



GENERAL ABBREVIATIONS

GENERAL ABBREVIATIONS

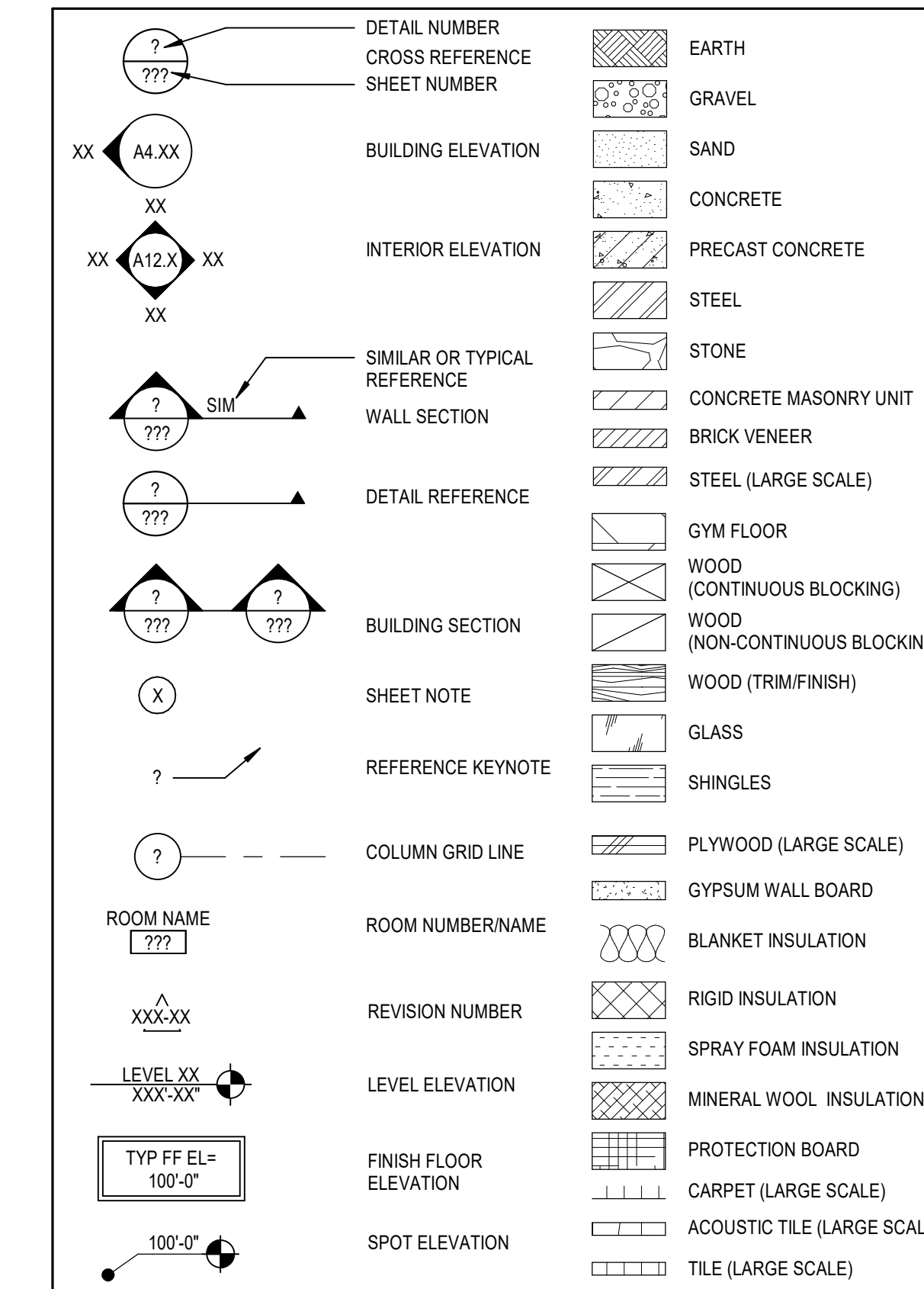
Table with 2 columns: Abbreviation and Description. Includes items like ADA (Americans with Disability Act), ADON (Addition or Additional), and various construction materials and methods.

Table with 2 columns: Abbreviation and Description. Includes items like A/E (Architect/Engineer), AB (Air Barrier), and various construction materials and methods.

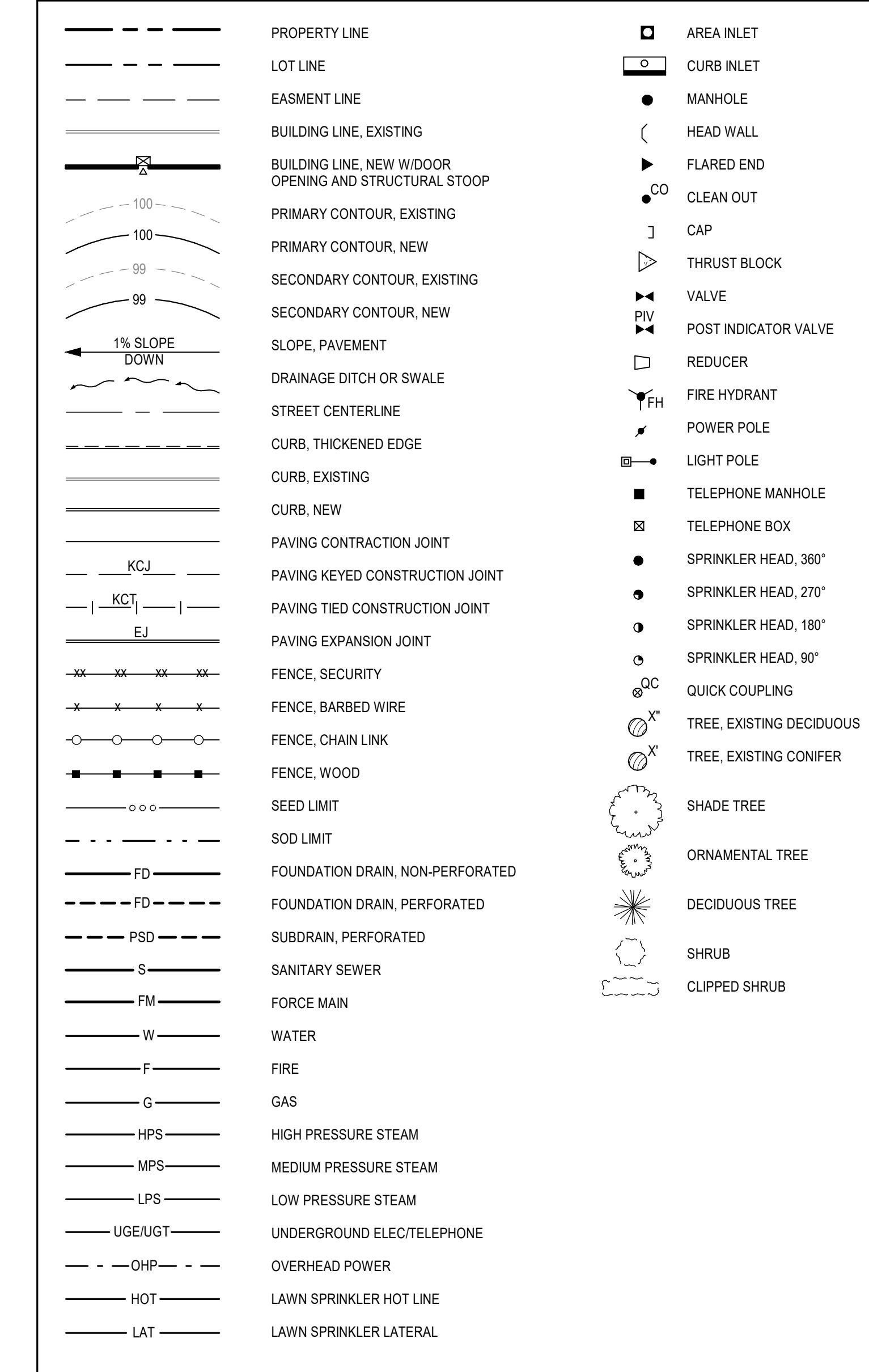
Table with 2 columns: Abbreviation and Description. Includes items like GL (Glue Laminated), GMP (Guaranteed Maximum Price), and various construction materials and methods.

Table with 2 columns: Abbreviation and Description. Includes items like SD (Soap Dispenser), SECY (Secretary), and various construction materials and methods.

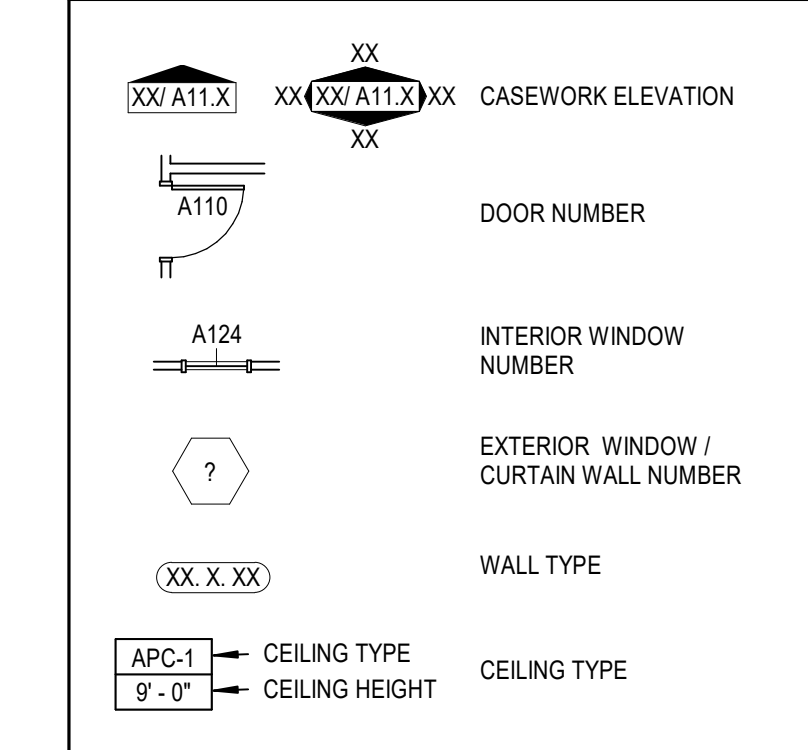
GENERAL SYMBOLS



SITE SYMBOLS



ARCHITECTURAL SYMBOLS



GENERAL NOTES

- List of general notes including: GENERAL NOTES APPLY TO ALL SHEETS, DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF CONCRETE WALLS, etc.

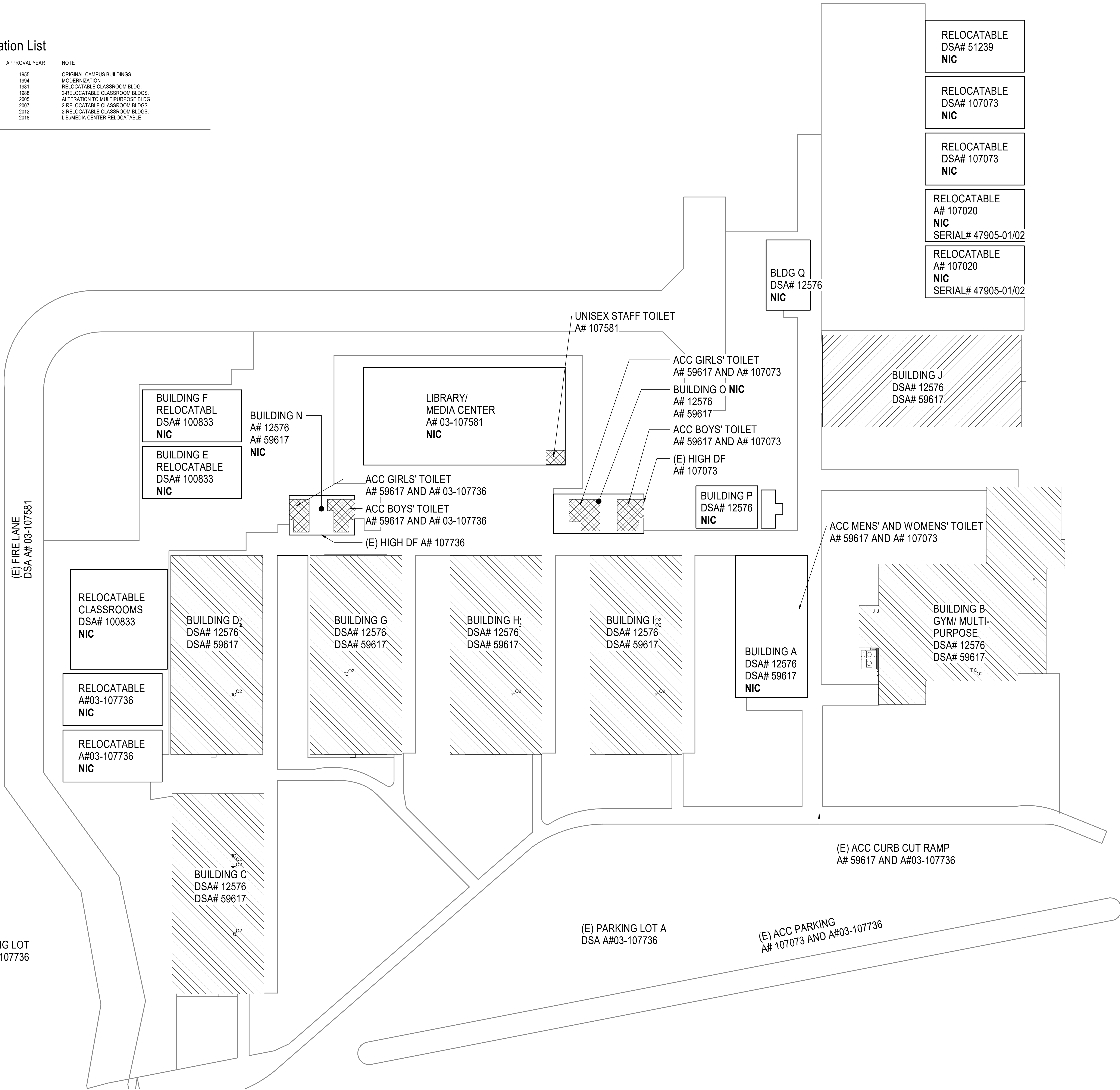
Vertical sidebar containing logos for DLR Group and USG, project name 'BEN LOMOND ELEM. SCHOOL', location 'COVID-19 COVID VALLEY DISTRICT WIDE HVAC REPLACEMENT', and other project details.

100% CONSTRUCTION DOCUMENT
11/08/2022 REVISIONS

G1.1

DSA Certification List

APPLICATION #	FILE #	APPROVAL YEAR	NOTE
03-12576	19-25	1955	ORIGINAL CAMPUS BUILDINGS
03-59617	19-25	1994	MODERNIZATION
03-43653	19-25	1981	RELOCATABLE CLASSROOM BLDG.
03-49745	19-25	1986	2 RELOCATABLE CLASSROOM BLDGS.
03-108338	19-25	2005	ALTERATION TO MULTIPURPOSE BLDG.
03-107073	19-25	2007	2 RELOCATABLE CLASSROOM BLDGS.
03-114877	56-9	2012	2 RELOCATABLE CLASSROOM BLDGS.
03-107581	19-25	2018	LIB/MEDIA CENTER RELOCATABLE



**SITE LEGEND**

- EXISTING BUILDING NOT IN SCOPE
- EXISTING BUILDING - SCOPE OF WORK UNDER THIS DSA APPLICATION
- (E) RESTROOMS - NOT IN SCOPE

**DLR Group**  
© DLR Group

LICENSED ARCHITECT  
 JESSIE MILLER  
 No. C-52306  
 10/31/2023  
 STATE OF CALIFORNIA

**USG**

**BEN LOMOND ELEM. SCHOOL**  
 COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT  
681 E. COVINA BLVD COVINA, CA 91722

100%  
 CONSTRUCTION  
 DOCUMENT  
 11/08/2022  
 REVISIONS

75-22605  
 DSA A#03-122228  
 DSA File #: 19-25  
 ARCHITECTURAL  
 SITE PLAN

Autodesk Docs/75-22605-00\_CVUSD - District Wide HVAC Replacement/75-22605-00\_CVUSD\_Ben Lomond ES\_AR\_2020.rvt  
 11/2/2022 11:17:49 AM

**SITE PLAN**  
 SCALE: 1" = 20'-0"

REFERENCE KEYNOTES

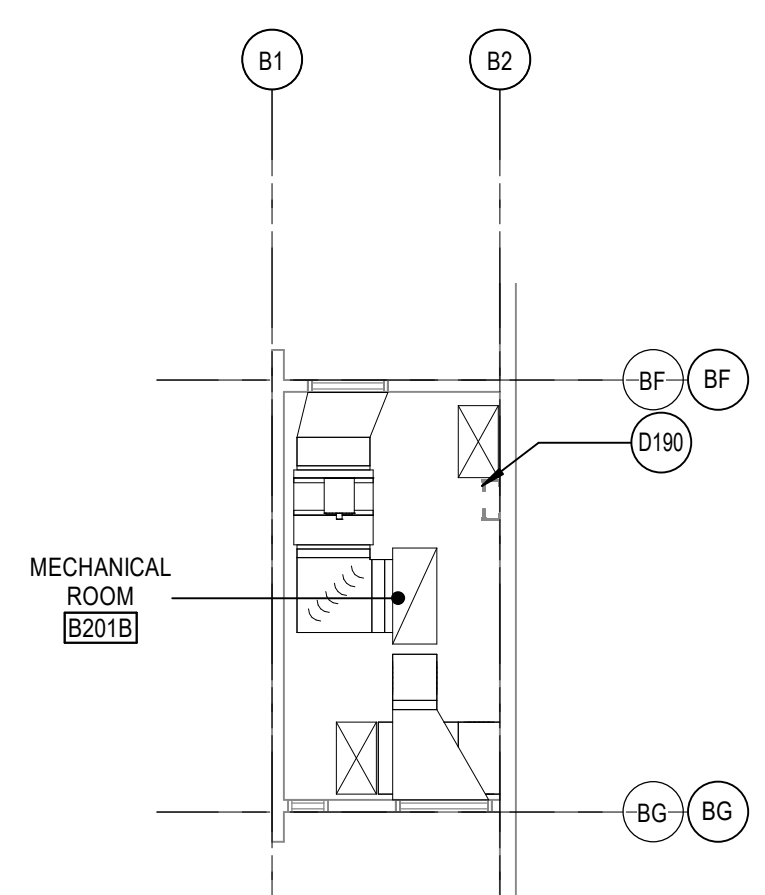
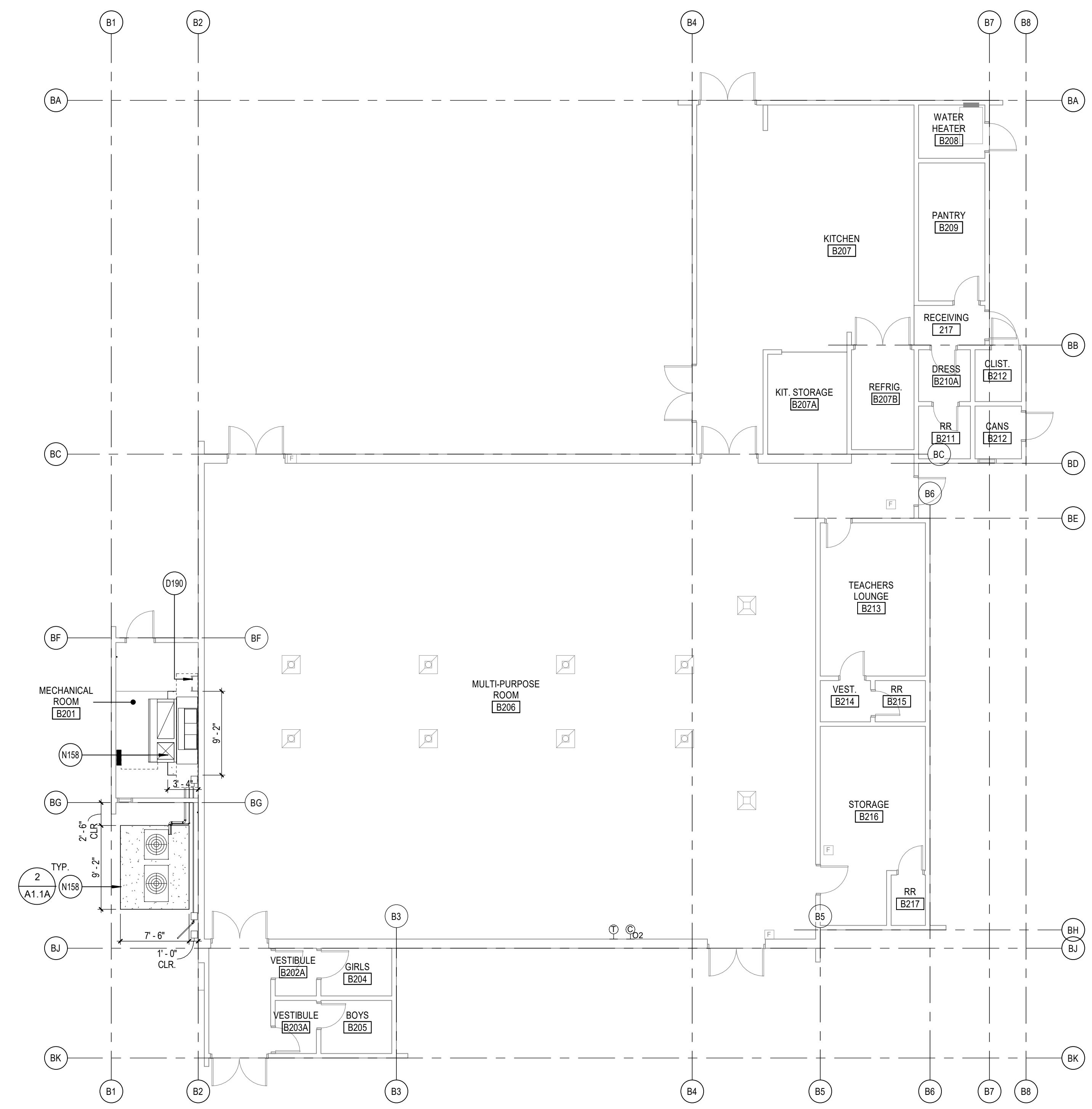
KEYNOTES
D190 REMOVE (E) LADDER
N158 NEW MECHANICAL EQUIPMENT ON NEW 6" THK. TOP LEVELED CONCRETE PAD & PLACED 6" FROM EDGE OF PAD. SEE MECH DWGS.

GENERAL ARCHITECTURAL NOTES

- ALL INTERIOR CMU WALLS SHALL REMAIN U.N.O.
- SEE STRUCTURAL DRAWINGS FOR BRACING OF NON-LOAD BEARING MASONRY WALLS.
- FURNISH AND INSTALL FIRE-TREATED WOOD BLOCKING OR METAL BAKING PLATE IN METAL STUD PARTITIONS FOR THE PROPER ANCHORAGE OF ALL WALL ATTACHED ITEMS. I.E. TOILET ACCESSORIES, CASEWORK, MILLWORK, WALL-MOUNTED FIXTURES, MARKER BOARDS, TACK BOARDS, DOOR STOPS, AUDIO VISUAL BRACKETS, AND OTHER WALL ATTACHED ITEMS WHERE OCCURS.
- GYPSUM BOARD SURFACES SHALL BE ISOLATED WITH CONTROL JOINTS WHERE SHOWN ON DRAWINGS AND AS DESCRIBED IN THE SPECIFICATIONS.
- MASONRY CONTROL JOINTS (CJ) AND CONTROL JOINTS ABOVE (CA) SHALL BE LOCATED AS SHOWN ON THE FLOOR PLAN AND BUILDING ELEVATIONS, AND WHERE LARGE PLUMBING VENTS OR RISERS OCCUR IN SINGLE WYTHE MASONRY WALLS, AND WHERE MASONRY WALLS BEARING ON THE CONCRETE FLOOR SLAB ABOUT MASONRY WALLS BEARING ON CONCRETE FOOTINGS OR AS INDICATED ON DRAWINGS.
- SCRIBE GYPSUM WALL BOARD OF WALLS AND PARTITIONS TO IRREGULARITIES OF DECK ABOVE. SEAL TIGHTLY AROUND ALL PENETRATIONS.
- MAINTAIN (E) SEISMIC BRACING FOR SUSPENDED CEILING OR AS SHOWN ON THE DRAWINGS.

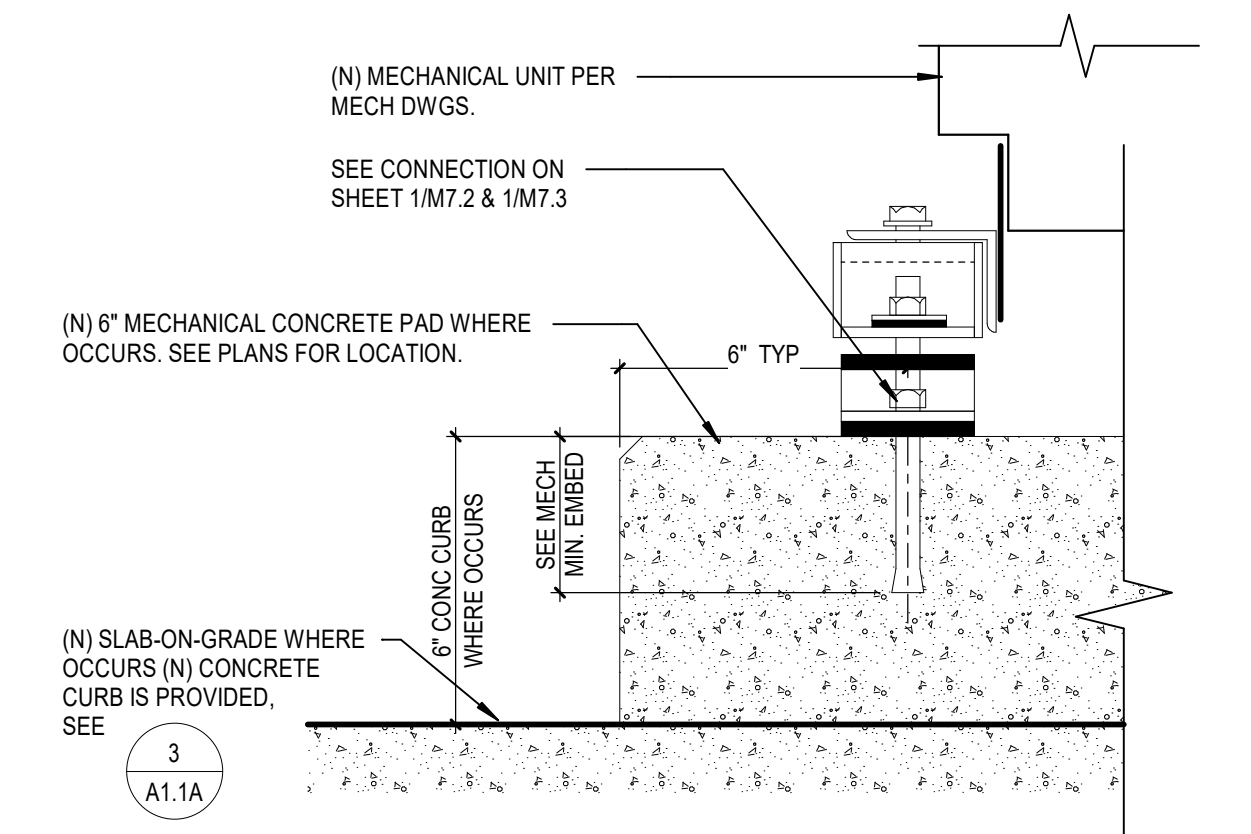
DEMOLITION GENERAL NOTES

- DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.
- THE CONTRACTOR SHALL:
- COORDINATE ALL DEMOLITION AND PHASING EFFORTS WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. IN ALL CASES, PROVISIONS SHALL BE MADE FOR USER'S SAFETY.
  - COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH THE OWNER AND AS SPECIFIED.
  - CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN THE EXISTING BUILDING WHICH OFFER A ONE-HOUR ENCLOSURE TO ISOLATE ANY DEMOLITION/CONSTRUCTION WORK FROM THE GENERAL PUBLIC AND AS DEEMED NECESSARY BY THE OWNER AND CODE OFFICIAL HAVING JURISDICTION. COORDINATE LOCATIONS WITH THE OWNER AND MAINTAIN MEANS OF EGRESS THROUGHOUT THE WORK.
  - MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES.
  - VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
  - REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, MILLWORK, PLUMBING FIXTURES, CEILING, SOFFITS, MARKERBOARDS, AND OTHER ITEMS, AS REQUIRED TO EXECUTE THE DEMOLITION/CONSTRUCTION WORK DESCRIBED BY THE DRAWINGS.
  - THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS.
  - PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
  - REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND/OR CONDITION.
  - EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT.
  - VERIFY AND MAINTAIN THE LOCATION OF EXISTING POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION OF THEIR SERVICE.
  - PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR RE-ROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, AND OTHER ITEMS, AS REQUIRED TO MAINTAIN FIRE-RESISTANCE-RATED SEPARATIONS. FINISH AS REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.
  - CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
  - SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK.
  - AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF INFLUENCE AROUND EXISTING FOOTINGS AND FLOOR SLABS AS DIRECTED BY GEOTECHNICAL ENGINEER.
  - WHERE CMU WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY REMOVING CMU IN TOOTH-IN PATTERN BOTH SIDES OF DEMOLITION FOR CONTRACTOR TO TOOTH-IN NEW CMU PATCHES.
  - WHERE PLASTER/STUD WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY SAWCUTTING ADJACENT PLASTER FINISH A MINIMUM OF 1'-0" BEYOND DEMOLITION.

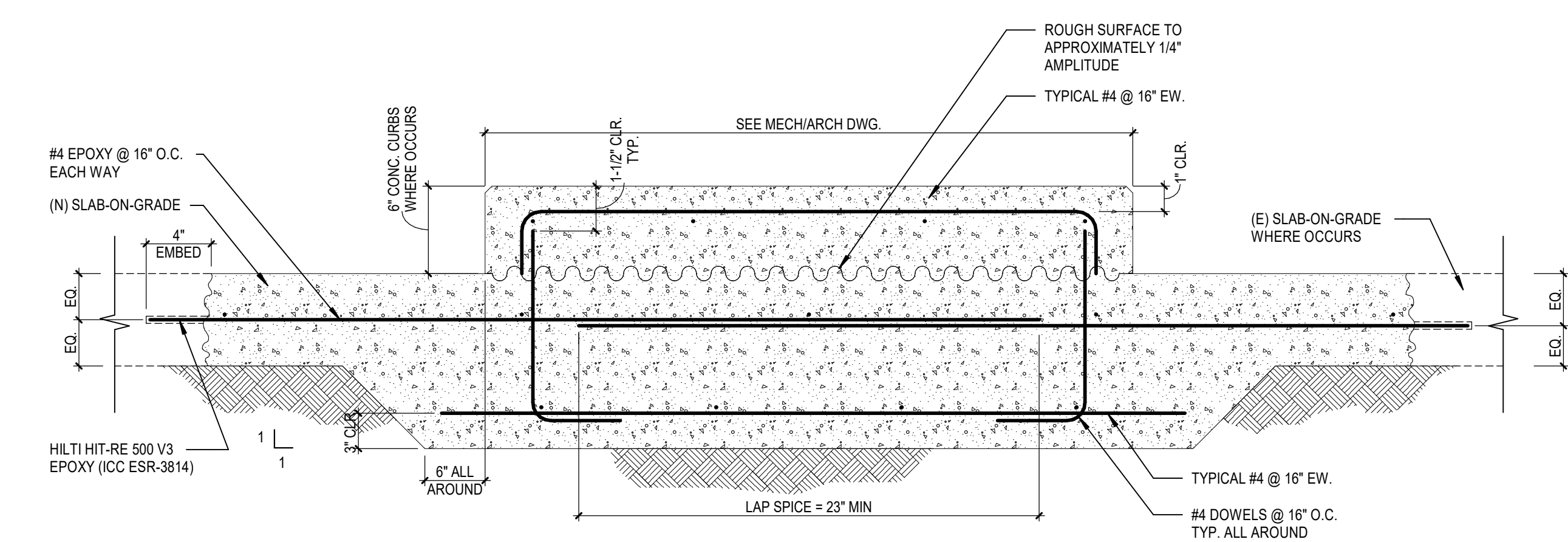


**BLDG B - MEZZANINE LEVEL**  
SCALE: 1/8" = 1'-0"

**BUILDING A AND B FLOOR PLANS - MPR**  
SCALE: 1/8" = 1'-0"



**MECH. ANCHORAGE AT CONC. CURB**  
SCALE: 3/4" = 1'-0"



**TYPICAL MECH. EQUIPMENT CONCRETE PAD AT (E) SLAB-ON-GRADE**  
SCALE: 1/12" = 1'-0"



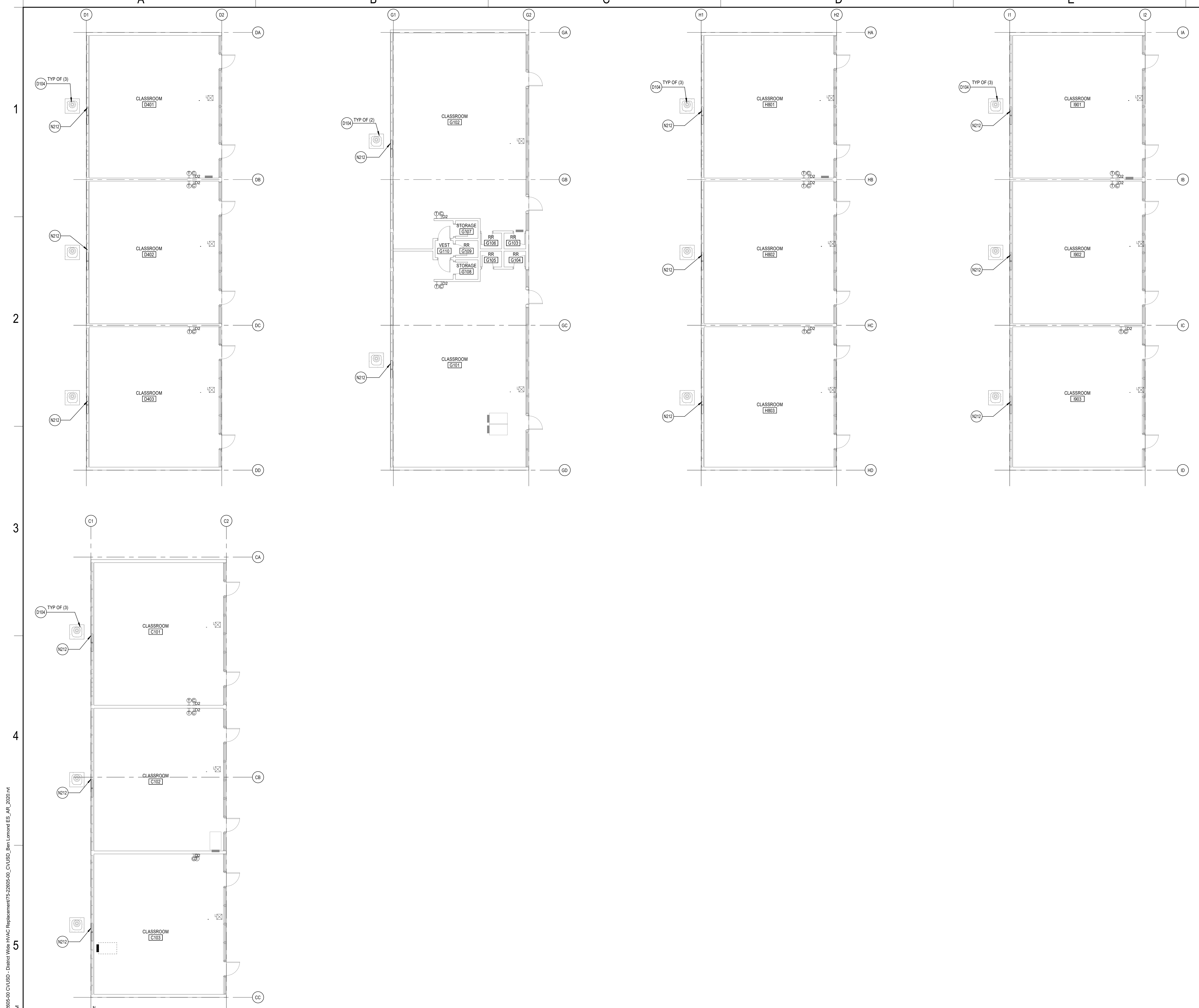
**BEN LOMOND ELEM. SCHOOL**  
COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT  
681 E. COVINA BLVD COVINA, CA 91722

100% CONSTRUCTION DOCUMENT  
11/08/2022 REVISIONS

75-22605  
DSA A#03-122228  
DSA File #: 19-25

**BUILDING B FLOOR PLANS**

**A1.1A**



**REFERENCE KEYNOTES**

KEYNOTES
D104 REMOVE (E) MECHANICAL EQUIP., EQUIP. CONC. PAD, & ITS ASSOCIATED PARTS. SEE MECHANICAL & PLUMBING DWG.
N212 REPLACE (E) INFILL PANEL AT CONDENSER UNIT PENETRATIONS WITH GLAZING TO MATCH ADJACENT. PAINT FRAME TO MATCH ADJACENT.

**GENERAL ARCHITECTURAL NOTES**

- ALL INTERIOR CMU WALLS SHALL REMAIN TO REMAIN UNO.
- SEE STRUCTURAL DRAWINGS FOR BRACING OF NON-LOAD BEARING MASONRY WALLS.
- FURNISH AND INSTALL FIRE-TREATED WOOD BLOCKING OR METAL BACKING PLATE IN METAL STUD PARTITIONS FOR THE PROPER ANCHORAGE OF ALL WALL ATTACHED ITEMS. I.E. TOILET ACCESSORIES, CASEWORK, MILLWORK, WALL-MOUNTED FIXTURES, MARKER BOARDS, TACK BOARDS, DOOR STOPS, AUDIO VISUAL BRACKETS, AND OTHER WALL ATTACHED ITEMS WHERE OCCURS.
- GYPSUM BOARD SURFACES SHALL BE ISOLATED WITH CONTROL JOINTS WHERE SHOWN ON DRAWINGS AND AS DESCRIBED IN THE SPECIFICATIONS.
- MASONRY CONTROL JOINTS (CJ) AND CONTROL JOINTS ABOVE (CA) SHALL BE LOCATED AS SHOWN ON THE FLOOR PLAN AND BUILDING ELEVATIONS, AND WHERE LARGE PLUMBING VENTS OR RISERS OCCUR IN SINGLE WYTHE MASONRY WALLS, AND WHERE MASONRY WALLS BEARING ON THE CONCRETE FLOOR SLABS ABOUT MASONRY WALLS BEARING ON CONCRETE FOOTINGS OR AS INDICATED ON DRAWINGS.
- SCRIBE GYPSUM WALL BOARD OF WALLS AND PARTITIONS TO IRREGULARITIES OF DECK ABOVE. SEAL TIGHTLY AROUND ALL PENETRATIONS.
- MAINTAIN (E) SEISMIC BRACING FOR SUSPENDED CEILING OR AS SHOWN ON THE DRAWINGS.

**DEMOLITION GENERAL NOTES**

- DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.
- THE CONTRACTOR SHALL:
- COORDINATE ALL DEMOLITION AND PHASING EFFORTS WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. IN ALL CASES, PROVISIONS SHALL BE MADE FOR USER'S SAFETY.
  - COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH THE OWNER AND AS SPECIFIED.
  - CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN THE EXISTING BUILDING WHICH OFFER A ONE-HOUR ENCLOSURE TO ISOLATE ANY DEMOLITION/CONSTRUCTION WORK FROM THE GENERAL PUBLIC AND AS DEEMED NECESSARY BY THE OWNER AND CODE OFFICIAL HAVING JURISDICTION. COORDINATE LOCATIONS WITH THE OWNER AND MAINTAIN MEANS OF EGRESS THROUGHOUT THE WORK.
  - MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES.
  - VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
  - REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, MILLWORK, PLUMBING FIXTURES, CEILING, SOFFITS, MARKERBOARDS, AND OTHER ITEMS, AS REQUIRED TO EXECUTE THE DEMOLITION/CONSTRUCTION WORK DESCRIBED BY THE DRAWINGS.
  - THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS.
  - PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
  - REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND/OR CONDITION.
  - EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT.
  - VERIFY AND MAINTAIN THE LOCATION OF EXISTING POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION OF THEIR SERVICE.
  - PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR RE-ROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, AND OTHER ITEMS, AS REQUIRED TO MAINTAIN FIRE-RESISTANCE-RATED SEPARATIONS. FINISH AS REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.
  - CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
  - SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK.
  - AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF INFLUENCE AROUND EXISTING FOOTINGS AND FLOOR SLABS AS DIRECTED BY GEOTECHNICAL ENGINEER.
  - WHERE CMU WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY REMOVING CMU IN TOOTH-IN PATTERN BOTH SIDES OF DEMOLITION FOR CONTRACTOR TO TOOTH-IN NEW CMU PATCHES.
  - WHERE PLASTER/STUD WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY SAWCUTTING ADJACENT PLASTER FINISH A MINIMUM OF 1'-0" BEYOND DEMOLITION.



**BEN LOMOND ELEM. SCHOOL**  
 COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT  
 671 E. COVINA BLVD COVINA, CA 91722

100%  
**CONSTRUCTION DOCUMENT**  
 11/08/2022  
 REVISIONS

75-22605  
 DSA A#03-122228  
 DSA File #: 19-25  
**BUILDINGS CDGH AND I FLOOR PLANS**

**A1.1C**

Autodesk Docs/75-22605-00\_CVUSD - District Wide HVAC Replacement/75-22605-00\_CVUSD\_Ben Lomond ES\_AR\_2020.rvt  
 11/2/2022 11:17:51 AM

**BUILDINGS CDGH AND I FLOOR PLANS**  
 SCALE: 1/8" = 1'-0"

A

B

C

D

E

F

1

2

3

4

5

REFERENCE KEYNOTES

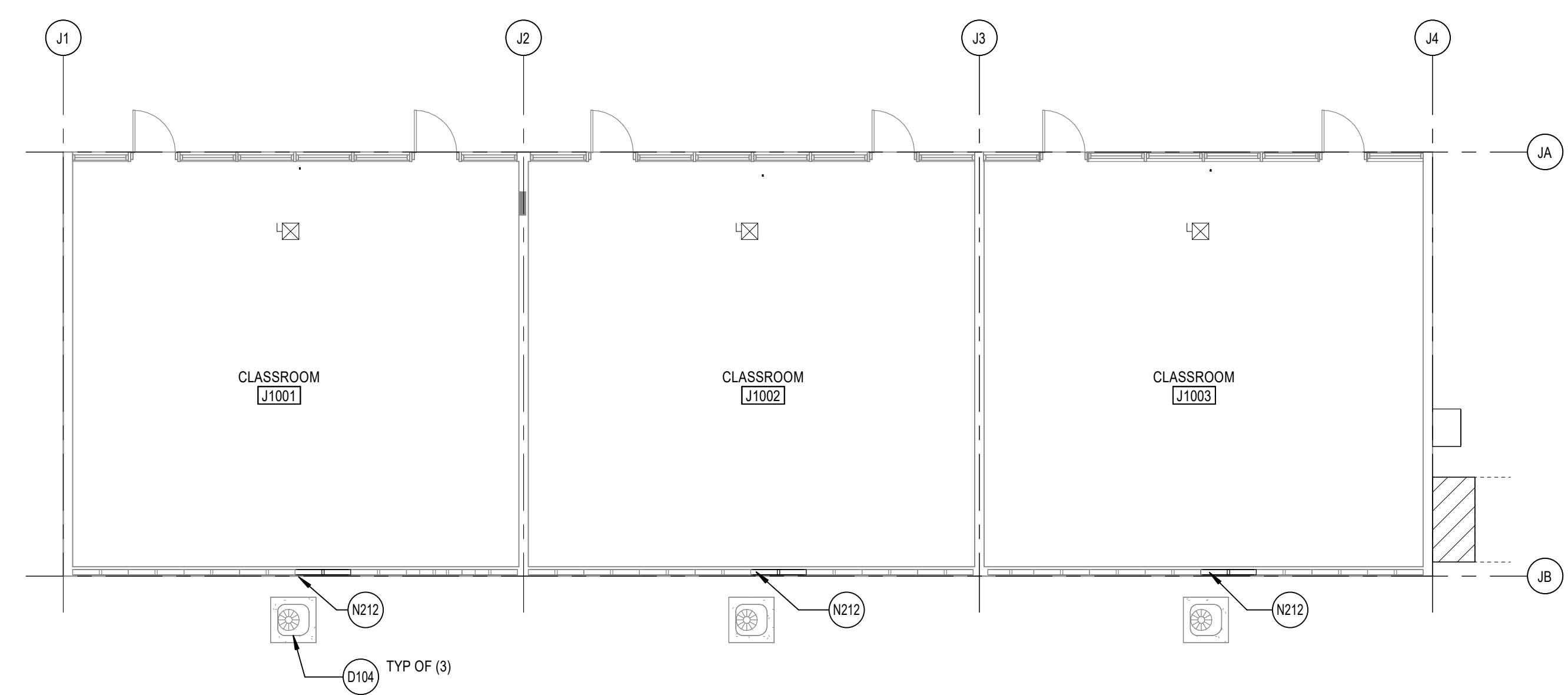
KEYNOTES	
D104	REMOVE (E) MECHANICAL EQUIP., EQUIP. CONC. PAD, & ITS ASSOCIATED PARTS. SEE MECHANICAL & PLUMBING DWG.
N212	REPLACE (E) INFILL PANEL AT CONDENSER UNIT PENETRATIONS WITH GLAZING TO MATCH ADJACENT. PAINT FRAME TO MATCH ADJACENT.

GENERAL ARCHITECTURAL NOTES

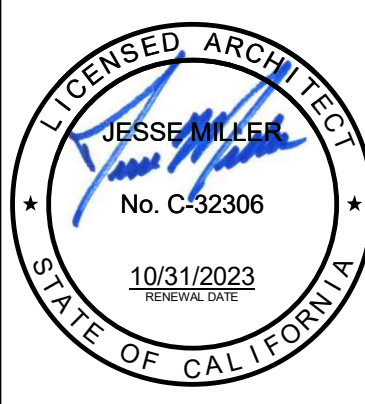
- ALL INTERIOR CMU WALLS SHALL REMAIN U.N.O.
- SEE STRUCTURAL DRAWINGS FOR BRACING OF NON-LOAD BEARING MASONRY WALLS.
- FURNISH AND INSTALL FIRE-TREATED WOOD BLOCKING OR METAL BACKING PLATE IN METAL STUD PARTITIONS FOR THE PROPER ANCHORAGE OF ALL WALL ATTACHED ITEMS, I.E. TOILET ACCESSORIES, CASEWORK, MILLWORK, WALL-MOUNTED FIXTURES, MARKER BOARDS, TACK BOARDS, DOOR STOPS, AUDIO VISUAL BRACKETS, AND OTHER WALL ATTACHED ITEMS WHERE OCCURS.
- GYPSUM BOARD SURFACES SHALL BE ISOLATED WITH CONTROL JOINTS WHERE SHOWN ON DRAWINGS AND AS DESCRIBED IN THE SPECIFICATIONS.
- MASONRY CONTROL JOINTS (CJ) AND CONTROL JOINTS ABOVE (CA) SHALL BE LOCATED AS SHOWN ON THE FLOOR PLAN AND BUILDING ELEVATIONS, AND WHERE LARGE PLUMBING VENTS OR RISERS OCCUR IN SINGLE WYTHE MASONRY WALLS, AND WHERE MASONRY WALLS BEARING ON THE CONCRETE FLOOR SLAB ABOUT MASONRY WALLS BEARING ON CONCRETE FOOTINGS OR AS INDICATED ON DRAWINGS.
- SCRIBE GYPSUM WALL BOARD OF WALLS AND PARTITIONS TO IRREGULARITIES OF DECK ABOVE. SEAL TIGHTLY AROUND ALL PENETRATIONS.
- MAINTAIN (E) SEISMIC BRACING FOR SUSPENDED CEILINGS OR AS SHOWN ON THE DRAWINGS.

DEMOLITION GENERAL NOTES

- DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.
- THE CONTRACTOR SHALL:
- COORDINATE ALL DEMOLITION AND PHASING EFFORTS WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. IN ALL CASES, PROVISIONS SHALL BE MADE FOR USER'S SAFETY.
  - COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH THE OWNER AND AS SPECIFIED.
  - CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN THE EXISTING BUILDING WHICH OFFER A ONE-HOUR ENCLOSURE TO ISOLATE ANY DEMOLITION/CONSTRUCTION WORK FROM THE GENERAL PUBLIC AND AS DEEMED NECESSARY BY THE OWNER AND CODE OFFICIAL HAVING JURISDICTION. COORDINATE LOCATIONS WITH THE OWNER AND MAINTAIN MEANS OF EGRESS THROUGHOUT THE WORK.
  - MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES.
  - VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
  - REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, MILLWORK, PLUMBING FIXTURES, CEILING, SOFFITS, MARKERBOARDS, AND OTHER ITEMS, AS REQUIRED TO EXECUTE THE DEMOLITION/CONSTRUCTION WORK DESCRIBED BY THE DRAWINGS.
  - THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS.
  - PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
  - REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND/OR CONDITION.
  - EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT.
  - VERIFY AND MAINTAIN THE LOCATION OF EXISTING POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION OF THEIR SERVICE.
  - PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR RE-ROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, AND OTHER ITEMS, AS REQUIRED TO MAINTAIN FIRE-RESISTANCE-RATED SEPARATIONS. FINISH AS REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.
  - CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
  - SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK.
  - AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF INFLUENCE AROUND EXISTING FOOTINGS AND FLOOR SLABS AS DIRECTED BY GEOTECHNICAL ENGINEER.
  - WHERE CMU WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY REMOVING CMU IN TOOTH-IN PATTERN BOTH SIDES OF DEMOLITION FOR CONTRACTOR TO TOOTH-IN NEW CMU PATCHES.
  - WHERE PLASTER/STUD WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY SAWCUTTING ADJACENT PLASTER FINISH A MINIMUM OF 1'-0" BEYOND DEMOLITION.



 **BUILDING J FLOOR PLANS**  
SCALE: 1/8" = 1'-0"

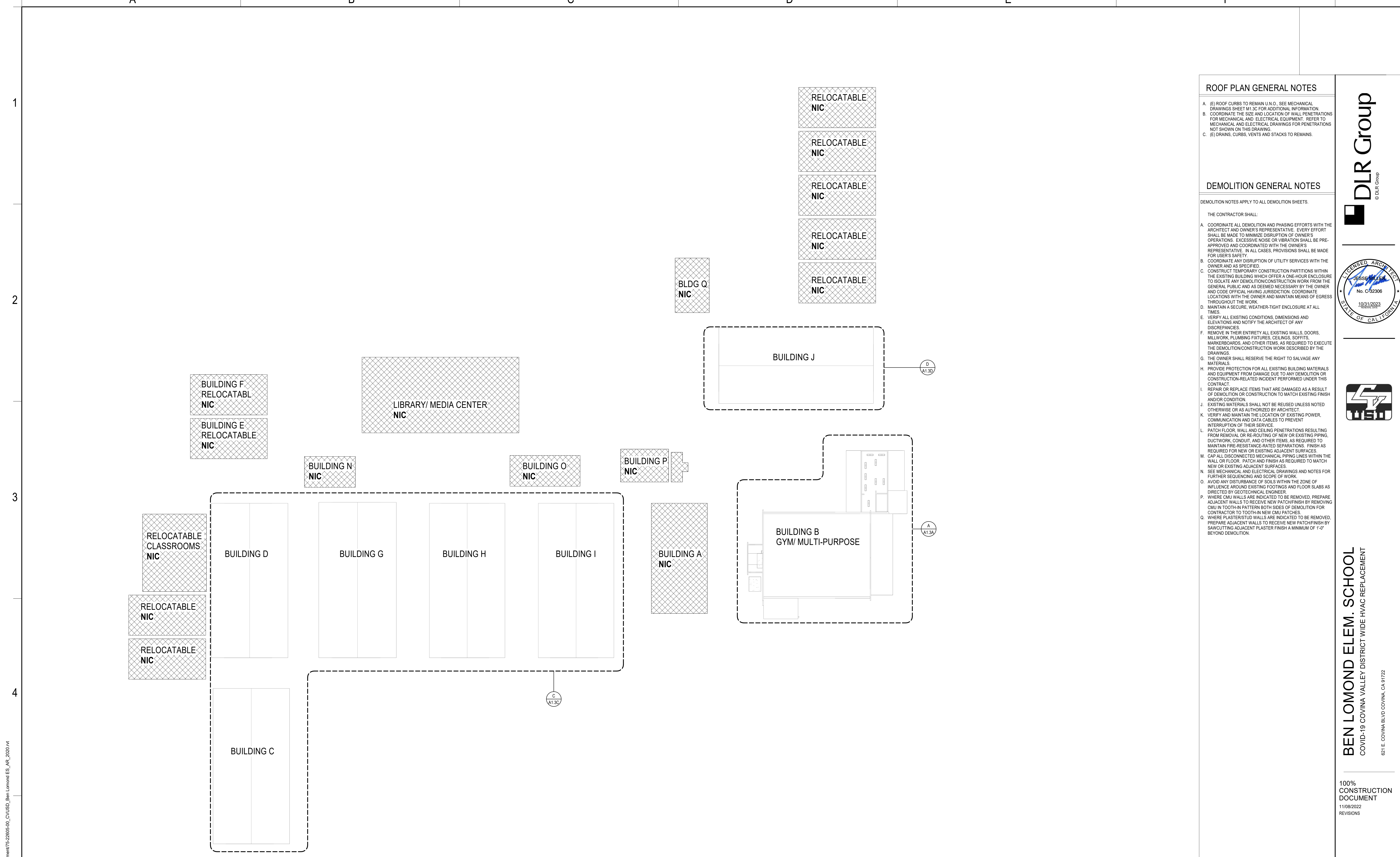


**BEN LOMOND ELEM. SCHOOL**  
COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT  
621 E. COVINA BLVD COVINA, CA 91722

100%  
CONSTRUCTION  
DOCUMENT  
11/08/2022  
REVISIONS

75-22605  
DSA A#03-122228  
DSA File #: 19-25  
**BUILDING J  
FLOOR PLANS**

**A1.1D**



**ROOF PLAN GENERAL NOTES**

- A. (E) ROOF CURBS TO REMAIN U.N.O., SEE MECHANICAL DRAWINGS SHEET M1.3C FOR ADDITIONAL INFORMATION.
- B. COORDINATE THE SIZE AND LOCATION OF WALL PENETRATIONS FOR MECHANICAL AND ELECTRICAL EQUIPMENT. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR PENETRATIONS NOT SHOWN ON THIS DRAWING.
- C. (E) DRAINS, CURBS, VENTS AND STACKS TO REMAIN.

**DEMOLITION GENERAL NOTES**

DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.

THE CONTRACTOR SHALL:

- A. COORDINATE ALL DEMOLITION AND PHASING EFFORTS WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. IN ALL CASES, PROVISIONS SHALL BE MADE FOR USER'S SAFETY.
- B. COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH THE OWNER AND AS SPECIFIED.
- C. CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN THE EXISTING BUILDING WHICH OFFER A ONE-HOUR ENCLOSURE TO ISOLATE ANY DEMOLITION/CONSTRUCTION WORK FROM THE GENERAL PUBLIC AND AS DEEMED NECESSARY BY THE OWNER AND CODE OFFICIAL HAVING JURISDICTION. COORDINATE LOCATIONS WITH THE OWNER AND MAINTAIN MEANS OF EGRESS THROUGHOUT THE WORK.
- D. MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES.
- E. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
- F. REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, MILLWORK, PLUMBING FIXTURES, CEILING, SOFFITS, MARKERBOARDS, AND OTHER ITEMS, AS REQUIRED TO EXECUTE THE DEMOLITION/CONSTRUCTION WORK DESCRIBED BY THE DRAWINGS.
- G. THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS.
- H. PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
- I. REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND/OR CONDITION.
- J. EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT.
- K. VERIFY AND MAINTAIN THE LOCATION OF EXISTING POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION OF THEIR SERVICE.
- L. PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR RE-ROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, AND OTHER ITEMS, AS REQUIRED TO MAINTAIN FIRE-RESISTANCE-RATED SEPARATIONS. FINISH AS REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.
- M. CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
- N. SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SCHEDULING AND SCOPE OF WORK.
- O. AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF INFLUENCE AROUND EXISTING FOOTINGS AND FLOOR SLABS AS DIRECTED BY GEOTECHNICAL ENGINEER.
- P. WHERE CMU WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCHFINISH BY REMOVING CMU IN TOOTH-IN PATTERN BOTH SIDES OF DEMOLITION FOR CONTRACTOR TO TOOTH-IN NEW CMU PATCHES.
- Q. WHERE PLASTER/STUD WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCHFINISH BY SAWCUTTING ADJACENT PLASTER FINISH A MINIMUM OF 1'-0" BEYOND DEMOLITION.



**BEN LOMOND ELEM. SCHOOL**  
 COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT  
 687 E. COVINA BLVD COVINA, CA 91722

100%  
 CONSTRUCTION  
 DOCUMENT  
 11/08/2022  
 REVISIONS

75-22605  
 DSA A#03-122228  
 DSA File #: 19-25  
**OVERALL ROOF  
 PLAN**

**A1.3**

**OVERALL ROOF PLAN**  
 SCALE: 3/8" = 1'-0"

Autodesk Docs/75-22605-00\_CVUSD - District Wide HVAC Replacement/75-22605-00\_CVUSD\_Ben Lomond ES\_AR\_2020.rvt  
 11/2/2022 11:17:52 AM

A

B

C

D

E

F

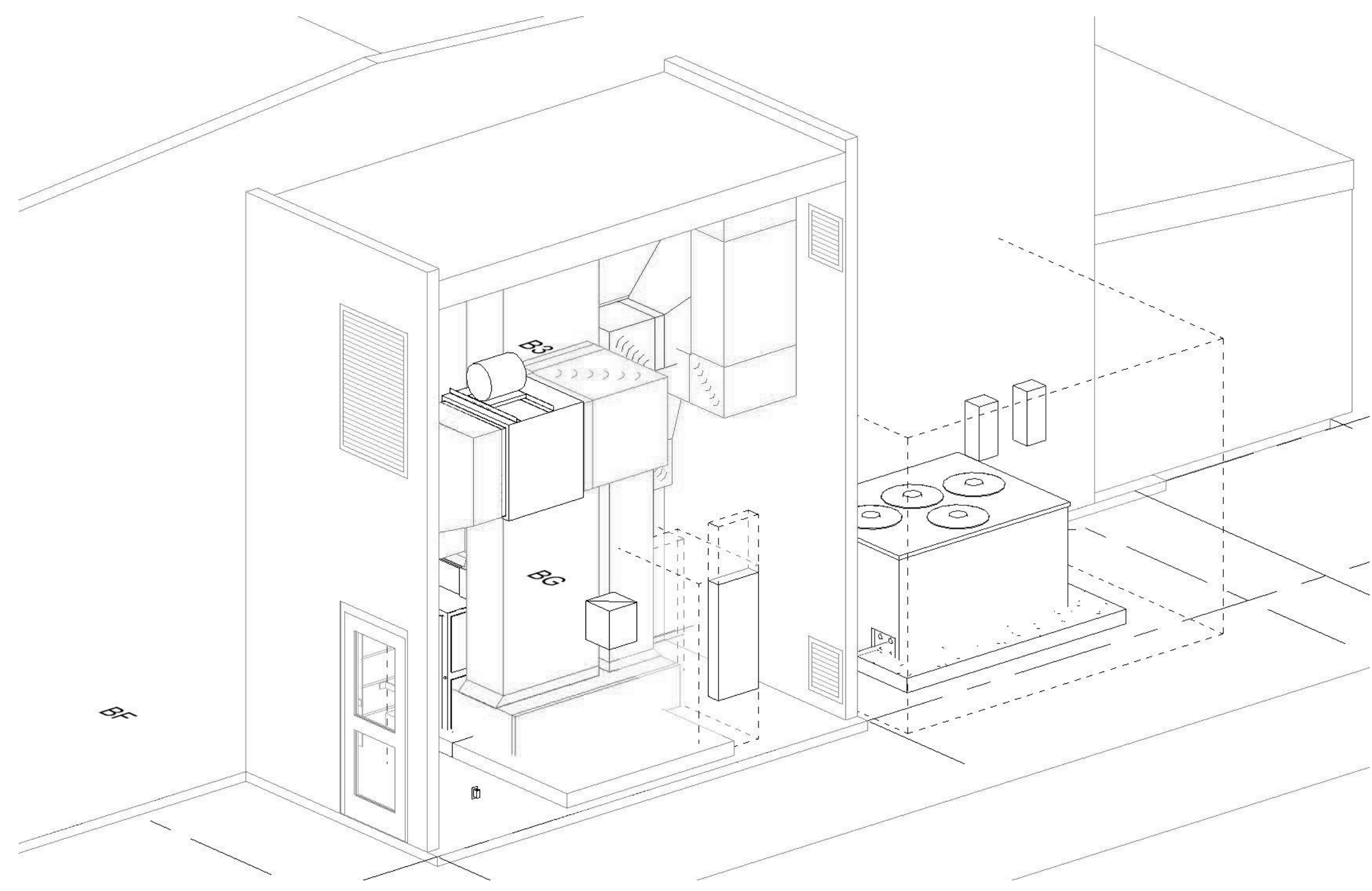
1

2

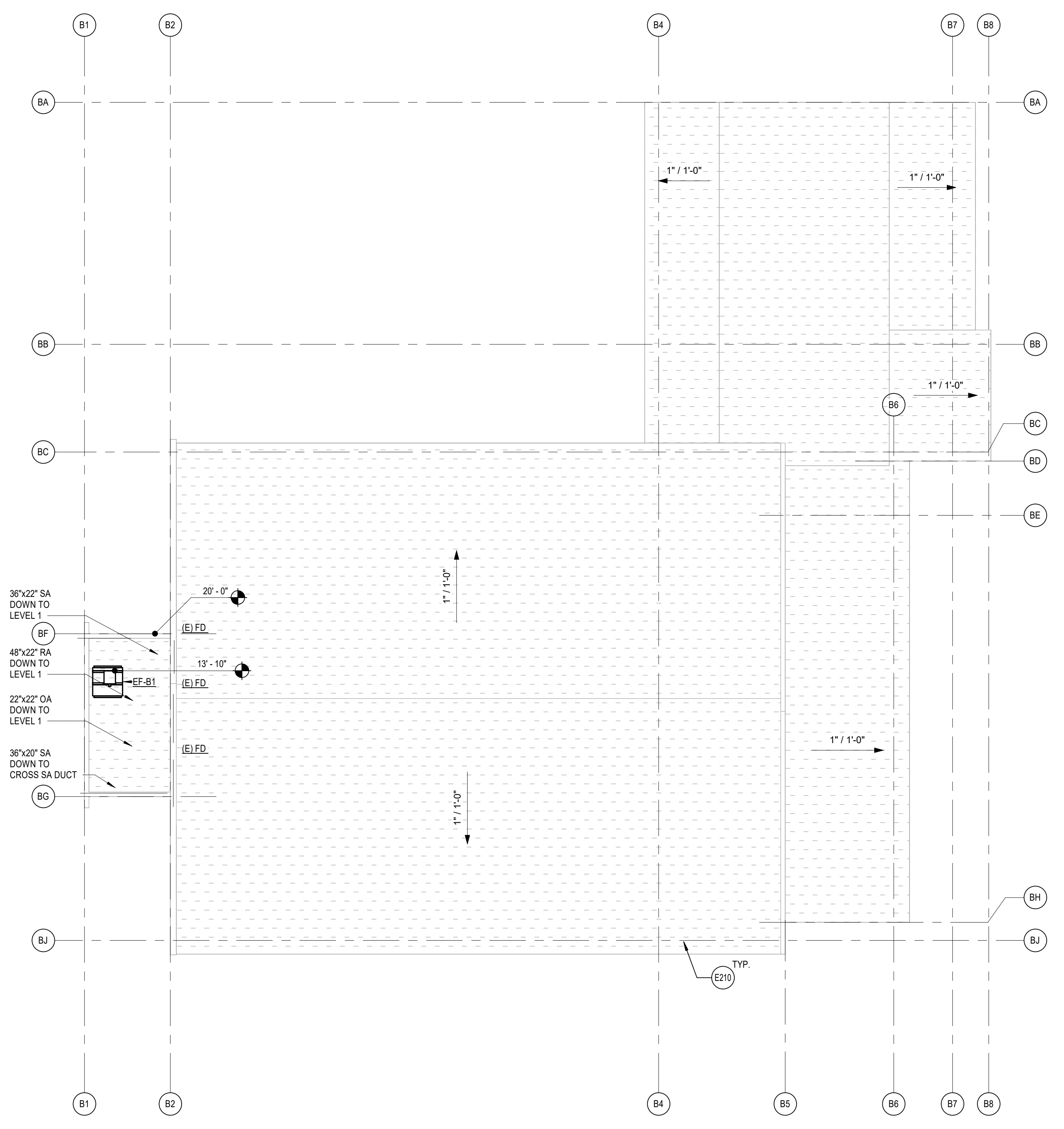
3

4

5



1 AXON VIEW AT BUILDING A AND B  
A1.3A SCALE: 3" = 1'-0"



BUILDINGS A AND B ROOF PLANS  
SCALE: 1/8" = 1'-0"

REFERENCE KEYNOTES

KEYNOTES

ROOF PLAN GENERAL NOTES

- A. (E) ROOF CURBS TO REMAIN U.N.O., SEE MECHANICAL DRAWINGS SHEET M1.3C FOR ADDITIONAL INFORMATION.
- B. COORDINATE THE SIZE AND LOCATION OF WALL PENETRATIONS FOR MECHANICAL AND ELECTRICAL EQUIPMENT. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR PENETRATIONS NOT SHOWN ON THIS DRAWING.
- C. (E) DRAINS, CURBS, VENTS AND STACKS TO REMAINS.

DEMOLITION GENERAL NOTES

- DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.
- THE CONTRACTOR SHALL:
- A. COORDINATE ALL DEMOLITION AND PHASING EFFORTS WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. IN ALL CASES, PROVISIONS SHALL BE MADE FOR USER'S SAFETY.
  - B. COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH THE OWNER AND AS SPECIFIED.
  - C. CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN THE EXISTING BUILDING WHICH OFFER A ONE-HOUR ENCLOSURE TO ISOLATE ANY DEMOLITION/CONSTRUCTION WORK FROM THE GENERAL PUBLIC AND AS DEEMED NECESSARY BY THE OWNER AND CODE OFFICIAL HAVING JURISDICTION. COORDINATE LOCATIONS WITH THE OWNER AND MAINTAIN MEANS OF EGRESS THROUGHOUT THE WORK.
  - D. MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES.
  - E. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
  - F. REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, MILLWORK, PLUMBING FIXTURES, CEILING, SOFFITS, MARKERBOARDS, AND OTHER ITEMS, AS REQUIRED TO EXECUTE THE DEMOLITION/CONSTRUCTION WORK DESCRIBED BY THE DRAWINGS.
  - G. THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS.
  - H. PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
  - I. REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND/OR CONDITION.
  - J. EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT.
  - K. VERIFY AND MAINTAIN THE LOCATION OF EXISTING POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION OF THEIR SERVICE.
  - L. PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR RE-ROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, AND OTHER ITEMS, AS REQUIRED TO MAINTAIN FIRE-RESISTANCE-RATED SEPARATIONS. FINISH AS REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.
  - M. CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
  - N. SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK.
  - O. AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF INFLUENCE AROUND EXISTING FOOTINGS AND FLOOR SLABS AS DIRECTED BY GEOTECHNICAL ENGINEER.
  - P. WHERE CMU WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY REMOVING CMU IN TOOTH-IN PATTERN BOTH SIDES OF DEMOLITION FOR CONTRACTOR TO TOOTH-IN NEW CMU PATCHES.
  - Q. WHERE PLASTER/STUO WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY SAWCUTTING ADJACENT PLASTER FINISH A MINIMUM OF 1'-0" BEYOND DEMOLITION.



BEN LOMOND ELEM. SCHOOL  
COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT  
687 E. COVINA BLVD COVINA, CA 91722

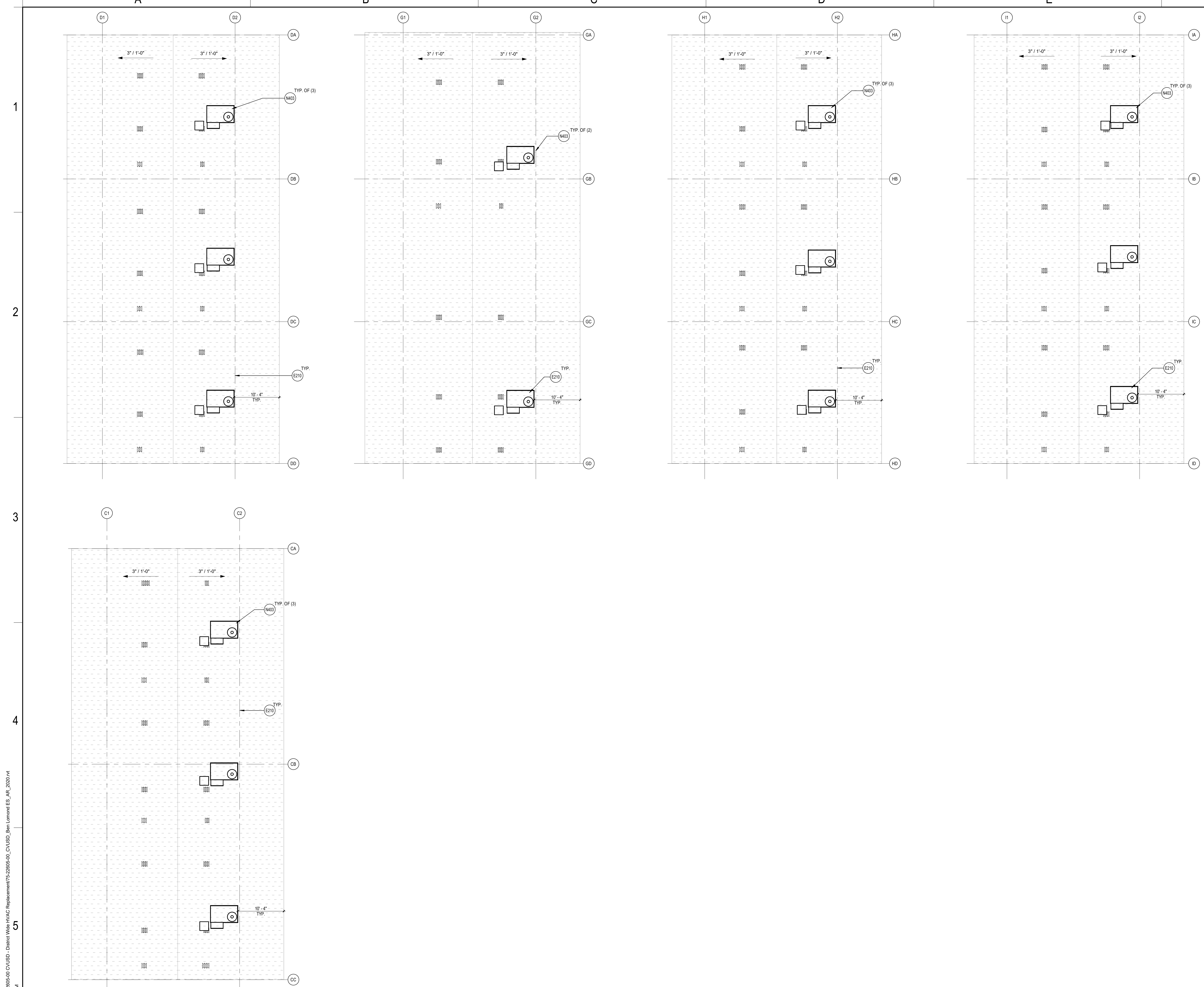
100%  
CONSTRUCTION  
DOCUMENT  
11/08/2022  
REVISIONS

75-22605  
DSA A#03-122228  
DSA File #: 19-25  
BUILDINGS B  
ROOF PLAN

A1.3A

Autodesk Docs/75-22605-00 CVUSD - District Wide HVAC Replacement/75-22605-00 CVUSD - Ben Lomond ES\_AR\_2020.rvt  
11/2/2022 11:17:53 AM





**REFERENCE KEYNOTES**

**KEYNOTES**  
 E210 LINE OF (E) BLDG BELOW SHOWN DASHED  
 N403 (N) MECHANICAL UNITS ATTACHED TO THE (E) UNIT CURBS. SEE MECHANICAL DRAWING SHEET M1.38 & M1.3D

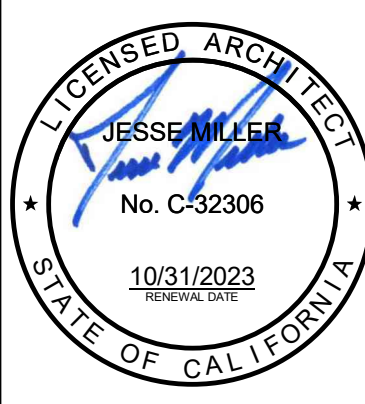
**ROOF PLAN GENERAL NOTES**

- A. (E) ROOF CURBS TO REMAIN U.N.O. SEE MECHANICAL DRAWINGS SHEET M1.3C FOR ADDITIONAL INFORMATION.
- B. COORDINATE THE SIZE AND LOCATION OF WALL PENETRATIONS FOR MECHANICAL AND ELECTRICAL EQUIPMENT. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR PENETRATIONS NOT SHOWN ON THIS DRAWING.
- C. (E) DRAINS, CURBS, VENTS AND STACKS TO REMAIN.

**DEMOLITION GENERAL NOTES**

DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.

- THE CONTRACTOR SHALL:
- A. COORDINATE ALL DEMOLITION AND PHASING EFFORTS WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. IN ALL CASES, PROVISIONS SHALL BE MADE FOR USER'S SAFETY.
  - B. COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH THE OWNER AND AS SPECIFIED.
  - C. CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN THE EXISTING BUILDING WHICH OFFER A ONE-HOUR ENCLOSURE TO ISOLATE ANY DEMOLITION/CONSTRUCTION WORK FROM THE GENERAL PUBLIC AND AS DEEMED NECESSARY BY THE OWNER AND CODE OFFICIAL HAVING JURISDICTION. COORDINATE LOCATIONS WITH THE OWNER AND MAINTAIN MEANS OF EGRESS THROUGHOUT THE WORK.
  - D. MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES.
  - E. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
  - F. REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, MILLWORK, PLUMBING FIXTURES, CEILINGS, SOFFITS, MARKERS/BARDS, AND OTHER ITEMS, AS REQUIRED TO EXECUTE THE DEMOLITION/CONSTRUCTION WORK DESCRIBED BY THE DRAWINGS.
  - G. THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS.
  - H. PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
  - I. REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND/OR CONDITION.
  - J. EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT.
  - K. VERIFY AND MAINTAIN THE LOCATION OF EXISTING POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION OF THEIR SERVICE.
  - L. PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR RE-ROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT AND OTHER ITEMS, AS REQUIRED TO MAINTAIN FIRE-RESISTANCE-RATED SEPARATIONS. FINISH AS REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.
  - M. CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
  - N. SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK.
  - O. AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF INFLUENCE AROUND EXISTING FOOTINGS AND FLOOR SLABS AS DIRECTED BY GEOTECHNICAL ENGINEER.
  - P. WHERE CMU WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY REMOVING CMU IN TOOTH-IN PATTERN BOTH SIDES OF DEMOLITION FOR CONTRACTOR TO TOOTH-IN NEW CMU PATCHES.
  - Q. WHERE PLASTER/STUD WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY SAWCUTTING ADJACENT PLASTER FINISH A MINIMUM OF 1'-0" BEYOND DEMOLITION.



**BEN LOMOND ELEM. SCHOOL**  
 COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT  
 687 E. COVINA BLVD COVINA, CA 91722

100%  
 CONSTRUCTION  
 DOCUMENT  
 11/08/2022  
 REVISIONS

75-22605  
 DSA A#03-122228  
 DSA File #: 19-25  
 BUILDINGS CDGH  
 AND I ROOF  
 PLANS

**A1.3C**

Autodesk Docs/75-22605-00\_CVUSD - District Wide HVAC Replacement/75-22605-00\_CVUSD\_Ben Lomond ES\_AR\_2020.rvt  
 11/2/2022 11:17:53 AM

**BUILDINGS CDGH AND I ROOF PLANS**  
 SCALE: 1/8" = 1'-0"

A

B

C

D

E

F

1

2

3

4

5

REFERENCE KEYNOTES

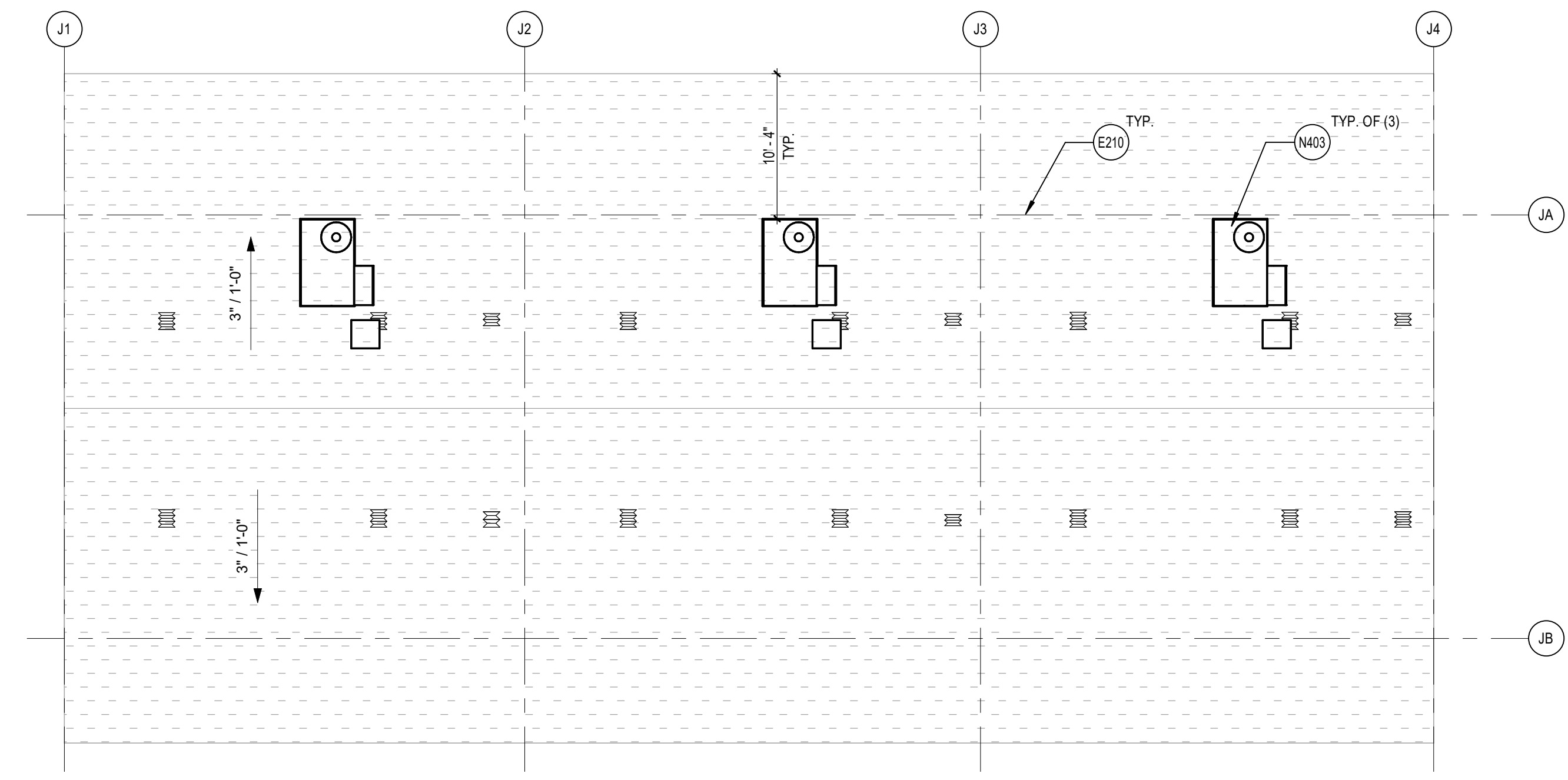
KEYNOTES	
E210	LINE OF (E) BLDG BELOW SHOWN DASHED
N403	(N) MECHANICAL UNITS ATTACHED TO THE (E) UNIT CURB. SEE MECHANICAL DRAWING SHEET M1.38 & M1.3D

ROOF PLAN GENERAL NOTES

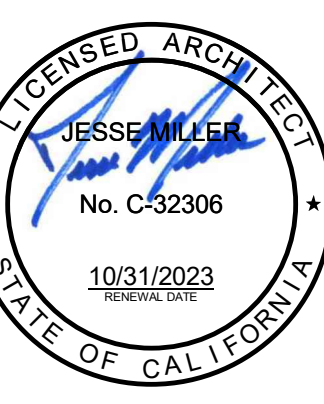
- A. (E) ROOF CURBS TO REMAIN U.N.O., SEE MECHANICAL DRAWINGS SHEET M1.3C FOR ADDITIONAL INFORMATION.
- B. COORDINATE THE SIZE AND LOCATION OF WALL PENETRATIONS FOR MECHANICAL AND ELECTRICAL EQUIPMENT. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR PENETRATIONS NOT SHOWN ON THIS DRAWING.
- C. (E) DRAINS, CURBS, VENTS AND STACKS TO REMAINS.

DEMOLITION GENERAL NOTES

- DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.
- THE CONTRACTOR SHALL:
- A. COORDINATE ALL DEMOLITION AND PHASING EFFORTS WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. IN ALL CASES, PROVISIONS SHALL BE MADE FOR USER'S SAFETY.
  - B. COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH THE OWNER AND AS SPECIFIED.
  - C. CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN THE EXISTING BUILDING WHICH OFFER A ONE-HOUR ENCLOSURE TO ISOLATE ANY DEMOLITION/CONSTRUCTION WORK FROM THE GENERAL PUBLIC AND AS DEEMED NECESSARY BY THE OWNER AND CODE OFFICIAL HAVING JURISDICTION. COORDINATE LOCATIONS WITH THE OWNER AND MAINTAIN MEANS OF EGRESS THROUGHOUT THE WORK.
  - D. MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES.
  - E. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
  - F. REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, MILLWORK, PLUMBING FIXTURES, CEILINGS, SOFFITS, MARKERS/BARDS, AND OTHER ITEMS, AS REQUIRED TO EXECUTE THE DEMOLITION/CONSTRUCTION WORK DESCRIBED BY THE DRAWINGS.
  - G. THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS.
  - H. PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
  - I. REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND/OR CONDITION.
  - J. EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT.
  - K. VERIFY AND MAINTAIN THE LOCATION OF EXISTING POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION OF THEIR SERVICE.
  - L. PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR RE-ROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, AND OTHER ITEMS, AS REQUIRED TO MAINTAIN FIRE-RESISTANCE-RATED SEPARATIONS. FINISH AS REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.
  - M. CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
  - N. SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK.
  - O. AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF INFLUENCE AROUND EXISTING FOOTINGS AND FLOOR SLABS AS DIRECTED BY GEOTECHNICAL ENGINEER.
  - P. WHERE CMU WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY REMOVING CONTRACTOR TO TOOTH-IN NEW CMU PATCHES.
  - Q. WHERE PLASTER/STUD WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY SAWCUTTING ADJACENT PLASTER FINISH A MINIMUM OF 1'-0" BEYOND DEMOLITION.



 **BUILDINGS J AND Q ROOF PLANS**  
SCALE: 1/8" = 1'-0"



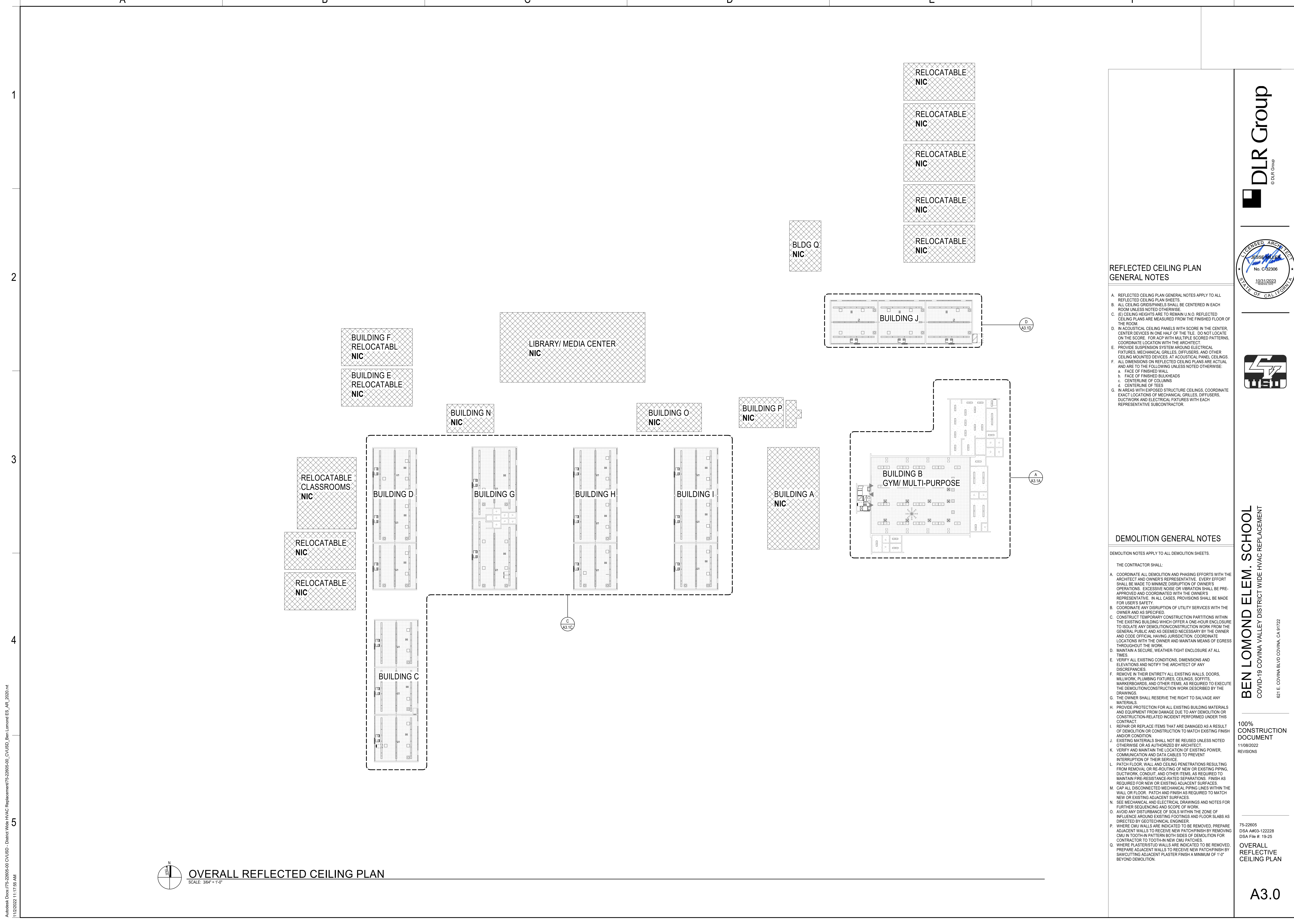
**BEN LOMOND ELEM. SCHOOL**  
COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT  
681 E. COVINA BLVD COVINA, CA 91722

100%  
CONSTRUCTION  
DOCUMENT  
11/08/2022  
REVISIONS

75-22605  
DSA A#03-122228  
DSA File #: 19-25

**BUILDINGS J AND Q ROOF PLANS**

**A1.3D**



**OVERALL REFLECTED CEILING PLAN**  
SCALE: 3/64" = 1'-0"

**REFLECTED CEILING PLAN  
GENERAL NOTES**

- A. REFLECTED CEILING PLAN GENERAL NOTES APPLY TO ALL REFLECTED CEILING PLAN SHEETS.
- B. ALL CEILING GRIDS/PANELS SHALL BE CENTERED IN EACH ROOM UNLESS NOTED OTHERWISE.
- C. (E) CEILING HEIGHTS ARE TO REMAIN U.N.O. REFLECTED CEILING PLANS ARE MEASURED FROM THE FINISHED FLOOR OF THE ROOM.
- D. IN ACOUSTICAL CEILING PANELS WITH SCORE IN THE CENTER, CENTER DEVICES IN ONE HALF OF THE TILE. DO NOT LOCATE ON THE SCORE. FOR ACP WITH MULTIPLE SCORED PATTERNS, COORDINATE LOCATION WITH THE ARCHITECT.
- E. PROVIDE SUSPENSION SYSTEM AROUND ELECTRICAL FIXTURES, MECHANICAL GRILLES, DIFFUSERS, AND OTHER CEILING MOUNTED DEVICES AT ACOUSTICAL PANEL CEILINGS.
- F. ALL DIMENSIONS ON REFLECTED CEILING PLANS ARE ACTUAL AND ARE TO THE FOLLOWING UNLESS NOTED OTHERWISE.
  - a. FACE OF FINISHED WALL
  - b. FACE OF FINISHED BULKHEADS
  - c. CENTERLINE OF COLUMNS
  - d. CENTERLINE OF TEES
- G. IN AREAS WITH EXPOSED STRUCTURE CEILINGS, COORDINATE EXACT LOCATIONS OF MECHANICAL GRILLES, DIFFUSERS, DUCTWORK AND ELECTRICAL FIXTURES WITH EACH REPRESENTATIVE SUBCONTRACTOR.

**DEMOLITION GENERAL NOTES**

- DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.
- THE CONTRACTOR SHALL:
- A. COORDINATE ALL DEMOLITION AND PHASING EFFORTS WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. IN ALL CASES, PROVISIONS SHALL BE MADE FOR USER'S SAFETY.
  - B. COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH THE OWNER AND AS SPECIFIED.
  - C. CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN THE EXISTING BUILDING WHICH OFFER A ONE-HOUR ENCLOSURE TO ISOLATE ANY DEMOLITION/CONSTRUCTION WORK FROM THE GENERAL PUBLIC AND AS DEEMED NECESSARY BY THE OWNER AND CODE OFFICIAL HAVING JURISDICTION. COORDINATE LOCATIONS WITH THE OWNER AND MAINTAIN MEANS OF EGRESS THROUGHOUT THE WORK.
  - D. MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES.
  - E. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
  - F. REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, MILLWORK, PLUMBING FIXTURES, CEILINGS, SOFFITS, MARKERS/BARDS, AND OTHER ITEMS, AS REQUIRED TO EXECUTE THE DEMOLITION/CONSTRUCTION WORK DESCRIBED BY THE DRAWINGS.
  - G. THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS.
  - H. PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
  - I. REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND/OR CONDITION.
  - J. EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT.
  - K. VERIFY AND MAINTAIN THE LOCATION OF EXISTING POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION OF THEIR SERVICE.
  - L. PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR RE-ROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, AND OTHER ITEMS, AS REQUIRED TO MAINTAIN FIRE-RESISTANCE-RATED SEPARATIONS. FINISH AS REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.
  - M. CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
  - N. SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK.
  - O. AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF INFLUENCE AROUND EXISTING FOOTINGS AND FLOOR SLABS AS DIRECTED BY GEOTECHNICAL ENGINEER.
  - P. WHERE CMU WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY REMOVING CMU IN TOOTH-IN PATTERN BOTH SIDES OF DEMOLITION FOR CONTRACTOR TO TOOTH-IN NEW CMU PATCHES.
  - Q. WHERE PLASTER/STUD WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY SAWCUTTING ADJACENT PLASTER FINISH A MINIMUM OF 1'-0" BEYOND DEMOLITION.



**BEN LOMOND ELEM. SCHOOL**  
COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT  
621 E. COVINA BLVD COVINA, CA 91722

100%  
CONSTRUCTION  
DOCUMENT  
11/08/2022  
REVISIONS

75-22605  
DSA A#03-122228  
DSA File #: 19-25

**OVERALL  
REFLECTIVE  
CEILING PLAN**

**A3.0**

Autodesk Docs/175-22605-00\_CVUSD - District Wide HVAC Replacement/75-22605-00\_CVUSD\_Ben Lomond ES\_AR\_2020.rvt  
11/2/2022 11:17:55 AM

REFERENCE KEYNOTES

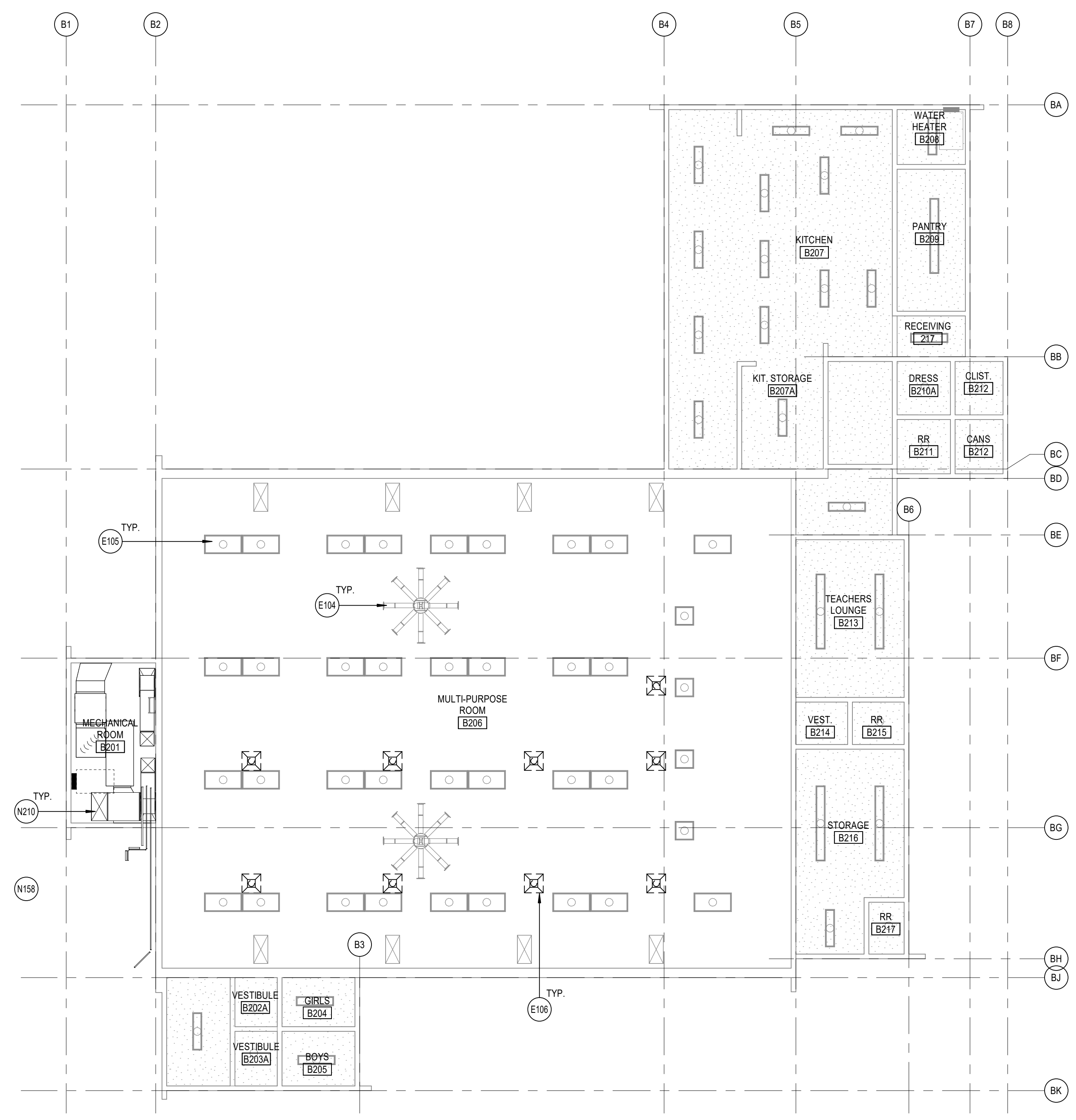
KEYNOTES	KEYNOTES
E104	(E) CEILING FAN TO REMAIN, PROTECT IN PLACE
E105	(E) LIGHT FIXTURES TO REMAIN, PROTECT IN PLACE
E106	(E) DIFFUSERS AND GRILLES, REFER TO MECHANICAL DRAWINGS
N210	REPLACE (E) DUCTWORK, REFER TO MECHANICAL DRAWINGS

REFLECTED CEILING PLAN  
GENERAL NOTES

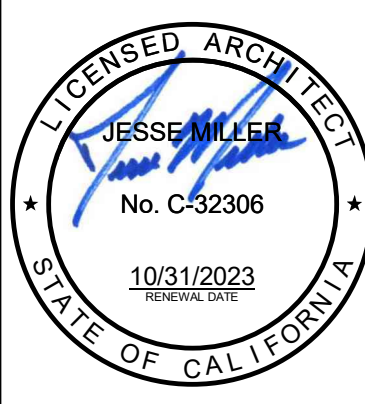
- A. REFLECTED CEILING PLAN GENERAL NOTES APPLY TO ALL REFLECTED CEILING PLAN SHEETS
- B. ALL CEILING GRIDS/PANELS SHALL BE CENTERED IN EACH ROOM UNLESS NOTED OTHERWISE
- C. (E) CEILING HEIGHTS ARE TO REMAIN U.N.O. REFLECTED CEILING PLANS ARE MEASURED FROM THE FINISHED FLOOR OF THE ROOM
- D. IN ACOUSTICAL CEILING PANELS WITH SCORE IN THE CENTER, CENTER DEVICES IN ONE HALF OF THE TILE. DO NOT LOCATE ON THE SCORE. FOR ACP WITH MULTIPLE SCORED PATTERNS, COORDINATE LOCATION WITH THE ARCHITECT
- E. PROVIDE SUSPENSION SYSTEM AROUND ELECTRICAL FIXTURES, MECHANICAL GRILLES, DIFFUSERS, AND OTHER CEILING MOUNTED DEVICES AT ACOUSTICAL PANEL CEILINGS
- F. ALL DIMENSIONS ON REFLECTED CEILING PLANS ARE ACTUAL AND ARE TO THE FOLLOWING UNLESS NOTED OTHERWISE:
  - a. FACE OF FINISHED WALL
  - b. FACE OF FINISHED BULKHEADS
  - c. CENTERLINE OF COLUMNS
  - d. CENTERLINE OF TEES
- G. IN AREAS WITH EXPOSED STRUCTURE CEILINGS, COORDINATE EXACT LOCATIONS OF MECHANICAL GRILLES, DIFFUSERS, DUCTWORK AND ELECTRICAL FIXTURES WITH EACH REPRESENTATIVE SUBCONTRACTOR.

DEMOLITION GENERAL NOTES

- DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.
- THE CONTRACTOR SHALL:
- A. COORDINATE ALL DEMOLITION AND PHASING EFFORTS WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. IN ALL CASES, PROVISIONS SHALL BE MADE FOR USER'S SAFETY.
  - B. COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH THE OWNER AND AS SPECIFIED.
  - C. CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN THE EXISTING BUILDING WHICH OFFER A ONE-HOUR ENCLOSURE TO ISOLATE ANY DEMOLITION/CONSTRUCTION WORK FROM THE GENERAL PUBLIC AND AS DEEMED NECESSARY BY THE OWNER AND CODE OFFICIAL HAVING JURISDICTION. COORDINATE LOCATIONS WITH THE OWNER AND MAINTAIN MEANS OF EGRESS THROUGHOUT THE WORK.
  - D. MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES.
  - E. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
  - F. REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, MILLWORK, PLUMBING FIXTURES, CEILINGS, SOFFITS, MARKERS/BOARDS, AND OTHER ITEMS, AS REQUIRED TO EXECUTE THE DEMOLITION/CONSTRUCTION WORK DESCRIBED BY THE DRAWINGS.
  - G. THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS.
  - H. PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
  - I. REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND/OR CONDITION.
  - J. EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT.
  - K. VERIFY AND MAINTAIN THE LOCATION OF EXISTING POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION OF THEIR SERVICE.
  - L. PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR RE-ROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, AND OTHER ITEMS, AS REQUIRED TO MAINTAIN FIRE-RESISTANCE-RATED SEPARATIONS. FINISH AS REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.
  - M. CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
  - N. SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK.
  - O. AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF INFLUENCE AROUND EXISTING FOOTINGS AND FLOOR SLABS AS DIRECTED BY GEOTECHNICAL ENGINEER.
  - P. WHERE CMU WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY REMOVING CMU IN TOOTH-IN PATTERN BOTH SIDES OF DEMOLITION FOR CONTRACTOR TO TOOTH-IN NEW CMU PATCHES.
  - Q. WHERE PLASTER/STUO WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY SAWCUTTING ADJACENT PLASTER FINISH A MINIMUM OF 1'-0" BEYOND DEMOLITION.



 BUILDINGS A AND B REFLECTED CEILING PLANS  
SCALE: 1/8" = 1'-0"

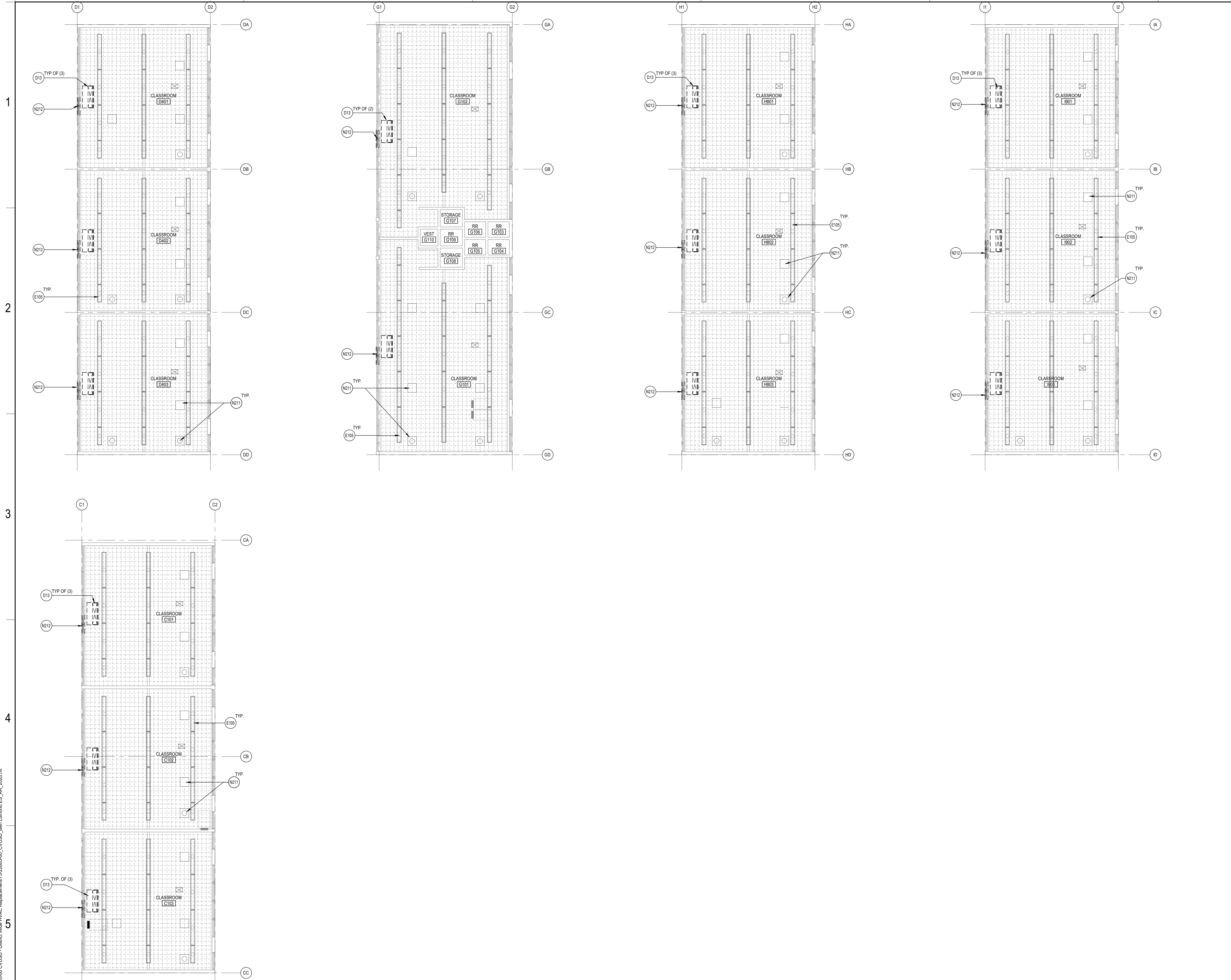


**BEN LOMOND ELEM. SCHOOL**  
COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT  
621 E. COVINA BLVD COVINA, CA 91722

100%  
CONSTRUCTION  
DOCUMENT  
11/08/2022  
REVISIONS

75-22605  
DSA A#03-122228  
DSA File #: 19-25  
BUILDINGS B  
REFLECTED  
CEILING PLANS

A3.1A



**REFERENCE KEYNOTES**

KEYNOTES	KEYNOTES
D13	REMOVE (E) CEILING MOUNTED FAN COIL UNIT - SEE MECHANICAL DRAWINGS
E105	(E) LIGHT FIXTURES TO REMAIN, PROTECT IN PLACE
N211	REPLACE (E) DIFFUSERS AND GRILLES TO MATCH (E) CEILING TILES, REFER TO MECHANICAL DRAWINGS
N212	REPLACE (E) INFL. PANEL AT CONDENSER UNIT PENETRATIONS WITH GLAZING TO MATCH ADJACENT. PAINT FRAME TO MATCH ADJACENT

**REFLECTED CEILING PLAN GENERAL NOTES**

- REFLECTED CEILING PLAN GENERAL NOTES APPLY TO ALL REFLECTED CEILING PLAN SHEETS
- ALL CEILING GRIDS/PANELS SHALL BE CENTERED IN EACH ROOM UNLESS NOTED OTHERWISE
- (E) CEILING HEIGHTS ARE TO REMAIN U.N.O. REFLECTED CEILING PLANS ARE MEASURED FROM THE FINISHED FLOOR OF THE ROOM
- IN ACOUSTICAL CEILING PANELS WITH SCORE IN THE CENTER, CENTER DEVICES IN ONE HALF OF THE TILE. DO NOT LOCATE ON THE SCORE. FOR ACP WITH MULTIPLE SCORED PATTERNS, COORDINATE LOCATION WITH THE ARCHITECT
- PROVIDE SUSPENSION SYSTEM AROUND ELECTRICAL FIXTURES, MECHANICAL GRILLES, DIFFUSERS, AND OTHER CEILING MOUNTED DEVICES AT ACOUSTICAL PANEL CEILING. ALL DIMENSIONS ON REFLECTED CEILING PLANS ARE ACTUAL AND ARE TO THE FOLLOWING UNLESS NOTED OTHERWISE:
  - FACE OF FINISHED WALL
  - FACE OF FINISHED BULKHEADS
  - CENTERLINE OF COLUMNS
  - CENTERLINE OF TEES
- IN AREAS WITH EXPOSED STRUCTURE CEILINGS, COORDINATE EXACT LOCATIONS OF MECHANICAL GRILLES, DIFFUSERS, DUCTWORK AND ELECTRICAL FIXTURES WITH EACH REPRESENTATIVE SUBCONTRACTOR.

**DEMOLITION GENERAL NOTES**

- DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.
- THE CONTRACTOR SHALL:
- COORDINATE ALL DEMOLITION AND PHASING EFFORTS WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. IN ALL CASES, PROVISIONS SHALL BE MADE FOR USER'S SAFETY.
  - COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH THE OWNER AND AS SPECIFIED.
  - CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN THE EXISTING BUILDING WHICH OFFER A ONE-HOUR ENCLOSURE TO ISOLATE ANY DEMOLITION/CONSTRUCTION WORK FROM THE GENERAL PUBLIC AND AS DEEMED NECESSARY BY THE OWNER AND CODE OFFICIAL HAVING JURISDICTION. COORDINATE LOCATIONS WITH THE OWNER AND MAINTAIN MEANS OF EGRESS THROUGHOUT THE WORK.
  - MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES.
  - VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
  - REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, MILLWORK, PLUMBING FIXTURES, CEILING, SOFFITS, MARKERS/BARDS, AND OTHER ITEMS, AS REQUIRED TO EXECUTE THE DEMOLITION/CONSTRUCTION WORK DESCRIBED BY THE DRAWINGS.
  - THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS.
  - PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
  - REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND/OR CONDITION.
  - EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT.
  - VERIFY AND MAINTAIN THE LOCATION OF EXISTING POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION OF THEIR SERVICE.
  - PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR RE-ROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, AND OTHER ITEMS, AS REQUIRED TO MAINTAIN FIRE-RESISTANCE-RATED SEPARATIONS. FINISH AS REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.
  - CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
  - SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK.
  - AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF INFLUENCE AROUND EXISTING FOOTINGS AND FLOOR SLABS AS DIRECTED BY GEOTECHNICAL ENGINEER.
  - WHERE CMU WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY REMOVING CMU IN TOOTH-IN PATTERN BOTH SIDES OF DEMOLITION FOR CONTRACTOR TO TOOTH-IN NEW CMU PATCHES.
  - WHERE PLASTER/STUD WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY SAWCUTTING ADJACENT PLASTER FINISH A MINIMUM OF 1'-0" BEYOND DEMOLITION.



**BEN LOMOND ELEM. SCHOOL**  
 COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT  
 681 E. COVINA BLVD COVINA, CA 91722

100%  
**CONSTRUCTION DOCUMENT**  
 11/08/2022  
 REVISIONS

75-22605  
 DSA A#03-122228  
 DSA File #: 19-25  
**BUILDINGS CDGH AND I REFLECTED CEILING PLANS**

**A3.1C**

Autodesk Docs/75-22605-00\_CVUSD - District Wide HVAC Replacement/75-22605-00\_CVUSD - Ben Lomond ES\_AR\_2020.rvt  
 11/20/2022 11:17:57 AM

**AREA C - REFLECTED CEILING PLAN**  
 SCALE: 1/8" = 1'-0"

REFERENCE KEYNOTES

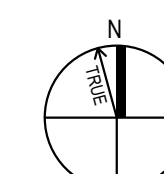
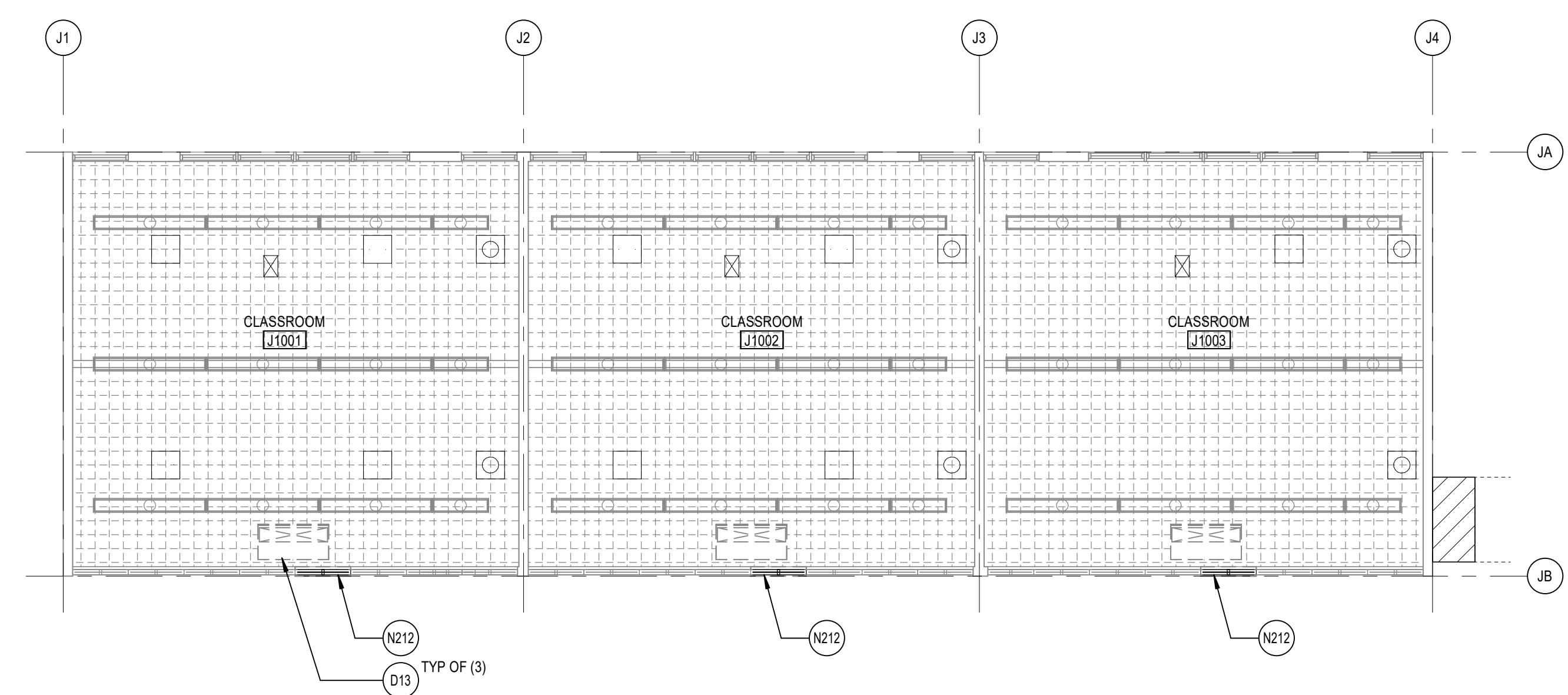
KEYNOTES	
D13	REMOVE (E) CEILING MOUNTED FAN COIL UNIT - SEE MECHANICAL DRAWINGS
N212	REPLACE (E) INFILL PANEL AT CONDENSER UNIT PENETRATIONS WITH GLAZING TO MATCH ADJACENT. PAINT FRAME TO MATCH ADJACENT

REFLECTED CEILING PLAN GENERAL NOTES

- A. REFLECTED CEILING PLAN GENERAL NOTES APPLY TO ALL REFLECTED CEILING PLAN SHEETS
- B. ALL CEILING GRIDS/PANELS SHALL BE CENTERED IN EACH ROOM UNLESS NOTED OTHERWISE
- C. (E) CEILING HEIGHTS ARE TO REMAIN U.N.O. REFLECTED CEILING PLANS ARE MEASURED FROM THE FINISHED FLOOR OF THE ROOM
- D. IN ACOUSTICAL CEILING PANELS WITH SCORE IN THE CENTER, CENTER DEVICES IN ONE HALF OF THE TILE. DO NOT LOCATE ON THE SCORE. FOR ACP WITH MULTIPLE SCORED PATTERNS, COORDINATE LOCATION WITH THE ARCHITECT
- E. PROVIDE SUSPENSION SYSTEM AROUND ELECTRICAL FIXTURES, MECHANICAL GRILLES, DIFFUSERS, AND OTHER CEILING MOUNTED DEVICES AT ACOUSTICAL PANEL CEILINGS
- F. ALL DIMENSIONS ON REFLECTED CEILING PLANS ARE ACTUAL AND ARE TO THE FOLLOWING UNLESS NOTED OTHERWISE:
  - a. FACE OF FINISHED WALL
  - b. FACE OF FINISHED BULKHEADS
  - c. CENTERLINE OF COLUMNS
  - d. CENTERLINE OF TEES
- G. IN AREAS WITH EXPOSED STRUCTURE CEILINGS, COORDINATE EXACT LOCATIONS OF MECHANICAL GRILLES, DIFFUSERS, DUCTWORK AND ELECTRICAL FIXTURES WITH EACH REPRESENTATIVE SUBCONTRACTOR.

DEMOLITION GENERAL NOTES

- DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.
- THE CONTRACTOR SHALL:
- A. COORDINATE ALL DEMOLITION AND PHASING EFFORTS WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. IN ALL CASES, PROVISIONS SHALL BE MADE FOR USER'S SAFETY.
  - B. COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH THE OWNER AND AS SPECIFIED.
  - C. CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN THE EXISTING BUILDING WHICH OFFER A ONE-HOUR ENCLOSURE TO ISOLATE ANY DEMOLITION/CONSTRUCTION WORK FROM THE GENERAL PUBLIC AND AS DEEMED NECESSARY BY THE OWNER AND CODE OFFICIAL HAVING JURISDICTION. COORDINATE LOCATIONS WITH THE OWNER AND MAINTAIN MEANS OF EGRESS THROUGHOUT THE WORK.
  - D. MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES.
  - E. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
  - F. REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, MILLWORK, PLUMBING FIXTURES, CEILINGS, SOFFITS, MARKERS/BARDS, AND OTHER ITEMS, AS REQUIRED TO EXECUTE THE DEMOLITION/CONSTRUCTION WORK DESCRIBED BY THE DRAWINGS.
  - G. THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS.
  - H. PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
  - I. REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND/OR CONDITION.
  - J. EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT.
  - K. VERIFY AND MAINTAIN THE LOCATION OF EXISTING POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION OF THEIR SERVICE.
  - L. PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR RE-ROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, AND OTHER ITEMS, AS REQUIRED TO MAINTAIN FIRE-RESISTANCE-RATED SEPARATIONS. FINISH AS REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.
  - M. CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
  - N. SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK.
  - O. AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF INFLUENCE AROUND EXISTING FOOTINGS AND FLOOR SLABS AS DIRECTED BY GEOTECHNICAL ENGINEER.
  - P. WHERE CMU WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY REMOVING CMU IN TOOTH-IN PATTERN BOTH SIDES OF DEMOLITION FOR CONTRACTOR TO TOOTH-IN NEW CMU PATCHES.
  - Q. WHERE PLASTER/STUCCO WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY SAWCUTTING ADJACENT PLASTER FINISH A MINIMUM OF 1'-0" BEYOND DEMOLITION.



**BUILDINGS J AND Q REFLECTED CEILING PLANS**  
SCALE: 1/8" = 1'-0"



**BEN LOMOND ELEM. SCHOOL**  
COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT  
671 E. COVINA BLVD COVINA, CA 91722

100%  
CONSTRUCTION  
DOCUMENT  
11/08/2022  
REVISIONS

75-22605  
DSA A#03-122228  
DSA File #: 19-25

**BUILDINGS J AND Q REFLECTED CEILING PLANS**

**A3.1D**

ABBREVIATIONS

ABBREVIATIONS

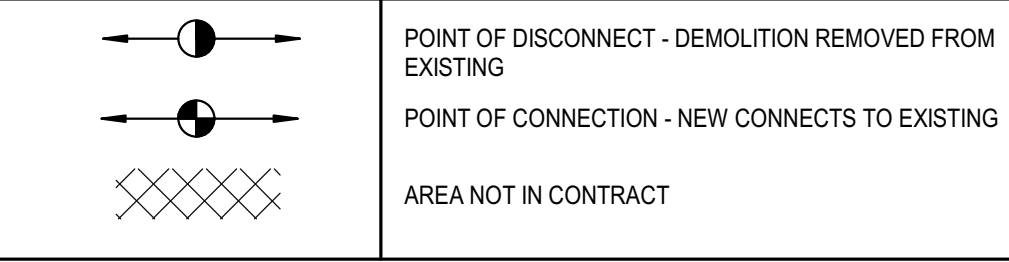
SHEET INDEX

Table of abbreviations and their corresponding full names, including terms like DEMOLISHED, EXISTING, RELOCATED, etc.

Table of abbreviations and their corresponding full names, including terms like HIGH TEMPERATURE HOT WATER SUPPLY, HUMIDIFIER, HEATING VENTILATING UNIT, etc.

Table of sheet index and symbols, including MECHANICAL SYMBOLS, ABBREVIATIONS & NOTES, and overall mechanical floor plan details.

GENERAL SYMBOLS



GENERAL NOTES

- 1 THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING, PRIOR TO FINAL BID... 2 WHERE FLOOR DRAINS OCCUR WITHIN THE LIMITS OF CONSTRUCTION... 3 COORDINATE INSTALLATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE TRAY, STRUCTURE, AND EQUIPMENT TO PREVENT CONFLICTS...

GENERAL HVAC NOTES

- 1 CONDENSATE DRAINS SHALL BE SUPPLIED FOR ALL COOLING EQUIPMENT... 2 ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK SHALL BE RATED FOR PRESSURE CLASS OF 2" W.G. UNLESS NOTED OTHERWISE...

EQUIPMENT ANCHORAGE NOTE

MEP COMPONENT ANCHORAGE NOTE
ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE OSA APPROVED CONSTRUCTION DOCUMENTS...

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

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

ACCEPTANCE TESTING

MANDATORY ACCEPTANCE TESTING PER TITLE 24, PART 6 SHALL BE AS FOLLOWS:
NRCAMCH-02A - OUTDOOR AIR ACCEPTANCE
NRCAMCH-03A - CONSTANT VOLUME, SINGLE ZONE, UNITARY AIR CONDITIONER AND HEAT PUMP SYSTEMS...

MECHANICAL MANDATORY MEASURES

EQUIPMENT AND SYSTEMS EFFICIENCY
ANY APPLIANCE FOR WHICH THERE IS A CALIFORNIA STANDARD ESTABLISHED IN THE APPLIANCE EFFICIENCY STANDARDS SHALL COMPLY WITH THAT STANDARD.
PIPING, EXCEPT THOSE CONVEYING FLUIDS WITH A DESIGN OPERATING TEMPERATURE BETWEEN 60°F AND 105°F, OR WITHIN SPACE-CONDITIONING EQUIPMENT CERTIFIED UNDER §110.1 OR §110.2, SHALL BE INSULATED IN ACCORDANCE WITH §120.3...

HVAC SYMBOLS

Table of HVAC symbols including schematic, 3D, and description for various components like gas flue exhaust air, general exhaust air, grease exhaust air, relief air, smoke exhaust air, energy recovery air, return air, transfer air, combustion air, outside air, supply air, diffuser, grille, wall register, linear diffuser, air flow measuring station, backdraft damper, barometric relief damper, differential pressure sensor, duct detector, gravity damper, motorized damper, pressure reducing damper, security bars, static pressure sensor, volume damper, remote volume damper, fire damper, combination fire/smoke damper, smoke damper, round duct up, rectangular duct up, oval duct up, round duct down, rectangular duct down, oval duct down, mitered elbow with vanes, mitered elbow without vanes, radiused elbow, tee with vanes, radiused tee, duct with insulation, duct with lining, duct is fabric, flexible duct, transfer duct, duct smoke detector, supply arrow, return arrow, exhaust arrow, door undercut arrow with CFM, diffuser/register/grille tag, mechanical equipment tag, mechanical equipment clearance, carbon dioxide sensor, carbon monoxide sensor, humidistat, nitrogen dioxide sensor, pressure sensor, temperature sensor, thermostat.

PIPING VALVES AND FITTINGS

Table of piping valves and fittings including schematic, 3D, and description for pipe drop, pipe rise, pipe tee down, pipe tee up, concentric reducer, eccentric reducer, pipe cap, pipe alignment guide, pipe anchor, flow direction, expansion joint, flexible connection, union, direction of pipe pitch, aquastat, expansion loop, balancing valve, ball valve, butterfly valve, check valve, steam trap, gate valve, circuit setter, manual air vent, automatic air vent, plug valve, pressure gauge, solenoid valve, angle valve, automatic control valve 2-way, automatic control valve 3-way, automatic flow control valve, strainer, pressure and temperature test port, thermometer, pressure reducing valve (water systems), pressure regulating valve (gas systems), relief valve, flow measuring device, backflow preventer, union.

NOTE

ALL NOTES ON THIS SHEET ARE APPLICABLE TO ALL OTHER SHEETS IN THIS SET.
THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE APPLICABLE IN THIS SET OF DRAWINGS.



Ben Lomond Elementary School
COVINA VALLEY USD
681 E COVINA BLVD, COVINA, CA 91722

100% CONSTRUCTION DOCUMENT
11/08/2022
REVISIONS

75-22605-00

MECHANICAL SYMBOLS, ABBREVIATIONS & NOTES

MO.1









L DISTRIBUTION (DUCTWORK and PIPING)
The answers to the questions below apply to the following duct systems: RTU-G1 Duct leakage testing triggered for these systems? No
11 No The scope of the project includes only duct systems serving healthcare facilities
12 Yes Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.
13 Yes The space conditioning system serves less than 5,000 ft² of conditioned floor area.
14 No The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:
Outdoors
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)B or if the roof has fixed vents or openings to the outside/ unconditioned spaces
In an unconditioned crawl space
In other unconditioned spaces
15 The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.
16 The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.
17 Yes Duct system shall be sealed in accordance with the California Mechanical Code

Registration Number: Registration Date/Time: Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20200601 Report Generated: 2022-07-19 14:35:20

L DISTRIBUTION (DUCTWORK and PIPING)
The answers to the questions below apply to the following duct systems: RTU-J2 Duct leakage testing triggered for these systems? No
11 No The scope of the project includes only duct systems serving healthcare facilities
12 Yes Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.
13 Yes The space conditioning system serves less than 5,000 ft² of conditioned floor area.
14 No The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:
Outdoors
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)B or if the roof has fixed vents or openings to the outside/ unconditioned spaces
In an unconditioned crawl space
In other unconditioned spaces
15 The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.
16 The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.
17 Yes Duct system shall be sealed in accordance with the California Mechanical Code

Registration Number: Registration Date/Time: Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20200601 Report Generated: 2022-07-19 14:35:20

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
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.
Form/Title Field Inspector Pass Fail
NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap. FCU/CU-B1; RTU-C1; RTU-C2; RTU-C3; RTU-D1; RTU-D2; RTU-D3; RTU-G1; RTU-G2; RTU-H1; RTU-H2; RTU-H3; RTU-J1; RTU-J2; RTU-J3; RTU-I1; RTU-I2; RTU-I3;

Registration Number: Registration Date/Time: Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20200601 Report Generated: 2022-07-19 14:35:20

L DISTRIBUTION (DUCTWORK and PIPING)
The answers to the questions below apply to the following duct systems: RTU-H1 Duct leakage testing triggered for these systems? No
11 No The scope of the project includes only duct systems serving healthcare facilities
12 Yes Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.
13 Yes The space conditioning system serves less than 5,000 ft² of conditioned floor area.
14 No The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:
Outdoors
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)B or if the roof has fixed vents or openings to the outside/ unconditioned spaces
In an unconditioned crawl space
In other unconditioned spaces
15 The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.
16 The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.
17 Yes Duct system shall be sealed in accordance with the California Mechanical Code

Registration Number: Registration Date/Time: Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20200601 Report Generated: 2022-07-19 14:35:20

L DISTRIBUTION (DUCTWORK and PIPING)
The answers to the questions below apply to the following duct systems: RTU-I1 Duct leakage testing triggered for these systems? No
11 No The scope of the project includes only duct systems serving healthcare facilities
12 Yes Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.
13 Yes The space conditioning system serves less than 5,000 ft² of conditioned floor area.
14 No The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:
Outdoors
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)B or if the roof has fixed vents or openings to the outside/ unconditioned spaces
In an unconditioned crawl space
In other unconditioned spaces
15 The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.
16 The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.
17 Yes Duct system shall be sealed in accordance with the California Mechanical Code

Registration Number: Registration Date/Time: Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20200601 Report Generated: 2022-07-19 14:35:20

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
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.
Form/Title Field Inspector Pass Fail
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'. FCU/CU-B1; RTU-C1; RTU-C2; RTU-C3; RTU-D1; RTU-D2; RTU-D3; RTU-G1; RTU-G2; RTU-H1; RTU-H2; RTU-H3; RTU-J1; RTU-J2; RTU-J3; RTU-I1; RTU-I2; RTU-I3;

Registration Number: Registration Date/Time: Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20200601 Report Generated: 2022-07-19 14:35:20

L DISTRIBUTION (DUCTWORK and PIPING)
The answers to the questions below apply to the following duct systems: RTU-H3 Duct leakage testing triggered for these systems? No
11 No The scope of the project includes only duct systems serving healthcare facilities
12 Yes Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.
13 Yes The space conditioning system serves less than 5,000 ft² of conditioned floor area.
14 No The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:
Outdoors
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)B or if the roof has fixed vents or openings to the outside/ unconditioned spaces
In an unconditioned crawl space
In other unconditioned spaces
15 The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.
16 The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.
17 Yes Duct system shall be sealed in accordance with the California Mechanical Code

Registration Number: Registration Date/Time: Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20200601 Report Generated: 2022-07-19 14:35:20

L DISTRIBUTION (DUCTWORK and PIPING)
The answers to the questions below apply to the following duct systems: RTU-I3 Duct leakage testing triggered for these systems? No
11 No The scope of the project includes only duct systems serving healthcare facilities
12 Yes Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.
13 Yes The space conditioning system serves less than 5,000 ft² of conditioned floor area.
14 No The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:
Outdoors
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)B or if the roof has fixed vents or openings to the outside/ unconditioned spaces
In an unconditioned crawl space
In other unconditioned spaces
15 The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.
16 The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.
17 Yes Duct system shall be sealed in accordance with the California Mechanical Code

Registration Number: Registration Date/Time: Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20200601 Report Generated: 2022-07-19 14:35:20

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
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.
Form/Title Field Inspector Pass Fail
NRCA-MCH-05-A - Air Economizer Controls RTU-C1; RTU-C2; RTU-C3; RTU-D1; RTU-D2; RTU-D3; RTU-G1; RTU-G2; RTU-H1; RTU-H2; RTU-H3; RTU-J1; RTU-J2; RTU-J3; RTU-I1; RTU-I2; RTU-I3;

Registration Number: Registration Date/Time: Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20200601 Report Generated: 2022-07-19 14:35:20

1

2

3

4

5



Ben Lomond Elementary School  
COVINA VALLEY USD  
621 E COVINA BLVD, COVINA, CA 91722

100% CONSTRUCTION DOCUMENT  
11/08/2022 REVISIONS

75-22605-00  
TITLE 24 COMPLIANCE

M0.5

Autodesk Docs/75-22605-00\_CVUSD - District Wide HVAC Replacement/75-22605-00\_CVUSD\_Ben Lomond ES MEP\_2022.rvt  
11/02/2022 4:57:48 PM

1  
2  
3  
4  
5

STATE OF CALIFORNIA  
**Mechanical Systems**  
 NRCC-MCH-E CALIFORNIA ENERGY COMMISSION  
**CERTIFICATE OF COMPLIANCE** NRCC-MCH-E  
 Project Name: CVUSD Ben Lomond Report Page: (Page 37 of 39)  
 Project Address: 621 E Covina Blvd Date Prepared: 7/19/2022

**O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE**  
 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/NRCA/](https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/)

Form/Title	Systems/Spaces To Be Field Verified	Field Inspector	
		Pass	Fail
NRCA-MCH-06-A Demand Control Ventilation Systems must be submitted for all systems required to employ demand controlled ventilation (refer to 3.10.1.1.3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO <sub>2</sub> ) concentration setpoints.	FCU/CU-B1; RTU-C1; RTU-C2; RTU-C3; RTU-D1; RTU-D2; RTU-D3; RTU-G1; RTU-G2; RTU-H1; RTU-H2; RTU-H3; RTU-J1; RTU-J2; RTU-J3; RTU-I1; RTU-I2; RTU-I3	<input type="checkbox"/>	<input type="checkbox"/>
NRCA-MCH-11-A Automatic Demand Shed Controls	FCU/CU-B1; RTU-C1; RTU-C2; RTU-C3; RTU-D1; RTU-D2; RTU-D3; RTU-G1; RTU-G2; RTU-H1; RTU-H2; RTU-H3; RTU-J1; RTU-J2; RTU-J3; RTU-I1; RTU-I2; RTU-I3	<input type="checkbox"/>	<input type="checkbox"/>
NRCA-MCH-16-A Supply Air Temperature Reset Controls	FCU/CU-B1; RTU-C1; RTU-C2; RTU-C3; RTU-D1; RTU-D2; RTU-D3; RTU-G1; RTU-G2; RTU-H1; RTU-H2; RTU-H3; RTU-J1; RTU-J2; RTU-J3; RTU-I1; RTU-I2; RTU-I3	<input type="checkbox"/>	<input type="checkbox"/>
NRCA-MCH-18-A Energy Management Control Systems	FCU/CU-B1; RTU-C1; RTU-C2; RTU-C3; RTU-D1; RTU-D2; RTU-D3; RTU-G1; RTU-G2; RTU-H1; RTU-H2; RTU-H3; RTU-J1; RTU-J2; RTU-J3; RTU-I1; RTU-I2; RTU-I3	<input type="checkbox"/>	<input type="checkbox"/>

**P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION**  
 There are no NRCV forms required for this project.

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance  
 Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601  
 Registration Provider: Energysoft  
 Report Generated: 2022-07-19 14:35:20

STATE OF CALIFORNIA  
**Mechanical Systems**  
 NRCC-MCH-E CALIFORNIA ENERGY COMMISSION  
**CERTIFICATE OF COMPLIANCE** NRCC-MCH-E  
 Project Name: CVUSD Ben Lomond Report Page: (Page 38 of 39)  
 Project Address: 621 E Covina Blvd Date Prepared: 7/19/2022

**Q. MANDATORY MEASURES DOCUMENTATION LOCATION**  
 This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

	01	02
Compliance with Mandatory Measures documented through MCH	Yes	M-Sheets
Mandatory Measures Note Block		

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance  
 Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601  
 Registration Provider: Energysoft  
 Report Generated: 2022-07-19 14:35:20

STATE OF CALIFORNIA  
**Mechanical Systems**  
 NRCC-MCH-E CALIFORNIA ENERGY COMMISSION  
**CERTIFICATE OF COMPLIANCE** NRCC-MCH-E  
 Project Name: CVUSD Ben Lomond Report Page: (Page 39 of 39)  
 Project Address: 621 E Covina Blvd Date Prepared: 7/19/2022

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**  
 I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: TONG FANG ZHAO  
 Signature Date: 2022-07-19  
 Company: DLR Group  
 Address: 700 S FLOWER STREET  
 City/State/Zip: LOS ANGELES CA 90017  
 Phone: 213-444-0610

**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: TONG FANG ZHAO  
 Signature Date: 2022-07-19  
 Company: DLR GROUP  
 Address: 700 FLOWER STREET  
 City/State/Zip: LOS ANGELES CA 90017  
 Phone: 213-444-0610

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance  
 Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601  
 Registration Provider: Energysoft  
 Report Generated: 2022-07-19 14:35:20



**Ben Lomond Elementary School**  
 COVINA VALLEY USD  
 621 E COVINA BLVD, COVINA, CA 91722

100%  
 CONSTRUCTION  
 DOCUMENT  
 11/08/2022  
 REVISIONS

75-22605-00

TITLE 24  
 COMPLIANCE




M0.6



**GENERAL NOTES**

A FOR SYMBOLS AND ABBREVIATIONS SEE DRAWING M0.1

**SITE LEGEND**

-  EXISTING BUILDING NOT IN SCOPE
-  EXISTING BUILDING - SCOPE OF WORK UNDER THIS DSA APPLICATION
-  (E) RESTROOMS - NOT IN SCOPE



**Ben Lomond Elementary School**  
 COVINA VALLEY USD  
 681 E COVINA BLVD, COVINA, CA 91722

100%  
 CONSTRUCTION  
 DOCUMENT  
 11/08/2022  
 REVISIONS

75-22605-00

OVERALL  
 MECHANICAL  
 FLOOR PLAN

**M1.1**

Autodesk Docs/75-22605-00\_CVUSD - District Wide HVAC Replacement/75-22605-00\_CVUSD\_Ben Lomond ES MEP\_2022.rvt  
 10/21/2022 4:57:47 PM

 **OVERALL FLOOR PLAN**  
 SCALE: 3/8" = 1'-0"

DEMO NOTES - MPR ONLY

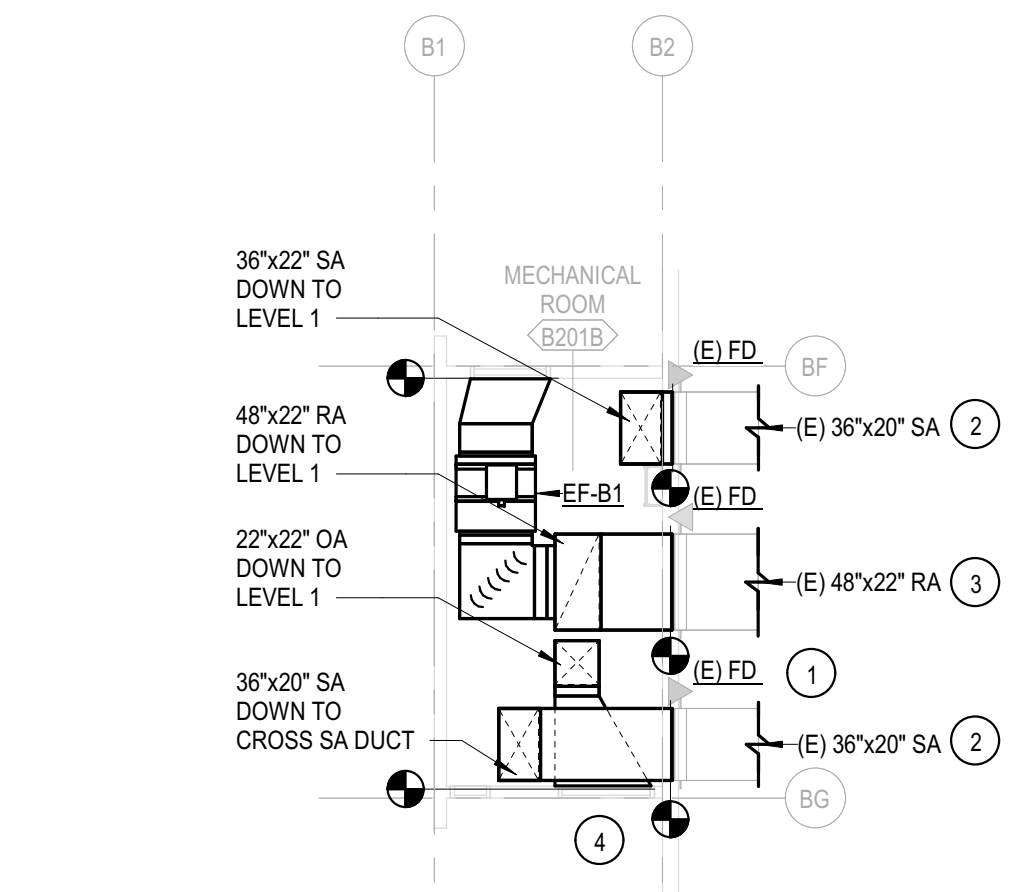
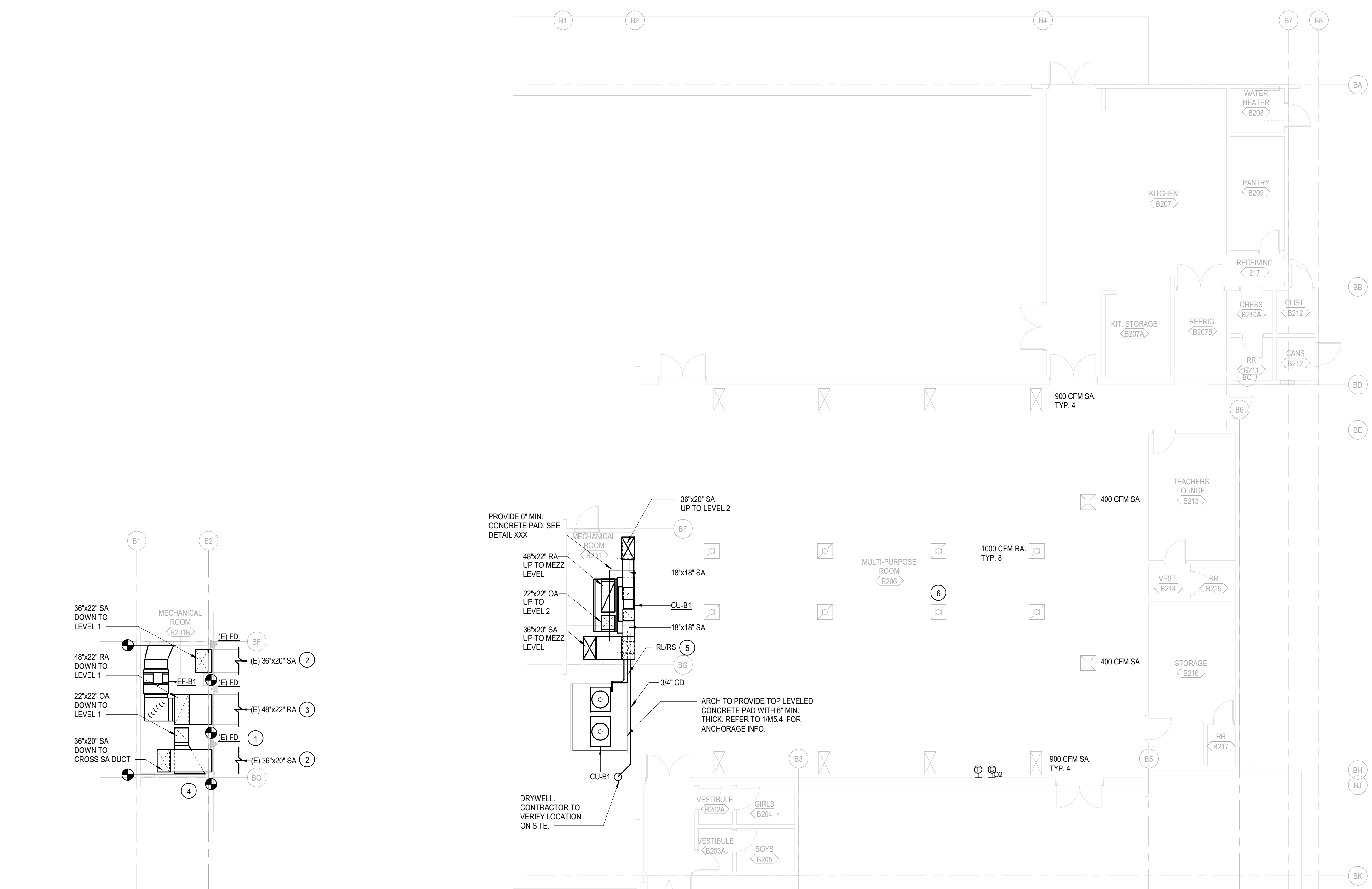
- A. REMOVE EXHAUST FAN, FURNACE AND RELATED DUCT, WIRING, MOTOR, SUPPORTS AND OTHER APPURTENANCES TO POC IN MECHANICAL ROOM. REMOVE GAS PIPING IN MECHANICAL ROOM AND CAP AT FLOOR.

GENERAL NOTES

- 1. SCOPE OF WORK IS CLASSROOMS & MPR ONLY.
- 2. EXISTING DUCTWORK IN MPR TO REMAIN.
- 3. PROVIDE 1" LINEAR TO NEW SA & RA DUCT IN MECHANICAL ROOM.
- 4. PROVIDE FLEXIBLE DUCT AT UNIT CONNECTION FOR SA & RA DUCT.

KEY NOTES

- 1. (E) FIRE DAMPER TO REMAIN. TYP.
- 2. (E) SA DUCTWORK TO REMAIN.
- 3. (E) RA DUCTWORK TO REMAIN.
- 4. (E) OSA LOUVER & DAMPER TO REMAIN TO BE READY TO CONNECT TO DUCTWORK. CONTRACTOR TO VERIFY DAMPER CONDITION ON SITE PRIOR TO BID.
- 5. RLRS PENETRATE WALL ABOVE GRADE. CONTRACTOR TO VERIFY LOCATION ON SITE. PROVIDE PHP PIPE SUPPORT.
- 6. (E) DIFFUSERS & GRILLES. CONTRACTOR TO VERIFY LOCATIONS ON SITE.



BLDG B - MEZZ LEVEL  
SCALE: 1/8" = 1'-0"

BUILDING A AND B MECHANICAL FLOOR PLAN - MPR  
SCALE: 1/8" = 1'-0"



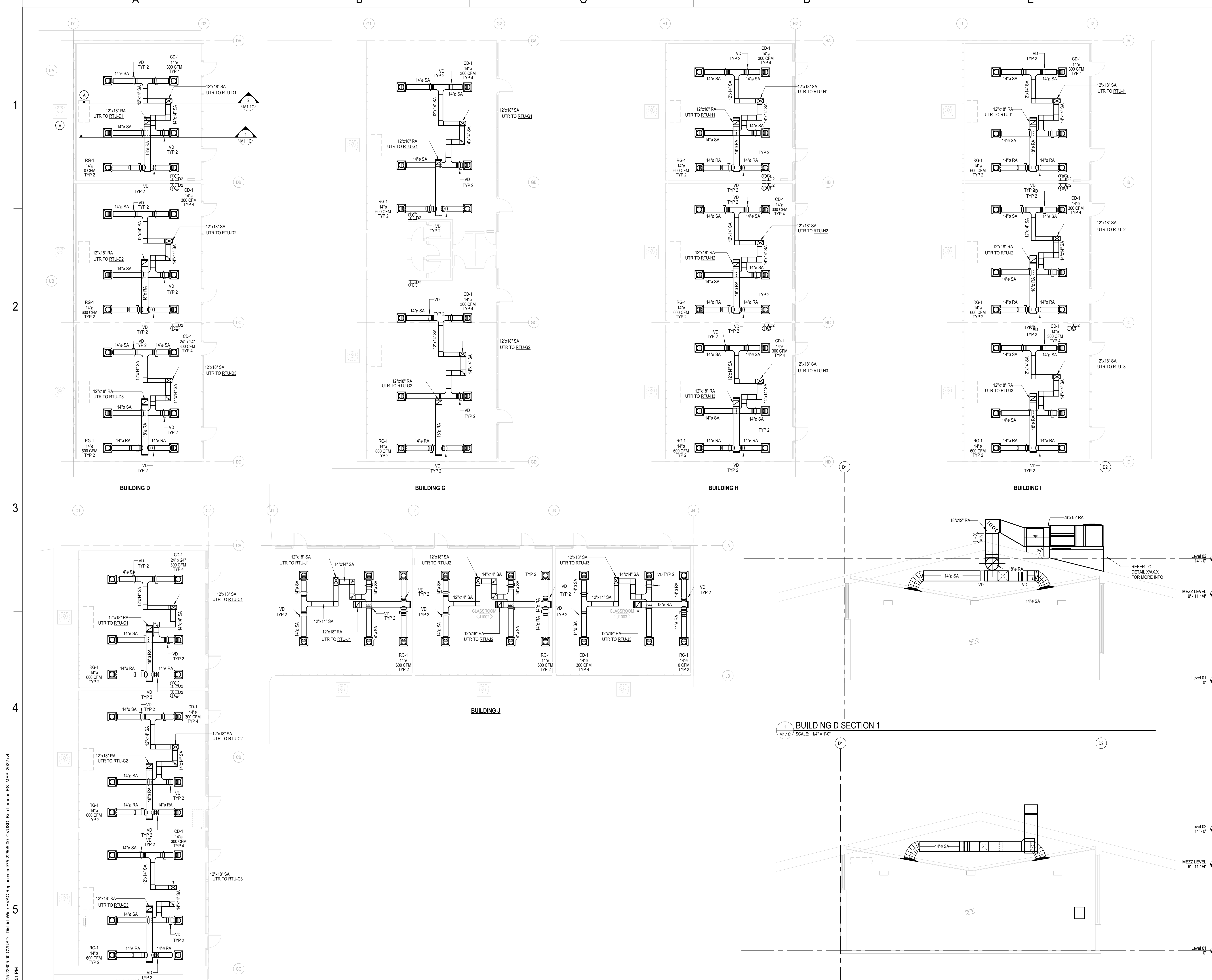
**Ben Lomond Elementary School**  
 COVINA VALLEY USD  
 681 E COVINA BLVD. COVINA, CA 91722

100%  
 CONSTRUCTION  
 DOCUMENT  
 11/08/2022  
 REVISIONS

75-22605-00

BUILDING A AND B  
 - MECHANICAL  
 FLOOR PLAN

M1.1A



**DEMO NOTES**

- A. DEMOLISH EXISTING OUTDOOR CONDENSING UNIT AND INDOOR FANCL. UNITS, ALONG WITH RELATED CONCRETE PADS, PIPING, CONDUIT, FENCE, SUPPORTS AND OTHER APPURTENANCES. REFER TO ARCH PLANS OR SPECS FOR FILLING HOLES AND MATCHING WALL. TYP.

**GENERAL NOTES**

- 1. SCOPE OF WORK IS CLASSROOMS & MPR ONLY.
- 2. DIFFUSERS AND GRILLES TO MATCH (E) CEILING TILES. REFER TO RCP.



**Ben Lomond Elementary School**  
 COVINA VALLEY USD  
 681 E COVINA BLVD, COVINA, CA 91722

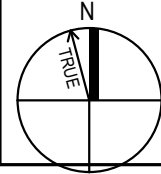
100% CONSTRUCTION DOCUMENT  
 11/08/2022  
 REVISIONS

75-22605-00

BUILDINGS C, D, G, H, I AND J MECHANICAL FLOOR PLANS

M1.1C

Autodesk Docs/75-22605-00\_CVUSD - District Wide HVAC Replacement/75-22605-00\_CVUSD\_Ben Lomond ES\_MEP\_2022.rvt  
 10/21/2022 4:57:51 PM



**BUILDINGS C, D, G, H, I AND J MECHANICAL FLOOR PLANS**  
 SCALE: 1/8" = 1'-0"

**1 BUILDING D SECTION 1**  
 M1.1C SCALE: 1/4" = 1'-0"

**2 BUILDING D SECTION 2**  
 M1.1C SCALE: 1/4" = 1'-0"

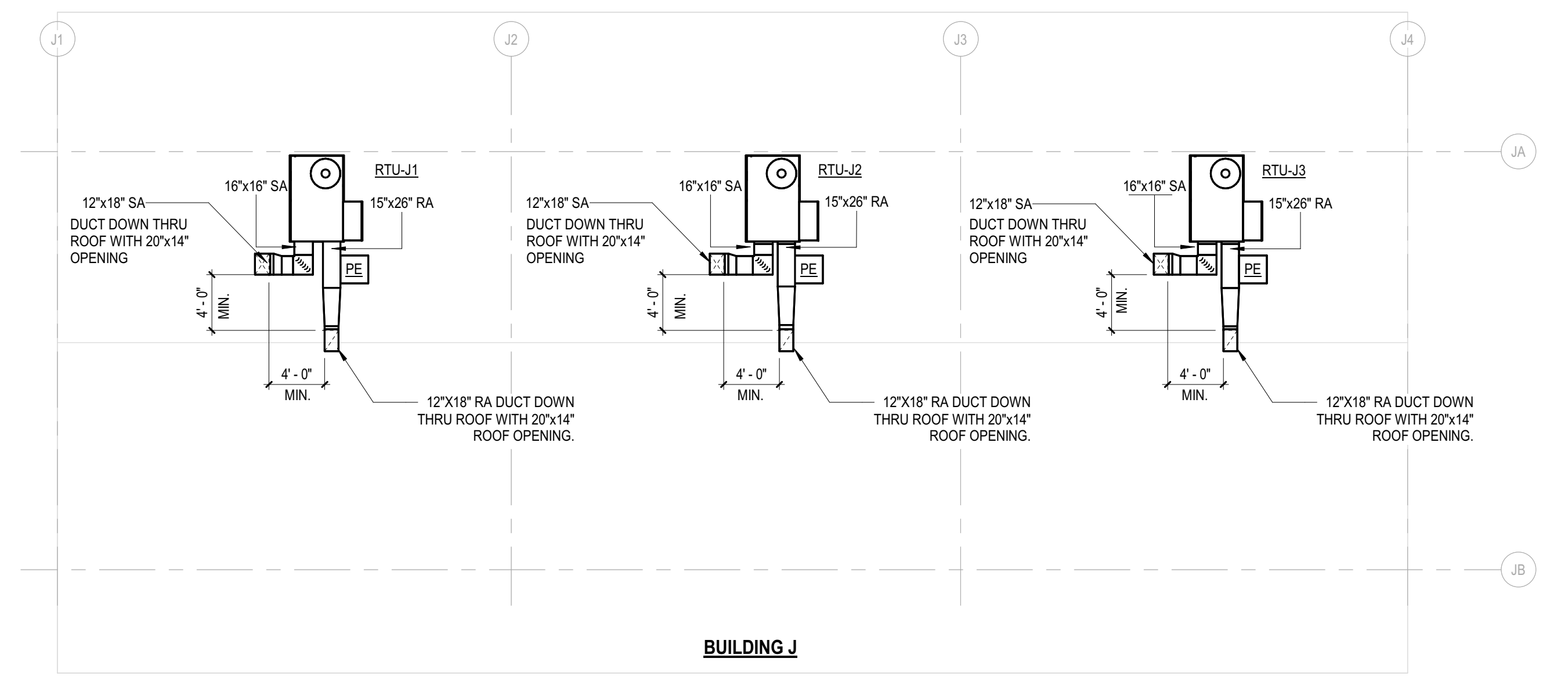
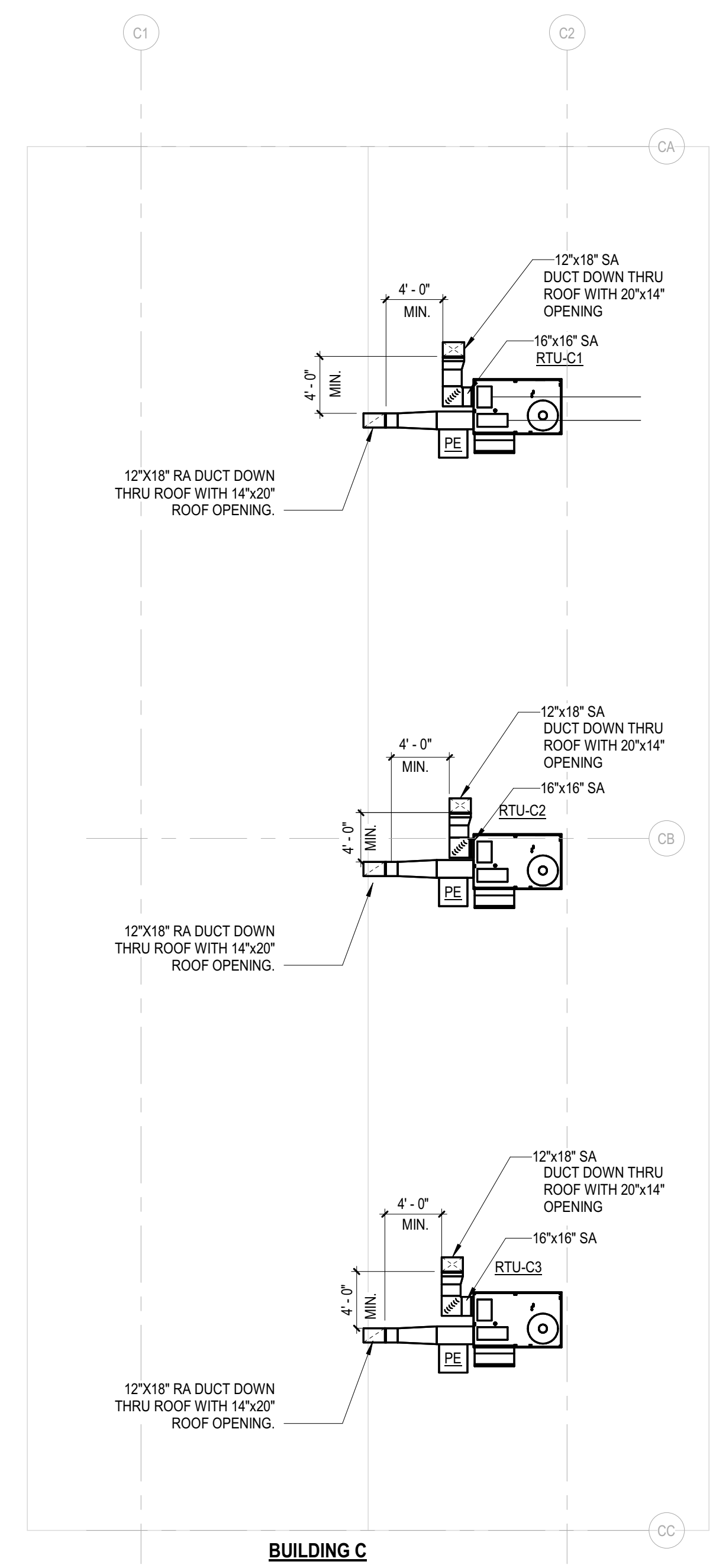
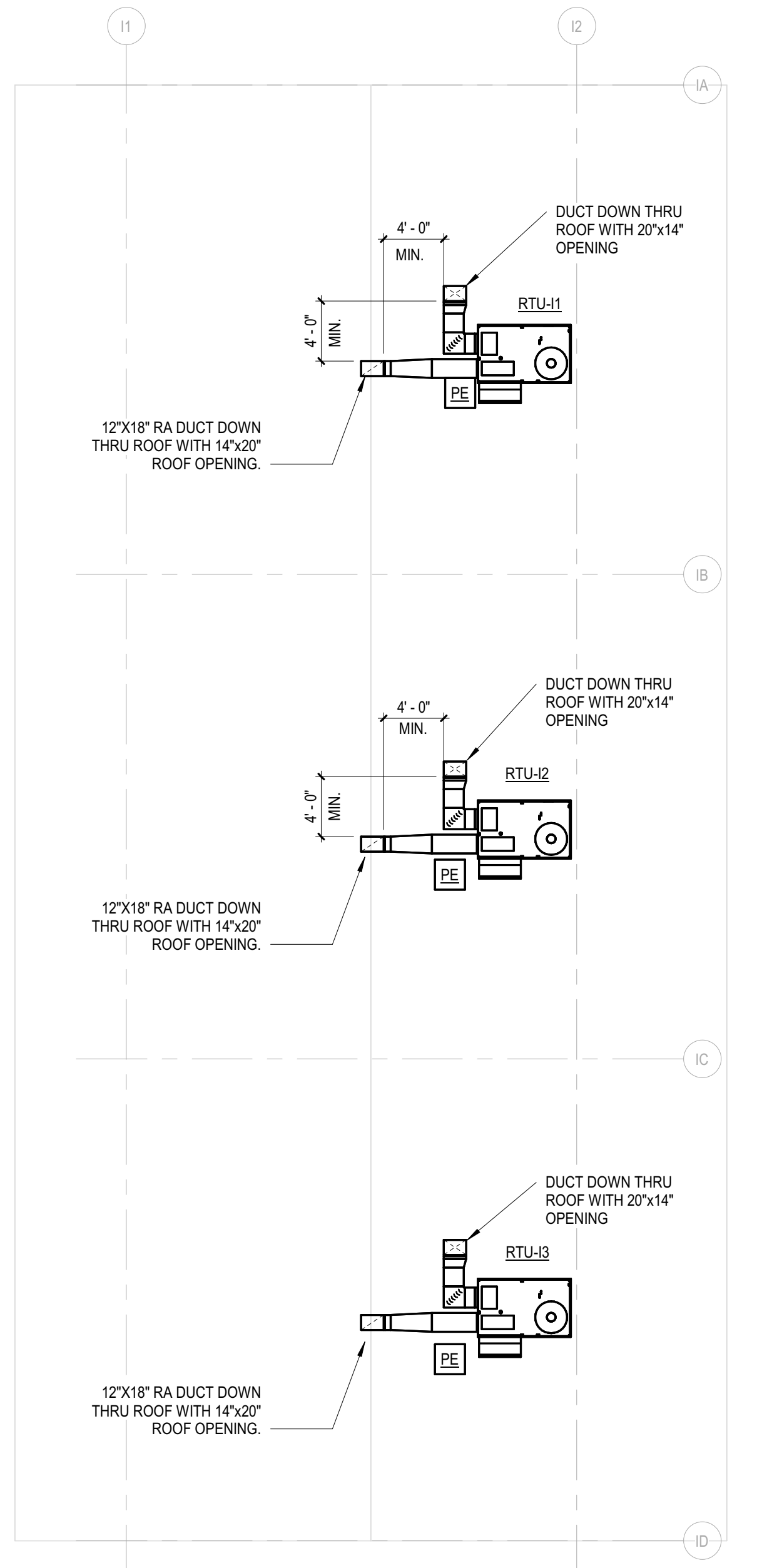
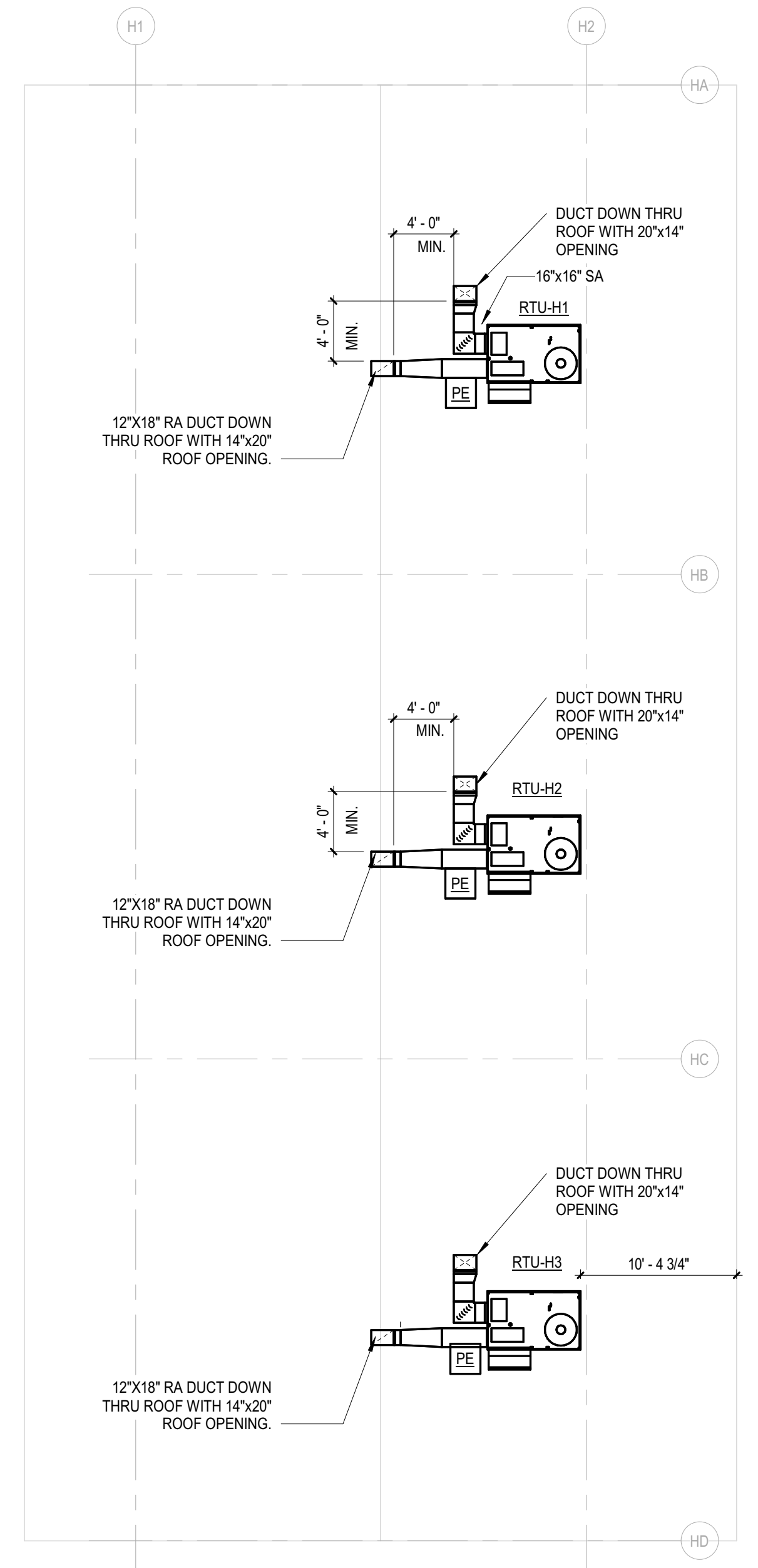
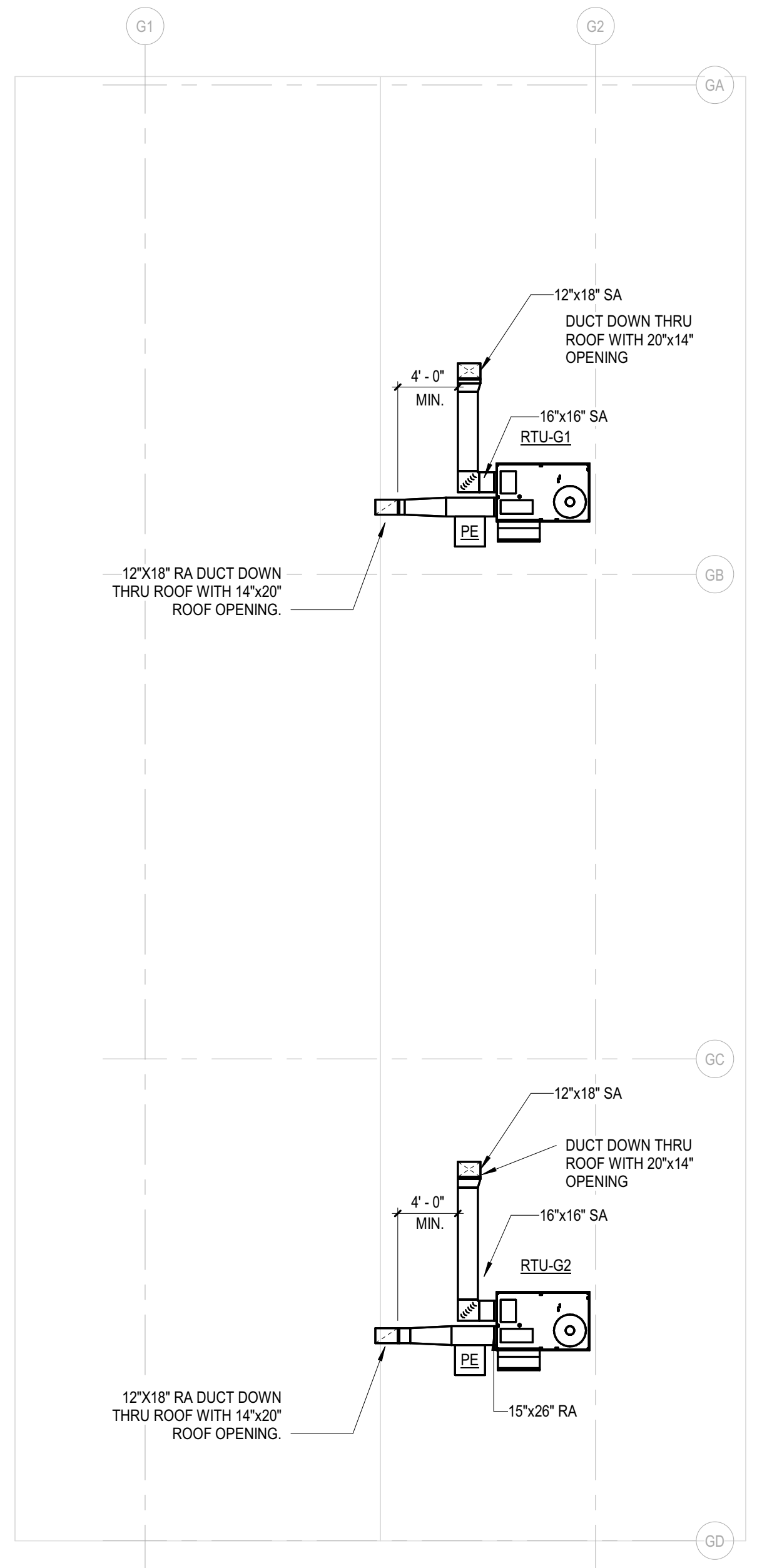
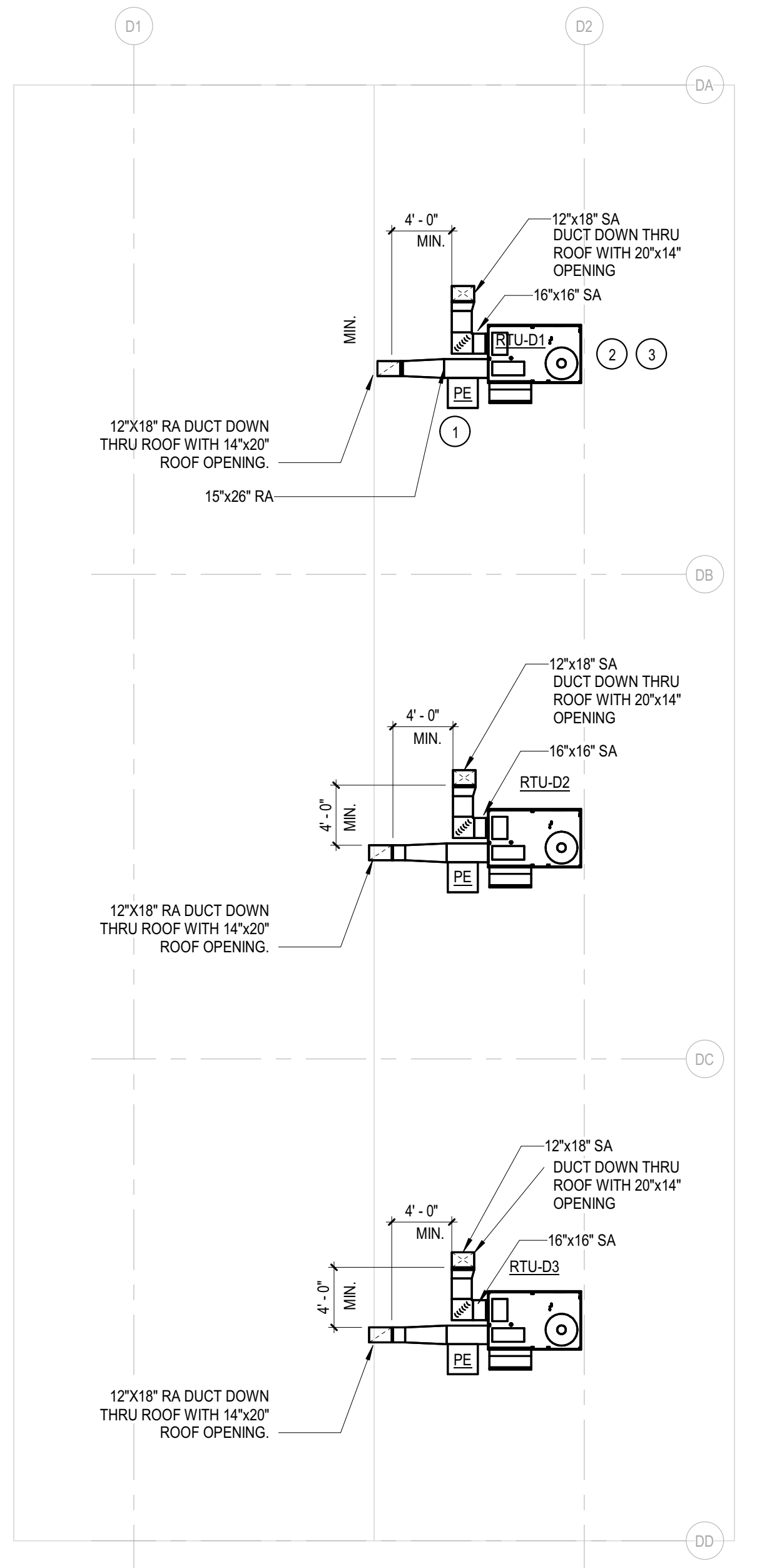
1

2

3

4

5



**GENERAL NOTES**

- SCOPE OF WORK IS CLASSROOMS & MPR ONLY.
- PROVIDE LINER TO DUCTWORK FOR 10 FEET FROM RTU.
- PROVIDE FLEXIBLE DUCT AT UNIT CONNECTION FOR SA & RA DUCT.

**KEY NOTES**

- PROVIDE POWER EXHAUST ON RETURN DUCT WITH LEG LENGTH TO FIT THE ROOF SLOPE. CONTRACTOR TO VERIFY ON SITE. TYP.
- RTU TO BE 10'-0" MIN. FROM ROOF EDGE. CONTRACTOR TO VERIFY ON SITE. TYP.
- RTU IS LESS THAN 10'-0" FROM ROOF EDGE. ARCH TO PROVIDE PROTECTION GUARDS. TYP.



**Ben Lomond Elementary School**  
 COVINA VALLEY USD  
 681 E COVINA BLVD, COVINA, CA 91722

100%  
 CONSTRUCTION  
 DOCUMENT  
 11/08/2022  
 REVISIONS

75-22605-00

BUILDINGS C, D,  
 G, H, I AND J  
 MECHANICAL  
 ROOF PLANS

M1.3C

**OVERALL ROOF PLAN**  
 SCALE: 1/8" = 1'-0"

Autodesk Docs/75-22605-00\_CVUSD - District Wide HVAC Replacement/75-22605-00\_CVUSD - Ben Lomond ES MEP\_2022.rvt  
 10/21/2022 4:57:52 PM



1  
2  
3  
4  
5

A

B

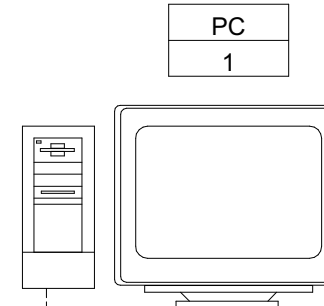
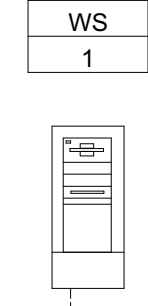
C

D

E

F

EXISTING I-VU PRO WEB SERVER  
LOCATED AT DISTRICT OFFICE



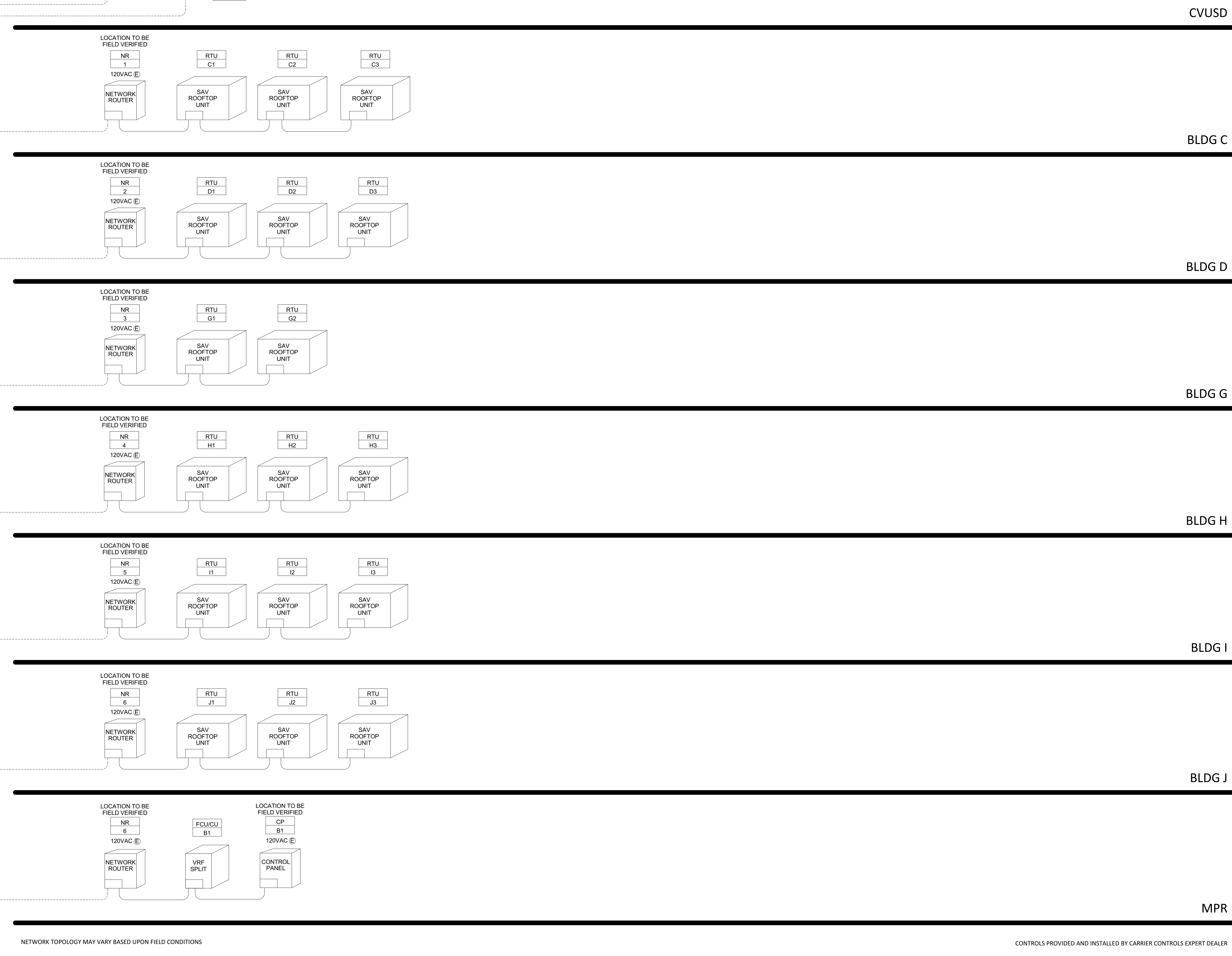
ANY PC OR INTERNET DEVICE WITH  
STANDARD WEB BROWSER SOFTWARE  
AND  
LAN ACCESS, SUPPLIED BY OTHERS

**BACNET MSTP NETWORK GUIDELINES:**  
A MSTP NETWORK SHALL NOT EXCEED 10,000 FEET OVERALL LENGTH, CONSISTING OF UP TO FIVE 2000 FOOT SEGMENTS WITH NO GREATER THAN 30 DEVICES PER SEGMENT. EACH 2000 FOOT SEGMENT SHALL BE JOINED TO THE NEXT SEGMENT USING A BACNET REPEATER WITH APPROPRIATE TERMINATION. NO MORE THAN 4 REPEATERS CAN BE USED ON A SINGLE BACNET MSTP NETWORK. EACH SEGMENT WILL HAVE TERMINATION AT THE BEGINNING AND END OF THE SEGMENT.

**WIRE LEGEND**

LINE STYLE	WIRE TYPE	PART NUMBER	DESCRIPTION
---	LOCAL AREA NETWORK		PROVIDED AND INSTALLED BY OTHERS
---	BACNET MS/TP NETWORK WIRING	042002-S	24 AWG 2 COND SHIELDED, PLENUM, ORG
---	CARRIER COMORT NETWORK WIRING	003336-S	20 AWG 3 COND SHIELDED, PLENUM, WHT / GRN STRIPE

CUSTOMER LOCAL AREA NETWORK



**BACS RISER DIAGRAM**  
MS.1  
NO SCALE

CONTROLS PROVIDED AND INSTALLED BY CARRIER CONTROLS EXPERT DEALER



**Ben Lomond Elementary School**  
COVINA VALLEY USD  
681 E COVINA BLVD, COVINA, CA 91722

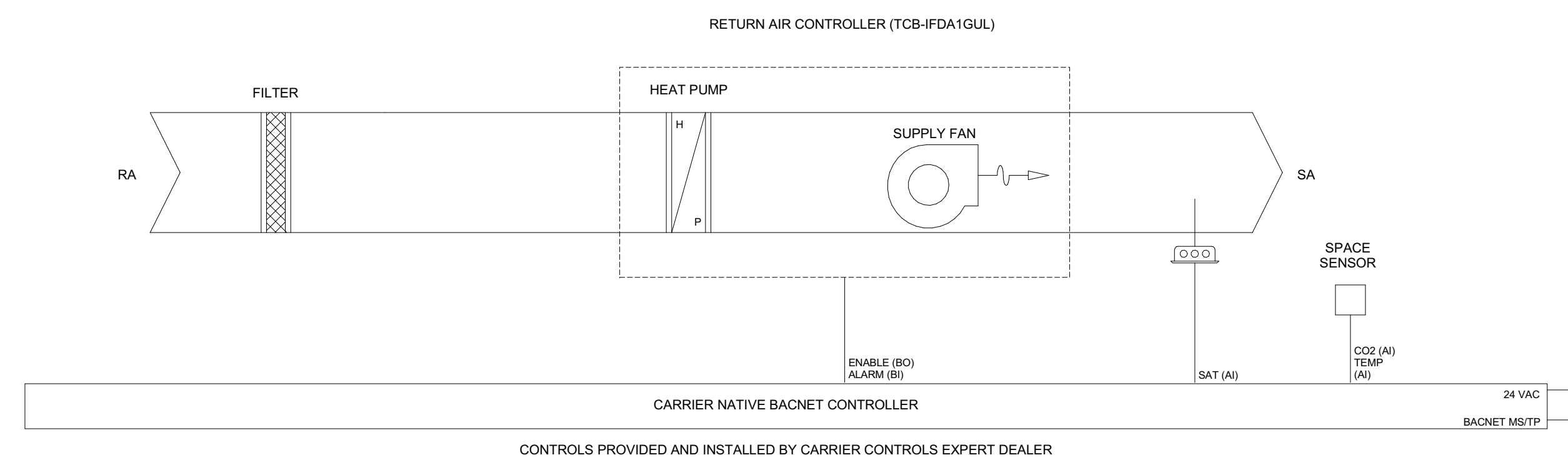
100%  
CONSTRUCTION  
DOCUMENT  
11/08/2022  
REVISIONS

75-22605-00

CONTROLS  
DIAGRAMS

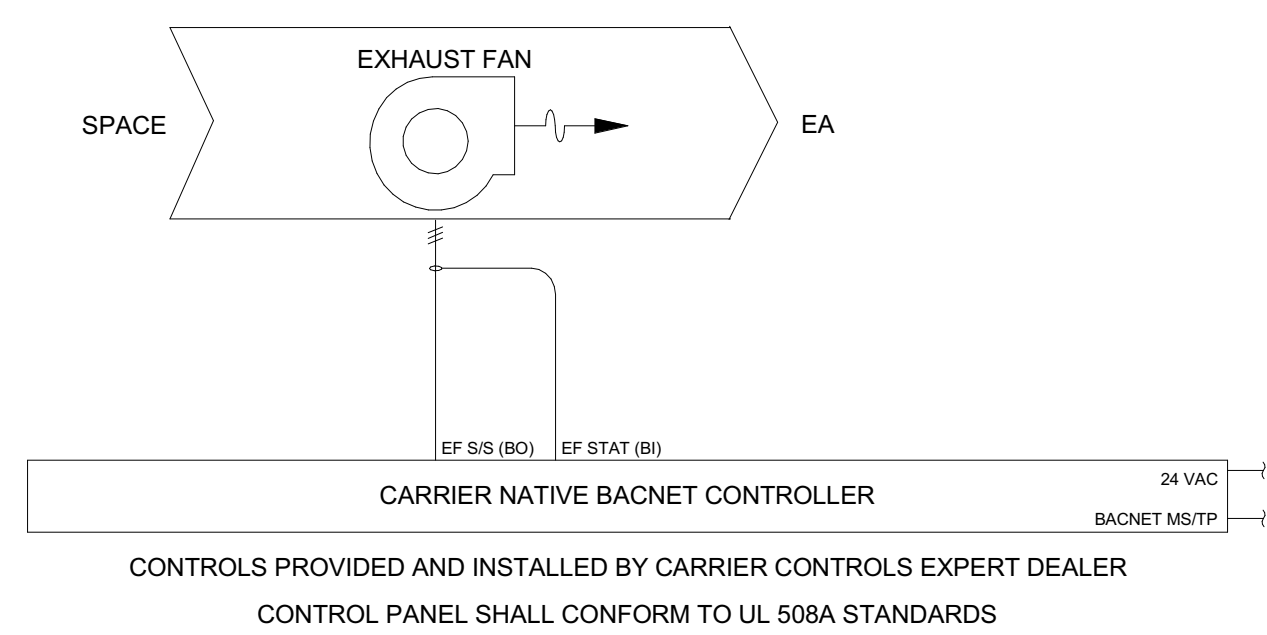
**M5.1**

Autodesk Docs/75-22605-00\_CVUSD - District Wide HVAC Replacement/75-22605-00\_CVUSD\_Ben Lomond ES MEP\_2022.rvt  
10/21/2022 4:57:53 PM



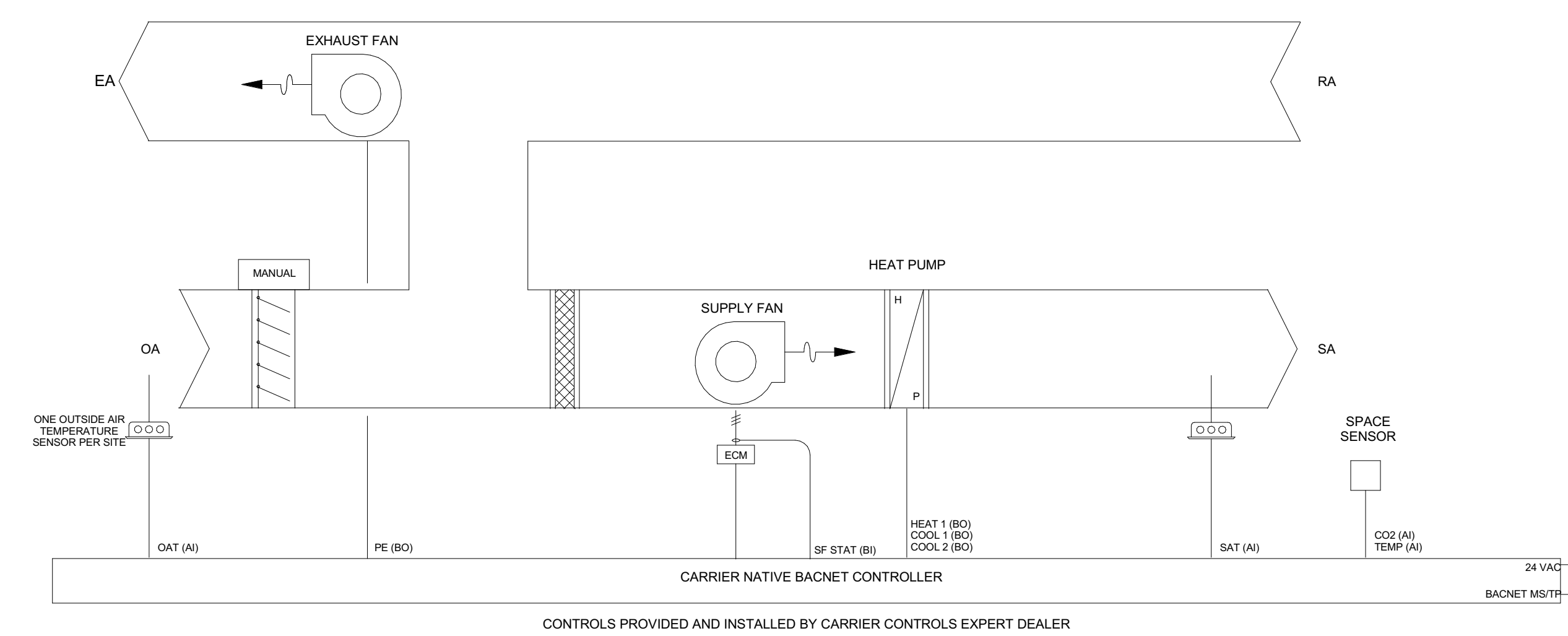
SPLIT SYSTEM DETAIL (FCU/CU-B1)

SCALE	1
NONE	



EXHAUST FAN DETAIL (EF-B1)

SCALE	2
NONE	



50FCQ HEAT PUMP DETAIL (RTU-C1 THRU RTU-C3, RTU- D1 THRU RTU-D3, RTU-G1 THRU RTU-G2, RTU-H1 THRU RTU-H3, RTU-I1 THRU RTU-I3, AND RTU-J1 THRU RTU-J3)

**SEQUENCES OF OPERATION**

SEQUENCE OF OPERATION FOR CVUSD BEN LOMOND ES  
HEAT PUMP RTU (RTU-C1, RTU-C2, RTU-D1 THRU RTU-D3, RTU-G1 THRU RTU-G3, RTU-H1 THRU RTU-H3, RTU-I1 THRU RTU-I3, AND RTU-J1 THRU RTU-J3)

**INDOOR FAN**  
THE FAN OPERATES AT A VARIABLE SPEED TO MEET THE LOAD CONDITIONS AND SAT SAFETY REQUIREMENTS TO PROVIDE MAXIMUM ENERGY SAVINGS BY MINIMIZING FAN HORSEPOWER CONSUMPTION. FAN SPEED IS NOT CONTROLLED BY STATIC PRESSURE.

**HEATING MODE**  
WHEN SPACE TEMPERATURE IS BELOW THE OCCUPIED HEATING SETPOINT, UNIT SHALL OPERATE IN THE HEATING MODE. UNIT SHALL STAGE AVAILABLE HEAT STAGES TO SATISFY DEMAND IN THE OCCUPIED SPACE.

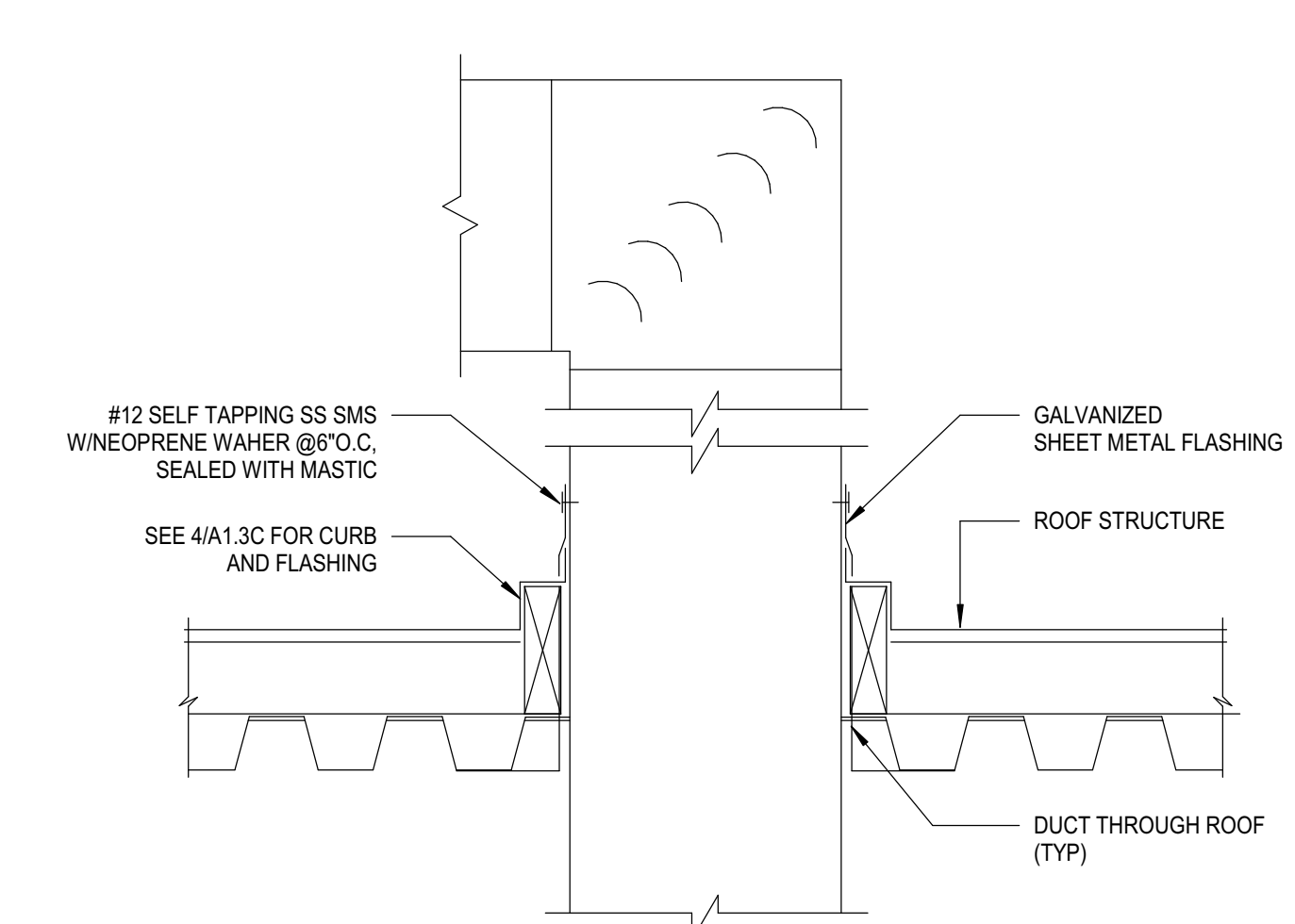
**COOLING MODE**  
WHEN SPACE TEMPERATURE IS ABOVE OCCUPIED COOLING SETPOINT, UNIT SHALL OPERATE IN THE COOLING MODE. UNIT SHALL ENABLE AVAILABLE COOLING STAGES TO SATISFY DEMAND IN THE OCCUPIED SPACE.

**CO2 CONTROL**  
UNIT SHALL MONITOR SPACE CO2 WHEN THE SUPPLY FAN IS ENERGIZED. WHEN CO2 IS ABOVE SETPOINT OF 1000 PPM, AN ALARM SHALL BE ENABLED THROUGH THE EMS.

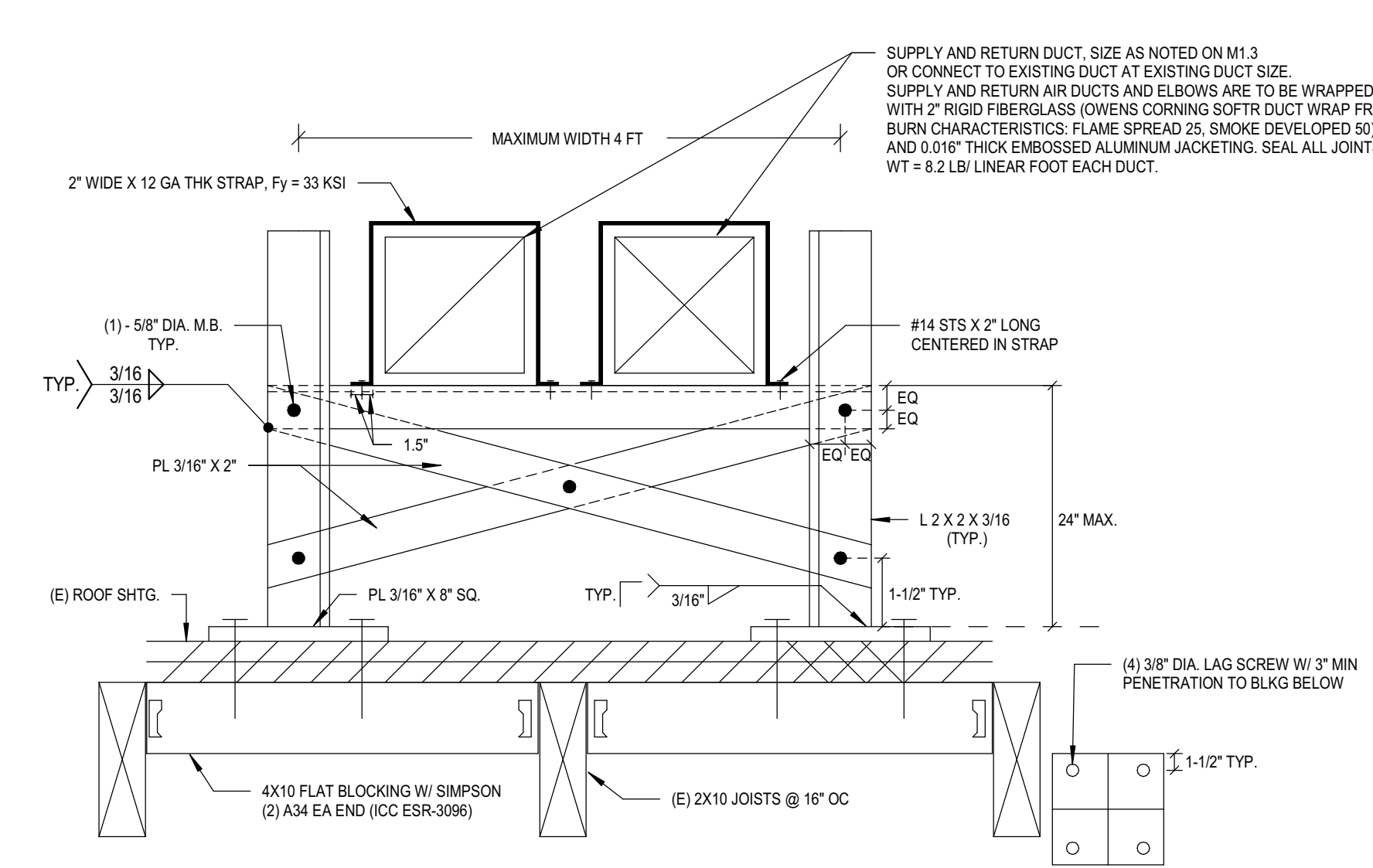
**POWER EXHAUST**  
THE EXHAUST FAN SHALL RUN WHEN THE UNIT IS OCCUPIED.

1 BACS DETAIL  
M5.2 NO SCALE

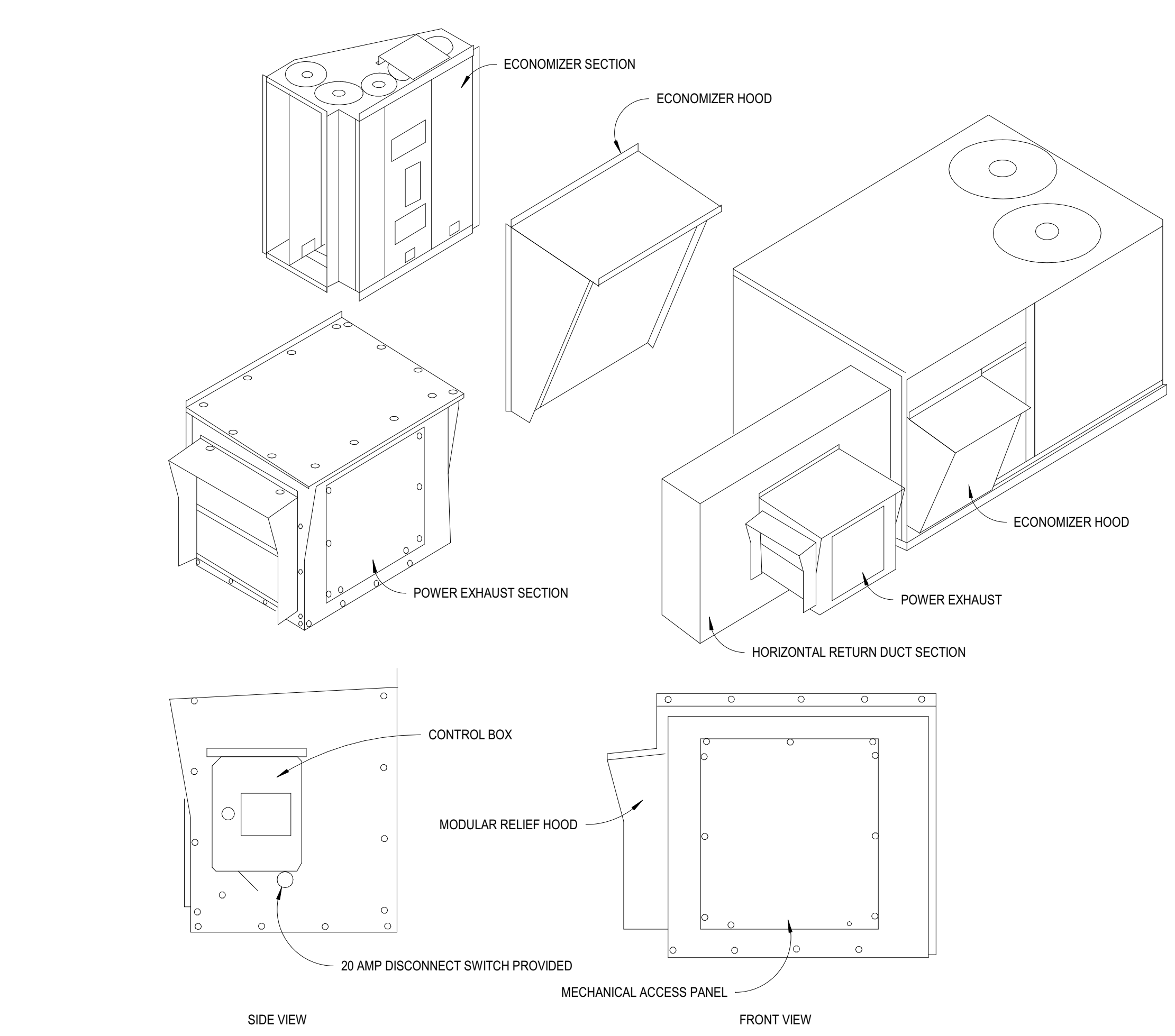
1  
2  
3  
4  
5



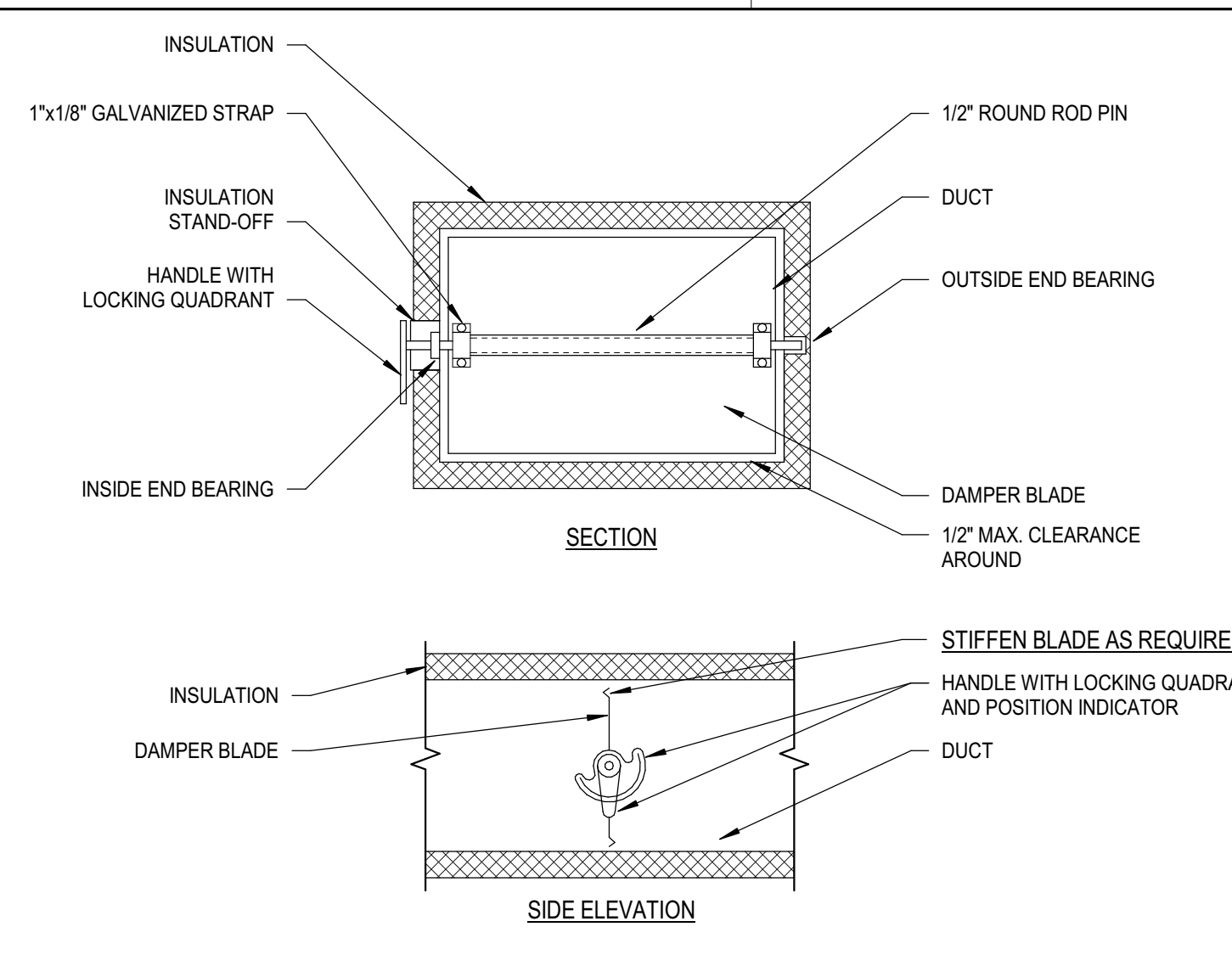
1 DUCT THRU ROOF PENETRATION  
M7.1 NO SCALE



12 DUCT SUPPORT ON ROOF DETAIL  
M7.1 NO SCALE

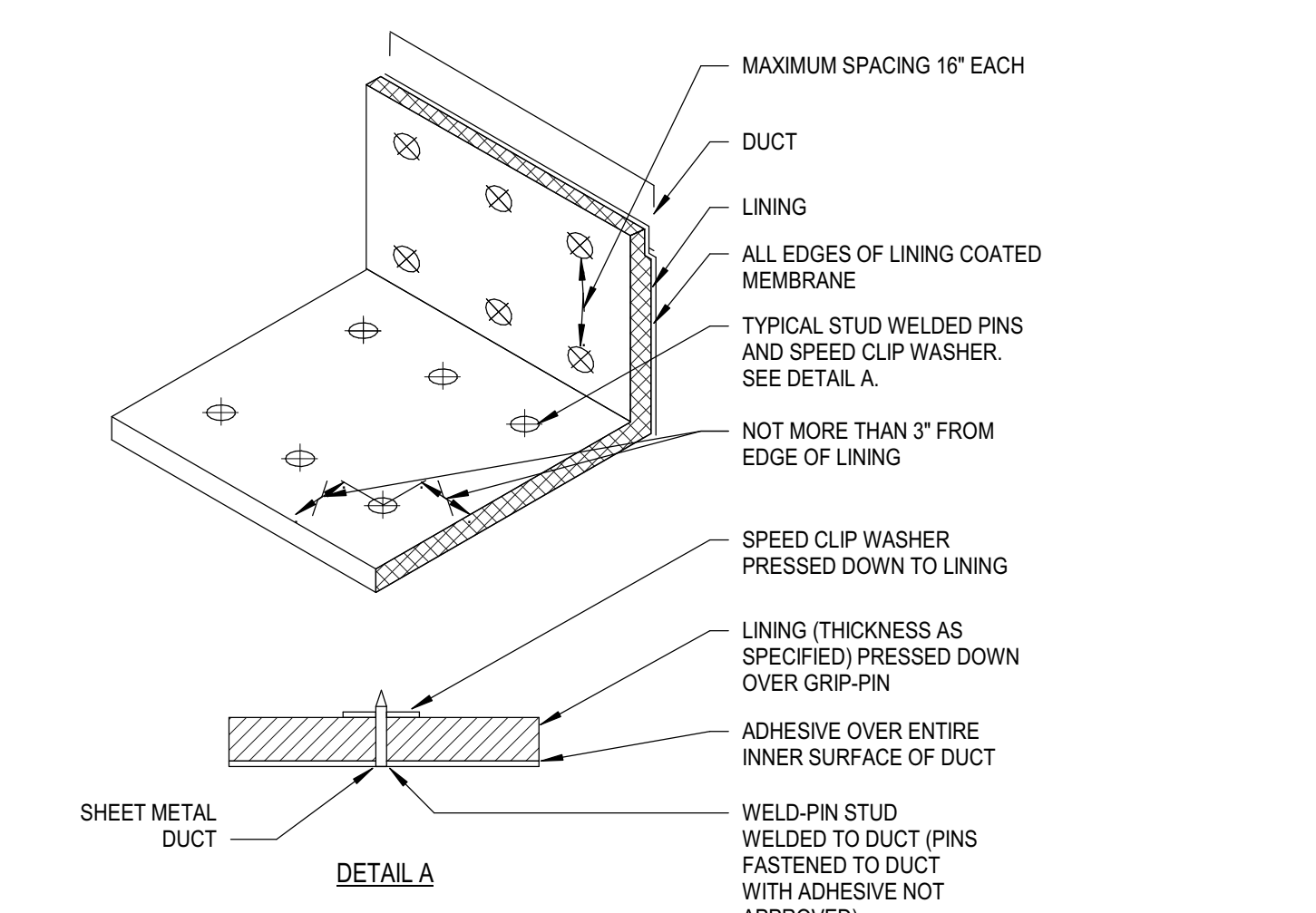


8 ECONOMIZER AND POWER EXHAUST DETAIL - HORIZONTAL DISCHARGE RTU (LESS THAN 15 TONS)  
M7.1 NO SCALE

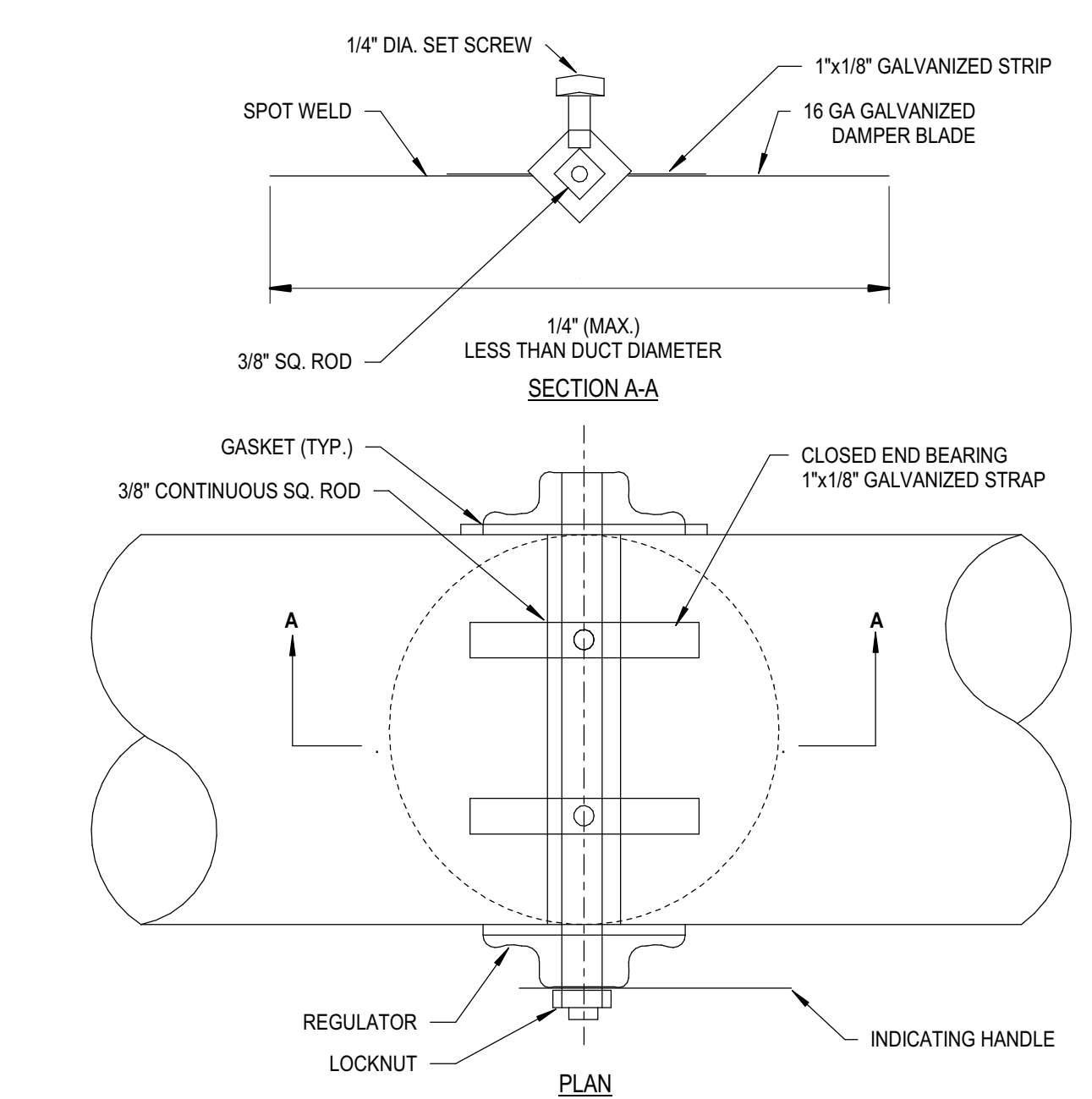


- DELETE INSULATION STAND-OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.
- DETAIL SHOWS SINGLE BLADE DAMPER. MULTI-BLADE DAMPERS INSTALLATIONS SHALL BE SIMILAR.
- LOCK DAMPER DURING AIR BALANCE AND MARK QUADRANT TO RECORD AIR BALANCED DAMPER POSITION.
- PROVIDE "HAT" SECTION AT QUADRANT FOR ALL EXTERNALLY INSULATED DUCTWORK.
- PROVIDE FLUORESCENT COLORED MARKERS ON CEILING AT ALL VOLUME DAMPER LOCATIONS.

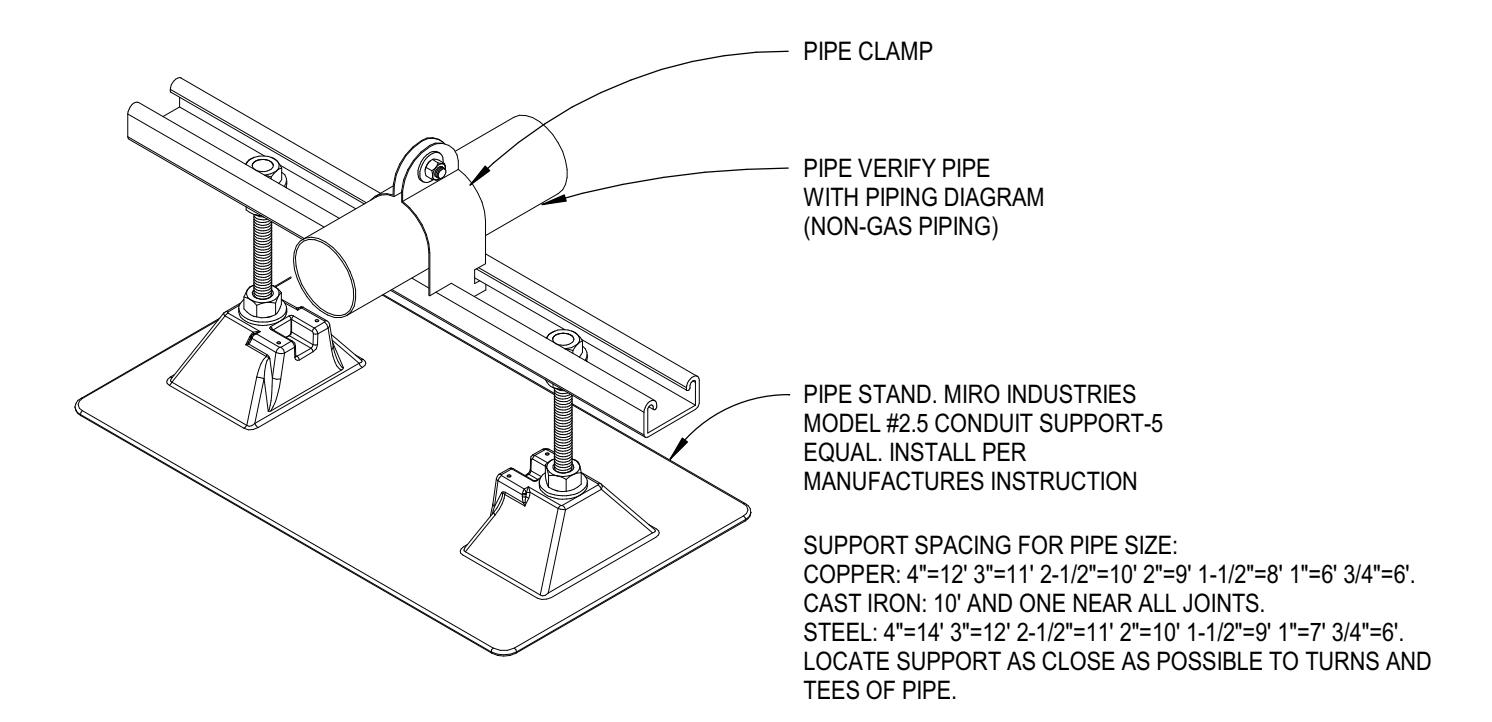
2 RECTANGULAR VOLUME DAMPER DETAIL  
M7.1 NO SCALE



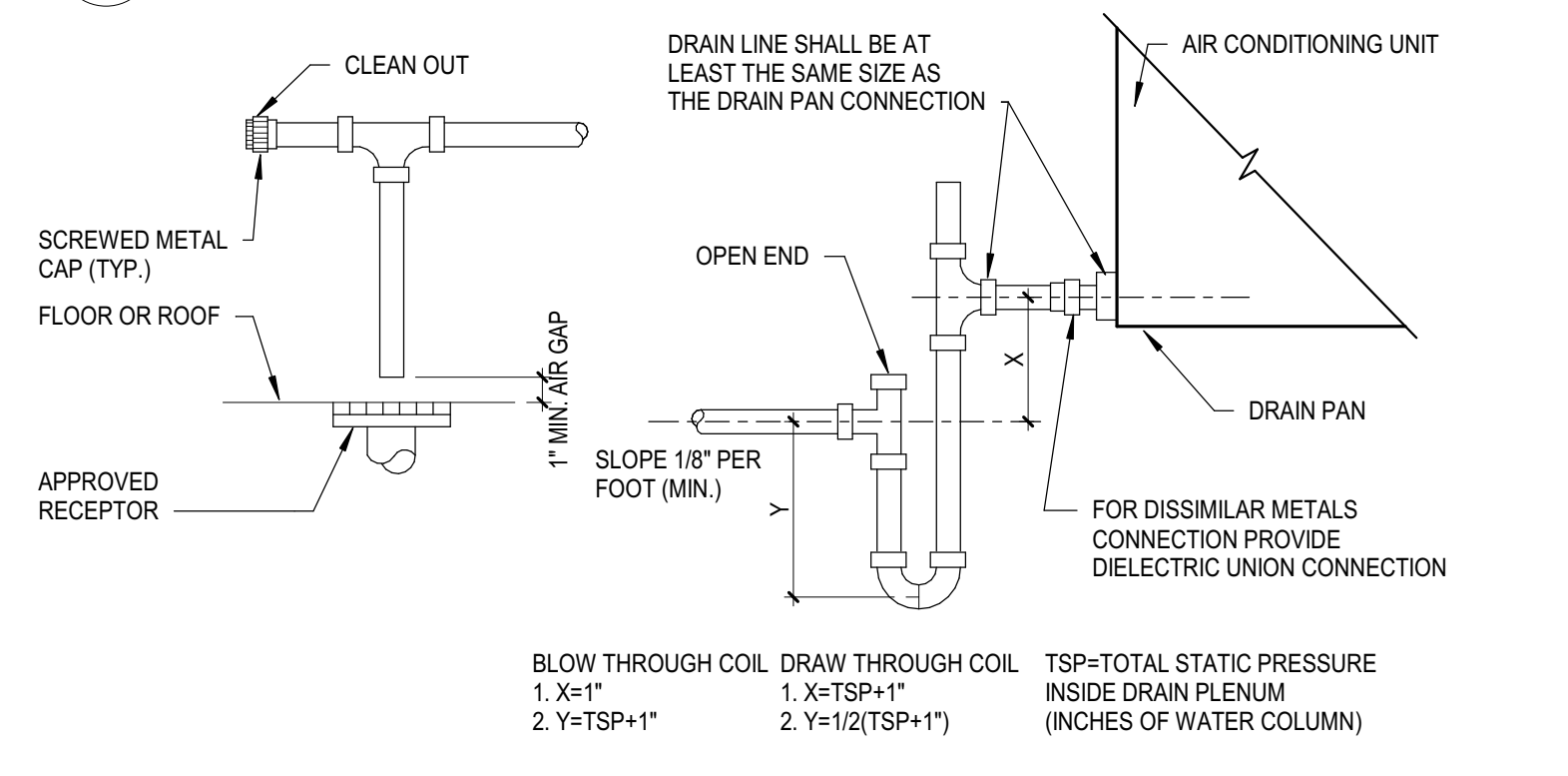
5 ACOUSTICAL DUCT LINING INSTALLATION DETAIL  
M7.1 NO SCALE



3 ROUND VOLUME DAMPER (UP TO 14")  
M7.1 NO SCALE

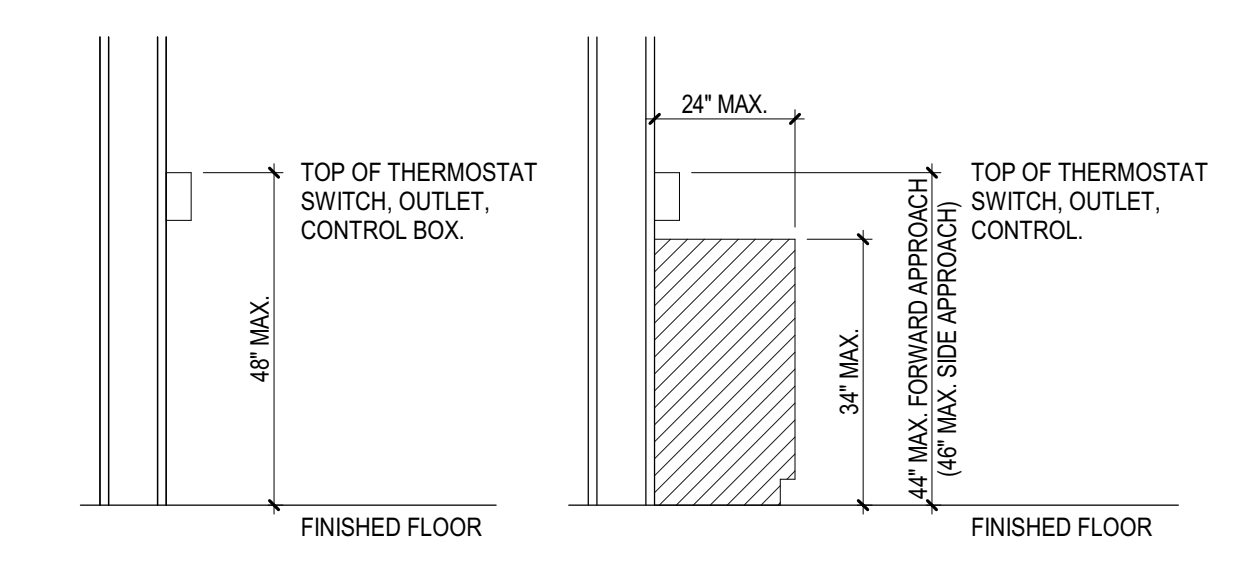


4 PIPE SUPPORT ON ROOF DETAIL  
M7.1 NO SCALE

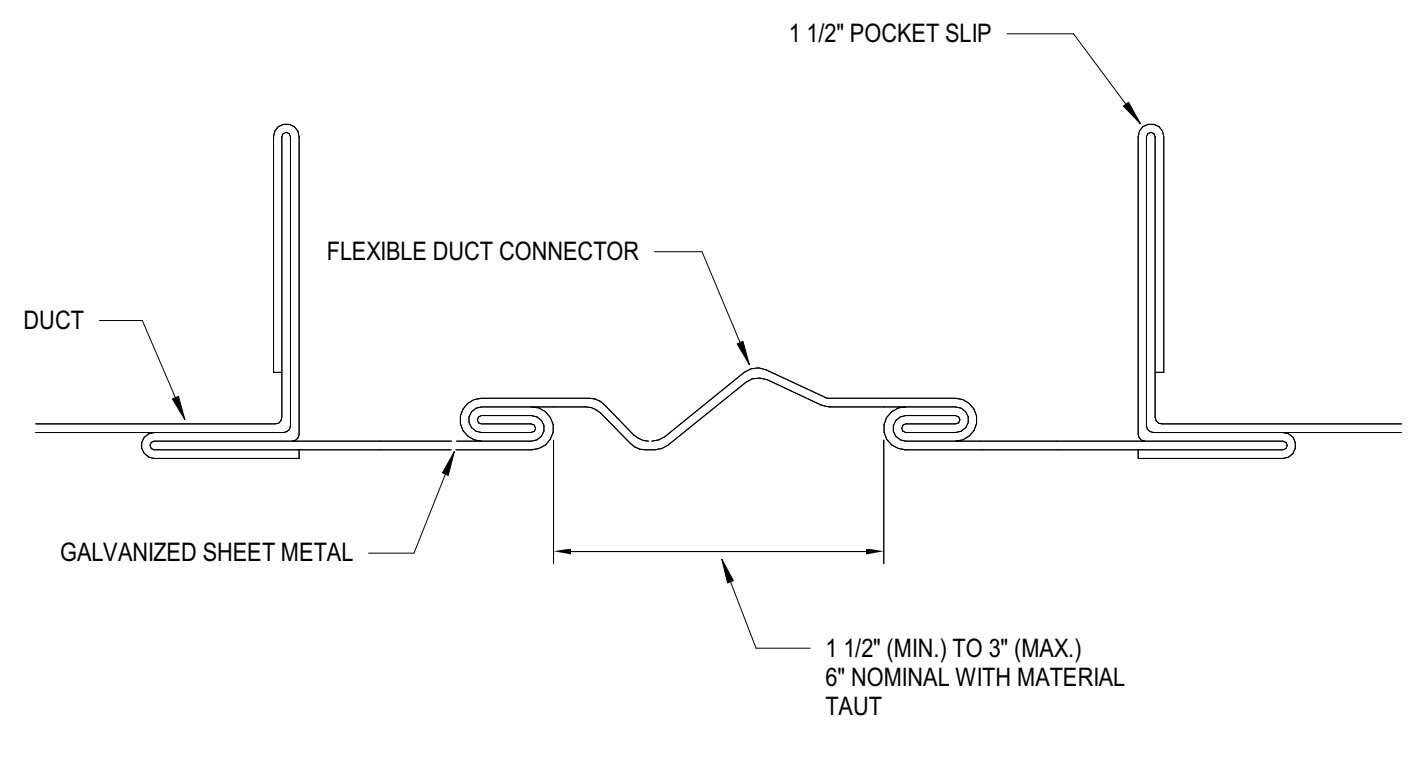


- NOTES:
- WHERE VERTICAL SPACE DOES NOT PERMIT TRAP INSTALLATION AS REQUIRED ABOVE FLOOR SLAB, EXTEND P-TRAP TO BELOW SLAB.
  - FOR INDOOR AND OUTDOOR INSTALLATION PROVIDE INSULATED RAIN LINE TO THE POINT OF DISCHARGE AT APPROVED RECEPTOR.

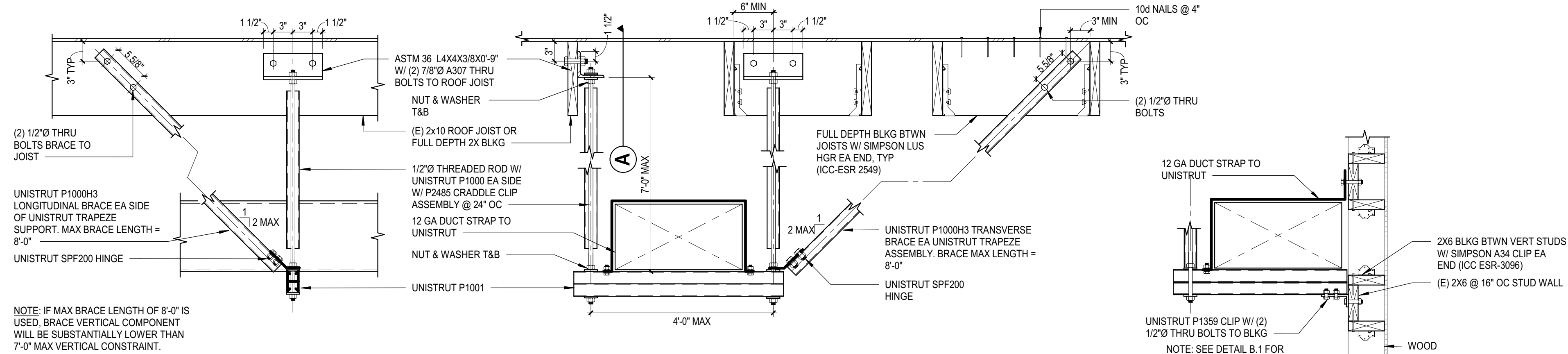
7 CONDENSATE DRAIN CONNECTION DETAIL  
M7.1 NO SCALE



9 THERMOSTAT MOUNTING  
M7.1 NO SCALE



10 FLEXIBLE DUCT CONNECTOR  
M7.1 NO SCALE



A LONGITUDINAL DIRECTION

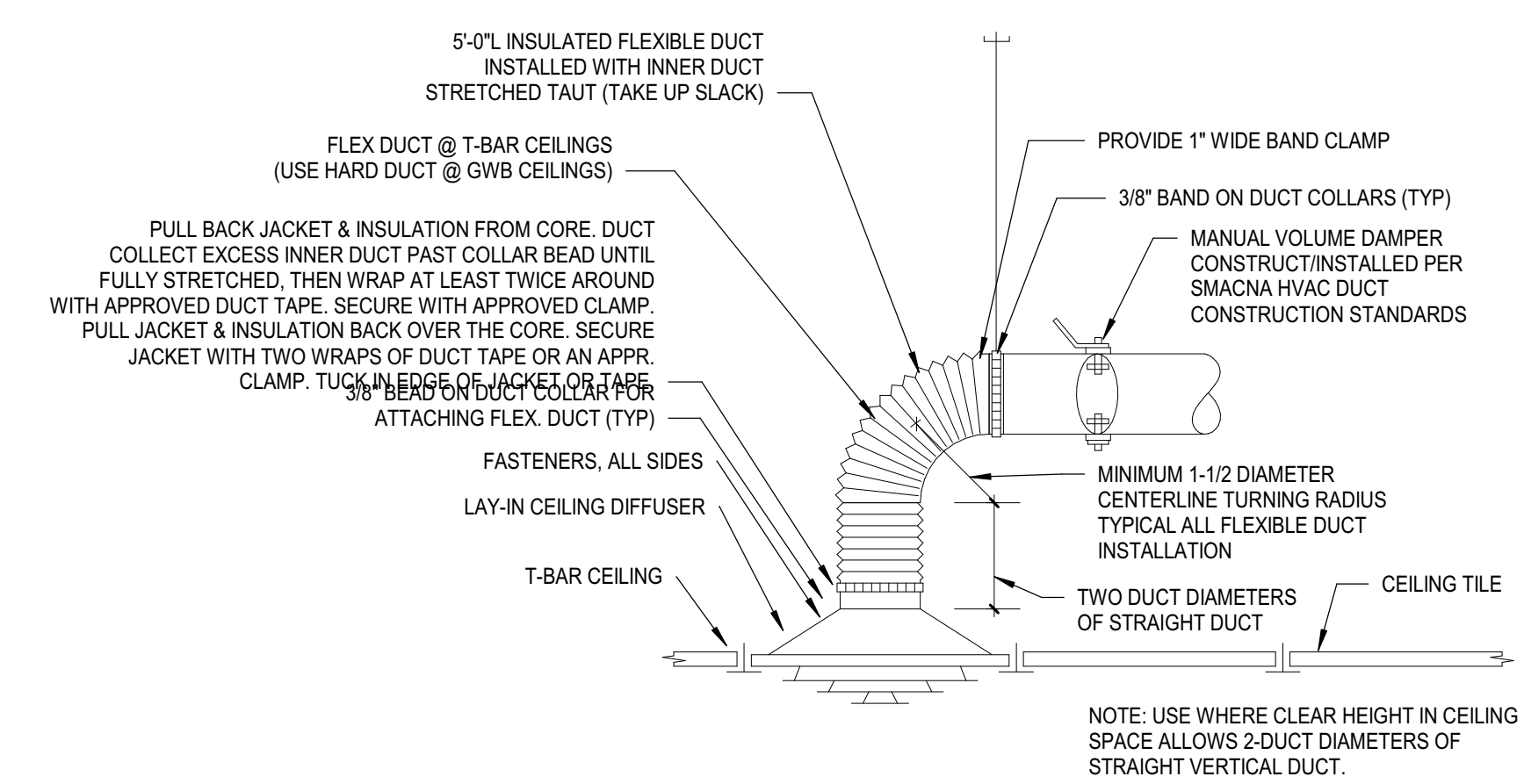
B.1 TRANSVERSE DIRECTION - WOOD ROOF

B.2 TRANSVERSE DIRECTION - WOOD WALL TIEBACK

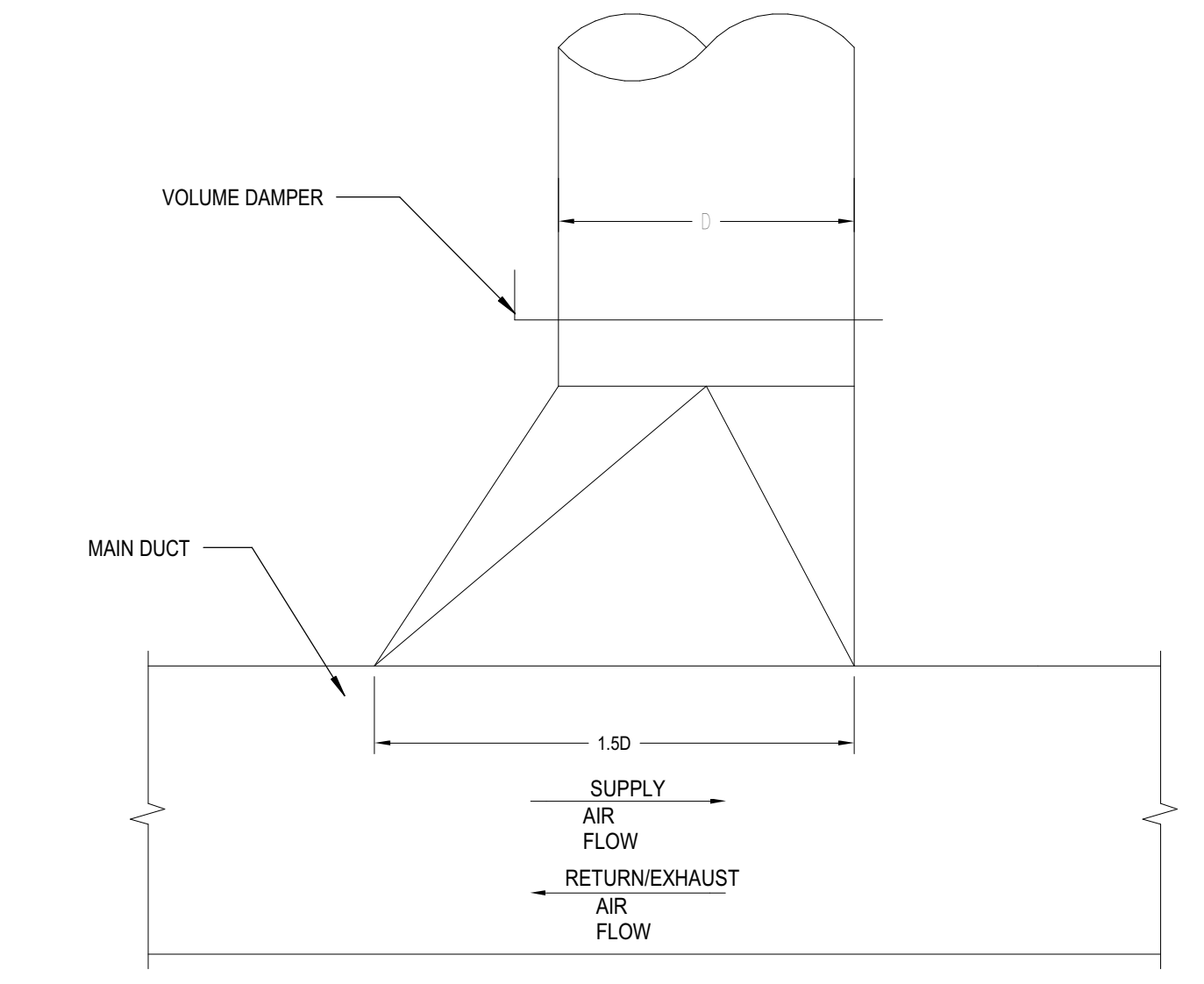
11 DUCT SUPPORTS  
M7.1 NO SCALE

Autodesk Docs/75-22605-00\_CVUSD - District Wide HVAC Replacement/75-22605-00\_CVUSD - Ben Lomond ES\_MEP\_2022.rvt  
10/21/2022 4:57:54 PM

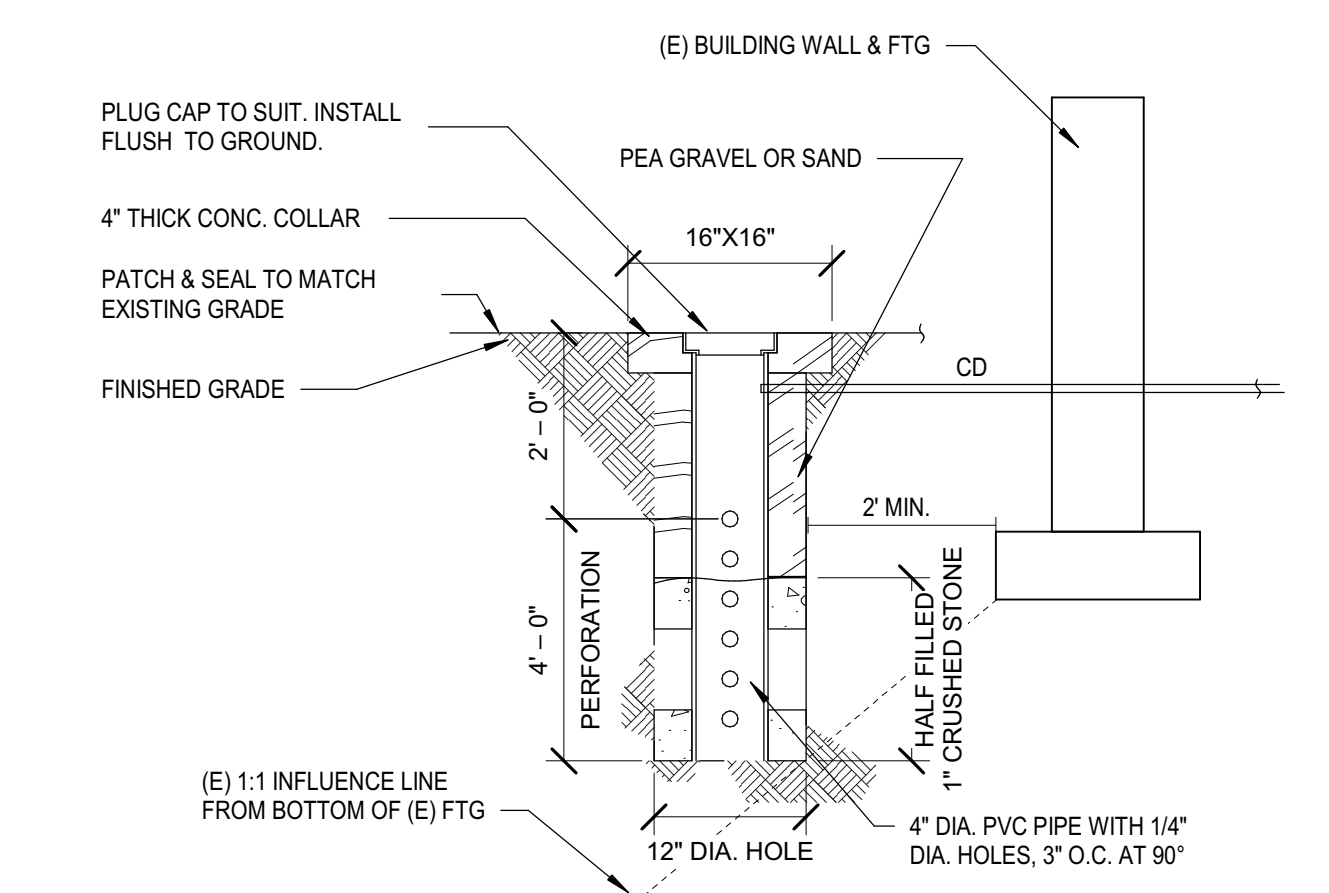
1  
2  
3  
4  
5



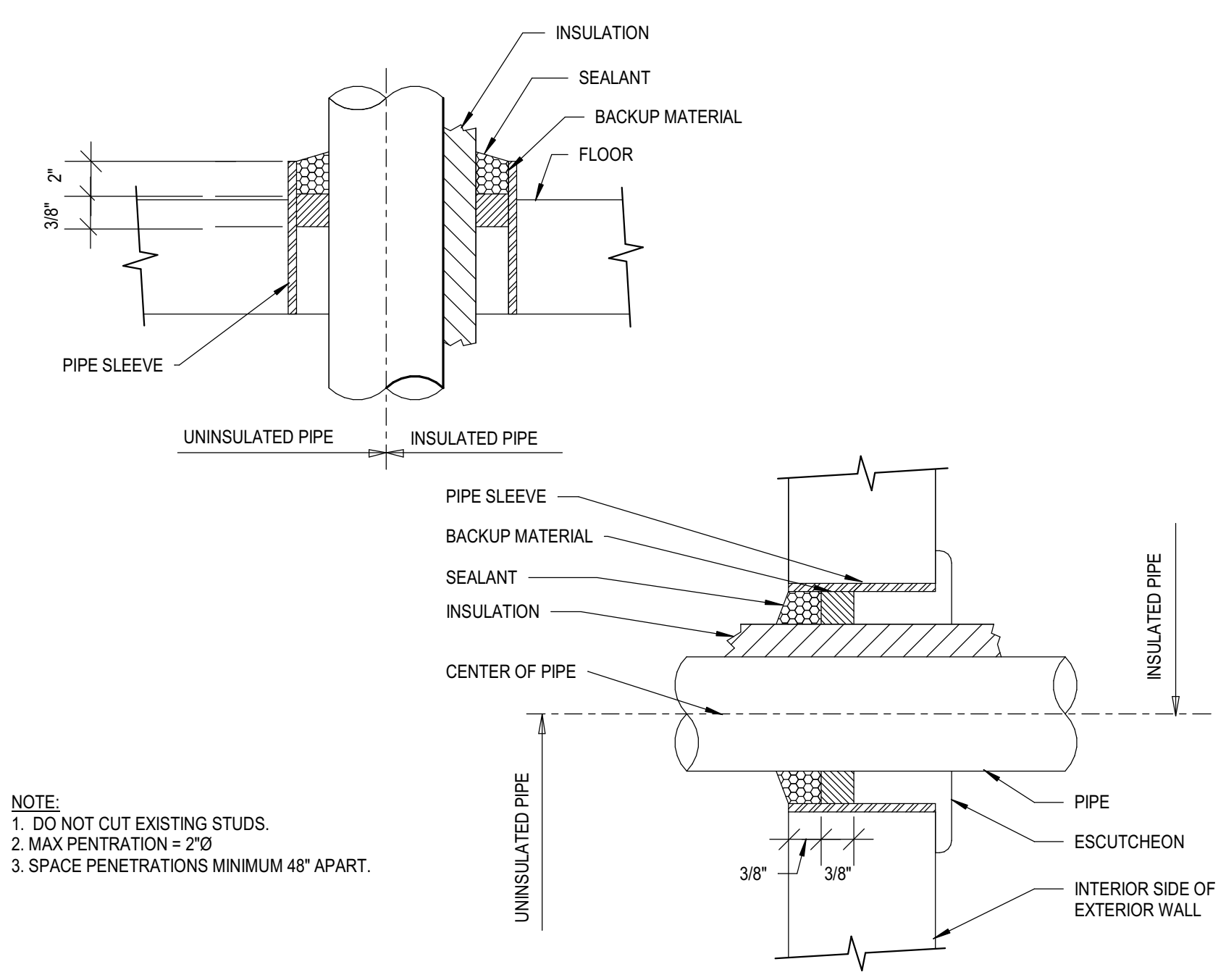
1 CEILING SUPPLY DIFFUSER CONNECTION DETAIL  
M7.2 / NO SCALE



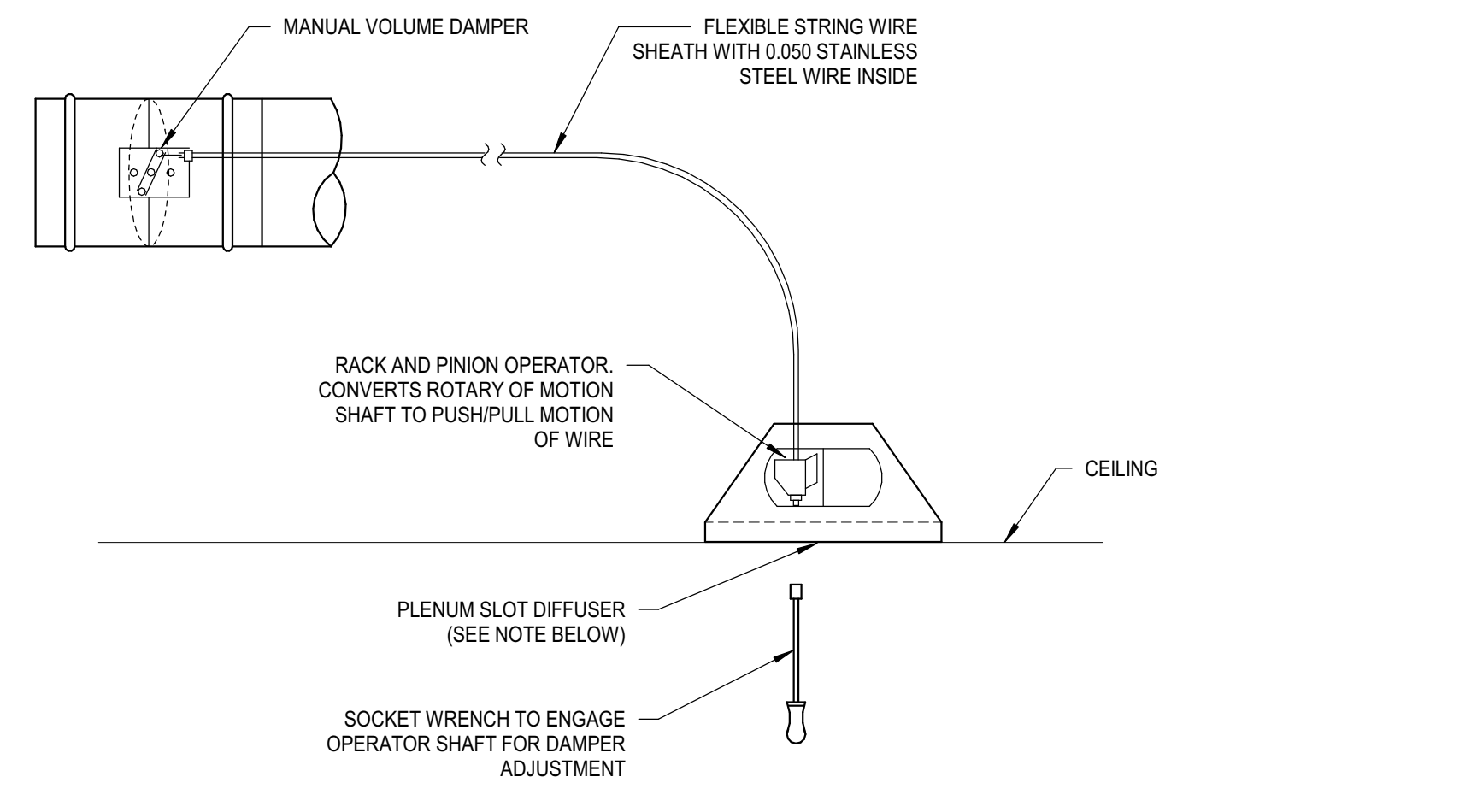
2 ROUND DUCT BRANCH TO MAIN RECT. CONNECTION  
M7.2 / NO SCALE



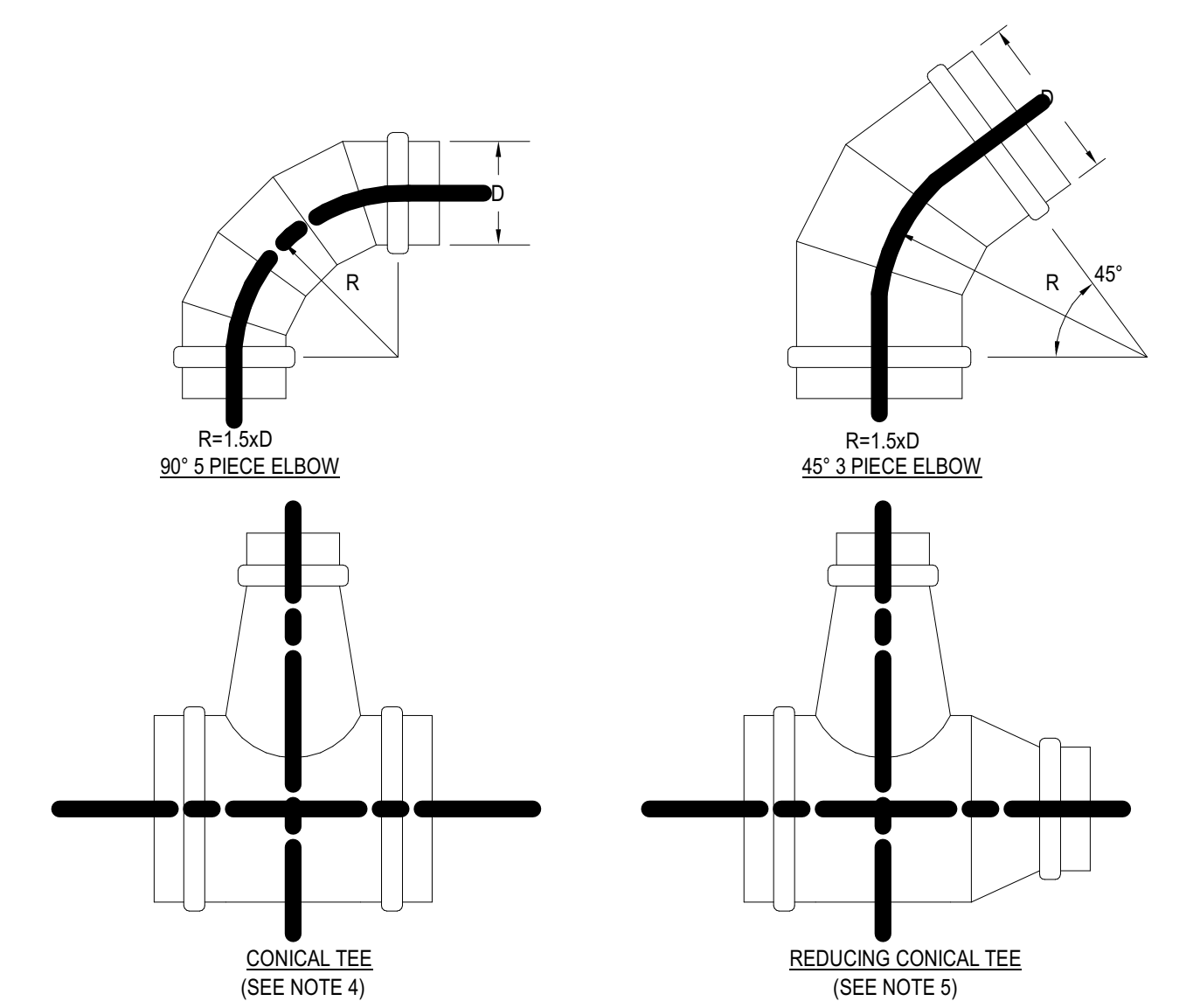
3 DRY WELL DETAIL  
M7.2 / SCALE: 1/4" = 1'-0"



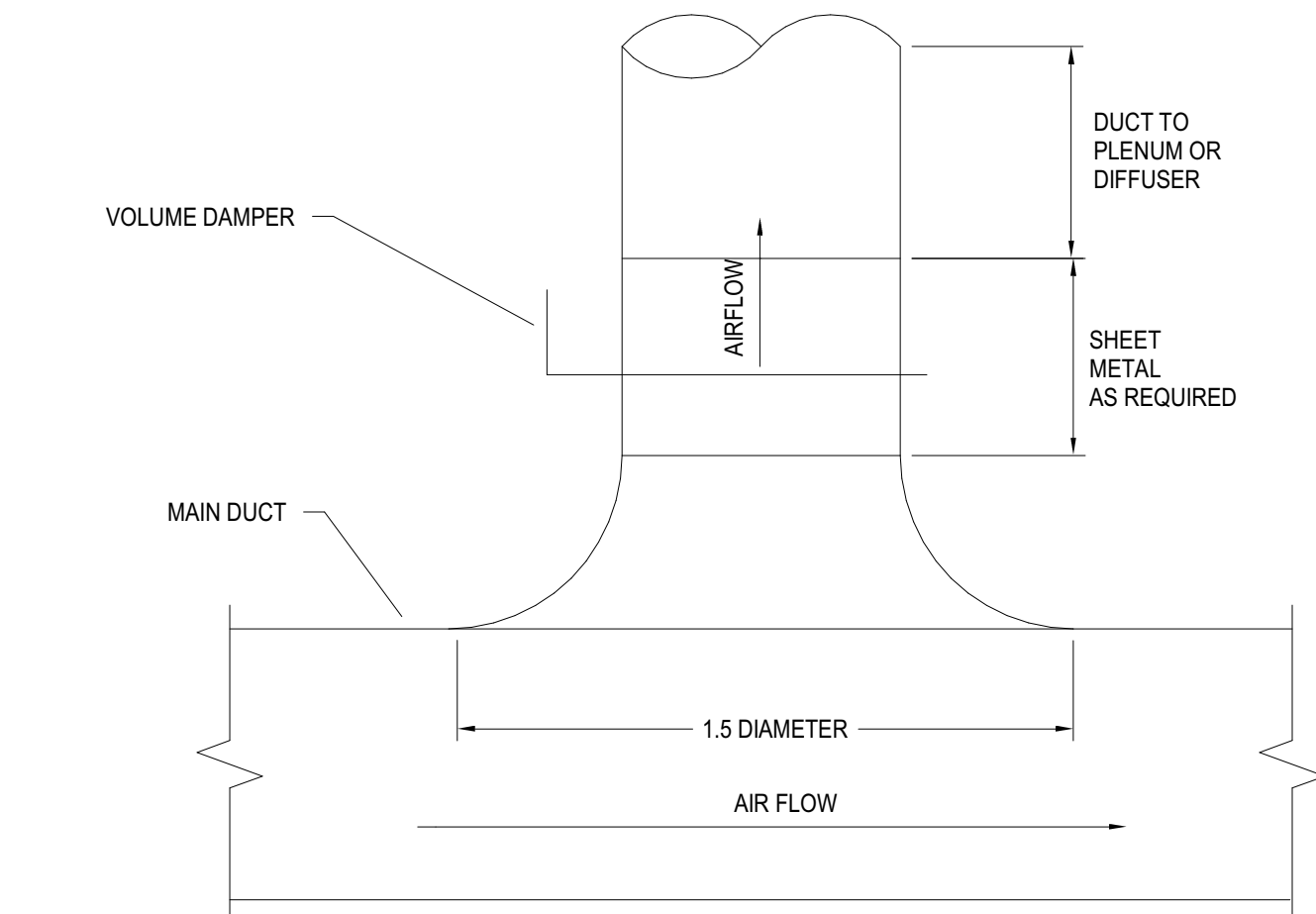
4 PIPE PENETRATION DETAILS  
M7.2 / NO SCALE



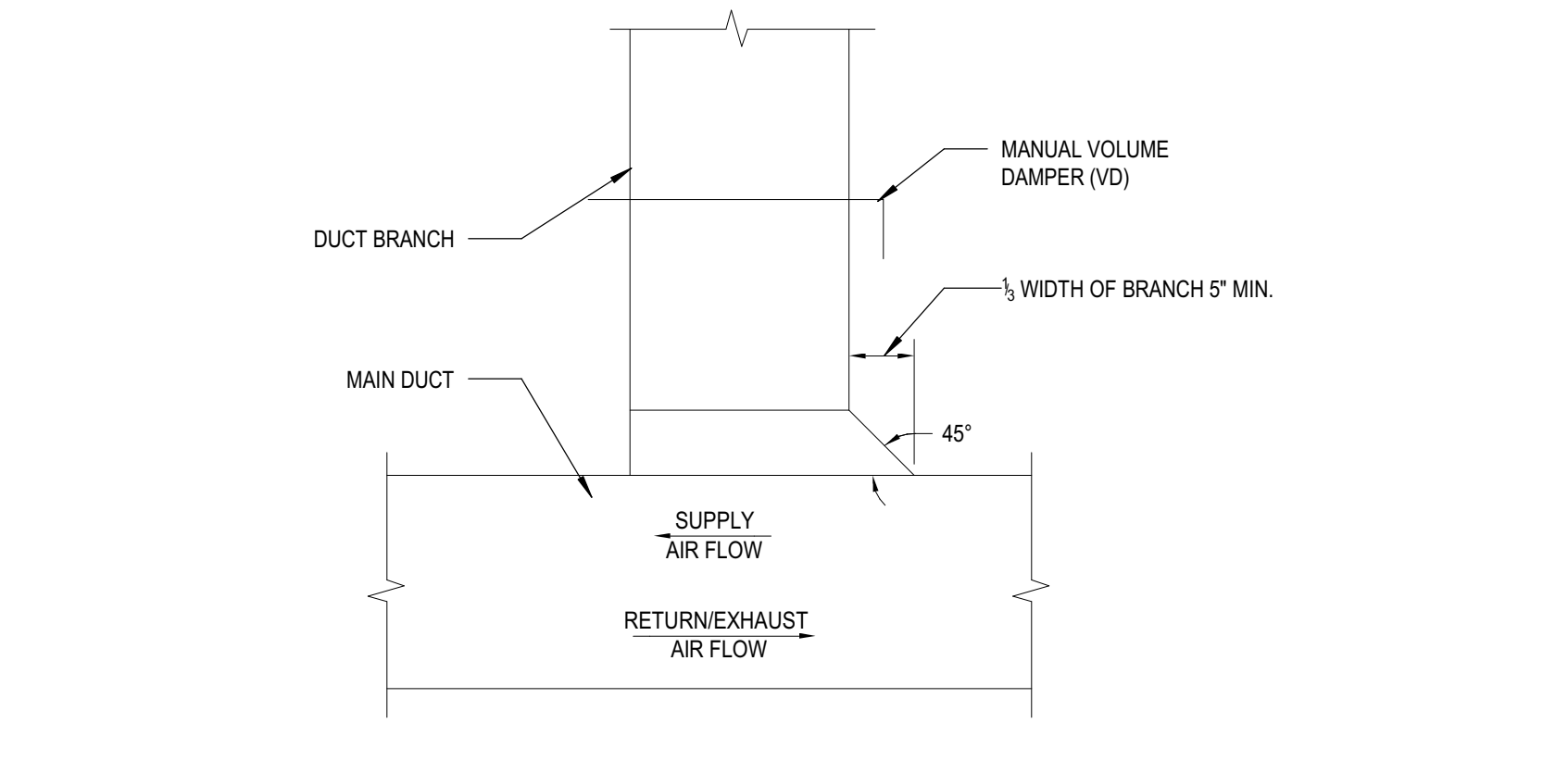
5 BOWDEN TYPE CABLE CONTROL (YOUNG'S REGULATOR)  
M7.2 / NO SCALE



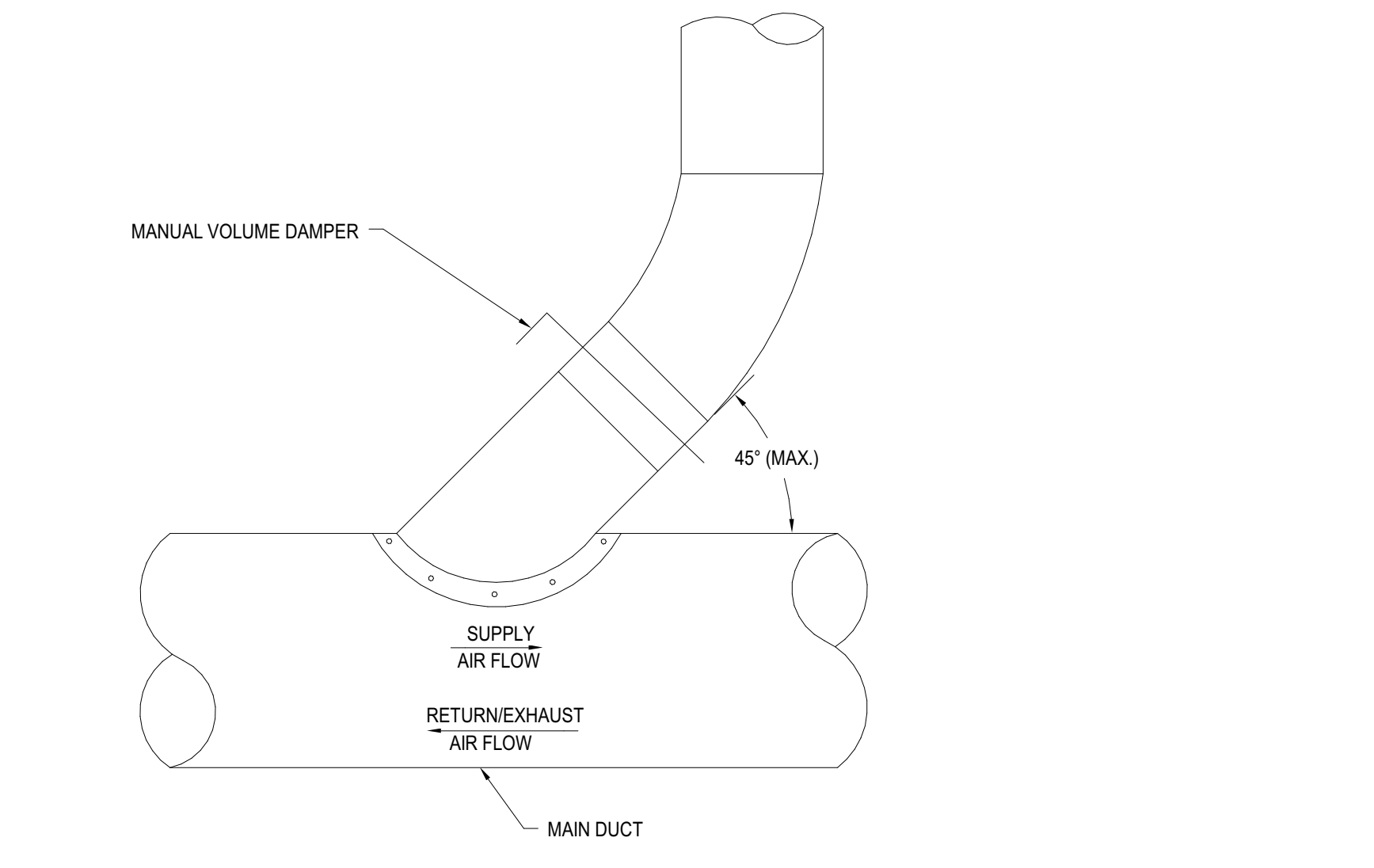
6 ROUND DUCT FITTINGS  
M7.2 / NO SCALE



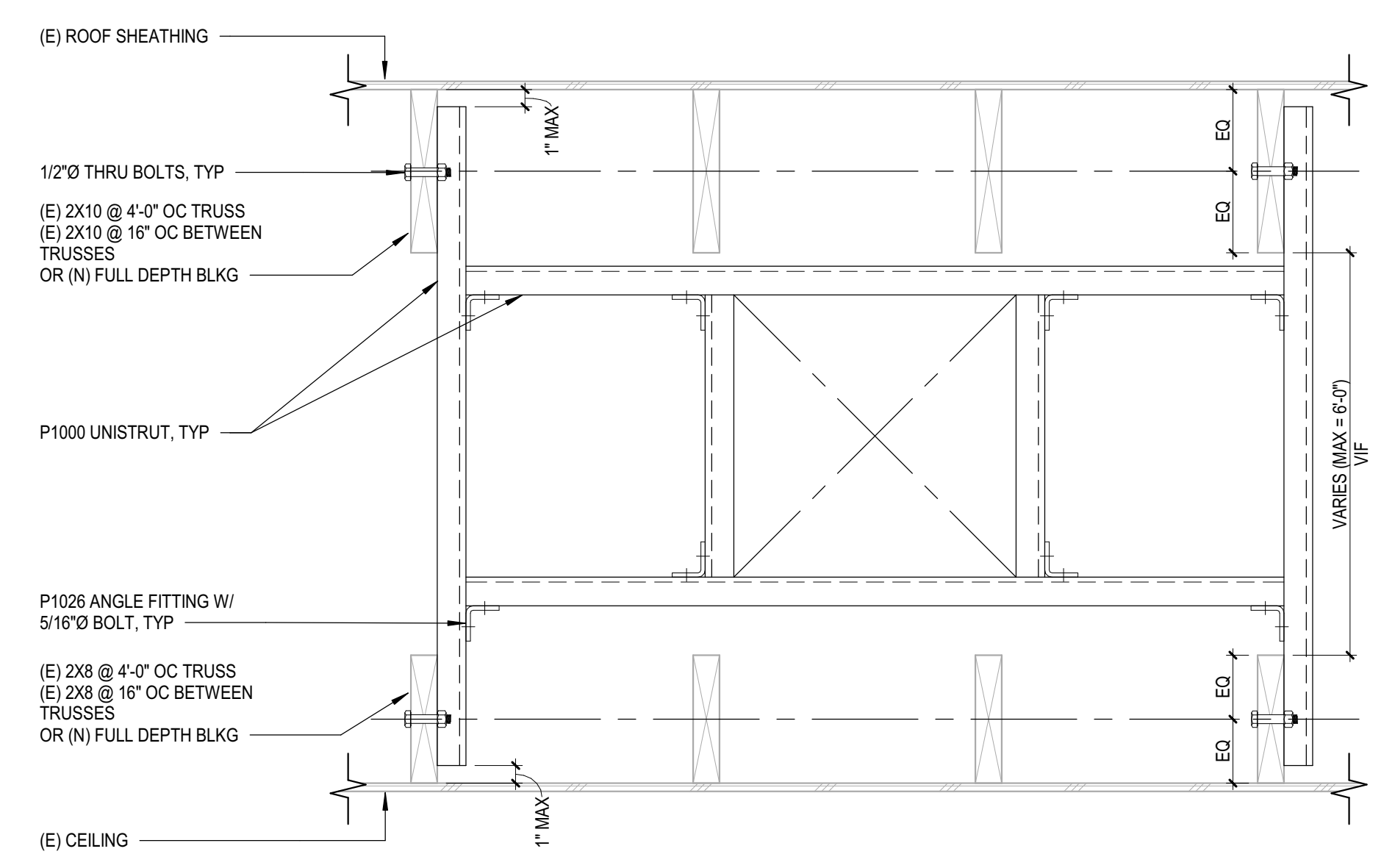
7 ROUND SUPPLY DUCT BRANCH TO RECTANGULAR DUCT  
M7.2 / NO SCALE



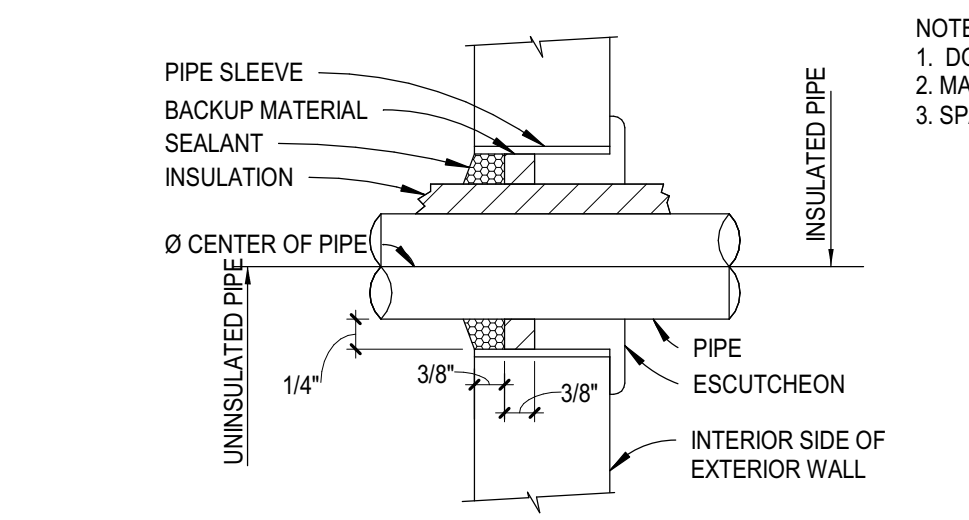
8 RECTANGULAR DUCT BRANCH TO RECTANGULAR DUCT  
M7.2 / NO SCALE



9 ROUND DUCT BRANCH TO ROUND MAIN CONNECTION  
M7.2 / NO SCALE



10 DUCT SUPPORT IN CEILING SPACE  
M7.2 / NO SCALE



PIPE THRU WALL PENETRATION DETAIL  
SCALE: 1/8" = 1'-0"

Autodesk Docs/75-22605-00\_CVUSD - District Wide HVAC Replacement/75-22605-00\_CVUSD - Ben Lomond ES\_MEP\_2022.rvt  
11/02/2022 4:57:55 PM

MARK	MAKE	MODEL	STEEL FRAME
FCU-B1	CARRIER	40RUAD-16	ASTM A36, L 3 X 3 X 1/4

### DETAIL-1

TIE-DOWN STRAPS AS SHOWN

LEVELLING BOLT 3/8 DIA. & ATTACHMENT OF STEEL BASE TO SPRING ISOLATOR

**NOTES:**  
 1. APPROX. STEEL WEIGHT INCLUDING ISOLATORS.: 200 LBS.  
 2. — INDICATES TIE-DOWN STRAP. SEE DETAIL 3.  
 3. ALL DIMENSIONS REQUIRE FINAL REVIEW AT COMMENCEMENT OF PROJECT.

### DETAIL-3

ATTACHMENT OF SPRING ISOLATORS TO CONCRETE PAD ON GRADE

9/16" DIA. HOLE (2) PLACES  
 USE 1/2" DIA. HILTI KB T22 ANCHORS IN 3000 PSI HR CONCRETE, MIN 3" NORMAL EMBEDMENT, MIN 6" CONCRETE THICKNESS & MIN 6" EDGE DISTANCE.  
 INSTALL ANCHORS WITH SPECIAL INSPECTION PER ICC ESR-4266.

MAX. ALLOW. LOADS:    HORIZ. 1100 lbs.    VERT. (UP) 1400 lbs.

**RMU-RO-SIT-1**

### DETAIL-2

VIEW A-A

VIEW B-B

NOTCH @ EA. ISOLATOR LOCATION

### ATTACHMENT OF UNIT TO STEEL BASE

TIE DOWN STRAP DETAIL

CONNECTION DETAIL

<b>M. W. SAUSSE &amp; CO., INC.</b> 28744 Whitherspoon Pkwy. Valencia, CA 91355 Phone: (661) 257-3311 Fax: (661) 257-7673	<b>JOB NAME:</b> COVINA USD - BEN LOMOND ES <b>CUST.:</b> <b>CUST. P.O.:</b> <b>MECH. ENGR.:</b> DLRG <b>MARK:</b> FCU-B1 (HORIZONTAL)	<b>REVISIONS:</b> <b>A:</b> ADDED WELDING (7-21-22) <b>B:</b> VERT TO HORIZ (7-25-22) TDT <b>C:</b> CALL OUT ALL ATTACHMENTS (9-2-22) <b>D:</b> SPECS ANGLE (9-26-22)	<b>DRN:</b> JO <b>DATE:</b> 6/24/22 <b>DRAWING NO.:</b> <div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto; text-align: center;">-2D</div>
---	--	---	---

1 FCU-B1  
M7.3 SCALE: 12" = 1'-0"

Autodesk Docs/75-22605-00\_CVUSD - District Wide HVAC Replacement/75-22605-00\_CVUSD - Ben Lomond ES MEP\_2022.rvt 10/21/2022 4:57:58 PM

MARK	MAKE	MODEL	STEEL FRAME
CU-B1	TOSHIBA	MNY-AP144	ASTM A36, L 4 X 3 X 1/4

**DETAIL-1**

**DETAIL-2**

**DETAIL-3**

ATTACHMENT OF SPRING ISOLATORS TO CONCRETE PAD ON GRADE  
1 1/16" DIA. HOLE (2) PLACES  
USE 5/8" DIA. STAINLESS HLTI KB T22 ANCHORS IN MIN 3000 PSI HR CONCRETE,  
MIN 3-1/4" NOMINAL EMBEDMENT, MIN 4" CONCRETE THICKNESS & MIN  
6" EDGE DISTANCE. INSTALL ANCHORS WITH SPECIAL INSPECTION PER ICC ESR-428A.

**REGISTERED PROFESSIONAL ENGINEER**  
NATHAN D. TREMBLAY  
No. 56481  
Exp. 3/30/23  
STRUCTURAL  
STATE OF CALIFORNIA  
10/05/2022

CS X 6.7 X 4-1/2 LG  
1/2" DIA. LEVELING BOLT  
L 4 X 3 X 1/4  
NEOPRENE GROMMET  
1/2" DIA. TAP  
5/8" EARTHQUAKE STABILIZER BOLT  
1/4" PLATE  
APPROX. OPER. HT. 5-1/2  
1/4" REBbed NEOPRENE PAD

MAX. ALLOW. LOADS: HORIZ: 2200 LBS  
VERT. (UP): 2820 LBS

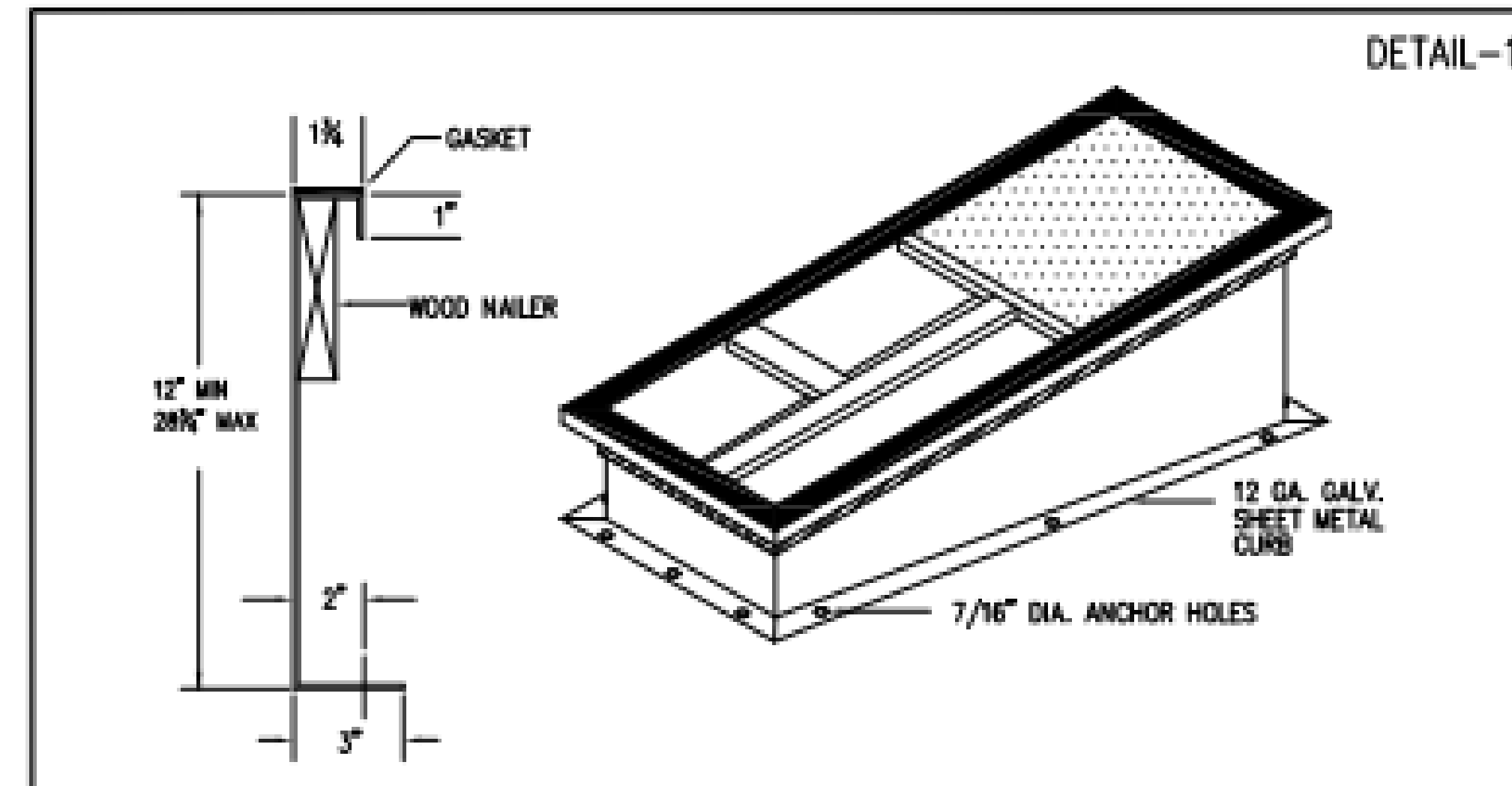
**NOTES:**

- APPROX. STEEL WEIGHT INCLUDING ISOLATORS: 450 LBS.
- FOR ISOLATORS: SEE DETAIL 3.
- M.W. SAUSSE & CO. INC. IS NOT RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE EQUIPMENT WHEN ANCHORED AS SHOWN.
- NOT FOR CONSTRUCTION, ALL DIMENSIONS REQUIRE FINAL REVIEW AT COMMENCEMENT OF PROJECT.

<p>M. W. SAUSSE &amp; CO., INC. 28744 Whitherspoon Pkwy, Valencia, CA 91355 Phone: (661) 257-3311 Fax: (661) 257-7673</p> <p><b>Vibrex</b> <b>RMUHAB</b></p>	<b>JOB NAME:</b> COVINA USD - BEN LOMOND	<b>REVISIONS:</b>	<b>DRN:</b> TDT
	<b>CUST.:</b>	<b>A:</b> RENAME HP TO CU-B1 (9-2-22)	<b>DATE:</b> 9-6-22
	<b>CUST. P.O.:</b>	<b>B:</b> CHANGED UNIT (9-6-22)	<b>DRAWING NO.:</b>
	<b>MECH. ENGR.:</b> DLR	<b>C:</b> SPECS ANGLE (9-20-22)	-1C
	<b>MARK:</b> CU-B1	<b>D:</b>	

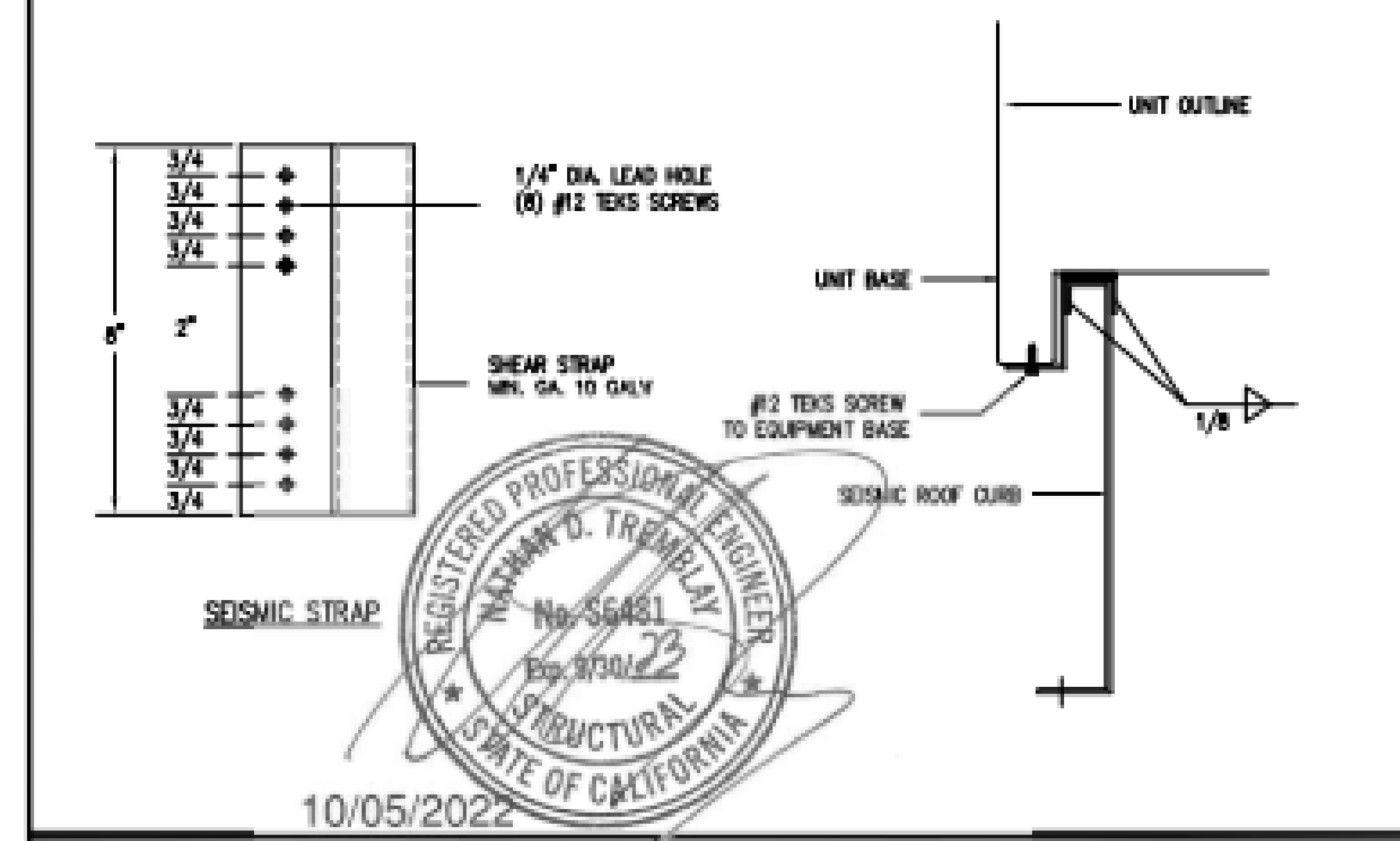
1 CU-B1  
M7.4 / NO SCALE

Autodesk Docs/75-22605-00\_CUVSD - District Wide HVAC Replacement/75-22605-00\_CUVSD - Ben Lomond ES\_MEP\_2022.rvt  
 10/21/2022 4:57:55 PM



NOTES:  
 1. FOR ANCHOR REQUIREMENTS AND SEISMIC STRAPS, SEE DETAIL 2, 3.  
 2. ROOF SLOPE TO BE VERIFIED BY CONTRACTOR BEFORE FABRICATION & ROOF CURB HEIGHT ARE APPROXIMATE.  
 3. NOT FOR CONSTRUCTION, ALL DIMENSIONS REQUIRE FINAL REVIEW AT COMMENCEMENT OF PROJECT

2. SUBMITTED ROOF CURBS ARE PITCHED TO MATCH ROOF SLOPE.

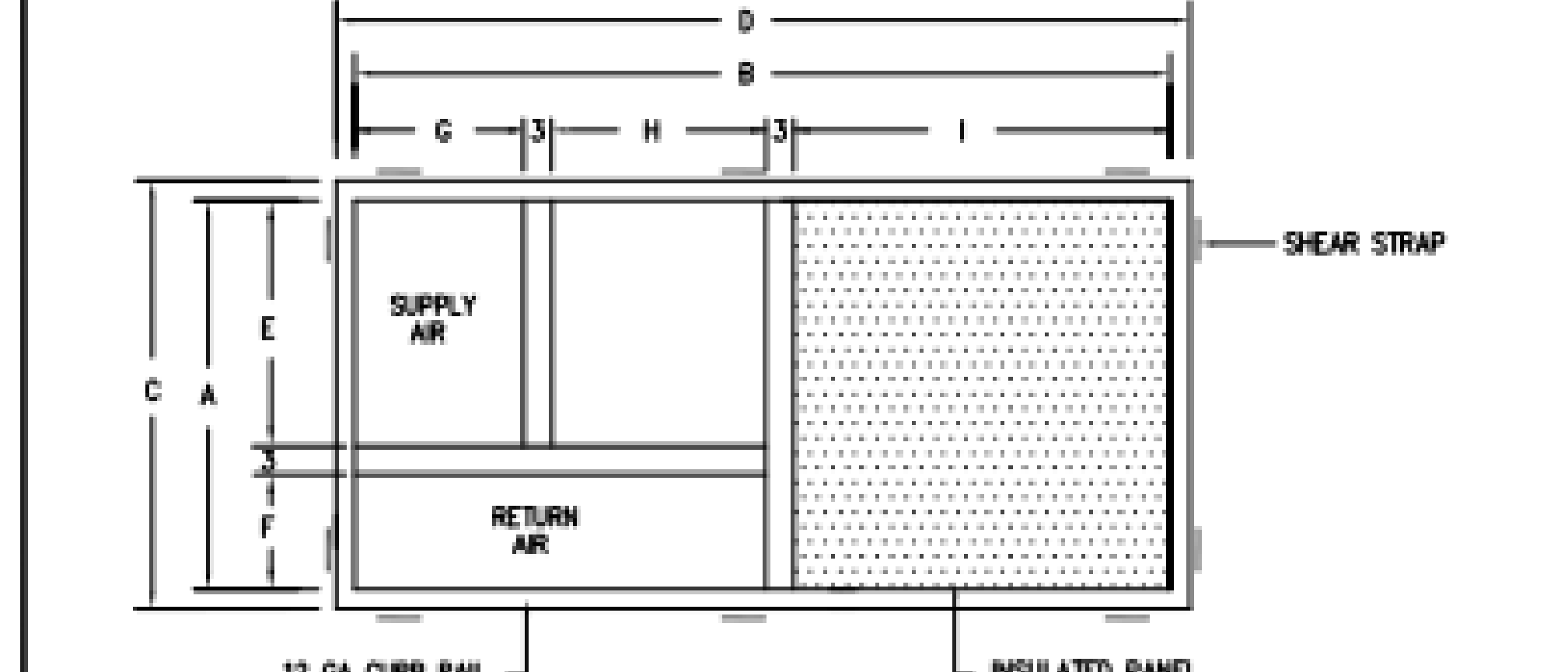


M. W. SAUSSÉ & CO., INC.  
 26744 Witherspoon Pkwy, Valencia, CA 91355  
 Phone: (861) 257-3311 Fax: (861) 257-7673

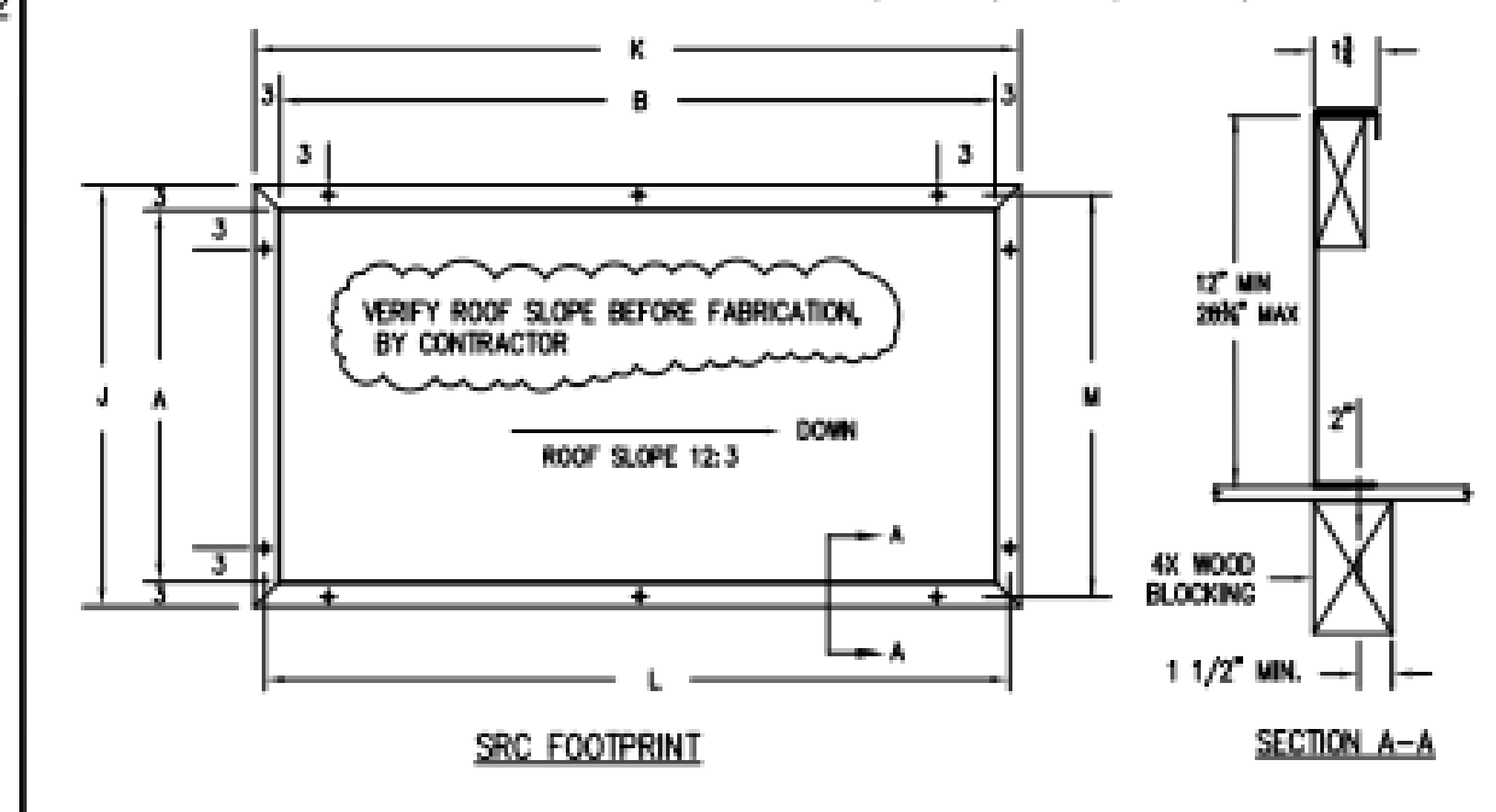
**Vibrex SRC**

JOB NAME: COVINA USD - BEN LOMOND ES  
 CUST. P.O.:  
 MECH. ENGR.: DLR  
 MARK: 3 TON

MARK	MAKE	TYPE	SIZE	CURB WT
3 TON	CARRIER	SOFCOA	04	275#



A	B	C	D	E	F	G	H	I	J	K	L	M
36-15/16	67-1/8	40-7/16	70-5/8	20-1/4	13-11/16	13-7/8	15-3/16	32-1/16				
						42-15/16	73-1/8	71-1/8	40-15/16			



NOTES:  
 1. L & M DIMENSIONS ARE CENTERLINES OF ANCHOR HOLES IN CURB BOTTOM FLANGE.  
 2. FOR ANCHORAGE, USE 3/8" DIA. LAG BOLT MIN. 3" LONG INTO MIN. 4 X 4 DOUGLAS FIR, MIN 1-1/2" EDGE DISTANCE, & MIN 2-5/8" END DISTANCE. (3) ON LONG SIDES & (2) ON SHORT SIDES.

1 RTU CURB  
 M7.5 NO SCALE



Ben Lomond Elementary School  
 COVINA VALLEY USD  
 681 E COVINA BLVD, COVINA, CA 91722

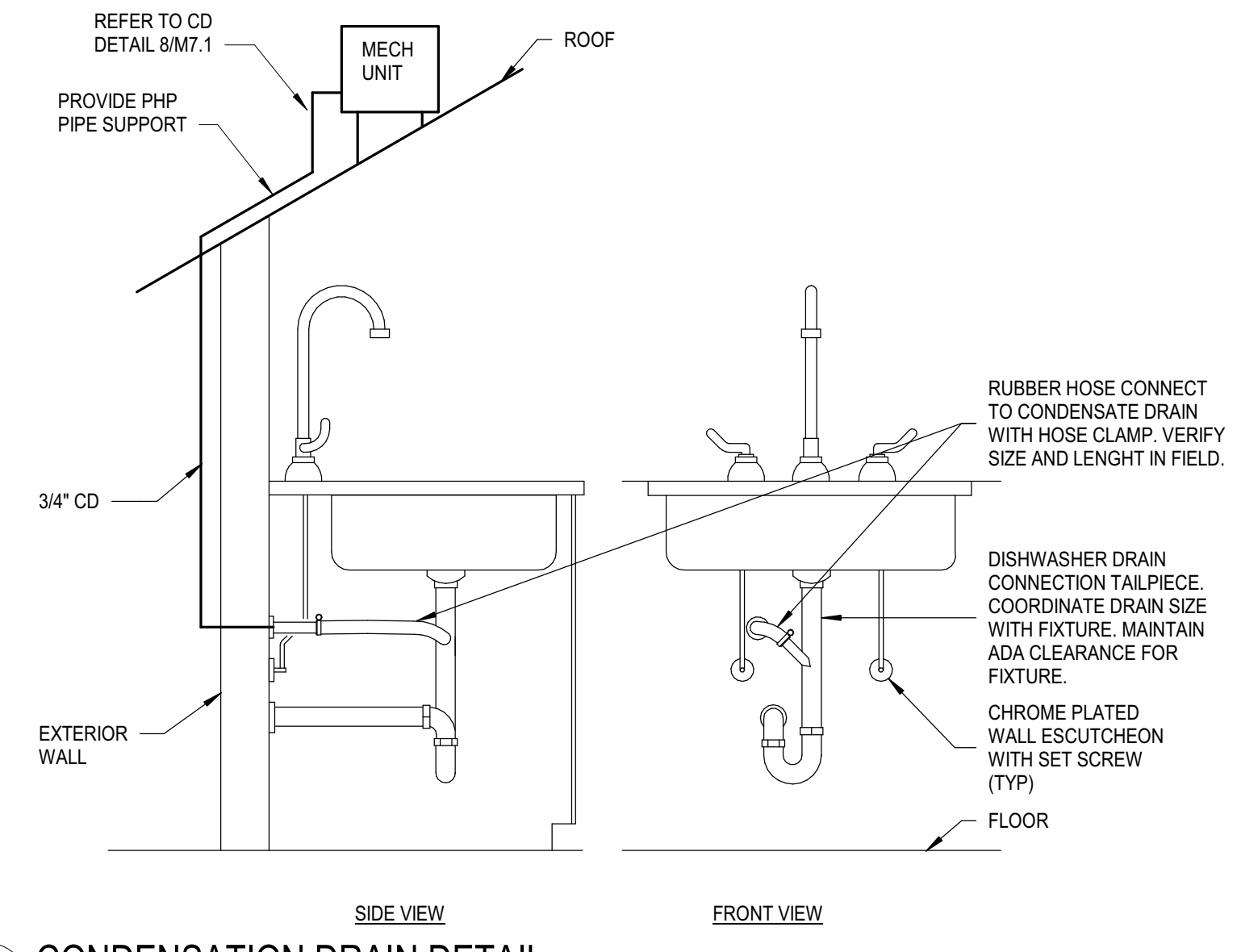
100% CONSTRUCTION DOCUMENT  
 11/08/2022 REVISIONS

MECHANICAL DETAILS

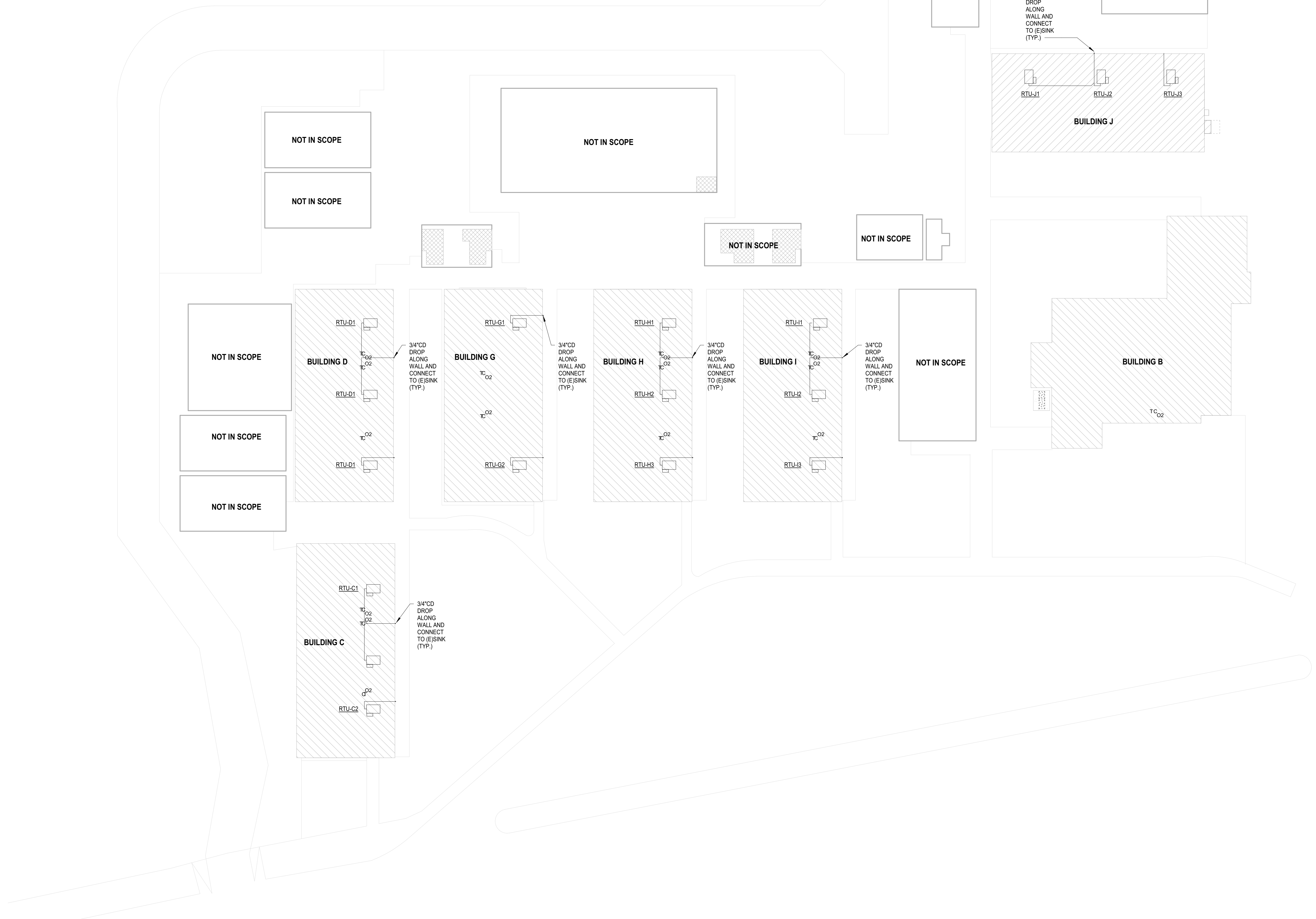
M7.5







1 CONDENSATION DRAIN DETAIL  
MP1.1 SCALE: 1/8" = 1'-0"



MECHANICAL PLUMBING SITE PLAN  
SCALE: 3/64" = 1'-0"

GENERAL NOTES

- IF AN EXISTING SINK IS BELOW NEW MECHANICAL UNITS, PROCEED WITH CONDENSATE DROP ALONG EXTERIOR FACE OF WALL AND CONNECT TO EXISTING LAVSINK IN CLASSROOM AS SHOWN IN DETAIL 1MP1.1

SITE LEGEND

- EXISTING BUILDING - NOT IN SCOPE
- EXISTING BUILDING - SCOPE OF WORK UNDER THIS DSA APPLICATION
- (E) RESTROOMS - NOT IN SCOPE



**Ben Lomond Elementary School**  
COVINA VALLEY USD  
681 E COVINA BLVD, COVINA, CA 91722

100%  
CONSTRUCTION  
DOCUMENT  
11/08/2022  
REVISIONS

75-22605-00

MECHANICAL  
PLUMBING SITE  
PLAN

MP1.1

Autodesk Docs/75-22605-00\_CVUSD - District Wide HVAC Replacement/75-22605-00\_CVUSD\_Ben Lomond ES MEP\_2022.rvt  
10/21/2022 4:57:59 PM

SHEET INDEX

Table with 2 columns: ID (E0.1, E2.1, E5.1, E6.1) and Description (ELECTRICAL SYMBOLS, ROOF ELECTRICAL PLAN, etc.)

GENERAL NOTES

- 1 PENETRATIONS IN WALLS REQUIRING PROTECTED OPENINGS MUST BE FIRESTOPPED WITH AN APPROVED MATERIAL.
2 UNLESS SPECIFICALLY SHOWN ON THESE DRAWINGS, NO STRUCTURAL MEMBER SHALL BE CUT, DRILLED, OR NOTCHED WITHOUT PRIOR AUTHORIZATION...

APPLICABLE CODE: 2019 CBC 02/02/2020 REVISED: 02/14/2020

MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA-APPROVED CONSTRUCTION DOCUMENTS...

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

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE...

- A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
B. COMPONENTS WEIGHING LESS THAN 25 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT...

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...

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

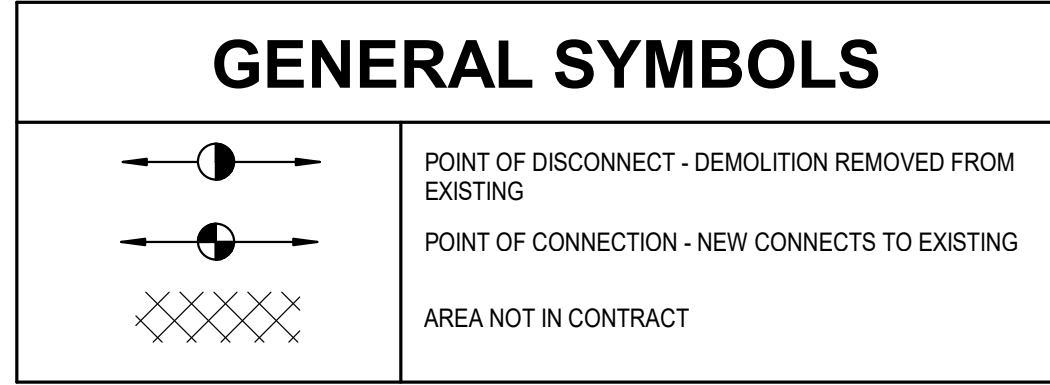
PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCS 7-16 SECTION 13.3 AS DEFINED IN ASCS 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8, AND 2019 CBC SECTIONS 1617A.1.24, 1617A.1.25 AND 1617A.1.26.

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

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

Table with 5 columns: MP, MD, PP, E, and Option 1/2 description.

GENERAL SYMBOLS



POWER

- CIRCUIT HOME RUN
CONDUIT TURNING UP
CONDUIT TURNING DOWN
CONDUIT STUB-UP
CONDUIT SLEEVE
CONDUIT SEAL
CONDUIT CONCEALED IN CEILING OR WALLS, POWER
CONDUIT CONCEALED IN CEILING OR WALLS, OTHER (\*) = SEE ABBREVIATIONS
CONDUIT CONCEALED IN FLOOR OR UNDERGROUND, POWER
CONDUIT CONCEALED IN FLOOR OR UNDERGROUND, OTHER (\*) = SEE ABBREVIATIONS
EXPOSED CONDUIT, POWER
EXPOSED CONDUIT, OTHER (\*) = SEE ABBREVIATIONS
FIRE RATED SLEEVE
TRANSFORMER
BRANCH CIRCUIT PANELBOARD MOUNT 72-INCHES TO TOP
DISTRIBUTION PANELBOARD MOUNT 72-INCHES TO TOP
EQUIPMENT CABINET, AS NOTED
SWITCHBOARD
MOTOR STARTER OR DRIVE
DISCONNECT SWITCH
COMBINATION STARTER / DISCONNECT SWITCH
CURRENT TRANSFORMER ENCLOSURE
METER
GENERATOR
AUTOMATIC TRANSFER SWITCH
SYSTEM GROUND ELECTRODE
THERMOSTAT
MUSHROOM SWITCH
ELECTRICAL MANHOLE
ELECTRICAL HAND HOLE
MOTOR CONNECTION, HORSEPOWER AS INDICATED
FUSE AND SWITCH ASSEMBLY
MANUAL CONTROLLER WITH THERMAL OVERLOAD
MANUAL CONTROLLER W/O THERMAL OVERLOAD
CIRCUIT BREAKER ENCLOSURE
PULL BOX
EQUIPMENT CONNECTION
CABLE TRAY, LADDER TYPE OR RUNWAY
CABLE TRAY
MULTI-OUTLET ASSEMBLIES MOUNT 18-INCHES AFF, UNO WHERE DENOTED 'AC', MOUNT ABOVE COUNTER
DIVIDED SURFACE RACEWAY MOUNT 18-INCHES AFF, UNO WHERE DENOTED 'AC', MOUNT ABOVE COUNTER
PUSHBUTTON STATION: MOUNT 42-INCHES AFF UNO
SWITCH, PUSH BUTTON, SINGLE
SWITCH, PUSH BUTTON, DOUBLE
SWITCH, PUSH BUTTON, TRIPLE

- RECEPTACLES, MOUNT 18-INCHES AFF, UNO
DIAGONAL LINE THROUGH SYMBOL OR DENOTED 'AC' INDICATES MOUNT DEVICE ABOVE COUNTER WHERE INDICATED AS 'MOUNT ABOVE COUNTER' MOUNT BOTTOM OF BOX 2-INCHES ABOVE TOP OF BACKSPASH OR 6-INCHES ABOVE COUNTERTOP IF NO BACKSPASH EXISTS.
LABELS SHALL BE MACHINE PRINTED, UNO
SIMPLEX RECEPTACLE
DUPLEX RECEPTACLE
DUPLEX RECEPTACLE, GFI TYPE
DUPLEX RECEPTACLE, MOUNT ABOVE COUNTER
DUPLEX RECEPTACLE, GFI TYPE, MOUNT ABOVE COUNTER
FOURPLEX RECEPTACLE
FOURPLEX RECEPTACLE, GFI TYPE
FOURPLEX RECEPTACLE, MOUNT ABOVE COUNTER
FOURPLEX RECEPTACLE, GFI TYPE, MOUNT ABOVE COUNTER
DUPLEX RECEPTACLE, FLUSH IN CEILING
FOURPLEX RECEPTACLE, FLUSH IN CEILING
DUPLEX RECEPTACLE, HORIZONTALLY MOUNTED
DUPLEX RECEPTACLE, HORIZ. MTD, GFI TYPE
DUPLEX RECEPTACLE, HORIZ. MTD, ABOVE COUNTER
DUPLEX RECEPTACLE, HORIZ. MTD, GFI TYPE, MOUNT ABOVE COUNTER
WEATHER RESISTANT GFI DUPLEX RECEPTACLE, ROOF MOUNT 18-INCHES ABOVE ADJACENT STRUCTURE WITH A WEATHERPROOF, IN-USE COVER
WEATHER RESISTANT GFI DUPLEX RECEPTACLE, MOUNT 18-INCHES AFF WITH A WEATHERPROOF, IN-USE COVER
STD DUPLEX RECEPTACLE TO SERVE ELECTRIC WATER COOLER, MOUNT AT HEIGHT PER
EVC EQUIPMENT MANUFACTURER'S INSTALLATION GUIDELINES: WIRE TO GFCI BKR IN PANELBOARD
DUPLEX RECEPTACLE TO SERVE TELEVISION MOUNT AT SAME HEIGHT AND WITHIN 8-INCHES OF ADJACENT TV OUTLET
DUPLEX RECEPTACLE, EMERGENCY
FOURPLEX RECEPTACLE, EMERGENCY
DUPLEX RECEPTACLE, LOWER SWITCH
DUPLEX RECEPTACLE, SWITCHED
RANGE RECEPTACLE, MOUNT 8-INCHES AFF
SPECIAL RECEPTACLE, DEEP WELL BOX
FLUSH FLOOR OUTLET BOX UNO
FLUSH FLOOR BOX WITH DUPLEX RECEPTACLE UNO
MULTI-DEVICE FLOOR BOX WITH DUPLEX RECEPTACLE AND TELECOMMUNICATIONS OUTLETS
USB ONLY RECEPTACLE
RECEPTACLE WITH USB PORTS
FLUSH JUNCTION BOX, CEILING MOUNTED
JUNCTION BOX FOR FUTURE PROJECTOR POWER MOUNT 24-INCHES ABOVE SUSPENDED CEILING MOUNT TIGHT TO CEILING AT EXPOSED STRUCTURE LABEL BOX COVER PROJECTOR POWER
JUNCTION BOX ABOVE SUSPENDED CEILING WITH FLEX CONNECTION
FLUSH JUNCTION BOX, WALL MOUNTED
SURFACE JUNCTION BOX, WALL MOUNTED
SURFACE JUNCTION BOX, CEILING MOUNTED
HAND DRYER, INSTALL HAND DRYER SPECIFIED IN DIV. 11
MCA
MCB
MCC
MANHOLE
MLO
MOCP
MRTS
MSB
MOUNTED
MTG
MTS
N
N.C
N.O
NF
NL
OFCI
OS&Y
P
PA
PB
PH
PIV
PNL
PWR
RCP
RECPT
REF
RESP
SCCR
SD
SEC
SPD
SWBD
TBB
TCC
TGB
TMGB
TO
TR
TS
TV
UG
UPS
V
VA
VFD
W
WA
WG
WP
XFMR
DUPLEX RECEPTACLE, EMERGENCY
FOURPLEX RECEPTACLE, EMERGENCY
DUPLEX RECEPTACLE, LOWER SWITCH
DUPLEX RECEPTACLE, SWITCHED
RANGE RECEPTACLE, MOUNT 8-INCHES AFF
SPECIAL RECEPTACLE, DEEP WELL BOX
FLUSH FLOOR OUTLET BOX UNO
FLUSH FLOOR BOX WITH DUPLEX RECEPTACLE UNO
MULTI-DEVICE FLOOR BOX WITH DUPLEX RECEPTACLE AND TELECOMMUNICATIONS OUTLETS
USB ONLY RECEPTACLE
RECEPTACLE WITH USB PORTS
FLUSH JUNCTION BOX, CEILING MOUNTED
JUNCTION BOX FOR FUTURE PROJECTOR POWER MOUNT 24-INCHES ABOVE SUSPENDED CEILING MOUNT TIGHT TO CEILING AT EXPOSED STRUCTURE LABEL BOX COVER PROJECTOR POWER
JUNCTION BOX ABOVE SUSPENDED CEILING WITH FLEX CONNECTION
FLUSH JUNCTION BOX, WALL MOUNTED
SURFACE JUNCTION BOX, WALL MOUNTED
SURFACE JUNCTION BOX, CEILING MOUNTED
HAND DRYER, INSTALL HAND DRYER SPECIFIED IN DIV. 11
MINIMUM CIRCUIT AMPACITY
MAIN CIRCUIT BREAKER
MOTOR CONTROL CENTER
MANHOLE
MAIN LUGS ONLY
MAXIMUM OVERCURRENT PROTECTION
MOTOR RATED TOGGLE SWITCH
MAIN SWITCHBOARD
MOUNTED
MOUNTING
MAIN TRANSFER SWITCH
NEUTRAL
NORMALLY CLOSED
NORMALLY OPEN
NON-FUSED
NIGHT LIGHT
OWNER FURNISHED CONTRACTOR INSTALLED
OUTSIDE SCREW AND YOKE
POLE(S)
PUBLIC ADDRESS
PULL BOX
PHASE
PHASE
POST INDICATOR VALVE
PANEL
POWER
REFLECTED CEILING PLAN
RECEPTACLE
REFERENCE
RESPONSE
SHORT CIRCUIT CURRENT RATING
SMOKE DAMPER
SECONDARY
SURGE PROTECTION DEVICE
SWITCHBOARD
TELECOMMUNICATIONS BONDING BACKBONE
TIME CLOCK
TELECOMMUNICATIONS GRONDING BUSBAR
TELECOMMUNICATIONS MAIN GRONDING BUSBAR
TELECOMMUNICATIONS OUTLET
TELECOMMUNICATIONS ROOM
TAMPER SWITCH
TELEVISION
UNDERGROUND
UNINTERRUPTABLE POWER SUPPLY
VOLT
VOLT-AMPERE
VARIABLE FREQUENCY DRIVE
WIRE
TELECOMMUNICATIONS WORK AREA
WIRE GUARD
WEATHER-PROOF (NEMA 3R)
TRANSFORMER

ABBREVIATIONS

Table of abbreviations and their meanings, including terms like AMPERE, AUTOMATIC TRANSFER SWITCH, BUILDING AUTOMATION SYSTEM, etc.

NOTE: ALL NOTES ON THIS SHEET ARE APPLICABLE TO ALL OTHER SHEETS IN THIS SET. THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE APPLICABLE IN THIS SET OF DRAWINGS.



Ben Lomond Elementary School
COVINA VALLEY USD
661 E COVINA BLVD., COVINA, CA 91722

100% CONSTRUCTION DOCUMENT
11/08/2022 REVISIONS

75-22605-00

ELECTRICAL SYMBOLS, ABBREVIATIONS & NOTES

E0.1

A

B

C

D

E

F

1

2

3

4

5

GENERAL NOTES

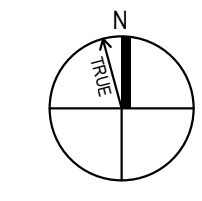
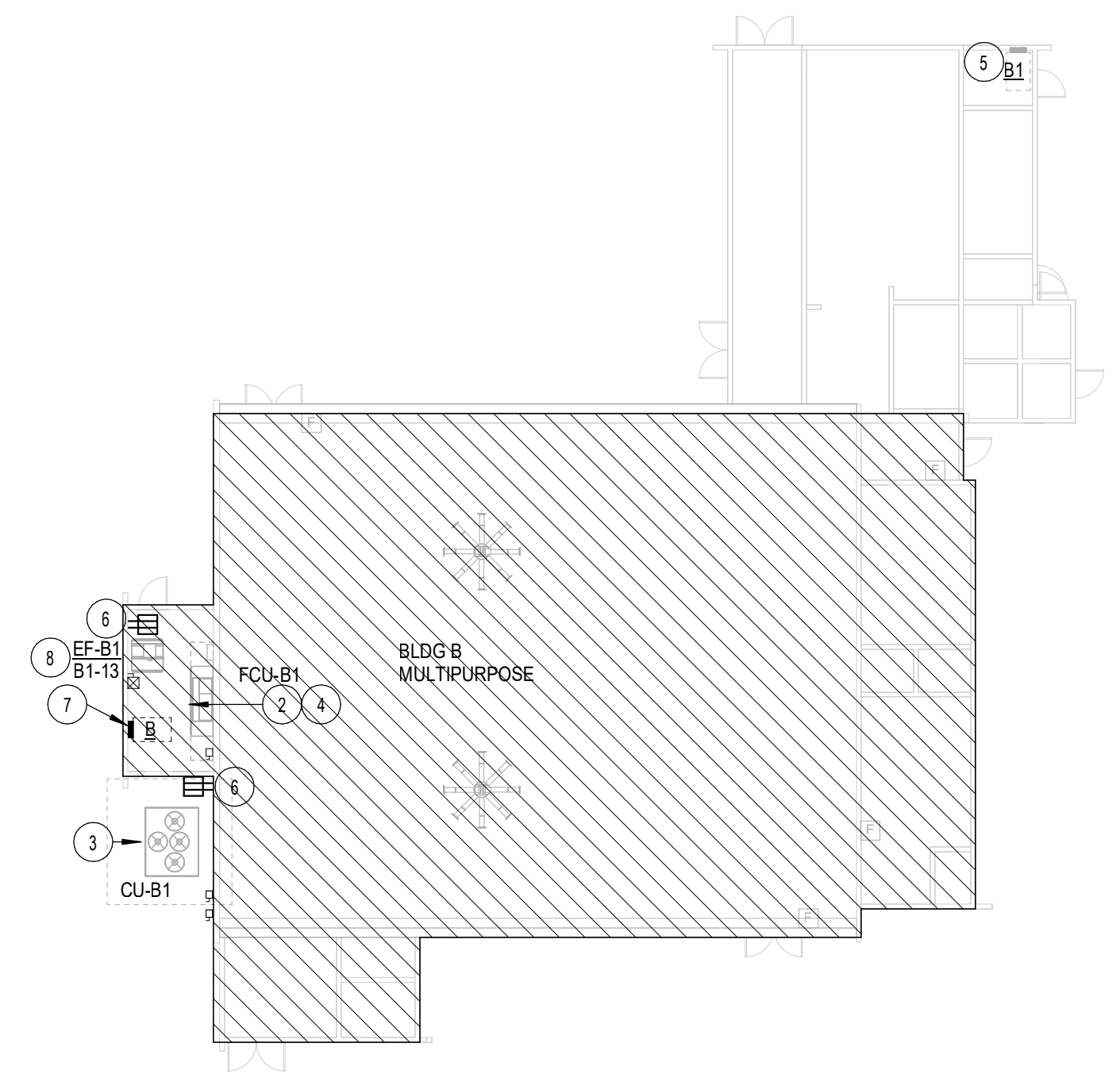
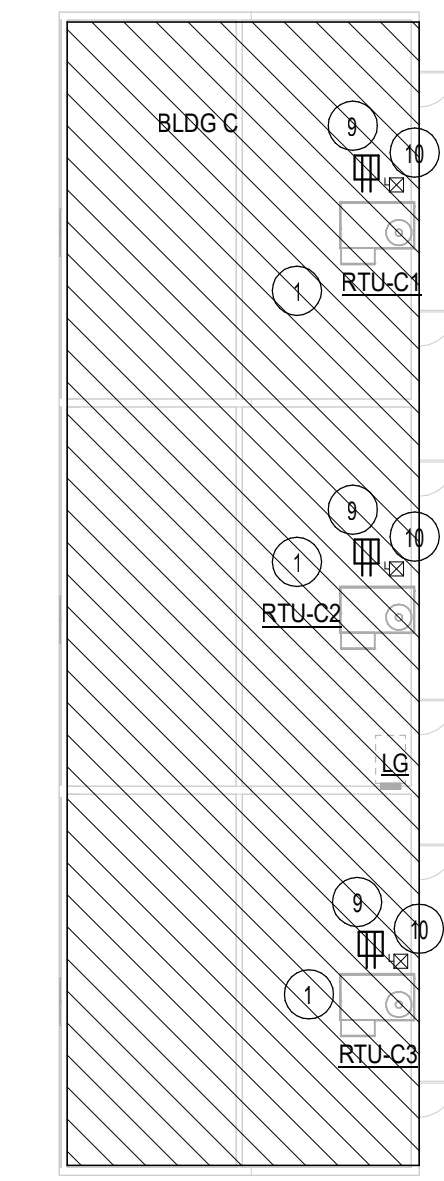
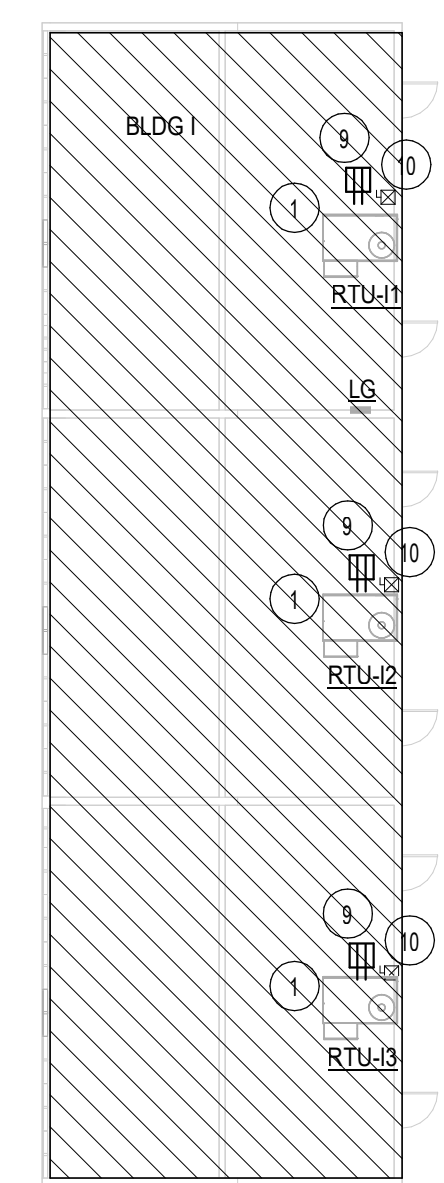
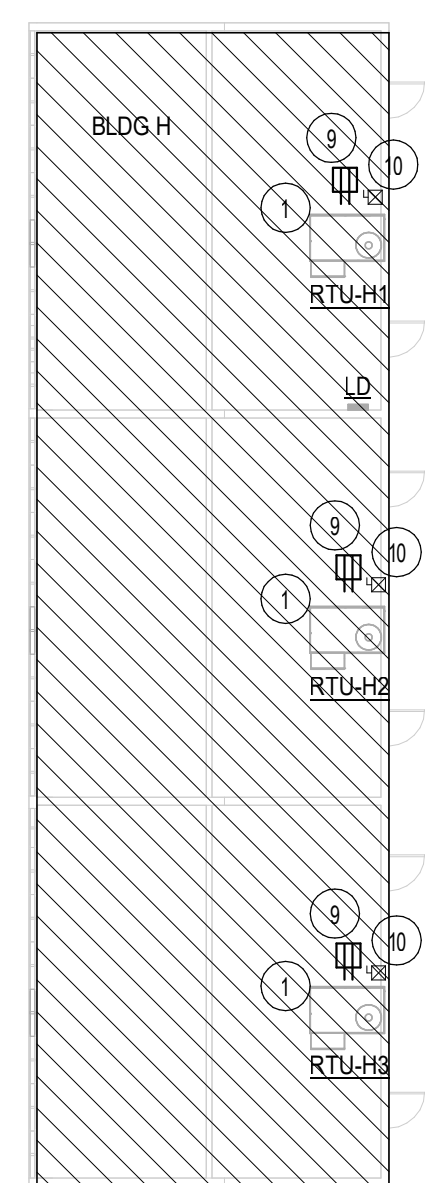
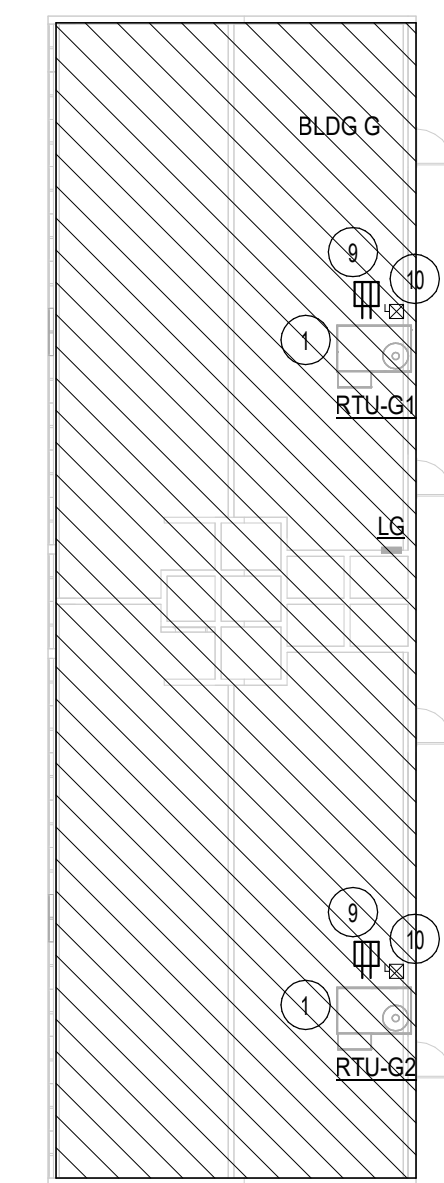
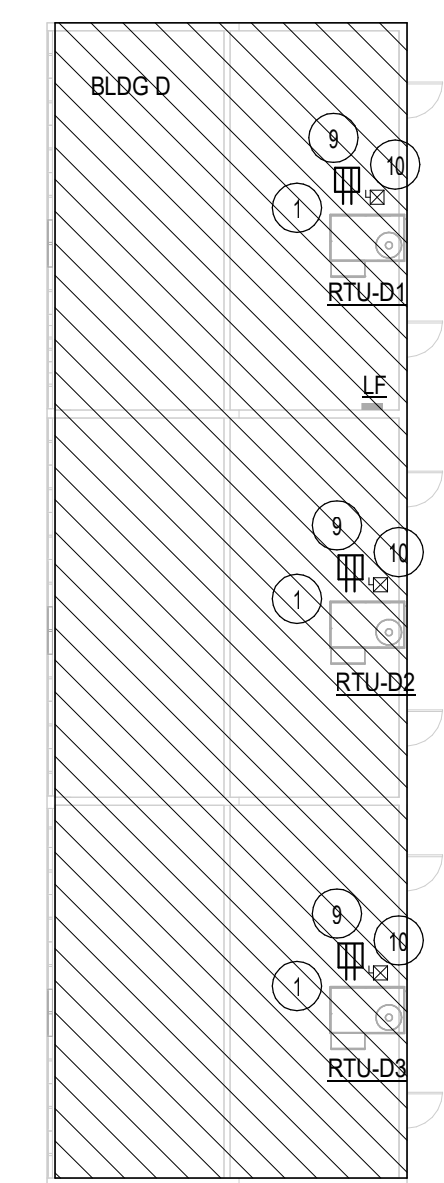
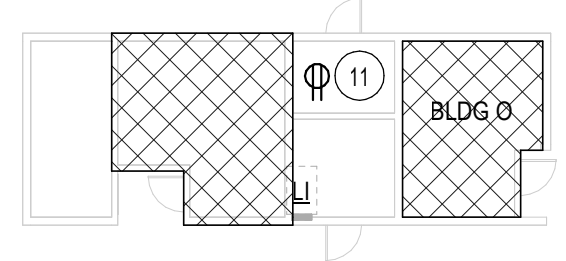
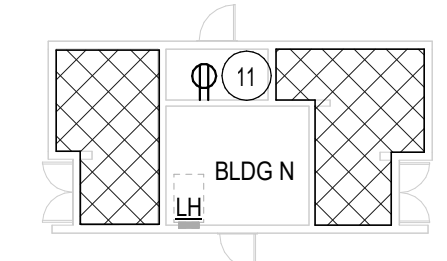
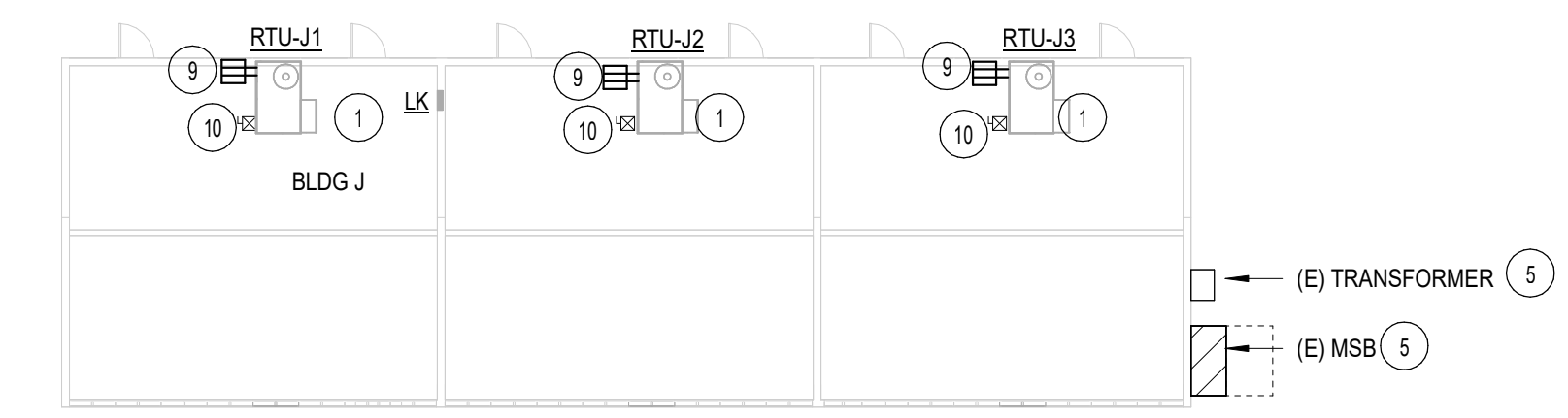
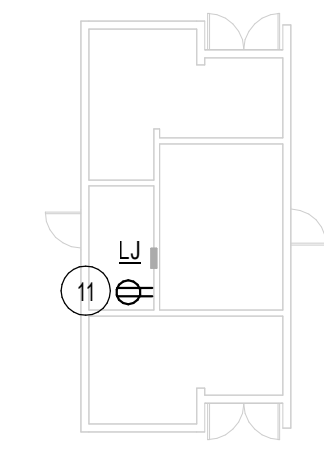
- A WORK TO INCLUDE REMOVAL OF EXISTING FEEDER TO EXISTING HVAC EQUIPMENT THAT ARE TO BE REMOVED AND REPLACED. FEEDER TO EXISTING INDOOR FAN COIL UNIT TO BE REMOVED IN ITS ENTIRETY.
- B DISCONNECTING MEANS TO BE NEMA 3R RATED, FURNISHED AND INSTALLED BY DIVISION 26.
- C CARBON MONOXIDE DETECTION SYSTEM NOT REQUIRED. ELECTRIC HEATING IS BEING PROVIDED.
- D SEE SCHEDULE ON SHEET ES.1 FOR ADDITIONAL INFORMATION.
- E FUSES SHALL BE PROVIDED PER EQUIPMENT NAMEPLATE RATING.
- F ELECTRICAL PANELS LOCATED AT GRADE LEVEL DIRECTLY BELOW WHERE SHOWN.
- G ENERGY MANGEMENT SYSTEM (EMS) / BUILDING AUTOMATION SYSTEM (BAS) IS A DELEGATED DESIGN SCOPE BY CONTRACTOR. CONTRACTOR TO FIELD COORDINATE WITH SCHOOL DISTRICT FOR LOCATIONS OF EMS ROUTER AND EMS PANEL AS WELL AS CONDUIT ROUTING.
- H CARBON MONOXIDE DETECTION SYSTEM WILL NOT BE PROVIDED AT THIS TIME UNDER CEBC 503.15.1.  
EXCEPTION 2: THE GROUP BUILDING WAS CONSTRUCTED BEFORE THE ADOPTION OF THE 2016 CALIFORNIA BUILDING STANDARDS CODE.  
EXISTING HVAC UNITS ARE BEING REPLACED IN KIND THROUGHOUT.
- J CONTRACTOR TO PROVIDE CONNECTION FROM LOAD SIDE OF HVAC EQUIPMENT DISCONNECT SWITCH TO FEED POWER EXHAUST DISCONNECT SWITCH. PROVIDE SAME SIZE FEEDER. PROVIDE FUSES PER EQUIPMENT NAMEPLATE RATING.

KEYNOTES

No.	DESCRIPTION
1	EXISTING HVAC EQUIPMENT AT GRADE TO BE DISCONNECTED AND REPLACED AS PART OF THIS SCOPE OF WORK WITH ROOF TOP EQUIPMENT. EXTEND EXISTING FEEDER AS REQUIRED. SEE TABLE ON SHEET ES.1 FOR OTHER INFORMATION. PROVIDE ALL REQUIRED CONNECTION.
2	EXISTING HVAC EQUIPMENT AT GRADE TO BE DISCONNECTED AND REPLACED AS PART OF THIS SCOPE OF WORK. PROVIDE NEW FEEDER PER TABLE ON SHEET ES.1. PROVIDE ALL REQUIRED CONNECTION.
3	NEW HVAC EQUIPMENT AT GRADE. PROVIDE NEW FEEDER PER TABLE ON SHEET ES.1. PROVIDE ALL REQUIRED CONNECTION.
4	DUCT SMOKE DETECTOR FOR COMPLIANCE TO CALIFORNIA MECHANICAL CODE SECTION 909 IS NOT REQUIRED PER CODE EXCEPTION NO.2. ROOM HAVE DIRECT EXIT TO EXTERIOR AND TRAVEL DISTANCE DOES NOT EXCEED 100 FEET.
5	EXISTING ELECTRICAL EQUIPMENT TO REMAIN AND TO BE PROTECTED IN PLACE.
6	PROVIDE 120 VOLT CIRCUIT FROM SPARE BREAKER. PROVIDE TANDEM BREAKER AS REQUIRED.
7	(N) PANELBOARD B AT GRADE LEVEL. 277/480 VOLTS, 3-PHASE, W-WIRE, 225 AMP BUS. REFER TO SHEET E6.1 FOR PANELBOARD MOUNTING DETAIL. PROVIDE UNDERGROUND TRENCHING FROM SWITCHBOARD MSB AS REQUIRED. FIELD COORDINATE EXACT ROUTING WITH SCHOOL DISTRICT.
8	SIZE 1 MOTOR STARTER FOR EXHAUST FAN. PROVIDE ALL REQUIRED CONNECTIONS.
9	GFCI TYPE RECEPTACLE PROVIDED BY HVAC EQUIPMENT MANUFACTURER. SEE TABLE PROVIDED ON SHEET ES-1. PROVIDE WEATHERPROOF COVER.
10	FUSED DISCONNECT SIZE PER TABLE SHOWN ON ES.1.
11	PROVIDE 120V CIRCUIT FOR EMS PANEL AND EMS ROUTER. FIELD VERIFY EXACT LOCATION OF EMS PANEL AND EMS ROUTER.

SITE LEGEND

- EXISTING BUILDING NOT IN SCOPE
- EXISTING BUILDING - SCOPE OF WORK UNDER THIS DSA APPLICATION
- (E) RESTROOMS - NOT IN SCOPE



OVERALL ELECTRICAL POWER PLAN

SCALE: 1/16" = 1'-0"



**Ben Lomond Elementary School**  
 COVINA VALLEY USD  
 681 E COVINA BLVD, COVINA, CA 91722

100%  
 CONSTRUCTION  
 DOCUMENT  
 11/08/2022  
 REVISIONS

75-22605-00

ROOF  
ELECTRICAL  
PLAN

E2.1

Autodesk Docs/75-22605-00 COVUSD - District Wide HVAC Replacement/75-22605-00 COVUSD - Ben Lomond ES\_MEP\_2022.rvt  
 8/29/2022 2:25:15 PM

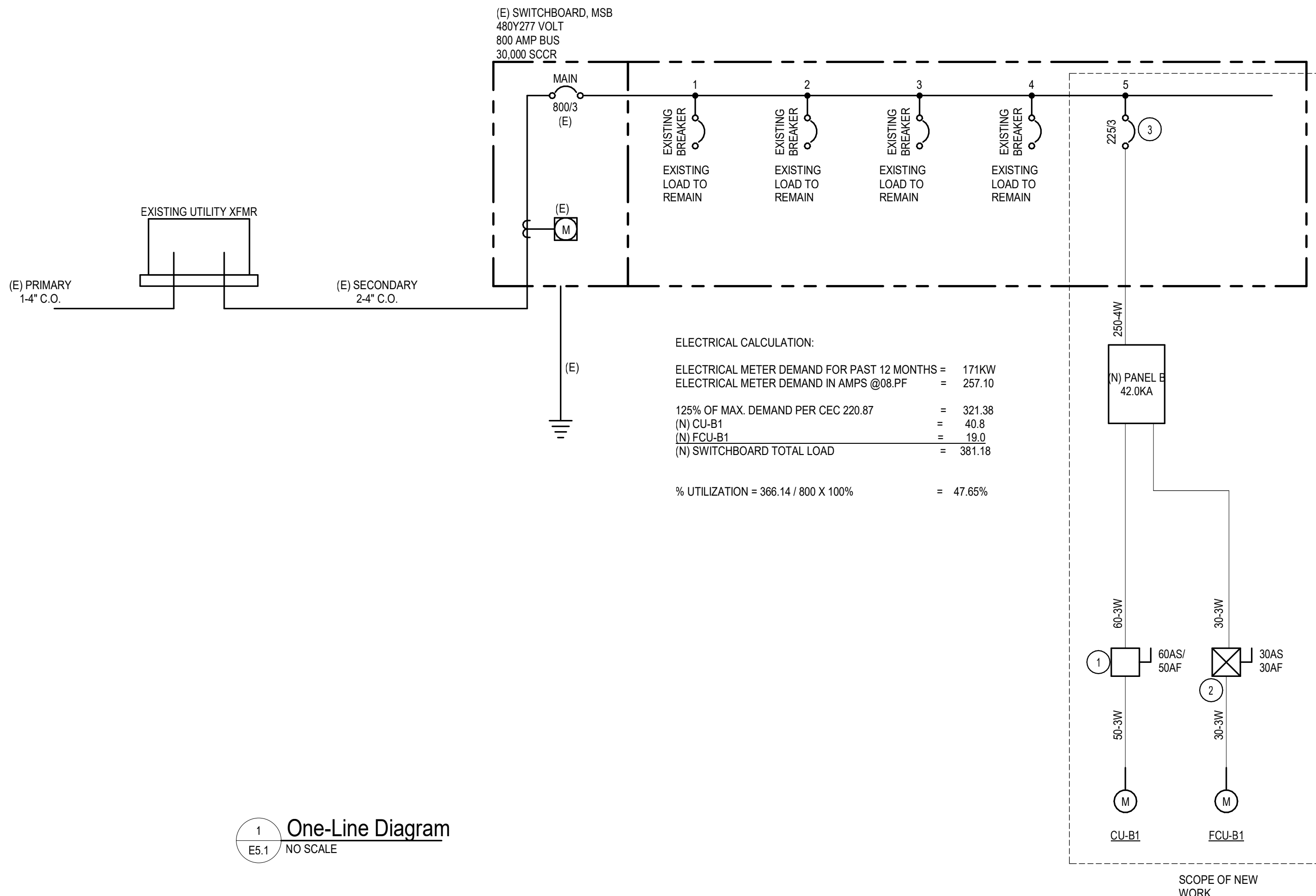
### GENERAL SINGLE LINE NOTES

- OVERCURRENT DEVICES OF ENTIRE DISTRIBUTION SYSTEM SHALL MEET STATED FAULT CURRENT VALUES WITH FULLY RATED EQUIPMENT.
- CONDUCTOR LENGTHS INDICATED ON THE SINGLE LINE DIAGRAM ARE FOR FAULT CURRENT CALCULATIONS ONLY. ACTUAL LENGTH SHALL BE DETERMINED BY FIELD CONDITIONS AND ACTUAL ROUTES OF FEEDERS.
- REFER TO SWITCHBOARD SCHEDULES AND DISTRIBUTION PANEL SCHEDULES FOR ADDITIONAL REQUIREMENTS. WHERE A DISCREPANCY EXISTS BETWEEN EQUIPMENT ON THE SINGLE LINE DIAGRAM AND THE DETAILS SCHEDULES, THE ITEM OR ARRANGEMENT WITH BETTER QUALITY, GREATER QUANTITY, OR HIGHER COST SHALL BE USED.
- ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

CCT		CIRCUIT DESCRIPTION	BKR TRIP	P	BKR TYPE	LOAD TYPE	PHASE A (VA)	PHASE B (VA)	PHASE C (VA)	LOAD TYPE	BKR TRIP	P	BKR TYPE	CIRCUIT DESCRIPTION	CCT
1							9,090	9,090	9,090						2
3	CU-B1		50	3	M										4
5															6
7															8
9															10
11															12
13															14
15	FCU-B1		30	3	M		4,207	4,207	4,207						16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
TOTAL LOAD:							13297 VA	13297 VA	13297 VA						
TOTAL AMPS:							48.0 A	48.0 A	48.0 A						

LOAD TYPE	LOAD DESCRIPTION	CONNECTED LOAD (VA)	DEMAND D.	ESTIMATED DEMAND (VA)	DEMAND FACTOR NOTES	BKR TYPE	PANEL TOTALS
L	LIGHTING	0 VA	0.00%	0 VA	CONTINUOUS LOAD @ 125%	G = GFCI (5mA)	CONNECTED LOAD: 40 kVA ESTIMATED DEMAND: 47 kVA CONNECTED CURRENT: 48.0 A EMD CURRENT: 56.2 A
R	RECEPTACLES	0 VA	0.00%	0 VA	FIRST 10kVA @ 100%, REMAINDER @ 50%	GP = GFP (30mA)	
K	KITCHEN	0 VA	0.00%	0 VA	NON-DWELLING KITCHEN LOADS, NEC ART. 220	ST = SHUNT TRIP	
M	MOTOR	38892 VA	117.89%	46710 VA	LARGEST MOTOR, NEC ART. 430	LO = LOCK OUT	
C	COOLING	0 VA	0.00%	0 VA			
H	HEATING	0 VA	0.00%	0 VA			
O	OTHER	0 VA	0.00%	0 VA			
Spare	SPARE	0 VA	0.00%	0 VA			

**NOTES:**



No.	DESCRIPTION
1	FUSED DISCONNECT TO BE PROVIDED BY CONTRACTOR.
2	VARIABLE FREQUENCY DRIVE WITH ON/OFF SWITCH TO BE PROVIDED UNDER DIVISION 23.
3	CONTRACTOR TO MATCH EXISTING BREAKER.

FEEDER SCHEDULE - COPPER													
MARK (AMPS)	# SETS	Ø & N	GND	CONDUIT SIZE									
				4W	3W	2W							
15	1	12	12	3/4"	3/4"	3/4"							
20	1	12	12	3/4"	3/4"	3/4"							
25	1	10	10	3/4"	3/4"	3/4"							
30	1	10	10	3/4"	3/4"	3/4"							
35	1	8	10	3/4"	3/4"	3/4"							
40	1	8	10	3/4"	3/4"	3/4"							
45	1	6	10	1"	3/4"	3/4"							
50	1	6	10	1"	3/4"	3/4"							
60	1	4	10	1-1/4"	1"	3/4"							
70	1	4	8	1-1/4"	1"	3/4"							
80	1	3	8	1-1/4"	1-1/4"	1"							
90	1	2	8	1-1/4"	1-1/4"	1"							
100	1	1	8	1-1/2"	1-1/2"	1-1/4"							
110	1	1	6	1-1/2"	1-1/2"	1-1/4"							
125	1	1	6	1-1/2"	1-1/2"	1-1/4"							
150	1	1/0	6	2"	1-1/2"	1-1/4"							
175	1	2/0	6	2"	1-1/2"	1-1/4"							
200	1	3/0	6	2"	2"	1-1/2"							
225	1	4/0	4	2-1/2"	2"	1-1/2"							
250	1	250	4	2-1/2"	2"	1-1/2"							
300	1	350	4	3"	2-1/2"	2"							
350	1	500	3	3-1/2"	3"	2-1/2"							
400	1	600	3	3-1/2"	3"	2-1/2"							
400	2	3/0	3	2"	2"	1-1/2"							
450	2	4/0	2	2-1/2"	2"	1-1/2"							
500	2	250	2	2-1/2"	2-1/2"	2"							
600	2	350	1	3"	2-1/2"	2"							
700	2	500	1/0	3-1/2"	3"	2-1/2"							
800	2	600	1/0	3-1/2"	3"	2-1/2"							
1000	3	400	2/0	3"	3"	2-1/2"							
1200	3	600	3/0	3-1/2"	3-1/2"	3"							
1800	4	600	4/0	3-1/2"	3-1/2"	3"							
2000	5	600	250	4"	3-1/2"	3"							
2500	6	600	350	4"	3-1/2"	3"							
3000	8	500	400	3-1/2"	3"	2-1/2"							
4000	10	600	500	4"	3-1/2"	3"							

ABBREVIATIONS:

Ø PHASE  
N NEUTRAL  
GND EQUIPMENT GROUNDING CONDUCTOR  
4W FOUR WIRE + GROUND (3Ø, N, GND)  
3W THREE WIRE + GROUND (3Ø, GND or 2Ø, N, GND)  
2W TWO WIRE + GROUND

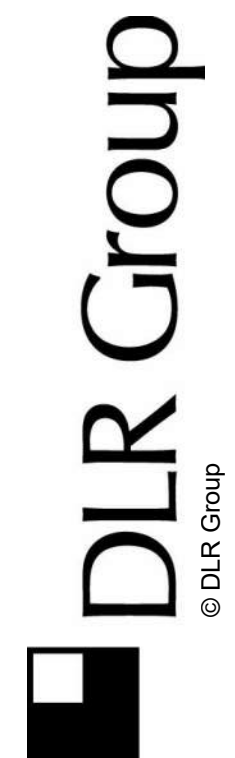
NOTES:

- CONDUCTOR AMPACITIES ARE BASED ON NEC TABLE 310.15(B)(16).
- CONDUIT SIZES ARE BASED ON A MAXIMUM FILL RATIO OF 40%.
- SCHEDULE SHALL BE USED FOR FEEDERS AND BRANCH CIRCUITS WHERE APPLICABLE.
- ALL FEEDERS AND BRANCH CIRCUITS SHALL INCLUDE AN EQUIPMENT GROUNDING CONDUCTOR. SCHEDULE IS VALID FOR TYPE THHN, THWN-2, AND XHHW-2 CONDUCTORS. SEE SPECIFICATIONS FOR CONDUCTOR TYPES REQUIRED.
- SCHEDULE IS VALID FOR TYPE EMT, IMC, FMC, LPAC, HDPE, AND RMC-40 RACEWAYS. SEE SPECIFICATIONS FOR RACEWAY APPLICATIONS. OPTIONAL CONFIGURATIONS (1 OR 2 SETS) ARE GIVEN FOR SOME SIZES.
- NOT ALL SIZES USED.

Ben Lomond AC UNIT REPLACEMENT																								
TAGS	EXISTING UNIT						TAGS	NEW UNIT						NOTES										
	V/PH	MCA	FLA	MOCF	ELECTRICAL PANEL/CKT#	FEEDER SIZE		DISCONNECT	DIRECT REPLACEMENT? Y/N	CFM	V/PH	MCA	MOCF		ELECTRICAL PANEL/CKT#	DISCONNECT	FEEDER SIZE	REQUIRED?	Model#	MCA	MOCF	FEEDER SIZE	DISCONNECT	
NA	-	-	-	NA	NA	NA	NA	CU-B1 (BLDG. B)	N	-	480/3	40.8	50	B-1,3,5	60A (50A FUSE)	3#6+1#10GND-0.75°C	NO	-	-	-	-	-	-	-
NA	-	-	-	NA	NA	NA	NA	FCU-B1 (BLDG. B)	N	8,000	480/3	19	30	B-13,15,17	30A (20A FUSE)	3#12, 1#12GND-0.75°C	NO	-	-	-	-	-	-	-
CU/FCU-C1 (BLDG. C)	240/1	22.875	18.3	30	LG-4,6	2#10, 1#10GND-0.75°C	30	RTU-C1 (BLDG. C)	Y	1,200	240/1	26	30	LG-4,6	30A (30A FUSE)	-	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)		
CU/FCU-C2 (BLDG. C)	240/1	22.875	18.3	30	LG-1,3	2#10, 1#10GND-0.75°C	30	RTU-C1 (BLDG. C)	Y	1,200	240/1	26	30	LG-1,3	30A (30A FUSE)	-	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)		
CU/FCU-C3 (BLDG. C)	240/1	22.875	18.3	30	LG-5,7	2#10, 1#10GND-0.75°C	30	RTU-C1 (BLDG. C)	Y	1,200	240/1	26	30	LG-5,7	30A (30A FUSE)	-	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)		
CU/FCU-D1 (BLDG. D)	240/1	22.875	18.3	30	LH-4,6	2#10, 1#10GND-0.75°C	30	RTU-D1 (BLDG. D)	Y	1,200	240/1	26	30	LH-4,6	30A (30A FUSE)	-	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)		
CU/FCU-D2 (BLDG. D)	240/1	22.875	18.3	30	LH-8,10	2#10, 1#10GND-0.75°C	30	RTU-D2 (BLDG. D)	Y	1,200	240/1	26	30	LH-8,10	30A (30A FUSE)	-	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)		
CU/FCU-D3 (BLDG. D)	240/1	22.875	18.3	30	LH-12,14	2#10, 1#10GND-0.75°C	30	RTU-D3 (BLDG. D)	Y	1,200	240/1	26	30	LH-12,14	30A (30A FUSE)	-	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)		
CU/FCU-G1 (BLDG. G)	240/1	22.875	18.3	30	LH-5,7	2#10, 1#10GND-0.75°C	30	RTU-G1 (BLDG. G)	Y	1,200	240/1	26	30	LH-5,7	30A (30A FUSE)	-	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)		
CU/FCU-G2 (BLDG. G)	240/1	22.875	18.3	30	LH-9,11	2#10, 1#10GND-0.75°C	30	RTU-G2 (BLDG. G)	Y	1,200	240/1	26	30	LH-9,11	30A (30A FUSE)	-	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)		
CU/FCU-H1 (BLDG. H)	240/1	22.875	18.3	30	LI-1,3	2#10, 1#10GND-0.75°C	30	RTU-H1 (BLDG. H)	Y	1,200	240/1	26	30	LI-1,3	30A (30A FUSE)	-	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)		
CU/FCU-H2 (BLDG. H)	240/1	22.875	18.3	30	LI-5,7	2#10, 1#10GND-0.75°C	30	RTU-H2 (BLDG. H)	Y	1,200	240/1	26	30	LI-5,7	30A (30A FUSE)	-	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)		
CU/FCU-H3 (BLDG. H)	240/1	22.875	18.3	30	LI-9,11	2#10, 1#10GND-0.75°C	30	RTU-H3 (BLDG. H)	Y	1,200	240/1	26	30	LI-9,11	30A (30A FUSE)	-	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)		
CU/FCU-I1 (BLDG. I)	240/1	22.875	18.3	30	LI-2,4	2#10, 1#10GND-0.75°C	30	RTU-I1 (BLDG. I)	Y	1,200	240/1	26	30	LI-2,4	30A (30A FUSE)	-	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)		
CU/FCU-I2 (BLDG. I)	240/1	22.875	18.3	30	LI-6,8	2#10, 1#10GND-0.75°C	30	RTU-I2 (BLDG. I)	Y	1,200	240/1	26	30	LI-6,8	30A (30A FUSE)	-	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)		
CU/FCU-I3 (BLDG. I)	240/1	22.875	18.3	30	LI-10,12	2#10, 1#10GND-0.75°C	30	RTU-I3 (BLDG. I)	Y	1,200	240/1	26	30	LI-10,12	30A (30A FUSE)	-	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)		
CU/FCU-J1 (BLDG. J)	240/1	22.875	18.3	30	LI-2,4	2#10, 1#10GND-0.75°C	30	RTU-J1 (BLDG. J)	Y	1,200	240/1	26	30	LI-2,4	30A (30A FUSE)	-	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)		
CU/FCU-J2 (BLDG. J)	240/1	22.875	18.3	30	LI-7,9	2#10, 1#10GND-0.75°C	30	RTU-J2 (BLDG. J)	Y	1,200	240/1	26	30	LI-7,9	30A (30A FUSE)	-	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)		
CU/FCU-J3 (BLDG. J)	240/1	22.875	18.3	30	LI-6,8	2#10, 1#10GND-0.75°C	30	RTU-J3 (BLDG. J)	Y	1,200	240/1	26	30	LI-6,8	30A (30A FUSE)	-	YES	PCD-SRT12CA	7.1	12.8	2#10, 1#10GND-0.75°C	20A (15A FUSE)		

GENERAL NOTES:

- CONTRACTOR TO FIELD VERIFY CIRCUITING AND FEEDER INFORMATION PRIOR TO EQUIPMENT REMOVAL. CONTRACTOR TO PROVIDE REQUIRED ADJUSTMENTS AS NEEDED.
- PROVIDE MECHANICAL UNIT WITH INTEGRAL CONVENIENCE RECEPTACLE. FEED FROM SPARE 20A/1P BREAKER IN NEAREST PANEL. ROUTE 2#12+1#12GND IN 1/2" EMT CONDUIT FROM PANEL TO RECEPTACLE. POWER NO MORE THAN 10 RECEPTACLES ON ONE CIRCUIT. FIELD VERIFY EXACT LOCATION OF NEAREST PANEL AND ROUTE OF NEW CIRCUIT FROM PANEL TO UNIT RECEPTACLE.
- CONTRACTOR TO DEMOLISH POWER CONNECTION FROM CONDENSING UNITS, FAN COIL UNITS AND CONDENSATE PUMPS. DEMOLITION TO CONSIST OF REMOVAL OF POWER CONNECTION, CABLING, AND CONDUIT BACK TO SOURCE UNLESS NOTED OTHERWISE.
- FIELD COORDINATE EQUIPMENT MANUFACTURER FOR FAULT CURRENT LIMITING FUSE TYPES



Ben Lomond Elementary School  
Covina Valley USD  
671 E. COVINA BLVD., COVINA, CA 91722

100% CONSTRUCTION DOCUMENT  
11/08/2022 REVISIONS

75-22605-00

ELECTRICAL DIAGRAMS AND SCHEDULES

### ALTERNATE ARRANGEMENT OF SEISMIC BRACES FOR CONDUITS ON TRAPEZE

**SEISMIC BRACE BRACKET PERPENDICULAR TO JOIST**

**SEISMIC BRACE BRACKET PARALLEL TO JOIST**

BRACE BRACKET ATTACHMENT TYPE	ALLOWABLE LATERAL LOAD LBS	MAX BRACE RANGE	DIA. INCH	Cmin1 INCH	Cmin2 INCH
38A TO 38D	250	30°-45°	1/2	1 1/2	1 1/2
38A TO 38B	150	40°-60°	1/2	1 1/2	1 1/2
50A TO 50D	300	30°-45°	1/2	1 1/2	2
50A TO 50B	170	40°-60°	1/2	1 1/2	2
63A TO 63D	340	30°-45°	1/2	1 1/2	2 1/2
63A TO 63C	200	40°-60°	1/2	1 1/2	2 1/2

NOTES:  
1) REFER TO APPROPRIATE DETAIL F PAGES FOR DIMENSIONS AND NOTATIONS NOT SHOWN.

**MASON WEST, INC.**  
1601 E. Miraloma Ave. Placentia, CA 92670  
TEL (714) 630-0701, www.masonwest.com

**Jiefu "Jeff" Zhang, SE**  
California SE No. 55270

PAGE **A25.1**

08/16/2019 OPM-0043-13: Reviewed for Code Compliance by Jeffrey Kikumoto Page 130 of 812

### SEISMIC BRACKET ATTACHMENT TO STRUCTURAL TIMBER WITH (1) THRU BOLT OR THREADED ROD

**SEISMIC BRACE BRACKET PERPENDICULAR TO JOIST**

**SEISMIC BRACE BRACKET PARALLEL TO JOIST**

BRACE BRACKET ATTACHMENT TYPE	ALLOWABLE LATERAL LOAD LBS	MAX BRACE RANGE	DIA. INCH	Cmin1 INCH	Cmin2 INCH
38A TO 38B	150	40°-60°	1/2	1 1/2	1 1/2
38A TO 38A	80	40°-60°	1/2	1 1/2	1 1/2
50A TO 50C	180	30°-45°	1/2	1 1/2	2
50A TO 50A	100	40°-60°	1/2	1 1/2	2
63A TO 63C	210	30°-45°	1/2	1 1/2	2 1/2
63A TO 63A	120	40°-60°	1/2	1 1/2	2 1/2

NOTES:  
SEE DETAIL NO.00 FOR SECTION NOTES

**MASON WEST, INC.**  
1601 E. Miraloma Ave. Placentia, CA 92670  
TEL (714) 630-0701, www.masonwest.com

**Jiefu "Jeff" Zhang, SE**  
California SE No. 55270

PAGE **N4.10**

08/16/2019 OPM-0043-13: Reviewed for Code Compliance by Jeffrey Kikumoto Page 697 of 812

### SEISMIC BRACKET ATTACHMENT TO WOOD I-JOISTS WITH (1) THRU BOLT OR THREADED ROD

**PERPENDICULAR TO JOIST**

**PARALLEL TO JOIST**

BRACE BRACKET ATTACHMENT TYPE	ALLOWABLE LATERAL LOAD LBS	MAX BRACE RANGE	DIA. INCH
38A TO 38B	150	30°-45°	1/2
38A TO 38A	80	40°-60°	1/2
50A TO 50C	180	30°-45°	1/2
50A TO 50A	100	40°-60°	1/2
63A TO 63C	210	30°-45°	1/2
63A TO 63A	120	40°-60°	1/2

NOTES:  
SEE DETAIL NO.00 FOR SECTION NOTES

**MASON WEST, INC.**  
1601 E. Miraloma Ave. Placentia, CA 92670  
TEL (714) 630-0701, www.masonwest.com

**Jiefu "Jeff" Zhang, SE**  
California SE No. 55270

PAGE **N4.11**

08/16/2019 OPM-0043-13: Reviewed for Code Compliance by Jeffrey Kikumoto Page 698 of 812

### SEISMIC BRACKET ATTACHMENT TO WOOD JOIST

**AT JOIST**

**VIEW A-A**

BRACE BRACKET ATTACHMENT TYPE	ALLOWABLE LATERAL LOAD LBS	MAX BRACE RANGE	DIA. INCH
38A TO 38E	420	30°-45°	1/2
38A TO 38D	300	40°-60°	1/2
50A TO 50E	420	30°-45°	1/2
50A TO 50D	300	40°-60°	1/2
63A TO 63E	420	30°-45°	1/2
63A TO 63D	300	40°-60°	1/2

NOTES:  
SEE DETAIL NO.00 FOR SECTION NOTES

**MASON WEST, INC.**  
1601 E. Miraloma Ave. Placentia, CA 92670  
TEL (714) 630-0701, www.masonwest.com

**Jiefu "Jeff" Zhang, SE**  
California SE No. 55270

PAGE **N4.13**

08/16/2019 OPM-0043-13: Reviewed for Code Compliance by Jeffrey Kikumoto Page 700 of 812

### SEISMIC BRACKET ATTACHMENT TO WOOD JOIST

**AT JOIST**

**VIEW A-A**

BRACE BRACKET ATTACHMENT TYPE	ALLOWABLE LATERAL LOAD LBS	MAX BRACE RANGE	DIA. INCH
38A TO 38E	420	30°-45°	1/2
38A TO 38D	300	40°-60°	1/2
50A TO 50E	420	30°-45°	1/2
50A TO 50D	300	40°-60°	1/2
63A TO 63E	420	30°-45°	1/2
63A TO 63D	300	40°-60°	1/2

NOTES:  
SEE DETAIL NO.00 FOR SECTION NOTES

**MASON WEST, INC.**  
1601 E. Miraloma Ave. Placentia, CA 92670  
TEL (714) 630-0701, www.masonwest.com

**Jiefu "Jeff" Zhang, SE**  
California SE No. 55270

PAGE **N4.13**

08/16/2019 OPM-0043-13: Reviewed for Code Compliance by Jeffrey Kikumoto Page 700 of 812

### ELECTRICAL CONDUIT WEIGHT TABLES

CONDUIT DIAMETER (IN)	CONDUIT WEIGHTS			
	PIPE TYPE	PIPE WEIGHT PER FOOT (LBS)	TOTAL	
ELECTRICAL METAL TUBING (EMT) WEIGHT	1/2	0.29	0.22	0.51
	3/4	0.44	0.40	0.84
	1	0.64	0.66	1.30
	1 1/2	0.95	1.17	2.12
	2	1.10	1.60	2.70
	2 1/2	1.40	2.62	4.02
INTERMEDIATE METAL CONDUIT (IMC) WEIGHT	1/2	2.05	3.74	5.79
	3/4	2.90	5.76	8.66
	1	3.25	7.73	10.98
	1 1/2	3.70	9.94	13.64
	2	---	---	---
	2 1/2	---	---	---
RIGID METAL CONDUIT (RMC) WEIGHT	1/2	0.60	0.22	0.82
	3/4	0.82	0.41	1.23
	1	1.16	0.66	1.82
	1 1/2	1.90	1.17	3.07
	2	2.42	2.62	5.04
	2 1/2	4.28	3.47	7.75
REGULATORY WEIGHT	3	5.26	5.43	10.69
	3 1/2	6.12	7.34	13.46
	4	6.82	9.50	16.32
	5	---	---	---
	6	---	---	---
	6 1/2	---	---	---

**MASON WEST, INC.**  
1601 E. Miraloma Ave. Placentia, CA 92670  
TEL (714) 630-0701, www.masonwest.com

**Jiefu "Jeff" Zhang, SE**  
California SE No. 55270

PAGE **APP3.0**

08/16/2019 Page 811 of 812

**NOTES:**

- MAXIMUM WEIGHT OF EQUIPMENT UNIT NOT TO EXCEED 600 LBS
- COORDINATE EXACT LOCATIONS WITH MECHANICAL, ELECTRICAL AND ARCHITECTURAL DRAWINGS.

**NON-STRUCTURAL EQUIPMENT WEIGHT**

WEIGHT < 250 LBS	SINGLE 2x STUD
250 LBS < WEIGHT	DOUBLE 2x STUD

**2 ROOF PENETRATION DETAIL**  
E6.1 NO SCALE

**1 TYP WALL EQUIPMENT BACKING**  
E6.1 NO SCALE

2 E6.1 NO SCALE

1 E6.1 NO SCALE