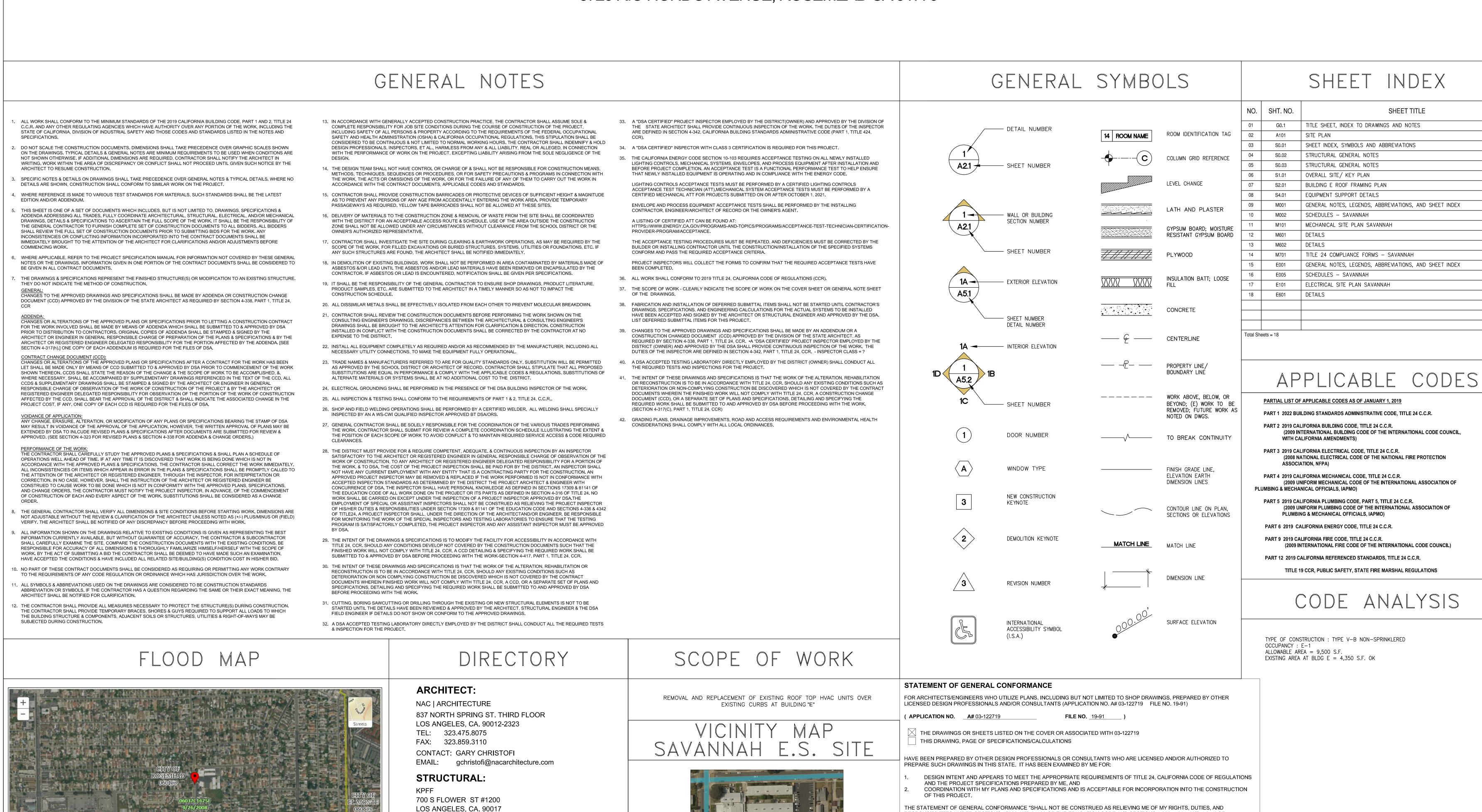
# ROSEMEAD SCHOOL DISTRICT HVAC REPLACEMENT AT BUILDING "E"

# SAVANNAH ELEMENTARY SCHOOL

3720 RIO HONDO AVENUE, ROSEMEAD CA 91770

FILE NO: 19-91 A#: 03-122719



PROJECT SITE:

SAVANNAH MIDDLE SCHOOL

CONTACT: BEN SEGURA

LONG BEACH, CA. 90815

CONTACT: ANDREW SMITH

EMAIL: andrew.smith@p2sinc.com

5000 E.SPRING ST.8TH FLOOR

LONG BEACH, CA. 90815

CONTACT: ALLEN SLY

EMAIL: allen.sly@p2sinc.com

**MECHANICAL:** 

TEL: 562-497-2999

**ELECTRICAL:** 

TEL: 562-497-2999

P2S ENG

P2S ENG

20.2 Cross Sections with 1% Annual Chance

Base Flood Elevation Line (BFE)

17.5 Water Surface Elevation

Jurisdiction Boundary

Hydrographic Feature

GENERAL --- Channel, Culvert, or Storm Sewer

- Coastal Transect Baseline

Limit of Study

OTHER \_ Profile Baseline

STRUCTURES IIIIII Levee, Dike, or Floodwall

Without Base Flood Elevation (BFE)

Regulatory Floodway Zone AE, AO, AH, VE, AR

0.2% Annual Chance Flood Hazard, Area

of 1% annual chance flood with average

depth less than one foot or with drainag

areas of less than one square mile Zoo

Area with Reduced Flood Risk due to

Future Conditions 1% Annual

Chance Flood Hazard Zone X

Levee. See Notes. Zone X

Area of Undetermined Flood Hazard Zone D FLOOD HAZARD Area with Flood Risk due to Levee Zone D

With BFE or Depth

and does not represent an authoritative

Selected FloodMap Boundar

Digital Data Available

MAP PANELS

No Digital Data Available

NO SCREEN Area of Minimal Flood Hazard Zone:

Otherwise Protected Area

OTHER AREAS Coastal Barrier Resource System Area

EMAIL: benjamin.segura@kpff.com

5000 E.SPRING ST.8TH FLOOR

DATE 02-14-2023

NAC NO 161-21043

DRAWN

CHECKED .

DSA SUBMITTAI

SCHOOL DISTRICT

PARK ROSEMEAD

3720 RIO HONDO AVENUE ROSEMEAD CA 91770

TITLE SHEET, INDEX TO DRAWINGS AND NOTES

RESPONSIBILITIES UNDER SECTIONS 17302 AND 81138 OF THE EDUCATION CODE AND SECTIONS 4-336, 4-341, AND 4-344" OF

THIS DRAWING OR PAGE

11/17/2022

05/31/2023

EXPIRATION DATE

IS/ARE IN GENERAL CONFORMANCE WITH THE PROJECT

ARCHITECT OR ENGINEER DESIGNATED TO BE IN

THAS/HAVE BEEN COORDINATED WITH THE PROJECT PLANS

DESIGN INTENT. AND

AND SPECIFICATIONS.

GENERAL RESPONSIBLE CHARGE

SIGNATURE

**HELENA JUBANY** 

LICENSE NUMBER

PRINT NAME

C-22214

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ight|$  ALL DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEET

PRINT NAME

LICENSE NUMBER

DESIGN INTENT. AND

FOR THIS PORTION OF THE WORK

IS/ARE IN GENERAL CONFORMANCE WITH THE PROJECT

HAS/HAVE BEEN COORDINATED WITH THE PROJECT PLANS

EXPIRATION DATE

ARCHITECT OR ENGINEER DELEGATED RESPONSIBILITY



BUILDINGS IN SCOPE	DSA-A#	CERTIFICATION STATUS
BLDG - E	03-118780	NOT CERTIFIED
BLDG - E	03-107659	CERTIFIED

FILE NO: 19-91 A#: 03-122719



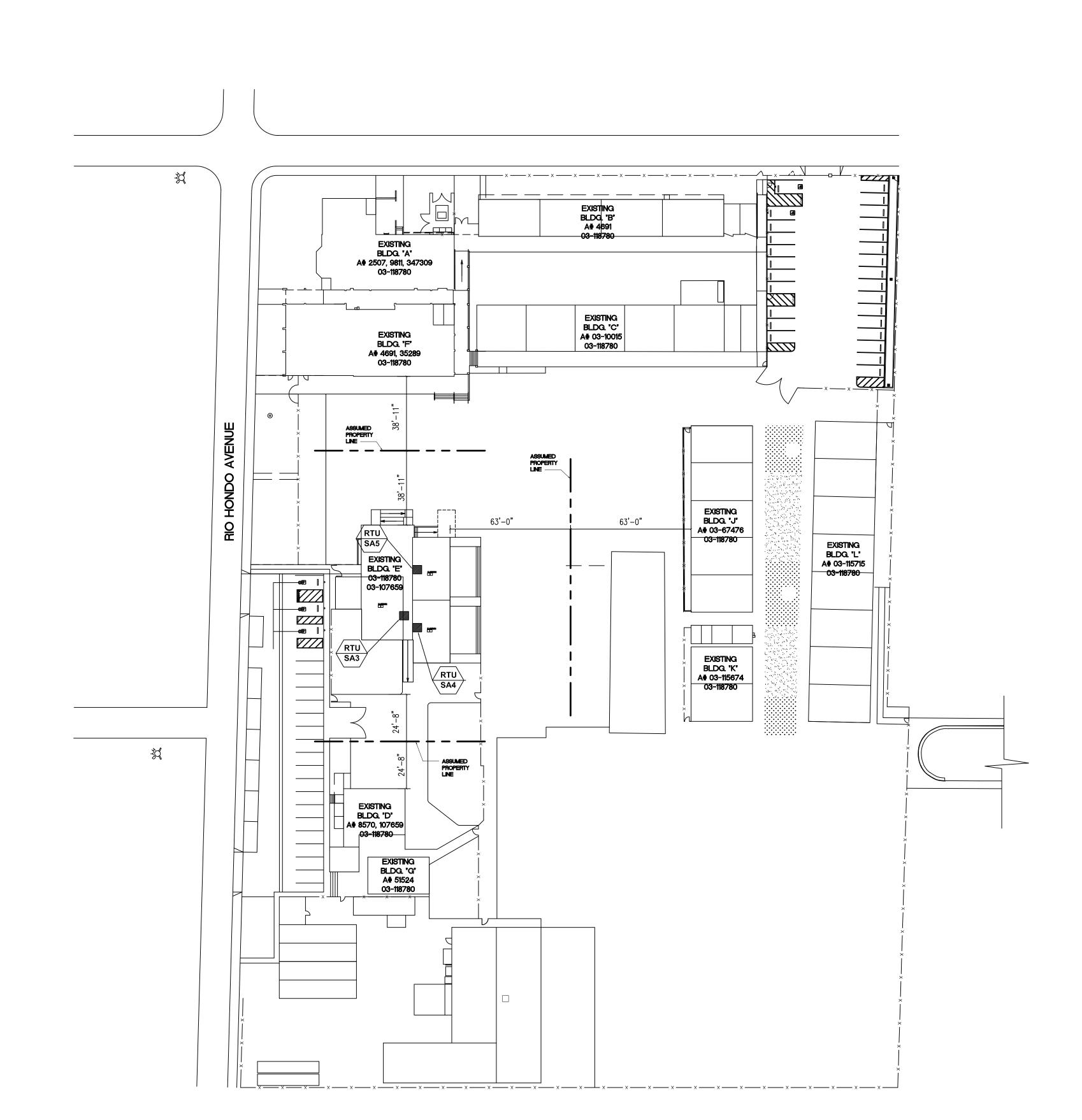
ROSEMEAD SCHOOL DISTRICT
RSD - SAVANNAH ELEMENTARY
HVAC REPLACEMENT AT BUILDINGS E

ROSEMEAD SCHOOL DISTRICT 3720 RIO HONDO AVENUE ROSEMEAD CA 91770

LEGEND

REMOVE EXISTING ROOFTOP HVAC UNIT AND REPLACE AS PER MECHANICAL DWGS.

DATE 02-14-2023



A#: 03-122719

ROSEMEAD SCHOOL DISTRICT PARK ROSEMEAD 3907 ROSEMEAD BOULEVARD ROSEMEAD, CA 91770

NAC NO 161-21043

SHEET INDEX, SYMBOLS AND ABBREVIATIONS

11-17-2022

THICKNESS GRADE NO. 1 2" NOM. AND SMALLER LARGER THAN 2" NOM. GRADE NO. 1

ALL STRUCTURAL PLYWOOD SHEATHING SHALL BE DOUGLAS FIR STANDARD GRADE RATED SHEATHING - EXPOSURE 1 CONFORMING TO THE LATEST EDITION OF DOC PS1 ALL PANELS SHALL BEAR LEGIBLE DFPA STAMPS.

ORIENTED STRAND BOARD (OSB) MAY BE SUBSTITUTED FOR PLYWOODS NOTED ABOVE, AND COMPLY WITH DOC PS2. PROVIDED IT IS RATED BY APA'S PERFORMANCE STANDARD RATING & ICC-ESR # NOTED.

ALL FLOOR & ROOF SHEATHING SHALL BE LAID FACE GRAIN PERPENDICULAR TO FRAMING AND SHALL BE APPROVED BY THE BUILDING INSPECTOR BEFORE COVERING.

ALL NAILING SHALL CONFORM TO THE APPLICABLE BUILDING CODE AND REGULATIONS. ALL NAILS SHALL BE COMMON NAILS ASTM F1667. MINIMUM NAILING REQUIREMENTS OUTLINED IN TABLE 2304.9.1 OF THE CODE SHALL BE FOLLOWED UNLESS OTHERWISE NOTED.

LAG BOLTS (LAG SCREWS): PROVIDE LEAD HOLE 60%-70% OF THREADED SHANK DIAMETER AND FULL DIAMETER FOR SMOOTH SHANK PORTION. MINIMUM PENETRATION INTO MAIN MEMBER SHALL BE 8d.

UNLESS OTHERWISE NOTED, ALL WOOD SILL PLATE UNDER BEARING, EXTERIOR OR SHEAR WALLS IN CONTACT WITH CONCRETE OR MASONRY SHALL BE BOLTED TO CONCRETE OR MASONRY WITH 5/8"Ø BOLTS AT 4'-0" OC BEGINNING AT 9" OC MAX. FROM EACH END OF THE PLATES. BOLTS SHALL EXTEND A MINIMUM OF 8" INTO CONCRETE OR MASONRY. "HILTI 0.145"Ø DN PINS (ICC-ESR #1390) AT 16" MIN SPACING MAY BE SUBSTITUTED FOR ANCHOR BOLTS AT INTERIOR NON-SHEAR/NON-BEARING WALLS ONLY.

ALL BOLT HEADS AND NUTS WHICH BEAR AGAINST THE FACE OF WOOD MEMBERS SHALL BE PROVIDED WITH METAL WASHERS AS INDICATED ON PLANS OR PER WASHER PLATE SCHEDULE ON NOTE #11 AND HOLES SHALL BE DRILLED A MAXIMUM OF 1/16" OVERSIZED. INSPECTOR SHALL VERIFY THESE CONDITIONS IN THE FIELD.

ALL NUTS ON BOLTS SHALL BE TIGHTENED WHEN INSTALLED AND RE-TIGHTENED AT THE COMPLETION OF WORK OR BEFORE CLOSING IN. THREAD PROJECTION SHALL BE 1/16 INCH MINIMUM BEYOND THE NUT.

USE OF MACHINE NAILING IS SUBJECT TO A SATISFACTORY JOBSITE DEMONSTRATION AND THE APPROVAL BY THE INSPECTOR AND STRUCTURAL ENGINEER. THE APPROVAL IS SUBJECT TO CONTINUED SATISFACTORY PERFORMANCE. MACHINE NAILING WILL NOT BE APPROVED IN 5/16" PLYWOOD. IF NAILHEADS PENETRATE THE OUTER PLY MORE THAN WOULD BE NORMAL FOR A HAND HAMMER OR IF MINIMUM ALLOWABLE EDGE DISTANCES ARE NOT MAINTAINED, THE PERFORMANCE WILL BE DEEMED UNSATISFACTORY.

ALL 5/8" DIAMETER AND LARGER BOLTS CALLED OUT ON DRAWINGS, INCLUDING ANCHOR BOLTS (AB) SHALL HAVE STEEL SQUARE PLATE WASHERS AS LISTED BELOW UNDER THE HEAD AND/OR NUT BEARING ON WOOD.

> 7/8" **BOLT DIAMETER** 7/16" **WASHER - THICKNESS** 2 3/4" 3 1/2" WASHER - WIDTH 2 1/2" MINIMUM EMBEDMENT

FRAMING CONNECTORS: PER MANUFACTURER'S APPROVED PRODUCT EVALUATION REPORT (ICC-ESR) AND INSTALLED ACCORDINGLY. SIZE AND NUMBER OF NAILS TO BE MAXIMUM SPECIFIED BY THE MANUFACTURER UNO. THE FOLLOWING IS A LIST OF ICC-ESR NUMBERS CORRESPONDING TO SOME OF THE FRAMING CONNECTORS USED IN THE PROJECT:

ECT:	
<u>DESCRIPTION</u>	ICC-ESR#
SIMPSON 'CMST'	2105
SIMPSON 'LPT4'	5313
SIMPSON 'HD'	5708
SIMPSON 'EPC, 'PC"	443
SIMPSON 'CC'	2011
SIMPSON 'PBS'	5709
SIMPSON 'LUS'	5708
SIMPSON 'A34', 'A35'	5672
SIMPSON 'HU'	5117
SIMPSON 'ITT'	2329

BOLTED HOLD DOWN ANCHORS: INSTALL PER MANUFACTURE'S APPROVED ICC PRODUCT EVALUATION REPORT. INSTALL HOLD DOWN 1/2 INCH MINIMUM ABOVE THE PLATE TO ALLOW FOR TIGHTENING POST BOLTS. USE EXTRA CARE IN BORING THE POST HOLES (1/32 TO 1/16 LARGER THAN THE BOLT DIAMETER). THE HOLD DOWN SHALL BE INSTALLED TIGHT TO THE HOLD DOWN POST WITHOUT FILLERS OR DAPPING. THE POST BOLTS SHALL NOT BE COUNTERSUNK INTO THE HOLD DOWN POST UNO. DO NOT BEND HOLD DOWN ANCHORS. (SIMPSON HD ICC-ESR# 5708).

SUBSTITUTIONS: PROVIDE MANUFACTURER'S APPROVED PRODUCT EVALUATION REPORT AND A LIST OF ALL PROPOSED SUBSTITUTIONS TO THE ENGINEER FOR REVIEW BEFORE FABRICATION. PROPOSED SUBSTITUTIONS SHALL BE APPROVED BY DSA.

PRESERVATIVE TREATED WOOD: WOOD EXPOSED TO THE WEATHER; FOUNDATION PLATES ON CONCRETE SLABS. FOUNDATIONS WHICH ARE IN DIRECT CONTACT WITH EARTH SHALL BE TREATED WOOD WITH PRESERVATIVE RETENTION CONFORMING TO AWPA AS REQUIRED FOR USE. NEWLY EXPOSED SURFACES RESULTING FROM FIELD CUTTING, BORING OR HANDLING SHALL BE FIELD TREATED IN ACCORDANCE WITH AWPA M-4.

TOP PLATES: TWO PIECES, SAME SIZE AS STUDS, STAGGER SPLICES 4'-0" MINIMUM. CENTER SPLICES OVER STUDS.

FULL-DEPTH SOLID BLOCKING OR CROSS BRACING: INSTALLED AT INTERVALS NOT EXCEEDING 8 FEET FOR ALL JOISTS AND RAFTERS.

CUTTING AND NOTCHING: DO NOT CUT, BORE, COUNTERSINK OR NOTCH WOOD MEMBERS EXCEPT WHERE SHOWN IN THE DETAILS. HOLES THROUGH PLATES. STUDS AND DOUBLE PLATES IN WALLS SHALL NOT EXCEED 40% THE MEMBER WIDTH AND SHALL BE LOCATED IN THE CENTER OF THE MEMBER.

END SUPPORT: ROOF AND FLOOR JOISTS OVER 4 INCHES DEEP SHALL HAVE THEIR ENDS HELD IN POSITION WITH EITHER: FULL DEPTH SOLID BLOCKING: NAILED BRIDGING; NAILING OR BOLTING TO OTHER FRAMING MEMBERS; OR APPROVED JOIST HANGERS.

GALVANIZING: ALL EXPOSED STEEL TIMBER HARDWARE FASTENERS AND CONNECTORS SHALL BE GALVANIZED. DESIGN LOADS

FLOOR AND ROOF LIVE LOADS:

20 PSF (REDUCIBLE)

SNOW LOADS:

SNOW LOADS ARE IN ACCORDANCE WITH SECTION 1608A OF THE CODE. GROUND SNOW LOAD, Pg = ZERO

WIND LOADS:

WIND LOADS ARE IN ACCORDANCE WITH SECTION 1609A OF THE CODE. SEE TABLE ON THIS SHEET FOR PRESSURE AT EXTERIOR COMPONENTS AND CLADDING. BASIC WIND SPEED, V = 101 MPH (3-SECOND GUST) RISK CATEGORY III WIND EXPOSURE C WIND IMPORTANCE FACTOR, I = 1.0 DESIGN WIND PRESSURE = 37.96 PSF

EARTHQUAKE LOADS ON NONSTRUCTURAL COMPONENTS:

EARTHQUAKE LOADS ARE IN ACCORDANCE WITH SECTION 1613A OF THE CODE. RISK CATEGORY III Ip = 1.0 FOR ALL NONSTRUCTURAL COMPONENTS

SEISMIC DESIGN CATEGORY (SDC) = D SITE CLASS = D

= 1.936g = 0.7g = 0.793g

= 1.549g

EARTHQUAKE LOADS ON NONSTRUCTURAL COMPONENTS, SHALL BE DETERMINED IN ACCORDANCE WITH THE FOLLOWING PROCEDURE: CALCULATE Fp BASED ON ASCE 7-16 EQUATION 13.3-1 USING THE VALUE OF  $S_{DS} = 1.549g$ 

THE MAXIMUM AND MINIMUM VALUES FOR Fp SHALL BE DETERMINED FROM ASCE 7-16 EQUATIONS 13.3-2 AND 13.3-3, RESPECTIVELY. ALL EARTHQUAKE LOADS ON NONSTRUCTURAL COMPONENTS SHALL BE BASED ON VALUES OF ap AND Rp FROM ASCE 7-16 TABLES 13.5-1 AND 13.6-1.

EARTHQUAKE LOADS ON PRIMARY STRUCTURE

EARTHQUAKE LOADS ARE IN ACCORDANCE WITH SECTION 1613A OF THE CODE.

 $R = 6 \frac{1}{2}$  (WOOD SHEARWALL)

FLOOD DESIGN DATA:

THE PROJECT IS NOT LOCATED WITHIN A FLOOD HAZARD AREA

STRUCTURAL OBSERVATION:

STRUCTURAL OBSERVATION SHALL BE PERFORMED BY THE STRUCTURAL ENGINEER OF RECORD OR DESIGNEE IN ACCORDANCE WITH SECTION 1710A OF THE CODE.

STRUCTURAL OBSERVATION IS THE VISUAL OBSERVATION OF THE ELEMENTS AND CONNECTIONS OF THE STRUCTURAL SYSTEM AT SIGNIFICANT CONSTRUCTION STAGES AND THE COMPLETED STRUCTURE FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATION. STRUCTURAL OBSERVATION DOES NOT WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED OF THE BUILDING INSPECTOR OR THE DEPUTY INSPECTOR.

A CIVIL OR STRUCTURAL ENGINEER OR ARCHITECT SHALL PERFORM THE STRUCTURAL OBSERVATION THE ENGINEER OR ARCHITECT SHALL BE REGISTERED OR LICENSED IN THE STATE OF CALIFORNIA. THE DEPARTMENT OF BUILDING AND SAFETY REQUIRES THE USE OF THE ENGINEER OR ARCHITECT RESPONSIBLE FOR THE STRUCTURAL DESIGN WHEN THEY ARE INDEPENDENT OF THE CONTRACTOR.

THE STRUCTURAL OBSERVER SHALL PROVIDE EVIDENCE OF EMPLOYMENT BY THE OWNER, A LETTER FROM THE OWNER OR A COPY OF THE AGREEMENT FOR SERVICES SHALL BE SENT TO THE BUILDING INSPECTOR BEFORE THE FIRST SITE VISIT, THE STRUCTURAL OBSERVER SHALL ALSO INFORM THE OWNER OF THE REQUIREMENTS FOR A PRECONSTRUCTION MEETING AND SHALL PRESIDE OVER THIS MEETING.

THE CONTRACTOR SHALL COORDINATE AND CALL FOR A PRE-CONSTRUCTION MEETING BETWEEN THE ENGINEER OR ARCHITECT RESPONSIBLE FOR THE STRUCTURAL DESIGN, STRUCTURAL OBSERVER, CONTRACTOR, AFFECTED SUBCONTRACTORS AND DEPUTY INSPECTORS. THE PURPOSE OF THE MEETING SHALL BE TO IDENTIFY THE MAJOR STRUCTURAL ELEMENTS AND CONNECTIONS THAT AFFECT THE VERTICAL AND LATERAL LOAD SYSTEMS OF THE STRUCTURE AND TO REVIEW SCHEDULING OF THE REQUIRED OBSERVATIONS. A RECORD OF THE MEETING SHALL BE INCLUDED IN THE FIRST OBSERVATION REPORT SUBMITTED TO THE BUILDING INSPECTOR.

THE STRUCTURAL OBSERVER SHALL PERFORM SITE VISITS AT THOSE STEPS IN THE PROGRESS OF THE WORK THAT ALLOW FOR CORRECTION OF DEFICIENCIES WITHOUT SUBSTANTIAL EFFORT OR UNCOVERING OF THE WORK INVOLVED. AT A MINIMUM, THE FOLLOWING SIGNIFICANT CONSTRUCTION STAGES REQUIRE A SITE VISIT AND AN OBSERVATION REPORT FROM THE STRUCTURAL OBSERVER.

CONSTRUCTION STAGES

**ELEMENTS/CONNECTIONS TO BE OBSERVED** 

a. ROOF FRAMING

CONNECTORS / STRAPS

THE STRUCTURAL OBSERVER SHALL PREPARE A REPORT FOR EACH SIGNIFICANT STATE OF CONSTRUCTION OBSERVED. A COPY OF THE OBSERVATION REPORT SHALL BE SENT TO DSA, OWNER, CONTRACTOR, AND PROJECT INSPECTOR.

**GENERAL** 

THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.

ALL DRAWINGS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.

EXISTING CONDITIONS SHOWN ARE BASED ON LIMITED AVAILABLE AS-BUILT DOCUMENTATION. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL ACTUAL CONDITIONS. DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THOSE SHOWN ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO START OF WORK. ARCHITECT AND ENGINEER SHALL REVIEW THE ACTUAL FIELD CONDITIONS AND DETERMINE THE EXTENT OF MODIFICATIONS WHICH WILL BE REQUIRED TO THE AFFECTED DETAILS. MODIFICATIONS TO THE CONTRACT DOCUMENTS MAY BE SUBJECT TO REVIEW & APPROVAL BY DSA.

UNLESS NOTED OTHERWISE OR SPECIFICALLY APPROVED BY THE SEOR, PRIOR TO DRILLING INTO (E) CONCRETE ELEMENTS FOR INSTALLATION OF EPOXY/EXPANSION ANCHORS/DOWELS, THE CONTRACTOR SHALL SCAN (USING NON-DESTRUCTIVE METHODS) THE (E) CONCRETE IN THE AREA OF ANCHORAGE TO LOCATE (E) REINFORCING BARS OR OTHER (E) EMBEDDED OBJECTS IN THE CONCRETE. (E) REINFORCING BARS SHALL NOT BE CUT OR DAMAGED DURING INSTALLATION OF EPOXY/EXPANSION ANCHORS/DOWELS. IF CONFLICTS OCCUR BETWEEN THE (E) REINFORCING BARS AND EPOXY/EXPANSION ANCHORS/DOWELS, A COMPOSITE LAYOUT

OF THE (E) REINFORCING BARS AND EPOXY/EXPANSION ANCHORS/DOWELS SHALL BE PROVIDED TO THE STRUCTURAL ENGINEER AND ARCHITECT FOR REVIEW AND TO DETERMINE IF CONNECTION/ANCHORAGE DETAILS REQUIRE MODIFICATION, MODIFICATIONS TO THE APPROVED CONTRACT DOCUMENTS MAY BE SUBJECT TO REVIEW AND APPROVAL BY DSA.

NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.

ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING:

2019 CALIFORNIA BUILDING CODE, PART 2A, REFERRED TO HERE AS "THE CODE", AND ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER WHICH ANY PORTION OF THE WORK, INCLUDING THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY, AND THOSE CODES & STANDARDS LISTED IN THESE NOTES AND SPECIFICATIONS.

SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:

a. SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS, EXCEPT

b. SIZE AND LOCATION OF ALL INTERIOR AND EXTERIOR NON-BEARING

c. SIZE AND LOCATION OF ALL CONCRETE CURBS, EQUIPMENT PADS, PITS, FLOOR DRAINS, SLOPES, DEPRESSED AREAS, CHANGE IN LEVEL, CHAMFERS, GROOVES,

d. SIZE AND LOCATION OF ALL FLOOR AND ROOF OPENINGS EXCEPT

e. FLOOR AND ROOF FINISHES.

f. DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS.

SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR THE FOLLOWING:

a. PIPE RUNS, SLEEVES, HANGERS, TRENCHES, WALL AND SLAB OPENINGS. ETC.. **EXCEPT AS SHOWN OR NOTED** 

b. ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS.

c. CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL OR PLUMBING FIXTURES.

d. SIZE AND LOCATION OF MACHINE OR EQUIPMENT BASES, ANCHOR BOLTS FOR MOTOR MOUNTS.

THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.

OPENINGS, POCKETS, ETC., SHALL NOT BE PLACED IN CONCRETE SLABS, DECKS, WALLS, UNLESS SPECIALLY DETAILED ON THE STRUCTURAL DRAWINGS. NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHERS SHOW OPENINGS, POCKETS, ETC., LARGER THAN 6" NOT SHOWN ON THE STRUCTURAL DRAWINGS, BUT WHICH ARE LOCATED IN STRUCTURAL MEMBERS. FOR ANY FURTHER RESTRICTIONS ON OPENINGS IN STRUCTURAL ELEMENTS. SEE APPLICABLE SECTIONS BELOW.

PIPES SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIFICALLY APPROVED.

ASTM SPECIFICATIONS ON THE DRAWINGS SHALL BE OF THE LATEST REVISION.

CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES, SUCH AS CESSPOOLS, CISTERNS FOUNDATIONS, ETC. IF ANY SUCH STRUCTURES ARE FOUND, STRUCTURAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON FRAMED ROOF OR FLOOR. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.

FILE NO: 19-91 A#: 03-122719

11-17-01-31







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907 ROSEMEAD BOULEVARD

ROSEMEAD, CA 91770

161-21043

CHECKED EMB/AL 11-17-2022

STRUCTURAL GENERAL

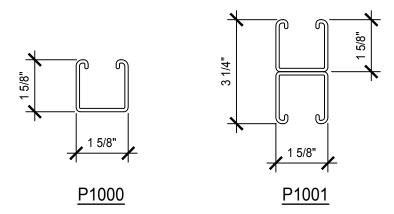
### **UNISTRUT METAL FRAMING**

- UNISTRUT METAL FRAMING SHALL BE BY UNISTRUT CORPORATION, WAYNE, MI
  OR ENGINEER APPROVED EQUAL. INSTALL PER MANUFACTURER'S
  RECOMMENDATIONS AND AS NOTED ON THE DRAWINGS.
- 2. ALL CHANNEL MEMBERS SHALL BE FABRICATED FROM STRUCTURAL GRADE STEEL CONFORMING TO ONE OF THE FOLLOWING ASTM SPECIFICATIONS: A 1011 SS GR 33, A 635 GR 33.
- 3. ALL FITTINGS SHALL BE FABRICATED FROM STEEL CONFORMING TO ONE OF THE FOLLOWING ASTM SPECIFICATIONS:
  A 575, A 576, A 36 OR A 635.
- 4. ALL UNISTRUT MEMBERS AND FITTINGS SHALL BE HOT DIP GALVANIZED, UNO.
- 5. AREAS OF UNISTRUT MEMBERS WHERE GALVANIZATION HAS BEEN REMOVED TO ALLOW FOR WELDING SHALL BE COATED WITH ZINC-RICH, GALVANIZING PAINT AFTER WELDING.
- 6. MINIMUM UNISTRUT PROPERTIES SHALL BE AS FOLLOWS:

PARAMETER	P1000	P1001
AREA OF SECTION	0.555 IN <sup>2</sup>	1.111 IN <sup>2</sup>
AXIS 1-1		
MOMENT OF INERTIA (I)	0.185 IN <sup>4</sup>	0.928 IN <sup>4</sup>
SECTION MODULUS (S)	0.202 IN <sup>3</sup>	0.571 IN <sup>3</sup>
RADIUS OF GYRATION (r)	0.577 IN	0.914 IN
AXIS 2-2		
MOMENT OF INERTIA (I)	0.236 IN <sup>4</sup>	0.471 IN <sup>4</sup>
SECTION MODULUS (S)	0.290 IN <sup>3</sup>	0.580 IN <sup>3</sup>
RADIUS OF GYRATION (r)	0.651 IN	0.651 IN

### 7. BOLT TORQUE REQUIREMENTS:

BOLT SIZE	1/4"	5/ <sub>16</sub> "	3/8"	1/2"	5/8"	3/4"
REC. TORQUE FT/LB	6	11	19	50	100	125
MAX TORQUE FT/LB	7	15	25	70	125	135



### STRUCTURAL TESTS AND SPECIAL INSPECTIONS

- 1. STRUCTURAL TESTS AND SPECIAL INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH CHAPTER 17A OF THE CODE.
- 2. THE SPECIAL INSPECTOR MUST BE CERTIFIED BY DIVISION OF THE STATE ARCHITECT (DSA), IN THE CATEGORY OF WORK REQUIRED TO HAVE SPECIAL INSPECTION.
- 3. THE SPECIAL INSPECTORS AND TESTING FIRM MUST BE HIRED BY THE OWNER OR OWNER'S REPRESENTATIVE.
- 4. SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS AND FURNISH COPIES TO THE BUILDING OFFICIAL, OWNER, AND STRUCTURAL ENGINEER OF RECORD. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS, OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS AND FURNISH COPIES TO THE BUILDING OFFICIAL, COMPLETED IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.
- SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 1707A OF THE CODE FOR THE FOLLOWING ITEMS:
- a) STRUCTURAL STEEL. SPECIAL INSPECTION FOR SPECIAL STEEL CONCENTRIC BRACED FRAMES AND OTHER STRUCTURAL STEEL ELEMENT THAT IS PART OF THE SEISMIC-FORCE-RESISTING SYSTEM SHALL BE IN ACCORDANCE WITH SECTION 1707A.2 OF THE CODE AND THE QUALITY ASSURANCE PLAN REQUIREMENTS OF AISC 341.
- ARCHITECTURAL COMPONENTS. PERIODIC SPECIAL INSPECTION DURING THE ERECTION AND FASTENING OF EXTERIOR CLADDING, EXTERIOR NONBEARING WALLS, SUSPENDED THE STRUCTURE SHALL BE IN ACCORDANCE WITH SECTION 1707A.6 OF THE CODE. CEILING SYSTEMS AND THEIR ANCHORAGE, AND INTERIOR AND EXTERIOR VENEER IN
- c) MECHANICAL AND ELECTRICAL COMPONENTS (SECTION 1707A.7 OF THE CODE)
  - i. PERIOD SPECIAL INSPECTION IS REQUIRED DURING THE ANCHORAGE OF ELECTRICAL EQUIPMENT FOR EMERGENCY OR STANDBY POWER SYSTEMS.
- ii. PERIOD SPECIAL INSPECTION IS REQUIRED DURING THE INSTALLATION OF ANCHORAGE OF OTHER ELECTRICAL EQUIPMENT IN THE STRUCTURE.
- iii. PERIOD SPECIAL INSPECTION IS REQUIRED DURING THE INSTALLATION OF VIBRATION ISOLATION SYSTEMS IN THE STRUCTURE.
- 6. STRUCTURAL TESTING FOR SEISMIC RESISTANCE SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 1708A OF THE CODE FOR THE FOLLOWING ITEMS:
  - a) CONCRETE REINFORCEMENT BELOW MOMENT FRAMES SHALL COMPLY WITH SECTION 21.1.5.2 OF ACI 318-11. SPECIAL INSPECTOR SHALL VERIFY CERTIFIED MILL TEST REPORTS FOR EACH TESTING DEMONSTRATES REQUIREMENTS OF ACI 318-14 SECTION 21.1.5.2:
  - THE ACTUAL YIELD STRENGTH BASED ON MILL TESTS DOES NOT EXCEED fy BY MORE THAN 18,000 PSI.
  - ii. THE RATIO OF THE ACTUAL TENSILE STRENGTH TO THE ACTUAL YIELD STRENGTH IS NOT LESS THAN 1.25.
- b) STRUCTURAL STEEL. TESTING SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE PLAN REQUIREMENTS OF AISC 341.

### **INSPECTIONS**

THE FOLLOWING ELEMENTS OF CONSTRUCTION SHALL HAVE CONTINUOUS INSPECTION BY A BUILDING INSPECTOR APPROVED BY DSA.

- 1. EXPANSION ANCHORS.\*
- 2. ADHESIVE ANCHORS.\*
- 3. POWDER ACTIVATED FASTENERS / SHOT PINS.\*

### \* THESE ITEMS REQUIRE SPECIAL INSPECTION.

ALL SPECIAL INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 1704A OF THE CODE AND ANY ADDITIONAL REQUIREMENTS STATED IN THESE DRAWINGS AND/OR THE PROJECT SPECIFICATIONS.

REFER TO THE STRUCTURAL TESTS AND INSPECTIONS FORM FOR ADDITIONAL INFORMATION AND ADDITIONAL TESTING AND INSPECTION REQUIREMENTS.

FILE NO: 19-91 A#: 03-122719

11-17-202 01-31-202

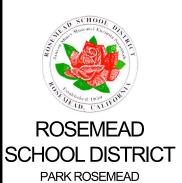




ROSEMEAD SCHOOL DISTRICT

RSD - SAVANNAH ELEMENTARY SCHOOL

HVAC REPLACEMENT AT BUILDINGS E



3907 ROSEMEAD BOULEVARD ROSEMEAD, CA 91770

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COSEMEAD, CA 91770

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COSEMEAD BOULEVARD

ROSEMEAD BOULEVA

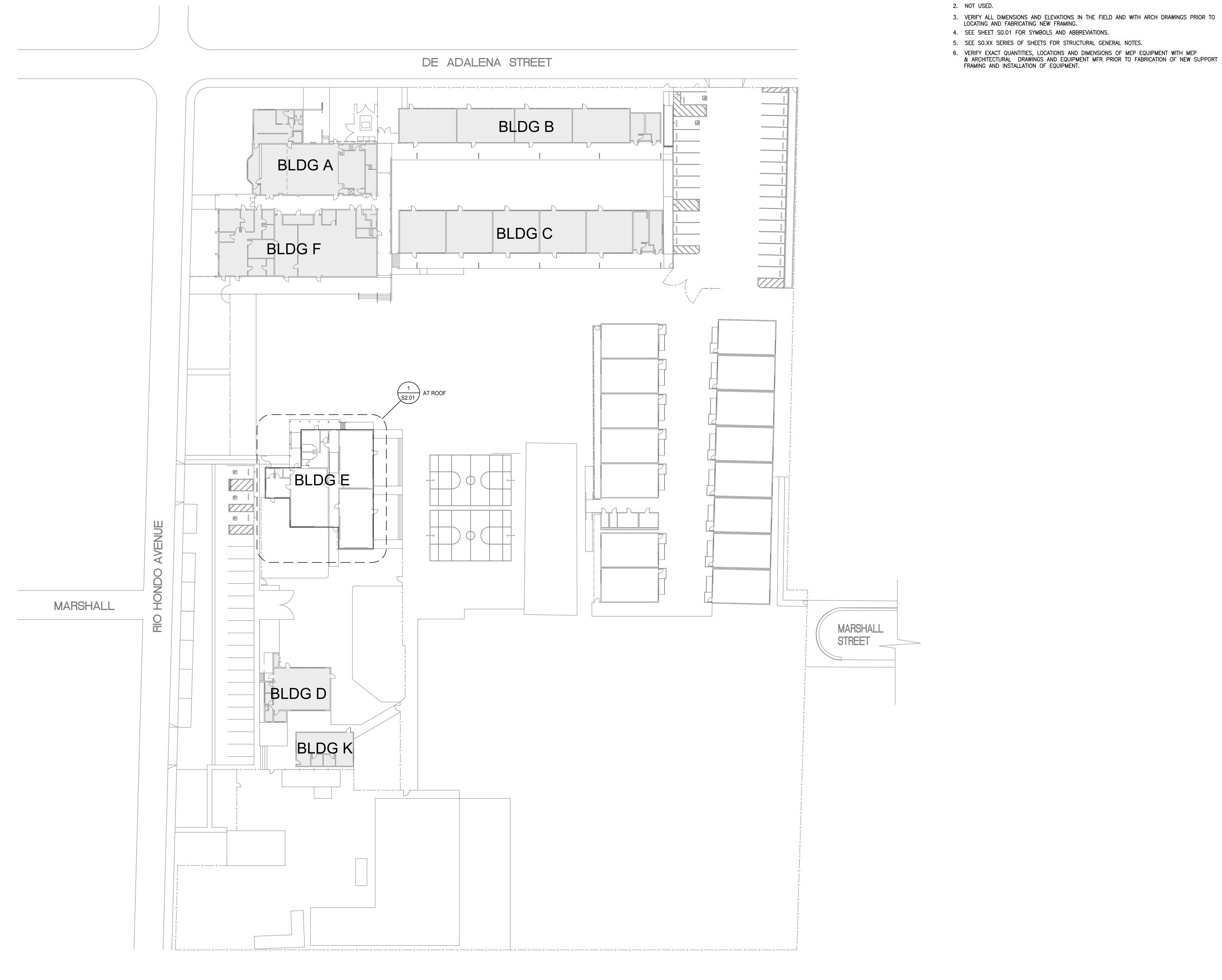
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ECKED EMB/AL
11-17-2022

UCTURAL GENERAL NOTES

<u>S0 03</u>



SITE / KEY PLAN NOTES:

- 1. THE PURPOSE OF THIS KEY PLAN IS TO INDICATE AREAS FOR ENLARGED STRUCTURAL PLANS ONLY.

- 5. SEE SO.XX SERIES OF SHEETS FOR STRUCTURAL GENERAL NOTES.

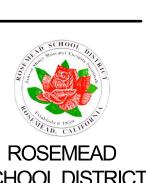
VERIFY EXACT QUANTITIES, LOCATIONS AND DIMENSIONS OF MEP EQUIPMENT WITH MEP & ARCHITECTURAL DRAWINGS AND EQUIPMENT MFR PRIOR TO FABRICATION OF NEW SUPPORT FRAMING AND INSTALLATION OF EQUIPMENT.

FILE NO: 19-91 A#: 03-122719









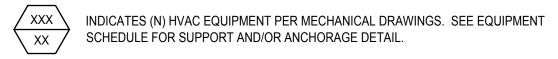
SCHOOL DISTRICT

# (C) 204 (g 16' CC) (C) 20

### PLAN NOTES:

- 1. EXISTING CONDITIONS SHOWN ON PLANS, SECTIONS AND DETAILS ARE BASED ON LIMITED AVAILABLE AS-BUILT DOCUMENTATION. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL ACTUAL CONDITIONS. DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THOSE SHOWN ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO START OF WORK. ARCHITECT AND ENGINEER SHALL REVIEW THE ACTUAL FIELD CONDITIONS AND DETERMINE THE EXTENT OF MODIFICATIONS WHICH WILL BE REQUIRED TO THE AFFECTED DETAILS. MODIFICATIONS TO THE CONTRACT DOCUMENTS MAY BE SUBJECT TO REVIEW & APPROVAL BY DSA.
- VERIFY ALL DIMENSIONS AND ELEVATIONS IN THE FIELD AND WITH ARCH DRAWINGS PRIOR TO LOCATING AND FABRICATING NEW FRAMING.
- ELEMENTS SHOWN SCREENED ARE EXISTING ELEMENTS WHICH ARE TO REMAIN, UNO. ELEMENTS SHOWN DARK ARE NEW ELEMENTS, UNO.
- 4. VERIFY ALL DIMENSIONS, ELEVATIONS, FINISH SURFACES, SLOPES, DRAINS, DEPRESSIONS, CURBS, ETC, WITH ARCHITECTURAL DRAWINGS PRIOR TO START OF CONSTRUCTION.
- 5. SEE ARCH FOR FINISHES, PARTITION WALLS, WATERPROOFING, ROOFING, AND OTHER NON-STRUCTURAL ELEMENTS.
- 6. SEE ARCHITECTURAL DRAWINGS FOR GRID DIMENSIONS & HORIZONTAL CONTROL.
- 7. MOVE AND REPLACE (E) CROSS BRIDGING IN KIND AS REQUIRED FOR INSTALLATION OF SISTERING JOISTS.
- 8. SEE SHEET S0.01 FOR SYMBOLS AND ABBREVIATIONS.
- 9. SEE S0.XX SERIES OF SHEETS FOR STRUCTURAL GENERAL NOTES.
- 10. SEE S4.XX SERIES OF SHEETS FOR EQUIPMENT SUPPORT DETAILS.

### MECHANICAL EQUIPMENT NOTES:



- ARCHITECTURAL DRAWINGS AND EQUIPMENT MFR PRIOR TO FABRICATION OF NEW SUPPORT FRAMING AND INSTALLATION OF EQUIPMENT.
- 3. ALL (N) DUCTS SHALL RUN THROUGH (E) ROOF AND WALL OPENINGS IN (E) WOOD STUD WALLS, TYP, UNO. NO (N) OPENINGS SHALL BE CUT IN (E) ROOF OR WALLS. SEE DETAIL 2/S4.01 FOR (N) FRAMING AT (E) WOOD ROOF OPENINGS AS REQ'D.

2. VERIFY EXACT QUANTITIES, LOCATIONS AND/OR DIMENSIONS OF MEP EQUIPMENT WITH MEP &

 IF PIPING FROM MECH UNIT REQUIRE CORE THRU (E) ROOF OR WALL SHEATHING (2 INCH MAX DIAMETER), CORE SHALL BE LOCATED BETWEEN ADJACENT (E) JOISTS OR STUDS AND SHALL NOT CUT JOISTS OR STUDS.

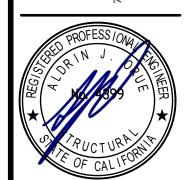
### **EQUIPMENT SCHEDULE**

	RT	U UNIT	S
MARK	OPERATING WEIGHT LBS.	DETAIL REFERENCE	REMARKS
RTU-SA3	675	4/S4.01	SEE MECH FOR ADDL INFORMATIO
RTU-SA4	675	4/S4.01	SEE MECH FOR ADDL INFORMATIO
RTU-SA5	675	4/\$4.01	SEE MECH FOR ADDL INFORMATIO

FILE NO: 19-91 A#: 03-122719

11-17-202





SCHOOL

ROSEMEAD SCHOOL DISTRICT

RSD - SAVANNAH ELEMENTARY SCHOOL VAC REPLACEMENT AT BUILDINGS E

ROSEMEAD SCHOOL DISTRICT PARK ROSEMEAD

AC NO 161-21043

NAC NO 161-21043

FILE

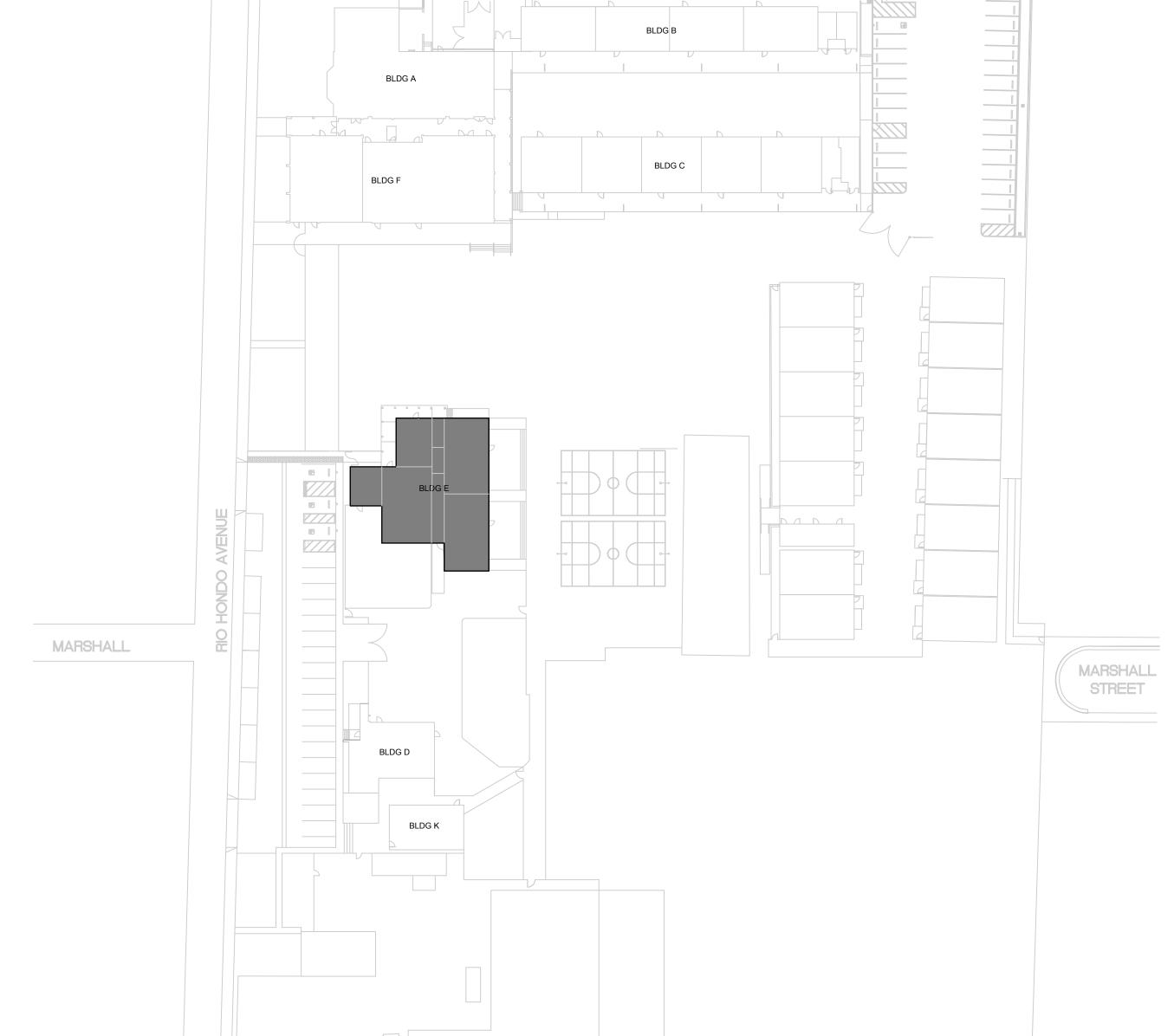
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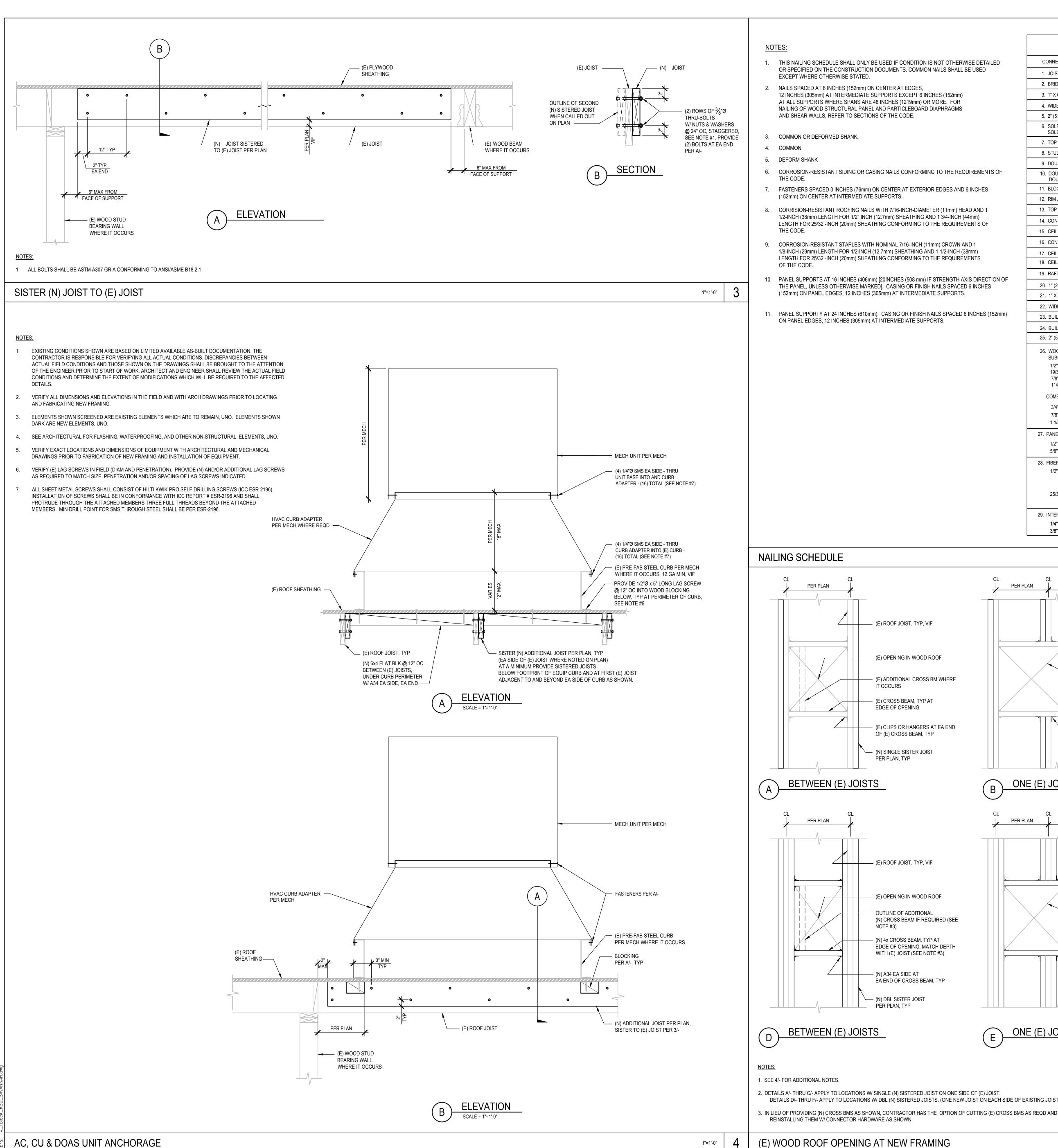
DATE 11-17-2022

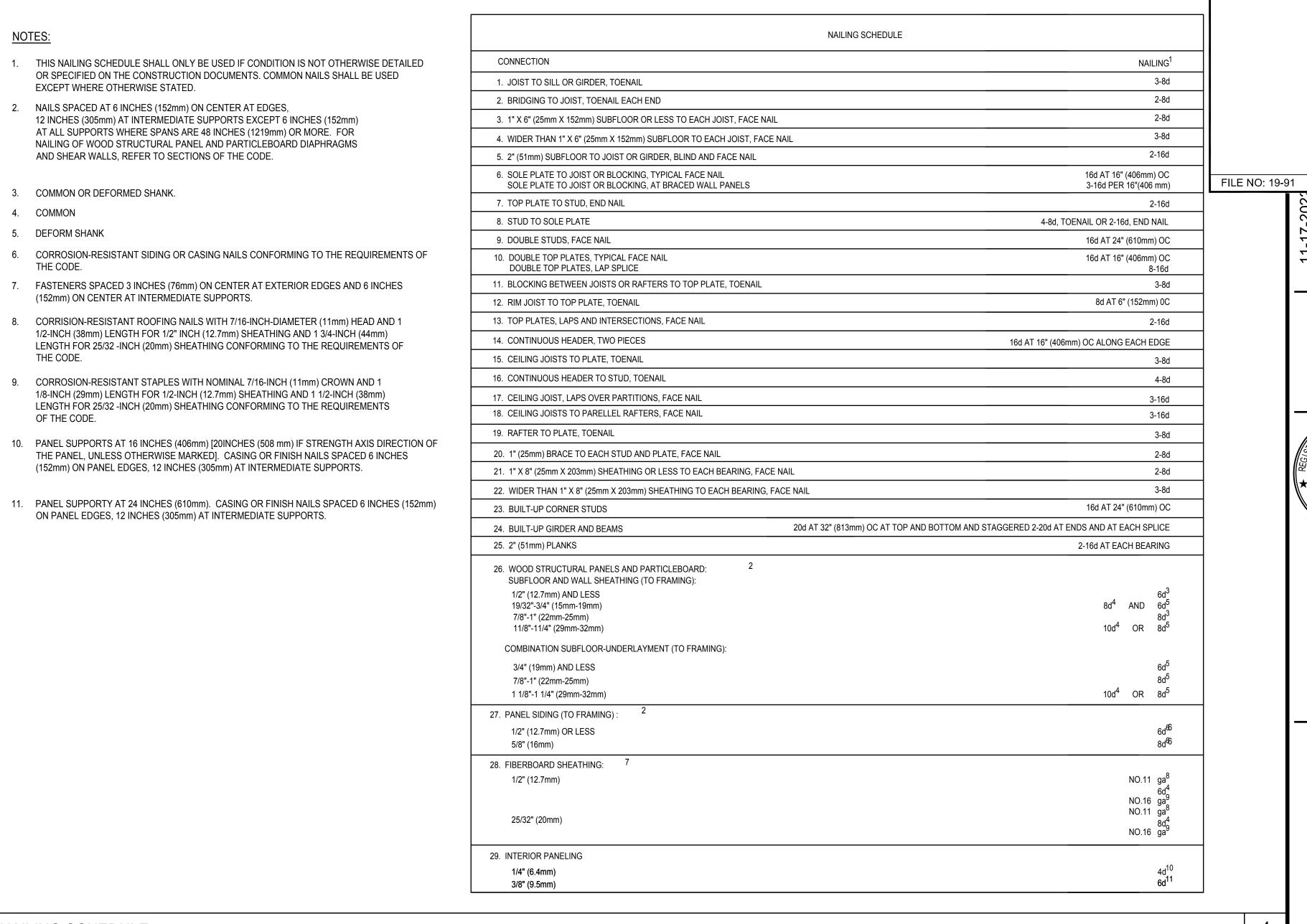
BUILDING E ROOF FRAMING PLAN

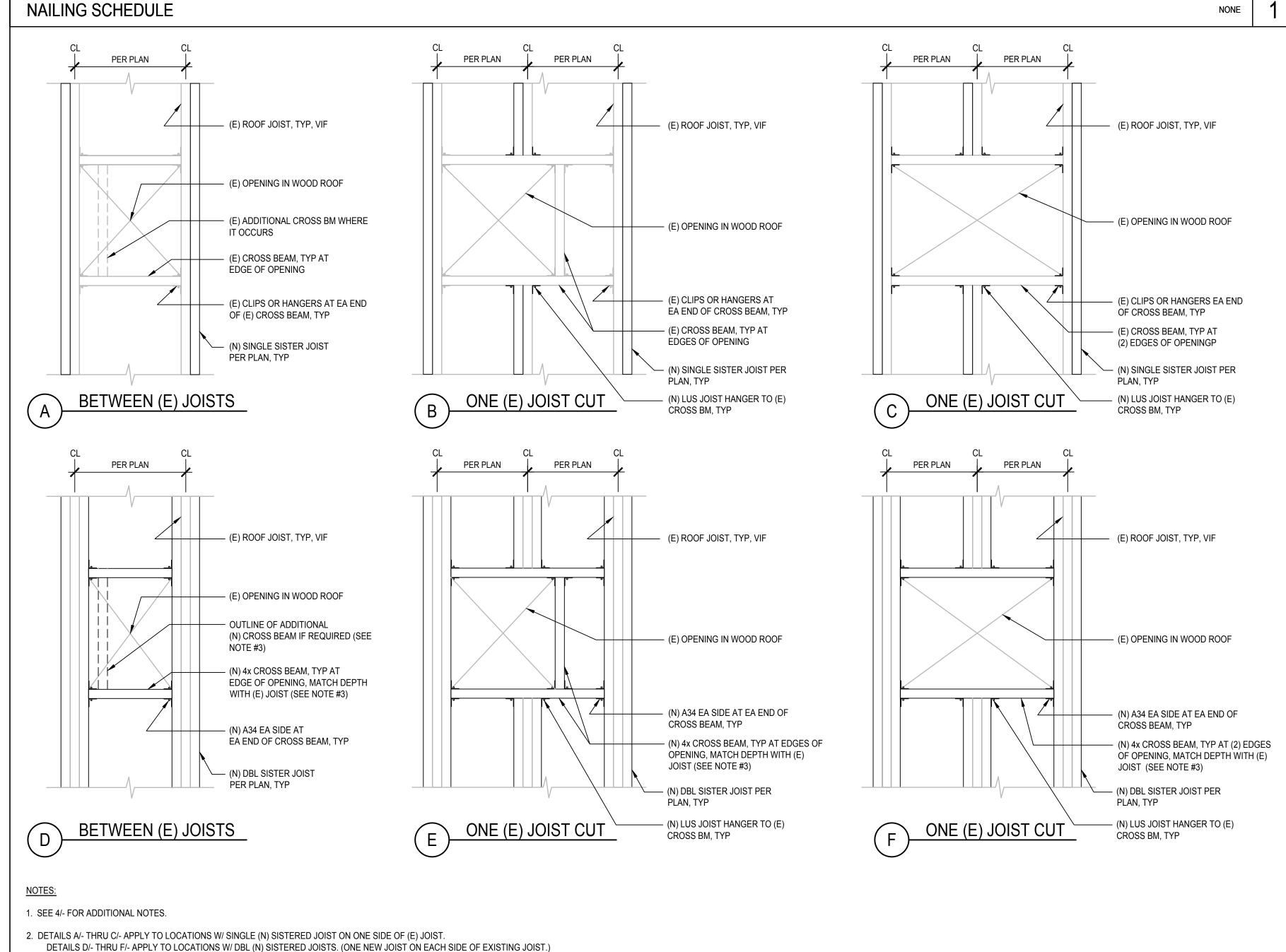
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**ROSEMEAD** SCHOOL DISTRICT

PARK ROSEMEAD 3907 ROSEMEAD BOULEVARD ROSEMEAD, CA 91770

NAC NO 161-21043 11-17-2022

**EQUIPMENT SUPPORT** DETAILS

(E) WOOD ROOF OPENING AT NEW FRAMING

DESCRIPTION

NOTE CALLOUT

DETAIL CALLOUT
- NUMBER ON TOP DENOTES DETAIL NUMBER
- NUMBER ON BOTTOM DENOTES SHEET DETAIL IS SHOWN

-- MECHANICAL EQUIPMENT CALLOUT, SEE MECHANICAL PLANS FOR EXACT LOCATION AND REQUIREMENTS

POINT OF CONNECTION

POINT OF DISCONNECTION

NEW LINEWORK

EXISTING LINEWORK

SECTION CALLOUT

DEMOLITION LINEWORK

DIRECTION OF FLOW

## DUCTWORK LEGEND

SYMBOL 16"x12" 16"x12"

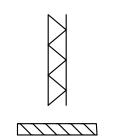
SHEET METAL DUCT

HIDDEN SHEET METAL DUCT

DESCRIPTION

16"x12" 16"x12" (1"L)

INTERNALLY INSULATED SHEET METAL DUCT
CLEAR INSIDE DIMENSION SHOWN, LINER THICKNESS IN
PARENTHESIS



LOUVER

**FILTER** 

ACCESS DOOR OR ACCESS PANEL (AP) IN DUCTWORK

### PIPING LEGEND

SYMBOL	DESCRIPTION
4" CHWR	NEW PIPING (SIZE-SERVICE)
(E) 4" CHWR —;	EXISTING PIPING (SIZE-SERVICE)
$\leftarrow$	ELBOW FACING AWAY FROM VIEWER
$\leftarrow$	ELBOW FACING TOWARD VIEWER
$\leftarrow$ $\odot$	TEE FACING AWAY FROM VIEWER
$\leftarrow$	TEE FACING TOWARD VIEWER
	PIPE CAP
$\longleftarrow \Box$	TRANSITION, ASYMMETRIC
$\longleftarrow \bigcup \longrightarrow$	TRANSITION, SYMMETRIC
$\leftarrow$	EXPANSION JOINT (COMPENSATOR)
<del></del>	PIPE GUIDE
$\leftarrow$ $\times$	PIPE ANCHOR
$\leftarrow$	UNION, SCREWED
Y	DRAIN, FUNNEL
	PUMP
<del></del>	BALL VALVE
CD —	CONDENSATE DRAIN
C	ELBOW DOWN
$\circ$ —— $\rightarrow$	PIPE TEE UP & DOWN OR ELBOW UP

PIPE TEE DOWN

### **ABBREVIATIONS**

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
AAV	AUTOMATIC AIR VENT	HP	HORSEPOWER
AFF	ABOVE FINISHED FLOOR	HT	HEIGHT
AHU	AIR HANDLING UNIT	HZ	HERTZ
AL	ALUMINUM	ID	INSIDE DIAMETER
AP	ACCESS PANEL	IN	INCHES
APD	AIRSIDE PRESSURE DROP	KW	KILOWATTS
BD	BLOWDOWN	LAT	LEAVING AIR TEMPERATURE
BDD	BACK DRAFT DAMPER	LBS	POUNDS
BFC	BELOW FINISHED CEILING	LF	LINEAR FEET
BFP BHP	BACK FLOW PREVENTER BRAKE HORSEPOWER	LWT MAX	LEAVING WATER TEMPERATURE MAXIMUM
BLDG	BUILDING	MBH	THOUSAND BTU PER HOUR
BOB	BOTTOM OF BEAM	MC	MECHANICAL CONTRACTOR
BOP	BOTTOM OF PIPE	MCA	MINIMUM CIRCUIT AMPS
BTU	BRITISH THERMAL UNIT	MH	MANHOLE
CFM	CUBIC FEET PER MINUTE	MIN	MINIMUM
CHWR	CHILLED WATER RETURN	MOCP	MAXIMUM OVERLOAD CIRCUIT PROTECT
CHWS	CHILLED WATER SUPPLY	NFA	NET FREE AREA
CI	CAST IRON	NIC	NOT IN CONTRACT
CL	CENTER LINE	NPSHR	NET POSITIVE SUCTION HEAD REQUIRED
CP	CONDENSATE PUMP	OAT	OUTSIDE AIR TEMPERATURE
CT	COOLING TOWER	OBD	OPPOSED BLADE DAMPER
CU	CONDENSING UNIT	OC	ON CENTER
CV	CONSTANT VOLUME BOX	OD	OUTSIDE DIAMETER
CWR	CONDENSER WATER RETURN	OA	OUTSIDE AIR
CWS	CONDENSER WATER SUPPLY	PD	PRESSURE DROP
CWFR	CONDENSER WATER FILTER RETURN	PERF	PERFORATED
CWFS	CONDENSER WATER FILTER SUPPLY	PH	PHASE
DB	DRY BULB	POD	POINT OF DISCONNECT
DEG	DEGREES	PR	PRESSURE RELIEF
DIA	DIAMETER	PRV	PRESSURE REDUCING VALVE
DL	DOOR LOUVER	PSID	POUNDS PER SQUARE INCH DIFFERENTI
DN	DOWN	PSIG	POUNDS PER SQUARE INCH GAUGE
DX (E)	DIRECT EXPANSION EXISTING	PVC RA	POLYVINYL CHLORIDE RETURN AIR
EA	EACH	RF	RETURN FAN
EAT	ENTERING AIR TEMPERATURE	RLA	RATED LOAD AMPS
EC	ELECTRICAL CONTRACTOR	RPM	REVOLUTIONS PER MINUTE
EFF	EFFICIENCY	SA	SUPPLY AIR
EL	ELEVATION	SF	SUPPLY FAN
ESP	EXTERNAL STATIC PRESSURE	SPEC	SPECIFICATION
EWT	ENTERING WATER TEMPERATURE	SS	STAINLESS STEEL
°F	DEGREES FAHRENHEIT	STD	STANDARD
FD	FIRE DAMPER	TAD	TRANSFER AIR DUCT
FG	FILTER GRILLE	TDH	TOTAL DYNAMIC HEAD
FLA	FULL LOAD AMPS	TEFC	TOTALLY ENCLOSED FAN COOLED
FLR	FLOOR	TSP	TOTAL STATIC PRESSURE
FOB	FLAT ON BOTTOM	TYP	TYPICAL
FOT	FLAT ON TOP	UC	UNDERCUT
FPI	FINS PER INCH	TYP	TYPICAL
FPM	FEET PER MINUTE	V	VOLTS
FSD	FIRE SMOKE DAMPER	VAV	VARIABLE AIR VOLUME
FT	FEET OR FOOT	VD	VOLUME DAMPER
GA	GALVANIZED	VFD	VARIABLE FREQUENCY DRIVE
GALV	GALVANIZED	VTR	VENT THRU ROOF
GC GPH	GENERAL CONTRACTOR	W/ W/O	WITHOUT
GPH GPM	GALLONS PER HOUR GALLONS PER MINUTE	W/O WB	WITHOUT WET BULB
HB	HOSE BIBB	WC	WATER COLUMN
HD	HEAD	WG	WATER GAUGE
HHWR	HEATING HOT WATER RETURN	WPD	WATER PRESSURE DROP
HHWS	HEATING HOT WATER SUPPLY	WT	WEIGHT
HP	HEAT PUMP		<u></u>
•			

IN THE EVENT ABBREVIATIONS NOT MENTIONED HEREIN ARE USED, REFERENCE WILL BE MADE TO ANSI Y1.1, MILITARY STANDARD ABBREVIATIONS, AND OTHER STANDARD INDUSTRY CONVENTIONS.

## **CONTROL ABBREVIATIONS**

ABBREVI.	ATION DESCRIPTION	<u>ABBREVIATIO</u>	N DESCRIPTION
ABBREVI A AFMS AI AO CS DI DO DP FS FM HOA	ALARM AIRFLOW MONITORING STATION ANALOG INPUT ANALOG OUTPUT CURRENT SWITCH DIGITAL INPUT DIGITAL OUTPUT DIFFERENTIAL PRESSURE FLOW SWITCH FLOW METER HANDS-OFF-AUTO	ABBREVIATIO  PS PT RH S SC SI SP SS T TI VA	PRESSURE SWITCH PRESSURE TRANSMITTER RELATIVE HUMIDITY STATUS SPEED CONTROL SPEED INDICATOR SETPOINT START/STOP TEMPERATURE TEMPERATURE INDICATOR DAMPER/VALVE ACTUATOR
KW LA MOD NC NO	KILOWATTS LEVEL ALARM MOTOR OPERATED DAMPER NORMALLY CLOSED NORMALLY OPEN	VP VSH ZC ZI ZO	VELOCITY PRESSURE VIBRATION SWITCH CLOSED END SWITCH POSITION INDICATOR OPEN END SWITCH

IN THE EVENT ABBREVIATIONS NOT MENTIONED HEREIN ARE USED, REFERENCE WILL BE MADE TO ANSI Y1.1, MILITARY STANDARD ABBREVIATIONS, AND OTHER STANDARD INDUSTRY CONVENTIONS.

# SHEET INDEX

SHEET DESCRIPTION

GENERAL NOTES, LEGENDS, ABBREVIATIONS AND SHEET INDEX

M002 SCHEDULES - SAVANNAH

M101 MECHANICAL SITE PLAN - SAVANNAH

M601 DETAILS

M602 DETAILS

M701 TITLE 24 COMPLIANCE FORMS - SAVANNAH

### GENERAL NOTES

- 1. ALL WORK SHALL COMPLY WITH THE 2019 EDITIONS OF THE CALIFORNIA BUILDING, MECHANICAL, PLUMBING, AND OTHER APPLICABLE FEDERAL, STATE, OR LOCAL CODES AS ADOPTED AND ENFORCED BY THE LOCAL JURISDICTION. IN CASE THE PLANS SHOW MORE STRINGENT REQUIREMENTS, THE PLANS SHALL GOVERN THE DESIGN, YET NOTHING ON THE DESIGN DOCUMENTS SHALL BE INTERPRETED AS AUTHORITY TO VIOLATE CODE(S) OR REGULATION(S).
- 2. SUBMISSION OF BID IN CONNECTION WITH THIS WORK SHALL IMPLY THAT THE BIDDER HAS EXAMINED THE JOB SITE UNDER WHICH THE CONTRACTOR WILL BE OBLIGATED TO OPERATE UNDER THIS CONTRACT. NO

EXTRA CHARGE WILL BE ALLOWED FOR FAILURE OF ANY BIDDER TO EXAMINE THE SITE PRIOR TO BID.

- 3. WHERE USED, THE TERM "PROVIDE" SHALL MEAN "FURNISH AND INSTALL".
- 4. IN THE EVENT OF A CONFLICT OR INCONSISTENCY BETWEEN ITEMS INDICATED ON DRAWINGS AND SPECIFICATIONS WITH CODE REQUIREMENTS, THE MORE STRINGENT STANDARD SHALL PREVAIL.
- 5. CARE SHALL BE EXERCISED TO MINIMIZE ANY INCONVENIENCE OR DISTURBANCE TO OTHER AREAS OF THE BUILDING WHICH ARE TO REMAIN IN OPERATION. ISOLATE WORK AREAS TO KEEP DUST AND DIRT WITHIN THE CONSTRUCTION AREA.
- 6. NO PIPING, EQUIPMENT, ETC. SHALL BE REMOVED, DISCONNECTED OR SHUT DOWN WITHOUT PRIOR REVIEW WITH THE OWNER TO CONFIRM THAT AREAS TO REMAIN IN OPERATION WILL NOT BE AFFECTED. IF ANY AREAS NOT WITHIN THE SCOPE OF WORK ARE AFFECTED BY ANY SHUTDOWN, REMOVAL OR DISCONNECTION, SUFFICIENT ADVANCE NOTICE MUST BE GIVEN TO THE OWNER INDICATING WHICH AREAS WILL BE AFFECTED, WHEN THE PROPOSED SHUTDOWN WILL OCCUR, AND FOR HOW LONG A PERIOD OF TIME.
- 7. THE ARRANGEMENT OF EQUIPMENT AND PIPING SHOWN ON THE DRAWINGS IS BASED UPON INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME OF DESIGN AND IS NOT INTENDED TO SHOW EXACT DIMENSIONS. THIS CONTRACTOR SHALL VERIFY ALL DIMENSIONS AT THE SITE MAKING FIELD MEASUREMENTS AND SHOP DRAWINGS NECESSARY FOR FABRICATION OR ERECTION OF HVAC SYSTEMS. MAKE ALLOWANCE FOR BEAMS, PIPES AND OTHER OBSTRUCTIONS IN BUILDING CONSTRUCTION. CHECK DRAWINGS SHOWING WORK OF OTHER TRADES AND CONSULT WITH THE OWNER'S REPRESENTATIVE IN THE EVENT OF POTENTIAL INTERFERENCE. SHOP DRAWINGS SHALL BE MINIMUM 1/4"=1'-0" SCALE, INDICATING FITTINGS, SIZES, WELDS AND CONFIGURATIONS AND SUBMITTED TO ENGINEER FOR REVIEW.
- 8. THIS CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES PRIOR TO FABRICATION, PURCHASE AND/OR INSTALLATION OF ALL WORK.
- 9. EXISTING MATERIALS THAT ARE REMOVED SHALL NOT BE REUSED IN NEW SYSTEMS, EXCEPT WHERE INDICATED AS BEING RELOCATED.
- 10. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 11. THIS CONTRACTOR SHALL NOT BORE, NOTCH, CUT, OR PENETRATE INTO A STRUCTURAL MEMBER WITHOUT WRITTEN APPROVAL FROM A DESIGNATED STRUCTURAL ENGINEER AND THE OWNER.
- 12. ALL PIPE ELBOWS SHALL BE LONG RADIUS UNLESS OTHERWISE SPECIFICALLY NOTED ON THE DRAWINGS.
- 13. INSTALL MANUAL VOLUME DAMPERS WITHIN DUCT BRANCHES TO BALANCE AIRFLOW CFM. ON INSULATED DUCTS, MOUNT DAMPER REGULATOR ON 2" STAND-OFF BRACKET TO CLEAR INSULATION.
- 14. ALL MATERIAL EXPOSED WITHIN RA PLENUMS SHALL BE NON-COMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX NOT GREATER THAN 25 AND SMOKE DEVELOPED INDEX NOT GREATER THAN 50. COMPLY WITH CMC-602.2.
- 15. COORDINATE ACCESS TO EQUIPMENT WITH WORK OF OTHER TRADES. PROVIDE DUCT ACCESS DOORS AND CEILING ACCESS DOORS TO ALLOW ACCESS FOR FILTER CHANGEOUT, CONTROLS ACCESS AND ACCESS TO SERVICE/REMOVE COMPONENTS INCLUDING, BUT NOT LIMITED TO, FANS, PULLEYS, SHEAVES, BELTS, ETC.
- 16. MEP COMPONENT ANCHORAGE NOTE:

ALL MECHANICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA-APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26, AND 30:

- 1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
- 2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.

  "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS
  FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
- 3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

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

- A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
- B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.
- THE ANCHORAGE OF ALL MECHANICAL COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.
- 17. PIPING AND DUCTWORK DISTRIBUTION SYSTEM BRACING NOTE:

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

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

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP ☒ MD ☒ PP☒ E ☒ - OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP  $\square$  MD  $\square$  PP $\square$  E  $\square$  - OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM #) #\_\_\_\_\_

FILE NO: 19-91 A#: 03-122719

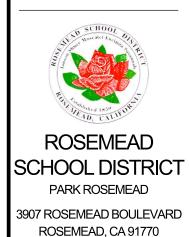
Long Beach | Los Angeles San Diego | San Jose



ROSEMEAD SCHOOL DISTRICT

RSD - SAVANNAH ELEMENTARY SCHOC

HVAC REPLACEMENT AT BUILDINGS E



ARCHITECTUR

NAC NO 161-21043

FILE

DRAWN JL

GENERAL NOTES,
LEGENDS,
ABBREVIATIONS, AND

CHECKED SN

M001

### PACKAGED AIR CONDITIONING UNITS

						SUPPL	Y FAN		C	OOLING CAPACI	ГҮ	TOTAL HEATING CAPACITY		ELECTRICAL														
MARK	MANUFACTURER & MODEL	LOCATION	TYPE	SERVICE	AIRFLOW	HP/(BHP)	FOD	DDM	TOTAL	SENSIBLE	TONIC	SEER	INPUT	OUTPUT	ENTERING AIR	LEAVING AIR	THERMAL	VOLTAGE	DUACE	EL A	MOA	MOOD	OUTSIDE AIR CFM SETPOIN	OPERATING T WEIGHT LBS.	CURB WEIGHT LBS.	MAX OPERATING WEIGHT LBS.	REMARKS	
								AIRFLOW CFM	пг/(впг)	ESP	RPM	MBH	SENSIBLE TO	TONS	UNS	INPUT OUTPUT MBH MBH	°F DB	°F DB		VOLTAGE	TAGE PHASE	FLA	MCA	MOCP			WEIGHT EDG.	
RTU-SA3	CARRIER 48GCGM06A2A5-0A0A0	SAVANNAH GAS BLDG E ROOF	AS HEAT/ELEC COOL	CLASSROOM 3	2,000	1.0/(0.79)	0.5	1,949	63.0	48.32	5	16.1	60.0	49.0	70.0	92.7	81%	230	3	30	31	45	600	675	0	675	1 3 4 5 6 12	
RTU-SA4	CARRIER 48GCGM06A2A5-0A0A0	SAVANNAH GAS BLDG E ROOF	AS HEAT/ELEC COOL	CLASSROOM 4	2,000	1.0/(0.79)	0.5	1,949	63.0	48.32	5	16.1	60.0	49.0	70.0	92.7	81%	230	3	30	31	45	600	675	0	675	1 3 4 5 6 12	
RTU-SA5	CARRIER 48GCGM06A2A5-0A0A0	SAVANNAH GAS BLDG E ROOF	AS HEAT/ELEC COOL	CLASSROOM 5	2,000	1.0/(0.79)	0.5	1,949	63.0	48.32	5	16.1	60.0	49.0	70.0	92.7	81%	230	3	30	31	45	600	675	0	675	1 3 4 5 6 12	

1	UNIT SHALL BE VERTICAL DISCHARG

4 PROVIDE WITH 2" MERV-13 FILTERS.

2 UNIT SHALL BE HORIZONTAL DISCHARGE. 5 PROVIDE WITH 100% OSA ECONOMIZER WITH BAROMETRIC RELIEF. PROVIDE TITLE 24 COMPLIANT VENSTAR 2800 THERMOSTAT WITH ADJUSTABLE SETPOINT AND OVERRIDE CAPABILITY. REPLACE IN PLACE OF EXISTING THERMOSTAT.

6 UNIT DISCHARGE CONFIGURATION SHALL MATCH EXISTING. NO ADAPTER CURB REQUIRED FOR MOUNTING.

7 PROVIDE WITH CA-CAR-537-YRK-560-RTAP-20 MICROMETL CURB ADAPTER.

8 PROVIDE WITH CA-CAR-537-CAR-005 MICROMETL CURB ADAPTER. 9 EXISTING UNIT MODEL : CARRIER 48NLT048. CONTRACTOR TO VERIFY MODEL AND DIMENSIONS FOR ADAPTER CURB ATTACHMENT.

EXISTING UNIT MODEL: CARRIER 48NLT042. CONTRACTOR TO FIELD VERIFY MODEL AND DIMENSIONS FOR ADAPTER CURB ATTACHMENT.

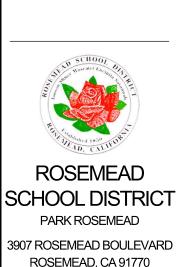
13 EXISTING UNIT MODEL: YORK D1EG048. CONTRACTOR TO FIELD VERIFY MODEL AND DIMENSIONS FOR ADAPTER CURB ATTACHMENT. EXISTING UNIT MODEL : CARRIER 48HJD005, 48HDJ006 OR 48HJD007. CONTRACTOR TO FIELD VERIFY MODEL AND DIMENSIONS FOR CURB ATTACHMENT. EXISTING UNIT MODEL : BARD RPM36B. CONTRACTOR TO FIELD VERIFY MODEL AND DIMENSIONS FOR ADAPTER CURB. PROVIDE CDI 1959854-1-9999-4000 OR EQUAL ADAPTER.

EXISTING UNIT MODEL: CARRIER 48HJD006. CONTRACTOR TO FIELD VERIFY MODEL AND DIMENSIONS FOR CURB ATTACHMENT.

[12] EXISTING UNIT MODEL: CARRIER 48HJD006. CONTRACTOR TO FIELD VERIFY MODEL AND DIMENSIONS FOR HORIZONTAL DISCHARGE. ATTACH PER STRUCTURAL.

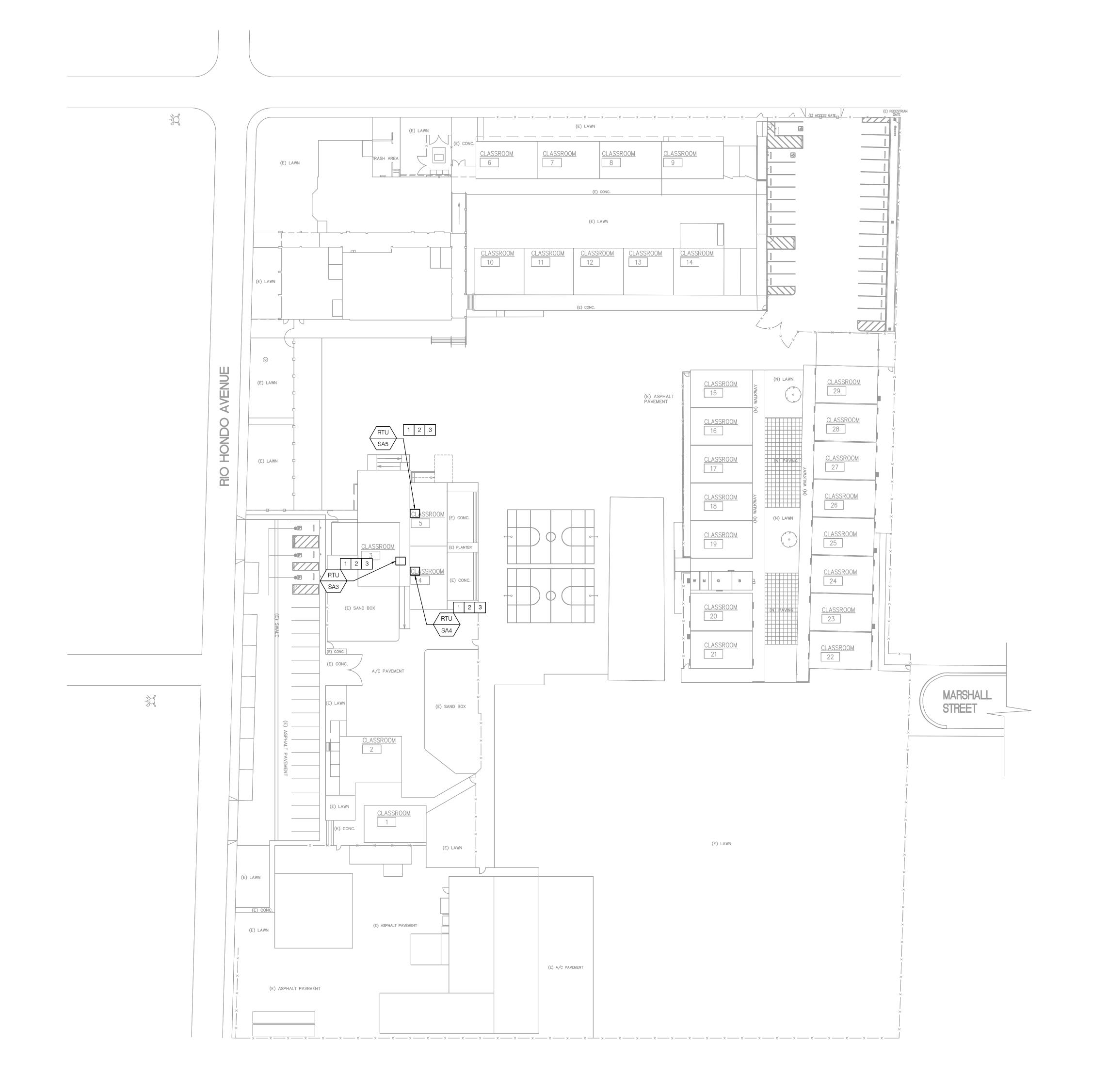
FILE NO: 19-91 A#: 03-122719





SCHEDULES - SAVANNAH

PLUMBING PIPING N	MATERIALS SCHEDULE
CONDENSATE DRAIN PIPING:	TYPE 'L' COPPER TUBING, HARD DRAWN CONFORMING TO ASTM B 88, WITH WROUGHT COPPER SOLDER SWEAT FITTINGS AND LEAD-FREE SOLDER JOINTS. ALL CONDENSATE DRAIN PIPING WITHIN THE BUILDING SHALL BE INSULATED.
2. INSULATION OF CONDENSATE DRAIN PIPING:	GLASS FIBER PIPE INSULATION WITH FACTORY-APPLIED JACKET CONFORMING TO ASTM C547. 1-INCH THICK FOR PIPE SIZES 1" & SMALLER. 1½-INCH THICK FOR PIPE SIZES 1¼" INCHES & LARGER. SEAL ALL JOINTS WITH THE FACTORY-APPLIED, SELF-SEAL LAP AND BUTT STRIPS. JOHNS MANVILLE MICRO-LOK 'HP' OR EQUAL.
3. GAS PIPING:	SCHEDULE 40 BLACK STEEL PIPE CONFORMING TO ASTM A 53 WITH 150 PSIG MALLEABLE IRON THREADED FITTINGS. WELDED JOINTS FOR PIPE SIZES 2½" AND LARGER OR WELDED THROUGHOUT WHEN USED FOR MEDIUM PRESSURE. OUTDOOR PIPING EXPOSED TO ATMOSPHERE SHALL BE PAINTED WITH RUST INHIBITING PAINT.
4. PIPE PROTECTION: PROVIDE NON-CON	DUCTING DIELECTRIC CONNECTIONS JOINING DISSIMILAR METALS.



**GENERAL NOTES** 

1. WHERE EXISTING EQUIPMENT IS NOTED TO BE REPLACED, CONTRACTOR SHALL DEMOLISH EXISTING UNIT AND UTILITIES AS REQUIRED FOR NEW INSTALLATION. DISCONNECT GAS PIPING, UNIT DISCONNECT AND CONTROL WIRING AT UNIT LOCATION AND RECONNECT TO NEW UNIT. WALL AND ROOF OPENING SHALL BE COVERED UNTIL NEW WATERPROOFING IS COMPLETE.

2. CONDENSATE AND GAS PIPING TO BE PAINTED TO MATCH THE EXTERIOR COLOR OF ROOF.

**KEY NOTES** 

FILE NO: 19-91 A#: 03-122719 1 REPLACE EXISTING ROOFTOP UNIT WITH NEW EQUIPMENT IN SAME LOCATION ON ROOF PER DETAIL 2/M601. NEW

UNIT TO MOUNT TO EXISTING CURB WITHOUT CURB ADAPTER.

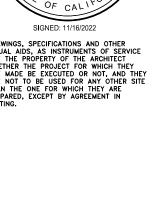
PROVIDE 3/4" CD FROM A/C UNIT AND INTERCEPT (E) 3/4" CD AT ROOF. FIELD VERIFY LOCATION OF (E) CD PIPE AND

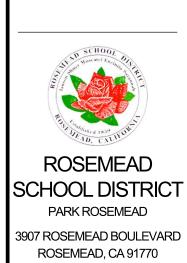
EXTEND AS REQUIRED. REFER TO DETAIL 4/M601. PROVIDE 3/4" GAS TO A/C UNIT AND INTERCEPT (E) 3/4" AT ROOF. FIELD VERIFY LOCATION OF (E) GAS PIPE AND EXTEND AS REQUIRED.REFER TO DETAIL 6/M601.





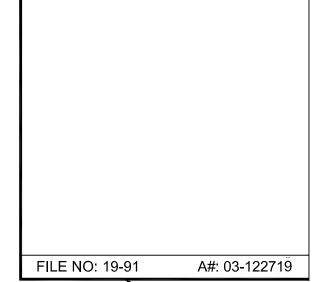


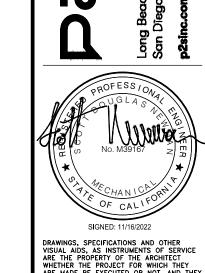




MECHANICAL SITE PLAN -SAVANNAH







ROSEMEAD SCHOOL DISTRICT PARK ROSEMEAD 3907 ROSEMEAD BOULEVARD ROSEMEAD, CA 91770

1. 60 FT TALL BUILDING MAX

4. RISK CATAGORY III AND IV

155 MPH, 3-SECOND GUST

2. EXPOSURE C

5. IP = 1.56. SS = 2.50

7. FA = 1.2

**VERIFY** 

14 GA MICROHOLD CLIPS. ATTACH TO CURB W/ #10 X 1" 7 TEKS SCREW. MIN. (5) EQUALLY SPACED PER LONG SIDE,

8 14 GA MICROHOLD CLIPS. ATTACH TO UNIT W/ #12 X 1-1/2" TEKS SCREW.

REFER TO STRUCTURAL PLANS FOR CALCULATIONS AND ADDITIONAL DETAILING.

(3) EQUALLY SPACED PER SHORT SIDE

9 EQUIPMENT BASE RAIL.

WIND SPEED

NAC NO 161-21043 DRAWN JL CHECKED SN

DATE 10-06-2022 DETAILS

**GENERAL NOTE** 

A. REFER TO SPECIFICATION FOR PIPE SUPPORT SPACING.

B. CONDENSATE DRAIN PIPING SHALL SLOPE AT MINIMUM 1%. C. REFER TO STRUCTURAL DRAWINGS AND ARCHITECTURAL DRAWINGS FOR MAX ROOF SLOPE.

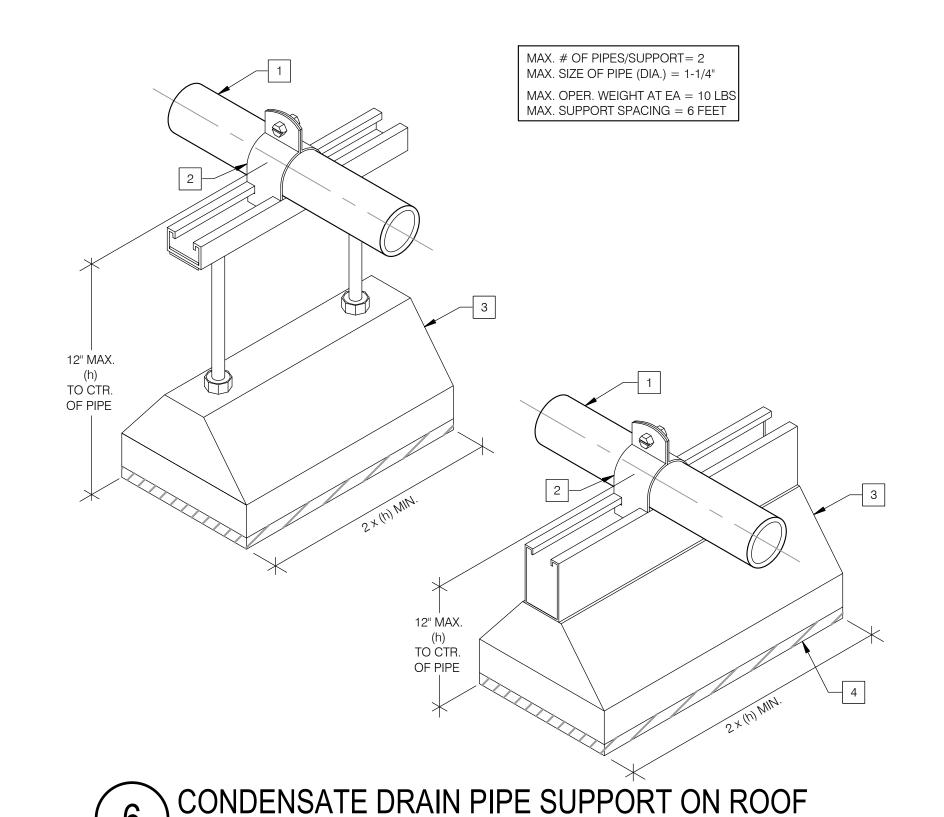
DETAIL NOTES

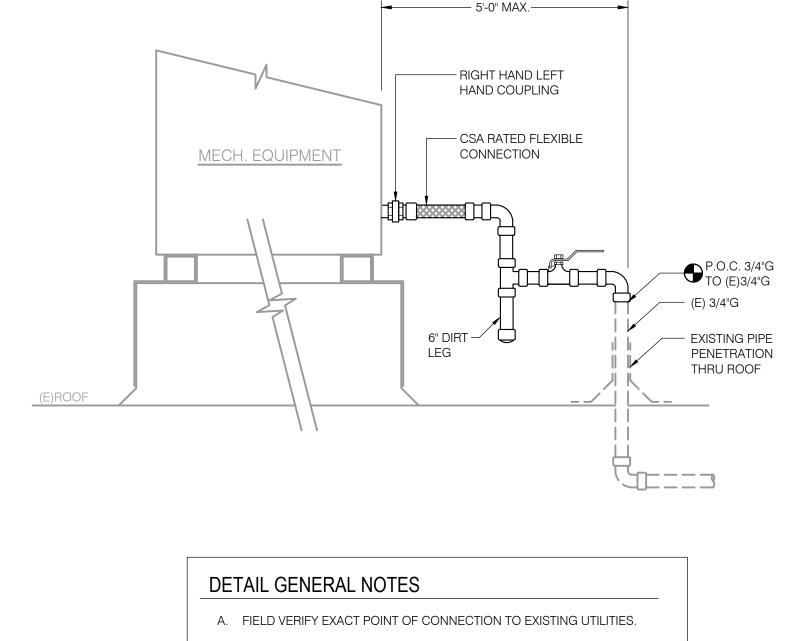
PIPE AT ROOF - REFER TO SPECIFICATIONS FOR PIPE MATERIAL.

2 PIPE CLAMP - UNISTRUT P1113 OR EQUAL.

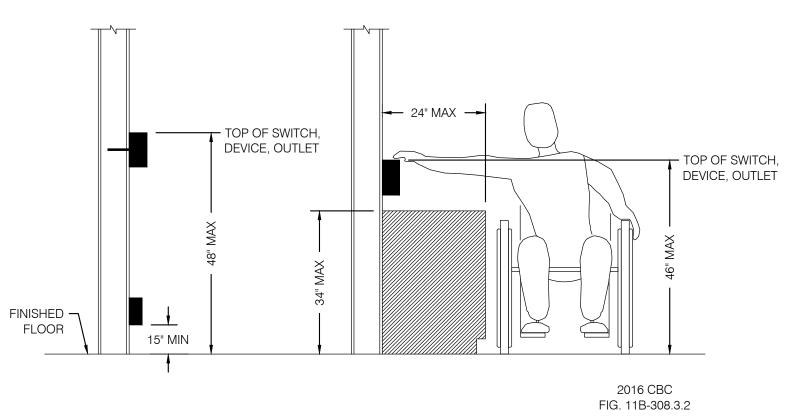
B-LINE C-PORT SERIES PIPE SUPPORT SYSTEM OR EQUAL.

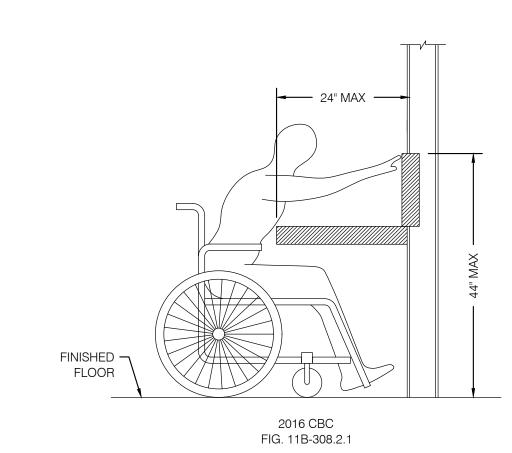
4 SET ON MASTIC OR RUBBER PADDING AT PVC ROOF CONSTRUCTION AREAS - TYPICAL.



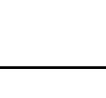






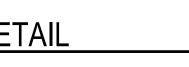


### NOTES THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION



FINISHED -

PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES SYSTEM (IE: TEMPERATURE AND HUMIDITY SENSORS).



DEPTH OF SEAL TO OVERCOME OPERATING STATIC PRESSURE +1" (VERIFY IN FIELD) BUT LESS NOT LESS THAN 3" MIN.

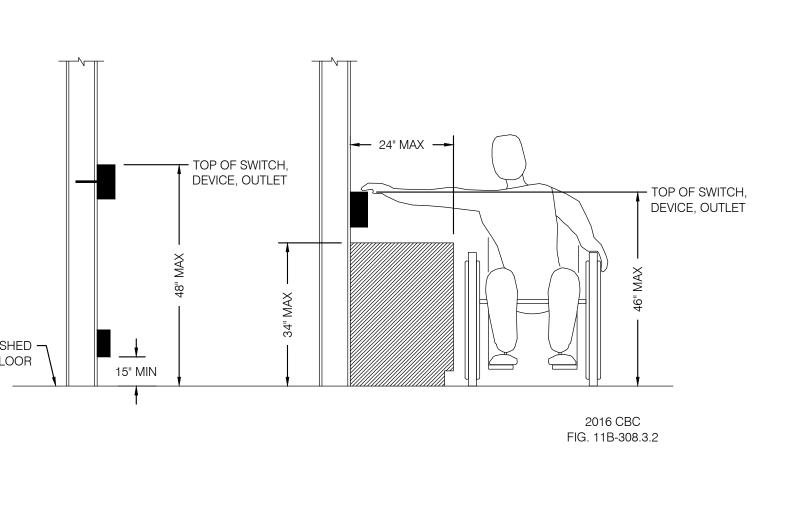
2 3/4"CD, LENGTH VARIES, SEE ROOF PLANS FOR ROUTING. FOR CONDENSATE PIPE SUPPORT ON ROOF SEE DETAIL 5/M601.

B. SUPPORT DRAIN LINE TO PREVENT SAGS AND TERMINATE TO AN

APPROVED RECEPTOR. (LAVATORY TAILPIECE, SERVICE SINK, FLOOR

MECH. EQUIPMENT







(E)ROOF SHEATHING -

(E)ROOF FRAMING

EXISTING SUPPLY DUCT. CONNECT TO ADAPTER CURB AT POC SHOWN.

2 EXISTING RETURN DUCT. CONNECT TO ADAPTER CURB AT POC SHOWN.

14 GA FULLY ASSEMBLED, ADAPTOR CURB. MOUNT TO EXISTING CURB PER STRUCTURAL DRAWINGS. REFER TO MECHANICAL SCHEDULE AND DETAIL FOR ACCESSORY.

3 EXISTING ROOF CURB AND FLASHING.

6 INTERNAL INSULATION WITH GASKETING.

5 INTERNAL DUCT TRANSITIONS

NOTES

(E)WOOD SHEATHING -

(E)WOOD FRAMING —

EXISTING SUPPLY DUCT. CONNECT TO UNIT SUPPLY IN CURB AT POC SHOWN.

2 EXISTING RETURN DUCT. CONNECT TO UNIT RETURN CURB AT POC SHOWN.

4 MATCH EXISTING ANCHORAGE FROM UNIT TO CURB.

ROOFTOP UNIT INSTALLATION ON (E) CURB

3 EXISTING ROOF CURB AND FLASHING.



MECHANICAL EQUIPMENT -CONDENSATE DRAIN CONNECTION.

BRASS UNION WITH 6" BRASS NIPPLE.

( WHERE STEEL MEETS COPPER)

12" LONG FLEXIBLE NEOPRENE -U.V. PROTECTION HOSE

CONNECTION WITH STAINLESS

CD VENT -

- BRASS CLEANOUT

PLUG (THREADED)

DETAIL KEY NOTES

DETAIL GENERAL NOTES

SINK OR ROOF RECEPTOR.)

A. MANUALLY PRIME TRAP BEFORE START-UP.

STEEL STEEL CLAMPS

P.O.C. 3/4"CD TO (E)3/4"CD

EXISTING PIPE —

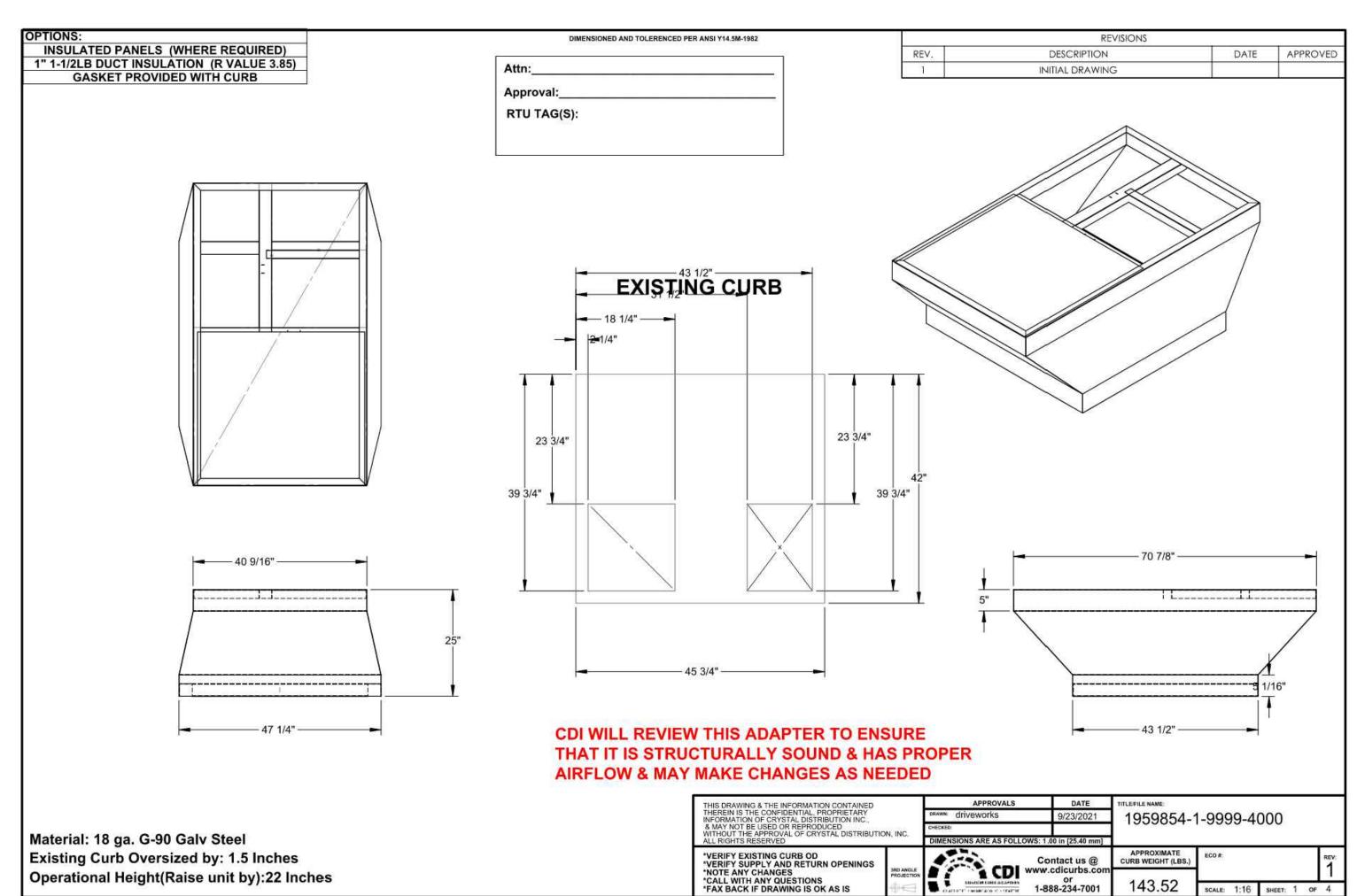
PENETRATION

THRU ROOF

(E) 3/4"CD-

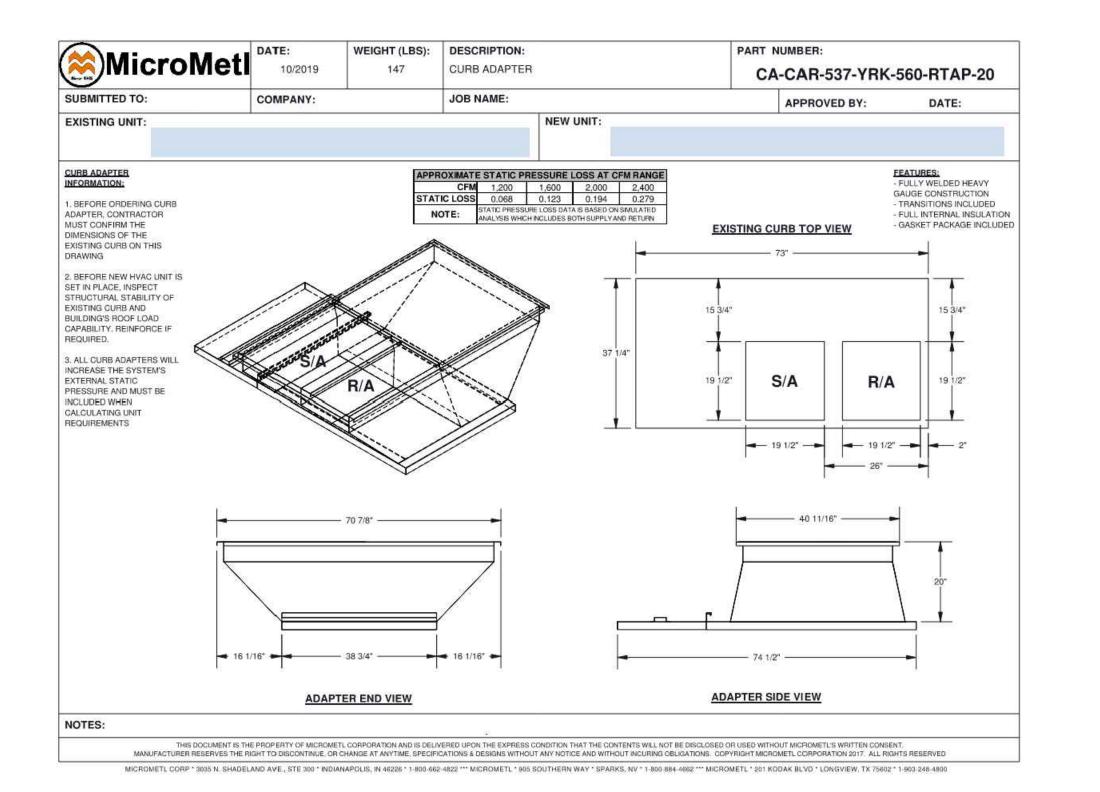
BRASS CLEANOUT ---PLUG (THREADED)

UNION (TYP) ---

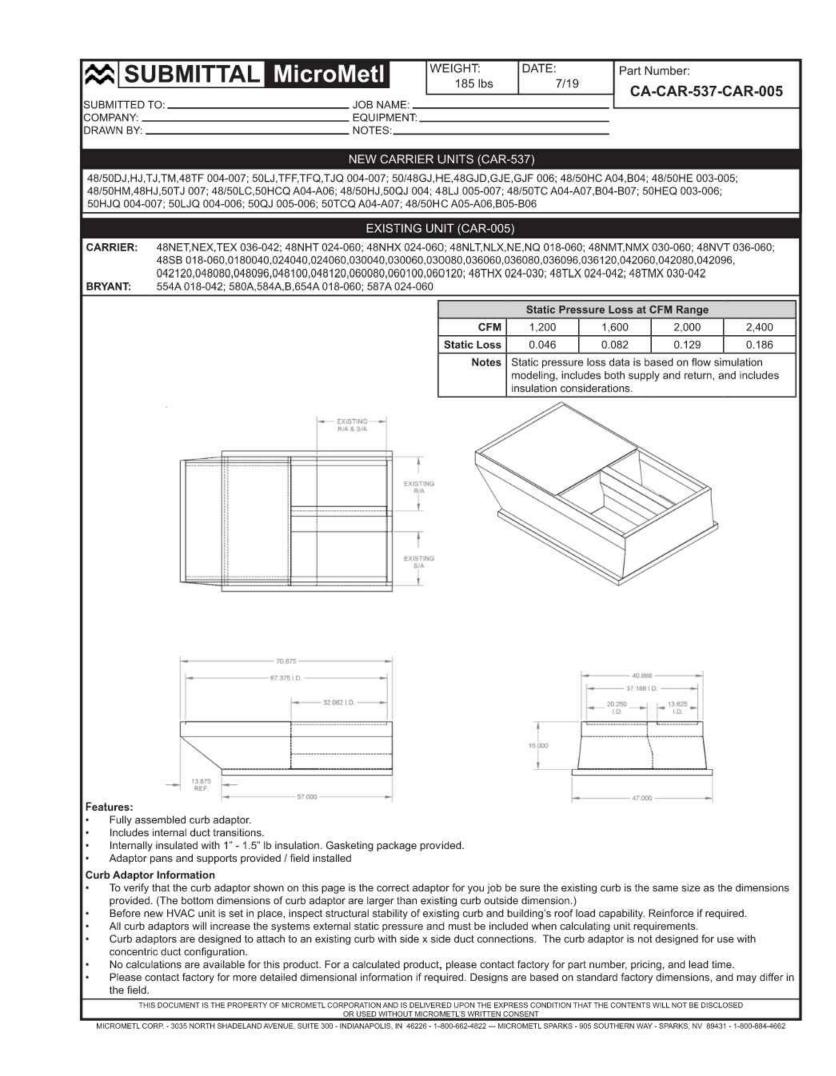


\\crystal.cdicurbs.com\eng\files\CURBS\_CURB\_ADAPTERS\1-XXXX-XXXX\_CURB\_ADAPTERS\1-9999-2022\1959854-1-9999-4000

4) CURB ADAPTER: CDI 1959854-1-999-4000

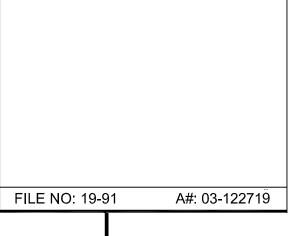


3 CURB ADAPTER: CA-CAR-537-YRK-560-RTAP-20
NO SCALE



2 CURB ADAPTER: CA-CAR-537-CAR-005
NO SCALE

NOT USED
NO SCALE





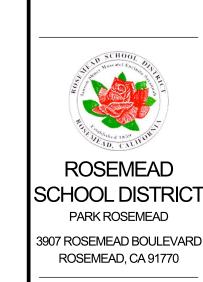


SIGNED: 11/16/2022

DRAWINGS, SPECIFICATIONS AND OTHER VISUAL AIDS, AS INSTRUMENTS OF SERVARE THE PROPERTY OF THE ARCHITECT WHETHER THE PROJECT FOR WHICH THE ARE MADE BE EXECUTED OR NOT, AND ARE NOT TO BE USED FOR ANY OTHER THAN THE ONE FOR WHICH THEY ARE PREPARED, EXCEPT BY AGREEMENT IN WRITING.

ROSEMEAD SCHOOL DISTRICT

RSD - SAVANNAH ELEMENTARY SCHOOL



ARCHITECTURE

NAC NO 161-21043

FILE

DRAWN JL

CHECKED SN

DATE 10-06-2022

DETAILS

NAC NO 161-21043 10-06-2022

> TITLE 24 COMPLIANCE FORMS - SAVANNAH

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

CERTIFICATE OF COMPLIANCE This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive Project Name: RSD HVAC Replacement Report Page: (Page 1 of 8) Project Address: 2022-11-16T18:16:49-05:00 Date Prepared:

A. GENERAL INFORMATION 01 Project Location (city) Rosemead 04 Total Conditioned Floor Area 7600 02 Climate Zone Total Unconditioned Floor Area 06 # of Stories (Habitable Above Grade) 03 Occupancy Types Within Project: ☐ Office (B) Retail (M) ☐ Non-refrigerated Warehouse (S) ☐ Hotel/ Motel Guest Rooms (R-1) School (E) ☐ Healthcare Facility (I) ☐ High-Rise Residential (R-2/R-3) ☐ Relocatable Class Bldg (E) ☐ Other (Write In)

B. PROJECT SCOPE This table Includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2 for alterations. Air System(s) Wet System Components Dry System Components ☐ Water Economizer Air Economizer Cooling Air System Pumps ☐ Electric Resistance Heat 

Registration Number: Generated Date/Time: Documentation Software: Energy Code Ace Compliance ID: 77583 CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2022-11-16 15:16:53 Schema Version: rev 20200601

STATE OF CALIFORNIA Mechanical Systems CALIFORNIA ENERGY COMMISSION NRCC-MCH-E CERTIFICATE OF COMPLIANCE RSD HVAC Replacement Report Page: Project Address: Date Prepared:

☐ System Piping

☐ Cooling Towers

☐ Chillers

H. FAN SYSTEMS & AIR ECONOMIZERS This table is used to demonstrate compliance with prescriptive requirements found in  $\S140.4(c)$ ,  $\S140.4(e)$  and  $\S140.4(m)$  for fan systems. Fan systems serving only process loads are exempt from these requirements and do not need to be included in Table H. Designed per §140.4(e) and System Fan Type: RTU-E10-E18 Constant Volume Controls: Name: 05 an Power Pressure Drop Adjustment - Table 140.4-E Fan Name or Maximum Design Supply Airflow Fan Function Design HP Design Airflow through Item Tag (CFM) Device (CFM) Fully ducted return/ 1600 exhaust RTU-E10-E18 1600 0.62 Supply culated Adjustment H2O) Maximum System Fan Total System Design 0.62 Total System Design Supply Airflow (CFM): Power (B)HP:

<sup>1</sup> FOOTNOTES: Computer room economizers must meet requirements of  $\S140.9(a)$  and will be documented on the NRCC-PRC-E document.

<sup>2</sup> The unit used for HP must be consistent for all fans within a system.

have setback thermostats.

Mechanical Controls

Mechanical Controls (existing to remain, altered

I. SYSTEM CONTROLS This table is used to demonstrate compliance with mandatory controls in §110.2 and §120.2 and prescriptive controls in §140.4(f) and (n) or requirements in §141.0(b)2E for altered space conditioning systems. 01 02 Shut-Off Thermostats Floor Area System Demand Response Window Interlocks pe System Name §110.2(b) & (c)<sup>1</sup>, Controls Temp. Reset Being Served Controls §110.12 and §120.2(b) §140.4(n) §120.2(e) §140.4(f) 120.2(a)or §141.0(b)2E §120.2(g) Setback + DR Tstat per NA: Single NA: Single Single zone |<= 25,000 ft<sup>2</sup> **EMCS** RTU-E10-E18 NA: Alteration Project

Registration Number: Generated Date/Time: Documentation Software: Energy Code Ace CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Compliance ID: 77583 Schema Version: rev 20200601 Report Generated: 2022-11-16 15:16:53

<sup>1</sup>FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to

STATE OF CALIFORNIA Mechanical Systems CALIFORNIA ENERGY COMMISSION CERTIFICATE OF COMPLIANCE NRCC-MCH-Project Name: RSD HVAC Replacement Report Page: (Page 7 of 8) 2022-11-16T18:16:49-05:0

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION There are no NRCV forms required for this project. Q. MANDATORY MEASURES DOCUMENTATION LOCATION This table is used to indicate where mandatory measures are documented in the plan set or construction documentation. 02 Compliance with Mandatory Measures documented through MCH M001 landatory Measures Note Block

STATE OF CALIFORNIA Mechanical Systems

CALIFORNIA ENERGY COMMISSION CERTIFICATE OF COMPLIANCE NRCC-MCH-E RSD HVAC Replacement Report Page: (Page 2 of 8 Project Name: Date Prepared: 2022-11-16T18:16:49-05:00 Project Address:

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. System Summary Controls Ventilatio §110.1, §110.2, §120.3, Controls §140.4(k) §140.4(c), §120.1 §110.2(e)2 Compliance Results §110.2, §120.2, §140.4(d) §140.4(I) §140.4 (See Table F) (See Table I) (See Table G) (See Table H) (See Table . (See Table K) (See Table L) (See Table M) COMPLIES with Exceptional Conditions Mandatory Measures Compliance (See Table Q for Details) COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form. The permit applicant has indicated on Table J that ventilation calculations have been attached or included elsewhere on the plans.

Ductwork (existing to remain, altered or new)

2022-11-16T18:16:49-05:00

☐ Zonal Systems/ Terminal Boxes

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

Registration Number: Generated Date/Time: Documentation Software: Energy Code Ace Compliance ID: 77583 CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20200601 Report Generated: 2022-11-16 15:16:53

STATE OF CALIFORNIA Mechanical Systems

CALIFORNIA ENERGY COMMISSION CERTIFICATE OF COMPLIANCE NRCC-MCH-E RSD HVAC Replacement Report Page: (Page 5 of 8 Date Prepared: 2022-11-16T18:16:49-05:0 Project Address

I. SYSTEM CONTROLS

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

J. VENTILATION AND INDOOR AIR QUALITY

This table is used to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(e)3B for all nonresidential, high-rise residential and hotel/motel ccupancies. For alterations, only ventialtion systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet. O1 Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table. ☐ Check this box if the project included Nonresidential or Hotel/Motel spaces Check this box if the project included new or altered high-rise residential dwelling units. 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.

K. TERMINAL BOX CONTROLS

This section does not apply to this project. L. DISTRIBUTION (DUCTWORK and PIPING) This table is used to show compliance with mandatory pipe insulation requirements found in §120.3 and prescriptive requirements found in §140.4(I) for duct leakage testing. Existing Supply and Return The answers to the questions below apply to the following duct systems: Duct leakage testing triggered for these systems? No The scope of the project includes only duct systems serving healthcare facilities Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system. Yes The space conditioning system serves less than 5,000 ft<sup>2</sup> of conditioned floor area. 13 No The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system: 14

Registration Number: Generated Date/Time: Documentation Software: Energy Code Ace Compliance ID: 77583 CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2022-11-16 15:16:53 Schema Version: rev 20200601

In an unconditioned crawl space

In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof does not meet the

requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces

ocumentation Author Signature:

EA/ HERS Certification Identification (if applicable)

STATE OF CALIFORNIA Mechanical Systems

City/State/Zip:

CALIFORNIA ENERGY COMMISSION NRCC-MCH-E CERTIFICATE OF COMPLIANCE NRCC-MCH-E (Page 8 of 8) Project Name: RSD HVAC Replacement Report Page: 2022-11-16T18:16:49-05:00 Project Address:

I certify that this Certificate of Compliance documentation is accurate and complete. umentation Author Name Andrew Smith

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

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

The information provided on this Certificate of Compliance is true and correct. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer) The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements

of Title 24, Part 1 and Part 6 of the California Code of Regulations. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations,

plans and specifications submitted to the enforcement agency for approval with this building permit application. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable

inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy. onsible Designer Name: Responsible Designer Signature:

Registration Number: Generated Date/Time:

Documentation Software: Energy Code Ace

Mechanical Systems

STATE OF CALIFORNIA

CALIFORNIA ENERGY COMMISSION CERTIFICATE OF COMPLIANCE NRCC-MCH-E Project Name: RSD HVAC Replacement Report Page: (Page 3 of 8) Project Address: Date Prepared: 2022-11-16T18:16:49-05:00

This table is used to demonstrate compliance for mechanical equipment with mandatory requirements found in §110.1 and §110.2(a) and prescriptive requirements found in §140.4(a),

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

§140.4(b) and §140.4(k) or §141.0(b)2 for alterations. Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters) 05 06 07 08 09 10 11 Equipment Sizing per Mechanical Schedule (kBtu/h) Cooling Output<sup>2,3</sup> Load Calculations Smallest Size quipment Type per Tables 110.2 / Titl Name or Item Equipment Category per r Design (kBtu/h) Rated (kBtu/h) Heating Output (kBtu/h) (kBtu/h) Ref Design (kBtu/h) Tables 110.2 §140.4(a) Heating Load (kBtu/h) (kBtu/h) Load RTU-E10-E18 Sm. Commercial AC Air-cooled unitary AC/HP Pkg (3Ph) Yes 49000 49000

<sup>1</sup>FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per §140.4(a). Healthcare facilities are excepted.

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

Dry System Equipment	Efficiency (other than Package	Terminal Air Conditi	oners (PTAC) and	Package Terminal	Heat Pumps (PTHP	r))		
01	02	03	04	05	06	07	08	09
			Heati	ng Mode			Cooling Mode	
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency
RTU-E10-E18	<65,000		HSPF	8	81	SEER	14	16.1

G. PUMPS

This section does not apply to this project. Generated Date/Time: Documentation Software: Energy Code Ace Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Compliance ID: 77583 Schema Version: rev 20200601 Report Generated: 2022-11-16 15:16:53

STATE OF CALIFORNIA Mechanical Systems

CALIFORNIA ENERGY COMMISSION CERTIFICATE OF COMPLIANCE NRCC-MCH-E Project Name: RSD HVAC Replacement Report Page: 2022-11-16T18:16:49-05:00 Date Prepared: Project Address:

.. DISTRIBUTION (DUCTWORK and PIPING) In other unconditioned spaces The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos. 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. Duct system shall be sealed in acordance with the California Mechanical Code

M. COOLING TOWERS

his section does not apply to this project.

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

NRCI-MCH-01-E - Must be submitted for all buildings

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE elections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. hese documents must be provided to the building inspector during construction and can be found online at ttps://www.energy.ca.gov/title24/2019standards/2019\_compliance\_documents/Nonresidential\_Documents/NRCA/ Form/Title Verified

Systems/Spaces To Be Field NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A RTU-E10-E18 upply Fan VFD Acceptance (if applicable) since testing activities overlap. NRCA-MCH-05-A - Air Economizer Controls RTU-E10-E18 NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance RTU-E10-E18 RTU-E10-E18 NRCA-MCH-18-A Energy Management Control Systems

Registration Number: Generated Date/Time: Documentation Software: Energy Code Ace Compliance ID: 77583 Report Version: 2019.1.003 CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Schema Version: rev 20200601 Report Generated: 2022-11-16 15:16:53

Space Conditioning Mandatory Measures:

110.2 CERTIFICATION BY MANUFACTURERS

ANY SPACE CONDITIONING EQUIPMENT LISTED IN \$110.2 SHALL ONLY BE INSTALLED IF CERTIFIED TO THE ENERGY COMMISSION TO MEET ALL APPLICABLE \$110.2 REQUIREMENTS. 110.5 PILOT LIGHTS PROHIBITED FOR NATURAL GAS EQUIPMENT

PILOT LIGHTS ARE PROHIBITED ON NATURAL GAS FAN-TYPE CENTRAL FURNACES, POOL HEATERS, SPA HEATERS, AND FIREPLACES.

110.8(a) INSULATION CERTIFICATION INSTALLED INSULATION SHALL BE CERTIFIED BY THE DEPARTMENT OF CONSUMER AFFAIRS PER TITLE 24, PART 12, CHAPTERS 12-13, ARTICLE 3 "STANDARDS FOR INSULATING MATERIAL."

110.8(b) UREA FORMALDEHYDE INSULATION UREA FORMALDEHYDE INSULATION SHALL NOT BE INSTALLED UNLESS IN EXTERIOR SIDE WALLS WITH A FOUR-MIL-THICK PLASTIC POLYETHYLENE VAPOR RETARDER OR EQUIVALENT PLASTIC SHEATHING VAPOR RETARDER INSTALLED BETWEEN THE UREA FORMALDEHYDE FOAM INSULATION AND THE INTERIOR SPACE.

110.8(c) INSULATING MATERIAL ALL INSULATING MATERIALS SHALL BE INSTALLED IN COMPLIANCE WITH THE FLAME SPREAD RATING AND SMOKE DENSITY REQUIREMENTS OF THE CALIFORNIA BUILDING CODE.

IF INSULATION IS INSTALLED ON AN EXISTING SPACE-CONDITIONING DUCT, IT SHALL COMPLY WITH SECTION 604.0 OF THE CMC.

120.1(a) GENERAL VENTILATION AND INDOOR AIR QUALITY REQUIREMENTS ALL OCCUPIABLE SPACES IN HIGH-RISE RESIDENTIAL, HOTEL/MOTEL, AND NONRESIDENTIAL BUILDINGS OTHER THAN HEALTHCARE SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF \$120.1(a) THROUGH (g). THE REQUIRED OUTDOOR AIR VENTILATION RATE AND AIR-DISTRIBUTION SYSTEM DESIGN SHALL BE CLEARLY IDENTIFIED ON THE PLANS.

L20.1(c)2 NATURAL VENTILATION

NATURALLY VENTILATED SPACES SHALL BE DESIGNED IN ACCORDANCE WITH 120.1(c)2A THROUGH 120.1(c)2C AND INCLUDE A MECHANICAL VENTILATION SYSTEMS DESIGNED IN ACCORDANCE WITH 120.1(c)3. 120.1(c)3 MECHANICAL VENTILATION

OCCUPIABLE SPACES SHALL BE VENTILATED WITH A MECHANICAL VENTILATION SYSTEM CAPABLE OF PROVIDING AN OUTDOOR AIRFLOW RATE (Vz) TO THE ZONE NO LESS THAN THE LARGER OF (Vz) DESCRIBED IN 120.1(c)3A OR 120.1(c)3B. 120.1(d) TIMES OF OCCUPANCY

MINIMUM OUTDOOR AIR RATE SHALL BE MET AT TIMES WHEN THE SPACE IS USUALLY OCCUPIED IN ACCORDANCE WITH 120.1(c). 120.1(d)2 PRE-OCCUPANCY

THE LESSER OF THE MINIMUM RATE OF OUTDOOR AIR REQUIRED BY SECTION 120.1(c) OR THREE COMPLETE AIR CHANGES SHALL BE SUPPLIED TO THE ENTIRE BUILDING DURING THE 1-HOUR PERIOD IMMEDIATELY BEFORE THE BUILDING IS NORMALLY OCCUPIED.

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Generated Date/Time: Report Version: 2019.1.003

Schema Version: rev 20200601

Report Generated: 2022-11-16 15:16:53

Compliance ID: 77583

Documentation Software: Energy Code Ace

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Report Version: 2019.1.003 Schema Version: rev 20200601 Compliance ID: 77583

Report Generated: 2022-11-16 15:16:53

LINEAR PENDANT LIGHT FIXTURE, DIMENSIONS PER PLANS - UPPER

TRACK LIGHTING - UPPER CASE LETTER INDICATES LIGHT FIXTURE CALLOUT. LOWER CASE LETTER INDICATES LIGHTING CONTROL ZONE.

LED STRIP LIGHT FIXTURE - UPPER CASE LETTER INDICATES LIGHT FIXTURE CALLOUT. LOWER CASE LETTER INDICATES LIGHTING CONTROL

INDICATES LIGHTING CONTROL ZONE.

CASE LETTER INDICATES LIGHT FIXTURE CALLOUT. LOWER CASE LETTER

UNDERCABINET / COVE FIXTURE - UPPER CASE LETTER INDICATES LIGHT

FIXTURE CALLOUT. LOWER CASE LETTER INDICATES LIGHTING CONTROL

 $\times \nabla \nabla$ 

### **ABBREVIATIONS**

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
1/C	SINGLE CONDUCTOR	KVA	KILOVOLT-AMPERES
&	AND	KW	KILOWATT
@	AT	LF	LINEAR FEET LIQUIDTIGHT FLEXIBLE METAL CONDUIT
A OR AMP	AMPERES	LFMC	
ABV	ABOVE	LGST	LARGEST
A.C.	ASPHALT CONCRETE	LIS	LOAD INTERRUPTER SWITCH
AF	AMPERE FUSE RATING	LOC.	LOCATION
AFC	AVAILABLE FAULT CURRENT	LOTO	LOCK-OUT & TAG-OUT
AFF	ABOVE FINISHED FLOOR	LSI	LONG TERM, SHORT TERM, INSTANTANEOUS
AFG	ABOVE FINISH GRADE AMPERE INTERRUPTING CAPACITY	LTG	LIGHTING
AIC		LV	LOW VOLTAGE
AL	ALUMINUM	M	METER
APPROX.	APPROXIMATE	MAX	MAXIMUM
ARCH.	ARCHITECT; ARCHITECTURAL	MCA	MAXIMUM CIRCUIT AMPACITY
AS ASCC	AMPERE SWITCH RATING AVAILABLE SHORT CIRCUIT CURRENT	MCC MCP	MOTOR CONTROL CENTER MOTOR CIRCUIT PROTECTOR
ATC	AIR TERMINAL CHAMBER	MFGR, MFR	MANUFACTURER
ATO	AUTOMATIC THROW-OVER (SWITCH)	MH	MANHOLE
ATS AUTO	AUTOMATIC TRANSFER SWITCH AUTOMATIC	MI. MRCT	MECHANICAL INTERLOCK MULTI-RATIO CURRENT TRANSFORMER
AUX	AUXILIARY	MIN	MINIMUM MAXIMUM OVERCURRENT PROTECTION
AWG	AMERICAN WIRE GAUGE	MOCP	
BAT	BATTERY	MTD	MOUNTED
BEL	BELOW	MTG	MOUNTING
BKBD	BACKBOARD	MTR	MOTOR
BKR	BREAKER	MTTB	MAIN TELEPHONE TERMINAL BOARD
BLDG	BUILDING	MV	MEDIUM VOLTAGE
B.S.	BARE STRANDED	N	NORTH NOTIFICATION APPLIANCE CIRCUIT
C	CONDUIT	NAC	
CB CC	CIRCUIT BREAKER CONSTANT CURRENT	NC NEC	NORMALLY CLOSED NATIONAL ELECTRICAL CODE
CEC CF	CALIFORNIA ELECTRICAL CODE CUBIC FEET	NF NIC	NON-FUSED NOT IN CONTRACT
CKT	CIRCUIT CENTER LINE	NL	NIGHT LIGHT- 24HRS ON NUMBER
CL CLG	CEILING	NO. OC	ON CENTER
CMU C.O.	CONCRETE MASONRY UNIT CONDUIT ONLY WITH PULL WIRE	OCPD OD	OVERCURRENT PROTECTIVE DEVICE OUTSIDE DIAMETER
COL CP	COLUMN COMMUNICATION PROCESSOR	OE OFC	OVERHEAD ELECTRICAL OIL FUSED CUTOUT
CPT CR	CONTROL POWER TRANSFORMER CONTROL RELAY	OH OL	OVERHEAD OIL LEVER SWITCH
CSFD	COMBINATION SMOKE FIRE DAMPER	Р	POLE
CT CW	CURRENT TRANSFORMER COLD WATER	PAC PB	PROGRAMMABLE AUTOMATION CONTROLLER PULL BOX
CU	COPPER	PC	PHOTOCELL POLYCHLORINATED BIPHENYL
DIAG	DIAGRAM	PCB	
DIST. DL	DISTANCE DAMP LOCATION LISTING	PDS PF	PRESSURE DIFFERENTIAL SWITCH POWER FACTOR
DM	DIGITAL METER DIGITAL METER MODULE	PH OR Ø	PHASE
DMM		PILC	PAPER INSULATED, LEAD COVER
DP	DISTRIBUTION PANEL	PIV	POST INDICATING VALVE
DIST.	DISTANCE	PL	PLATE
DWG	DRAWING	PLC	PROGRAMMABLE LOGIC CONTROLLER
DWP EA	DEPARTMENT OF WATER & POWER EACH	PNL POC	PANEL POINT OF CONNECTION
ECM	ELECTRONIC CIRCUIT MONITOR ELECTRICAL	PREF.	PREFERRED
ELEC.		PRI.	PRIMARY
EM	EMERGENCY	PVC	POLY-VINYL CHLORIDE
EMH	ELECTRICAL MANHOLE	PWR	POWER
EMT	ELECTRICAL METALLIC TUBING	REC/RECEPT	RECEPTACLE
EPO	EMERGENCY POWER OFF ETHYLENE PROPYLENE RUBBER	REQ'D	REQUIRED
EPR		RGS	RIGID GALVANIZED STEEL
EQUIP ER	EQUIPMENT EXISTING TO BE REMOVED	RMC RPBP	RIGID METAL CONDUIT REDUCED PRESSURE BACK FLOW PREVENTER
ERR	EXISTING TO BE RELOCATED AND - RECONNECTED	RM RTAC	ROOM REAL TIME AUTOMATION CONTROLLER
EXIST/(E)	EXISTING	SCCR	SHORT CIRCUIT CURRENT RATING
EXP	EXPLOSION PROOF	SCE	SOUTHERN CALIFORNIA EDISON
FA	FIRE ALARM	SF	SQUARE FEET
FFE	FINISHED FLOOR ELEVATION FINISH	SHT	SHEET
FIN.		SIG.	SIGNAL
FIP.	FIELD INTERFACE PANEL	SP	SPARE
FIXT	FIXTURE	SPECS	SPECIFICATIONS
FLA	FULL LOAD AMPS	ST	STREET
FLR	FLOOR	STD	STANDARD
FLUOR	FLUORESCENT	STP	SHIELDED TWISTED PAIR
FT	FEET	SW	SWITCH
FACP	FIRE ALARM CONTROL PANEL	SWBD	SWITCHBOARD
FATC	FIRE ALARM TERMINAL CABINET FLEXIBLE METAL CONDUIT	SWGR	SWITCHGEAR
FMC		SWST	SWITCHING STATION
FO	FIBER OBTIC	TB	TERMINAL BLOCK
FTG	FOOTING	TEL./TELE	TELEPHONE
GEN	GENERATOR	TMH	TELEPHONE MANHOLE
GFI	GROUND FAULT INTERRUPTER	T.O.D.	TOP OF DUCTBANK
GFR	GROUND FAULT RELAY GREEN GROUND	T.O.M.	TOP OF MANHOLE
GG		TPS	TWISTED SHIELDED PAIR
GND	GROUND	TRANSF,XFMR	TRANSFORMER
HOA	HAND-OFF-AUTOMATIC	TS	TAMPER SWITCH TYPICAL
HP	HORSEPOWER	TYP	
HT	HEIGHT	UG	UNDERGROUND
HTR	HEATER	UON	UNLESS OTHERWISE NOTED
HZ	HERTZ INTEGRATED COMMUNICATIONS OPTICAL -	V	VOLTS
ICON		VA	VOLT-AMPERES
IE	NETWORK INVERT ELEVATION	VB VFD	VIBRATION SWITCH
IED	INTELLIGENT ELECTRONIC DEVICES	W	VARIABLE FREQUENCY DRIVE WATTS
IMC	INTERMEDIATE METAL CONDUIT	W/ W/O	WITH WITHOUT
ISC	SHORT CIRCUIT CURRENT		
	INCADESCENT JUNCTION BOX	WCR WP	WITHSTAND CLOSE-ON RATING WEATHERPROOF

IN THE EVENT ABBREVIATIONS NOT MENTIONED HEREIN ARE USED, REFERENCE WILL BE MADE TO ANSI Y1.1, MILITARY STANDARD ABBREVIATIONS, AND OTHER STANDARD INDUSTRY CONVENTIONS.

### GENERAL NOTES

- ALL WORK SHALL COMPLY WITH THE LATEST EDITION OF THE CALIFORNIA ELECTRICAL CODE AND ALL OTHER APPLICABLE FEDERAL AND STATE. WHERE THE CONSTRUCTION DOCUMENTS INDICATE MORE RESTRICTIVE REQUIREMENTS, THE CONSTRUCTION DOCUMENTS SHALL GOVERN BUT THE CONSTRUCTION DOCUMENTS SHALL NOT BE INTERPRETED AS AUTHORITY TO VIOLATE ANY CODE OR REGULATION.
- 2. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BEAR THE UNDERWRITERS' LABEL (UL) AND SHALL BE INSTALLED IN THE MANNER FOR WHICH THEY ARE DESIGNED AND APPROVED.
- 3. THE CONTRACTOR SHALL NOT BORE, NOTCH OR IN ANY WAY CUT INTO ANY STRUCTURAL MEMBER
- WITHOUT WRITTEN APPROVAL FROM THE ARCHITECT OR STRUCTURAL ENGINEER.
- 4. MECHANICAL, ELECTRICAL AND PLUMBING EQUIPMENT ANCHORAGE NOTES:
- ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26, AND 30.
- A. ALL PERMANENT EQUIPMENT AND COMPONENTS.
- B. TEMPORARY, MOVABLE, OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.

  "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS
  FOR 110/220V RECEPTACLES HAVING A FLEXIBLE CABLE.
- C. TEMPORARY, MOVABLE, OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS.

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

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

5. PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTES:

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

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

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP[ ] MD[ ] PP[ ] EX OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP[ ] MD[ ] PP[ ] E[ ] OPTION 2: SHALL COMPLY WITH HCAI PREAPPROVAL (OPM#) #:

### SHEET INDEX

SHEET	DESCRIPTION

E001 GENERAL NOTES, LEGENDS, ABBREVIATIONS, AND SHEET INDEX

E002 SCHEDULES - SAVANNAH

E101 ELECTRICAL SITE PLAN - SAVANNAH

DETAILS

FILE NO: 19-91 A#: 03-122719

Long Beach | Los Angeles
San Diego | San Jose



ROSEMEAD SCHOOL DISTRICT

RSD - SAVANNAH ELEMENTARY SCHOO

HVAC REPLACEMENT AT BUILDINGS E

ROSEMEAD SCHOOL DISTRICT PARK ROSEMEAD

3907 ROSEMEAD BOULEVARD

ROSEMEAD, CA 91770

ARCHITECTURE

JUBANY A

NAC NO 161-21043

FILE

DRAWN MT

CHECKED AS

DATE 10-06-2022

GENERAL NOTES,
LEGENDS,
ABBREVIATIONS, AND

E001

### **GENERAL NOTES**

1. WHERE EXISTING CIRCUIT BREAKERS AND FEEDERS ARE BEING RE-USED, CONTRACTOR SHALL VERIFY THE EXISTING CIRCUIT FOR THAT HVAC UNIT IS SERVING THE RESPECTIVE BUILDING PER THE SCHEDULE. MODIFY UNIT NAMES IN THE PANEL DIRECTORY AS REQUIRED TO MATCH THE RESPECTIVE UNIT THAT IS SERVED.

2. REFER TO MECHANICAL SCHEDULES FOR ADDITIONAL EQUIPMENT INFORMATION.

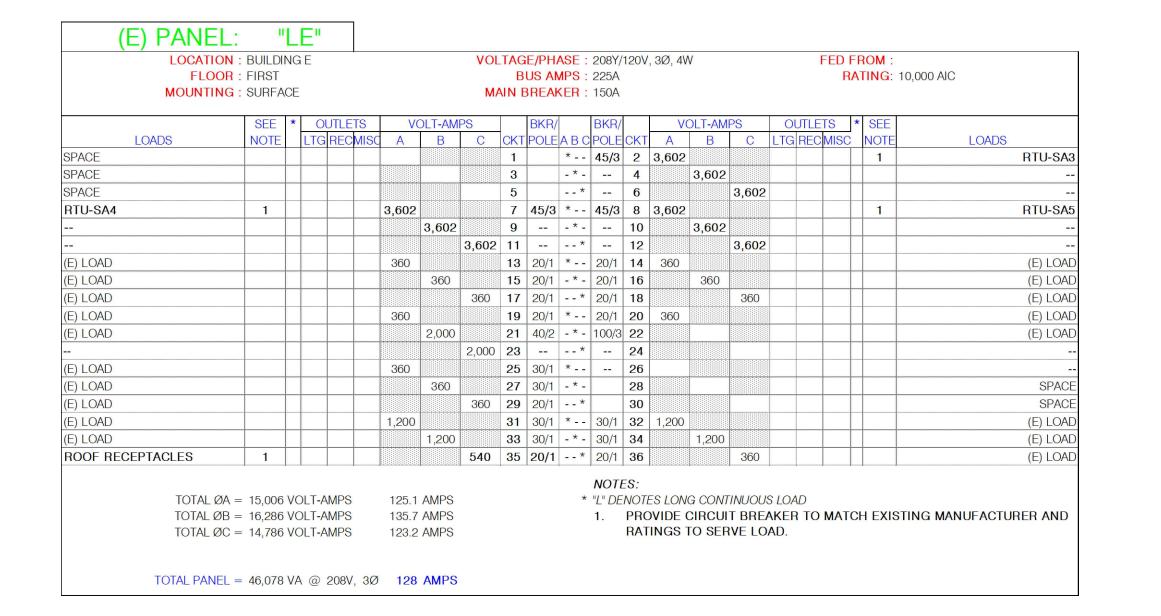
2. HVAC FOLLIDMENT WHOSE EXISTING CIRCLIT REFAKED.

3. HVAC EQUIPMENT WHOSE EXISTING CIRCUIT BREAKER MATCHES THE MOCP OF THE NEW UNIT SHALL BE PROVIDED WITH A NON-FUSED DISCONNECT. IF THE EXISTING CIRCUIT BREAKER EXCEEDS THE MOCP, A FUSED DISCONNECT SHALL BE PROVIDED.

FILE NO: 19-91 A#: 03-122719

MECHA	MECHANICAL EQUIPMENT ELECTRICAL CONNECTION SCHEDULE										
MARK	DESCRIPTION	LOCATION	VOLTAGE	PHASE	MCA	DISCONNECT	МОСР	FEEDER	PANEL	CIRCUIT	REMARKS
RTU-SA3	PACKAGED A/C UNIT	BLDG E ROOF	208	3	31.0	30A/240VAC/3P	45	3/4"C - 3#8 & 1#10 G	"LE"	2, 4, 6	1
RTU-SA4	PACKAGED A/C UNIT	BLDG E ROOF	208	3	31.0	30A/240VAC/3P	45	3/4"C - 3#10 & 1#10 G	"LE"	7, 9, 11	1
RTU-SA5	PACKAGED A/C UNIT	BLDG E ROOF	208	3	31.0	30A/240VAC/3P	45	3/4"C - 3#10 & 1#10 G	"LE"	8, 10, 12	1

1 PROVIDE FUSED DISCONNECT FOR UNIT IN NEMA-3R ENCLOSURE. FUSED SIZED PER MOCP.







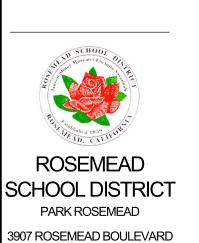
SIGNED: 11/16/2022

DRAWINGS, SPECIFICATIONS AND OTHER VISUAL AIDS, AS INSTRUMENTS OF SERVICE ARE THE PROPERTY OF THE ARCHITECT WHETHER THE PROJECT FOR WHICH THEY ARE MADE BE EXECUTED OR NOT, AND THEY ARE NOT TO BE USED FOR ANY OTHER SITE THAN THE ONE FOR WHICH THEY ARE PREPARED, EXCEPT BY AGREEMENT IN WRITING

ROSEMEAD SCHOOL DISTRICT

RSD - SAVANNAH ELEMENTARY SCHOC

HVAC REPLACEMENT AT BUILDINGS E



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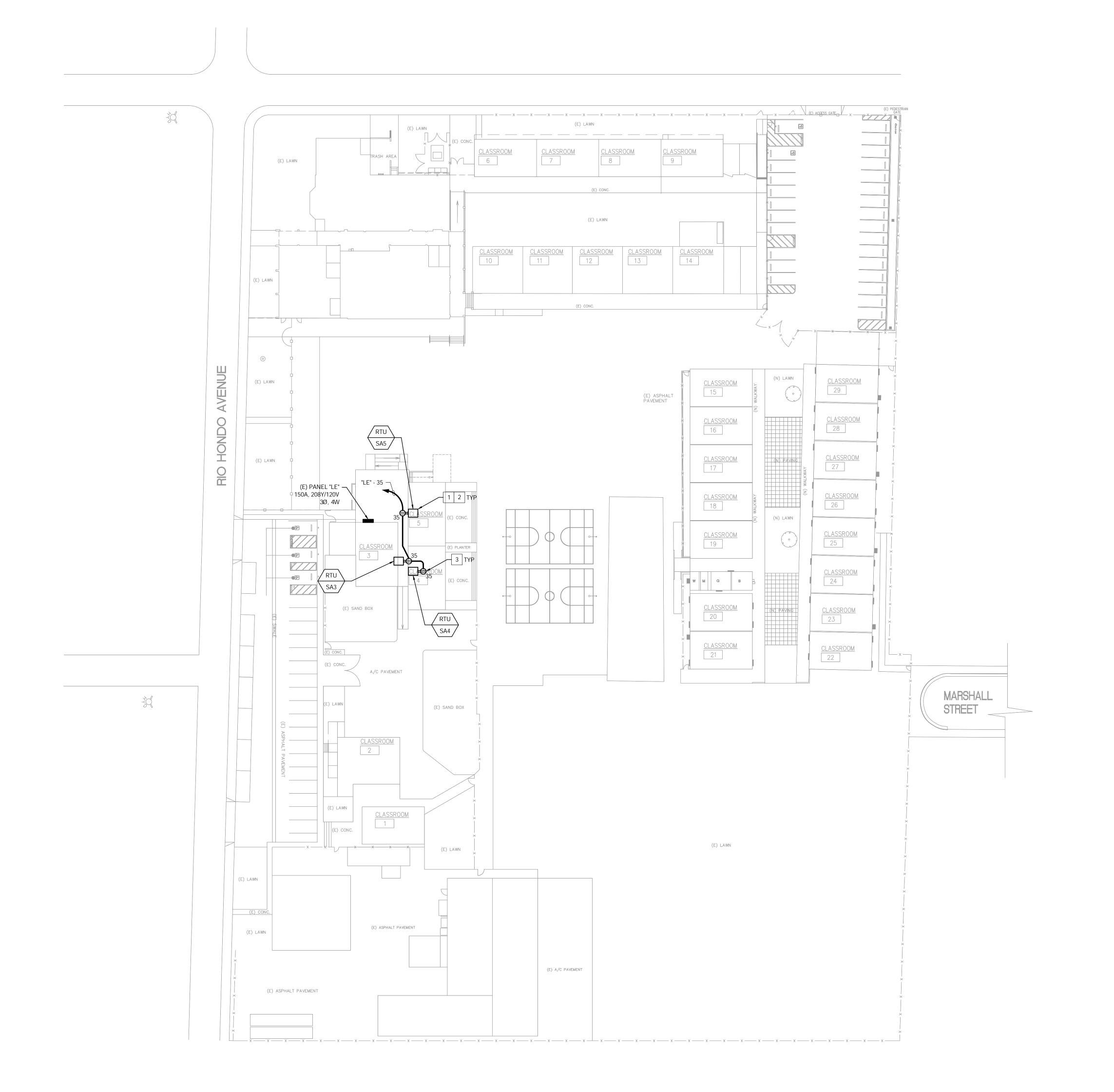
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SCHEDULES - SAVANNAH

E005



**GENERAL NOTES** 

- 1. REFER TO MECHANICAL EQUIPMENT ELECTRICAL CONNECTION SCHEDULES AND PANEL SCHEDULES FOR ADDITIONAL CIRCUIT INFORMATION.
- 2. REFER TO MECHANICAL SCHEDULES FOR ADDITIONAL EQUIPMENT INFORMATION.
- 3. REFER TO SHEET E601 FOR INSTALLATION DETAILS. CONDUIT SHALL BE ROUTED ON CANOPIES AND ROOFS TO SERVE UNITS AS REQUIRED.
- 4. CARBON MONOXIDE DETECTION SYSTEM IS NOT REQUIRED UNDER CEBC 503.15.1 EXCEPTIONS 1 AND 2. SCOPE INCLUDES REPLACEMENT OF EXISTING FUEL-BURNING UNITS ALREADY PRESENT AND THE GROUP E BUILDING WAS CONSTRUCTED BEFORE THE ADOPTION OF THE 2016 CALIFORNIA BUILDING STANDARDS CODE.

FILE NO: 19-91 A#: 03-122719

DISCONNECT EXISTING HVAC UNIT AND DISCONNECT SWITCH.

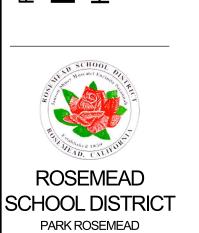
PROVIDE CONNECTION TO NEW HVAC UNIT. PROVIDE NEW DISCONNECT SWITCH. REFER TO PANEL SCHEDULES AND EQUIPMENT CONNECTION SCHEDULES FOR MORE INFORMATION.

PROVIDE 120V/20A WEATHERPROOF GFCI DUPLEX RECEPTACLE AT UNIT.









3907 ROSEMEAD BOULEVARD ROSEMEAD, CA 91770

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AC NO	161-21043	
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3 CONDUIT WALL SUPPORT
NO SCALE

**GENERAL NOTE** 

A. REFER TO SPECIFICATION FOR PIPE SUPPORT SPACING. B. CONDENSATE DRAIN PIPING SHALL SLOPE AT MINIMUM 1%.

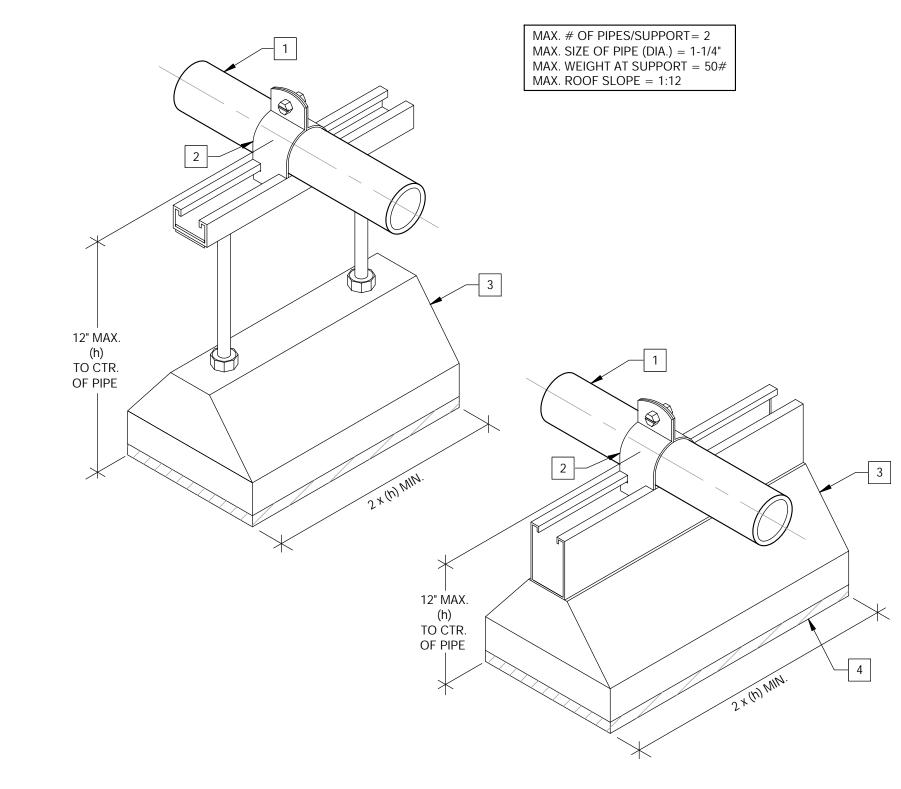
**DETAIL NOTES** 

1 PIPE AT ROOF - REFER TO SPECIFICATIONS FOR PIPE MATERIAL.

2 PIPE CLAMP - UNISTRUT P1113

B-LINE C-PORT SERIES PIPE SUPPORT SYSTEM OR EQUAL.

4 SET ON MASTIC OR RUBBER PADDING AT PVC ROOF CONSTRUCTION AREAS - TYPICAL.



2 CONDUIT ROOF SUPPORT
NO SCALE

— 1-HOUR FIRE RATED CONSTRUCTION — CP 25W/B CAULK OR CP 25N/S CAULK ON BOTH SIDES OF THE WALL.

- THIS IS UL STD #49 FOR CONCRETE WALLS OR UL SYSTEM #147 FOR 1HR. GYPSUM BOARD WALL.
- 2. THE MAXIMUM ANNULAR SPACE TO BE FILLED IS 2". THE MINIMUM ANNULAR SPACE IS 3/4"
- 3. FOR SOLID CONCRETE WALLS, THE CP 25 CAULK MAY BE CENTERED IN THE WALL WITH DAMMING MATERIAL ON BOTH SIDES OF THE GAULK.
- 4 USE CP 25S(SELF SEVELING) CAULK ON HORIZONTAL SURFACES WHEN SEALING OPENING FROM ABOVE THE PENETRATION. USE CP25N (NO SAG) CAULK ON VERTICAL SURFACES AND ON HORIZONTAL SURFACES WHEN SEALING OPENINGS FROM BELOW. USE CP 25WB CAULK ON EITHER
- 5. SHRINKAGE OF CP 25 CAULKS IS ACCEPTABLE AFTER INITIAL
  - WET DEPTH INSTALLATION.

6. THE DEPTH OF THE CP 25 CAULKS DEPENDS ON THE INSULATION THICKNESS.

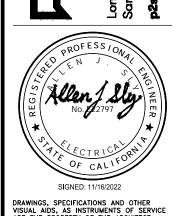
CAULK DEPTH (MIN.)

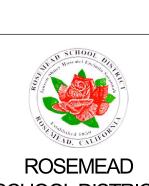
1" 1" THICK

2" 2-3" THICK

1 CONDUIT PENETRATION
NO SCALE

FILE NO: 19-91 A#: 03-122719





SCHOOL DISTRICT PARK ROSEMEAD 3907 ROSEMEAD BOULEVARD ROSEMEAD, CA 91770

NAC NO 161-21043 CHECKED AS

DATE 10-06-2022

**DETAILS** 

E601