTED. SEE MECH. SCHEDULE FOR MODEL NUMBER. REPLACE (E) MECHANICAL UNIT ON ROOF. (N) PACKAGE UNIT TO BE MOUNTED ON (N) CURB AND RECONNECTED TO (E) DUCT DROPS. PROVIDE THE NECESSARY FITTINGS AND TRANSITIONS FOR A

SAN RAFAEL CITY SCHOOLS

![](_page_21_Figure_0.jpeg)

![](_page_21_Figure_3.jpeg)

![](_page_21_Figure_4.jpeg)

PLEASE RECYCLE

# M10.11

![](_page_21_Picture_15.jpeg)

![](_page_22_Figure_0.jpeg)

![](_page_22_Figure_1.jpeg)

![](_page_22_Figure_2.jpeg)

RELIEF/INTAKE HOOD MOUNTING DETAIL

NTS

![](_page_22_Figure_3.jpeg)

![](_page_22_Figure_4.jpeg)

![](_page_22_Figure_5.jpeg)

FLEXIBLE DUCT CONNECTOR, TYP BACKDRAFT DAMPER PROVIDED BY FAN MANUFACTURER

INLINE SUPPLY AIR FAN, SEE SCHEDULE

LOCKNUT, TYP

![](_page_22_Figure_7.jpeg)

# M10.12

![](_page_22_Picture_15.jpeg)

![](_page_23_Picture_0.jpeg)

![](_page_23_Figure_1.jpeg)

![](_page_23_Figure_2.jpeg)

![](_page_23_Figure_3.jpeg)

![](_page_23_Figure_5.jpeg)

/1

Controls contractor shall run controls conduit on same Unistrut as refrigerant line - space to accommodate up to 1" conduit - Rigid.

**KEYNOTES** 

ISSUE

NOTES

![](_page_23_Picture_9.jpeg)

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT:

SHEET NAME: MECHANICAL CONTROLS

![](_page_23_Picture_14.jpeg)

DATE: 2024.10.01 SHEET:

# M10.13

CLIENT PROJ NO:

### **DSA SUBMITTAL**

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_23_Picture_22.jpeg)

www.lpengineers.com Job #: 24-2053

MEP & FS / Sustainability / CxA 1209 Pleasant Grove Blvd. Roseville, CA 95678 р 916-771-0778

![](_page_23_Picture_25.jpeg)

![](_page_23_Picture_26.jpeg)

![](_page_24_Picture_0.jpeg)

![](_page_24_Picture_10.jpeg)

![](_page_25_Figure_0.jpeg)

![](_page_25_Figure_1.jpeg)

| EQUIPMENT ANCHORAGE NOTES   |
|---|
| CAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS<br>PPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR<br>EET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC SECTIONS 1617A.1.17<br>7A.1.20 & 1617A.1.23 AND ASCE 7-16 CHAPTERS 13, 26 AND 30.   |
| L PERMANENT EQUIPMENT AND COMPONENTS.<br>MPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO<br>E BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL<br>SLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A   |
| EXIBLE CABLE.<br>MPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF<br>SS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT<br>E COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.  |
| NG MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE<br>T DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS<br>LEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING,<br>. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL   |
| MPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS<br>OVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.<br>MPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5<br>UNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.   |
| GE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE<br>THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER<br>ESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL<br>AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.  |
|   |
| PIPING AND DUCTWORK DISTRIBUTION SYSTEM<br>BRACING NOTES  |
| VORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND<br>TS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8;<br>, SECTIONS 1617A.1.24 THROUGH 1617A.1.26.  |
| DF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION<br>AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PRE-APPROVED INSTALLATION<br>SHPD OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL<br>ILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE<br>SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE<br>THE HANGER AND BRACE LOADS.   |
| PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):  |
| <ul> <li>OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.</li> <li>P E</li> <li>OPTION 2: SHALL COMPLY WITH THE APPLICABLE HCAI PRE-APPROVAL (OPM#) #0043-13.</li> </ul>  |
|   |
| PLUMBING SPECIFICATIONS   |
| NTRACTOR SHALL COMPLY WITH ALL CODES AND REGULATIONS IN EFFECT AT THE JOB SITE, INCLUDING,<br>'LIMITED TO:<br>2022 CALIFORNIA BUILDING CODE<br>2022 CALIFORNIA MECHANICAL CODE<br>2022 CALIFORNIA PLUMBING CODE<br>2022 CALIFORNIA ELECTRICAL CODE<br>2022 CALIFORNIA BUILDING STANDARDS<br>2022 CALIFORNIA GREEN BUILDING STANDARDS<br>2022 CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS - TITLE 24<br>NATIONAL FIRE PROTECTION ASSOCIATION<br>CALIFORNIA STATE FIRE MARSHAL  |
| GS ARE SCHEMATIC AND DIAGRAMMATIC. DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF<br>ENT, PIPING, AND OTHER PLUMBING WORK. USE JUDGEMENT AND CARE TO INSTALL PLUMBING WORK TO<br>IOB CONDITIONS WITHIN THE BUILDING CONSTRUCTION AND FINISHES, AND TO FUNCTION PROPERLY.<br>CTOR SHALL EXAMINE THE SITE, VERIFY DIMENSIONS AND LOCATIONS WITH DRAWINGS, CHECK UTILITY<br>TION LOCATIONS, AND FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AND LIMITATIONS. NO<br>WILL BE ALLOWED BECAUSE OF THE CONTRACTOR'S MISUNDERSTANDING OF THE AMOUNT OF WORK<br>D OR HIS LACK OF KNOWLEDGE OF ANY SITE CONDITION WHICH MAY AFFECT HIS WORK. ANY APPARENT<br>E OF THE DRAWINGS OR SPECIFICATIONS FROM THE EXISTING CONDITIONS AT THE SITE SHALL BE<br>TO THE ATTENTION OF THE ENGINEER IMMEDIATELY. |
| NTRACTOR SHALL ORGANIZE HIS WORK SO THAT THE PROGRESS OF THE PLUMBING WORK WILL CONFORM<br>PROGRESS OF THE OTHER TRADES, AND SHALL COMPLETE THE ENTIRE INSTALLATION AS SOON AS THE<br>DNS OF THE BUILDING WILL PERMIT. ANY COST RESULTING FROM DEFECTIVE OR ILL TIMED WORK<br>MED UNDER THIS SECTION SHALL BE BORNE BY THIS CONTRACTOR.<br>RK SHALL ALSO INCLUDE THE COMPLETION OF DETAILS OF PLUMBING WORK NOT MENTIONED OR SHOWN<br>RE NECESSARY FOR THE SUCCESSFUL OPERATION OF PLUMBING SYSTEMS DESCRIBED ON THE<br>GS OR REQUIRED BY THESE SPECIFICATIONS. FURNISH AND INSTALL ANY INCIDENTAL WORK NOT SHOWN   |
| CIFIED WHICH IS REQUIRED TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.<br>ERIALS AND EQUIPMENT INSTALLED UNDER THIS CONTRACT SHALL BE GUARANTEED FREE FROM ALL<br>ICAL, ELECTRICAL AND WORKMANSHIP DEFECTS FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL<br>ANCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ALL DAMAGED ITEMS<br>ED UNDER THIS CONTRACT WITHOUT ADDITIONAL COST TO OWNER.<br>MBING CONTRACTOR SHALL PROVIDE THE OWNER COPIES OF OPERATION, MAINTENANCE AND<br>TATIVE MAINTENANCE MANUALS FOR EACH MODEL AND TYPE OF PLUMBING EQUIPMENT   |
| ANUFACTURER'S PRODUCT DATA INCLUDING NAME OF MANUFACTURER, TRADE NAME, MODEL, CAPACITY,<br>, DIMENSIONS, WEIGHTS, INSTALLATION AND STARTUP DATA. EQUIPMENT PERFORMANCES SCHEDULED<br>IMUM CAPACITY, FLOW, EFFICIENCY, ETC. REQUIRED. WEIGHTS AND ELECTRICAL DATA SCHEDULED IS<br>AVAILABLE OR ALLOWABLE.<br>IMMENT IS TO BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER. USING ALL ACCESSORY   |
| INT AVAILABLE FROM THE MANUFACTURER FOR SUPPORTS, CONTROLS, ETC., TO MAKE A COMPLETE<br>ALL EQUIPMENT OR ACCESSORIES NEEDED AND NOT SHOWN OR SPECIFIED SHALL BE FURNISHED AND<br>ED BY THIS CONTRACTOR. ADJUST THE EQUIPMENT FOR PROPER OPERATION, CHECK ALL CONTROLS AND<br>HAT ALL SAFETY DEVICES ARE FUNCTIONING PROPERLY.   |
| ACCESS DOORS WHERE ACCESS THROUGH FLOORS, WALLS OR CEILINGS IS REQUIRED TO ACCESS<br>G COMPONENTS OR OTHER SYSTEMS REQUIRING ACCESS FOR MAINTENANCE. TESTING OR   |

CHECK ALL SYSTEMS FOR LEAKS AND EXCESSIVE NOISE. CORRECT ANY DEFICIENCIES AS SOON AS DISCOVERED. OPERATE THE SYSTEMS AS A TEST AND DEMONSTRATE TO THE OWNER THAT THE SYSTEM IS FUNCTIONING INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS, OR CONNECTED EQUIPMENT. PLUMBING EQUIPMENT AND PIPING SHALL NOT BE WITHIN ELECTRICAL OR LOW VOLTAGE EQUIPMENT DEDICATED SPACE. NO PIPING WILL BE ALLOWED ABOVE EQUIPMENT'S DEDICATED SPACE. ALL EXPOSED MATERIAL SHALL BE PREPARED WITH A PRIME COAT AND THEN PAINTED, COLOR BY ARCHITECT. NEW BUILDINGS 10,000 SQUARE FEET AND ABOVE TO BE COMMISSIONED PER REQUIREMENTS LISTED IN CALGREEN SECTION 5.410.2. ADHESIVES, SEALANTS AND CAULKS USED ON THE PROJECT SHALL MEET THE REQUIREMENTS LISTED IN CALGREEN SECTION 5.504.4.1. FOR NEW BUILDINGS IN EXCESS OF 50,000 SQUARE FEET, OR WATER CONSUMPTION IN EXCESS OF 1,000 GAL/DAY, PROVIDE WATER SUB-METERS AS REQUIRED PER CALGREEN SECTION 5.303.1.1. 18. PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL COMPLY WITH WATER CONSERVING REQUIREMENTS LISTED IN CALGREEN SECTION 5.303.3. 19. COORDINATE ALL NEW OR CHANGING UTILITY SERVICES WITH UTILITY PROVIDER AS SOON AS POSSIBLE. ANY COST RESULTING FROM WORK PERFORMED PRIOR TO COORDINATING WITH UTILITY COMPANY WHICH DOES NOT COMPLY WITH UTILITY COMPANY REQUIREMENTS SHALL BE BORNE BY THIS CONTRACTOR. 20. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS, FIXTURE MOUNTING HEIGHTS AND CBC

| SYMBOL               | ITEM  | ABBF   |
|----------------------|---|--------|
| WH                   | - EQUIPMENT DESIGNATION /   |        |
|                      |   |        |
|                      |   |        |
| <u>WC-1</u>          | <ul> <li>FIXTURE DESIGNATION /<br/>UNIT ABBREVIATION</li> <li>NUMBER</li> </ul> |        |
|                      | - DETAIL DESIGNATION  |        |
| P-1                  | <ul> <li>DETAIL NUMBER</li> <li>SHEET NO WHERE SHOWN</li> </ul>                 |        |
|                      | DOMESTIC COLD WATER   | CW     |
|                      | DOMESTIC HOT WATER  | HW     |
|                      | DOMESTIC HOT WATER RETURN   | HWR    |
| v                    | VENT  | V      |
| —_G—_                | GAS   | G      |
| —_MG—_               | MEDIUM PRESSURE GAS   | MG     |
| —LPG—                | LIQUID PROPANE GAS  | LPG    |
| <u> </u>             | SEWER   | S      |
| <b>—</b> GW <b>—</b> | GREASE WASTE  | GW     |
|                      | ACID VENT   | AV     |
| — AW —               | ACID WASTE  | AW     |
| SD                   | STORM DRAIN   | SD     |
|                      | ROOF DRAIN  | RD     |
| OD                   | OVERFLOW DRAIN  | OD     |
| —c—                  | CONDENSATE DRAIN  | С      |
| —scd—                | SECONDARY CONDENSATE DRAIN  | SCD    |
| — T&P —              | TEMPERATURE & PRESSURE RELIEF   | T&P    |
| —_D—_                | DRAIN   | D      |
| — FS —               | FIRE SPRINKLER  | FS     |
| ]                    | PIPE CAP  |        |
| 0                    | PIPE RISER / DROP   | (R)/(D |
|                      | SHUT-OFF VALVE IN BOX   | SOV    |
| FCOQ                 | FLOOR CLEANOUT  | FCO    |
| сотсф—               | CLEANOUT TO GRADE   | COTG   |
| 어                    | WALL CLEANOUT   | wco    |
|                      | CLEANOUT  | со     |
| <u> </u>             | HOSE BIBB   | НВ     |
|                      | OVERFLOW DRAIN OUTLET   |        |
| 101                  | BALL VALVE  | BV     |
| $\bowtie$            | GATE VALVE  | GV     |
|                      | CHECK VALVE   | CHK.\  |
|                      | MIXING VALVE  | TMV    |
| <u> </u>             | SHUT-OFF COCK   | SOC    |
|                      | CIRCULATION PUMP  | CP     |
|                      |   | BLV    |
|                      |   | TP     |
| ₩<br>₽               | PRESSURE REDUCING VALVE   | PRV    |
|                      | GAS PRESSURE REGULATOR  | GPR    |
| EV                   |   |        |
|                      |   |        |
|                      |   |        |
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|                      |   |        |
|                      | NFW   |        |
|                      | FXISTING  |        |
| I                    |   |        |
|                      |   |        |

AGENCY **APPROVAL:** DSA #01-121955 FILE #21-39

![](_page_25_Picture_6.jpeg)

3584-003-000 3546 CONCOURS STREET ONTARIO, CA 91764 DOUE

![](_page_25_Picture_8.jpeg)

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT:

SHEET NAME:

![](_page_25_Picture_13.jpeg)

DATE: 2024.10.01 SHEET:

|              | PLUMBING SHEET INDEX                         |
|--------------|--|
| SHEET NUMBER | SHEET NAME                                   |
| P0.01        | PLUMBING LEGEND AND NOTES                    |
| P2.11        | PLUMBING BLDG B & C FLOOR PLANS - DEMOLITION |
| P2.12        | PLUMBING BLDG B & C FLOOR PLANS              |
| P4.11        | PLUMBING BLDG B & C ROOF PLANS - DEMOLITION  |
| P4.12        | PLUMBING BLDG B & C ROOF PLANS               |
|              |  |

# **P0.01**

CLIENT PROJ NO:

### **DSA SUBMITTAL**

PLUMBING LEGEND AND NOTES

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_25_Picture_23.jpeg)

www.lpengineers.com Job #: 24-2053

MEP & FS / Sustainability / CxA 1209 Pleasant Grove Blvd. Roseville, CA 95678 р 916-771-0778

![](_page_25_Picture_26.jpeg)

![](_page_25_Picture_27.jpeg)

![](_page_26_Figure_0.jpeg)

![](_page_26_Picture_3.jpeg)

![](_page_26_Picture_4.jpeg)

HMC Architects 3584-003-000 3546 CONCOURS STREET ONTARIO, CA 91764 909 989 9979 / www.hmcarchitects.com

ISSUE  $\Delta$  **DESCRIPTION** 

### **KEYNOTES**

NOTES

![](_page_26_Picture_10.jpeg)

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT:

SHEET NAME:

![](_page_26_Picture_15.jpeg)

DATE: 2024.10.01 SHEET:

![](_page_26_Picture_18.jpeg)

CLIENT PROJ NO:

### **DSA SUBMITTAL**

PLUMBING BLDG B & C FLOOR PLANS - DEMOLITION

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_26_Picture_24.jpeg)

www.lpengineers.com Job #: 24-2053

MEP & FS / Sustainability / CxA 1209 Pleasant Grove Blvd. Roseville, CA 95678 p 916-771-0778

![](_page_26_Picture_27.jpeg)

SAN RAFAEL

![](_page_27_Figure_0.jpeg)

![](_page_27_Picture_1.jpeg)

![](_page_27_Picture_2.jpeg)

HMC Architects 3584-003-000 3546 CONCOURS STREET ONTARIO, CA 91764 909 989 9979 / www.hmcarchitects.com

ISSUE  $\Delta$  **DESCRIPTION** 

### **KEYNOTES**

NOTES

![](_page_27_Picture_8.jpeg)

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT:

SHEET NAME:

![](_page_27_Picture_13.jpeg)

DATE: 2024.10.01 SHEET:

![](_page_27_Picture_16.jpeg)

CLIENT PROJ NO:

### **DSA SUBMITTAL**

PLUMBING BLDG B & C FLOOR PLANS

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_27_Picture_22.jpeg)

www.lpengineers.com Job #: 24-2053

MEP & FS / Sustainability / CxA 1209 Pleasant Grove Blvd. Roseville, CA 95678 p 916-771-0778

![](_page_27_Picture_25.jpeg)

SAN RAFAEL CITY SCHOOLS

![](_page_28_Figure_0.jpeg)

![](_page_28_Picture_7.jpeg)

![](_page_28_Picture_13.jpeg)

![](_page_29_Figure_0.jpeg)

![](_page_29_Picture_2.jpeg)

![](_page_29_Picture_8.jpeg)

| IN ABOVE IS<br>ILONG AT THIS<br>IL PAGE SIZE       | UTILITIES SERVICE AND UNDE   |
|--|--|
| THE LINE SHOW<br>EXACTLY ONE INCI<br>SHEETS ORIGIN | <ol> <li>UNDERGROUND TRENCHING:         <ul> <li>A. USE EXTREME CAUTION WHEN DIGGING TO AVOID BURIED ELE<br/>800-277-2600, 48 HOURS BEFORE DIGGING.</li> <li>B. BEFORE START OF ANY UNDERGROUND TRENCHING FOR CONE<br/>COORDINATE WITH ALL PLANS OF OTHER TRADES (ARCHITECTURE<br/>C. TRENCHING AND BACKFILLING SHALL BE IN ACCORDANCE WITH<br/>ARCHITECTURAL SITE PLAN PRIOR TO THE TRENCHING, ETC. AND<br/>D. ALL UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC, U<br/>BELL FITTINGS. ALL ELBOWS, BENDS AND TURNS TRANSITIONING</li> </ul> </li> </ol> |
|  | <ul> <li>PVC COATED GALVANIZED STEEL ELBOWS AND OFFSETS.</li> <li>E. ALL UNDERGROUND SERVICE CONDUITS SHALL BE SEALED TO</li> <li>F. PROVIDE 24" MINIMUM COVERAGE FOR UNDERGROUND CONDU<br/>SERVICE CONDUITS WHICH SHALL HAVE A 36" MINIMUM SEPARAT<br/>UNDERGROUND CONDUITS. TRENCHES SHALL ALL BE INSTALLED<br/>"ELECTRICAL", LOCATED 8" BELOW GRADE IN THE TRENCH.</li> <li>G. PROVIDE UNDERGROUND TRACER WHERE NON-METAL CONDU</li> </ul>  |
|  | <ul> <li>H. PROVIDE "PARTEX" IDENTIFICATION TAGS TO IDENTIFY UNDERGINATION TAGS TO IDENTIFY UNDERGINATION TAGS TO IDENTIFY UNDERGINATION TAGS TO IDENTIFY UNDERGINATION OF LOT AND TAGE WATERTIGHT.</li> <li>J. ALL UNDERGROUND RACEWAYS SHALL BE WATERTIGHT.</li> <li>J. ALL UNDERGROUND RACEWAYS SHALL BE PROVIDED WITH A #WHETHER SHOWN ON PLAN OR NOT, UNLESS OTHERWISE NOTED</li> <li>K. THE CONTRACTOR SHALL BE RESPONSIBLE UNDER THIS CONT<br/>PCC (PORTLAND CEMENT CONCRETE) WALKS, AC PAVING, UTILITI</li> </ul>                                |
|  | RESULTING FROM THIS PROJECT. WHEN CUTTING OR TRENCHING<br>WALKWAYS, THE CONTRACTOR SHALL BE REQUIRED TO COMPLE<br>SCORE MARK TO SCORE MARK AFFECTED BY THE CONSTRUCTIO<br>REPLACED TO MATCH ADJACENT CONDITION AND AS DIRECTED E   |
|  | EQUIPMENT AND  |
|  | ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS<br>THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLL<br>MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRES<br>1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26 AND 30.<br>1. ALL PERMANENT EQUIPMENT AND COMPONENTS.  |
|  | <ol> <li>TEMPORARY, MOVABLE OR MOBILE EQUIPMENT IF<br/>BUILDING UTILITY SERVICES SUCH AS ELECTRICIT<br/>INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT<br/>CABLE.</li> <li>TEMPORARY, MOVABLE OR MOBILE EQUIPMENT W<br/>MASS LOCATED 4 FEET OR MORE ABOVE THE ADJ<br/>THE COMPONENT IS REQUIRED TO BE RESTRAINE</li> </ol>  |
|  | THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENT<br>NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE RE<br>HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE CON<br>CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT   |
|  | A. COMPONENTS WEIGHING LESS THAN 400 FOUNDS<br>ABOVE THE ADJACENT FLOOR OR ROOF LEVEL TH<br>B. COMPONENTS WEIGHING LESS THAN 20 POUNDS,<br>POUNDS PER FOOT, WHICH ARE SUSPENDED FRO<br>THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLU<br>OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE O<br>RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT IN<br>EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH A   |
|  | PIPING AND DUCTWORK<br>BRACING   |
|  | APPLICABLE CODE: 2022 CBC<br>PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEI<br>DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS<br>AND 2022 CBC, SECTIONS 1617A.1.24, 1617A.1.25 AND 1617A.1<br>THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO<br>SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTAC<br>GUIDE (E.G., HCAI OPM FOR 2013 CBC OR LATER), COPIES OF<br>SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START<br>DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF R<br>TO SUPPORT THE HANGER AND BRACE LOADS.                      |
|  | MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMB<br>MP MD PP E<br>DETAILS.<br>MP MD PP E<br>OPTION 2: SHALL COMPLY WITH H<br>AS INDICATED IN THESE DRAWING   |
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| MEP+FA_r22.r                                       |  |
| I PEDRO ES_N                                       |  |
| 53_SRCS SAN  |  |
| FA R22/24-20                                       |  |
| ES HVAC and  |  |
| S San Pedro  |  |
| 4003000 SRC<br>M                                   |  |
| s://358⁄<br> 3:43 AN                               |  |

### VICE AND UNDERGROUND TRENCHING NOTES

HEN DIGGING TO AVOID BURIED ELECTRICAL CABLES. CALL UNDERGROUND SERVICE ALERT (U.S.A.) ORE DIGGING.

NDERGROUND TRENCHING FOR CONDUIT RUNS, THE CONTRACTOR SHALL BE RESPONSIBLE TO NS OF OTHER TRADES (ARCHITECTURAL, CIVIL, LANDSCAPE), AND SITE CONDITIONS TO AVOID CONFLICT.

LING SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS. COORDINATE WITH CIVIL, LANDSCAPE AND PRIOR TO THE TRENCHING, ETC. AND THE INSTALLATION OF THE ELECTRICAL SYSTEM. DUITS SHALL BE SCHEDULE 40 PVC, UL LISTED FOR DIRECT BURIAL, AND TERMINATED WITH FACTORY END , BENDS AND TURNS TRANSITIONING TO GRADE SHALL BE INSTALLED USING PER MANUFACTURED 40-MIL STEEL ELBOWS AND OFFSETS.

VICE CONDUITS SHALL BE SEALED TO COMPLY WITH CEC 230.8.

VERAGE FOR UNDERGROUND CONDUITS, UNLESS OTHERWISE NOTED. THE EXCEPTION IS FOR PG&E SHALL HAVE A 36" MINIMUM SEPARATION BETWEEN THE POWER AND LOW VOLTAGE SYSTEM TRENCHES SHALL ALL BE INSTALLED WITH A RED POLYETHYLENE WARNING RIBBON LABELED BELOW GRADE IN THE TRENCH.

TRACER WHERE NON-METAL CONDUITS ARE INSTALLED.

FIFICATION TAGS TO IDENTIFY UNDERGROUND CIRCUITS.

ICES SHALL BE MADE WATERPROOF BY PROVIDING WITH "SPLICE-KOTE" SPLICE KITS OR OTHER ACCEPTED ERS SHALL BE WATERTIGHT. EWAYS SHALL BE PROVIDED WITH A #8 AWG MINIMUM SIZE COPPER EQUIPMENT GROUNDING CONDUCTOR,

NOR NOT, UNLESS OTHERWISE NOTED. BE RESPONSIBLE UNDER THIS CONTRACT TO REPAIR AND REPLACE ANY AND ALL DAMAGES TO EXISTING

NCRETE) WALKS, AC PAVING, UTILITIES, TREES, TURF, PLANTED AREAS AND OTHER FACILITIES IECT. WHEN CUTTING OR TRENCHING THROUGH EXISTING CONCRETE SIDEWALKS, DRIVEWAYS, AND OR SHALL BE REQUIRED TO COMPLETELY REPLACE ENTIRE SECTIONS OF CONCRETE PANELS FROM RK AFFECTED BY THE CONSTRUCTION WORK. ALL SIDEWALKS, DRIVEWAYS, AND WALKWAYS SHALL BE ENT CONDITION AND AS DIRECTED BY THE ARCHITECT.

### EQUIPMENT ANCHORAGE NOTES

BING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON INSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO ISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC SECTIONS 1617A.1.18 THROUGH 6 CHAPTERS 13, 26 AND 30.

, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE LITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF ED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT NENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

ANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT TE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL TIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND INECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS: WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS DJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT. WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 R FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

MECHANICAL. ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL SSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED CEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

### NG AND DUCTWORK DISTRIBUTION SYSTEM BRACING NOTES

D ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND CRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8; NS 1617A.1.24. 1617A.1.25 AND 1617A.1.26. /ING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION D BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PRE-APPROVED INSTALLATION

FOR 2013 CBC OR LATER) COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE GER AND BRACE LOADS. IP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND

OPTION 2: SHALL COMPLY WITH HCAi (OSHPD) PRE-APPROVAL (OPM#) # AS INDICATED IN THESE DRAWINGS WITH PROJECT-SPECIFIC NOTES AND DETAILS.

### GENERAL NOTES

- THESE GENERAL NOTES ARE INTENDED TO ASSIST THE CONTRACTOR IN THE EXECUTION OF THE ELECTRICAL WO INCLUDED IN CONJUNCTION WITH THE CONTRACT DOCUMENT DRAWINGS AND SPECIFICATION REQUIREMENTS. SI NOTES ARE EXCERPTS FROM THE SPECIFICATION.
- PROCURE PERMITS AND LICENSES REQUIRED. PAY ALL NECESSARY FEES AND ARRANGE FOR INSPECTIONS REQU CODES AND ORDINANCES AND UTILITY COMPANIES.
- COORDINATE ALL ELECTRICAL SERVICES WITH THE RESPECTIVE UTILITY COMPANIES AND PROVIDE ALL TRENCHI WIRING, METER FACILITIES AND OUTLETS REQUIRED BY THEM. WORKMANSHIP SHALL BE OF THE HIGHEST GRADE. DEFECTIVE EQUIPMENT OR EQUIPMENT DAMAGED IN THE COU
- OR TEST SHALL BE REPLACED OR REPAIRED IN A MANNER MEETING WITH THE ACCEPTANCE OF THE ARCHITECT. INSTALL ALL EQUIPMENT, CONDUITS, OUTLETS, AND FIXTURES IN STRICT ACCORDANCE WITH THE CURRENT EDITION APPLICABLE CODES (CEC, STATE, COUNTY AND CITY).
- DO NOT SCALE PLANS FOR FIXTURES, DEVICES, OR APPLIANCE LOCATIONS. USE FIGURED DIMENSIONS IF GIVEN ( MECHANICAL AND ARCHITECTURAL PLANS. ALSO REFER TO ACTUAL ON-SITE CONDITIONS. ALL MATERIAL AND EQUIPMENT IS TO BE LISTED AND INSTALLED PER MANUFACTURER'S SPECIFICATIONS AND CE
- ALL ELECTRICAL DEVICES AND EQUIPMENT, FIXTURES, CONDUITS AND WIRING SHOWN ON THESE PLANS ARE NEW
- OUTLET BOXES INSTALLED IN FIRE WALLS SHALL BE ONE-PIECE STEEL AND INSTALLED IN SEPARATE (STAGGEREI PENETRATIONS, MINIMUM 24 INCHES HORIZONTAL SEPARATION. FIRE WALLS SHALL BE MADE IN ACCORDANCE WIT ELECTRICAL CODES 10. THE FINAL LOCATION OF ALL OUTLETS SHALL BE VERIFIED WITH THE ARCHITECT AND/OR OWNER AT TIME OF CON-
- . ALL OUTDOOR ELECTRICAL EQUIPMENT SHALL BE WEATHER-PROTECTED. 12. CONTRACTOR SHALL VERIFY THAT ALL LIGHTING FIXTURES, CEILING TRIMS, AND FRAMES ARE COMPATIBLE WITH
- INSTALLED 3. CONTRACTOR SHALL COORDINATE LIGHT FIXTURE LOCATIONS AND INSTALLATIONS WITH THE MECHANICAL CONT REQUIRED CLEARANCES (MINIMUM 3 INCHES) BETWEEN THE LIGHT FIXTURES AND MECHANICAL DUCTS OR EQUIP OPERATION, INSTALLATION AND/OR REMOVAL OF FIXTURES.
- 14. BEFORE SUBMITTING FOR ARCHITECT'S REVIEW AND PLACING ORDER FOR THE LIGHT FIXTURES. THE CONTRACTOR VOLTAGE OF ALL THE LIGHTING FIXTURES TO MATCH THE VOLTAGE OF THE SERVICE PANEL, WHETHER THE VOLT. FIXTURES ARE SHOWN ON THE PLAN OR NOT.
- 5. PLACEMENT AND CIRCUITING OF EXIT SIGNS AND EGRESS LIGHTING COMPLY WITH CBC REQUIREMENTS. 16. ALL CONDUIT SHALL BE ROUTED CONCEALED UNLESS NOTED ON PLAN OR ACCEPTED BY THE ARCHITECT.
- 17. PROVIDE ALL NECESSARY SLEEVES AND INSERTS FOR ALL WORK PASSING THROUGH OR ATTACHING TO WALLS, I 18. ALL WIRING SHALL BE INSTALLED IN RIGID METALLIC CONDUIT. UNLESS OTHERWISE NOTED. CONDUITS INSTALLE AND CEILING MAY BE EMT WITH STEEL COMPRESSION TYPE FITTINGS. PVC WHERE INSTALLED UNDERGROUND AN ALL EXPOSED CONDUITS SHALL BE RIGID STEEL CONDUITS WITH THREADED TYPE FITTINGS. INSTALL ALL CONDUI WITH CECA STANDARDS OF INSTALLATION.
- 9. ELECTRICAL NON-METALLIC TUBING (ENT) AND MC CABLE ARE NOT PERMITTED TO BE USED FOR THIS PROJECT, N 20. WHERE EXISTING CONDUITS, CONCEALED OR EXPOSED, AND (WIREMOLD) SURFACE RACEWAY IS NOT IN PLACE A PROVIDE NEW CONDUITS AND (WIREMOLD) SURFACE RACEWAY FOR THE NEW WORK. VERIFY EXISTING CONDITIC PROVIDE ALL NECESSARY NEW MATERIAL, APPARATUS, AND WORK THAT ARE REQUIRED TO BE INCLUDED IN THE
- 1. CONDUCTORS, #8 AND LARGER, SHALL BE STRANDED COPPER WITH THNN/THWN INSULATION, UNLESS OTHERWIS 22. PROVIDE WORKING CLEARANCE PER CEC 110.26 FOR SERVICE PANEL, SUBPANELS, MOTOR DISCONNECT SWITCH SECTIONS. HVAC EQUIPMENT, APPLIANCES, ETC.
- 23. PROVIDE A WARNING LABEL (SIGN) CLEARLY VISIBLE TO QUALIFIED PERSONS TO COMPLY WITH NEC AND CEC 116 ELECTRIC ARC FLASH HAZARDS AT SWITCHBOARDS. PANELBOARDS. INDUSTRIAL CONTROL PANELS AND MOTOR THAT ARE LIKELY TO REQUIRE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE WHILE ENERGIZED. SE SHALL BE LEGIBLY MARKED WITH THE MAXIMUM AVAILABLE FAULT CURRENT PER CEC SECTION 110.24(A).
- 24. BUILDING SERVICE AND SUBPANELS TO COMPLY WITH CEC 110.9 AND 110.10 INTERRUPTING RATING AND BRACING CALCULATIONS FOR SUBPANELS IF INTERRUPTING RATING TO BE USED IS LOWER THAN MAIN SERVICE RATING. 25. ALL APPLIANCES SHALL COMPLY WITH CEC ARTICLE 422. APPLIANCE CONTROL AND PROTECTION PER CEC 422-III; PER 422-II.
- 26. BUILDING EXPANSION JOINTS MAY OR MAY NOT BE INDICATED ON THE ELECTRICAL DRAWINGS. VERIFY THE LOCA APPLICABLE BUILDING EXPANSION JOINTS WITH THE ARCHITECTURAL DRAWINGS. WIRING METHODS ACROSS EXF SHALL INCLUDE USE OF FLEXIBLE FITTINGS OR OTHER DEVICES AS APPROPRIATE TO EACH APPLICATION. IN NO C CROSS SUCH A JOINT IN BUILDING CONSTRUCTION WITHOUT USE OF THE APPROPRIATE WIRING METHODS.
- 27. CONTRACTOR SHALL SIZE ALL THE INTERIOR AND EXTERIOR BUILDING PULL BOXES AND UNDERGROUND PULL BOXES AND COMPLY WITH CEC 314.28 FOR INSTALLATION OF RACEWAYS AND WIRING AS REQUIRED BY CODE, UNLESS O 28. WHERE ACCESSIBILITY IS NOT AVAILABLE TO ELECTRICAL OUTLETS, DEVICES AND/OR EQUIPMENT, COORDINATE FOR PROVISIONS TO PROVIDE ACCESSIBILITY TO THEM.
- 29. CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE MECHANICAL DRAWINGS AND PROVIDES ALL CONDUITS AND POWER WIRING SHOWN ON THE MECHANICAL DRAWINGS THAT IS NOT SHOWN ON THE ELECTRICAL PLANS. 30. CONTRACTOR SHALL REFER TO THE MECHANICAL DRAWINGS AND COORDINATE FOR THE EQUIPMENT LOCATIONS
- PENETRATION WITH THE MECHANICAL CONTRACTOR FOR MECHANICAL CONNECTIONS. ENTER ROOF MOUNTED U EQUIPMENT MOUNTING CURES WHERE POSSIBLE. VERIFY ON-SITE. PROVIDE CONVENIENCE OUTLET WITHIN 25 FEET OF MECHANICAL EQUIPMENT PER U.M.C. WHERE LOCATED OU WEATHERPROOF AND GFCI CONVENIENCE OUTLET. SECURE ROOF MOUNTED OUTLET TO THE MECHANICAL EQUIF
- LOCATION IN FIELD WITH THE MECHANICAL CONTRACTOR. 32. VERIFY SINGLE-POINT CONNECTIONS TO ROOF MOUNTED HVAC UNITS WITH MECHANICAL CONTRACTOR ON-SITE PRIOR TO ELECTRICAL ROUGH-IN. PROVIDE DUAL DISCONNECTS IF TWO-POINT CONNECTIONS IS REQUIRED, WHETHER SHOWN ON PLANS OR NOT.
- 33. VERIFY SINGLE-POINT CONNECTIONS TO ROOF MOUNTED HVAC UNITS WITH MECHANICAL CONTRACTOR ON-SITE PRIOR TO ELECTRICAL ROUGH-IN. PROVIDE DUAL DISCONNECTS IF TWO-POINT CONNECTIONS IS REQUIRED, WHETHER SHOWN ON PLANS OR NOT.
- 34. COORDINATE THE HVAC EQUIPMENT FOR FUSES REQUIRE. WHERE FUSES ARE REQUIRED, VERIFY FUSE SIZE ON-SITE AND PROVIDE FOR HVAC EQUIPMENT PER UNIT NAMEPLATE SPECIFICATIONS.
- 35. MOTOR DISCONNECT SWITCHES SHALL COMPLY WITH CEC 430-IX AND 440.11.
- 36. MOTOR STARTERS FOR HVAC EQUIPMENT ARE PROVIDED BY MECHANICAL CONTRACTOR AND CONNECTED BY ELECTRICAL CONTRACTOR, UNLESS NOTED OTHERWISE
- 7. ALL CONNECTIONS FROM THE DISCONNECT SWITCHES TO HVAC UNITS SHALL BE COPPER CONDUCTORS. MOTOR DISCONNECT SWITCHES SHALL COMPLY WITH CEC 430-VII, 430-VIII, AND 440-II.
- 38. VERIFY LOCATION AND HEIGHT OF ALL MECHANICAL OR FIXTURE EQUIPMENT OUTLETS WITH SUPPLIER PRIOR TO ANY ROUGH-IN WORK. PROVIDE ALL RUNS AND CONNECTIONS TO EQUIPMENT. 39. ALL TERMINATION PROVISIONS OF EQUIPMENT, INCLUDING CIRCUITS RATED 100 AMPERES OR LESS SHALL BE RATED AT 60 DEGREE, CENTIGRADE PER CEC 110.14(c).
- 40. ALL LIGHT FIXTURES INSTALLED OVER FOOD HANDLING OR FOOD PREPARATION AREAS, OPEN FOOD STORAGE, AND UTENSIL WASHING AREAS SHALL BE OF SHATTERPROOF CONSTRUCTION OR SHALL BE PROTECTED WITH SHATTERPROOF SHIELDS AND SHALL BE READILY CLEANABLE

### DEMOLITION GENERAL NOTES ALL DEMOLITION GENERAL NOTES SHOWN BELOW ARE NOT NECESSARILY USED ON PLANS IF NOT REQUIRED.

- ALL EXISTING EQUIPMENT. DEVICES, CONDUIT AND WIRING, ETC., WHERE SHOWN ON PLANS ARE BASED ON AVAILABLE EXISTING DOCUMENTS AND LIMITED SITE SURVEYS AND ARE SHOWN FOR CLARITY. IT SHALL BE REGARDED AS AN APPROXIMATION ONLY. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES. THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT. PRIOR TO SUBMITTING BID AND BEFORE START OF ANY ELECTRICAL WORK, CONTRACTOR SHALL VERIFY ON-SITE ALL EXISTING LOCATIONS AND CONDITIONS TO ASCERTAIN ALL WORK REQUIRED.
- EXISTING ELECTRICAL MAIN SERVICE IS BEING REPLACED WITH NEW THAT IS TO BE INCLUDED IN THE SCOPE OF WORK. CONTRACTOR SHALL VERIFY AND COORDINATE. THE SEQUENCE OF WORK WITH THE LOCAL UTILITY COMPANY. THE OWNER/DISTRICTS REPRESENTATIVE AND OTHER TRADES AT THE EARLIEST START OF CONSTRUCTION FOR ALL REQUIREMENT AND SCHEDULE THE REQUIRED WORK FOR A SMOOTH AND TIMELY TRANSFORMATION FROM THE EXISTING SERVICE TO THE NEW SERVICE TO ENSURE THAT ALL WORK PROCEED WITH A MINIMUM OF INTERFERENCE AND DELAY. LIMIT THE ELECTRICAL SHUTDOWN TO A MINIMAL SO IT WILL NOT AFFECT THE EXISTING FACILITY'S NORMAL DAILY FUNCTIONS AND OPERATION.
- CAUSE AS LITTLE INTERFERENCE OR INTERRUPTION OF EXISTING UTILITIES AND/OR OTHER EXISTING FACILITY'S SYSTEMS AND SERVICES AS POSSIBLE. CONTRACTOR SHALL NOTIFY THE OWNER/DISTRICT'S REPRESENTATIVE AT LEAST 72 HOURS TO SCHEDULE ALL NECESSARY SHUTDOWN. SHUTDOWN WORK SHALL BE PERFORMED AFTER THE NORMAL OPERATION HOURS OF THE FACILITY, IF SO DIRECTED BY THE OWNER/DISTRICT'S REPRESENTATIVE.
- ALL REMOVED AND/OR DEMOLISHED ELECTRICAL MATERIALS AND EQUIPMENT TO BE ACCOMPLISHED UNDER THIS CONTRACT, WHICH IN THE OPINION OF THE OWNER/DISTRICT'S REPRESENTATIVE ARE DEEM SALVAGEABLE, SHALL REMAIN THE PROPERTY OF THE OWNER/DISTRICT. ALL ELECTRICAL MATERIAL AND EQUIPMENT CONSIDERED NOT SALVAGEABLE SHALL BE REMOVED FROM THE SITE AND DISPOSED BY THE CONTRACTOR ACCORDINGLY.
- WHERE REMOVAL OF AN EXISTING SYSTEM'S DEVICE WILL RESULT IN LOSS OF CIRCUIT CONTINUITY, THE ISOLATED PORTIONS OF THE CIRCUIT SHALL BE RECONNECTED TO PROVIDE SERVICE TO ALL REMAINING DEVICES. IF SITE CONDITIONS MAKE RECONNECTION IMPOSSIBLE, CONNECTION SHALL BE MADE FROM AN ADJACENT AVAILABLE DEVICE AS NOTED AND/OR AS DIRECTED BY THE ARCHITECT AND/OR THE OWNER/DISTRICT'S REPRESENTATIVE
- WHERE EXISTING CONCEALED CONDUITS, WHETHER SHOWN OR NOT, OR SPECIFIED TO BE REUSED, WHICH BECAME EXPOSED DUE TO CONSTRUCTION CHANGES. IT SHALL BE REROUTED TO THE NEAREST AVAILABLE REUSED OUTLET
- ALL EXISTING EXPOSED CONDUITS AND/OR WIRING THAT ARE DETERMINED BY THE DISTRICT AND ARCHITECT TO BE MAINTAINED FOR EXISTING SYSTEM FUNCTION AND CONTINUITY, WHETHER SHOWN ON PLAN OR NOT, ARE TO BE REROUTED, CONCEALED IN WALL AND/OR CEILING FOR A CLEAN FINISHED SURFACE WITH NO EXPOSED CONDUITS AND/OR WIRING WITHIN THE REMODELED AREA.
- REMOVE ALL EXISTING EXPOSED CONDUITS, WIRING, ELECTRICAL OUTLETS, DEVICES AND EQUIPMENT THAT ARE DETERMINED BY THE DISTRICT AND ARCHITECT TO BE NON FUNCTIONAL AND/OR NOT BEING USED FROM WITHIN THE REMODELED ARE FOR A CLEAN FINISHED SURFACE.
- WHERE EXISTING WIRING OR EQUIPMENT IS ABANDONED AS A RESULT OF THIS CONTRACT, IT SHALL BE REMOVED INSOFAR AS POSSIBLE, THIS INCLUDES BUT IS NOT LIMITED TO A. REMOVE ALL WIRE AND CABLE. B. REMOVE ALL DEVICES AND EQUIPMENT. C. REMOVE ALL EXPOSED CONDUIT AND CONDUIT IN ACCESSIBLE CONCEALED AREA, AS FAR AS POSSIBLE.
- D. CUT OFF AND CAP ALL ABANDONED CONDUIT. STUBS SHALL NOT BE PROTRUDED ABOVE FLOOR AND/OR FINISHED WALLS AND CEILINGS ). WHEREVER EXISTING ELECTRICAL DEVICES, PANELS, CONDUITS, CABLES, ETC., CONFLICT WITH REMODEL WORK, WHETHER SHOWN
- OR NOT, RELOCATE THESE ITEMS AS DIRECTED BY THE ARCHITECT AND/OR OWNER/DISTRICT'S REPRESENTATIVE. I. WHERE SHOWN ON PLAN FOR REMOVAL OF EXISTING CONDUITS. REMOVE ALL PORTIONS OF CONDUITS WHERE IT IS ACCESSIBLE AND
- ABANDON PORTIONS OF CONDUITS WHERE IT IS INACCESSIBLE. CUT AND/OR FINISHED WALLS AND CEILINGS. 12. CONTRACTOR SHALL UPDATE WITH NEW TYPED WRITTEN PANEL DIRECTORIES TO EXISTING PANELS INVOLVED IN THIS RENOVATION
- WORK THAT SHALL REFLECT ALL CHANGES TO THE CIRCUIT DESIGNATIONS. 13. PROVIDE AND INSTALL PROTECTIVE COVERING OVER EXISTING EQUIPMENT IN AREA WHEN INSTALLING ANY NEW WORK.
- 14. COORDINATE WITH OTHER TRADES AND PROMPTLY TRANSMIT ALL INFORMATION REQUIRED BY THEM. COORDINATE THE SEQUENCE OF DEMOLITION WITH OTHER TRADES TO ENSURE THAT ALL WORK PROCEEDS WITH A MINIMUM OF INTERFERENCE AND DELAY. . REFER TO MECHANICAL AND PLUMBING DRAWING FOR HEATERS, EXHAUST FANS, WATER HEATERS, PUMPS, AND ETC., WHICH
- REQUIRE TO BE DISCONNECTED BY THE ELECTRICAL CONTRACTOR FOR REMOVAL OR ABANDONMENT BY THE MECHANICAL AND/OR PLUMBING CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE SEQUENCE FOR WORK WITH THE MECHANICAL AND/OR PLUMBING FOR REMOVAL OF ALL APPLICABLE STARTERS. DISCONNECT SWITCHES AND ASSOCIATED CONDUIT AND WIRING. 16. ALL LIGHT FIXTURES INDICATED AS RELOCATED SHALL BE CLEANED AND RE-LAMPED PRIOR TO THE RE-INSTALLATION.

| GENERAL NOTES<br>ALL GENERAL NOTES SHOWN BELOW ARE NOT NECESSARILY USED ON PLANS IF NOT REQUIRED   |                             | ELECTRICAL A  | BBRE <sup>\</sup>      | VIATIONS   | <b>APPROVAL:</b><br>DSA #01-121955   |
|--|-----------------------------|---|------------------------|--|--------------------------------------|
| NOTES ARE INTENDED TO ASSIST THE CONTRACTOR IN THE EXECUTION OF THE ELECTRICAL WORK AND TO BE  |                             | DESCRIPTION   | ABBREV                 | DESCRIPTION  | FILE #21-39                          |
| JUNCTION WITH THE CONTRACT DOCUMENT DRAWINGS AND SPECIFICATION REQUIREMENTS. SOME OF THE GENERAL RPTS FROM THE SPECIFICATION.  | A, AMP                      | AMPERES   | MAX                    | MAXIMUM  |                                      |
| S AND LICENSES REQUIRED. PAY ALL NECESSARY FEES AND ARRANGE FOR INSPECTIONS REQUIRED BY LOCAL<br>VANCES AND UTILITY COMPANIES.   | AC<br>AF/AT                 | ABOVE COUNTER<br>AMPERE FRAME / AMPERE TRIP   | MC<br>MCA              | METAL-CLAD CABLE<br>MINIMUM CIRCUIT AMPACITY   |                                      |
| ELECTRICAL SERVICES WITH THE RESPECTIVE UTILITY COMPANIES AND PROVIDE ALL TRENCHING, CONDUITS,<br>ACILITIES AND OUTLETS REQUIRED BY THEM   | AFCI<br>AFF<br>AHJ          | ARC FAULT CIRCOTTINTERROPTER<br>ABOVE FINISHED FLOOR<br>AUTHORITY HAVING JURISDICTION               | MCC<br>MGB             | MAIN CIRCUIT BREAKER<br>MOTOR CONTROL CENTER<br>MAIN GROUND BAR                                    |                                      |
| HALL BE OF THE HIGHEST GRADE. DEFECTIVE EQUIPMENT OR EQUIPMENT DAMAGED IN THE COURSE OF INSTALLATION   | AIC<br>AL                   | AMPERE INTERRUPTING CAPACITY<br>ALUMINUM  | MG SET<br>MLO          | MOTOR-GENERATOR SET<br>MAIN LUGS ONLY  |                                      |
| PMENT, CONDUITS, OUTLETS, AND FIXTURES IN STRICT ACCORDANCE WITH THE CURRENT EDITION OF ALL  | ANSI<br>AS/AF<br>AT         | AMPERE SWITCH / AMPERE FUSE<br>AMPERE TRIP RATING OF BREAKER  | MPOE<br>MS             | MINIMUM POINT OF ENTRY<br>MOTION SENSOR  |                                      |
| ANS FOR FIXTURES, DEVICES, OR APPLIANCE LOCATIONS. USE FIGURED DIMENSIONS IF GIVEN OR CHECK  | AUTO<br>ATS                 | AUTOMATIC<br>AUTOMATIC TRANSFER SWITCH  | MSB<br>MTD<br>MTS      | MAIN SWITCHBOARD<br>MOUNTED<br>MANUAL TRANSFER SWITCH  |                                      |
| DEQUIPMENT IS TO BE LISTED AND INSTALLED PER MANUFACTURER'S SPECIFICATIONS AND CEC 110.3.  | BMS<br>C, CDT               | BUILDING MANAGEMENT SYSTEM  | MV<br>MV               | MEDIUM VOLTAGE CABLE<br>MEGAWATTS  |                                      |
| DEVICES AND EQUIPMENT, FIXTURES, CONDUITS AND WIRING SHOWN ON THESE PLANS ARE NEW, UNLESS OTHERWISE  | CATV<br>CB                  | COMMUNITY ANTENNA TELEVISION<br>CIRCUIT BREAKER   | (N)<br>NECA            | NEW<br>NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION   |                                      |
| STALLED IN FIRE WALLS SHALL BE ONE-PIECE STEEL AND INSTALLED IN SEPARATE (STAGGERED) STUD<br>IINIMUM 24 INCHES HORIZONTAL SEPARATION. FIRE WALLS SHALL BE MADE IN ACCORDANCE WITH CBC AND  | CEC<br>CFL<br>CFCI          | CALIFORNIA ELECTRICAL CODE<br>COMPACT FLUORESCENT<br>CONTRACTOR FURNISHED, CONTRACTOR INSTALLED     | NEIVIA<br>NIC<br>NL    | NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION<br>NOT IN CONTRACT<br>NIGHT LIGHT                    |                                      |
| ES.<br>ON OF ALL OUTLETS SHALL BE VERIFIED WITH THE ARCHITECT AND/OR OWNER AT TIME OF CONSTRUCTION.  | cmil<br>CO                  | CIRCULAR MIL<br>CONDUIT ONLY WPULL STRING   | NTS<br>OC              | NOT TO SCALE<br>ON CENTER  |                                      |
| ECTRICAL EQUIPMENT SHALL BE WEATHER-PROTECTED.   | CSFM<br>CT                  | CALIFORNIA STATE FIRE MARSHALL<br>CURRENT TRANSFORMER   | OCPD<br>OFCI           | OVERCURRENT PROTECTIVE DEVICE<br>OWNER FURNISHED CONTRACTOR INSTALLED                              |                                      |
| ALL VERIFY THAT ALL LIGHTING FIXTURES, CEILING TRIMS, AND FRAMES ARE COMPATIBLE WITH CEILING SYSTEM  | DET                         | COPPER<br>DETAIL<br>DISCONNECT  | OFOI<br>PH, P<br>PB    | OWNER FURNISHED, OWNER INSTALLED<br>PHASE OR POLE<br>PUIL BOX                                      |                                      |
| ALL COORDINATE LIGHT FIXTURE LOCATIONS AND INSTALLATIONS WITH THE MECHANICAL CONTRACTOR. MAINTAIN<br>ANCES (MINIMUM 3 INCHES) BETWEEN THE LIGHT FIXTURES AND MECHANICAL DUCTS OR EQUIPMENT FOR PROPER<br>ALLATION AND/OR REMOVAL OF FIXTURES.  | DIST<br>DWG<br>EC           | DISTRIBUTION<br>DRAWING<br>ELECTRICAL CONTRACTOR  | PF<br>PFB<br>PIV       | POWER FACTOR<br>PROVIDE FOR FUTURE BREAKER<br>POST INDICATOR VALVE                                 |                                      |
| NG FOR ARCHITECT'S REVIEW AND PLACING ORDER FOR THE LIGHT FIXTURES. THE CONTRACTOR SHALL VERIFY THE<br>THE LIGHTING FIXTURES TO MATCH THE VOLTAGE OF THE SERVICE PANEL, WHETHER THE VOLTAGE FOR THE LIGHT<br>OWN ON THE PLAN OR NOT  | EGC<br>ELEV, EL<br>EM EMERG | EQUIPMENT GROUNDING CONDUCTOR<br>ELEVATION<br>EMERGENCY   | PLC<br>PNL<br>PoF      | PROGRAMMABLE LOGIC CONTROLLERS<br>PANEL<br>POWER OVER INTERNET                                     | HMC Architect                        |
| CIRCUITING OF EXIT SIGNS AND EGRESS LIGHTING COMPLY WITH CBC REQUIREMENTS.   | EMT<br>ENT                  | ELECTRICAL METALLIC TUBING<br>ELECTRICAL NONMETALLIC TUBING   | PV<br>PVC              | PHOTOVOLTAICS<br>POLYVINYL CHLORIDE  |                                      |
| LL BE ROUTED CONCEALED UNLESS NOTED ON PLAN OR ACCEPTED BY THE ARCHITECT.  | EOL<br>EPO                  | END OF LINE RESISTOR<br>EMERGENCY POWER OFF   | PWR<br>(R)             | POWER<br>RELOCATED   | 3584-003-000                         |
| ESSARY SLEEVES AND INSERTS FOR ALL WORK PASSING THROUGH OR ATTACHING TO WALLS, FLOORS, OR CEILINGS.<br>BE INSTALLED IN RIGID METALLIC CONDUIT. UNLESS OTHERWISE NOTED. CONDUITS INSTALLED CONCEALED IN WALL  | EQPT                        |   | REC, RECPT             | RECEPTACLE<br>PECUIDED   |                                      |
| BE EMT WITH STEEL COMPRESSION TYPE FITTINGS. PVC WHERE INSTALLED UNDERGROUND AND/OR UNDER SLAB.<br>NDUITS SHALL BE RIGID STEEL CONDUITS WITH THREADED TYPE FITTINGS. INSTALL ALL CONDUITS IN ACCORDANCE<br>DARDS OF INSTALLATION.  | EV3E<br>EXH<br>(E)          | EXHAUST<br>EXISTING<br>FI TI IRE  | RGSC<br>RMC<br>RMS     | REQUIRED<br>RIGID GALVANIZED STEEL CONDUIT<br>RIGID METAL CONDUIT<br>ROOT-MEAN-SOLIARE             | 3546 CONCOURS STREET                 |
| METALLIC TUBING (ENT) AND MC CABLE ARE NOT PERMITTED TO BE USED FOR THIS PROJECT, NO EXCEPTIONS.   | FACP                        | FIRE ALARM CONTROL PANEL<br>FURNISHED BY OTHERS   | SCADA                  | SUPERVISORY CONTROL AND DATA ACQUISITION   | 909 989 9979 / www.hmcarchitects.com |
| CONDUITS, CONCEALED OR EXPOSED, AND (WIREMOLD) SURFACE RACEWAY IS NOT IN PLACE AS SHOWN ON PLANS,<br>NDUITS AND (WIREMOLD) SURFACE RACEWAY FOR THE NEW WORK. VERIFY EXISTING CONDITION ON SITE AND<br>ESSARY NEW MATERIAL, APPARATUS, AND WORK THAT ARE REQUIRED TO BE INCLUDED IN THE BID PACKAGE.  | FF<br>FG<br>FLA             | FINISHED FLOOR<br>FINISHED GRADE<br>FULL LOAD AMPS  | SHLD<br>SPD<br>SPECS   | SHIELDED<br>SURGE-PROTECTIVE DEVICE<br>SPECIFICATIONS  | ISSUE                                |
| AND LARGER, SHALL BE STRANDED COPPER WITH THNN/THWN INSULATION, UNLESS OTHERWISE NOTED.  | FLEX<br>FLUOR               | FLEXIBLE<br>FLUORESCENT   | SW<br>T, XFMR          | SWITCH<br>TRANSFORMER  |                                      |
| G CLEARANCE PER CEC 110.26 FOR SERVICE PANEL, SUBPANELS, MOTOR DISCONNECT SWITCHES, CONTROL<br>EQUIPMENT, APPLIANCES, ETC.   | FMC<br>FMT                  | FLEXIBLE METAL CONDUIT<br>FLEXIBLE METAL TUBING   | TEMP<br>THHN           | TEMPORARY<br>THERMOPLASTIC, HEAT RESISTANT CABLE, NYLON  |                                      |
| NG LABEL (SIGN) CLEARLY VISIBLE TO QUALIFIED PERSONS TO COMPLY WITH NEC AND CEC 116.16 OF POTENTIAL<br>ASH HAZARDS AT SWITCHBOARDS, PANELBOARDS, INDUSTRIAL CONTROL PANELS AND MOTOR CONTROL CENTERS<br>TO REQUIRE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE WHILE ENERGIZED. SERVICE EQUIPMENT   | GEC<br>GFCI<br>GFPE<br>GND  | GROUND-FAULT CURRENT INTERRUPTER<br>GROUND-FAULT PROTECTION OF EQUIPMENT<br>GROUND                  | THWN<br>TR             | THERMOPLASTIC, HEAT AND MOISTURE RESISTANT<br>CABLE, NYLON JACKET OUTER SHEATH<br>TAMPER-RESISTANT |                                      |
| A MARKED WITH THE MAXIMUM AVAILABLE FAULT CURRENT PER CEC SECTION 110.24(A).   | HID<br>HP                   | HIGH INTENSITY DISCHARGE<br>HORSEPOWER  | TS<br>TSTAT            | TAMPER SWITCH<br>THERMOSTAT  |                                      |
| OR SUBPANELS IF INTERRUPTING RATING TO BE USED IS LOWER THAN MAIN SERVICE RATING.  | HVAC<br>Hz                  | HEATING, VENTILATION & AIR CONDITIONING<br>HERTZ (cycle per second)                                 | TYP<br>UG              | TYPICAL<br>UNDERGROUND   |                                      |
| SHALL COMPLY WITH CEC ARTICLE 422. APPLIANCE CONTROL AND PROTECTION PER CEC 422-III, BRANCH CIRCUITS   | IG                          | INSTITUTE OF ELECTRICAL AND ELECTRONICS<br>ENGINEERS<br>ISOLATED GROUND                             | UGPS<br>UL<br>UNO      | UNDERGROUND PULL SECTION<br>UNDERWRITERS LABORATORIES<br>UNLESS NOTED OTHERWISE                    |                                      |
| TON JOINTS MAY OR MAY NOT BE INDICATED ON THE ELECTRICAL DRAWINGS. VERIFY THE LOCATIONS OF ALL<br>DING EXPANSION JOINTS WITH THE ARCHITECTURAL DRAWINGS. WIRING METHODS ACROSS EXPANSIONS JOINTS<br>SE OF FLEXIBLE FITTINGS OR OTHER DEVICES AS APPROPRIATE TO EACH APPLICATION. IN NO CASE SHALL CONDUIT<br>DINT IN BUILDING CONSTRUCTION WITHOUT USE OF THE APPROPRIATE WIRING METHODS | IMC<br>ISC, SC<br>ISOL      | INTERMEDIATE METAL CONDUIT<br>SHORT CIRCUIT<br>ISOLATED   | UPS<br>USB<br>VFD      | UNINTERRUPTIBLE POWER SUPPLY<br>UNIVERSAL SERIAL BUS<br>VARIABLE FREQUENCY DRIVE                   |                                      |
| ALL SIZE ALL THE INTERIOR AND EXTERIOR BUILDING PULL BOXES AND UNDERGROUND PULL BOXES PER CEC 314.16   | JBOX<br>kcmil<br>kV         | JUNCTION BOX<br>ONE THOUSAND CIRCULAR MILS<br>KILOVOLTS   | V<br>VA<br>Vac         | VOLTS<br>VOLT-AMPERE<br>VOLTS ALTERNATING CURRENT  |                                      |
| SILITY IS NOT AVAILABLE TO ELECTRICAL OUTLETS, DEVICES AND/OR EQUIPMENT, COORDINATE WITH THE ARCHITECT<br>TO PROVIDE ACCESSIBILITY TO THEM.  | kW<br>kVA                   | KILOWATTS<br>KILOVOLT-AMPERES<br>LIGHTEMITTING DODE   | Vdc<br>VNEM<br>W       | VOLTS DIRECT CURRENT<br>VIRTUAL NET ENERGY METERING<br>WATTS                                       |                                      |
| RESPONSIBLE FOR REVIEWING THE MECHANICAL DRAWINGS AND PROVIDES ALL CONDUITS AND CONTROL WIRING AND<br>HOWN ON THE MECHANICAL DRAWINGS THAT IS NOT SHOWN ON THE ELECTRICAL PLANS.   | LCP                         | LIGHTING CONTROL PANEL<br>LIGHTING CONTROL PANEL<br>LIQUEFIED PETROLEUM GAS                         | W-hr<br>W/             | WATT-HOUR<br>WITH  | KEYNOTES                             |
| ALL REFER TO THE MECHANICAL DRAWINGS AND COORDINATE FOR THE EQUIPMENT LOCATIONS. COORDINATE ROOF<br>TH THE MECHANICAL CONTRACTOR FOR MECHANICAL CONNECTIONS. ENTER ROOF MOUNTED UNITS THROUGH<br>THING CLIRES WHERE POSSIBLE, VERIES ON SITE   |                             | LOCKED-ROTOR CURRENT<br>LONG-TIME, SHORT-TIME, INSTANTANEOUS &<br>EQUIPMENT GROUND-FAULT PROTECTION | WP<br>WPL<br>WPU<br>WR | WEATHERPROOF<br>WEATHERPROOF LOCKING<br>WEATHERPROOF WHILE IN USE<br>WEATHER RESISTANT             |                                      |
| IENCE OUTLET WITHIN 25 FEET OF MECHANICAL EQUIPMENT PER U.M.C. WHERE LOCATED OUTSIDE, PROVIDE<br>AND GFCI CONVENIENCE OUTLET, SECURE ROOF MOUNTED OUTLET TO THE MECHANICAL EQUIPMENT. VERIFY   |                             |   | (X)                    | REMOVE OR DEMO   |                                      |

PLEASE RECYCLE

CONSULTANT: CONSULTING ENGINEERS

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT:

SHEET NAME:

![](_page_30_Picture_74.jpeg)

DATE: 2024.10.01 SHEET:

### • "2022 CALIFORNIA ENERGY CODE" (TITLE 24 - PART 6). • "2022 CALIFORNIA GREEN BUILDING STANDARDS CODE" - CALGreen (TITLE 24 - PART 11).

"2022 CALIFORNIA BUILDING CODE" (CBC).

"2022 CALIFORNIA ELECTRICAL CODE" (CEC).

APPLICABLE CODES AND STANDARDS

PROJECT ELECTRICAL SCOPE OF WORK

DESCRIPTION: PROVIDE NEW ELECTRICAL PANELS TO SERVICE THE NEW MECHANICAL EQUIPMENT LOCATED AT THE EXTERIOR OF THE EXISTING BUILDINGS, AND PROVIDE ELECTRICAL CONNECTION TO MECHANICAL UPGRADES IN THE EXISTING BUILDINGS.

### ELECTRICAL SHEET INDEX HEET NUMBER SHEET NAME ELECTRICAL ABBREVIATIONS, NOTES & SHEET INDEX E0.01 ELECTRICAL SYMBOL LEGEND E0.02 ELECTRICAL SITE PLAN ELECTRICAL BLDG B & C FLOOR PLANS - DEMOLITION E2.11 E2.12 ELECTRICAL BLDG B & C FLOOR PLANS ELECTRICAL BLDG B & C ROOF PLANS - DEMOLITION E4.12 ELECTRICAL BLDG B & C ROOF PLANS E6.11 ELECTRICAL ONE-LINE DIAGRAM ELECTRICAL SCHEDULES E7.11 ELECTRICAL PANEL SCHEDULES E7.12 E7.13 ELECTRICAL PANEL SCHEDULES E10.11 ELECTRICAL DETAILS E10.12 ELECTRICAL DETAILS

![](_page_30_Picture_89.jpeg)

CLIENT PROJ NO:

### **DSA SUBMITTAL**

**ELECTRICAL ABBREVIATIONS, NOTES & SHEET INDEX** 

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_30_Picture_95.jpeg)

![](_page_30_Picture_96.jpeg)

www.lpengineers.com Job #: 24-2053

MEP & FS / Sustainability / CxA 1209 Pleasant Grove Blvd. Roseville, CA 95678 p 916-771-0778

![](_page_30_Picture_100.jpeg)

![](_page_30_Picture_101.jpeg)

| 22.rvt                    |
|---------------------------|
| IEP+FA_r                  |
| DRO ES_N                  |
| CS SAN PE                 |
| 24-2053_SR                |
| d FA R22/3                |
| HVAC an                   |
| n Pedro ES                |
| SRCS Sar                  |
| 84003000                  |
| <pre>&lt; Docs://35</pre> |
| utodesk                   |

|               |   |                                  | ELECTRICAL SYMBOL LEGEND  |                |   | DSA #01-12195                             |
|---------------|---|----------------------------------|---|----------------|---|---|
|               |   |                                  | ALL SYMBOLS SHOWN IN THIS LEGEND ARE NOT NECESSARY USED ON PLANS IF NOT REQUIRED  |                |   |   |
| SYMBOL        | DESCRIPTION   | SYMBOL                           | DESCRIPTION   | SYMBOL         | DESCRIPTION   |   |
|               | POWER   |                                  | LIGHTING  |                | ONE LINE DIAGRAM  |   |
| /////         |   |                                  | LED LUMINAIRE - T-BAR LAY-IN  | (N)            |   |   |
|               | RECESSED MOLINTED LIGHTING OR DISTRIBUTION PANEL  |                                  | LED LUMINAIRE - RECESSED IN GYPBOARD  | PANEL<br>"A"   | PANEL IDENTIFICATION  |   |
|               | SUBFACE MOUNTED LIGHTING OR DISTRIBUTION PANEL  |                                  | LED LUMINAIRE - SURFACE   | 100A           |   |   |
|               | RECESSED TERMINAL CABINET w/ 3/4"C PLYWOOD BACKBOARD, DUPLEX RECEPTACLE & #6 CU GND, UNO  | •••                              | LED LUMINAIRE - SUSPENDED   |                |   |   |
|               | SURFACE MOUNTED TERMINAL CABINET W 3/4"C PLYWOOD BACKBOARD, DUPLEX RECEPTACLE & #6 CU GND, UNO  |                                  | LED LUMINAIRE - SURFACE OR SUSPENDED STRIP  |                | CIRCUIT BREAKER   |   |
| —<br>_ ]      | DISTRIBUTION TRANSFORMER, MOUNTING AND SIZE AS NOTED  |                                  | LED LUMINAIRE - RECESSED DOWNLIGHT  | 312 92         |   |   |
| <u>.</u><br>J | NON-FUSED DISCONNECT SWITCH   |                                  | LED LUMINAIRE - RECESSED WALLWASH   | 250AF          |   |   |
| 니<br>가        | ENCLOSED CIRCUIT BREAKER DISCONNECT SWITCH  | 0                                | LED LUMINAIRE - SURFACE   | 200AT q        | CIRCUIT BREAKER WITH BREAKER TRIPING UNIT   |   |
| _<br>카        | FUSED DISCONNECT SWITCH; SIZE DISCONNECT AND FUSES PER UNIT LABEL   |                                  | LED LUMINAIRE - WALL  |                |   |   |
| ۵             | MOTOR STARTER/CONTROLLER  | $     \oplus$                    | LED LUMINAIRE - PENDANT   |                | FUSED SWITCH  |   |
| 3H            | COMBINATION CIRCUIT BREAKER DISCONNECT/MOTOR STARTER  |                                  | TRACK LIGHT - SUSPENDED OR SURFACE MOUNTED  |                |   |   |
| ₹₽            | COMBINATION FUSIBLE DISCONNECT/MOTOR CONTROLLER; PROVIDE FUSES PER MANUFACTURER'S REQUIREMENTS.   |                                  | CONTINUOUS LINEAR LED TAPE OR LED COVE LIGHT  | T              |   |   |
| _             |   |                                  |   |                |   |   |
|               |   |                                  |   |                | GROUND FAULT CIRCUIT INTERRUPTER  |   |
| A             | SUBSCRIPT TEXT WHERE OCCURS, SEE RECEPTACLE SUBSCRIPT LEGEND BELOW.   |                                  | HATCHED LUMINAIRE INDICATES AN EMERGENCY LUMINAIRE CONNECTED TO A EMERGENCY POWER DISTRIBUTION<br>SYSTEM, OR INTEGRAL EMERGENCY BATTERY BACK-UP |                |   |   |
|               | DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER TOP [1]   |                                  |   |                | GROUND  |   |
|               | ISOLATED GROUND DUPLEX RECEPTACLE, 20A, 125V @ +16" TO BOTTOM OF BOX, UNO.  |                                  |   |                | UNDERGROUND TERMINATION SERVICE LUG   | 3584-003-0                                |
|               | DEDICATED DUPLEX RECEPTACLE OUTLET 20A, 125V, @ +16" TO BOTTOM OF BOX, UNO  |                                  | SINGLE FAGE EATH SIGN. SEE LIGHTING FIXTURE SCHEDULE FOR SPECIFICATION. DIRECTIONAL ARROW AS INDICATED ON PLANS. (CEILING OR WALL)              | $\  \  \sim M$ | UTILITY METER WITH CURRENT TRANSFORMER COMPARTMENT METER SOCKET   |   |
|               | GFCI DUPLEX RECEPTACLE OUTLET 20A, 125V, @ +16" TO BOTTOM OF BOX, UNO   |                                  | DOUBLE FACE EXIT SIGN. SEE LIGHTING FIXTURE SCHEDULE FOR SPECIFICATION. DIRECTIONAL ARROW AS INDICATED  |                |   | 3546 CONCOURS S                           |
|               | GFCI DUPLEX RECEPTACLE OUTLET MOUNTED ABOVE COUNTER TOP AND/OR SINK BACKSPLASH [1]  |                                  | COMBINATION EMERGENCY EXIT SIGN WITH DUAL HEAD LIGHTS WITH EMERGENCY RATTERY RACK LID   |                | CUSTOWER-OWNED WULTFUNCTION WETER WITH CURRENT TRANSFURMERS   | ONTARIO, CA 91764<br>909 989 9979 / www.h |
|               | ISOLATED GROUND GFCI DUPLEX RECEPTACLE OUTLET 20A, 125V, @ +16" TO BOTTOM OF BOX, UNO   | ₩ X X                            | CONDINATION EIVENGENCT EAT SIGN WITH DUAL HEAD EIGHTS WITH EIVENGENCT DATLENT DACK-OF   |                | MOTOR   |   |
|               | DEDICATED GFCI DUPLEX RECEPTACLE OUTLET 20A, 125V, @ +16" TO BOTTOM OF BOX, UNO   |                                  | BATTERY POWERED EMERGENCY EGRESS LUMINAIRE - SURFACE MOUNTED  |                |   |   |
|               | FOURPLEX RECEPTACLE OUTLET 20A, 125V, @ +16" TO BOTTOM OF BOX, UNO.   |                                  | SPOT/FLOOD LUMINAIRE - CEILING  |                |   | <b>DESCRIPTION</b>                        |
|               | FOURPLEX RECEPTACLE OUTLET MOUNTED ABOVE COUNTER TOP [1]  | $\square$                        | SPOT/FLOOD LUMINAIRE - ABOVE GROUND   |                |   |   |
|               | ISOLATED GROUNDED DOUBLE DUPLEX RECEPTACLE 20A, 125V @ +16" TO BOTTOM OF BOX, UNO   |                                  | EXTERIOR POLE FIXTURE - SINGLE HEAD   |                | LIFER GROUND  |   |
|               | DEDICATED DOUBLE DUPLEX RECEPTACLE OUTLET 20A, 125V, @ +16" TO BOTTOM OF BOX, UNO   |                                  | EXTERIOR POLE FIXTURE - TWIN HEAD   |                |   |   |
|               | GFCI DOUBLE DUPLEX RECEPTACLE OUTLET 20A, 125V, @ +16" TO BOTTOM OF BOX, UNO  | $\bigcirc$                       | EXTERIOR PATHWAY POST-TOP POLE FIXTURE  |                | BOND TO COLD WATER PIPE, GAS PIPE, BUILDING STEEL   |   |
| 3             | GFCI DOUBLE DUPLEX RECEPTACLE OUTLET MOUNTED ABOVE COUNTER TOP AND/OR SINK BACKSPLASH [1]   | $    \otimes$                    | BOLLARD FIXTURE   |                |   |   |
|               | ISOLATED GROUND GFCI DOUBLE DUPLEX RECEPTACLE OUTLET 20A, 125V, @ +16" TO BOTTOM OF BOX, UNO  |                                  | STEP LUMINAIRE  |                | AUTOMATIC TRANSFER SWITCH   |   |
| /             | DEDICATED GFCI DOUBLE DUPLEX RECEPTACLE OUTLET 20A, 125V, @+16" TO BOTTOM OF BOX, UNO   |                                  |   |                |   |   |
| 2             | SPECIAL RECEPTACLE OUTLET, SIZE AND NEMA CONFIGURATION AS NOTED, MOUNTED @ +16" TO BOTTOM OF BOX, UNO   |                                  |   | Α              |   |   |
| 2             | FLOOR MOUNTED DUPLEX RECEPTACLE, 20A, 125V FLOSH IN FINISHED FLOOR  |                                  | LIGHTING CONTROLS   |                | NEUTRAL LINK  |   |
| 8             | FLOOR MOUNTED DUBLE DUPLEX RECEPTACLE, 20A, 125V FLOSH IN FINISHED FLOOR  | \$                               | SINGLE POLE TOGGLE SWITCH, 20A, 120-277V @ +46" TO TOP OF BOX, UNO [1]  |                |   |   |
| 2<br>2        | CEILING MOUNTED DUPLEX RECEPTACLE, 20A, 125V  | \$ <sup>3</sup>                  | THREE WAY TOGGLE SWITCH, 20A, 120-277V @ +46" TO TOP OF BOX, UNO [1]  | SPD            | SURGE PROTECTIVE DEVICE   |   |
| ୬<br>ଲା       | ELOOR MOUNTED COMBINATION DUPLEX RECEPTACLE / TELECOM   | \$ <sup>a,b,c</sup>              | SUBSCRIPTS "a b c" DESIGNATE THE QUANTITY OF SWITCHES AT EACH LOCATION (TYPICAL FOR ALL SWITCH TYPES) [1]                                       |                |   | KEYNOIE                                   |
| <u>8</u>      | FLOOR MOUNTED COMBINATION DOUBLE DUPLEX RECEPTACLE / TELECOM  | \$ <sup>K</sup>                  | SINGLE POLE KEYED BARREL SWITCH 20A, 120-277V @ +46" TO TOP OF BOX, UNO [1]   |                |   |   |
| •             |   |                                  | WALL MOUNTED PUSH BUTTON @ +46" TO TOP OF BOX, UNO [1]  |                | CIRCUITS  |   |
| Ð             | FLOOR MOUNTED COMBINATION POWER AND TELECOM WITH WHIP FOR PARTITION FURNITURE   | 回                                | WALL MOUNTED DIMMER SWITCH @ +46" TO TOP OF BOX, UNO [1]  | ப் ப           | STUB  |   |
| 5             | POWER / TELECOM WITH WHIP FOR PARTITION FURNITURE   |                                  | DIGITAL WALL CONTROL OVERRIDE SWITCH. RUN CABLING BACK TO LIGHTING CONTROL PANEL.<br>MOUNTED @ +46" TO TOP OF BOX, UNO [1]                      |                | CONTINUATION  |   |
|               | WALL MOUNTED JUNCTION BOX - SIZE AS REQUIRED BY CODE  |                                  | WALL MOUNTED OCCUPANCY SENSOR. DUAL TECHNOLOGY, PASSIVE INFRA-RED OR ULTRASONIC,  | —•             | CONDUIT RISER - UP  |   |
|               | CEILING JUNCTION BOX - SIZE AS REQUIRED BY CODE   |                                  | MOUNTED @ +46" TO TOP OF BOX, UNO [1]   |                | CONDUIT DROP - DOWN   |   |
|               | FLOOR MOUNTED JUNCTION BOX - SIZE AS REQUIRED BY CODE   |                                  | CEILING, OR PENDANT, MOUNTED OCCUPANCY SENSOR. DUAL TECHNOLOGY, PASSIVE INFRA-RED OR ULTRASONIC   |                | CONDUIT CONCEALED IN CEILING OR WALL.   |   |
|               | PLUGMOLD  |                                  | CORNER MOUNT OCCUPANCY SENSOR. DUAL TECHNOLOGY, PASSIVE INFRA-RED OR ULTRASONIC   |                | CONDUIT CONCEALED IN FLOOR OR UNDERGROUND   |   |
|               | POWER POLE  |                                  | PHOTOCONTROL DAYLIGHT SENSOR  |                | EXISTING CONDUIT TO REMAIN.   |   |
|               | CEILING EXHAUST FAN   |                                  |   |                | CONDUIT & CONDUCTORS FOR LOW VOLTAGE MOTION SENSORS   |   |
|               | ELECTRIC VEHICLE CHARGING STATION, DUAL PORT & SINGLE PORT  |                                  |   |                | EXISTING CONDUIT AND/OR CONDUCTORS TO BE REMOVED. UNDERGROUND CONDUIT MAY BE ABANDONED IN PLACE.  |   |
|               | THERMAL OVERLOAD SWITCH   |                                  | TAGS AND LEADERS  | $    \land$    | HOMERUN TO PANEL BOARD OR TERMINAL CABINET W/ CONDUCTORS AS NOTED   |   |
|               | MOTOR RATED SWITCH  | $\  \ $ $(\mathbf{x})$           | KEY NOTE  | ♥              |   |   |
|               |   |                                  |   |                | CIRCUIT CONDUTORS:<br>LONG TICK INDICATES NEUTRAL CONDUCTOR <sup>®</sup> SHORT TICKS INDICATE PHASE CONDUCTORS <sup>®</sup> TICK MARK WITH A DOT  |   |
| _             |   | L1-11a                           | LIGHT FIXTURE TAG : FIXTURE TYPE<br>PANEL NAME - CIRCUIT# / SWITCHLEG   |                | ON THE END INDICATES EQUIPMENT GROUNDING CONDUCTOR. NUMBER BY TICKS INDICATES WIRE GAUGE OTHER<br>THAN 12 AWG CU, NO TICKS INDICATES 2 #12 CU 1 #12 CU GND IN 1/2" CONDUIT. OTHERS AS NOTED ON PLAN |   |
|               |   | $    \langle \mathbf{x} \rangle$ | FEEDER DESIGNATION TAG  |                | NOTE: PROVIDE A CODE SIZED EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS FOR THIS PROJECT,<br>WHETHER SHOWN ON PLAN OR NOT.   |   |
| C             | CONTROLLED/UNCONTROLLED [2]   |                                  |   |                | FLEXIBLE CONDUIT, 6'-0" LONG MAX. w/ #12 CU GROUND UNO.   |   |
| LC            | LOCKING COVER   | <b>★</b>                         |   |                |   |   |
| TR            | TAMPER-RESISTANT  | x                                | DETAIL DESIGNATION:   |                |   |   |
| U             | USB (UNIVERSAL SERIAL BUS)  | Ex.1                             | BOTTOM LETTER / NUMBER INDICATES SHEET NUMBER   |                |   |   |
| NP            | WEATHERPROOF  |                                  |   |                |   |   |
| WPU           | WEATHERPROOF WHILE IN USE   |                                  | IVIEUTIANIUAL UR MUUVIDING EQUIMIVIENT TAG  |                |   |   |
| <b>FO -</b>   |   |                                  | BRACKET   |                |   |   |
| <u>=00TNC</u> |   |                                  |   |                |   |   |
| ij pr<br>Pr   | KUVIDE 44" MAX. TO TOP OF BOX AT AREAS WITH FORWARD ACCESSIBLE APPROACH KNEE CLEARANCE, OR<br>ROVIDE 46" MAX. TO TOP OF BOX AT AREAS WITH PARALLEL ACCESSIBLE APPROACH ( PER CBC 11B-308 ). |                                  |   |                |   |   |
|               | R DUPLEX RECEPTACLES: ONE HALF IS CONTROLLED, AND ONE HALF IS UNCONTROLLED. PLACE CONTROLLED HALF AT BOTTOM.  |                                  |   |                |   |   |

![](_page_31_Picture_2.jpeg)

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT:

SHEET NAME:

![](_page_31_Picture_7.jpeg)

DATE: 2024.10.01 SHEET:

![](_page_31_Picture_10.jpeg)

CLIENT PROJ NO:

### DSA SUBMITTAL

### ELECTRICAL SYMBOL LEGEND

### SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_31_Picture_16.jpeg)

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![](_page_31_Picture_20.jpeg)

![](_page_31_Picture_21.jpeg)

![](_page_32_Figure_0.jpeg)

![](_page_32_Picture_2.jpeg)

![](_page_32_Picture_3.jpeg)

3546 CONCOURS STREET ONTARIO, CA 91764

 $\Delta$  **DESCRIPTION** 

ISSUE

### KEYNOTES (#)

- 1/E10.11

CONSULTANT: CONSULTING ENGINEERS

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT:

SHEET NAME: ELECTRICAL SITE PLAN

![](_page_32_Picture_14.jpeg)

DATE: 2024.10.01 SHEET:

### **GENERAL NOTES**

- A. ALL ELECTRICAL CONDUCTORS IN PARALLEL SHALL COMPLY WITH CEC 310.10 (H).
- B. CORROSION PROTECTION / WRAPPING IS REQUIRED ON ALL UNDER-SLAB OR UNDERGROUND FERROUS ELECTRICAL CONDUIT. THE MATERIAL USED FOR CORROSION PROTECTION SHALL BE CALIFORNIA CODE APPROVED AND LABELED.
- C. VOLTAGE DROP SHOWN ON THE ELECTRICAL ONE-LINE IS FOR PLAN CHECK PURPOSES. CONTRACTOR SHALL MEASURE ACTUAL FEEDER LENGTHS AND CALCULATE VOLTAGE DROP CALCULATIONS FOR ALL FEEDERS AND CIRCUIT GROUNDING, CEC 215.2(A)(2).
- D. EXTERIOR ELECTRICAL OUTLETS INDICATED WEATHERPROOF WHILE IN USE "WPU" SHALL BE PROVIDED WITH WEATHERPROOF COVER, DIE-CAST METAL AND/OR AS INDICATED ON ELECTRICAL SPECIFICATION SECTION 26 27 26.
- CONDUIT UNDERGROUND PATHWAYS SHALL BE FULLY COORDINATED WITH EXISTING UNDERGROUND UTILITES. REFER TO SHEET E0.01 FOR GENERAL UG TRENCHING NOTES. FOR UG CONSTRUCTION, THE MINIMUM DEPTH BELOW GRADE, AND REQUIRED COVERAGE PER CEC, TABLE 300.50. SEE TYPICAL TRENCH DETAIL 2/E10.11. GENRAL CONTRACTOR TO VERIFY THE FINAL CONSTRUCTION, DEPTH BELOW GRADE, AND CONCRETE COVERAGE (WHERE APPLICABLE).
- F. UNDERGROUND PULL BOXES SHOWN ON THE PLAN SHALL BE VERIFIED BASED ON FINAL CONDUIT QUANTITY AND SIZES. ALL UNDERGROUND PULL BOXES SHALL BE SIZE PER CEC ARTICLE 314.28.
- G. FIELD VERIFY ALL EXISTING CONDITIONS, PRIOR TO ANY WORK, AND REPORT TO ENGINEERS ANY DISCREPANCIES.
- H. UNDERGROUND CONDUITS SHALL BE SCH-40 PVC.

PLEASE RECYCLE

![](_page_32_Picture_26.jpeg)

CLIENT PROJ NO:

### DSA SUBMITTAL

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_32_Picture_32.jpeg)

Job #: 24-2053

![](_page_32_Picture_33.jpeg)

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1 ELECTRICAL PANEL SURFACE MOUNTED. SEE DETAIL 2/E10.12. 2 UNDERGROUND PULL BOX, SEE TYPICAL DETAIL 3 FOR TRENCHING/BORING SEE DETAIL 2/E10.11.

DATE

909 989 9979 / www.hmcarchitects.com

![](_page_32_Picture_38.jpeg)

![](_page_32_Picture_39.jpeg)

![](_page_33_Figure_0.jpeg)

### **GENERAL NOTES**

- A. ALL ELECTRICAL EQUIPMENT IS EXISTING (E) TO REMAIN UNCHANGED UNLESS NOTED OTHERWISE AS DEMO (X).
- B. CONTRACTOR SHALL COORDINATE WITH ARCHITECT, AND ALL PARTIES INVOLVED FOR THE DEMOLITION OF PANEL, REMOVAL OF CONDUCTORS, AND THE REMOVAL OR CONDUITS TO BE ABANDONED PRIOR TO DEMOLITION.
- C. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. NOTIFY ARCHITECT AND ENGINEER OF ANY CONFLICTS OR DISCREPANCIES.
- D. REFER TO ADDITIONAL DEMOLITION GENERAL NOTES ON COVER SHEET E0.01 AND ELECTRICAL SPECIFICATION SECTION 26 05 05.
- E. CIRCUIT SHOWN ON THE EXISTING FURNACE BEING DEMO ARE FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY CIRCUITS PRIOR TO DEMOLITION WORK.

![](_page_33_Picture_9.jpeg)

![](_page_33_Picture_10.jpeg)

HMC Architects 3584-003-000

ISSUE  $\Delta$  **DESCRIPTION** 

### KEYNOTES (#)

- REMAIN IN PLACE.

- UNDER THE SCOPE OF WORK.

![](_page_33_Picture_18.jpeg)

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT:

SHEET NAME: DEMOLITION

![](_page_33_Picture_23.jpeg)

DATE: 2024.10.01 SHEET:

![](_page_33_Picture_26.jpeg)

CLIENT PROJ NO:

### DSA SUBMITTAL

ELECTRICAL BLDG B & C FLOOR PLANS -

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_33_Picture_32.jpeg)

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3 INTERCEPT EXISTING LIGHT CIRCUIT, DISCONNECT, REMOVE AND STORE EXISTING LIGHTS IN STORAGE 207. EXISTING LIGHT CONTROL TO REMAIN. 4 INTERCEPT EXISTING LIGHT CIRCUIT, DISCONNECT, REMOVE AND STORE EXISTING LIGHTS. REMAINING LIGHTS TO STAY OPERATIONAL AND EXISTING LIGHT CONTROL TO REMAIN. REFER TO ARCHITECT AND STRUCTURAL DRAWINGS FOR ACTUAL AREA THAT IS IMPACTED

WIRES, AND REMOVE EXISTING (2) POLE LIGHT SWITCH AND BLANK COVER. LIGHT CONTROL LOCATION TO BE RELOCATED ON THE SAME WALL EXISTING LIGHT CIRCUIT, WIRES, AND CONDUIT TO REMAIN. SEE SHEET E2.12 FOR NEW LOCATION AND ADDITIONAL INFORMATION.

1 DISCONNECT 120V CIRCUIT THAT SERVES THE EXISTING FURNACE BEING DEMOLISHED. REMOVE WIRES BACK TO SOURCE PANEL AND CONDUIT TO 2 INTERCEPT EXISTING LIGHT CIRCUIT, DISCONNECT

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![](_page_33_Picture_39.jpeg)

SAN RAFAEL

![](_page_34_Figure_0.jpeg)

![](_page_34_Picture_2.jpeg)

### **GENERAL NOTES**

- A. ALL ELECTRICAL CONDUCTORS IN PARALLEL SHALL COMPLY WITH CEC 310.10 (H).
- B. CORROSION PROTECTION / WRAPPING IS REQUIRED ON ALL UNDER-SLAB OR UNDERGROUND FERROUS ELECTRICAL CONDUIT AND FITTINGS. THE MATERIAL USED FOR CORROSION PROTECTION SHALL BE CALIFORNIA CODE APPROVED AND LABELED.
- C. ALL ELECTRICAL CABLING WORKING SPACE SHALL COMPLY WITH CEC 110.72.
- D. ALL ELECTRICAL EQUIPMENT WORKING SPACE SHALL COMPLY WITH CEC ARTICLE 110.34 ARTICLE 110.34(C), AND 110.73.
- E. ALL CONDUCTOR BENDING RADIUS SHALL BE PER CEC 300.34.
- F. ARC-FLASH WARNING LABELS SHALL BE PROVIDED ON ALL ELECTRICAL EQUIPMENT AS REQUIRED PER CEC 110.26(A).
- G. ALL ELECTRICAL PENETRATIONS GOING THROUGH SHEARWALL(S) SHALL BE FULLY COORDINATED WITH STRUCTURAL DRAWINGS, ARCHITECTURAL DRAWINGS AND OTHER PARTIES INVOLVED PRIOR TO INSTALLATION AND ROUGH INSTALLATION.
- H. PER CEC 408.4(A) CIRCUITS DIRECTORY OR CIRCUIT IDENTIFICATION. EVERY CIRCUIT AND CIRCUIT MODIFICATION SHALL BE LEGIBLY IDENTIFIED AS TO ITS CLEAR, EVIDENT, AND SPECIFIC PURPOSE OR USE. THE IDENTIFICATION SHALL INCLUDE AN APPROVED DEGREE OF DETAIL THAT ALLOWS EACH CIRCUIT TO BE DISTINGUISHED FROM ALL OTHERS. EX; SOUTH, NORTH, ETC, ROOM#, ROOM NAME, MACHINE#, OR LOCATION WITH-IN BUILDING.
- PER CEC 408.4(B) SOURCE OF SUPPLY, ALL PANELBOARDS SUPPLIED BY A FEEDER, SHALL BE MARKED TO INDICATE WHERE THE POWER ORIGINATES.
- EXTERIOR ELECTRICAL OUTLETS INDICATED WEATHERPROOF WHILE IN USE "WPU" SHALL BE PROVIDED WITH WEATHERPROOF COVER, DIE-CAST METAL AND/OR AS INDICATED ON ELECTRICAL SPECIFICATION 26 27 26.
- K. CONDUIT UNDERGROUND PATHWAYS SHALL BE FULLY COORDINATED WITH EXISTING UNDERGROUND UTILITES. REFER TO SHEET E0.01 FOR GENERAL UG TRENCHING NOTES. FOR UG CONSTRUCTION, THE MINIMUM DEPTH BELOW GRADE, AND REQUIRED COVERAGE PER CEC, TABLE 300.50. SEE TYPICAL TRENCH DETAIL 3/E10.11 AND 4/E10.11. GENRAL CONTRACTOR TO VERIFY THE FINAL CONSTRUCTION, DEPTH BELOW GRADE, AND CONCRETE COVERAGE (WHERE APPLICABLE).
- UNDERGROUND PULL BOXES SHOWN ON THE PLAN SHALL BE VERIFIED BASED ON FINAL CONDUIT QUANTITY AND SIZES. ALL UNDERGROUND PULL BOXES SHALL BE SIZE PER CEC ARTICLE 314.28.
- M. FIELD VERIFY ALL EXISTING CONDITIONS, PRIOR TO ANY WORK, AND REPORT TO ENGINEERS ANY DISCREPANCIES.
- N. UNDERGROUND CONDUITS SHALL BE SCH-40 PVC.

AGENCY **APPROVAL:** DSA #01-121955 FILE #21-39

![](_page_34_Picture_19.jpeg)

# 3584-003-000

ONTARIO, CA 91764

 $\Delta$  **DESCRIPTION** 

ISSUE

KEYNOTES #

- 3/E10.12.
- 2/E10.12.

- DETAILS.

![](_page_34_Picture_34.jpeg)

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT:

SHEET NAME:

![](_page_34_Picture_39.jpeg)

DATE: 2024.10.01 SHEET:

![](_page_34_Picture_42.jpeg)

CLIENT PROJ NO:

### **DSA SUBMITTAL**

ELECTRICAL BLDG B & C FLOOR PLANS

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_34_Picture_48.jpeg)

9 PROVIDE 120V, 2#12 CU, 1#12 CU GND, 3/4"C FOR SUPPLY FAN, SF-B1. 10 NEW SOFFIT TO HOUSE MECHANICAL EQUIPMENT. REFER TO ARCHITECTURAL DRAWINGS FOR

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Job #: 24-2053

SWITCH FOR ODU. REFER TO M0.02 FOR ADDITIONAL INFORMATION. 8 PROVIDE 208V, 1-PH, 2#10 CU, 1#10 CU GND, 3/4"C 15 MOCP, MOTOR RATED DISCONNECT FOR IDU UNIT. IDU POWERED FROM ODU.

6 RE-INSTALL EXISTING LIGHTS, RECONNECT TO EXISTING LIGHT CIRCUIT. PROVIDE CONDUIT AND WIRES AS REQUIRED. RE-INSTALLED LIGHTS TO BE CONTROLLED VIA EXISTING LIGHT CONTROL. PROVIDE 208V, 1-PH, 2#10 CU, 1#10 CU GND, 3/4"C, 19 MCA, 30 MOCP, 30AS/30AF SAFETY DISCONNECT

THE NEW LIGHT CONTROL LOCATION. 5 PROVIDE 208V, 1-PH, 2#8 CU, 1#10 CU GND, 3/4"C, 29 MCA, 40 MOCP, 60AS/40AF SAFETY DISCONNECT SWITCH FOR HEAP PUMP UNIT. REFER TO M0.02 FOR ADDITIONAL INFORMATION.

INFORMATION. 4 PROVIDE A (2) POLE LIGHT SWITCH AND RECONNECT TO EXISTING LIGHT CIRCUIT. PROVIDE WIRES AND CONDUIT AS REQUIRED TO

3 PROVIDE 208V, 1-PH, 2#10 CU, 1#10 CU GND, 3/4"C, 1 MOCP, MOTOR RATED DISCONNECT FOR FAN COIL UNIT. REFER TO M0.02 FOR ADDITIONAL

2 NEW DISCONNECT, NEMA 3R. REFER TO DETAIL

1 NEW PANELBOARD, NEMA 3R. REFER TO DETAIL

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![](_page_34_Picture_58.jpeg)

![](_page_35_Figure_0.jpeg)

![](_page_35_Picture_3.jpeg)

HMC Architects 3584-003-000

![](_page_35_Picture_5.jpeg)

### KEYNOTES (#)

- 1 EXISTING ELECTRICAL ROOF PENETRATIONS TO REMAIN FOR NEW SCOPE OF WORK.
- 2 INTERCEPT EXISTING CIRCUIT THAT SERVICE

  - PANEL.
- WIRES TO THE NEAREST JUNCTION BOX.

### **GENERAL NOTES**

(X.1)

-X.2

TN

 $\leftarrow \mathbf{X}$ 

 $\searrow$ 

(Y.2)

- A. ALL ELECTRICAL EQUIPMENT IS EXISTING (E) TO REMAIN UNCHANGED UNLESS NOTED OTHERWISE AS DEMO (X).
- B. CONTRACTOR SHALL COORDINATE WITH ARCHITECT, AND ALL PARTIES INVOLVED FOR THE DEMOLITION OF PANEL, REMOVAL OF CONDUCTORS, AND THE REMOVAL OR CONDUITS TO BE ABANDONED PRIOR TO DEMOLITION.
- C. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. NOTIFY ARCHITECT AND ENGINEER OF ANY CONFLICTS OR DISCREPANCIES.
- D. REFER TO ADDITIONAL DEMOLITION GENERAL NOTES ON COVER SHEET E0.01 AND ELECTRICAL SPECIFICATION SECTION 26 05 05.
- E. ALL CIRCUIT BREAKERS THAT BECOME SPARE FROM MECHANICAL UNITS BEEN DEMOLISHED AND WHICH ARE NOT BEEN USED FOR THE NEW MECHANICAL EQUIPMENT SHALL BE NOTED ON PANEL DIRECTORY AS SPARE AND BREAKER SHALL BE ON THE OPEN POSITION.

![](_page_35_Picture_18.jpeg)

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT:

SHEET NAME:

![](_page_35_Picture_23.jpeg)

DATE: 2024.10.01 SHEET:

![](_page_35_Picture_26.jpeg)

CLIENT PROJ NO:

### DSA SUBMITTAL

ELECTRICAL BLDG B & C ROOF PLANS - DEMOLITION

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_35_Picture_31.jpeg)

www.lpengineers.com Job #: 24-2053

MEP & FS / Sustainability / CxA 1209 Pleasant Grove Blvd. Roseville, CA 95678 p 916-771-0778

EXISTING MECHANICAL ROOFTOP UNIT BEING DEMOLISHED, DISCONNECT AND REMOVE DISCONNECT SWITCH & WIRES BACK TO SOURCE 3 INTERCEPT EXISTING CIRCUIT THAT SERVICE EXISTING OUTLET, DISCONNECT AND REMOVE

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![](_page_35_Picture_37.jpeg)

SAN RAFAEL CITY SCHOOLS

![](_page_36_Figure_0.jpeg)

![](_page_36_Picture_2.jpeg)

3584-003-000

ISSUE

 $\Delta$  **DESCRIPTION** 

### **KEYNOTES #**

### **GENERAL NOTES**

(X.1)

-X.2

 $\rightarrow$ 

- A. REFER TO MECHANICAL DRAWINGS FOR EXACT HVAC EQUIPMENT LOCATIONS AND SPECIFICATIONS. VERIFY EQUIPMENT WIRE SIZE, CONDUIT SIZES, CIRCUIT BREAKER AND DISCONNECT SIZES WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN OF ELECTRICAL.
- B. ELECTRICAL CONTRACTOR SHALL PROVIDE ROOF JACKS FOR POWER AND 3/4" CONTROL CONDUITS TO ROOF MOUNTED HVAC EQUIPMENT. PROVIDE CONTROL CONDUIT FROM EACH UNIT TO THERMOSTAT LOCATIONS. SEE MECHANICAL DRAWINGS FOR THERMOSTAT LOCATIONS.
- C. ALL CONNECTIONS TO HVAC EQUIPMENT SHALL BE MADE WITH COPPER CONDUCTORS ONLY. SIZE CONDUCTORS PER UNIT NAMEPLATE SPECIFICATIONS. VERIFY PRIOR TO INSTALLATION OF CONDUCTORS.
- D. ALL DISCONNECT SWITCHES SHALL BE FUSIBLE NEMA 3R, SIZE AS REQUIRED. ALL HVAC UNITS SHALL BE FUSED PER EQUIPMENT NAMEPLATE SPECIFICATIONS. ELECTRICAL CONTRACTOR SHALL VERIFY DISCONNECT AND FUSE SIZING WITH MECHANICAL CONTRACTOR PRIOR TO ORDERING MATERIALS.
- E. ALL FUSES FOR THIS PROJECT SHALL BE BUSSMAN CLASS RK5 DUAL ELEMENT CURRENT LIMITING WITH AMPERAGES AS INDICATED OR REQUIRED.
- F. NO CONDUIT SHALL BE RUN ON ROOF. APPROPRIATE ROOF JACKS SHALL BE PROVIDED FOR ALL ROOF PENETRATIONS. COORDINATE WITH MECHANICAL CONTRACTOR AT JOBSITE. ENTER UNITS WITHIN ROOF CURBS WHERE POSSIBLE. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTLY LOCATING ROOF PENETRATIONS.
- G. LOCATE NEMA 3R ROOF RECEPTACLES SO THAT NO MECHANICAL UNIT IS FURTHER THAN 20 FT FROM A RECEPTACLE. PROVIDE ALL NECESSARY HARDWARE FOR RECEPTACLE OUTLET SUPPORT.
- H. REFER TO MECHANICAL DRAWINGS FOR CONTROL WIRING. ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUIT AND ROOF PENETRATIONS FOR CONTROL WIRING AS REQUIRED. COORDINATE WITH MECHANICAL CONTRACTOR AT JOBSITE.
- FIRE SEAL ALL FIRE ASSEMBLY PENETRATIONS FOR CONDUITS WITH AN APPROVED FIRE SEALANT AFTER CONDUIT INSTALLATION. FIRE SEAL SHALL PROVIDE EQUAL FIRE RATING AS ASSEMBLY PENETRATED.

![](_page_36_Picture_21.jpeg)

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT:

SHEET NAME:

![](_page_36_Picture_26.jpeg)

DATE: 2024.10.01 SHEET:

![](_page_36_Picture_29.jpeg)

CLIENT PROJ NO:

ELECTRICAL BLDG B & C ROOF PLANS

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_36_Picture_35.jpeg)

www.lpengineers.com Job #: 24-2053

MEP & FS / Sustainability / CxA 1209 Pleasant Grove Blvd. Roseville, CA 95678 p 916-771-0778

![](_page_36_Picture_38.jpeg)

![](_page_36_Picture_40.jpeg)

![](_page_36_Picture_41.jpeg)

![](_page_37_Figure_0.jpeg)

| TAGE     | E DRO   | OP C    | CALCULATIO                         | ONS                      |                 |                  |                   |           |                 |               |            |             |      |
|----------|---------|---------|------------------------------------|--------------------------|-----------------|------------------|-------------------|-----------|-----------------|---------------|------------|-------------|------|
| Project: | SRCS S  | an Pedr | o ES                               |                          |                 |                  | Note:             | Enter No  | minal Con       | ductor Sizes  | except as  | s below:    |      |
|          |         |         |                                    |                          |                 |                  |                   | 1/0 = 101 | I, 2/0 = 10     | 02, 3/0 = 103 | 3, 4/0 = 1 | 04          |      |
|          |         |         | Raceway                            | Conductor                |                 |                  |                   | Load      |                 | Line-to-Ne    | eutral     | Line-to-Lin | e    |
| gnation  | Voltage | Phase   | Metalic (M) or<br>Non-Metalic (NM) | Material<br>(AL) or (CU) | Nominal<br>Size | Parallel<br>Runs | Length in<br>Feet | AMPS      | Power<br>Factor | Volt Drop     | %          | Volt Drop   | %    |
|          |         |         |                                    |                          |                 |                  |                   |           |                 |               |            |             |      |
| DP-C-M"  | 208     | 3       | NM                                 | CU                       | 350             | 2                | 270               | 400.0     | 85%             |               |            | 4.99        | 2.40 |
| . "B-M"  | 208     | 3       | NM                                 | CU                       | 250             | 1                | 79                | 160.0     | 85%             |               |            | 1.44        | 0.69 |
|          |         |         |                                    |                          |                 |                  |                   |           |                 |               |            |             |      |
|          |         |         |                                    |                          |                 |                  |                   |           |                 |               |            |             |      |
|          |         |         |                                    |                          |                 |                  |                   |           |                 |               |            |             |      |

![](_page_37_Picture_4.jpeg)

### KEYNOTES #

- DETAIL 3/E10.11.

### **GENERAL NOTES**

- A. REFER TO MECHANICAL DRAWINGS FOR EXACT HVAC EQUIPMENT LOCATIONS AND SPECIFICATIONS. VERIFY EQUIPMENT WIRE SIZE, CONDUIT SIZES, CIRCUIT BREAKER AND DISCONNECT SIZES WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN OF ELECTRICAL.
- B. ELECTRICAL CONTRACTOR SHALL PROVIDE ROOF JACKS FOR POWER AND 3/4" CONTROL CONDUITS TO ROOF MOUNTED HVAC EQUIPMENT. PROVIDE CONTROL CONDUIT FROM EACH UNIT TO THERMOSTAT LOCATIONS. SEE MECHANICAL DRAWINGS FOR THERMOSTAT LOCATIONS.
- C. ALL CONNECTIONS TO HVAC EQUIPMENT SHALL BE MADE WITH COPPER CONDUCTORS ONLY. SIZE CONDUCTORS PER UNIT NAMEPLATE SPECIFICATIONS. VERIFY PRIOR TO INSTALLATION OF CONDUCTORS.
- D. ALL DISCONNECT SWITCHES SHALL BE FUSIBLE NEMA 3R, SIZE AS REQUIRED. ALL HVAC UNITS SHALL BE FUSED PER EQUIPMENT NAMEPLATE SPECIFICATIONS. ELECTRICAL CONTRACTOR SHALL VERIFY DISCONNECT AND FUSE SIZING WITH MECHANICAL CONTRACTOR PRIOR TO ORDERING MATERIALS.
- E. ALL FUSES FOR THIS PROJECT SHALL BE BUSSMAN CLASS RK5 DUAL ELEMENT CURRENT LIMITING WITH AMPERAGES AS INDICATED OR REQUIRED.
- F. NO CONDUIT SHALL BE RUN ON ROOF. APPROPRIATE ROOF JACKS SHALL BE PROVIDED FOR ALL ROOF PENETRATIONS. COORDINATE WITH MECHANICAL CONTRACTOR AT JOBSITE. ENTER UNITS WITHIN ROOF CURBS WHERE POSSIBLE. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTLY LOCATING ROOF PENETRATIONS.
- G. LOCATE NEMA 3R ROOF RECEPTACLES SO THAT NO MECHANICAL UNIT IS FURTHER THAN 20 FT FROM A RECEPTACLE. PROVIDE ALL NECESSARY HARDWARE FOR RECEPTACLE OUTLET SUPPORT.
- H. REFER TO MECHANICAL DRAWINGS FOR CONTROL WIRING. ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUIT AND ROOF PENETRATIONS FOR CONTROL WIRING AS REQUIRED. COORDINATE WITH MECHANICAL CONTRACTOR AT JOBSITE.
- FIRE SEAL ALL FIRE ASSEMBLY PENETRATIONS FOR CONDUITS WITH AN APPROVED FIRE SEALANT AFTER CONDUIT INSTALLATION. FIRE SEAL SHALL PROVIDE EQUAL FIRE RATING AS ASSEMBLY PENETRATED.
- J. MAXIMUM AVAILABLE FAULT CURRENT (AFC) SHALL BE FIELD MARKED ON ALL SERVICE EQUIPMENT, LEGIBLY, AND SHALL INCLUDE DATE AFC CALCULATION WAS PERFORMED, IN COMPLIANCE WITH CEC 2016 SECTION 110.24(A).

![](_page_37_Picture_19.jpeg)

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT:

SHEET NAME:

![](_page_37_Picture_24.jpeg)

DATE: 2024.10.01 SHEET:

![](_page_37_Picture_27.jpeg)

CLIENT PROJ NO:

### **DSA SUBMITTAL**

ELECTRICAL ONE-LINE DIAGRAM

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_37_Picture_33.jpeg)

www.lpengineers.com Job #: 24-2053

MEP & FS / Sustainability / CxA 1209 Pleasant Grove Blvd. Roseville, CA 95678 p 916-771-0778

1 PROVIDE 3/4" X 10' CU GROUND ROD AND 1#6 CU GROUNDING ELECTRODE CONDUCTOR. SEE 2 PROVIDE NEW BREAKER. BREAKER TO MATCH EXISTING FRAME AND EXISTING AIC RATING.

DATE

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HMC Architects

![](_page_37_Picture_39.jpeg)

|                                 |  |   |   | ONE L   | INE DIAGRA                             | M FEED        | DER SCH              | HEDULE      | <b>_</b>    |                              |                                |
|---------------------------------|--|---|---|---|--|---------------|----------------------|-------------|-------------|------------------------------|--------------------------------|
|                                 |  | 3   | Ø 3W + G  | ND CIRCUITS   |  |               |                      | 30          | ) 4W + GN   | D CIRCUITS                   |                                |
| FEEDER<br>TAG                   | RATING                                 | CON   | DUIT<br>PVC                                       | PHASE CONDUCTORS  | EQUIP. GND.<br>CONDUCTOR (EGC)         | FEEDER<br>TAG | RATING               | CON<br>EMT  | DUIT<br>PVC | PHASE, NEUTRAL<br>CONDUCTORS | EQUIP. GND.<br>CONDUCTOR (EGC) |
|                                 | (AMPS)                                 |   |   | (COPPER)  | (NEC TABLE 250.122)                    |               | (AMPS)               |             |             | (COPPER)                     | (NEC TABLE 250.122)            |
| 203                             | 20                                     | 3/4"C   | 1"C   | (3) #12   | #12                                    | 204           | 20                   | 3/4"C       | 1"C         | (4) #12                      | #12                            |
| 253                             | 25                                     | 3/4"C   | 1"C   | (3) #10   | #10                                    | 254           | 25                   | 3/4"C       | 1"C         | (4) #10                      | #10                            |
| 303                             | 30                                     | 3/4"C   | 1"C   | (3) #10   | #10                                    | 304           | 30                   | 3/4"C       | 1"C         | (4) #10                      | #10                            |
| 403                             | 40                                     | 3/4"C   | 1"C   | (3) #8  | #10                                    | 404           | 40                   | 1"C         | 1"C         | (4) #8                       | #10                            |
| 453                             | 45                                     | 1"C   | 1"C   | (3) #6  | #10                                    | 454           | 45                   | 1"C         | 1-1/4"C     | (4) #6                       | #10                            |
| 503                             | 50                                     | 1"C   | 1"C   | (3) #6  | #10                                    | 504           | 50                   | 1"C         | 1-1/4"C     | (4) #6                       | #10                            |
| 603                             | 60                                     | 1-1/4"C   | 1-1/4"C   | (3) #4  | #10                                    | 604           | 60                   | 1-1/4"C     | 1-1/4"C     | (4) #4                       | #10                            |
| 703                             | 70                                     | 1-1/4"C   | 1-1/4"C   | (3) #4  | #8                                     | 704           | 70                   | 1-1/4"C     | 1-1/4"C     | (4) #4                       | #8                             |
| 803                             | 80                                     | 1-1/4"C   | 1-1/2"C   | (3) #2  | #8                                     | 804           | 80                   | 1-1/2"C     | 1-1/2"C     | (4) #2                       | #8                             |
| 903                             | 90                                     | 1-1/4"C   | 1-1/2"C   | (3) #2  | #8                                     | 904           | 90                   | 1-1/2"C     | 1-1/2"C     | (4) #2                       | #8                             |
| 1003                            | 100                                    | 1-1/2"C   | 2"C   | (3) #1  | #8                                     | 1004          | 100                  | 2"C         | 2"C         | (4) #1                       | #8                             |
| 1253                            | 125                                    | 1-1/2"C   | 2"C   | (3) #1  | #6                                     | 1254          | 125                  | 2"C         | 2"C         | (4) #1                       | #6                             |
| 1503                            | 150                                    | 2"C   | 2"C   | (3) #1/0  | #6                                     | 1504          | 150                  | 2"C         | 2"C         | (4) #1/0                     | #6                             |
| 1753                            | 175                                    | 2"C   | 2"C   | (3) #2/0  | #6                                     | 1754          | 175                  | 2"C         | 2-1/2"C     | (4) #2/0                     | #6                             |
| 2003                            | 200                                    | 2"C   | 2-1/2"C   | (3) #3/0  | #6                                     | 2004          | 200                  | 2-1/2"C     | 2-1/2"C     | (4) #3/0                     | #6                             |
| 2253                            | 225                                    | 2-1/2"C   | 2-1/2"C   | (3) #4/0  | #4                                     | 2254          | 225                  | 2-1/2"C     | 3"C         | (4) #4/0                     | #4                             |
| 2503                            | 250                                    | 2-1/2"C   | 3"C   | (3) #250 KCMIL  | #4                                     | 2504          | 250                  | 2-1/2"C     | 3"C         | (4) #250 KCMIL               | #4                             |
| 3003                            | 300                                    | 3"C   | 3"C   | (3) #350 KCMII  | #4                                     | 3004          | 300                  | 3"C         | 3-1/2"C     | (4) #350 KCMII               | #4                             |
| 3503                            | 350                                    | 3"C   | 3-1/2"C   | (3) #500 KCMIL  | #3                                     | 3504          | 350                  | 3-1/2"C     | 4"C         | (4) #500 KCMIL               | #3                             |
| 4003                            | 400                                    | (2) 2"C   | (2) 2 1/2"C                                       | (3) #3/0 (EACH)   | #3 (EACH)                              | 4004          | 400                  | (2) 2 1/2"C | (2) 2 1/2"C | (4) #3/0 (EACH)              | #3 (EACH)                      |
| 4003                            | 400                                    |   | (2) 2-1/2 C                                       | (3) #3/0 (EACH)   | #3 (EACH)                              | 4004          | 400                  | (2) 2-1/2 C | (2) 2-1/2 C | (4) #3/0 (EACH)              | #3 (EACH)                      |
| 4503                            | 450                                    | (2) 2-1/2 C                                     | (2) 2-1/2 C                                       | (3) #4/0 (EACH)   | #2 (EACH)                              | 4504          | 450                  | (2) 2-1/2 C | (2) 3 C     | (4) #4/0 (EACH)              | #2 (EACH)                      |
| 5003                            | 500                                    | (2) 2-1/2°C                                     | (2) 3°C   | (3) #250 KCMIL (EACH)   | #2 (EACH)                              | 5004          | 500                  | (2) 2-1/2°C | (2) 3 C     | (4) #250 KCMIL (EACH)        | #2 (EACH)                      |
| 6003                            | 600                                    | (2) 3"C   | (2) 3"C   | (3) #350 KCMIL (EACH)   | #1 (EACH)                              | 6004          | 600                  | (2) 3"C     | (2) 3-1/2"C | (4) #350 KCMIL (EACH)        | #1 (EACH)                      |
| 7003                            | 700                                    | (2) 3"C   | (2) 3-1/2"C                                       | (3) #500 KCMIL  | #1/0 (EACH)                            | 7004          | 700                  | (2) 3-1/2"C | (2) 4"C     | (4) #500 KCMIL               | #1/0 (EACH)                    |
| 8003                            | 800                                    | (3) 2-1/2"C                                     | (3) 3"C   | (3) #300 KCMIL (EACH)   | #1/0 (EACH)                            | 8004          | 800                  | (3) 3"C     | (3) 3-1/2"C | (4) #300 KCMIL (EACH)        | #1/0 (EACH)                    |
| 10003                           | 1000                                   | (3) 3"C   | (3) 3-1/2"C                                       | (3) #400 KCMIL (EACH)   | #2/0 (EACH)                            | 10004         | 1000                 | (3) 3"C     | (3) 3-1/2"C | (4) #400 KCMIL (EACH)        | #2/0 (EACH)                    |
| 12003                           | 1200                                   | (4) 3"C   | (4) 3"C   | (3) #350 KCMIL (EACH)   | #3/0 (EACH)                            | 12004         | 1200                 | (4) 3"C     | (4) 3-1/2"C | (4) #350 KCMIL (EACH)        | #3/0 (EACH)                    |
| 16003                           | 1600                                   | (5) 3"C   | (5) 3-1/2"C                                       | (3) #400 KCMIL (EACH)   | #4/0 (EACH)                            | 16004         | 1600                 | (5) 3"C     | (5) 3-1/2"C | (4) #400 KCMIL (EACH)        | #4/0 (EACH)                    |
| 20003                           | 2000                                   | (6) 3"C   | (6) 3-1/2"C                                       | (3) #400 KCMIL (EACH)   | #250 KCMIL (EACH)                      | 20004         | 2000                 | (6) 3"C     | (6) 3-1/2"C | (4) #400 KCMIL (EACH)        | #250 KCMIL (EACH)              |
| 25003                           | 2500                                   | (7) 3"C   | (7) 3-1/2"C                                       | (3) #500 KCMIL (EACH)   | #350 KCMIL (EACH)                      | 25004         | 2500                 | (7) 3-1/2"C | (7) 4"C     | (4) #500 KCMIL (EACH)        | #350 KCMIL (EACH)              |
| 30003                           | 3000                                   | (8) 3"C   | (8) 3-1/2"C                                       | (3) #500 KCMIL (EACH)   | #400 KCMIL (EACH)                      | 30004         | 3000                 | (8) 3-1/2"C | (8) 4"C     | (4) #500 KCMIL (EACH)        | #400 KCMIL (EACH)              |
| 40003                           | 4000                                   | (10) 3-1/2"C                                    | (10) 4"C  | (3) #600 KCMIL (EACH)   | #500 KCMIL (EACH)                      | 40004         | 4000                 | (10) 4"C    | (10) 4"C    | (4) #600 KCMIL (EACH)        | #500 KCMIL (EACH)              |
|                                 | 3Ø, 3W                                 | + GND CIF                                       | RCUITS AD   | JUSTED FOR VOLTA  | GE DROP                                | 3Ø, 4V        | V + GND CIF          | CUITS AD.   | JUSTED FO   | OR VOLTAGE DROP / I          | UNDERGROUND                    |
|                                 |  |   |   |   |  | 2504a         | 250                  | 2-1/2"C     | 3"C         | (4) #250 KCMIL               | #4                             |
|                                 |  |   |   |   |  | 6004a         | 600                  | (2) 3"C     | (2) 3-1/2"C | (4) #350 KCMIL (EACH)        | #1 (EACH)                      |
|                                 |  |   |   |   |  |               |                      |             |             |                              |                                |
|                                 |  |   |   |   |  |               |                      |             |             |                              |                                |
| NOTES                           | <br>::                                 |   |   |   |  |               |                      |             |             |                              |                                |
| A. ALL CO                       | NDUCTORS S                             | SHALL BE DUAL I                                 | RATED THHN/TH<br>DNS.                             | IWN, 90°/75°, 600V, COPPER WHE  | ERE INSTALLED                          | De            | PRIMARY              |             |             |                              | ΝΙ/Δ                           |
| B. CONDU                        | CTOR SIZES                             | ARE BASED ON                                    | 2020 NEC TABLE                                    | E 310.16, COPPER.   |  |               | SERVICE<br>SECONDARY |             |             |                              |                                |
| C. ALL CIR<br>ARE SIZ           | CUITS 100A /<br>ZED FROM TH            | AND LOWER ARE<br>IE 75° COLUMN.                 | SIZED FROM T                                      | HE 60° COLUMN (NEC 110.14(C)).  | ALL OTHER CIRCUITS                     |               | SERVICE<br>EXISTING  |             | N/A         |                              | N/A                            |
| D. PVC CC<br>E. WHERE<br>THE EG | NDUIT HAS E<br>UNGROUND<br>SC SHALL BE | BEEN SIZED BAS<br>ED CONDUCTOF<br>UPSIZED PROPC | ED ON TABLE C<br>RS ARE INCREAS<br>ORTIONATELY AG | .1 - SCHEDULE 80.<br>SED FROM THE MINIMUM SIZE DI<br>CCORDING TO CIRCULAR MIL (NI | JE TO VOLTAGE DROP,<br>EC 250.122(B)). | EXIST         | FEEDER               | IN/A        | IN/A        |                              | (⊏)                            |

AGENCY APPROVAL: DSA #01-121955 FILE #21-39

![](_page_38_Picture_8.jpeg)

3584-003-000

3546 CONCOURS STREET ONTARIO, CA 91764 909 989 9979 / www.hmcarchitects.com

ISSUE

 $\Delta$  **DESCRIPTION** 

KEYNOTES

CONSULTANT:

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT:

SHEET NAME: ELECTRICAL SCHEDULES

![](_page_38_Picture_17.jpeg)

DATE: 2024.10.01 SHEET:

PLEASE RECYCLE

![](_page_38_Picture_20.jpeg)

CLIENT PROJ NO:

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_38_Picture_26.jpeg)

![](_page_38_Picture_27.jpeg)

CONSULTING<br/>ENGINEERSwww.lpengineers.comJob #: 24-2053

MEP & FS / Sustainability / CxA 1209 Pleasant Grove Blvd. Roseville, CA 95678 p 916-771-0778

![](_page_38_Picture_31.jpeg)

(E) Branch Panel: F (SEC 2) Location: ELECTRICAL 409 Vol Supply From: F (SEC 1) Phase Mounting: Surface Wire Enclosure: Type 1 A B C СКТ Load Name Trip Poles 
 43
 (E) LTG - RM 404A

 45
 (E) LTG - RM 405A

 47
 (E) LTG - RM 403A
 20 A 1 0 
 20 A
 1
 750

 20 A
 1
 750

 20 A
 1
 (0)

 20 A
 1
 750
 0

 20 A
 1
 750
 1

 20 A
 1
 750
 1

 20 A
 1
 750
 1

 20 A
 1
 720
 1

 20 A
 1
 720
 1

 20 A
 1
 720
 1

 20 A
 1
 750
 1

 20 A
 1
 500
 1

 60 A
 3
 5,572
 1

 -- -- 5,572
 1

 60 A
 3
 5,284
 1

 -- -- 5,284
 1

 -- -- 5,284
 1

 -- -- 456
 1

 -- -- 456
 1

 -- -- 456
 1

 49
 (E) LTG - RM 402A

 51
 (E) LTG - RM 401A
 53 (E) REC - COMP LAB 55 (E) REC - LIBRARY 57 (E) LTG - HALLWAY 59 **REC - ROOF MECHANICAL EQUIPMENT** 61 (E) EF - 7 
 63
 [1] PHP - 1

 65
 - 

 67
 - 

 69
 [1] PHP - 2
 71 --73 -- 
 75
 [1] PHP - 1: POWER EXHAUST FAN

 77
 - 
 79
 - 

 81
 SPARE
 0 20 A 1 83 SPARE Total Load: 14,693 VA Total Amps: 122 A Legend: Load Classification Connected Load Demand 38926 VA 110. 180 VA Receptacle 100 7300 VA 100. pare

[1] PROVIDE NEW BREAKER. NEW BREAKER TO MATCH EXISTING TYPE AND AIC RATING.

| olts:<br>ses:<br>res: | 120/208<br>3<br>4 | Wye  |       |       |      | A.I.C. Rating: 10,000<br>Mains Type: MLO<br>Mains Rating: 250 A |     |
|-----------------------|-------------------|------|-------|-------|------|---|-----|
| C                     | Α                 | В    | с     | Poles | Trip | Load Name   | СКТ |
|                       | 0                 |      |       | 1     | 20 A | (E) FAEP  | 44  |
|                       |                   | 500  |       | 1     | 20 A | (E) FAEP  | 46  |
| 0                     |                   |      | 1,000 | 1     | 20 A | (E) LTG - EXTERIOR F-9  | 48  |
|                       | 0                 |      |       | 1     | 20 A | SPARE   | 50  |
|                       |                   | 0    |       | 1     | 20 A | SPARE   | 52  |
| 080                   |                   |      | 0     | 1     | 20 A | SPARE   | 54  |
|                       | 0                 |      |       | 1     | 20 A | SPARE   | 56  |
|                       |                   | 0    |       | 1     | 20 A | SPARE   | 58  |
| 80                    |                   |      | 500   | 1     | 20 A | (E) SECURITY  | 60  |
|                       | 499               |      |       | 2     | 20 A | [1] FC - C1   | 62  |
|                       |                   | 499  |       |       |      | -   | 64  |
| 572                   |                   |      | 998   | 2     | 20 A | [1] FC - C2 & FC - C3   | 66  |
|                       | 998               |      |       |       |      |   | 68  |
|                       |                   | 998  |       | 2     | 20 A | [1] FC - C4 & FC - C5   | 70  |
| 284                   |                   |      | 998   |       |      | -   | 72  |
|                       | 0                 |      |       | 1     | 20 A | SPARE   | 74  |
|                       |                   | 0    |       | 1     | 20 A | SPARE   | 76  |
| 56                    |                   |      | 0     | 1     | 20 A | SPARE   | 78  |
|                       | 0                 |      |       | 1     | 20 A | SPARE   | 80  |
|                       |                   | 0    |       | 1     | 20 A | SPARE   | 82  |
| 0                     |                   |      | 0     | 1     | 20 A | SPARE   | 84  |
| 15.44                 | 5 VA              | 15.9 | 53 VA | -     |      | 1   |     |
| 130                   | ) A               | 13   | 4 A   | L     |      |   |     |

| d Factor | Estimated Demand | Panel                      | Totals    |
|----------|------------------|----------------------------|-----------|
| .74%     | 43105 VA         |                            |           |
| .00%     | 180 VA           | Total Conn. Load:          | 46,091 VA |
| .00%     | 7300 VA          | Total Est. Demand:         | 50,265 VA |
|          |                  | Total Conn. Current:       | 128 A     |
|          |                  | Total Est. Demand Current: | 140 A     |
|          |                  |                            |           |
|          |                  |                            |           |
|          |                  |                            |           |
|          |                  |                            |           |
|          |                  |                            |           |

| (E       | Branch Panel:             | С              |
|----------|---------------------------|----------------|
| •        | Location:                 | HALLWAY 200    |
|          | Supply From:              |                |
|          | Mounting:                 | Surface        |
|          | Enclosure:                | Туре 1         |
|          |                           |                |
| Notes:   |                           |                |
|          |                           |                |
|          |                           |                |
|          |                           |                |
| СКТ      | Load Name                 |                |
| 1        | (E) LTG - BATHROOM        |                |
| י<br>2   | $(E) \perp TG = BM 35$    |                |
| 5        | (E) LTG PM 36             |                |
| 7        |                           |                |
| 7        | (E) LTG - RM 37           |                |
| 9        | (E) LTG - RM 37           |                |
| 11       | (E) LTG - RM 37           |                |
| 13       | [1] (ER) REC - RM 38-37   |                |
| 15       | [1] (ER) REC - RM 36      |                |
| 1/       | [1] (ER) REC - RM 35      |                |
| 19       | [2] FC - B1 & FC - B4     |                |
| 21       |                           |                |
| 23       | [2] FC - B2 & FC - B5     |                |
| 25       |                           |                |
| 27       | (E) LTG - RM 38           |                |
| 29       | (E) LTG - HALLWAY & RM 38 |                |
|          |                           |                |
| logond   |                           |                |
| Legena.  |                           |                |
|          |                           |                |
| Load Cla | ssification               |                |
| Motor    |                           |                |
| Spare    |                           |                |
|          |                           |                |
|          |                           |                |
|          |                           |                |
|          |                           |                |
|          |                           |                |
| Notes:   |                           |                |
| 1] CONT  | RACTOR TO RELOCATE EXIST  | ING CIRCUIT TO |
| RATING.  |                           |                |
|          |                           |                |
|          |                           |                |

|         | Location: ELECTF<br>Supply From:<br>Mounting: Surface<br>Enclosure: Type 1 | RICAL 409 |              |           | I         | Volts:<br>Phases:<br>Wires: | 120/208<br>3<br>4 | Wye      |               |       |      | A.I.C. Rating: 10,000<br>Mains Type: MCB<br>Mains Rating: 250 A<br>MCB Rating: 250 A |     |
|---------|--|-----------|--------------|-----------|-----------|-----------------------------|-------------------|----------|---------------|-------|------|--|-----|
| Notes:  |  |           |              |           |           |                             |                   |          |               |       |      |  |     |
|         |  |           |              | A         | В         | с                           | A                 | В        | С             |       |      |  |     |
| СКТ     | Load Name  | Trip      | Poles        | ·'        | <u> '</u> | <u> </u>                    | <u> </u> '        | L!       | <b>└───</b> ′ | Poles | Trip | Load Name  | СКТ |
| 1       | (E) REC - CLASS COMP   | 20 A      | 1            | 720       |           | L                           | 720               |          | '             | 1     | 20 A | (E) REC - COMP RM  | 2   |
| 3       | (E) REC - CLASS COMP   | 20 A      | 1 /          |           | 720       |                             |                   | 720      |               | 1     | 20 A | (E) REC - COMP RM  | 4   |
| 5       | SPARE  | 20 A      | 1 /          |           |           | 0                           |                   |          | 720           | 1     | 20 A | (E) REC - COMP RM  | 6   |
| 7       | (E) REC - CLASS  | 20 A      | <u> </u>     | 540       |           |                             | 720               |          | ('            | 1     | 20 A | (E) REC - COMP RM  | 8   |
| 9       | (E) REC - CLASS COMP   | 20 A      | <u> </u>     |           | 720       |                             |                   | 720      |               | 1     | 20 A | (E) REC - COMP RM  | 10  |
| 11      | (E) REC - CLASS COMP   | 20 A      | 1            |           |           | 720                         |                   |          | 720           | 1     | 20 A | (E) REC - COMP RM  | 12  |
| 13      | SPARE  | 20 A      | 1            | 0         |           |                             | 720               |          |               | 1     | 20 A | (E) REC - LIBRARY  | 14  |
| 15      | (E) REC - CLASS  | 20 A      | <u>  1</u> ' |           | 540       |                             | L                 | 720      |               |       | 20 A | (E) REC - LIBRARY  | 16  |
| 17      | (E) REC - CLASS COMP   | 20 A      | <u>  1</u> ' |           |           | 720                         |                   |          | 540           | 1     | 20 A | (E) REC - HALLWAY  | 18  |
| 19      | (E) REC - CLASS COMP   | 20 A      | 1 <u>'</u>   | 720       |           |                             | 180               |          | ('            | 1     | 20 A | (E) REC - HALL ELEC  | 20  |
| 21      | SPARE  | 20 A      | <u>  1</u> / |           | <b>0</b>  |                             | ('                | 900      |               |       | 20 A |  | 22  |
| 23      | (E) REC - CLASS 403  | 20 A      | <u>  1</u>   |           | $\square$ | 540                         |                   |          | 0 '           | 1     | 20 A | SPARE  | 24  |
|         | (E) REC - CLASS COMP   | 20 A      | <u>  1</u> ′ | 720       |           |                             |                   | ليب      | '             | 1     | 20 A | SPARE  | 26  |
| 27      | (E) REC - CLASS COMP   | 20 A      | <u>  1</u> ' |           | 720       |                             | ('                |          |               |       | 20 A | SPARE  | 28  |
| 29      | SPARE  | 20 A      | <u>  1</u>   |           | ()        | 0                           |                   |          |               |       | 20 A | SPARE  | 30  |
| 31      | (E) REC - CLASS  | 20 A      |              | 720       |           | (                           |                   |          | '             | 1     | 20 A | SPARE  | 32  |
| 33      |  | 20 A      | 1 /          |           | 720       |                             | ('                | 0        |               |       | 20 A | SPARE  | 34  |
| 35      |  | 20 A      |              |           | ()        | 720                         |                   |          |               |       | 20 A | SPARE  | 30  |
| 37      | SPARE  | 20 A      | 1,           |           |           |                             | 0                 |          | ('            | 1     | 20 A |  | 38  |
| 39      | (E) REC - CLASS  | 20 A      | 1            |           | 720       |                             | L'                | 0        |               | 1     | 20 A | SPARE  | 40  |
| 41      | (E) REC - CLASS RM   | 20 A      | 1 /          |           |           | 720                         |                   |          | 0             | 1     | 20 A | SPARE  | 42  |
|         |  | Tota      | al Load:     | 20,29     | 97 VA     | 22,47                       | '7 VA             | 21,21    | 4 VA          |       |      |  |     |
|         |  | Tota      | I Amps:      | 169       | ЭА        | 188                         | 3 A               | 178      | 3 A           |       |      |  |     |
| -egenu  |  | Cor       |              |           |           |                             | -4.5.0            | Cetin    | atod De       |       | 1    | Panol Totale   |     |
| Motor   |  |           | 38926 V/     | 10au<br>4 |           | 110.74%                     |                   |          | 43105 V/      | Δ     |      |  |     |
| Recepta | acle   |           | 180 VA       | ·         |           | 100.00%                     | !<br>n            | ·        | 180 VA        |       |      | Total Conn. Load: 63.985 VA  |     |
| Spare   |  |           | 25660 V/     | <u>م</u>  |           | 100.00%                     | <br>n             | ;        | 25660 V/      | A     |      | Total Est. Demand: 68,132 VA   |     |
|         |  |           |              | ·         |           |                             |                   | <u> </u> |               |       |      | Total Conn. Current: 178 A   |     |
|         |  |           |              |           |           |                             |                   |          |               |       | Tot  | al Est. Demand Current: 189 A  |     |
|         |  |           |              |           | <u> </u>  |                             |                   |          |               |       |      |  |     |
| Notes:  |  | 1         |              |           |           |                             |                   |          |               | I     |      | I  |     |
|         |  |           |              |           |           |                             |                   |          |               |       |      |  |     |

AGENCY APPROVAL: DSA #01-121955 FILE #21-39

3584-003-000

3546 CONCOURS STREET ONTARIO, CA 91764 909 989 9979 / www.hmcarchitects.com

 $\Delta$  **DESCRIPTION** 

ISSUE

**KEYNOTES** 

![](_page_39_Picture_12.jpeg)

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT:

SHEET NAME:

![](_page_39_Picture_17.jpeg)

DATE: 2024.10.01 SHEET:

| Volts:  | 120/208 Single |
|---------|----------------|
| Phases: | 1              |
| Wires:  | 3              |
|         |                |

A.I.C. Rating: 10,000 Mains Type: MCB Mains Rating: 225 A MCB Rating: 175 A

|   |      |           | Α    | в     | Α     | в     |       |      |                                       |     |
|---|------|-----------|------|-------|-------|-------|-------|------|---------------------------------------|-----|
| е | Trip | Poles     |      |       |       |       | Poles | Trip | Load Name                             | СКТ |
|   | 20 A | 1         | 500  |       | 500   |       | 1     | 20 A | (E) LTG - RM 39                       | 2   |
|   | 20 A | 1         |      | 500   |       | 500   | 1     | 20 A | (E) LTG - RM 40                       | 4   |
|   | 20 A | 1         | 500  |       | 500   |       | 1     | 20 A | (E) LTG - RM 39 - 40                  | 6   |
|   | 20 A | 1         |      | 500   |       | 500   | 1     | 20 A | (E) LTG - RM 41                       | 8   |
|   | 20 A | 1         | 500  |       | 500   |       | 1     | 20 A | (E) LTG - RM 41                       | 10  |
|   | 20 A | 1         |      | 500   |       | 800   | 1     | 20 A | (E) REC - COPIER                      | 12  |
|   | 20 A | 1         | 540  |       | 540   |       | 1     | 20 A | (E) REC - RM 41                       | 14  |
|   | 20 A | 1         |      | 540   |       | 540   | 1     | 20 A | (E) REC - RM 40                       | 16  |
|   | 20 A | 1         | 540  |       | 540   |       | 1     | 20 A | (E) REC - RM 39                       | 18  |
|   | 20 A | 2         |      | 998   |       | 998   | 2     | 20 A | [2] FC - B3 & FC - B6                 | 20  |
|   |      |           | 998  |       | 998   |       |       |      |                                       | 22  |
|   | 20 A | 2         |      | 998   |       | 12    | 1     | 20 A | SF-B1 - PSYCH/COUNSELING/BOOK STO 207 | 24  |
|   |      |           | 998  |       | 500   |       | 1     | 20 A | (E) FACP - C                          | 26  |
|   | 20 A | 1         |      | 500   |       | 4,250 | 2     | 60 A | (E) PANEL "CC" AT COPY ROOM           | 28  |
|   | 20 A | 1         | 0    |       | 4,560 |       |       |      |                                       | 30  |
|   | To   | tal Load: | 13,0 | 98 VA |       |       |       |      | •                                     |     |
|   | Tota | al Amps:  | 12   | 5 A   | -     |       |       |      |                                       |     |

| otals     | Panel                      | Estimated Demand | Demand Factor | Connected Load |  |
|-----------|----------------------------|------------------|---------------|----------------|--|
|           |                            | 6250 VA          | 104.16%       | 6000 VA        |  |
| 25,120 VA | Total Conn. Load:          | 19350 VA         | 100.00%       | 19350 VA       |  |
| 25,362 VA | Total Est. Demand:         |                  |               |                |  |
| 21 A      | Total Conn. Current:       |                  |               |                |  |
| 22 A      | Total Est. Demand Current: |                  |               |                |  |
|           |                            |                  |               |                |  |
|           |                            |                  |               |                |  |

ING CIRCUIT TO THE NEW ASSIGNED CIRCUIT BREAKER SPACE. [2] PROVIDE NEW BREAKER. NEW BREAKER TO MATCH EXISTING TYPE AND AIC

| (E) PANEL "F"<br>(SEC 2) | (E) PANEL "C"            |
|--------------------------|--------------------------|
| -                        | (E) PANEL "F"<br>(SEC 1) |
|                          |                          |

# E7.12

CLIENT PROJ NO:

### DSA SUBMITTAL

ELECTRICAL PANEL SCHEDULES

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_39_Picture_32.jpeg)

![](_page_39_Picture_33.jpeg)

www.lpengineers.com

MEP & FS / Sustainability / CxA 1209 Pleasant Grove Blvd. Roseville, CA 95678 p 916-771-0778

![](_page_39_Picture_37.jpeg)

₩Z

### Branch Panel: DP-C-M Location: Supply From: MSB - A Mounting: Surface Enclosure: NEMA 3R Notes: СКТ Load Name 1 HP - C1 3 - 5 HP - C2 7 - 9 HP - C3 \_\_\_\_\_ 11 -- 11 - 13 HP - C4 15 - 17 HP - C5 19 - 21 SPARE 23 SPARE 25 SPARE 27 SPARE 29 SPARE 31 SPARE 33 - 35 - 37 PANEL "F 37 PANEL "B-M" 39 --41 --Legend: Load Classification Receptacle Notes:

|          | Location:<br>Supply From: DP-C-M<br>Mounting: Surface<br>Enclosure: NEMA 3R |       | Volts: 120/208 Wye<br>Phases: 3<br>Wires: 4 |         |        |         |       |       |          |       |      | A.I.C. Rating: 65,000<br>Mains Type: MCB<br>Mains Rating: 250 A<br>MCB Rating: 250 A |                    |       |  |
|----------|---|-------|---|---------|--------|---------|-------|-------|----------|-------|------|--|--------------------|-------|--|
| Notes:   |   |       |   |         |        |         |       |       |          |       |      |  |                    |       |  |
| OVT      |   | Tria  | Dalaa                                       | Α       | в      | с       | A     | в     | С        | Dalas | Taia | land   | N                  | OVT   |  |
|          |   |       | Poles                                       | 2 4 1 2 |        |         | 0     |       |          | Poles |      |  | Name               | CKI   |  |
| 3        |   | 40 A  | 2   | 2,413   | 2/13   |         | 0     | 0     |          | 2     | 20 A | JPARE  |                    | 2<br> |  |
| 5        | <br>HP - B2   | 40 A  | 2   |         | 2,413  | 2 4 1 3 |       | 0     | 1 706    | 2     | 30 4 |  |                    | 6     |  |
| 7        |   |       |   | 2,413   |        | 2,713   | 1,706 |       | 1,700    |       |      |  |                    | 8     |  |
| . 9      | HP - B3   | 40 A  | 2   | _,      | 2,413  |         | .,    | 180   |          | 1     | 20 A | REC - EXTERIOR AT MF   | CHANICAL EQUIPMENT | 10    |  |
| 11       |   |       |   |         | ,      | 2,413   |       |       | 180      | 1     | 20 A | REC - EXTERIOR AT ME   | CHANICAL EQUIPMENT | 12    |  |
| 13       | HP - B4   | 40 A  | 2   | 2,413   |        |         | 0     |       |          | 2     | 40 A | SPARE  |                    | 14    |  |
| 15       |   |       |   |         | 2,413  |         |       | 0     |          |       |      |  |                    | 16    |  |
| 17       | HP - B5   | 40 A  | 2   |         |        | 2,413   |       |       | 0        | 2     | 40 A | SPARE  |                    | 18    |  |
| 19       |   |       |   | 2,413   |        |         | 0     |       |          |       |      |  |                    | 20    |  |
| 21       | HP - B6   | 40 A  | 2   |         | 2,413  |         |       | 0     |          | 2     | 40 A | SPARE  |                    | 22    |  |
| 23       |   |       |   |         |        | 2,413   |       |       | 0        |       |      |  |                    | 24    |  |
| 25       | SPARE   | 20 A  | 1   | 0       |        |         | 0     |       |          | 1     | 20 A | SPARE  |                    | 26    |  |
| 27       | SPARE   | 20 A  | 1   |         | 0      | -       |       | 0     |          | 1     | 20 A | SPARE  |                    | 28    |  |
| 29       | SPARE   | 20 A  | 1   | 0       |        | 0       | 0     |       | 0        | 1     | 20 A | SPARE  |                    | 30    |  |
| 31       | SPARE   | 20 A  | 1   | 0       |        |         | 0     |       |          | 1     | 20 A | SPARE  |                    | 32    |  |
| 35<br>35 |   |       | 1   |         |        |         |       |       |          | 1     |      | PFB  |                    | 34    |  |
| 37       | PER   |       | 1   |         |        |         |       |       |          | 1     |      | PEB  |                    | 38    |  |
| 30       | PEB   |       | 1   |         |        |         |       |       |          | 1     |      | PEB  |                    | 40    |  |
| <u> </u> | PER   |       | 1   |         |        |         |       |       |          | 1     |      | PFB  |                    | 40    |  |
| - 1      |   | Tota  | lload.                                      | 11.35   | 58 V.A | 9.82    | 3 VA  | 11.52 | P9 \/A   |       |      |  |                    | 74    |  |
|          |   | Total | Amps:                                       | 97      | 7 A    | 82      | 2 A   | 98    | A        | J     |      |  |                    |       |  |
| Legenc   | :   |       | -   |         |        |         |       |       |          |       |      |  |                    |       |  |
| Load C   | lassification   | Conr  | nected L                                    | oad     | Der    | nand Fa | ctor  | Estim | nated De | mand  |      | Panel  | Totals             |       |  |
| Poppet   |   | 3     | 2308 VA                                     | 4       |        | 103.73% |       |       | 33575 VA | 4     |      | Total Comp. Lood   | 22 710 \/A         |       |  |
| vecept   |   |       | 500 VA                                      |         |        | 100.00% | )     |       | 300 VA   |       |      | Total Est. Domandi   | 32,1 10 VA         |       |  |
|          |   |       |   |         |        |         |       |       |          |       |      | Total Conn. Current:   | 91 Δ               |       |  |
|          |   |       |   |         |        |         |       |       |          |       | То   | tal Est. Demand Current:   | 94 A               |       |  |
|          |   |       |   |         |        |         |       |       |          |       |      |  |                    |       |  |
|          |   |       |   |         |        |         |       |       |          |       |      |  |                    |       |  |
| Notes:   |   |       |   |         |        |         |       |       |          |       |      |  |                    |       |  |

AGENCY APPROVAL: DSA #01-121955 FILE #21-39

![](_page_40_Picture_4.jpeg)

3584-003-000

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ISSUE

 $\Delta$  **DESCRIPTION** 

**KEYNOTES** 

![](_page_40_Picture_8.jpeg)

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT:

SHEET NAME:

![](_page_40_Picture_13.jpeg)

DATE: 2024.10.01 SHEET:

| Volts:  | 120/208 Wye |
|---------|-------------|
| Phases: | 3           |
| Wires:  | 4           |
|         |             |

### A.I.C. Rating: 65,000 Mains Type: MCB Mains Rating: 600 A MCB Rating: 600 A

| Trip     | Poles | Α      | В     | с      | Α    | В     | С    | Poles | Trip  | Load Name                              | скт |
|----------|-------|--------|-------|--------|------|-------|------|-------|-------|--|-----|
| 40 A     | 2     | 2,413  |       |        | 180  |       |      | 1     | 20 A  | REC - EXTERIOR AT MECHANICAL EQUIPMENT | 2   |
| <br>     |       | ,      | 2,413 |        |      | 0     |      | 1     | 20 A  | SPARE                                  | 4   |
| 40 A     | 2     |        |       | 2,413  |      |       | 0    | 1     | 20 A  | SPARE                                  | 6   |
|          |       | 2,413  |       |        | 0    |       |      | 1     | 20 A  | SPARE                                  | 8   |
| 40 A     | 2     |        | 2,413 |        |      | 0     |      | 1     | 20 A  | SPARE                                  | 10  |
|          |       |        |       | 2,413  |      |       | 0    | 1     | 20 A  | SPARE                                  | 12  |
| 40 A     | 2     | 2,413  |       |        | 0    |       |      | 1     | 20 A  | SPARE                                  | 14  |
|          |       |        | 2,413 |        |      | 0     |      | 1     | 20 A  | SPARE                                  | 16  |
| 40 A     | 2     |        |       | 2,413  |      |       | 0    | 1     | 20 A  | SPARE                                  | 18  |
|          |       | 2,413  |       |        | 0    |       |      | 1     | 20 A  | SPARE                                  | 20  |
| 20 A     | 1     |        | 0     |        |      | 0     |      | 1     | 20 A  | SPARE                                  | 22  |
| 20 A     | 1     |        |       | 0      |      |       |      | 1     |       | PFB                                    | 24  |
| 20 A     | 1     | 0      |       |        |      |       |      | 1     |       | PFB                                    | 26  |
| 20 A     | 1     |        | 0     |        |      |       |      | 1     |       | PFB                                    | 28  |
| 20 A     | 1     |        |       | 0      |      |       |      | 1     |       | PFB                                    | 30  |
| 100 A    | 3     | 0      |       |        | 0    |       |      | 3     | 100 A | SPARE                                  | 32  |
|          |       |        | 0     |        |      | 0     |      |       |       |  | 34  |
|          |       |        |       | 0      |      |       | 0    |       |       |  | 36  |
| 250 A    | 3     | 11,358 |       |        | 0    |       |      | 3     | 250 A | SPARE                                  | 38  |
|          |       |        | 9,823 |        |      | 0     |      |       |       |  | 40  |
| <br>     |       |        |       | 11,529 |      |       | 0    |       |       |  | 42  |
| <br>Tota | Load: | 21,18  | 31 VA | 17,06  | 2 VA | 18,76 | 8 VA |       |       |  |     |
| Total    | Amps: | 17     | 9 A   | 142    | 2 A  | 159   | 9 A  |       |       |  |     |

Connected Load Demand Factor Estimated Demand Panel Totals 56498 VA 102.14% 57705 VA Total Conn. Load:57,011 VATotal Est. Demand:58,218 VATotal Conn. Current:158 ATotal Est. Demand Current:162 A 540 VA 100.00% 540 VA

| - | PANEL "DP-C-M" |
|---|----------------|
| - | PANEL "B-M     |

![](_page_40_Picture_20.jpeg)

# **E7.13**

CLIENT PROJ NO:

ELECTRICAL PANEL SCHEDULES

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_40_Picture_27.jpeg)

![](_page_40_Picture_28.jpeg)

CONSULTING<br/>ENGINEERSwww.lpengineers.comJob #: 24-2053

MEP & FS / Sustainability / CxA 1209 Pleasant Grove Blvd. Roseville, CA 95678 p 916-771-0778

![](_page_40_Picture_32.jpeg)

![](_page_40_Picture_33.jpeg)

- NOTES: 1. ALL SPLICES WITHIN THE CONCRETE PULLBOX ARE TO BE SEALED WITH AN INSULATING AND ENCAPSULATING RESIN PACK, SCOTCHCAST 4 OR EQUAL.
- 2. ALL CONDUIT WITHIN THE CONCRETE PULLBOX ARE TO BE SEALED WITH RTV DUCT SEAL TO PREVENT WATER ENTERING CONDUIT SYSTEM.
- 3. ALL CONDUCTORS AND CABLES ARE TO BE GROUPED AND WIRE TIED EVERY 6" PER CONDUIT FILL.
- 4. PROVIDE TWO 12" EXTENSION RINGS UNLESS NOTED OTHERWISE.

![](_page_41_Figure_5.jpeg)

![](_page_41_Picture_7.jpeg)

![](_page_41_Picture_13.jpeg)

### <u>KEY NOTES</u>:

HOT-DIPPED GALVANIZED UNISTRUT CONDUIT CLAMP. SIZE AS REQUIRED.  $\langle 2 \rangle$  conduit as noted on drawings. ROOFTOP SUPPORT WITH HOT-DIPPED GALVANIZED CHANNEL. MANUFACTURER PER SPECS.  $\langle 4 \rangle$  SECURE TO ROOF WITH A FULL BED OF NON-HARDENING ADHESIVE TYPE MASTIC. ADHESIVE TO BE COMPATIBLE WITH PVC ROOF MEMBRANE. VERIFY SPECIFICATION FOR COMPATIBILITY PRIOR TO INSTALLATION. 5 PROVIDE SACRIFICIAL LAYER OF PVC

> NOTE: INSTALL SUPPORT BLOCK 8'-0" O.C. MAX, WITHIN 36" OF A BOX CONNECTION, AND AT EACH CHANGE OF DIRECTION.

![](_page_42_Figure_4.jpeg)

### WOOD STUD WALL

- NOTES: 1. THE CAULK IS TO BE FORCED INTO THE ANNULAR SPACE TO THE MAXIMUM EXTENT POSSIBLE FLUSH WITH THE EXTERIOR OF THE PENETRATION SURFACE.
- 2. FINISH CAULKING WITH A 1/4" (6mm) MINIMUM BEAD OF CP 25N/S CAULK APPLIED
- TO THE PERIMETER OF THE CONDUIT/PIPE AT ITS EGRESS FROM THE WALL.
- 3. THE MAXIMUM ANNULAR SPACE IS NOT TO EXCEED 3/16" (5mm).
- 4. INSTALL 3M FIRESTOP ON BOTH SIDES OF THE WALL
- 5. THESE RECOMMENDATIONS ARE BASED ON PRODUCT PERFORMANCE PER ASTM. E-814 (UL 1479) FIRE TEST AND UL THROUGH-PENETRATION FIRESTOP SYSTEM #WL1001.

![](_page_42_Figure_13.jpeg)

![](_page_42_Picture_15.jpeg)

![](_page_42_Picture_21.jpeg)

| THE INTENT OF THESE DR<br>ALARM SYSTEM (INCLUDIN  | DESCRIPTIONS 1.   | SYMBOL<br>NFPA   | RIPTIONS<br>E CEILING   | SYMBOL<br>A  |
|---|---|--|---|--|
| APPLICABLE LOCAL FIRE   |   | NIC  |   | AFF  |
| LOCATIONS OF EXISTING<br>BUILT PLANS AND LIMITED  | NETWORK PROCESSING UNIT 2.  | NPU<br>NTS   | DRILY MAVING JURISDICTION   | чнј<br>ALM   |
| SYSTEM AND SITE CONDI<br>REQUIRING IMMEDIATE AT   | PRE-ACTION PANEL  | PAP  |   |  |
| INFERRED TO, IN THE CON<br>COMMENCEMENT OF THE  | PRE-ACTION PANEL PULL BOX   | PAP<br>PB  | NG MANAGEMENT SYSTEM<br>JIT   | BMS<br>C   |
| CONTRACTOR SHALL SUB  | RELOCATE / RELOCATED 3.   | (R)<br>(BC)  |   | CBC  |
| SPECIAL INSPECTOR AND<br>DETAILED PLANS, SPECIFI  | EXISTING TO REMOVE AND COVER<br>EXISTING DEVICE TO BE RELOCATED   | (RC)<br>(RD)   | ORNIA ELECTRICAL CODE   | CFC  |
| CONTRACTOR SHALL BE   | RELOCATED DEVICE  | (RL)<br>(RR)   | G MOUNTED   | CM<br>CD   |
| PER DSA IR F-2 SECTION 1<br>CONSTRUCTION OF NEW   | STATUS COMMAND CENTER 4.  | SCC  | TOR   | DET  |
| BUILDINGS OR PORTIONS   | SIGNALING LINE CIRCUIT  | SLC<br>SMK   | GATHERING PANEL<br>NG TO REMAIN   | DGP<br>(E)   |
| NOTIFIED IMMEDIATELY B<br>TO ESTABLISH, INSTRUCT  | SUPERVISORY   | SUPV   | CONDUIT   | EC   |
| A FIRE ALARM SYSTEM IS<br>BUILDING TO INFORM THE  | TOP OF SHAFT<br>TROUBLE   | TOS<br>TRBL  | GENCY<br>RICAL METALLIC TUBING  | EM<br>EMT  |
| NEW BUILDINGS THAT AR<br>SHALL NOT REQUIRE A FI   | TAMPER SWITCH   | TS   |   | EOL  |
|   |   | UNO  | LARM ANNUNCIATOR  | EPO<br>FAA   |
| INCLUDING CONDUITS, BC  | VOICE COMMAND CENTER 5.   | VCC<br>VT  | LARM CONTROL PANEL  | ACP  |
| NO KNOWN EXISTING CEII<br>SPACE OCCUR DURING FI   | WATTAGE 6.  | W  | LARM TERMINAL CABINET   | -AF3<br>-ATC   |
| ATTIC SPACE, PROVIDE A<br>SUBMITTED TO AND APPR   | WITH<br>WITHOUT   | W/<br>W/O  | SHED BY OTHERS<br>OMMAND CENTER   | =BO<br>=CC   |
| THE FIRE ALARM SYSTEM   | WATERFLOW 7.  | WF   | MOKE DAMPER   | =SD  |
| 2022 CALIFORNIA ELECTR  | WIRE GUARD<br>WEATHERPROOF  | WG<br>WP   | LARM TRANSPONDER<br>ND BOX  | FTR<br>GB  |
| FIRE ALARM SYSTEM SHA<br>SUPERVISING STATION IN   | REMOVE 8.   | (X)  |   | -  |
|   | IRANSFORMER 9.  | XFMR   | I<br>NG VENTILATION & AIR CONDITIONING  | HT<br>HVAC   |
|   |   |  | MATION MANAGEMENT SYSTEM  | MS   |
| PER CBC 901.6.3.  |   |  | JM  | MIN  |
| OWNER SHALL BE RESPO<br>PROVISIONS.   | 11.   |  |   | (N)<br>N/A   |
| INSTALLATION OF THE FIR   | 12.   |  | VAILABLE  | NA   |
| INCLUDING CALIFORNIA S<br>HAVE BEEN APPROVED B'   |   |  |   |  |
| UPON COMPLETION OF TH   | 13.   |  | JAR DISPLAT UNIT  | 100  |
| THE SCHOOL SHALL NOT<br>AND/OR SIGNED OFF ON (  |   |  |   |  |
| ARCHITECT/ENGINEER AN   | 14.   |  |   |  |
| INSPECTION AND /OR TES  |   |  |   | 1 ΔI I F   |
| CONTRACTOR SHALL SUB  | RVEY AND ARE SHOWN FOR CLARITY. IT  | AITED SITE SU  | AILABLE EXISTING DOCUMENTS AND LIP<br>GARDED AS AN APPROXIMATION ONLY   | BASE   |
| BEFORE REQUESTING FIN   | TICES, THE CONTRACTOR WILL BE<br>JOB SITE CONDITIONS DURING THE   | UCTION PRAC  | E WITH GENERALLY ACCEPTED CONSTR<br>ASSUME SOLE AND COMPLETE RESPO  | ACCO<br>REQU   |
| HAS BEEN INSTALLED AND  | NG BID AND BEFORE START OF ANY<br>TING LOCATIONS AND CONDITIONS TO  | R TO SUBMITT<br>SITE ALL EXIS  | CONSTRUCTION OF THE PROJECT. PRIO<br>WORK, CONTRACTOR SHALL VERIFY ON   |  |
| CONTRACTOR SHALL PRO<br>SUCH USE. REFERENCE N   |   |  | LL WORK REQUIRED.   | ASCE   |
| CONTRACTOR SHALL IDEN<br>DRAWINGS.  | RUCTION IS COMPLETED. CAUSE AS LITTLE<br>MS AND/OR OTHER EXISTING FACILITY'S  | ALARM SYST   | E ALARM SYSTEM SHALL REMAIN ACTIVI<br>CE OR INTERRUPTION OF EXISTING FIRE   | 2. EXIST<br>INTER  |
|   | JTDOWN WORK SHALL BE PERFORMED  | JTDOWNS. SH  | JRS TO SCHEDULE ALL NECESSARY SHI   | LEAS   |
| THE CONTRACTOR SHALL  | RECTED BY THE OWNER'S   | ·_····   |   |  |
| THE CONTRACTOR SHALL<br>FALSE ALARMS.   | RECTED BY THE OWNER'S   | ,  | TIVE.   | REPR   |
| THE CONTRACTOR SHALL<br>FALSE ALARMS.<br>PROVIDE FIRE ALARM AUI<br>IN ALL OCCUPIED AREA, B<br>THROUGHOUT. SYNCHRO   | RECTED BY THE OWNER'S<br>SHALL BE PROVIDED AT THE DIRECTION OF<br>DWNER SHALL ASSIST WITH FIRE WATCH<br>C IS OCCUPIED. THE CONTRACTOR COMMI   | A FIRE CODE  | TIVE.<br>N CONFORMANCE WITH THE CALIFORN<br>CTOR FOR EVERY OFF-LINE BUILDING.   | 3. FIRE \<br>THE C   |
| THE CONTRACTOR SHALL<br>FALSE ALARMS.<br>PROVIDE FIRE ALARM AUI<br>IN ALL OCCUPIED AREA, B<br>THROUGHOUT. SYNCHRO<br>WALL MOUNTED VISIBLE M   | RECTED BY THE OWNER'S       10.         SHALL BE PROVIDED AT THE DIRECTION OF<br>OWNER SHALL ASSIST WITH FIRE WATCH       19.         G IS OCCUPIED . THE CONTRACTOR SHALL<br>WHENEVER THE BUILDING IS NOT<br>TORING AND MAINTAINING ALL FIRE WATCH       20.   | A FIRE CODE<br>THE BUILDING<br>R THE BUILDIN<br>G HOURS ANI  | TIVE.<br>N CONFORMANCE WITH THE CALIFORN<br>CTOR FOR EVERY OFF-LINE BUILDING.<br>JRING BUILDING HOURS AND WHENEVE<br>FIRE WATCH ACTIVITIES AFTER BUILDIN<br>HE CONTRACTOR SHALL BE RESPONSIV  | 3. FIRE \<br>THE C<br>ACTIV<br>PROV  |
| THE CONTRACTOR SHALL<br>FALSE ALARMS.<br>PROVIDE FIRE ALARM AUE<br>IN ALL OCCUPIED AREA, B<br>THROUGHOUT. SYNCHRO<br>WALL MOUNTED VISIBLE M<br>AND THEIR TOPS AT 96" M  | RECTED BY THE OWNER'S<br>SHALL BE PROVIDED AT THE DIRECTION OF<br>OWNER SHALL ASSIST WITH FIRE WATCH<br>G IS OCCUPIED . THE CONTRACTOR SHALL<br>WHENEVER THE BUILDING IS NOT<br>FORING AND MAINTAINING ALL FIRE WATCH<br>20.  | A FIRE CODE<br>THE BUILDING<br>R THE BUILDIN<br>G HOURS ANI<br>BLE FOR MON   | TIVE.<br>N CONFORMANCE WITH THE CALIFORN<br>CTOR FOR EVERY OFF-LINE BUILDING.<br>JRING BUILDING HOURS AND WHENEVE<br>FIRE WATCH ACTIVITIES AFTER BUILDIN<br>HE CONTRACTOR SHALL BE RESPONSIE  | 3. FIRE \<br>THE C<br>ACTIV<br>PROV<br>OCCU<br>LOGS  |
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| THE CONTRACTOR SHALL<br>FALSE ALARMS.<br>PROVIDE FIRE ALARM AUI<br>IN ALL OCCUPIED AREA, B<br>THROUGHOUT. SYNCHRO<br>WALL MOUNTED VISIBLE M<br>AND THEIR TOPS AT 96" M<br>WALL MOUNTED AUDIBLE<br>FINISHED FLOOR AND NO<br>A FLASHING VISUAL WARM<br>[TWO (2) FLASHES OR LES  | RECTED BY THE OWNER'S10.SHALL BE PROVIDED AT THE DIRECTION OF<br>OWNER SHALL ASSIST WITH FIRE WATCH<br>G IS OCCUPIED. THE CONTRACTOR SHALL<br>WHENEVER THE BUILDING IS NOT<br>FORING AND MAINTAINING ALL FIRE WATCH19.EQUIPMENT TO BE ACCOMPLISHED UNDER<br>ENTATIVE ARE DEEMED SALVAGEABLE,<br>ATERIAL AND EQUIPMENT CONSIDERED<br>DSED BY THE CONTRACTOR ACCORDINGLY.21.  | A FIRE CODE<br>THE BUILDING<br>R THE BUILDIN<br>G HOURS ANI<br>BLE FOR MON<br>TERIALS AND<br>NER'S REPRES<br>TIRE ALARM M<br>ITE AND DISP  | TIVE.<br>N CONFORMANCE WITH THE CALIFORN<br>CTOR FOR EVERY OFF-LINE BUILDING.<br>JRING BUILDING HOURS AND WHENEVE<br>FIRE WATCH ACTIVITIES AFTER BUILDIN<br>HE CONTRACTOR SHALL BE RESPONSIE<br>O AND/OR DEMOLISHED ELECTRICAL MA<br>CT, WHICH IN THE OPINION OF THE OWN<br>N THE PROPERTY OF THE OWNER. ALL I<br>EABLE SHALL BE REMOVED FROM THE S   | 3. FIRE N<br>THE C<br>ACTIV<br>PROV<br>OCCU<br>LOGS<br>4. ALL R<br>THIS C<br>SHALL<br>NOT S  |
| THE CONTRACTOR SHALL<br>FALSE ALARMS.<br>PROVIDE FIRE ALARM AUD<br>IN ALL OCCUPIED AREA, B<br>THROUGHOUT. SYNCHRO<br>WALL MOUNTED VISIBLE M<br>AND THEIR TOPS AT 96" M<br>WALL MOUNTED AUDIBLE<br>FINISHED FLOOR AND NO<br>A FLASHING VISUAL WARM<br>[TWO (2) FLASHES OR LESS<br>IMPAIRED AS SHOWN ON<br>INTERIOR SPACE SHALL B   | RECTED BY THE OWNER'S10.SHALL BE PROVIDED AT THE DIRECTION OF<br>OWNER SHALL ASSIST WITH FIRE WATCH<br>G IS OCCUPIED . THE CONTRACTOR SHALL<br>WHENEVER THE BUILDING IS NOT<br>TORING AND MAINTAINING ALL FIRE WATCH19.EQUIPMENT TO BE ACCOMPLISHED UNDER<br>ENTATIVE ARE DEEMED SALVAGEABLE,<br>ATERIAL AND EQUIPMENT CONSIDERED<br>DSED BY THE CONTRACTOR ACCORDINGLY.20.IN LOSS OF CIRCUIT CONTINUITY, THE<br>DROVIDE SED WIGHT TO ALL DESTAURTS.21.   | A FIRE CODE<br>THE BUILDING<br>R THE BUILDIN<br>G HOURS ANI<br>BLE FOR MON<br>TERIALS AND<br>VER'S REPRES<br>TIRE ALARM M<br>ITE AND DISP  | TIVE.<br>N CONFORMANCE WITH THE CALIFORN<br>CTOR FOR EVERY OFF-LINE BUILDING.<br>JRING BUILDING HOURS AND WHENEVE<br>FIRE WATCH ACTIVITIES AFTER BUILDIN<br>HE CONTRACTOR SHALL BE RESPONSIE<br>O AND/OR DEMOLISHED ELECTRICAL MA<br>CT, WHICH IN THE OPINION OF THE OWN<br>N THE PROPERTY OF THE OWNER. ALL I<br>EABLE SHALL BE REMOVED FROM THE S   | <ol> <li>FIRE N<br/>THE C<br/>ACTIV<br/>PROV<br/>OCCU<br/>LOGS</li> <li>ALL R<br/>THIS C<br/>SHALL<br/>NOT S</li> <li>WHEF</li> </ol>  |
| THE CONTRACTOR SHALL<br>FALSE ALARMS.<br>PROVIDE FIRE ALARM AUI<br>IN ALL OCCUPIED AREA, B<br>THROUGHOUT. SYNCHRO<br>WALL MOUNTED VISIBLE N<br>AND THEIR TOPS AT 96" M<br>WALL MOUNTED AUDIBLE<br>FINISHED FLOOR AND NO<br>A FLASHING VISUAL WARN<br>[TWO (2) FLASHES OR LES<br>IMPAIRED AS SHOWN ON<br>INTERIOR SPACE SHALL B<br>SMOKE DETECTORS SHAL  | RECTED BY THE OWNER'S       10.         SHALL BE PROVIDED AT THE DIRECTION OF<br>DWNER SHALL ASSIST WITH FIRE WATCH<br>G IS OCCUPIED . THE CONTRACTOR SHALL<br>WHENEVER THE BUILDING IS NOT<br>FORING AND MAINTAINING ALL FIRE WATCH       19.         EQUIPMENT TO BE ACCOMPLISHED UNDER<br>ENTATIVE ARE DEEMED SALVAGEABLE,<br>ATERIAL AND EQUIPMENT CONSIDERED<br>DSED BY THE CONTRACTOR ACCORDINGLY.       21.         IN LOSS OF CIRCUIT CONTINUITY, THE<br>PROVIDE SERVICE TO ALL REMAINING<br>CONNECTION SHALL BE MADE FROM AN<br>THE ARCHITECT AND CON THE OWNED CONTRACTOR       23.   | A FIRE CODE<br>THE BUILDING<br>R THE BUILDING<br>G HOURS ANI<br>BLE FOR MON<br>TERIALS AND<br>VER'S REPRES<br>FIRE ALARM M<br>ITE AND DISP<br>WILL RESULT<br>ONNECTED TO<br>IMPOSSIBLE,<br>DIRECTED TO   | TIVE.<br>N CONFORMANCE WITH THE CALIFORN<br>CTOR FOR EVERY OFF-LINE BUILDING.<br>JRING BUILDING HOURS AND WHENEVE<br>FIRE WATCH ACTIVITIES AFTER BUILDIN<br>HE CONTRACTOR SHALL BE RESPONSI<br>O AND/OR DEMOLISHED ELECTRICAL MA<br>CT, WHICH IN THE OPINION OF THE OWN<br>N THE PROPERTY OF THE OWNER. ALL I<br>EABLE SHALL BE REMOVED FROM THE S<br>OVAL OF AN EXISTING SYSTEM'S DEVICE<br>RTIONS OF THE CIRCUIT SHALL BE RECO<br>ITE CONDITIONS MAKE RECONNECTION  | <ul> <li>REPR</li> <li>3. FIRE \<br/>THE C<br/>ACTIV<br/>PROV<br/>OCCU<br/>LOGS</li> <li>4. ALL R<br/>THIS C<br/>SHALL<br/>NOT S</li> <li>5. WHEF<br/>ISOLA<br/>DEVIC</li> </ul>   |
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### FIRE ALARM GENERAL NOTES

THESE DRAWINGS AND/OR SPECIFICATIONS DESCRIBE A COMPLETE, FUNCTIONING FIRE (INCLUDING VOICE EVACUATION PER SB575) WITH DEVICES, WIRING AND FIRE ALARM TO MEET THE REQUIREMENTS OF NFPA 72 AND 2022 CALIFORNIA FIRE CODE AND CAL FIRE MARSHALL REGULATIONS AND REQUIREMENTS.

EXISTING EQUIPMENT AND DEVICES SHOWN ON THESE PLANS ARE BASED ON AVAILABLE AS-ID LIMITED SITE SURVEYS. CONTRACTOR SHALL THOROUGHLY INSPECT THE EXISTING TE CONDITIONS BEFORE BID. ADVISE THE SCHOOL'S REPRESENTATIVE OF ALL CONDITIONS EDIATE ATTENTION OR MIGHT CAUSE DIFFICULTIES THAT ARE NOT ADDRESSED, OR I THE CONTRACT DRAWINGS AND SPECIFICATIONS PRIOR TO NEW CONSTRUCTION AND THE NT OF THE GUARANTEE PERIOD.

SHALL SUBMIT ANY ALTERATIONS OF THE APPROVED CONSTRUCTION DOCUMENTS TO THE CTOR AND DSA FOR NEW APPROVALS. START INSTALLATION OF THE SYSTEM AFTER S, SPECIFICATIONS, NEW SHOP DRAWINGS AND SUBMITTALS HAS BEEN APPROVED BY DSA. SHALL BE TOTALLY RESPONSIBLE FOR ANY DELAY.

SECTION 1. WHEN, AS PART OF AN ALTERATION OR MODERNIZATION PROJECT OR I OF NEW BUILDING A FIRE PROTECTION/LIFE SAFETY IS PLACED OUT OF SERVICE AND CCUPIED PORTION OF AN EXISTING BUILDING UNDERGOING RENOVATION OR OCCUPIED PORTIONS OF THE CAMPUS, THEN THE SCHOOL DISTRICT, DSA, AND THE GINEER IN GENERAL RESPONSIBLE CHARGE OF THE CONSTRUCTION PROJECT SHALL BE DIATELY BY THE PROJECT INSPECTOR. IT WILL BE THE SCHOOL DISTRICT'S RESPONSIBILITY INSTRUCT AND MAINTAIN FIRE WATCH PERSONNEL IN/AT THE AFFECTED BUILDING(S). WHERE YSTEM IS OUT OF SERVICE, WARNING SIGNS SHALL BE POSTED AT ALL ENTRANCES TO ANY FORM THE OCCUPANTS. MODERNIZATIONS OF EXISTING BUILDINGS OR CONSTRUCTION OF S THAT ARE NOT OCCUPIED BY THE PUBLIC, STAFF OR STUDENT DURING CONSTRUCTION, UIRE A FIRE WATCH AS LONG AS THE CONSTRUCTION EFFORTS DO NOT AFFECT OTHER

ADDITIONAL COSTS ASSOCIATED WITH RE-USE OF ANY EXISTING SYSTEM COMPONENT, IDUITS, BOXES, CONTROL PANELS, ETC. WILL NOT BE CONSIDERED.

STING CEILING OR ATTIC SPACE IN ROOMS OR AREA WITH HARD CEILING. IF CEILING OR ATTIC DURING FIELD CONSTRUCTION THAT REQUIRE ADDING DETECTORS ABOVE THE CEILING OR ROVIDE A CONSTRUCTION CHANGE DOCUMENT, OR A SEPARATE SHEET OF PLANS SHALL BE AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK.

I SYSTEM SHALL CONFORM TO THE 2022 CALIFORNIA FIRE CODE, ARTICLE 907, CBC 305 AND A ELECTRICAL CODE, ARTICLE 760. STEM SHALL TRANSMIT ALARM, SUPERVISORY AND TROUBLE SIGNAL TO AN APPROVED

TATION IN ACCORDANCE WITH 2022 NFPA 72 AND CBC 907.6.6. SHALL PROVIDE A COMPLETE AND FUNCTIONAL CODE COMPLIANT SYSTEM WITH ALL

DWARE, DEVICES, PROGRAMMING AND POINT/DEVICE DESCRIPTION SCHEDULES. CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING

BE RESPONSIBLE FOR ESTABLISHING A FIRE SYSTEM MONITORING CONTRACT OR

OF THE FIRE ALARM SYSTEM SHALL NOT BE STARTED UNTIL DETAILED SPECIFICATIONS, IFORNIA STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM PROVED BY THE CALIFORNIA STATE FIRE MARSHAL, AND THE LOCAL FIRE MARSHAL.

FION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM, A SATISFACTORY TEST OF THE 1 SHALL BE MADE IN THE PRESENCE OF THE ENFORCING AGENCY AND SPECIAL INSPECTOR. ALL NOT BE IN OPERATION UNTIL THE IOR AND THE LOCAL FIRE MARSHAL HAS VERIFIED O OFF ON OPERATIONAL CAPACITY OF THE FIRE ALARM SYSTEM.

GINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE FINAL ID /OR TESTING. HALL SUBMIT THE SPECIAL INSPECTOR NFPA CERTIFICATE OF COMPLIANCE FORM TO THE

SENTATIVE FOR SUBMISSION TO THE FIRE DEPARTMENT. STING FINAL APPROVAL OF THE INSTALLATION, THE SYSTEM INSTALLING CONTRACTOR A WRITTEN STATEMENT TO THE INSPECTOR OF RECORD TO THE EFFECT THAT THE SYSTEM ALLED AND COMPLETELY TESTED IN ACCORDANCE WITH 2022 NFPA 72, SECTION 7.5.2 AND 7.6. SHALL PROVIDE INTELLIGIBILITY TESTING USING INTELLIGIBILITY METERS APPROVED FOR

ERENCE NFPA 72 CHAPTER 24. AN STI SCORE OF 7.0 IS A MINIMUM REQUIREMENT. SHALL IDENTIFY ALL ACOUSTICALLY DISTINGUISHABLE SPACES (ADS) ON CONTRACTOR SHOP OR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE

LARM AUDIBLE SOUND LEVEL AT LEAST 15 DBA ABOVE THE AVERAGE AMBIENT SOUND LEVEL

D AREA, BUT NOT LESS THAN 75 DBA AT 10 FEET OR MORE THAN 120 DBA IN TOTAL, SYNCHRONIZED TEMPORAL CODE 3 SOUND. (2022 NFPA 72, 18.4.2.1) VISIBLE NOTIFICATION DEVICES SHALL HAVE THEIR BOTTOMS MOUNTED AT 80" MINIMUM

S AT 96" MAXIMUM FROM FINISHED FLOOR. AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM FROM

R AND NO CLOSER THEN 6" TO A HORIZONTAL STRUCTURE. UAL WARNING DEVICE HAVING A FREQUENCY OF NOT MORE THAN 60 FLASHES PER MINUTE S OR LESS THAN ONE (1) FLASH PER SECOND] SHALL BE INSTALLED TO WARN THE HEARING-IOWN ON THE DRAWINGS. FLASHING VISUAL WARNING DEVICES VIEWABLE WITHIN THE SAME

E SHALL BE SYNCHRONIZED. (2022 NFPA 72, 18.5.3.1, 18.5.3.6 AND 18.5.5.7) ORS SHALL NOT BE ANY CLOSER THAN 1' FROM FIRE SPRINKLERS OR 3' FROM ANY SUPPLY REA OF CONSTRUCTION OR POSSIBLE DAMAGE/CONTAMINATION ON NEWLY INSTALLED FIRE S SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER.

AND HEAT DETECTORS AT LEAST ONE FOOT AWAY FROM FLUORESCENT LIGHT FIXTURES. SHALL AFFIX TO EACH FIELD DEVICE A DEVICE LABEL. DEVICE LABEL SHALL BE ARRANGED TAIL "FIRE ALARM CIRCUIT IDENTIFIERS". INITIATION DEVICES CONNECTED TO EQUIPMENT BY HAVE A LABEL AFFIXED TO MODULE INDICATING THE EQUIPMENT CONNECTED. ONS THROUGH RATED ASSEMBLIES REQUIRING OPENING PROTECTION SHALL BE PROVIDED ATION FIRE STOP SYSTEM AS IDENTIFIED IN CBC CHAPTER 7, UL OR OTHER APPROVED LAB RIA. APPROVED TYPES OF MATERIALS SHALL BE IDENTIFIED WITHIN THE PROJECT

WITHIN THE FIRE ALARM SECTION. AND EXTERIOR CONDUITS TO HAVE WATER TIGHT FITTINGS AND WIRE TO BE APPROVED TIONS.

DARDS, ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED ACH FIRE DEVICE. DO NOT SPLICE THE WIRE. ALL BOXES TO BE SIZED PER CEC.

1 CIRCUITS SHALL BE IN CONDUIT OR RACEWAY WHEN PASSING THROUGH A FLOOR OR WALL 7 FEET ABOVE THE FLOOR. FIRE ALARM WIRING ABOVE CEILING SHALL BE SUPPORTED BY STRUCTURE SO AS NOT TO DAMAGE THE CABLE..

ALL BE ALLOWED FOR FIRE ALARM SYSTEM UNDERGROUND CABLES. RM WIRING SHALL NOT BE INSTALLED IN ANY RACEWAY WITH WIRING IN EXCESS OF 24 VOLT. NEL, REMOTES, AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER

RS SPECIFICATIONS. NO SINGLE DEVICE SHALL EXCEED 20 LBS. WITHOUT SPECIAL MOUNTING 1 EQUIPMENT BRANCH CIRCUITS SHALL BE DEDICATED AS PER 2022 NFPA 72, 10.6.5.1.2 AND ITS

LEARLY LABELED AT THE FIRE ALARM CONTROL PANEL. EQUIPMENT POWER SOURCE CIRCUITS SHALL BE IDENTIFIED AT THE POWER SOURCE PER 0.6.5.2. USING A RED CLEARLY MARKED DISCONNECT WITH LOCK-ON CAPABILITY. ITH ELECTRICAL.

ASSOCIATED WITH EMERGENCY VOICE ALARM COMMUNICATION SYSTEMS (EVAC) SHALL BE R USE, INSTALLED IN COMPLIANCE WITH CBC SECTIONS 11B-305 AND 11B-308. SIBILITY IS NOT AVAILABLE TO THE NEW FIRE ALARM DEVICES LOCATED ABOVE THE SPACES, PROVIDE ACCESS PANELS TO THESE DEVICES, COORDINATE PRIOR TO THE

OR SHALL PROVIDE AS-BUILT SHOP DRAWINGS INDICATING CIRCUITING OF ALL DETECTOR AS VICES IN ALL THE BUILDINGS OF THIS PROJECT. AS-BUILT DRAWINGS SHALL BE STORED IN CUMENT CABINET INSTALLED ADJACENT TO FIRE ALARM CONTROL PANEL OR LOCATION AUTHORITY HAVING JURISDICTION.

MENTATION CABINET TO BE INSTALLED PROXIMAL TO FACP (2022 NFPA 72, 7,7,2,1), ALL MENTATION SHALL BE STORED IN THE DOCUMENTATION CABINET (2022 NFPA 72 7.7.2.3). THE ON CABINET TO BE PROMINENTLY LABELED "SYSTEM RECORD DOCUMENTS" (2022 NFPA 72

D INSTALLATION METHOD OF CONDUCTORS TO NEW FIRE ALARM APPLIANCES SHALL BE CEALED SPACES ABOVE CEILINGS OR WALLS, ALL CONDUCTORS USED IN CONCEALED BE PLENUM RATED. IF INSTALLATION OF CONDUCTORS IN CONCEALED SPACES IS NOT DUCTORS SHALL BE INSTALLED INSIDE OF CONDUIT ATTACHED FLUSH TO WALLS AND ALLING CONTRACTOR SHALL PATCH, REPAIR AND MATCH ALL FINISHES OF EXISTING THEIR ORIGINAL CONDITION.

| EQUIPMENT ANCHORAGE NOTES   |   |   |  |  | AGENCY<br>APPROVAL:  |  |  |   |
|---|---|---|--|--|--|--|--|---|
|   | SYMBOL                                    | QTY   | EXISTING   | MANUFACTURER   | PART NO  | DESCRIPTION  | CSFM   |   |
| APPLICABLE CODE: 2022 CBC<br><u>MEP COMPONENT ANCHORAGE NOTE</u><br>ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE<br>DETAILS ON THE DSA-APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE<br>ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC<br>DETAILS A 442 TUPOLICUL 46474 4 20 AND ASSOC 7 40 CUMPTERS 40 20 AND 202 | [FACU]                                    | 1   | NEW  | NOTIFIER   | N16X   | INTELLIGENT FIRE ALARM PANE<br>WITH ONE SLC LOOP, 10"<br>TOUCHSCREEN DISPLAY, 4 NACS<br>AND POWER SUPPLY IN A BLACK<br>ENCLOSURE.<br>N16X WITH DISPLAY. INTELLIGEN<br>FIRE ALARM WITH ONE SLC LOOP | - 7165-0028:0516   |   |
| <ol> <li>ALL PERMANENT EQUIPMENT AND COMPONENTS.</li> <li>1. ALL PERMANENT EQUIPMENT AND COMPONENTS.</li> <li>2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED)<br/>TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY<br/>ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT</li> </ol>   |   | 1   | NEW  | NOTIFIER   | CPU-N16LD  | 10" TOUCHSCREEN DISPLAY, 4<br>NACS, AND POWER SUPPLY;<br>CHASSIS MOUNTED FOR USE IN<br>CAB-5 SERIES CABINET.<br>120 VAC DIGITAL AUDIO  | 7165-0028:0516<br>A                                      |   |
| RECEPTACLES HAVING A FLEXIBLE CABLE.<br>3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A<br>CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT<br>DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY<br>DSA  |   | 1   | NEW  | NOTIFIER   | DAA2-5070  | AMPLIFIER (50 W, 70VRMS), MAX<br>ALARM CURRENT<br>SIGNALING LINE MODULE<br>PROVIDES A SIGNALING LINE<br>CIRCUIT OF 159 ADDRESSABLE   | 7165-0028:0224   |   |
| THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE<br>BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS<br>SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING,<br>AND CONDULT FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL                                       |   | 2   | NEW  | NOTIFIER   | SLM-318<br>PMB-AUX   | POINTS. ADD SLM-318 UNITS TO<br>EXPAND SLC CAPABILITY. SEE<br>DN-62115.<br>ADDRESSABLE POWER<br>SUPPLY/BATTERY CHARGER   | - 7165-0028:0224   | SK  |
| A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR<br>LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.<br>B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS  | FATC                                      | 3   | NEW  | GENERIC  | TERMINAL CABINET<br>FCPS-24S6 MAIN BOARD                           | GENERIC FIRE ALARM TERMINAL<br>CABINET<br>FIRE ALARM POWER SUPPLY<br>MAIN BOARD<br>120 VAC DIGITAL AUDIO   | - <u>-</u><br>7315-0075:0206                             |   |
| THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A<br>WALL.<br>THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE<br>APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER   |   | 3   | NEW  | NOTIFIER   | DAA2-5070<br>XP6-MA  | AMPLIFIER (50 W, 70VRMS), MAX<br>ALARM CURRENT<br>SIX ZONE INTERFACE MODULE<br>W/BB-XP<br>DUAL-ACTION ADDRESSABLE  | 7165-0028:0224           7300-0028:0219                  | HMC Archite   |
| DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL<br>COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.  |   | 28  | NEW  | NOTIFIER   | NBG-12LX<br>FMM-1  | PULL STATION. INCLUDES KEY<br>LOCKING FEATURE.<br>ADDRESSABLE MONITOR MODUL<br>W/ FLASHSCAN, SUPERVISES<br>CLASS A OR CLASS B OF DRY   | 7150-0028:0199<br>E<br>7300-0028:0219                    | 3584-003-000  |
| APPLICABLE CODE: 2022 CBC   | CM  | 2   | NEW  | NOTIFIER   | FCM-1  | CONTACT INPUT<br>ADDRESSABLE CONTROL<br>MODULE W/ FLASHSCAN, 1 CLAS<br>A OR 1 CLASS B<br>ADDRESSABLE RELAY MODULE V  | S 7300-0028:0219   | 3546 CONCOURS STREET<br>ONTARIO, CA 91764<br>909 989 9979 / www.hmcarchitects.c |
| PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE<br>PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES  |   | 3   | NEW  | NOTIFIER   | FRM-1  | FLASHSCAN, 2 FORM-C DRY<br>CONTACTS<br>INTELLIGENT NON-RELAY   | 7300-0028:0219   |   |
| AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2022 CBC, SECTIONS 1617A.1.24, 1617A.1.25, AND 1617A.1.26.<br>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  |   | 1   | NEW  | NOTIFIER   | DNR W/FSP-951R<br>FST-951H W/B300-6                                | PHOTOELECTRIC DUCT<br>DETECTOR/ FSP-951R.<br>FLASHSCAN AND CLIP MODE.<br>LOW-PROFILE INTELLIGENT<br>190°F/88°C FIXED THERMAL   | 3240-1653:0209<br>7272-0028:0503<br>7270-0028:0502       |   |
| INSTALLATION GUIDE (E.G., HCAI OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION<br>GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND<br>BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY<br>OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.   | <u>(</u> <u>s</u> )                       | 139   | NEW  | NOTIFIER   | FSP-951 W/B300-6   | SENSOR. FLASHSCAN ONLY.<br>ADDRESSABLE LOW-PROFILE<br>PHOTOELECTRIC SMOKE<br>DETECTOR. FLASHSCAN ONLY.   | 7300-1653:0109<br>7272-0028:0503<br>7300-1653:0109       |   |
| MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS<br>(E):<br>MP MD PP E OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC<br>NOTES AND DETAILS   | WP<br>WP                                  | 27<br>42                                      | NEW  | SYSTEM SENSOR<br>SYSTEM SENSOR   | SPSRK<br>SPSCWL  | OUTDOOR SPEAKER STROBE,<br>STANDARD CD<br>SPEAKER/STROBE CEILING<br>MOUNT WHITE  | 7320-1653:0201<br>7320-1653:0521                         |   |
| MP MD PP E OPTION 2: SHALL COMPLY WITH THE APPLICABLE HCAI PRE-APPROVAL (OPM#)  | × ·                                       | 9   | NEW  | SYSTEM SENSOR  | SWLED  | STROBE, WALL, WHITE  | 7125-1653:0533   |   |
|   |   | DESCR   |  | FIRE ALAR  | SERVES   | EDULE<br>ENVIRONMENT   | NOTES  | KEYNOTES  |
| GOVERNING CODES & APPLICABLE STANDARDS  | A<br>B<br>C                               | 2#16 UTP<br>2#14 UTP<br>2#16 STP              | FPLR, SOLII<br>FPLR, SOLII<br>FPLR, SOLII                | COAT COAT CRED/BLK CR | SLC INTELLIGENT LOOF<br>NAC STROBE<br>VOICE (SPEAKER)              | USE       INTERIOR       INTERIOR       INTERIOR       INTERIOR  |  |   |
| TITLE 24 CODES:1.2022 CALIFORNIA BUILDING STANDARD ADMINISTRATIVE CODE (CAC), (PART 1, TITLE 24, CCR).2.2022 CALIFORNIA BUILDING CODE (CBC), VOLUMES 1 AND 2 (PART 2, TITLE 24, CCR). (2021 EDITION   | D<br>E<br>P<br>S                          | 2#16 UTP<br>4#16 UTP<br>2#14 UTP<br>4#16 UTP  | FPLR, SOLII<br>FPLR, SOLII<br>FPLR, SOLII<br>FPLR, SOLII | D RED/BLK I<br>D RED/BLK F<br>D RED/BLK 2<br>D RED/BLK 5   | DC CIRCUIT<br>FAA RS485 COMM<br>24VDC POWER<br>SBUS                | INTERIOR<br>INTERIOR<br>INTERIOR<br>INTERIOR   |  |   |
| <ul> <li>INTERNATIONAL BUILDING CODE WITH 2022 CALIFORNIA AMENDMENTS.)</li> <li>3. 2022 CALIFORNIA ELECTRICAL CODE, (PART 3, TITLE 24, CCR). (2020 EDITION NATIONAL ELECTRICAL CODE WITH 2022 CALIFORNIA AMENDMENTS).</li> </ul>  | AU<br>BU                                  | 2#16 UTP<br>2#14 UTP                          | WP#AQ225<br>WP#AQ226                                     | RED/BLK S<br>RED/BLK N   | SLC ADDRESS LOOP<br>NAC STROBE (VISUAL)                            | EXTERIOR/UDGND DIRI<br>EXTERIOR/UDGND DIRI   | ECT BURIAL CABLE<br>ECT BURIAL CABLE                     |   |
| 4. 2022 CALIFORNIA MECHANICAL CODE (CMC), (PART 4, TITLE 24, CCR). (2021 EDITION IAPMO UNIFORM MECHANICAL CODE WITH 2022 CALIFORNIA AMENDMENTS).  | CU<br>DU<br>EU                            | 2#14 STP<br>2#16 UTP<br>4#16 UTP              | WP#AQ294           WP#AQ225           WP#AQ225           | RED/BLKMRED/BLKINRED/BLKF  | NAC VOICE (VISUAL)<br>NITIATE DEVICE CIRCUI<br>FAA RS485 COMM      | EXTERIOR/UDGND DIRI<br>EXTERIOR/UDGND DIRI<br>EXTERIOR/UDGND DIRI  | ECT BURIAL CABLE<br>ECT BURIAL CABLE<br>ECT BURIAL CABLE |   |
| 5. 2022 CALIFORNIA PLUMBING CODE (CPC), (PART 5, TITLE 24, CCR). (2021 EDITION IAPMO UNIFORM PLUMBING CODE WITH 2022 CALIFORNIA AMENDMENTS).  | PU<br>RU                                  | 2#14 UTP<br>2#16 UTP                          | WP#AQ226<br>WP#AQ225                                     | RED/BLK 2<br>RED/BLK 5   | 24VDC POWER<br>SPEAKER RISER                                       | EXTERIOR/UDGND DIRI<br>EXTERIOR/UDGND DIRI   | ECT BURIAL CABLE   |   |
| <ol> <li>2022 CALIFORNIA ENERGY CODE, (PART 6, TITLE 24, CCR). (2022 EDITION CALIFORNIA ENERGY COMMISSION<br/>BUILDING ENERGY EFFICIENCY STANDARDS).</li> <li>2022 CALIFORNIA FIRE CODE (CFC), (PART 9, TITLE 24, CCR). (2021 EDITION INTERNATIONAL FIRE CODE WITH<br/>2022 CALIFORNIA AMENIDMENTS).</li> </ol>   | <u>NOTE</u><br>1. ALL<br>2. MIN<br>3. ALL | <u>S:</u><br>CONDUCT<br>IIMUM CONI<br>SURFACE | ORS SHALL BE<br>DUIT SIZE IS 3/4<br>ROUTED RACE          | COPPER AND SO<br>4" - CONCEALED IN<br>WAYS SHALL BE V  | LID - STRANDED COND<br>N CEILING SPACE OR AF<br>VIREMOLD OR APPROV | DUCTOR IS NOT ACCEPTABLE<br>PPROPRIATE WALLS.<br>/ED EQUAL.  |  |   |
| <ol> <li>2022 CALIFORNIA REFERENCE CODE, (PART 12, TITLE 24. CCR).</li> </ol>   |   | <u>CABLE AI</u><br>STP<br>SLC                 | BBREVIATIONS<br>SHIELDED<br>SIGNAL LI                    | <u>:</u><br>) TWISTED PAIR<br>NE CIRCUIT   | PA<br>UTP  | PUBLIC ADDRESS<br>UNSHIELDED TWISTED PA  | IR   |   |
| REFERENCE CODE SECTIONS FOR APPLICABLE STANDARDS:         1.       2022 CBC, CHAPTER 35.  |   | NAC<br>IDC                                    | NOTES  |  |  |  |  |   |
| <ol> <li>2022 CFC, CHAPTER 80.</li> <li>2022 NFPA 72. AS AMENDED.</li> </ol>  |   |   |  |  |  |  |  |   |
|   | EXAMF                                     | IN<br>PLE:                                    | ITIATING DE  | EVICES   | EXAMPLE:   | AUDIBLE / VISUAL I   | DEVICES  |   |
| FIRE ALARM MONITORING NOTE  |   |   |  |  | ⊠ N1-1-1   | APPLIANCE CANDE  | ELA RATING   |   |
| AUTOMATIC FIRE ALARM SYSTEMS SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN<br>APPROVED SUPERVISING STATION AS REQUIRED BY NFPA 72 AS AMENDED BY ARTICLE 91. THE SUPERVISING<br>STATION SHALL BE LISTED AS EITHER UUFX OR UUJS BY UNDERWRITERS LABORATORY OR SHALL MEET THE  |   |   | - DEVICE RE  | FERENCE NUMBE  | R CRS  |  |  |   |
| REQUIREMENTS OF FACTORY MUTUAL RESEARCH APPROVAL STANDARD 3011. SUPERVISION OF SYSTEM AND LEASED TELEPHONE LINES SHALL BE ARRANGED BY DISTRICT.   |   |   | - SIGNALING  | M = MODULE<br>LINE CIRCUIT<br>MBOL (SMOKF SE   | NSOR)  | FACP/POWER SUP   | PLY REFERENCE  | CONSULTANT:   |
| FIRE ALARM SHEET INDEX  |   |   |  | X  | ,  | DEVICE SYMBOL (S   | MOKE SENSOR)   |   |
| SHEET NUMBER     SHEET NAME       FA0.01     FIRE ALARM LEGEND AND NOTES       FA0.03     FIRE ALARM CALCULATIONS       FA0.04     FIRE ALARM RISER DIAGRAM   | S <sup>-</sup> Cl                         | TYLE:4<br>LASS:B                              |  |  |  |  |  | CONSULTING  |
| FA1.11       FIRE ALARM SITE PLAN         FA2.11       FIRE ALARM BLDG B & C FLOOR PLANS - DEMOLITION         FA2.12       FIRE ALARM BLDG B & C FLOOR PLANS         FA2.13       FIRE ALARM BLDG B & C FLOOR PLANS   |   |   | SCOPE (  | DF WORK A  |  | INFORMATION  |  | ENGINEERS   |
| FA2.13       FIRE ALARM BLDG A & D FLOOR FLANS - DEMOLITION         FA2.14       FIRE ALARM BLDG A & D FLOOR PLANS         FA4.12       FIRE ALARM BLDG C ROOF PLAN         FA10.11       FIRE ALARM DETAILS  |   | 1. PROVID                                     | E AND EXPAND   | NEW FIRE ALARM   | I SYSTEM TO EXISTING   | G CAMPUS BUILDINGS.  |  | E 3 MI  |
|   |   |   |  |  |  |  |  | ₩ f and<br>★  |
|   |   | OCCUPAN                                       | CY CLASSIFICA  | ATION: BUILDING B<br>N: BUILDING B: V-E  | 8 & C: E<br>3 BUILDING C: V-A                                      |  |  | STATE   |
|   |   | NUMBER (                                      | DF STORIES: 1 :<br>R PROTECTION                          | STORY<br>J: NO   |  |  |  | FACILITY:   |
|   |   | ALTERNAT                                      | IVE PROTECTI   | ON: NOT APPLICA<br>AL, AUTOMATIC FI  | BLE<br>RE ALARM SYSTEM   |  |  | 498 POINT SAN PEDRO R<br>SAN RAFAEL CA 94901                                    |
|   |   |   |  |  |  |  |  | PROJECT:<br>SRCS SAN PEDRO ELEMI  |
|   |   |   |  |  |  |  |  | SHEET NAME:<br>FIRE ALARM LEGEND AN   |
|   |   |   |  |  |  |  |  | DSA SUBMITT   |
|   |   |   |  |  |  |  |  | DATE: <b>2024.10.01</b>   |

SHEET

![](_page_43_Picture_68.jpeg)

CLIENT PROJ NO:

### **SUBMITTAL**

### RM LEGEND AND NOTES

N PEDRO ELEMENTARY SCHOOL HVAC & FA

### SAN PEDRO RD EL CA 94901

![](_page_43_Picture_74.jpeg)

![](_page_43_Picture_75.jpeg)

www.lpengineers.com Job #: 24-2053

MEP & FS / Sustainability / CxA 1209 Pleasant Grove Blvd. Roseville, CA 95678 p 916-771-0778

![](_page_43_Picture_80.jpeg)

|          |                          |                                     | PANEL<br>(SECOND/     | . P1 (N16X) BATTERY CALCU<br>Ary power source requi | LATION<br>REMENTS)      |                            |                                      |                |
|----------|--------------------------|-------------------------------------|-----------------------|---|-------------------------|----------------------------|--------------------------------------|----------------|
|          |                          |                                     | *PANEL POWER REQUIREN | NENT OF 8.111A EXCEEDS A                            | VAILABLE CAPACITY OF 6A |                            |                                      |                |
|          |                          | ΟΤΥ                                 | ΡΔΡΤ ΝΟ               | DESCRIPTION   | STANDBY CURR            | ENT (AMPS)                 | SECONDARY ALARM                      | CURRENT (AMPS) |
|          |                          | QTT                                 |                       | N16x with display.                                  |                         |                            |                                      | IVIAL          |
|          |                          |                                     |                       | Intelligent fire alarm with<br>one SLC loop, 10"    |                         |                            |                                      |                |
|          |                          | 1                                   | CPU-N16LD             | touchscreen display, 4                              | 0.269                   | .269                       | 0.279                                | .279           |
|          |                          |                                     |                       | chassis mounted for use in                          |                         |                            |                                      |                |
|          |                          |                                     |                       | a CAB-5 Series cabinet.                             |                         |                            |                                      |                |
| PANEL CC | <b>MPONENTS</b>          | 1                                   | DAA2-5070             | Amplifier (50 W, 70VRMS),                           | 0.4                     | .4                         | 3.75                                 | 3.75           |
|          |                          | 1                                   |                       | Addressable Power                                   | 0.006                   | 006                        | 0.11                                 | 11             |
|          |                          | 1                                   | FIMD-AUX              | Supply/Battery Charger                              | 0.090                   | .030                       | 0.11                                 | . ! !          |
|          |                          |                                     |                       | provides a Signaling Line                           |                         |                            |                                      |                |
|          |                          | 2                                   | SLM-318               | points. Add SLM-318 units                           | 0.159                   | .318                       | 0.276                                | .552           |
|          |                          |                                     |                       | to expand SLC capability.<br>See DN-62115.          |                         |                            |                                      |                |
| CIRCUIT  | SYMBOL                   | QTY                                 | PART NO               | DESCRIPTION   | CURRENT DRAW (A)        | TOTAL (A)                  | CURRENT DRAW (A)                     | TOTAL (A)      |
|          | $\langle s \rangle$      | 113                                 | FSP-951 w/B300-6      | Addressable low-profile<br>photoelectric smoke      | 0.0002                  | .0226                      | 0.0045                               | .5085          |
|          |                          |                                     |                       | detector. FlashScan only.                           |                         |                            |                                      |                |
|          | $\langle H \rangle$      | 40                                  | FST-951H w/B300-6     | 190°F/88°C fixed thermal                            | 0.0002                  | .008                       | 0.0045                               | .18            |
| P1•L1    |                          |                                     |                       | sensor. FlashScan only.<br>Dual-action addressable  |                         |                            |                                      |                |
|          | F                        | 22                                  | NBG-12LX              | pull station. Includes key                          | 0.000375                | .00825                     | 0.005                                | .11            |
|          |                          | 1                                   | ΧΡ6-ΜΔ                | Six Zone Interface Module                           | 0.002                   | 002                        | 0.04                                 | 04             |
|          |                          |                                     |                       | Intelligent Non-Relay                               | 0.002                   | .002                       | 0.04                                 | .04            |
|          | $\langle s \rangle$      | 1                                   | DNR w/FSP-951R        | Detector/ FSP-951R.                                 | 0.0002                  | .0002                      | 0.0045                               | .0045          |
|          |                          |                                     |                       | FlashScan and CLIP mode.                            |                         |                            |                                      |                |
|          | (AOM) and                | 2                                   | FCM-1                 | Addressable Control<br>Module W/ FlashScan, 1       | 0.000485                | .00097                     | 0.0065                               | .013           |
|          | <u> </u>                 | -                                   |                       | Class A or 1 Class B<br>Addressable Monitor         |                         |                            | 0.0000                               |                |
|          | AIM                      | 0                                   |                       | Module W/ FlashScan,                                | 0.00025                 | 0007                       | 0.005                                | 01             |
|          |                          | 2                                   | F IVIIVI- I           | Class B of Dry Contact                              | 0.00035                 | .0007                      | 0.005                                | .01            |
| P1•L2    |                          |                                     |                       | Input<br>Addressable Relay Module                   |                         |                            |                                      |                |
|          | AOM                      | 3                                   | FRM-1                 | W/ FlashScan, 2 Form-C<br>Dry Contacts              | 0.000255                | .000765                    | 0.0065                               | .0195          |
|          |                          | 26                                  | FCD 051/D200 6        | Addressable low-profile                             | 0.0002                  | 0050                       | 0.0045                               | 117            |
|          |                          | 20                                  | FSP-951 W/B300-0      | detector. FlashScan only.                           | 0.0002                  | .0052                      | 0.0045                               | .117           |
|          | $\langle H \rangle$      | 3                                   | EST-951H w/B300-6     | Low-profile intelligent                             | 0.0002                  | 0006                       | 0.0045                               | 0135           |
|          |                          |                                     |                       | sensor. FlashScan only.                             | 0.0002                  | .0000                      | 0.0040                               | .0100          |
|          | F                        | 6                                   | NBG-12LX              | Dual-action addressable pull station. Includes key  | 0.000375                | .00225                     | 0.005                                | .03            |
|          | ▼                        |                                     |                       | locking feature.                                    |                         |                            |                                      |                |
|          | <u> </u>                 | 5                                   | SPSCWL                | Mount, White 75cd                                   | 0                       |                            | 0.111                                | .555           |
| P1•N1    | WP                       | 2                                   | SPSRK                 | Outdoor Speaker Strobe,<br>Standard cd 110cd        | 0                       |                            | 0.202                                | .404           |
|          | X                        | 2                                   | SWLED                 | Strobe, Wall, White 15cd                            | 0                       |                            | 0.018                                | .036           |
|          |                          | 3                                   | SPSCWI                | Speaker/Strobe Ceiling                              | 0                       |                            | 0.041                                | .123           |
|          | C                        |                                     | 00000                 | Mount, White 15cd<br>Speaker/Strobe Ceiling         | -                       |                            |                                      |                |
| P1•N2    | ∟ ⊂ c                    | 2                                   | SPSCWL                | Mount, White 75cd                                   | 0                       |                            | 0.111                                | .222           |
|          | WP                       | 2                                   | SPSRK                 | Outdoor Speaker Strobe,<br>Standard cd 110cd        | 0                       |                            | 0.202                                | .404           |
|          | X                        | 1                                   | SWLED                 | Strobe, Wall, White 15cd                            | 0                       |                            | 0.018                                | .018           |
|          |                          | 2                                   | SPSCWL                | Speaker/Strobe Ceiling                              | 0                       |                            | 0.041                                | .082           |
| D4 NO    | C                        |                                     | 000014                | IVIOUNT, VVNIte 15cd<br>Speaker/Strobe Ceiling      |                         |                            | 0.000                                | 100            |
| P1•N3    | C C                      | 2                                   | SPSCWL                | Mount, White 30cd                                   | U                       |                            | U.Ub3                                | .120           |
|          | м<br>МР                  | 2                                   | SPSRK                 | Standard cd 110cd                                   | 0                       |                            | 0.202                                | .404           |
|          |                          | 7                                   | SPSCWL                | Speaker/Strobe Ceiling<br>Mount White 0.25w         | 0                       |                            | 0                                    |                |
| P1•S1    |                          | 7                                   | SPSCWI                | Speaker/Strobe Ceiling                              | 0                       |                            | 0                                    |                |
|          | C                        | · ·                                 |                       | Mount, White 0.5w                                   | •<br>                   |                            |                                      |                |
|          | WP                       | 6                                   | SPSRK                 | Standard cd 1w                                      |                         |                            | 0                                    |                |
|          |                          |                                     |                       |   | TOTAL STANDBY (A)       | .134535<br>REQUIRED STANDB | TOTAL ALARM (A)<br>Y TIME = 24 HOURS | 8.111          |
|          |                          |                                     |                       |   |                         | REQUIRED ALARM             | TIME = 15 MINUTES                    |                |
|          | SECONDARY S<br>SECONDARY | ALARM LOAD (A)                      |                       | .134535<br>8.111                                    | 24<br>0.25              |                            | 27.2                                 | 3              |
|          | STANDBY AND ALARM        | SUBTOTAL (AMP HOURS)                |                       |   |                         | 29.                        | 26                                   |                |
|          | SECONDARY LOAD REG       | NG FACTOR<br>(UIREMENTS (AMP HOURS) |                       |   |                         | 1.2<br>36.                 | 20<br><b>57</b>                      |                |
|          |                          | /                                   |                       |   |                         |                            |                                      |                |

PROVIDE (2) 12V 55AH BATTERIES \*BATTERY BOX SIZE CAPACITY NOT SPECIFIED. REFER TO MANUFACTURER DOCUMENTATION.

|                               |                                |                             |  | CIRCUIT S                     | ETTINGS            | TOTA                       | _S      |
|-------------------------------|--------------------------------|-----------------------------|--|-------------------------------|--------------------|----------------------------|---------|
|                               |                                |                             |  | Starting Calculation Voltage: | 20.4               | Max. Voltage Drop:         | .55     |
|                               | P4 N1 LUMP                     | SUM REPORT                  |  | Min. Operational Voltage:     | 16                 | End Of Line Voltage:       | 8.85    |
|                               |                                |                             |  | Max. Circuit Current (A):     | 3                  | Voltage Drop Percent:      | 7.62 %  |
|                               |                                |                             |  | Wire Resistance (Ω/kFt):      | 3.07               | Total Circuit Current (A): | .859    |
| Circuit Wiring Properties:    | 'V' 14/2 FPLP/R (NAC) 14 A'    | NG, 2 Cond. Solid Copper    | FPLP/R Analog Unshielded                     | Total Circuit Length (Ft):    | 295                | Spare Current (A):         | 2.141   |
| Distance measur               | ed using drawn segment len     | gths with 10.00 % additiona | al length calculated                         | Total Circuit Resistance (Ω): | 1.809617           | Spare Current (A) Percent: | 71.37 % |
|                               | Symbol                         | Part No.                    | Description                                  | Qty.                          | Device Current (A) | Total Current (A)          |         |
|                               | X                              | SWLED                       | Strobe, Wall, White 15cd                     | 2                             | 0.018              | .036                       |         |
| DEVICE TOTALS                 | Č c                            | SPSCWL                      | Speaker/Strobe Ceiling<br>Mount, White 15cd  | 1                             | 0.041              | .041                       |         |
|                               | ĕ c                            | SPSCWL                      | Speaker/Strobe Ceiling<br>Mount, White 30cd  | 6                             | 0.063              | .378                       |         |
|                               | WP                             | SPSRK                       | Outdoor Speaker Strobe,<br>Standard cd 110cd | 2                             | 0.202              | .404                       |         |
| Calculation Methods:          |                                |                             |  |                               |                    |                            |         |
| Total Resistance (Ω) = Wire R | esistance (Ω/Ft) x 2 x Total ( | Circuit Length (Ft)         |  |                               |                    |                            |         |
| Total Voltage Drop = Total Re | sistance (Ω) x Total Circuit C | urrent (A)                  |  |                               |                    |                            |         |

|   |                               |                          |  | CIRCUIT S                     | ETTINGS            | TOTAL                      | S       |
|---|-------------------------------|--------------------------|--|-------------------------------|--------------------|----------------------------|---------|
|   |                               |                          |  | Starting Calculation Voltage: | 20.4               | Max. Voltage Drop:         | .43     |
|   | P4 N2 LUMP                    | SUM REPORT               |  | Min. Operational Voltage:     | 16                 | End Of Line Voltage:       | 8.97    |
|   |                               |                          |  | Max. Circuit Current (A):     | 3                  | Voltage Drop Percent:      | 7.02 %  |
|   |                               |                          |  | Wire Resistance (Ω/kFt):      | 3.07               | Total Circuit Current (A): | .891    |
| Circuit Wiring Properties   | s: 'V' 14/2 FPLP/R (NAC) 14 A | WG, 2 Cond. Solid Copper | FPLP/R Analog Unshielded                     | Total Circuit Length (Ft):    | 262                | Spare Current (A):         | 2.109   |
| Distance measured using drawn segment lengths with 10.00 % additional length calculated |                               |                          |  | Total Circuit Resistance (Ω): | 1.607988           | Spare Current (A) Percent: | 70.30 % |
|   | Symbol                        | Part No.                 | Description                                  | Qty.                          | Device Current (A) | Total Current (A)          |         |
|   | C C                           | SPSCWL                   | Speaker/Strobe Ceiling<br>Mount, White 30cd  | 1                             | 0.063              | .063                       |         |
| DEVICE TOTALS   | ⊠ c                           | SPSCWL                   | Speaker/Strobe Ceiling<br>Mount, White 75cd  | 2                             | 0.111              | .222                       |         |
|   | WP WP                         | SPSRK                    | Outdoor Speaker Strobe,<br>Standard cd 110cd | 3                             | 0.202              | .606                       |         |

Total Resistance ( $\Omega$ ) = Wire Resistance ( $\Omega$ /Ft) x 2 x Total Circuit Length (Ft) Total Voltage Drop = Total Resistance ( $\Omega$ ) x Total Circuit Current (A)

![](_page_44_Picture_6.jpeg)

|                           |                               |                              |  | CIRCUIT S                     | ETTINGS            | TOTA                       | ALS     |
|---------------------------|-------------------------------|------------------------------|--|-------------------------------|--------------------|----------------------------|---------|
|                           |                               |                              |  | Starting Calculation Voltage: | 20.4               | Max. Voltage Drop:         | .61     |
|                           | P1 N1 LUMP S                  | SUM REPORT                   |  | Min. Operational Voltage:     | 16                 | End Of Line Voltage:       | 8.79    |
|                           |                               |                              |  | Max. Circuit Current (A):     | 1.5                | Voltage Drop Percent:      | 7.91 %  |
|                           |                               |                              |  | Wire Resistance (Ω/kFt):      | 3.07               | Total Circuit Current (A): | .995    |
| Circuit Wiring Properties | : 'V' 14/2 FPLP/R (NAC) 14 AV | NG, 2 Cond. Solid Copper F   | PLP/R Analog Unshielded                      | Total Circuit Length (Ft):    | 264                | Spare Current (A):         | .505    |
| Distance measu            | ured using drawn segment len  | gths with 10.00 % additional | length calculated                            | Total Circuit Resistance (Ω): | 1.620892           | Spare Current (A) Percent: | 33.67 % |
|                           | Symbol                        | Part No.                     | Description                                  | Qty.                          | Device Current (A) | Total Current (A)          |         |
|                           | X                             | SWLED                        | Strobe, Wall, White 15cd                     | 2                             | 0.018              | .036                       |         |
| DEVICE TOTALS             |                               |                              | Speaker/Strobe Ceiling<br>Mount, White 75cd  | 5                             | 0.111              | .555                       |         |
|                           | WP                            | SPSRK                        | Outdoor Speaker Strobe,<br>Standard cd 110cd | 2                             | 0.202              | .404                       |         |
| Calculation Methods:      |                               |                              |  |                               |                    |                            |         |

Total Resistance ( $\Omega$ ) = Wire Resistance ( $\Omega$ /Ft) x 2 x Total Circuit Length (Ft) Total Voltage Drop = Total Resistance ( $\Omega$ ) x Total Circuit Current (A)

|                            |                             |                             |  | CIRCUIT SE                    | TTINGS             | ΤΟΤΑ                       | LS      |
|----------------------------|-----------------------------|-----------------------------|--|-------------------------------|--------------------|----------------------------|---------|
|                            |                             |                             |  | Starting Calculation Voltage: | 20.4               | Max. Voltage Drop:         | .99     |
|                            | P1 N2 LUMP                  | SUM REPORT                  |  | Min. Operational Voltage:     | 16                 | End Of Line Voltage:       | 9.41    |
|                            |                             |                             |  | Max. Circuit Current (A):     | 1.5                | Voltage Drop Percent:      | 4.85 %  |
|                            |                             |                             |  | Wire Resistance (Ω/kFt):      | 3.07               | Total Circuit Current (A): | .767    |
| Circuit Wiring Properties: | 'V' 14/2 FPLP/R (NAC) 14 A  | WG, 2 Cond. Solid Copper    | FPLP/R Analog Unshielded                     | Total Circuit Length (Ft):    | 210                | Spare Current (A):         | .733    |
| Distance measu             | red using drawn segment ler | ngths with 10.00 % addition | al length calculated                         | Total Circuit Resistance (Ω): | 1.289999           | Spare Current (A) Percent: | 48.87 % |
|                            | Symbol                      | Part No.                    | Description                                  | Qty.                          | Device Current (A) | Total Current (A)          |         |
|                            | X                           | SWLED                       | Strobe, Wall, White 15cd                     | 1                             | 0.018              | .018                       |         |
| DEVICE TOTALS              | ▼ c                         | SPSCWL                      | Speaker/Strobe Ceiling<br>Mount, White 15cd  | 3                             | 0.041              | .123                       |         |
|                            | ▼ c                         | SPSCWL                      | Speaker/Strobe Ceiling<br>Mount, White 75cd  | 2                             | 0.111              | .222                       |         |
|                            | V<br>WP                     | SPSRK                       | Outdoor Speaker Strobe,<br>Standard cd 110cd | 2                             | 0.202              | .404                       |         |

Total Resistance ( $\Omega$ ) = Wire Resistance ( $\Omega$ /Ft) x 2 x Total Circuit Length (Ft) Total Voltage Drop = Total Resistance ( $\Omega$ ) x Total Circuit Current (A)

|   |                               |                          |  | CIRCUIT S                     | ETTINGS            | TOTALS                     |         |  |
|---|-------------------------------|--------------------------|--|-------------------------------|--------------------|----------------------------|---------|--|
|   |                               | Startin                  |  | Starting Calculation Voltage: | 20.4               | Max. Voltage Drop:         | .83     |  |
|   | P1 N3 LUMP S                  | SUM REPORT               |  | Min. Operational Voltage:     | 16                 | End Of Line Voltage:       | 9.57    |  |
|   |                               |                          |  | Max. Circuit Current (A):     | 1.5                | Voltage Drop Percent:      | 4.06 %  |  |
|   |                               |                          |  | Wire Resistance (Ω/kFt):      | 3.07               | Total Circuit Current (A): | .612    |  |
| Circuit Wiring Properties:  | : 'V' 14/2 FPLP/R (NAC) 14 AV | NG, 2 Cond. Solid Copper | FPLP/R Analog Unshielded                     | Total Circuit Length (Ft):    | 220                | 220 Spare Current (A):     |         |  |
| Distance measured using drawn segment lengths with 10.00 % additional length calculated |                               |                          |  | Total Circuit Resistance (Ω): | 1.35334            | Spare Current (A) Percent: | 59.20 % |  |
|   | Symbol Part No.               |                          | Description                                  | Qty.                          | Device Current (A) | Total Current (A)          |         |  |
|   | × c                           | SPSCWL                   | Speaker/Strobe Ceiling<br>Mount, White 15cd  | 2                             | 0.041              | .082                       |         |  |
| DEVICE TOTALS   | ⊠ c                           | SPSCWL                   | Speaker/Strobe Ceiling<br>Mount, White 30cd  | 2                             | 0.063              | .126                       |         |  |
|   |                               | SPSRK                    | Outdoor Speaker Strobe,<br>Standard cd 110cd | 2                             | 0.202              | .404                       |         |  |

|                            |   |                          |  | CIRCUIT S                     | ETTINGS                | TOTA                       | LS      |
|----------------------------|---|--------------------------|--|-------------------------------|------------------------|----------------------------|---------|
|                            |   |                          |  | Starting Calculation Voltage: | 20.4                   | Max. Voltage Drop:         | .83     |
|                            | P1 N3 LUMP  | SUM REPORT               |  | Min. Operational Voltage:     | 16                     | End Of Line Voltage:       | 9.57    |
|                            |   |                          |  | Max. Circuit Current (A):     | 1.5                    | Voltage Drop Percent:      | 4.06 %  |
|                            |   |                          |  | Wire Resistance (Ω/kFt):      | 3.07                   | Total Circuit Current (A): | .612    |
| Circuit Wiring Properties: | 'V' 14/2 FPLP/R (NAC) 14 A  | WG, 2 Cond. Solid Copper | FPLP/R Analog Unshielded                     | Total Circuit Length (Ft):    | 220 Spare Current (A): |                            | .888    |
| Distance measu             | Distance measured using drawn segment lengths with 10.00 % additional length calculated |                          |  |                               | 1.35334                | Spare Current (A) Percent: | 59.20 % |
|                            | Symbol Part No. Description   |                          | Description                                  | Qty.                          | Device Current (A)     | Total Current (A)          |         |
|                            | ⊠ c   | SPSCWL                   | Speaker/Strobe Ceiling<br>Mount, White 15cd  | 2                             | 0.041                  | .082                       |         |
| DEVICE TOTALS              | ⊠ c   | SPSCWL                   | Speaker/Strobe Ceiling<br>Mount, White 30cd  | 2                             | 0.063                  | .126                       |         |
|                            | SPSRK   |                          | Outdoor Speaker Strobe,<br>Standard cd 110cd | 2                             | 0.202                  | .404                       |         |

Total Resistance ( $\Omega$ ) = Wire Resistance ( $\Omega$ /Ft) x 2 x Total Circuit Length (Ft) Total Voltage Drop = Total Resistance ( $\Omega$ ) x Total Circuit Current (A)

|   |                               |                          |  | CIRCUIT SE                    | ETTINGS            | TOTA                       | LS      |
|---|-------------------------------|--------------------------|--|-------------------------------|--------------------|----------------------------|---------|
|   |                               |                          |  | Starting Calculation Voltage: | 20.4               | Max. Voltage Drop:         | .27     |
|   | P2 N1 LUMP S                  | SUM REPORT               |  | Min. Operational Voltage:     | 16                 | End Of Line Voltage:       | 9.13    |
|   |                               |                          |  | Max. Circuit Current (A):     | 3                  | Voltage Drop Percent:      | 6.25 %  |
|   |                               |                          |  | Wire Resistance (Ω/kFt):      | 3.07               | Total Circuit Current (A): | .068    |
| Circuit Wiring Properties   | : 'V' 14/2 FPLP/R (NAC) 14 AV | WG, 2 Cond. Solid Copper | FPLP/R Analog Unshielded                     | Total Circuit Length (Ft):    | 194                | Spare Current (A):         | .932    |
| Distance measured using drawn segment lengths with 10.00 % additional length calculated |                               |                          |  | Total Circuit Resistance (Ω): | 1.193678           | Spare Current (A) Percent: | 64.40 % |
|   | Symbol                        | Part No.                 | Description                                  | Qty.                          | Device Current (A) | Total Current (A)          |         |
|   | X                             | SWLED                    | Strobe, Wall, White 15cd                     | 1                             | 0.018              | .018                       |         |
| DEVICE TOTALS   | <sup>▼</sup> c                | SPSCWL                   | Speaker/Strobe Ceiling<br>Mount, White 75cd  | 4                             | 0.111              | .444                       |         |
|   | WP WP                         | SPSRK                    | Outdoor Speaker Strobe,<br>Standard cd 110cd | 3                             | 0.202              | .606                       |         |

Total Resistance ( $\Omega$ ) = Wire Resistance ( $\Omega$ /Ft) x 2 x Total Circuit Length (Ft) Total Voltage Drop = Total Resistance ( $\Omega$ ) x Total Circuit Current (A)

|   |                              |                          |  | CIRCUIT SE                    | TTINGS             | TOTA                       | ALS     |
|---|------------------------------|--------------------------|--|-------------------------------|--------------------|----------------------------|---------|
|   |                              |                          |  | Starting Calculation Voltage: | 20.4               | Max. Voltage Drop:         | .2      |
|   | P2 N2 LUMP                   | SUM REPORT               |  | Min. Operational Voltage:     | 16                 | End Of Line Voltage:       | 9.2     |
|   |                              |                          |  | Max. Circuit Current (A):     | 3                  | Voltage Drop Percent:      | 5.87 %  |
|   |                              |                          |  | Wire Resistance (Ω/kFt):      | 3.07               | Total Circuit Current (A): | .993    |
| Circuit Wiring Properties   | : 'V' 14/2 FPLP/R (NAC) 14 A | WG, 2 Cond. Solid Copper | FPLP/R Analog Unshielded                           | Total Circuit Length (Ft):    | 196                | Spare Current (A):         | 2.007   |
| Distance measured using drawn segment lengths with 10.00 % additional length calculated |                              |                          |  | Total Circuit Resistance (Ω): | 1.206016           | Spare Current (A) Percent: | 66.90 % |
|   | Symbol                       | Part No.                 | Description  | Qty.                          | Device Current (A) | Total Current (A)          |         |
|   | X                            | SWLED                    | Strobe, Wall, White 15cd                           | 3                             | 0.018              | .054                       |         |
| DEVICE TOTALS   | DEVICE TOTALS                |                          |  |                               | 0.111              | .333                       |         |
|   | WP                           | SPSRK                    | SPSRK Outdoor Speaker Strobe,<br>Standard cd 110cd |                               | 0.202              | .606                       |         |

Total Resistance ( $\Omega$ ) = Wire Resistance ( $\Omega$ /Ft) x 2 x Total Circuit Length (Ft) Total Voltage Drop = Total Resistance ( $\Omega$ ) x Total Circuit Current (A)

|   |                               |                          |  | CIRCUIT SE                    | TTINGS                     | TOTA                       | _S     |
|---|-------------------------------|--------------------------|--|-------------------------------|----------------------------|----------------------------|--------|
|   |                               |                          |  | Starting Calculation Voltage: | 20.4                       | Max. Voltage Drop:         | .93    |
|   | P3 N1 LUMP                    | SUM REPORT               |  | Min. Operational Voltage:     | 16                         | End Of Line Voltage:       | 8.47   |
|   |                               |                          |  | Max. Circuit Current (A):     | 3                          | Voltage Drop Percent:      | 9.46 % |
|   |                               |                          |  | Wire Resistance (Ω/kFt):      | 3.07                       | Total Circuit Current (A): | .156   |
| Circuit Wiring Properties   | : 'V' 14/2 FPLP/R (NAC) 14 A' | WG, 2 Cond. Solid Copper | FPLP/R Analog Unshielded                     | Total Circuit Length (Ft):    | 272                        | Spare Current (A):         | .844   |
| Distance measured using drawn segment lengths with 10.00 % additional length calculated |                               |                          | Total Circuit Resistance (Ω):                | 1.670082                      | Spare Current (A) Percent: | 61.47 %                    |        |
|   | Symbol                        | Part No.                 | Description                                  | Qty.                          | Device Current (A)         | Total Current (A)          |        |
|   | × c                           | SPSCWL                   | Speaker/Strobe Ceiling<br>Mount, White 30cd  | 2                             | 0.063                      | .126                       |        |
| DEVICE TOTALS   | C C                           | SPSCWL                   | Speaker/Strobe Ceiling<br>Mount, White 75cd  | 2                             | 0.111                      | .222                       |        |
|   | WP                            | SPSRK                    | Outdoor Speaker Strobe,<br>Standard cd 110cd | 4                             | 0.202                      | .808                       |        |

 Total Resistance ( $\Omega$ ) = Wire Resistance ( $\Omega$ /Ft) x 2 x Total Circuit Length (Ft)

 Total Voltage Drop = Total Resistance ( $\Omega$ ) x Total Circuit Current (A)

|                            |                              |                               |  | CIRCUIT S                     | ETTINGS            | ΤΟΤΑ                       | LS      |
|----------------------------|------------------------------|-------------------------------|--|-------------------------------|--------------------|----------------------------|---------|
|                            |                              | Starting Calculation Voltage: |  | 20.4                          | Max. Voltage Drop: | .87                        |         |
|                            | P3 N2 LUMP ና                 | SUM REPORT                    |  | Min. Operational Voltage:     | 16                 | End Of Line Voltage:       | 8.53    |
|                            |                              |                               |  | Max. Circuit Current (A):     | 3                  | Voltage Drop Percent:      | 9.16 %  |
|                            |                              |                               |  | Wire Resistance (Ω/kFt):      | 3.07               | Total Circuit Current (A): | .002    |
| Circuit Wiring Properties: | 'V' 14/2 FPLP/R (NAC) 14 AV  | VG, 2 Cond. Solid Copper      | FPLP/R Analog Unshielded                     | Total Circuit Length (Ft):    | 304                | Spare Current (A):         | .998    |
| Distance measu             | red using drawn segment leng | oths with 10.00 % addition    | al length calculated                         | Total Circuit Resistance (Ω): | 1.864131           | Spare Current (A) Percent: | 66.60 % |
|                            | Symbol                       | Part No.                      | Description                                  | Qty.                          | Device Current (A) | Total Current (A)          |         |
|                            | × c                          | SPSCWL                        | Speaker/Strobe Ceiling<br>Mount, White 30cd  | 1                             | 0.063              | .063                       |         |
| DEVICE TOTALS              | × c                          | SPSCWL                        | Speaker/Strobe Ceiling<br>Mount, White 75cd  | 3                             | 0.111              | .333                       |         |
|                            |                              | SPSRK                         | Outdoor Speaker Strobe,<br>Standard cd 110cd | 3                             | 0.202              | .606                       |         |

Total Resistance ( $\Omega$ ) = Wire Resistance ( $\Omega$ /Ft) x 2 x Total Circuit Length (Ft) Total Voltage Drop = Total Resistance ( $\Omega$ ) x Total Circuit Current (A)

|                               |                                       |                            |  | CIRCUIT S                     | ETTINGS            | TOTALS                     |         |  |
|-------------------------------|---------------------------------------|----------------------------|--|-------------------------------|--------------------|----------------------------|---------|--|
|                               |                                       |                            |  | Starting Calculation Voltage: | 20.4               | Max. Voltage Drop:         | .84     |  |
|                               | P3 N3 LUMP S                          | SUM REPORT                 |  | Min. Operational Voltage:     | 16                 | End Of Line Voltage:       | 9.56    |  |
|                               |                                       |                            |  | Max. Circuit Current (A):     | 3                  | Voltage Drop Percent:      | 4.11 %  |  |
|                               |                                       |                            |  | Wire Resistance (Ω/kFt):      | 3.07               | Total Circuit Current (A): | .795    |  |
| Circuit Wiring Properties     | : 'V' 14/2 FPLP/R (NAC) 14 AV         | NG, 2 Cond. Solid Copper   | FPLP/R Analog Unshielded                     | Total Circuit Length (Ft):    | 172                | Spare Current (A):         | 2.205   |  |
| Distance measu                | ired using drawn segment leng         | gths with 10.00 % addition | al length calculated                         | Total Circuit Resistance (Ω): | 1.054671           | Spare Current (A) Percent: | 73.50 % |  |
|                               | Symbol                                | Part No.                   | Description                                  | Qty.                          | Device Current (A) | Total Current (A)          |         |  |
| DEVICE TOTALS                 | ⊠ c                                   | SPSCWL                     | Speaker/Strobe Ceiling<br>Mount, White 30cd  | 3                             | 0.063              | .189                       |         |  |
|                               | WP                                    | SPSRK                      | Outdoor Speaker Strobe,<br>Standard cd 110cd | 3                             | 0.202              | .606                       |         |  |
| Calculation Methods:          | · · · · · · · · · · · · · · · · · · · |                            |  |                               |                    | · ·                        |         |  |
| Total Resistance (Ω) = Wire I | Resistance (Ω/Ft) x 2 x Total C       | Circuit Length (Ft)        |  |                               |                    |                            |         |  |
| Total Voltage Drop = Total Re | esistance (Ω) x Total Circuit C       | urrent (A)                 |  |                               |                    |                            |         |  |

AGENCY APPROVAL:

![](_page_44_Picture_29.jpeg)

HMC Architects 3584-003-000

ISSUE  $\Delta$  **DESCRIPTION** 

**KEYNOTES** 

NOTES

CONSULTANT:

FACILITY:

SAN RAFAEL CA 94901

PROJECT:

SHEET NAME:

![](_page_44_Picture_39.jpeg)

DATE: 2024.10.01 SHEET:

![](_page_44_Picture_42.jpeg)

CLIENT PROJ NO:

### **DSA SUBMITTAL**

### FIRE ALARM CALCULATIONS

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

### 498 POINT SAN PEDRO RD

![](_page_44_Picture_49.jpeg)

![](_page_44_Picture_50.jpeg)

www.lpengineers.com Job #: 24-2053

MEP & FS / Sustainability / CxA 1209 Pleasant Grove Blvd. Roseville, CA 95678 p 916-771-0778

3546 CONCOURS STREET ONTARIO, CA 91764 909 989 9979 / www.hmcarchitects.com

![](_page_44_Picture_55.jpeg)

![](_page_45_Figure_0.jpeg)

| 0025 P1•L<br>(N)   | 2•M011 F<br>((S)                                  | P1•L2•D026<br>(N)                          | P1•L2•D0<br>(N)   | )27 P1<br>(N)   | L2•M012                | P1•L2•D028 P<br>(N) (N   |                           | P1•L2•D029 F<br>(N) (S)  |   |                             |                                |  |  |  |                          |  |                          |                          |   |                           |                          |   |
|--|---|--|-------------------|---|------------------------|--------------------------|---------------------------|--|---|-----------------------------|--------------------------------|--|--|--|--------------------------|--|--------------------------|--------------------------|---|---------------------------|--------------------------|---|
| P1•L<br>P1•L1•D152<br>N)   | 2•M001 F<br>()<br>(N)<br>(N)<br>(N)               | – — — — — —<br>P1•L2•D008<br>(N)           | P1•L2•D0<br>(N)   | 009 P1<br>(N  | •L2•M002               | P1•L2•D010 F<br>(N) (S)  | P1•L2•D011 F<br>N) (<br>F | P1•L2•M003 F<br>N) ((  | P1•L2•D012 F<br>N) (<br>(S)   | P1•L2•D013 F<br>N) (<br>(S) | P1•L2•D014 P1•<br>[N] (N)<br>F | L2•M004 P1<br>(N<br>S  | •L2•D015 P1<br>(N)<br>S  | •L2•D016 P1<br>(N)<br>S  | •L2•D017 P1•<br>(N)      | L2•D018 P1•<br>(N)   | L2•D019 P1•<br>(N)       | _2•D020 P1•<br>(N)       | PL2•D021 P1•<br>(N)<br>S  | L2•D022 P1•L<br>(N)       | .2•M005 P1•L2<br>(N)     | M006<br>BUILDING D                          |
| P1•L1•D125<br>N)   | P1•L1•D126<br>(N)<br>S 〉                          | P1•L1•I<br>(N)<br><s></s>                  | D127              | P1•L1•D128<br>(N)                                       | P1•L1•D129<br>(N)<br>S | P1•L1•D130<br>(N)<br>S   | P1•L1•D131<br>(A)<br>(N)  | P1•L1•D132<br>(N)<br>S   | P1•L1•D133<br>(N)<br>   | P1•L1•D134<br>(N)<br>S      | P1•L1•D135<br>(N)<br><s></s>   | P1•L1•D136<br>(N)<br>S   | P1•L1•D137<br>(A)<br>(N)   | P1•L1•D138<br>(N)<br>  | P1•L1•D139<br>(N)        | P1•L1•M028<br>(N)<br>F   | P1•L1•D140<br>(N)<br>    | P1•L1•D141<br>(A)<br>(N) | P1•L1•D142<br>(N)<br>S  | P1•L1•D143<br>(N)         | P1•L1•D144<br>(A)<br>(N) | P1•L1•D145<br>(N)                           |
| — — — — — —<br>P1•L1•D101<br>N)  | P1•L1•D102<br>(A)<br>(N)                          | P1•L1•!<br>(N)                             | D103 F<br>(       | P1•L1•M024<br>N)  | P1•L1•D104<br>(N)      | P1•L1•D105<br>(N)        | P1•L1•D106<br>(N)         | P1•L1•D107 (N)   | P1•L1•D108<br>(A)<br>(N)  | P1•L1•D109<br>(N)           | P1•L1•M025<br>(N)              | P1•L1•D110<br>(N)  | P1•L1•D111<br>(N)  | P1•L1•D112<br>(N)  | P1•L1•D113<br>(N)        | — —  | P1•L1•D115<br>(N)        | P1•L1•M026<br>(N)        | P1•L1•D116<br>(N)   | P1•L1•D117  <br>(N)  <br> | P1•L1•D118<br>(N)        | P1•L1•D119<br>(A)<br>(N)<br>H<br>BUILDING C |
| P1•L1•D076<br>N)   | P1•L1•D077<br>(N)<br>S                            | P1•L1•I<br>(A)<br>(N)<br>H                 | D078              | P1•L1•D079<br>(N)                                       | P1•L1•M021<br>(N)      | P1•L1•D080<br>(N)        | P1•L1•D081<br>(N)         | P1•L1•D082<br>(N)  | P1•L1•M022<br>(N)<br>F  | P1•L1•D083<br>(N)           | P1•L1•D084<br>(A)<br>(N)       | P1•L1•D085<br>(A)<br>(N)   | P1•L1•D086<br>(N)  | P1•L1•D087<br>(A)<br>(N)   | P1•L1•D088<br>(A)<br>(N) | P1•L1•D089<br>(N)<br>  | P1•L1•D090<br>(A)<br>(N) | P1•L1•D091<br>(A)<br>(N) | P1•L1•D092<br>(N)   | P1•L1•D093<br>(A)<br>(N)  | P1•L1•M023<br>(N)<br>F   | P1•L1•D094<br>(A)<br>(N)<br>H               |
| <br>1•L1•M016<br>√)  | P1•L1•D053<br>(N)<br>S                            | — — — — — — — — — — — — — — — — — — —      | D054              | — — — — — -<br>P1•L1•D055<br>(N)                        | P1•L1•D056<br>(N)      | P1•L1•M017<br>(N)        | P1•L1•D057<br>(N)         | P1•L1•D058<br>(N)  | P1•L1•D059<br>(N)   | P1•L1•D060<br>(N)           | P1•L1•D061<br>(N)              | P1•L1•D062<br>(A)<br>(N)   | P1•L1•D063<br>(A)<br>(N)   | P1•L1•M018<br>(N)  | P1•L1•D064<br>(N)        | P1•L1•D065<br>(N)<br>S   | P1•L1•D066<br>(N)        | P1•L1•D067<br>(A)<br>(N) | P1•L1•D068<br>(N)   | P1•L1•M019<br>(N)         | P1•L1•D069<br>(N)        | P1•L1•D070<br>(N)<br>S BUILDING B           |
| 1•L1•M010<br>N)  | P1•L1•D031<br>(N)<br>S                            | P1•L1•I<br>(N)                             | D032              | P1•L1•D033<br>(A)<br>(N)                                | P1•L1•D034<br>(N)      | P1•L1•M011<br>(N)        | P1•L1•D035<br>(N)         | P1•L1•D036<br>(N)  | P1•L1•D037<br>(N)   | P1•L1•D038<br>(N)           | P1•L1•M012<br>(N)              | P1•L1•D039<br>(A)<br>(N)   | P1•L1•D040<br>(N)  | P1•L1•D041<br>(N)  | P1•L1•D042<br>(N)        | P1•L1•D043<br>(N)  | P1•L1•M013<br>(N)<br>F   | P1•L1•D044<br>(A)<br>(N) | P1•L1•D045<br>(N)   | P1•L1•D046<br>(N)<br>S    | P1•L1•D047<br>(N)        | P1•L1•D048<br>(A)<br>(N)<br>H               |
| P1•L1•D006<br>A)<br>N)   | P1•L1•D007<br>(A)<br>(N)                          | P1•L1•I<br>(N)                             | D008              | P1•L1•D009<br>(N)                                       | P1•L1•D010<br>(N)      | P1•L1•D011<br>(A)<br>(N) | P1•L1•D012<br>(N)         | P1•L1•D013<br>(N)  | P1•L1•M007<br>(N)   | P1•L1•D014<br>(N)           | P1•L1•D015<br>(A)<br>(N)       | P1•L1•D016<br>(N)  | P1•L1•D017<br>(N)  | P1•L1•D018<br>(A)<br>(N)   | P1•L1•D019<br>(N)        | P1•L1•D020<br>(N)<br>  | P1•L1•M008<br>(N)        | P1•L1•D021<br>(N)        | P1•L1•D022<br>(A)<br>(N)  | P1•L1•D023<br>(N)         | P1•L1•D024<br>(N)        | P1•L1•D025<br>(A)<br>(N)<br>H               |
| (N)<br>P1•N2•08 I<br>P1•S1•14<br>110cd<br>1w<br>WP<br>(N)<br>C<br>P2•N11•08 EC                     | EOL 4.7k  | ]  |                   |   | BUILDING A             |                          |                           |  |   |                             |                                |  |  |  | CTRL. UNIT ANNUNC        | IATION   | NOTIF                    | ICATION FIRE S/          | AFETY CONTROL   |                           |                          |   |
| P2•S1•07<br>110cd<br>1w<br>WP<br>(N)<br>C<br>P2•N2•08<br>P2•S1•12<br>75cd<br>0.5w<br>C<br>(N)<br>V | P2•N2•09<br>P2•S1•13<br>110cd<br>1w<br>WP<br>(N)  | 9 EOL 4.7k<br>EOL 20k                      |                   |   | BUILDING B             |                          |                           | 1 SYSTEM ALAR  | SYSTEM IN   | IPUTS                       | A B C D                        | PUS NAL CONDITION CO<br>PUS NAL CONDIGNAL<br>NS CONTONES CONT<br>NS CONTONES CONT<br>NS CONTONES CONT<br>NS CONTONES CONTONE<br>SUPERIOUS CONTONES<br>CONTONES | DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DUTION<br>DU | N ONDION<br>N CONDITON<br>NAL CONDITON<br>SML COND |                          | NUT DONTROSCONT ACTION AND A CONTROL AND A CONTROL AND A CONTROL AND A CONTRACT A |                          | AF AG AH AI A            |   | MARKS                     |                          |   |
| P3•N1•08 EOL 4.<br>P3•S1•08<br>110cd<br>1w<br>WP<br>(N)  |   |  |                   |   |                        |                          |                           | 2 SMOKE SENS<br>3 HEAT SENSC<br>4 MANUAL PUL<br>5<br>6<br>7<br>8   | SOR/DETECTOR<br>R/DETECTOR<br>L STATION   |                             | 0                              | 0  |  |  |                          |  |                          |                          | 2<br>3<br>4<br>5<br>6<br>7<br>8   |                           |                          |   |
| C  |   |  |                   |   |                        |                          |                           | 9         SYSTEM SUPE           10         DUCT DETEC           11         12           13         14           15         16           16         SYSTEM TROU           17         FIRE ALARM           18         OPEN CIRCU           19         FIRE ALARM           20         21 | RVISORY CONDITIO<br>TOR<br>BLE CONDITION<br>AC POWER FAILURE<br>IT OR GROUND FAU<br>SYSTEM LOW BATT | E<br>ET<br>ERY              |                                |  |  |  |                          |  |                          |                          | 9         10         11         12         13         14         15         16         17         18         19         20         21 |                           |                          |   |
|  |   |  |                   |   |                        |                          | 2                         | SCALE: 1/4" =  | LARM (  | SEQUE                       | A B C D                        | E F G H  | TIONS  | N O P Q I  | R S T U V                | W X Y Z A  | A AB AC AD AE            | AF AG AH AI A            | <u>v</u>  |                           |                          |   |
| P4•N1•08<br>P4•S1•06<br>30cd<br>0.25w<br>C<br>(N)  | P4•N1•09<br>P4•S1•07<br>30cd<br>0.25w<br>C<br>(N) | P4•N′<br>P4•S1<br>110cc<br>1w<br>WP<br>(N) | 1•10<br> •08<br>] | P4•N1•11 EOL 4<br>P4•S1•09<br>30cd<br>0.25w<br>C<br>(N) | BUILDING C             |                          |                           |  |   |                             |                                |  |  |  |                          |  |                          |                          |   |                           |                          |   |
|  |   |  |                   |   | BUILDING D             |                          |                           |  |   |                             |                                |  |  |  |                          |  |                          |                          |   |                           |                          |   |

AGENCY APPROVAL:

![](_page_45_Figure_3.jpeg)

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ISSUE  $\Delta$  **DESCRIPTION** 

**KEYNOTES** 

NOTES

CONSULTANT:

FACILITY:

SAN RAFAEL CA 94901

PROJECT:

SHEET NAME:

![](_page_45_Picture_13.jpeg)

DATE: 2024.10.01 SHEET:

![](_page_45_Picture_17.jpeg)

CLIENT PROJ NO:

### **DSA SUBMITTAL**

### FIRE ALARM RISER DIAGRAM

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

### 498 POINT SAN PEDRO RD

![](_page_45_Picture_24.jpeg)

![](_page_45_Picture_25.jpeg)

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![](_page_45_Picture_29.jpeg)

![](_page_46_Figure_0.jpeg)

![](_page_46_Picture_3.jpeg)

CLIENT PROJ NO:

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_46_Picture_11.jpeg)

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1 EXISTING MAIN CAMPUS VOICE EVACUATION FIRE ALARM CONTROL UNIT W/ MIC. 2 NEW FIRE ALARM TERMINAL CABINET WITH NEW NAC POWER SUPPLY AND NEW AMPLIFIER.

DATE

SAN RAFAEL CITY SCHOOLS

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**REVIEWING AGENCIES** 

![](_page_47_Figure_0.jpeg)

AGENCY APPROVAL:

PLEASE RECYCLE

![](_page_47_Picture_5.jpeg)

CLIENT PROJ NO:

DATE: 2024.10.01

**DSA SUBMITTAL** 

FIRE ALARM BLDG B & C FLOOR PLANS -DEMOLITION

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

FACILITY:

PROJECT:

SHEET NAME:

SHEET:

![](_page_47_Picture_11.jpeg)

![](_page_47_Picture_12.jpeg)

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![](_page_47_Picture_17.jpeg)

![](_page_48_Figure_0.jpeg)

![](_page_48_Picture_11.jpeg)

![](_page_48_Picture_14.jpeg)

![](_page_49_Figure_0.jpeg)

![](_page_49_Figure_2.jpeg)

### **GENERAL NOTES**

- FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO ANY WORK, AND REPORT TO ENGINEERS ANY DISCREPANCIES. UNDERGROUND CONDUITS SHALL BE SCH-40PVC. 1
- 2.

![](_page_49_Picture_6.jpeg)

HMC Architects 3584-003-000

![](_page_49_Picture_8.jpeg)

**KEYNOTES** 

NOTES

CONSULTANT:

FACILITY:

PROJECT:

SHEET NAME:

![](_page_49_Picture_16.jpeg)

DATE: 2024.10.01 SHEET:

![](_page_49_Figure_18.jpeg)

PLEASE RECYCLE

 $\mathbf{\mathbf{n}}$ 

![](_page_49_Picture_20.jpeg)

CLIENT PROJ NO:

### **DSA SUBMITTAL**

FIRE ALARM BLDG A & D FLOOR PLANS -DEMOLITION

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

### 498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

![](_page_49_Picture_26.jpeg)

![](_page_49_Picture_27.jpeg)

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![](_page_49_Picture_32.jpeg)

![](_page_50_Figure_0.jpeg)

![](_page_50_Picture_1.jpeg)

### FIRE ALARM BLDG A FLOOR PLAN SCALE: 1/8" = 1'-0"

![](_page_50_Figure_3.jpeg)

![](_page_50_Figure_4.jpeg)

PLEASE RECYCLE

0 4 8 12 16

SHEET:

![](_page_50_Picture_7.jpeg)

CLIENT PROJ NO:

DSA SUBMITTAL

FIRE ALARM BLDG A & D FLOOR PLANS

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

### 498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

![](_page_50_Picture_12.jpeg)

![](_page_50_Picture_13.jpeg)

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INTEGRATED TO THE FIRE ALARM SYSTEM WITH (1 CONTROL MODULE AND (1) MONITORING MODULE 6 CONNECT RELAY MODULE TO HVAC UNIT FOR

1 NEW FIRE ALARM VOICE EVACUATION PANEL 2 NEW XP6-MA SIX ZONE INTERFACE MODULE. EXISTING PORTABLE CLASSROOMS TO BE TIED INTO NEW FIRE ALARM SYSTEM VIA MODULE. 3 NEW EXTERIOR SPEAKER STROBE MOUNTED AT 6' 4 NEW FIRE ALARM TERMINAL CABINET WITH NEW NAC POWER SUPPLY AND NEW AMPLIFIER.

DATE

HMC Architects

SAN RAFAEL CITY SCHOOLS

**REVIEWING AGENCIES** STAMP HERE

![](_page_51_Figure_0.jpeg)

![](_page_51_Picture_8.jpeg)

CLIENT PROJ NO:

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_51_Picture_15.jpeg)

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1 CONNECT RELAY MODULE TO HVAC UNIT FOR SHUTDOWN (TYP.).

DATE

SAN RAFAEL CITY SCHOOLS

![](_page_51_Picture_21.jpeg)

![](_page_52_Figure_0.jpeg)

![](_page_52_Figure_1.jpeg)

PLEASE RECYCLE

# FA10.11

![](_page_52_Picture_10.jpeg)

### STATE OF CALIFORNIA Mechanical Systems

CERTIFICATE OF COMPLIANCE Project Name: San Pedro ES

Report Page: Date Prepared:

### F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS) Space Conditioning System Information

| 01          | 02       | 03             | 04            |   |
|-------------|----------|----------------|---------------|---|
| System Name | Quantity | System Serving | System Status | S |
| FC-B5       | 1        | Single zone    | Alteration    |   |
| FC-B6       | 1        | Single zone    | Alteration    |   |
| IDU-1       | 1        | Single zone    | Alteration    |   |
| FC-C1       | 1        | Single zone    | Alteration    |   |
| FC-C2       | 1        | Single zone    | Alteration    |   |
| FC-C3       | 1        | Single zone    | Alteration    |   |
| FC-C4       | 1        | Single zone    | Alteration    |   |
| FC-C5       | 1        | Single zone    | Alteration    |   |
| PHP-2       | 1        | Single zone    | Alteration    |   |
| PHP-1       | 1        | Single zone    | Alteration    |   |

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| F. HVAC SYSTEM S    | SUMMARY (DRY & WET SYSTEM          | S)                          |                   |  |                   |                   |  |                   | F. HVAC SYSTE              | M SUMMARY (DRY & WET S          | SYSTEMS)                              |  |             |             |               |              |               |              |             |
|---------------------|------------------------------------|-----------------------------|-------------------|--|-------------------|-------------------|--|-------------------|----------------------------|---------------------------------|---------------------------------------|--|-------------|-------------|---------------|--------------|---------------|--------------|-------------|
| Dry System Equipm   | ent Efficiency (other than Package | Terminal Air Condit         | ioners (PTAC) and | Package Termina  | Heat Pumps (PTH   | P), DX-DOAS and [ | Dual Fuel Heat Pu  | mps)              | Dry System Equ             | ipment Sizing (includes air con | ditioners, condensers, heat pumps     | VRF, furnaces and u                            | nit heaters | and DOAS    | systems)      |              |               |              |             |
| 01                  | 02                                 | 03                          | 04                | 05   | 06                | 07                | 08   | 09                | 01                         | 02                              | 03                                    | 04   | 05          | 06          | 07            | 08           | 09            | 10           | 11          |
|                     |                                    |                             | Heat              | ing Mode<br>Minimum                                      |                   |                   | Cooling Mode<br>Minimum                                  |                   | FC-C1                      | Unitary Heat Pumps              | Air-cooled, split (3 phase)           | NA: Altered per<br>141.0(b)2E and              | 34.7        | 50          | 0             | 44.62        | 46            | 23.91        | 29.         |
| Name or Item<br>Tag | Size Category<br>(Btu/h)           | Rating<br>Condition<br>(°F) | Efficiency Unit   | Efficiency<br>Required per<br>Tables 110.2 /<br>Title 20 | Design Efficiency | Efficiency Unit   | Efficiency<br>Required per<br>Tables 110.2 /<br>Title 20 | Design Efficiency | FC-C2                      | Unitary Heat Pumps              | Air-cooled, split (3 phase)           | NA: Altered per<br>141.0(b)2E and<br>180.2(b)2 | 34.7        | 50          | 0             | 44.62        | 46            | 23.88        | 29.3        |
| FC-B1               | <65,000                            |                             | HSPF2             | 7.5  | 8.9               | SEER2             | 14.3   | 16                |                            |                                 |                                       | NA: Altered per                                |             | 1           |               |              |               |              |             |
| FC-B2               | <65,000                            |                             | HSPF2             | 7.5  | 8.9               | SEER2             | 14.3   | 16                | FC-C3                      | Unitary Heat Pumps              | Air-cooled, split (3 phase)           | 141.0(b)2E and                                 | 34.7        | 50          | 0             | 44.62        | 46            | 23.91        | 29.         |
| FC-B3               | <65,000                            |                             | HSPF2             | 7.5  | 8.9               | SEER2             | 14.3   | 16                |                            |                                 |                                       | 180.2(b)2                                      |             |             |               |              |               |              |             |
| FC-B4               | <65,000                            |                             | HSPF2             | 7.5  | 8.9               | SEER2             | 14.3   | 16                | EC-CA                      | Unitary Heat Pumps              | Air-cooled split (3 phase)            | NA: Altered per                                | 3/1 7       | 50          | 0             | 11.62        | 16            | 23.88        | 20 3        |
| FC-B5               | <65,000                            |                             | HSPF2             | 7.5  | 8.9               | SEER2             | 14.3   | 16                | 10-04                      | officary freat Fullips          | All-cooled, split (5 plase)           | 180.2(b)2                                      | .54.7       | 50          | 0             | 44.02        | 40            | 25.00        | 25.5        |
| FC-B6               | <65,000                            |                             | HSPF2             | 7.5  | 8.9               | SEER2             | 14.3   | 16                |                            |                                 |                                       | NA: Altered per                                | 11          |             |               | -            | ÷             | 100          | +           |
| IDU-1               | <65,000                            |                             | HSPF2             | 7.5  | 9.3               | SEER2             | 14.3   | 24.7              | FC-C5                      | Unitary Heat Pumps              | Air-cooled, split (3 phase)           | 141.0(b)2E and                                 | 34.7        | 50          | 0             | 44.62        | 46            | 23.91        | 29.         |
| FC-C1               | <65,000                            |                             | HSPF2             | 7.5  | 8.9               | SEER2             | 14.3   | 16                |                            |                                 |                                       | 180.2(b)2                                      |             |             |               |              |               |              |             |
| FC-C2               | <65,000                            |                             | HSPF2             | 7.5  | 8.9               | SEER2             | 14.3   | 16                | 101220-004-0010            | C 212 10 2 602 1                |                                       | NA: Altered per                                | monanament  | NUCLEAR AND | 13.5550.555   |              |               | 100000       | 12-12-12-12 |
| FC-C3               | <65,000                            | 1                           | HSPF2             | 7.5  | 8.9               | SEER2             | 14.3   | 16                | PHP-2                      | Unitary Heat Pumps              | Air-cooled, pkg (3 phase)             | 141.0(b)2E and                                 | 63.48       | 32.43       | 40.98         | 40.02        | 37.34         | 4.67         | 3.6         |
| FC-C4               | <65,000                            |                             | HSPF2             | 7.5  | 8.9               | SEER2             | 14.3   | 16                |                            |                                 |                                       | 180.2(D)2                                      |             |             |               |              |               |              |             |
| FC-C5               | <65,000                            |                             | HSPF2             | 7.5  | 8.9               | SEER2             | 14.3   | 16                | PHP-1                      | Unitary Heat Pumps              | Air-cooled, pkg (3 phase)             | 141.0(b)2E and                                 | 70.41       | 42.41       | 40.98         | 49.93        | 46.9          | 12.56        | 27.3        |
| PHP-2               | <65,000                            |                             | HSPF2             | 6.7  | 11.2              | SEER2             | 13.4   | 16.5              |                            | o mary near 1 ampo              |                                       | 180.2(b)2                                      |             |             | 10.50         | 15155        |               | 12.00        |             |
| PHP-1               | <65,000                            |                             | HSPF2             | 6.7  | 11.2              | SEER2             | 13.4   | 16.4              | <sup>1</sup> FOOTNOTES: Fo | uinment shall be the smallest   | size, within the available options of | he desired equipmen                            | t line_nece | ssarv to me | et the desiar | n heatina an | nd cooling lo | ads of the l | building    |

G. PUMPS This section does not apply to this project.

### CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

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| System<br>Name         | FC-B3                 | Quantit<br>y | 1              | Fan System<br>Status              | Alteration                | System<br>Zoning | all other<br>systems | Serving<br>Dwelling<br>Units | Not<br>Serving<br>Dwelling<br>Units | Fan<br>System<br>Airflow<br>(cfm)              | 1,190    | Site<br>Elevation                      | 40       | Economizer                       | NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h |
|------------------------|-----------------------|--------------|----------------|-----------------------------------|---------------------------|------------------|----------------------|------------------------------|-------------------------------------|--|----------|--|----------|----------------------------------|---|
| 01                     | 02                    | 03           |                | 04                                |                           | 0                | )5                   | 06                           | 07                                  | 08   |          | 09                                     |          | 10                               | 11  |
| Fan                    |                       |              |                |                                   |                           |                  | 6.                   |                              | Allow                               | vance  |          |  | Design   |                                  |   |
| Name<br>or Item<br>Tag | Fan Type              | Qty          |                | Component                         | i                         | Airflow<br>Compo | through<br>nent (%)  | Water<br>Gauge<br>(w.g)      | Compone<br>nt<br>Allowance          | Fan<br>Allowance<br>(watt/cfm)<br><sup>3</sup> | Design I | Electrical Inpu<br>Method              | ut Power | Motor<br>Nameplate<br>Horsepower | Design<br>Electrical<br>Input<br>Power (kW)       |
|                        |                       |              | Base All<br>sp | owance for sys<br>aces <=6 floors | tem serving<br>s away     | 1,:              | 190                  |                              | 276                                 |  |          |  |          |                                  |   |
|                        |                       |              | MERV<br>therma | 13-16 Filter up                   | ostream of<br>equipment   | 1,:              | 190                  |                              | 165                                 |  |          |  |          |                                  |   |
| 51                     | Supply                | 1            | Hydron         | nic/DX cooling o<br>pump coil     | coil or heat              | 1,:              | 190                  |                              | 165                                 |  | Man      | ufacturer pro                          | vided    |                                  | 0.18  |
|                        |                       |              | Econ           | omizer Return                     | Damper                    | 1,:              | 190                  |                              | 55                                  |  |          |  |          |                                  |   |
|                        |                       |              |                | Supply Fan Syst                   | tem                       | 1,:              | 190                  |                              | 165                                 |  |          |  |          |                                  |   |
| Supply<br>Allowa       | Fan Base<br>Ince (kW) |              | Ex             | huast/Return/l<br>Allo            | Relief/Trans<br>wance(kW) | fer Fan Ba       | ase                  |                              | Fan S<br>Allowan                    | ystem<br>ce (kW) <sup>3</sup>                  | N NOT    | 1 Fan System Electrical<br>Output (kW) |          |                                  | 0.18  |

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05 06 Space Type Utilizing Recovered Heat 

**Mechanical Systems** CERTIFICATE OF COMPLIANCE Project Name: San Pedro ES

Yes AND

STATE OF CALIFORNIA

Report Page: Date Prepared: C. COMPLIANCE RESULTS Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D., or the table indicated as not compliant for guidance. 06 03 08 09 01 04 05 System Fans/ System Summary erminal Box Controls Pumps Economize 110.1, AND Controls 120.3, AND Cooling Towers Ventilation 140.4(k), 140.4(c), 110.2, 120.2, 110.2, 140.4(d), 140.4(I), 120.1, 160.2 110.2(e)2 **Compliance Results** 140.4(e), 140.4(f), 170.2(c)4I 140.4, 170.2(c)4B 160.2, 160.3 170.2(c) 170.2(c) 170.2(c) (See Table F) 
 (See Table G)
 (See Table H)
 (See Table I)
 (See Table J)
 (See Table K)
 (See Table L) (See Table M) AND Yes AND Yes AND Yes AND

D. EXCEPTIONAL CONDITIONS This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form. E. ADDITIONAL REMARKS This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

Mandatory Measures Compliance (See Table Q for Details)

| pace Conditioning System Info | ormation |                |               |            |                          |
|-------------------------------|----------|----------------|---------------|------------|--------------------------|
| 01                            | 02       | 03             | 04            | 05         | 06                       |
| System Name                   | Quantity | System Serving | System Status | Space Type | Utilizing Recovered Heat |
| FC-B1                         | 1        | Single zone    | Alteration    |            |                          |
| FC-B2                         | 1        | Single zone    | Alteration    |            |                          |
| FC-B3                         | 1        | Single zone    | Alteration    |            |                          |
| FC-B4                         | 1        | Single zone    | Alteration    |            |                          |

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| U-IVICH-E | CERTIFICATE OF | COMPLIANCE   |
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| 6 of 51)  | Project Name:  | San Pedro ES |
| 18/2024   |                |              |
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|           |                |              |

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<sup>2</sup>It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables. <sup>3</sup> If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.

<sup>4</sup> Authority Having Jurisdiction may ask for load calculations used for compliance per 140.4(b) and 170.2(c).

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|----------------|---------------------------|--------------|-------|----------------------|------------|------------------|----------------------|------------------------------|-------------------------------------|-----------------------------------|-------|-------------------|--------|------------|---|--|
|                |                           |              |       |                      |            |                  |                      | Dat                          | te Prepared:                        |                                   |       |                   |        |            | 9/18/20                                       |  |
| H. FAN S       | YSTEMS &                  | & AIR ECO    | NOMIZ | ZERS                 |            |                  |                      |                              |                                     |                                   |       |                   |        |            |   |  |
| System<br>Name | FC-B2                     | Quantit<br>y | 1     | Fan System<br>Status | Alteration | System<br>Zoning | all other<br>systems | Serving<br>Dwelling<br>Units | Not<br>Serving<br>Dwelling<br>Units | Fan<br>System<br>Airflow<br>(cfm) | 1,190 | Site<br>Elevation | 40     | Economizer | NA: Altere<br>package<br>AC or HI<br><54 kBtu |  |
| 01             | 02                        | 03           |       | 04                   |            | 0                | 05                   | 06                           | 07                                  | 08                                |       | 09                |        | 10         | 11  |  |
| Fan            |                           |              |       | 4N                   |            |                  |                      |                              | Allow                               | /ance                             | 2     |                   | Design |            | ÷.  |  |

| Ean                    |                                   |     |   |                                  |                         | Allov                      | wance  |                                  | Design            |                                  |   |
|------------------------|-----------------------------------|-----|---|----------------------------------|-------------------------|----------------------------|--|----------------------------------|-------------------|----------------------------------|---|
| Name<br>or Item<br>Tag | Fan Type                          | Qty | Component   | Airflow through<br>Component (%) | Water<br>Gauge<br>(w.g) | Compone<br>nt<br>Allowance | Fan<br>Allowance<br>(watt/cfm)<br><sup>3</sup> | Design Electrical Inpu<br>Method | it Power          | Motor<br>Nameplate<br>Horsepower | Design<br>Electrica<br>Input<br>Power (kV |
|                        |                                   |     | Base Allowance for system serving<br>spaces <=6 floors away     | 1,190                            |                         | 276                        |  |                                  |                   |                                  |   |
|                        | 1995-1 1996 - 10                  |     | MERV 13-16 Filter upstream of<br>thermal conditioning equipment | 1,190                            |                         | 165                        |  | Manufacturor provided            |                   |                                  |   |
| SF                     | Supply                            | 1   | Hydronic/DX cooling coil or heat<br>pump coil                   | 1,190                            |                         | 165                        |  | Manufacturer pro                 | vided             |                                  | 0.18                                      |
|                        |                                   |     | Economizer Return Damper  | 1,190                            |                         | 55                         |  |                                  |                   |                                  |   |
|                        |                                   |     | Supply Fan System   | 1,190                            |                         | 165                        |  |                                  |                   |                                  |   |
| Suppl<br>Allow         | Supply Fan Base<br>Allowance (kW) |     | Exhuast/Return/Relief/Transf<br>Allowance(kW)                   | fer Fan Base                     |                         | Fan S<br>Allowan           | öystem<br>ice (kW) <sup>3</sup>                | 1                                | Fan Syste<br>Outp | m Electrical<br>ut (kW)          | 0.18                                      |

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COMPLIES

AND Yes AND

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COMPLIES

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| wiechanical Syster                                    | 15   | CALIFORNIA ENERGY COMMISSIO   |
|---|--|---|
| CERTIFICATE OF COMPLIANCE                             | E  | NRCC-MCH  |
| This document is used to a path outlined in 140.4, or | emonstrate compliance for mechanical systems that are within the scope of the 141.0(b)2 for alterations. | he permit application and are demonstrating compliance using the prescriptive |
| Project Name: San Pedro                               | ES Report Page   | e: (Page 1 of 5   |
|   | 498 Point San Pedro Poad P Date Prenar   | red: 9/18/20  |

This table Includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in

02

Wet System Components

Water Economizer

System Piping

Cooling Towers

Pumps

Chillers

Boilers

San Rafael

2

 04
 Total Conditioned Floor Area

 05
 Total Unconditioned Floor Area

06 # of Stories (Habitable Above Grade)

AGENCY **APPROVAL:** DSA #01-121955 FILE #21-39

![](_page_53_Picture_53.jpeg)

### HMC Architects 3584-003-000 3546 CONCOURS STREET

1320E  $\Delta$  **DESCRIPTION** 

**KEYNOTES** 

NOTES

STATE OF CALIFORNIA Mechanical Systems CERTIFICATE OF COMPLIANCE

Project Name: San Pedro ES

01 Project Location (city)

03 Occupancy Types Within Project:

Heating Air System

Cooling Air System

or new)

Classroom 
 Library 
 Warehouse 
 All Other Occupancies

140.4, 170.2(b) or 141.0(b)2 and 180.2(b)2 for alterations.

01

Air System(s)

Mechanical Controls Mechanical Controls (existing to remain, altered

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02 Climate Zone

**B. PROJECT SCOPE** 

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12241

0

1

03

Dry System Components

Ductwork (existing to remain, altered or new)

Air Economizer

Fan Systems

Ventilation

Electric Resistance Heat

Zonal Systems/ Terminal Boxes

| )ry System Equi     | ipment Sizing (includes air co              | nditioners, condensers, heat pumps, VR          | F, furnaces and u                                   | nit heaters a          | and DOAS s        | systems)                               |                                    |                            |                                      |   |
|---------------------|---|---|---|------------------------|-------------------|--|------------------------------------|----------------------------|--------------------------------------|---|
| 01                  | 02  | 03  | 04  | 05                     | 06                | 07                                     | 08                                 | 09                         | 10                                   | 11  |
|                     |   |   |   |                        | Equipme           | ent Sizing pe<br>140.4(a&b)            | er Mechanica<br>), 170.2(c)1 {     | al Schedule<br>& 170.2(c)2 | (kBtu/h)                             |   |
|                     | Equipment Category per                      |   | Smallest Size                                       | Hea                    | ating Outpu       | 1t <sup>2,3</sup>                      | Cooling C                          | Output <sup>2,3</sup>      | Load Calc                            | ulations <sup>3,4</sup>                         |
| Name or Item<br>Tag | Tables 110.2, 140.4(a)2 and<br>170.2(c)3aii | Equipment Type per Tables 110.2 and<br>Title 20 | Available <sup>1</sup><br>140.4(a) and<br>170.2(c)1 | Per Design<br>(kBtu/h) | Rated<br>(kBtu/h) | Supp.<br>Heating<br>Output<br>(kBtu/h) | Sensible<br>Per Design<br>(kBtu/h) | Rated<br>(kBtu/h)          | Total<br>Heating<br>Load<br>(kBtu/h) | Total<br>Sensible<br>Cooling<br>Load<br>(kBtu/h |
| FC-B1               | Unitary Heat Pumps                          | Air-cooled, split (3 phase)                     | NA: Altered per<br>141.0(b)2E and<br>180.2(b)2      | 34.7                   | 50                | 0                                      | 44.69                              | 46                         | 24.39                                | 29.98   |
| FC-B2               | Unitary Heat Pumps                          | Air-cooled, split (3 phase)                     | NA: Altered per<br>141.0(b)2E and<br>180.2(b)2      | 34.7                   | 50                | 0                                      | 44.69                              | 46                         | 24.39                                | 29.98   |
| FC-B3               | Unitary Heat Pumps                          | Air-cooled, split (3 phase)                     | NA: Altered per<br>141.0(b)2E and<br>180.2(b)2      | 34.7                   | 50                | 0                                      | 44.69                              | 46                         | 24.39                                | 29.98   |
| FC-B4               | Unitary Heat Pumps                          | Air-cooled, split (3 phase)                     | NA: Altered per<br>141.0(b)2E and<br>180.2(b)2      | 34.7                   | 50                | 0                                      | 44.64                              | 46                         | 24.04                                | 29.56   |
| FC-B5               | Unitary Heat Pumps                          | Air-cooled, split (3 phase)                     | NA: Altered per<br>141.0(b)2E and<br>180.2(b)2      | 34.7                   | 50                | 0                                      | 44.64                              | 46                         | 24.04                                | 29.56   |
| FC-B6               | Unitary Heat Pumps                          | Air-cooled, split (3 phase)                     | NA: Altered per<br>141.0(b)2E and<br>180.2(b)2      | 34.7                   | 50                | 0                                      | 44.74                              | 46                         | 24.73                                | 30.41   |
| IDU-1               | Unitary Heat Pumps                          | Air-cooled, split (3 phase)                     | NA: Altered per<br>141.0(b)2E and<br>180.2(b)2      | 20.12                  | 29                | 0                                      | 21.58                              | 22                         | 6.02                                 | 5.31  |

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Project Name: San Pedro ES

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|-------------------------|--------------------------------|------------------------|---------------------|-------------------------------------|------------------------------|------------------------|--------------------------|------------------------------|-------------------------------------|--|--------------|---------------------------|--|--|---|
| This table<br>process l | e is used to a<br>oads are exe | demonstro<br>empt from | te comp<br>these re | liance with pres<br>quirements and  | criptive req<br>I do not nee | uirement<br>d to be in | s found in<br>Icluded in | 140.4(c), 1<br>Table H.      | 40.4(e), 140                        | ).4(m), 170.                                   | 2(c)3, and 1 | 70.2(c)4A for             | fan systems.   | Fan systems se                             | erving only                                     |
| System<br>Name          | FC-B1                          | Quantit<br>Y           | 1                   | Fan System<br>Status                | Alteration                   | System<br>Zoning       | all other<br>systems     | Serving<br>Dwelling<br>Units | Not<br>Serving<br>Dwelling<br>Units | Fan<br>System<br>Airflow<br>(cfm)              | 1,190        | Site<br>Elevation         | 40   | Economizer                                 | NA: Altere<br>packaged<br>AC or HP<br><54 kBtu/ |
| 01                      | 02                             | 03                     |                     | 04                                  |                              | 0                      | )5                       | 06                           | 07                                  | 08   |              | 09                        |  | 10   | 11  |
| Fan                     |                                |                        |                     |                                     |                              |                        |                          |                              | Allov                               | vance  |              | Design                    |  |  |   |
| Name<br>or Item<br>Tag  | Fan Type                       | Qty                    |                     | Component                           |                              | Airflow<br>Compoi      | through<br>nent (%)      | Water<br>Gauge<br>(w.g)      | Compone<br>nt<br>Allowance          | Fan<br>Allowance<br>(watt/cfm)<br><sup>3</sup> | Design       | Electrical Inpu<br>Method | Design<br>Dut Power Motor<br>Nameplate<br>Horsepower | Design<br>Electrical<br>Input<br>Power (kW |   |
|                         |                                |                        | Base All<br>sp      | owance for syst<br>aces <=6 floors  | tem serving<br>away          | 1,1                    | 190                      |                              | 276                                 |  |              |                           |  |  |   |
| 65                      | 6 I                            |                        | MERV<br>therma      | 13-16 Filter up<br>I conditioning e | stream of<br>equipment       | 1,1                    | 190                      |                              | 165                                 |  |              | <i>.</i> .                |  |  |   |
| 51                      | Supply                         | 1                      | Hydror              | nic/DX cooling c<br>pump coil       | oil or heat                  | 1,1                    | 190                      |                              | 165                                 |  | ivian        | utacturer pro             | vided  |  | 0.18  |
|                         |                                |                        | Econ                | iomizer Return                      | Damper                       | 1,1                    | 190                      |                              | 55                                  |  |              |                           |  |  |   |
|                         |                                |                        |                     | Supply Fan Syst                     | em                           | 1,1                    | 190                      |                              | 165                                 |  |              |                           |  |  |   |
| Supply                  | Fan Base<br>Ince (kW)          |                        | Ex                  | huast/Return/I<br>Allov             | Relief/Transf<br>wance(kW)   | fer Fan Ba             | ase                      |                              | Fan S<br>Allowan                    | ystem<br>ce (kW) <sup>3</sup>                  |              | 1                         | Fan Syste<br>Outp                                    | em Electrical<br>out (kW)                  | 0.18  |

Generated Date/Time: Report Version: 2022.0.000 Schema Version: rev 20220101

Compliance ID: EnergyPro-4955-0924-3389 Report Generated: 2024-09-18 14:33:49

Documentation Software: EnergyPro

![](_page_53_Picture_68.jpeg)

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT:

SHEET NAME:

![](_page_53_Picture_73.jpeg)

DATE: 2024.10.01 SHEET:

|              | TITLE 24 COMPLIANCE SHEET INDEX  |
|--------------|----------------------------------|
| SHEET NUMBER | SHEET NAME                       |
| T24.1        | TITLE 24 COMPLIANCE CALCULATIONS |
| T24.2        | TITLE 24 COMPLIANCE CALCULATIONS |
| T24.3        | TITLE 24 COMPLIANCE CALCULATIONS |
| T24.4        | TITLE 24 COMPLIANCE CALCULATIONS |
| T24.5        | TITLE 24 COMPLIANCE CALCULATIONS |
| T24.6        | TITLE 24 COMPLIANCE CALCULATIONS |
|              |                                  |

![](_page_53_Picture_77.jpeg)

CLIENT PROJ NO:

### TITLE 24 COMPLIANCE CALCULATIONS

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_53_Picture_83.jpeg)

www.lpengineers.com Job #: 24-2053

MEP & FS / Sustainability / CxA 1209 Pleasant Grove Blvd. Roseville, CA 95678 p 916-771-0778

![](_page_53_Picture_86.jpeg)

![](_page_53_Picture_87.jpeg)

### STATE OF CALIFORNIA **Mechanical Systems** CERTIFICATE OF COMPLIANCE

Project Name: San Pedro ES

Report Page: Date Prepared:

| H. FAN S               | SYSTEMS 8               | AIR ECO      | NOMIZ   | ERS                                  |                           |                  |                      |                              | -                                   |  |  |                           |          |                                  |   |
|------------------------|-------------------------|--------------|---|--------------------------------------|---------------------------|------------------|----------------------|------------------------------|-------------------------------------|--|--|---------------------------|----------|----------------------------------|---|
| System<br>Name         | FC-B6                   | Quantit<br>Y | 1   | Fan System<br>Status                 | Alteration                | System<br>Zoning | all other<br>systems | Serving<br>Dwelling<br>Units | Not<br>Serving<br>Dwelling<br>Units | Fan<br>System<br>Airflow<br>(cfm)              | 1,190                                  | Site<br>Elevation         | 40       | Economizer                       | NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h |
| 01                     | 02                      | 03           |   | 04                                   |                           | (                | 05                   | 06                           | 07                                  | 08   |  | 09                        |          | 10                               | 11  |
| Fan                    |                         |              |   | 10-                                  |                           |                  |                      |                              | Allov                               | vance  |  |                           | Design   |                                  | С.  |
| Name<br>or Item<br>Tag | Fan Type                | Qty          |   | Component                            | t                         | Airflow<br>Compo | through<br>ment (%)  | Water<br>Gauge<br>(w.g)      | Compone<br>nt<br>Allowance          | Fan<br>Allowance<br>(watt/cfm)<br><sup>3</sup> | Design I                               | Electrical Inpu<br>Method | ut Power | Motor<br>Nameplate<br>Horsepower | Design<br>Electrical<br>Input<br>Power (kW        |
|                        |                         |              | Base Allowance for system serving<br>spaces <=6 floors away |                                      | 1,                        | 190              |                      | 276                          |                                     |  |  |                           |          |                                  |   |
|                        |                         |              | MERV<br>therma  | ′ 13-16 Filter up<br>al conditioning | ostream of<br>equipment   | 1,               | 190                  |                              | 165                                 |  |  | <b>2</b> 3                |          |                                  |   |
| SF                     | Supply                  | 1            | Hydror  | nic/DX cooling o<br>pump coil        | coil or heat              | 1,               | 190                  |                              | 165                                 |  | Man                                    | ufacturer pro             | vided    |                                  | 0.18  |
|                        |                         |              | Ecor  | nomizer Return                       | Damper                    | 1,               | 190                  |                              | 55                                  | 1  |  |                           |          |                                  |   |
|                        |                         |              |   | Supply Fan Sys                       | tem                       | 1,               | 190                  |                              | 165                                 |  |  |                           |          |                                  |   |
| Supply<br>Allowa       | / Fan Base<br>ance (kW) |              | E   | /huast/Return<br>Allo                | Relief/Trans<br>wance(kW) | fer Fan B        | ase                  |                              | Fan S<br>Allowan                    | ystem<br>ice (kW) <sup>3</sup>                 | 1 Fan System Electrical<br>Output (kW) |                           |          | 0.18                             |   |

### CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Generated Date/Time: Report Version: 2022.0.000 Schema Version: rev 20220101

STATE OF CALIFORNIA **Mechanical Systems** CERTIFICATE OF COMPLIANCE Project Name: San Pedro ES

Report Page: Date Prepared:

| H. FAN S               | SYSTEMS &               | AIR ECO                                     | NOMIZE         | ERS                               |                           |                  |                      |                              |                                     |  |          |                           |                   |                                  |   |
|------------------------|-------------------------|---|----------------|-----------------------------------|---------------------------|------------------|----------------------|------------------------------|-------------------------------------|--|----------|---------------------------|-------------------|----------------------------------|---|
| System<br>Name         | FC-C2                   | Quantit<br>y                                | 1              | Fan System<br>Status              | Alteration                | System<br>Zoning | all other<br>systems | Serving<br>Dwelling<br>Units | Not<br>Serving<br>Dwelling<br>Units | Fan<br>System<br>Airflow<br>(cfm)              | 1,190    | Site<br>Elevation         | 40                | Economizer                       | NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h |
| 01                     | 02 03 04                |   |                |                                   | 0                         | )5               | 06                   | 07                           | 08                                  | 09   |          |                           | 10                | 11                               |   |
| Fan                    |                         |   |                | hi                                |                           |                  |                      |                              | Allov                               | vance  |          |                           | Design            |                                  | ÷   |
| Name<br>or Item<br>Tag | Fan Type                | Qty   |                | Component                         |                           |                  | through<br>nent (%)  | Water<br>Gauge<br>(w.g)      | Compone<br>nt<br>Allowance          | Fan<br>Allowance<br>(watt/cfm)<br><sup>3</sup> | Design I | Electrical Inpu<br>Method | ut Power          | Motor<br>Nameplate<br>Horsepower | Design<br>Electrical<br>Input<br>Power (kW)       |
|                        |                         |   | Base All<br>sp | owance for sys<br>aces <=6 floors | tem serving<br>away       | 1,:              | 190                  |                              | 276                                 |  |          |                           |                   |                                  |   |
|                        |                         |   | MERV<br>therma | 13-16 Filter up                   | stream of<br>equipment    | 1,:              | 190                  |                              | 165                                 |  |          | <b>v</b> .:               |                   |                                  |   |
| SF                     | Supply                  | 1   | Hydror         | nic/DX cooling o<br>pump coil     | oil or heat               | 1,:              | 190                  |                              | 165                                 |  | Man      | ufacturer pro             | vided             |                                  | 0.18  |
|                        |                         |   | Econ           | omizer Return                     | Damper                    | 1,:              | 190                  |                              | 55                                  |  |          |                           |                   |                                  |   |
|                        |                         |   |                | Supply Fan Syst                   | tem                       | 1,:              | 190                  |                              | 165                                 |  |          |                           |                   |                                  |   |
| Supply<br>Allowa       | / Fan Base<br>ance (kW) | Exhuast/Return/Relief/Tran<br>Allowance(kW) |                |                                   | Relief/Trans<br>wance(kW) | fer Fan Ba       | ase                  |                              | Fan S<br>Allowan                    | ystem<br>ce (kW) <sup>3</sup>                  | A ST     | 1                         | Fan Syste<br>Outp | m Electrical<br>out (kW)         | 0.18  |

### STATE OF CALIFORNIA

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

**Mechanical Systems** CERTIFICATE OF COMPLIANCE Schema Version: rev 20220101

Report Version: 2022.0.000

Generated Date/Time:

Project Name: San Pedro ES

Report Page: Date Prepared:

|                        |                       | 20           |                                  | 10                                |                            | G                | G                    |                              | 2                                   |  |          | 6                        | 2                 |                                  | 31  |
|------------------------|-----------------------|--------------|----------------------------------|-----------------------------------|----------------------------|------------------|----------------------|------------------------------|-------------------------------------|--|----------|--------------------------|-------------------|----------------------------------|---|
| H. FAN S               | YSTEMS &              | AIR ECO      | NOMIZE                           | RS                                |                            |                  |                      |                              |                                     |  |          |                          |                   |                                  |   |
| System<br>Name         | FC-C5                 | Quantit<br>Y | 1 Fan System<br>Status Alteratio |                                   |                            | System<br>Zoning | all other<br>systems | Serving<br>Dwelling<br>Units | Not<br>Serving<br>Dwelling<br>Units | Fan<br>System<br>Airflow<br>(cfm)              | 1,190    | Site<br>Elevation        | 40                | Economizer                       | NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h |
| 01                     | 02                    | 03           |                                  | 04                                | C                          | 15               | 06                   | 07                           | 08                                  |  | 09       |                          | 10                | 11                               |   |
| Fan                    |                       |              | h:                               |                                   |                            |                  | ÷.                   |                              | Allow                               | /ance  | ē        |                          | Design            |                                  |   |
| Name<br>or Item<br>Tag | Fan Type              | Qty          | Component                        |                                   |                            | Airflow<br>Compo | through<br>nent (%)  | Water<br>Gauge<br>(w.g)      | Compone<br>nt<br>Allowance          | Fan<br>Allowance<br>(watt/cfm)<br><sup>3</sup> | Design E | lectrical Inpu<br>Method | it Power          | Motor<br>Nameplate<br>Horsepower | Design<br>Electrical<br>Input<br>Power (kW)       |
|                        |                       |              | Base Allo<br>spa                 | owance for sys<br>aces <=6 floors | tem serving<br>away        | 1,190            |                      |                              | 276                                 |  |          |                          |                   |                                  |   |
|                        | <b>c</b> 1            |              | MERV<br>therma                   | 13-16 Filter up<br>I conditioning | stream of<br>equipment     | 1,:              | 190                  |                              | 165                                 |  |          | e .                      |                   |                                  | 0.10  |
| 51                     | Supply                | 1            | Hydron                           | ic/DX cooling o<br>pump coil      | oil or heat                | 1,190            |                      |                              | 165                                 |  | Mani     | ifacturer pro            | vided             |                                  | 0.18  |
|                        |                       |              | Econ                             | omizer Return                     | Damper                     | 1,3              | 190                  |                              | 55                                  |  |          |                          |                   |                                  |   |
|                        |                       |              |                                  | Supply Fan Syst                   | tem                        | 1,1              | 190                  |                              | 165                                 |  |          |                          |                   |                                  |   |
| Supply<br>Allowa       | Fan Base<br>ince (kW) |              | Ex                               | huast/Return/I<br>Allo            | Relief/Transf<br>wance(kW) | fer Fan Ba       | ise                  |                              | Fan Sy<br>Allowan                   | ystem<br>ce (kW) <sup>3</sup>                  |          | 1                        | Fan Syste<br>Outp | m Electrical<br>ut (kW)          | 0.18  |
|                        |                       | 6 a c        |                                  | V.2                               |                            |                  |                      | 0 X                          |                                     | 6. E   | e        | C                        |                   | 11                               | Q   |

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| CALIFORNIA ENERGY COMMISSION |
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| NRCC-MCH-E                   |
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| 9/18/2024                    |

| STATE OF CALIFORM | AIF        |
|-------------------|------------|
| Mechanica         | l Systems  |
| CERTIFICATE OF    | COMPLIANCE |
|                   |            |

Project Name: San Pedro ES

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CALIFORNIA ENERGY COMMISSION NRCC-MCH-E (Page 11 of 51)

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STATE OF CALIFORNIA

**Mechanical Systems** 

CERTIFICATE OF COMPLIANCE

Project Name: San Pedro ES

| FAN SYSTEMS & AIR ECONOMIZERS   | H. FAN SYSTEMS & AIR ECONOMIZERS  |  |
|---|---|--|
| ystem Jame FC-B5 Quantit y 1 Fan System Status Alteration System Zoning Systems Systems Units Serving Dwelling Units (cfm)  | System<br>NameFC-B4Quantit<br>y1Fan System<br>StatusAlterationSystem<br>System<br>Zoningall other<br>systemsServing<br>Dwelling<br>UnitsNot<br>Serving<br>Dwelling<br>UnitsFan<br>System<br>(cfm)Site<br>Elevation40EconomizerNA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h   |  |
| 01 02 03 04 05 06 07 08 09 10 11  | 01         02         03         04         05         06         07         08         09         10         11  |  |
| Fan<br>Name<br>r Item<br>TagQtyComponentAirflow through<br>Component (%)Water<br>Gauge<br>(w.g)Fan<br>AllowanceFan<br>AllowanceDesign Electrical Input Power<br>MethodMotor<br>Electrical<br>Input<br>Power (kW)      | Fan<br>Name<br>or Item<br>TagPan TypeQtyComponentAirflow through<br>Component (%)Water<br>Gauge<br>(w.g)Water<br>Gauge<br>(w.g)Fan<br>Allowance<br>(w.g)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%)Ban<br>Component<br>(%) <td></td> |  |
| Base Allowance for system serving spaces <= 6 floors away   | Base Allowance for system serving spaces <= 6 floors away   | SAN RAFAEL   |
| SF     Supply     1     Inernal conditioning equipment     1       Hydronic/DX cooling coil or heat<br>pump coil     1,190     165       Economizer Return Damper     1,190     55                                    | SF     Supply     1     Internal conditioning equipment     1       Hydronic/DX cooling coil or heat<br>pump coil     1,190     165       Economizer Return Damper     1,190     55   | CITY SCHOOLS   |
| Supply Fan Base<br>Allowance (kW)     Exhuast/Return/Relief/Transfer Fan Base<br>Allowance(kW)     Interfer Fan Base<br>Allowance (kW) <sup>3</sup> Fan System<br>1     Fan System Electrical<br>Output (kW)     0.18 | Supply Fan Base<br>Allowance (kW)     Exhuast/Return/Relief/Transfer Fan Base<br>Allowance(kW)     Interference     Fan System<br>Allowance (kW) <sup>3</sup> Fan System Electrical<br>Output (kW)     0.18   |  |
|   |   | HMC Architects   |
|   |   | 3584-003-000   |
|   |   | 3546 CONCOURS STREET   |
| Generated Date/Time: Documentation Software: EnergyPro  | Generated Date/Time: Documentation Software: EnergyPro  | ONTARIO, CA 91764<br>909 989 9979 / www.hmcarchitects.com          |
| Schema Version: rev 20220101 Report Generated: 2024-09-18 14:33:49  | State of Calleophia   | A DESCRIPTION DATE   |
| Iechanical Systems CALIFORNIA ENERGY COMMISSION REFERENCE   | Mechanical Systems CALIFORNIA ENERGY COMMISSION   |  |
| oject Name: San Pedro ES Report Page: (Page 14 of 51) Date Prenared: 9/18/2024  | CERTIFICATE OF COMPLIANCE       NRCC-INCH-E         Project Name:       San Pedro ES       Report Page:       (Page 13 of 51)         Date Prepared:       9/18/2024  |  |
|   |   |  |
| FAN SYSTEMS & AIR ECONOMIZERS   | H. FAN SYSTEMS & AIR ECONOMIZERS  |  |
| ystem Jame FC-C1 Quantit y 1 Fan System Status Alteration System Status Alteration Systems Systems Units Dwelling Dwelling Dwelling Dwelling Dwelling Airflow 1,190 Site Elevation 40 Economizer AC or HP             | System<br>Name     IDU-1     Quantit<br>y     1     Fan System<br>Status     Alteration     System<br>Zoning     all other<br>systems     Serving<br>Units     Not<br>Serving<br>Dwelling     Fan<br>System<br>Airflow     Site<br>Elevation     40     Rot<br>Economizer     NA: Altered<br>packaged<br>AC or HP   |  |
| O1         O2         O3         O4         O5         O6         O7         O8         O9         10         11  | O1         O2         O3         O4         O5         O6         O7         O8         O9         10         11  |  |
| Fan Jame Jame Titem Tag     Qty     Component     Airflow through Component (%)     Main Main Manage (w.g)     Allowance     Bain Main Main Manage (w.g)     Matrix Main Main Main Main Main Main Main Main           | Fan<br>Name<br>or Item<br>Tag     Fan Type     Qty     Component     Airflow through<br>Component (%)     Mater<br>Component (%)     Allowance     Ban<br>Compone<br>(w.g)     Fan<br>Allowance     Ban<br>Allowance     Ban<br>Design Electrical Input Power<br>(watt/cfm)<br>3     Motor<br>Method     Design<br>Electrical<br>Horsepower   | KEYNOTES   |
| Base Allowance for system serving spaces <= 6 floors away 1,190 276   | Base Allowance for system serving spaces <= 6 floors away 710 165   |  |
| SF     Supply     1     Micro 13-16 Filter dipstream of<br>thermal conditioning equipment     1,190     165       Hydronic/DX cooling coil or heat<br>pump coil     1,190     165                                     | SF     Supply     1     MERV 15-16 Filter upstream of<br>thermal conditioning equipment     710     99       Hydronic/DX cooling coil or heat<br>pump coil     710     99     Manufacturer provided     0.18  |  |
| Economizer Return Damper         1,190         55           Supply Fan System         1,190         165           Supply Fan Base         Exhuast/Return/Relief/Transfer Fan Base         Fan System                  | Supply Fan Base<br>Allowance (kW)     Exhuast/Return/Relief/Transfer Fan Base<br>Allowance(kW) <sup>3</sup> Fan System<br>Allowance (kW) <sup>3</sup> Fan System Electrical<br>Output (kW)     0.18   |  |
| Allowance (kW) Allowance (kW) <sup>3</sup> Output (kW)  |   |  |
|   |   |  |
| Generated Date/Time: Documentation Software: EnergyPro  | Generated Date/Time: Documentation Software: EnergyPro  |  |
| A Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Compliance ID: EnergyPro-4955-0924-3389 Schema Version: rev 20220101 Report Generated: 2024-09-18 14:33:49         | CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Compliance ID: EnergyPro-4955-0924-3389 Schema Version: rev 20220101 Report Generated: 2024-09-18 14:33:49  |  |
| Iechanical Systems CALIFORNIA ENERGY COMMISSION   | STATE OF CALIFORNIA Mechanical Systems CALIFORNIA ENERGY COMMISSION   | NOTES  |
| IRTIFICATE OF COMPLIANCE     NRCC-MCH-E       oject Name:     San Pedro ES     Report Page:     (Page 17 of 51)   | CERTIFICATE OF COMPLIANCE     NRCC-MCH-E       Project Name:     San Pedro ES     (Page 16 of 51)   |  |
| Date Prepared: 9/18/2024  | Date Prepared:     9/18/2024  |  |
| FAN SYSTEMS & AIR ECONOMIZERS   | H. FAN SYSTEMS & AIR ECONOMIZERS  |  |
| ystem Vame FC-C4 Quantit y 1 Fan System Status Alteration System Zoning systems Systems Units Units (cfm) Site Levation 40 Economizer Ac or HP  | System<br>Name     FC-C3     Quantit<br>y     1     Fan System<br>Status     Alteration     System<br>Zoning     all other<br>systems     Serving<br>Dwelling<br>Units     System<br>Linits     Not<br>(fm)     Fan<br>(fm)     Site<br>Elevation     40     Economizer     NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/b   |  |
| 01         02         03         04         05         06         07         08         09         10         11  | 01         02         03         04         05         06         07         08         09         10         11  |  |
| Fan Jame r Item Tag     Qty     Component     Airflow through Component (%)     Water Gauge (w.g)     Fan Type Gauge (w.g)     Design Electrical Input Power (Method     Motor Nameplate Horsepower (NeW)             | Fan<br>Name<br>or Item<br>TagPan TypeQtyComponentAirflow through<br>Component (%)Water<br>Gauge<br>(w.g)Water<br>Gauge<br>(w.g)Fan<br>AllowanceDesign Electrical Input Power<br>MethodMotor<br>Electrical<br>Input<br>Power (LWI)   |  |
| Base Allowance for system serving spaces <= 6 floors away   | Base Allowance for system serving spaces <= 6 floors away   | CONSULTANT:<br>MEP & FS / Sustainability / CxA                     |
| SF     Supply     1     Intervision (approximation)     1,190     165       Hydronic/DX cooling coil or heat<br>pump coil     1,190     165   | SF     Supply     1     Intervision distribution of patient of thermal conditioning equipment     1,190     165       Hydronic/DX cooling coil or heat pump coil     1,190     165     Manufacturer provided     0.18   | 1209 Pleasant Grove Blvd.<br>Roseville, CA 95678<br>p 916-771-0778 |
| Economizer Return Damper     1,190     55       Supply Fan System     1,190     165   | Economizer Return Damper     1,190     55       Supply Fan System     1,190     165   | CONSULTING www.lpengineers.com                                     |
| Allowance (kW)     Allowance (kW) <sup>3</sup> 1     Output (kW)     0.18   | Allowance (kW)     Allowance (kW) <sup>3</sup> 1     Output (kW)     0.18   | ENGINEERS Job #: 24-2053   |
|   |   | POEFSCIA   |

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CALIFORNIA ENERGY COMMISSION

NRCC-MCH-E (Page 15 of 51) 9/18/2024

| STATE OF CALIFORM | AIA     |
|-------------------|---------|
| Mechanica         | I Syste |
| CERTIFICATE OF    | COMPLIA |
| Project Name:     | San Ped |

|   |  |  | NOMIZERS   |  |   |  |  |  |   |  |   | H. FAN   | SYSTEMS 8  | & AIR ECO   | ONOMIZERS   |  |  |  |   | · · · ·            |  |  |   |   |  |
|---|--|--|--|--|---|--|--|--|---|--|---|--|--|---|---|--|--|--|---|--------------------|--|--|---|---|--|
| em<br>ne FC-B   | 5 Q.   | luantit<br>Y   | 1 Fan System<br>Status Alteration  | System all other<br>Zoning systems   | Serving<br>Dwelling<br>Units  | Not<br>Serving<br>Dwelling<br>Units  | Fan<br>System<br>Airflow<br>(cfm)  | 1,190 Site<br>Elevatio   | on 40   | Economizer   | NA: Altered<br>packaged<br>AC or HP   | System<br>Name   | FC-B4  | Quantit<br>y  | t 1 Fan System Altera   | tion System all c<br>Zoning syst   | ther<br>ems<br>Unit  | ng Serving<br>Dwelling   | Fan<br>System<br>Airflow<br>(cfm)   | 1,190              | Site<br>Elevation                                    | 40   | Economizer  | NA: Altered<br>packaged<br>AC or HP   |  |
| 1 02  |  | 03   | 04   | 05   | 06  | 07   | 08   | 09   | Docid   | 10   | 11  | 01   | 02   | 03  | 04  | 05   | 06   | 07   | 08  |                    | 09   | Dosign   | 10  | 11  |  |
| n<br>ne<br>Eem Fan Ty   | /pe  | Qty  | Component  | Airflow through<br>Component (%)   | Water<br>Gauge<br>(w.g)   | Compone<br>nt  | Fan<br>Allowance<br>(watt/cfm)   | Design Electrical<br>Metho   | Input Power   | Motor<br>Nameplate   | Design<br>Electrical<br>Input   | Fan<br>Name<br>or Item   | Fan Type   | Qty   | Component   | Airflow thro<br>Component  | ugh<br>(%) Wate<br>Gaug<br>(w.g  | r<br>e<br>Compon<br>nt   | e Fan<br>Allowance<br>(watt/cfm)  | Design El          | lectrical Input<br>Method                            | t Power  | Motor<br>Nameplate  | Design<br>Electrical<br>Input   |  |
| 5   |  |  | Base Allowance for system serving  | 3 1 190  |   | Allowance  | 3  |  |   | Horsepower   | Power (kW)  | Tag  |  |   | Base Allowance for system se  | ving 1 190   |  | Allowand   | e 3   |                    |  |  | Horsepower  | Power (kW)  |  |
|   |  | ŀ  | spaces <=6 floors away<br>MERV 13-16 Filter upstream of  | 1,190  |   | 165  |  |  |   |  |   |  |  |   | spaces <=6 floors away<br>MERV 13-16 Filter upstream  | of 1.190   |  | 165  | -   |                    |  |  |   |   |  |
| : Supp  | ly   | 1  | thermal conditioning equipment<br>Hydronic/DX cooling coil or heat   | 1.190  |   | 165  |  | Manufacturer   | provided  |  | 0.18  | SF   | Supply   | 1   | thermal conditioning equipm<br>Hydronic/DX cooling coil or h  | ent 1.190  |  | 165  |   | Manu               | facturer prov  | vided  |   | 0.18  |  |
|   |  | ł  | pump coil<br>Economizer Return Damper  | 1,190  |   | 55   |  |  |   |  |   |  |  |   | pump coil<br>Economizer Return Dampe  | r 1,190  |  | 55   | -   |                    |  |  |   |   |  |
| ank Fan De  |  | [  | Supply Fan System  | 1,190  |   | 165<br>Ean St  | rtom   | -  | Fee G   | utom Electrical  |   | Comm   | Li Fon Doco  | _   | Supply Fan System   | 1,190  |  | 165<br>Ean   | Suctom  |                    |  | For Susta  | n Flastrian   |   |  |
| owance (kW  | V)   |  | Allowance(kW)  |  | ļ,  | Allowand   | ce (kW) <sup>3</sup>   | 1  | 0   | utput (kW)   | 0.18  | Allow  | vance (kW)   |   | Allowance   | <w)< th=""><th></th><th>Allowa</th><th>ince (kW)<sup>3</sup></th><th></th><th>23</th><th>Outp</th><th>ut (kW)</th><th>0.18</th><th></th></w)<> |  | Allowa   | ince (kW) <sup>3</sup>  |                    | 23   | Outp   | ut (kW)   | 0.18  |  |
| 3uilding Enerį  | y Efficier   | ency Stan  | ndards - 2022 Nonresidential Complian  | ice  | Generated D<br>Report Versi<br>Schema Vers  | Date/Time:<br>ion: 2022.0.00<br>sion: rev 2022   | 0<br>0101  |  | Doo<br>Compliano<br>Report  | umentation Softwa<br>e ID: EnergyPro-49<br>Generated: 2024-0   | are: EnergyPro<br>55-0924-3389<br>9-18 14:33:49   | CA Build   | ding Energy Ef   | fficiency Sta   | andards - 2022 Nonresidential Com   | pliance  | Generate<br>Report V<br>Schema   | d Date/Time:<br>ersion: 2022.0.<br>/ersion: rev 20.  | 000<br>220101   |                    | с  | Docume<br>Compliance ID<br>Report Gen  | entation Softwa<br>: EnergyPro-49<br>erated: 2024-0   | are: EnergyPro<br>955-0924-3389<br>99-18 14:33:49   |  |
| of CALIFORNIA   | Syste  | ems  |  |  |   |  |  |  | CAL   | FORNIA ENERGY  | COMMISSION  | STATE OF C   | CALIFORNIA<br>anical Sy  | /stems  |   |  |  |  |   |                    |  | CALIFOR  | RNIA ENERGY   | COMMISSION  |  |
| ICATE OF CC   | San Ped  | dro ES   |  |  | Rep   | port Page:   |  |  |   |  | NRCC-MCH-E<br>(Page 14 of 51)   | CERTIFIC<br>Project N  | ATE OF COMI<br>Name: Sar   | n Pedro ES  | ·   |  |  | Report Page:   |   |                    |  |  |   | NRCC-MCH-E<br>(Page 13 of 51)   |  |
|   |  |  |  |  | Dat   | te Prepared:   |  |  |   |  | 9/18/2024   |  |  |   |   |  |  | Date Prepared  | :   |                    |  |  |   | 9/18/2024   |  |
| AN SYSTEN   | IS & All   | IR ECO   | NOMIZERS   | 11   |   |  |  |  | - ii  |  |   | H. FAN   | SYSTEMS &  | & AIR ECO   | ONOMIZERS   |  |  |  |   |                    | vi.  |  |   |   |  |
| em  | . 0  | uantit   | Fan System   | System all other   | Serving   | Not<br>Serving   | Fan<br>System  | Site   | 738   |  | NA: Altered   | System   |  | Quantit   | Fan System  | System all o   | ther   | ng Not<br>Serving  | Fan<br>System   |                    | Site   |  |   | NA: Altered   |  |
| FC-C  | 1  | y  | 1 Status Alteration  | Zoning systems   | Dwelling<br>Units   | Dwelling<br>Units  | Airflow<br>(cfm)   | 1,190 Elevation  | on 40   | Economizer   | AC or HP<br><54 kBtu/h  | Name   | IDU-1  | y   | 1 Status Altera   | Zoning syst  | ems Dwelli<br>Unit   | Dwelling   | g Airflow (cfm)   | 710                | Elevation  | 40   | Economizer  | AC or HP<br><54 kBtu/h  |  |
| 02  |  | 03   | 04   | 05   | 06  | 07   | 08   | 09   |   | 10   | 11  | 01   | 02   | 03  | 04  | 05   | 06   | 07   | 08  |                    | 09   | <b>D</b>   | 10  | 11  |  |
|   |  | 01   |  | Airflow through  | Water   | Allow  | Fan  |  | Desig   | Motor  | Design  | Fan<br>Name  | Free T   |   |   | Airflow thro   | ugh Wate   | r Compon   | e Fan   |                    |  | Design   | Motor   | Design  |  |
| Fan Ty  | pe   | Qty  | Component  | Component (%)  | Gauge<br>(w.g)  | nt<br>Allowance  | Allowance<br>(watt/cfm)  | Design Electrical<br>Metho   | Input Power<br>d  | Nameplate  | Electrical<br>Input   | or Item<br>Tag   | Fan Type   | Qty   | Component   | Component  | (%) Gaug<br>(w.g   | e nt<br>Allowand   | Allowance<br>(watt/cfm)   | Design El          | lectrical Input<br>Method                            | t Power  | Nameplate<br>Horsepower   | Electrical<br>Input   |  |
|   |  |  | Base Allowance for system serving  | 3 1 190  |   | 276  | 3  |  |   |  | Power (kW)  |  |  |   | Base Allowance for system se  | ving 710   |  | 165  | 3   |                    |  |  |   | Power (kW)  |  |
|   |  | ł  | spaces <=6 floors away<br>MERV 13-16 Filter upstream of  | 1,120  |   | 2/0  |  |  |   |  |   |  |  |   | spaces <=6 floors away<br>MERV 13-16 Filter upstream  | of   |  | 201  |   |                    |  |  |   |   |  |
| Supp  | ly   | 1  | thermal conditioning equipment<br>Hydronic/DX cooling coil or heat   | 1,190  |   | 165  |  | Manufacturer   | provided  |  | 0.18  | SF   | Supply   | 1   | thermal conditioning equipm<br>Hydronic/DX cooling coil or h  | ent 710<br>eat   |  | 99   |   | Manu               | facturer prov  | vided  |   | 0.18  |  |
|   |  |  | pump coil  | 1,190  |   | 165  |  |  |   |  |   |  |  |   | pump coil   | 710  |  | 99   |   |                    |  |  |   |   |  |
|   |  |  | • North State Stat | 4 4 6 6  |   | 55   |  |  |   |  | 1 I   | 1  | 1  |   |   | . 710  |  |  |   |                    |  | 1  |   |   |  |
| 1   |  | ł  | Supply Fan System  | 1,190<br>1,190   | 1.<br>  | 165  |  |  |   |  |   | Suppl  | y Fan Base   |   | Supply Fan System<br>Exhuast/Return/Relief/   | ransfer Fan Base   |  | Fan  | System  | 1                  |  | Fan Syste  | m Electrical  | 0.18  |  |
| ply Fan Ba<br>wance (kV   | se<br>V)   |  | Economizer Return Damper<br>Supply Fan System<br>Exhuast/Return/Relief/Trans<br>Allowance(kW)  | 1,190<br>1,190<br>sfer Fan Base  |   | 165<br>Fan Sy<br>Allowand  | ystem<br>ce (kW) <sup>3</sup>  | 1  | Fan St<br>O   | ystem Electrical<br>utput (kW)   | 0.18  | Suppl<br>Allow   | y Fan Base<br>vance (kW)   |   | Supply Fan System<br>Exhuast/Return/Relief/<br>Allowance  | ransfer Fan Base<br>(W)  |  | Fan<br>Allowa  | System<br>ince (kW) <sup>3</sup>  | 1                  |  | Fan Syste<br>Outp  | m Electrical<br>ut (kW)   | 0.18  |  |
| pply Fan Ba<br>lowance (kV<br>uilding Energ<br>DF CALIFORNIA<br><b>TRANICAL</b><br>FICATE OF CO<br><b>T Name</b> :  | se<br>V)<br>y Efficier<br>Syste<br>DMPLIAN<br>San Ped  | ency Stan<br>PMS<br>NCE<br>dro ES  | Economizer Return Damper<br>Supply Fan System<br>Exhuast/Return/Relief/Trans<br>Allowance(kW)  | 1,190<br>1,190<br>sfer Fan Base  | Generated D<br>Report Versi<br>Schema Vers<br>Report Dat  | 165<br>Fan Sy<br>Allowand<br>Date/Time:<br>ion: 2022.0.00<br>sion: rev 2022<br>port Page:<br>te Prepared:  | vstem<br>ce (kW) <sup>3</sup>  | 1  | Fan Sy<br>O<br>Doc<br>Compliano<br>Report<br>CAL  | ystem Electrical<br>utput (kW)<br>cumentation Softwa<br>e ID: EnergyPro-49<br>Generated: 2024-0<br>FORNIA ENERGY   | 0.18<br>0.18<br>are: EnergyPro<br>55-0924-3389<br>9-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 17 of 51)<br>9/18/2024   | Suppl<br>Allow<br>CA Build<br>STATE OF G<br>Mech<br>CERTIFIC<br>Project M  | ding Energy Ef<br>anical Sy<br>ATE OF COMI<br>Vame: Sar  | fficiency Sta<br>ystems<br>PLIANCE<br>n Pedro ES  | Supply Fan System<br>Exhuast/Return/Relief/<br>Allowance(   | oliance  | Generate<br>Report V<br>Schema   | d Date/Time:<br>ersion: 2022.0.<br>/ersion: rev 20:<br>Report Page:<br>Date Prepared   | System<br>ince (kW) <sup>3</sup>  |                    | с<br>с   | Fan Syste<br>Outp<br>Docume<br>Compliance ID<br>Report Gen<br>CALIFOF                                  | m Electrical<br>ut (kW)<br>entation Softwa<br>: EnergyPro-49<br>erated: 2024-0  | 0.18<br>0.18<br>are: EnergyPro<br>055-0924-3389<br>09-18 14:33:49<br>09-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 16 of 51)<br>9/18/2024   |  |
| pply Fan Ba<br>lowance (kv<br>luilding Energ<br>OF CALIFORNIA<br><b>Chanical</b><br>FICATE OF CC<br>ct Name:  | se<br>V)<br>sy Efficier<br>Syste<br>DMPLIAN<br>San Ped   | ency Stan<br>ems<br>NCE<br>dro ES  | Economizer Return Damper<br>Supply Fan System<br>Exhuast/Return/Relief/Trans<br>Allowance(kW)<br>ndards - 2022 Nonresidential Complian   | 1,190<br>1,190<br>sfer Fan Base  | Generated D<br>Report Versi<br>Schema Vers  | 165<br>Fan Sy<br>Allowand<br>Date/Time:<br>ion: 2022.0.00<br>sion: rev 2022<br>port Page:<br>te Prepared:  | vstem<br>ce (kW) <sup>3</sup>  | 1  | Fan Se<br>O<br>Doc<br>Complianc<br>Report<br>CAL  | vstem Electrical<br>utput (kW)<br>:umentation Softwa<br>:e ID: EnergyPro-49<br>Generated: 2024-0<br>FORNIA ENERGY  | 0.18<br>0.18<br>are: EnergyPro<br>55-0924-3389<br>9-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 17 of 51)<br>9/18/2024   | Suppl<br>Allow<br>CA Build<br>STATE OF O<br>Mech<br>CERTIFIC<br>Project N  | ding Energy Ef<br>CALIFORNIA<br>Anical Sy<br>TATE OF COMI<br>Name: Sar   | fficiency Sta<br>/stems<br>PLIANCE<br>n Pedro ES  | Supply Fan System<br>Exhuast/Return/Relief/<br>Allowance(<br>andards - 2022 Nonresidential Com  | oliance  | Generate<br>Report V<br>Schema   | d Date/Time:<br>ersion: 2022.0.<br>/ersion: rev 200  | System<br>ince (kW) <sup>3</sup>  |                    |  | Fan Syste<br>Outpr<br>Docume<br>Compliance ID<br>Report Gen  | m Electrical<br>ut (kW)<br>entation Softwa<br>: EnergyPro-49<br>erated: 2024-0  | 0.18<br>0.18<br>are: EnergyPro<br>955-0924-3389<br>99-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 16 of 51)<br>9/18/2024   |  |
| uilding Energ<br>CALIFORNI/<br>CALIFORNI/<br>CALIFORNI/<br>CHANICAL<br>FICATE OF CC<br>t Name:  | se<br>V)<br>sy Efficier<br>Syste<br>DMPLIAN<br>San Ped   | ency Stan<br>PERS<br>NCE<br>dro ES   | Economizer Return Damper<br>Supply Fan System<br>Exhuast/Return/Relief/Trans<br>Allowance(kW)<br>ndards - 2022 Nonresidential Complian   | 1,190<br>1,190<br>sfer Fan Base  | Generated D<br>Report Versi<br>Schema Vers<br>Schema Vers   | 165         Fan Sy         Allowand         Date/Time:         ion: 2022.0.00         sion: rev 2022         port Page:         te Prepared:         Not         Serving   | vstem<br>ce (kW) <sup>3</sup>  | 1  | Fan Sv<br>O<br>Doc<br>Complianc<br>Report<br>CALI   | utput (kW)   | 0.18<br>0.18<br>are: EnergyPro<br>55-0924-3389<br>9-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 17 of 51)<br>9/18/2024   | Suppl<br>Allow<br>CA Build<br>STATE OF O<br>Mech<br>CERTIFIC<br>Project N<br>H. FAN<br>System  | ding Energy Ef<br>california<br>anical Sy<br>ATE OF COMI<br>Name: Sar  | fficiency Sta<br>ystems<br>PLIANCE<br>n Pedro ES<br>& AIR ECC<br>Quantit                        | Supply Fan System Exhuast/Return/Relief/ Allowance( andards - 2022 Nonresidential Com DNOMIZERS Fan System  | pliance  | Generate<br>Report V<br>Schema   | d Date/Time:<br>ersion: 2022.0.<br>/ersion: rev 20:<br>/ersion: rev 20:<br>/ersion: rev 20:<br>//ersion: rev 20:<br>//er                   | System<br>ince (kW) <sup>3</sup>  |                    | Site   | Fan Syste<br>Outp<br>Docume<br>Compliance ID<br>Report Gen   | m Electrical<br>ut (kW)<br>entation Softwa<br>: EnergyPro-49<br>erated: 2024-0<br>RNIA ENERGY   | 0.18<br>0.18<br>are: EnergyPro<br>255-0924-3389<br>19-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 16 of 51)<br>9/18/2024   |  |
| ilding Energ<br>hilding Energ<br>F CALIFORNI<br>hanical<br>ICATE OF CC<br>t Name:   | se<br>V)<br>sy Efficier<br>Syste<br>DMPLIAN<br>San Ped   | ency Stan<br>Perns<br>NCE<br>dro ES<br>IR ECOP                                   | Economizer Return Damper         Supply Fan System         Exhuast/Return/Relief/Trans<br>Allowance(kW)         ndards - 2022 Nonresidential Complian         Image: Status         PNOMIZERS         1       Fan System<br>Status         Alteration  | 1,190<br>1,190<br>sfer Fan Base  | Generated D<br>Report Versi<br>Schema Versi<br>Schema Versi<br>Schema Versi   | 165<br>Fan Sy<br>Allowand<br>Date/Time:<br>ion: 2022.0.00<br>sion: rev 2022<br>port Page:<br>te Prepared:<br>boot<br>Serving<br>Dwelling<br>Units  | vstem<br>ce (kW) <sup>3</sup><br>0<br>0101<br>Fan<br>System<br>Airflow<br>(cfm)              | 1<br>1,190 Site<br>Elevatio  | Fan Sy<br>O<br>Doc<br>Complianc<br>Report<br>CAL  | vstem Electrical<br>utput (kW)<br>:umentation Softwa<br>:e ID: EnergyPro-49<br>Generated: 2024-0<br>FORNIA ENERGY<br>Economizer  | 0.18<br>0.18<br>0.18<br>0.18<br>0.18<br>0.18<br>0.18<br>0.18  | Suppl<br>Allow<br>CA Build<br>STATE OF 0<br>Mech<br>CERTIFIC<br>Project N<br>H. FAN<br>System<br>Name                                    | ding Energy Ef<br>california<br>anical Sy<br>cate of comi<br>vame: Sar<br>SYSTEMS &<br>FC-C3                   | fficiency Sta<br>/stems<br>PLIANCE<br>n Pedro ES<br>& AIR ECC<br>Quantit<br>y                   | Supply Fan System       Exhuast/Return/Relief/<br>Allowance       andards - 2022 Nonresidential Com       andards - 2022 Nonresidential Com       DNOMIZERS       t     1       Fan System       Status   | tion System all c<br>zoning syst   | Generate<br>Report V<br>Schema<br>ther<br>ems  | d Date/Time:<br>ersion: 2022.0.<br>/ersion: rev 20.<br>/ersion: rev 20.<br>Report Page:<br>Date Prepared   | System<br>ince (kW) <sup>3</sup>  | 1,190              | Site<br>Elevation                                    | Fan Syste<br>Outp<br>Docume<br>Compliance ID<br>Report Gen<br>CALIFOF                                  | m Electrical<br>ut (kW)<br>entation Softwa<br>: EnergyPro-49<br>erated: 2024-0<br>RNIA ENERGY<br>Economizer                                   | 0.18<br>0.18<br>0.18<br>0.18<br>0.18<br>0.18<br>0.18<br>0.18  |  |
| nilding Energ<br>hilding Energ<br>hanical<br>FICATE OF CC<br>t Name:<br>N SYSTEM<br>m<br>e FC-C   | se<br>v)<br>sy Efficier<br>Syste<br>DMPLIAN<br>San Ped<br>IS & AII<br>4 Qu   | ency Stan<br>Processing<br>IR ECOP<br>Quantit<br>y<br>03                         | Economizer Return Damper         Supply Fan System         Exhuast/Return/Relief/Trans<br>Allowance(kW)         ndards - 2022 Nonresidential Complian         ndards - 2022 Nonresidential Complian         NOMIZERS         1       Fan System<br>Status         04   | 1,190<br>1,190<br>sfer Fan Base<br>Acce<br>System all other<br>systems<br>05   | Generated D<br>Report Versi<br>Schema Vers<br>Schema Vers   | 165         Fan Sy         Allowand         Date/Time:         ion: 2022.0.00         sion: rev 2022.0         port Page:         te Prepared:         Not         Serving         Dwelling         Units         07         Allow   | vstem<br>ce (kW) <sup>3</sup>  | 1<br>1,190 Site<br>Elevation<br>09                                   | Fan Sy<br>O<br>Doc<br>Complianc<br>Report<br>CALL   | vstem Electrical<br>utput (kW)   | 0.18<br>0.18<br>0.18<br>0.18<br>0.18<br>0.18<br>0.18<br>0.18  | Suppl<br>Allow<br>CA Build<br>STATE OF 6<br>Mech<br>CERTIFIC<br>Project N<br>System<br>Name<br>01  | ding Energy Ef<br>anical Sy<br>ATE OF COMI<br>Name: Sar<br>SYSTEMS &<br>FC-C3                                  | fficiency Sta<br>ystems<br>PLIANCE<br>n Pedro ES<br>& AIR ECC<br>Quantit<br>y<br>03             | Supply Fan System<br>Exhuast/Return/Relief/<br>Allowance(<br>andards - 2022 Nonresidential Com<br>DNOMIZERS<br>t 1 Fan System<br>Status Altera  | bliance  | Generate<br>Report V<br>Schema<br>ther<br>ems<br>Servin<br>Dwelli<br>Unit<br>06                                      | d Date/Time:<br>ersion: 2022.0.<br>/ersion: rev 200<br>//ersion: rev 200<br>Report Page:<br>Date Prepared<br>Date Prepared<br>Date Org<br>Dwelling<br>Units<br>07  | System<br>System<br>ince (kW) <sup>3</sup><br>000<br>220101<br>Fan<br>System<br>Airflow<br>(cfm)<br>08<br>000<br>000<br>000<br>000<br>000<br>000<br>000   | 1,190              | Site<br>Elevation<br>09                              | Fan Syste<br>Outp<br>Docume<br>Compliance ID<br>Report Gen<br>CALIFOR<br>40                            | m Electrical<br>ut (kW)<br>entation Softwa<br>: EnergyPro-49<br>erated: 2024-0<br>RNIA ENERGY<br>Economizer<br>10                             | 0.18<br>0.18<br>0.18<br>0.18<br>0.18<br>0.18<br>0.18<br>0.18  |  |
| uilding Energ<br>br CALIFORNI/<br>chanical<br>FICATE OF CC<br>t Name:<br>N SYSTEM<br>m<br>e FC-CC<br>02<br>fice<br>Fan Ty   | se<br>V)<br>sy Efficier<br>Syste<br>DMPLIAN<br>San Ped   | ency Stan ems rems rems rems rems rems rems rems                                 | Economizer Return Damper<br>Supply Fan System<br>Exhuast/Return/Relief/Trans<br>Allowance(kW)<br>ndards - 2022 Nonresidential Complian<br>NOMIZERS<br>1 Fan System<br>Status Alteration<br>04<br>Component   | 1,190<br>1,190<br>ifer Fan Base<br>System all other<br>Systems<br>05<br>Airflow through<br>Component (%)   | Generated D<br>Report Versi<br>Schema Versi<br>Schema Versi<br>Schema Versi<br>Dat  | 165<br>Fan Sy<br>Allowand<br>Date/Time:<br>ion: 2022.0.00<br>sion: rev 2022<br>port Page:<br>te Prepared:<br>bwelling<br>Units<br>07<br>Allow<br>Compone   | vstem<br>ce (kW) <sup>3</sup>  | 1<br>1,190<br>Site<br>Elevation<br>09<br>Design Electrical           | Fan Sy<br>O<br>Doc<br>Complianc<br>Report<br>CALI   | eumentation Softwa<br>eumentation Softwa<br>e ID: EnergyPro-49<br>Generated: 2024-0<br>FORNIA ENERGY<br>Economizer<br>10<br>gn   | are: EnergyPro<br>55-0924-3389<br>9-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 17 of 51)<br>9/18/2024<br>NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h<br>11<br>Design<br>Electrical                                | Suppl<br>Allow<br>CA Build<br>STATE OF 0<br>Mech<br>CERTIFIC<br>Project N<br>System<br>Name<br>01<br>Fan<br>Name<br>or Item              | ding Energy Ef<br>california<br>anical Sy<br>cate of comi<br>vame: Sar<br>SYSTEMS &<br>FC-C3<br>02<br>Fan Type | fficiency Sta<br>/stems<br>PLIANCE<br>n Pedro ES<br>& AIR ECC<br>Quantit<br>y<br>03<br>Qty      | Supply Fan System<br>Exhuast/Return/Relief/<br>Allowance(<br>andards - 2022 Nonresidential Com<br>DNOMIZERS<br>t 1 Fan System<br>Status Altera<br>04<br>Component   | bliance  | Generate<br>Report V<br>Schema<br>ther<br>ems<br>Schema<br>Unit<br>Unit<br>Unit<br>Unit                              | d Date/Time:<br>ersion: 2022.0.<br>/ersion: rev 20.<br>/ersion: re | System<br>ince (kW) <sup>3</sup>  | 1,190              | Site<br>Elevation<br>09                              | Fan Syste<br>Outp<br>Docume<br>Compliance ID<br>Report Gen<br>CALIFOF<br>40<br>Design<br>t Power       | entation Softwa<br>entation Softwa<br>: EnergyPro-49<br>erated: 2024-0<br>RNIA ENERGY<br>Economizer<br>10<br>Motor                            | are: EnergyPro<br>255-0924-3389<br>29-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 16 of 51)<br>9/18/2024<br>NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h<br>11<br>Design<br>Electrical  |  |
| pply Fan Ba<br>owance (kV<br>be californi/<br>chanical<br>FicATE OF CC<br>t Name:<br>N SYSTEM<br>m<br>e FC-C<br>02<br>fe Fan Ty   | se<br>V)<br>sy Efficier<br>Syste<br>DMPLIAN<br>San Ped   | ency Stan<br>PERS<br>NCE<br>dro ES<br>IR ECON<br>Quantit<br>y<br>03<br>Qty       | Economizer Return Damper         Supply Fan System         Exhuast/Return/Relief/Trans<br>Allowance(kW)         ndards - 2022 Nonresidential Complian         I       Fan System<br>Status         Alteration         O4         Component   | 1,190<br>1,190<br>sfer Fan Base<br>System all other<br>Zoning systems<br>05<br>Airflow through<br>Component (%)  | Generated D<br>Report Versi<br>Schema Versi<br>Schema Versi<br>Schema Versi<br>Dat  | 165         Fan Sy         Allowand         Oate/Time:         ion: 2022.0.00         sion: rev 2022         port Page:         te Prepared:         Not         Serving         Dwelling         Units         07         Allowance         Allowance   | o<br>Fan<br>System<br>Airflow<br>(cfm)<br>08<br>vance<br>Fan<br>Allowance<br>(watt/cfm)<br>3 | 1<br>1,190<br>Site<br>Elevation<br>09<br>Design Electrical<br>Metho  | Fan Sy<br>O<br>Doc<br>Complianc<br>Report<br>CALI<br>On 40<br>Desig                           | eumentation Softwa<br>eumentation Softwa<br>e ID: EnergyPro-49<br>Generated: 2024-0<br>FORNIA ENERGY<br>Economizer<br>10<br>gn<br>Motor<br>Nameplate<br>Horsepower             | are: EnergyPro<br>55-0924-3389<br>9-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 17 of 51)<br>9/18/2024<br>NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h<br>11<br>Design<br>Electrical<br>Input<br>Power (kW)         | Suppl<br>Allow<br>CA Build<br>STATE OF O<br>Mech<br>CERTIFIC<br>Project M<br>System<br>Name<br>O1<br>Fan<br>Name<br>or Item<br>Tag       | ding Energy Ef<br>anical Sy<br>ATE OF COMI<br>Vame: Sar<br>SYSTEMS &<br>FC-C3<br>02<br>Fan Type                | fficiency Sta<br>ystems<br>PLIANCE<br>n Pedro ES<br>& AIR ECC<br>Quantit<br>y<br>03<br>Qty      | Supply Fan System<br>Exhuast/Return/Relief/<br>Allowance(<br>andards - 2022 Nonresidential Com<br>DNOMIZERS<br>t 1 Fan System<br>Status Altera<br>04  | tion System all c<br>System all c<br>Zoning System o<br>Airflow thro<br>Component  | Generate<br>Report V<br>Schema<br>ther<br>ems<br>Unit<br>Unit<br>Unit<br>Unit<br>Gaug<br>(%)                         | d Date/Time:<br>ersion: 2022.0.<br>/ersion: rev 20:<br>//ersion: rev 20:<br>//                   | System<br>ince (kW) <sup>3</sup>  | 1,190              | Site<br>Elevation<br>09                              | Fan Syste<br>Outp<br>Docume<br>Compliance ID<br>Report Gen<br>CALIFOF<br>40<br>Design<br>t Power       | entation Softwa<br>entation Softwa<br>: EnergyPro-49<br>erated: 2024-0<br>RNIA ENERGY<br>Economizer<br>10<br>Nameplate<br>Horsepower          | are: EnergyPro<br>55-0924-3389<br>99-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 16 of 51)<br>9/18/2024<br>NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h<br>11<br>Design<br>Electrical<br>Input<br>Power (kW)  |  |
| uilding Energ<br>DF CALIFORNI/<br>Chanical<br>FICATE OF CC<br>It Name:  | se<br>v)<br>se<br>v)<br>se<br>v<br>se<br>v<br>se<br>v<br>se<br>v<br>se<br>v<br>se<br>v<br>se<br>v<br>se<br>se<br>v<br>se<br>se<br>se<br>se<br>se<br>se<br>se<br>se<br>se<br>se | ency Stan<br>Perss<br>NCE<br>dro ES<br>IR ECOP<br>Quantit<br>y<br>03<br>Qty      | Economizer Return Damper         Supply Fan System         Exhuast/Return/Relief/Trans<br>Allowance(kW)         ndards - 2022 Nonresidential Complian         ndards - 2022 Nonresidential Complian         NOMIZERS         1       Fan System<br>Status         1       Fan System<br>Status         Alteration         O4         Base Allowance for system serving<br>spaces <=6 floors away   | 1,190         1,190         sfer Fan Base         System         all other         Zoning         all other         systems         05         Airflow through         Component (%)         1,190   | Generated D<br>Report Versi<br>Schema Versi<br>Schema Versi<br>Schema Versi<br>Dat<br>Dat   | 165         Fan Sy         Allowand         Oate/Time:         ion: 2022.0.00         sion: 2022.0.00         sion: 2022.0.00         sion: rev 2022         port Page:         te Prepared:         Not         Serving         Dwelling         Units         07         Allow         Compone         nt         Allowance         276                    | vstem<br>ce (kW) <sup>3</sup>  | 1<br>1,190<br>Site<br>Elevation<br>09<br>Design Electrical<br>Metho  | Fan Sy<br>O<br>Doc<br>Complianc<br>Report<br>CALI   | eumentation Softwa<br>eumentation Softwa<br>e ID: EnergyPro-49<br>Generated: 2024-0<br>FORNIA ENERGY<br>Economizer<br>10<br>gn<br>Motor<br>Nameplate<br>Horsepower             | are: EnergyPro<br>55-0924-3389<br>9-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 17 of 51)<br>9/18/2024<br>NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h<br>11<br>Design<br>Electrical<br>Input<br>Power (kW)         | Suppl<br>Allow<br>CA Build<br>STATE OF 0<br>Mech<br>CERTIFIC<br>Project N<br>System<br>Name<br>01<br>Fan<br>Name<br>or Item<br>Tag       | ding Energy Ef<br>california<br>anical Sy<br>cate of comi<br>vame: Sar<br>SYSTEMS &<br>FC-C3<br>02<br>Fan Type | fficiency Sta<br>ystems<br>PLIANCE<br>n Pedro ES<br>& AIR ECC<br>Quantit<br>y<br>03<br>Qty      | Supply Fan System         Exhuast/Return/Relief/<br>Allowance(         andards - 2022 Nonresidential Com         andards - 2022 Nonresidential Com         DNOMIZERS         1       Fan System<br>Status         Alterative         Component         Base Allowance for system se<br>spaces <=6 floors away   | tion System all c<br>Zoning System all c<br>zoning System all c<br>zoning syst<br>05<br>Airflow thro<br>Component<br>ving 1,190                | Generate<br>Report V<br>Schema<br>ther<br>ems<br>Unit<br>Unit<br>Unit<br>Gaug<br>(%)                                 | d Date/Time:<br>ersion: 2022.0.<br>/ersion: rev 200<br>//ersion: rev 200<br>//                   | System<br>ince (kW) <sup>3</sup><br>System<br>(kW) <sup>3</sup><br>Fan<br>System<br>Airflow<br>(cfm)<br>08<br>System<br>Airflow<br>(cfm)<br>08<br>System<br>Airflow<br>(cfm)<br>08<br>System<br>Airflow<br>(cfm)<br>3 | 1,190              | Site<br>Elevation<br>09                              | Fan Syste<br>Outp<br>Docume<br>Compliance ID<br>Report Gen<br>CALIFOF<br>40<br>40<br>Design<br>t Power | entation Softwa<br>entation Softwa<br>: EnergyPro-49<br>erated: 2024-0<br>RNIA ENERGY<br>Economizer<br>10<br>Motor<br>Nameplate<br>Horsepower | are: EnergyPro<br>0.18<br>are: EnergyPro<br>055-0924-3389<br>09-18 14:33:49<br>09-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 16 of 51)<br>9/18/2024<br>VA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h<br>11<br>Design<br>Electrical<br>Input<br>Power (kW)                       |  |
| uilding Energ<br>DF CALIFORNI/<br>Chanical<br>FICATE OF CC<br>CT Name:<br>IN SYSTEM<br>IM SYSTEM<br>IM FIC-C<br>02<br>IM Fan Ty<br>IM Fan Ty  | se<br>v)<br>sy Efficier<br>Syste<br>DMPLIAN<br>San Ped   | ency Stan ems RCE dro ES RUantit y 03 Qty  | Economizer Return Damper         Supply Fan System         Exhuast/Return/Relief/Trans<br>Allowance(kW)         ndards - 2022 Nonresidential Complian         ndards - 2022 Nonresidential Complian         NOMIZERS         1       Fan System<br>Status         1       Fan System<br>Status         Alteration         04         Component         Base Allowance for system serving<br>spaces <=6 floors away   | 1,190         1,190         sfer Fan Base         System         all other         Zoning         all other         systems         05         Airflow through         Component (%)         1,190         1,190   | Generated D<br>Report Versi<br>Schema Versi<br>Schema Versi<br>Schema Versi<br>Dat  | 165         Fan Sy         Allowand         Oate/Time:         ion: 2022.0.00         sion: rev 2022.0         port Page:         te Prepared:         Not         Serving         Dwelling         Units         07         Allowance         276         165   | vstem<br>ce (kW) <sup>3</sup>  | 1<br>1,190<br>Site<br>Elevation<br>09<br>Design Electrical<br>Metho  | Fan Sy<br>O<br>Doc<br>Complianc<br>Report<br>CALI   | eumentation Softwa<br>eumentation Softwa<br>e ID: EnergyPro-49<br>Generated: 2024-0<br>FORNIA ENERGY<br>Economizer<br>10<br>gn<br>Motor<br>Nameplate<br>Horsepower             | are: EnergyPro<br>55-0924-3389<br>9-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 17 of 51)<br>9/18/2024<br>NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h<br>11<br>Design<br>Electrical<br>Input<br>Power (kW)         | Suppl<br>Allow<br>CA Build<br>STATE OF 0<br>Mech<br>CERTIFIC<br>Project N<br>System<br>Name<br>or Item<br>Tag                            | ding Energy Ef<br>anical Sy<br>ATE OF COMI<br>Vame: Sar<br>SYSTEMS &<br>FC-C3<br>02<br>Fan Type                | fficiency Sta<br>/stems<br>PLIANCE<br>n Pedro ES<br>& AIR ECC<br>Quantit<br>y<br>03<br>Qty      | Supply Fan System   Exhuast/Return/Relief/<br>Allowance   andards - 2022 Nonresidential Com   andards - 2022 Nonresidential Com   DNOMIZERS   1   Fan System<br>Status   Alterative<br>Component   Base Allowance for system se<br>spaces <=6 floors away   | bliance  | Generate<br>Report V<br>Schema<br>   | d Date/Time:<br>ersion: 2022.0.<br>/ersion: rev 20.<br>//ersion: rev 20.<br>//                   | System<br>ince (kW) <sup>3</sup>  | 1,190              | Site<br>Elevation<br>09                              | Fan Syste<br>Outp<br>Docume<br>Compliance ID<br>Report Gen<br>CALIFOF<br>40<br>40<br>t Power           | entation Softwa<br>entation Softwa<br>: EnergyPro-49<br>erated: 2024-0<br>RNIA ENERGY<br>Economizer<br>10<br>Motor<br>Nameplate<br>Horsepower | are: EnergyPro<br>55-0924-3389<br>99-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 16 of 51)<br>9/18/2024<br>NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h<br>11<br>Design<br>Electrical<br>Input<br>Power (kW)  |  |
| pply Fan Ba<br>lowance (kv<br>auilding Energe<br>OF CALIFORNI/<br>chanical<br>FICATE OF CC<br>ct Name:<br>AN SYSTEM<br>am FC-C<br>b<br>b<br>c<br>c<br>c<br>c<br>c<br>c<br>c<br>c<br>c<br>c<br>c<br>c<br>c<br>c<br>c<br>c<br>c | se<br>v)<br>sy Efficier<br>Syste<br>DMPLIAN<br>San Ped   | ency Stan<br>Perss<br>NCE<br>dro ES<br>IR ECOP<br>Quantit<br>y<br>03<br>Qty<br>1 | Economizer Return Damper         Supply Fan System         Exhuast/Return/Relief/Trans<br>Allowance(kW)         Image: Allowance (kW)         NOMIZERS         1       Fan System<br>Status         Alteration         OCOMPONENT         Base Allowance for system serving<br>spaces <=6 floors away  | 1,190   1,190   1,190   sfer Fan Base   System all other systems O5 Airflow through Component (%) 3 1,190 1,190 1,190  | Generated D<br>Report Versi<br>Schema Vers<br>Schema Vers<br>Dat  | 165         Fan Sy         Allowand         Oate/Time:         ion: 2022.0.00         sion: 2022.0.00         sion: rev 2022.0         port Page:         te Prepared:         Dwelling         Units         07         Allowance         276         165         165   | o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o  | 1<br>1,190<br>Site<br>Elevation<br>09<br>Design Electrical<br>Methor | Fan Sy<br>O<br>Doc<br>Complianc<br>Report<br>CALL<br>CALL<br>Doc<br>Input Power<br>d<br>Desig | vstem Electrical<br>utput (kW)<br>cumentation Softwa<br>e ID: EnergyPro-49<br>Generated: 2024-0<br>FORNIA ENERGY<br>Economizer<br>10<br>30<br>Motor<br>Nameplate<br>Horsepower | are: EnergyPro<br>55-0924-3389<br>9-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 17 of 51)<br>9/18/2024<br>NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h<br>11<br>Design<br>Electrical<br>Input<br>Power (kW)<br>0.18 | Suppl<br>Allow<br>CA Build<br>STATE OF 4<br>Mech<br>CERTIFIC<br>Project N<br>Name<br>O1<br>Fan<br>Name<br>or Item<br>Tag                 | ding Energy Ef<br>anical Sy<br>ATE OF COMI<br>Name: Sar<br>SYSTEMS &<br>FC-C3<br>02<br>Fan Type<br>Supply      | fficiency Sta<br>ystems<br>PLIANCE<br>n Pedro ES<br>& AIR ECC<br>Quantit<br>y<br>03<br>Qty<br>1 | Supply Fan System<br>Exhuast/Return/Relief/<br>Allowance<br>andards - 2022 Nonresidential Com<br>DNOMIZERS<br>t 1 Fan System<br>Status Altera<br>O4<br>Component<br>Base Allowance for system se<br>spaces <=6 floors away<br>MERV 13-16 Filter upstream<br>thermal conditioning equipm<br>Hydronic/DX cooling coil or f<br>pump coil   | bliance<br>tion System all c<br>Zoning System ving 1,190<br>of 1,190<br>eat 1,190  | Generate<br>Report V<br>Schema<br>ther<br>ems<br>Unit<br>Unit<br>Unit<br>Unit<br>Gaug<br>(%)<br>Wate<br>Gaug<br>(w.g | d Date/Time:<br>ersion: 2022.0.<br>/ersion: rev 200<br>Report Page:<br>Date Prepared<br>Date Prepared<br>Serving<br>Dwelling<br>Units<br>07<br>Allowand<br>re<br>Compon<br>nt<br>Allowand<br>276<br>165  | System<br>ince (kW) <sup>3</sup>  | 1,190              | Site<br>Elevation<br>09<br>lectrical Input<br>Method | Fan Syste<br>Outp<br>Docume<br>Compliance ID<br>Report Gen<br>CALIFOF<br>40<br>Design<br>t Power       | entation Softwa<br>entation Softwa<br>: EnergyPro-49<br>erated: 2024-0<br>RNIA ENERGY<br>Economizer<br>10<br>Nameplate<br>Horsepower          | are: EnergyPro<br>55-0924-3389<br>99-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 16 of 51)<br>9/18/2024<br>NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h<br>11<br>Design<br>Electrical<br>Input<br>Power (kW)<br>0.18  |  |
| auilding Energe<br>OF CALIFORNIA<br>chanical<br>IFICATE OF CC<br>ct Name:   | se<br>v)<br>sy Efficier<br>Syste<br>Syste<br>MPLIAN<br>San Ped   | ency Stan<br>PERS<br>NCE<br>dro ES<br>IR ECOP<br>Quantit<br>y<br>03<br>Qty<br>1  | Economizer Return Damper         Supply Fan System         Exhuast/Return/Relief/Trans<br>Allowance(kW)         Image: Allowance (kW)         NOMIZERS         1       Fan System<br>Status         Alteration         Component         Base Allowance for system serving<br>spaces <=6 floors away   | 1,190         1,190         sfer Fan Base         System         all other         System         System         System         all other         System         System         1,190         1,190         1,190         1,190         1,190         1,190         1,190         1,190  | Generated D<br>Report Versi<br>Schema Versi<br>Schema Versi<br>Dat<br>0at<br>0at<br>0at<br>0at<br>0at<br>0at                          | 165         Fan Sy         Allowand         Oate/Time:         ion: 2022.0.00         sion: rev 2022         port Page:         te Prepared:         Not         Serving         Dwelling         Units         07         Allowance         Allowance         276         165         165         165         165   | o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o  | 1<br>1,190<br>Site<br>Elevation<br>09<br>Design Electrical<br>Methor | Fan Sy<br>O<br>Doc<br>Complianc<br>Report<br>CALL<br>CALL<br>On 40<br>Desig                   | eumentation Softwa<br>eumentation Softwa<br>e ID: EnergyPro-49<br>Generated: 2024-0<br>FORNIA ENERGY<br>Economizer<br>10<br>gn<br>Motor<br>Nameplate<br>Horsepower             | are: EnergyPro<br>55-0924-3389<br>9-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 17 of 51)<br>9/18/2024<br>NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h<br>11<br>Design<br>Electrical<br>Input<br>Power (kW)<br>0.18 | Suppl<br>Allow<br>CA Build<br>STATE OF O<br>Mech<br>CERTIFIC<br>Project M<br>System<br>Name<br>O1<br>Fan<br>Name<br>or Item<br>Tag       | ding Energy Ef<br>anical Sy<br>ATE OF COMI<br>Vame: Sar<br>SYSTEMS &<br>FC-C3<br>02<br>Fan Type<br>Supply      | fficiency Sta<br>stems<br>PLIANCE<br>n Pedro ES<br>AIR ECC<br>Quantit<br>y<br>03<br>Qty<br>1    | Supply Fan System         Exhuast/Return/Relief/<br>Allowance(         andards - 2022 Nonresidential Com         andards - 2022 Nonresidential Com         DNOMIZERS         1       Fan System<br>Status         Alterative         Component         Base Allowance for system se<br>spaces <=6 floors away   | bliance  | Generate<br>Report V<br>Schema<br>ther<br>ems<br>Unit<br>Unit<br>Unit<br>Unit<br>(%)<br>Wate<br>Gaug<br>(w.g         | d Date/Time:<br>ersion: 2022.0.<br>/ersion: rev 200<br>//ersion: rev 200<br>//                   | System<br>ince (kW) <sup>3</sup>  | 1,190<br>Design El | Site<br>Elevation<br>09<br>lectrical Input<br>Method | Fan Syste<br>Outp<br>Docume<br>Compliance ID<br>Report Gen<br>CALIFOF<br>40<br>Design<br>t Power       | entation Softwa<br>entation Softwa<br>: EnergyPro-49<br>erated: 2024-0<br>RNIA ENERGY<br>Economizer<br>10<br>Motor<br>Nameplate<br>Horsepower | are: EnergyPro<br>55-0924-3389<br>9-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 16 of 51)<br>9/18/2024<br>NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h<br>11<br>Design<br>Electrical<br>Input<br>Power (kW)<br>0.18   |  |
| auilding Energe<br>OF CALIFORNIU<br>chanical<br>IFICATE OF CC<br>ct Name:<br>N SYSTEM<br>em<br>ne<br>FC-C<br>L<br>02<br>n<br>ne<br>Fan Ty<br>g<br>Supp  | se v) se v) se v) sy Efficier Syste San Ped sa AII 4 Qu ype ly ly se e   | ency Stan<br>PMS<br>NCE<br>dro ES<br>IR ECOP<br>Quantit<br>y<br>03<br>Qty<br>1   | Economizer Return Damper         Supply Fan System         Exhuast/Return/Relief/Trans<br>Allowance(kW)         Image: Allowance (kW)         NOMIZERS         1       Fan System<br>Status         Alteration         O4         Component         Base Allowance for system serving<br>spaces <= 6 floors away   | 1,190         1,190         sfer Fan Base         System         all other         System         all other         System         all other         System         all other         System         1,190         1,190         1,190         1,190         1,190         1,190         1,190         1,190         1,190         1,190         1,190         1,190         1,190         1,190 | Generated D<br>Report Versi<br>Schema Versi<br>Schema Versi<br>G<br>Units<br>06<br>Water<br>Gauge<br>(w.g)<br>Water<br>Gauge<br>(w.g) | 165         Fan Sy         Allowand         Oate/Time:         ion: 2022.0.00         sion: rev 2022         port Page:         te Prepared:         Not         Serving         Dwelling         Units         07         Allowance         165         165         165         165         165         165         165         165         165         165 | o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o<br>o                           | 1<br>1,190 Site<br>Elevation<br>09<br>Design Electrical<br>Methor    | Fan Sy<br>O<br>Doc<br>Complianc<br>Report<br>CALL<br>CALL<br>Input Power<br>d<br>provided     | vstem Electrical<br>utput (kW)<br>cumentation Softwa<br>e ID: EnergyPro-49<br>Generated: 2024-0<br>FORNIA ENERGY<br>Economizer<br>10<br>30<br>Kotor<br>Nameplate<br>Horsepower | are: EnergyPro<br>55-0924-3389<br>9-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 17 of 51)<br>9/18/2024<br>NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h<br>11<br>Design<br>Electrical<br>Input<br>Power (kW)<br>0.18 | Suppl<br>Allow<br>CA Build<br>STATE OF O<br>Mech<br>CERTIFIC<br>Project M<br>System<br>Name<br>O1<br>Fan<br>Name<br>or Item<br>Tag<br>SF | ding Energy Ef<br>anical Sy<br>ATE OF COMI<br>Name: Sar<br>SYSTEMS &<br>FC-C3<br>02<br>Fan Type<br>Supply      | fficiency Sta<br>ystems<br>PLIANCE<br>n Pedro ES<br>R AIR ECC<br>Quantit<br>y<br>03<br>Qty<br>1 | Supply Fan System   Exhuast/Return/Relief/<br>Allowance(   Exhuast/Return/Relief/<br>Allowance(   andards - 2022 Nonresidential Com   andards - 2022 Nonresidential Com   T   1   Fan System<br>Status   Alterative of the system set of the system | bliance<br>tion System all c<br>Zoning system<br>tion Airflow thro<br>Component<br>ving 1,190<br>of 1,190<br>ransfer Fan Base                  | Generate<br>Report V<br>Schema   | d Date/Time:<br>ersion: 2022.0.<br>/ersion: 2022.0.<br>/ersion: rev 200<br>//ersion: rev 200<br>//e                   | System<br>ince (kW) <sup>3</sup><br>System<br>(kW) <sup>3</sup><br>System<br>Fan<br>System<br>Airflow<br>(cfm)<br>08<br>owance<br>Fan<br>Allowance<br>(watt/cfm)<br>3<br>System                                       | 1,190<br>Design El | Site<br>Elevation<br>09<br>lectrical Input<br>Method | Fan Syste<br>Outp<br>Docume<br>Compliance ID<br>Report Gen<br>CALIFOF<br>40<br>Design<br>t Power       | entation Softwa<br>entation Softwa<br>: EnergyPro-49<br>erated: 2024-0<br>RNIA ENERGY<br>Economizer<br>10<br>Motor<br>Nameplate<br>Horsepower | are: EnergyPro<br>0.18<br>are: EnergyPro<br>055-0924-3389<br>09-18 14:33:49<br>09-18 14:33:49<br>09-18/2024<br>COMMISSION<br>NRCC-MCH-E<br>(Page 16 of 51)<br>9/18/2024<br>VA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h<br>11<br>Design<br>Electrical<br>Input<br>Power (kW)<br>0.18 |  |

### Documentation Software: EnergyPro Compliance ID: EnergyPro-4955-0924-3389 Report Generated: 2024-09-18 14:33:49

CALIFORNIA ENERGY COMMISSION NRCC-MCH-E (Page 18 of 51) 9/18/2024

| STATE OF CALIFORNIA        |                |                          |
|----------------------------|----------------|--------------------------|
| Mechanical Systems         |                | CALIFORNIA ENERGY COMMIS |
| CERTIFICATE OF COMPLIANCE  |                | NRCC-N                   |
| Project Name: San Pedro ES | Report Page:   | (Page 17                 |
|                            | Date Prenared: | 0/19                     |

|   |   |   | DNOMIZERS  |  |   |  |   |                                    |  |  |   |  | SYSTEMS  | & AIR ECO   | NOMIZERS  |   |   |   |   |  |                     |   |  |  |   |
|---|---|---|--|--|---|--|---|------------------------------------|--|--|---|--|--|---|---|---|---|---|---|--|---------------------|---|--|--|---|
| System<br>Name FC   | С-В5  | Quantit<br>y  | 1 Fan System<br>Status Alteration  | System all other<br>Zoning systems   | Serving<br>Dwelling<br>Units  | Not<br>Serving<br>Dwelling<br>Units  | Fan<br>System<br>Airflow<br>(cfm)   | 1,190 E                            | Site<br>levation   | 40 Econom  | zer NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/b   | System<br>Name   | FC-B4  | Quantit<br>y  | 1 Fan System<br>Status                          | Alteration Z  | ovstem all other<br>coning systems  | Serving<br>Dwelling<br>Units  | Not<br>Serving<br>Dwelling<br>Units   | Fan<br>System<br>Airflow<br>(cfm)  | 1,190               | Site<br>Elevation                                   | 40   | Economizer   | NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/b   |
| 01 0  | 02  | 03  | 04   | 05   | 06  | 07   | 08  |                                    | 09   | 10   | 11  | 01   | 02   | 03  | 04  |   | 05  | 06  | 07  | 08   |                     | 09  | Design   | 10   | 11  |
| Fan<br>Name<br>or Item<br>Tag   | п Туре  | Qty   | Component  | Airflow through<br>Component (%)   | Water<br>Gauge<br>(w.g)   | Compone<br>nt<br>Allowance   | Fan<br>Ilowance<br>vatt/cfm)  | Design Elec                        | trical Input Pov<br>Aethod   | ver Moto<br>Namepl<br>Horsepo  | Design<br>Electrical<br>wer Design  | Fan<br>Name<br>or Item<br>Tag  | Fan Type   | Qty   | Component                                       | A   | Airflow through<br>Component (%)  | Water<br>Gauge<br>(w.g)   | Compone<br>nt<br>Allowance  | Fan<br>lowance<br>att/cfm)<br>3  | Design Ele          | ectrical Input<br>Method                            | Design<br>t Power  | Motor<br>Nameplate<br>Horsepower   | Design<br>Electrical<br>Input<br>Power (kW)   |
|   |   |   | Base Allowance for system serving<br>spaces <=6 floors away  | g 1,190  |   | 276  |   | 1                                  |  |  | Fower (KW)  |  |  |   | Base Allowance for syste<br>spaces <=6 floors a | em serving<br>Iway  | 1,190   |   | 276   | × .  |                     |   |  |  | Fower (KW)  |
|   |   |   | MERV 13-16 Filter upstream of<br>thermal conditioning equipment  | 1,190  |   | 165  |   |                                    |  |  | 0.10  |  |  |   | MERV 13-16 Filter ups<br>thermal conditioning e | tream of<br>quipment  | 1,190   |   | 165   |  |                     |   |  |  | 0.10  |
| SF Sur  | ipply   | 1   | Hydronic/DX cooling coil or heat<br>pump coil  | 1,190  |   | 165  |   | Manufac                            | turer provided   |  | 0.18  | SF   | Supply   | 1   | Hydronic/DX cooling co<br>pump coil             | il or heat  | 1,190   |   | 165   |  | Manuf               | acturer provi                                       | ided   |  | 0.18  |
|   |   |   | Economizer Return Damper<br>Supply Fan System  | 1,190<br>1,190   |   | 55<br>165  |   |                                    |  |  |   |  |  |   | Economizer Return D<br>Supply Fan Syste         | amper<br>m  | 1,190<br>1,190  |   | 55<br>165   |  |                     |   |  |  |   |
| Supply Fan B<br>Allowance (J  | Base<br>(kW)  |   | Exhuast/Return/Relief/Trans<br>Allowance(kW)   | sfer Fan Base  |   | Fan Syst<br>Allowance  | tem<br>(kW) <sup>3</sup>  | 1                                  | Fa   | n System Electric<br>Output (kW)   | al 0.18   | Suppl  | ly Fan Base<br>vance (kW)  |   | Exhuast/Return/R<br>Allow                       | elief/Transfer<br>ance(kW)  | Fan Base  |   | Fan Syste   | em<br>(kW) <sup>3</sup>  | 1                   |   | Fan Syste<br>Outr  | em Electrical<br>out (kW)  | 0.18  |
| CA Building Ene   | ergy Effici   | ciency Sta  | andards - 2022 Nonresidential Compliar   | nce f  | Generated Da<br>Report Versic<br>Schema Versi   | ate/Time:<br>on: 2022.0.000<br>ion: rev 202201   | .01   |                                    | Comp<br>Rej  | Documentation So<br>liance ID: EnergyPro<br>port Generated: 20   | ftware: EnergyPro<br>-4955-0924-3389<br>24-09-18 14:33:49   | CA Build   | ding Energy E  | fficiency Sta   | ndards - 2022 Nonresidentia                     | l Compliance  |   | Generated Da<br>Report Version<br>Schema Versio   | te/Time:<br>n: 2022.0.000<br>on: rev 2022010  | 01   |                     | с   | Docum<br>Compliance II<br>Report Gei   | entation Softwa<br>D: EnergyPro-49<br>herated: 2024-0  | are: EnergyPro<br>)55-0924-3389<br>)9-18 14:33:49   |
| ATE OF CALIFORM   | al Syst   | tems  |  |  |   |  |   |                                    |  | CALIFORNIA ENER  | GY COMMISSION   | STATE OF O   | anical Sy  | ystems  |   |   |   |   |   |  |                     |   | CALIFO   | RNIA ENERGY  | COMMISSION  |
| ERTIFICATE OF<br>'roject Name:  | F COMPLIA<br>San Pe   | Pedro ES  |  |  | Rep   | ort Page:  |   |                                    |  |  | NRCC-MCH-E<br>(Page 14 of 51)   | CERTIFIC<br>Project N  | CATE OF COM<br>Name: Sa  | n Pedro ES  |   |   |   | Repo  | rt Page:  |  |                     |   |  |  | NRCC-MCH-E<br>(Page 13 of 51)   |
|   |   |   |  |  | Date  | e Prepared:  |   |                                    |  |  | 9/18/2024   |  |  |   |   |   |   | Date  | Prepared:   |  |                     |   |  |  | 9/18/2024   |
| I. FAN SYSTE  | EMS & A   | AIR ECO   | DNOMIZERS  |  |   |  |   |                                    |  |  |   | H. FAN   | SYSTEMS  | & AIR ECO   | NOMIZERS  |   |   |   |   |  |                     |   |  |  |   |
| System  | C-C1  | Quantit   | 1 Fan System   | System all other   | Serving   | Not<br>Serving   | Fan<br>System   | 1,190                              | Site   | 40 Econom  | NA: Altered<br>packaged   | System   | IDU-1  | Quantit   | Fan System                                      | Alteration  | ystem all other   | Serving<br>Dwelling   | Not<br>Serving S  | Fan<br>System  | 710                 | Site  | 40   | Economizer   | NA: Altered<br>packaged   |
| Name  |   | У   | Status   | Zoning systems   | Units   | Dwelling<br>Units  | Airflow<br>(cfm)  | _, E                               | levation   |  | AC or HP<br><54 kBtu/h  | Name   |  | У   | Status  | Z   | Coning systems  | Units   | Dwelling /<br>Units   | Airflow<br>(cfm)   |                     | Elevation   | .0   | 2.5.10111201   | AC or HP<br><54 kBtu/h  |
| 01 0  | 02  | 03  | 04   | 05   | 06  | 07<br>Allowar  | 08<br>nce   |                                    | 09<br>D  | esign 10   | 11  | 01   | 02   | 03  | 04  |   | 05  | 06  | 07<br>Allowan   | 08<br>ce   |                     | 09  | Design   | 10   | 11  |
| Name<br>or Item<br>Tag  | і Туре  | Qty   | Component  | Airflow through<br>Component (%)   | Water<br>Gauge<br>(w.g)   | Compone<br>nt<br>Allowance   | Fan<br>Ilowance<br>vatt/cfm)<br>3   | Design Elec<br>N                   | trical Input Pov<br>Aethod   | ver Moto<br>Namepl<br>Horsepo  | , Design<br>Electrical<br>wer Power (kW)  | Name<br>or Item<br>Tag   | Fan Type   | Qty   | Component                                       | AC  | Airflow through<br>Component (%)  | Water<br>Gauge<br>(w.g)   | Compone<br>nt<br>Allowance  | Fan<br>lowance<br>att/cfm)<br>3  | Design Ele          | ectrical Input<br>Method                            | t Power  | Motor<br>Nameplate<br>Horsepower   | Design<br>Electrical<br>Input<br>Power (kW)   |
|   |   |   | Base Allowance for system serving<br>spaces <=6 floors away  | g 1,190  |   | 276  |   |                                    |  |  |   |  |  |   | Base Allowance for syste<br>spaces <=6 floors a | em serving<br>Iway  | 710   |   | 165   |  |                     |   |  |  |   |
| SF Sur  | vlaai   | 1   | MERV 13-16 Filter upstream of<br>thermal conditioning equipment  | 1,190  |   | 165  |   | Manufac                            | turer provided   |  | 0.18  | SF   | Supply   | 1   | MERV 13-16 Filter ups<br>thermal conditioning e | tream of<br>quipment  | 710   |   | 99  |  | Manuf               | acturer provi                                       | ided   |  | 0.18  |
|   |   |   | Hydronic/DX cooling coil or heat<br>pump coil  | 1,190  |   | 165  |   |                                    |  |  |   |  |  |   | Hydronic/DX cooling co<br>pump coil             | il or heat  | 710   |   | 99  |  |                     |   |  |  |   |
|   |   |   | Economizer Return Damper<br>Supply Fan System  | 1,190<br>1,190   |   | 55<br>165  |   |                                    |  |  |   | Suppl  | ly Fan Base  |   | Supply Fan Syste<br>Exhuast/Return/R            | m<br>elief/Transfer   | 710<br>Fan Base   |   | 99<br>Fan Syste   | em   | 1                   |   | Fan Syste  | m Electrical   | 0.18  |
| Supply Fan B<br>Allowance (I  |   |   |  | cfor Fon Boco  |   | Fan Syst   | tem<br>(kW) <sup>3</sup>  | 1                                  | Fa   | n System Electric  | al 0.18   | Allow  | vance (kW)   |   | Allow   | ance(kW)  | 1   |   | Allowance   | (kW) <sup>3</sup>  | T                   |   | Outp   |  | 0.18  |
|   | Base<br>(kW)  |   | Allowance(kW)  |  |   | Allowance  |   | 2                                  | 24   | Output (kw)  |   |  |  |   |   |   |   |   |   |  |                     |   | 1  | ut (KW)  |   |
| CA Building Ener<br>TATE OF CALIFORT<br><b>Vechanica</b><br><b>:ERTIFICATE OF</b><br><b>'roject Name:</b>   | Base<br>(kW)<br>hergy Effici<br>RNIA<br>al Syst<br>San Pe   | ciency Star<br>tems<br>IANCE<br>Pedro ES  | Allowance(kW)<br>andards - 2022 Nonresidential Complian  | nce  | Generated Da<br>Report Versic<br>Schema Versi   | Allowance<br>ate/Time:<br>on: 2022.0.000<br>ion: rev 202201<br>ort Page:<br>a Prenared:  | .01   |                                    | Comp<br>Rej  | Documentation So<br>liance ID: EnergyPro<br>port Generated: 20<br>CALIFORNIA ENER  | ftware: EnergyPro<br>-4955-0924-3389<br>-4-09-18 14:33:49<br>GY COMMISSION<br>NRCC-MCH-E<br>(Page 17 of 51)<br>9/18/2024  | CA Build<br>STATE OF<br>Mech<br>CERTIFIC<br>Project M  | ding Energy E<br>CALIFORNIA<br>I <b>anical Sy</b><br>CATE OF COM<br>Name: Sa                             | fficiency Sta<br>ystems<br>IPLIANCE<br>n Pedro ES   | indards - 2022 Nonresidentia                    | l Compliance  |   | Generated Da<br>Report Version<br>Schema Version  | te/Time:<br>n: 2022.0.000<br>on: rev 2022010<br>rt Page:<br>Prenared:   | 01   |                     | c   | Docum<br>Compliance II<br>Report Ger<br>CALIFO                                   | entation Softwa<br>D: EnergyPro-49<br>herated: 2024-0<br>RNIA ENERGY   | are: EnergyPro<br>55-0924-3389<br>9-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 16 of 51)<br>9/18/2024   |
| CA Building Ene<br>TATE OF CALIFORT<br><b>Mechanica</b><br><b>CERTIFICATE OF</b><br><b>Project Name</b> :   | Base<br>(kW)<br>hergy Effici<br>RNIA<br><b>al Syst</b><br>San Pe  | ciency Star<br>tems<br>IANCE<br>Pedro ES  | Allowance(kW)  |  | Generated Da<br>Report Versic<br>Schema Versi   | Allowance<br>ate/Time:<br>on: 2022.0.000<br>ion: rev 202201<br>ort Page:<br>e Prepared:  | .01   |                                    | Comp<br>Rej  | Documentation So<br>liance ID: EnergyPro<br>port Generated: 20   | ftware: EnergyPro<br>-4955-0924-3389<br>-4-09-18 14:33:49<br>GY COMMISSION<br>NRCC-MCH-E<br>(Page 17 of 51)<br>9/18/2024  | CA Build<br>STATE OF<br><b>Mech</b><br>CERTIFIC<br>Project M   | ding Energy E<br>CALIFORNIA<br>I <b>anical Sy</b><br>CATE OF COM<br>Name: Sa                             | fficiency Sta<br>ystems<br>PLIANCE<br>n Pedro ES  | indards - 2022 Nonresidentia                    | l Compliance  |   | Generated Da<br>Report Version<br>Schema Version<br>Repo<br>Date  | te/Time:<br>n: 2022.0.000<br>on: rev 2022010<br>rt Page:<br>Prepared:   | 01   |                     | c   | Docum<br>Compliance II<br>Report Gel<br>CALIFO                                   | entation Softwa<br>D: EnergyPro-49<br>herated: 2024-0<br>RNIA ENERGY   | are: EnergyPro<br>55-0924-3389<br>9-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 16 of 51)<br>9/18/2024   |
| CA Building Ene<br>TATE OF CALIFOR<br>Vechanica<br>CERTIFICATE OF<br>Project Name:<br>H. FAN SYSTE  | Base<br>(kW)<br>hergy Effici<br>RNIA<br>al Syst<br>San Pe<br>EMS & A  | ciency Star<br>tems<br>IANCE<br>Pedro ES  | andards - 2022 Nonresidential Compliar   |  | Generated Da<br>Report Versio<br>Schema Versi<br>Date   | Allowance<br>ate/Time:<br>on: 2022.0.000<br>ion: rev 202201<br>ort Page:<br>e Prepared:  | .01   |                                    | Comp<br>Re   | Documentation So<br>liance ID: EnergyPro<br>port Generated: 20   | ftware: EnergyPro<br>-4955-0924-3389<br>4-09-18 14:33:49<br>GY COMMISSION<br>NRCC-MCH-E<br>(Page 17 of 51)<br>9/18/2024   | CA Build<br>STATE OF<br>Mech<br>CERTIFIC<br>Project M  | ding Energy E<br>CALIFORNIA<br>CATE OF COM<br>Name: Sa<br>SYSTEMS &                                      | ifficiency Sta<br>ystems<br>PLIANCE<br>n Pedro ES<br>& AIR ECCO                                       | ndards - 2022 Nonresidentia                     | l Compliance  |   | Generated Da<br>Report Version<br>Schema Version<br>Repo<br>Date  | te/Time:<br>n: 2022.0.000<br>on: rev 2022010<br>rt Page:<br>Prepared:   | )1<br>Fan  |                     | C   | Docum<br>Compliance II<br>Report Gei<br>CALIFO                                   | entation Softwa<br>D: EnergyPro-49<br>herated: 2024-0<br>RNIA ENERGY   | are: EnergyPro<br>155-0924-3389<br>19-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 16 of 51)<br>9/18/2024   |
| CA Building Ener<br>TATE OF CALIFORM<br>Vechanica<br>CERTIFICATE OF<br>Project Name:<br>H. FAN SYSTE<br>System<br>Name FC   | Base<br>(kW)<br>hergy Effici<br>RNIA<br>al Syst<br>San Pe<br>EMS & A<br>C-C4  | ciency Star<br>tems<br>IANCE<br>Pedro ES<br>AIR ECO<br>Quantit<br>y                   | Allowance(kW) andards - 2022 Nonresidential Complian DNOMIZERS 1 Fan System Status Alteration  | System all other<br>Zoning systems   | Generated Da<br>Report Versio<br>Schema Versi<br>Schema Versi<br>Date   | Allowance<br>ate/Time:<br>on: 2022.0.000<br>ion: rev 202201<br>ort Page:<br>e Prepared:<br>Not<br>Serving<br>Dwelling  | .01<br>Fan<br>System<br>Airflow   | 1,190 E                            | Comp<br>Rej<br>Site<br>levation  | Documentation So<br>liance ID: EnergyPro<br>port Generated: 20<br>CALIFORNIA ENER  | ftware: EnergyPro<br>9-4955-0924-3389<br>94-09-18 14:33:49<br>GY COMMISSION<br>NRCC-MCH-E<br>(Page 17 of 51)<br>9/18/2024<br>VA: Altered<br>packaged<br>AC or HP  | CA Build<br>STATE OF<br>Mech<br>CERTIFIC<br>Project M<br>System<br>Name  | ding Energy E<br>CALIFORNIA<br>Anical Sy<br>CATE OF COM<br>Name: Sa<br>SYSTEMS a<br>FC-C3                | ifficiency Sta<br>ystems<br>IPLIANCE<br>n Pedro ES<br>& AIR ECO<br>Quantit<br>y                       | ndards - 2022 Nonresidentia                     | I Compliance  | iystem all other<br>coning systems  | Serving<br>Dwelling   | te/Time:<br>h: 2022.0.000<br>on: rev 2022010<br>rt Page:<br>Prepared:<br>Not<br>Serving<br>Dwelling   | D1<br>Fan<br>System<br>Airflow   | 1,190               | Site<br>Elevation                                   | Docum<br>Compliance II<br>Report Gel<br>CALIFO                                   | entation Softwa<br>D: EnergyPro-49<br>herated: 2024-0<br>RNIA ENERGY   | are: EnergyPro<br>155-0924-3389<br>19-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 16 of 51)<br>9/18/2024<br>NA: Altered<br>packaged<br>AC or HP  |
| CA Building Ener<br>TATE OF CALIFOR<br>Vechanica<br>CERTIFICATE OF<br>Project Name:<br>H. FAN SYSTE<br>System<br>Name<br>FC<br>01 0                                       | Base<br>(kW)<br>hergy Effici<br>RNIA<br>al Syst<br>San Pe<br>EMS & A<br>C-C4  | ciency Star<br>tems<br>IANCE<br>Pedro ES<br>AIR ECO<br>Quantit<br>y<br>03             | Allowance(kW) andards - 2022 Nonresidential Complian DNOMIZERS 1 Fan System Status Alteration 04   | System all other<br>Systems<br>05  | Generated Da<br>Report Versic<br>Schema Versi<br>Date<br>Date<br>Dwelling<br>Units<br>06  | Allowance<br>ate/Time:<br>on: 2022.0.000<br>ion: rev 202201<br>ort Page:<br>e Prepared:<br>Vot<br>Serving<br>Dwelling<br>Units<br>07   | Fan<br>System<br>Airflow<br>(cfm)<br>08   | 1,190 EI                           | Comp<br>Rej<br>Site<br>levation  | Documentation So<br>iance ID: EnergyPro<br>port Generated: 20<br>CALIFORNIA ENER<br>40 Econom  | ftware: EnergyPro<br>4-4955-0924-3389<br>4-09-18 14:33:49<br>GY COMMISSION<br>NRCC-MCH-E<br>(Page 17 of 51)<br>9/18/2024<br>kn A: Altered<br>packaged<br>AC or HP<br><54 kBtu/h<br>11   | CA Build<br>STATE OF 4<br>Mech<br>CERTIFIC<br>Project 1<br>System<br>Name<br>01  | ding Energy E<br>CALIFORNIA<br>CATE OF COM<br>Name: Sa<br>SYSTEMS (<br>FC-C3<br>02                       | Stems<br>PLIANCE<br>n Pedro ES<br>AIR ECO<br>Quantit<br>y<br>03                                       | ndards - 2022 Nonresidentia                     | Alteration St   | all other<br>system all other<br>systems<br>05  | Generated Da<br>Report Version<br>Schema Version<br>Date<br>Date<br>Dwelling<br>Units<br>06                                       | te/Time:<br>h: 2022.0.000<br>h: rev 2022010<br>rt Page:<br>Prepared:<br>Not<br>Serving<br>Dwelling<br>Units<br>07   | Fan<br>System<br>Airflow<br>(cfm)<br>08  | 1,190               | Site<br>Elevation<br>09                             | Docum<br>Compliance II<br>Report Gen<br>CALIFO                                   | entation Softwa<br>D: EnergyPro-49<br>herated: 2024-0<br>RNIA ENERGY<br>Economizer<br>10                                     | are: EnergyPro<br>155-0924-3389<br>19-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 16 of 51)<br>9/18/2024<br>NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h<br>11  |
| CA Building Ener<br>TATE OF CALIFORM<br>Vechanica<br>CERTIFICATE OF<br>Project Name:<br>1. FAN SYSTE<br>System<br>Name<br>01 0<br>Fan                                     | Base<br>(kW)<br>hergy Effici<br>RNIA<br>al Syst<br>San Pe<br>EMS & A<br>C-C4  | ciency Star<br>tems<br>IANCE<br>Pedro ES<br>AIR ECO<br>Quantit<br>y<br>03             | Allowance(kW) Allowance(kW) andards - 2022 Nonresidential Complian NOMIZERS I Fan System Status Alteration 04  | System all other systems   | Generated Date<br>Report Versic<br>Schema Versi<br>Schema Versi<br>Date<br>Date<br>Dwelling<br>Units<br>06<br>Water             | Allowance<br>ate/Time:<br>on: 2022.0.000<br>ion: rev 202201<br>ort Page:<br>e Prepared:<br>Vot<br>Serving<br>Dwelling<br>Units<br>07<br>Allowar  | Fan<br>System<br>Airflow<br>(cfm)<br>08<br>nce<br>Fan                               | 1,190 EI                           | Comp<br>Rej<br>Site<br>levation<br>09  | Documentation So<br>liance ID: EnergyPri<br>port Generated: 20<br>CALIFORNIA ENER<br>40 Econom<br>10<br>esign  | ftware: EnergyPro<br>-4955-0924-3389<br>24-09-18 14:33:49<br>GY COMMISSION<br>NRCC-MCH-E<br>(Page 17 of 51)<br>9/18/2024<br>VA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h<br>11<br>Design   | CA Build<br>STATE OF A<br>Mech<br>CERTIFIC<br>Project M<br>System<br>Name<br>01<br>Fan                                     | ding Energy E<br>CALIFORNIA<br><b>anical Sy</b><br>CATE OF COM<br>Name: Sa<br>SYSTEMS 3<br>FC-C3<br>02   | Stems<br>PLIANCE<br>n Pedro ES<br>& AIR ECO<br>Quantit<br>y<br>03                                     | ndards - 2022 Nonresidentia                     | Alteration Signature  | system all other<br>coning systems<br>05  | Generated Da<br>Report Version<br>Schema Version<br>Date<br>Date<br>Serving<br>Dwelling<br>Units<br>06<br>Water                   | te/Time:<br>n: 2022.0.000<br>on: rev 2022010<br>rt Page:<br>Prepared:<br>Not<br>Serving<br>Dwelling<br>Units<br>07<br>Allowan   | Fan<br>System<br>Airflow<br>(cfm)<br>08<br>ce<br>Fan                             | 1,190               | Site<br>Elevation<br>09                             | Docum<br>Compliance II<br>Report Gel<br>CALIFO<br>40<br>Design                   | entation Softwa<br>D: EnergyPro-49<br>nerated: 2024-0<br>RNIA ENERGY<br>Economizer<br>10                                     | are: EnergyPro<br>155-0924-3389<br>19-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 16 of 51)<br>9/18/2024<br>NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h<br>11<br>Design  |
| CA Building Ener<br>TATE OF CALIFOR<br>Vechanica<br>CERTIFICATE OF<br>Project Name:<br>   | Base<br>(kW)<br>hergy Effici<br>RNIA<br>al Syst<br>San Pe<br>EMS & A<br>C-C4  | ciency Star<br>tems<br>IANCE<br>Pedro ES<br>AIR ECO<br>Quantit<br>y<br>03<br>Qty      | Allowance(kW) Allowance(kW) andards - 2022 Nonresidential Compliar DNOMIZERS I Fan System Status Alteration O4 Component Base Allowance for system serving   | System all other<br>System Systems<br>OS<br>Airflow through<br>Component (%)   | Generated Da<br>Report Versic<br>Schema Versi<br>Date<br>Date<br>Dwelling<br>Units<br>06<br>Water<br>Gauge<br>(w.g)             | Allowance<br>ate/Time:<br>on: 2022.0.000<br>ion: rev 202201<br>ort Page:<br>e Prepared:<br>Vot<br>Serving<br>Dwelling<br>Units<br>07<br>Allowance<br>(v  | Fan<br>System<br>Airflow<br>(cfm)<br>08<br>nce<br>Fan<br>Ilowance<br>watt/cfm)<br>3 | 1,190 El                           | Site<br>levation<br>09<br>trical Input Pov<br>Aethod   | Documentation So<br>iance ID: EnergyPro<br>port Generated: 20<br>CALIFORNIA ENER<br>40 Econom<br>40 Econom<br>esign<br>ver Moto<br>Namepl<br>Horsepo | ftware: EnergyPro<br>-4955-0924-3389<br>-4-09-18 14:33:49<br>GY COMMISSION<br>NRCC-MCH-E<br>(Page 17 of 51)<br>9/18/2024<br>MA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h<br>11<br>   | CA Build<br>STATE OF 4<br>Mech<br>CERTIFIC<br>Project 1<br>M. FAN<br>System<br>Name<br>01<br>Fan<br>Name<br>or Item<br>Tag | ding Energy E<br>CALIFORNIA<br>CATE OF COM<br>Name: Sa<br>SYSTEMS 3<br>FC-C3<br>02<br>Fan Type           | Sefficiency Stands<br>Stems<br>PLIANCE<br>n Pedro ES<br>R AIR ECO<br>Quantit<br>y<br>03<br>c<br>Qty   | ndards - 2022 Nonresidentia                     | Alteration Signature  | all other<br>system all other<br>systems<br>05<br>Airflow through<br>Component (%)  | Generated Da<br>Report Version<br>Schema Version<br>Date<br>Date<br>Dwelling<br>Units<br>06<br>Water<br>Gauge<br>(w.g)            | te/Time:<br>h: 2022.0.000<br>h: rev 2022010<br>rt Page:<br>Prepared:<br>Prepared:<br>Vot<br>Serving<br>Dwelling<br>Units<br>07<br>Allowan<br>Compone<br>nt<br>Allowance | Fan<br>System<br>Airflow<br>(cfm)<br>08<br>ce<br>Fan<br>lowance<br>att/cfm)<br>3 | 1,190               | Site<br>Elevation<br>09<br>ectrical Input<br>Method | Docum<br>Compliance II<br>Report Gen<br>CALIFO<br>40<br>40<br>Design<br>t Power  | entation Softwa<br>D: EnergyPro-49<br>herated: 2024-0<br>RNIA ENERGY<br>Economizer<br>10<br>Motor<br>Nameplate<br>Horsepower | are: EnergyPro<br>155-0924-3389<br>19-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 16 of 51)<br>9/18/2024<br>NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h<br>11<br>Design<br>Electrical<br>Input<br>Power (kW)         |
| CA Building Ener<br>TATE OF CALIFOR<br>Vechanica<br>CERTIFICATE OF<br>Project Name:<br>H. FAN SYSTE<br>System<br>Name<br>O1 00<br>Fan<br>Name<br>or Item<br>Tag<br>SF Sup | Base<br>(kW)<br>hergy Effici<br>RNIA<br>al Syst<br>San Pe<br>EMS & P<br>C-C4<br>02<br>1 Type                              | ciency Star<br>tems<br>IANCE<br>Pedro ES<br>AIR ECO<br>Quantit<br>y<br>03<br>Qty<br>1 | Allowance(kW) Al | Airflow through<br>Component (%)<br>9<br>1,190<br>1,190<br>1,190   | Generated Da<br>Report Versic<br>Schema Versi<br>Schema Versi<br>Date<br>Date<br>Date<br>Units<br>06<br>Water<br>Gauge<br>(w.g) | Allowance<br>ate/Time:<br>on: 2022.0.000<br>ion: rev 202201<br>ort Page:<br>e Prepared:<br>Vot<br>Serving<br>Dwelling<br>Units<br>07<br>Allowance<br>Compone<br>nt<br>Allowance<br>276<br>165<br>165 | Fan<br>System<br>Airflow<br>(cfm)<br>08<br>nce<br>Fan<br>Ilowance<br>watt/cfm)<br>3 | 1,190 El<br>Design Elec<br>Manufac | Site<br>levation<br>09<br>trical Input Pov<br>Aethod   | Documentation So<br>iance ID: EnergyPro<br>port Generated: 20<br>CALIFORNIA ENER<br>40 Econom<br>40 Econom<br>esign<br>ver Moto<br>Namepl<br>Horsepo | ftware: EnergyPro<br>-4955-0924-3389<br>44-09-18 14:33:49<br>GY COMMISSION<br>NRCC-MCH-E<br>(Page 17 of 51)<br>9/18/2024<br>MA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h<br>11<br>Design<br>Electrical<br>Input<br>Power (kW)<br>0.18  | CA Build<br>STATE OF 4<br>Mech<br>CERTIFIC<br>Project 1<br>M. FAN<br>System<br>Name<br>of Item<br>Tag<br>SF                | ding Energy E<br>CALIFORNIA<br>CATE OF COM<br>Name: Sa<br>SYSTEMS 3<br>FC-C3<br>02<br>Fan Type<br>Supply | Sificiency Sta<br>ystems<br>IPLIANCE<br>n Pedro ES<br>& AIR ECO<br>Quantit<br>y<br>03<br>Cuantit<br>1 | ndards - 2022 Nonresidentia                     | I Compliance Alteration Alteration C Alteration C Alteration C Alteration C A A C A C A C A C A C A C A C A C A | Airflow through<br>Component (%)<br>1,190<br>1,190<br>1,190<br>1,190  | Generated Da<br>Report Version<br>Schema Version<br>Date<br>Date<br>Dwelling<br>Units<br>06<br>Water<br>Gauge<br>(w.g)            | te/Time:<br>h: 2022.0.000<br>h: rev 2022010<br>rt Page:<br>Prepared:<br>Prepared:<br>07<br>07<br>07<br>07<br>07<br>Allowance<br>165<br>165<br>165<br>165                | Fan<br>System<br>Airflow<br>(cfm)<br>08<br>ce<br>Fan<br>lowance<br>att/cfm)<br>3 | 1,190               | Site<br>Elevation<br>09<br>ectrical Input<br>Method | Docum<br>Compliance II<br>Report Gen<br>CALIFO<br>40<br>40<br>Design<br>t Power  | entation Softwa<br>D: EnergyPro-49<br>herated: 2024-0<br>RNIA ENERGY<br>Economizer<br>10<br>Motor<br>Nameplate<br>Horsepower | are: EnergyPro<br>155-0924-3389<br>19-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 16 of 51)<br>9/18/2024<br>NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h<br>11<br>Design<br>Electrical<br>Input<br>Power (kW)<br>0.18 |
| CA Building Ener<br>TATE OF CALIFORM<br>Vechanica<br>CERTIFICATE OF<br>Project Name:<br>1. FAN SYSTE<br>System<br>Name<br>of Item<br>Tag<br>SF Sup                        | Base<br>(kW)<br>hergy Effici<br>al Syst<br>F COMPLIA<br>San Pe<br>EMS & A<br>C-C4<br>02<br>Type<br>hpply<br>hpply<br>Base | ciency Star<br>tems<br>iANCE<br>Pedro ES<br>AIR ECO<br>Quantit<br>y<br>03<br>Qty<br>1 | Allowance(kW) Al | nce System all other systems of a system systems of a system all other systems of a systems of a systems of a system of a syst | Generated Da<br>Report Versio<br>Schema Versio<br>Date<br>Date<br>Serving<br>Dwelling<br>Units<br>06<br>Water<br>Gauge<br>(w.g) | Allowance<br>ate/Time:<br>on: 2022.0.000<br>ion: rev 202201<br>e Prepared:<br>Vot<br>Serving<br>Dwelling<br>Units<br>07<br>Allowance<br>Allowance<br>276<br>165<br>165<br>165<br>55<br>165<br>55     | Fan<br>System<br>Airflow<br>(cfm)<br>08<br>nce<br>Fan<br>Ilowance<br>watt/cfm)<br>3 | 1,190 El<br>Design Elec<br>Manufac | Site<br>levation<br>09<br>Comp<br>Rei<br>0<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | Documentation So<br>liance ID: EnergyPro<br>port Generated: 20<br>CALIFORNIA ENER<br>40 Econom<br>40 Econom<br>40 Namepl<br>Horsepo                  | ftware: EnergyPro<br>-4955-0924-3389<br>-4-09-18 14:33:49<br>GY COMMISSION<br>NRCC-MCH-E<br>(Page 17 of 51)<br>9/18/2024<br>GY COMMISSION<br>NRCC-MCH-E<br>(Page 17 of 51)<br>9/18/2024<br>NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h<br>11<br>Design<br>Electrical<br>Input<br>Power (kW)<br>0.18 | CA Build<br>STATE OF 4<br>Mech<br>CERTIFIC<br>Project 1  | ding Energy E<br>CALIFORNIA<br>CATE OF COM<br>Name: Sa<br>SYSTEMS a<br>FC-C3<br>02<br>Fan Type<br>Supply | Sefficiency Sta<br>PLIANCE<br>n Pedro ES<br>R<br>Quantit<br>y<br>03<br>Quantit<br>1                   | ndards - 2022 Nonresidentia                     | I Compliance  | all other<br>system<br>20ning all other<br>systems<br>05<br>Airflow through<br>Component (%)<br>1,190<br>1,190<br>1,190<br>1,190<br>1,190<br>1,190<br>1,190 | Generated Da<br>Report Version<br>Schema Version<br>Date<br>Date<br>Serving<br>Dwelling<br>Units<br>06<br>Water<br>Gauge<br>(w.g) | te/Time:<br>a: 2022.0.000<br>an: rev 2022010<br>rt Page:<br>Prepared:<br>Prepared:<br>07<br>Allowance<br>165<br>165<br>165<br>165<br>165<br>165<br>165<br>165           | Fan<br>System<br>Airflow<br>(cfm)<br>08<br>ce<br>Fan<br>lowance<br>att/cfm)<br>3 | 1,190<br>Design Ele | Site<br>Elevation<br>09<br>ectrical Input<br>Method | Docum<br>Compliance II<br>Report Gei<br>40<br>40<br>Design<br>t Power<br>t Power | entation Softwa<br>D: EnergyPro-49<br>herated: 2024-0<br>RNIA ENERGY<br>Economizer<br>10<br>Motor<br>Nameplate<br>Horsepower | are: EnergyPro<br>155-0924-3389<br>19-18 14:33:49<br>COMMISSION<br>NRCC-MCH-E<br>(Page 16 of 51)<br>9/18/2024<br>NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h<br>11<br>Design<br>Electrical<br>Input<br>Power (kW)<br>0.18 |

### Documentation Software: EnergyPro Compliance ID: EnergyPro-4955-0924-3389 Report Generated: 2024-09-18 14:33:49

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Report Version: 2022.0.000 Schema Version: rev 20220101

Generated Date/Time:

Documentation Software: EnergyPro Compliance ID: EnergyPro-4955-0924-3389 Report Generated: 2024-09-18 14:33:49

Documentation Software: EnergyPro Compliance ID: EnergyPro-4955-0924-3389 Report Generated: 2024-09-18 14:33:49

Generated Date/Time:

Report Version: 2022.0.000

Schema Version: rev 20220101

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

FACILITY:

PROJECT:

SHEET NAME:

![](_page_54_Picture_47.jpeg)

DATE: 2024.10.01 SHEET:

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

# T24.2

CLIENT PROJ NO:

### TITLE 24 COMPLIANCE CALCULATIONS

### SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_54_Picture_58.jpeg)

![](_page_54_Picture_59.jpeg)

![](_page_54_Picture_62.jpeg)

![](_page_54_Picture_63.jpeg)

![](_page_54_Picture_64.jpeg)

AGENCY

CALIFORNIA ENERGY COMMISSION

Report Page: Date Prepared:

NRCC-MCH-E

9/18/2024

(Page 10 of 51)

APPROVAL:

FILE #21-39

### STATE OF CALIFORNIA Mechanical Systems CERTIFICATE OF COMPLIANCE

Project Name: San Pedro ES

Report Page: Date Prepared:

| H. EXHAUST AI      | R HEAT RECOV | ERY 140.4(q), 1                   | 70.2(c)4O              |             |                    |  |  |                         |   |   |
|--------------------|--------------|-----------------------------------|------------------------|-------------|--------------------|--|--|-------------------------|---|---|
| 01                 | 02           | 03                                | 04                     |             | 05                 | 06   | 07   |                         | 08  | Γ |
| Fan System<br>Name | Qty          | Hours of<br>Operation per<br>Year | Design Su<br>Airflow R | pply<br>ate | Outdoor<br>Airflow | % Outdoor Air<br>at Full Design<br>Airflow | Exemptions to<br>Exhaust Air<br>Heat Recovery<br>Requirement<br>per 140.4(q) &<br>170.2(c)40 | Ext<br>Heat<br>14<br>17 | haust Air<br>t Recovery<br>0.4(q) &<br>0.2(c)4O | R |
| Fan Energy Ind     | ex (FEI)     |                                   |                        |             |                    |  |  |                         |   |   |
|                    | 01           |                                   |                        |             |                    | 02   |  |                         |   |   |
|                    | Name or Ite  | em Tag                            |                        |             |                    | FEI Exception                              |  |                         |   |   |
|                    | FC-B1        | Ĺ                                 |                        |             |                    | Altered Fan Syster                         | n  |                         |   |   |
|                    | FC-B2        | 2                                 |                        |             |                    | Altered Fan Syster                         | n  |                         |   |   |
|                    | FC-B3        | 3                                 |                        |             |                    | Altered Fan Syster                         | n  |                         |   |   |
|                    | FC-B4        | 1                                 |                        |             |                    | Altered Fan Syster                         | n  |                         |   |   |
|                    | FC-B5        | 5                                 |                        |             |                    | Altered Fan Syster                         | n  |                         |   |   |
|                    | FC-B6        | 5                                 |                        |             |                    | Altered Fan Syster                         | n  |                         | -   |   |
|                    | IDU-1        | Ĺ                                 |                        |             |                    | None Applies                               |  |                         |   |   |
|                    | FC-C1        | Ĺ                                 |                        |             |                    | Altered Fan Syster                         | n  |                         |   |   |
|                    | FC-C2        | 2                                 |                        |             |                    | Altered Fan Syster                         | n  |                         |   |   |
|                    | FC-C3        | 3                                 |                        |             |                    | Altered Fan Syster                         | n  |                         |   |   |
|                    | FC-C4        | 1                                 |                        |             |                    | Altered Fan Syster                         | n  |                         |   |   |
|                    | FC-CS        | 5                                 |                        |             |                    | Altered Fan Syster                         | n  |                         |   |   |
|                    | PHP-2        | 2                                 |                        |             |                    | Altered Fan Syster                         | n  |                         |   |   |
|                    | PHP-:        | 1                                 |                        |             |                    | Altered Fan Syster                         | m  |                         |   |   |

### CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Generated Date/Time: Report Version: 2022.0.000

Schema Version: rev 20220101

STATE OF CALIFORNIA Mechanical Systems

CERTIFICATE OF COMPLIANCE

Project Name: San Pedro ES

Report Page: Date Prepared:

J. VENTILATION AND INDOOR AIR QUALITY

|               | 04                               |   | 05                               |                             |                           |                     | 06                                | C                                      |
|---------------|----------------------------------|---|----------------------------------|-----------------------------|---------------------------|---------------------|-----------------------------------|--|
| System Name   | FC-B1                            | System Desi<br>Airfl                            | gn OA CFM                        | 346                         | System<br>Transfer        | Design<br>Air CFM   | 0                                 | Air Filtration per 12<br>160.2         |
|               |                                  | 7.011   |                                  |                             | manorer                   |                     |                                   | Prov                                   |
| 08            | 09                               | 10  | 11                               | 12                          | 13                        | 14                  | 15                                | 1                                      |
| Space Name    | Mechanical Ventilation R         | equired per 1                                   | 20.1(c)3 <sup>3</sup> & 1        | 60.2(c)3                    |                           | Exh. V              | /ent per 120.1(c)4 &<br>160.2(c)4 | DCV or Sensor Con                      |
| or Item Tag   | Occupancy Type <sup>4</sup>      | Conditioned<br>Floor Area<br>(ft <sup>2</sup> ) | # of Shower<br>heads/<br>toilets | # of<br>people <sup>5</sup> | Required<br>Min OA<br>CFM | Required<br>Min CFM | Provided per Design<br>CFM        | 120.1(d)5, and 120<br>160.2(c)5E       |
| Classrooms    | Classroom (ages 5-18)            | 910   |                                  |                             | 345.8                     | 0                   | 0                                 | DCV                                    |
|               | 0.000.0000 (0800 0 20)           |   |                                  |                             | 0.010                     |                     | -                                 | Occ Sensor                             |
| 17            | Total System Required Min OA CFM |   |                                  |                             | 346                       | 18                  | Ventilation for this S            | system Complies?                       |
|               | 04                               |   | 05                               |                             | i.                        |                     | 06                                | C                                      |
| System Name   | FC-B2                            | System Desi<br>Airfl                            | gn OA CFM<br>ow <sup>1</sup>     | 346                         | System<br>Transfer        | Design<br>Air CFM   | 0                                 | Air Filtration per 12<br>160.2<br>Prov |
| 08            | 09                               | 10  | 11                               | 12                          | 13                        | 14                  | 15                                | 1                                      |
| <b>c u</b>    | Mechanical Ventilation F         | equired per 1                                   | 20.1(c)3 <sup>3</sup> & 1        | 60.2(c)3                    |                           | Exh. V              | /ent per 120.1(c)4 &<br>160.2(c)4 | DCV or Sensor Con                      |
| or Item Tag   | Occupancy Type <sup>4</sup>      | Conditioned<br>Floor Area<br>(ft <sup>2</sup> ) | # of Shower<br>heads/<br>toilets | # of<br>people <sup>5</sup> | Required<br>Min OA<br>CFM | Required<br>Min CFM | Provided per Design<br>CFM        | 120.1(d)5, and 120<br>160.2(c)5E       |
| Classrooms    | Classroom (ares 5-18)            | 910   |                                  |                             | 245.8                     | 0                   | 0                                 | DCV                                    |
| Classi UUIIIS | Classicolli (ages 2.10)          | 510   |                                  |                             | 545.0                     |                     | U                                 | Occ Sensor                             |
| 17            | Total System Required Min OA CFM |   |                                  |                             | 346                       | 18                  | Ventilation for this S            | ystem Complies?                        |
|               |                                  |   |                                  | Generat                     | ted Date/Tin              | ne:                 |                                   | Documentat                             |

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

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### STATE OF CALIFORNIA Mechanical Systems

CERTIFICATE OF COMPLIANCE

Project Name: San Pedro ES

Report Page:

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|              | 04                               |   | 05                               |                             |   |                     | 06                                |                                | 07   |
|--------------|----------------------------------|---|----------------------------------|-----------------------------|---|---------------------|-----------------------------------|--------------------------------|--|
| System Name  | IDU-1                            | System Desi                                     | gn OA CFM                        | 71                          | System                                    | Design              | 0                                 | Air Filtration per 1<br>160.   | 20.1(c) 141.0(b)2 and 2(c)21 <sup>2</sup>        |
|              |                                  | AITTI   | ow-                              |                             | Transier                                  | AIT CFIVI           |                                   | Pro                            | ovided   |
| 08           | 09                               | 10  | 11                               | 12                          | 13  | 14                  | 15                                |                                | 16   |
| с. N         | Mechanical Ventilation I         | Required per 1                                  | 20.1(c)3 <sup>3</sup> & 1        | 60.2(c)3                    |   | Exh. \              | /ent per 120.1(c)4 & 160.2(c)4    | DCV or Sensor Co               | ntrols per 120.1(d)3,                            |
| or Item Tag  | Occupancy Type <sup>4</sup>      | Conditioned<br>Floor Area<br>(ft <sup>2</sup> ) | # of Shower<br>heads/<br>toilets | # of<br>people <sup>5</sup> | Required<br>Min OA<br>CFM Min CFM CFM CFM |                     |                                   | 120.1(d)5, and 12<br>160.2(c)5 | 20.1(e)3 <sup>6</sup> 160.2(c)5D<br>E 160.2(c)5D |
| Storago      | Occupiable storage rooms for dry | 474   |                                  |                             | 71.1                                      | 0                   | 0                                 | DCV                            | NA: Not required per<br>§120.1(d)3               |
| Storage      | materials                        | 474   |                                  |                             | /1.1                                      | U                   | U                                 | Occ Sensor                     | NA: Not required<br>space type                   |
| 17           | Total System Required Min OA CFM |   |                                  |                             | 71  | 18                  | Ventilation for this S            | ystem Complies?                | Yes  |
|              | 04                               |   | 05                               |                             |   |                     | 06                                |                                | 07   |
| System Name  | FC-C1                            | System Desi                                     | gn OA CFM                        | 339                         | System                                    | Design              | 0                                 | Air Filtration per 1<br>160.   | 20.1(c) 141.0(b)2 and<br>2(c)21 <sup>2</sup>     |
|              |                                  | All   | 0                                |                             | manister                                  |                     |                                   | Pro                            | ovided   |
| 08           | 09                               | 10  | 11                               | 12                          | 13  | 14                  | 15                                |                                | 16   |
| Space Name   | Mechanical Ventilation           | Required per 1                                  | 20.1(c)3 <sup>3</sup> & 1        | 60.2(c)3                    |   | Exh. \              | /ent per 120.1(c)4 &<br>160.2(c)4 | DCV or Sensor Co               | ntrols per 120.1(d)3,                            |
| or Item Tag  | Occupancy Type <sup>4</sup>      | Conditioned<br>Floor Area<br>(ft <sup>2</sup> ) | # of Shower<br>heads/<br>toilets | # of<br>people <sup>5</sup> | Required<br>Min OA<br>CFM                 | Required<br>Min CFM | Provided per Design<br>CFM        | 120.1(d)5, and 12<br>160.2(c)5 | 20.1(e)3 <sup>6</sup> 160.2(c)5D<br>E 160.2(c)5D |
| Classrooms   | Classroom (ages 5-18)            | 802   |                                  |                             | 220                                       | 0                   | 0                                 | DCV                            | NA: Not required per<br>§120.1(d)3               |
| Classicollis | Classicolii (ages 5-10)          | 032   |                                  |                             | 335                                       | U                   | <u>v</u>                          | Occ Sensor                     | NA: Not required<br>space type                   |
| 17           | Total System Required Min OA CFM |   |                                  |                             | 339                                       | 18                  | Ventilation for this S            | ystem Complies?                | Yes  |

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

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![](_page_55_Figure_22.jpeg)

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CALIFORNIA ENERGY COMMISSION

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|   |  |
|   |  |
|   | 07   |
| Air Filtration per                              | 120.1(c) 141.0(b)2 and   |
| 160   | ).2(c)21 <sup>2</sup>  |
| Pr  | rovided  |
|   | 16   |
| DCV or Sensor C<br>120.1(d)5, and 1<br>160.2(c) | ontrols per 120.1(d)3,<br>120.1(e)3 <sup>6</sup> 160.2(c)5D<br>5E 160.2(c)5D |
| DCV   | NA: Not required per<br>§120.1(d)3   |
| Occ Sensor                                      | NA: Not required<br>space type   |
| stem Complies?                                  | Yes  |
|   | 07   |
| Air Filtration per 160                          | 120.1(c) 141.0(b)2 and<br>0.2(c)21 <sup>2</sup>                              |
| Pr  | rovided  |
| 10.5  | 16   |
| DCV or Sensor C<br>120.1(d)5, and 1<br>160.2(c) | ontrols per 120.1(d)3,<br>L20.1(e)3 <sup>6</sup> 160.2(c)5D<br>5E 160.2(c)5D |
| DCV   | NA: Not required per<br>§120.1(d)3   |
| Occ Sensor                                      | NA: Not required   |

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Yes

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| H. FAN S               | YSTEMS 8              | AIR EC      | CONOMI       | ERS                                    |                           |                  | in in its second se |                              |                                     | 10   |        | (ii                       |               |                                  |   | H. FAN                 | SYSTEMS 8               | AIR ECO      | DNOMIZERS  | н î li                           |                         |                                     |  |          | · · · · · · · · · · · · · · · · · · · |                   |                                  |   |
|------------------------|-----------------------|-------------|--------------|--|---------------------------|------------------|--|------------------------------|-------------------------------------|--|--------|---------------------------|---------------|----------------------------------|---|------------------------|-------------------------|--------------|--|----------------------------------|-------------------------|-------------------------------------|--|----------|---------------------------------------|-------------------|----------------------------------|---|
| System<br>Name         | PHP-1                 | Quanti<br>y | tit 1        | Fan System<br>Status                   | Alteration                | System<br>Zoning | all other<br>systems   | Serving<br>Dwelling<br>Units | Not<br>Serving<br>Dwelling<br>Units | Fan<br>System<br>Airflow<br>(cfm)              | 2,000  | Site<br>Elevation         | 40            | Economizer                       | Differential<br>Temperatur<br>e             | System<br>Name         | PHP-2                   | Quantit<br>y | 1 Fan System<br>Status Alteration                            | System all othe<br>Zoning system | er<br>Dwelling<br>Units | Not<br>Serving<br>Dwelling<br>Units | Fan<br>System<br>Airflow<br>(cfm)              | 1,600    | Site<br>Elevation                     | 40                | Economizer                       | NA: Altered<br>packaged<br>AC or HP<br><54 kBtu/h |
| 01                     | 02                    | 03          |              | 04                                     |                           | 0                | )5   | 06                           | 07                                  | 08   |        | 09                        |               | 10                               | 11  | 01                     | 02                      | 03           | 04   | 05                               | 06                      | 07                                  | 08   |          | 09                                    |                   | 10                               | 11  |
| Fan                    |                       |             |              | - <u>1</u>                             |                           |                  | <i>.</i>   |                              | Allov                               | vance  | 2      |                           | Design        |                                  |   | Ean                    |                         |              |  |                                  |                         | Allow                               | /ance  |          |                                       | Design            |                                  |   |
| Name<br>or Item<br>Tag | Fan Type              | Qty         |              | Component                              |                           | Airflow<br>Compo | through<br>nent (%)  | Water<br>Gauge<br>(w.g)      | Compone<br>nt<br>Allowance          | Fan<br>Allowance<br>(watt/cfm)<br><sup>3</sup> | Design | Electrical Inpu<br>Method | ut Power      | Motor<br>Nameplate<br>Horsepower | Design<br>Electrical<br>Input<br>Power (kW) | Name<br>or Item<br>Tag | Fan Type                | Qty          | Component  | Airflow through<br>Component (%  | Water<br>Gauge<br>(w.g) | Compone<br>nt<br>Allowance          | Fan<br>Allowance<br>(watt/cfm)<br><sup>3</sup> | Design E | lectrical Inpu<br>Method              | t Power           | Motor<br>Nameplate<br>Horsepower | Design<br>Electrical<br>Input<br>Power (kW)       |
|                        |                       |             | Base A<br>s  | llowance for syst<br>paces <=6 floors  | tem serving<br>away       | 2,0              | 000  |                              | 464                                 |  |        |                           |               |                                  |   |                        |                         |              | Base Allowance for system serving<br>spaces <=6 floors away  | 1,600                            |                         | 371                                 |  |          |                                       |                   |                                  |   |
|                        |                       |             | MER<br>therm | V 13-16 Filter up<br>al conditioning e | stream of<br>equipment    | 2,0              | 000  |                              | 278                                 |  |        |                           |               |                                  |   |                        |                         |              | MERV 13-16 Filter upstream of thermal conditioning equipment | 1,600                            |                         | 222                                 |  |          |                                       |                   |                                  |   |
| SF                     | Supply                | 1           | Hydro        | nic/DX cooling conic/DX cooling coil   | oil or heat               | 2,0              | 000  |                              | 278                                 |  | Man    | ufacturer pro             | vided         |                                  | 0.76  | SF                     | Supply                  | 1            | Hydronic/DX cooling coil or heat<br>pump coil                | 1,600                            |                         | 222                                 |  | Manu     | ufacturer prov                        | vided             |                                  | 0.66  |
|                        |                       |             | Eco          | nomizer Return I                       | Damper                    | 2,0              | 000  |                              | 92                                  |  |        |                           |               |                                  |   |                        |                         |              | Economizer Return Damper                                     | 1,600                            |                         | 74                                  |  |          |                                       |                   |                                  |   |
|                        |                       |             |              | Supply Fan Syst                        | em                        | 2,0              | 000  |                              | 278                                 |  |        |                           |               |                                  |   |                        |                         |              | Supply Fan System  | 1,600                            |                         | 222                                 |  |          |                                       |                   |                                  |   |
| Supply<br>Allowa       | Fan Base<br>Ince (kW) |             | 6            | xhuast/Return/F<br>Allov               | Relief/Trans<br>wance(kW) | fer Fan Ba       | ase  |                              | Fan S<br>Allowan                    | ystem<br>ce (kW) <sup>3</sup>                  | 1.     | .39                       | Fan Sys<br>Ou | tem Electrical<br>tput (kW)      | 0.76  | Supply<br>Allowa       | / Fan Base<br>ance (kW) |              | Exhuast/Return/Relief/Trans<br>Allowance(kW)                 | fer Fan Base                     |                         | Fan S<br>Allowan                    | ystem<br>ce (kW) <sup>3</sup>                  | 1.       | 11                                    | Fan Syste<br>Outp | m Electrical<br>ut (kW)          | 0.66  |

<sup>2</sup> Low-turndown single-zone VAV fan system must be capable of and configured to reduce airflow to 50 percent of design airflow and use no more than 30 percent of the design wattage at that airflow. No more than 10 percent of the design load served by the equipment shall have fixed loads.

<sup>3</sup> Fan system allowance includes fan system base allowance. <sup>4</sup> Filter pressure loss can only be counted once per fan system.

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<sup>1</sup> FOOTNOTES: Fans serving spaces with design background noise goals below NC35

<sup>5</sup> Complex Fan System means a fan system that combines a single cabinet fan system with other supply fans, exhaust fans, or both. <sup>6</sup> Computer room economizers must meet requirements of 140.9(a) and will be documented on the NRCC-PRC-E

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CALIFORNIA ENERGY COMMISSION

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STATE OF CALIFORNIA Mechanical Systems CERTIFICATE OF COMPLIANCE

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| Project Name: San Ped | Iro ES      |                           |         | Repor                            | t Page:                           |      |                   | (Page 23 of 5          |
|-----------------------|-------------|---------------------------|---------|----------------------------------|-----------------------------------|------|-------------------|------------------------|
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|                       |             |                           |         |                                  |                                   |      |                   |                        |
|                       |             |                           |         |                                  |                                   |      |                   |                        |
| I. SYSTEM CONTROLS    |             |                           |         |                                  |                                   |      |                   |                        |
| FC-C2                 | Single zone | <= 25,000 ft <sup>2</sup> | Setback | NA: Altered<br>per<br>141.0(b)2E | NA: Altered<br>per<br>§141.0(b)2E | EMCS | NA:<br>Alteration | NA: Alteration Project |
| FC-C3                 | Single zone | <= 25.000 ft <sup>2</sup> | Setback | NA: Altered                      | NA: Altered                       | EMCS | NA:               | NA: Alteration Project |

| FC-C3                 | Single zone          | <= 25,000 ft <sup>2</sup> | Setback                | per<br>141.0(b)2E                | per<br>§141.0(b)2E                | EMCS                        | NA:<br>Alteration | NA: Alteration Project       |
|-----------------------|----------------------|---------------------------|------------------------|----------------------------------|-----------------------------------|-----------------------------|-------------------|------------------------------|
| FC-C4                 | Single zone          | <= 25,000 ft <sup>2</sup> | Setback                | NA: Altered<br>per<br>141.0(b)2E | NA: Altered<br>per<br>§141.0(b)2E | EMCS                        | NA:<br>Alteration | NA: Alteration Project       |
| FC-C5                 | Single zone          | <= 25,000 ft <sup>2</sup> | Setback                | NA: Altered<br>per<br>141.0(b)2E | NA: Altered<br>per<br>§141.0(b)2E | EMCS                        | NA:<br>Alteration | NA: Alteration Project       |
| PHP-2                 | Single zone          | <= 25,000 ft <sup>2</sup> | Setback                | NA: Altered<br>per<br>141.0(b)2E | NA: Altered<br>per<br>§141.0(b)2E | EMCS                        | NA:<br>Alteration | NA: Alteration Project       |
| PHP-1                 | Single zone          | <= 25,000 ft <sup>2</sup> | Setback                | NA: Altered<br>per<br>141.0(b)2E | NA: Altered<br>per<br>§141.0(b)2E | EMCS                        | NA:<br>Alteration | NA: Alteration Project       |
| FOOTNOTES: Gravity go | as wall heaters, gro | avity floor heaters       | , gravity room heaters | s, non-central elec              | tric heaters, fire                | places or decorative gas ap | pliances, wood    | d stoves are not required to |

### 

have setback thermostats.

| J. VENTILATIO   | ON AND IN   | IDOOR AIR QUALITY  |
|---|---|--|
| This table is us<br>d:t24refnolink,<br>application ne<br>in a spreadshe | ed to demo<br>/]160.2, 160<br>ed to be doo<br>et. | nstrate compliance with mandatory ventilation requirements in 120.1 120.2(e)3B 140.4(p) and 140.4(q) for all nonresidential and hotel/motel and<br>D.3(a)3D, 170.2(a)4N, 170.2(a)4O for high-rise residential occupancies. For alterations, only ventilation systems being altered within the scope of the permit<br>cumented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented |
| 01  |   | Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.   |
| 02  |   | Check this box if the project included Nonresidential, Hotel/Motel Spaces or Multifamily Common Use Spaces   |
| 02  |   |  |
| 03  |   | Check the box if the project is using natural ventilation in any nonresidential or hotel/motel spaces to meet required ventilation rates per 120.1(c)2.  |
| Nonresidentia   | and Hotel   | / Motel Multifamily Common Use Ventilation Systems   |
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|                        |    |
|                        |    |
| AND INDOOR AIR QUALITY |    |
| 04                     | 05 |

| J. VENTILATIO             | ON AND INDOOR AIR QUALITY        |   |                                  |                             |                           |                     |                                   |  |   |  |
|---------------------------|----------------------------------|---|----------------------------------|-----------------------------|---------------------------|---------------------|-----------------------------------|--|---|--|
|                           | 04                               |   | 05                               |                             |                           |                     | 06                                | (  | )7  |  |
| System Name               | FC-B5                            | System Desi<br>Airfle                           | gn OA CFM<br>ow <sup>1</sup>     | 341                         | System<br>Transfer        | Design<br>Air CFM   | 0                                 | Air Filtration per 1<br>160.<br>Pro<br>DCV or Sensor Co<br>120.1(d)5, and 12<br>160.2(c)5<br>DCV<br>Occ Sensor<br>ystem Complies?<br>Air Filtration per 1<br>160.<br>Pro<br>DCV or Sensor Co<br>120.1(d)5, and 12<br>160.2(c)5<br>DCV<br>Occ Sensor<br>DCV<br>Occ Sensor<br>VSTEM COMPLIES?              | 0.1(c) 141.0(b)2 and<br>2(c)21 <sup>2</sup>   |  |
|                           |                                  | 10  | 11                               | 10                          | 12                        | 1.1.1               | 15                                | Prov   | lided   |  |
| 08                        | 09                               | 10  |                                  | 12                          | 13                        | 14                  | 15                                |  | 16  |  |
|                           | Mechanical Ventilation F         | Required per 1                                  | 20.1(c)3 <sup>3</sup> & 1        | 60.2(c)3                    |                           | Exn.                | 160.2(c)4 &                       | DCV or Sensor Controls per 120.1(d)3,<br>120.1(d)5, and 120.1(e)3 <sup>6</sup> 160.2(c)5D<br>160.2(c)5E 160.2(c)5D   |   |  |
| Space Name<br>or Item Tag | Occupancy Type <sup>4</sup>      | Conditioned<br>Floor Area<br>(ft <sup>2</sup> ) | # of Shower<br>heads/<br>toilets | # of<br>people <sup>5</sup> | Required<br>Min OA<br>CFM | Required<br>Min CFM | Provided per Design<br>CFM        |  |   |  |
| Classrooms                | Classroom (ages 5, 19)           | 907   |                                  |                             | 240.0                     | 0                   | 0                                 | DCV  | NA: Not required per<br>§120.1(d)3            |  |
| Classioonis               | Classicolin (ages 5-18)          | 857   |                                  |                             | 540.9                     | U                   | 0                                 | 0<br>Air Filtration per 124<br>160.2<br>Prov<br>1<br>DCV or Sensor Com<br>120.1(d)5, and 120<br>160.2(c)5E<br>DCV<br>Occ Sensor<br>/stem Complies?<br>0<br>Air Filtration per 124<br>160.2<br>Prov<br>1<br>DCV or Sensor Con<br>120.1(d)5, and 120<br>160.2(c)5E<br>DCV<br>0cc Sensor<br>ystem Complies? | NA: Not required<br>space type                |  |
| 17                        | Total System Required Min OA CFM |   |                                  |                             | 341                       | 18                  | Ventilation for this S            | ystem Complies?  | Yes   |  |
|                           | 04                               |   | 05                               |                             |                           |                     | 06                                | (  | )7  |  |
| System Name               | FC-B6                            | System Desi<br>Airflo                           | gn OA CFM<br>ow <sup>1</sup>     | 351                         | System<br>Transfer        | Design<br>Air CFM   | 0                                 | Air Filtration per 12<br>160.2   | 0.1(c) 141.0(b)2 and<br>(c)21 <sup>2</sup>    |  |
| 08                        | 09                               | 10  | 11                               | 12                          | 13                        | 14                  | 15                                | FIG  | 16  |  |
| C N                       | Mechanical Ventilation F         | Required per 1                                  | 20.1(c)3 <sup>3</sup> & 1        | 60.2(c)3                    |                           | Exh. V              | Vent per 120.1(c)4 &<br>160.2(c)4 | DCV or Sensor Cor  | trols per 120.1(d)3,                          |  |
| or Item Tag               | Occupancy Type <sup>4</sup>      | Conditioned<br>Floor Area<br>(ft <sup>2</sup> ) | # of Shower<br>heads/<br>toilets | # of<br>people <sup>5</sup> | Required<br>Min OA<br>CFM | Required<br>Min CFM | Provided per Design<br>CFM        | 120.1(d)5, and 12<br>160.2(c)5E  | 0.1(e)3 <sup>6</sup> 160.2(c)5D<br>160.2(c)5D |  |
| Classrooms                | Classroom (ages 5-18)            | 923   |                                  |                             | 350.7                     | 0                   | 0                                 | DCV  | NA: Not required per<br>§120.1(d)3            |  |
| Classicollis              | Classicolii (ages 5-18)          | 525   |                                  |                             | 330.7                     | Ŭ                   | U U                               | Occ Sensor   | NA: Not required<br>space type                |  |
| 17                        | Total System Required Min OA CFM |   |                                  |                             | 351                       | 18                  | Ventilation for this S            | ystem Complies?  | Yes   |  |
|                           |                                  |   |                                  | Genera                      | ted Date/Tir              | ne:                 |                                   | Documenta  | tion Software: EnergyPro                      |  |

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|---------------------------|--|
| Mechanical Systems        |  |
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CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

| CERTIFICATE OF COMPL                          | IANCE                                    |   |   |                                    |                               |                                      |   | NRCC-MC  |
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|   |  |   |   |                                    |                               |                                      |   |  |
|   | -  |   |   |                                    |                               |                                      |   |  |
| I. SYSTEM CONTROL                             | LS                                       |   |   |                                    |                               |                                      |   |  |
| This table is used to de 141.0(b)2E 180.2(b)2 | emonstrate compli<br>for altered space c | ance with mand<br>onditioning syste       | latory controls in 110.2 and 1.<br>ems.   | 20.2 and pres                      | criptive control              | s in 140.4(f) and (n), 170.2         | (c)4D 170.2(c)4L                        | or requirements in                             |
| 01  | 02                                       | 03  | 04  | 05                                 | 06                            | 07                                   | 08                                      | 09   |
| System Name                                   | System<br>Zoning                         | Conditioned<br>Floor Area<br>Being Served | Thermostats<br>110.2(b) & (c) <sup>1</sup> , 120.2(a)<br>160.3(a)2A or 141.0(b)2F & | Shut-Off<br>Controls<br>120.2(e) & | Isolation<br>Zone<br>Controls | Demand Response<br>110.12 120.2(b) & | Supply Air<br>Temp. Reset<br>140.4(f) & | Window Interlocks per<br>140.4(n) & 170.2(c)4[ |

| FC-B1       Single zone       <= 25,000 ft <sup>2</sup> Setback       NA: Altered<br>per<br>141.0(b)2E       NA: Altered<br>per<br>141.0(b)2E       EMCS       NA:<br>Alteration       NA:<br>Alteration  |               |
|---|---------------|
| NA: Altered NA: Altered   | ation Project |
| FC-B2 Single zone $\langle = 25,000 \text{ ft}^2 \rangle$ Setback $\begin{array}{c c c c c c c c c c c c c c c c c c c $  | ation Project |
| FC-B3Single zone<= 25,000 ft²SetbackNA: Altered<br>per<br>141.0(b)2ENA: Altered<br>per<br>\$ $\frac{5141.0(b)2E}$ NA: Altered<br>AlterationNA:<br>NA: Altered<br>Alteration   | ation Project |
| FC-B4Single zone<= 25,000 ft²SetbackNA: Altered<br>per<br>141.0(b)2ENA: Altered<br>per<br>\$\$141.0(b)2ENA: Altered<br>per<br>\$\$141.0(b)2ENA: Altered<br>per<br>\$\$141.0(b)2ENA: Altered<br>Per<br>\$\$141.0(b)2ENA: Altered<br>PerNA: Altered<br>AlterationNA: Altered<br>NA: Altered<br>Alteration | ation Project |
| FC-B5Single zone<= 25,000 ft²SetbackNA: Altered<br>per<br>141.0(b)2ENA: Altered<br>per<br>\$ $\frac{5141.0(b)2E}$ EMCSNA:<br>AlterationNA:<br>NA:<br>Alteration   | ation Project |
| FC-B6Single zone<= 25,000 ft²SetbackNA: Altered<br>per<br>141.0(b)2ENA: Altered<br>per<br>\$\$141.0(b)2ENA: Altered<br>per<br>\$\$141.0(b)2ENA: Altered<br>per<br>\$\$141.0(b)2ENA: Altered<br>PerNA: Altered<br>AlterationNA: Altered<br>NA: Altered<br>Alteration                                     | ation Project |
| IDU-1 Single zone <= 25,000 ft <sup>2</sup> Setback EMCS 4 Hour Timer EMCS NA: Would increase energy use  | ovided        |
| FC-C1 Single zone $\leq 25,000 \text{ ft}^2$ Setback NA: Altered<br>per per per EMCS Alteration NA: Altered<br>$141.0(b)2E$ $\underline{$141.0(b)2E}$   | ation Project |

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CALIFORNIA ENERGY COMMISSION

NRCC-MCH-E

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### STATE OF CALIFORNIA Mechanical Systems CERTIFICATE OF COMPLIANCE

Project Name: San Pedro ES

|             |                                  |  |                                  |                             | Date Prep                 | ared:               |                                   |   | 9/18/202  |
|-------------|----------------------------------|--|----------------------------------|-----------------------------|---------------------------|---------------------|-----------------------------------|---|---|
| VENTILATIO  | ON AND INDOOR AIR QUALITY        |  |                                  |                             |                           | ».                  |                                   |   |   |
|             | 04                               |  | 05                               |                             |                           |                     | 06                                |   | 07  |
| System Name | FC-B3                            | System Design OA CFM   |                                  |                             | System<br>Transfer        | Design<br>Air CFM   | 0                                 | Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21 <sup>2</sup> |   |
|             |                                  |  |                                  |                             |                           |                     |                                   | Pro   | vided   |
| 08          | 09                               | 10   | 11                               | 12                          | 13                        | 14                  | 15                                |   | 16  |
| C N         | Mechanical Ventilation           | Required per 12  | 20.1(c)3 <sup>3</sup> & 1        | 60.2(c)3                    |                           | Exh. V              | /ent per 120.1(c)4 &<br>160.2(c)4 | DCV or Sensor Co  | ntrols per 120.1(d)3,                           |
| or Item Tag | Occupancy Type <sup>4</sup>      | Conditioned<br>Floor Area<br>(ft <sup>2</sup> )                        | # of Shower<br>heads/<br>toilets | # of<br>people <sup>5</sup> | Required<br>Min OA<br>CFM | Required<br>Min CFM | Provided per Design<br>CFM        | 120.1(d)5, and 12<br>160.2(c)5                                    | 0.1(e)3 <sup>6</sup> 160.2(c)5D<br>E 160.2(c)5D |
| Classrooms  | Classroom (ages 5-19)            | 910  |                                  |                             | 245.9                     |                     | 0                                 | DCV   | NA: Not required per<br>§120.1(d)3              |
| Classrooms  | Classroom (ages 5-18)            | 910  |                                  |                             | 545.8                     | 0                   | U                                 | Occ Sensor  | NA: Not required space type                     |
| 17          | Total System Required Min OA CFM |  |                                  |                             | 346                       | 18                  | Ventilation for this S            | System Complies? Yes  |   |
|             | 04                               |  | 05                               |                             |                           |                     | 06                                |   | 07  |
| System Name | FC-B4                            | System Desi  | gn OA CFM                        | 341                         | System                    | Design              | 0                                 | Air Filtration per 12<br>160.                                     | 20.1(c) 141.0(b)2 and 2(c)21 <sup>2</sup>       |
|             |                                  | Airio  | JW                               |                             | Tansier                   |                     |                                   | Pro   | vided   |
| 08          | 09                               | 10   | 11                               | 12                          | 13                        | 14                  | 15                                |   | 16  |
| Casas Nama  | Mechanical Ventilation           | Mechanical Ventilation Required per 120.1(c)3 <sup>3</sup> & 160.2(c)3 |                                  |                             |                           |                     | /ent per 120.1(c)4 &<br>160.2(c)4 | DCV or Sensor Co  | ntrols per 120.1(d)3,                           |
| or Item Tag | Occupancy Type <sup>4</sup>      | Conditioned<br>Floor Area<br>(ft <sup>2</sup> )                        | # of Shower<br>heads/<br>toilets | # of<br>people <sup>5</sup> | Required<br>Min OA<br>CFM | Required<br>Min CFM | Provided per Design<br>CFM        | 120.1(d)5, and 12<br>160.2(c)51                                   | 0.1(e)3 <sup>6</sup> 160.2(c)5D<br>E 160.2(c)5D |
| Classrooms  | (lassroom (ages 5-19)            | 807  |                                  |                             | 340.9                     |                     | 0                                 | DCV   | NA: Not required per<br>§120.1(d)3              |
| CIASSIOUTIS | Classicolli (ages 2-10)          | 057  |                                  |                             | 540.9                     |                     | U                                 | Occ Sensor  | NA: Not required space type                     |
| 17          | Total System Required Min OA CFM | · · · · · · · · · · · · · · · · · · ·                                  |                                  |                             | 341                       | 18                  | Ventilation for this S            | system Complies?  | Yes   |

Report Version: 2022.0.000

Schema Version: rev 20220101

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

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AGENCY **APPROVAL:** DSA #01-121955 FILE #21-39

![](_page_55_Picture_68.jpeg)

![](_page_55_Picture_69.jpeg)

1320E

![](_page_55_Picture_70.jpeg)

**KEYNOTES** 

NOTES

![](_page_55_Picture_72.jpeg)

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT:

SHEET NAME:

![](_page_55_Picture_77.jpeg)

DATE: 2024.10.01 SHEET:

# T24.3

CLIENT PROJ NO:

### **DSA SUBMITTAL**

TITLE 24 COMPLIANCE CALCULATIONS

SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_55_Picture_86.jpeg)

www.lpengineers.com Job #: 24-2053

MEP & FS / Sustainability / CxA 1209 Pleasant Grove Blvd. Roseville, CA 95678 р 916-771-0778

![](_page_55_Picture_89.jpeg)

![](_page_55_Picture_90.jpeg)

|  | THE LINE SHOWN ABOVE | EXACTLY ONE INCH LONG AT | SHEETS ORIGINAL PAGE SI |  |  |
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|--|----------------------|--------------------------|-------------------------|--|--|

### STATE OF CALIFORNIA

| tate of califor<br>Mechanic | nia<br>al Systems                |   |                                  |                             |                           |                     |                                   | CALIFORNIA                              |   | STATE OF CALIFORM         | IA<br>I Systems                  |   |                                  |                             |                           |                     |                                   | CALIFORNIA                             |   |
|-----------------------------|----------------------------------|---|----------------------------------|-----------------------------|---------------------------|---------------------|-----------------------------------|---|---|---------------------------|----------------------------------|---|----------------------------------|-----------------------------|---------------------------|---------------------|-----------------------------------|--|---|
| CERTIFICATE OF              | COMPLIANCE                       |   |                                  |                             |                           |                     |                                   |   | NRCC-MCH-E                                    | CERTIFICATE OF            | COMPLIANCE                       |   |                                  |                             |                           |                     |                                   |  | NRCC-MCH-E                                    |
| Project Name:               | San Pedro ES                     |   |                                  |                             | Report Pa                 | ge:                 |                                   |   | (Page 30 of 51)                               | Project Name:             | San Pedro ES                     |   |                                  |                             | Report Pa                 | ge:                 |                                   |  | (Page 29 of 51)                               |
| - (2)<br>                   |                                  |   |                                  |                             | Date Prep                 | ared:               |                                   |   | 9/18/2024                                     |                           |                                  |   |                                  |                             | Date Prep                 | ared:               |                                   |  | 9/18/2024                                     |
|                             |                                  |   |                                  |                             |                           |                     |                                   |   |   |                           |                                  |   |                                  |                             |                           |                     |                                   |  |   |
|                             | 04                               |   | 05                               | V                           |                           |                     | 06                                | 0                                       | 17  | J. VENTIEARIO             |                                  |   | 05                               |                             |                           |                     | 06                                | (                                      | 17  |
| System Name                 | PHP-2                            | System Desi                                     | ign OA CFM                       | 76                          | System                    | Design<br>Air CFM   | 0                                 | Air Filtration per 120<br>160.2         | 0.1(c) 141.0(b)2 and<br>(c)21 <sup>2</sup>    | System Name               | FC-C4                            | System Desi                                     | gn OA CFM                        | 339                         | System<br>Transfer        | Design<br>Air CFM   | 0                                 | Air Filtration per 12<br>160.2         | 0.1(c) 141.0(b)2 and<br>(c)21 <sup>2</sup>    |
|                             |                                  |   |                                  |                             |                           |                     |                                   | Prov                                    | rided   |                           |                                  |   |                                  |                             |                           |                     |                                   | Prov                                   | vided   |
| 08                          | 09                               | 10  | 11                               | 12                          | 13                        | 14                  | 15                                | 1                                       | .6  | 08                        | 09                               | 10  | 11                               | 12                          | 13                        | 14                  | 15                                | 1                                      | .6  |
| Space Name                  | Mechanical Ventilation f         | Required per 1                                  | 20.1(c)3 <sup>3</sup> & 2        | 160.2(c)3                   |                           | Exh. \              | /ent per 120.1(c)4 &<br>160.2(c)4 | DCV or Sensor Cont                      | trols per 120.1(d)3,                          | Space Name                | Mechanical Ventilation           | Required per 1                                  | 20.1(c)3 <sup>3</sup> & 1        | 60.2(c)3                    |                           | Exh. V              | /ent per 120.1(c)4 &<br>160.2(c)4 | DCV or Sensor Con                      | trols per 120.1(d)3,                          |
| or Item Tag                 | Occupancy Type <sup>4</sup>      | Conditioned<br>Floor Area<br>(ft <sup>2</sup> ) | # of Shower<br>heads/<br>toilets | # of people <sup>5</sup>    | Required<br>Min OA<br>CFM | Required<br>Min CFM | Provided per Design<br>CFM        | 120.1(d)5, and 120<br>160.2(c)5E        | 0.1(e)3 <sup>6</sup> 160.2(c)5D<br>160.2(c)5D | or Item Tag               | Occupancy Type <sup>4</sup>      | Conditioned<br>Floor Area<br>(ft <sup>2</sup> ) | # of Shower<br>heads/<br>toilets | # of<br>people <sup>5</sup> | Required<br>Min OA<br>CFM | Required<br>Min CFM | Provided per Design<br>CFM        | 120.1(d)5, and 120<br>160.2(c)5E       | 0.1(e)3 <sup>6</sup> 160.2(c)5D<br>160.2(c)5D |
| Computor Lab                | Computer Lab                     | 505   |                                  |                             | 75.9                      | 0                   | 0                                 | DCV                                     | NA: Not required per<br>§120.1(d)3            | Classrooms                | Classroom (ages 5-19)            | 901   |                                  |                             | 229.6                     | 0                   | 0                                 | DCV                                    | NA: Not required per<br>§120.1(d)3            |
| Jomputer Lab                | Computer Lab                     | 505   | 8                                |                             | /5.8                      | 0                   | 0                                 | Occ Sensor                              | NA: Not required<br>space type                | classrooms                | Classroom (ages 5-16)            | 691   |                                  |                             | 558.0                     | Ū                   | U                                 | Occ Sensor                             | NA: Not required<br>space type                |
| 17                          | Total System Required Min OA CFM |   |                                  |                             | 76                        | 18                  | Ventilation for this S            | System Complies?                        | Yes   | 17                        | Total System Required Min OA CFM |   |                                  |                             | 339                       | 18                  | Ventilation for this S            | system Complies?                       | Yes   |
|                             | 04                               |   | 05                               |                             |                           |                     | 06                                | 0                                       | 17  |                           | 04                               |   | 05                               |                             |                           |                     | 06                                | (                                      | )7  |
| System Name                 | PHP-1                            | System Desi<br>Airfle                           | ign OA CFM<br>ow <sup>1</sup>    | 204                         | System<br>Transfer        | Design<br>Air CFM   | 0                                 | Air Filtration per 120<br>160.2<br>Prov | 0.1(c) 141.0(b)2 and<br>(c)21 <sup>2</sup>    | System Name               | FC-C5                            | System Desi<br>Airflo                           | gn OA CFM<br>ow <sup>1</sup>     | 339                         | System<br>Transfer        | Design<br>Air CFM   | 0                                 | Air Filtration per 12<br>160.2<br>Prov | 0.1(c) 141.0(b)2 and<br>(c)21 <sup>2</sup>    |
| 08                          | 09                               | 10  | 11                               | 12                          | 13                        | 14                  | 15                                | 1                                       | 6   | 08                        | 09                               | 10  | 11                               | 12                          | 13                        | 14                  | 15                                | 1101                                   | 6   |
|                             | Mechanical Ventilation F         | Required per 1                                  | 20.1(c)3 <sup>3</sup> & :        | 160.2(c)3                   |                           | Exh. \              | /ent per 120.1(c)4 &<br>160.2(c)4 | DCV or Sensor Cont                      | trols per 120.1(d)3.                          |                           | Mechanical Ventilation           | Required per 1                                  | 20.1(c)3 <sup>3</sup> & 1        | 60.2(c)3                    |                           | Exh. V              | /ent per 120.1(c)4 &<br>160.2(c)4 | DCV or Sensor Con                      | trols per 120.1(d)3.                          |
| Space Name<br>or Item Tag   | Occupancy Type <sup>4</sup>      | Conditioned<br>Floor Area<br>(ft <sup>2</sup> ) | # of Shower<br>heads/<br>toilets | # of<br>people <sup>5</sup> | Required<br>Min OA<br>CFM | Required<br>Min CFM | Provided per Design<br>CFM        | 120.1(d)5, and 120<br>160.2(c)5E        | 0.1(e)3 <sup>6</sup> 160.2(c)5D<br>160.2(c)5D | Space Name<br>or Item Tag | Occupancy Type <sup>4</sup>      | Conditioned<br>Floor Area<br>(ft <sup>2</sup> ) | # of Shower<br>heads/<br>toilets | # of<br>people <sup>5</sup> | Required<br>Min OA<br>CFM | Required<br>Min CFM | Provided per Design<br>CFM        | 120.1(d)5, and 120<br>160.2(c)5E       | 0.1(e)3 <sup>6</sup> 160.2(c)5D<br>160.2(c)5D |
| Library                     | Library - reading room/ stacks   | 1357  |                                  |                             | 203.5                     | 0                   | 0                                 | DCV                                     | NA: Not required per<br>§120.1(d)3            | Classrooms                | Classroom (ages 5-18)            | 892   |                                  |                             | 339                       | 0                   | 0                                 | DCV                                    | NA: Not required per<br>§120.1(d)3            |
| Library                     | Library - reading roomy stacks   | 1357  |                                  |                             | 203.5                     | v                   | 0                                 | Occ Sensor                              | NA: Not required<br>space type                | classicollis              | Classicolli (aBcs 2-10)          | 0.02  |                                  |                             | 555                       | Ŭ                   | ÿ                                 | Occ Sensor                             | NA: Not required space type                   |
| 17                          | Total System Required Min OA CFM |   |                                  |                             | 204                       | 18                  | Ventilation for this S            | System Complies?                        | Yes   | 17                        | Total System Required Min OA CFM |   |                                  |                             | 339                       | 18                  | Ventilation for this S            | ystem Complies?                        | Yes   |

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

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### STATE OF CALIFORNIA Mechanical Systems

| CERTIFICATE OF | COMPLIANCE   |                |
|----------------|--------------|----------------|
| Project Name:  | San Pedro ES | Report Page:   |
|                |              | Date Prepared: |
|                |              |                |

|                |                |   |                    | Dwelling Units: Total duct leakage of duct syste<br>or duct system to outside shall not exceed 6% p<br>systems? |
|----------------|----------------|---|--------------------|---|
|                |                |   |                    | Duct leakage testing per CMC Section 603.10<br>systems?   |
| 11             | No             | The scope of the project includes only duct s   | systems            | serving healthcare facilities   |
| 12             | Yes            | Duct system provides conditioned air to an o  | occupiat           | ble space for a constant volume, single zone, spac  |
| 13             | Yes            | The space conditioning system serves less th  | an 5,00            | 0 ft <sup>2</sup> of conditioned floor area.  |
| 14             | No             | The combined surface area of the ducts is m   | ore tha            | n 25% of the total surface area of the entire duct  |
| 15             |                | The scope of the project includes extending   | an exist           | ing duct system, which is constructed, insulated c  |
| 16             | No             | The scope of the project includes an existing<br>and diagnostic testing in accordance with pro- | duct sy<br>ocedure | stem that is documented to have been previously<br>is in the Reference Nonresidential Appendix NA2.             |
| 17             |                | All Ductwork and plenums with pressure clas   | ss rating          | s shall be constructed to Seal Class A  |
| 18             |                | All ductwork is an extension of an existing du  | uct syste          | em  |
| 19             | 5              | Ductwork serving individual dwelling unit   |                    |   |
| 20             |                | < 25 ft of new or replacement space condition   | oning du           | ucts installed  |
| 21             | R-8            | Duct Insulation R-value   |                    |   |
| 22             |                | ×   |                    |   |
| 23             |                |   |                    |   |
| answers to the | e questions be | low apply to the following duct systems:  | C-B3               | NR/ Common Use: Duct leakage testing sha<br>NA7.5.3 required for these sys                                      |

|  | Generated Date/Time:                                       |
|--|--|
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| STATE OF CALIFORNIA  |  |

### STATE OF CALIFORN **Mechanical Systems**

CERTIFICATE OF COMPLIANCE Project Name: San Pedro ES

Report Page: Date Prepared:

|               |                |   | <b>Dwelling Units:</b> Total duct leakage of duct system shall not exceed 12% or duct system to outside shall not exceed 6% per RA3.1.4 required for systems? | No                 |  |  |  |
|---------------|----------------|---|---|--------------------|--|--|--|
|               |                |   | Duct leakage testing per CMC Section 603.10.1 required for these systems?   | Yes                |  |  |  |
| 11            | No             | The scope of the project includes only duct syste   | ems 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 ft <sup>2</sup> of conditioned floor area.                               |   |                    |  |  |  |
| 14            | No             | The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:                  |   |                    |  |  |  |
| 15            |                | 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 due<br>and diagnostic testing in accordance with procee                         | t system that is documented to have been previously sealed as confirmed throug<br>dures in the Reference Nonresidential Appendix NA2.                         | gh field verificat |  |  |  |
| 17            |                | All Ductwork and plenums with pressure class ra   | itings shall be constructed to Seal Class A   |                    |  |  |  |
| 18            |                | All ductwork is an extension of an existing duct s  | system  |                    |  |  |  |
| 19            |                | Ductwork serving individual dwelling unit   |   |                    |  |  |  |
| 20            |                | < 25 ft of new or replacement space conditionin   | g ducts installed   |                    |  |  |  |
| 21            | R-8            | Duct Insulation R-value   |   |                    |  |  |  |
| 22            |                |   |   |                    |  |  |  |
| 23            |                |   |   |                    |  |  |  |
| answers to th | e questions be | low apply to the following duct systems: FC-B   | 6 NR/ Common Use: Duct leakage testing shall not exceed 6% per<br>NA7.5.3 required for these systems?   | No                 |  |  |  |

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Report Version: 2022.0.000 Schema Version: rev 20220101

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| CALIFORNIA E   | NERGY COMMISSION       |
|--|------------------------|
|  | NRCC-MCH-E             |
|  | (Page 33 of 51)        |
|  | 9/18/2024              |
|  |                        |
| duct system shall not exceed 12%<br>ceed 6% per RA3.1.4 required for | No                     |
| on 603.10.1 required for these<br>s?                                 | Yes                    |
| one, space-conditioning system.                                      |                        |
| tire duct system:  |                        |
| nsulated or sealed with asbestos.                                    |                        |
| previously sealed as confirmed thron<br>ndix NA2.                    | ugh field verification |
|  |                        |
|  |                        |
| esting shall not exceed 6% per<br>these systems?                     | No                     |
|  |                        |

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CALIFORNIA ENERGY COMMISSION NRCC-MCH-E (Page 36 of 51) 9/18/2024

| em shall not exceed 12% per RA3.1.4 required for | No                      |
|--|-------------------------|
| .0.1 required for these                          | Yes                     |
| ce-conditioning system.                          |                         |
| t system:  |                         |
| or sealed with asbestos.                         |                         |
| ly sealed as confirmed thr<br>2.                 | ough field verification |
|  |                         |

| CERTIFICATE OF C<br>Project Name:  | San Pedro ES  | Report Page:  | (Page 29 of 51)   | Project Name: San Pedro ES  | Report Page:  | (Page 28 of 51)  | DSA #01-121955   |
|--|---|---|---|---|---|--|--|
|  |   | Date Prepared:  | 9/18/2024   |   | Date Prepared:  | 9/18/2024  | FILE #21-39  |
| J. VENTILATIO  | ON AND INDOOR AIR QUALITY   |   |   | J. VENTILATION AND INDOOR AIR QU  | ALITY   |  |  |
|  | 04  | 05 06   | 07<br>Air Filtration per 120.1(c) 141.0(b)2 and   | 04  | 05 06   | 07<br>Air Filtration per 120.1(c) 141.0(b)2 and  |  |
| System Name  | FC-C4 System  | m Design OA CFM     System Design     0       Airflow <sup>1</sup> 339     Transfer Air CFM     0   | 160.2(c)21 <sup>2</sup><br>Provided   | System Name FC-C2   | System Design OA CFM     339     System Design     0       Airflow <sup>1</sup> 339     Transfer Air CFM     0  | 160.2(c)21 <sup>2</sup><br>Provided  |  |
| 08   | 09 10   | 0 11 12 13 14 15  | 16  | 08 09   | 10 11 12 13 14 15   | 16   |  |
| Space Name   | Mechanical Ventilation Required   | d per 120.1(c)3 <sup>3</sup> & 160.2(c)3  | DCV or Sensor Controls per 120.1(d)3,   | Mechanical V<br>Space Name  | entilation Required per 120.1(c)3 <sup>3</sup> & 160.2(c)3  | DCV or Sensor Controls per 120.1(d)3,  |  |
| or Item Tag  | Occupancy Type <sup>4</sup> Floor   | Area heads/ # of Min OA Required Provided pe  | r Design 120.1(d)5, and 120.1(e)3° 160.2(c)5D<br>160.2(c)5E 160.2(c)5D  | or Item Tag Occupancy Type  | Floor Area heads/ people <sup>5</sup><br>(fr <sup>2</sup> ) toilote people <sup>5</sup><br>CFM Min CA Min CFM CFM   | 120.1(d)5, and 120.1(e)3° 160.2(c)5D<br>160.2(c)5E 160.2(c)5D  |  |
|  |   |   | DCV NA: Not required per  |   |   | DCV NA: Not required per   |  |
| Classrooms   | Classroom (ages 5-18) 89  | 338.6 0 0   | Occ Sensor NA: Not required   | Classrooms Classroom (ages 5-   | 18) 891 338.6 0 0   | Occ Sensor NA: Not required  |  |
| 17 T   | Total System Required Min OA CFM  | 339 18 Ventilation  | on for this System Complies? Yes  | 17 Total System Required Min  | OA CFM 339 18 Ventilation for this S  | ystem Complies? Yes  |  |
|  | 04  | 05 06   | 07<br>Air Filtration per 120.1(c) 141.0(b)2 and   | 04  | 05 06   | 07<br>Air Filtration per 120.1(c) 141.0(b)2 and  |  |
| System Name  | FC-C5 System  | Airflow <sup>1</sup> 339 System Design 0<br>Airflow <sup>1</sup> 0  | 160.2(c)21 <sup>2</sup><br>Provided   | System Name FC-C3   | System Design OA CFM     System Design     0       Airflow <sup>1</sup> 339     Transfer Air CFM     0  | 160.2(c)21 <sup>2</sup><br>Provided  |  |
| 08   | 09 10   | 0 11 12 13 14 15  | 16  | 08 09   | 10 11 12 13 14 15   | 16   |  |
| Space Name   | Mechanical Ventilation Required   | d per 120.1(c)3 <sup>3</sup> & 160.2(c)3  | DCV or Sensor Controls per 120.1(d)3,   | Mechanical V<br>Space Name  | entilation Required per 120.1(c)3 <sup>3</sup> & 160.2(c)3  | DCV or Sensor Controls per 120.1(d)3,  | HMC Architects   |
| or Item Tag  | Occupancy Type <sup>4</sup> Floor   | Area heads/ # of Min OA Required Provided pe  | r Design 120.1(d)5, and 120.1(e)3° 160.2(c)5D<br>160.2(c)5E 160.2(c)5D  | or Item Tag Occupancy Type  | Floor Area heads/ people <sup>5</sup><br>(fr <sup>2</sup> ) toilote people <sup>5</sup> | 120.1(d)5, and 120.1(e)3* 160.2(c)5D<br>160.2(c)5E 160.2(c)5D  |  |
|  |   |   | DCV NA: Not required per  |   |   | DCV NA: Not required per   | 3584-003-000   |
| Classrooms   | Classroom (ages 5-18) 89  | 339 0 0   | Occ Sensor NA: Not required   | Classrooms Classroom (ages 5-   | 18) 892 339 0 0   | Occ Sensor NA: Not required  |  |
| 17 T   | Total System Required Min OA CFM  | 339 18 Ventilation  | on for this System Complies? Yes  | 17 Total System Required Min  | OA CFM 339 18 Ventilation for this S  | space type<br>ystem Complies? Yes  | 3546 CONCOURS STREET   |
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| CA Building Ener   | ergy Efficiency Standards - 2022 Nonresidential Con   | npliance Report Version: 2022.0.000<br>Schema Version: rev 20220101   | Compliance ID: EnergyPro-4955-0924-3389<br>Report Generated: 2024-09-18 14:33:49  | CA Building Energy Efficiency Standards - 202   | 2 Nonresidential Compliance Report Version: 2022.0.000<br>Schema Version: rev 20220101  | Compliance ID: EnergyPro-4955-0924-3389<br>Report Generated: 2024-09-18 14:33:49   | ISSUE  |
| STATE OF CAUSORN   |   |   | To table ★ a lend of your space which the over planets of the transfer of the space of the sector of the space of the spa |   |   | 1999. Al an an an ann an an an an an an an an an   | ADESCRIPTIONDATE   |
| Mechanical   | al Systems  |   | CALIFORNIA ENERGY COMMISSION  | Mechanical Systems  |   | CALIFORNIA ENERGY COMMISSION   |  |
| CERTIFICATE OF C<br>Project Name:  | COMPLIANCE<br>San Pedro ES  | Report Page:  | NRCC-MCH-E<br>(Page 32 of 51)   | CERTIFICATE OF COMPLIANCE Project Name: San Pedro ES  | Report Page:  | NRCC-MCH-E<br>(Page 31 of 51)  |  |
|  |   | Date Prepared:  | 9/18/2024   |   | Date Prepared:  | 9/18/2024  |  |
|  |   |   |   |   |   |  |  |
| L. DISTRIBUTR  |   | Dwelling Units: Total duct leakage of o   | duct system shall not exceed 12%  | <sup>1</sup> FOOTNOTES: System CFM should include   | both mechanical and natural ventilation for the zone/system   |  |  |
|  |   | or duct system to outside shall not exe<br>system   | s?  | <sup>2</sup> Air filtration requirements apply to the for<br>systems providing outside air to occupiable  | llowing three system types per 120.1(c)1A: space conditioning systems utilizing ducts to supply ai<br>e space; supply side of balanced ventilation systems including heat recovery and energy recovery  | r to occupiable space; supply-only ventilation<br>ventilation systems providing outside air to   |  |
|  |   | Duct leakage testing per CMC Section<br>system  | s? Yes  | occupiable space.<br><sup>3</sup> Uniform Mechanical Code may have mor  | e stringent ventilation requirements; the most stringent code requirement takes precedence.   |  |  |
| 11<br>12   | No         The scope of the project           Yes         Duct system provides control  | includes only duct systems serving healthcare facilities<br>nditioned air to an occupiable space for a constant volume, single z  | one, space-conditioning system.   | <sup>4</sup> See Standards Tables 120.1-A and 120.1-<br><sup>5</sup> For lecture halls with fixed seating, the e  | B.<br>spected number of occupants shall be determined in accordance with the California Buildina Code   |  |  |
| 13   | Yes The space conditioning s  | ystem serves less than 5,000 ft <sup>2</sup> of conditioned floor area.   | atire duct system:  | <sup>6</sup> 120.2(e)3 requires systems serving room.<br>Examples of spaces which require lighting  | s that are required by 130.1(c) to have lighting occupancy sensing controls to also have occupancy  | ,<br>sensing zone controls for ventilation.  | KEYNOTES   |
| 15   | The scope of the project  | includes extending an existing duct system, which is constructed, in  | isulated or sealed with asbestos.   | and open areas in warehouses, library boo   | k stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless exc   | epted by 130.1(c).   |  |
| 16   | No The scope of the project<br>and diagnostic testing in  | accordance with procedures in the Reference Nonresidential Appe   | ndix NA2.   | K. TERMINAL BOX CONTROLS  |   |  |  |
| 17<br>18   | All Ductwork and plenun<br>All ductwork is an extens  | ns with pressure class ratings shall be constructed to Seal Class A sion of an existing duct system   |   | This section does not apply to this project.  |   |  |  |
| 19<br>20   | Ductwork serving individ < 25 ft of new or replace  | lual dwelling unit<br>ment space conditioning ducts installed   |   | L. DISTRIBUTION (DUCTWORK and PI  | PING)   |  |  |
| 21   | R-8 Duct Insulation R-value   |   |   | This table is used to show compliance with  | n mandatory pipe insulation requirements found in 120.3 and mandatory requirements found in 1<br>tion shall be protected from damage, including that due to sunlight, moisture, equipment mainte  | 20.4(g) for duct sealing.<br>nance, and wind. Insulation exposed to  |  |
| 22   |   |   |   | 01 Weath<br>outsid  | er shall be installed with a cover suitable for outdoor service. Insulation covering chilled water pi<br>e the conditioned space shall have a Class I or Class II vapor retarder. All penetrations and joints o   | ping and refrigerant suction piping located of which shall be sealed.  |  |
| The answers to   | the questions below apply to the following d  | uct systems: FC-B2 NA7.5.3 required for   | these systems?  | The answers to the questions below apply  | to the following duct systems: FC-B1 NR/ Common Use: Duct leakage testing shall in NA7 5-2 required for these systems   | not exceed 6% per No   |  |
|  |   |   |   | ······································  | NA7.5.3 required for these syste  | ms?  |  |
|  |   |   |   |   |   |  |  |
|  |   |   |   |   |   |  |  |
|  |   |   |   |   |   |  |  |
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| CA Building Ener   | ergy Efficiency Standards - 2022 Nonresidential Con   | npliance Report Version: 2022.0.000   | Compliance ID: EnergyPro-4955-0924-3389   | CA Building Energy Efficiency Standards - 202   | 2 Nonresidential Compliance Report Version: 2022.0.000  | Compliance ID: EnergyPro-4955-0924-3389  |  |
|  |   | Schema Version: rev 20220101  | Report Generated: 2024-09-18 14:33:49   |   | Schema Version: rev 20220101  | Report Generated: 2024-09-18 14:33:49  | NOTES  |
| STATE OF CALIFORNI   | NIA<br>al Svstems   |   |   | STATE OF CALIFORNIA<br>Mechanical Systems   |   |  |  |
| CERTIFICATE OF C   | COMPLIANCE<br>San Padro ES  | Papart Page   |   |   |   | CALIFORNIA ENERGY COMMISSION   |  |
| Project Name.  | San Feuro ES  | Date Prepared:  | NRCC-MCH-E  | Project Name: San Podro ES  | Deport Page   | CALIFORNIA ENERGY COMMISSION<br>NRCC-MCH-E<br>(Page 34 of E1)  |  |
|  |   | a second second   | NRCC-MCH-E<br>(Page 35 of 51)<br>9/18/2024  | Project Name: San Pedro ES  | Report Page:<br>Date Prepared:  | CALIFORNIA ENERGY COMMISSION<br>NRCC-MCH-E<br>(Page 34 of 51)<br>9/18/2024   |  |
| L. DISTRIBUTIO   |   |   | NRCC-MCH-E<br>(Page 35 of 51)<br>9/18/2024  | Project Name: San Pedro ES  | Report Page:<br>Date Prepared:  | CALIFORNIA ENERGY COMMISSION<br>NRCC-MCH-E<br>(Page 34 of 51)<br>9/18/2024   |  |
|  | ION (DUCTWORK and PIPING)   | Dwelling Units: Total duct leakage of c   | NRCC-MCH-E<br>(Page 35 of 51)<br>9/18/2024  | L. DISTRIBUTION (DUCTWORK and PI  | PING)  Report Page: Date Prepared:  Date Prepared:  Dote Prepared: Description: Des  | CALIFORNIA ENERGY COMMISSION<br>NRCC-MCH-E<br>(Page 34 of 51)<br>9/18/2024   |  |
|  | ION (DUCTWORK and PIPING)   | <b>Dwelling Units:</b> Total duct leakage of o<br>or duct system to outside shall not exc<br>system   | NRCC-MCH-E<br>(Page 35 of 51)<br>9/18/2024<br>luct system shall not exceed 12%<br>:eed 6% per RA3.1.4 required for<br>s?  | L. DISTRIBUTION (DUCTWORK and PI  | Report Page:         Date Prepared:         PING)         Dwelling Units: Total duct leakage of duct system or duct system to outside shall not exceed 6% per systems?  | CALIFORNIA ENERGY COMMISSION<br>NRCC-MCH-E<br>(Page 34 of 51)<br>9/18/2024<br>shall not exceed 12%<br>RA3.1.4 required for No  |  |
|  | ION (DUCTWORK and PIPING)   | Dwelling Units: Total duct leakage of o<br>or duct system to outside shall not exe<br>system<br>Duct leakage testing per CMC Section<br>system  | NRCC-MCH-E<br>(Page 35 of 51)<br>9/18/2024<br>duct system shall not exceed 12%<br>ceed 6% per RA3.1.4 required for<br>s?<br>on 603.10.1 required for these<br>s?  | L. DISTRIBUTION (DUCTWORK and PI  | Report Page:         Date Prepared:         PING)         Dwelling Units: Total duct leakage of duct system or duct system to outside shall not exceed 6% per systems?         Duct leakage testing per CMC Section 603.10.1 systems?   | CALIFORNIA ENERGY COMMISSION NRCC-MCH-E (Page 34 of 51) 9/18/2024 shall not exceed 12% RA3.1.4 required for required for these Yes   |  |
| 11   | ION (DUCTWORK and PIPING) No The scope of the project Yes Duct system provides courses  | Dwelling Units: Total duct leakage of corduct system to outside shall not excosystem:           Duct leakage testing per CMC Sections           includes only duct systems serving healthcare facilities           nditioned air to an occupiable space for a constant volume single zonal  | NRCC-MCH-E<br>(Page 35 of 51)<br>9/18/2024<br>Juct system shall not exceed 12%<br>ceed 6% per RA3.1.4 required for<br>s?<br>on 603.10.1 required for these<br>s?<br>one, space-conditioning system.   | L. DISTRIBUTION (DUCTWORK and PI  | Report Page:         Date Prepared:         PING)         Dwelling Units: Total duct leakage of duct system<br>or duct system to outside shall not exceed 6% per<br>systems?         Duct leakage testing per CMC Section 603.10.1<br>systems?         ope of the project includes only duct systems serving healthcare facilities         ystem provides conditioned air to an occupiable space for a constant volume, single zone, space-   | CALIFORNIA ENERGY COMMISSION NRCC-MCH-E (Page 34 of 51) 9/18/2024 shall not exceed 12% RA3.1.4 required for required for these Yes conditioning system.  |  |
| 11<br>12<br>13   | ION (DUCTWORK and PIPING) No The scope of the project Yes Duct system provides co Yes The space conditioning s  | Dwelling Units: Total duct leakage of o<br>or duct system to outside shall not exc<br>system<br>Duct leakage testing per CMC Section<br>system<br>includes only duct systems serving healthcare facilities<br>inditioned air to an occupiable space for a constant volume, single z<br>system serves less than 5,000 ft <sup>2</sup> of conditioned floor area.   | NRCC-MCH-E<br>(Page 35 of 51)<br>9/18/2024<br>juct system shall not exceed 12%<br>ceed 6% per RA3.1.4 required for<br>s?<br>on 603.10.1 required for these<br>s?<br>one, space-conditioning system.   | L. DISTRIBUTION (DUCTWORK and PI         11       No         12       Yes         13       Yes  | Report Page:         Date Prepared:         PING)         Dwelling Units: Total duct leakage of duct system<br>or duct system to outside shall not exceed 6% per<br>systems?         Duct leakage testing per CMC Section 603.10.1<br>systems?         ope of the project includes only duct systems serving healthcare facilities<br>ystem provides conditioned air to an occupiable space for a constant volume, single zone, space-<br>pace conditioning system serves less than 5,000 ft <sup>2</sup> of conditioned floor area.  | CALIFORNIA ENERGY COMMISSION NRCC-MCH-E (Page 34 of 51) 9/18/2024 shall not exceed 12% RA3.1.4 required for required for these Yes conditioning system.  |  |
| 11<br>12<br>13<br>14<br>15   | ION (DUCTWORK and PIPING) No The scope of the project Yes Duct system provides cod Yes The space conditioning s No The <u>combined</u> surface ar The scope of the project  | Dwelling Units: Total duct leakage of or duct system to outside shall not exa system:           Duct leakage testing per CMC Section system:           Includes only duct systems serving healthcare facilities           Inditioned air to an occupiable space for a constant volume, single zorystem serves less than 5,000 ft <sup>2</sup> of conditioned floor area.           rea of the ducts is more than 25% of the total surface area of the emincludes extending an existing duct system, which is constructed, in  | NRCC-MCH-E         (Page 35 of 51)         9/18/2024  | L. DISTRIBUTION (DUCTWORK and PI         11       No         12       Yes         13       Yes         14       No         15       The so  | Report Page:         Date Prepared:         PING)         Dwelling Units: Total duct leakage of duct system<br>or duct system to outside shall not exceed 6% per<br>systems?         Duct leakage testing per CMC Section 603.10.1<br>systems?         ope of the project includes only duct systems serving healthcare facilities         ystem provides conditioned air to an occupiable space for a constant volume, single zone, space-<br>pace conditioning system serves less than 5,000 ft <sup>2</sup> of conditioned floor area.         ombined surface area of the ducts is more than 25% of the total surface area of the entire duct sy<br>ope of the project includes extending an existing duct system, which is constructed, insulated or   | CALIFORNIA ENERGY COMMISSION NRCC-MCH-E (Page 34 of 51) 9/18/2024 shall not exceed 12% RA3.1.4 required for RA3.1.4 required for required for these Yes conditioning system. conditioning system. stem: sealed with asbestos.  | CONSULTANT:  |
| 11<br>12<br>13<br>14<br>15<br>16   | NO       The scope of the project         Yes       Duct system provides con         Yes       The space conditioning s         No       The scope of the project         No       The scope of the project and diagnostic testing in   | Dwelling Units: Total duct leakage of conduct system to outside shall not excosystem:           Duct system to outside shall not excosystem:           Duct leakage testing per CMC Sections           includes only duct systems serving healthcare facilities           nditioned air to an occupiable space for a constant volume, single zonstant volume, single zonstant serves less than 5,000 ft <sup>2</sup> of conditioned floor area.           rea of the ducts is more than 25% of the total surface area of the emincludes an existing duct system that is documented to have been accordance with procedures in the Reference Nonresidential Appendix   | NRCC-MCH-E<br>(Page 35 of 51)<br>9/18/2024<br>duct system shall not exceed 12%<br>ceed 6% per RA3.1.4 required for<br>s?<br>on 603.10.1 required for these<br>s?<br>one, space-conditioning system.<br>tire duct system:<br>sulated or sealed with asbestos.<br>previously sealed as confirmed through field verification<br>ndix NA2.  | L. DISTRIBUTION (DUCTWORK and PI         11       No         12       Yes         13       Yes         14       No         15       The so         16       No  | Report Page:           Date Prepared:           PING)           Dwelling Units: Total duct leakage of duct system<br>or duct system to outside shall not exceed 6% per<br>systems?           Duct leakage testing per CMC Section 603.10.1<br>systems?           ope of the project includes only duct systems serving healthcare facilities<br>ystem provides conditioned air to an occupiable space for a constant volume, single zone, space-<br>pace conditioning system serves less than 5,000 ft <sup>2</sup> of conditioned floor area.           wmbined surface area of the ducts is more than 25% of the total surface area of the entire duct sy<br>ope of the project includes extending an existing duct system, which is constructed, insulated or<br>ope of the project includes an existing duct system that is documented to have been previously s<br>agnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.  | CALIFORNIA ENERGY COMMISSION<br>NRCC-MCH-E<br>(Page 34 of 51)<br>9/18/2024<br>shall not exceed 12%<br>RA3.1.4 required for<br>required for these<br>Yes<br>conditioning system.<br>stem:<br>sealed with asbestos.<br>ealed as confirmed through field verification   | CONSULTANT:<br>MEP & FS / Sustainability / CxA   |
| 11<br>12<br>13<br>14<br>15<br>16<br>17<br>18   | ION (DUCTWORK and PIPING) No The scope of the project Yes Duct system provides co Yes The space conditioning s No The <u>combined</u> surface ar The scope of the project No The scope of the project All Ductwork and plenum All ductwork is an extense  | Dwelling Units: Total duct leakage of corduct system to outside shall not excosystem:           Duct leakage testing per CMC Section system:           Duct leakage testing per CMC Section system:           includes only duct systems serving healthcare facilities           nditioned air to an occupiable space for a constant volume, single zonstant volume, single zonstant serves less than 5,000 ft <sup>2</sup> of conditioned floor area.           rea of the ducts is more than 25% of the total surface area of the emincludes extending an existing duct system, which is constructed, ir includes an existing duct system that is documented to have been accordance with procedures in the Reference Nonresidential Appents with pressure class ratings shall be constructed to Seal Class A sion of an existing duct system   | NRCC-MCH-E         (Page 35 of 51)         9/18/2024  | CERTIFICATE OF COMPLIANCE         Project Name:       San Pedro ES         L. DISTRIBUTION (DUCTWORK and PI         11       No         11       No         12       Yes         13       Yes         14       No         15       The so         16       No         17       All Du         18       All du   | Depine         Date Prepared:           PING)         Dwelling Units: Total duct leakage of duct system or duct system to outside shall not exceed 6% per systems?           Duct leakage testing per CMC Section 603.10.1 systems?         Duct leakage testing per CMC Section 603.10.1 systems?           ope of the project includes only duct systems serving healthcare facilities         systems?           ope of the project includes only duct systems serving healthcare facilities         systems?           ope of the project includes only duct systems serving healthcare facilities         systems?           ope of the project includes an exist smore than 25% of the total surface area of the entire duct sy ope of the project includes are existing duct system that is documented to have been previously s agnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.           ctwork is an extension of an existing duct system         that is documented to Seal Class A   | CALIFORNIA ENERGY COMMISSION NRCC-MCH-E (Page 34 of 51) 9/18/2024 shall not exceed 12% RA3.1.4 required for RA3.1.4 required for required for these Yes conditioning system. sealed with asbestos. ealed as confirmed through field verification   | CONSULTANT:<br>MEP & FS / Sustainability / CxA<br>1209 Pleasant Grove Blvd.<br>Roseville, CA 95678   |
| 11<br>12<br>13<br>14<br>15<br>16<br>17<br>18<br>19   | ION (DUCTWORK and PIPING)         No       The scope of the project         Yes       Duct system provides col         Yes       The space conditioning s         No       The combined surface ar         The scope of the project       The scope of the project         No       The scope of the project         No       The scope of the project         No       All Ductwork and plenun         All ductwork is an extense       Ductwork serving individe  | Dwelling Units: Total duct leakage of corduct system to outside shall not excosystem.           Duct leakage testing per CMC Section system.           Duct leakage testing per CMC Section system.           Includes only duct systems serving healthcare facilities           Inditioned air to an occupiable space for a constant volume, single zorystem serves less than 5,000 ft <sup>2</sup> of conditioned floor area.           rea of the ducts is more than 25% of the total surface area of the entincludes extending an existing duct system, which is constructed, ir includes an existing duct system that is documented to have been accordance with procedures in the Reference Nonresidential Appenres with pressure class ratings shall be constructed to Seal Class A sion of an existing duct system  | NRCC-MCH-E         (Page 35 of 51)         9/18/2024  | L. DISTRIBUTION (DUCTWORK and PI         11       No         11       No         12       Yes         13       Yes         14       No         15       The so         16       No         17       All Du         18       All du         19       Ducty   | Report Page:         Date Prepared:         PING)         Dwelling Units: Total duct leakage of duct system<br>or duct system to outside shall not exceed 6% per<br>systems?         Duct leakage testing per CMC Section 603.10.1<br>systems?         ope of the project includes only duct systems serving healthcare facilities<br>ystem provides conditioned air to an occupiable space for a constant volume, single zone, space-<br>pace conditioning system serves less than 5,000 ft <sup>2</sup> of conditioned floor area.         mbined surface area of the ducts is more than 25% of the total surface area of the entire duct sy<br>ope of the project includes extending an existing duct system, which is constructed, insulated or<br>ope of the project includes an existing duct system that is documented to have been previously s<br>agnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.         ctwork and plenums with pressure class ratings shall be constructed to Seal Class A         ctwork is an extension of an existing duct system   | CALIFORNIA ENERGY COMMISSION NRCC-MCH-E (Page 34 of 51) 9/18/2024 shall not exceed 12% RA3.1.4 required for No required for these Yes conditioning system. stem: sealed with asbestos. ealed as confirmed through field verification   | CONSULTANT:       MEP & FS / Sustainability / CxA         Image: Construction of the second secon |
| 11<br>12<br>13<br>14<br>15<br>16<br>17<br>18<br>19<br>20<br>21   | ION (DUCTWORK and PIPING)         No       The scope of the project         Yes       Duct system provides con         Yes       The space conditioning s         No       The combined surface ar         The scope of the project       The scope of the project         No       The scope of the project         No       The scope of the project         No       All Ductwork and plenun         All Ductwork is an extens       Ductwork serving individ         R-8       Duct Insulation R-value  | Dwelling Units: Total duct leakage of conduct system to outside shall not example           Duct leakage testing per CMC Sections           Duct leakage testing per CMC Sections           Includes only duct systems serving healthcare facilities           Inditioned air to an occupiable space for a constant volume, single zo           ystem serves less than 5,000 ft <sup>2</sup> of conditioned floor area.           rea of the ducts is more than 25% of the total surface area of the end           includes extending an existing duct system, which is constructed, ir           includes an existing duct system that is documented to have been accordance with procedures in the Reference Nonresidential Apperents with pressure class ratings shall be constructed to Seal Class A sion of an existing duct system           lual dwelling unit           ment space conditioning ducts installed   | NRCC-MCH-E         (Page 35 of 51)         9/18/2024  | L. DISTRIBUTION (DUCTWORK and PI         11       No         12       Yes         13       Yes         14       No         15       The sc         16       No         17       All Du         18       All du         19       Ductw         20       < 25 fr  | Report Page:         Date Prepared:         PING)         Dwelling Units: Total duct leakage of duct system<br>or duct system to outside shall not exceed 6% per<br>systems?         Duct leakage testing per CMC Section 603.10.1<br>systems?         Duct leakage testing per CMC Section 603.10.1<br>systems?         ope of the project includes only duct systems serving healthcare facilities<br>ystem provides conditioned air to an occupiable space for a constant volume, single zone, space-<br>bace conditioning system serves less than 5,000 ft <sup>2</sup> of conditioned floor area.         probled surface area of the ducts is more than 25% of the total surface area of the entire duct sy<br>ope of the project includes extending an existing duct system, which is constructed, insulated or<br>ope of the project includes an existing duct system that is documented to have been previously s<br>agnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.         ctwork and plenums with pressure class ratings shall be constructed to Seal Class A<br>ctwork is an extension of an existing duct system<br>fork serving individual dwelling unit         of new or replacement space conditioning ducts installed<br>msulation R-value  | CALIFORNIA ENERGY COMMISSION NRCC-MCH-E (Page 34 of 51) 9/18/2024 shall not exceed 12% RA3.1.4 required for required for these Yes conditioning system. stem: sealed with asbestos. ealed as confirmed through field verification  | CONSULTANT:         MEP & FS / Sustainability / CxA         CONSULTING         MEP & FS / Sustainability / CxA         Soeville, CA 95678         916-771-0778         www.lpengineers.com   |
| 11<br>12<br>13<br>14<br>15<br>16<br>17<br>18<br>19<br>20<br>21<br>21<br>22<br>23                                   | NO       The scope of the project         Yes       Duct system provides conditioning s         No       The space conditioning s         No       The scope of the project         No       All buctwork and plenun         All ductwork is an extens       Ductwork serving individ         <   | Dwelling Units: Total duct leakage of corduct system to outside shall not excosystem.           Duct leakage testing per CMC Section system.           Duct leakage testing per CMC Section system.           includes only duct systems serving healthcare facilities           nditioned air to an occupiable space for a constant volume, single zonstant volume, single zonstant serves less than 5,000 ft <sup>2</sup> of conditioned floor area.           rea of the ducts is more than 25% of the total surface area of the emincludes extending an existing duct system, which is constructed, ir includes an existing duct system that is documented to have been accordance with procedures in the Reference Nonresidential Appents with pressure class ratings shall be constructed to Seal Class A sion of an existing duct system           lual dwelling unit           ment space conditioning ducts installed  | NRCC-MCH-E         (Page 35 of 51)         9/18/2024  | L. DISTRIBUTION (DUCTWORK and PI         11       No         11       No         12       Yes         13       Yes         14       No         15       The so         16       No         17       All Du         18       All du         19       Ductw         20       < 25 ft  | Report Page:         Date Prepared:         PING)         Dwelling Units: Total duct leakage of duct system<br>or duct system to outside shall not exceed 6% per<br>systems?         Duct leakage testing per CMC Section 603.10.1<br>systems?         ope of the project includes only duct systems serving healthcare facilities<br>ystem provides conditioned air to an occupiable space for a constant volume, single zone, space-<br>bace conditioning system serves less than 5,000 ft <sup>2</sup> of conditioned floor area.         ope of the project includes extending an existing duct system, which is constructed, insulated or<br>ope of the project includes an existing duct system that is documented to have been previously s<br>agnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.         ctwork and plenums with pressure class ratings shall be constructed to Seal Class A<br>:twork is an extension of an existing duct system<br>ork serving individual dwelling unit<br>: of new or replacement space conditioning ducts installed<br>insulation R-value   | CALIFORNIA ENERGY COMMISSION NRCC-MCH-E (Page 34 of 51) 9/18/2024 shall not exceed 12% RA3.1.4 required for RA3.1.4 required for required for these Yes conditioning system. stem: sealed with asbestos. ealed as confirmed through field verification   | CONSULTANT:       MEP & FS / Sustainability / CxA         Image: State of the stat |
| 11<br>12<br>13<br>14<br>15<br>16<br>17<br>18<br>19<br>20<br>21<br>20<br>21<br>22<br>23<br>The answers to           | ION (DUCTWORK and PIPING)         No       The scope of the project         Yes       Duct system provides col         Yes       The space conditioning s         No       The scope of the project         All Ductwork and plenum       All ductwork is an extens         Duct work serving individ       < 25 ft of new or replace   | Dwelling Units: Total duct leakage of or or duct system to outside shall not excession of duct system to outside shall not excession of duct system to outside shall not excession of duct systems constant presence of the construct of the system serving healthcare facilities           Includes only duct systems serving healthcare facilities           Inditioned air to an occupiable space for a constant volume, single z           system serves less than 5,000 ft <sup>2</sup> of conditioned floor area.           rea of the ducts is more than 25% of the total surface area of the enincludes extending an existing duct system, which is constructed, ir includes an existing duct system that is documented to have been accordance with procedures in the Reference Nonresidential Appenes with pressure class ratings shall be constructed to Seal Class A sion of an existing duct system           Iual dwelling unit           ment space conditioning ducts installed           uct systems:         FC-B5           NR/ Common Use: Duct leakage te NA7.5.3 required for   | NRCC-MCH-E         (Page 35 of 51)         9/18/2024  | L. DISTRIBUTION (DUCTWORK and PI         11       No         11       No         12       Yes         13       Yes         14       No         15       The so         16       No         17       All Du         18       All du         19       Ductw         20       < 25 ft  | Report Page:         Date Prepared:         PING)         Dwelling Units: Total duct leakage of duct system<br>or duct system to outside shall not exceed 6% per<br>systems?         Duct leakage testing per CMC Section 603.10.1<br>systems?         ope of the project includes only duct systems serving healthcare facilities<br>ystem provides conditioned air to an occupiable space for a constant volume, single zone, space-<br>pace conditioning system serves less than 5,000 ft <sup>2</sup> of conditioned floor area.         mbined surface area of the ducts is more than 25% of the total surface area of the entire duct sy<br>ope of the project includes extending an existing duct system, which is constructed, insulated or<br>ope of the project includes an existing duct system that is documented to have been previously s<br>agnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.         ctwork and plenums with pressure class ratings shall be constructed to Seal Class A         ctwork is an extension of an existing duct system<br>tork serving individual dwelling unit         of new or replacement space conditioning ducts installed<br>nsulation R-value         to the following duct systems:       FC-B4         NR/ Common Use: Duct leakage testing shall I<br>NA7.5.3 required for these system   | CALIFORNIA ENERGY COMMISSION         NRCC-MCH-E         (Page 34 of 51)         9/18/2024    shall not exceed 12%          RA3.1.4 required for       No         required for these       Yes  | CONSULTANT:       MEP & FS / Sustainability / CxA         LODGUELENGE       MEP & FS / Sustainability / CxA         Serville, CA 95678       916-771-0778         Job #: 24-2053       www.lpengineers.com         Job #: 24-2053       Job #: 24-2053   |
| 11<br>12<br>13<br>14<br>15<br>16<br>17<br>18<br>19<br>20<br>21<br>21<br>22<br>23<br>The answers to                 | NO       The scope of the project         Yes       Duct system provides conditioning s         Yes       The space conditioning s         No       The scope of the project         No       All buctwork and plenun         All Ductwork is an extense       Ductwork serving individe         All ductwork is an extense       Duct Insulation R-value         R-8       Duct Insulation R-value         Date questions below apply to the following d | Dwelling Units: Total duct leakage of conduct system to outside shall not example           Duct leakage testing per CMC Section system           Duct leakage testing per CMC Section system           Includes only duct systems serving healthcare facilities           Inditioned air to an occupiable space for a constant volume, single z           ystem serves less than 5,000 ft <sup>2</sup> of conditioned floor area.           rea of the ducts is more than 25% of the total surface area of the entincludes extending an existing duct system, which is constructed, ir           includes an existing duct system that is documented to have been accordance with procedures in the Reference Nonresidential Appens with pressure class ratings shall be constructed to Seal Class A sion of an existing duct system           lual dwelling unit           ment space conditioning ducts installed           uct systems:         FC-B5           NR/ Common Use: Duct leakage term           NA7.5.3 required for  | NRCC-MCH-E<br>(Page 35 of 51)         9/18/2024         duct system shall not exceed 12%<br>ceed 6% per RA3.1.4 required for<br>s?       No         on 603.10.1 required for these<br>s?       Yes         one, space-conditioning system.  | L. DISTRIBUTION (DUCTWORK and PI         11       No         11       No         12       Yes         13       Yes         14       No         15       The sc         16       No         17       All Du         18       All du         19       Ductw         20       < 25 ft  | Report Page:           Date Prepared:           PING)           Or duct system to outside shall not exceed 6% per<br>systems?           Duct leakage testing per CMC Section 603.10.1<br>systems?           ope of the project includes only duct systems serving healthcare facilities<br>ystem provides conditioned air to an occupiable space for a constant volume, single zone, space-<br>nace conditioning system serves less than 5,000 ft <sup>2</sup> of conditioned floor area.           mbined surface area of the ducts is more than 25% of the total surface area of the entire duct sy<br>ope of the project includes extending an existing duct system, which is constructed, insulated or<br>ope of the project includes an existing duct system that is documented to have been previously s<br>agnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.           ctwork and plenums with pressure class ratings shall be constructed to Seal Class A<br>ctwork is an extension of an existing duct system<br>fork serving individual dwelling unit<br>of new or replacement space conditioning ducts installed<br>nsulation R-value           to the following duct systems:         FC-B4           NR/ Common Use: Duct leakage testing shall in<br>NA7.5.3 required for these system   | CALIFORNIA ENERGY COMMISSION         NRCC-MCH-E       (Page 34 of 51)       9/18/2024         shall not exceed 12%       No       No         required for these       Yes       Yes         conditioning system.   | CONSULTANT:       MEP & FS / Sustainability / CxA         LODSULTING       MEP & FS / Sustainability / CxA         LODSULTING       MEP & FS / Sustainability / CxA         Subscripting       Mer & fs / Sustainability / CxA         Mer & FS / Sustainability / CxA       Subscripting         Mer & FS / Subscripting       Subscripting   |
| 11<br>12<br>13<br>14<br>15<br>16<br>17<br>18<br>19<br>20<br>21<br>22<br>23<br>The answers to 7                     | NO       The scope of the project         Yes       Duct system provides conditioning s         No       The space conditioning s         No       The scope of the project         No       All buctwork and plenun         All ductwork is an extens       Ductwork serving individ         2       25 ft of new or replace         R-8       Duct Insulation R-value         Duct apply to the following d   | Dwelling Units: Total duct leakage of corduct system to outside shall not excession           Duct leakage testing per CMC Sections           system:           Duct leakage testing per CMC Sections           system           Duct leakage testing per CMC Sections           system           Includes only duct systems serving healthcare facilities           Inditioned air to an occupiable space for a constant volume, single z           system serves less than 5,000 ft <sup>2</sup> of conditioned floor area.           rea of the ducts is more than 25% of the total surface area of the end           includes an existing duct system that is documented to have been accordance with procedures in the Reference Nonresidential Apperence           ns with pressure class ratings shall be constructed to Seal Class A           sion of an existing duct system           lual dwelling unit           ment space conditioning ducts installed           uct systems:         FC-B5           NR/ Common Use: Duct leakage tege           NA7.5.3 required for   | NRCC-MCH-E<br>(Page 35 of 51)         9/18/2024   | L. DISTRIBUTION (DUCTWORK and PI         11       No         11       No         12       Yes         13       Yes         14       No         15       The so         16       No         17       All Du         18       All du         19       Ductw         20       < 25 fi  | Report Page:         Date Prepared:         PING)         Dwelling Units: Total duct leakage of duct system<br>or duct system to outside shall not exceed 6% per<br>systems?         Duct leakage testing per CMC Section 603.10.1<br>systems?         ope of the project includes only duct systems serving healthcare facilities<br>ystem provides conditioned air to an occupiable space for a constant volume, single zone, space-<br>pace conditioning system serves less than 5,000 ft² of conditioned floor area.         mbined surface area of the ducts is more than 25% of the total surface area of the entire duct sy<br>ope of the project includes an existing duct system that is documented to have been previously s<br>agnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.         ctwork and plenums with pressure class ratings shall be constructed to Seal Class A<br>ctwork is an extension of an existing duct system<br>tork serving individual dwelling unit         to fnew or replacement space conditioning ducts installed<br>nsulation R-value         to the following duct systems:         FC-B4  | CALIFORNIA ENERGY COMMISSION         NRCC-MCH-E       (Page 34 of 51)         9/18/2024       9/18/2024         shall not exceed 12%       No         required for these       Yes         conditioning system.  | CONSULTANT:       MEP & FS / Sustainability / CxA         LODSULTING       MEP & FS / Sustainability / CxA         Serville, CA 95678       916-771-0778         Www.lpengineers.com       Job #: 24-2053  |
| 11<br>12<br>13<br>14<br>15<br>16<br>17<br>18<br>19<br>20<br>21<br>22<br>23<br>The answers to                       | ION (DUCTWORK and PIPING)          No       The scope of the project         Yes       Duct system provides col         Yes       The space conditioning s         No       The combined surface ar         No       The scope of the project         No       All Ductwork and plenum         All Ductwork is an extens       Ductwork serving individ         All Ductwork serving individ       < 25 ft of new or replace                              | Dwelling Units: Total duct leakage of corduct system to outside shall not exasystem           Duct leakage testing per CMC Sections           includes only duct systems serving healthcare facilities           inditioned air to an occupiable space for a constant volume, single zoystem serves less than 5,000 ft <sup>2</sup> of conditioned floor area.           rea of the ducts is more than 25% of the total surface area of the errinoludes extending an existing duct system, which is constructed, ir includes an existing duct system that is documented to have been accordance with procedures in the Reference Nonresidential Appens with pressure class ratings shall be constructed to Seal Class A sion of an existing duct system           lual dwelling unit           ment space conditioning ducts installed           uct systems:         FC-B5           NR/ Common Use: Duct leakage tege           NA7.5.3 required for  | NRCC-MCH-E         (Page 35 of 51)         9/18/2024  | Image: San Pedro ES         L. DISTRIBUTION (DUCTWORK and PI         11       No         11       No         12       Yes         13       Yes         14       No         15       The so         16       No         17       All Du         18       All du         19       Ductw         20       < 25 ft  | Report Page:           Date Prepared:           PING)   | CALIFORNIA ENERGY COMMISSION         NRCC-MCH-E       (Page 34 of 51)         9/18/2024       9/18/2024         shall not exceed 12%       No         required for these       Yes         conditioning system.  | CONSULTANT:       MEP & FS / Sustainability / CxA         LODG       Augusta         LODG       Bill   |
| 11<br>12<br>13<br>14<br>15<br>16<br>17<br>18<br>19<br>20<br>21<br>21<br>22<br>23<br>The answers to                 | ION (DUCTWORK and PIPING)   | Dwelling Units: Total duct leakage of corduct system to outside shall not exassystem:           Duct leakage testing per CMC Sections           includes only duct systems serving healthcare facilities           inditioned air to an occupiable space for a constant volume, single z           ystem serves less than 5,000 ft <sup>2</sup> of conditioned floor area.           rea of the ducts is more than 25% of the total surface area of the err           includes extending an existing duct system, which is constructed, ir           includes an existing duct system that is documented to have been accordance with procedures in the Reference Nonresidential Apperents with pressure class ratings shall be constructed to Seal Class A           ision of an existing duct system           lual dwelling unit           ment space conditioning ducts installed           uct systems:         FC-B5           NR/ Common Use: Duct leakage te NA7.5.3 required for   | NRCC-MCH-E         (Page 35 of 51)         9/18/2024  | Project Name:       San Pedro ES         L. DISTRIBUTION (DUCTWORK and PI         11       No         11       No         12       Yes         13       Yes         14       No         15       The sa         16       No         17       All Du         18       All du         19       Ductw         20       < 25 fi   | Report Page:           Date Prepared:           PING)           Dwelling Units: Total duct leakage of duct system<br>or duct system to outside shall not exceed 6% per<br>systems?           Duct leakage testing per CMC Section 603.10.1<br>systems?           ope of the project includes only duct systems serving healthcare facilities           ystem provides conditioned air to an occupiable space for a constant volume, single zone, space-<br>pace conditioning system serves less than 5,000 ft <sup>2</sup> of conditioned floor area.           mmbined surface area of the ducts is more than 25% of the total surface area of the entire duct sy<br>ope of the project includes extending an existing duct system, which is constructed, insulated or<br>ope of the project includes an existing duct system that is documented to have been previously s<br>agnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.           ctwork and plenums with pressure class ratings shall be constructed to Seal Class A           :twork is an extension of an existing duct system           or for ew or replacement space conditioning ducts installed           insulation R-value           .to the following duct systems:           FC-B4         NR/ Common Use: Duct leakage testing shall in<br>NA7.5.3 required for these system   | CALIFORNIA ENERGY COMMISSION         NRCC-MCH-E       (Page 34 of 51)         9/18/2024       9/18/2024         shall not exceed 12%       No         required for these       Yes         conditioning system.  | CONSULTANT:       MEP & FS / Sustainability / CxA         LODG       LODG         LODG       LODG         LODG       LODG         LODG       MEP & FS / Sustainability / CxA         Masseville, CA 95678       Soseville, CA 95678         109 Pleasant Grove Blvd.       Roseville, CA 95678         109 Pleasant Grove Blvd.       New Ipengineers.com         100 Proof       Www.Ipengineers.com         100 # 24-2053       Mat681         Mat681       Mat681         Wortuger, North       Mat681         Mat681       Mat681  |
| 11<br>12<br>13<br>14<br>15<br>16<br>17<br>18<br>19<br>20<br>21<br>22<br>23<br>The answers to                       | ION (DUCTWORK and PIPING)   | Dwelling Units: Total duct leakage of corduct system to outside shall not exassystem.           Duct leakage testing per CMC Sections           includes only duct systems serving healthcare facilities           inditioned air to an occupiable space for a constant volume, single z           ystem serves less than 5,000 ft <sup>2</sup> of conditioned floor area.           rea of the ducts is more than 25% of the total surface area of the enincludes extending an existing duct system, which is constructed, ir           includes an existing duct system that is documented to have been accordance with procedures in the Reference Nonresidential Appens with pressure class ratings shall be constructed to Seal Class A sion of an existing duct system           lual dwelling unit           ment space conditioning ducts installed           uct systems:         FC-B5           NR/ Common Use: Duct leakage to NA7.5.3 required for   | NRCC-MCH-E         (Page 35 of 51)         9/18/2024  | Image: San Pedro ES         L. DISTRIBUTION (DUCTWORK and PI         11       No         11       No         12       Yes         13       Yes         14       No         15       The sc         16       No         17       All Du         18       All du         19       Ductw         20       < 25 ft  | Report Page:           Date Prepared:           PING)           Dwelling Units: Total duct leakage of duct system<br>or duct system to outside shall not exceed 6% per<br>systems?           Duct leakage testing per CMC Section 603.10.1<br>systems?           ope of the project includes only duct systems serving healthcare facilities<br>ystem provides conditioned air to an occupiable space for a constant volume, single zone, space-<br>nace conditioning system serves less than 5,000 ft <sup>2</sup> of conditioned floor area.           mibined surface area of the ducts is more than 25% of the total surface area of the entire duct sy<br>ope of the project includes extending an existing duct system, which is constructed, insulated or<br>ope of the project includes an existing duct system that is documented to have been previously s<br>agnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.           ctwork and plenums with pressure class ratings shall be constructed to Seal Class A           ctwork is an extension of an existing duct system           ork serving individual dwelling unit<br>ork serving individual dwelling unit<br>sulation R-value           to the following duct systems:         FC-B4           NR/ Common Use: Duct leakage testing shall in<br>NA7.5.3 required for these system   | CALIFORNIA ENERGY COMMISSION         NRCC-MCH-E       (Page 34 of 51)         9/18/2024       9/18/2024         shall not exceed 12%       No         required for these       Yes         conditioning system.  | CONSULTANT:       MEP & F5 / Sustainability / CxA         LODGUE       Service, CA 95678         DOSULTING       Www.lpengineers.com         UNIVERSION       Www.lpengineers.com         Job #: 24-2053       Soft DECORPT  |
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| $ \begin{array}{ c c c c c c c c c c c c c c c c c c c$  | 06         07           0         Air Filtration per 120.1(c) 141.0(b)2           0         160.2(c)21 <sup>2</sup> Provided         16           . Vent per 120.1(c)4 & 160.2(c)4         16           . Vent per 120.1(c)4 & 160.2(c)4         DCV or Sensor Controls per 120.1(d) 120.1(d)5, and 120.1(e)3 <sup>6</sup> 160.2(c)5           1         Provided per Design CFM         160.2(c)5E 160.2(c)5D   |
| $ \begin{array}{ c c c c c } \hline + 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0$   | 06         07           0         Air Filtration per 120.1(c) 141.0(b)2           0         160.2(c)21 <sup>2</sup> Provided         16           Vent per 120.1(c)4 & 160.2(c)4         16           160.2(c)4         DCV or Sensor Controls per 120.1(d)           120.1(d)5, and 120.1(e)3 <sup>6</sup> 160.2(c)5         160.2(c)5E 160.2(c)5D  |
| em NameFC-C4FAM BelleviewFAM BelleviewProvided <thp< th=""><td>0         160.2(c)21<sup>2</sup>           Provided         Provided           15         16           . Vent per 120.1(c)4 &amp; 160.2(c)4         DCV or Sensor Controls per 120.1(d)           160.2(c)4         DCV or Sensor Controls per 120.1(d)           120.1(d)5, and 120.1(e)3<sup>6</sup> 160.2(c)5         160.2(c)5E 160.2(c)5D</td></thp<>  | 0         160.2(c)21 <sup>2</sup> Provided         Provided           15         16           . Vent per 120.1(c)4 & 160.2(c)4         DCV or Sensor Controls per 120.1(d)           160.2(c)4         DCV or Sensor Controls per 120.1(d)           120.1(d)5, and 120.1(e)3 <sup>6</sup> 160.2(c)5         160.2(c)5E 160.2(c)5D   |
| $ \begin{array}{ c c c c c c c c c c c c c c c c c c c$  | 15         16           I. Vent per 120.1(c)4 &         160.2(c)4           160.2(c)4         DCV or Sensor Controls per 120.1(d)           d         Provided per Design           A         CFM  |
| $\frac{1}{10000000000000000000000000000000000$   | d         Provided per Design         120.1(d)5, and 120.1(e)3 <sup>6</sup> 160.2(c).           1         CFM         160.2(c)5E 160.2(c)5D  |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $  |  |
| 17       Total System Required Min OA CFM       339       18       Ventilation for this System Complies?       Yes       17       Total System Required Min OA CFM       339       18       Ventilation for this System Complies?       Yes         Mane $04$ $05$ $05$ $06$ $07$ $06$ $07$ $06$ $07$ $06$ $07$ $06$ <   | 0 DCV NA: Not require <u>§120.1(d)3</u> Occ Sensor NA: Not requ space typ  |
| Name       FC-C5       System Design OA CFM       339       System Design Transfer Air CFM       Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)212         08       09       10       11       12       13       14       15       16       08       09       10       11       12       13       14       15       16       08       09       10       11       12       13       14       15       16       08       09       10       11       12       13       14       15       16       08       09       10       11       12       13       14       15       160.2(c)4       09       10       11       12       13       14       15       00   | Ventilation for this System Complies? Yes 06 07  |
| Image: Construction of the constru   | Air Filtration per 120.1(c) 141.0(b)2           0         160.2(c)21 <sup>2</sup>  |
| $\frac{1}{1} + \frac{1}{1} + \frac{1}$ | Provided           15         16   |
| Image: constraint of the billing o  | . Vent per 120.1(c)4 &           160.2(c)4           DCV or Sensor Controls per 120.1(d)           120.1(d)5, and 120.1(e)3 <sup>6</sup> 160.2(c)?           160.2(c)5D  |
| Occ Sensor INA: NOT required   | 0 DCV NA: Not require<br>§120.1(d):<br>NA: Not require   |
| Image: Second space  | Ventilation for this System Complies?         Yes  |
| Generated Date/Time:Documentation Software: EnergyProGenerated Date/Time:Generated Date/Time:ilding Energy Efficiency Standards - 2022 Nonresidential ComplianceReport Version: 2022.0.000Compliance ID: EnergyPro-4955-0924-3389CA Building Energy Efficiency Standards - 2022 Nonresidential ComplianceReport Version: 2022.0.000Schema Version: rev 20220101Report Generated: 2024-09-18 14:33:49CA Building Energy Efficiency Standards - 2022 Nonresidential ComplianceReport Version: 2022.0.000   | Documentation Software: Ener<br>Compliance ID: EnergyPro-4955-0924<br>)1 Report Generated: 2024-09-18 14   |
| >F CALIFORNIA     STATE OF CALIFORNIA       chanical Systems     CALIFORNIA ENERGY COMMISSION     Mechanical Systems       IFICATE OF COMPLIANCE     NRCC-MCH-E     CERTIFICATE OF COMPLIANCE  | CALIFORNIA ENERGY COMM   |
| ct Name:       San Pedro ES       Project Name:       San Pedro ES       Report Page:         Date Prepared:       9/18/2024       9/18/2024       Date Prepared:       Date Prepared:   | (Page 31<br>9/1  |
|  |  |
| Image: Properties of the project includes only duct system serving healthcare facilities       Image: Properties of the project includes only duct system serving healthcare facilities       No         Image: Properties of the project includes only duct system serving healthcare facilities       Yes       The scope of the project includes only duct system serving healthcare facilities       Yes         Image: Provide the project includes only duct system serving healthcare facilities       Image: Provide the system serving healthcare facilities       Image: Provide the system serving healthcare facilities         Image: Provide the project includes only duct system serving healthcare facilities       Image: Provide the system serving healthcare facilities       Image: Provide the system serving healthcare facilities         Image: Provide the project includes only duct system serving healthcare facilities       Image: Provide the system serving healthcare facilities       Image: Provide the system serving healthcare facilities         Image: Provide the project includes only duct system serving healthcare facilities       Image: Provide the system serving healthcare facilities       Image: Provide the system serving healthcare facilities         Image: Provide the project includes only duct system serving healthcare facilities       Image: Provide the system serving for the system serving   | ns utilizing ducts to supply air to occupiable space; supply-only venti<br>covery and energy recovery ventilation systems providing outside ai<br>ment takes precedence.<br>the California Building Code.<br>ntrols to also have occupancy sensing zone controls for ventilation.<br>toms less than 1,000 ft <sup>2</sup> , classrooms, conference rooms, restrooms, a<br>l unloading zones, unless excepted by 130.1(c).  |
| 14       No       The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:       Examples of spaces which require lighting occupancy sensors include offices 250ft <sup>2</sup> or smaller, multipurpose roc and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and  |  |
| 14       No       The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:         15       16       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.  |  |
| 14NoThe combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:Examples of spaces which require lighting occupancy sensors include offices 250ft <sup>2</sup> or smaller, multipurpose roc15Image: the scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.Image: 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.Image: the scope of the project includes an existing duct system that is documented to Seal Class A17All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class AK. TERMINAL BOX CONTROLS18All ductwork is an extension of an existing duct systemThe scope of the project.   |  |
| 14NoThe combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:15The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.16NoThe scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification<br>and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.17All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A18All ductwork is an extension of an existing duct system19Ductwork serving individual dwelling unit20< 25 ft on ew or replacement space conditioning ducts installed16The scope of the project.17Instable is used to show compliance with mandatory pipe insulation reauirements found in 120.3 and mandate  | ory requirements found in 120.4(g) for duct sealina.   |
| 14       No       The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:         15       The scope of the project includes actending an existing duct system, which is constructed, insulated or sealed with absents.         16       No       The scope of the project includes area insting duct system, which is constructed to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.         17       All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A         18       All ductwork is an extension of an existing duct system.         20       < 25 ft of new or replacement space conditioning duct sistalled         21       R-8         22       Insulation R-value         23       Insulation R-value         24       No         17       Net following duct systems:         18       No         19       Ductwork serving individual dwelling unit         22       Insulation R-value         23       Insulation R-value         24       No         17       NR/ Common Use: Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?       No         18       National data open areas in warehouse below apply to the following duct system:       FC-81   | tory requirements found in 120.4(g) for duct sealing.<br>moisture, equipment maintenance, and wind. Insulation exposed to<br>ion covering chilled water piping and refrigerant suction piping loca<br>All penetrations and joints of which shall be sealed.<br>:: Duct leakage testing shall not exceed 6% per<br>.5.3 required for these systems? No  |
| 11       No       The combined system tains of the ducks is more than 25% of the total surface area of the educe system.         15       In the scope of the project includes extending an existing duct system this is commended to have been previously sealed with absets.       Example of space subicit neuror lighting accurancy sensus include of (Fer. 25.00) <sup>2</sup> or smaller, multipurpose record and agenostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.       Example of space subicit neuror lighting accurancy sensus include of (Fer. 25.00) <sup>2</sup> or smaller, multipurpose record and agenostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.         16       No       The scope of the project includes an existing duct system tais is able constructed to san Class A         18       All ductwork is an extension of an esting duct system tais is able constructed to san Class A         19       Ductwork senving individual duelling unit         20       2.5 ft of new or replacement space conditioning ducts system.       FC B2       NA7.5.3 required for these systems?       No         nervers to the questions below apply to the following duct system:       FC B2       NA7.5.3 required for these systems?       No         neight for the source of the project for damage.       Report Version. Software: Energifor       Software: Energifor       Software: Energifor         uilding finery tofficiency Standerds - 2022 Nonresidential Compliance       Report Version. 2022.0000       Schema Version. rev 2022.001       Schema Version. rev   | tory requirements found in 120.4(g) for duct sealing.<br>moisture, equipment maintenance, and wind. Insulation exposed to<br>ion covering chilled water piping and refrigerant suction piping loca<br>All penetrations and joints of which shall be sealed.<br>Duct leakage testing shall not exceed 6% per<br>'.5.3 required for these systems?<br>No<br>Documentation Software: Ener<br>Compliance ID: EnergyPro-4955-0924<br>Report Generated: 2024-09-18 14:   |
| 11 No The combined surface area of the dutis surface area of the toritis dut system:   15 No The combined surface area of the dutis is more than 25% of the total surface area of the entitis dut system; which is constructed with absents:   16 No The combined surface area of the project includes an existing dut system, which is constructed to sealed with absents:   17 All Ductwork is an existing in accordince with proceed dues in the following duct system. The is following duct system which is constructed to Saal Cass A   18 All ductwork is an existing duct system   20 < 25 ft of new or replacement space conditioning ducts installed   21 R-8   22 a   23    24 R-8   Ductwork serving individial wells unit   25 No   26 < 25 ft of new or replacement space conditioning ducts installed   22 a   23 a   24 R-8   Ductwork serving individial wells unit   25 No   26 No   27 No   28 No   29 a   20 < 25 ft of new or replacement space conditioning duct system:   20 < 25 ft of new or replacement space conditioning duct system:   20 < 25 ft of new or replacement space conditioning duct system:   20 No   | tory requirements found in 120.4(g) for duct sealing.<br>moisture, equipment maintenance, and wind. Insulation exposed to<br>ion covering chilled water piping and refrigerant suction piping loca<br>All penetrations and joints of which shall be sealed.<br>Duct leakage testing shall not exceed 6% per<br>'.5.3 required for these systems?<br>No<br>Documentation Software: Ener<br>Compliance ID: EnergyPro-4955-0924<br>Report Generated: 2024-09-18 14:<br>CALIFORNIA ENERGY COMM   |
| 1 No The combined surface are of the docks in more than 25% of the honize duck system   15 No The scope of the project induces continging without system that is documented to have been previously selds as confirmed. Through field verification and diagonation with pressure ducks statings hall is constructed, multiple or support of the angle ducks stating is an advisorial of the pressure ducks and elements with pressure ducks stating is an advisorial of the pressure ducks installed   17 All duckwork and felement system with pressure ducks stating is an advisorial of the pressure ducks installed   12 R buck installed reader ducks installed   12 R buck installed reader ducks stating is an advisorial of the soles to duck system   12 R buck installed reader ducks stating is an advisorial of the pressure ducks installed   13 Duck work installed verification is an advisorial of the pressure ducks installed   14 M duckwork and felement system with measible duck system   15 Not   16 Not   17 All duckwork and felement system ducks installed   18 Duck installed reader ducks installed   19 Duck installed reader ducks system   10 Installed reader ducks system   10 Installed reader ducks system   11 No   12 R buck installed reader ducks system   12 R buck installed reader ducks system   13 Duck installed reader ducks system   14 No  | tory requirements found in 120.4(g) for duct sealing.<br>moisture, equipment maintenance, and wind. Insulation exposed to<br>ion covering chilled water piping and refrigerant suction piping loca<br>All penetrations and joints of which shall be sealed.<br>E: Duct leakage testing shall not exceed 6% per<br>'.5.3 required for these systems?<br>No<br>Documentation Software: Energy<br>Compliance ID: EnergyPro-4955-0924<br>1 CALIFORNIA ENERGY COMM<br>CALIFORNIA ENERGY COMM<br>NRCC-<br>(Page 34   |
|  | tory requirements found in 120.4(g) for duct sealing.<br>moisture, equipment maintenance, and wind. Insulation exposed to<br>ion covering chilled water piping and refrigerant suction piping loca<br>All penetrations and joints of which shall be sealed.<br>2: Duct leakage testing shall not exceed 6% per<br>7.5.3 required for these systems?<br>No<br>Documentation Software: Energy<br>Compliance ID: EnergyPro-4955-0924<br>1<br>CALIFORNIA ENERGY COMM<br>CALIFORNIA ENERGY COMM<br>NRCC-<br>(Page 32<br>9/1   |
| 14       No       Treatment of the dust is more than 25% of the total surface area of the dust is dust is more than 25% of the total surface area of the dust is dust in more than 25% of the total surface area of the dust is dust in more than 25% of the total surface area of the dust is dust in more than 25% of the project includes are subing dust yeters is and is an extension of in acting dust yeters more indust gifters 35M <sup>2</sup> evention. Additional total surface area of the dust is dust in the dust in more than 25% of the project includes are subing dust yeters. The total surface area of the dust is dust in the dust in the dust in the dust in the dust is dust in the dust in the dust in the dust is dust in the dust in the dust in the dust in the dust is dust in the dust in the dust is dust in the dust is dust in the dust in the dust is dust in the dust is dust in the dust in the dust in the dust is dust in the dust in the dust in the dust is dus  | tory requirements found in 120.4(g) for duct sealing.<br>moisture, equipment maintenance, and wind. Insulation exposed to<br>ion covering chilled water piping and refrigerant suction piping loca<br>All penetrations and joints of which shall be sealed.<br>E: Duct leakage testing shall not exceed 6% per<br>'.5.3 required for these systems?<br>No<br>Documentation Software: Ener<br>Compliance ID: EnergyPro-4955-0924<br>1<br>CALIFORNIA ENERGY COMM<br>CALIFORNIA ENERGY COMM<br>MRCC-<br>(Page 32<br>9/1<br>duct leakage of duct system shall not exceed 12%<br>side shall not exceed 6% per RA3.1.4 required for<br>systems?<br>g per CMC Section 603.10.1 required for these<br>Var  |
|  | tory requirements found in 120.4(g) for duct sealing.<br>moisture, equipment maintenance, and wind. Insulation exposed to<br>ion covering chilled water piping and refrigerant suction piping loca<br>. All penetrations and joints of which shall be sealed.<br>2: Duct leakage testing shall not exceed 6% per<br>'.5.3 required for these systems?<br>No<br>Documentation Software: Ener<br>. Compliance ID: EnergyPro-4955-0924<br>11.<br>CALIFORNIA ENERGY COMM<br>CALIFORNIA ENERGY COMM<br>MRCC-<br>(Page 34<br>9/1<br>duct leakage of duct system shall not exceed 12%<br>side shall not exceed 6% per RA3.1.4 required for<br>systems?<br>g per CMC Section 603.10.1 required for these<br>systems?   |
|  | tory requirements found in 120.4(g) for duct sealing.<br>moisture, equipment maintenance, and wind. Insulation exposed to<br>ion covering chilled water piping and refrigerant suction piping loca<br>All penetrations and joints of which shall be sealed.<br>Duct leakage testing shall not exceed 6% per<br>'.5.3 required for these systems?<br>No<br>Documentation Software: EnergyPro-4955-0924<br>10<br>Compliance ID: EnergyPro-4955-0924<br>11<br>CALIFORNIA ENERGY COMM<br>NRCC<br>(Page 34<br>9/1<br>duct leakage of duct system shall not exceed 12%<br>side shall not exceed 6% per RA3.1.4 required for<br>systems?<br>g per CMC Section 603.10.1 required for these<br>systems?<br>g per CMC Section 603.10.1 required for these<br>systems?<br>ties<br>volume, single zone, space-conditioning system.<br>pr area.<br>pe area of the entire duct system:   |
|  | tory requirements found in 120.4(g) for duct sealing.<br>moisture, equipment maintenance, and wind. Insulation exposed to<br>ion covering chilled water piping and refrigerant suction piping loca<br>. All penetrations and joints of which shall be sealed.<br>. Duct leakage testing shall not exceed 6% per<br>  |
|  | tory requirements found in 120.4(g) for duct sealing.<br>moisture, equipment maintenance, and wind. Insulation exposed to<br>ion covering chilled water piping and refrigerant suction piping loca<br>All penetrations and joints of which shall be sealed.<br>EDuct leakage testing shall not exceed 6% per<br>'.5.3 required for these systems?<br>No<br>Documentation Software: Ene<br>Compliance ID: EnergyPro-4955-0924<br>Report Generated: 2024-09-18 14<br>CALIFORNIA ENERGY COMM<br>CALIFORNIA ENERGY COMM<br>NRCC<br>(Page 3<br>9/1<br>duct leakage of duct system shall not exceed 12%<br>side shall not exceed 6% per RA3.1.4 required for<br>systems?<br>g per CMC Section 603.10.1 required for these<br>systems?<br>g per CMC Section 603.10.1 required for these<br>systems?<br>ities<br>volume, single zone, space-conditioning system.<br>or area.<br>ce area of the entire duct system:<br>is constructed, insulated or sealed with asbestos.<br>ed to have been previously sealed as confirmed through field verific<br>residential Appendix NA2.<br>o Seal Class A                            |
| 11       No       No <td< th=""><td>tory requirements found in 120.4(g) for duct sealing.<br/>moisture, equipment maintenance, and wind. Insulation exposed to<br/>ion covering chilled water piping and refrigerant suction piping loca<br/>All penetrations and joints of which shall be sealed.<br/>:: Duct leakage testing shall not exceed 6% per<br/>7.5.3 required for these systems?<br/>No<br/>Documentation Software: Ene<br/>Compliance ID: EnergyPro-4955-0924<br/>11<br/>CALIFORNIA ENERGY COMM<br/>CALIFORNIA ENERGY COMM<br/>(Page 3)<br/>9/1<br/>duct leakage of duct system shall not exceed 12%<br/>side shall not exceed 6% per RA3.1.4 required for<br/>systems?<br/>g per CMC Section 603.10.1 required for these<br/>systems?<br/>g per CMC Section 603.10.1 required for these<br/>systems?<br/>g per CMC Section 603.10.1 required for these<br/>systems?<br/>ities<br/>volume, single zone, space-conditioning system.<br/>or area.<br/>ce area of the entire duct system:<br/>is constructed, insulated or sealed with asbestos.<br/>ed to have been previously sealed as confirmed through field verific<br/>residential Appendix NA2.<br/>o Seal Class A</td></td<>   | tory requirements found in 120.4(g) for duct sealing.<br>moisture, equipment maintenance, and wind. Insulation exposed to<br>ion covering chilled water piping and refrigerant suction piping loca<br>All penetrations and joints of which shall be sealed.<br>:: Duct leakage testing shall not exceed 6% per<br>7.5.3 required for these systems?<br>No<br>Documentation Software: Ene<br>Compliance ID: EnergyPro-4955-0924<br>11<br>CALIFORNIA ENERGY COMM<br>CALIFORNIA ENERGY COMM<br>(Page 3)<br>9/1<br>duct leakage of duct system shall not exceed 12%<br>side shall not exceed 6% per RA3.1.4 required for<br>systems?<br>g per CMC Section 603.10.1 required for these<br>systems?<br>g per CMC Section 603.10.1 required for these<br>systems?<br>g per CMC Section 603.10.1 required for these<br>systems?<br>ities<br>volume, single zone, space-conditioning system.<br>or area.<br>ce area of the entire duct system:<br>is constructed, insulated or sealed with asbestos.<br>ed to have been previously sealed as confirmed through field verific<br>residential Appendix NA2.<br>o Seal Class A |
| 1 10 Terms Te  | tory requirements found in 120.4(g) for duct sealing.<br>moisture, equipment maintenance, and wind. Insulation exposed to<br>ion covering chilled water piping and refrigerant suction piping loca<br>All penetrations and joints of which shall be sealed.<br>Public backage testing shall not exceed 6% per<br>7.5.3 required for these systems?<br>No<br>Documentation Software: Ene<br>Compliance ID: EnergyPro-4955-0924<br>Report Generated: 2024-09-18 14<br>CALIFORNIA ENERGY COMM<br>CALIFORNIA ENERGY COMM<br>(Page 3<br>9/1<br>duct leakage of duct system shall not exceed 12%<br>side shall not exceed 6% per RA3.1.4 required for<br>systems?<br>g per CMC Section 603.10.1 required for these<br>systems?<br>ities<br>volume, single zone, space-conditioning system.<br>or area.<br>ce area of the entire duct system:<br>is constructed, insulated or sealed with asbestos.<br>d to have been previously sealed as confirmed through field verific<br>residential Appendix NA2.<br>o Seal Class A   |
| 1 0 The gradient under and the data is more than 236 of the test of the data is more than 236 of the  | tory requirements found in 120.4(g) for duct sealing.<br>moisture, equipment maintenance, and wind. Insulation exposed to<br>ion covering chilled water piping and refrigerant suction piping loca<br>All penetrations and joints of which shall be sealed.<br>2: Duct leakage testing shall not exceed 6% per<br>5.3 required for these systems? No<br>Documentation Software: Ene<br>Compliance ID: EnergyPro-4955-0924<br>Report Generated: 2024-09-18 14<br>CALIFORNIA ENERGY COMM<br>CALIFORNIA ENERGY COMM<br>NRCC<br>(Page 3<br>9/1<br>duct leakage of duct system shall not exceed 12%<br>side shall not exceed 6% per RA3.1.4 required for<br>systems? No<br>g per CMC Section 603.10.1 required for these<br>systems?<br>ities<br>volume, single zone, space-conditioning system.<br>or area.<br>ce area of the entire duct system:<br>is constructed, insulated or sealed with asbestos.<br>2 d to have been previously sealed as confirmed through field verific<br>residential Appendix NA2.<br>o Seal Class A  |

STATE OF CALIFORNIA

Mechanical Systems

Compliance ID: EnergyPro-4955-0924-3389 Report Generated: 2024-09-18 14:33:49

Documentation Software: EnergyPro

DATE: 2024.10.01 SHEET:

# T24.4

CLIENT PROJ NO:

### **DSA SUBMITTAL**

### TITLE 24 COMPLIANCE CALCULATIONS

### T SAN PEDRO RD AEL CA 94901

![](_page_56_Picture_42.jpeg)

![](_page_56_Picture_43.jpeg)

![](_page_56_Picture_46.jpeg)

![](_page_56_Picture_47.jpeg)

AGENCY

CALIFORNIA ENERGY COMMISSION

APPROVAL:

### STATE OF CALIFORNIA **Mechanical Systems**

CERTIFICATE OF COMPLIANCE Project Name: San Pedro ES

Report Page: Date Prepared:

|               |              |   |                           | Dwelling Units: Total duct leakage of duct syst<br>or duct system to outside shall not exceed 6%<br>systems? |
|---------------|--------------|---|---------------------------|--|
|               |              |   |                           | Duct leakage testing per CMC Section 603.1<br>systems?   |
| 11            | No           | The scope of the project includes only duc  | t systems s               | serving healthcare facilities  |
| 12            | Yes          | Duct system provides conditioned air to an  | n occupiab                | le space for a constant volume, single zone, spa   |
| 13            | Yes          | The space conditioning system serves less   | than 5,000                | ) ft <sup>2</sup> of conditioned floor area.   |
| 14            | No           | The combined surface area of the ducts is   | more than                 | 25% of the total surface area of the entire due  |
| 15            |              | The scope of the project includes extendin  | ng an existi              | ng duct system, which is constructed, insulated  |
| 16            | No           | The scope of the project includes an existin<br>and diagnostic testing in accordance with p                     | ng duct sys<br>procedures | tem that is documented to have been previous<br>s in the Reference Nonresidential Appendix NA                |
| 17            |              | All Ductwork and plenums with pressure c  | lass rating               | s shall be constructed to Seal Class A   |
| 18            |              | All ductwork is an extension of an existing   | duct syste                | m  |
| 19            |              | Ductwork serving individual dwelling unit   |                           |  |
| 20            |              | < 25 ft of new or replacement space condi-  | tioning du                | cts installed  |
| 21            | R-8          | Duct Insulation R-value   |                           |  |
| 22            |              | da Alexandra Alexandr |                           |  |
| 23            |              |   |                           |  |
| nswers to the | questions be | low apply to the following duct systems:  | FC-C2                     | NR/ Common Use: Duct leakage testing sh<br>NA7.5.3 required for these s                                      |

### Generated Date/Time: CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Schema Version: rev 20220101

STATE OF CALIFORNIA **Mechanical Systems** 

Report Page: Date Prepared:

Generated Date/Time:

Report Version: 2022.0.000

Schema Version: rev 20220101

CERTIFICATE OF COMPLIANCE Project Name: San Pedro ES

### L. DISTRIBUTION (DUCTWORK and PIPING)

|                |                |  |                                 | Dwelling Units: Total duct leakage of duct system shall n<br>or duct system to outside shall not exceed 6% per RA3.1<br>systems? |
|----------------|----------------|--|---------------------------------|--|
|                |                |  |                                 | Duct leakage testing per CMC Section 603.10.1 requir<br>systems?   |
| 11             | No             | The scope of the project includes only o   | duct systems                    | serving healthcare facilities  |
| 12             | Yes            | Duct system provides conditioned air to  | o an occupiat                   | le space for a constant volume, single zone, space-conditi   |
| 13             | Yes            | The space conditioning system serves lo  | ess than 5,00                   | 0 ft <sup>2</sup> of conditioned floor area.   |
| 14             | No             | The combined surface area of the ducts   | s is more tha                   | n 25% of the total surface area of the entire duct system:   |
| 15             |                | The scope of the project includes exten  | ding an exist                   | ing duct system, which is constructed, insulated or sealed   |
| 16             | No             | The scope of the project includes an ex<br>and diagnostic testing in accordance wi | isting duct sy<br>ith procedure | stem that is documented to have been previously sealed a<br>is in the Reference Nonresidential Appendix NA2.                     |
| 17             |                | All Ductwork and plenums with pressur  | re class rating                 | s shall be constructed to Seal Class A   |
| 18             |                | All ductwork is an extension of an exist   | ing duct syste                  | em   |
| 19             |                | Ductwork serving individual dwelling u   | nit                             |  |
| 20             |                | < 25 ft of new or replacement space co   | nditioning du                   | icts installed   |
| 21             | R-8            | Duct Insulation R-value  |                                 |  |
| 22             |                |  |                                 |  |
| 23             |                |  |                                 |  |
| answers to the | e questions be | low apply to the following duct systems:   | FC-C5                           | NR/ Common Use: Duct leakage testing shall not exc<br>NA7.5.3 required for these systems?  |

### CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

### STATE OF CALIFORNIA **Mechanical Systems** CERTIFICATE OF COMPLIANCE

| CERTIFICATE OF | COMPLIANCE                 |                |
|----------------|----------------------------|----------------|
| Project Name:  | San Pedro ES               | Report Page:   |
|                |                            | Date Prepared: |
|                |                            |                |
|                |                            |                |
|                | ION (DIJCTWORK and PIPING) |                |
| L. DISTRIBUT   |                            |                |
|                |                            |                |

| Image: Description of the project includes and plant provides conditioning duct system provides conditioning system.         Image: Description duct laskage of duct system provides conditioning system.         Image: Description duct laskage of duct system provides conditioning system.         Image: Description duct laskage of duct system provides conditioning system.         Image: Description duct laskage of duct system provides conditioning system.         Image: Description duct laskage of duct system provides conditioning system.         Image: Description duct laskage of duct system provides conditioning system.         Image: Description duct laskage of duct system provides conditioning system.         Image: Description duct laskage of duct system.         Image: Description duct laskage duct system system serves laskage duct system system sy  | L. DISTRIBUTION     | ISTRIBUTION (DUCTWORK and PIPING) |   |  |  |                        | L. DISTRIBUTIO    | N (DUCTWOR   | RK and PIPING)   |   |                     |  |
|--|---------------------|-----------------------------------|---|--|--|------------------------|-------------------|--|--|---|---------------------|--|
| Image: Now is part on the scope of the project includes only duct systems serving healthcare facilities       Yes       Duct leakage testing per CMC Section (03.10.1 required for these systems?       Mes         11       No       The scope of the project includes only duct system serving healthcare facilities       11       No       The scope of the project includes only duct system serving healthcare facilities       12       Yes       Duct leakage testing per CMC Section (03.10.1 required for these system?       13       No       The scope of the project includes only duct system serving healthcare facilities       12       Yes       Duct system provides conditioned air to an coscupiable space for a constant volume, single zone, space-conditioning system server sies stan 5.000 ft² conditioned floor area.       13       Yes       The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with absets.       13       Yes       The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with absets.       15       The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with absets.       16       No       The scope of the project includes extending an existing duct system at its documented to have been previously sealed as confirmed through field verification and alignostic testing in accordance with procedures in the Reference Nonesidential Appendix Nu2.       17       All Ductwork kan existing duct system serving healthcare facilities       12       18       No       No       The scope of t  |                     |                                   |   |  | Dwelling Units: Total duct leakage of duct system shall not exceed 12% or duct system to outside shall not exceed 6% per RA3.1.4 required for systems? | No                     |                   |  |  | <b>Dwelling Units:</b> Total duct leakage of duct system shall not exceed 12% or duct system to outside shall not exceed 6% per RA3.1.4 required for systems? | No                  |  |
| 11       No       The scope of the project includes only duct systems serving healthcare facilities         12       Yes       Duct system provides conditioning system serving less to an scoupiable space for a constant volume, single zone, space-conditioning system         13       Yes       The scope of the project includes only duct systems serves less than 5,000 ft <sup>-1</sup> or conditioned floor area.         14       No       The scope of the project includes only duct systems serves less than 5,000 ft <sup>-1</sup> or conditioned floor area.         15       The scope of the project includes and site system serves less than 5,000 ft <sup>-1</sup> or conditioned floor area.         16       No       The scope of the project includes and site stan second ance with procedures in the facterence Nonresidential Appendix MA2.         17       All Joutwork is an extensing duct system which is constructed, instaled or sealed with absence.         18       All Joutwork is an extensing of an existing duct system.         19       Ductwork serving individual dytenging unt         20       < 25 ft of new or replacement space conditioning ducts instaled   |                     |                                   |   |  | Duct leakage testing per CMC Section 603.10.1 required for these systems?  | Yes                    |                   |  |  | Duct leakage testing per CMC Section 603.10.1 required for these systems?   | Yes                 |  |
| 12       Yes       Duck system provides conditioned air to an occupiable space for a constant volume, sigle zone, space-conditioning system.         13       Yes       The space conditioning system serves lass than 5,000 ft <sup>2</sup> of conditioned floor area.         14       No       The combined system serves lass than 5,000 ft <sup>2</sup> of conditioned floor area.         15       Image: conditioning system serves lass than 5,000 ft <sup>2</sup> of conditioned floor area.         16       No       The scope of the project induces extending an existing duct system, which is constructed, insulated or sealed with absetsos.         16       No       The scope of the project induces are string duct system, which is constructed, insulated or sealed with absetsos.         17       AID Uctwork and plenums with pressure class rating shall be constructed to Seal Class A         19       Ductwork and plenums with pressure class rating shall be constructed to Seal Class A         120       R       S1 fo new or replacement space conditioning duct sinstalled         120       R       Ductwork serving individual dwelling unit         121       R       Ductwork serving individual dwelling unit         122       R       Ductwork serving individual dwelling unit         123       R       Ductwork serving individual dwelling unit         124       R       Ductwork serving individual dwelling unit         125       D       Du   | 11                  | No                                | The scope of the project includes only  | duct systems   | serving healthcare facilities  |                        | 11                | No   | The scope of the project includes only duct system   | is serving healthcare facilities  |                     |  |
| 13       Yes       The space conditioning system serves less than 5,000 f <sup>2</sup> of conditioned floor area.         14       No       The combined surface area of the ducts is more than 25% of the total surface are of the duct system.         15       In he space of the project includes area of the ducts is more than 25% of the total surface area of the ducts is more than 25% of the total surface area of the duct system.         16       No       The scape of the project includes are siting duct system, which is constructed, insulated or sealed with absetos.         17       All Ductwork is an extension of an existing duct system, the Reference Nonresidential Appendix NA2.         18       All ductwork is an extension of an existing duct system.         19       Out work serving individuad welling unit         12       Re       Out twork serving individuad welling unit         22       Re       Ductwork serving individuad welling unit.         23       Re       Duct work serving individuad welling unit.         24       Re       Duct work serving individuad welling unit.         23       Re       Duct work serving individuad welling unit.       Instant of the averve instant duct system.         24       Re       Duct work serving individuad welling unit.       Instant on the averve instant duct system.         24       Re       Duct work serving individuad welling unit.       Instant on the averve instant duct syst   | 12                  | Yes                               | Duct system provides conditioned air  | to an occupiat   | ble space for a constant volume, single zone, space-conditioning system.   |                        | 12                | Yes  | Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system. |   |                     |  |
| 14       No       The gambing surface area of the duck is more than 25% of the total surface area of the duck surface area of the duck is more than 25% of the total surface area of the duck is more than 25% of the total surface area of the duck suret matere and duck surface area of the duck suret mat | 13                  | Yes                               | The space conditioning system serves less than 5,000 ft <sup>2</sup> of conditioned floor area. |  |  |                        | 13                | Yes  | The space conditioning system serves less than 5,  | J00 ft <sup>2</sup> of conditioned floor area.  |                     |  |
| 15       The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with absets.         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 Nonesidential Appendix NA2.         17       All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A         18       All ductwork is an extension of an existing duct system         19       Ductwork serving individual dwelling unit         20       <25 ft of new or replacement space conditioning ducts installed   | 14                  | No                                | The combined surface area of the duc  | n 25% of the total surface area of the entire duct system:                 |  | 14                     | No                | The combined surface area of the ducts is more the | The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:               |   |                     |  |
| 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.   17 All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A   18 All ductwork is an extension of an existing duct system that is documented to have been previously sealed as confirmed through field verification   19 Ductwork serving individual dwelling unit   20 < 25 ft of new or replacement space conditioning ducts installed  | 15                  |                                   | The scope of the project includes exte  | ting duct system, which is constructed, insulated or sealed with asbestos. |  | 15                     |                   | The scope of the project includes extending an ex  | t includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.                     |   |                     |  |
| 17 All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A   18 All ductwork is an extension of an existing duct system   19 Ductwork serving individual dwelling unit   20 <25 ft of new or replacement space conditioning ducts installed  | 16                  | No                                | The scope of the project includes an e<br>and diagnostic testing in accordance v                | existing duct sy<br>with procedure   | ystem that is documented to have been previously sealed as confirmed throus<br>es in the Reference Nonresidential Appendix NA2.                        | ugh field verification | 16                | No   | The scope of the project includes an existing duct<br>and diagnostic testing in accordance with procedu                    | system that is documented to have been previously sealed as confirmed throu<br>ares in the Reference Nonresidential Appendix NA2.                             | ugh field verificat |  |
| 18       All ductwork is an extension of an existing duct system         19       Ductwork serving individual dwelling unit         20       <25 ft of new or replacement space conditioning ducts installed   | 17                  |                                   | All Ductwork and plenums with press   | ure class rating   | gs shall be constructed to Seal Class A  |                        | 17                |  | All Ductwork and plenums with pressure class rati  | ngs shall be constructed to Seal Class A  |                     |  |
| 19       Ductwork serving individual dwelling unit         20       <25 ft of new or replacement space conditioning ducts installed  | 18                  |                                   | All ductwork is an extension of an exis   | ting duct syste  | em   |                        | 18                |  | All ductwork is an extension of an existing duct sy  | stem  |                     |  |
| 20         25 ft of new or replacement space conditioning ducts installed         21       R-8       Duct Insulation R-value         22       0       0         23       0       0         23       0       0         Necolspan="3">This section does not apply to this project.   | 19                  |                                   | Ductwork serving individual dwelling  | unit   |  |                        | 19                |  | Ductwork serving individual dwelling unit  |   |                     |  |
| 21       R-8       Duct Insulation R-value         22       0       0         23       0       0         A COLING TOWERS         This section does not apply to this project.  | 20                  |                                   | < 25 ft of new or replacement space c   | onditioning du   | ucts installed   |                        | 20                |  | < 25 ft of new or replacement space conditioning   | ducts installed   |                     |  |
| 22       22       22       23       24       23       23       24       23       24       23       24       23       24       23       24       23       24 <td< td=""><td>21</td><td>R-8</td><td>Duct Insulation R-value</td><td>10</td><td></td><td></td><td>21</td><td>R-8</td><td>Duct Insulation R-value</td><td></td><td></td></td<>   | 21                  | R-8                               | Duct Insulation R-value   | 10   |  |                        | 21                | R-8  | Duct Insulation R-value  |   |                     |  |
| 23       23       23       23       NR/ Common Use: Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?       No         M. COOLING TOWERS       This section does not apply to this project.       NHP-1       NR/ Common Use: Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?       No   | 22                  |                                   |   |  |  |                        | 22                |  |  |   |                     |  |
| M. COOLING TOWERS         PHP-1         NR/ Common Use: Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?         No           This section does not apply to this project.         This project.         No         No   | 23                  |                                   |   |  |  |                        | 23                |  |  |   |                     |  |
| This section does not apply to this project.   |                     |                                   |   |  |  |                        | The answers to th | e questions be                                     | elow apply to the following duct systems: PHP-1  | NR/ Common Use: Duct leakage testing shall not exceed 6% per<br>NA7.5.3 required for these systems?   | No                  |  |
| This section does not apply to this project.   | M. COOLING TO       | WERS                              |   |  |  |                        | 1                 |  |  |   |                     |  |
|  | This section does r | not apply to this                 | project.  |  |  |                        |                   |  |  |   |                     |  |

Generated Date/Time: CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Report Version: 2022.0.000 Schema Version: rev 20220101

|   | CATE OF COMPLIANCE   |  |  | NRCC-MCH-F  | CERTIFICATE OF CO   | MPLIANCE  |  |  |   | NRCC-MCH-E  |
|---|--|--|--|---|---|---|--|--|---|---|
| (Page 38 of 51) Project N/  | Name: San Pedro ES   | i  | Report Page:   | (Page 37 of 51)   | Project Name:   | San Pedro ES  |  | Report Page:   |   | (Page 36 of 51)   |
| 9/18/2024   |  |  | Date Prepared:   | 9/18/2024   |   |   |  | Date Prepared:   |   | 9/18/2024   |
|   |  |  |  |   |   |   |  |  |   |   |
| L. DISTR  | RIBUTION (DUCTW  | /ORK and PIPING)   |  |   | L. DISTRIBUTIO  | N (DUCTWOR  | K and PIPING)  |  |   |   |
| No  |  |  | Dwelling Units: Total duct leakage of d<br>or duct system to outside shall not exc<br>systems                        | uct system shall not exceed 12%<br>eed 6% per RA3.1.4 required for No<br>?  |   |   |  | Dwelling Units: Total duct leakage of d<br>or duct system to outside shall not exc<br>systems                        | uct system shall not exceed 12%<br>eed 6% per RA3.1.4 required for<br>?                 | No  |
| Yes   |  |  | Duct leakage testing per CMC Section<br>systems  | n 603.10.1 required for these<br>? Yes  |   |   |  | Duct leakage testing per CMC Section<br>systems  | n 603.10.1 required for these ?   | Yes   |
|   | 11 No  | The scope of the project includes only duc   | systems serving healthcare facilities  |   | 11  | No  | The scope of the project includes only due   | ct systems serving healthcare facilities   |   |   |
| 1   | 12 Yes   | Duct system provides conditioned air to an   | occupiable space for a constant volume, single zo  | ne, space-conditioning system.  | 12  | Yes   | Duct system provides conditioned air to a  | n occupiable space for a constant volume, single zo  | one, space-conditioning system.   |   |
| 1   | 13 Yes   | The space conditioning system serves less  | than 5,000 ft <sup>2</sup> of conditioned floor area.  |   | 13  | Yes   | The space conditioning system serves less  | than 5,000 ft <sup>2</sup> of conditioned floor area.  |   |   |
| 1   | 14 No  | The <u>combined</u> surface area of the ducts is   | more than 25% of the total surface area of the en  | ire duct system:  | 14  | No  | The <u>combined</u> surface area of the ducts is   | more than 25% of the total surface area of the en  | tire duct system:   |   |
| 1   | 15   | The scope of the project includes extendin   | g an existing duct system, which is constructed, in  | sulated or sealed with asbestos.  | 15  |   | The scope of the project includes extending  | ng an existing duct system, which is constructed, in   | sulated or sealed with asbestos.  |   |
| ield verification   | 16 No  | The scope of the project includes an existing<br>and diagnostic testing in accordance with p                     | ng duct system that is documented to have been p<br>procedures in the Reference Nonresidential Apper                 | reviously sealed as confirmed through field verification dix NA2.   | 16  | No  | The scope of the project includes an existi<br>and diagnostic testing in accordance with | ing duct system that is documented to have been p<br>procedures in the Reference Nonresidential Apper                | reviously sealed as confirmed through<br>dix NA2.                                       | n field verification  |
|   | 17   | All Ductwork and plenums with pressure c   | ass ratings shall be constructed to Seal Class A   |   | 17  |   | All Ductwork and plenums with pressure of  | class ratings shall be constructed to Seal Class A   |   |   |
| 1   | 18   | All ductwork is an extension of an existing  | duct system  |   | 18  |   | All ductwork is an extension of an existing  | duct system  |   |   |
| 1   | 19   | Ductwork serving individual dwelling unit  |  |   | 19  |   | Ductwork serving individual dwelling unit  |  |   |   |
| 2   | 20   | < 25 ft of new or replacement space condi  | ioning ducts installed   |   | 20  |   | < 25 ft of new or replacement space cond   | itioning ducts installed   |   |   |
| 2   | 21 R-8   | B Duct Insulation R-value  |  |   | 21  | R-8   | Duct Insulation R-value  |  |   |   |
| 2   | 22   |  |  |   | 22  |   |  |  |   |   |
| No The ansv   | swers to the question  | s below apply to the following duct systems:   | FC-C1 NR/ Common Use: Duct leakage te  | sting shall not exceed 6% per No  | The answers to th   | ne questions be   | low apply to the following duct systems:   | FC-B6 NR/ Common Use: Duct leakage ter   | sting shall not exceed 6% per   | No  |
|   |  | and a second s |  |   | 10.   |   |  | NA7.5.3 required for   |   | 72  |
| 'tware: EnergyPro<br>-4955-0924-3389 CA Buildi<br>4-09-18 14:33:49  | lding Energy Efficiency S  | tandards - 2022 Nonresidential Compliance  | Generated Date/Time:<br>Report Version: 2022.0.000<br>Schema Version: rev 20220101                                   | Documentation Software: EnergyPro<br>Compliance ID: EnergyPro-4955-0924-3389<br>Report Generated: 2024-09-18 14:33:49   | CA Building Energy  | y Efficiency Stand  | ards - 2022 Nonresidential Compliance  | Generated Date/Time:<br>Report Version: 2022.0.000<br>Schema Version: rev 20220101                                   | Documentation So<br>Compliance ID: EnergyPro<br>Report Generated: 20                    | oftware: EnergyPro<br>ro-4955-0924-3389<br>024-09-18 14:33:49   |
| itware: EnergyPro<br>4955-0924-3389 CA Buildi<br>'4-09-18 14:33:49 STATE OF CA<br>GY COMMISSION Mecha   | Iding Energy Efficiency S<br>CALIFORNIA<br>CALIFORNIA  | tandards - 2022 Nonresidential Compliance  | Generated Date/Time:<br>Report Version: 2022.0.000<br>Schema Version: rev 20220101                                   | Documentation Software: EnergyPro<br>Compliance ID: EnergyPro-4955-0924-3389<br>Report Generated: 2024-09-18 14:33:49<br>CALIFORNIA ENERGY COMMISSION   | CA Building Energy<br>STATE OF CALIFORNIA<br>Mechanical                                       | y Efficiency Stand  | ards - 2022 Nonresidential Compliance  | Generated Date/Time:<br>Report Version: 2022.0.000<br>Schema Version: rev 20220101                                   | Documentation So<br>Compliance ID: EnergyPro<br>Report Generated: 20<br>CALIFORNIA ENER | oftware: EnergyPro<br>ro-4955-0924-3389<br>024-09-18 14:33:49   |
| ftware: EnergyPro<br>1-4955-0924-3389 CA Buildi<br>14-09-18 14:33:49<br>STATE OF CA<br>STATE OF CA<br>Mecha<br>NRCC-MCH-E<br>(Page 41 of 51)                  | Iding Energy Efficiency S<br>CALIFORNIA<br>Danical Systems<br>CATE OF COMPLIANCE<br>Name: San Pedro FS | tandards - 2022 Nonresidential Compliance  | Generated Date/Time:<br>Report Version: 2022.0.000<br>Schema Version: rev 20220101                                   | Documentation Software: EnergyPro<br>Compliance ID: EnergyPro-4955-0924-3389<br>Report Generated: 2024-09-18 14:33:49<br>CALIFORNIA ENERGY COMMISSION<br>NRCC-MCH-E                                 | CA Building Energy<br>STATE OF CALIFORNIA<br>Mechanical<br>CERTIFICATE OF CO<br>Project Name: | y Efficiency Stand<br>Systems<br>MPLIANCE<br>San Pedro ES | ards - 2022 Nonresidential Compliance  | Generated Date/Time:<br>Report Version: 2022.0.000<br>Schema Version: rev 20220101                                   | Documentation So<br>Compliance ID: EnergyPr<br>Report Generated: 20<br>CALIFORNIA ENER  | oftware: EnergyPro<br>ro-4955-0924-3389<br>024-09-18 14:33:49<br>RGY COMMISSION<br>NRCC-MCH-E<br>(Page 39 of 51)              |
| tware: EnergyPro<br>-4955-0924-3389 CA Buildi<br>4-09-18 14:33:49 STATE OF CA<br>SY COMMISSION Mecha<br>NRCC-MCH-E<br>(Page 41 of 51) Project Na<br>9/18/2024 | Iding Energy Efficiency S<br>CALIFORNIA<br>Danical Systems<br>CATE OF COMPLIANCE<br>Name: San Pedro ES | tandards - 2022 Nonresidential Compliance  | Generated Date/Time:<br>Report Version: 2022.0.000<br>Schema Version: rev 20220101<br>Report Page:<br>Date Prepared: | Documentation Software: EnergyPro<br>Compliance ID: EnergyPro-4955-0924-3389<br>Report Generated: 2024-09-18 14:33:49<br>CALIFORNIA ENERGY COMMISSION<br>NRCC-MCH-E<br>(Page 40 of 51)<br>9/18/2024 | CA Building Energy<br>STATE OF CALIFORNIA<br>Mechanical<br>CERTIFICATE OF CO<br>Project Name: | y Efficiency Stand<br>Systems<br>MPLIANCE<br>San Pedro ES | ards - 2022 Nonresidential Compliance  | Generated Date/Time:<br>Report Version: 2022.0.000<br>Schema Version: rev 20220101<br>Report Page:<br>Date Prepared: | Documentation So<br>Compliance ID: EnergyPro<br>Report Generated: 20<br>CALIFORNIA ENER | oftware: EnergyPro<br>ro-4955-0924-3389<br>024-09-18 14:33:49<br>RGY COMMISSION<br>NRCC-MCH-E<br>(Page 39 of 51)<br>9/18/2024 |
| ware: EnergyPro<br>4955-0924-3389<br>409-18 14:33:49<br>CA Buildi<br>1-09-18 14:33:49<br>STATE OF C/<br>Wecha<br>NRCC-MCH-E<br>(Page 41 of 51)<br>9/18/2024   | Iding Energy Efficiency S<br>CALIFORNIA<br>Danical Systems<br>CATE OF COMPLIANCE<br>Name: San Pedro ES | tandards - 2022 Nonresidential Compliance  | Generated Date/Time:<br>Report Version: 2022.0.000<br>Schema Version: rev 20220101<br>Report Page:<br>Date Prepared: | Documentation Software: EnergyPro<br>Compliance ID: EnergyPro-4955-0924-3389<br>Report Generated: 2024-09-18 14:33:49<br>CALIFORNIA ENERGY COMMISSION<br>NRCC-MCH-E<br>(Page 40 of 51)<br>9/18/2024 | CA Building Energy<br>STATE OF CALIFORNIA<br>Mechanical<br>CERTIFICATE OF CO<br>Project Name: | y Efficiency Stand<br>Systems<br>MPLIANCE<br>San Pedro ES | ards - 2022 Nonresidential Compliance  | Generated Date/Time:<br>Report Version: 2022.0.000<br>Schema Version: rev 20220101<br>Report Page:<br>Date Prepared: | Documentation So<br>Compliance ID: EnergyPr<br>Report Generated: 20<br>CALIFORNIA ENER  | oftware: EnergyPro<br>ro-4955-0924-3389<br>024-09-18 14:33:49<br>RGY COMMISSION<br>NRCC-MCH-E<br>(Page 39 of 51)<br>9/18/2024 |

| CALIFORNIA E                  | NERGY COMMISSION       |
|-------------------------------|------------------------|
|                               | NRCC-MCH-E             |
|                               | (Page 41 of 51)        |
|                               | 9/18/2024              |
|                               |                        |
|                               |                        |
|                               |                        |
| stem shall not exceed 12%     |                        |
| % per RA3.1.4 required for    | No                     |
|                               |                        |
| .10.1 required for these      | Vac                    |
|                               | ies                    |
|                               |                        |
| pace-conditioning system.     |                        |
|                               |                        |
| uct system:                   |                        |
| ed or sealed with asbestos.   |                        |
| usly sealed as confirmed thro | ugh field verification |
| A2.                           | •                      |
|                               |                        |
|                               |                        |
|                               |                        |
|                               |                        |
|                               |                        |
| 9                             |                        |
|                               |                        |
|                               |                        |
| shall not exceed 6% per       | No                     |

### Duct leakage testing per CMC Section 603.10.1 required for these systems? No The scope of the project includes only duct systems serving healthcare facilities 11 Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system. 12 Yes 13 The space conditioning system serves less than 5,000 ft<sup>2</sup> of conditioned floor area. Yes No The <u>combined</u> surface area of the ducts is more than 25% of the total surface area of the entire duct system: 14 The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos. 15 The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification 16 No and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2. Ductwork and pienums with pressure class ratings shall be constructed to Seal Class A 18 All ductwork is an extension of an existing duct system 19 Ductwork serving individual dwelling unit 20 < 25 ft of new or replacement space conditioning ducts installed R-8 Duct Insulation R-value 21 22 23 NR/ Common Use: Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems? The answers to the questions below apply to the following duct systems: FC-C4

### Documentation Software: EnergyPro Compliance ID: EnergyPro-4955-0924-3389 Report Generated: 2024-09-18 14:33:49

| CALIFORNIA ENERGY COMMISSION<br>NRCC-MCH-E |
|--|
| NRCC-MCH-E                                 |
|  |
| (Page 44 of 51)                            |
| 9/18/2024                                  |

|                  |              |  | Schema           | Version: rev 20220101 Report Generated: 2  | 2024-09-18 14:33:49 |
|------------------|--------------|--|------------------|--|---------------------|
| STATE OF CALIFOR | IIA          |  |                  |  |                     |
| Mechanica        | l Systems    |  |                  | CALIFORNIA EN  | ERGY COMMISSION     |
| CERTIFICATE OF   | COMPLIANCE   |  |                  |  | NRCC-MCH-E          |
| Project Name:    | San Pedro ES |  |                  | Report Page:   | (Page 43 of 51      |
|                  |              |  |                  | Date Prepared:   | 9/18/2024           |
|                  |              |  | Du               | velling Units: Total duct leakage of duct system shall not exceed 12%<br>duct system to outside shall not exceed 6% per RA3.1.4 required for<br>systems? | No                  |
|                  |              |  | -                | systems? Duct leakage testing per CMC Section 603.10.1 required for these  | Yes                 |
|                  | NI 0. 1923   |  |                  | systems?   |                     |
| 11               | No           | The scope of the project includes only due | ict systems serv | ving healthcare facilities   |                     |
| 12               | Yes          | Duct system provides conditioned air to a  | an occupiable s  | pace for a constant volume, single zone, space-conditioning system.  |                     |
| 13               | Yes          | The space conditioning system serves less  | s than 5,000 ft  | <sup>2</sup> of conditioned floor area.  |                     |
| 14               | No           | The combined surface area of the ducts is  | s more than 25   | % of the total surface area of the entire duct system:   |                     |
|                  |              |  |                  |  |                     |

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Report Version: 2022.0.000

Compliance ID: EnergyPro-4955-0924-3389 Report Generated: 2024-09-18 14:33:49

Documentation Software: EnergyPro

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Generated Date/Time: Report Version: 2022.0.000 Schema Version: rev 20220101

Documentation Software: EnergyPro Compliance ID: EnergyPro-4955-0924-3389 Report Generated: 2024-09-18 14:33:49

Documentation Software: EnergyPro

Compliance ID: EnergyPro-4955-0924-3389

|                  |                |   |                          | systems?   |                        |
|------------------|----------------|---|--------------------------|--|------------------------|
|                  |                |   |                          | Duct leakage testing per CMC Section 603.10.1 required for these systems?  | Yes                    |
| 11               | No             | The scope of the project includes only duct   | systems s                | erving healthcare facilities   |                        |
| 12               | Yes            | Duct system provides conditioned air to an  | occupiabl                | e space for a constant volume, single zone, space-conditioning system.   |                        |
| 13               | Yes            | The space conditioning system serves less t   | han 5,000                | ft <sup>2</sup> of conditioned floor area.   |                        |
| 14               | No             | The combined surface area of the ducts is n   | nore than                | 25% of the total surface area of the entire duct system:   |                        |
| 15               |                | The scope of the project includes extending   | g an existir             | ng duct system, which is constructed, insulated or sealed with asbestos.   |                        |
| 16               | No             | The scope of the project includes an existin<br>and diagnostic testing in accordance with p | g duct syst<br>rocedures | tem that is documented to have been previously sealed as confirmed thro<br>in the Reference Nonresidential Appendix NA2. | ugh field verification |
| 17               |                | All Ductwork and plenums with pressure cla  | ass ratings              | shall be constructed to Seal Class A   |                        |
| 18               |                | All ductwork is an extension of an existing c   | luct syster              | n  |                        |
| 19               |                | Ductwork serving individual dwelling unit   |                          |  |                        |
| 20               |                | < 25 ft of new or replacement space condition   | ioning duc               | ts installed   |                        |
| 21               | R-8            | Duct Insulation R-value   |                          |  |                        |
| 22               |                |   |                          |  |                        |
| 23               |                |   |                          |  |                        |
| he answers to th | e questions be | low apply to the following duct systems:  | FC-C3                    | NR/ Common Use: Duct leakage testing shall not exceed 6% per<br>NA7.5.3 required for these systems?                      | No                     |

| CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance |             |  | Report Version: 2022.0.000Compliance ID: EnerSchema Version: rev 20220101Report Generated               |  | ro-4955-0924-3389<br>024-09-18 14:33:49 |
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| ATE OF CALIFORNIA  |             |  |   |  |   |
| lechanical S   | Systems     |  |   | CALIFORNIA ENE   | RGY COMMISSION                          |
| RTIFICATE OF CO  | MPLIANCE    |  |   |  | NRCC-MCH-E                              |
| oject Name: S  | an Pedro ES |  | Report Page:  |  | (Page 42 of 51)                         |
|  |             |  | Date Prepared:  |  | 9/18/2024                               |
| DISTRIBUTION   | DUCIWORK    |  | Dwelling Units: Total duct leakage o  | f duct system shall not exceed 12%                     |   |
| Distribution   |             |  | Dwelling Units: Total duct leakage o  | f duct system shall not exceed 12%                     |   |
|  |             |  | system to outside shall not e   | ms?  | INO                                     |
|  |             |  | Duct leakage testing per CMC Sec<br>system  | tion 603.10.1 required for these ms?                   | Yes                                     |
| 11   | No          | The scope of the project includes only o   | duct systems serving healthcare facilities  | · · · · · ·  |   |
| 12   | Yes         | Duct system provides conditioned air to  | o an occupiable space for a constant volume, single   | zone, space-conditioning system.                       |   |
| 13   | Yes         | The space conditioning system serves le  | ess than 5,000 ft <sup>2</sup> of conditioned floor area.   |  |   |
| 14   | No          | The combined surface area of the ducts   | s is more than 25% of the total surface area of the   | entire duct system:                                    |   |
| 15   |             | The scope of the project includes exten  | ding an existing duct system, which is constructed,   | insulated or sealed with asbestos.                     |   |
| 16   | No          | The scope of the project includes an ex<br>and diagnostic testing in accordance wi | isting duct system that is documented to have been<br>th procedures in the Reference Nonresidential App | n previously sealed as confirmed throug<br>bendix NA2. | n field verification                    |
| 17   |             | All Ductwork and plenums with pressur  | e class ratings shall be constructed to Seal Class A  |  |   |
| 18   |             | All ductwork is an extension of an existi  | ing duct system   |  |   |
| 19   | 2 A         | Ductwork serving individual dwelling un  | nit   |  |   |
| 20   |             | < 25 ft of new or replacement space co   | nditioning ducts installed  |  |   |
| 21   | R-8         | Duct Insulation R-value  |   |  |   |
| 22   |             |  |   |  |   |
| 23   |             |  |   |  |   |
|  |             |  |   |  |   |

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Schema Version: rev 20220101

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

| Documentation Software: EnergyPro       | i. |
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| Compliance ID: EnergyPro-4955-0924-3389 |    |
| Report Generated: 2024-09-18 14:33:49   | 1  |

NOTES

CONSULTANT:

FACILITY:

498 POINT SAN PEDRO RD SAN RAFAEL CA 94901

PROJECT:

SHEET NAME:

![](_page_57_Picture_37.jpeg)

DATE: 2024.10.01 SHEET:

# T24.5

CLIENT PROJ NO:

### TITLE 24 COMPLIANCE CALCULATIONS

### SRCS SAN PEDRO ELEMENTARY SCHOOL HVAC & FA

![](_page_57_Picture_46.jpeg)

![](_page_57_Picture_47.jpeg)

www.lpengineers.com Job #: 24-2053

MEP & FS / Sustainability / CxA 1209 Pleasant Grove Blvd. Roseville, CA 95678 p 916-771-0778

![](_page_57_Picture_50.jpeg)

IC Architects 1-003-000

![](_page_57_Picture_52.jpeg)

|   | Date  | IFAPE A7 DE ST  |  | INFUDITEASE  |   | IFTUELLINATUE DATIFETULIES   |  |   | $\Pi = \Pi S \Delta \pi \Pi I_{-} I J I U S S$ |
|---|---|---|--|--|---|--|--|---|--|
|   |   | ate Prepared: 9/18/2024   |  | Date Prepared:   | (Page 46 01 51)<br>9/18/2024  |  | Date Prepared:   | 9/18/2024   | FILE #21-39                                    |
|   | O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE   |   | O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE  |  |   | N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION  |  |   |  |
|   | NRCA-MICH-05-A - Air Economizer Controis  | Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4 Ton  | Selections have been made based on information provided in previous table<br>These documents must be provided to the building inspector during constru-<br>https://www.energy.cg.gov/title24/2019standards/2019.compliance.doc | les of this document. If any selection needs to be changed<br>uction and can be found online at<br>uments (Nonresidential, Documents (NBCA ( | , please explain why in Table E Additional Remarks.   | Selections have been made based on information provided in previous table<br>These documents must be provided to the building inspector during constru   | s of this document. If any selection needs to be change<br>tion and can be found online at<br>ments (Nanresidential, Documents (NRCI (   | d, please explain why in Table E Additional Remarks.  |  |
|   |   | Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4 Ton  | For  | rm/Title   | Systems/Spaces To Be Field<br>Verified  |  | Form/Title   |   |  |
|   |   | Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4 Ton  | NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed H<br>Supply Fan VFD Acceptance (if applicable) since testing activities overlap.   | VAC units. Note: MCH-02-A can be performed in conjunc  | tion with MCH-07-A 4 Ton Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4 Ton | NRCI-MCH-01-E - Must be submitted for all buildings  |  |   |  |
|   |   | Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4T Trane<br>Heat Pump WHC048H; 5T  |  |  | Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 2 T Trane                      |  |  |   |  |
|   |   | Trane Heat Pump WHC060H;  |  |  | Cassette; 4 Ton Trane Heat<br>Pump; 4 Ton Trane Heat<br>Pump: 4 Ton Trane Heat                      |  |  |   |  |
|   |   |   |  |  | Pump; 4 Ton Trane Heat<br>Pump; 4 Ton Trane Heat<br>Pump; 4 Ton Trane Heat                          |  |  |   |  |
|   |   |   |  |  | WHC048H; 5T Trane Heat<br>WHC048H; 5T Trane Heat<br>Pump WHC060H;                                   |  |  |   |  |
|   |   |   | NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form doe<br>Systems are included in the scope, permit applicant should move this form  | es not automatically move to "Yes'. If Constant Volume S<br>n to "Yes".  | ngle Zone HVAC 4 Ton Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4 Ton     |  |  |   |  |
|   |   |   |  |  | Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 2 T Trane                      |  |  |   | HMC Archit                                     |
|   |   |   |  |  | Cassette; 4 Ton Trane Heat<br>Pump; 4 Ton Trane Heat<br>Pump; 4 Ton Trane Heat                      |  |  |   |  |
|   |   |   |  |  | Pump; 4 Ton Trane Heat<br>Pump; 4 Ton Trane Heat<br>Pump; 4T Trane Heat Pump                        |  |  |   | 3584-003-000                                   |
|   |   |   |  |  | WHC048H; 5T Trane Heat<br>Pump WHC060H;   |  |  |   | 3546 CONCOURS STREET<br>ONTARIO, CA 91764      |
| Index     Default     Default <thdefault< th=""> <thdefault< th=""> <thdefault< th="">     &lt;</thdefault<></thdefault<></thdefault<>  | Generated Dat CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Versio  | Date/Time:     Documentation Software: EnergyPro       sion: 2022.0.000     Compliance ID: EnergyPro-4955-0924-3389 | CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance   | Generated Date/Time:<br>Report Version: 2022.0.000   | Documentation Software: EnergyPro<br>Compliance ID: EnergyPro-4955-0924-3389                        | CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance   | Generated Date/Time:<br>Report Version: 2022.0.000   | Documentation Software: EnergyPro<br>Compliance ID: EnergyPro-4955-0924-3389  | 909 989 9979 / www.hmcarchite                  |
|   | Schema Versio   | rsion: rev 20220101 Report Generated: 2024-09-18 14:33:49   |  | Schema Version: rev 20220101   | Report Generated: 2024-09-18 14:33:49   |  | Schema Version: rev 20220101   | Report Generated: 2024-09-18 14:33:49   |  |
|   | STATE OF CALIFORNIA<br>Mechanical Systems   | CALIFORNIA ENERGY COMMISSION  | STATE OF CALIFORNIA<br>Mechanical Systems  |  |   | STATE OF CALIFORNIA<br>Mechanical Systems  |  |   |  |
|   | Project Name: San Pedro ES Date   | eport Page: (Page 50 of 51)<br>ate Prepared: 9/18/2024  | Project Name: San Pedro ES   | Report Page:<br>Date Prepared:   | (Page 49 of 51)<br>9/18/2024  | Project Name: San Pedro ES   | Report Page:<br>Date Prepared:   | (Page 48 of 51)<br>9/18/2024  |  |
|   |   |   | O DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE   |  |   | O DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE   |  |   |  |
|   | This table is used to indicate where mandatory measures are documented in the plan set or const<br>01 | nstruction documentation. 02  | NRCA-MCH-12-A FDD for Packaged Direct Expansion Units  |  | 4 Ton Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4 Ton  | NRCA-MCH-11-A Automatic Demand Shed Controls   |  | 4 Ton Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4 Ton  |  |
|   | Compliance with Mandatory Measures documented through MCH<br>Mandatory Measures Note Block            | Yes Plan sheet or construction document location M-Sheets   |  |  | Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4 Ton                          |  |  | Trane Heat Pump; 4 Ion<br>Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4 Ton  |  |
|   |   |   |  |  | Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4 Ton                          |  |  | Cassette; 4 Ton Trane Heat<br>Pump; 4 Ton Trane Heat  |  |
|   |   |   |  |  | Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4T Trane                       |  |  | Pump; 4 Ton Trane Heat<br>Pump; 4 Ton Trane Heat<br>Pump; 4 Ton Trane Heat  | KEYNOTES                                       |
|   |   |   | NRCA-MCH-16-A Supply Air Temperature Reset Controls  |  | Trane Heat Pump WHC060H;<br>2 T Trane Cassette;   |  |  | WHC048H; 5T Trane Heat<br>Pump WHC060H;   |  |
| <text></text>   |   |   | NRCA-MCH-18-A Energy Management Control Systems  |  | 4 Ton Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4 Ton                    |  |  |   |  |
| <text></text>   |   |   |  |  | Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 4 Ton<br>Trane Heat Pump; 2 T Trane                      |  |  |   |  |
|   |   |   |  |  | Cassette; 4 Ton Trane Heat<br>Pump; 4 Ton Trane Heat<br>Pump; 4 Ton Trane Heat                      |  |  |   |  |
| <form></form>   |   |   |  |  | Pump; 4 Ton Trane Heat<br>Pump; 4 Ton Trane Heat<br>Pump; 4T Trane Heat Pump                        |  |  |   |  |
| <text></text>   |   |   |  |  | WHC048H; 5T Trane Heat<br>Pump WHC060H;   |  |  |   |  |
| Autor de la construir                   |   |   | <b>P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION</b><br>There are no NRCV forms required for this project.   |  |   |  |  |   |  |
|   | Generated Da  | Date/Time: Documentation Software: EnergyPro  |  | Generated Date/Time:   | Documentation Software: EnergyPro   |  | Generated Date/Time:   | Documentation Software: EnergyPro   |  |
|   | CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version Schema Versio | rsion: rev 20220101 Compliance ID: EnergyPro-4955-0924-3389<br>Report Generated: 2024-09-18 14:33:49                | CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance   | Schema Version: rev 20220101   | Report Generated: 2024-09-18 14:33:49   | CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance   | Schema Version: rev 20220101   | Report Generated: 2024-09-18 14:33:49   | NOTES  |
|   |   |   |  |  |   | STATE OF CALIFORNIA<br>Mechanical Systems  |  |   |  |
|   |   |   |  |  |   | Project Name:       San Pedro ES         Project Address:       498 Point  | Report Page:<br>San Pedro Road R Date Prepared:  | (Page 51 of 51)<br>9/18/2024  |  |
|   |   |   |  |  |   | DOCUMENTATION AUTHOD'S DECLADATION STATEMENT   |  |   |  |
|   |   |   |  |  |   | I certify that this Certificate of Compliance documentation is accura  | te and complete. Documentation Author Signature:   | D   |  |
|   |   |   |  |  |   | Marcos Hernandez Company: Address:   | Signature Date: 2024-09-18<br>CEA/ HERS Certification Identification (if application   | sable):   |  |
|   |   |   |  |  |   | 1209 Pleasant Grove Blvd<br><sup>City/State/Zip:</sup><br>Roseville CA 95678   | Phone:   |   |  |
|   |   |   |  |  |   | RESPONSIBLE PERSON'S DECLARATION STATEMENT I certify the following under penalty of perjury, under the laws of the State of California:  |  |   |  |
| <ul> <li>1. Second and an and</li></ul> |   |   |  |  |   | <ol> <li>I am eligible under Division 3 of the Business and Professions Code to accept response.</li> <li>The energy features and performance specifications, materials, components, and of Title 24, Part 1 and Part 6 of the California Code of Regulations.</li> </ol>  | nsibility for the building design or system design identified on this C<br>nanufactured devices for the building design or system design identi  | Certificate of Compliance (responsible designer)<br>ified on this Certificate of Compliance conform to the requirements   | CONSULTANT:                                    |
|   |   |   |  |  |   | <ol> <li>The building design features or system design features identified on this Certificate<br/>plans and specifications submitted to the enforcement agency for approval with th</li> <li>I will ensure that a completed signed copy of this Certificate of Compliance shall b<br/>inspections. I understand that a completed signed copy of this Certificate of Compliance shall b</li> </ol> | of Compliance are consistent with the information provided on oth<br>is building permit application.<br>made available with the building permit(s) issued for the building,<br>iance is required to be included with the documentation the builder | her applicable compliance documents, worksheets, calculations,<br>and made available to the enforcement agency for all applicable<br>r provides to the building owner at occupancy. |  |
|   |   |   |  |  |   | Responsible Designer Name:<br>Jason DeDora   | Responsible Designer Signature:  | 22-   |  |
| In a real in a  |   |   |  |  |   | LP Consulting Engineers Address: Address:  | License:   |   | CONSULTING<br>Engineers                        |
| Second Safite       Second Safite<  |   |   |  |  |   | City/State/Zip:<br>Roseville CA 95678  | Phone:<br>(916) 771-0778   |   |  |
| Catality in general catality is 2022 received and catality is 2022          |   |   |  |  |   |  |  |   | 215  |
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| A Mainty Press, Mittan, 41: 303 New selected Corplance       Report Network, no. 2020/001, West Selected 2015 Of all 4.8.4.85       FACILITY:         498 POINT San PED<br>SAN RAFAEL CA SAN         FRQUEDT:       SRCS SAN PEDRO E         SRCS SAN PEDRO E       SRC SAN PEDRO E         DISA SUBBIL       DISA SUBBIL   |   |   |  |  |   |  | Generated Date/Time:   | Documentation Software: EnergyPro   |  |
| 498 POINT SAN PED<br>SAN RAFAEL CA 348<br>PROJECT:<br>SRCS SAN PEDRO E<br>SHEET NAME:<br>TITLE 24 COMPLIAN<br>DISA SUBMI  |   |   |  |  |   | CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance   | Report Version: 2022.0.000<br>Schema Version: rev 20220101   | Compliance ID: EnergyPro-4955-0924-3389<br>Report Generated: 2024-09-18 14:33:49  | FACILITY:                                      |
| SAN RAFAEL CA SAC<br>PROJECT:<br>SRCS SAN PEDRO E<br>SHEET NAME:<br>TITLE 24 COMPLIAN<br>DATE: 2024 10.01   |   |   |  |  |   |  |  |   | 498 POINT SAN PEDRO                            |
| PROJECT:<br>SRCS SAN PEDRO E<br>SHEET NAME:<br>TITLE 24 COMPLIAN<br>DATE: 2024.10.01  |   |   |  |  |   |  |  |   | SAN RAFAEL CA 9490                             |
| SHEET NAME:<br>TITLE 24 COMPLIAN<br>DSA SUBMI   |   |   |  |  |   |  |  |   | PROJECT:<br>SRCS SAN PEDRO EL                  |
| DSA SUBMI   |   |   |  |  |   |  |  |   | SHEET NAME:<br>TITLE 24 COMPLIANC              |
| DATE: 2024.10.01  |   |   |  |  |   |  |  |   | DSA SUBMIT                                     |
|   |   |   |  |  |   |  |  |   |  |

![](_page_58_Picture_7.jpeg)

![](_page_58_Picture_10.jpeg)

### JBMITTAL

### SAN PEDRO RD EL CA 94901

![](_page_58_Picture_16.jpeg)

![](_page_58_Picture_17.jpeg)

![](_page_58_Picture_20.jpeg)

![](_page_58_Picture_22.jpeg)