

STATE  
 DSA FILE NUMBER 41-26  
 APPL # 01-119526

REVISIONS

No.	Description	Date
1		

MILESTONES

DD	
90% CD	
DSA SUB	05/24/2021
BACKCHECK	10/22/2021

SHEET  
**SITE PLAN**

DATE 10/22/2021  
 JOB # 2021005.05  
 SHEET #

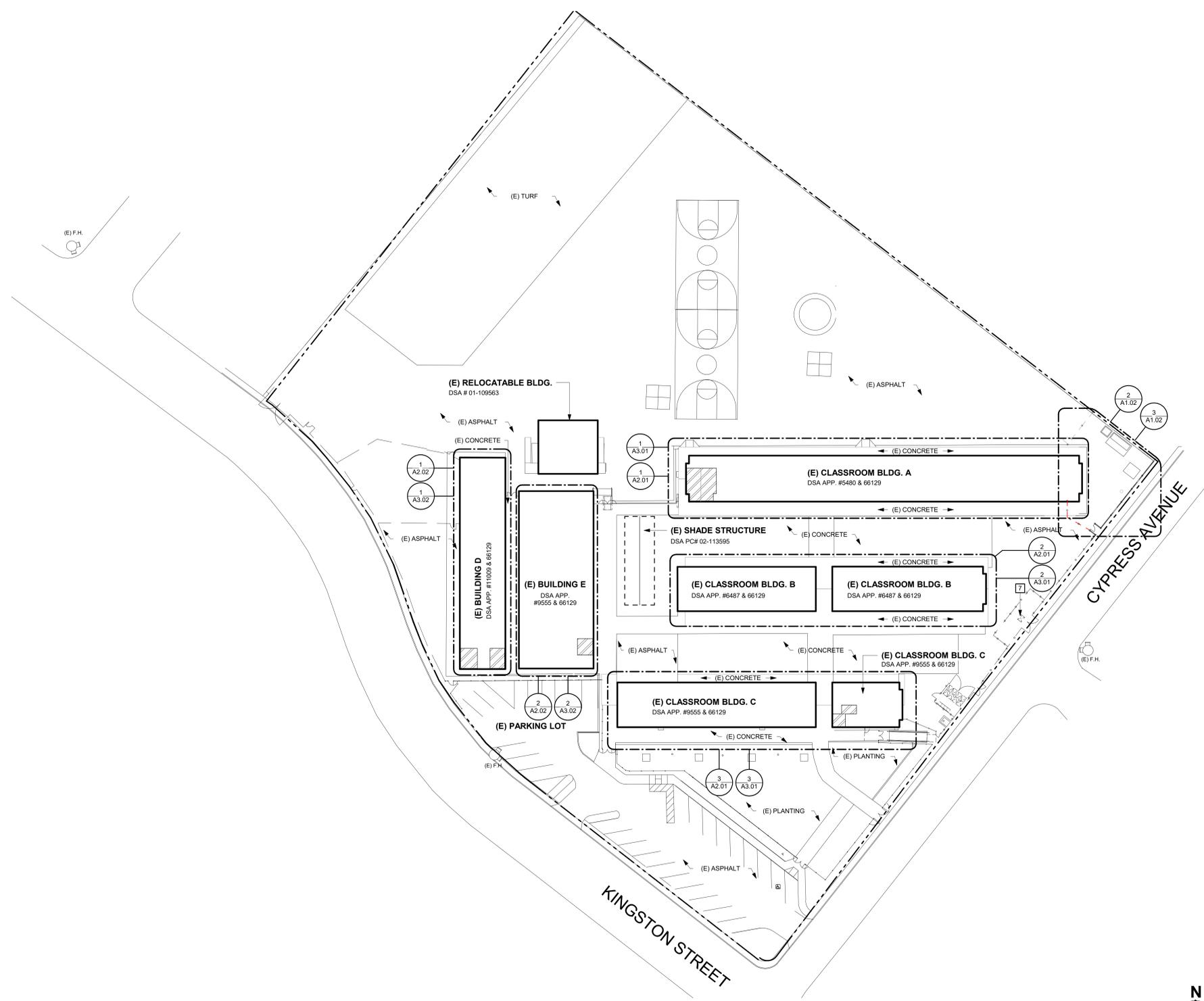
**A1.02**

**GENERAL SHEET NOTES**

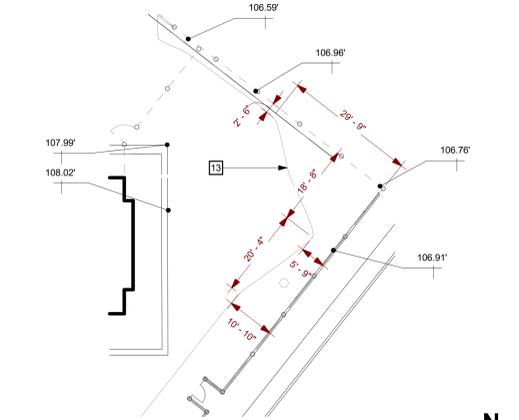
- A BUILDINGS ARE UNSPRINKLERED, TYPE V-B CONSTRUCTION UNLESS OTHERWISE NOTED.
- B NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING THE DEMOLITION WORK HAVE BEEN APPROVED BY DSA.
- C CONTRACTOR SHALL MAINTAIN FIRE LANE ACCESS THROUGHOUT PROJECT.
- D DO NOT INTERRUPT EXISTING UTILITY SERVICES SERVING OCCUPIED OR USED FACILITIES, EXCEPT WHEN AUTHORIZED IN WRITING BY AND COORDINATED WITH THE OWNER.
- E PROTECT EXISTING & NEW STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, TREES AND SHRUBS FROM DAMAGE DURING CONSTRUCTION.
- F REFER TO ELECTRICAL AND MECHANICAL DRAWINGS FOR EXTENT OF ELECTRICAL AND MECHANICAL WORK.
- G TOP OF EXTERIOR ELECTRICAL EQUIPMENT PADS TO BE LOCATED 12" MIN. ABOVE 10' FEMA BASE FLOOD ELEVATION, PER ASCE 24-14 TABLE 1-1. 10' FEMA BASE FLOOD ELEVATION CORRELATES TO 106.929' ON SAN MATEO SURVEY DATUM.

**NEW SITE PLAN KEYNOTES**

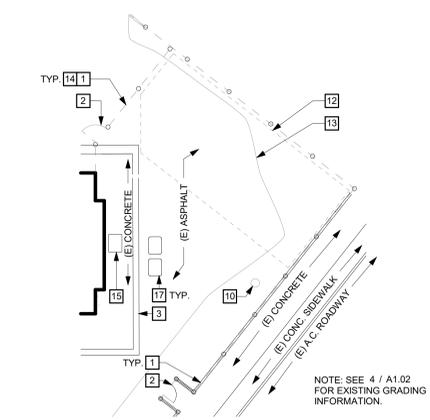
- 1 (E) CHAINLINK FENCING TO REMAIN
- 2 (E) GATE TO REMAIN
- 3 (E) CONCRETE STAIRS
- 4 AT (E) CONCRETE PAVING, UTILIZE POST ANCHORAGE DETAIL 3/A8.10
- 5 CHAINLINK FENCE, SEE DETAIL 2/A8.10 AND S.E.D. 4" SPHERE SHALL NOT PASS BETWEEN FENCING AND ADJACENT SURFACES.
- 6 ELECTRICAL EQUIPMENT, SEE SHEET E1.1. TOP OF CONCRETE TO BE 108' ELEVATION PER SAN MATEO DATUM. ADJACENT A.C. TO BE 107.5' ELEVATION.
- 7 REMOVE (E) ELECTRICAL EQUIPMENT AND PAD, S.E.D.
- 8 ATTACH CHAINLINK TO (E) POLE.
- 9 CONFORM A.C. GRADING FLUSH TO ADJACENT (E) A.C. TO REMAIN. SEE 9/A8.10 FOR A.C. ASSEMBLY. GRADE A.C. TO DRAIN AROUND ELECTRICAL EQUIPMENT. COORDINATE WITH PULLBOXES INSTALLED FLUSH TO GRADE. SEE 2/E1.1.
- 10 (E) TREE TO REMAIN. ADJACENT NEW ELECTRICAL EQUIPMENT, TRIM CANOPY FOR PG&E ACCESS.
- 11 LEVEL CLEARANCE AT FRONT OF TRANSFORMER, S.E.D.
- 12 REMOVE PAVING EXTENTS AS REQUIRED AND PREP FOR NEW WORK. SEE 2/E1.1 AND SEE 2/A1.02 FOR MORE INFORMATION.
- 13 CONTOUR LINE OF ELEVATION 107' PER SAN MATEO SURVEY DATUM, EQUIVALENT TO 10.071' PER FEMA SURVEY DATUM.
- 14 SALVAGE AND REINSTALL (E) CHAINLINK FENCING AS REQUIRED FOR CONSTRUCTION ACCESS.
- 15 (E) STEEL GRATE TO TUNNEL CRAWL SPACE BELOW.
- 16 PATCH (E) STAIRS AT ELECTRICAL TRENCHING, SEE E1.1 AND DETAIL 20/A9.10
- 17 (E) PULLBOX TO REMAIN.



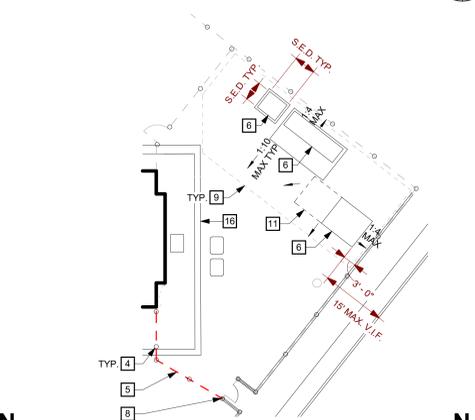
**1 NEW SITE PLAN**  
 SCALE: 1/32" = 1'-0"



**4 EXISTING GRADING - FOR REFERENCE ONLY**  
 SCALE: 1/16" = 1'-0"



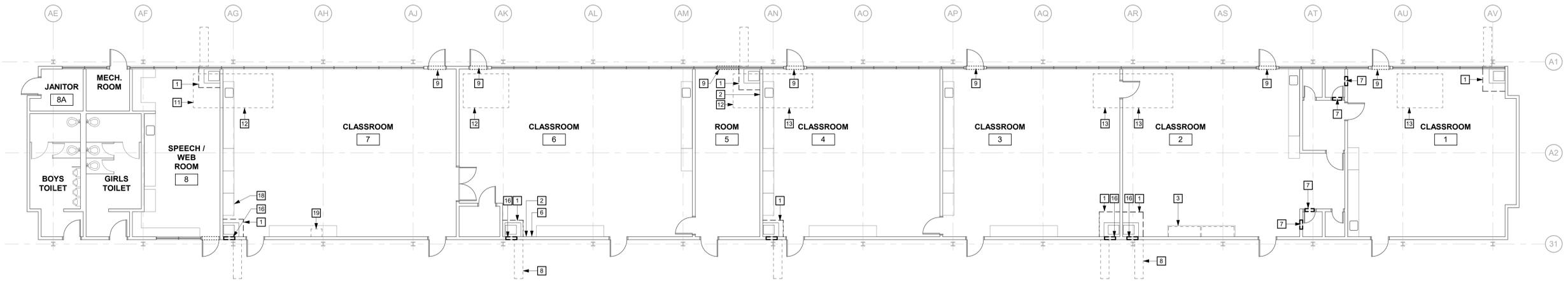
**3 DEMOLITION ENLARGED SITE PLAN**  
 SCALE: 1/16" = 1'-0"



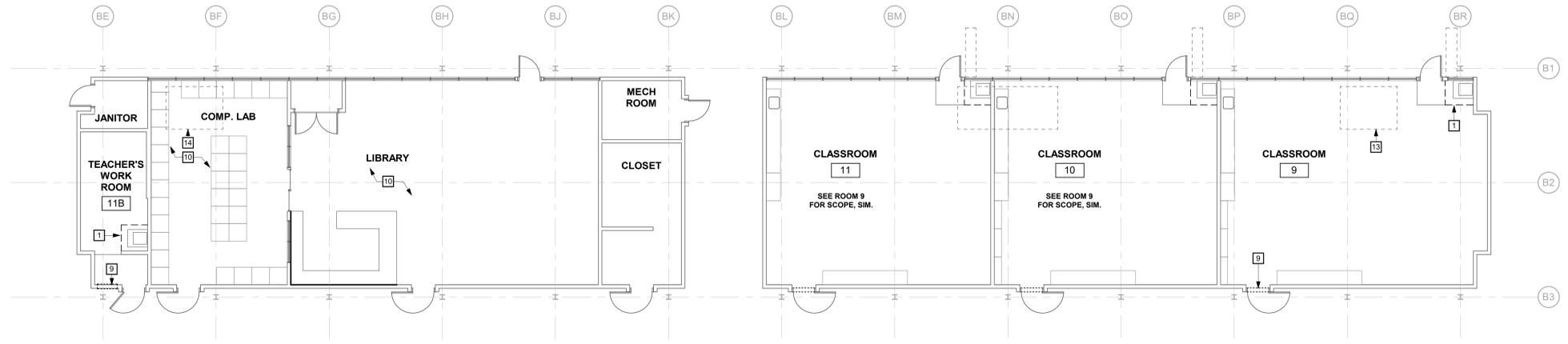
**2 NEW ENLARGED SITE PLAN**  
 SCALE: 1/16" = 1'-0"

**GRAPHIC KEY**

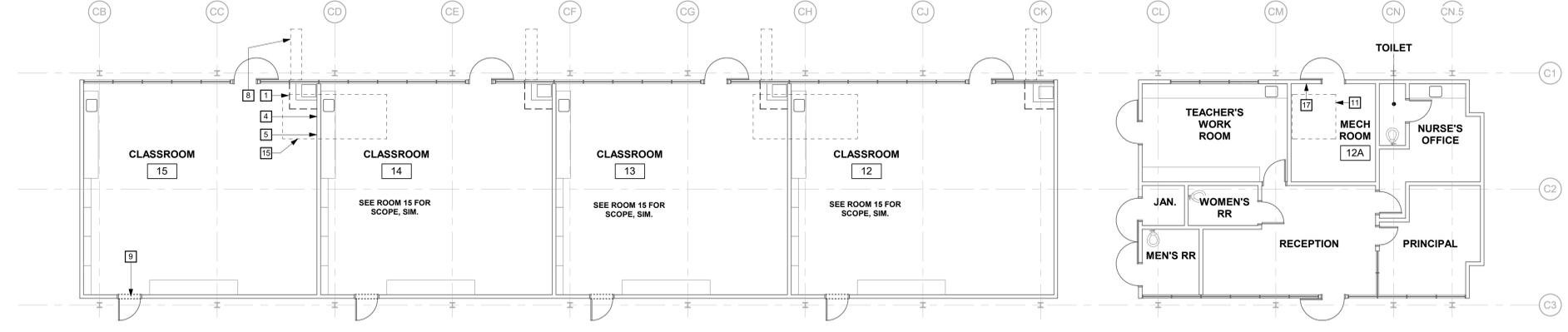
- EXISTING TOILET ROOMS.
- EXISTING CONSTRUCTION TO REMAIN
- EXISTING COVERED STRUCTURE
- PROPERTY LINE
- (E) CHAINLINK FENCE
- (N) CHAINLINK FENCE
- EXISTING FIRE HYDRANT
- (E) F.H.



**1 DEMOLITION FLOOR PLAN - BLDG A**  
 SCALE: 1/8" = 1'-0"



**2 DEMOLITION FLOOR PLAN - BLDG B**  
 SCALE: 1/8" = 1'-0"



**3 DEMOLITION FLOOR PLAN - BLDG C**  
 SCALE: 1/8" = 1'-0"

**GENERAL SHEET NOTES**

- A ROOM NAMES OR NUMBERS MAY NOT BE CONSISTENT BETWEEN DEMOLITION AND NEW FLOOR PLANS.
- B REFER TO STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR EXTENT OF STRUCTURAL, MECHANICAL, AND ELECTRICAL DEMOLITION WORK.
- C VERIFY LIMITS OF DEMOLITION WITH SCOPE OF NEW WORK PRIOR TO COMMENCING WORK.
- D ALL ITEMS SHOWN DASHED ARE TO BE DEMOLISHED UNLESS OTHERWISE NOTED ON PLANS.
- E REMOVE ALL MISCELLANEOUS TRIM, CASEWORK, EQUIPMENT, CONDUIT, BASES, AND OTHER SURFACE MOUNTED ITEMS WHETHER SHOWN OR NOT, AS REQUIRED TO FACILITATE SCOPE OF WORK. REMOVE AND CAP ALL OUTLETS, SWITCHES, WIRES, THERMOSTATS, ETC. TO THEIR SOURCE AS REQUIRED. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION AND SCOPE OF WORK.
- F REMOVE ADJACENT FINISHES AS REQUIRED TO FACILITATE SCOPE OF WORK. PATCH BACK IN KIND.
- G EXISTING EQUIPMENT INDICATED TO BE RELOCATED PER NEW PLAN IS TO BE STORED AND PROTECTED DURING CONSTRUCTION.
- H NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING THE DEMOLITION WORK HAVE BEEN APPROVED BY DSA.

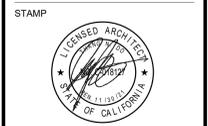
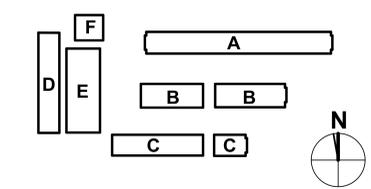
**DEMOLITION FLOOR PLAN KEYNOTES**

- 1 REMOVE (E) MECHANICAL UNIT AND METAL ENCLOSURE, S.M.D. REMOVE (E) NON-STRUCTURAL BLOCKING BETWEEN JOISTS.
- 2 RECONFIGURE (E) WIREMOLD. SHORTEN CONFIGURATION TIGHT TO NEW ENCLOSURE AND PROVIDE END CAP. SEE NEW FLOOR PLAN FOR MORE INFORMATION.
- 3 REMOVE (E) STORAGE ENCLOSURE ON TOP OF CASEWORK.
- 4 SHORTEN (E) RACEWAY. COORDINATE LENGTH TIGHT TO NEW ENCLOSURE. SEE NEW FLOOR PLANS.
- 5 SALVAGE (E) 4x 8' TACK PANEL AND TURN OVER TO DISTRICT.
- 6 RELOCATE (E) DATA OUTLET, COORDINATED TO RECONFIGURED WIREMOLD. LOCATE A.F.F. 15" MIN. TO 48" MAX.
- 7 CUT AND PREP OPENING, S.M.D. AND S.S.D.
- 8 REMOVE PAVING AND PREP FOR NEW WORK, S.M.D.
- 9 REMOVE (E) WINDOW GLAZING ABOVE AND PREP FOR NEW WORK, S.M.D.
- 10 (E) SUSPENDED 24"x48" A.C.T. CEILING ABOVE, S.E.D. AND REMOVE AND REINSTALL TILES AS REQUIRED FOR CONSTRUCTION ACCESS. DO NOT ALTER SUSPENDED GRID.
- 11 REMOVE (E) GYP. BD. CEILING FINISH FOR MECHANICAL UNIT CURB BLOCKING, S.M.D., S.S.D., AND SEE ROOF PLAN.
- 12 REMOVE (E) GLUE UP A.C.T. O' GYP. BD. CEILING ASSEMBLY FOR MECHANICAL UNIT CURB BLOCKING, S.M.D., S.S.D., AND SEE ROOF PLAN.
- 13 REMOVE (E) GLUE UP CEILING TILES FOR MECHANICAL UNIT CURB INSTALLATION AT ROOF, S.M.D., S.S.D., AND SEE ROOF PLAN.
- 14 SALVAGE AND REINSTALL (E) LAY IN A.C.T. AT SUSPENDED A.C.T. GRID FOR MECHANICAL UNIT CURB BLOCKING, S.M.D., S.S.D., AND SEE ROOF PLAN.
- 15 REMOVE (E) CEMENT PLASTER CEILING FINISH FOR MECHANICAL UNIT CURB BLOCKING, S.M.D., S.S.D., AND SEE ROOF PLAN.
- 16 CUT AND PREP WALL FOR LOUVER OPENING, S.M.D. AND SEE S/S8.01. DO NOT OVERCUT.
- 17 PREP FOR NEW WORK, S.M.D.
- 18 SALVAGE AND REINSTALL IN KIND (E) CASEWORK AND WALL BASE AS REQUIRED FOR CONSTRUCTION ACCESS.
- 19 SALVAGE AND TURN OVER TO DISTRICT (E) PROJECTOR AND MOUNTING BRACKET.

**GRAPHIC KEY**

- EXISTING WALL TO REMAIN.
- EXISTING STOREFRONT OR WINDOW TO REMAIN.

**BLDG KEY**



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REVISIONS

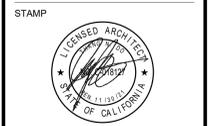
No.	Description	Date

MILESTONES

DD	
90% CD	
DSA SUB	05/24/2021
BACKCHECK	10/22/2021

**DEMOLITION FLOOR PLAN - BLDGS A, B, & C**

DATE 10/22/2021  
 JOB # 2021005.05  
 SHEET # A2.01



STATE  
 DSA FILE NUMBER 41-26  
 APPL # 01-119526

REVISIONS

No.	Description	Date
△		

MILESTONES

DD	
90% CD	
DSA SUB	05/24/2021
BACKCHECK	10/22/2021

SHEET  
**DEMOLITION FLOOR PLAN - BLDGS D & E**

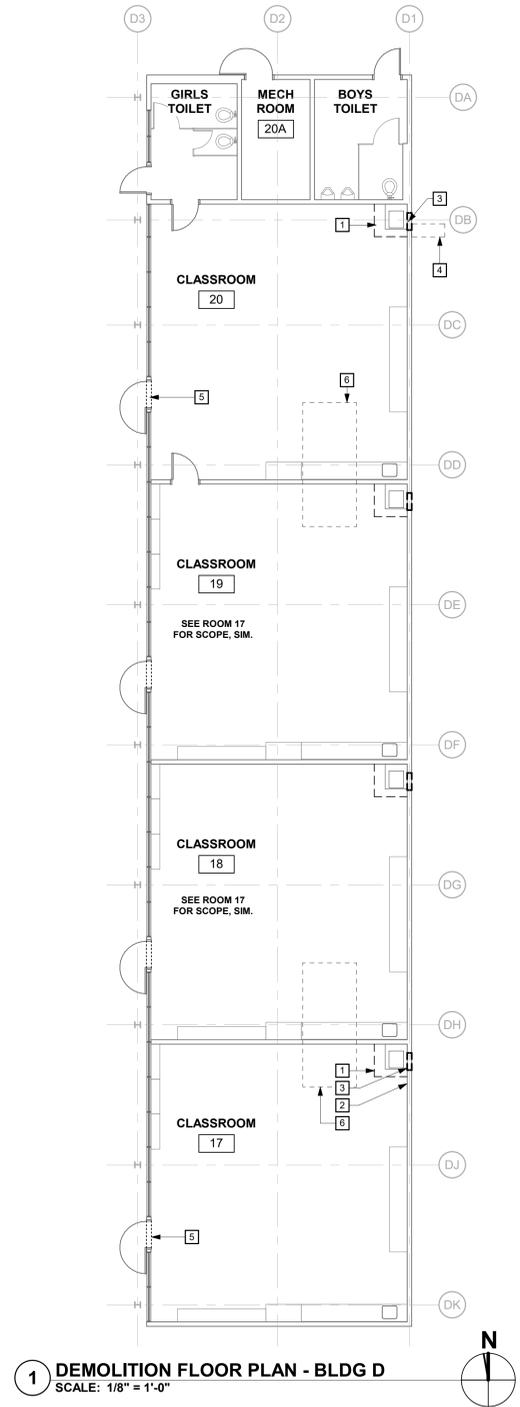
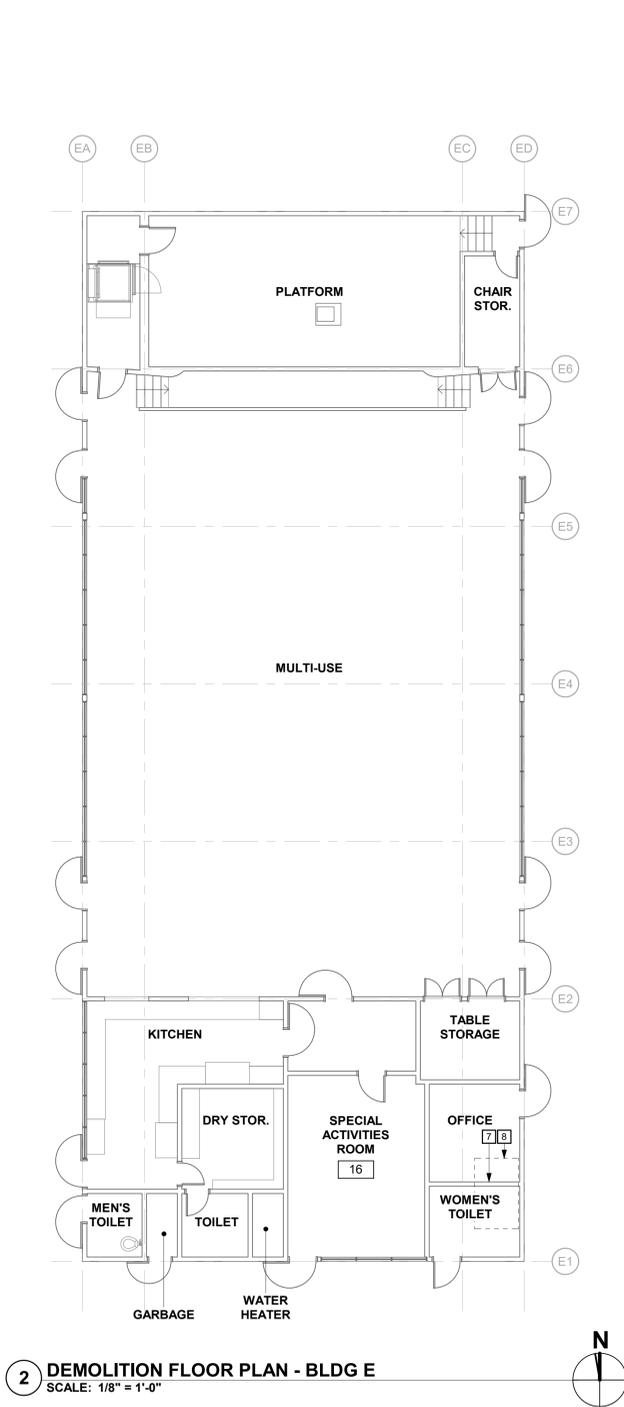
DATE 10/22/2021  
 JOB # 2021005.05  
 SHEET # **A2.02**

**GENERAL SHEET NOTES**

- A ROOM NAMES OR NUMBERS MAY NOT BE CONSISTENT BETWEEN DEMOLITION AND NEW FLOOR PLANS.
- B REFER TO STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR EXTENT OF STRUCTURAL, MECHANICAL, AND ELECTRICAL DEMOLITION WORK.
- C VERIFY LIMITS OF DEMOLITION WITH SCOPE OF NEW WORK PRIOR TO COMMENCING WORK.
- D ALL ITEMS SHOWN DASHED ARE TO BE DEMOLISHED UNLESS OTHERWISE NOTED ON PLANS.
- E REMOVE ALL MISCELLANEOUS TRIM, CASEWORK, EQUIPMENT, CONDUIT, BASES, AND OTHER SURFACE MOUNTED ITEMS WHETHER SHOWN OR NOT, AS REQUIRED TO FACILITATE SCOPE OF WORK. REMOVE AND CAP ALL OUTLETS, SWITCHES, WIRES, THERMOSTATS, ETC. TO THEIR SOURCE AS REQUIRED. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION AND SCOPE OF WORK.
- F REMOVE ADJACENT FINISHES AS REQUIRED TO FACILITATE SCOPE OF WORK. PATCH BACK IN KIND.
- G EXISTING EQUIPMENT INDICATED TO BE RELOCATED PER NEW PLAN IS TO BE STORED AND PROTECTED DURING CONSTRUCTION.
- H NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING THE DEMOLITION WORK HAVE BEEN APPROVED BY DSA

**DEMOLITION FLOOR PLAN KEYNOTES**

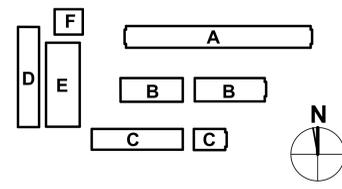
- 1 REMOVE (E) MECHANICAL UNIT AND METAL ENCLOSURE. S.M.D. REMOVE (E) NON-STRUCTURAL BLOCKING BETWEEN JOISTS.
- 2 RECONFIGURE (E) ADJACENT WIREMOLD
- 3 CUT AND PREP WALL FOR LOUVER OPENING. S.M.D. AND SEE S/S8.01. DO NOT OVERCUT.
- 4 REMOVE PAVING AND PREP FOR NEW WORK. S.M.D.
- 5 REMOVE (E) WINDOW GLAZING ABOVE AND PREP FOR NEW WORK. S.M.D.
- 6 REMOVE (E) GLUE UP A.C.T. O' GYP. BD. CEILING ASSEMBLY FOR MECHANICAL UNIT CURB BLOCKING. S.M.D., S.S.D., AND SEE ROOF PLAN.
- 7 PREP FOR NEW WORK. S.M.D.
- 8 REMOVE (E) GYP. BD. CEILING FINISH FOR MECHANICAL UNIT CURB BLOCKING. S.M.D., S.S.D., AND SEE ROOF PLAN.

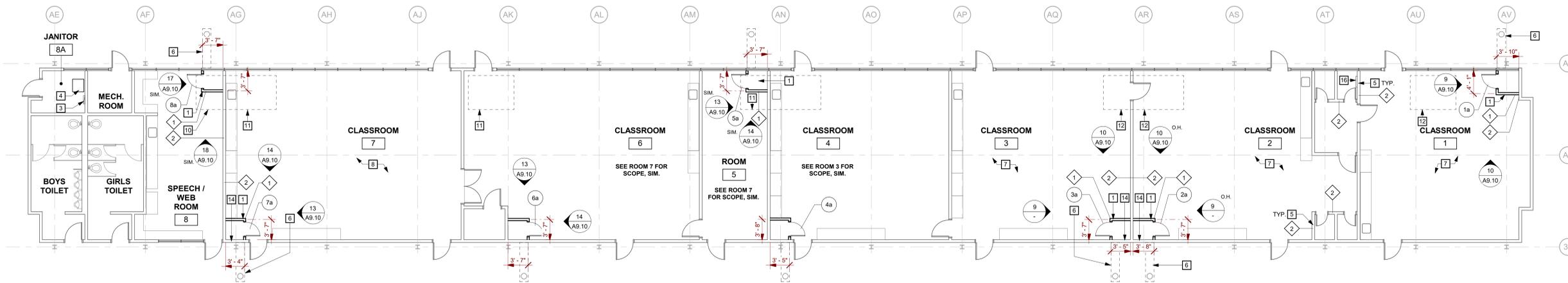


**GRAPHIC KEY**

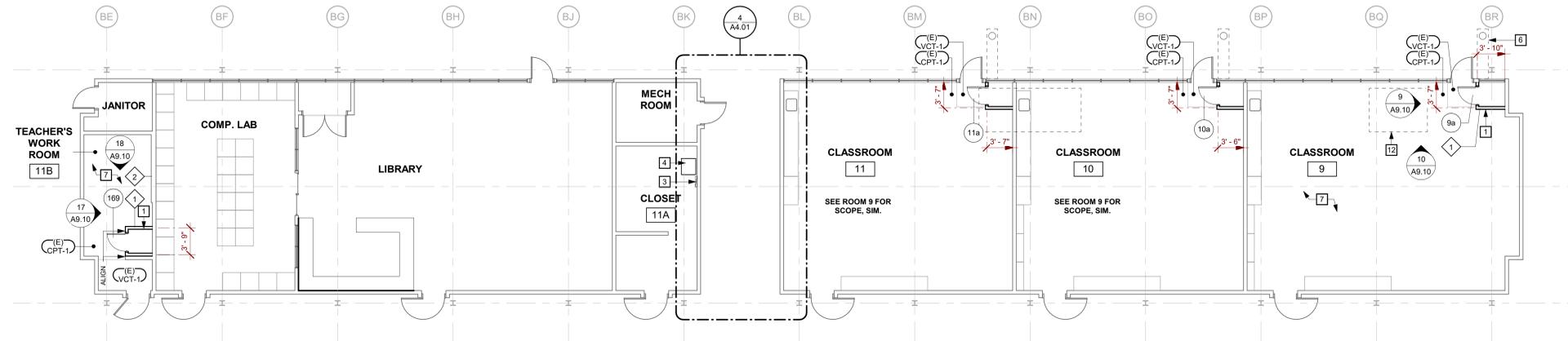
- EXISTING WALL TO REMAIN.
- EXISTING STOREFRONT OR WINDOW TO REMAIN.

**BLDG KEY**

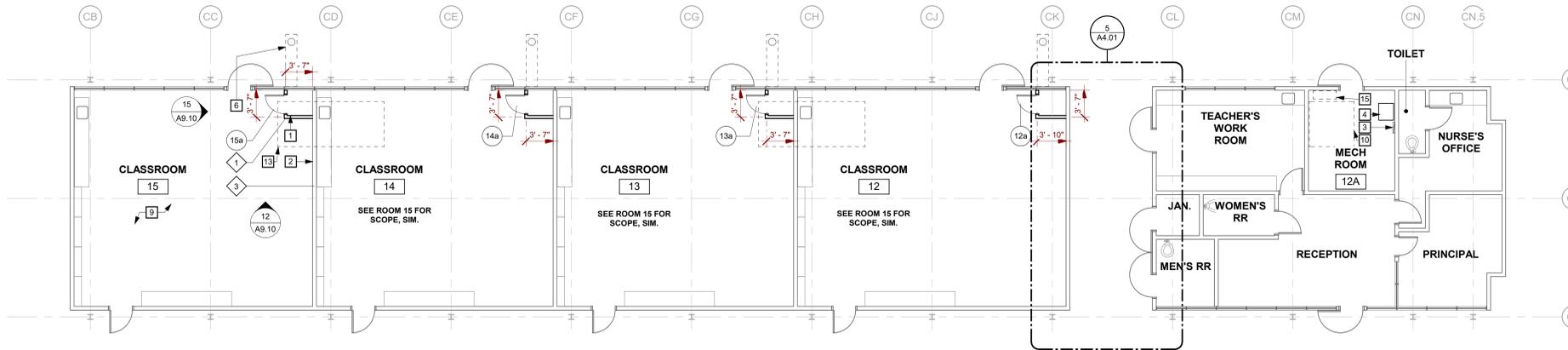




**1 NEW FLOOR PLAN - BLDG A**  
 SCALE: 1/8" = 1'-0"



**2 NEW FLOOR PLAN - BLDG B**  
 SCALE: 1/8" = 1'-0"



**3 NEW FLOOR PLAN - BLDG C**  
 SCALE: 1/8" = 1'-0"

**GENERAL SHEET NOTES**

- A REFER TO STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR EXTENT OF STRUCTURAL, MECHANICAL, AND ELECTRICAL WORK.
- B DIMENSIONS FOR EXISTING BUILDING ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY PRIOR TO START OF CONSTRUCTION.
- C PATCH AND PAINT WALL AT REMOVED CASEWORK, REMOVED WALL MOUNTED BOARDS, OR RECONFIGURED RACEWAY.
- D SCRIBE FINISHES TIGHT TO ADJACENT CONDITIONS INCLUDING WALL FINISHES, WINDOWS, AND DUCTWORK.
- E PROVIDE NEW WALL BASE AT ALL REMOVED CASEWORK, NEW PARTITION WALLS, OR PATCHED FLOORING.

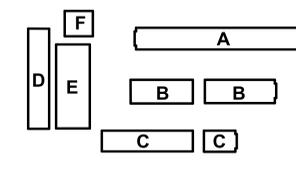
**NEW FLOOR PLAN KEYNOTES**

- 1 FULL HEIGHT FRAMED MECHANICAL ENCLOSURE. MAINTAIN MIN. INTERIOR CLR. PER DETAIL 16/A9.10. PATCH ADJACENT FINISHES INCLUDING BUT NOT LIMITED TO WALLS AND CEILINGS.
- 2 4" x 6" TACK PANEL. PATCH AND PAINT (E) WALL AT REMOVED TACK PANEL EXTENTS
- 3 ELECTRICAL PANEL. PROVIDE BACKING, S.E.D.
- 4 TRANSFORMER, S.E.D.
- 5 PATCH OPENING TIGHT TO MECHANICAL WORK, S.M.D AND SEE DETAIL 6/A9.10.
- 6 PATCH PAVING AT DRY WELL. SEE 6/A9.10 AND S.M.D.
- 7 REFER TO 11/A4.01 FOR TYPICAL REFLECTED CEILING PLAN
- 8 REFER TO 2/A4.01 FOR TYPICAL REFLECTED CEILING PLAN
- 9 REFER TO 3/A4.01 FOR TYPICAL REFLECTED CEILING PLAN
- 10 PATCH AND PAINT GYP. BD CEILING.
- 11 REPLACE GLUE UP CEILING TILES REMOVED FOR CONSTRUCTION ACCESS. SCRIBE LAYOUT TIGHT TO STRUCTURE. PAINT CEILING TILES AND STRUCTURE TO MATCH ADJACENT.
- 12 REPLACE GLUE UP CEILING TILES REMOVED FOR CONSTRUCTION ACCESS. SCRIBE LAYOUT TIGHT TO STRUCTURE. PAINT CEILING TILES AND STRUCTURE TO MATCH ADJACENT.
- 13 PATCH AND PAINT CEMENT PLASTER CEILING. SEE DETAIL 18/A9.10, SIM.
- 14 PATCH AND PAINT WALL FINISH, S.M.D.
- 15 MECHANICAL UNIT, S.M.D. PATCH AND PAINT WALL TO MATCH ADJACENT.
- 16 (E) WALL MOUNTED LIGHT FIXTURE AT 9" A.F.F. TO REMAIN. ROUTE DUCTWORK ABOVE LIGHT FIXTURE. SALVAGE AND REINSTALL AS REQUIRED FOR CONSTRUCTION ACCESS.

**GRAPHIC KEY**

- WALL TYPES:
- EXISTING WALL TO REMAIN.
  - WALL TYPE. REFER TO SHEET A9.10 FOR WALL TYPE DESCRIPTION, TYP.
  - STUD WALL.

**BLDG KEY**



**GENERAL SHEET NOTES**

- A REFER TO STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR EXTENT OF STRUCTURAL, MECHANICAL, AND ELECTRICAL WORK.
- B DIMENSIONS FOR EXISTING BUILDING ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY PRIOR TO START OF CONSTRUCTION.
- C PATCH AND PAINT WALL AT REMOVED CASEWORK, REMOVED WALL MOUNTED BOARDS, OR RECONFIGURED RACEWAY.
- D SCRIBE FINISHES TIGHT TO ADJACENT CONDITIONS INCLUDING WALL FINISHES, WINDOWS, AND DUCTWORK.
- E PROVIDE NEW WALL BASE AT ALL REMOVED CASEWORK, NEW PARTITION WALLS, OR PATCHED FLOORING.

**NEW FLOOR PLAN KEYNOTES**

- 1 FULL HEIGHT FRAMED MECHANICAL ENCLOSURE. MAINTAIN MIN. INTERIOR CLR. PER DETAIL 16/A9.10. PATCH ADJACENT FINISHES INCLUDING BUT NOT LIMITED TO WALLS AND CEILING.
- 2 ELECTRICAL PANEL, PROVIDE BACKING, S.E.D.
- 3 TRANSFORMER, S.E.D.
- 4 PATCH AND PAINT WALL FINISH, S.M.D.
- 5 MECHANICAL UNIT, S.M.D. PATCH AND PAINT WALL TO MATCH ADJACENT.
- 6 PATCH PAVING AT DRY WELL. SEE 6/A8.10 AND S.M.D.
- 7 REFER TO 2/A4.01 FOR TYPICAL REFLECTED CEILING PLAN
- 8 REPLACE GLUE UP CEILING TILE ASSEMBLY REMOVED FOR CONSTRUCTION ACCESS. SCRIBE LAYOUT TIGHT TO STRUCTURE. PAINT CEILING TILES AND STRUCTURE TO MATCH ADJACENT.

PROJECT  
**NORTH SHOREVIEW ELEMENTARY SCHOOL - HVAC REPLACEMENT**

SAN MATEO-FOSTER CITY SCHOOL DISTRICT

CONSULTANT

STAMP



STATE

DSA FILE NUMBER 41-26  
 APPL # 01-119526

REVISIONS

No.	Description	Date
1		

MILESTONES

DD	
90% CD	
DSA SUB	05/24/2021
BACKCHECK	10/22/2021

SHEET

**NEW FLOOR PLANS - BLDGS D & E**

DATE

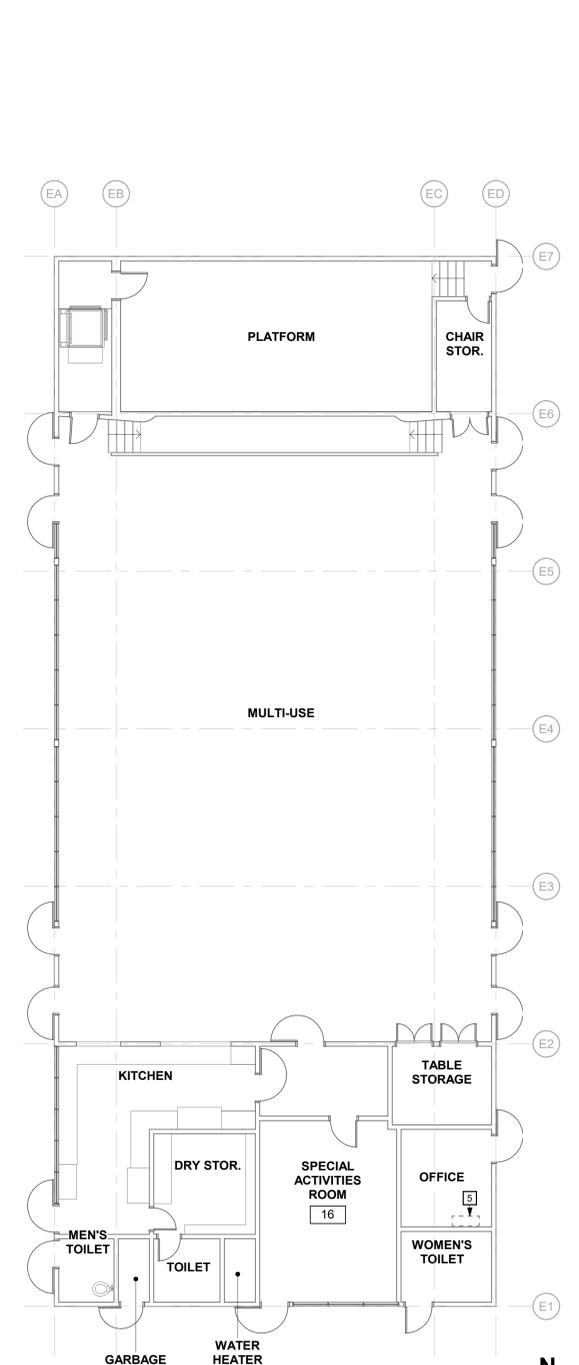
10/22/2021

JOB #

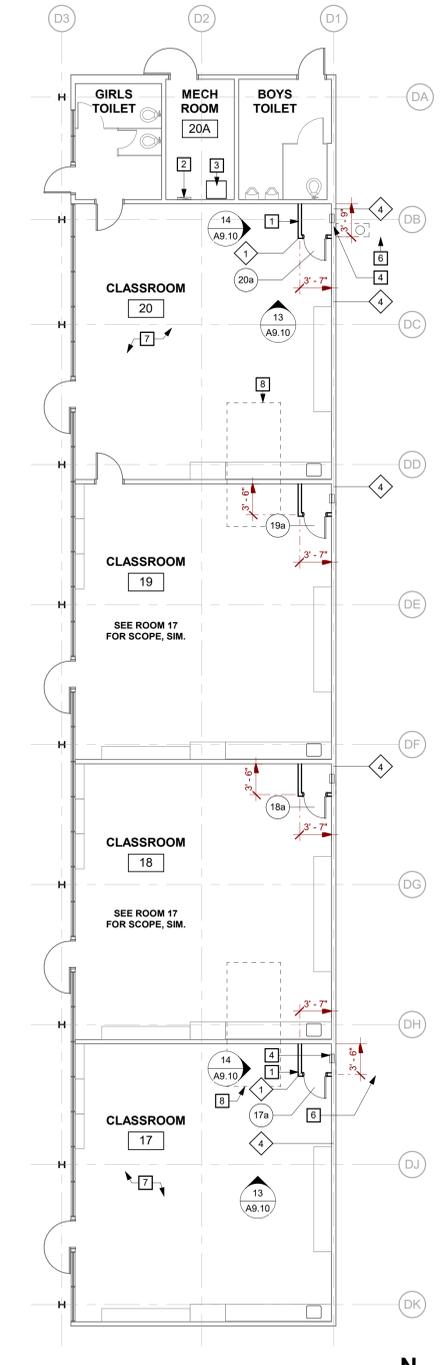
2021005.05

SHEET #

**A3.02**



**2 NEW FLOOR PLAN - BLDG E**  
 SCALE: 1/8" = 1'-0"

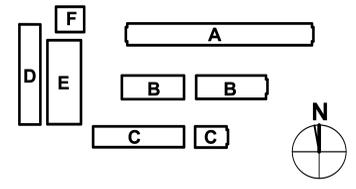


**1 NEW FLOOR PLAN - BLDG D**  
 SCALE: 1/8" = 1'-0"

**GRAPHIC KEY**

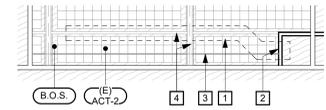
- WALL TYPES:
- EXISTING WALL TO REMAIN.
  - WALL TYPE. REFER TO SHEET A9.10 FOR WALL TYPE DESCRIPTION, TYP.
  - STUD WALL

**BLDG KEY**

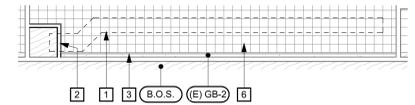


**GENERAL SHEET NOTES**

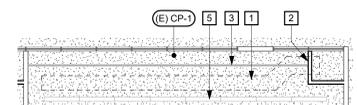
- A ROOM NAMES OR NUMBERS MAY NOT BE CONSISTENT BETWEEN DEMOLITION AND NEW PLANS.
- B REFER TO STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR EXTENT OF STRUCTURAL, MECHANICAL, AND ELECTRICAL WORK.
- C REFER TO FINISH SCHEDULE ON SHEET A11.01 FOR CEILING FINISHES NOT SHOWN.
- D PROVIDE NEW CEILING TILE MATCHING ADJACENT TILES WHERE EXISTING LIGHTS, SPEAKERS OR OTHER EQUIPMENT WERE REMOVED.



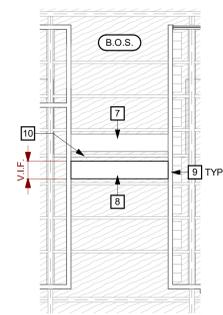
**1 TYP. NEW REFLECTED CEILING PLAN @ EXPOSED STRUCTURE**  
 SCALE: 1/8" = 1'-0"



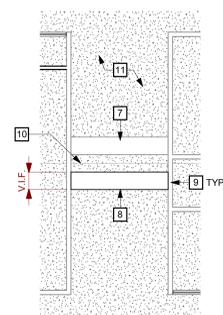
**2 TYP. REFLECTED CEILING PLAN @ HARDLID**  
 SCALE: 1/8" = 1'-0"



**3 TYP. REFLECTED CEILING PLAN @ CEMENT PLASTER**  
 SCALE: 1/8" = 1'-0"



**4 NEW REFLECTED PLAN - TYPICAL EXT. WALKWAY @ EXPOSED STRUCTURE**  
 SCALE: 1/8" = 1'-0"



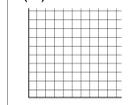
**5 NEW REFLECTED PLAN - TYPICAL EXT. WALKWAY @ CEMENT PLASTER**  
 SCALE: 1/8" = 1'-0"

**REFLECTED CEILING PLAN KEYNOTES**

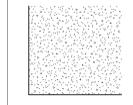
- 1 EXPOSED SUSPENDED DUCTWORK, S.M.D. OBSCURED FOR CLARITY.
- 2 PATCH AND PAINT (E) CEILING FINISH, SEE FINISH SCHEDULE FOR MORE INFORMATION.
- 3 (E) CURTAIN TRACK, WHERE OCCURS.
- 4 (E) EXPOSED ROOF STRUCTURE
- 5 (E) LIGHT FIXTURE
- 6 (E) GLUE-UP A.C.T. O/ (E) GYP. BD.
- 7 (E) 18 GA. PAINTED SHEET METAL CONDUIT ENCLOSURE TO REMAIN
- 8 PAINTED SHEET METAL CONDUIT ENCLOSURE. SEE DETAIL 8/A9-10.
- 9 S.E.D. FOR CONDUIT PENETRATION DETAIL.
- 10 (E) RIDGE
- 11 (E) CEMENT PLASTER FINISH

**GRAPHIC KEY**

(E) 12" x 12" GLUE UP CEILING TILES



(E) CEMENT PLASTER SOFFIT



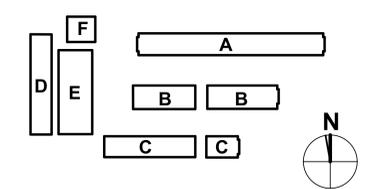
(E) WOOD, UNDERSIDE OF ROOF



GYPSUM BOARD CEILING OR SOFFIT



**BLDG KEY**



STAMP



STATE

DSA FILE NUMBER 41-26  
 APPL # 01-119526

REVISIONS

No.	Description	Date
△		

MILESTONES

DD	
90% CD	
DSA SUB	05/24/2021
BACKCHECK	10/22/2021

SHEET

**REFLECTED CEILING PLANS**

DATE

10/22/2021

JOB #

2021005.05

SHEET #

**A4.01**

**GENERAL SHEET NOTES**

- A REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR EXTENT OF MECHANICAL AND ELECTRICAL WORK.
- B SIZE OF MECHANICAL EQUIPMENT PADS ARE FOR REFERENCE ONLY. THE CONTRACTOR SHALL VERIFY REQUIRED PAD DIMENSION WITH EQUIPMENT MANUFACTURER.



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fax: (408)-300-5121

PROJECT

**NORTH SHOREVIEW ELEMENTARY SCHOOL - HVAC REPLACEMENT**

SAN MATEO-FOSTER CITY SCHOOL DISTRICT

CONSULTANT

STAMP



STATE

DSA FILE NUMBER 41-26  
APPL # 01-119526

REVISIONS

No.	Description	Date

MILESTONES

DD	
90% CD	
DSA SUB	05/24/2021
BACKCHECK	10/22/2021

SHEET

**SITE ROOF PLAN**

DATE

10/22/2021

JOB #

2021005.05

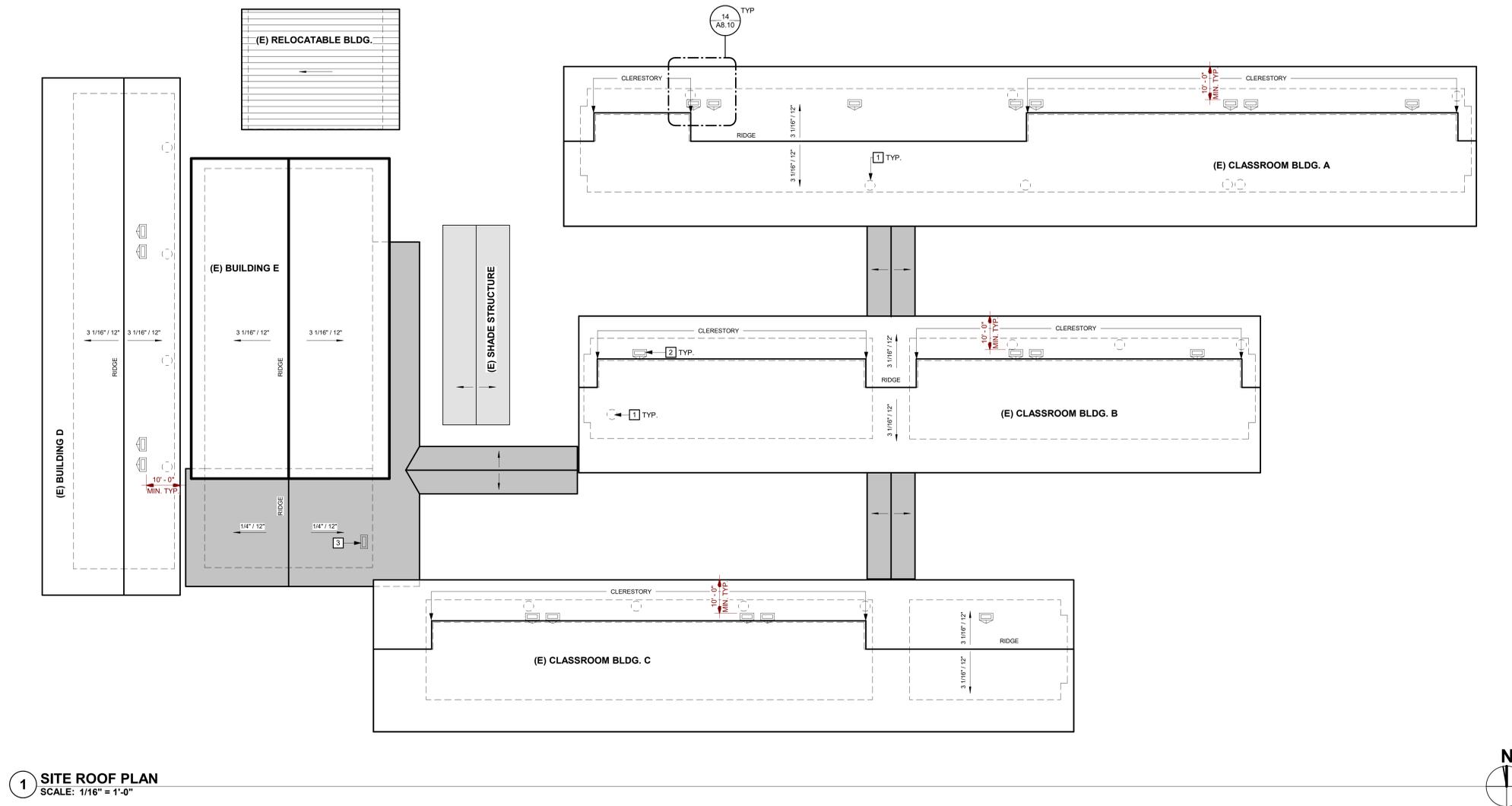
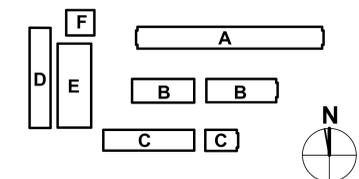
SHEET #

**A5.01**

**GRAPHIC KEY**

- (E) ASPHALT SHINGLE, CLASS C MINIMUM
- (E) PVC SINGLE PLY ROOFING, CLASS C MINIMUM
- (E) STANDING SEAM, CLASS C MINIMUM
- (E) METAL ROOFING
- OUTLINE OF WALL BELOW

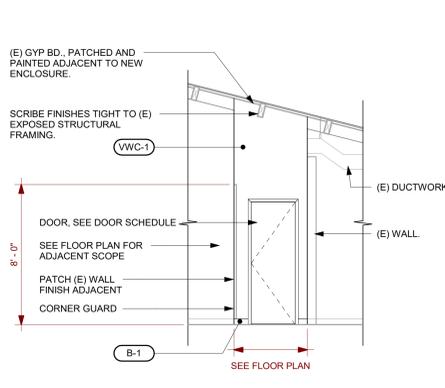
**BLDG KEY**



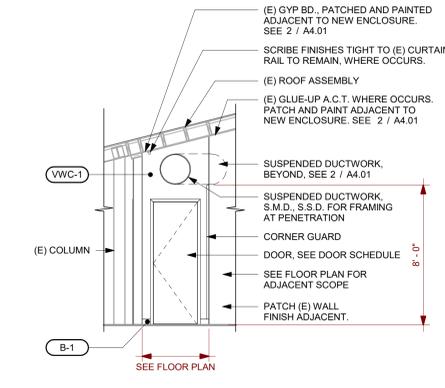
**1 SITE ROOF PLAN**  
SCALE: 1/16" = 1'-0"



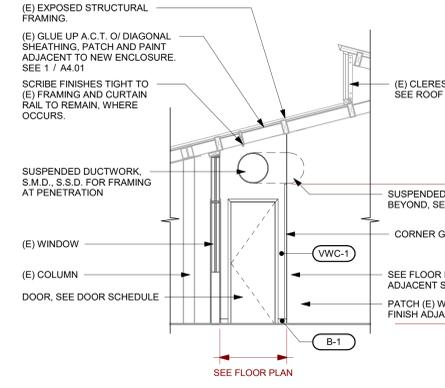




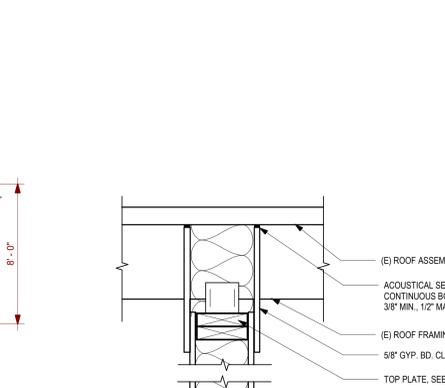
**17 HVAC ENCLOSURE TYPICAL ELEVATION @ EXPOSED STRUCTURE**  
 SCALE: 1/4" = 1'-0"



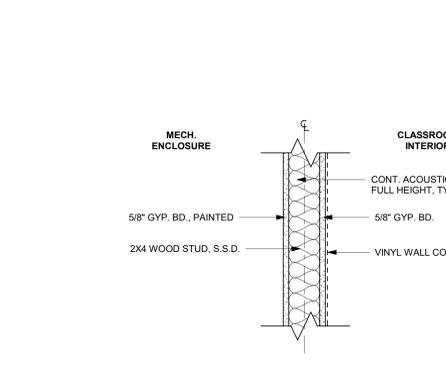
**13 HVAC ENCLOSURE TYPICAL ELEVATION @ HARDLID**  
 SCALE: 1/4" = 1'-0"



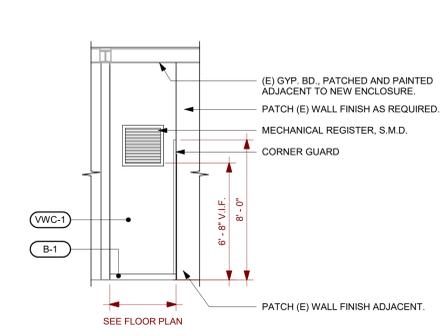
**9 HVAC ENCLOSURE TYPICAL ELEVATION AT EXPOSED ROOF STRUCTURE**  
 SCALE: 1/4" = 1'-0"



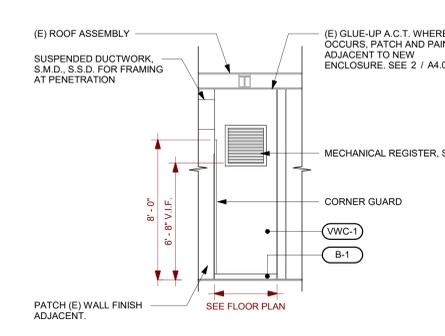
**1 TYPICAL SOUND TREATED NONRATED WALL**  
 SCALE: 1 1/2" = 1'-0"



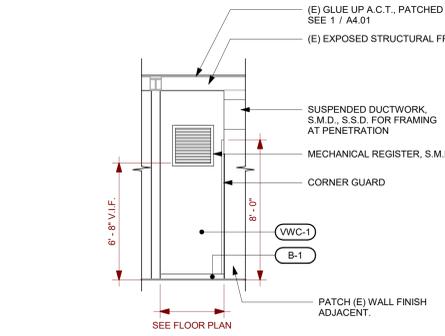
**1 WALL TYPE 1 - MECHANICAL ENCLOSURE**  
 SCALE: 1 1/2" = 1'-0"



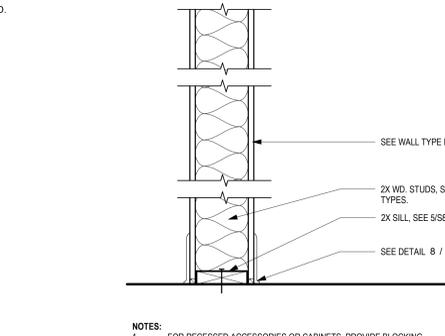
**18 HVAC ENCLOSURE TYPICAL ELEVATION @ EXPOSED STRUCTURE**  
 SCALE: 1/4" = 1'-0"



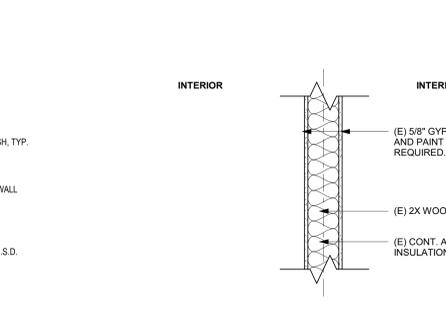
**14 HVAC ENCLOSURE TYPICAL ELEVATION @ HARDLID**  
 SCALE: 1/4" = 1'-0"



**10 HVAC ENCLOSURE TYPICAL ELEVATION AT EXPOSED ROOF STRUCTURE**  
 SCALE: 1/4" = 1'-0"



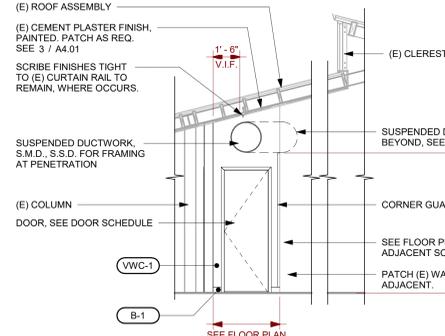
**6 TYPICAL SOUND TREATED NONRATED WALL**  
 SCALE: 1 1/2" = 1'-0"



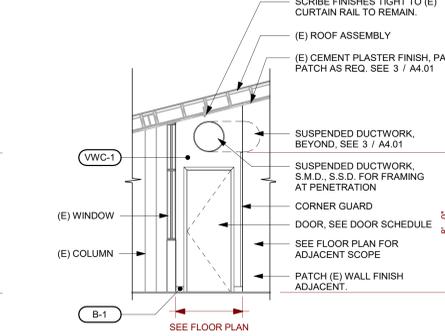
**2 (E) WALL TYPE 2 - GYP. BD.**  
 SCALE: 1 1/2" = 1'-0"



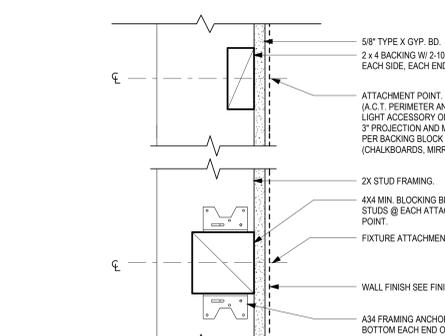
**15 HVAC ENCLOSURE TYPICAL ELEVATION @ CEMENT PLASTER**  
 SCALE: 1/4" = 1'-0"



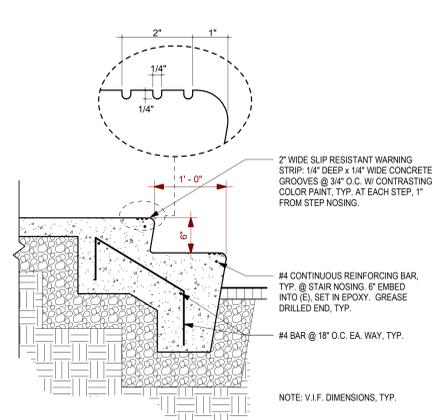
**11 HVAC ENCLOSURE TYPICAL ELEVATION @ CEMENT PLASTER**  
 SCALE: 1/4" = 1'-0"



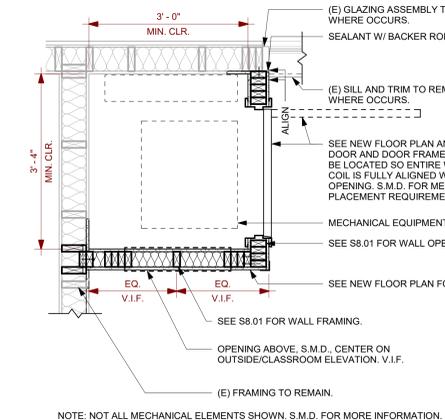
**7 TYPICAL WOOD WALL BACKING/ BLOCKING**  
 SCALE: 3" = 1'-0"



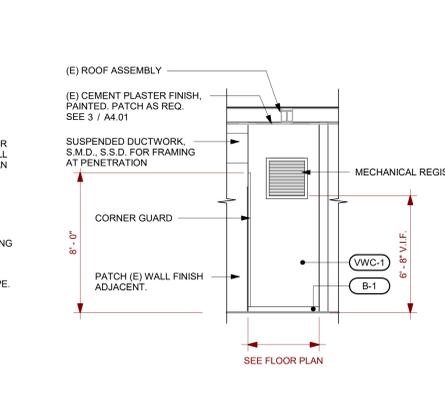
**3 WALL TYPE 3 - GLUE-UP A.C.T.**  
 SCALE: 1 1/2" = 1'-0"



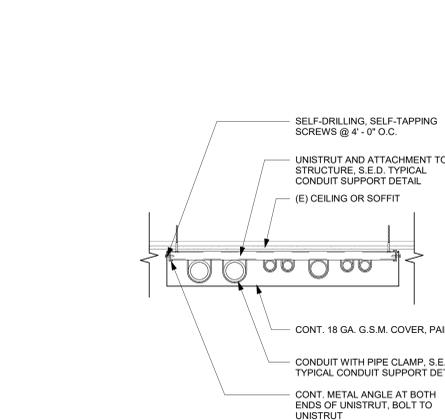
**20 (E) EXTERIOR STEPS**  
 SCALE: 1" = 1'-0"



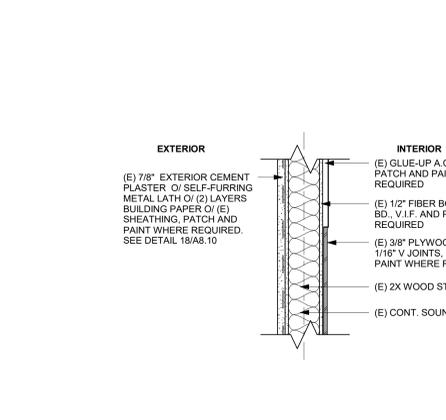
**16 MECH. ENCLOSURE CLEARANCES, TYP.**  
 SCALE: 3/4" = 1'-0"



**12 HVAC ENCLOSURE TYPICAL ELEVATION @ CEMENT PLASTER**  
 SCALE: 1/4" = 1'-0"



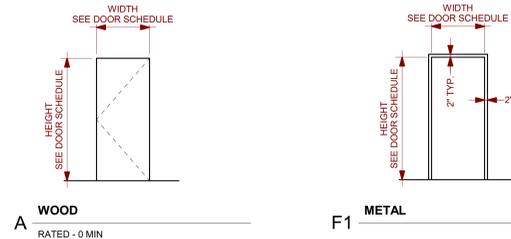
**8 CONDUIT ENCLOSURE**  
 SCALE: 1 1/2" = 1'-0"



**4 (E) WALL TYPE 4 - EXT. CEMENT PLASTER**  
 SCALE: 1 1/2" = 1'-0"

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DOOR SCHEDULE											
DOOR ID	OPENING SIZE		DOOR		FRAME		DETAILS (Sheet A10.02 U.O.N.)				HARDWARE GROUP
	WIDTH	HEIGHT	TYPE	FINISH	TYPE	FINISH	HEAD	JAMB-1	JAMB-2	SILL	
1a	2'-6"	7'-0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01
2a	2'-6"	7'-0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01
3a	2'-6"	7'-0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01
4a	2'-6"	7'-0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01
5a	2'-6"	7'-0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01
6a	2'-6"	7'-0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01
7a	2'-6"	7'-0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01
8a	2'-6"	7'-0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01
9a	2'-6"	7'-0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01
10a	2'-6"	7'-0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01
11a	2'-6"	7'-0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01
12a	2'-6"	7'-0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01
13a	2'-6"	7'-0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01
14a	2'-6"	7'-0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01
15a	2'-6"	7'-0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01
17a	2'-6"	7'-0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01
18a	2'-6"	7'-0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01
19a	2'-6"	7'-0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01
20a	2'-6"	7'-0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01

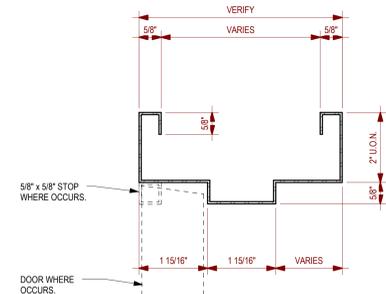


**WOOD**  
A  
RATED - 0 MIN

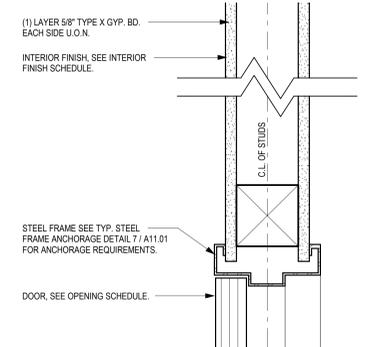
**METAL**  
F1

**DOOR TYPES**  
SCALE: 1/4" = 1'-0"

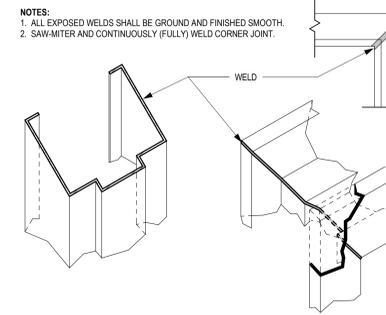
**FRAME TYPES**  
SCALE: 1/4" = 1'-0"



**10 TYPICAL STEEL FRAME DOOR PROFILE**  
SCALE: 6" = 1'-0"



**11 INTERIOR STEEL FRAME HEAD AND JAMB**  
SCALE: 3" = 1'-0"



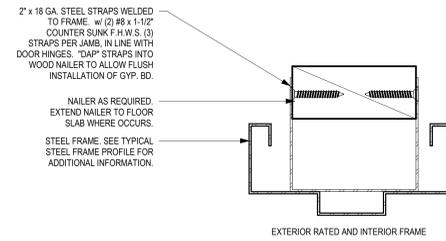
**12 TYP. WELDING @ STEEL FRAME CORNER**  
SCALE: 1 : 1

**DOOR SCHEDULE GENERAL NOTES**

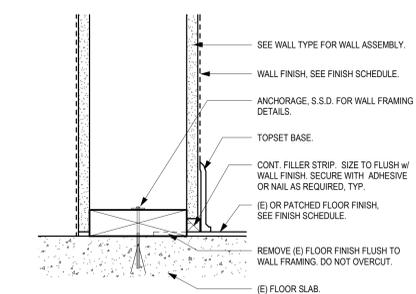
1 CONTRACTOR SHALL COORDINATE, PRIOR TO FABRICATION, DOOR FRAME DEPTH TO ACCEPT ALL WALL FINISHES AS DETAILED IN THE DRAWINGS.

**FINISH LEGEND**

MARK	DESCRIPTION	MFR. / BRAND	COLOR / FINISH	COMMENTS
(E) CONC-1	SEALED CONCRETE			
(E) CPT-1	CARPET (TILE)			
(E) VCT-1	VINYL COMPOSITION TILE			
ACT-1	1'-0" X 1'-0" ACOUSTICAL CEILING TILES O/ GYP. BD.	SEE SPEC.		
ACT-2	1'-0" X 1'-0" ACOUSTICAL CEILING TILES O/ STRUCTURE	SEE SPEC.		
ACT-3	1'-0" X 1'-0" ACOUSTICAL WALL TILES	SEE SPEC.		
B-1	4" RUBBER TOP SET BASE	SEE SPEC.		
CP-1	CEMENT PLASTER	SEE SPEC.		
ES	EXPOSED STRUCTURE, PAINTED			
GB-1	GYP. BOARD	SEE SPEC.		
GB-2	SUSP. GYP. BOARD	SEE SPEC.		
P-1	PAINT			
P-2	PAINT			
P-3	PAINT			
PLY-1	PLYWOOD	SEE SPEC.		
VWC-1	VINYL WALL COVERING	SEE SPEC.		



**7 TYPICAL STEEL FRAME ANCHORAGE**  
SCALE: 6" = 1'-0"



**8 INTERIOR WALL BASE**  
SCALE: 3" = 1'-0"

FINISH SCHEDULE							
NUMBER	ROOM	NAME	FLOOR		WALL FINISH	CEILING FINISH	COMMENTS
			FLOOR FINISH	BASE FINISH			
1	CLASSROOM	(E) VCT-1	B-1	VWC-1, GB-1	ACT-2, ES		
2	CLASSROOM	(E) CPT-1	B-1	VWC-1, GB-1	ACT-2, ES		
3	CLASSROOM	(E) CPT-1	B-1	VWC-1, GB-1	ACT-2, ES		
4	CLASSROOM	(E) VCT-1	B-1	VWC-1, GB-1	ACT-2, ES		
5	ROOM	(E) CPT-1	B-1	VWC-1, GB-1	ACT-1		
6	CLASSROOM	(E) CPT-1	B-1	VWC-1, GB-1	ACT-1		
7	CLASSROOM	(E) VCT-1	B-1	VWC-1, GB-1	ACT-1		
8	SPEECH / WEB ROOM	(E) CPT-1	B-1	VWC-1, GB-1	GB-2		
8A	JANITOR	(E) CONC-1	B-1	VWC-1, GB-1			
9	CLASSROOM	(E) CPT-1, (E) VCT-1	B-1	VWC-1, GB-1	ACT-2, ES		
10	CLASSROOM	(E) CPT-1, (E) VCT-1	B-1	VWC-1, GB-1	ACT-2, ES		
11	CLASSROOM	(E) CPT-1, (E) VCT-1	B-1	VWC-1, GB-1	ACT-2, ES		
11A	CLOSET	(E) CONC-1	B-1	VWC-1, GB-1	GB-2		
11B	TEACHER'S WORK ROOM	(E) CPT-1, (E) VCT-1	B-1	VWC-1, GB-1	B.O.S.		
12	CLASSROOM	(E) CPT-1	B-1	VWC-1, GB-1, ACT-3	CP-1, GB-2		
12A	MECH ROOM	(E) CONC-1	--	VWC-1, GB-1, ACT-3	GB-2		
13	CLASSROOM	(E) CPT-1	B-1	VWC-1, GB-1, ACT-3	CP-1, GB-2		
14	CLASSROOM	(E) CPT-1	B-1	VWC-1, GB-1, ACT-3	CP-1, GB-2		
15	CLASSROOM	(E) CPT-1	B-1	VWC-1, GB-1, ACT-3	CP-1, GB-2		
17	CLASSROOM	(E) CPT-1	B-1	VWC-1, GB-1, ACT-3	CP-1		
18	CLASSROOM	(E) CPT-1	B-1	VWC-1, GB-1, ACT-3	CP-1		
19	CLASSROOM	(E) CPT-1	B-1	VWC-1, GB-1, ACT-3	CP-1		
20	CLASSROOM	(E) CPT-1	B-1	VWC-1, GB-1, ACT-3	CP-1		
20A	MECH ROOM	(E) CONC-1	B-1	VWC-1, CP-1	CP-1		

**GENERAL FINISH SCHEDULE NOTES**

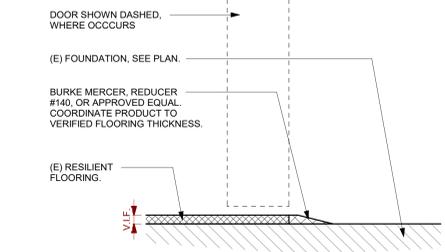
A WHERE MULTIPLE FINISHES ARE CALLED OUT, REFER TO INTERIOR ELEVATIONS FOR LOCATIONS OF INDIVIDUAL FINISHES.

B PROVIDE FINISHES TO COMPLY WITH FLAME SPREAD & SMOKE DENSITY REQUIREMENTS OF CBC 803 and 804.

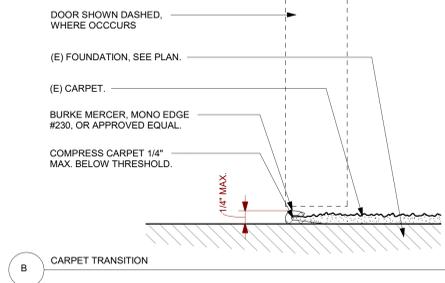
C PATCH FINISHES TO MATCH ADJACENT AT ALL SURFACES REMOVED TO FACILITATE CONSTRUCTION.

D EXISTING FINISHES THAT MIGHT OCCUR OUTSIDE OF THE AREA OF WORK HAVE BEEN OMITTED.

E (E) FLOORING INDICATED FOR REFERENCE ONLY.



**A RESILIENT FLOORING TRANSITION**



**4 FLOORING TRANSITION**  
SCALE: 6" = 1'-0"

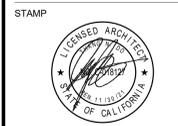
IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP: 01-119526 INC.  
REVIEWED FOR  
SS  FLS  ACS   
DATE: 10/27/2021

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architects

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PROJECT  
**NORTH SHOREVIEW ELEMENTARY SCHOOL - HVAC REPLACEMENT**

SAN MATEO-FOSTER CITY SCHOOL DISTRICT  
CONSULTANT



STATE  
DSA FILE NUMBER 41-26  
APPL # 01-119526

REVISIONS

No.	Description	Date

MILESTONES  
DD  
90% CD  
DSA SUB 05/24/2021  
BACKCHECK 10/22/2021

SHEET  
**FINISH SCHEDULE & OPENING SCHEDULE, LEGENDS, & DETAILS**

DATE 10/22/2021  
JOB # 2021005.05  
SHEET #

**A11.01**

#### I. GENERAL REQUIREMENTS

A. THE STRUCTURAL DRAWINGS AND PROJECT SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THE MEANS, METHODS, PROCEDURES AND SEQUENCE OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.

B. DURING THE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONNEL AND PROPERTY ON AND AROUND THE JOBSITE. THE CONTRACTOR SHALL PROVIDE SHORING, BRACING, GUYS, ETC. IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL STANDARDS.

C. ALL CONSTRUCTION, TESTING, AND INSPECTIONS SHALL CONFORM TO THE BUILDING CODE REFERENCED UNDER THE HEADING 'BASIS OF DESIGN' BELOW.

D. STANDARDS REFERENCED IN THESE DRAWINGS SHALL BE THE LATEST EDITION, UNLESS OTHERWISE NOTED.

E. SEE DRAWINGS OTHER THAN STRUCTURAL FOR: FLOOR FINISHES; DEPRESSIONS IN FLOOR SLABS; OPENINGS IN WALLS AND FLOORS REQUIRED BY ARCHITECTURAL AND MEP FEATURES; EXTERIOR PAVING; CURBS; SLOPES; DRAINS; PADS; NON-STRUCTURAL PARTITIONS; EMBEDDED ITEMS; ETC. COORDINATE THESE ITEMS WITH THE STRUCTURAL DRAWINGS.

F. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AT THE JOB SITE BEFORE COMMENCING WORK AND SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT.

G. OMISSIONS OR DISCREPANCIES BETWEEN THE VARIOUS ELEMENTS OF THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND STRUCTURAL ENGINEER AND RESOLVED BEFORE PROCEEDING WITH THE WORK.

H. DO NOT SCALE THE DRAWINGS; USE WRITTEN DIMENSIONS ONLY. WHERE NO DIMENSIONS ARE PROVIDED OR WHERE DIMENSIONS PROVIDED CONFLICT WITH OTHER DRAWINGS, CONSULT THE ARCHITECT AND SEOR BEFORE PROCEEDING WITH THE WORK.

I. WHERE MEMBER LOCATIONS ARE NOT DIMENSIONED, MEMBERS SHALL BE LOCATED ON COLUMN LINES OR EQUALLY SPACED BETWEEN MEMBERS ON COLUMN LINES OR BETWEEN MEMBERS OTHERWISE LOCATED. CENTERLINES OF COLUMNS, WALLS, FRAMING MEMBERS, AND FOUNDATIONS COINCIDE WITH GRIDLINES, UNLESS OTHERWISE NOTED.

J. TYPICAL DETAILS ARE INTENDED TO APPLY TO APPLICABLE SITUATIONS, UNLESS OTHERWISE NOTED. TYPICAL DETAILS MAY NOT BE SPECIFICALLY LOCATED.

K. DETAILS SHALL BE APPLIED TO EVERY LIKE CONDITION WHETHER OR NOT THEY ARE REFERENCED IN EVERY INSTANCE. FOR CONDITIONS NOT SPECIFICALLY SHOWN, USE DETAILS SIMILAR TO THOSE PROVIDED.

L. THE CONTRACTOR SHALL VERIFY THAT CONSTRUCTION LOADS DO NOT EXCEED THE CAPACITY OF THE STRUCTURE AT THE TIME THE LOADS ARE PLACED.

#### II. EXISTING CONSTRUCTION

A. WORK SHOWN IS NEW UNLESS OTHERWISE NOTED AS EXISTING, (E).

B. EXISTING CONSTRUCTION SHOWN IN THESE DRAWINGS WAS OBTAINED FROM AS-BUILT DRAWINGS AND INDICATED FOR REFERENCE ONLY. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, REVIEW ALL AVAILABLE EXISTING DRAWINGS AND VERIFY DIMENSIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND SEOR OF ALL DISCREPANCIES AND EXCEPTIONS BEFORE PROCEEDING WITH THE WORK.

C. THE REMOVAL, CUTTING, DRILLING, ETC. OF EXISTING WORK SHALL BE PERFORMED WITH GREAT CARE AND SMALL TOOLS IN ORDER TO MAINTAIN THE STRUCTURAL INTEGRITY OF THE BUILDING. IF EXISTING STRUCTURAL MEMBERS NOT INDICATED FOR REMOVAL INTERFERE WITH THE NEW WORK, THE SEOR SHALL BE NOTIFIED IMMEDIATELY. APPROVAL SHALL BE OBTAINED PRIOR TO REMOVAL OF THE EXISTING MEMBERS.

D. THE CONTRACTOR SHALL SAFELY SHORE EXISTING CONSTRUCTION WHEREVER EXISTING SUPPORTS ARE REMOVED TO ALLOW INSTALLATION OF THE NEW WORK. THE EXISTING CONSTRUCTION SHALL BE CONNECTED AND/OR EMBEDDED INTO THE NEW CONSTRUCTION AS SHOWN OR SPECIFIED.

E. ALL SHORING METHODS AND SEQUENCING OF DEMOLITION SHALL BE SPECIFIED BY A LICENSED CIVIL OR STRUCTURAL ENGINEERING IN THE STATE OF CALIFORNIA TO BE RETAINED BY THE CONTRACTOR. SEE SPECIFICATIONS FOR DETAILED REQUIREMENTS.

F. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES BEFORE BEGINNING WORK. SPECIAL CARE SHALL BE TAKEN TO PROTECT UTILITIES THAT ARE TO REMAIN IN SERVICE DURING CONSTRUCTION.

G. THE CONTRACTOR SHALL PROMPTLY REPAIR DAMAGE CAUSED DURING OPERATIONS WITH SIMILAR MATERIALS AND WORKMANSHIP.

H. THE CONTRACTOR SHALL LOCATE EXISTING REINFORCING STEEL WHERE EXISTING CONCRETE IS TO BE CUT, CORED OR SAWN. LOCATION SHALL BE DONE USING A NON-DESTRUCTIVE METHOD. DO NOT DAMAGE EXISTING REINFORCING WITHOUT NOTIFYING THE ARCHITECT AND SEOR.

#### III. BASIS OF DESIGN

A. THE STRUCTURAL DESIGN OF THIS PROJECT IS GOVERNED BY THE 2019 CALIFORNIA BUILDING CODE (CBC) WITH SSI/DSA AMMENDMENTS.

B. RISK CATEGORY = III

D. LIVE LOADS:

1. ROOF = 20 PSF

E. WIND DESIGN DATA:

1. BASIC WIND SPEED = 100 mph (3 SECOND GUST)

2. EXPOSURE CATEGORY = C

F. SEISMIC DESIGN DATA:

1. I = 1.25  
2. Fa = 1.2  
3. Fv = N/A  
4. Ss = 1.788  
5. S1 = 0.722  
6. Sds = 1.415  
7. SD1 = N/A  
8. SITE CLASS = D (DEFAULT)  
9. SEISMIC DESIGN CATEGORY = D

#### IV. CONCRETE

A. MIXING, BATCHING, TRANSPORTING AND PLACING OF ALL CONCRETE SHALL CONFORM TO ACI 301, SPECIFICATION FOR STRUCTURAL CONCRETE FOR BUILDINGS.

B. ALL CONCRETE SHALL BE THOROUGHLY CONSOLIDATED.

C. THE SCHEDULE BELOW INDICATES THE MINIMUM CONCRETE DESIGN MIX REQUIREMENTS. SEE THE SPECIFICATIONS FOR ADDITIONAL CONCRETE PROPERTIES.

TYPE	LOCATION	MINIMUM 28-DAY STRENGTH (PSI)	MAXIMUM WEIGHT (PCF)	MAX W/C RATIO
A	SLAB ON GRADE	3000	150	0.5

D. CONCRETE CLEAR COVER OVER MILD REINFORCING STEEL SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED:

- CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH = 3"
  - CONCRETE EXPOSED TO EARTH OR WEATHER:
    - NO. 5 BARS AND SMALLER = 1-1/2"
    - NO. 6 BARS AND LARGER = 2"
  - CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
    - SLABS, WALLS, JOISTS
    - NO. 11 BARS AND SMALLER = 3/4"
    - NO. 14 BARS AND LARGER = 1-1/2"
  - BEAMS, COLUMNS:
    - PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS = 1-1/2"
    - SHELLS, FOLDED PLATE MEMBERS:
      - NO. 5 BARS AND SMALLER = 1/2"
      - NO. 6 BARS AND LARGER = 3/4"

E. NON-SHRINK GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 6000 PSI AT 28 DAYS.

#### F. CONSTRUCTION JOINTS

- NO HORIZONTAL CONSTRUCTION JOINTS ARE PERMITTED IN BEAMS, WALLS OR SLABS UNLESS APPROVED BY THE SEOR IN WRITING.
- ALL CONSTRUCTION JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH TYPICAL CONSTRUCTION JOINT DETAILS.
- ALL CONSTRUCTION JOINT LOCATIONS SHALL BE COORDINATED AND CONSTRUCTED IN ACCORDANCE WITH ARCHITECTURAL FINISHES AND TREATMENTS.
- ALL SURFACES OF CONSTRUCTION JOINTS SHALL BE CLEANED TO REMOVE DUST, CHIPS OR OTHER FOREIGN MATTER PRIOR TO PLACING ADJACENT CONCRETE.

#### V. REINFORCING STEEL

A. ALL REINFORCING BARS SHALL BE DEFORMED BARS CONFORMING TO THE REQUIREMENTS OF ASTM A615 AND ASTM A706 WHERE REQUIRED; ALL BARS TO BE GRADE 60 UNLESS OTHERWISE NOTED.

B. REINFORCING BARS TO BE WELDED SHALL BE ASTM A706.

C. WELDED WIRE REINFORCING SHALL BE ASTM A185.

D. WELDED BAR ANCHORS SHALL BE NELSON D2L DEFORMED BAR ANCHORS PER ICC-ES ESR-5217.

E. DETAIL REINFORCING STEEL BASED ON THE PROJECT REQUIREMENTS, ACI 318, AND ACI 315.

#### F. TERMINATION OF REINFORCEMENT:

- TERMINATE ALL BARS IN LAPS, 90 DEGREE BENDS OR WITH DOWELS EPOXIED INTO EXISTING CONCRETE.
- PROVIDE DOWELS INTO FOOTINGS BELOW AND SLABS ABOVE AT WALLS AND COLUMNS OF SAME SIZE AND SPACING AS VERTICAL REINFORCEMENT.

G. WHERE A 90 DEGREE, 135 DEGREE OR 180 DEGREE HOOK IS GRAPHICALLY INDICATED, PROVIDE CORRESPONDING ACI STANDARD HOOK PER DETAIL 283/55.01.

#### H. SPLICES

- LAP REINFORCING STEEL AS SPECIFICALLY DETAILED ON THE DRAWINGS. SEE REBAR OFFSET AND LAP SPLICE SCHEDULE IN DETAIL 7/85.01.
- UNLESS OTHERWISE NOTED, ALL LAP SPLICES ARE TO BE CLASS B.
- MECHANICAL SPLICES, IF USED AT CONTRACTOR'S OPTION, SHALL BE ICC-ES APPROVED AND CAPABLE OF DEVELOPING 125% OF THE SPECIFIED MINIMUM YIELD STRENGTH OF THE BAR IN TENSION OR COMPRESSION.
- LOCATE LAPS IN REINFORCING STEEL AS FOLLOWS:
  - TOP HORIZONTAL REINFORCEMENT IN BEAMS AND WALLS AT SUPPORTS.
  - BOTTOM HORIZONTAL REINFORCEMENT IN BEAMS AND WALLS AT MIDSPAN.
  - VERTICAL REINFORCEMENT AT INSIDE FACE OF WALL AT SUPPORTS.
  - VERTICAL REINFORCEMENT AT OUTSIDE FACE OF WALL AT MIDHEIGHT OF WALL.

#### VI. WOOD

A. ALL WOOD FRAMING SHALL CONFORM TO NATIONAL DESIGN SPECIFICATIONS (NDS) FOR WOOD CONSTRUCTION AND APA PDS, PLYWOOD DESIGN SPECIFICATION.

B. ALL WOOD FRAMING SHALL BE DOUGLAS FIR LARCH, UNLESS OTHERWISE NOTED. GRADE SHALL BE AS FOLLOWS:

- WALL STUDS = NO 2
- SILL PLATES = PRESSURE TREATED
- BLOCKING AND MISCELLANEOUS = NO 2

C. REJECTION OF WOOD MEMBERS: THE PROVISION IN DOC PS 20 (AS REFERENCED BY CBC 2303.1.1) WHICH PERMITS FIVE PERCENT OF THE MATERIAL TO FALL BELOW GRADE SHALL NOT BE CONSTRUED TO PERMIT BELOW-GRADE MATERIAL TO BE USED AS LOAD-CARRYING MEMBERS WHICH HAVE BEEN DESIGNED FOR SPECIFIC ALLOWABLE STRESSES AND ACCEPTABLE SAFETY FACTORS. MATERIALS WHICH FALL BELOW GRADE SHALL BE REJECTED FOR LOAD-CARRYING USE. WOOD MEMBERS WHICH ARE REQUIRED TO CARRY DESIGN LOADS AND WHICH THE PROJECT ARCHITECT, SEOR OR INSPECTOR JUDGE TO BE MISGRADED SHALL BE REINSPECTED BY A QUALIFIED LUMBER GRADING INSPECTOR TO VERIFY THE PROPER GRADING OF THE MATERIAL. WOOD MEMBERS WHICH HAVE PERMISSIBLE GRADE CHARACTERISTICS OR DEFECTS IN SUCH COMBINATION AS TO AFFECT THE SERVICEABILITY OF THE MEMBER SHALL BE REJECTED BY THE PROJECT INSPECTOR WITH THE CONCURRENCE OF THE ARCHITECT OR SEOR.

D. ALL LUMBER IN CONTACT WITH CONCRETE OR CONCRETE MASONRY 0'-8" OR LESS ABOVE THE GROUND SHALL BE PRESSURE TREATED.

E. MAXIMUM MOISTURE CONTENT SHALL BE 15% AT TIME OF FRAMING FOR NEW WOOD MEMBERS ADJACENT TO EXISTING WOOD MEMBERS. ALL OTHER MEMBERS SHALL HAVE A MAXIMUM MOISTURE CONTENT OF 19% AT TIME OF FRAMING. REFER TO ARCHITECTURAL DRAWINGS, PROJECT SPECIFICATIONS AND CLADDING MANUFACTURERS' INFORMATION FOR MORE STRINGENT MOISTURE CONTENT REQUIREMENTS.

F. WOOD CONNECTORS SHALL BE AS MANUFACTURED BY SIMPSON STRONG TIE OR EQUAL PRODUCT IF APPROVED BY SEOR. SIMPSON DESIGNATIONS USED IN THESE DRAWINGS.

G. NAILS SHALL BE COMMON WIRE GAGE, UNLESS OTHERWISE NOTED AND CONFORM TO CBC TABLE 2304.10.1. USE OF MACHINE NAILING IS SUBJECT TO A SATISFACTORY JOBSITE DEMONSTRATION FOR EACH PROJECT AND THE APPROVAL OF THE PROJECT ARCHITECT, STRUCTURAL ENGINEER AND DSA.

H. LAG BOLTS AND UNFINISHED MACHINE BOLTS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD.

I. ANCHOR RODS SHALL CONFORM TO ASTM F1554 GR 36.

J. FASTENERS INSTALLED IN PRESSURE TREATED OR FIRE RETARDANT TREATED WOOD SHALL BE GALVANIZED.

K. PROVIDE LATERAL SUPPORT FOR BEAMS, JOISTS, AND RAFTERS PER CBC SECTION 2308.8.5.

#### VII. POST-INSTALLED ANCHORS

A. POST-INSTALLED ANCHORS INCLUDE EXPANSION ANCHORS, EPOXY ANCHORS AND REINFORCING STEEL DOWELS, SCREW ANCHORS AND POWDER-ACTUATED FASTENERS. AS DETAILED IN THE DRAWINGS.

B. DO NOT DAMAGE OR CUT EXISTING REINFORCING STEEL WHILE INSTALLING POST-INSTALLED ANCHORS. NOTIFY SEOR IF EXISTING REINFORCING STEEL INTERFERES WITH INSTALLATION OF POST-INSTALLED ANCHORS.

C. ALL MIS-DRILLED OR UNACCEPTABLE HOLES SHALL NOT BE USED AND SHALL BE GROUTED SOLID.

D. ALL POST-INSTALLED ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE ICC-ES REPORT AND MANUFACTURER'S RECOMMENDATIONS.

E. PROVIDE SPECIAL INSPECTION FOR THE INSTALLATION OF ALL POST-INSTALLED ANCHORS, UNLESS OTHERWISE NOTED.

F. FIELD TEST POST-INSTALLED ANCHORS, UNLESS OTHERWISE NOTED. FIELD TESTING SHALL BE IN COMPLIANCE WITH THE FOLLOWING:

- 10% OF POST-INSTALLED ANCHORS USED FOR SILL PLATE BOLTING SHALL BE TESTED; 100% OF ALL OTHER POST-INSTALLED ANCHORS USED FOR STRUCTURAL APPLICATIONS SHALL BE TESTED.
- 50% OF POST-INSTALLED ANCHORS USED FOR NON-STRUCTURAL APPLICATIONS SHALL BE TESTED, INCLUDING ONE HALF OF ALL ANCHORS IN EACH GROUP.
  - IF ANY ANCHOR FAILS TESTING, ALL ANCHORS OF THE SAME TYPE THAT ARE UNTESTED SHALL BE TESTED UNTIL 20 CONSECUTIVE ANCHORS PASS.
  - NO TESTING SHALL BE IN ACCORDANCE WITH CBC SECTION 1910A.5.5.1 TO ATTACH TRACKS OF INTERIOR, NON-STRUCTURAL PARTITION WALLS WHERE THERE ARE AT LEAST THREE FASTENERS PER PIECE OF TRACK.
  - NO TESTING REQUIRED OF REINFORCING STEEL DOWELS ACROSS COLD JOINTS IN CONCRETE SLABS ON GRADE.
  - TORQUE TESTING MAY BE USED FOR TORQUE CONTROLLED POST-INSTALLED ANCHORS; TENSION TEST ALL OTHER POST-INSTALLED ANCHORS.
  - TORQUE TESTING SHALL BE IN ACCORDANCE WITH CBC SECTION 1910A.5.5.2.
  - TENSION TESTING SHALL BE IN ACCORDANCE WITH CBC SECTION 1910A.5.5.1.
  - ALL FIELD TESTING SHALL BE DONE UNDER THE OBSERVATION OF THE PROJECT INSPECTOR.
  - TESTING SHALL OCCUR AT LEAST 24 HOURS AFTER THE ANCHOR HAS BEEN INSTALLED.

#### G. EPOXY ANCHORS AND REINFORCING STEEL DOWELS

- FOR INSTALLATION IN CONCRETE, EPOXY SHALL BE ONE OF THE FOLLOWING:
  - SET-XP PER ICC-ES ESR-2508 AS MANUFACTURED BY SIMPSON STRONG TIE
  - HIT-RE 500-SD PER ICC-ES ESR-2322 AS MANUFACTURED BY HILTI, INC.
  - HY-200 MAX-SD PER ICC-ES ESR-3187 AS MANUFACTURED BY HILTI, INC.
- FOR INSTALLATION IN FULLY-GROUTED MASONRY, EPOXY SHALL BE ONE OF THE FOLLOWING:
  - SET-HIGH STRENGTH PER ICC-ES ESR-2508 AS MANUFACTURED BY SIMPSON STRONG TIE
  - SET-XP PER ICC-ES ESR-1967 AS MANUFACTURED BY HILTI, INC.
- EPOXIED ANCHOR RODS SHALL BE CARBON STEEL THREADED RODS PER APPROPRIATE ICC-ES REPORT; EPOXIED REINFORCING STEEL DOWELS SHALL BE ASTM A615 GR 60 UNLESS OTHERWISE NOTED. MINIMUM ANCHOR EMBEDMENT AND TENSION TEST VALUES ARE AS FOLLOWS:

EPOXY ANCHORS IN NORMAL-WEIGHT CONCRETE (f <sub>c</sub> = 3000 PSI MIN)				
THREADED ROD DIAMETER (IN)	EMBED (IN)	TENSION TEST VALUE (LBS)		
		HY-200 MAX-SD	HIT-RE 500-SD	SET-XP
3/8	3	3360	3510	3620
1/2	4	6010	6150	5690
5/8	5	9440	9330	7640
3/4	6	7120	12860	9770
7/8	7	15750	13620	12250
1	8	20670	16440	15430
1 1/4	10	32500	22060	24100

ANCHORS SHALL NOT BE INSTALLED INTO CONCRETE THAT IS LESS THAN 21 DAYS OLD.

#### H. EXPANSION ANCHORS

- FOR INSTALLATION IN CONCRETE, EXPANSION ANCHORS SHALL BE ONE OF THE FOLLOWING:
  - STRONG BOLT 2 PER ICC-ES ESR-3037 AS MANUFACTURED BY SIMPSON STRONG TIE.
  - KWIK BOLT TZ2 PER ICC-ES ESR-4266 AS MANUFACTURED BY HILTI, INC.
- USE STAINLESS STEEL AT EXTERIOR, WEATHER-EXPOSED OR DAMP LOCATIONS; CARBON STEEL EXPANSION ANCHORS MAY BE USED AT ALL OTHER LOCATION, UNLESS OTHERWISE NOTED.
- MINIMUM ANCHOR EMBEDMENT AND TORQUE TEST VALUES ARE AS FOLLOWS:

KWIK BOLT TZ2 IN NORMAL WEIGHT CONCRETE (f <sub>c</sub> = 3000 PSI MIN)			
ANCHOR DIAMETER (IN)	EMBED (IN)	TORQUE TEST	
		DEPTH (IN)	VALUE (FT-LBS)
3/8	2 5/16	2 5/8	30
1/2	2 3/8	2 5/8	50
5/8	4 1/16	4 3/4	60
3/4	5 9/16	5 3/4	125

STRONG BOLT 2 IN NORMAL WEIGHT CONCRETE (f <sub>c</sub> = 3000 PSI MIN)			
ANCHOR DIAMETER (IN)	EMBED (IN)	TORQUE TEST	
		DEPTH (IN)	VALUE (FT-LBS)
3/8	1 7/8	2	30
1/2	2 3/4	3	60
5/8	5 3/8	5 3/8	90
3/4	5 1/4	6	150

- WHERE EXPANSION ANCHORS ARE INSTALLED IN CONTACT WITH WOOD FRAMING, PROVIDE AN OVERSIZE WASHER IN ORDER TO ACHIEVE TORQUE REQUIRED BY ICC-ES REPORT. USE 1/4"x3"x3" WASHER, MINIMUM.
- CONTRACTOR SHALL PROVIDE ANCHORS WITH SUFFICIENT TOTAL LENGTH FOR THE SPECIFIED EMBEDMENT LENGTH, THICKNESS OF FASTENED PART, WASHER AND NUT.

#### I. SCREW ANCHORS

- FOR INSTALLATION IN CONCRETE, SCREW ANCHORS SHALL BE ONE OF THE FOLLOWING:
  - TITEN HD PER ICC-ES ESR-2713 AS MANUFACTURED BY SIMPSON STRONG TIE.
  - KWIK HUS-EZ PER ICC-ES ESR-3027 AS MANUFACTURED BY HILTI, INC.
- MINIMUM ANCHOR EMBEDMENT AND TENSION TEST VALUES ARE AS FOLLOWS:

TITEN HD IN NORMAL WEIGHT CONCRETE (f <sub>c</sub> = 3000 PSI MIN)			
ANCHOR DIAMETER (IN)	EMBED (IN)	TENSION TEST	
		DEPTH (IN)	VALUE (FT-LBS)
3/8	2 1/2	3	1200
1/2	3 1/4	3 3/4	2973
5/8	4	4 1/2	3935
3/4	5 1/2	6	5895

KWIK HUS-EZ IN NORMAL WEIGHT CONCRETE (f <sub>c</sub> = 3000 PSI MIN)			
ANCHOR DIAMETER (IN)	EMBED (IN)	TENSION TEST	
		DEPTH (IN)	VALUE (FT-LBS)
1/4	2 1/2	2 7/8	1133
3/8	2 1/2	2 3/4	2093
1/2	2 1/4	2 5/8	1547
5/8	3 1/4	3 5/8	3049
3/4	4	4 3/8	4118

#### J. POWDER-ACTUATED FASTENERS

- PAF SHALL BE ONE OF THE FOLLOWING:
  - SIMPSON STRONG TIE POWDER-ACTUATED FASTENERS PER ICC-ES ESR-2138 FOR ANCHORAGE OF METAL TO CONCRETE, MASONRY OR STEEL.
  - HILTI, INC. X-1 PER ICC-ES ESR-2269 FOR ANCHORAGE OF METAL TO CONCRETE, MASONRY OR STEEL.
  - HILTI, INC. X-CP 72 PER ICC-ES ESR-2379 FOR ANCHORAGE OF SILL PLATES TO CONCRETE
  - DEWALT POWDER-ACTUATED FASTENERS PER ICC-ES ESR-2024 FOR ANCHORAGE OF METAL TO CONCRETE, MASONRY OR STEEL AND ANCHORAGE OF WOOD SILLS TO CONCRETE.
- PROVIDE 0.08"x1.1"x1.1" SQUARE OR 0.08"x1.425" DIAMETER ROUND WASHER AT EACH PAF.
- MINIMUM PAF EMBED INTO CONCRETE SHALL BE 1" UNLESS OTHERWISE NOTED.
- MINIMUM PAF EMBED INTO STEEL SHALL BE PER MANUFACTURER.

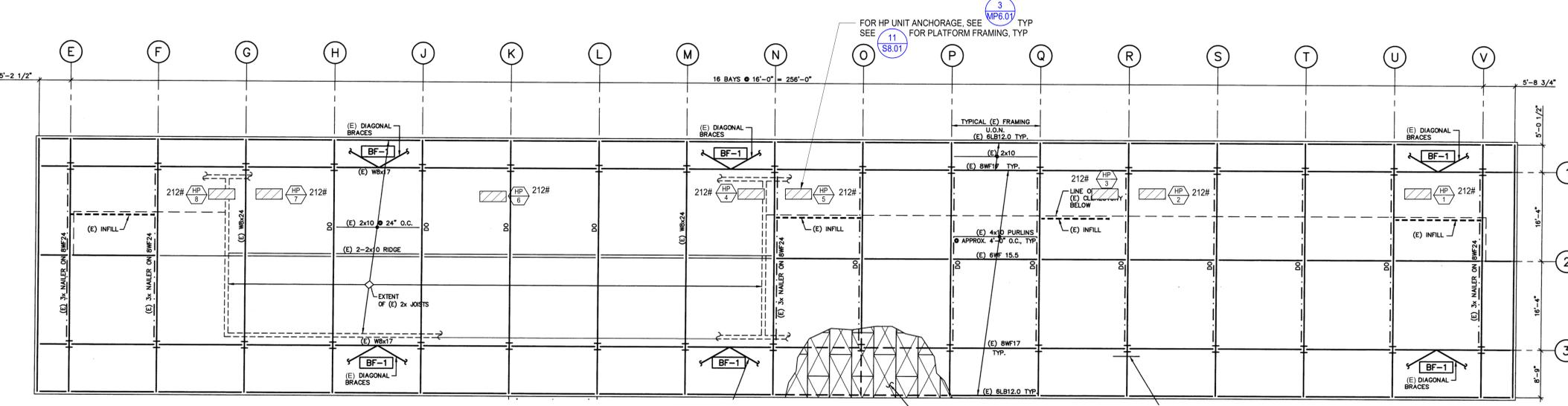
#### VIII. STRUCTURAL TESTS / SPECIAL INSPECTIONS

A. THE FOLLOWING ITEMS ARE EXEMPT FROM DSA REQUIREMENTS FOR STRUCTURAL TESTS / SPECIAL INSPECTION PER DSA FORM 103 AND SPECIFICATIONS:

- BATCH PLANT INSPECTION OF CONCRETE IS WAIVED IN COMPLIANCE WITH CBC SECTION 1705A.3.3.2. SEE SPECIFICATIONS FOR REQUIRED CERTIFICATION OF CEMENT AND REINFORCING, TAKING AND SAMPLING OF STRENGTH TEST, AND PROVISION OF WEIGHMASTERS' BATCH TICKETS.
- TESTING OF REINFORCING BARS IS NOT REQUIRED SUBJECT TO THE REQUIREMENTS AND LIMITATIONS GIVEN IN CBC SECTION 1910A.2.
- MANUFACTURED SUPPORT FRAMES AND CURBS USING HOT ROLLED OR COLD-FORMED STEEL FOR MECHANICAL, ELECTRICAL, OR PLUMBING EQUIPMENT WEIGHING LESS THAN 2000#.
- MANUFACTURED COMPONENTS FOR MECHANICAL, ELECTRICAL, OR PLUMBING HANGER SUPPORT AND BRACING.
- ANY SUPPORT FOR EXEMPT NON-STRUCTURAL COMPONENTS GIVEN IN CBC SECTION 1617A.1.18 MEETING THE FOLLOWING: A) WHEN SUPPORTED ON A FLOOR/ROOF, < 400# AND RESULTING COMPOSITE CENTER OF MASS < 4' ABOVE SUPPORTING FLOOR/ROOF. B) WHEN HUNG FROM A WALL OR ROOF/FLOOR, < 20# FOR DISCRETE UNITS OR < 5 PLF FOR DISTRIBUTED SYSTEMS.

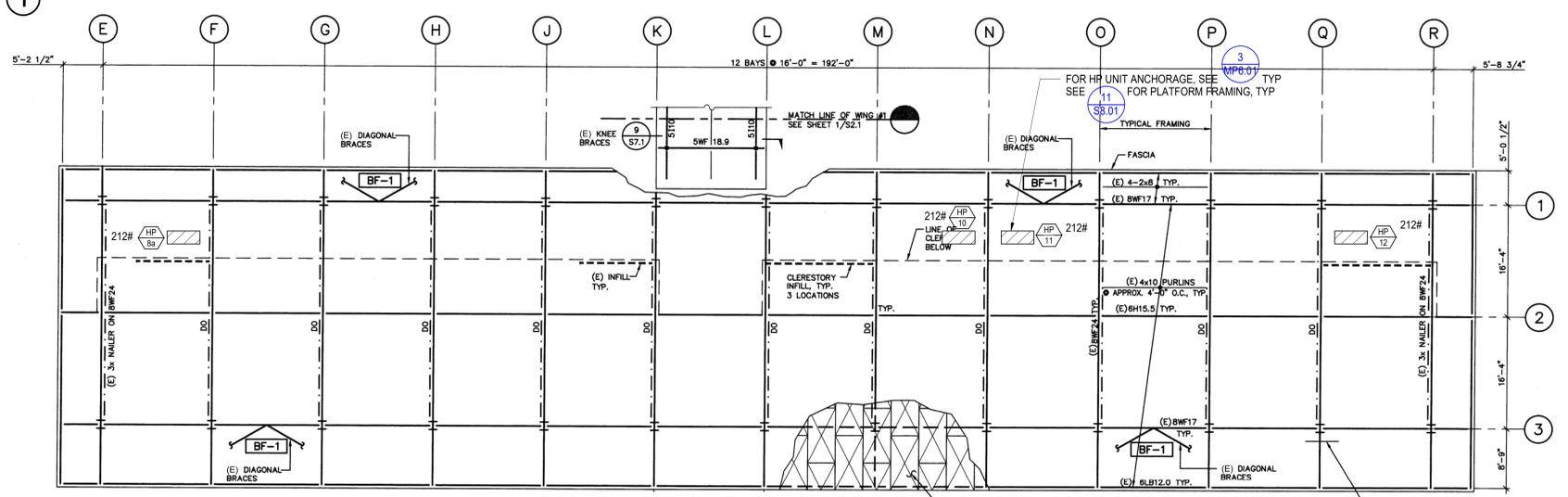
## ABBREVIATION

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
(E)	EXISTING	LLV	LONG LEG VERTICAL
(N)	NEW	LOC	LOCATION
AB	ANCHOR BOLT	LONG	LONGITUDINAL
ADDL	ADDITIONAL	LW	LIGHTWEIGHT
ALT	ALTERNATE	LWC	LIGHTWEIGHT CONCRETE
APPRX	APPROXIMATE	MATL	MATERIAL
AR	ANCHOR ROD	MAX	MAXIMUM
ARCH	ARCHITECT OR ARCHITECTURAL	MB	UNFINISHED MACHINE BOLT
AVG	AVERAGE	MECH	MECHANICAL
BLDG	BUILDING	MEP	MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION
BLKG	BLOCKING		
BM	BEAM	MEZZ	MEZZANINE
BOT	BOTTOM	MFR	MANUFACTURER
BRDG	BRIDGING	MID	MIDDLE
BTWN	BETWEEN	MIN	MINIMUM
CIP	CAST-IN-PLACE	MISC	MISCELLANEOUS
CJ	CONTROL/CONSTRUCTION JOINT	MTL	METAL
CJP	COMPLETE JOINT PENETRATION	N/A	NOT APPLICABLE
CL	CENTER LINE	NIC	NOT IN CONTRACT
CLR	CLEAR OR CLEARANCE	NO	NUMBER
COL	COLUMN	NOM	NOMINAL
CONC	CONCRETE	NS	NEAR SIDE
CONN	CONNECTION(S)	NTS	NOT TO SCALE
CONST	CONSTRUCTION	NW	NORMAL WEIGHT
CONT	CONTINUOUS	NWC	NORMALWEIGHT CONCRETE
CTR	CENTER	OC	ON CENTER
CTRD	CENTERED	OD	OUTSIDE DIAMETER
CTRSK	COUNTERSINK	OF	OUTSIDE FACE
db	DIAMETER OF BOLT OR REBAR	OH	OPPOSITE HAND
DBL	DOUBLE	OPNG(S)	OPENING(S)
DEMO	DEMOLISH	OPP	OPPOSITE
DET	DETAIL	OSB	ORIENTED STRAND BOARD
DF	DOUGLAS FIR	PAF	POWDER ACTUATED FASTENER
DIA	DIAMETER	PERP	PERPENDICULAR
DIAG	DIAGONAL	PL	PLATE
DIM(S)	DIMENSION(S)	PLY	PLYWOOD
DL	DEAD LOAD	PSF	POUNDS PER SQUARE FOOT
DWG(S)	DRAWING(S)	PSI	POUNDS PER SQUARE INCH
DWL	DOWEL(S)	PSL	PARALLEL STRAND LUMBER
EA	EACH	RAD	RADIUS
ECC	ECCENTRICITY	REF	REFERENCE
EF	EACH FACE	REINF	REINFORCE(D) (ING) OR (MENT)
EJ	EXPANSION JOINT	REQD	REQUIRED
EL	ELEVATION	REV	REVISION
ELEC	ELECTRICAL	RWD	REDWOOD
EMBED	EMBEDMENT	SAD	SEE ARCHITECTURAL DRAWINGS
EN	EDGE NAIL	SCD	SEE CIVIL DRAWINGS
ENGR	ENGINEER	SCHED	SCHEDULE(D)
EOS	EDGE OF SLAB	SECT	SECTION
EQ	EQUAL	SEOR	STRUCTURAL ENGINEER OF RECORD
EQUIP	EQUIPMENT	SF	SQUARE FOOT (FEET)
ES	EACH SIDE	SHT	SHEET
EW	EACH WAY	SIM	SIMILAR
EXP	EXPANSION	SLRS	SEISMIC LOAD RESISTING SYSTEM
EXT	EXTERIOR	SMD	SEE MECHANICAL DRAWINGS
FF	FINISH FLOOR	SMS	SHEET METAL SCREW(S)
FIN	FINISH(ED)	SOG	SLAB ON GRADE
FLR	FLOOR	SP	SPACE
FN	FIELD NAILING	SPEC(S)	SPECIFICATION(S)
FND	FOUNDATION	SQ	SQUARE
FO	FACE OF	STAGG'D	STAGGERED
FRM'G	FRAMING	STD	STANDARD
FS	FAR SIDE	STIFF	STIFFENER
FTG	FOOTING	STL	STEEL
GA	GAGE, GAUGE	STR	STRUCTURE
GALV	GALVANIZED	STRCTL	STRUCTURAL
GB	GRADE BEAM	SYMM	SYMMETRICAL
GEN	GENERAL	T&B	TOP AND BOTTOM
GLB	GLUE-LAMINATED BEAM	T&G	TONGUE AND GROOVE
GR	GRADE		
GYP	GYPSPUM		
HD	HOLD/DOWN		
HDR	HEADER	TEMP	

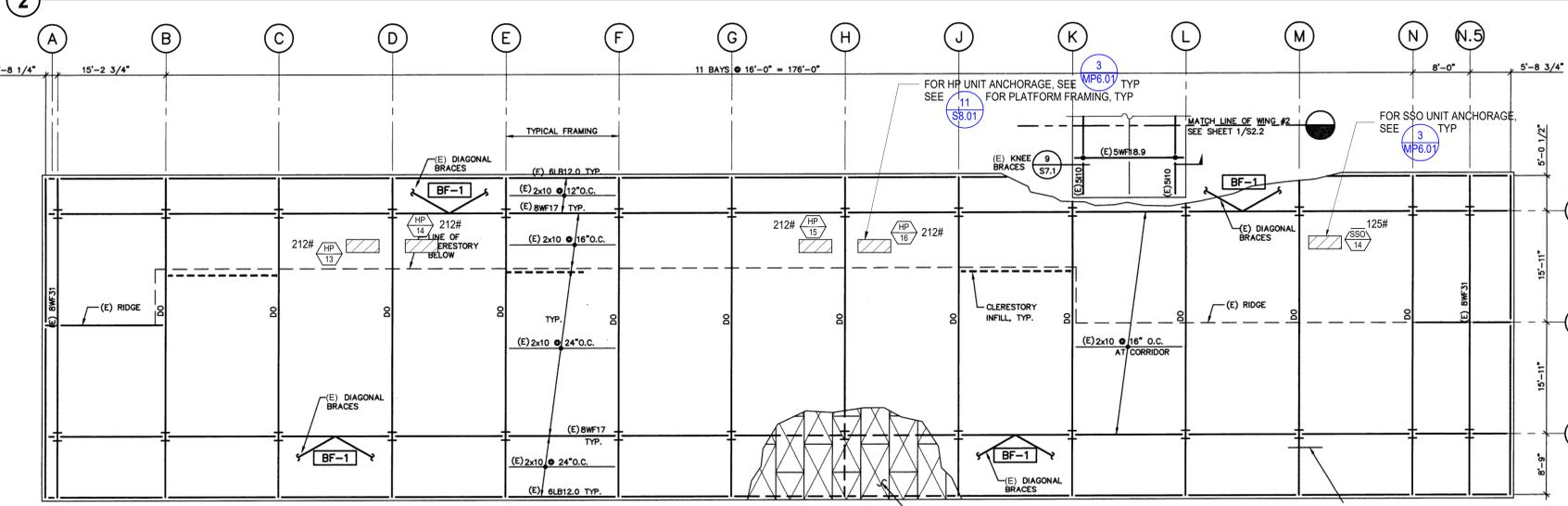


- SHEET NOTES:**
- LOCATIONS OF MECHANICAL UNITS ARE SHOWN FOR REFERENCE ONLY. SEE [16] A8.10, MP/2.03 AND MP/2.04 FOR UNIT LOCATIONS.
  - EXISTING STRUCTURAL FRAMING PLAN SHOWN IS TAKEN FROM DSA APPROVED AS-BUILT DRAWINGS AND IS SHOWN FOR REFERENCE ONLY.
  - SEE GENERAL NOTES ON SHEET S1.01.
  - SEE TYPICAL FRAMING DETAILS ON SHEET S8.01.

**1 EXISTING ROOF FRAMING PLAN - BLDG A**

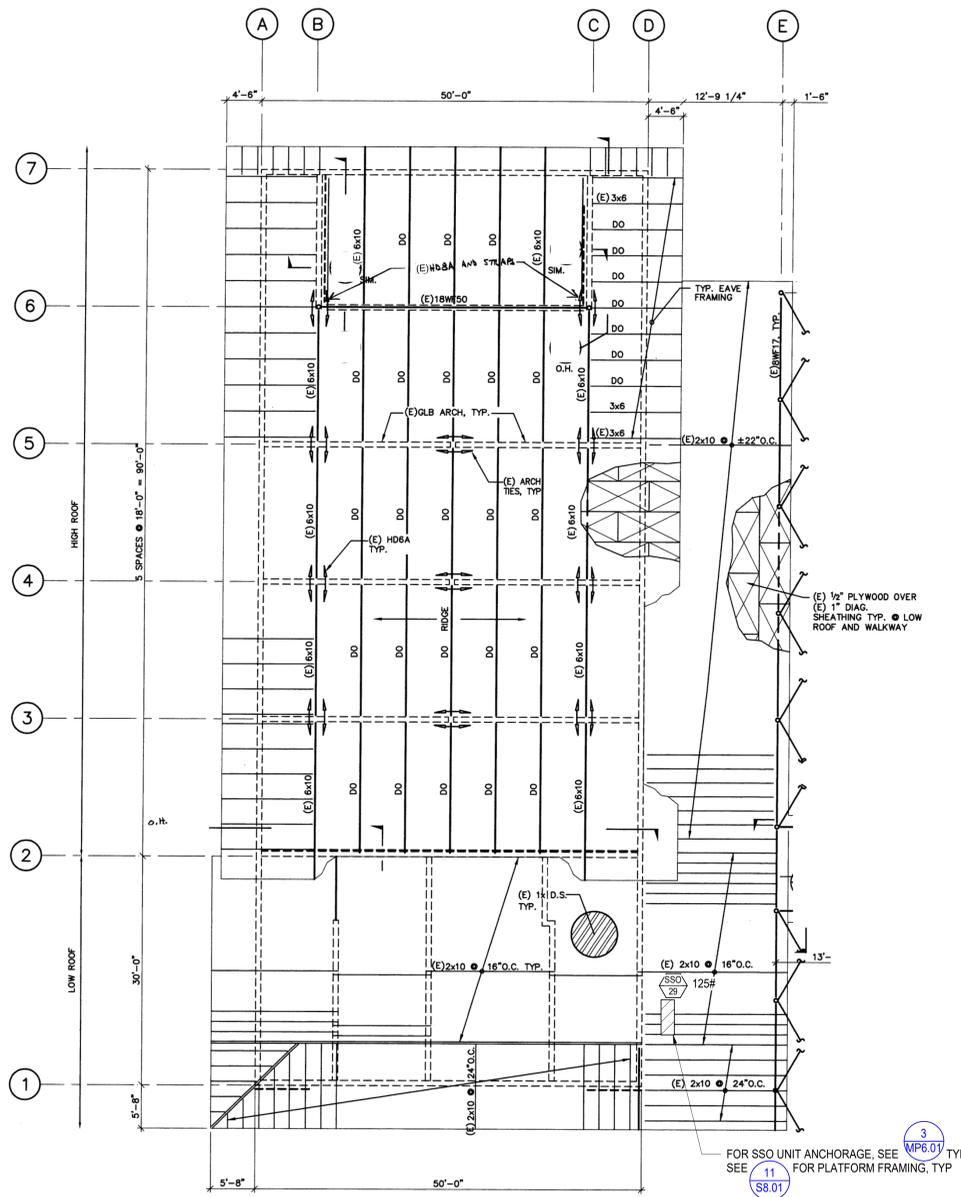


**2 EXISTING ROOF FRAMING PLAN - BLDG B**

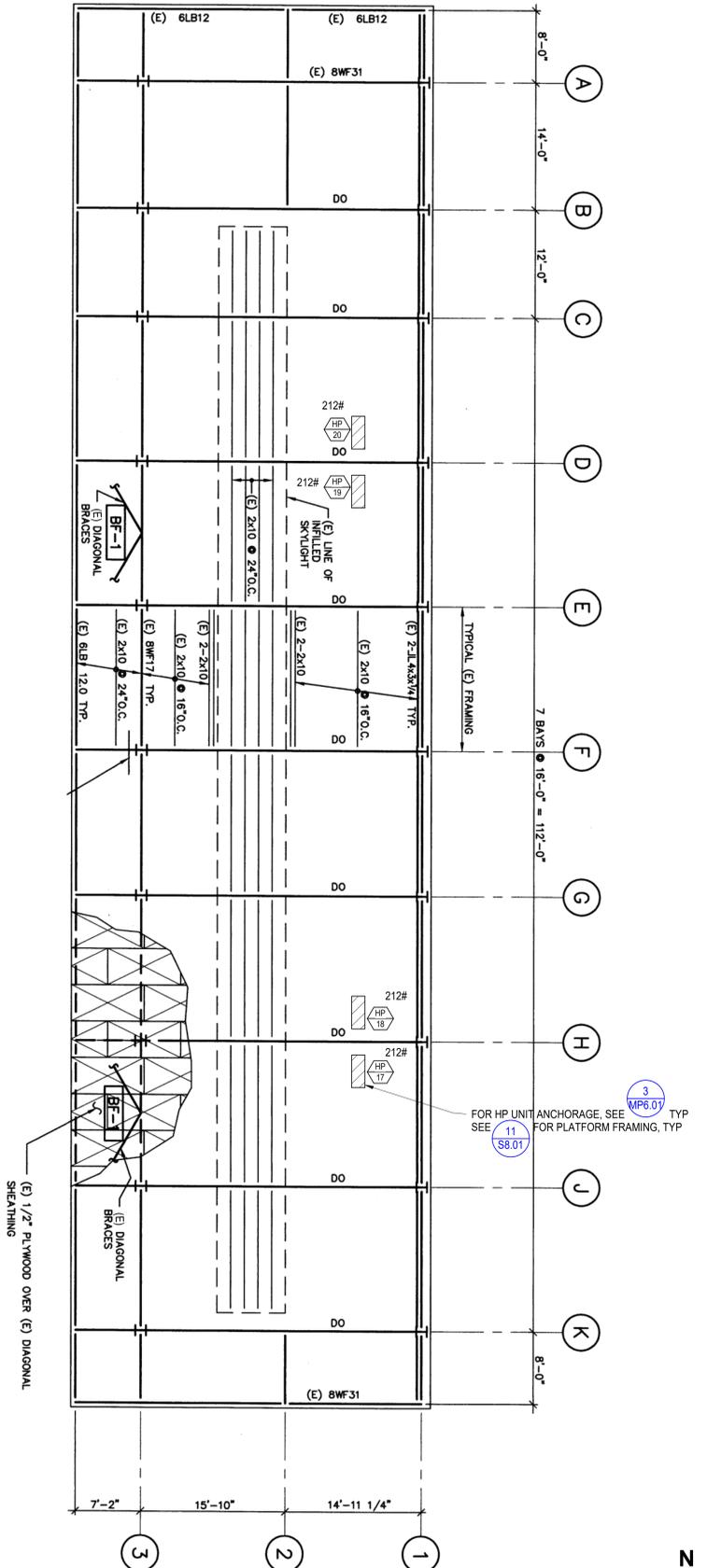


**3 EXISTING ROOF FRAMING PLAN - BLDG C**

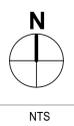
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**2** EXISTING ROOF FRAMING PLAN - BLDG E



**1** EXISTING ROOF FRAMING PLAN - BLDG D

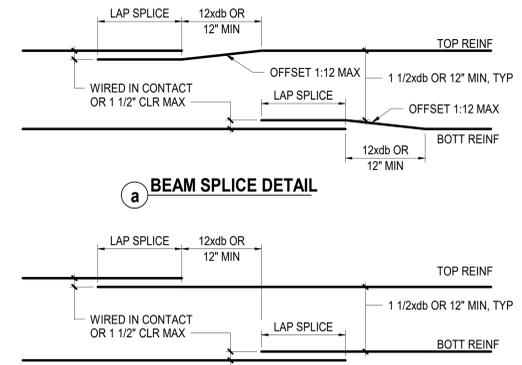


- SHEET NOTES:**
- LOCATIONS OF MECHANICAL UNITS ARE SHOWN FOR REFERENCE ONLY. SEE [A8.10](#), MP/2.03 AND MP/2.04 FOR UNIT LOCATIONS.
  - EXISTING STRUCTURAL FRAMING PLAN SHOWN IS TAKEN FROM DSA APPROVED AS-BUILT DRAWINGS AND IS SHOWN FOR REFERENCE ONLY.
  - SEE GENERAL NOTES ON SHEET S1.01.
  - SEE TYPICAL FRAMING DETAILS ON SHEET S8.01.

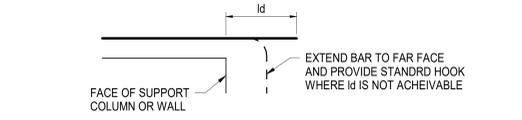
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CONCRETE STRENGTH		3000 PSI			
REINFORCING CONFIGURATION		CASE 1		CASE 2	
BAR LOCATION		TOP	OTHER	TOP	OTHER
CLASS A LAP SPlice AND STRAIGHT DEVELOPMENT LENGTH Ld (INCHES)	#3	22	17	32	25
	#4	29	22	43	33
	#5	36	28	54	41
	#6	43	33	64	50
	#7	63	48	94	72
	#3	28	22	42	32
	#4	37	29	56	43
CLASS B LAP SPlice (INCHES)	#5	47	36	70	54
	#6	56	43	84	64
	#7	81	63	122	94

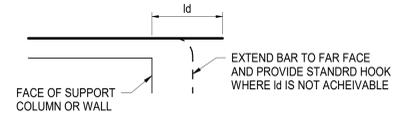
- NOTES:
- VALUES IN THE TABLE ARE FOR NON-EPOXY COATED GRADE 60 REINFORCING STEEL AND NORMAL WEIGHT CONCRETE.
  - CASES 1 AND 2 ARE DEPENDENT ON THE TYPE OF CONCRETE ELEMENT, CONCRETE COVER AND CENTER-TO-CENTER SPACING OF REINFORCING BARS. THEY ARE DEFINED AS:
    - CASE 1: BEAM AND COLUMNS:
      - CONCRETE COVER  $\geq$  db
      - CENTER-TO-CENTER SPACING  $\geq 2x$  db, AND
      - STIRRUPS OR TIES PROVIDED THROUGHOUT
    - OTHER ELEMENTS:
      - CONCRETE COVER  $\geq$  db AND
      - CENTER-TO-CENTER SPACING  $\geq 3x$  db
    - CASE 2: BEAM AND COLUMNS:
      - CONCRETE COVER  $<$  db
      - CENTER-TO-CENTER SPACING  $< 2x$  db
    - OTHER ELEMENTS:
      - CONCRETE COVER  $<$  db AND
      - CENTER-TO-CENTER SPACING  $< 2x$  db
  - TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF FRESH CONCRETE BELOW. OTHER BAR INCLUDE ALL VERTICAL REINFORCING, ALL HORIZONTAL WALL REINFORCING AND HORIZONTAL REINFORCING WITH LESS THAN 12" OF FRESH CONCRETE BELOW BAR.
  - PROVIDE CLASS B LAP SPLICES, U.O.N.
  - FOR LIGHTWEIGHT CONCRETE, MULTIPLY THE VALUES IN THIS TABLE BY 1.3.
  - WHERE  $l_d$  IS NOT OBTAINABLE DUE TO SPACE RESTRICTIONS, PROVIDE A STANDARD HOOK PER DETAIL 2.
  - FOR EPOXY-COATED BARS, MULTIPLY THE VALUE IN THIS TABLE BY 1.5.
  - SPLICES OF HORIZONTAL REINFORCING BARS IN WALLS AND SLABS SHALL BE STAGGERED. SPLICES OF HORIZONTAL REINFORCING BARS IN WALLS AND SLABS CONTAINING TWO CURTAINS OF REINFORCEMENT SHALL NOT OCCUR IN THE SAME LOCATION; SPLICES SHALL BE OFFSET BY THE MAXIMUM OF 12 INCHES AND 12 BAR DIAMETERS.
  - SEE SHORTCRETE NOTES FOR LAP SPLICES IN SHOTCRETE WALLS.
  - MECHANICAL COUPLERS MAY BE USED IN LIEU OF LAP SPLICES. MECHANICAL COUPLERS SHALL HAVE AN APPROVED ICC REPORT AND RESIST 125% OF REINFORCING BAR YIELD STRENGTH.
  - WHERE BARS OF DIFFERENT SIZES ARE SPLICED, SPLICE LENGTH SHALL BE THE MAXIMUM OF  $l_d$  OF THE LARGER BAR AND THE LAP SPLICE LENGTH OF THE SMALLER BAR.
  - LAP TOP BARS AT MIDSPAN AND BOTTOM BARS AT SUPPORT, U.O.N.
  - NON-CONTACT LAP SPLICED BARS SHALL BE SPLACED AT LEAST 1 1/2" AND NO MORE THAN THE MAXIMUM OF ONE-FIFTH OF THE LAP SPLICE AND 6".



(a) BEAM SPLICE DETAIL

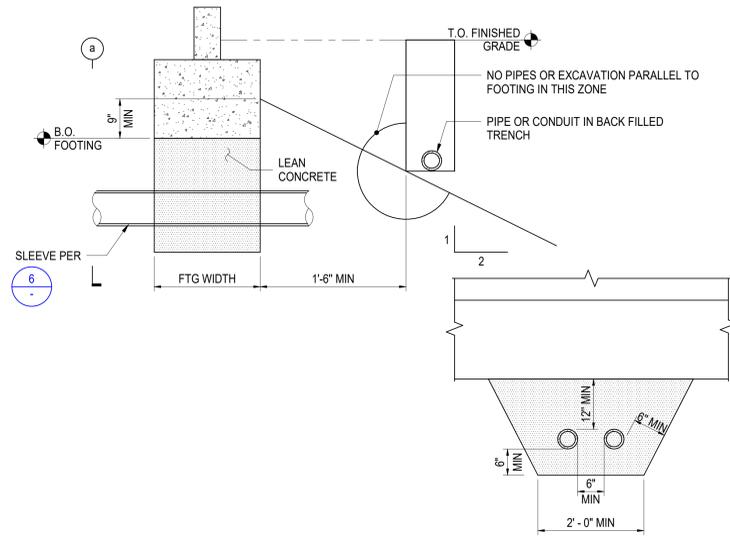


(b) STRAGGERED WALL OR SLAB SPLICE DETAIL

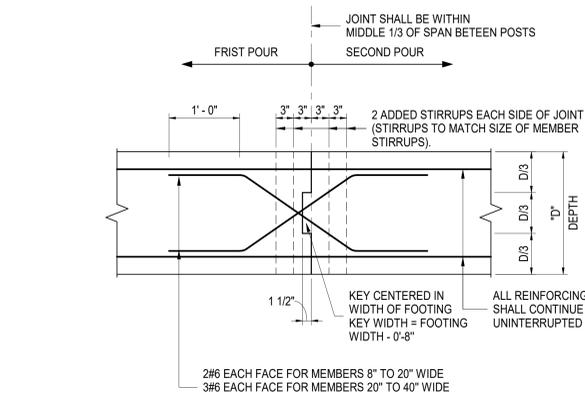


(c) BEAM AT SUPPORT

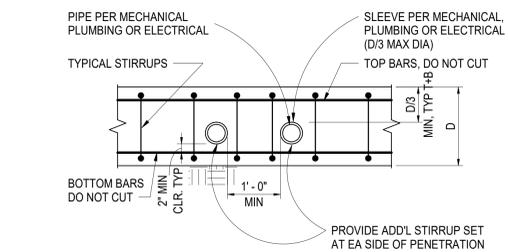
7 LAP SPLICE + STRAIGHT BAR DEVELOPMENT LENGTHS



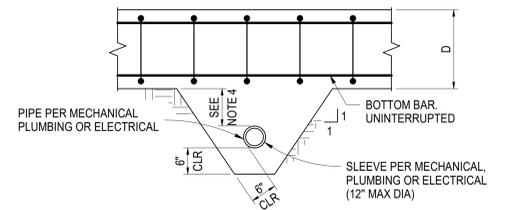
8 TYPICAL EXCAVATION PARALLEL TO FTG



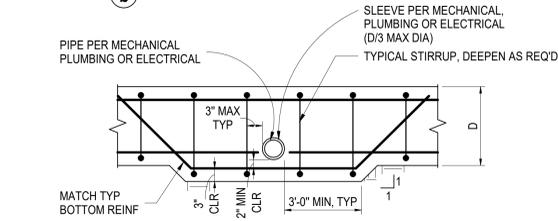
9 CONTINUOUS FOOTING CONSTRUCTION JOINT DETAIL



(a) CLEAR OF TOP & BOTTOM REINF



(b) BELOW BOTTOM REINF



(c) AT BOTTOM REINF

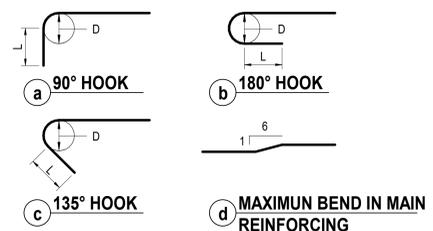
- NOTES:
- ALL PIPES AND CONDUITS SHALL CLEAR SLEEVE BY 1" ALL AROUND U.O.N.
  - SEAL VOID BETWEEN PIPE AND SLEEVE WITH ELASTIC WATERPROOF MATERIAL, TYP.
  - DETAIL APPLICABLE TO MAXIMUM 8" DIA SLEEVE.
  - NO FTG EXTENSION REQD FOR PIPE DEEPER THAN 12" BELOW FTG (SLEEVE STILL REQD). SEE DETAIL 8 ON THIS SHEET.
  - WHERE PENETRATION CONFLICTS WITH REBAR TIE, OMIT TIE & PROVIDE 1 ADDITIONAL TIE EA SIDE OF SLEEVE.
  - IF PIPE OR CONDUIT SLEEVE IS ASTM A53 SCHEDULE 40 OR GREATER PIPE, ADDITIONAL STIRRUPS MAY BE ELIMINATED, SLEEVE SHALL GALVAIZED.

6 TYPICAL FOOTING PENETRATION

BAR SIZE	HOOKED BAR DEVELOPMENT LENGTH, $l_{dh}$		
	3000 PSI	4000 PSI	5000 PSI
#3	0' - 8"	0' - 7"	0' - 6"
#4	0' - 11"	0' - 9"	0' - 9"
#5	1' - 2"	1' - 0"	0' - 11"
#6	1' - 4"	1' - 2"	1' - 1"
#7	1' - 7"	1' - 5"	1' - 3"

- NOTES:
- THE HOOKED BAR DEVELOPMENT LENGTHS IN THIS TABLE ARE FOR NORMALWEIGHT CONCRETE. FOR LIGHTWEIGHT CONCRETE, THE HOOKED BAR DEVELOPMENT LENGTH SHALL NOT BE LESS THEN  $10x_{db}$ , 7 1/2" AND  $1.3x_{l_{dh}}$  PER THE TABLE ABOVE.
  - THE HOOKED BAR DEVELOPMENT LENGTHS IN THIS TABLE APPLY TO MEMBERS WITH:
    - SIDE COVER EQUAL TO AT LEAST 2 1/2".
    - END COVER EQUAL TO AT LEAST 2".

2 HOOKED BAR DEVELOPMENT LENGTHS



BAR SIZE	MAIN REINFORCING HOOKS		
	BEND DIAMETER, D (IN)	90° HOOK L (IN)	180° HOOK L (IN)
#3	2 1/4	4 1/2	2 1/2
#4	3	6	2 1/2
#5	3 3/4	7 1/2	2 1/2
#6	4 1/2	9	3
#7	5 1/4	10 1/2	3 1/2

BAR SIZE	STIRRUP + TIE REINFORCING HOOKS		
	BEND DIAMETER, D (IN)	90° HOOK L (IN)	180° HOOK L (IN)
#3	1 1/2	3	3
#4	2	3	3
#5	2 1/2	3 3/4	3 3/4
#6	4 1/2	9	4 1/2
#7	5 1/4	10 1/2	5 1/4

3 TYPICAL BAR HOOKS

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DIV. OF THE STATE ARCHITECT  
APP: 01-119526 INC.  
REVIEWED FOR  
SS  FLS  ACS   
DATE: 10/27/2021

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PROJECT

NORTH SHOREVIEW  
ELEMENTARY  
SCHOOL - HVAC  
REPLACEMENT

SAN MATEO-FOSTER CITY  
SCHOOL DISTRICT

CONSULTANT

BASE  
DESIGN

582 MARKET ST. STE. 1402  
SAN FRANCISCO, CA 94104  
Office: (415) 466-2997  
www.BASEdesigninc.com

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DSA FILE NUMBER 41-26  
APPL # 01-119526

REVISIONS  
No. Description Date

MILESTONES  
DD  
90% CD  
DSA SUB 05/24/2021  
BACKCHECK 10/22/2021

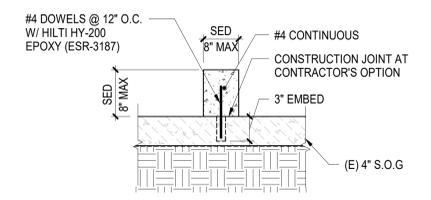
SHEET

TYPICAL  
CONCRETE  
DETAILS

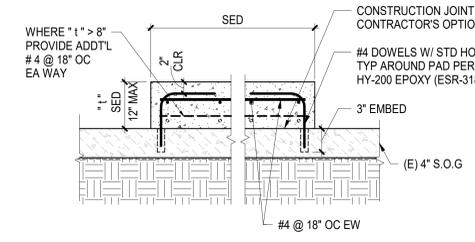
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JOB # 2021005.05

SHEET #

S5.01

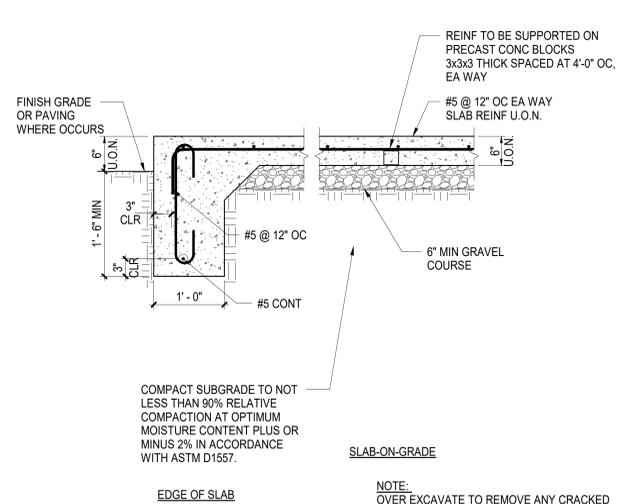


**B CURB AT SLAB-ON-GRADE**

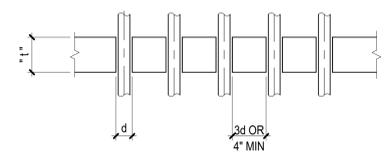


**A CURB WIDTH > 8"**

**9 CURBS AND HOUSEKEEPING PADS AT (E) S.O.G** NTS

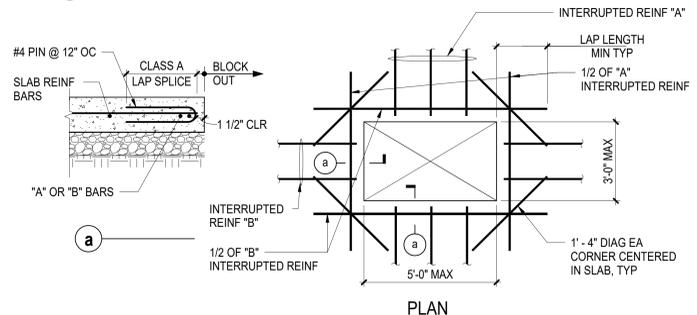


**5 SLAB-ON-GRADE DETAIL** NTS



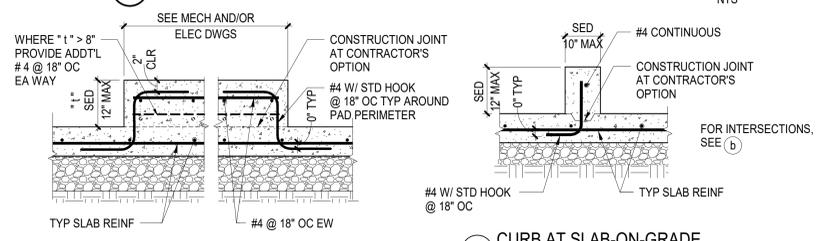
- NOTES:  
 1. DO NOT CUT REINFORCING.  
 2. IF 4" MINIMUM CLEAR DISTANCE BETWEEN SLEEVES IS NOT POSSIBLE, THIS CONDITION SHALL BE TREATED AS A SLAB OPENING PER DETAIL **7**.  
 3. USE OF ALUMINUM CONDUIT IS PROHIBITED.

**6 PIPING & CONDUIT THROUGH SLAB** NTS

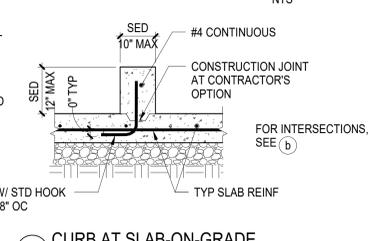


- NOTES:  
 1. OPENING SIZE, LOCATION, AND REINFORCING SHALL BE SUBMITTED AS PART OF THE REINFORCING SHOP DRAWING SUBMITTAL FOR REVIEW AND APPROVAL.  
 2. AT EACH SIDE OF THE OPENING, ADD NOT LESS THAN ONE-HALF THE AREA OF REINFORCING THAT IS INTERRUPTED BY THE OPENING. WHERE THE BAR LENGTH PAST THE OPENING IS INTERRUPTED BY AN EDGE OF SLAB, PROVIDE A STANDARD HOOK AT THE DISCONTINUOUS END.  
 3. WHERE THE DIAGONAL LENGTH IS INTERRUPTED BY AN EDGE OF SLAB, PROVIDE A STANDARD HOOK.  
 4. NOT REQUIRED AT COLUMN LOCATIONS.

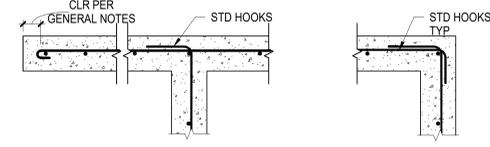
**7 OPENING IN SLAB-ON-GRADE** NTS



**b HOUSEKEEPING PAD AT SLAB-ON-GRADE**



**a CURB AT SLAB-ON-GRADE**



**c CONCRETE CURB INTERSECTIONS**

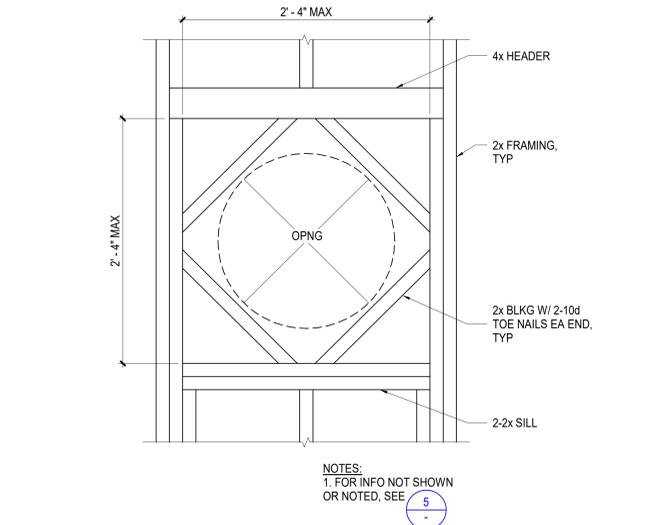
**8 CURBS AND HOUSEKEEPING PADS** NTS

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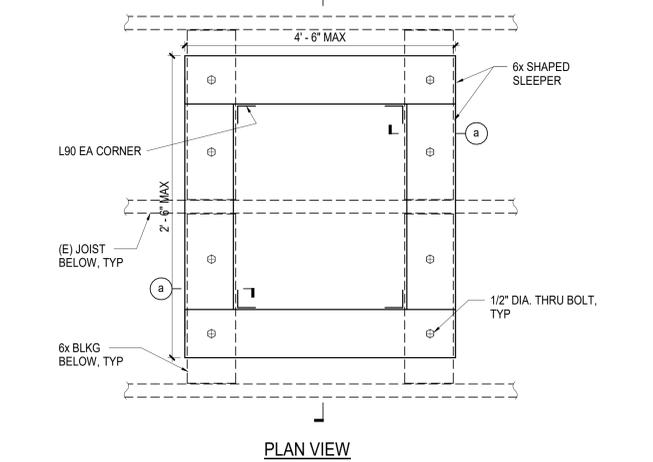
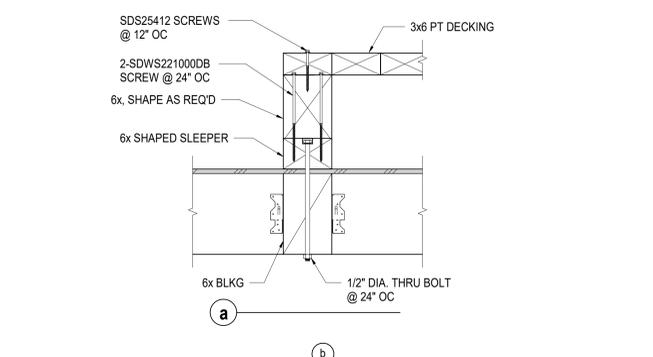
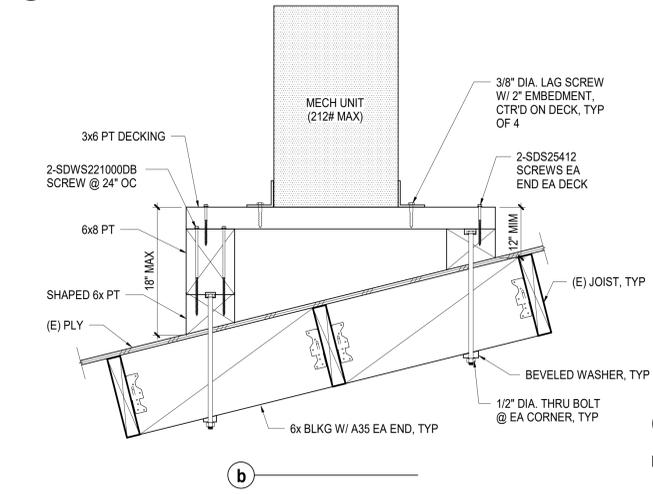
FASTENING SCHEDULE		
DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
<b>ROOF</b>		
1. Blocking between ceiling joists, rafters or trusses to top plate or other framing below	3-8d common (2 1/2" x 0.131"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Each end, toenail
Blocking between rafters or truss not at the wall top plate, to rafter or truss	2-8d common (2 1/2" x 0.131") 2-3" x 0.131" nails 2-3" 14 gage staples	Each end, toenail
Flat blocking to truss and web filler	2-16d common (3 1/2" x 0.162") 3-3" x 0.131" nails 3-3" 14 gage staples	End nail
2. Ceiling joists to top plate	16d common (3 1/2" x 0.162") @ 6" o.c. 3" x 0.131" nails @ 6" o.c. 3" x 14 gage staples @ 6" o.c.	Face nail
3. Ceiling joist not attached to parallel rafter, laps over partitions (no thrust)	3-8d common (2 1/2" x 0.131"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Each joist, toenail
4. Ceiling joist attached to parallel rafter (heel joint)	3-16d common (3 1/2" x 0.162") 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	Face nail
5. Collar tie to rafter	3-10d common (3" x 0.148"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	Face nail
6. Rafter or roof truss to top plate	3-10 common (3" x 0.148"); or 3-16d box (3 1/2" x 0.135"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	Toenail
7. Roof rafters to ridge valley or hip rafters; or roof rafter to 2-inch ridge beam	2-16d common (3 1/2" x 0.162"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown; or 3-10d common (3 1/2" x 0.148"); or 4-16d box (3 1/2" x 0.135"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	End nail Toenail
<b>WALL</b>		
8. Stud to stud (not at braced wall panels)	16d common (3 1/2" x 0.162"); 10d box (3" x 0.128"); or 3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	24" o.c. face nail 16" o.c. face nail
9. Stud to stud and abutting studs at intersecting wall corners (at braced wall panels)	16d common (3 1/2" x 0.162"); or 16d box (3 1/2" x 0.135"); or 3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	16" o.c. face nail 12" o.c. face nail 12" o.c. face nail
10. Built-up header (2" to 2" header)	16d common (3 1/2" x 0.162"); or 16d box (3 1/2" x 0.135")	16" o.c. each edge, face nail 12" o.c. each edge, face nail
11. Continuous header to stud	4-8d common (2 1/2" x 0.131"); or 4-10d box (3" x 0.128")	Toenail
12. Top plate to top plate	16d common (3 1/2" x 0.162"); or 10d box (3" x 0.128"); or 3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	16" o.c. face nail 12" o.c. face nail
13. Top plate to top plate, at end joints	8-16d common (3 1/2" x 0.162"); or 12-10d box (3" x 0.128"); or 12-3" x 0.131" nails; or 12-3" 14 gage staples, 7/16" crown	Each side of end joint, face nail (minimum 24" lap splice length each side of end joint)
14. Bottom plate to joist, rim joist, band joist or blocking (not at braced wall panels)	16d common (3 1/2" x 0.162"); or 16d box (3 1/2" x 0.135"); or 3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	16" o.c. face nail 12" o.c. face nail
15. Bottom plate to joist, rim joist, band joist or blocking at braced wall panels	2-16d common (3 1/2" x 0.162"); or 3-16d box (3 1/2" x 0.135"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	16" o.c. face nail
16. Stud to top or bottom plate	4-8d common (2 1/2" x 0.131"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown; or 2-16d common (3 1/2" x 0.162"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Toenail End nail
17. Top plates, laps at corners and intersections	2-16d common (3 1/2" x 0.162"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Face nail
18. 1" brace to each stud and plate	2-8d common (2 1/2" x 0.131"); or 2-10d box (3" x 0.128"); or 2-3" x 0.131" nails; or 2-3" 14 gage staples, 7/16" crown	Face nail
19. 1" x 6" sheathing to each bearing	2-8d common (2 1/2" x 0.131"); or 2-10d box (3" x 0.128")	Face nail
20. 1" x 8" and wider sheathing to each bearing	3-8d common (2 1/2" x 0.131"); or 3-10d box (3" x 0.128")	Face nail

**For S1: 1 inch = 25.4 mm.**  
a. Nails spaced at 6 inches at intermediate supports where spans are 48 inches or more. Nails for wall sheathing are permitted to be common, box or casing.  
b. Spacing shall be 6 inches on center on the edges and 12 inches on center at intermediate supports for nonstructural applications. Panel supports at 16 inches (20 inches if strength axis in the long direction of the panel, unless otherwise marked).  
c. Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule and the ceiling joist is fastened to the top plate in accordance with this schedule, the number of toenails in the rafter shall be permitted to be reduced by one nail.  
d. RSR-01 is a Roof Sheathing Ring Shank nail meeting the specifications in ASTM F1667.

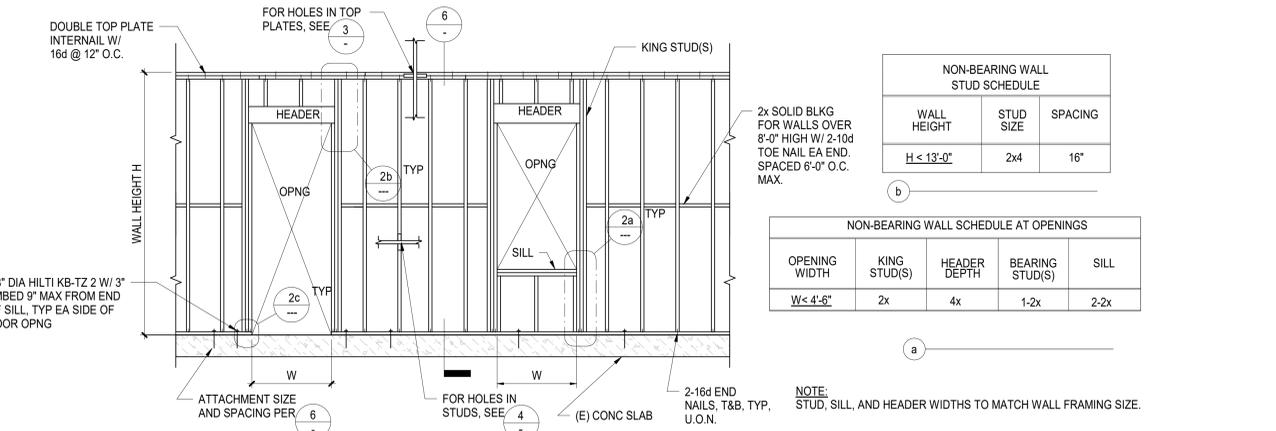
**12 NAILING SCHEDULE**



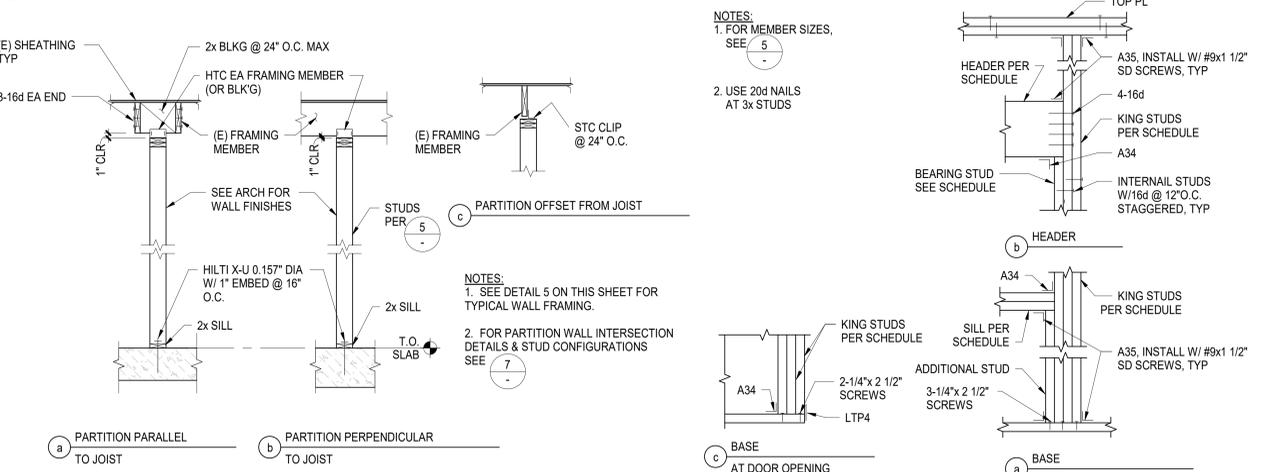
**9 FRAMING DETAIL AT ROUND OPENING**



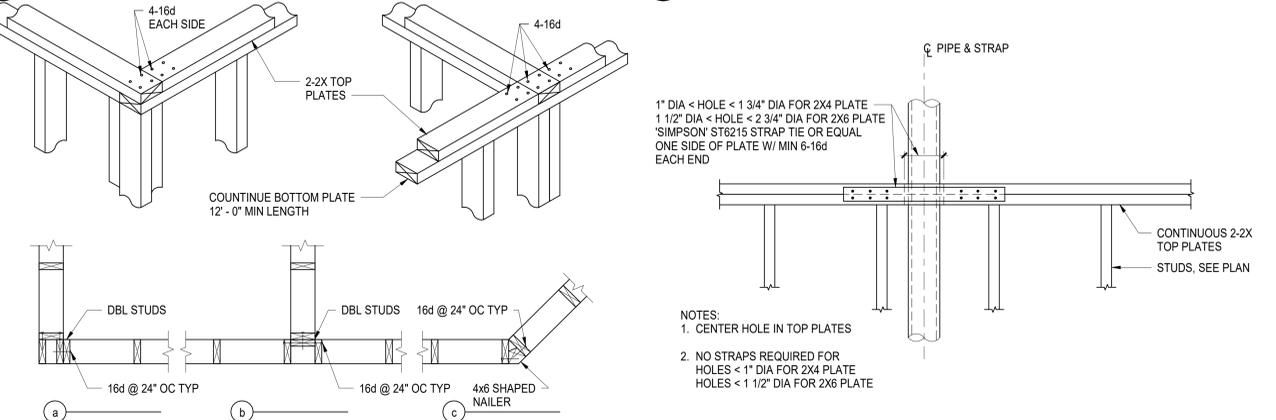
**11 MECH UNIT PLATFORM FRAMING DETAIL**



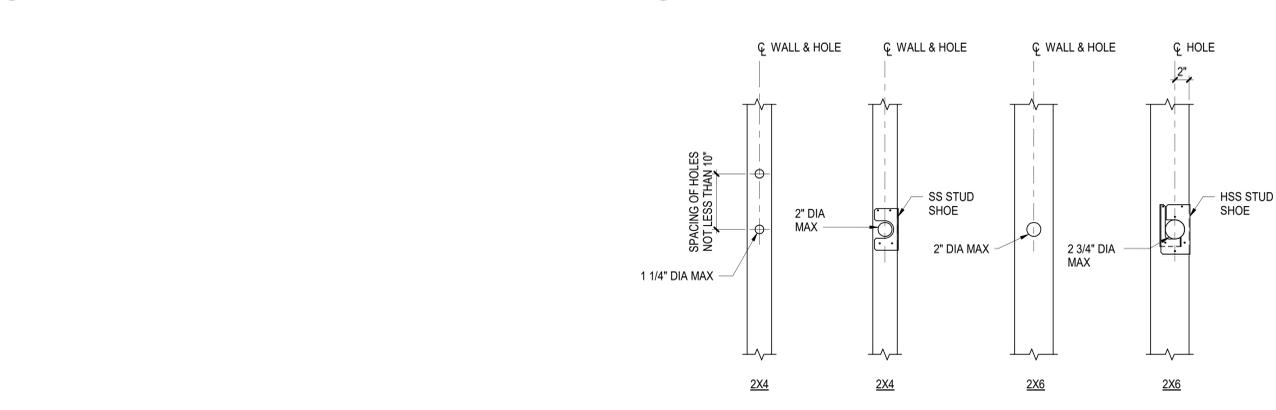
**5 TYPICAL INTERIOR NON-BEARING WALL FRAMING**



**6 NON-BEARING WALL PARTITION**



**7 WALL INTERSECTIONS**



**3 TOP PLATE PENETRATIONS**

**4 PENETRATIONS IN STUDS**

NON-BEARING WALL STUD SCHEDULE		
WALL HEIGHT	STUD SIZE	SPACING
H < 13'-0"	2x4	16"

NON-BEARING WALL SCHEDULE AT OPENINGS				
OPENING WIDTH	KING STUD(S)	HEADER DEPTH	BEARING STUD(S)	SILL
W < 4'-6"	2x	4x	1-2x	2-2x

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**aedis**  
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San Jose, CA 95113  
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fax: (408) 300-5121

PROJECT  
**NORTH SHOREVIEW ELEMENTARY SCHOOL - HVAC REPLACEMENT**

SAN MATEO-FOSTER CITY SCHOOL DISTRICT  
CONSULTANT

**BASE DESIGN**  
582 MARKET ST. STE. 1402  
SAN FRANCISCO, CA 94104  
Office: (415) 466-2997  
www.BASEdesigninc.com

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NO. 5594  
CALIFORNIA  
STATE OF CALIFORNIA

STATE DSA FILE NUMBER **41-26**  
APPL # **01-119526**

REVISIONS  
No. Description Date

MILESTONES  
DD  
90% CD  
DSA SUB 05/24/2021  
BACKCHECK 10/22/2021

SHEET  
**FRAMING DETAILS AND NAILING SCHEDULE**

DATE 10/22/2021  
JOB # 2021005.05  
SHEET #

**S8.01**

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AIR DISTRIBUTION SCHEDULE						
TAG	MANUFACTURER	MODEL NO.	DESCRIPTION	BORDER TYPE	MOUNTING DETAIL	NOTES
HSS-1	TITUS	S30FL	HIGH SIDEWALL SUPPLY	TYPE 1	12/MP6.01	1, 2, 4
LSR-1	TITUS	350RL	LOW SIDEWALL RETURN	TYPE 1	13/MP6.01	2, 3
RG-1	TITUS	30RL	RELIEF GRILLE	TYPE 1	10/MP6.01	2, 5

1. SET BLADES AT 22.5° DEFLECTION.
2. PRIME AND PAINT PER ARCHITECT'S INSTRUCTIONS. REGISTER COLOR SELECTED BY ARCHITECT.
3. PROVIDE WITH AIRSAN COMPACT DUCT SILENCER.
4. PROVIDE WITH ASD AIR SCOOP DEVICE.
5. CONTRACTOR TO FIELD VERIFY (E) DIMENSIONS PRIOR TO ORDERING.

CLASSROOM SPLIT SYSTEM HEAT PUMPS SCHEDULE																	
TAG	MANUFACTURER	MODEL	LOCATION	COOLING TOTAL MBH	HEATING TOTAL MBH	AIRFLOW CFM	OUTSIDE AIR CFM	REFRIGERANT PIPING		SEER	HSPF	ELECTRICAL			WEIGHT LBS	MOUNTING DETAIL	NOTES
								LIQUID	GAS			V/PH	MCA	MOCF			
FC-1	SAMSUNG	AC054KNZDCHIAA	BLDG A CLASSROOM 1	54	60	1150	450	3/8"	3/4"	-	-	NOTE 8			164	1/MP6.01	2, 3, 4, 6, 7, 8
HP-1	SAMSUNG	AC054KXADCHIAA	ROOF			-	-	3/8"	3/4"	17.1	9.0	208/1	42	70	212	3/MP6.01	1
FC-2	SAMSUNG	AC054KNZDCHIAA	BLDG A CLASSROOM 2	54	60	1150	450	3/8"	3/4"	-	-	NOTE 8			164	1/MP6.01	2, 3, 4, 6, 7, 8
HP-2	SAMSUNG	AC054KXADCHIAA	ROOF			-	-	3/8"	3/4"	17.1	9.0	208/1	42	70	212	3/MP6.01	1
FC-3	SAMSUNG	AC054KNZDCHIAA	BLDG A CLASSROOM 3	54	60	1150	450	3/8"	3/4"	-	-	NOTE 8			164	1/MP6.01	2, 3, 4, 6, 7, 8
HP-3	SAMSUNG	AC054KXADCHIAA	ROOF			-	-	3/8"	3/4"	17.1	9.0	208/1	42	70	212	3/MP6.01	1
FC-4	SAMSUNG	AC054KNZDCHIAA	BLDG A CLASSROOM 4	54	60	1150	450	3/8"	3/4"	-	-	NOTE 8			164	1/MP6.01	2, 3, 4, 6, 7, 8
HP-4	SAMSUNG	AC054KXADCHIAA	ROOF			-	-	3/8"	3/4"	17.1	9.0	208/1	42	70	212	3/MP6.01	1
FC-5	SAMSUNG	AC024KNZDCHIAA	BLDG A CLASSROOM 5	24	27	760	150	1/4"	5/8"	-	-	NOTE 8			100	1/MP6.01	2, 3, 4, 6, 7, 8
HP-5	SAMSUNG	AC024JXADCHIAA	ROOF			-	-	1/4"	5/8"	19.5	11.5	208/1	13.6	20	145	3/MP6.01	1
FC-6	SAMSUNG	AC054KNZDCHIAA	BLDG A CLASSROOM 6	54	60	1600	450	3/8"	3/4"	-	-	NOTE 8			164	1/MP6.01	2, 3, 4, 6, 7, 8
HP-6	SAMSUNG	AC054KXADCHIAA	ROOF			-	-	3/8"	3/4"	17.1	9.0	208/1	42	70	212	3/MP6.01	1
FC-7	SAMSUNG	AC054KNZDCHIAA	BLDG A CLASSROOM 7	54	60	1600	450	3/8"	3/4"	-	-	NOTE 8			164	1/MP6.01	2, 3, 4, 6, 7, 8
HP-7	SAMSUNG	AC054KXADCHIAA	ROOF			-	-	3/8"	3/4"	17.1	9.0	208/1	42	70	212	3/MP6.01	1
FC-8	SAMSUNG	AC024KNZDCHIAA	BLDG A CLASSROOM 8	24	27	760	150	1/4"	5/8"	-	-	NOTE 8			100	1/MP6.01	2, 3, 4, 6, 7, 8
HP-8	SAMSUNG	AC024JXADCHIAA	ROOF			-	-	1/4"	5/8"	19.5	11.5	208/1	13.58	20	145	3/MP6.01	1
FC-8a	SAMSUNG	AC024KNZDCHIAA	BLDG B ROOM 8a	24	27	760	150	1/4"	5/8"	-	-	NOTE 8			100	1/MP6.01	2, 3, 4, 6, 7, 8
HP-8a	SAMSUNG	AC024JXADCHIAA	ROOF			-	-	1/4"	5/8"	19.5	11.5	208/1	13.58	20	145	3/MP6.01	1
FC-10	SAMSUNG	AC054KNZDCHIAA	BLDG B CLASSROOM 10	54	60	1150	450	3/8"	3/4"	-	-	NOTE 8			164	1/MP6.01	2, 3, 4, 6, 7, 8
HP-10	SAMSUNG	AC054KXADCHIAA	ROOF			-	-	3/8"	3/4"	17.1	9.0	208/1	42	70	212	3/MP6.01	1
FC-11	SAMSUNG	AC054KNZDCHIAA	BLDG B CLASSROOM 11	54	60	1150	450	3/8"	3/4"	-	-	NOTE 8			164	1/MP6.01	2, 3, 4, 6, 7, 8
HP-11	SAMSUNG	AC054KXADCHIAA	ROOF			-	-	3/8"	3/4"	17.1	9.0	208/1	42	70	212	3/MP6.01	1
FC-12	SAMSUNG	AC054KNZDCHIAA	BLDG B CLASSROOM 12	54	60	1150	450	3/8"	3/4"	-	-	NOTE 8			164	1/MP6.01	2, 3, 4, 6, 7, 8
HP-12	SAMSUNG	AC054KXADCHIAA	ROOF			-	-	3/8"	3/4"	17.1	9.0	208/1	42	70	212	3/MP6.01	1
FC-13	SAMSUNG	AC054KNZDCHIAA	BLDG C CLASSROOM 13	54	60	1150	450	3/8"	3/4"	-	-	NOTE 8			164	1/MP6.01	2, 3, 4, 6, 7, 8
HP-13	SAMSUNG	AC054KXADCHIAA	ROOF			-	-	3/8"	3/4"	17.1	9.0	208/1	42	70	212	3/MP6.01	1
FC-14	SAMSUNG	AC054KNZDCHIAA	BLDG C CLASSROOM 14	54	60	1150	450	3/8"	3/4"	-	-	NOTE 8			164	1/MP6.01	2, 3, 4, 6, 7, 8
HP-14	SAMSUNG	AC054KXADCHIAA	ROOF			-	-	3/8"	3/4"	17.1	9.0	208/1	42	70	212	3/MP6.01	1
FC-15	SAMSUNG	AC054KNZDCHIAA	BLDG C CLASSROOM 15	54	60	1150	450	3/8"	3/4"	-	-	NOTE 8			164	1/MP6.01	2, 3, 4, 6, 7, 8
HP-15	SAMSUNG	AC054KXADCHIAA	ROOF			-	-	3/8"	3/4"	17.1	9.0	208/1	42	70	212	3/MP6.01	1
FC-16	SAMSUNG	AC054KNZDCHIAA	BLDG C CLASSROOM 16	54	60	1150	450	3/8"	3/4"	-	-	NOTE 8			164	1/MP6.01	2, 3, 4, 6, 7, 8
HP-16	SAMSUNG	AC054KXADCHIAA	ROOF			-	-	3/8"	3/4"	17.1	9.0	208/1	42	70	212	3/MP6.01	1
FC-17	SAMSUNG	AC054KNZDCHIAA	BLDG D CLASSROOM 17	54	60	1150	450	3/8"	3/4"	-	-	NOTE 8			164	1/MP6.01	2, 3, 4, 5, 6, 7, 8
HP-17	SAMSUNG	AC054KXADCHIAA	ROOF			-	-	3/8"	3/4"	17.1	9.0	208/1	42	70	212	3/MP6.01	1
FC-18	SAMSUNG	AC054KNZDCHIAA	BLDG D CLASSROOM 18	54	60	1150	450	3/8"	3/4"	-	-	NOTE 8			164	1/MP6.01	2, 3, 4, 5, 6, 7, 8
HP-18	SAMSUNG	AC054KXADCHIAA	ROOF			-	-	3/8"	3/4"	17.1	9.0	208/1	42	70	212	3/MP6.01	1
FC-19	SAMSUNG	AC054KNZDCHIAA	BLDG D CLASSROOM 19	54	60	1150	450	3/8"	3/4"	-	-	NOTE 8			164	1/MP6.01	2, 3, 4, 5, 6, 7, 8
HP-19	SAMSUNG	AC054KXADCHIAA	ROOF			-	-	3/8"	3/4"	17.1	9.0	208/1	42	70	212	3/MP6.01	1
FC-20	SAMSUNG	AC054KNZDCHIAA	BLDG D CLASSROOM 20	54	60	1150	450	3/8"	3/4"	-	-	NOTE 8			164	1/MP6.01	2, 3, 4, 5, 6, 7, 8
HP-20	SAMSUNG	AC054KXADCHIAA	ROOF			-	-	3/8"	3/4"	17.1	9.0	208/1	42	70	212	3/MP6.01	1

1. SPLIT SYSTEM SHALL BE ABLE TO OPERATE AT 94% HEATING CAPACITY DOWN TO 32°F OUTDOOR AMBIENT TEMPERATURE.
2. CFM BASED ON 0.55 ESP.
3. PROVIDE WITH SAMSUNG MM-ASUN 24VAC THERMOSTAT ADAPTER AND 24VAC TRANSFORMER.
4. PROVIDE WITH DELTA CONTROLS THERMOSTAT WITH CO2 SENSOR. SEE MP6.01 FOR CONTROLS.
5. PROVIDE WITH CONDENSATE PUMP.
6. PROVIDE WITH 4" MERV-13 FILTERS WITH FILTER ACCESS PANEL.
7. FAN COIL SHALL BE ADJUSTED TO OPERATE AT CONSTANT SPEED AT INDICATED CFM.
8. INDOOR UNIT POWERED BY OUTDOOR UNIT.

SPLIT SYSTEMS SCHEDULE																	
TAG	MANUFACTURER	MODEL	WING / BUILDING	LOCATION	COOLING TOTAL MBH	HEATING TOTAL MBH	AIRFLOW CFM	REFRIGERANT PIPING		SEER	HSPF	ELECTRICAL			WEIGHT LBS	MOUNTING DETAIL	NOTES
								LIQUID	GAS			V/PH	MCA	MOCF			
SSO-14	SAMSUNG	AR24TSFYBWKXCV	BLDG C	ROOF	22	NOTE 6	-	1/4"	5/8"	18	208/1	20	30	125	2/MP6.01		
SSI-14	SAMSUNG	AR24TSFYBWKXCV		MECH ROOM 14			657	1/4"	5/8"	-	NOTE 1			30	3/MP6.01	2, 3, 4, 5	
SSO-29	SAMSUNG	AR24TSFYBWKXCV	BLDG E	ROOF	22	24	-	1/4"	5/8"	18	208/1	20	30	125	2/MP6.01		
SSI-29	SAMSUNG	AR24TSFYBWKXCV		OFFICE 29B			657	1/4"	5/8"	-	NOTE 1			30	3/MP6.01	2, 3, 4, 5	

1. INDOOR UNITS ARE POWERED BY OUTDOOR UNIT.
2. PROVIDE WITH WALL MOUNTING BRACKET.
3. PROVIDE WITH SAMSUNG WALL MOUNTED THERMOSTAT.
4. PROVIDE WITH BACNET INTERFACE CARD. SEE MP6.01 FOR CONTROLS.
5. PROVIDE WITH CONDENSATE PUMP.
6. LOCK OUT HEATING.



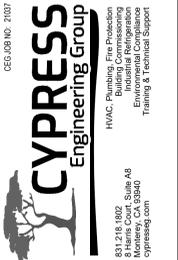
**aedis**  
architects

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PROJECT  
**NORTH SHOREVIEW ELEMENTARY SCHOOL - HVAC REPLACEMENT**

SAN MATEO-FOSTER CITY SCHOOL DISTRICT

CONSULTANT



STATE DSA FILE NUMBER **41-26**  
APPL # **01-119526**

REVISIONS  
**No. Description Date**

MILESTONES  
DD  
90% CD  
DSA SUB 05/24/2021  
BACKCHECK 10/22/2021

SHEET  
**SCHEDULES-MECHANICAL**

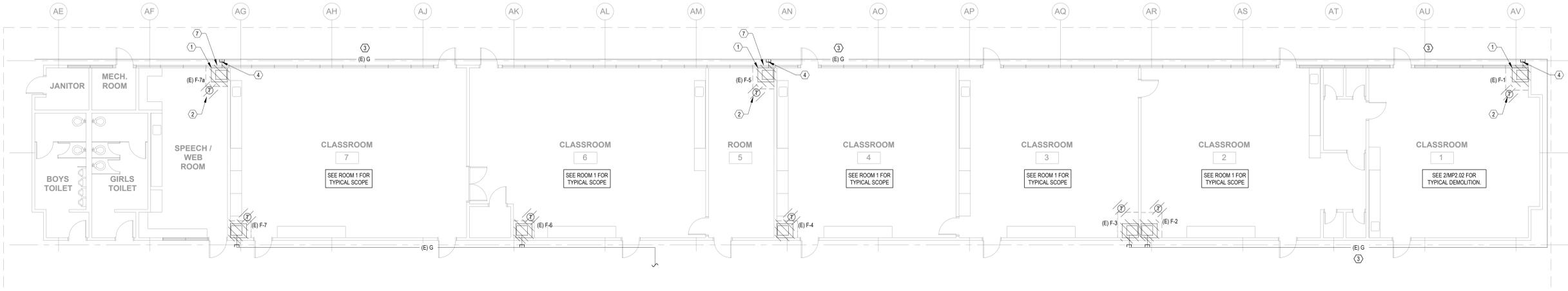
DATE 10/22/2021  
JOB # 2021005.05  
SHEET # **MP0.02**

REVISIONS

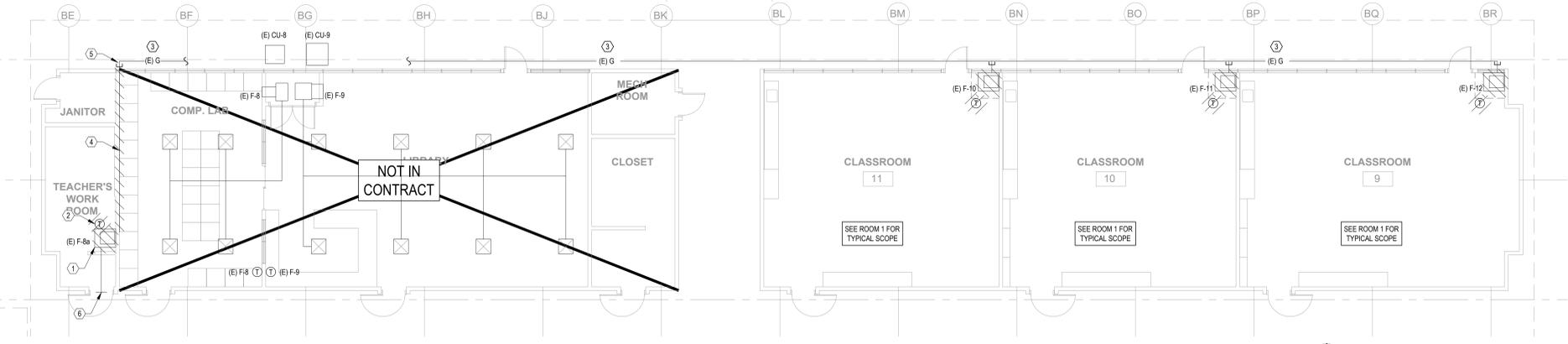
No.	Description	Date

MILESTONES

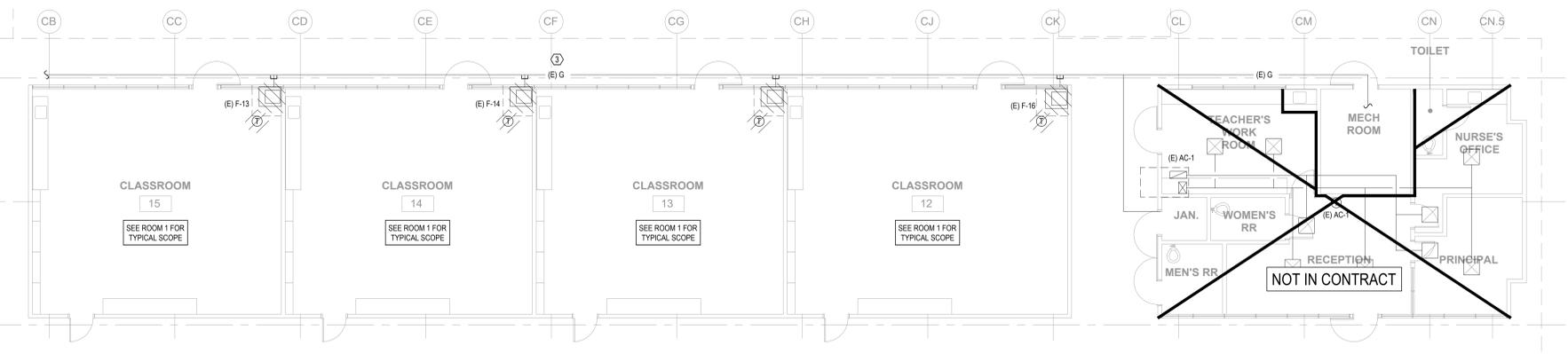
DD	
90% CD	
DSA SUB	05/24/2021
BACKCHECK	10/22/2021



**1 FLOOR PLAN - BLDG A - DEMO - MECHANICAL & PLUMBING**  
 MP2.01 SCALE: 1/8" = 1'-0"



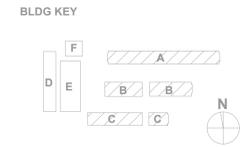
**2 FLOOR PLAN - BLDG B - DEMO - MECHANICAL & PLUMBING**  
 MP2.01 SCALE: 1/8" = 1'-0"



**3 FLOOR PLAN - BLDG C - DEMO - MECHANICAL & PLUMBING**  
 MP2.01 SCALE: 1/8" = 1'-0"



- | DEMOLITION SHEET NOTES  | GENERAL NOTES   |
|---|---|
| <ol style="list-style-type: none"> <li>REMOVE (E) FURNACE ENCLOSURE AND FURNACE, COMPLETE, TYP. SEE 2MP2.02 FOR TYPICAL FURNACE DEMO.</li> <li>REMOVE (E) THERMOSTAT AND WIRING BACK TO (E) FURNACE, TYP. SALVAGE (E) THERMOSTAT AND RETURN TO DISTRICT.</li> <li>(E) GAS MAIN TO REMAIN, TYP.</li> <li>REMOVE (E) GAS BRANCH LINE FROM (E) FURNACE BACK TO MAIN, CAP (E) BRANCH LINE AT MAIN, TYP. SEE 8MP6.01.</li> <li>CAP (PLUG) (E) GAS PIPE AT (E) FITTING, ABANDON (E) PIPING INSIDE BUILDING.</li> <li>(E) OUTSIDE AIR LOUVER AND (E) DUCTWORK TO REMAIN.</li> <li>(E) OUTSIDE AIR LOUVER TO REMAIN.</li> </ol> | <ol style="list-style-type: none"> <li>CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING AND NEW BUILDING STRUCTURES, SERVICES AND OWNER'S PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION.</li> <li>COORDINATE THE LOCATIONS OF ROOF/WALL OPENINGS, PENETRATIONS, DUCTWORK AND ALL MECHANICAL EQUIPMENT WITH RESPECT TO BUILDING STRUCTURE AND OTHER BUILDING SERVICES TO AVOID CONFLICT.</li> </ol> |



GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING AND NEW BUILDING STRUCTURES, SERVICES AND OWNER'S PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION.
- COORDINATE THE LOCATIONS OF ROOF WALL OPENINGS, PENETRATIONS, DUCTWORK AND ALL MECHANICAL EQUIPMENT WITH RESPECT TO BUILDING STRUCTURE AND OTHER BUILDING SERVICES TO AVOID CONFLICT.

IDENTIFICATION STAMP  
 DIV. OF THE STATE ARCHITECT  
 APP: 01-119526 INC.  
 REVIEWED FOR  
 SS  FLS  ACS   
 DATE: 10/27/2021

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 architects

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DEMOLITION SHEET NOTES

- REMOVE (E) FURNACE ENCLOSURE AND FURNACE, COMPLETE. TYP. SEE 2MP2.02 FOR TYPICAL FURNACE DEMO.
- REMOVE (E) THERMOSTAT AND WIRING BACK TO (E) FURNACE. TYP. SALVAGE (E) THERMOSTAT AND RETURN TO DISTRICT.
- (E) GAS MAIN TO REMAIN. TYP.
- REMOVE (E) GAS BRANCH LINE FROM (E) FURNACE BACK TO MAIN. CAP (E) BRANCH LINE AT MAIN. TYP. SEE 8MP6.01.

PROJECT  
**NORTH SHOREVIEW ELEMENTARY SCHOOL - HVAC REPLACEMENT**

SAN MATEO-FOSTER CITY SCHOOL DISTRICT

CONSULTANT

CELEBRATING 2007  
**CYPRESS**  
 Engineering Group  
 HVAC, Plumbing, Fire Protection, Mechanical, Electrical, Environmental Compliance, Training & Technical Support  
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 8 Marine Court, Suite A9  
 Monterey, CA 93940  
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STAMP



STATE

DSA FILE NUMBER 41-26  
 APPL # 01-119526

REVISIONS

No. Description Date

MILESTONES

DD  
 90% CD  
 DSA SUB 05/24/2021  
 BACKCHECK 10/22/2021

SHEET

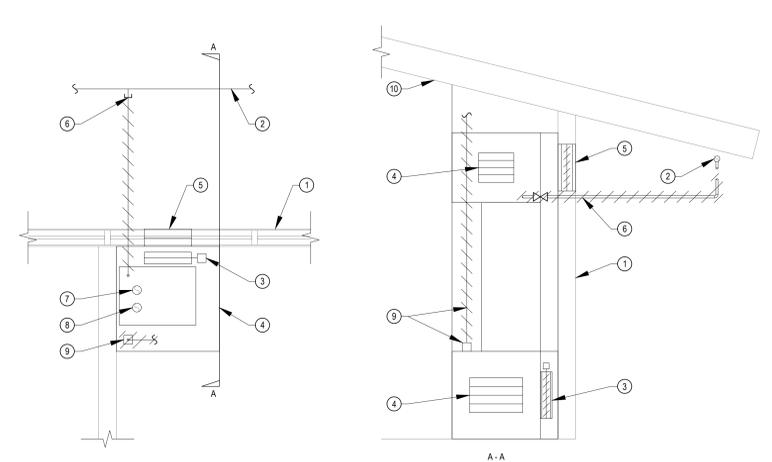
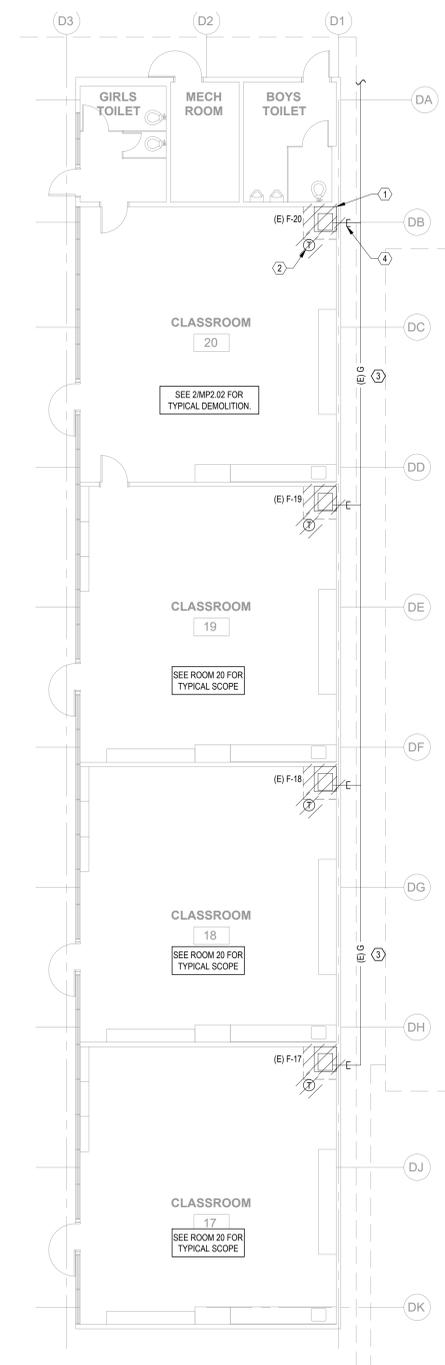
**FLOOR PLAN - DEMO - BLDG D - MECHANICAL & PLUMBING**

DATE 10/22/2021

JOB # 2021005.05

SHEET #

**MP2.02**



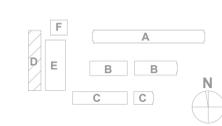
- DETAIL NOTES:
- (E) EXTERIOR WALL.
  - (E) GAS MAIN TO REMAIN.
  - REMOVE (E) OUTSIDE AIR DAMPER AND ACTUATOR. SALVAGE (E) ACTUATOR.
  - REMOVE (E) FURNACE ENCLOSURE, REGISTERS, AND ACCESS PANELS, COMPLETE.
  - REMOVE (E) OUTSIDE AIR LOUVER UNLESS NOTED OTHERWISE ON PLANS. HEIGHT VARIES.
  - REMOVE (E) GAS BRANCH LINE AND SHUT OFF VALVE. CAP AT (E) GAS MAIN. SEE DETAIL 8MP6.01.
  - REMOVE (E) COMBUSTION AIR INTAKE PATCH AND REPAIR ROOF AND CEILING PER ARCHITECT'S DRAWINGS.
  - REMOVE (E) FLUE PATCH AND REPAIR ROOF AND CEILING PER ARCHITECT'S DRAWINGS.
  - REMOVE (E) CONDENSATE PUMP. REMOVE (E) CONDENSATE DRAIN PIPING WITHIN ENCLOSURE.
  - (E) CEILING.

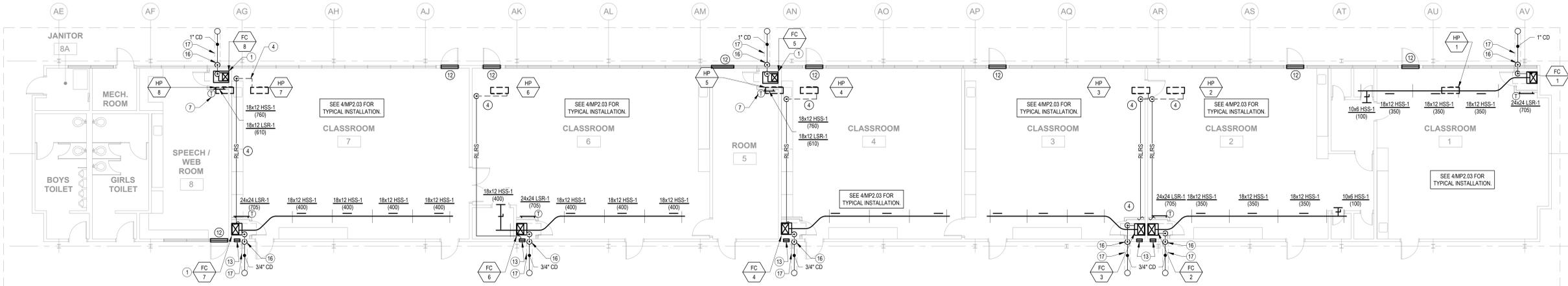
**2 TYPICAL FURNACE DEMO - MECHANICAL & PLUMBING**  
 MP2.02 SCALE: N.T.S.

**1 FLOOR PLAN - BLDG D - DEMO - MECHANICAL & PLUMBING**  
 MP2.02 SCALE: 1/8" = 1'-0"

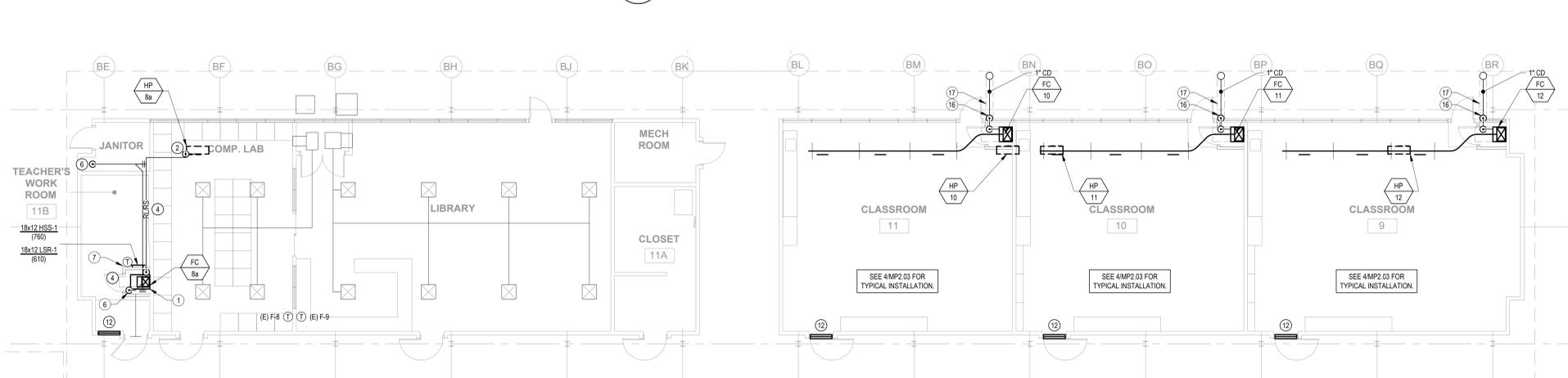


BLDG KEY

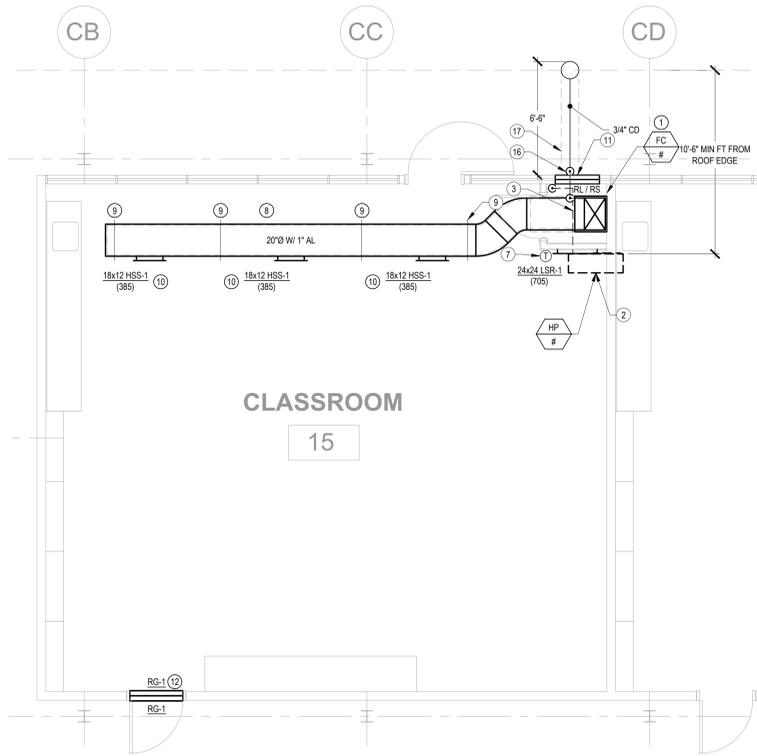




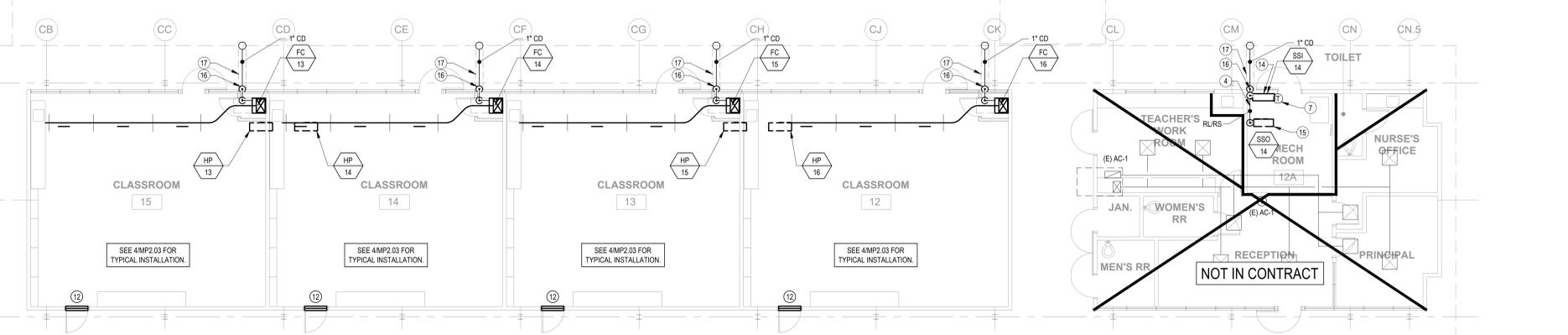
**1 FLOOR PLAN - BLDG A - NEW - MECHANICAL & PLUMBING**  
 SCALE: 1/8" = 1'-0"  
 NORTH



**2 FLOOR PLAN - BLDG B - NEW - MECHANICAL & PLUMBING**  
 SCALE: 1/8" = 1'-0"  
 NORTH



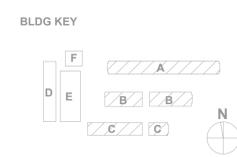
**4 ENLARGED FLOOR PLAN - TYPICAL CLASSROOM**  
 SCALE: 1/4" = 1'-0"



**3 FLOOR PLAN - BLDG C - NEW - MECHANICAL & PLUMBING**  
 SCALE: 1/8" = 1'-0"  
 NORTH

- NEW SHEET NOTES**
- INSTALL FAN COIL SEE 3MP2.04 AND 4MP2.04 FOR TYPICAL FAN COIL INSTALLATION. SEE 1MP6.01 FOR TYPICAL FAN COIL MOUNTING.
  - INSTALL HEAT PUMP ON ROOF. MIN 10 FT AWAY FROM EDGE OF ROOF. TYP. KEEP CLEAR OF (E) GAS PIPE ON ROOF.
  - INSTALL REFRIGERANT PIPING FROM HEAT PUMP TO FAN COIL. TYP. RUN PIPES ON ROOF AND PENETRATE ABOVE FAN COIL ENCLOSURE.
  - INSTALL REFRIGERANT PIPING FROM HEAT PUMP TO FAN COIL ON ROOF. PENETRATE ROOF AND RUN PIPING AT WALL TO FAN COIL ENCLOSURE. SUPPORT PIPES SIMILAR TO DETAIL 11MP6.01. COVER EXPOSED PIPING WITH WIRE MOLD. COVER PIPING WITH ALUMINUM JACKET AND PAINT AT EXPOSED STRUCTURE CEILING WHERE WIRE MOLD CANNOT BE INSTALLED.
  - NOT USED.
  - PUMP CD UP TO CEILING. SPILL CONDENSATE TO (E) MOP SINK WITH 1" AIR GAP. SEE DETAIL 9MP6.01 FOR CD CONNECTION TO UNIT.
  - INSTALL THERMOSTAT ON WALL. 48" AFF MAX. AND WIRE TO FAN COIL. TYP. SEE MP5.01.
  - EXPOSED SUPPLY DUCT INSIDE CLASSROOM.
  - DUCT SUPPORT. SEE DETAIL 5MP6.01.
  - FACE OPERABLE KEY EXTRACTOR. TYP. FOR ALL SUPPLY REGISTERS.
  - INSTALL 48"x24" RUSKIN L375 OUTSIDE AIR LOUVER WITH BIRDSCREEN UNLESS OTHERWISE NOTED ON FLOOR PLAN.
  - MOTORIZED RELIEF DAMPER AND RETURN GRILLE (RG-1) MOUNTED TO BOTH SIDES OF RELIEF OPENING. DAMPER AND GRILLE SIZE TO MATCH (E) FRAME APPROXIMATELY 36"x24". RETURN GRILLE AND MOTORIZED DAMPER TO FILL ENTIRE (E) WINDOW PANEL. VERIFY EXACT DIMENSION IN FIELD.
  - INSTALL 12"x42" RUSKIN L375 OUTSIDE AIR LOUVER WITH BIRDSCREEN.
  - INSTALL FAN COIL ABOVE HEIGHT OF DOOR. COORDINATE EXACT HEIGHT WITH DISTRICT.
  - INSTALL HEAT PUMP ON ROOF. MIN 10 FT AWAY FROM EDGE OF ROOF. INSTALL REFRIGERANT PIPING FROM HEAT PUMP TO FAN COIL.
  - CD FROM FAN COIL. DROP CD TIGHT TO EXTERIOR WALL TO BELOW GRADE. ROUTE TO CD DRYWELL. SEE 9MP6.01 FOR CONNECTION TO UNIT AND 14MP6.01 FOR CD DRYWELL.
  - SAWCUT, REPAIR, AND PATCH TO MATCH EXISTING. SEE SHEET A8.10 ON ARCHITECTS DRAWINGS FOR PATCHING AT GRADE.

- GENERAL NOTES**
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING AND NEW BUILDING STRUCTURES, SERVICES AND OWNER'S PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION.
  - COORDINATE THE LOCATIONS OF ROOF/WALL OPENINGS, PENETRATIONS, DUCTWORK AND ALL MECHANICAL EQUIPMENT WITH RESPECT TO BUILDING STRUCTURE AND OTHER BUILDING SERVICES TO AVOID CONFLICT.
  - FOR CLARITY, ABANDONED CD PIPING AND (E) GAS MAINS ARE NOT SHOWN ON THIS PLAN. SEE MP2.01.
  - PAINT ALL EXPOSED DUCTWORK, SUPPORTS, AND REGISTERS.
  - PAINT CONDENSATE PIPING AT EXTERIOR OF BUILDING.
  - SEE DETAIL 7MP6.01 FOR PIPE SUPPORT ON ROOF.
  - INSTALL REFRIGERANT AND CONDENSATE PIPING PER 1/8" SCALE FLOOR PLANS WHERE SHOWN. OTHERWISE, INSTALL PER TYPICAL ENLARGED VIEW SHOWN IN 4MP2.03.
  - CONTRACTOR TO PROVIDE AND INSTALL THERMOSTAT WIRING AND ASSOCIATED CONDUITS FOR ALL NEW HVAC EQUIPMENT AND CONNECTIONS.
  - EQUIPMENT MOUNTING DETAIL REFERENCE SHOWN ON SCHEDULES ON SHEET MP2.02



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 APP: 01-119526 INC.  
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PROJECT  
**NORTH SHOREVIEW ELEMENTARY SCHOOL - HVAC REPLACEMENT**

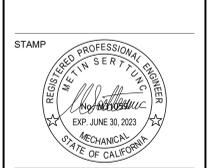
SAN MATEO-FOSTER CITY SCHOOL DISTRICT

CONSULTANT  
 DECISION: 2/07

**CYPRESS**  
 Engineering Group

HVAC, Plumbing, Fire Protection  
 Mechanical, Electrical, Fire Alarm  
 Environmental Remediation  
 Training & Technical Support

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STATE FILE NUMBER **41-26**  
 APPL # **01-119526**

REVISIONS

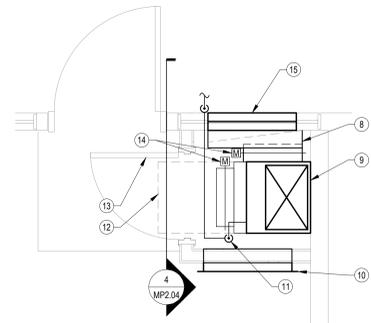
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MILESTONES

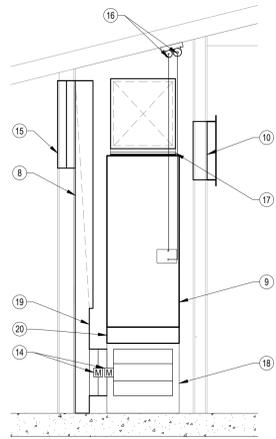
DD	
90% CD	
DSA SUB	05/24/2021
BACKCHECK	10/22/2021

SHEET  
**FLOOR PLAN - NEW - BLDGS A, B, & C - MECHANICAL & PLUMBING**

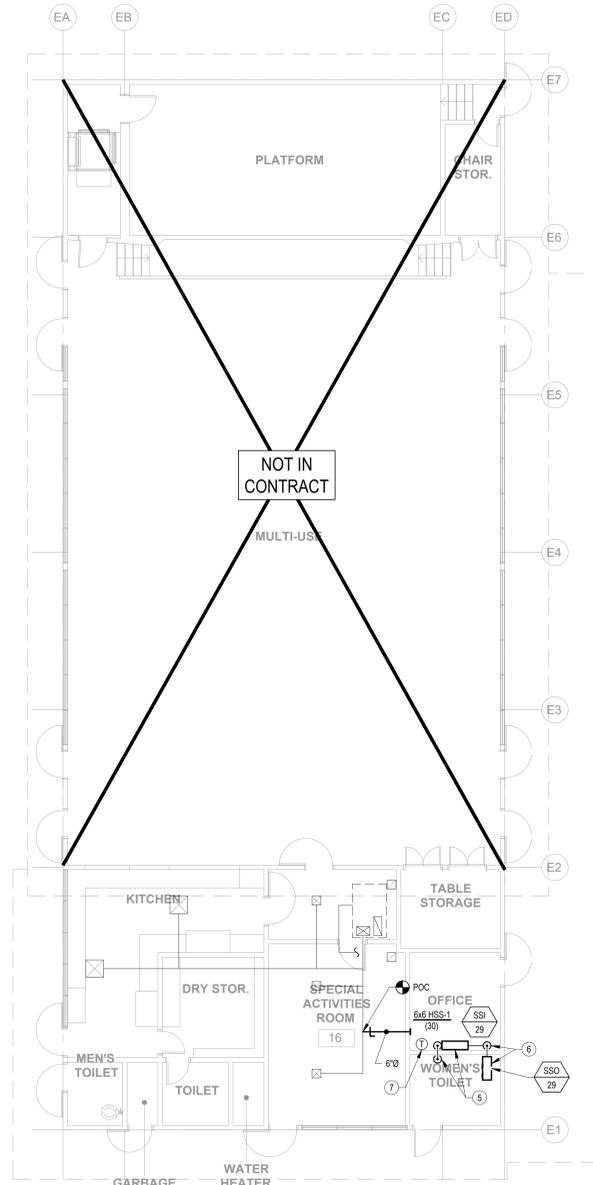
DATE **10/22/2021**  
 JOB # **2021005.05**  
 SHEET # **MP2.03**



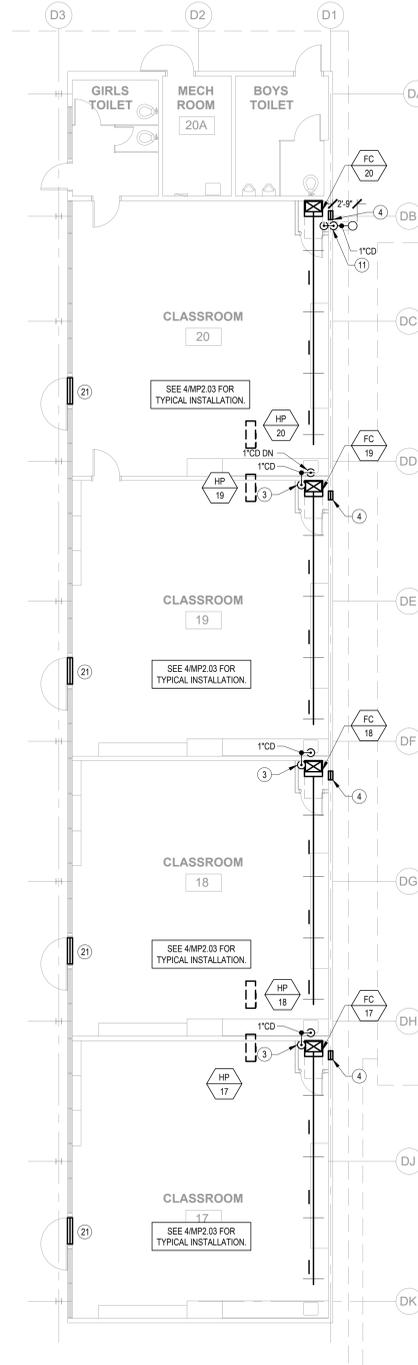
**3 FLOOR PLAN - ENCLOSURE**  
 MP2.04 SCALE: NONE



**4 SECTION - ENCLOSURE**  
 MP2.04 SCALE: NONE



**2 FLOOR PLAN - BLDG E - NEW - MECHANICAL & PLUMBING**  
 MP2.04 SCALE: 1/8" = 1'-0"



**1 FLOOR PLAN - BLDG D - NEW - MECHANICAL & PLUMBING**  
 MP2.04 SCALE: 1/8" = 1'-0"

- GENERAL NOTES**
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING AND NEW BUILDING STRUCTURES, SERVICES AND OWNER'S PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION.
  - COORDINATE THE LOCATIONS OF ROOF WALL OPENINGS, PENETRATIONS, DUCTWORK AND ALL MECHANICAL EQUIPMENT WITH RESPECT TO BUILDING STRUCTURE AND OTHER BUILDING SERVICES TO AVOID CONFLICT.
  - FOR CLARITY, ABANDONED CD PIPING AND (E) GAS MAINS ARE NOT SHOWN ON THIS PLAN. SEE MP2.01.
  - PAINT ALL EXPOSED DUCTWORK, SUPPORTS, AND REGISTERS.
  - PAINT CONDENSATE PIPING AT EXTERIOR OF BUILDING.
  - SEE DETAIL 7MP6.01 FOR PIPE SUPPORT ON ROOF.
  - CONTRACTOR TO PROVIDE AND INSTALL THERMOSTAT WIRING AND ASSOCIATED CONDUITS FOR ALL NEW HVAC EQUIPMENT AND CONNECTIONS.
  - EQUIPMENT MOUNTING DETAIL REFERENCE SHOWN ON SCHEDULES ON SHEET MP0.2.

- NEW SHEET NOTES**
- INSTALL FAN COIL, TYP. SEE 3MP2.04 AND 4MP2.04 FOR TYPICAL FAN COIL INSTALLATION. SEE 1MP6.01 FOR TYPICAL FAN COIL MOUNTING.
  - NOT USED
  - CONDENSATE DRAIN PIPE TO PENETRATE WALL UNDER SINK IN ADJACENT CLASSROOM. CONNECT CD PIPE TO SINK TAILPIECE.
  - INSTALL 12"x42" RUSKIN L375 OUTSIDE AIR LOUVER WITH BIRD SCREEN, TYP.
  - INSTALL FAN COIL. COORDINATE EXACT HEIGHT WITH DISTRICT. INSTALL CONDENSATE DRAIN PIPING FROM FAN COIL. PENETRATE WALL AND CONNECT TO SINK TAILPIECE IN WOMEN'S RESTROOM.
  - INSTALL HEAT PUMP ON ROOF, MIN 10'-6" AWAY FROM EDGE OF ROOF. INSTALL REFRIGERANT PIPING FROM HEAT PUMP TO FAN COIL.
  - INSTALL THERMOSTAT ON WALL, 48" AFF MAX, AND WIRE TO FAN COIL, TYP. SEE MP5.01.
  - 6"x32" OUTSIDE AIR DUCT DOWN TO MIXING PLENUM.
  - FAN COIL. SEE PLANS FOR LOCATION.
  - 24"x24" RETURN REGISTER HSR-1 WITH GRILLE SILENCER.
  - CD FROM FAN COIL. DROP PIPE DOWN TO ENCLOSURE FLOOR AT LEFT SIDE OF UNIT, ENSURING PIPE DOES NOT BLOCK FILTER ACCESS. THEN RUN ALONG FLOOR TO EXTERIOR WALL TO DRYWELL. PROVIDE CLEANOUT FOR EACH AGGREGATE HORIZONTAL CHANGE IN DIRECTION EXCEEDING 135°. SEE 9MP6.01 FOR CONNECTION TO UNIT AND 14MP6.01 FOR CD DRYWELL.
  - CLEARANCE REQUIRED FOR FILTER REPLACEMENT.
  - 30" FULL HEIGHT DOOR. SEE ARCHITECTS DRAWINGS.
  - 20"x16" MOTORIZED DAMPER (LOW VOLTAGE).
  - INSTALL OUTSIDE AIR LOUVER. SIZE TO MATCH FULL WIDTH AND HEIGHT OF (E) WINDOW PANEL (46"x26" NOMINAL). FIELD VERIFY EXACT FRAME SIZE BEFORE ORDERING LOUVER.
  - REFRIGERANT PIPING FROM HEAT PUMP TO FAN COIL. SEE 11MP6.01 FOR PIPE SUPPORT.
  - FLEX DUCT AT CONNECTION TO UNIT.
  - MIXING PLENUM BELOW FAN COIL.
  - DUCT TRANSITION TO ALLOW DAMPER CONNECTION.
  - FILTER BOX THAT CAN FIT 4" OR 2" FILTER.
  - MOTORIZED RELIEF DAMPER AND RETURN GRILL (RG-11 MOUNTED ON BOTH SIDES OF RELIEF OPENING. DAMPER AND GRILLE SIZE TO MATCH (E) FRAME. APPROXIMATELY 46"x35" RETURN GRILLE TO FILL ENTIRE (E) WINDOW PANEL. VERIFY EXACT DIMENSIONS IN FIELD.

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SAN MATEO-FOSTER CITY SCHOOL DISTRICT

CONSULTANT  
**CYPRESS Engineering Group**  
 DECISION: 2/07  
 HVAC, Plumbing, Fire Protection, Mechanical, Electrical, Environmental Compliance, Training & Technical Support  
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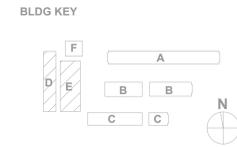
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 DSA FILE NUMBER 41-26  
 APPL # 01-119526

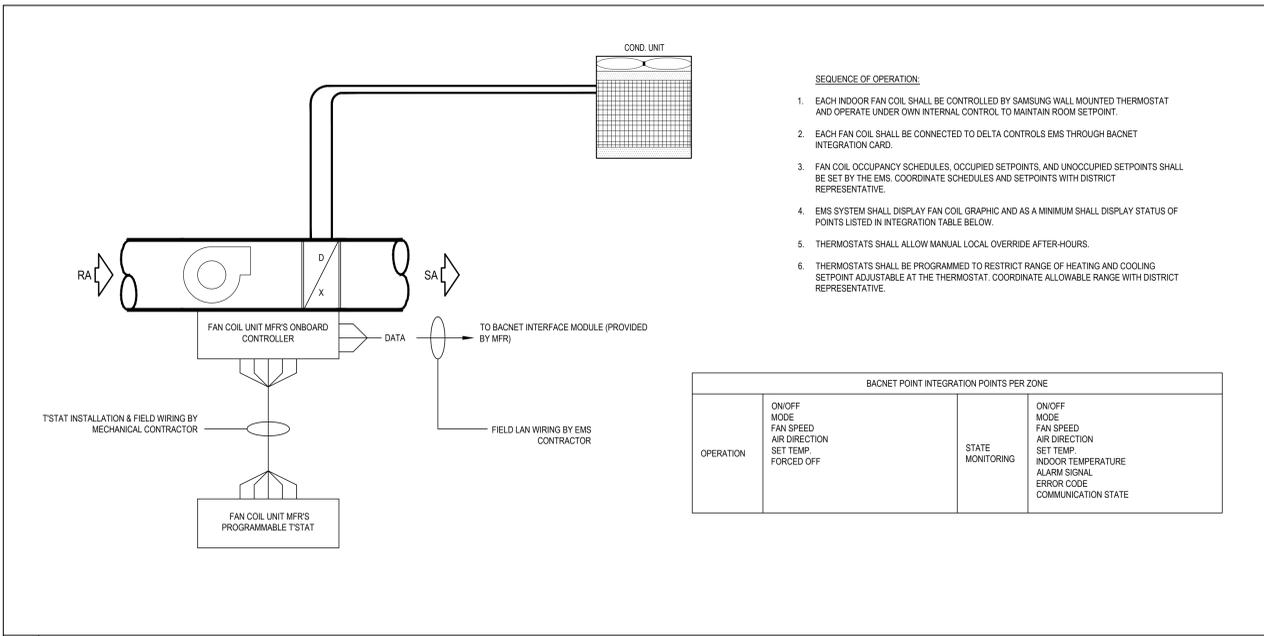
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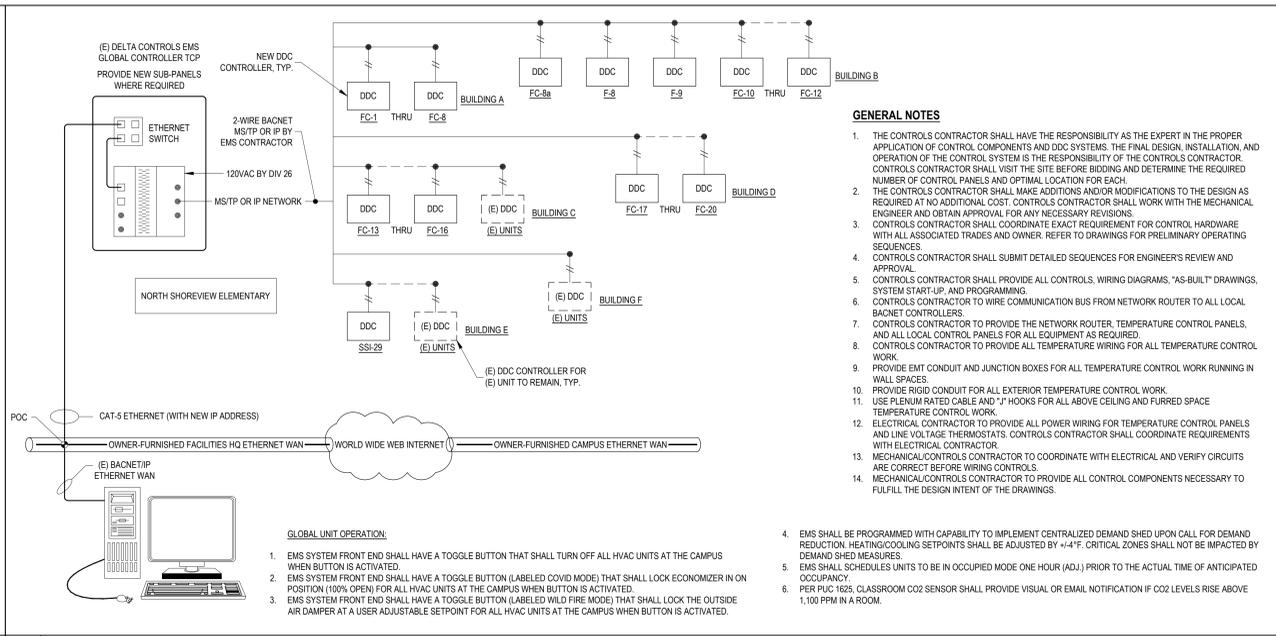
SHEET  
**FLOOR PLAN - NEW - BLDGS D & E - MECHANICAL & PLUMBING**

DATE 10/22/2021  
 JOB # 2021005.05  
 SHEET # **MP2.04**

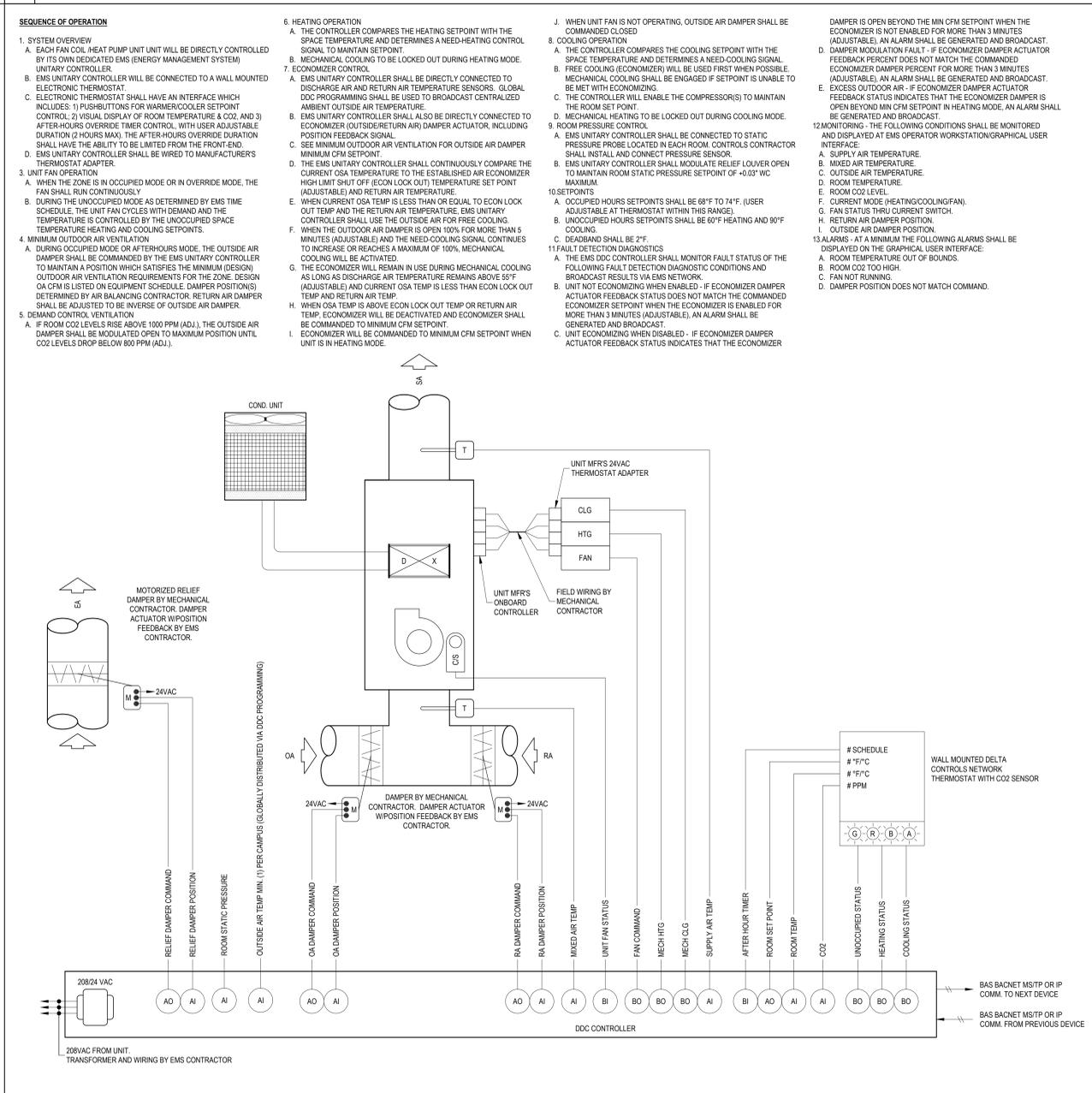




3 WALL MOUNT SPLIT SYSTEM CONTROL SCHEMATIC



1 EMS SYSTEM ARCHITECTURE



2 CLASSROOM SPLIT SYSTEM HEAT PUMP / FAN COIL UNIT CONTROL SCHEMATIC

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PROJECT  
**NORTH SHOREVIEW ELEMENTARY SCHOOL - HVAC REPLACEMENT**

SAN MATEO-FOSTER CITY SCHOOL DISTRICT

CONSULTANT  
DECEMBER 2007  
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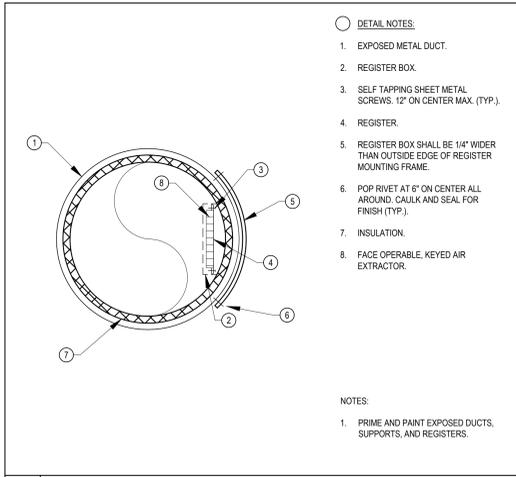
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**No. Description Date**

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SHEET  
**CONTROLS-MECHANICAL**

DATE 10/22/2021  
JOB # 2021005.05  
SHEET # **MP5.01**

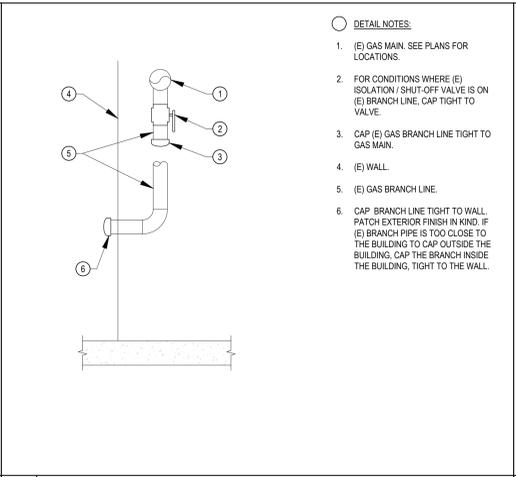


- DETAIL NOTES:**
1. EXPOSED METAL DUCT.
  2. REGISTER BOX.
  3. SELF TAPPING SHEET METAL SCREWS, 12" ON CENTER MAX. (TYP.)
  4. REGISTER.
  5. REGISTER BOX SHALL BE 1/4" WIDER THAN OUTSIDE EDGE OF REGISTER MOUNTING FRAME.
  6. POP RIVET AT 6" ON CENTER ALL AROUND. CAULK AND SEAL FOR FINISH (TYP.)
  7. INSULATION.
  8. FACE OPERABLE, KEYED AIR EXTRACTOR.

**NOTES:**

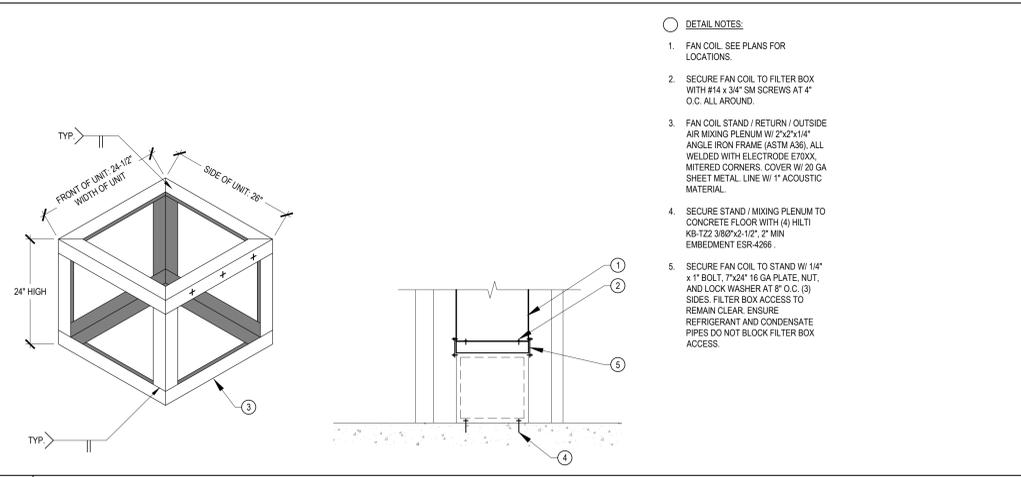
1. PRIME AND PAINT EXPOSED DUCTS, SUPPORTS, AND REGISTERS.

12 REGISTER DETAIL - DUCT MOUNTED N.T.S.



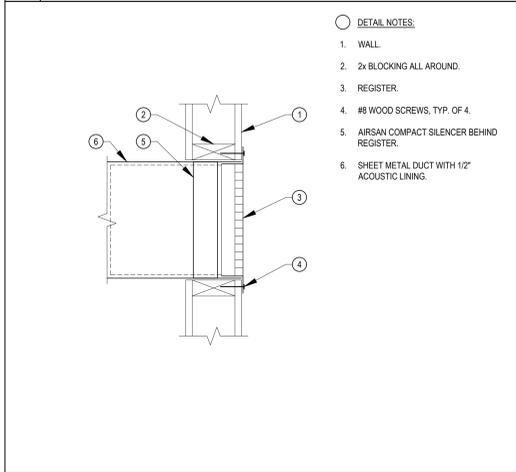
- DETAIL NOTES:**
1. (E) GAS MAIN. SEE PLANS FOR LOCATIONS.
  2. FOR CONDITIONS WHERE (E) ISOLATION / SHUT-OFF VALVE IS ON (E) BRANCH LINE, CAP TIGHT TO VALVE.
  3. CAP (E) GAS BRANCH LINE TIGHT TO GAS MAIN.
  4. (E) WALL.
  5. (E) GAS BRANCH LINE.
  6. CAP BRANCH LINE TIGHT TO WALL. PATCH EXTERIOR FINISH IN KIND. IF (E) BRANCH PIPE IS TOO CLOSE TO THE BUILDING, CAP THE BRANCH INSIDE THE BUILDING, TIGHT TO THE WALL.

8 CAPPING EXISTING GAS BRANCH N.T.S.



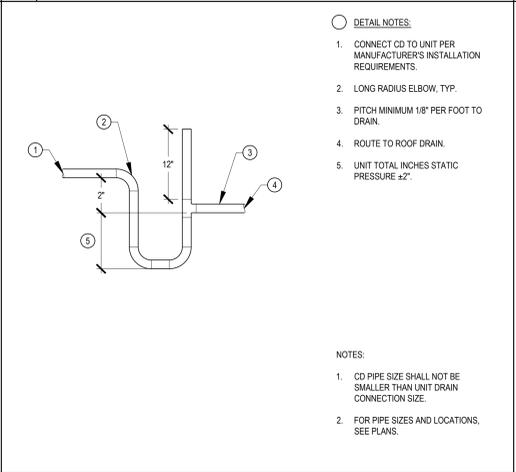
- DETAIL NOTES:**
1. FAN COIL. SEE PLANS FOR LOCATIONS.
  2. SECURE FAN COIL TO FILTER BOX WITH #14 x 3/4" SM SCREWS AT 4" O.C. ALL AROUND.
  3. FAN COIL STAND / RETURN / OUTSIDE AIR MIXING PLENUM W/ 2'x2'x1/4" ANGLE IRON FRAME (ASTM A36), ALL WELDED WITH ELECTRODE E70XX, MITERED CORNERS. COVER W/ 20 GA SHEET METAL LINE W/ 1" ACOUSTIC MATERIAL.
  4. SECURE STAND / MIXING PLENUM TO CONCRETE FLOOR WITH (4) HILTI KB-T22 3/8"x2-1/2", 2" MIN EMBEDMENT ESR-4266.
  5. SECURE FAN COIL TO STAND W/ 1/4" x 1" BOLT, 7/16" 16 GA PLATE, NUT, AND LOCK WASHER AT 8" O.C. (3) SIDES. FILTER BOX ACCESS TO REMAIN CLEAR. ENSURE REFRIGERANT AND CONDENSATE PIPES DO NOT BLOCK FILTER BOX ACCESS.

1 FAN COIL AND STAND MOUNTING N.T.S.



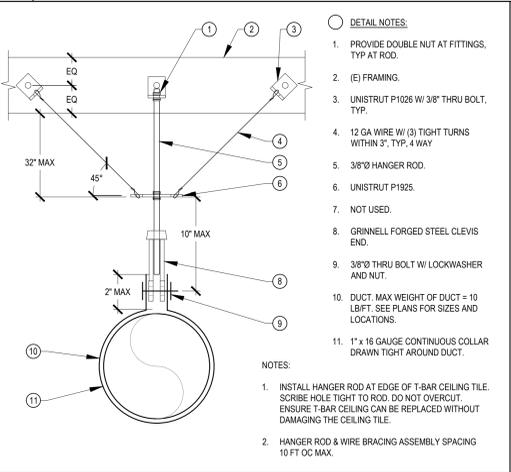
- DETAIL NOTES:**
1. WALL.
  2. 2x BLOCKING ALL AROUND.
  3. REGISTER.
  4. #8 WOOD SCREWS, TYP. OF 4.
  5. AIRSAN COMPACT SILENCER BEHIND REGISTER.
  6. SHEET METAL DUCT WITH 1/2" ACOUSTIC LINING.

13 REGISTER DETAIL - SIDEWALL MOUNTED N.T.S.



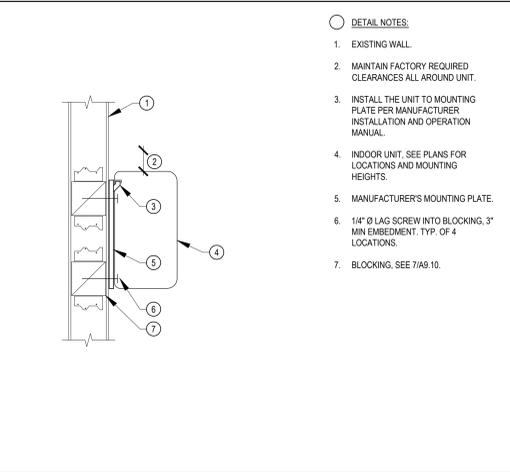
- DETAIL NOTES:**
1. CONNECT TO UNIT PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
  2. LONG RADIUS ELBOW, TYP.
  3. PITCH MINIMUM 1/8" PER FOOT TO DRAIN.
  4. ROUTE TO ROOF DRAIN.
  5. UNIT TOTAL INCHES STATIC PRESSURE <math>\leq 2''</math>.
- NOTES:**
1. CD PIPE SIZE SHALL NOT BE SMALLER THAN UNIT DRAIN CONNECTION SIZE.
  2. FOR PIPE SIZES AND LOCATIONS, SEE PLANS.

9 CONDENSATE DRAIN CONNECTION TO EQUIPMENT N.T.S.



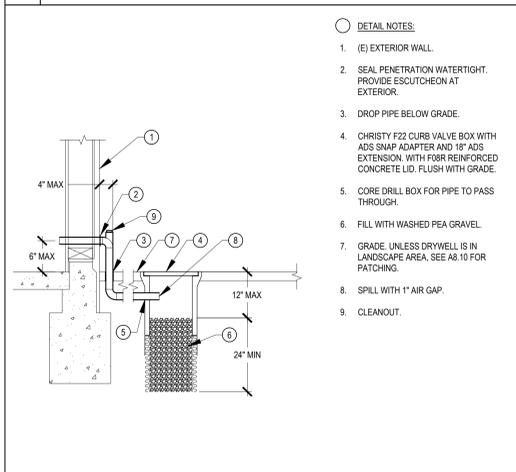
- DETAIL NOTES:**
1. PROVIDE DOUBLE NUT AT FITTINGS, TYP AT ROD.
  2. (E) FRAMING.
  3. UNISTRUT P1026 W/ 3/8" THRU BOLT, TYP.
  4. 12 GA WIRE W/ (3) TIGHT TURNS WITHIN 3", TYP. 4 WAY
  5. 3/8" HANGER ROD.
  6. UNISTRUT P1925.
  7. NOT USED.
  8. GRINNELL FORGED STEEL CLEVIS END.
  9. 3/8" THRU BOLT W/ LOCKWASHER AND NUT.
  10. DUCT. MAX WEIGHT OF DUCT = 10 LB/FT. SEE PLANS FOR SIZES AND LOCATIONS.
  11. 1" x 16 GAUGE CONTINUOUS COLLAR DRAWN TIGHT AROUND DUCT.
- NOTES:**
1. INSTALL HANGER ROD AT EDGE OF T-BAR CEILING TILE. SCRIBE HOLE TIGHT TO ROD. DO NOT OVERCUT. ENSURE T-BAR CEILING CAN BE REPLACED WITHOUT DAMAGING THE CEILING TILE.
  2. HANGER ROD & WIRE BRACING ASSEMBLY SPACING 10 FT OC MAX.

5 ROUND DUCT HANGER N.T.S.



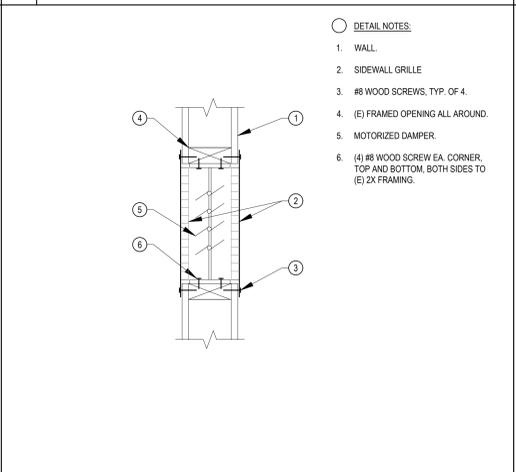
- DETAIL NOTES:**
1. EXISTING WALL.
  2. MAINTAIN FACTORY REQUIRED CLEARANCES ALL AROUND UNIT.
  3. INSTALL THE UNIT TO MOUNTING PLATE PER MANUFACTURER INSTALLATION AND OPERATION MANUAL.
  4. INDOOR UNIT. SEE PLANS FOR LOCATIONS AND MOUNTING HEIGHTS.
  5. MANUFACTURER'S MOUNTING PLATE.
  6. 1/4" Ø LAG SCREW INTO BLOCKING, 3" MIN EMBEDMENT, TYP. OF 4 LOCATIONS.
  7. BLOCKING, SEE 7/AS.10.

2 FAN COIL MOUNTING N.T.S.



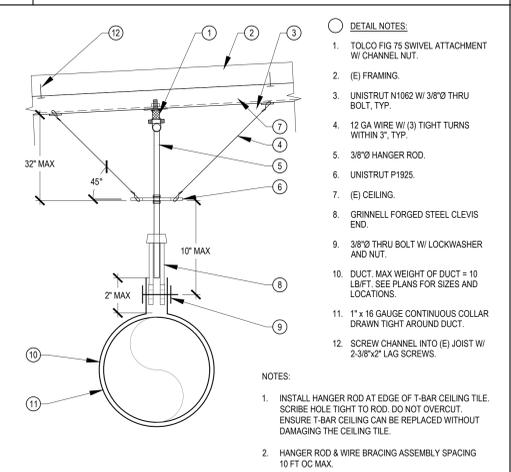
- DETAIL NOTES:**
1. (E) EXTERIOR WALL.
  2. SEAL PENETRATION WATERTIGHT. PROVIDE ESCUTCHEON AT EXTERIOR.
  3. DROP PIPE BELOW GRADE.
  4. CHRISTY F22 CURB VALVE BOX WITH ADS SNAP ADAPTER AND 18" ADS EXTENSION. WITH FOUR REINFORCED CONCRETE LID. FLUSH WITH GRADE.
  5. CORE DRILL BOX FOR PIPE TO PASS THROUGH.
  6. FILL WITH WASHED PEA GRAVEL.
  7. GRADE. UNLESS DRYWELL IS IN LANDSCAPE AREA, SEE AS.10 FOR PATCHING.
  8. SPILL WITH 1" AIR GAP.
  9. CLEANOUT.

14 CONDENSATE DRYWELL N.T.S.



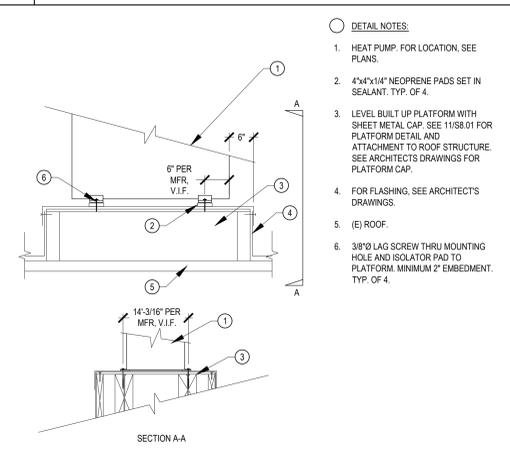
- DETAIL NOTES:**
1. WALL.
  2. SIDEWALL GRILLE.
  3. #8 WOOD SCREWS, TYP. OF 4.
  4. (E) FRAMED OPENING ALL AROUND.
  5. MOTORIZED DAMPER.
  6. (4) #8 WOOD SCREW EA. CORNER, TOP AND BOTTOM, BOTH SIDES TO (E) 2x FRAMING.

10 RELIEF DAMPER MOUNT N.T.S.



- DETAIL NOTES:**
1. TOLCO FIG 75 SWIVEL ATTACHMENT W/ CHANNEL NUT.
  2. (E) FRAMING.
  3. UNISTRUT P1026 W/ 3/8" THRU BOLT, TYP.
  4. 12 GA WIRE W/ (3) TIGHT TURNS WITHIN 3", TYP.
  5. 3/8" HANGER ROD.
  6. UNISTRUT P1925.
  7. (E) CEILING.
  8. GRINNELL FORGED STEEL CLEVIS END.
  9. 3/8" THRU BOLT W/ LOCKWASHER AND NUT.
  10. DUCT. MAX WEIGHT OF DUCT = 10 LB/FT. SEE PLANS FOR SIZES AND LOCATIONS.
  11. 1" x 16 GAUGE CONTINUOUS COLLAR DRAWN TIGHT AROUND DUCT.
  12. SCREW CHANNEL INTO (E) JOIST W/ 2-3/8"x2" LAG SCREWS.
- NOTES:**
1. INSTALL HANGER ROD AT EDGE OF T-BAR CEILING TILE. SCRIBE HOLE TIGHT TO ROD. DO NOT OVERCUT. ENSURE T-BAR CEILING CAN BE REPLACED WITHOUT DAMAGING THE CEILING TILE.
  2. HANGER ROD & WIRE BRACING ASSEMBLY SPACING 10 FT OC MAX.

6 ROUND DUCT HANGER N.T.S.



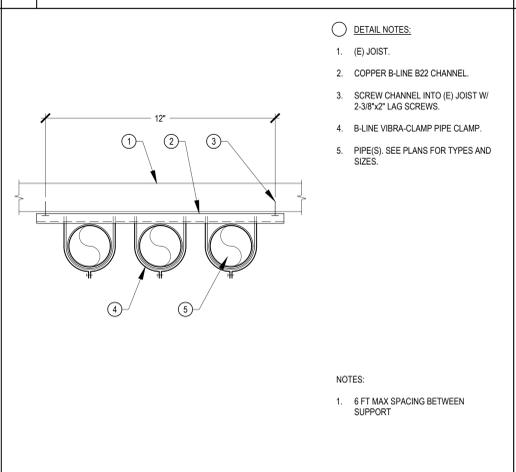
- DETAIL NOTES:**
1. HEAT PUMP. FOR LOCATION, SEE PLANS.
  2. 4"x4"x1/4" NEOPRENE PADS SET IN SEALANT, TYP. OF 4.
  3. LEVEL BUILT UP PLATFORM WITH SHEET METAL CAP. SEE 11/58.01 FOR PLATFORM DETAIL AND ATTACHMENT TO ROOF STRUCTURE. SEE ARCHITECT'S DRAWINGS FOR PLATFORM CAP.
  4. FOR FLASHING, SEE ARCHITECT'S DRAWINGS.
  5. (E) ROOF.
  6. 3/8" Ø LAG SCREW THRU MOUNTING HOLE AND ISOLATOR PAD TO PLATFORM. MINIMUM 2" EMBEDMENT, TYP. OF 4.

3 SPLIT SYSTEM HEAT PUMP UNIT ON PLATFORM N.T.S.



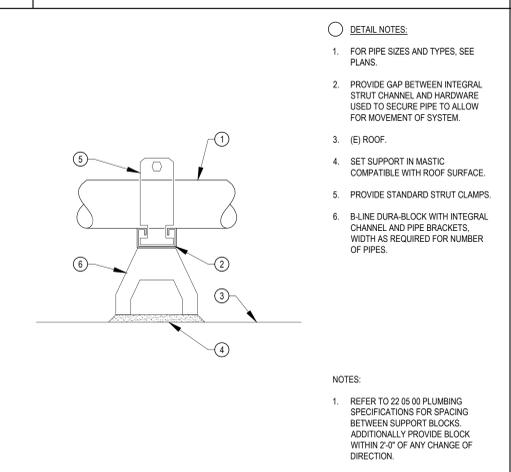
- DETAIL NOTES:**
1. (E) JOIST.
  2. COPPER B-LINE B22 CHANNEL.
  3. SCREW CHANNEL INTO (E) JOIST W/ 2-3/8"x2" LAG SCREWS.
  4. B-LINE VIBRA-CLAMP PIPE CLAMP.
  5. PIPE(S). SEE PLANS FOR TYPES AND SIZES.
- NOTES:**
1. 6 FT MAX SPACING BETWEEN SUPPORT

11 PIPE SUPPORT N.T.S.



- DETAIL NOTES:**
1. FOR PIPE SIZES AND TYPES, SEE PLANS.
  2. PROVIDE GAP BETWEEN INTEGRAL STRUT CHANNEL AND HARDWARE USED TO SECURE PIPE TO ALLOW FOR MOVEMENT OF SYSTEM.
  3. (E) ROOF.
  4. SET SUPPORT IN MASTIC COMPATIBLE WITH ROOF SURFACE.
  5. PROVIDE STANDARD STRUT CLAMPS.
  6. B-LINE DURABLOCK WITH INTEGRAL CHANNEL AND PIPE BRACKETS. WIDTH AS REQUIRED FOR NUMBER OF PIPES.
- NOTES:**
1. REFER TO 22 05 00 PLUMBING SPECIFICATIONS FOR SPACING BETWEEN SUPPORT BLOCKS. ADDITIONALLY PROVIDE BLOCK WITHIN 2'-0" OF ANY CHANGE OF DIRECTION.

7 PIPE SUPPORT ON ROOF N.T.S.



- DETAIL NOTES:**
1. GALVANIZED SHEET METAL ROOF JACK WITH CAP.
  2. FILL OPENING WITH FOAM.
  3. ROOF OPENING. SEE STRUCTURAL DRAWING FOR CURB. SEE ARCHITECT'S DRAWINGS FOR FLASHING.
  4. ROOFING.
  5. REMOVABLE SHEET METAL COVER ATTACHED WITH TWO (2) #8 SELF TAPPING SCREWS EACH SIDE. PAINTED.
  6. PIPE.
  7. PIPE INSULATION.
- NOTES:**
1. EXPOSED PIPING SHALL HAVE ALUMINUM JACKET.

4 PIPING ROOF JACK N.T.S.

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SHEET  
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2021005.05  
MP6.01

STATE OF CALIFORNIA  
**Mechanical Systems**  
 NRCC-MCH-E (Created 09/2020)  
 CERTIFICATE OF COMPLIANCE  
 Project Name: North Shoreview Montessori School - HVAC Replacement  
 Project Address: 1301 Cypress Avenue, San Mateo, CA 94401  
 Report Page: Page 7 of 12  
 Date Prepared: 2021-05-08

Table Continued

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

**M. COOLING TOWERS**  
 This Section Does Not Apply

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

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

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

STATE OF CALIFORNIA  
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 CERTIFICATE OF COMPLIANCE  
 Project Name: North Shoreview Montessori School - HVAC Replacement  
 Project Address: 1301 Cypress Avenue, San Mateo, CA 94401  
 Report Page: Page 8 of 12  
 Date Prepared: 2021-05-08

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

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

STATE OF CALIFORNIA  
**Mechanical Systems**  
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 CERTIFICATE OF COMPLIANCE  
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 Project Address: 1301 Cypress Avenue, San Mateo, CA 94401  
 Report Page: Page 9 of 12  
 Date Prepared: 2021-05-08

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

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

STATE OF CALIFORNIA  
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 CERTIFICATE OF COMPLIANCE  
 Project Name: North Shoreview Montessori School - HVAC Replacement  
 Project Address: 1301 Cypress Avenue, San Mateo, CA 94401  
 Report Page: Page 4 of 12  
 Date Prepared: 2021-05-08

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats §110.2(b) & (c)¹, §120.2(a) or §141.0(b)(2)E	Shut-Off Controls §120.2(e)	Isolation Zone Controls §120.2(a)	Demand Response §110.12 and §120.2(b)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(n)
HP/FC	single zone	≤ 25,000 ft²	EMCS	EMCS	NA: Single Zone	EMCS	NA: Single Zone	NA: Alteration project
WHP	single zone	≤ 25,000 ft²	EMCS	EMCS	NA: Single Zone	EMCS	NA: Single Zone	NA: Alteration project
AC	single zone	≤ 25,000 ft²	EMCS	EMCS	NA: Single Zone	EMCS	NA: Single Zone	NA: Alteration project
F/CU	single zone	≤ 25,000 ft²	EMCS	EMCS	NA: Single Zone	EMCS	NA: Single Zone	NA: Alteration project

¹ FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.  
 \* 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(g); EXCEPTION 1 to §140.4(f)

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

01	<input type="checkbox"/>	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	<input type="checkbox"/>	Check this box if the project includes Nonresidential or Hotel/Motel spaces
03	<input type="checkbox"/>	Check this box if the project includes new or altered high-rise residential dwelling units
03	<input type="checkbox"/>	Check the box if the project is using natural ventilation in any spaces to meet required ventilation rates per §120.1(c)(2).

**Nonresidential and Hotel/ Motel Ventilation Systems**

Table Continued

STATE OF CALIFORNIA  
**Mechanical Systems**  
 NRCC-MCH-E (Created 09/2020)  
 CERTIFICATE OF COMPLIANCE  
 Project Name: North Shoreview Montessori School - HVAC Replacement  
 Project Address: 1301 Cypress Avenue, San Mateo, CA 94401  
 Report Page: Page 5 of 12  
 Date Prepared: 2021-05-08

System Name	HP/FC	System Design OA CFM Air Flow:	450	System Design Transfer Air CFM:	0	Air Filtration per §120.1(c) and §141.0(b)(2)²		
Provided per §120.1(c) (NR & Hotel/Motel)								
08		10	11	12	13	14	15	16
Mechanical Ventilation Required per §120.1(c)(3)³								
Space Name or Item Tag	Occupancy Type⁴	Conditioned Floor Area (ft²)	# of showerheads /toilets	# of people⁵	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(d)(3), §120.1(d)(5) & §120.2(e)(2)⁶
HP/FC	Classroom (age 5-18)	1,000			150		0	DCV NA: Not required space type
17		Total System Required Min OA CFM	150		18		Ventilation for this System Complies? Yes	

**Nonresidential and Hotel/ Motel Ventilation Systems**

System Name	WHP	System Design OA CFM Air Flow:	450	System Design Transfer Air CFM:	0	Air Filtration per §120.1(c) and §141.0(b)(2)²		
Provided per §120.1(c) (NR & Hotel/Motel)								
08		10	11	12	13	14	15	16
Mechanical Ventilation Required per §120.1(c)(3)³								
Space Name or Item Tag	Occupancy Type⁴	Conditioned Floor Area (ft²)	# of showerheads /toilets	# of people⁵	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV or Occupant Sensor Controls per §120.1(d)(3), §120.1(d)(5) & §120.2(e)(2)⁶
WHP	Classroom (age 5-18)	1,000			150		0	DCV NA: Not required space type
17		Total System Required Min OA CFM	150		18		Ventilation for this System Complies? Yes	

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

STATE OF CALIFORNIA  
**Mechanical Systems**  
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 CERTIFICATE OF COMPLIANCE  
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 Project Address: 1301 Cypress Avenue, San Mateo, CA 94401  
 Report Page: Page 6 of 12  
 Date Prepared: 2021-05-08

¹ FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system.  
 ² Air filtration requirements apply to the following three system types per §120.1(c)(2): space conditioning systems utilizing ducts to supply air to occupiable space; supply only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.  
 ³ Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.  
 ⁴ See Standards Tables 120.1.4 and 120.1.8  
 ⁵ For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.  
 ⁶ §120.2(e)(2) requires systems serving rooms that are required by §130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller, multipurpose rooms less than 1,000ft², classrooms, conference rooms, restaurants, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by §120.1(c)

**K. TERMINAL BOX CONTROLS**  
 This Section Does Not Apply

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

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

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

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

STATE OF CALIFORNIA  
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 Report Page: Page 1 of 12  
 Date Prepared: 2021-05-08

**A. GENERAL INFORMATION**  
 01 Project Location (city) San Mateo  
 04 Total Conditioned Floor Area  
 05 Total Unconditioned Floor Area  
 06 # of Stories (Habitable Above Grade) 1  
 07 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**  
 Table Instructions: Include any mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)(2) for alterations.

My project consists of (check all that apply)		
01	02	03
Air System(s)	Wet System Components	Dry System Components
<input checked="" type="checkbox"/> Heating Air System	<input type="checkbox"/> Water Economizer	<input type="checkbox"/> Air Economizer
<input checked="" type="checkbox"/> Cooling Air System	<input type="checkbox"/> Pumps	<input type="checkbox"/> Electric Resistance Heat
Mechanical Controls	<input type="checkbox"/> Hydronic System Piping	<input type="checkbox"/> Fan Systems
<input checked="" type="checkbox"/> Mechanical Controls (existing to remain, altered or new)	<input checked="" type="checkbox"/> Cooling Towers	<input checked="" type="checkbox"/> Ductwork (existing to remain, altered or new)
	<input type="checkbox"/> Chillers	<input checked="" type="checkbox"/> Ventilation
	<input type="checkbox"/> Boilers	<input type="checkbox"/> Zonal Systems/ Terminal Boxes

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

01	02	03	04	05	06	07	08	09
System Summary §110.1, §110.2, §140.4	Pumps §140.4(k)	Fans/Economizers §140.4(c), §140.4(e)	System Controls §110.2, §120.2, §140.4(e)	Ventilation §120.1	Terminal Box Controls §140.4(f)	Distribution Towers §120.3, §140.4(i)	Cooling Towers §110.2(e)(2)	Compliance Results
(See Table F)	(See Table G)	(See Table H)	(See Table I)	(See Table J)	(See Table K)	(See Table L)	(See Table M)	COMPLIES
Yes	AND	AND	AND	Yes	AND	Yes	AND	COMPLIES
Mandatory Measures Compliance (See Table Q for Details)								COMPLIES

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

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 CERTIFICATE OF COMPLIANCE  
 Project Name: North Shoreview Montessori School - HVAC Replacement  
 Project Address: 1301 Cypress Avenue, San Mateo, CA 94401  
 Report Page: Page 2 of 12  
 Date Prepared: 2021-05-08

**D. EXCEPTIONAL CONDITIONS**  
 This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form. Selections made in Table O have been changed by the permit applicant. See Table E. Additional Remarks for permit applicant's explanation.

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

**F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)**  
 Table Instructions: Complete the following equipment schedules to show compliance with mandatory requirements found in §110.1 and §110.2(a) and prescriptive requirements found in §140.4(a), §140.4(b), and §140.4(c) or §141.0(b)(2) for alterations.

01	02	03	04	05	06	07	08	09	10	11
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available¹ §140.4(a)	Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
HP/FC	Unitary heat pumps (no elec. resistance)	Air cooled, split (1 phase)	Yes	60	60	0	54	54		
WHP	Unitary heat pumps	Air cooled, package (1 phase)	Yes	48	48	12	48	48		
AC	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	88	110	0	38	48		
F/CU	Furnace + AC	AC, air cooled, split + warm-air central furnace, gas-fired	Yes	78	80	0	48	48		

Table Continued

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

STATE OF CALIFORNIA  
**Mechanical Systems**  
 NRCC-MCH-E (Created 09/2020)  
 CERTIFICATE OF COMPLIANCE  
 Project Name: North Shoreview Montessori School - HVAC Replacement  
 Project Address: 1301 Cypress Avenue, San Mateo, CA 94401  
 Report Page: Page 3 of 12  
 Date Prepared: 2021-05-08

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

Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Heating Mode			Cooling Mode		
			Efficiency Unit	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency	Efficiency Unit	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency
HP/FC	<65,000		HSPF	8.2	9	SEER	14	17.1
WHP	<65,000		HSPF	8	8	SEER	14	14
AC	<65,000				0.8	SEER	13	20
F/CU	≥45kBtu/h cooling/ <225kBtu/h heating		AFUE	0.8	0.96	EER	11.7	12
						SEER	14	17

**G. PUMPS**  
 This Section Does Not Apply

**H. FAN SYSTEMS & AIR ECONOMIZERS**  
 This Section Does Not Apply

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

Table Continued

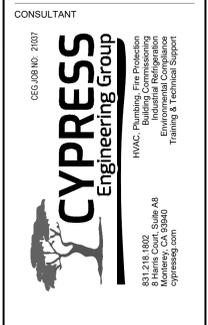
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards/> September 2020



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PROJECT  
**NORTH SHOREVIEW ELEMENTARY SCHOOL - HVAC REPLACEMENT**

SAN MATEO-FOSTER CITY SCHOOL DISTRICT



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

CERTIFICATE OF COMPLIANCE  
 Project Name: North Shoreview Montessori School - HVAC Replacement Report Page: Page 10 of 12  
 Project Address: 1301 Cypress Avenue, San Mateo, CA 94401 Date Prepared: 2021-05-08

**P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION**  
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YES	NO	Form/Title	Field Inspector	
			Pass	Fail
<input type="radio"/>	<input checked="" type="radio"/>	NRCV-MCH-04-H Duct Leakage Test NOTE: Must be completed by a HERS Rater	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCV-MCH-24 Enclosure Air Leakage Worksheet NOTE: Must be completed by a HERS Rater	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCV-MCH-27 High-rise Residential NOTE: Must be completed by a HERS Rater	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCV-MCH-32 Local Mechanical Exhaust NOTE: Must be completed by a HERS Rater	<input type="checkbox"/>	<input type="checkbox"/>

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

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

CERTIFICATE OF COMPLIANCE  
 Project Name: North Shoreview Montessori School - HVAC Replacement Report Page: Page 11 of 12  
 Project Address: 1301 Cypress Avenue, San Mateo, CA 94401 Date Prepared: 2021-05-08

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

D1		D2	
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block:		Plan sheet or construction document location	
Mandatory Measure	No	Plan sheet or construction document location	
Heating Equipment Efficiency per §110.1		MPD.02	
Cooling Equipment Efficiency per §110.1		MPD.02	
Furnace Standby Loss Control per §110.2(d)		NA	
Duct Insulation per §120.4		23 05 00	
Heating Hot Water Equipment Efficiency per §110.1		NA	
Cooling Chilled and Condenser Water Equipment Efficiency per §110.1		NA	
Open and Closed Circuit Cooling Towers conductivity of flow-based controls per §110.2(e)1		NA	
Open and Closed Circuit Cooling Towers Flow Meter with analog output per §110.2(e)3		NA	
Open and Closed Circuit Cooling Towers Overflow Alarm per §110.2(e)4		NA	
Open and Closed Circuit Cooling Towers Efficient Drift Eliminators per §110.2(e)5		NA	
Pipe Insulation per §120.3(b)		NA	
Combustion air shutoff, combustion air fan controls and stack design and controls for boilers per §120.9		NA	
Heat Pump with Supplementary Electric Resistance Heater Controls per §110.2(b)		NA	
The air duct and plenum system is designed per §120.4(a)-f)		Yes	
Kitchen range hoods shall be rated for sound in accordance with Section 7.2 of ASHRAE 62.2		NA	

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

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

CERTIFICATE OF COMPLIANCE  
 Project Name: North Shoreview Montessori School - HVAC Replacement Report Page: Page 12 of 12  
 Project Address: 1301 Cypress Avenue, San Mateo, CA 94401 Date Prepared: 2021-05-08

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**  
 1. I certify that this Certificate of Compliance documentation is accurate and complete.  
 Documentation Author Name: Chahan Shah Documentation Author Signature: *Chahan S. Shah*  
 Company: Cypress Engineering Group Signature Date: 5/8/21  
 Address: 8 Harris Court, Suite A8 CE/HERS Certification Identification (if applicable):  
 City/State/Zip: Monterey, CA 93940 Phone: 8312181802

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**  
 I certify the following under penalty of perjury, under the laws of the State of California:  
 1. The information provided on this Certificate of Compliance is true and correct.  
 2. 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).  
 3. 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.  
 4. 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.  
 5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.  
 Responsible Designer Name: Metin Serttunc Responsible Designer Signature: *M. Serttunc*  
 Company: Cypress Engineering Group Date Signed: 5/8/21  
 Address: 8 Harris Court, Suite A8 License: M31059  
 City/State/Zip: Monterey, CA 93940 Phone: 8312181802

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

IDENTIFICATION STAMP  
 DIV. OF THE STATE ARCHITECT  
 APP: 01-119526 INC.  
 REVIEWED FOR  
 SS  FLS  ACS   
 DATE: 10/27/2021

**aedis**  
 architects

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 San Jose, CA 95113  
 t el: (408)-300-5160  
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PROJECT  
**NORTH SHOREVIEW ELEMENTARY SCHOOL - HVAC REPLACEMENT**

SAN MATEO-FOSTER CITY SCHOOL DISTRICT

CONSULTANT

DECISION: 2/07  
**CYPRESS Engineering Group**  
 HVAC, Plumbing, Fire Protection, Mechanical, Electrical, and Environmental Compliance Training & Technical Support  
 831.218.1802  
 8 Harris Court, Suite A8  
 Monterey, CA 93940  
 cypresseng.com



STATE  
 DSA FILE NUMBER 41-26  
 APPL # 01-119526

REVISIONS  
**No. Description Date**

MILESTONES  
 DD  
 90% CD  
 DSA SUB 05/24/2021  
 BACKCHECK 10/22/2021

SHEET  
**TITLE 24 DOCUMENTS-MECHANICAL**

DATE 10/22/2021  
 JOB # 2021005.05  
 SHEET # **MP8.02**

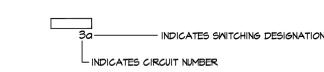
# SYMBOL LIST:

	PLAN, DETAIL OR SECTION DESIGNATION.
	ROOM NUMBER.
	SHEET REFERENCE SYMBOL - SEE ASSOCIATED NOTE ON SAME SHEET.
	FEEDER SCHEDULE SYMBOL.
	MECHANICAL EQUIPMENT TAG.
	INDICATES FIXTURE TYPE

## LUMINAIRE SYMBOLS

	LUMINAIRE - SEE SCHEDULE.
	LUMINAIRE - SEE SCHEDULE.
	LUMINAIRE - SEE SCHEDULE.
	POLE MOUNTED LUMINAIRE - SEE SCHEDULE.
	POLE MOUNTED LUMINAIRE - SEE SCHEDULE.
	LUMINAIRE - SEE SCHEDULE.
	LUMINAIRE - SEE SCHEDULE.
	LUMINAIRE WALL MOUNTED-SEE SCHEDULE.
	EMERGENCY LUMINAIRE - PROVIDE EMERGENCY BATTERY BALLAST
	EMERGENCY LUMINAIRE - PROVIDE EMERGENCY BATTERY BALLAST
	EMERGENCY LUMINAIRE - PROVIDE EMERGENCY BATTERY BALLAST
	EMERGENCY LUMINAIRE WALL MOUNTED- PROVIDE EM. BATTERY BALLAST
	EXIT LIGHT SINGLE FACE - SEE SCHEDULE.
	EXIT LIGHT SINGLE FACE (WITH ARROW)- SEE SCHEDULE.
	EXIT LIGHT (DOUBLE FACED WITH ARROW)- SEE SCHEDULE.
	EMERGENCY BATTERY PACK EXIT LIGHT INSTALL AS DIRECTED.

## TYPICAL LUMINAIRE NOMENCLATURE



## SWITCH SYMBOLS

	SINGLE POLE SWITCH, + 48" AFF TO THE TOP OF THE OUTLET BOX UON.
	SINGLE POLE SWITCH, + 48" AFF TO THE TOP OF THE OUTLET BOX, a = CIRCUIT CONTROLLED.
	THREE WAY SWITCH + 48" AFF TO THE TOP OF THE OUTLET BOX UON.
	FOUR WAY SWITCH + 48" AFF TO THE TOP OF THE OUTLET BOX UON.
	MOTOR RATED SWITCH
	WALL MOUNTED LOW VOLTAGE "DATA LINE SWITCH +48" FROM TOP OF BOX UON, a = CIRCUIT CONTROLLED
	LIGHTING OCCUPANCY SENSOR
	MOTION DETECTOR POWER PACK
	ONE CIRCUIT WALL SWITCH WITH BUILT IN OCCUPANCY SENSOR. CONNECT SWITCHING TO LIGHTING FIXTURES AS REQUIRED. MOUNT AT +48" AFF TO THE TOP OF THE SWITCH BOX UON.

## RECEPTACLE SYMBOLS

	CONVENIENCE RECEPTACLE - DUPLEX AT + 18" AFF AND NOT LESS THAN 15" FROM BOTTOM OF BOX UON.
	GFCI CONVENIENCE RECEPTACLE - DUPLEX AT +18" AFF AND NOT LESS THAN 15" FROM BOTTOM OF BOX UON.
	RECEPTACLE - DOUBLE DUPLEX AT + 18" AFF AND NOT LESS THAN 15" FROM BOTTOM OF BOX UON.
	SINGLE RECEPTACLE - NEMA 5-20R UON, AT + 18" AFF AND NOT LESS THAN 15" FROM BOTTOM OF BOX UON.
	SINGLE RECEPTACLE - NEMA L21 - 208 VOLT, THREE PHASE, 3 WIRE, AT + 18" AFF UON AND NOT LESS THAN 15" FROM BOTTOM OF BOX UON.
	DOUBLE DUPLEX RECEPTACLE WITH (1) CONTROLLED DUPLEX AND (1) UNCONTROLLED DUPLEX, AT +18" AFF AND NOT LESS THAN 15" FROM BOTTOM OF BOX UON.
	3-CHANNEL SURFACE RACEWAY, INSTALL AT +36" AFF UON. RACEWAY SHALL BE WIREMOLD #5500.
	FLOOR BOX WITH (2) DUPLEX RECEPTACLES AND DATA OUTLETS. QUANTITY OF DATA OUTLETS AS INDICATED ON THE FLOOR PLANS.

## POWER DISTRIBUTION SYMBOLS

	PANELBOARD - SURFACE OR FLUSH MOUNTED.
	LIGHTING CONTROL CABINET.
	EMERGENCY POWER INVERTER.
	JUNCTION BOX - CEILING OR WALL MOUNTED, SIZE PER CEC, TAPE AND TAG WIRING.
	MAIN SWITCHBOARD OR DISTRIBUTION PANEL.
	MOTOR
	RATINGS AS INDICATED.
	UNFUSED DISCONNECT SWITCH - RATINGS AS INDICATED.
	FUSED DISCONNECT SWITCH - SIZE FUSES PER MOTOR MANUFACTURER'S RECOMMENDATIONS, RATINGS AS INDICATED.
	MAGNETIC STARTER - NEMA SIZE INDICATED.
	TRANSFORMER - SEE SINGLE LINE FOR REQUIREMENTS.
	GROUND ROD.
	IN-GRADE ELECTRICAL PULL BOX WITH TRAFFIC RATED LID.
	IN-GRADE LIGHTING PULL BOX WITH TRAFFIC RATED LID.
	IN-GRADE COMMUNICATION PULL BOX WITH TRAFFIC RATED LID.
	SINGLE EV CHARGER FOR BUS
	DOUBLE EV CHARGER FOR CAR

## POWER DISTRIBUTION SINGLE LINE SYMBOLS

	DRAW-OUT CIRCUIT BREAKER.
	CIRCUIT BREAKER.
	FUSED SWITCH.
	"P64E" METER W/ CURRENT TRANSFORMER.
	TRANSFORMER.
	NORMALLY OPENED, AUXILIARY CONTACT.
	NORMALLY CLOSED, AUXILIARY CONTACT.
	AUTOMATIC TRANSFER SWITCH.
	EMERGENCY GENERATOR.

## WIRING & CONDUIT RUN SYMBOLS

	CONDUIT - CONCEALED IN WALLS OR CEILINGS.
	CONDUIT - EXPOSED.
	CONDUIT - IN OR BELOW FLOOR, 3/4" MIN.
	EXISTING CONDUIT, CABLES OR DEVICE
	CONDUIT - HOME RUN TO PANEL, TERMINAL CABINET, ETC. RUNS MARKED WITH CROSSHATCHES INDICATE NUMBER OF #12 AWG WIRES. CROSSHATCH WITH SUBSCRIPT 'S' INDICATES GREEN GROUND WIRE. SIZE CONDUIT ACCORDING TO SPECIFICATIONS AND APPLICABLE CODE. CROSSHATCHES WITH "10" INDICATES WIRE SIZE OTHER THAN #12S.
	FLEX CONDUIT WITH CONNECTION.
	CONDUIT - STUB UP.
	CONDUIT - STUB DOWN.
	CONDUIT EMERGENCY SYSTEM.
	CAPPED CONDUIT.
	CONDUIT CONTINUATION.

## WATTSTOPPER DIGITAL LIGHTING MANAGEMENT CONTROLS

	WATTSTOPPER LMCP24
	WATTSTOPPER LMRG-101
	WATTSTOPPER LMRG-211
	WATTSTOPPER LMRG-212
	WATTSTOPPER LMRG-213
	WATTSTOPPER LMRG-100, CEILING MOUNT
	WATTSTOPPER LMRX-101, + 48" AFF TO TOP OF THE BOX UON.
	WATTSTOPPER LMLS-500, CEILING/WALL MOUNT
	WATTSTOPPER LMSX-101, + 48" AFF TO TOP OF THE BOX UON.
	WATTSTOPPER LMSX-102, + 48" AFF TO TOP OF THE BOX UON.

## COMMUNICATIONS SYMBOLS

	1' FLOOR MOUNTED DATA RACK.
	DATA/TEL STATION AT +18" AFF UON WITH (1) DATA OUTLET. CONNECT DATA/TEL OUTLETS PER THE DATA/TEL RISER DIAGRAM. STUB CONDUIT INTO AVAILABLE CEILING SPACE.
	DATA/TEL STATION AT +18" AFF UON WITH (2) DATA OUTLETS. CONNECT DATA/TEL OUTLETS PER THE DATA/TEL RISER DIAGRAM. STUB CONDUIT INTO AVAILABLE CEILING SPACE.
	(2) DATA OUTLETS FOR WIRELESS ACCESS POINT EQUIPMENT TO BE MOUNTED IN CEILING CHASE.
	INTERIOR SPEAKER WALL MOUNTED AT + 8"-0" AFF UON. CONNECT SPEAKER PER THE PA/CLOCK RISER DIAGRAM
	CEILING MOUNTED SPEAKER. CONNECT SPEAKER PER THE PA/CLOCK RISER DIAGRAM
	FLUSH MOUNTED EXTERIOR SPEAKER AT +8"-0" AFF UON. CONNECT EXTERIOR SPEAKER PER THE PA/CLOCK RISER DIAGRAM.
	COMBINATION FLUSH MOUNTED CLOCK/SPEAKER DEVICE AT +8"-0" AFF UON. CONNECT CLOCK/SPEAKER PER THE PA/CLOCK RISER DIAGRAM. PROVIDE 3/4" ACCESSIBLE CEILING.
	HMI DEVICE. CONNECT PER A 4 1/2" EXTRA DEEP BOX WITH A 2 GANG RING THROUGH 1 1/4" TO CEILING.
	FIRE ALARM CONTROL PANEL.
	REMOTE POWER SUPPLY.
	EVAC SPEAKER AMPLIFIER.
	FIRE ALARM TERMINAL CABINET.
	REMOTE FIRE ALARM ANNIKIATOR.
	SMOKE DETECTOR
	PULL STATION
	HORN STROBE

## MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2014 CBC, SECTIONS 1617A.1.8 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTER 15, 26 AND 30.

- ALL PERMANENT EQUIPMENT AND COMPONENTS.
- 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 10/120V VOLT RECEPTACLE HAVING A FLEXIBLE CABLE.
- TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT 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 LINGSTUDINAL DIRECTIONS:

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

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT 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.

## PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 19.3 AS DEFINED IN ASCE 7-16 SECTION 19.6.5, 19.6.6, 19.6.7, 19.6.8, AND 2014 CBC, SECTIONS 1617A.1.24, 1617A.1.25 AND 1617A.1.26.

THE METHOD OF SHOWING BRACINGS AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACINGS AND ATTACHMENTS ARE BASED ON A PRE-APPROVED INSTALLATION GUIDE (E.G., SMACNA OR OSHPD OPM FOR 2019 CSB 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 SYSTEM. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGERS AND BRACE LOADS.

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

MP O MD O PP O EB - OPTION 1. DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP O MD O PP O ED - OPTION 2. SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVED (GPM #) #

# GENERAL NOTES:

- THE CONTRACTOR SHALL BE LICENSED BY THE STATE OF CALIFORNIA C-10 AND SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS. MATERIALS AND EQUIPMENT SHALL BE U.L. LISTED AND LABELED FOR THE APPLICATION.
- THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, LICENSES AND INSPECTION FEES REQUIRED BY THIS CONTRACT WORK.
- PRIOR TO SUBMITTING A BID THE CONTRACTOR SHALL VISIT THE SITE, REVIEW THE EXISTING CONDITIONS AND ALLOW FOR LABOR, MATERIAL AND COORDINATION THAT IS NECESSARY TO PROVIDE A COMPLETE INSTALLATION OF EACH SYSTEM. THE CONTRACTOR SHALL OBTAIN AND BE FAMILIAR WITH ALL OTHER TRADES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ELECTRICAL WORK NOTED AND CALLED OUT ON ALL CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN OTHER TRADES ON PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONS AND PROPERTY AND SHALL PROVIDE INSURANCE COVERAGE AS NECESSARY FOR LIABILITY, PERSONAL PROPERTY DAMAGE, TO FULLY PROTECT THE OWNER, ARCHITECT AND ENGINEER FROM ANY AND ALL CLAIMS RESULTING FROM THIS WORK.
- THE CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS AT THE PROJECT SITE INDICATING ALL MODIFICATIONS TO ELECTRICAL SYSTEMS. THE CONTRACTOR SHALL AT THE CONCLUSION OF THE PROJECT PROVIDE ACCURATE "AS-BUILT" DRAWINGS. "AS-BUILT" DRAWINGS SHALL SHOW ACTUAL CHANGES TO ORIGINAL ELECTRICAL DRAWINGS, SHOW LOCATIONS OF PULL BOXES, CONDUIT RUNS AND WIRING CHANGES. THE CONTRACTOR SHALL PROVIDE ONE (1) HARD COPY SET OF DOCUMENT DRAWINGS AND ONE (1) SET OF DOCUMENT DRAWINGS IN ELECTRONIC CAD FILE THAT REPRESENTS THE ACTUAL "AS-BUILTS". CAD FILES SHALL BE AUTOCAD 2010 FORMAT.
- ALL MATERIALS PROVIDED TO THE PROJECT SHALL BE NEW. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL ALL INCIDENTAL MATERIALS REQUIRED FOR A COMPLETE INSTALLATION.
- THE CONTRACTOR SHALL PROVIDE TO THE ARCHITECT A CONSTRUCTION SCHEDULE OF ELECTRICAL WORK. THE CONSTRUCTION SCHEDULE SHALL IDENTIFY ALL SIGNIFICANT MILESTONES WITH COMPLETION DATES.
- THE CONTRACTOR SHALL PROVIDE ALL REQUIRED "CUTTING, PATCHING, EXCAVATION, BACKFILL, AND REPAIRS" NECESSARY TO RESTORE DAMAGED SURFACES TO EQUAL OR BETTER THAN ORIGINAL CONDITIONS EXISTING AT START OF WORK. THE CONTRACTOR SHALL CONTACT "UNDERGROUND SERVICES ALERT" FOR LOCATION OF EXISTING UTILITIES PRIOR TO COMMENCEMENT OF UNDERGROUND WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAINTING ALL EXPOSED CONDUITS AND ELECTRICAL EQUIPMENT. REFER TO ARCHITECT'S PAINTING SECTION FOR REQUIREMENTS.
- ALL ELECTRICAL EQUIPMENT INSTALLED OUTDOORS SHALL BE WEATHERPROOF. EXTERIOR CONDUITS RUN INTO BUILDINGS SHALL BE INSTALLED WITH FLASHINGS, GAULLED AND SEALED. CONDUITS FOR EXTERIOR ELECTRICAL DEVICES SHALL BE RUN INSIDE BUILDING UNLESS OTHERWISE NOTED ON DRAWINGS. ALL EXTERIOR CONDUITS SHALL BE "R56" UNLESS OTHERWISE NOTED ON DRAWINGS.
- ALL CONDUITS UNLESS OTHERWISE NOTED ON DRAWINGS SHALL HAVE AS A MINIMUM TWO (2) #12S WITH ONE (1) #12 GROUND. "TICK" MARKS SHOWN ON CIRCUITRY ARE FOR "ROUGH" ESTIMATING ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WIRES AND WIRE SIZES REQUIRED BY LATEST CODE.
- COORDINATE ALL CONDUIT RUNS, ELECTRICAL EQUIPMENT AND PANELS WITH ALL OTHER WORK TO AVOID CONFLICTS.
- SEE ARCHITECTURAL DOCUMENTS FOR EXACT PLACEMENT OF LIGHTING FIXTURES AND DEVICES. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF CEILING TYPES FROM ARCHITECTURAL DOCUMENTS AND PROVIDE AND INSTALL ALL REQUIRED FIXTURE MOUNTING HARDWARE. PROVIDE AND INSTALL U.L. LISTED FIRE STOP ENCLOSURES FOR ALL RECESSED FIXTURES IN FIRE RATED CEILINGS.
- THE CONTRACTOR SHALL PROVIDE IN EVERY CONDUIT A DRAIN STRING FOR USE IN FUTURE CONSTRUCTION.
- POWER FEEDERS MAY NOT BE SHOWN ON THE DRAWINGS. REFER TO THE SINGLE LINE DIAGRAM FOR CONDUIT AND FEEDER INFORMATION. ALL DRAWINGS ARE DIAGRAMMATIC INDICATING LOCATION OR POSITION OF EQUIPMENT. FIELD VERIFY CONDITIONS PRIOR TO INSTALLATION OF ANY WORK.
- MANUFACTURER'S RECOMMENDATIONS FOR CONDUCTOR SIZING, CIRCUIT BREAKER OR FUSE PROTECTION OF ELECTRICALLY OPERATED EQUIPMENT MAY DIFFER FROM THOSE INDICATED ON DRAWINGS. CONTRACTOR SHALL CONFIRM RATINGS PRIOR TO ORDERING EQUIPMENT. PROVIDE ELECTRICAL PROTECTION TO EQUIPMENT IN ACCORDANCE TO MANUFACTURER'S SPECIFICATIONS AND PER NATIONAL ELECTRICAL CODE REQUIREMENTS.
- CONTRACTOR SHALL REVIEW EQUIPMENT REQUIREMENTS OF OTHER TRADES AND PROVIDE POWER CIRCUITS AND CONNECTIONS TO ELECTRICALLY OPERATED EQUIPMENT.
- EFFECTIVELY BOND ELECTRICAL CABINETS, ENCLOSURES AND CONDUIT RACEWAYS TO CODE APPROVED GROUND AS PART OF THE CONTINUOUS GROUNDING SYSTEM.
- MEASURE THE 3-PHASE AND PHASE TO NEUTRAL SERVICE VOLTAGE FOR 208/120V PANELS PRIOR TO ENERGIZING ANY PANELS OR EQUIPMENT. AVOID ENERGIZING 208/120V PANELS PHASE TO NEUTRAL VOLTAGE ABOVE 180 VOLTS. TRANSFORMER TAP SETTINGS MAY REQUIRE CHANGING.
- MEASURE THE 1-PHASE AND PHASE TO NEUTRAL SERVICE VOLTAGE FOR 240/120V PANELS PRIOR TO ENERGIZING ANY PANELS OR EQUIPMENT. AVOID ENERGIZING 240/120V PANELS PHASE TO NEUTRAL VOLTAGE ABOVE 180 VOLTS.
- DO NOT SUBSTITUTE SPECIFIED MATERIAL OR EQUIPMENT WITHOUT FIRST OBTAINING APPROVAL FROM THE OWNER OR HIS REPRESENTATIVE.
- IDENTIFY ALL ABOVE CEILING JUNCTION BOXES COVERS WITH PANEL AND CIRCUITS IN LEGIBLE PRINT USING BLACK INDELIBLE INK. ABOVE CEILING JUNCTION BOXES SHALL ALSO BE LABELED AT THE REAR INTERIOR BOX WITH AN INDELIBLE BLACK MARKER.
- LABEL ALL WALL AND/OR WIREMOLD MOUNTED OUTLET DEVICES WITH PANEL CIRCUIT IDENTIFICATION WITH BOLD TYPE-PRINTED LABELING. BLACK LETTERING ON WHITE BACKGROUND PREFERRED.
- DERATE CONDUCTORS IN RACEWAYS IN ACCORDANCE WITH NEC CODE REQUIREMENTS. PANEL FEEDERS TO WIREMOLDS CAN ENTER AT VARIOUS LOCATIONS TO LIMIT CONDUCTOR CIRCUITS PER WIREMOLD CAPACITIES.

# ABBREVIATIONS

A	AMPERE
ABV	ABOVE
AF	AMP FRAME OR AMP FUSE
AF1	ABOVE FINISHED FLOOR
ARCH	ARCHITECTURAL
AS	AMP SWITCH
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
BKR	BREAKER
BLDG	BUILDING
C	CONDUIT
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CD	CANDELAS
CKT	CIRCUIT
CL	CENTER LINE
CL6	CEILING
CO	CONDUIT ONLY
CR	CENTER
(D)	DEMOLISH
DET	DETAIL
DM	DIMENSION
DISTR	DISTRIBUTION
DWG	DRAWING
E	EMERGENCY
EM	EQUIPMENT
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
(F)	FUTURE
FIN	FLOOR
FL	FLOOR
G, GND	GROUND
HST	HEIGHT
HP	HORSEPOWER
IC	INTERCOM
IDF	INTERMEDIATE DISTRIBUTION FRAME
JB	JUNCTION BOX
KA/C	KILOAMPERE INTERRUPTING CAPACITY
KV	KILOVOLT
KVA	KILOVOLT AMPERES
KN	KILOWATT
LTS	LIGHTING
MCM	THOUSAND CIRCULAR MILS
MDF	MAIN DISTRIBUTION FRAME
MECH	MECHANICAL
MH	MANHOLE
MTD	MOUNTED
MTS	MOUNTING
(N)	NEW
NC	NORMALLY CLOSED
NEG	NOT IN CONTRACT
NEG	NOT IN ELECTRICAL CONTRACT
NO	NUMBER NORMALLY OPEN
NTS	NOT TO SCALE
O.C.	ON CENTER
PA	POLE CIRCUIT BREAKER
PA	PUBLIC ADDRESS
PB	PULL BOX
PF	POWER FACTOR
PH	PHONE
PAL	PANEL
(R)	EXISTING TO BE RELOCATED
REQD	REQUIRED
REGT	REGULATIONS
RM	ROOM
RSC	RISER STEEL CONDUIT
SHT	SHEET
SPI	SWITCH
SWB	SWITCHBOARD
TC	TERMINAL CABINET
TEL	TELEPHONE
TT	TYPE
UON	UNLESS OTHERWISE NOTED
V	VOLT
W	WATT
WP	WEATHERPROOF
XPR	TRANSFORMER

IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP: 01-119526 INC.  
REVIEWED FOR  
SS  FLS  ACS   
DATE: 10/27/2021

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PROJECT  
**NORTH  
SHERVIEW  
ELEMENTARY  
SCHOOL - HVAC  
REPLACEMENT**

SAN MATEO-FOSTER CITY  
SCHOOL DISTRICT

CONSULTANT

PROFESSIONAL ENGINEER  
STATE OF CALIFORNIA  
E16880  
Exp. 08/30/24  
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1800 The Alameda, Suite 200  
San Jose, CA 95126  
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STAMP

STATE FILE NUMBER  
DSA FILE NUMBER 41-26  
APPL # 01-119526

REVISIONS  
No. Description Date

MILESTONES  
DD  
90% CD  
DSA SUB 05/24/2021  
BACKCHECK 10/22/2021

SHEET  
**ELECTRICAL  
COVER SHEET**

DATE 10/22/2021  
JOB # 2021005.05  
SHEET #

**E0.1**

DRAWING INDEX	
SHEET NO.	SHEET TITLE
E0.1	ELECTRICAL COVER SHEET
E1.1	ELECTRICAL SITE PLAN
E2.1	ELECTRICAL DEMO FLOOR PLAN - BLDGS A, B & C
E2.2	ELECTRICAL DEMO FLOOR PLAN - BLDGS D & E
E3.1	ELECTRICAL NEW FLOOR PLAN - BLDGS A, B & C
E3.2	ELECTRICAL NEW FLOOR PLAN - BLDGS D & E
E4.1	DEMO SINGLE LINE DIAGRAM
E4.2	NEW SINGLE LINE DIAGRAM
E4.3	PANEL SCHEDULES
E5.1	ELECTRICAL DETAILS
E5.2	ELECTRICAL DETAILS
E5.3	ELECTRICAL DETAILS
E5.4	ELECTRICAL DETAILS



REVISIONS

No.	Description	Date
1		

MILESTONES

DD	
90% CD	
DSA SUB	05/24/2021
BACKCHECK	10/22/2021

**GENERAL NOTES:**

- CONTRACTOR SHALL COORDINATE UNDERGROUND REQUIREMENTS WITH ALL OTHER TRADES TO AVOID CONFLICTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY SAM CUTTING AND REMOVAL OF EXISTING SURFACES TO FACILITATE UNDERGROUND SYSTEMS. THE CONTRACTOR SHALL PATCH AND REPAIR ALL DAMAGED AND CUT SURFACES TO MATCH ADJACENT.
- CONTRACTOR TO SITE SURVEY EXISTING CONDITIONS AND LOCATIONS OF EXISTING UNDERGROUND SYSTEMS, WHERE NEW TRENCH WORK OCCURS PRIOR TO BIDDING. CONTRACTOR SHALL TAKE PROPER PRECAUTIONS TO ENSURE EXISTING UNDERGROUND SYSTEMS/CONDUITS/PIPES ARE NOT DAMAGED DURING INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR ANY REPAIRS REQUIRED IN THE EVENT THE EXISTING UNDERGROUND SYSTEMS ARE DAMAGED AS A RESULT OF THE NEW ELECTRICAL TRENCH WORK.
- INSTALL P64E PRIMARY TRENCH PER 1/ ES.1.
- INSTALL P64E SECONDARY TRENCH PER 3/ ES.1.
- P64E TRANSFORMER PAD SHALL BE PER 2/ ES.1.
- ALL ON SITE TRENCH SHALL BE INSTALLED PER 3/ ES.4.
- SEE THE DEMO SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.
- SEE NEW SINGLE LINE DIAGRAM FOR FEEDER CABLE AND CONDUIT REQUIREMENTS.
- THE CONTRACTOR SHALL HANDREL THROUGH THE ENTIRE P64E CONDUIT SYSTEM. COORDINATE WITH P64E FOR ADDITIONAL REQUIREMENTS AND PROCEDURES.

**SHEET NOTES:**

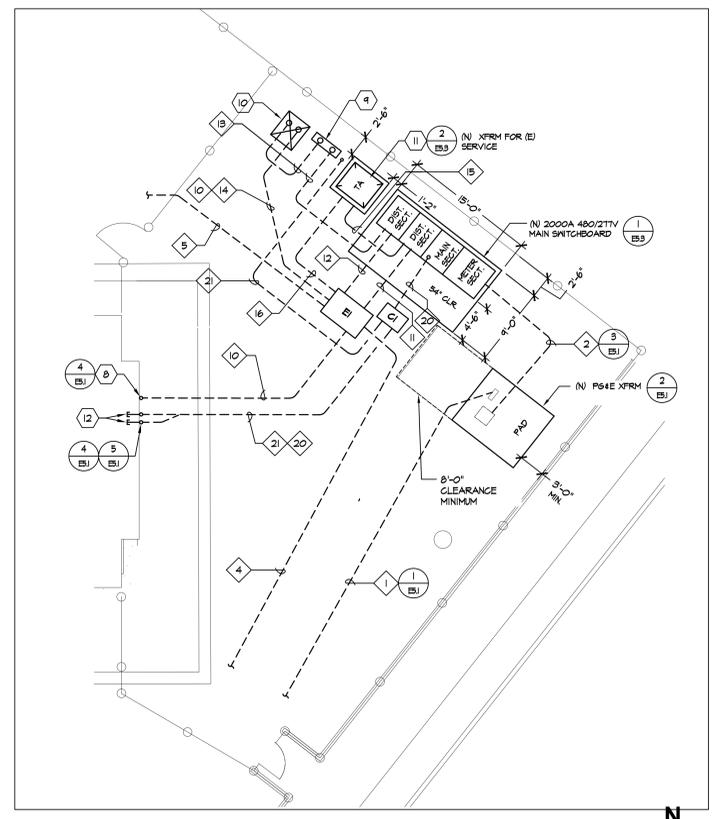
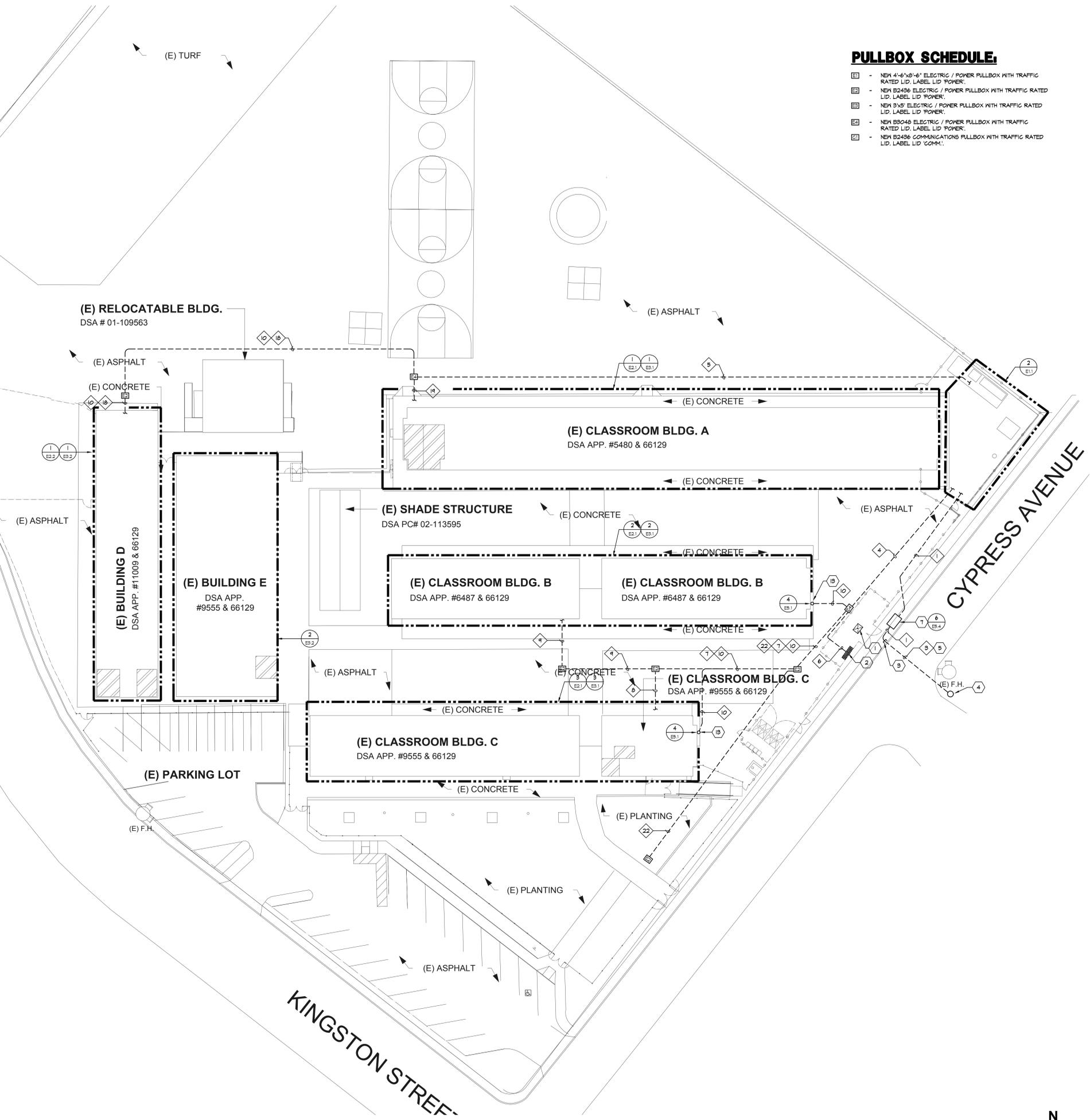
- |  |   |
|--|---|
| 1 EXISTING P64E TRANSFORMER TO BE REMOVED.   | 9 FUTURE PV DISCONNECT SWITCH.  |
| 2 EXISTING MAIN SWITCHBOARD TO BE CONVERTED TO DISTRIBUTION PANEL 'DPI'.   | 10 FUTURE PV DISTRIBUTION PANEL.  |
| 3 INTERCEPT EXISTING P64E PRIMARY CONDUIT.   | 11 NEW 225KVA TRANSFORMER 'TDP1'.   |
| 4 EXISTING P64E UTILITY POLE WITH RISER.   | 12 STUB CONDUIT HIGH ON THE WALL INSIDE THE ROOM AT CEILING LEVEL. VERIFY LOCATION WITH EXISTING ROOM CONDITION AND LAYOUT. |
| 5 EXISTING P64E PRIMARY STREET CROSSING TO REMAIN. INTERCEPT THE PRIMARY CONDUIT ON THE SCHOOL SIDE OF THE STREET AND EXTEND AS SHOWN. | 13 STUB PV CONDUIT IN THIS LOCATION. CONDUIT TO BE STUBBED UP AT BUILDING'S WALL. STUB UP AT 'H8' A.F.F. AND CAP.           |
| 6 EXISTING P64E GAS METER LOCATION.  |   |
| 7 NEW 3'x3' P64E PULLBOX.  |   |
| 8 STUB PV CONDUIT IN THIS LOCATION. CONDUIT TO BE STUBBED TO JUST OUTSIDE CONCRETE SIDEWALK. STUB UP AT 'H8' A.F.F. AND CAP.           |   |

**CONDUIT SCHEDULE:**

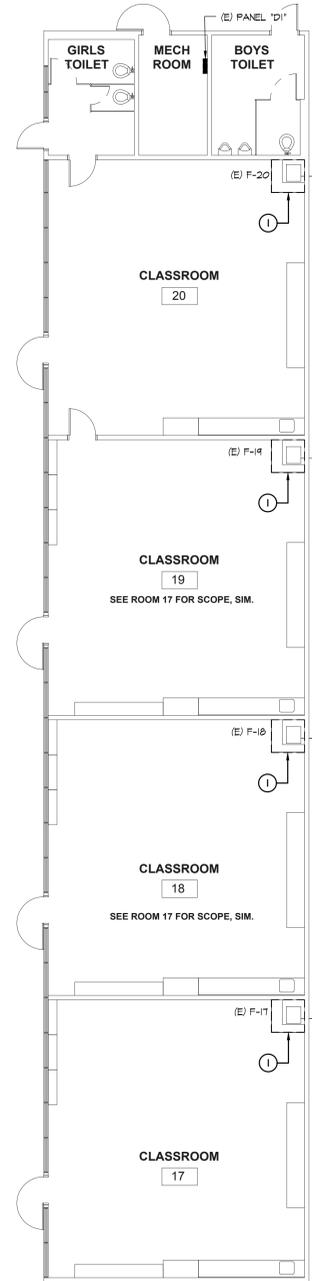
- |                                  |                                     |  |
|----------------------------------|-------------------------------------|--|
| 1 (N) (1) 4" - P64E PRIMARY      | 4 (N) (1) 2 1/2" - PANEL 'BM'       | 18 (N) (1) 2 1/2" - PANEL 'DM'           |
| 2 (N) (1) 5" - P64E SECONDARY    | 10 (N) (1) 2 1/2" - FUTURE PV       | 19 (N) (1) 4" - PANEL 'AM'               |
| 3 (E) (1) 4" - P64E PRIMARY      | 11 (N) (2) 4" - PANEL 'DPI'         | 20 (N) (1) 1" - P64E COMMUNICATIONS      |
| 4 (N) (2) 4" - PANEL 'DPI'       | (N) (1) 2 1/2" - PANEL 'BM'         | 21 (N) (1) 2" - FUTURE PV COMMUNICATIONS |
| (N) (1) 2 1/2" - PANEL 'CM'      | (N) (1) 2 1/2" - PANEL 'CM'         | 22 (N) (2) 2 1/2" - FUTURE EV            |
| (N) (2) 2 1/2" - FUTURE PV       | (N) (2) 2 1/2" - FUTURE EV          |  |
| 5 (N) (1) 4" - PANEL 'AM'        | 12 (N) (1) 4" - PANEL 'AM'          |  |
| (N) (1) 4" - PANEL 'EM' (FUTURE) | (N) (1) 4" - PANEL 'EM' (FUTURE)    |  |
| (N) (1) 2 1/2" - PANEL 'DM'      | (N) (2) 2 1/2" - FUTURE PV          |  |
| (N) (2) 2 1/2" - FUTURE PV       | 13 (N) (2) 3" - FUTURE PV           |  |
| (N) (2) 4" - FUTURE POWER        | 14 (N) (1) 2 1/2" - FUTURE PV       |  |
| 6 (N) (2) 4" - PANEL 'DPI'       | (N) (2) 4" - FUTURE PV              |  |
| 7 (N) (1) 2 1/2" - PANEL 'BM'    | 15 (N) (1) 4" - XFRM 'DPI'          |  |
| (N) (1) 2 1/2" - PANEL 'CM'      | 16 (N) (2) 4" - PANEL 'DPI'         |  |
| 8 (N) (1) 2 1/2" - PANEL 'CM'    | 17 (N) (1) 4" - PANEL 'EM' (FUTURE) |  |

**PULLBOX SCHEDULE:**

- 1 - NEW 4'-6"x8'-6" ELECTRIC / POWER PULLBOX WITH TRAFFIC RATED LID, LABEL LID POWER.
- 2 - NEW B2486 ELECTRIC / POWER PULLBOX WITH TRAFFIC RATED LID, LABEL LID POWER.
- 3 - NEW 3'x3' ELECTRIC / POWER PULLBOX WITH TRAFFIC RATED LID, LABEL LID POWER.
- 4 - NEW B2048 ELECTRIC / POWER PULLBOX WITH TRAFFIC RATED LID, LABEL LID POWER.
- 5 - NEW B2486 COMMUNICATIONS PULLBOX WITH TRAFFIC RATED LID, LABEL LID COMM.







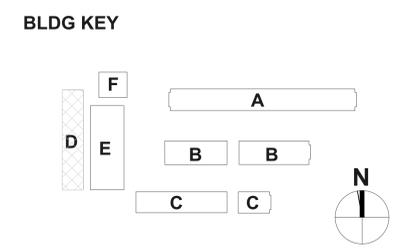
**GENERAL NOTES:**

1. CONTRACTOR SHALL REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL DEMO REQUIREMENTS.
2. EXISTING ELECTRICAL PANELS ARE TO REMAIN.
3. SEE NEW ELECTRICAL FLOOR PLANS FOR ADDITIONAL REQUIREMENTS.
4. SEE DEMO AND NEW SINGLE LINE DIAGRAMS FOR ADDITIONAL REQUIREMENTS.

**DEMOLITION SHEET NOTES:**

1. EXISTING MECHANICAL UNIT TO BE DEMOLISHED. PULL EXISTING ELECTRICAL CIRCUITRY BACK TO SOURCE AND REMOVE. REMOVE ALL CONDUITS, J-BOXES AND DISCONNECT SWITCH ASSOCIATED WITH THE DEMOLISHED UNIT.

**ELECTRICAL DEMO FLOOR PLAN - BLDG D**  
 1  
 E2.2 SCALE: 1/8" = 1'-0"



PROJECT  
**NORTH SHOREVIEW ELEMENTARY SCHOOL - HVAC REPLACEMENT**

SAN MATEO-FOSTER CITY SCHOOL DISTRICT  
 CONSULTANT



**American Consulting Engineers Electrical, Inc.**  
 1980 The Alameda, Suite 200  
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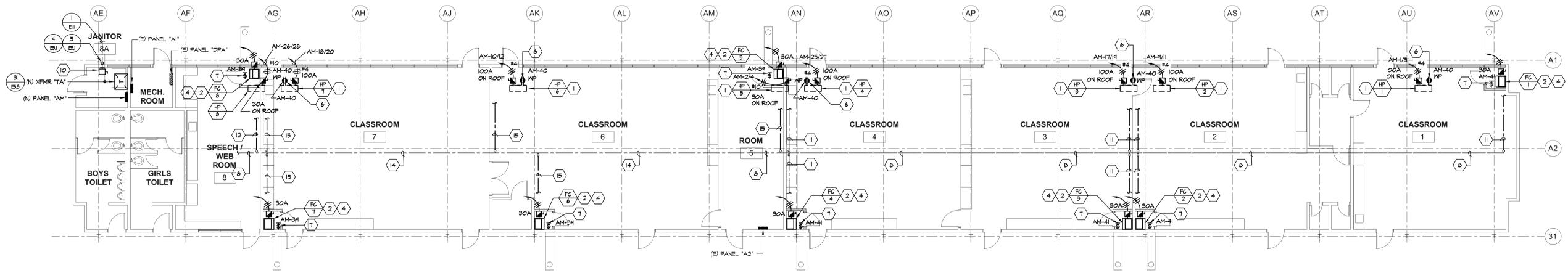
No.	Description	Date
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MILESTONES

DD	
90% CD	
DSA SUB	05/24/2021
BACKCHECK	10/22/2021

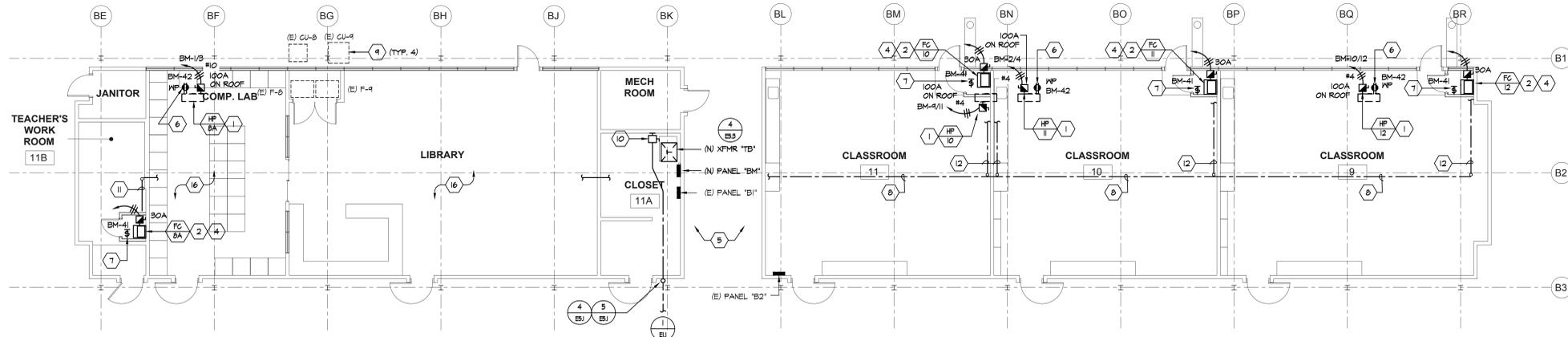
SHEET  
**ELECTRICAL DEMO FLOOR PLANS - BLDGS D & E**

DATE 10/22/2021  
 JOB # 2021005.05  
 SHEET #  
**E2.2**



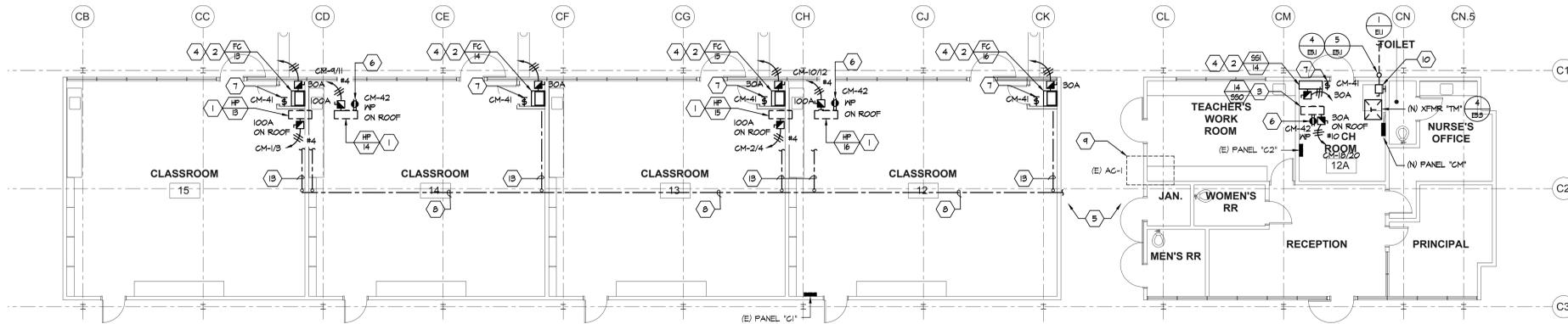
**1 ELECTRICAL NEW FLOOR PLAN - BLDG A**

E3.1 SCALE: 1/8" = 1'-0"



**2 ELECTRICAL NEW FLOOR PLAN - BLDG B**

E3.1 SCALE: 1/8" = 1'-0"



**3 ELECTRICAL NEW FLOOR PLAN - BLDG C**

E3.1 SCALE: 1/8" = 1'-0"



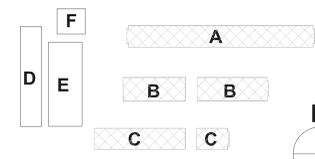
**GENERAL NOTES:**

1. ALL CONDUITS SHALL BE ROUTED CONCEALED IN CEILING BELOW WHERE POSSIBLE. ALL EXPOSED CONDUITS SHALL BE PAINTED.
2. CONTRACTOR SHALL COORDINATE EXACT LOCATIONS AND POINTS OF CONNECTION FOR MECHANICAL UNIT WITH MECHANICAL CONTRACTOR. ADJUST LOCATION AND CONNECTION POINTS AS NEEDED.
3. SEE PANEL SCHEDULES AND SINGLE LINE DIAGRAM FOR POWER CONNECTION REQUIREMENTS.
4. COORDINATE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
5. FUSED AND UNFUSED DISCONNECT SWITCHES SHALL BE 600V RATED, HEAVY DUTY CYCLE. FUSES FOR MECHANICAL UNITS SHALL BE SIZED PER THE MANUFACTURER'S RECOMMENDATION.
6. ROUTINGS SHOWN AND NOTED IS DIAGRAMMATIC. CONTRACTOR IS RESPONSIBLE TO VERIFY ROOM'S EXISTING CONDITION, COORDINATE AND CONFIRM CONDUIT ROUTING INSIDE BUILDING WITH ARCHITECT AND OWNER REPRESENTATIVE PRIOR TO INSTALLATION.

**SHEET NOTES:**

1. NEW 100A-2P, NEMA-3R, FUSED DISCONNECT SWITCH FOR MECHANICAL UNIT.
2. NEW 30A-2P, NEMA-1, FUSED DISCONNECT SWITCH FOR MECHANICAL UNIT.
3. NEW 30A-2P, NEMA-3R, FUSED DISCONNECT SWITCH FOR MECHANICAL UNIT.
4. INDOOR UNIT IS POWER BY THE OUTDOOR UNIT. ROUTE HOMERUN CIRCUIT TO ASSOCIATED OUTDOOR UNIT. REFER TO MECHANICAL SCHEDULE MPO02 FOR ADDITIONAL REQUIREMENTS.
5. MOUNT CONDUIT ADJACENT TO CHASE AND ROUTE ACROSS THE HALLWAY.
6. PROVIDE NEW WEATHERPROOF GFCI RECEPTACLE. RECEPTACLE SHALL BE MOUNTED ON WEATHERPROOF BOX WITH WHILE-IN-USE COVER. COVER SHALL BE INTERMATIC MP100MND "BOSS".
7. PROVIDE MOTOR RATED SWITCH AND 120V POWER FOR CONDENSATION PUMP.
8. ROUTE NEW CONDUIT IN CENTER OF THE ROOM ACROSS THE CEILING. MOUNT ADJACENT TO EXISTING CONDUIT ROUTED ON THE CEILING.
9. EXISTING MECHANICAL UNIT AND CONNECTIONS TO REMAIN.
10. NEW 400A-3P, NEMA-1, UNFUSED DISCONNECT SWITCH.
11. ROUTE CONDUIT UP ALONG WALL TIGHT TO CEILING.
12. ROUTE CONDUIT ALONG WALL TIGHT TO LOWER CEILING, UP TO HIGHER CEILING AND TIGHT TO CENTER OF CEILING.
13. ROUTE CONDUIT ALONG LOWER CEILING, UP WALL TO HIGHER CEILING AND ON CEILING TO CENTER.
14. ROUTE NEW CONDUIT IN CENTER OF THE ROOM ACROSS THE CEILING.
15. ROUTE ON CEILING TO CENTER.
16. ROUTE CONDUIT IN THE ABOVE ACCESSIBLE CEILING.

**BLDG KEY**



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DIV. OF THE STATE ARCHITECT  
APP: 01-119526 INC.  
REVIEWED FOR  
SS  FLS  ACS   
DATE: 10/27/2021

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architects

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387 S. 1st Street, Suite 300  
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t el: (408)-300-5160  
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PROJECT  
**NORTH  
SHOREVIEW  
ELEMENTARY  
SCHOOL - HVAC  
REPLACEMENT**

SAN MATEO-FOSTER CITY  
SCHOOL DISTRICT  
CONSULTANT



**American Consulting Engineers  
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1980 The Alameda, Suite 200  
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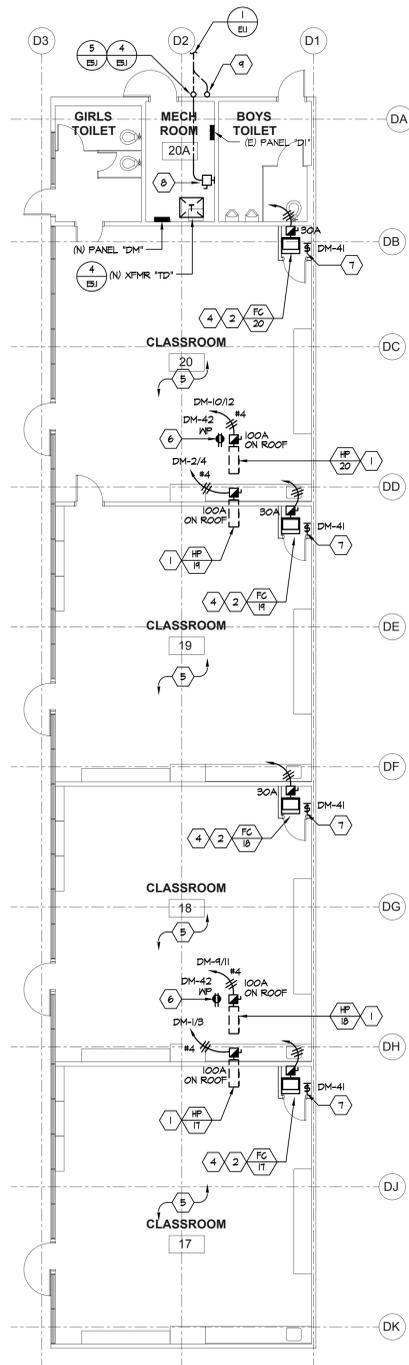
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No. Description Date

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BACKCHECK 10/22/2021

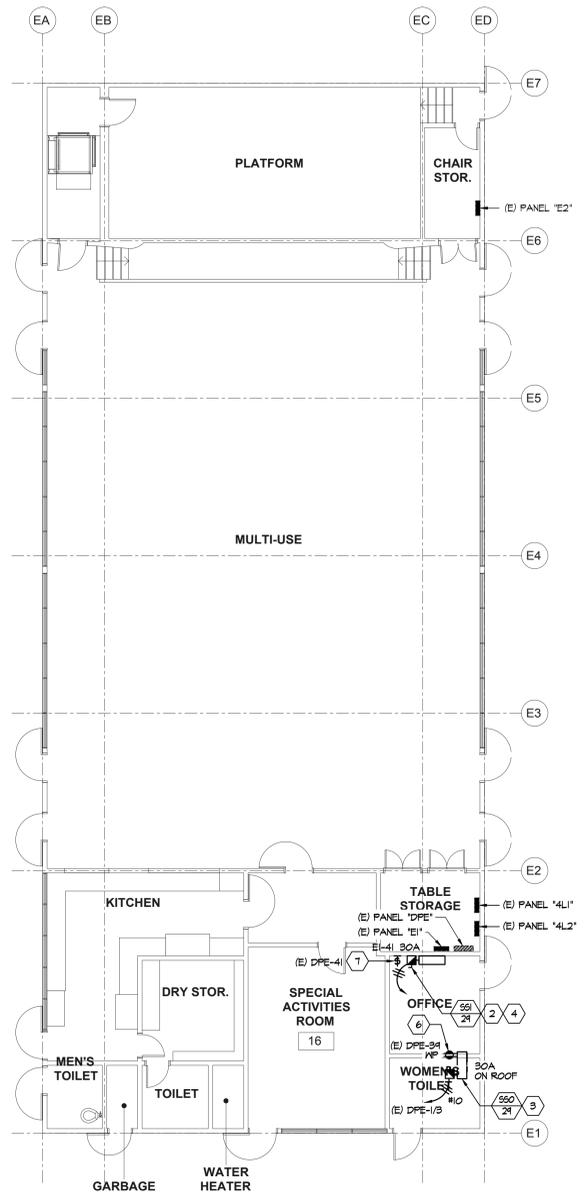
SHEET  
**ELECTRICAL  
NEW FLOOR  
PLANS -  
BLDG A, B & C**

DATE 10/22/2021  
JOB # 2021005.05  
SHEET #

**E3.1**



**ELECTRICAL NEW FLOOR PLAN - BLDG D**  
 1  
 E3.2 SCALE: 1/8" = 1'-0"



**ELECTRICAL NEW FLOOR PLAN - BLDG E**  
 2  
 E3.2 SCALE: 1/8" = 1'-0"

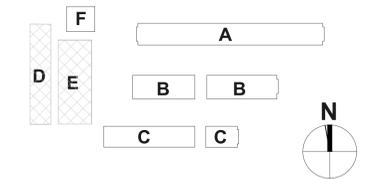
**GENERAL NOTES:**

1. ALL CONDUITS SHALL BE ROUTED CONCEALED IN CEILING BELOW WHERE POSSIBLE. ALL EXPOSED CONDUITS SHALL BE PAINTED.
2. CONTRACTOR SHALL COORDINATE EXACT LOCATIONS AND POINTS OF CONNECTION FOR MECHANICAL UNIT WITH MECHANICAL CONTRACTOR. ADJUST LOCATION AND CONNECTION POINTS AS NEEDED.
3. SEE PANEL SCHEDULES AND SINGLE LINE DIAGRAM FOR POWER CONNECTION REQUIREMENTS.
4. COORDINATE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
5. FUSED AND UNFUSED DISCONNECT SWITCHES SHALL BE 600V RATED HEAVY DUTY CYCLE. FUSES FOR MECHANICAL UNITS SHALL BE SIZED PER THE MANUFACTURER'S RECOMMENDATION.
6. ROUTING SHOWN AND NOTED IS DIAGRAMMATIC. CONTRACTOR IS RESPONSIBLE TO VERIFY ROOM'S EXISTING CONDITION. COORDINATE AND CONFIRM CONDUIT ROUTING INSIDE BUILDING WITH ARCHITECT AND OWNER REPRESENTATIVE PRIOR TO INSTALLATION.

**SHEET NOTES:**

- 1 NEW 100A-2P, NEMA-3R, FUSED DISCONNECT SWITCH FOR MECHANICAL UNIT.
- 2 NEW 30A-2P, NEMA-1, FUSED DISCONNECT SWITCH FOR MECHANICAL UNIT.
- 3 NEW 30A-2P, NEMA-3R, FUSED DISCONNECT SWITCH FOR MECHANICAL UNIT.
- 4 INDOOR UNIT IS POWER BY THE OUTDOOR UNIT. ROUTE HOMERUN CIRCUIT TO ASSOCIATED OUTDOOR UNIT. REFER TO MECHANICAL SCHEDULE MPO.02 FOR ADDITIONAL REQUIREMENTS.
- 5 ROUTE NEW CONDUIT IN CENTER OF THE ROOM ACROSS THE CEILING. MOUNT ADJACENT TO EXISTING CONDUIT ROUTED ON THE CEILING.
- 6 PROVIDE NEW WEATHERPROOF GFCI RECEPTACLE. RECEPTACLE SHALL BE MOUNTED ON WEATHERPROOF BOX WITH IN-USE COVER. COVER SHALL BE INTERMATIC MP101MXD "BOSS".
- 7 PROVIDE MOTOR RATED SWITCH AND 120V POWER FOR CONDENSATION PUMP.
- 8 NEW 400A-3P, NEMA 1, UNFUSED DISCONNECT SWITCH.
- 9 STUB FUTURE SOLAR CONDUIT 18" ABOVE GRADE AT THIS APPROXIMATE LOCATION AND GAP.

**BLDG KEY**



PROJECT  
**NORTH SHOREVIEW ELEMENTARY SCHOOL - HVAC REPLACEMENT**  
 SAN MATEO-FOSTER CITY SCHOOL DISTRICT  
 CONSULTANT



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STATE DSA FILE NUMBER 41-26  
 APPL # 01-119526

No.	Description	Date

MILESTONES  
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 BACKCHECK 10/22/2021

**ELECTRICAL NEW FLOOR PLANS - BLDGS D & E**

DATE 10/22/2021  
 JOB # 2021005.05  
 SHEET # **E3.2**

PROJECT  
**NORTH SHOREVIEW ELEMENTARY SCHOOL - HVAC REPLACEMENT**

SAN MATEO-FOSTER CITY SCHOOL DISTRICT  
 CONSULTANT



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 APPL # 01-119526

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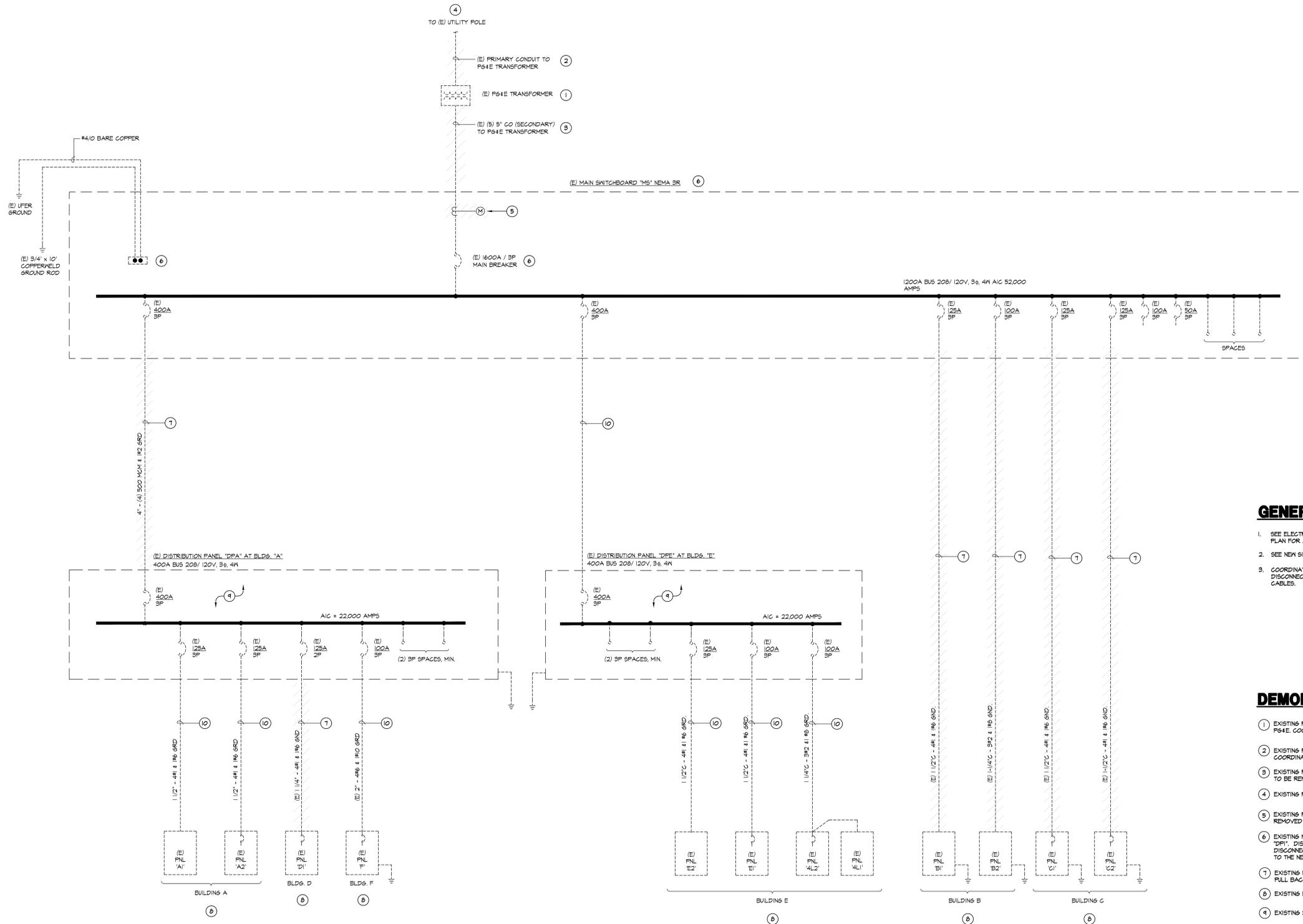
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 90% CD  
 DSA SUB 05/24/2021  
 BACKCHECK 10/22/2021

SHEET  
**DEMO SINGLE LINE DIAGRAM**

DATE 10/22/2021  
 JOB # 2021005.05  
 SHEET #

**E4.1**



**GENERAL NOTES:**

- SEE ELECTRICAL SITE PLAN AND ENLARGED SWITCHGEAR PLAN FOR ADDITIONAL REQUIREMENTS.
- SEE NEW SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.
- COORDINATE WITH THE P64E UTILITY COMPANY FOR THE DISCONNECTING AND REMOVAL OF ALL ASSOCIATED EQUIPMENT AND CABLES.

**DEMOLITION SHEET NOTES:**

- EXISTING P64E TRANSFORMER TO BE DISCONNECTED AND REMOVED BY P64E. COORDINATE REMOVAL WITH P64E.
- EXISTING P64E PRIMARY CONDUCTORS TO BE REMOVED BY P64E. COORDINATE REMOVAL WITH P64E.
- EXISTING P64E SECONDARY CONDUCTORS AND GROUNDING CONDUCTORS TO BE REMOVED BY P64E. COORDINATE REMOVAL WITH P64E.
- EXISTING P64E UTILITY POLE TO REMAIN.
- EXISTING P64E METER, CT'S AND PT'S TO BE DISCONNECTED AND REMOVED BY P64E. COORDINATE REMOVAL WITH P64E.
- EXISTING MAIN SWITCHBOARD TO BE CONVERTED TO DISTRIBUTION PANEL "DP1". DISCONNECT AND REMOVE EXISTING MAIN CIRCUIT BREAKER. DISCONNECT THE EXISTING MAIN BONDING JUMPER FROM THE GROUND BUS TO THE NEUTRAL BUS.
- EXISTING FEEDERS CABLES TO BE DISCONNECTED FROM EXISTING PANEL. PULL BACK TO SOURCE AND REMOVE.
- EXISTING ELECTRICAL PANELS TO REMAIN.
- EXISTING DISTRIBUTION PANEL TO REMAIN.
- EXISTING FEEDER CABLES TO REMAIN.

**SHEET NOTES:**

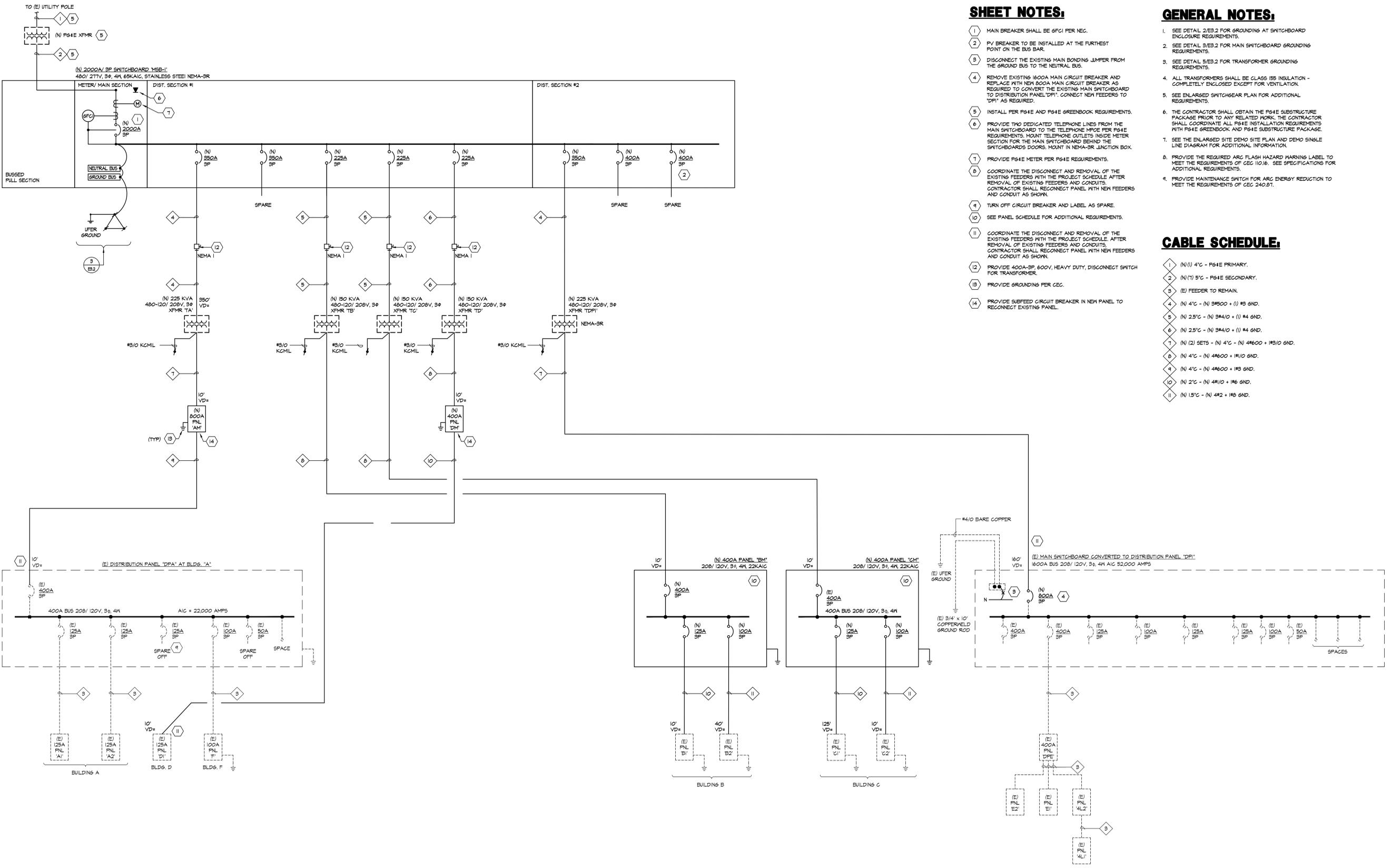
- 1 MAIN BREAKER SHALL BE 6FCI PER NEG.
- 2 PV BREAKER TO BE INSTALLED AT THE FURTHEST POINT ON THE BUS BAR.
- 3 DISCONNECT THE EXISTING MAIN BONDING JUMPER FROM THE GROUND BUS TO THE NEUTRAL BUS.
- 4 REMOVE EXISTING 1600A MAIN CIRCUIT BREAKER AND REPLACE WITH NEW 800A MAIN CIRCUIT BREAKER AS REQUIRED TO CONVERT THE EXISTING MAIN SWITCHBOARD TO DISTRIBUTION PANEL 'DPI'. CONNECT NEW FEEDERS TO 'DPI' AS REQUIRED.
- 5 INSTALL PER P64E AND P64E GREENBOOK REQUIREMENTS.
- 6 PROVIDE TWO DEDICATED TELEPHONE LINES FROM THE MAIN SWITCHBOARD TO THE TELEPHONE WIRING PER P64E REQUIREMENTS. MOUNT TELEPHONE OUTLETS INSIDE METER SECTION FOR THE MAIN SWITCHBOARD BEHIND THE SWITCHBOARD'S DOORS. MOUNT IN NEMA-3R JUNCTION BOX.
- 7 PROVIDE P64E METER PER P64E REQUIREMENTS.
- 8 COORDINATE THE DISCONNECT AND REMOVAL OF THE EXISTING FEEDERS WITH THE PROJECT SCHEDULE AFTER REMOVAL OF EXISTING FEEDERS AND CONDUITS. CONTRACTOR SHALL RECONNECT PANEL WITH NEW FEEDERS AND CONDUIT AS SHOWN.
- 9 TURN OFF CIRCUIT BREAKER AND LABEL AS SPARE.
- 10 SEE PANEL SCHEDULE FOR ADDITIONAL REQUIREMENTS.
- 11 COORDINATE THE DISCONNECT AND REMOVAL OF THE EXISTING FEEDERS WITH THE PROJECT SCHEDULE. AFTER REMOVAL OF EXISTING FEEDERS AND CONDUITS, CONTRACTOR SHALL RECONNECT PANEL WITH NEW FEEDERS AND CONDUIT AS SHOWN.
- 12 PROVIDE 400A-3P, 600V, HEAVY DUTY, DISCONNECT SWITCH FOR TRANSFORMER.
- 13 PROVIDE GROUNDINGS PER CEC.
- 14 PROVIDE SUBFEED CIRCUIT BREAKER IN NEM PANEL TO RECONNECT EXISTING PANEL.

**GENERAL NOTES:**

1. SEE DETAIL 2/E3.2 FOR GROUNDING AT SWITCHBOARD ENCLOSURE REQUIREMENTS.
2. SEE DETAIL 3/E3.2 FOR MAIN SWITCHBOARD GROUNDING REQUIREMENTS.
3. SEE DETAIL 5/E3.2 FOR TRANSFORMER GROUNDING REQUIREMENTS.
4. ALL TRANSFORMERS SHALL BE CLASS 155 INSULATION - COMPLETELY ENCLOSED EXCEPT FOR VENTILATION.
5. SEE ENLARGED SWITCHGEAR PLAN FOR ADDITIONAL REQUIREMENTS.
6. THE CONTRACTOR SHALL OBTAIN THE P64E SUBSTRUCTURE PACKAGE PRIOR TO ANY RELATED WORK. THE CONTRACTOR SHALL COORDINATE ALL P64E INSTALLATION REQUIREMENTS WITH P64E GREENBOOK AND P64E SUBSTRUCTURE PACKAGE.
7. SEE THE ENLARGED SITE DEMO SITE PLAN AND DEMO SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
8. PROVIDE THE REQUIRED ARC FLASH HAZARD WARNING LABEL TO MEET THE REQUIREMENTS OF CEC 110.16. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
9. PROVIDE MAINTENANCE SWITCH FOR ARC ENERGY REDUCTION TO MEET THE REQUIREMENTS OF CEC 240.81.

**CABLE SCHEDULE:**

- 1 (N) 11 4" - P64E PRIMARY.
- 2 (N) 11 5" - P64E SECONDARY.
- 3 (E) FEEDER TO REMAIN.
- 4 (N) 4" - (N) 3#500 + (1) #4 GND.
- 5 (N) 2 1/2" - (N) 3#4/0 + (1) #4 GND.
- 6 (N) 2 1/2" - (N) 3#4/0 + (1) #4 GND.
- 7 (N) (2) SETS - (N) 4" - (N) 4#600 + 1#3/0 GND.
- 8 (N) 4" - (N) 4#600 + 1#3/0 GND.
- 9 (N) 4" - (N) 4#600 + 1#3/0 GND.
- 10 (N) 2" - (N) 4#1/0 + 1#6 GND.
- 11 (N) 1 1/2" - (N) 4#2 + 1#6 GND.



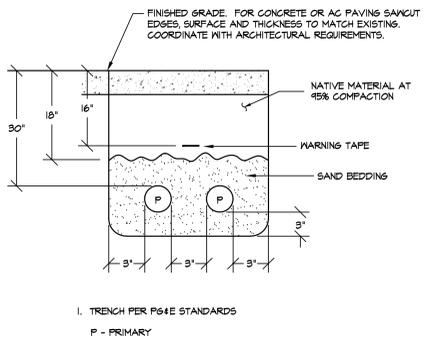
PANEL NAME:		N17M1		FED FROM: MSG				
VOLTAGE:		208/120V		MAIN CB: MLO				
PHASE:		3		BUSSING: 225 AMP				
WIRE:		4		MIN. AIC: 10,000				
TYPE:		NEMA 1		SUB-FEED CB:				
MOUNTING:		SURFACE		FEED THRU LUGS: YES				
CIRCUIT DESCRIPTION	LOAD TYPE (KVA)	CB	PKT #	PH	PKT #	CB	LOAD TYPE (KVA)	CIRCUIT DESCRIPTION
(N) HEAT PUMP 1 - CLASSROOM 1	4.37	70A	1	A	2	70A	2.26	(N) HEAT PUMP 5 - CLASSROOM 5
SPARE	4.37	2P	3	B	4	2P	2.26	SPARE
SPARE		20A/1P	5	C	6	20A/1P		SPARE
SPARE		20A/1P	7	A	8	20A/1P		SPARE
(N) HEAT PUMP 2 - CLASSROOM 2	4.37	70A	9	B	10	70A	4.37	(N) HEAT PUMP 6 - CLASSROOM 6
SPARE	4.37	2P	11	C	12	2P	4.37	SPARE
SPARE		20A/1P	13	A	14	20A/1P		SPARE
SPARE		20A/1P	15	B	16	20A/1P		SPARE
(N) HEAT PUMP 3 - CLASSROOM 3	4.37	70A	17	C	18	70A	2.26	(N) HEAT PUMP 7 - CLASSROOM 7
SPARE	4.37	2P	19	A	20	2P	2.26	SPARE
SPARE		20A/1P	21	B	22	20A/1P		SPARE
SPARE		20A/1P	23	C	24	20A/1P		SPARE
(N) HEAT PUMP 4 - CLASSROOM 4	4.37	70A	25	A	26	70A	2.26	(N) HEAT PUMP 8 - CLASSROOM 8
SPARE	4.37	2P	27	B	28	2P	2.26	SPARE
SPARE		20A/1P	29	C	30	20A/1P		SPARE
SPARE		20A/1P	31	A	32	20A/1P		SPARE
SPARE		20A/1P	33	B	34	20A/1P		SPARE
SPARE		20A/1P	35	C	36	20A/1P		SPARE
SPARE		20A/1P	37	A	38	20A/1P		SPARE
(N) MOTOR RATED SWITCH FOR COND. PUMP - BLDG A	0.48	20A/1P	39	B	40	20A/1P	0.90	(N) WEATHERPROOF GFCI REC - BLDG A
SPARE	0.48	20A/1P	41	C	42	20A/1P	0.90	SPARE
(N) MOTOR RATED SWITCH FOR COND. PUMP - BLDG B	0	0	0	0	0	0	0.9	(N) WEATHERPROOF GFCI REC - BLDG B
LOAD SUMMARY	CONNECTED KVA	DEMAND FACTOR	DEMAND KVA	Y#N#				
(LTO) LIGHTING X 125%	0	1.25	0.0	Y				
(REC) RECEIPTS PER 220.44:	0.9	1.00	0.9	N				
10KVA x 100% + REMAINDER x 50%	0	0.50	0.0	N				
(MTR) LARGEST MOTOR X 125%	0.3	1.25	0.6	Y				
+ REMAINING MOTORS x 100%	0.5	1.00	0.5	N				
(NCL) NON CONTINUOUS LOAD x 100%	57.2	1.00	57.2	N				
							19.9	
							23.4	
							15.8	
							59.2	
							164.5	

PANEL NAME:		N18M1		FED FROM: MSG				
VOLTAGE:		208/120V		MAIN CB: MLO				
PHASE:		3		BUSSING: 225 AMP				
WIRE:		4		MIN. AIC: 10,000				
TYPE:		NEMA 1		SUB-FEED CB:				
MOUNTING:		SURFACE		FEED THRU LUGS: YES				
CIRCUIT DESCRIPTION	LOAD TYPE (KVA)	CB	PKT #	PH	PKT #	CB	LOAD TYPE (KVA)	CIRCUIT DESCRIPTION
(N) HEAT PUMP BA - COMP LAB	4.37	70A	1	A	2	70A	4.37	(N) HEAT PUMP 11 - CLASSROOM 10
SPARE	4.37	2P	3	B	4	2P	4.37	SPARE
SPARE		20A/1P	5	C	6	20A/1P		SPARE
SPARE		20A/1P	7	A	8	20A/1P		SPARE
(N) HEAT PUMP 10 - CLASSROOM 11	4.37	70A	9	B	10	70A	4.37	(N) HEAT PUMP 12 - CLASSROOM 9
SPARE	4.37	2P	11	C	12	2P	4.37	SPARE
SPARE		20A/1P	13	A	14	20A/1P		SPARE
SPARE		20A/1P	15	B	16	20A/1P		SPARE
SPARE		20A/1P	17	C	18	20A/1P		SPARE
SPARE		20A/1P	19	A	20	20A/1P		SPARE
SPARE		20A/1P	21	B	22	20A/1P		SPARE
SPARE		20A/1P	23	C	24	20A/1P		SPARE
SPARE		20A/1P	25	A	26	20A/1P		SPARE
SPARE		20A/1P	27	B	28	20A/1P		SPARE
SPARE		20A/1P	29	C	30	20A/1P		SPARE
SPARE		20A/1P	31	A	32	20A/1P		SPARE
SPARE		20A/1P	33	B	34	20A/1P		SPARE
SPARE		20A/1P	35	C	36	20A/1P		SPARE
SPARE		20A/1P	37	A	38	20A/1P		SPARE
(N) MOTOR RATED SWITCH FOR COND. PUMP - BLDG B	0	0	0	0	0	0	0.54	(N) WEATHERPROOF GFCI REC - BLDG B
LOAD SUMMARY	CONNECTED KVA	DEMAND FACTOR	DEMAND KVA	Y#N#				
(LTO) LIGHTING X 125%	0	1.25	0.0	Y				
(REC) RECEIPTS PER 220.44:	0.5	1.00	0.5	N				
10KVA x 100% + REMAINDER x 50%	0	0.50	0.0	N				
(MTR) LARGEST MOTOR X 125%	0.8	1.25	0.8	Y				
+ REMAINING MOTORS x 100%	0	1.00	0.0	N				
(NCL) NON CONTINUOUS LOAD x 100%	34.9	1.00	34.9	N				
							8.7	
							17.5	
							9.8	
							36.1	
							100.2	

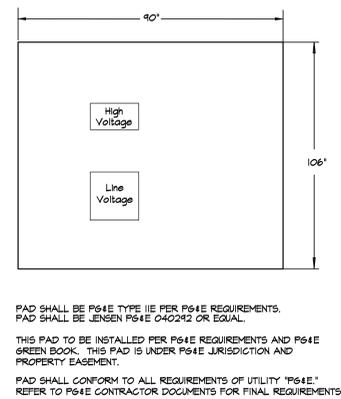
PANEL NAME:		N19M1		FED FROM: MSG				
VOLTAGE:		208/120V		MAIN CB: MLO				
PHASE:		3		BUSSING: 225 AMP				
WIRE:		4		MIN. AIC: 10,000				
TYPE:		NEMA 1		SUB-FEED CB:				
MOUNTING:		SURFACE		FEED THRU LUGS: YES				
CIRCUIT DESCRIPTION	LOAD TYPE (KVA)	CB	PKT #	PH	PKT #	CB	LOAD TYPE (KVA)	CIRCUIT DESCRIPTION
(N) HEAT PUMP 13 - CLASSROOM 15	4.37	70A	1	A	2	70A	4.37	(N) HEAT PUMP 15 - CLASSROOM 13
SPARE	4.37	2P	3	B	4	2P	4.37	SPARE
SPARE		20A/1P	5	C	6	20A/1P		SPARE
SPARE		20A/1P	7	A	8	20A/1P		SPARE
(N) HEAT PUMP 14 - CLASSROOM 14	4.37	70A	9	B	10	70A	4.37	(N) HEAT PUMP 16 - CLASSROOM 12
SPARE	4.37	2P	11	C	12	2P	4.37	SPARE
SPARE		20A/1P	13	A	14	20A/1P		SPARE
SPARE		20A/1P	15	B	16	20A/1P		SPARE
SPARE		20A/1P	17	C	18	20A/1P		SPARE
SPARE		20A/1P	19	A	20	20A/1P		SPARE
SPARE		20A/1P	21	B	22	20A/1P		SPARE
SPARE		20A/1P	23	C	24	20A/1P		SPARE
SPARE		20A/1P	25	A	26	20A/1P		SPARE
SPARE		20A/1P	27	B	28	20A/1P		SPARE
SPARE		20A/1P	29	C	30	20A/1P		SPARE
SPARE		20A/1P	31	A	32	20A/1P		SPARE
SPARE		20A/1P	33	B	34	20A/1P		SPARE
SPARE		20A/1P	35	C	36	20A/1P		SPARE
SPARE		20A/1P	37	A	38	20A/1P		SPARE
(N) MOTOR RATED SWITCH FOR COND. PUMP - BLDG C	0	0	0	0	0	0	0.54	(N) WEATHERPROOF GFCI REC - BLDG C
LOAD SUMMARY	CONNECTED KVA	DEMAND FACTOR	DEMAND KVA	Y#N#				
(LTO) LIGHTING X 125%	0	1.25	0.0	Y				
(REC) RECEIPTS PER 220.44:	0.5	1.00	0.5	N				
10KVA x 100% + REMAINDER x 50%	0	0.50	0.0	N				
(MTR) LARGEST MOTOR X 125%	0.5	1.25	0.6	Y				
+ REMAINING MOTORS x 100%	0	1.00	0.0	N				
(NCL) NON CONTINUOUS LOAD x 100%	34.9	1.00	34.9	N				
							8.7	
							17.5	
							9.8	
							36.1	
							100.2	

PANEL NAME:		N19M1		FED FROM: MSG				
VOLTAGE:		208/120V		MAIN CB: MLO				
PHASE:		3		BUSSING: 225 AMP				
WIRE:		4		MIN. AIC: 10,000				
TYPE:		NEMA 1		SUB-FEED CB:				
MOUNTING:		SURFACE		FEED THRU LUGS: YES				
CIRCUIT DESCRIPTION	LOAD TYPE (KVA)	CB	PKT #	PH	PKT #	CB	LOAD TYPE (KVA)	CIRCUIT DESCRIPTION
(N) HEAT PUMP 17 - CLASSROOM 17	4.37	70A	1	A	2	70A	4.37	(N) HEAT PUMP 19 - CLASSROOM 19
SPARE	4.37	2P	3	B	4	2P	4.37	SPARE
(N) FAN COIL 17 - CLASSROOM 17		20A	5	C	6	20A		(N) FAN COIL 19 - CLASSROOM 19
SPARE		2P	7	A	8	2P		SPARE
(N) HEAT PUMP 18 - CLASSROOM 18	4.37	70A	9	B	10	70A	4.37	(N) HEAT PUMP 20 - CLASSROOM 20
SPARE	4.37	2P	11	C	12	2P	4.37	SPARE
(N) FAN COIL 18 - CLASSROOM 18		20A	13	A	14	20A		(N) FAN COIL 20 - CLASSROOM 20
SPARE		2P	15	B	16	2P		SPARE
SPARE		20A/1P	17	C	18	20A/1P		SPARE
SPARE		20A/1P	19	A	20	20A/1P		SPARE
SPARE		20A/1P	21	B	22	20A/1P		SPARE
SPARE		20A/1P	23	C	24	20A/1P		SPARE
SPARE		20A/1P	25	A	26	20A/1P		SPARE
SPARE		20A/1P	27	B	28	20A/1P		SPARE
SPARE		20A/1P	29	C	30	20A/1P		SPARE
SPARE		20A/1P	31	A	32	20A/1P		SPARE
SPARE		20A/1P	33	B	34	20A/1P		SPARE
SPARE		20A/1P	35	C	36	20A/1P		SPARE
SPARE		20A/1P	37	A	38	20A/1P		SPARE
(N) MOTOR RATED SWITCH FOR COND. PUMP - BLDG D	0	0	0	0	0	0	0.36	(N) WEATHERPROOF GFCI REC - BLDG D
LOAD SUMMARY	CONNECTED KVA	DEMAND FACTOR	DEMAND KVA	Y#N#				
(LTO) LIGHTING X 125%	0	1.25	0.0	Y				
(REC) RECEIPTS PER 220.44:	0.4	1.00	0.4	N				
10KVA x 100% + REMAINDER x 50%	0	0.50	0.0	N				
(MTR) LARGEST MOTOR X 125%	0.5	1.25	0.6	Y				
+ REMAINING MOTORS x 100%	0	1.00	0.0	N				
(NCL) NON CONTINUOUS LOAD x 100%	34.9	1.00	34.9	N				
							8.7	
							17.5	
							9.8	
							35.9	
							99.7	

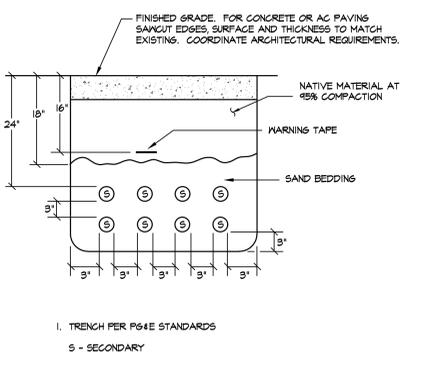
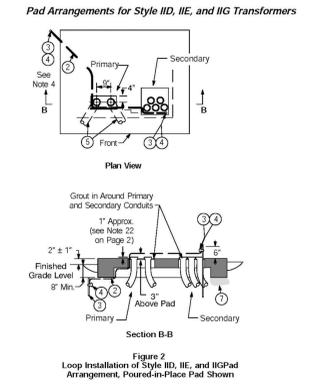
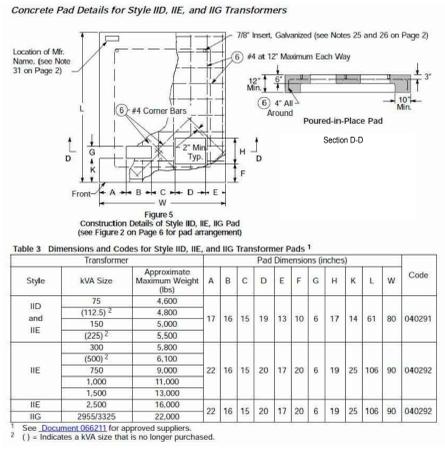
PANEL NAME:		N19M1		FED FROM: MSG	
VOLTAGE:		208/120V		MAIN CB: MLO	



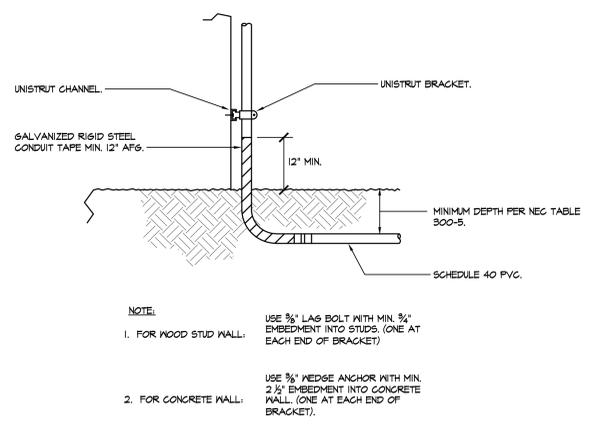
**1 PG&E TRENCH DETAIL PRIMARY SIDE**  
 ES.1 NOT TO SCALE



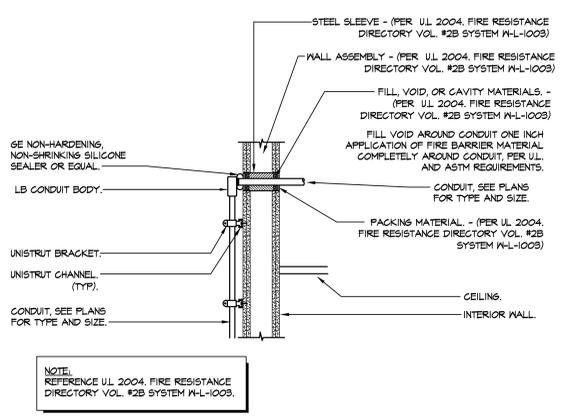
**2 PG&E TRANSFORMER PAD DETAIL**  
 ES.1 NOT TO SCALE



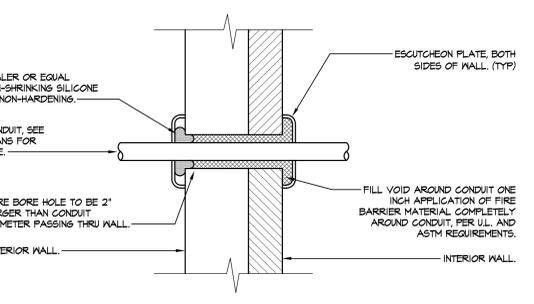
**3 PG&E TRENCH DETAIL SECONDARY SIDE**  
 ES.1 NOT TO SCALE



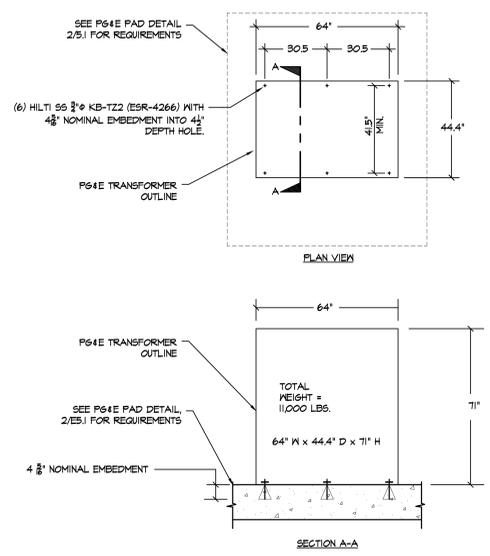
**4 UNDERGROUND CONDUIT RISER DETAIL**  
 ES.1 NOT TO SCALE



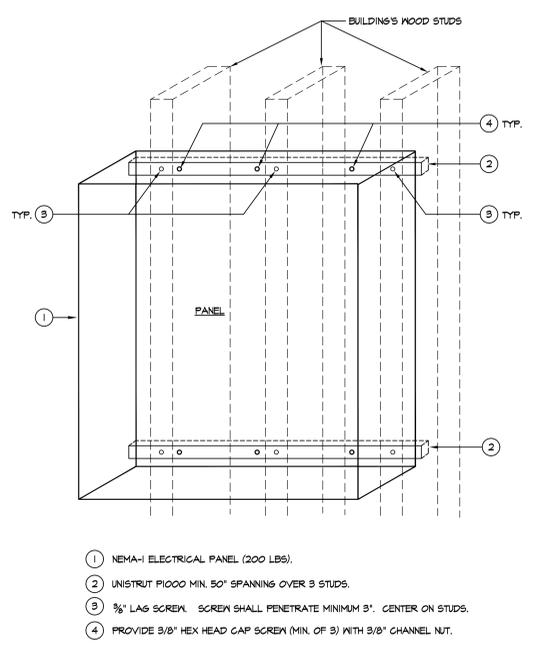
**5 CONDUIT RISER AND WALL PENETRATION - POWER**  
 ES.1 NOT TO SCALE



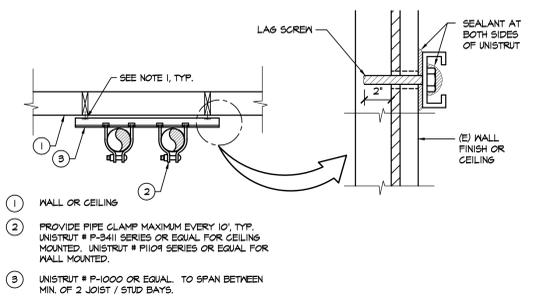
**6 CONDUIT WALL PENETRATION DETAIL**  
 ES.1 NOT TO SCALE



**7 PG&E TRANSFORMER ANCHORAGE DETAIL**  
 ES.1 NOT TO SCALE



**8 WALL MOUNTED PANEL INSTALLATION (100A-600A)**  
 ES.1 NOT TO SCALE



**9 TYPICAL CONDUIT SUPPORT DETAIL**  
 ES.1 SCALE: NOT TO SCALE



REVISIONS

No.	Description	Date
DD	90% CD	05/24/2021
BACKCHECK		10/22/2021

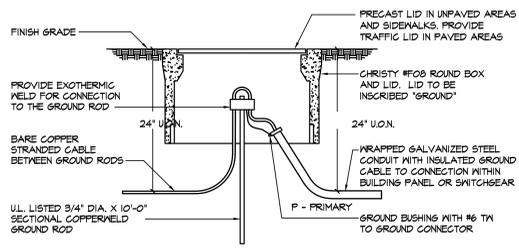
MILESTONES

DATE 10/22/2021  
 JOB # 2021005.05  
 SHEET #

**ELECTRICAL DETAILS**

**GROUNDING DETAIL NOTES:**

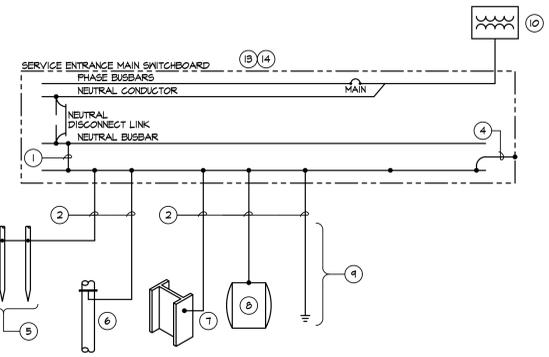
- 1 GROUND ROD. SEE DETAIL 1/E5.2 FOR REQUIREMENTS.
- 2 GADWELDED GROUNDING ELECTRODE CONDUCTOR TO THE REBAR.
- 3 UFER GADWELDED TO REBAR +20" OF BARE COPPER ENCASED.
- 4 NOT USED.
- 5 NOT USED.
- 6 #3/0 BARE COPPER MAIN SWITCHBOARD GROUNDING ELECTRODE CONDUCTOR. CONDUCTOR SHALL BE INSTALLED ENCASED IN THE CONCRETE SLAB.
- 7 #3/0 BARE COPPER TRANSFORMER GROUNDING ELECTRODE CONDUCTOR. CONDUCTOR SHALL BE INSTALLED ENCASED IN THE CONCRETE SLAB TO THE GROUND ROD AND GADWELDED TO THE GROUND ROD.
- 8 NOT USED.
- 9 ALL INTERSECTIONS OF GROUNDING CONDUCTORS SHALL BE GADWELDED TOGETHER.
- 10 GROUND RODS SHALL BE INSTALLED A MINIMUM 10' APART.
- 11 #3/0 BARE COPPER FENCE GROUNDING CONDUCTOR. CONDUCTOR SHALL BE INSTALLED ENCASED IN THE CONCRETE SLAB.
- 12 PROVIDE T INTERSECTION AND EXTEND #3/0 CONDUCTORS ABOVE THE SLAB ADJACENT TO THE FENCE POST. COORDINATE INSTALLATION WITH FENCE SLEEVES AND FENCE POST INSTALLER. T INTERSECTION SHALL BE GADWELDED. SEE 3/E5.2 AND 4/E5.2 FOR ADDITIONAL INFORMATION. SEE ARCHITECTURAL DRAWINGS FOR FENCE POST QUANTITY. TYPICAL FOR ALL FENCE POSTS.
- 13 PROVIDE GROUND ROD PER P64E GREENBOOK REQUIREMENTS.
- 14 SEE DETAIL 3/E5.2 FOR ADDITIONAL GROUNDING REQUIREMENTS.



NOTE:  
 SEE SINGLE LINE DIAGRAM AND FLOOR PLANS FOR SIZE OF CONDUCTORS AND ARRANGEMENT OF GROUNDING SYSTEM

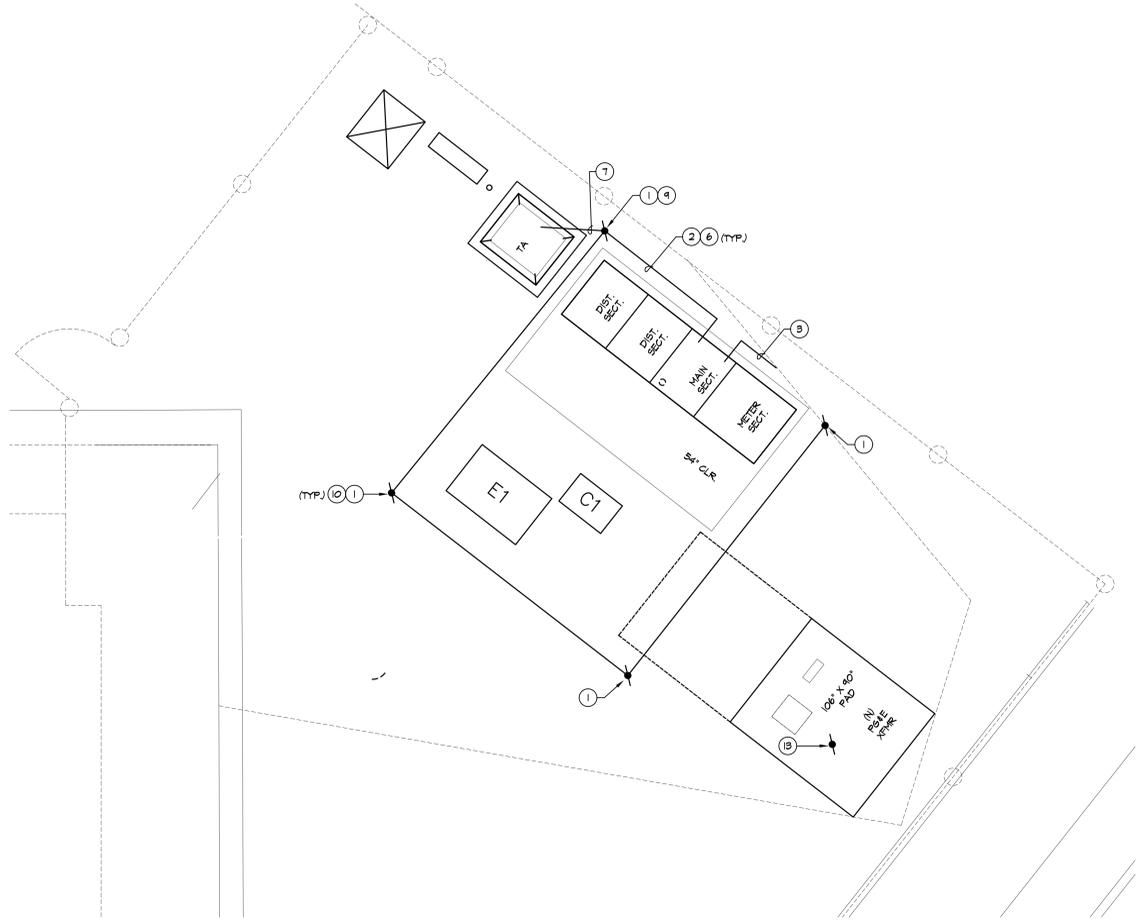
**GROUND ROD INSPECTION WELL FOR MULTIPLE GROUND RODS**

1 E5.2 NOT TO SCALE



**GROUNDING AT SWITCHBOARD ENCLOSURE**

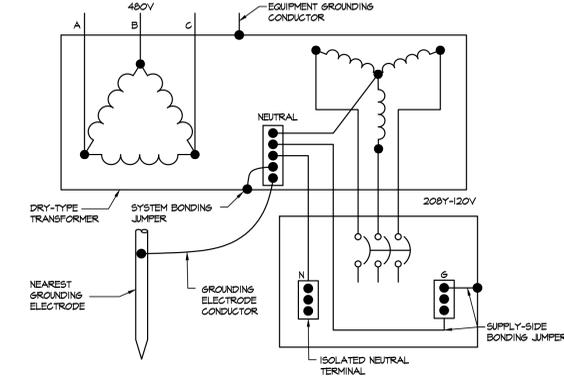
2 E5.2 SCALE: 1/4" = 1'-0"



- NOTES:
- 1 THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE USED FOR GROUNDING OR BONDING OF EQUIPMENT, STRUCTURES OR FRAMES REQUIRED TO BE GROUND OR BONDED (250.32(B)). PROVIDE ALL OF THE CONNECTIONS BELOW AND BOND TO THE EQUIPMENT GROUNDING CONDUCTOR.
  - 2 GROUNDING ELECTRODE CONDUCTOR. GROUNDING ELECTRODE CONDUCTOR SHALL BE BARE OR INSULATED COPPER AND SHALL BE SIZED PER TABLE 250.66.
  - 3 NOT USED.
  - 4 EQUIPMENT BONDING JUMPER. EQUIPMENT BONDING JUMPER SHALL BE INSULATED COPPER AND SHALL BE SIZED PER TABLE 250.122.
  - 5 PROVIDE A MINIMUM OF (3) GROUND ROD. GROUND ROD SHALL BE 10' LONG BY 3/4" DIAMETER COPPERWELD. GROUNDING ELECTRODE CONDUCTOR SHALL BE BONDED TO THE GROUND ROD VIA EXOTHERMIC WELD. GROUND RODS SHALL BE INSTALLED IN A ROUND BOX. SEE DETAIL FOR BOX/INSTALLATION REQUIREMENTS.
  - 6 PROVIDE GROUNDING ELECTRODE CONDUCTOR CONNECTION TO THE NEAREST UNDERGROUND WATER PIPE IN DIRECT CONTACT WITH EARTH FOR A MINIMUM OF 10 FEET. WATER PIPE SHALL BE ELECTRICALLY CONTINUOUS TO POINTS OF CONNECTION OF THE GROUNDING ELECTRODE CONDUCTOR. CONNECTION POINT SHALL NOT BE GREATER THAN 5' FROM THE POINT OF ENTRANCE OF THE UNDERGROUND WATER PIPE.
  - 7 PROVIDE GROUNDING ELECTRODE CONDUCTOR CONNECTION TO THE NEAREST METAL FRAME OR STRUCTURAL STEEL.
  - 8 PROVIDE GROUNDING ELECTRODE CONDUCTOR CONNECTION TO ALL OTHER LOCAL METAL UNDERGROUND SYSTEMS OR STRUCTURES, AS REQUIRED WHEN AVAILABLE.
  - 9 PROVIDE A CONCRETE ENCASED ELECTRODE (UFER) IN AND NEAR THE BOTTOM OF THE STRUCTURAL FOOTING OR SLAB ON GRADE THAT IS IN DIRECT CONTACT WITH EARTH. THE ELECTRODE SHALL BE A MINIMUM OF 20 FEET LONG INSIDE THE PAD, FOOTING OR SLAB. THE ELECTRODE CONDUCTOR SHALL BE BARE COPPER AND SIZED PER TABLE 250.66 BUT SHALL NOT BE LESS THAN #4AWG.
  - 10 MAIN UTILITY TRANSFORMER SHALL BE GROUND PER THE REQUIREMENTS OF THE UTILITY COMPANY.
  - 11 NOT USED.
  - 12 PROVIDE GROUNDING ELECTRODE CONDUCTOR CONNECTION TO THE SECONDARY SIDE OF ALL WYE CONNECTED BUILDING TRANSFORMERS. GROUNDING ELECTRODE CONDUCTOR MAY BE CONNECTED TO THE NEAREST STRUCTURAL STEEL OR THE MAIN SERVICE GROUNDING ELECTRODE ONLY. SEE TRANSFORMER GROUNDING DETAIL FOR ADDITIONAL REQUIREMENTS.
  - 13 THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL GROUNDING AND BONDING AS REQUIRED PER THE CEC.
  - 14 SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

**MAIN SERVICE GROUNDING DETAIL**

3 E5.2 NOT TO SCALE



**TRANSFORMER GROUNDING DETAIL**

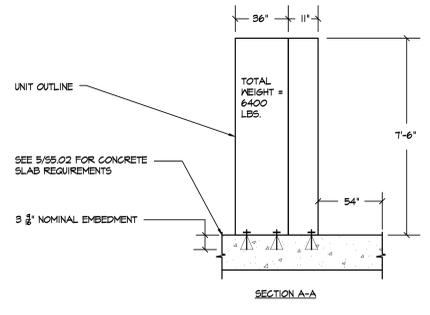
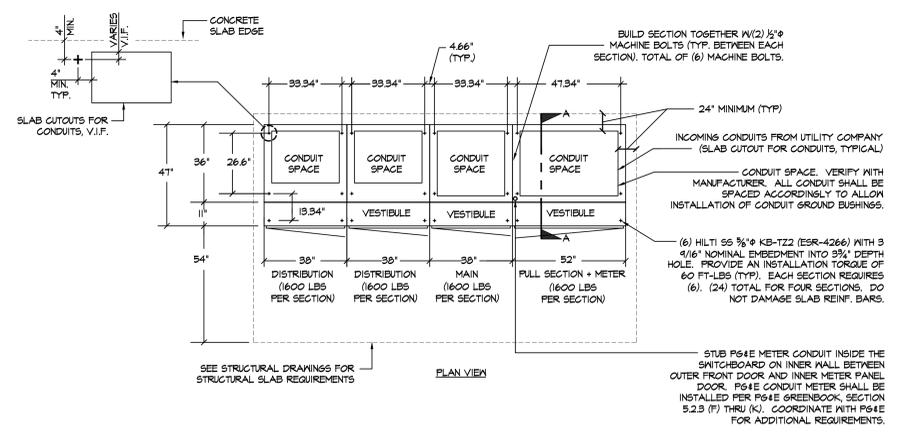
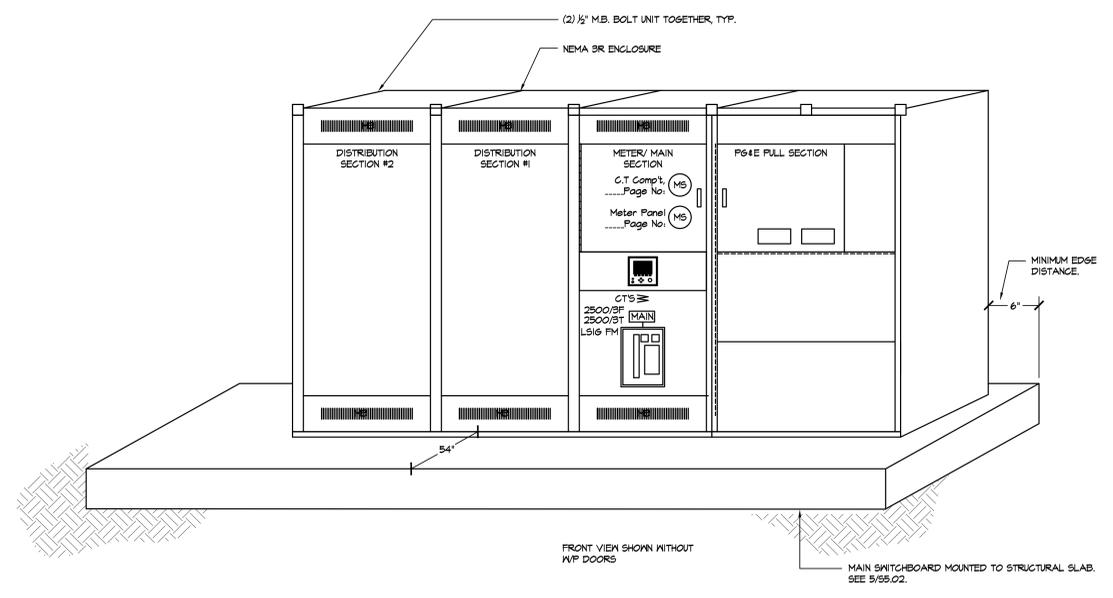
5 E5.2 NOT TO SCALE



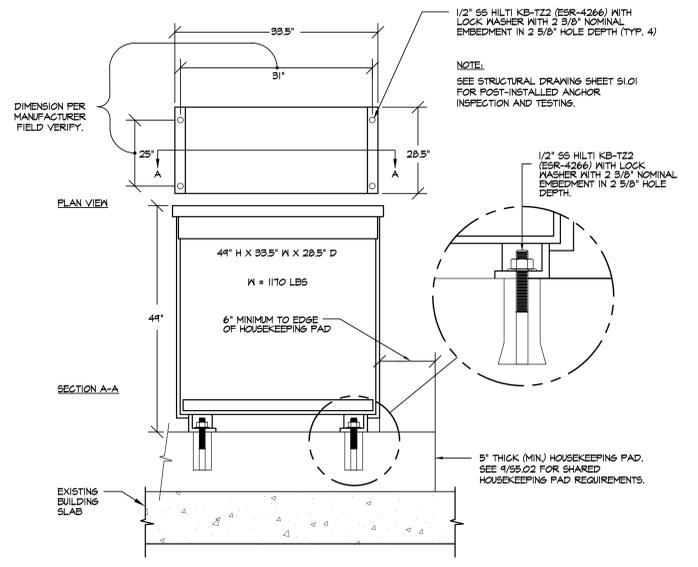
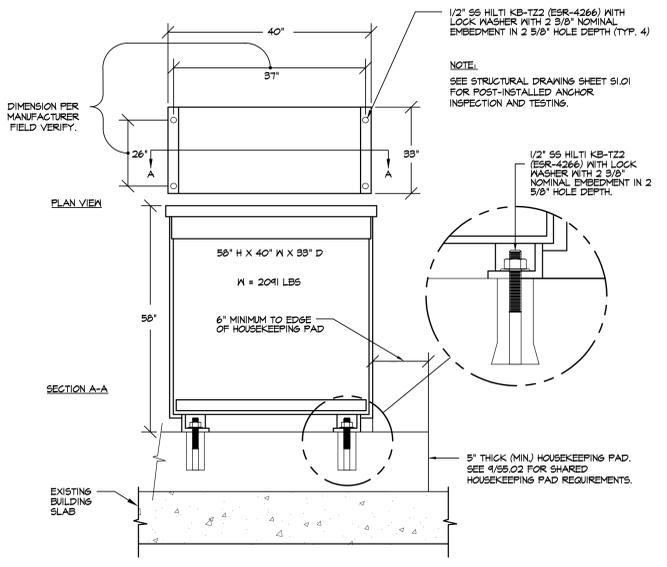
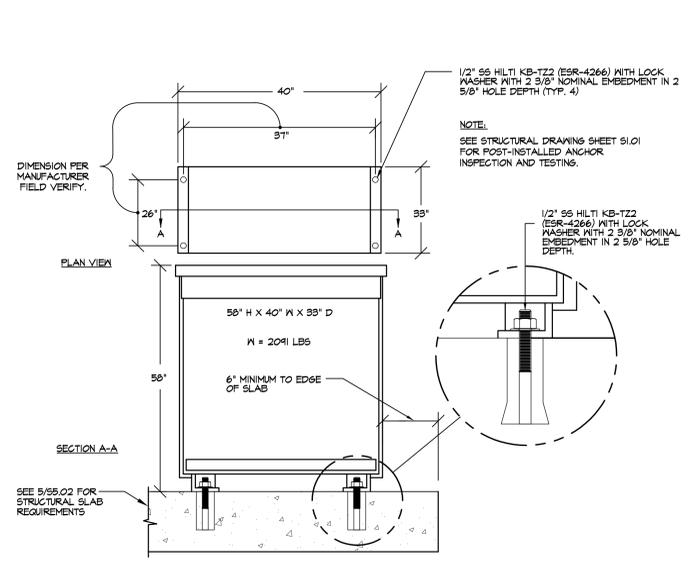
REVISIONS

No.	Description	Date
DD	90% CD	05/24/2021
DSA SUB	BACKCHECK	10/22/2021

**ELECTRICAL DETAILS**



**1 NEMA 3R MAIN SWITCHBOARD ELEVATION AND ANCHORAGE DETAIL**  
 E5.3 NOT TO SCALE



**2 DISTRIBUTION TRANSFORMER INSTALLATION DETAIL (225 KVA)**  
 E5.3 NOT TO SCALE

**3 DISTRIBUTION TRANSFORMER INSTALLATION DETAIL (225 KVA)**  
 E5.3 NOT TO SCALE

**4 DISTRIBUTION TRANSFORMER INSTALLATION DETAIL (150 KVA)**  
 E5.3 NOT TO SCALE



STATE DSA FILE NUMBER **41-26**  
 APPL # **01-119526**

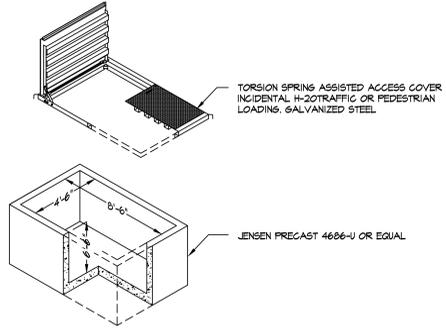
REVISIONS

No.	Description	Date
△		

MILESTONES

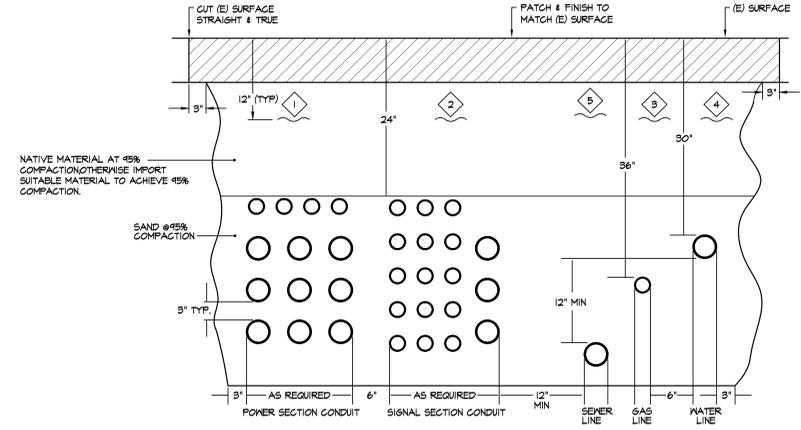
DD	
90% CD	
DSA SUB	05/24/2021
BACKCHECK	10/22/2021

SHEET  
**ELECTRICAL DETAILS**  
 DATE 10/22/2021  
 JOB # 2021005.05  
 SHEET # **E5.4**



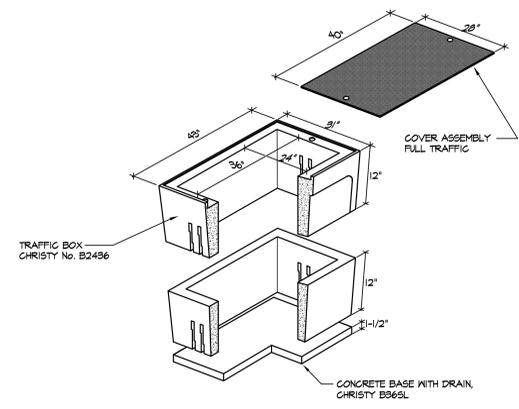
- NOTES:
- HIGH DENSITY REINFORCED CONCRETE BOX WITH NON-SETTING SHOULDERS POSITIONED TO MAINTAIN GRADE AND FACILITATE BACK FILLING. APPROXIMATE DIMENSIONS SHOWN.
  - ALL CONDUITS SHALL ENTER FROM SIDES OF FULL BOX. NO CONDUITS SHALL BE ALLOWED FROM THE BOTTOM OF THE FULL BOX.
  - CONTRACTOR SHALL STACK CONDUITS AS REQUIRED TO MEET THE NEC CODE REQUIREMENTS.
  - PROVIDE BELL ENDS ON ALL CONDUIT.
  - ALL PENETRATIONS INTO BOXES SHALL BE SEALED WITH GROUT.
  - PROVIDE BASE WITH DRAIN. PROVIDE DRAIN ROCK.

**2 4'6" x 8'6" ELECTRICAL VAULT**  
 E5.4 NOT TO SCALE



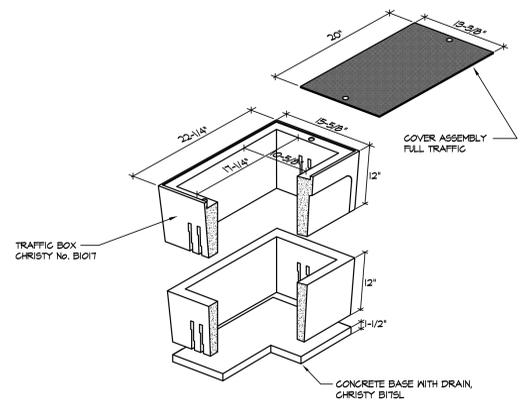
- NOTES:
- ALL ELECTRICAL TRENCH WORK SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
  - MINIMUM SPACING BETWEEN CONDUITS IS 3".
  - SEE SITE/FLOOR PLANS AND SPECIFICATIONS FOR CONDUIT REQUIREMENTS.
  - ALL UNDERGROUND CONDUITS TO BE IN CONFORMANCE WITH DETAIL US6.1
- 1 WARNING TAPE MARKED "POWER"  
 2 WARNING TAPE MARKED "SIGNAL"  
 3 WARNING TAPE MARKED "GAS"  
 4 WARNING TAPE MARKED "WATER"  
 5 WARNING TAPE MARKED "SEWER"

**3 TYPICAL JOINT TRENCH & DUCT BANK DETAIL**  
 E5.4 NOT TO SCALE



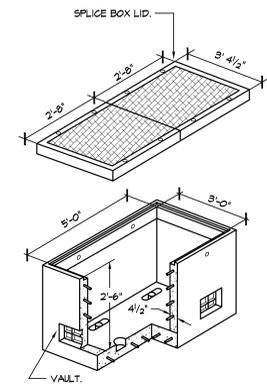
- NOTES:
- HIGH DENSITY REINFORCED CONCRETE BOX WITH NON-SETTING SHOULDERS POSITIONED TO MAINTAIN GRADE AND FACILITATE BACK FILLING. APPROXIMATE DIMENSIONS SHOWN.
  - ALL CONDUITS SHALL ENTER FROM SIDES OF FULL BOX. CONTRACTOR SHALL PROVIDE FULL BOX EXTENSION AS REQUIRED. NO CONDUITS SHALL BE ALLOWED FROM THE BOTTOM OF THE FULL BOX.
  - CONTRACTOR SHALL STACK CONDUITS AS REQUIRED TO MEET THE NEC CODE REQUIREMENTS.
  - PROVIDE BELL ENDS ON ALL CONDUIT.
  - ALL PENETRATIONS INTO BOXES SHALL BE SEALED WITH GROUT.
  - PROVIDE BASE WITH DRAIN. PROVIDE DRAIN ROCK.

**4 B2436 ELECTRICAL VAULT**  
 E5.4 NOT TO SCALE (FULL TRAFFIC COVER)



- NOTES:
- HIGH DENSITY REINFORCED CONCRETE BOX WITH NON-SETTING SHOULDERS POSITIONED TO MAINTAIN GRADE AND FACILITATE BACK FILLING. APPROXIMATE DIMENSIONS SHOWN.
  - ALL CONDUITS SHALL ENTER FROM SIDES OF FULL BOX. CONTRACTOR SHALL PROVIDE FULL BOX EXTENSION AS REQUIRED. NO CONDUITS SHALL BE ALLOWED FROM THE BOTTOM OF THE FULL BOX.
  - CONTRACTOR SHALL STACK CONDUITS AS REQUIRED TO MEET THE NEC CODE REQUIREMENTS.
  - PROVIDE BELL ENDS ON ALL CONDUIT.
  - ALL PENETRATIONS INTO BOXES SHALL BE SEALED WITH GROUT.
  - PROVIDE BASE WITH DRAIN. PROVIDE DRAIN ROCK.

**5 B1017 ELECTRICAL VAULT**  
 E5.4 NOT TO SCALE (FULL TRAFFIC COVER)



NOTE:  
 A HEAVY DUTY REINFORCED CONCRETE BOX WITH STANDARD KNOCKOUTS AND FILLING IRONS MADE IN CONFORMANCE WITH PG&E REQUIREMENTS.

**6 PG&E 3' X 5' ELECTRICAL VAULT**  
 E5.4 NOT TO SCALE