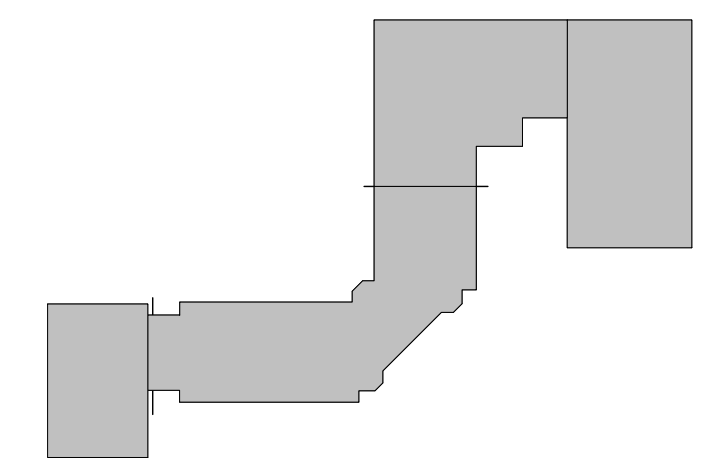


**OVERALL FOUNDATION PLAN**  
 NORTH SCALE: 1" = 20'-0"

1  
 S100



Project Title:  
**Hinsdale School Alterations**  
 15 Hinsdale Ave.  
 Winsted, CT 06098

**MHAI**  
 Michael Horton Associates Inc.  
 Consulting Structural Engineers  
 151 Meadow Street Branford, Connecticut 06405  
 (203) 481-8600 www.mha-eng.com



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 Architects / Engineers / Interior Designers  
 3190 Whitney Avenue, Hamden, CT 06518-2340  
 Tel. 203 230 9007 Fax. 203 230 8247  
 silverpetrucelli.com

| Revision: | Description: | Date: | Revised By: |
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Drawing Title:  
**OVERALL FOUNDATION PLAN**

State Project #: 162-0043RNV NOT FOR CONSTRUCTION

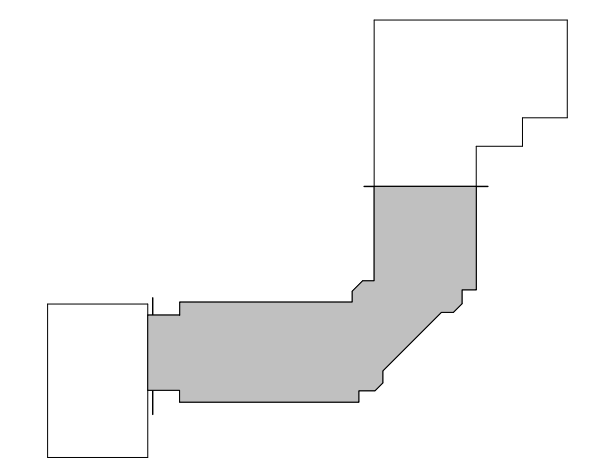
Date:  
**May 29, 2020**  
 Scale:  
**1" = 20'-0"**  
 Drawn By:  
**AC**  
 Project Number:  
**18.223**

Drawing Number:

**S100**



**FOUNDATION PLAN - BUILDING A**  
 NORTH SCALE: 1/8" = 1'-0"  
 1 S101



Project Title:  
**Hinsdale School Alterations**  
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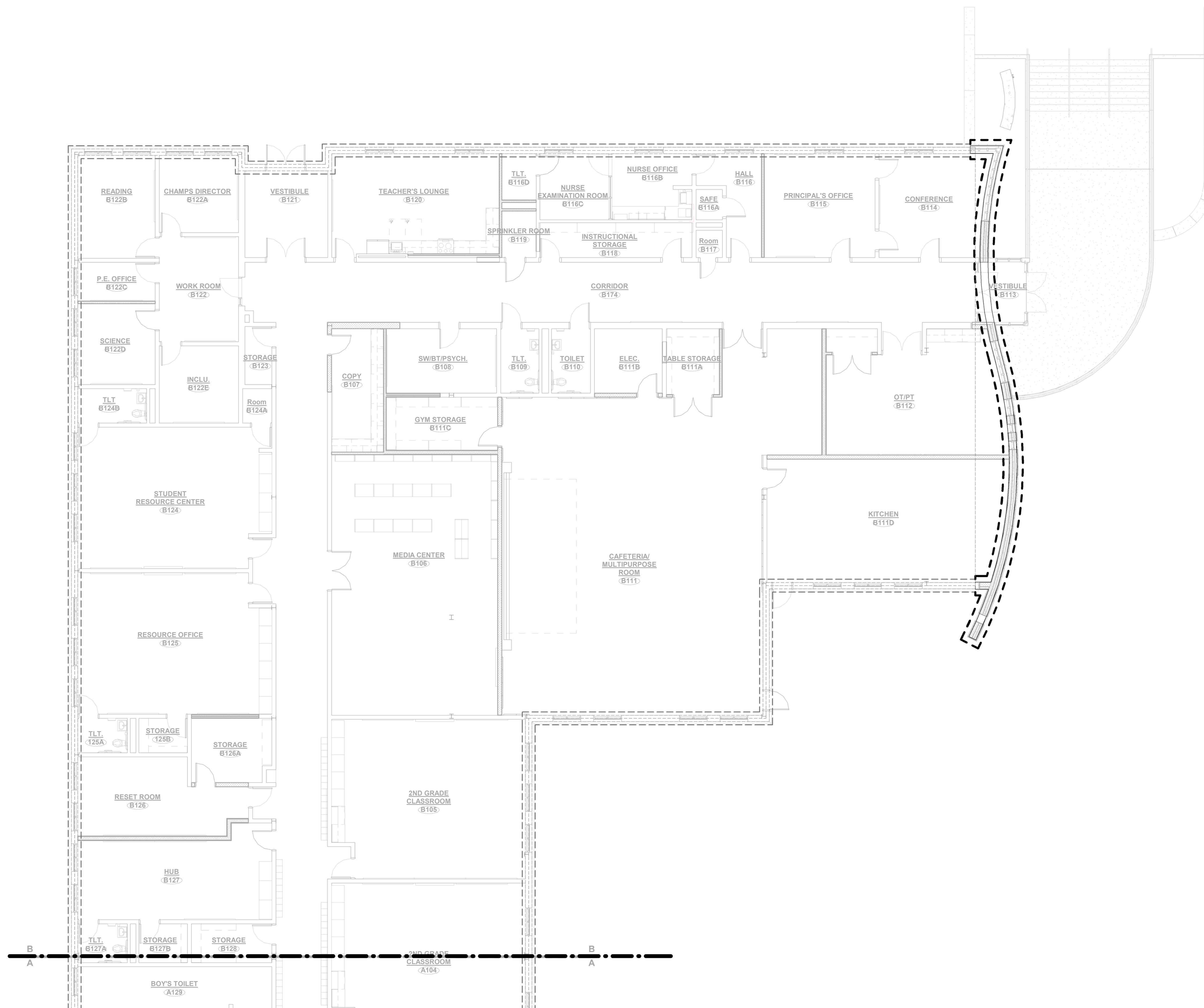


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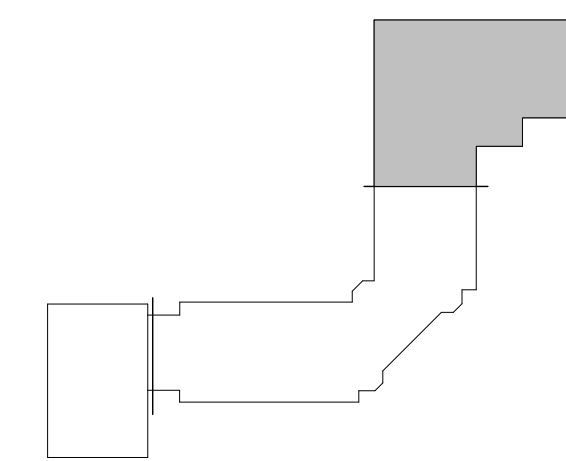
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Drawing Title:  
**FOUNDATION PLAN  
 BUILDING A**  
 State Project #: 162-0043RNV NOT FOR CONSTRUCTION

Date: **May 29, 2020**  
 Scale: **1/8" = 1'-0"**  
 Drawn By: **AC**  
 Project Number: **18.223**  
 Drawing Number: **S101**



FOUNDATION PLAN - BUILDING B  
 SCALE: 1/8" = 1'-0"  
 NORTH



Project Title:  
**Hinsdale School Alterations**  
 15 Hinsdale Ave.  
 Winsted, CT 06098

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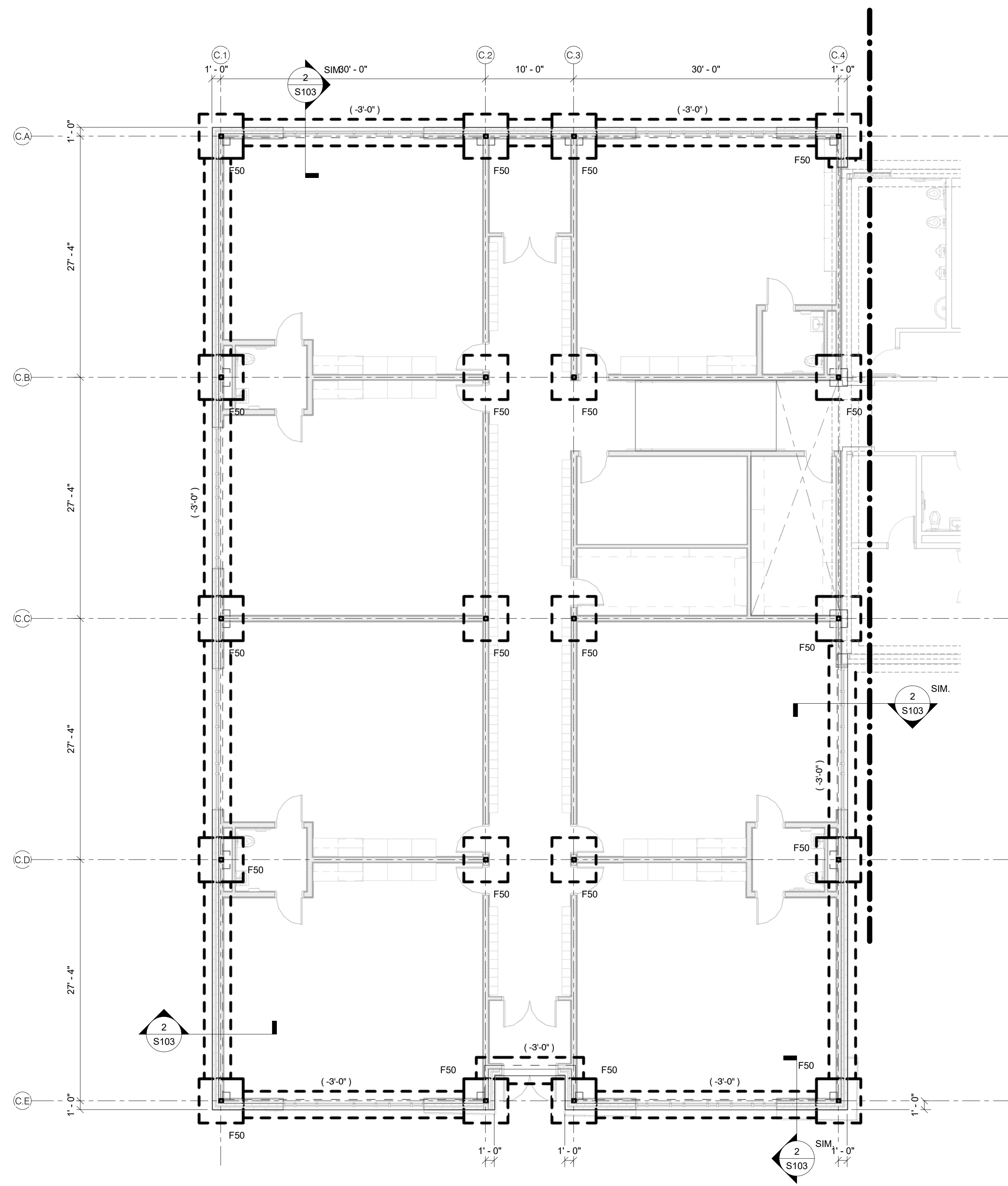


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Drawing Title:  
**FOUNDATION PLAN  
 -BUILDING B**  
 State Project #: 162-0043RNV NOT FOR CONSTRUCTION

Date: **May 29, 2020**  
 Scale: **1/8" = 1'-0"**  
 Drawn By: **AC**  
 Project Number: **18.223**  
 Drawing Number: **S102**

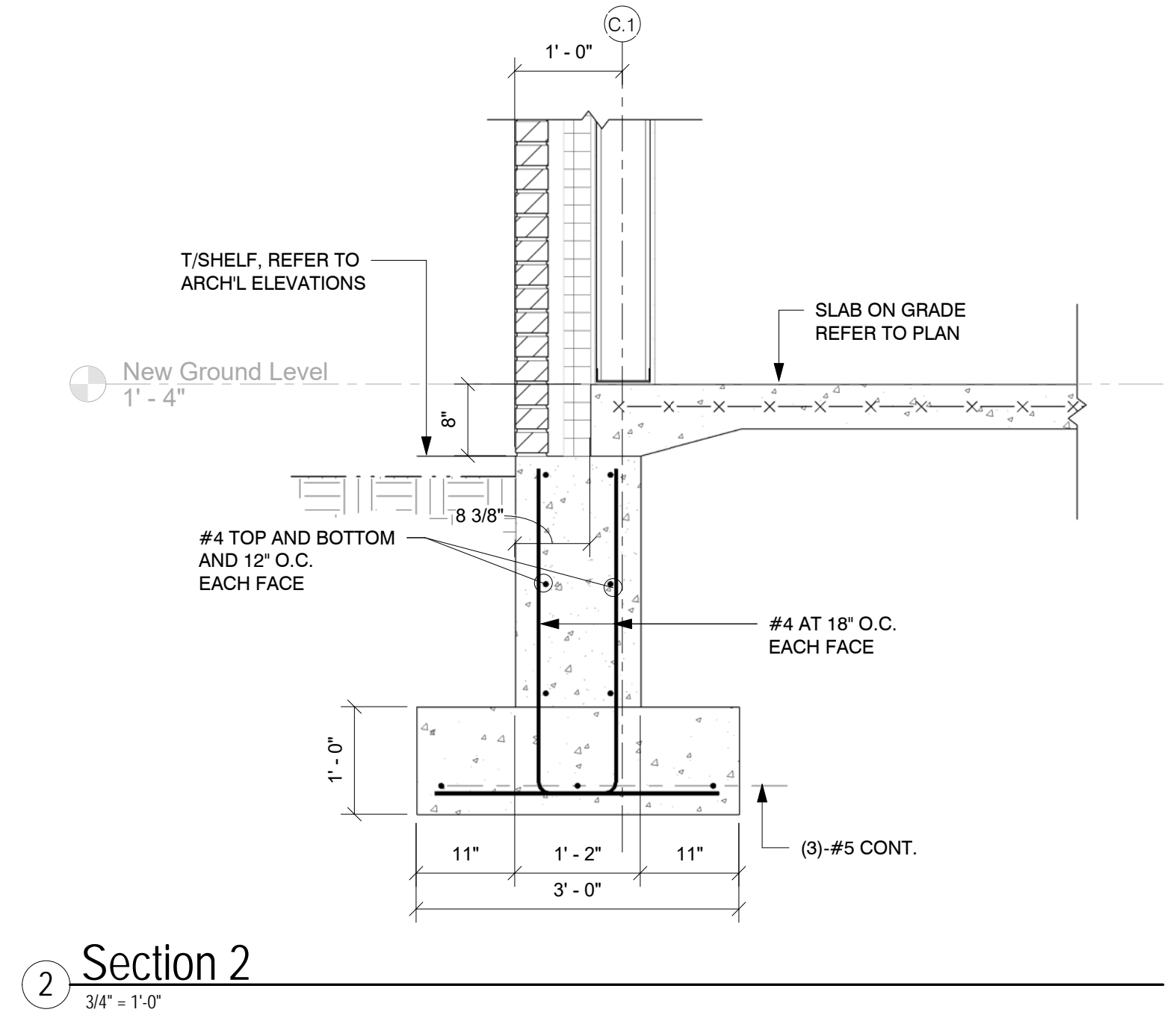


**FOUNDATION PLAN - BUILDING C**  
 SCALE: 1/8" = 1'-0"

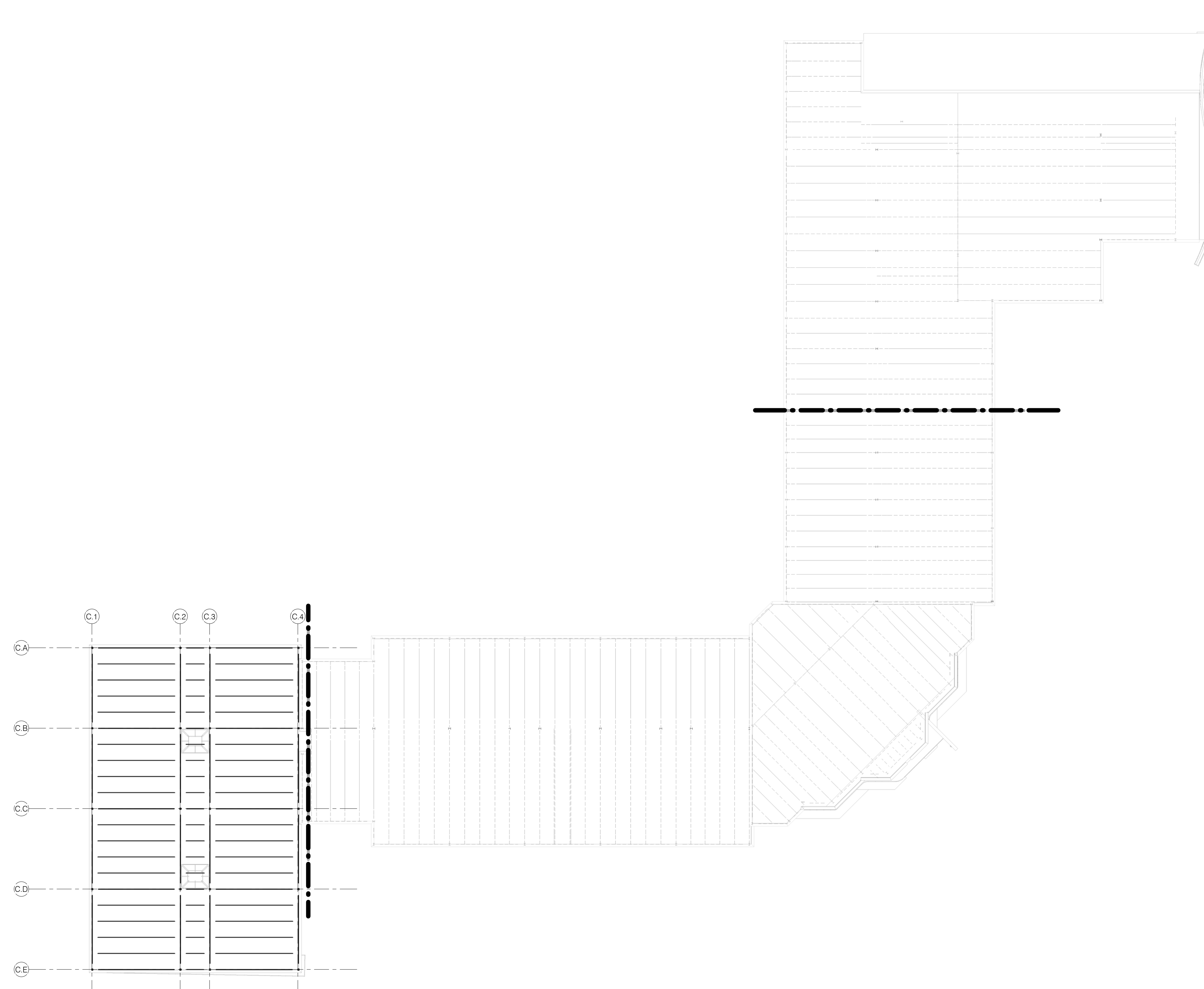
- FOUNDATION NOTES:**
- TOP OF CONCRETE SLAB ELEVATION = (0'-0") UNLESS OTHERWISE NOTED.
  - FLOOR CONSTRUCTION: 5" NORMAL WEIGHT CONCRETE SLAB REINF. WITH 6X6-W2.9XW2.9 W.W.F. (CHAIR). REFER TO GENERAL NOTES FOR SUBGRADE REQUIREMENTS.
  - PROVIDE SAWCUT JOINTS IN SLAB ON GRADE PER NOTE #4 ON DRAWINGS S700, AND 'TYPICAL SLAB ON GRADE DETAILS' ON SHEET S600.
  - TOP OF FOOTING ELEVATION (X'-X") GIVEN FROM ELEVATION (0'-0").
  - COORDINATE ALL SLAB ON GRADE DEPRESSIONS WITH ARCH'L DRAWINGS.
  - COORDINATE ALL PLUMBING INVERTS AND LOCATIONS WITH PLUMBING & SITE DRAWINGS REFER TO TYPICAL DETAIL ON DRAWING S600 FOR SUB SURFACE PIPING THROUGH FOUNDATION WALLS.
  - "C.J." INDICATES FOUNDATION WALL CONTROL JOINT. REFER TO TYPICAL DETAIL ON DRAWING S600.
  - EXISTING FOOTING LOCATIONS, EXTENTS, ELEVATIONS ARE ASSUMED AND ARE SHOWN FOR COORDINATION PURPOSES ONLY. CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL EXISTING INFORMATION PROVIDED BEFORE FABRICATING REINFORCING.
  - MATCH EXISTING BOTTOM OF FOOTING ELEVATION. MUST BE FIELD VERIFIED, SEE NOTE # ABOVE

| FOOTING SCHEDULE 2.0 TONS/SF |              |       |           |                |      |         |
|------------------------------|--------------|-------|-----------|----------------|------|---------|
| Mark                         | Footing Size |       |           | Reinf Each Way |      | Remarks |
|                              | Length       | Width | Thickness | No.            | Size |         |
| F50                          | 5'-0"        | 5'-0" | 1'-3"     | 6              | #5   |         |

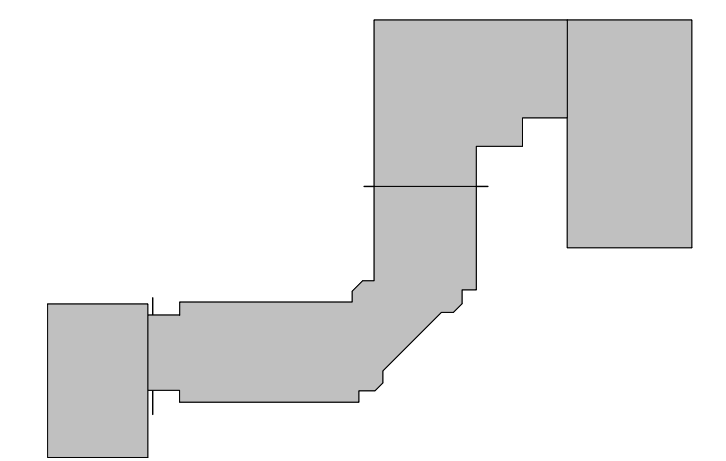
ZERO DATUM FOR ALL ELEVATIONS GIVEN ON STRUCTURAL DRAWINGS IS  
 T, FOUNDATION  
 ACTUAL ELEVATION 764'-4" = 0'-0"



| Revision: | Description: | Date: | Revised By: |
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1 OVERALL ROOF FRAMING PLAN  
1" = 20'-0"



Project Title:  
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Drawing Title:  
**OVERALL ROOF FRAMING PLAN**

State Project #: 162-0043RNV NOT FOR CONSTRUCTION

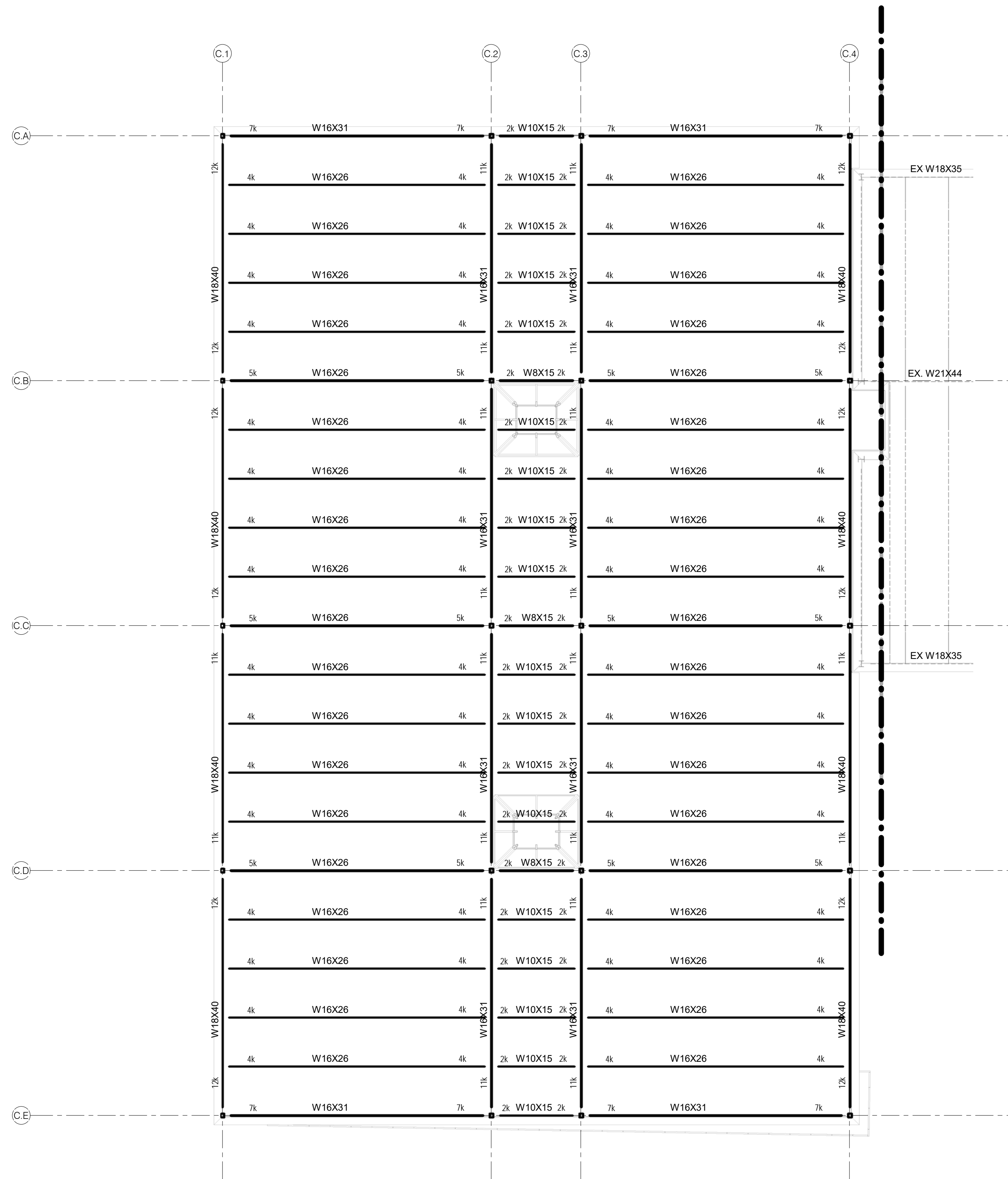
Date:  
**May 29, 2020**  
Scale:  
**1" = 20'-0"**  
Drawn By:  
**AC**  
Project Number:  
**18.223**

Drawing Number:

**S110**





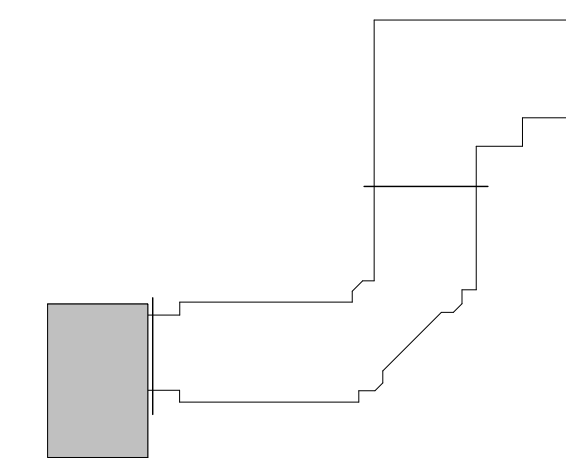


**ROOF FRAMING PLAN - BUILDING C**  
SCALE: 1/8" = 1'-0"

1  
S113

**ROOF FRAMING NOTES:**

1. TYPICAL ROOF CONSTRUCTION: 1 1/2" X20GA. GALVANIZED TYPE "B" METAL ROOF DECK. REFER TO GENERAL NOTES FOR FASTENING REQUIREMENTS.
2. \* — indicates MOMENT CONNECTION. REFER TO TYPICAL DETAILS ON DRAWING S601
3. ALL BEAM FRAMING SHALL HAVE EQUAL SPACING BETWEEN COLUMNS, UNLESS NOTED OTHERWISE.
4. REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS FOR ALL OPENING, DRAINS AND EQUIPMENT. PROVIDE FRAMES PER TYPICAL DETAILS
5. CONTRACTOR TO FIELD VERIFY ALL EXISTING FRAMING SIZES, SPACING AND LOCATIONS PRIOR TO SUBMITTING SHOP DRAWINGS.



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Drawing Title:  
**ROOF FRAMING PLAN  
BUILDING C**  
State Project #: 162-0043RNV NOT FOR CONSTRUCTION

Date: **May 29, 2020**  
Scale: **1/8" = 1'-0"**  
Drawn By: **AC**  
Project Number: **18.222**  
Drawing Number: **S113**

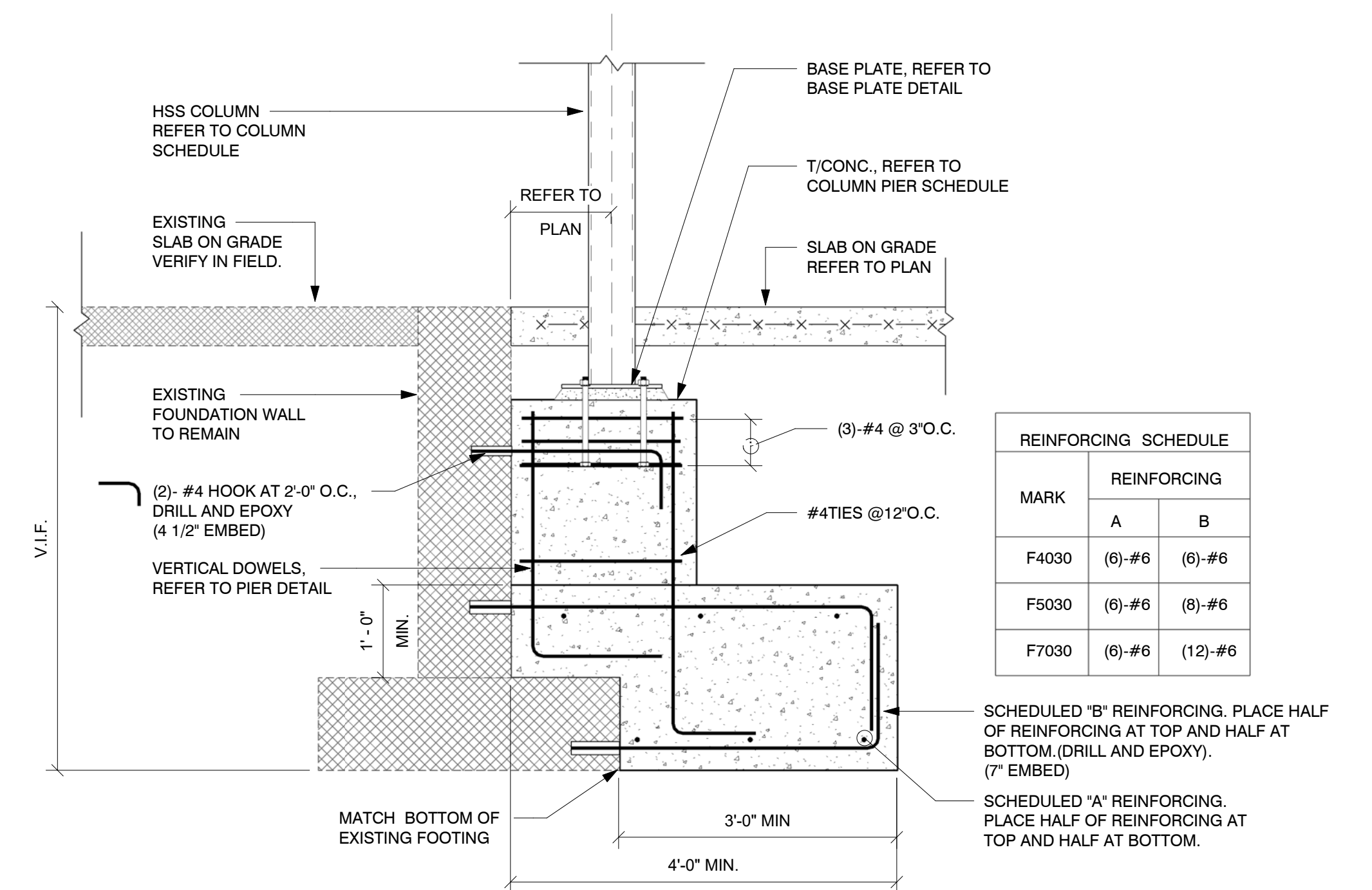
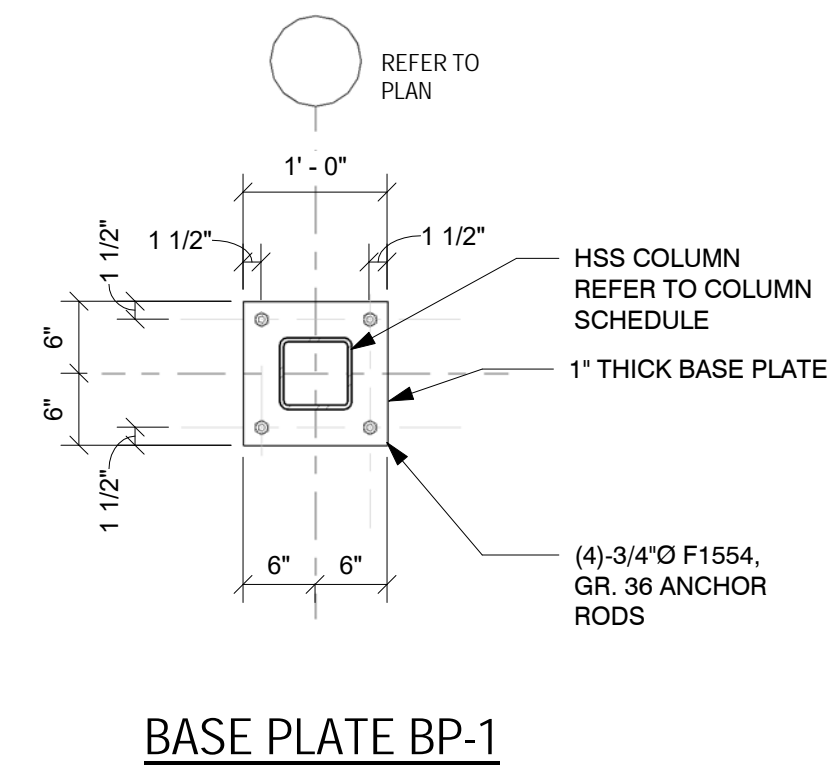
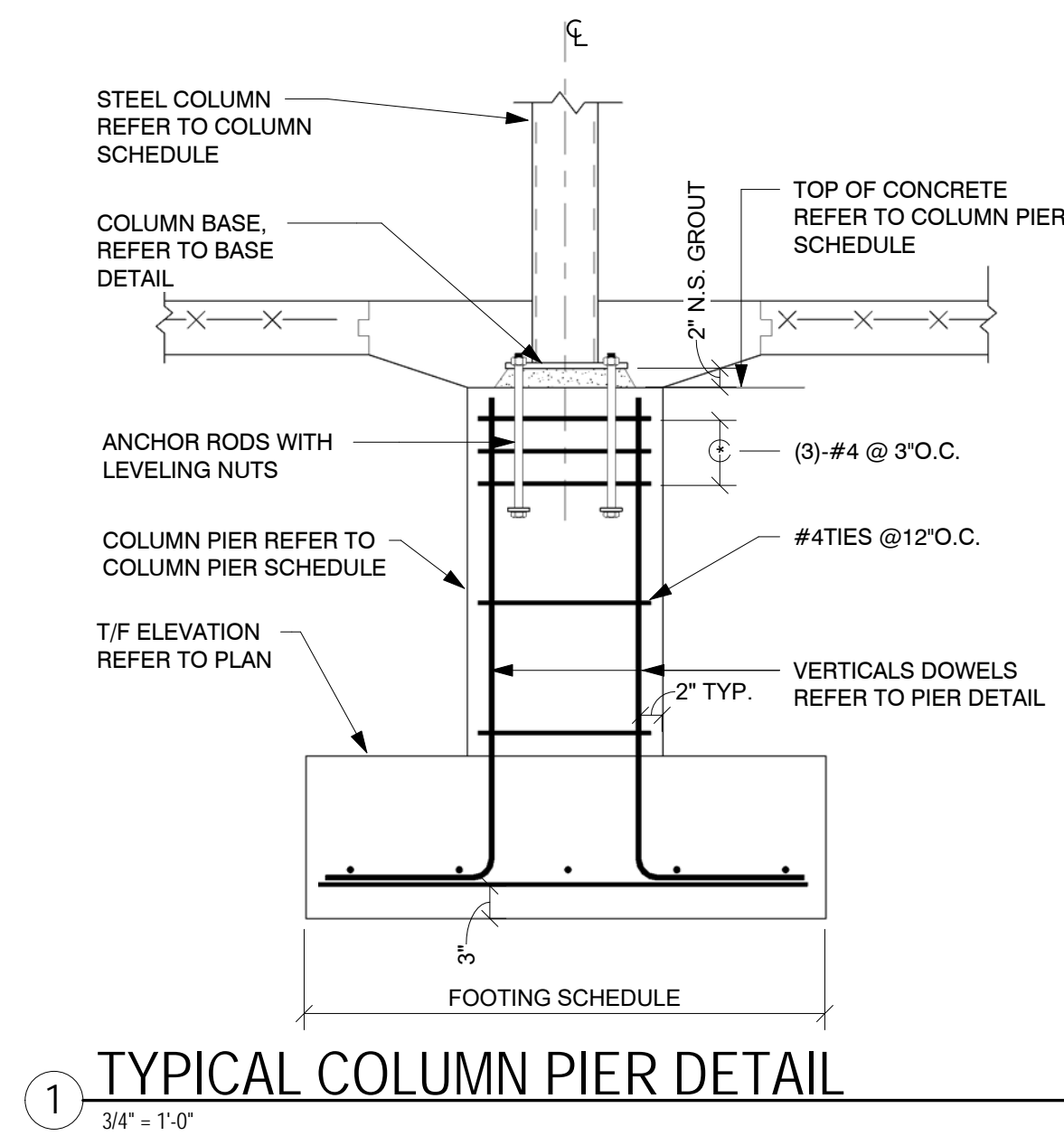
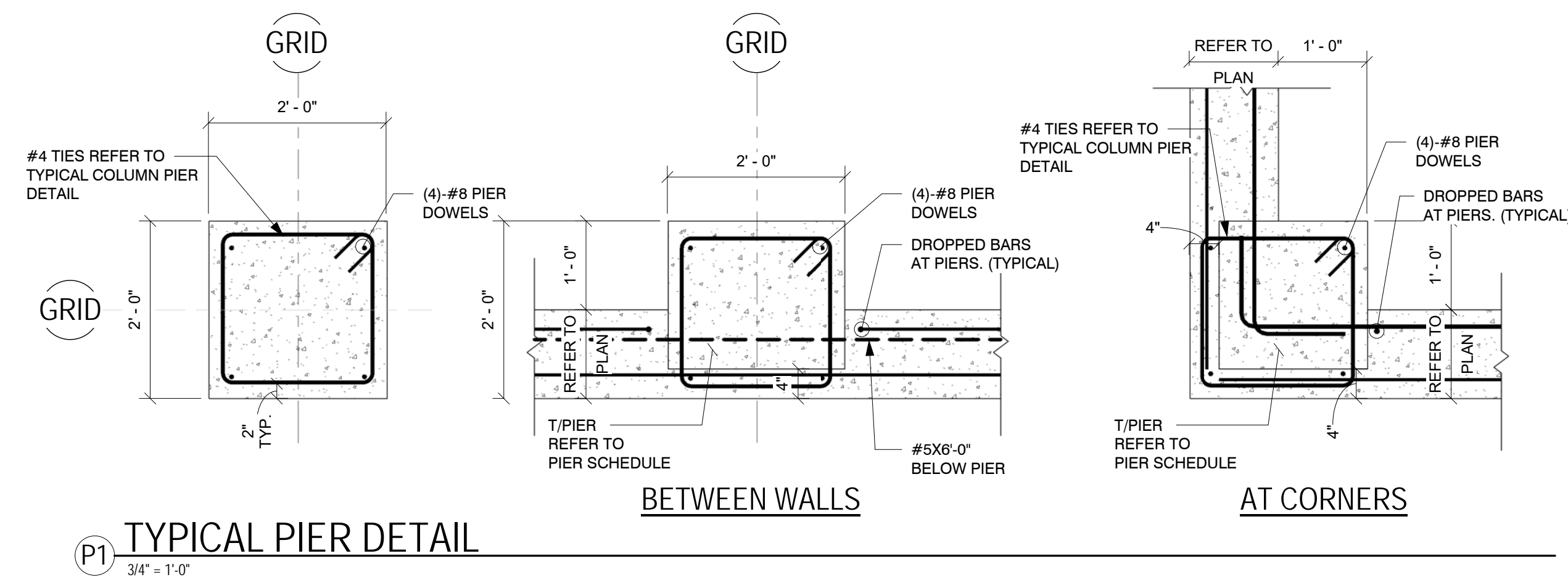


| COLUMN SCHEDULE AREA C |             |             |             |             |             |             |             |             |             |             |             |             |             |                  |        |        |        |        |        |        |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------------|--------|--------|--------|--------|--------|--------|
| Roof Level             |             |             |             |             |             |             |             |             |             |             |             |             |             | Roof Level       |        |        |        |        |        |        |
| 15' - 0"               | HSS6X6X5/16 | HSS6X6X5/16 | HSS6X6X5/16 | HSS6X6X5/16 | HSS6X6X5/16 | HSS6X6X5/16 | HSS6X6X5/16 | HSS6X6X5/16 | HSS6X6X5/16 | HSS6X6X5/16 | HSS6X6X5/16 | HSS6X6X5/16 | HSS6X6X5/16 | 15' - 0"         |        |        |        |        |        |        |
| New Ground Level       |             |             |             |             |             |             |             |             |             |             |             |             |             | New Ground Level |        |        |        |        |        |        |
| 1' - 4"                |             |             |             |             |             |             |             |             |             |             |             |             |             | 1' - 4"          |        |        |        |        |        |        |
| Column Locations       | C.1-CA      | C.1-CB      | C.1-CC      | C.1-CD      | C.1-CE      | C.2-CA      | C.2-CB      | C.2-CC      | C.2-CD      | C.2-CE      | C.3-CA      | C.3-CB      | C.3-CC      | C.3-CD           | C.3-CE | C.4-CA | C.4-CB | C.4-CC | C.4-CD | C.4-CE |

| COLUMN PIER SCHEDULE AREA C |        |      |            |
|-----------------------------|--------|------|------------|
| GRID                        | T/CONC | PIER | BASE PLATE |
| C.1-CA                      | -1'-0" | P1   | BP-1       |
| C.1-CB                      | -1'-0" | P1   | BP-1       |
| C.1-CC                      | -1'-0" | P1   | BP-1       |
| C.1-CD                      | -1'-0" | P1   | BP-1       |
| C.1-CE                      | -1'-0" | P1   | BP-1       |
| C.2-CA                      | -1'-0" | P1   | BP-1       |
| C.2-CB                      | -1'-0" | P1   | BP-1       |
| C.2-CC                      | -1'-0" | P1   | BP-1       |
| C.2-CD                      | -1'-0" | P1   | BP-1       |
| C.2-CE                      | -1'-0" | P1   | BP-1       |
| C.3-CA                      | -1'-0" | P1   | BP-1       |
| C.3-CB                      | -1'-0" | P1   | BP-1       |
| C.3-CC                      | -1'-0" | P1   | BP-1       |
| C.3-CD                      | -1'-0" | P1   | BP-1       |
| C.3-CE                      | -1'-0" | P1   | BP-1       |
| C.4-CA                      | -1'-0" | P1   | BP-1       |
| C.4-CB                      | -1'-0" | P1   | BP-1       |
| C.4-CC                      | -1'-0" | P1   | BP-1       |
| C.4-CD                      | -1'-0" | P1   | BP-1       |
| C.4-CE                      | -1'-0" | P1   | BP-1       |

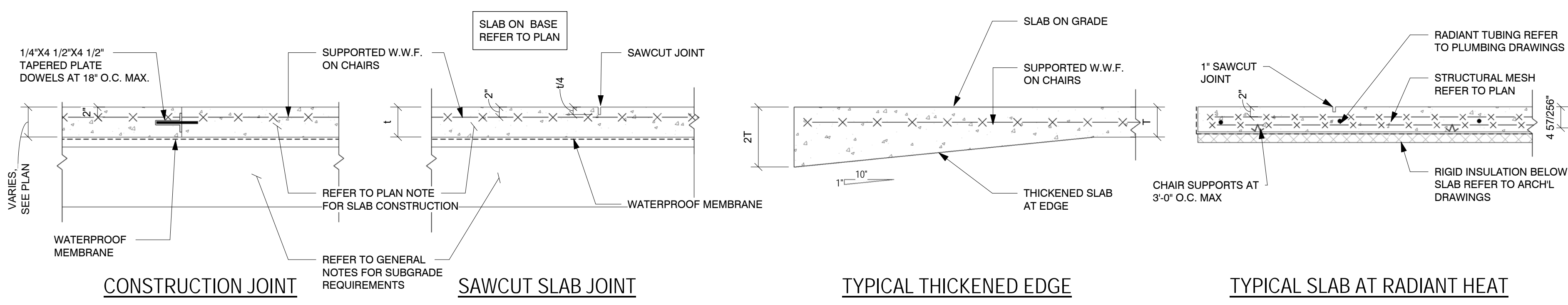
- COLUMN SCHEDULE NOTES:**
- LINE AT BOTTOM OF COLUMN INDICATES BOTTOM OF STEEL BASE PLATE. ADD 1 1/2" FOR GROUT AND LEVELING NUTS FOR TOP OF CONCRETE ELEVATION SEE COLUMN PIER SCHEDULE. IF NO PIER DETAIL IS GIVEN, COLUMN SITS DIRECTLY ON FOOTING OR STEEL BEAM.
  - APPROXIMATE TOP OF COLUMN ELEVATION. FOR ACTUAL ELEVATION SEE PLANS AND SECTIONS.
  - PROVIDE 1/4" CAP PLATE AT ALL HSS COLUMNS & 3/4" CAP PLATE AT ALL WIDE FLANGE COLUMNS UNLESS OTHERWISE NOTED.
  - ALL COLUMNS RECEIVE 2 HOUR SPRAY APPLIED FIREPROOFING UNLESS NOTED OTHERWISE.
  - ALL ROUND COLUMNS TO RECEIVE 2 HOUR INTUMESCENT PAINT COATING.

- NOTE:**
- IF NO PIER DETAIL DESIGNATION IS GIVEN, COLUMN SITS DIRECTLY ON FOOTING OR STEEL BEAM.
  - REFER TO DRAWING S201 FOR BASE PLATE DETAILS
  - TOP OF CONCRETE IS GIVEN FROM FINISHED FLOOR ELEVATION (0'-0")
  - "INT. PAINT" INDICATES INTUMESCENT PAINT FULL HEIGHT REFER TO SPECS



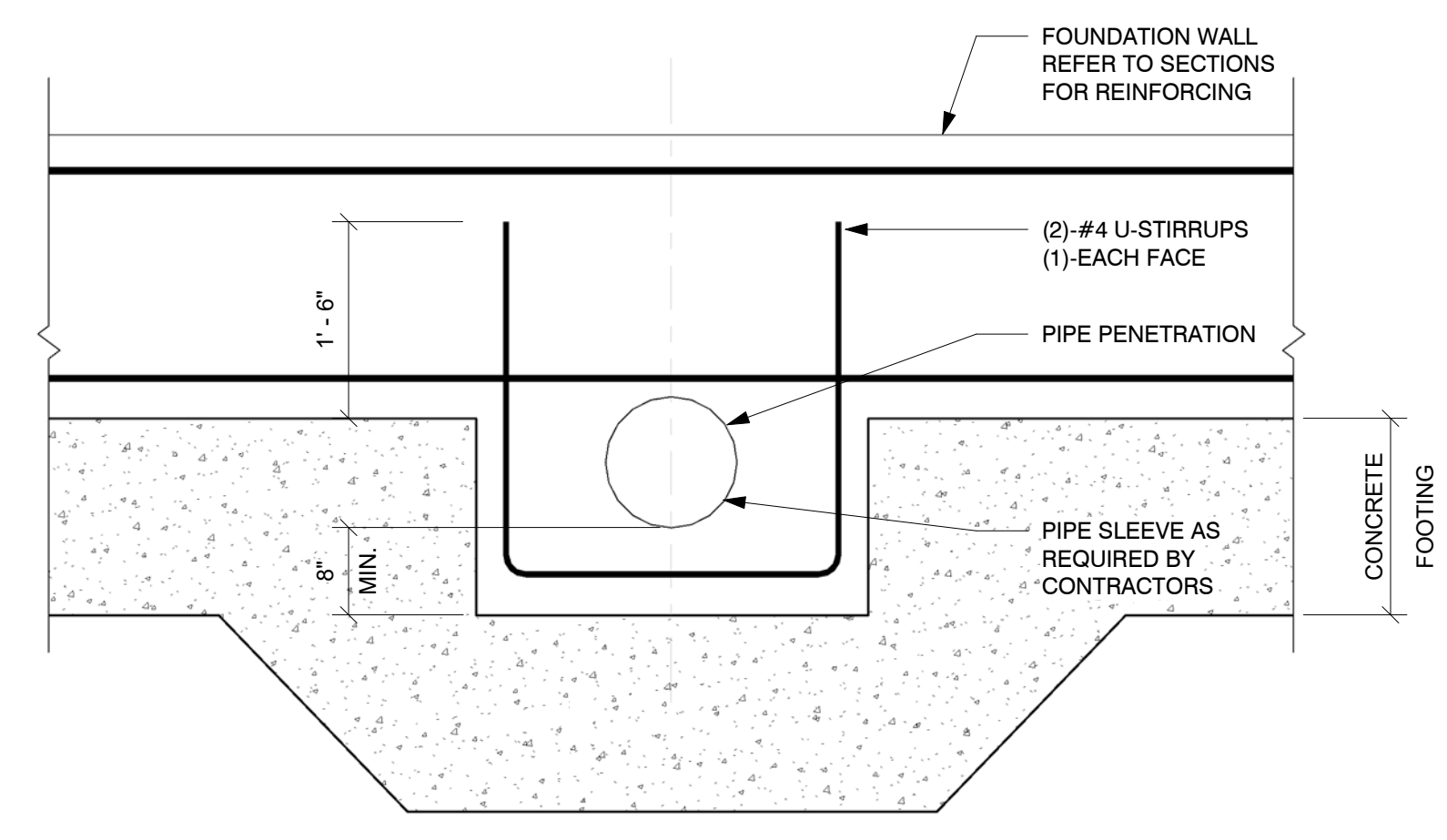
| MARK  | REINFORCING |         |
|-------|-------------|---------|
|       | A           | B       |
| F4030 | (6)-#6      | (6)-#6  |
| F5030 | (6)-#6      | (8)-#6  |
| F7030 | (6)-#6      | (12)-#6 |





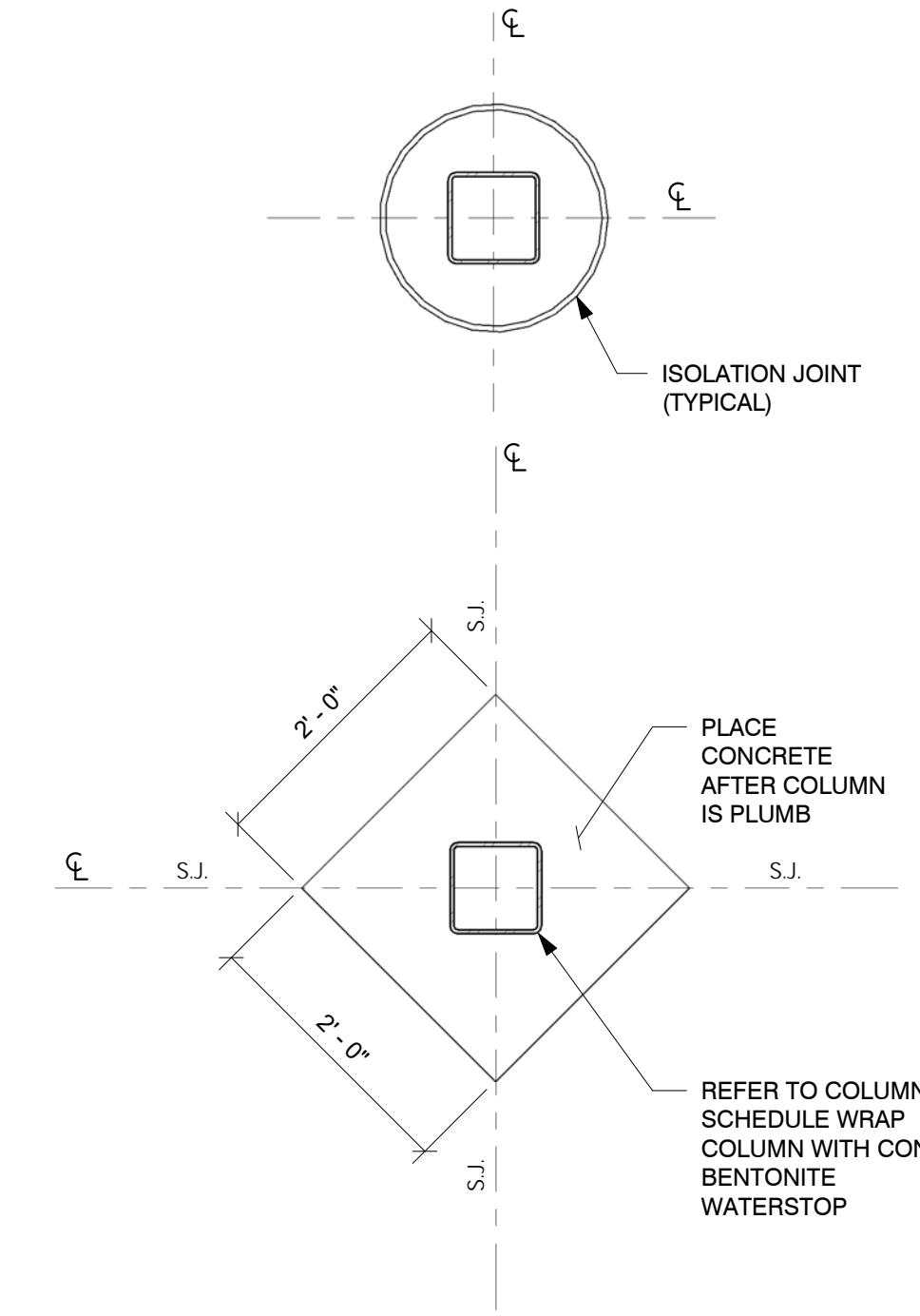
NOTE:  
CONTRACTOR SHALL SUBMIT A PLAN INDICATING THE PROPOSED LOCATION OF CONTROL AND CONSTRUCTION JOINTS PRIOR TO PLACING CONCRETE FOR SLAB. REFER TO GENERAL NOTES FOR SUBGRADE PREPARATION. REMOVE ALL FILL MATERIALS BELOW SLAB ON GRADE.

1 TYPICAL SLAB ON GRADE DETAIL - RADIANT  
3/4" = 1'-0"

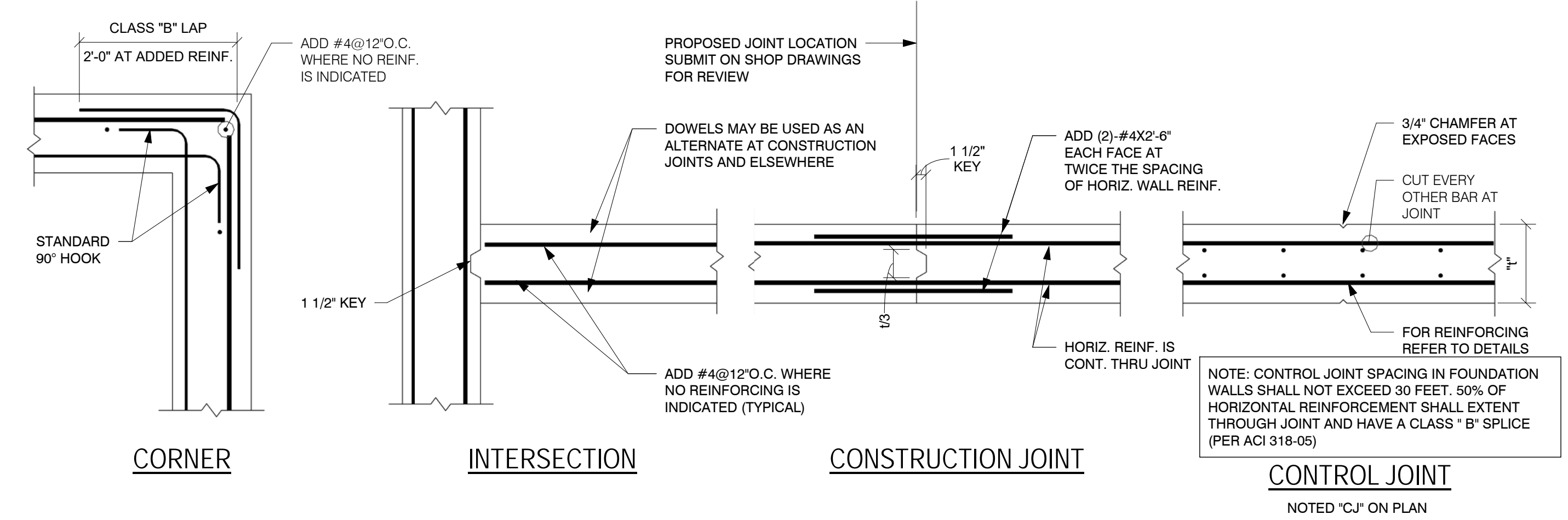


NOTE: DO NOT PLACE PENETRATIONS THROUGH COLUMNS PIERS OR FOOTINGS. REFER TO PLAN FOR LOCATIONS AND COORDINATE WITH SITE, MECHANICAL, PLUMBING, ELECTRICAL, AND FIRE PROTECTION DRAWINGS.

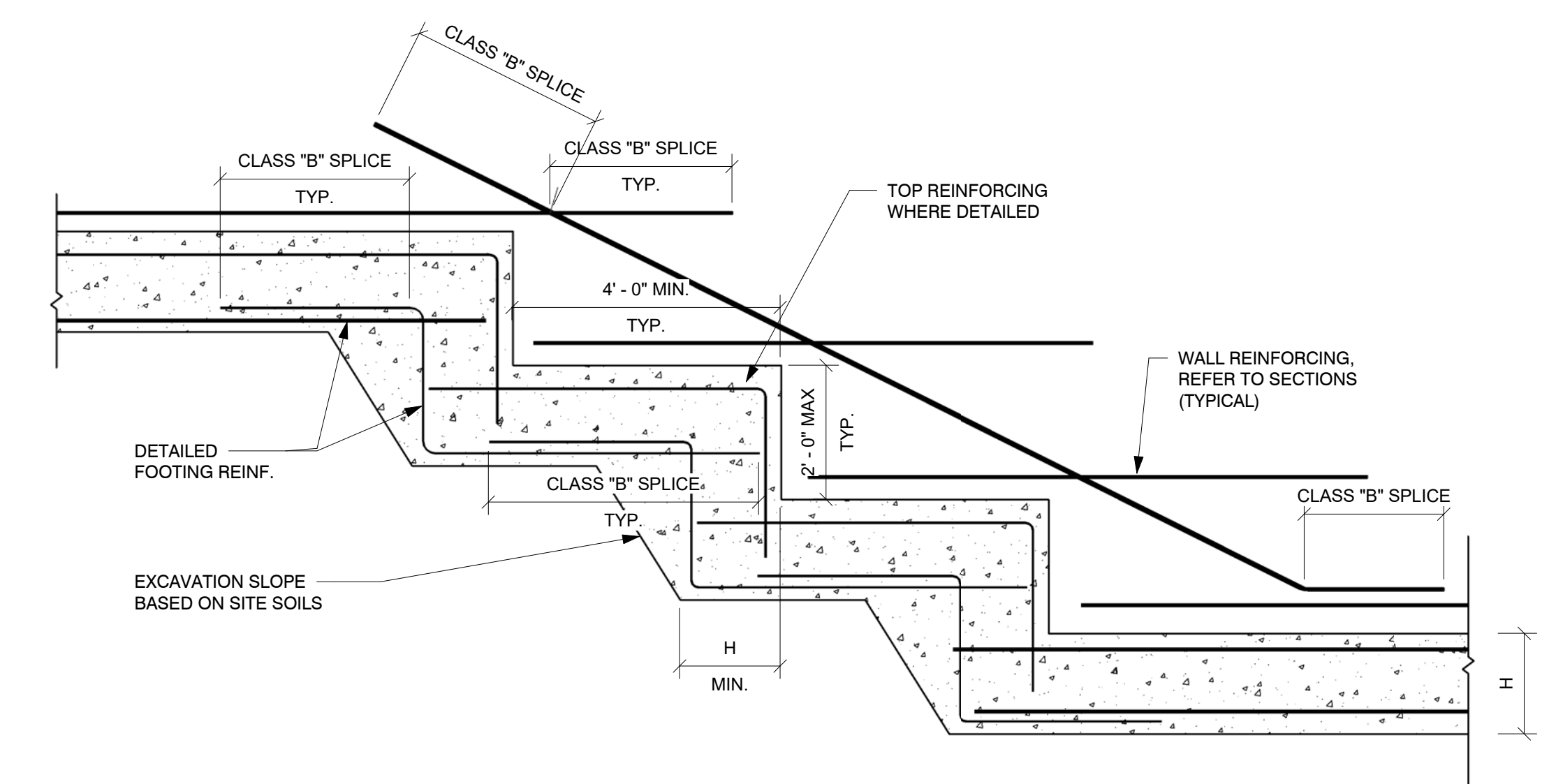
2 TYPICAL DETAIL OF PIPE PENETRATIONS THRU FOUNDATION WALLS  
3/4" = 1'-0"



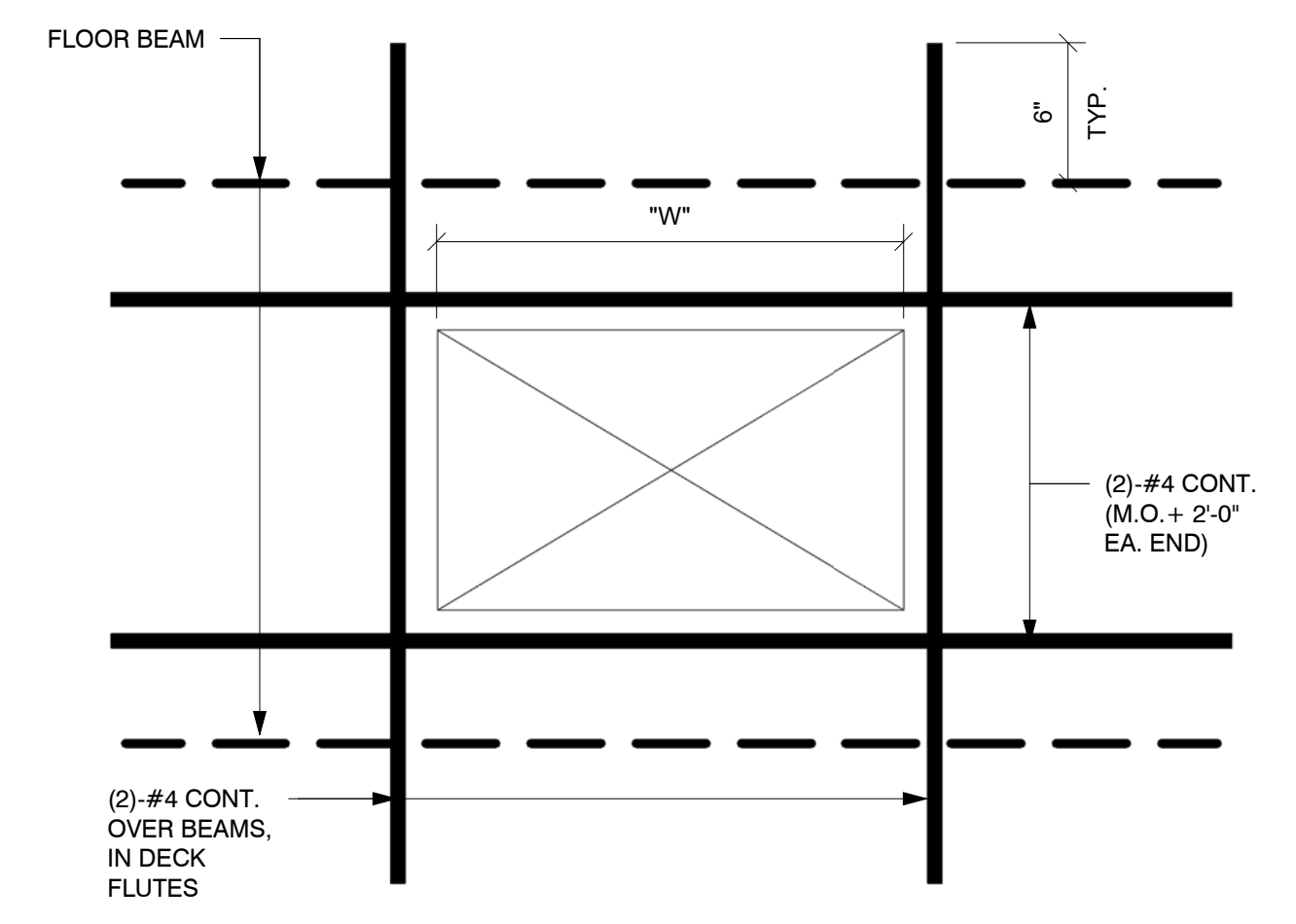
3 TYPICAL SLAB CONSTRUCTION JOINTS AT COLUMNS  
3/4" = 1'-0"



4 TYPICAL WALL REINFORCING DETAIL  
3/4" = 1'-0"

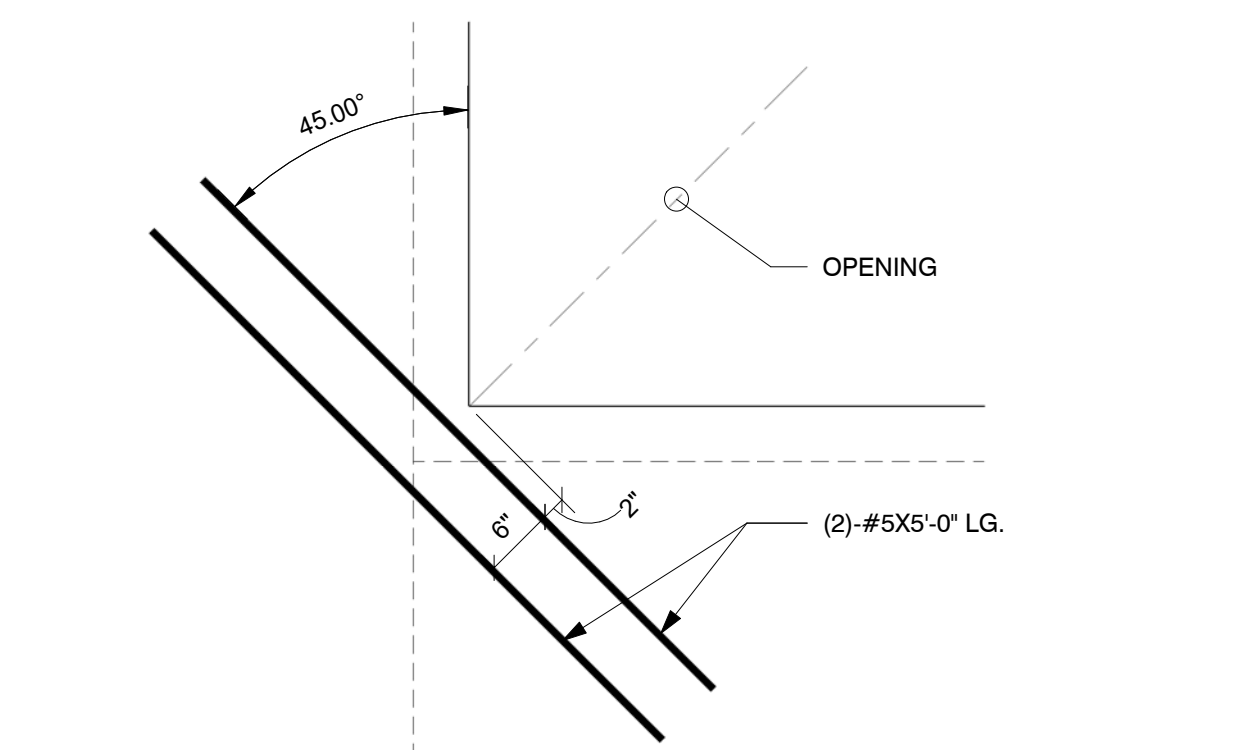


5 TYPICAL STEPPED FOOTING DETAIL  
1/2" = 1'-0"

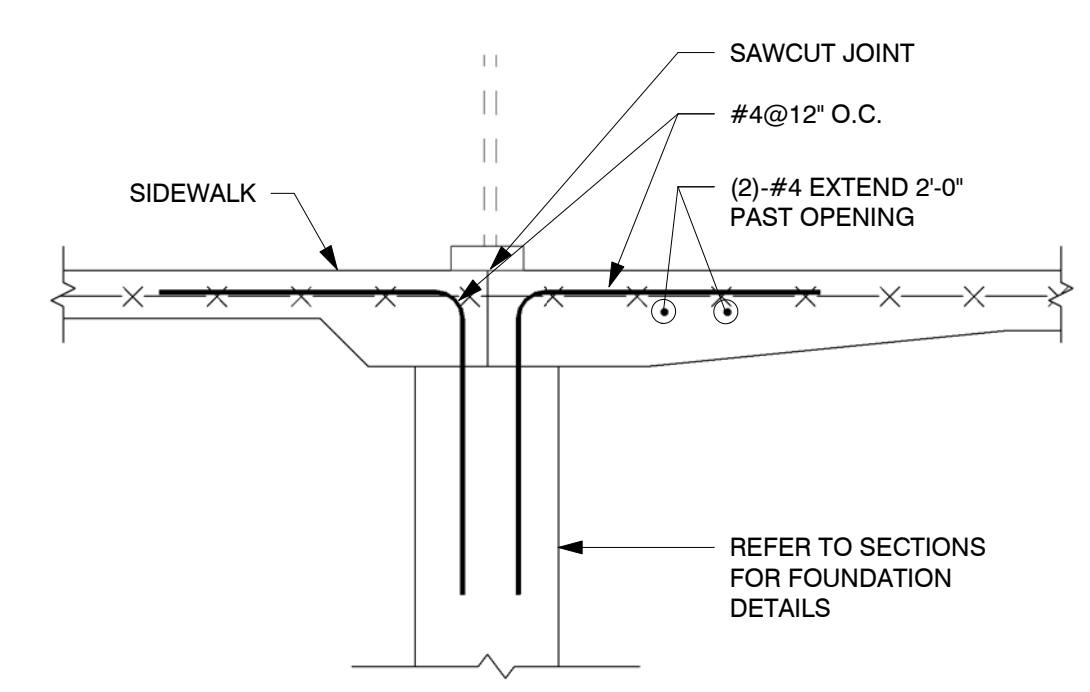


NOTES:  
1. FOR OPENINGS WITH 'W' GREATER THAN 4'-0" SUBMIT LOCATION FOR REVIEW.  
2. FOR STEEL FRAME REFER TO TYPICAL FLOOR OPENING DETAIL.  
3. COORDINATE QUANTITY AND LOCATIONS WITH MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS.

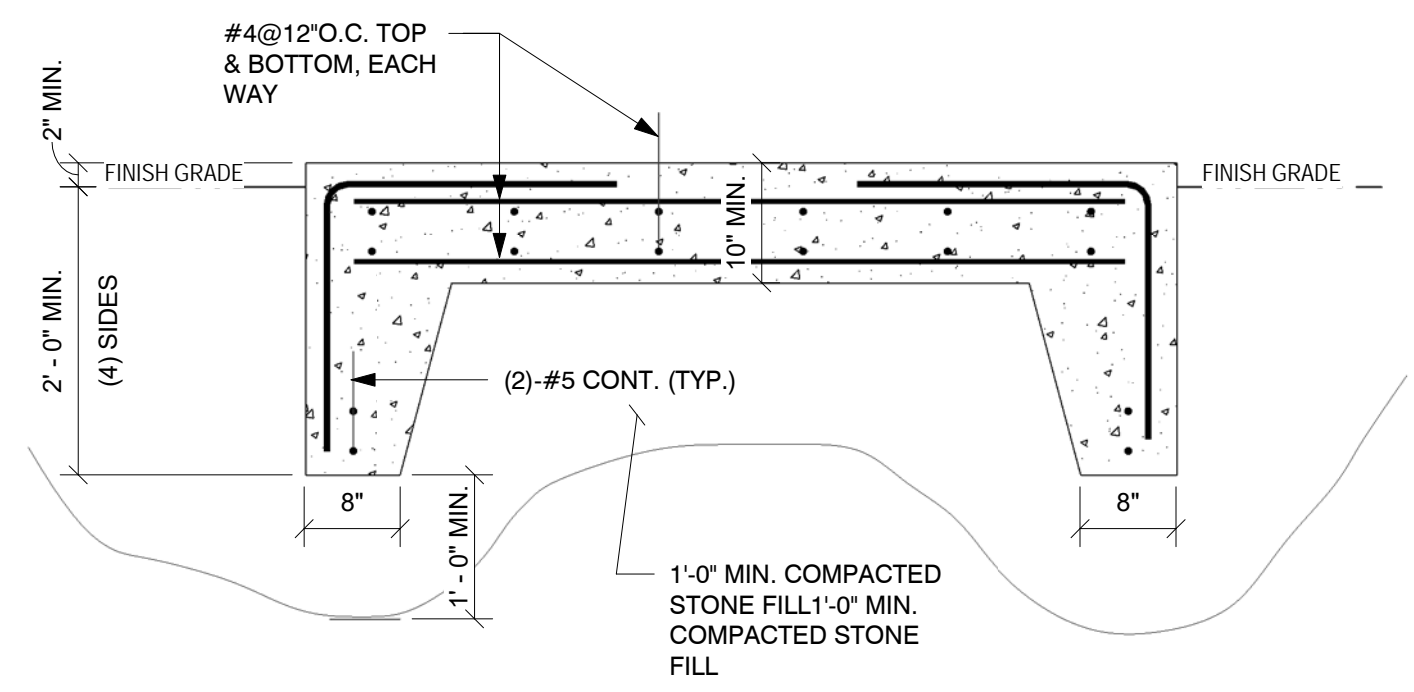
6 TYPICAL SLAB OPENING DETAIL  
1 1/2" = 1'-0"



7 TYPICAL AT REENTRANT SLAB CORNERS  
3/4" = 1'-0"

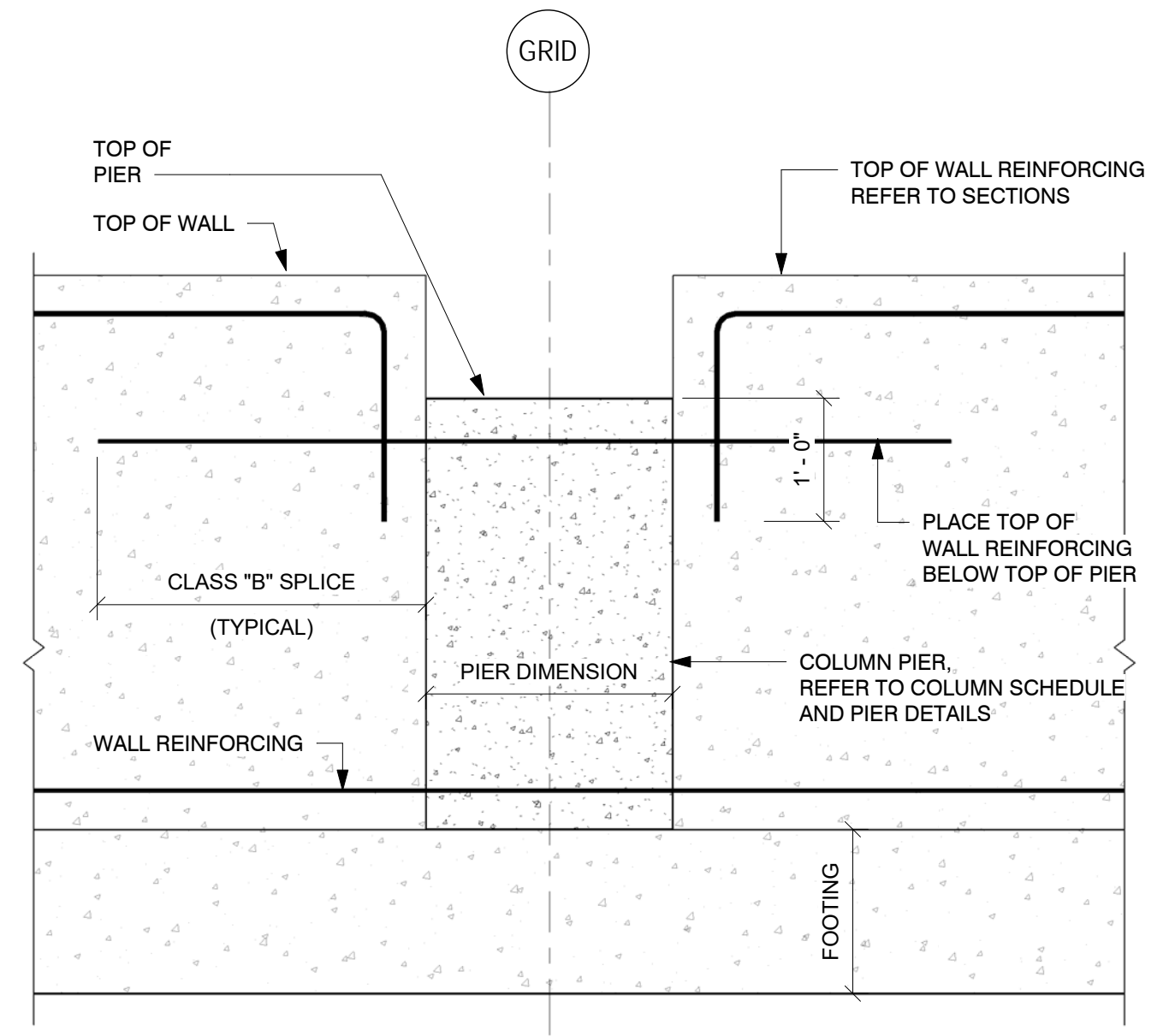


8 TYPICAL FOUNDATION AT DOORS  
3/4" = 1'-0"



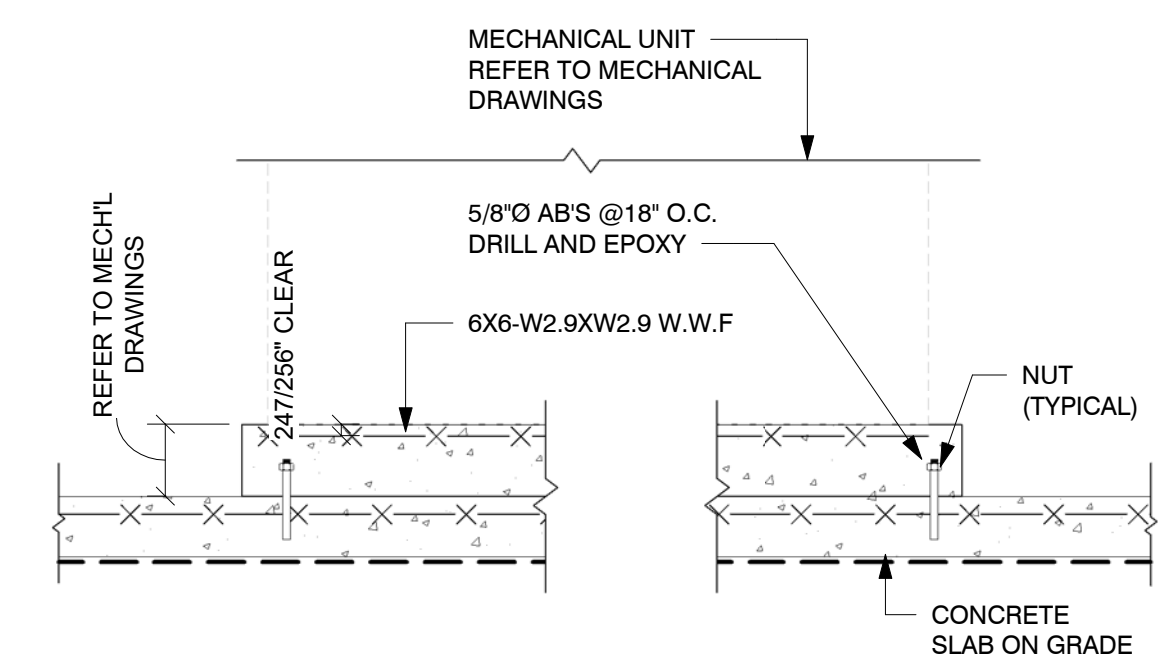
1. COORDINATE WITH MECHANICAL DRAWING FOR QUANTITY, SIZE AND LOCATION. 2. PROVIDE PADS AT GENERATORS, REFRIGERATOR AND FREEZER UNITS. COORDINATE WITH ELECTRICAL & KITCHEN DRAWINGS FOR SIZE AND LOCATION.

9 TYPICAL CONCRETE EQUIPMENT PAD ON GRADE  
3/4" = 1'-0"



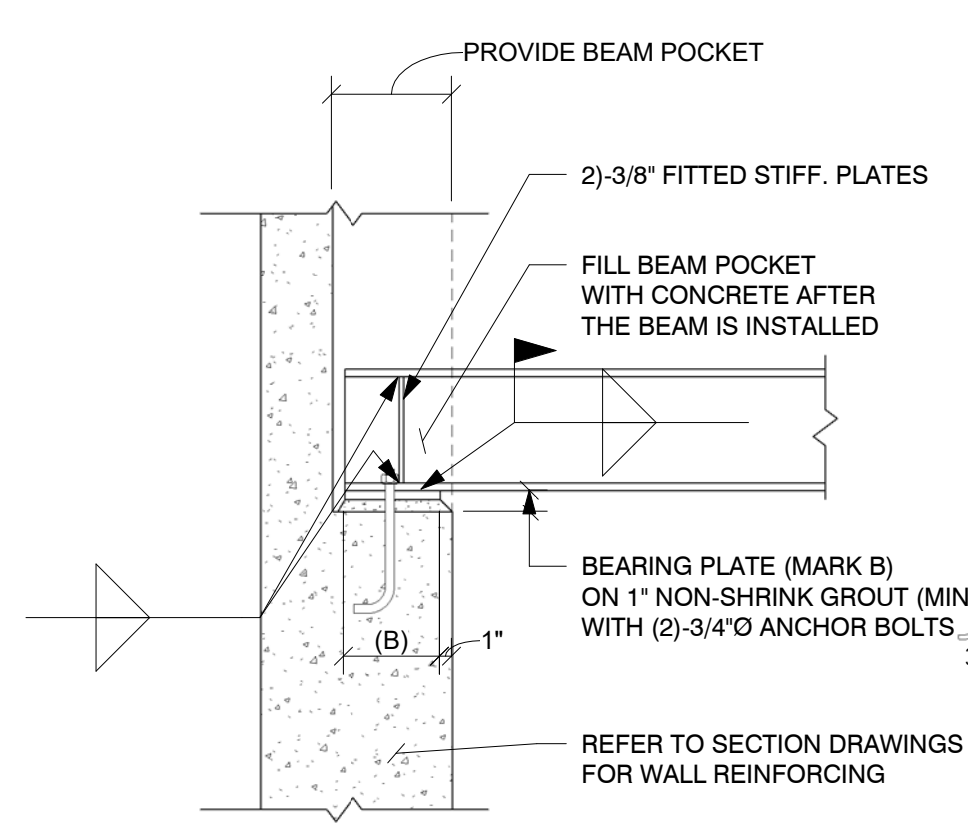
NOTE: REFER TO SECTIONS FOR REINFORCING.

10 TYPICAL WALL REINFORCING DETAIL  
3/4" = 1'-0"

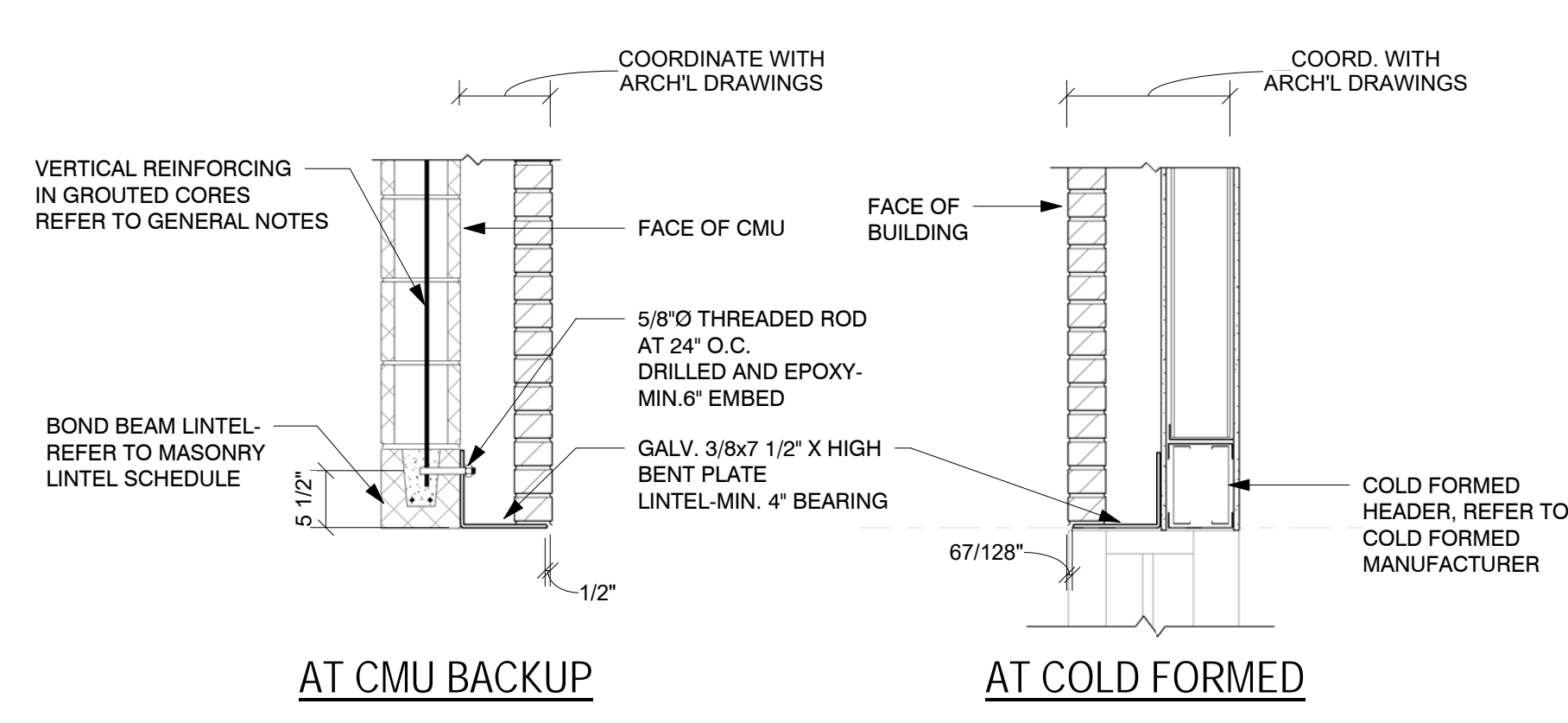


1. COORDINATE WITH MECHANICAL DRAWING FOR QUANTITY, SIZE AND LOCATION

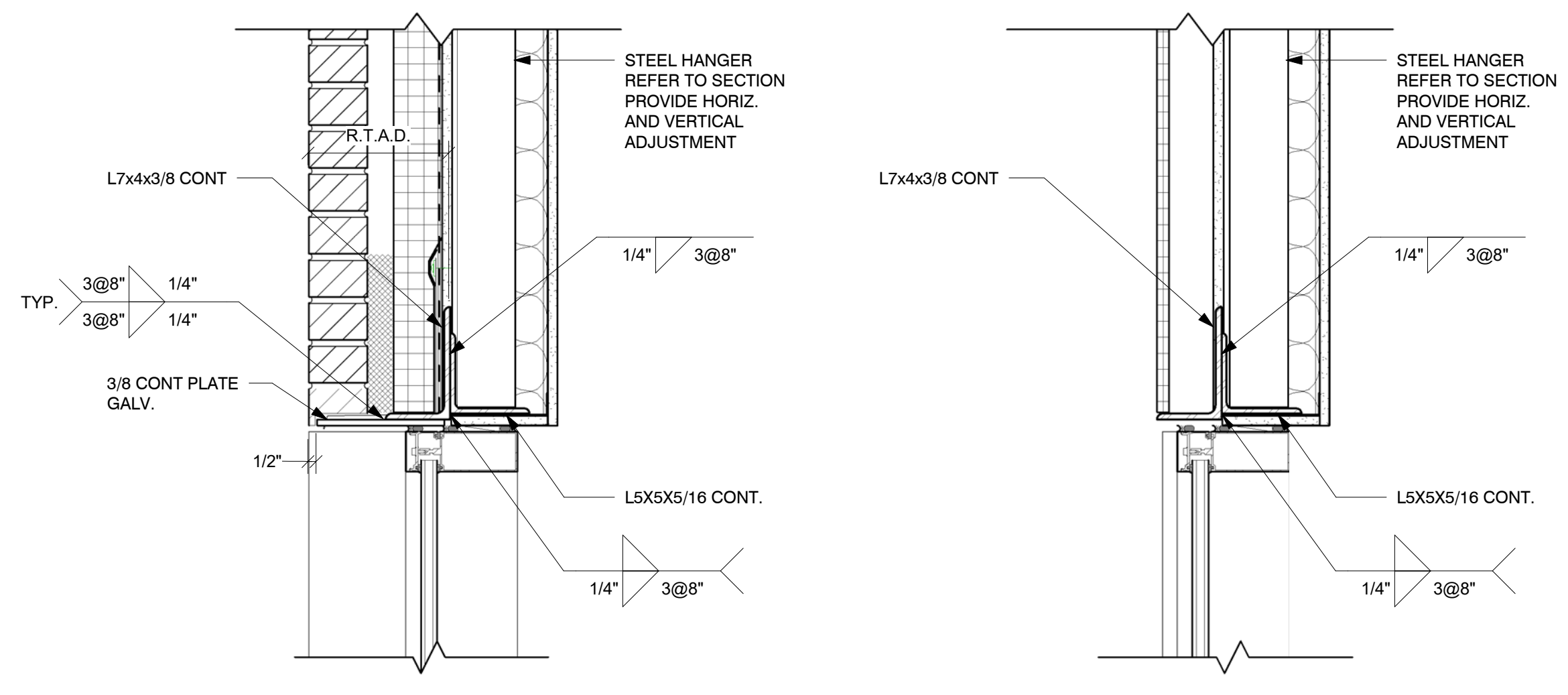
11 TYPICAL NEW CONCRETE PAD ON CONCRETE SLAB ON GRADE  
3/4" = 1'-0"



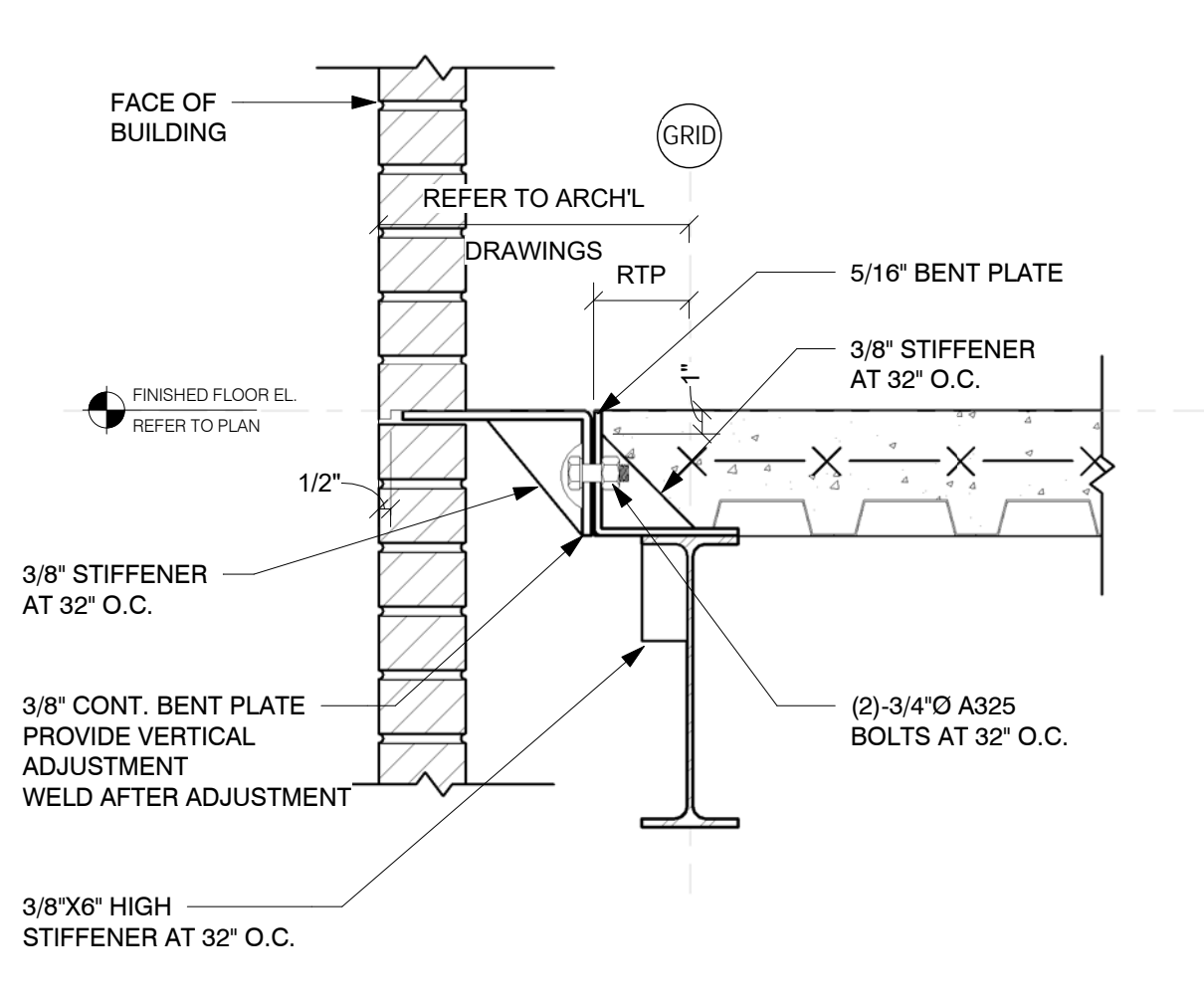
12 TYPICAL BEAM BEARING PLATE DETAIL  
3/4" = 1'-0"



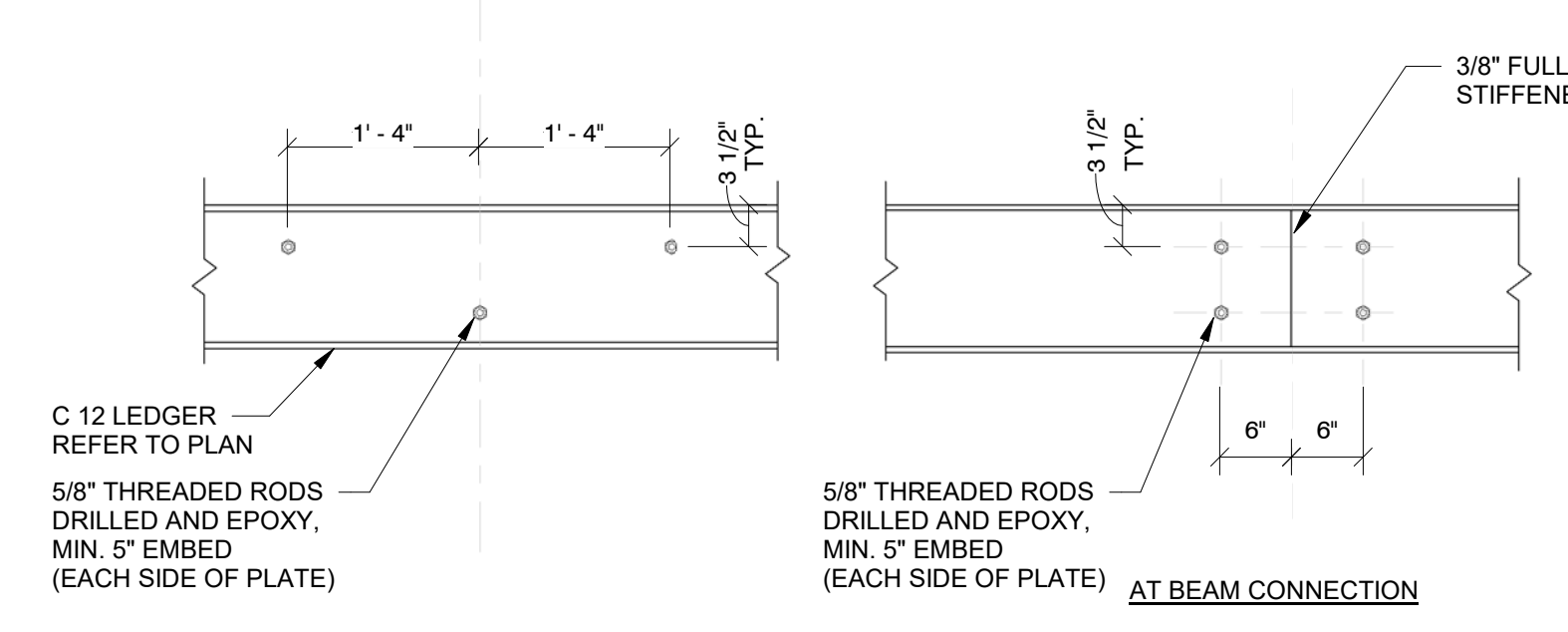
1 TYPICAL EXTERIOR LOOSE LINTEL  
3/4" - 1'-0"



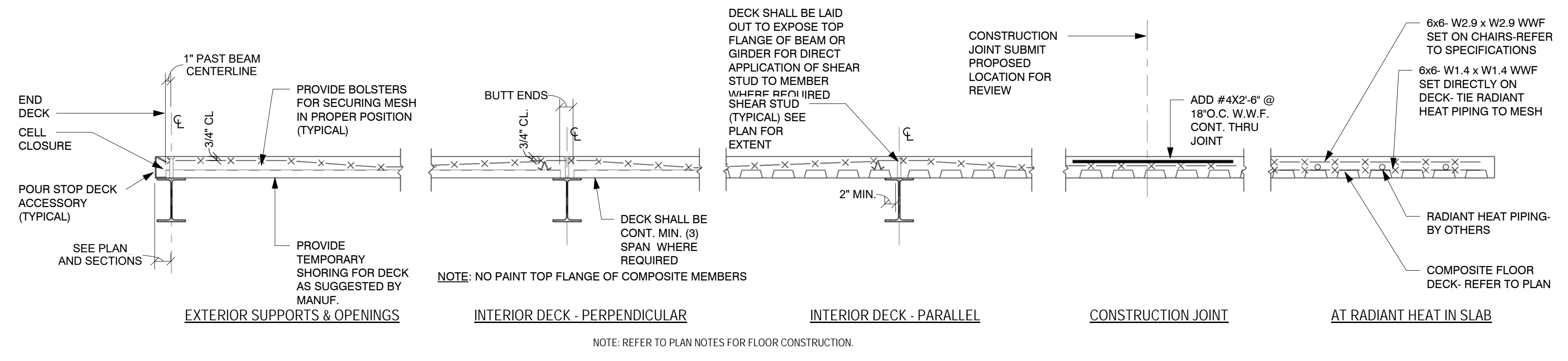
2 TYPICAL HUNG ANGLE DETAIL  
1 1/2" - 1'-0"



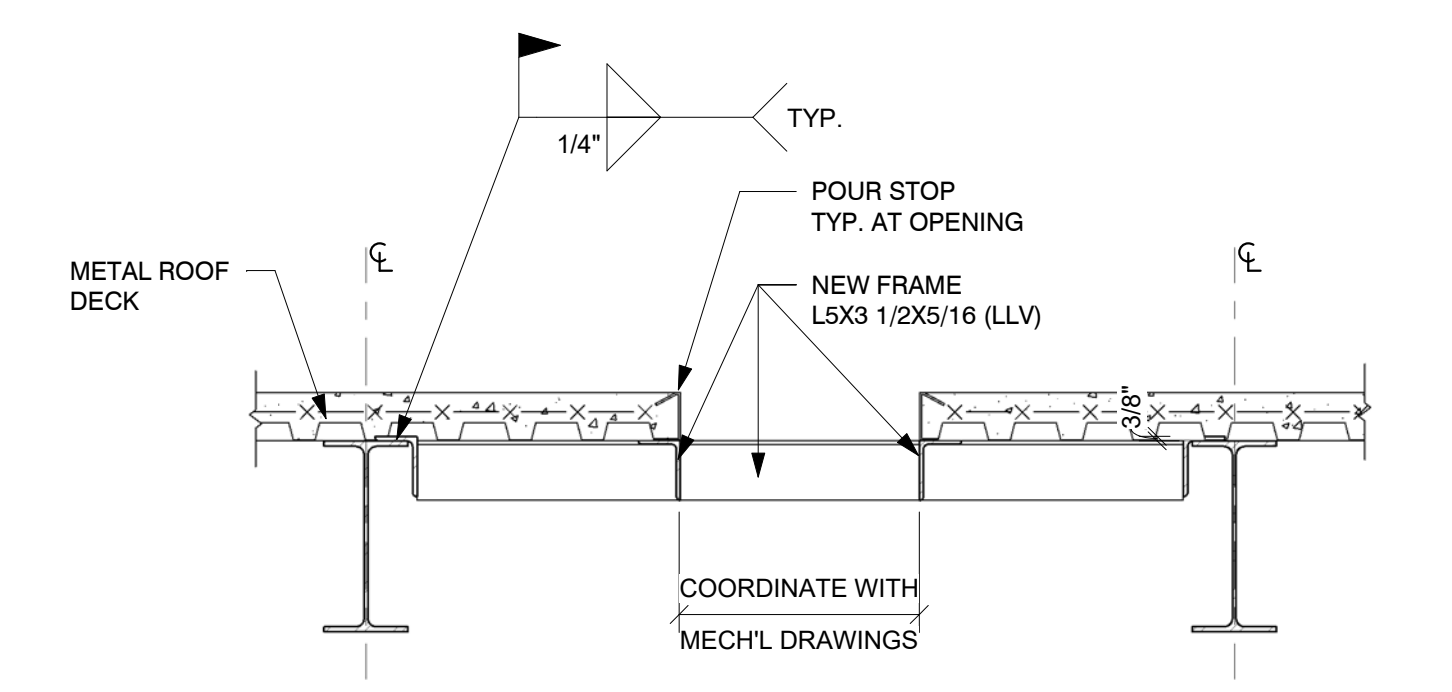
3 TYPICAL RELIEVING ANGLE  
1 1/2" - 1'-0"



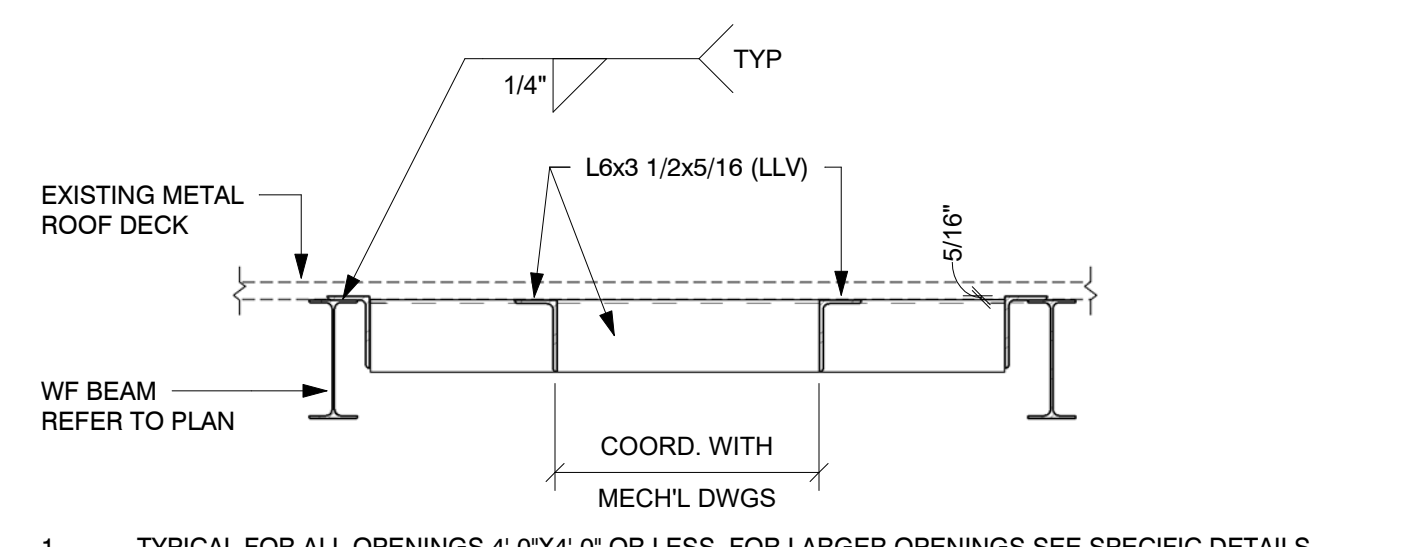
4 TYPICAL LEDGER BOLTING DETAIL  
3/4" - 1'-0"



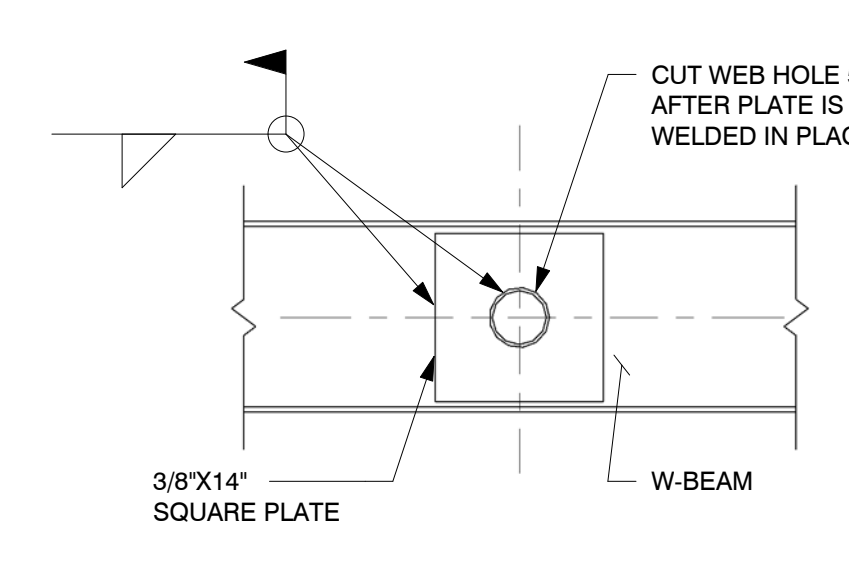
5 TYPICAL SUPPORTED SLAB DETAILS  
3/4" - 1'-0"



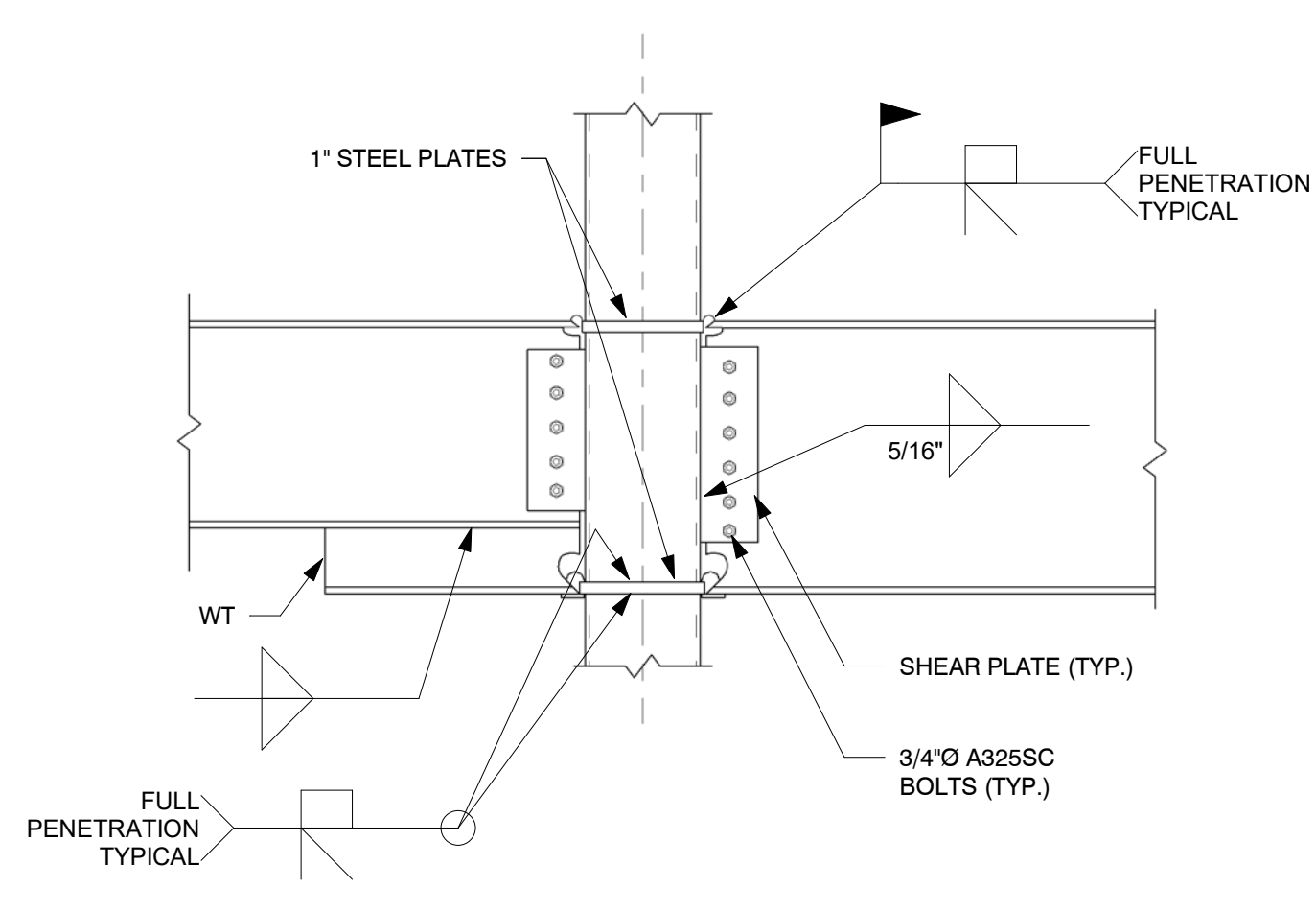
6 TYPICAL FLOOR OPENING DETAIL  
3/4" - 1'-0"



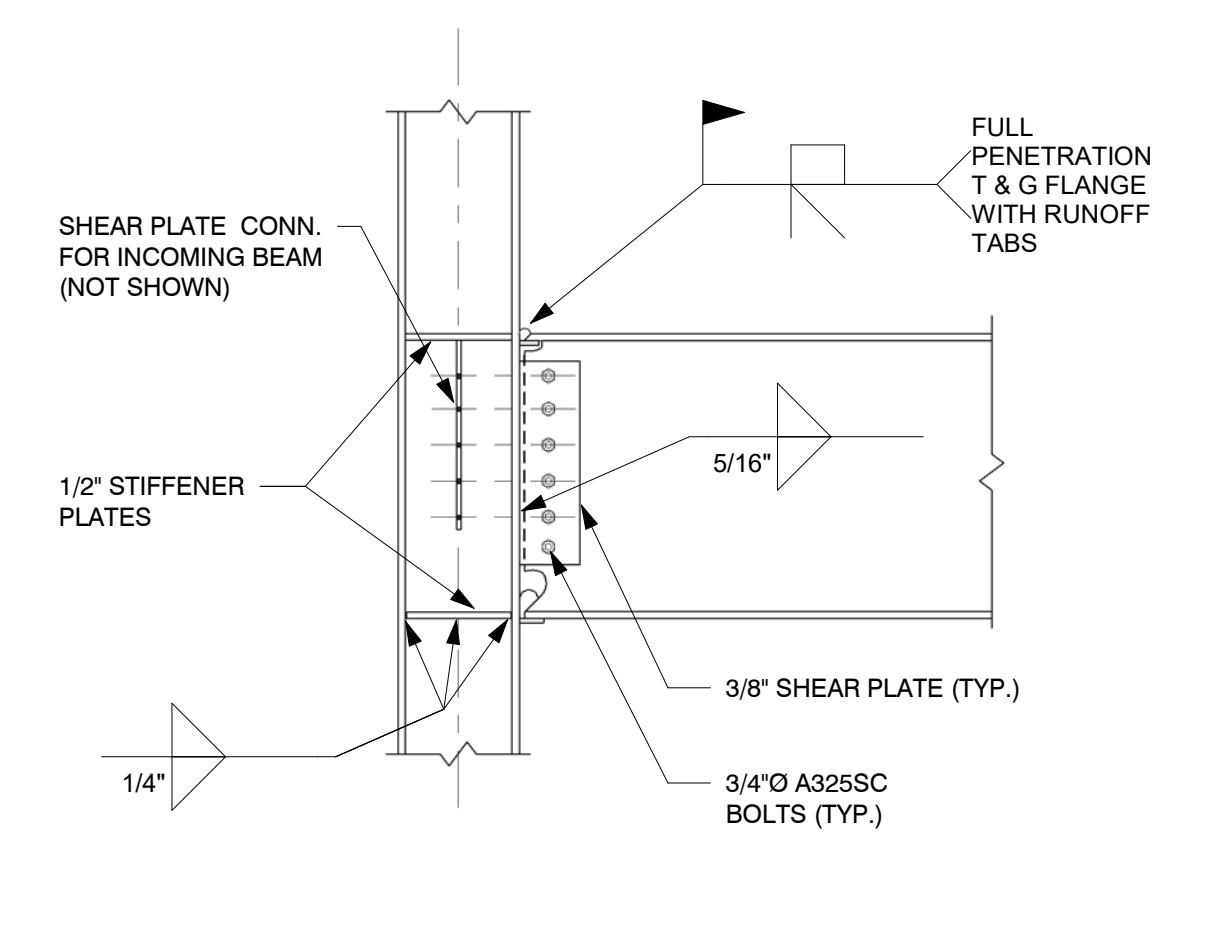
7 TYPICAL ROOF FRAME OPENING DETAIL (W BEAM)  
3/4" - 1'-0"



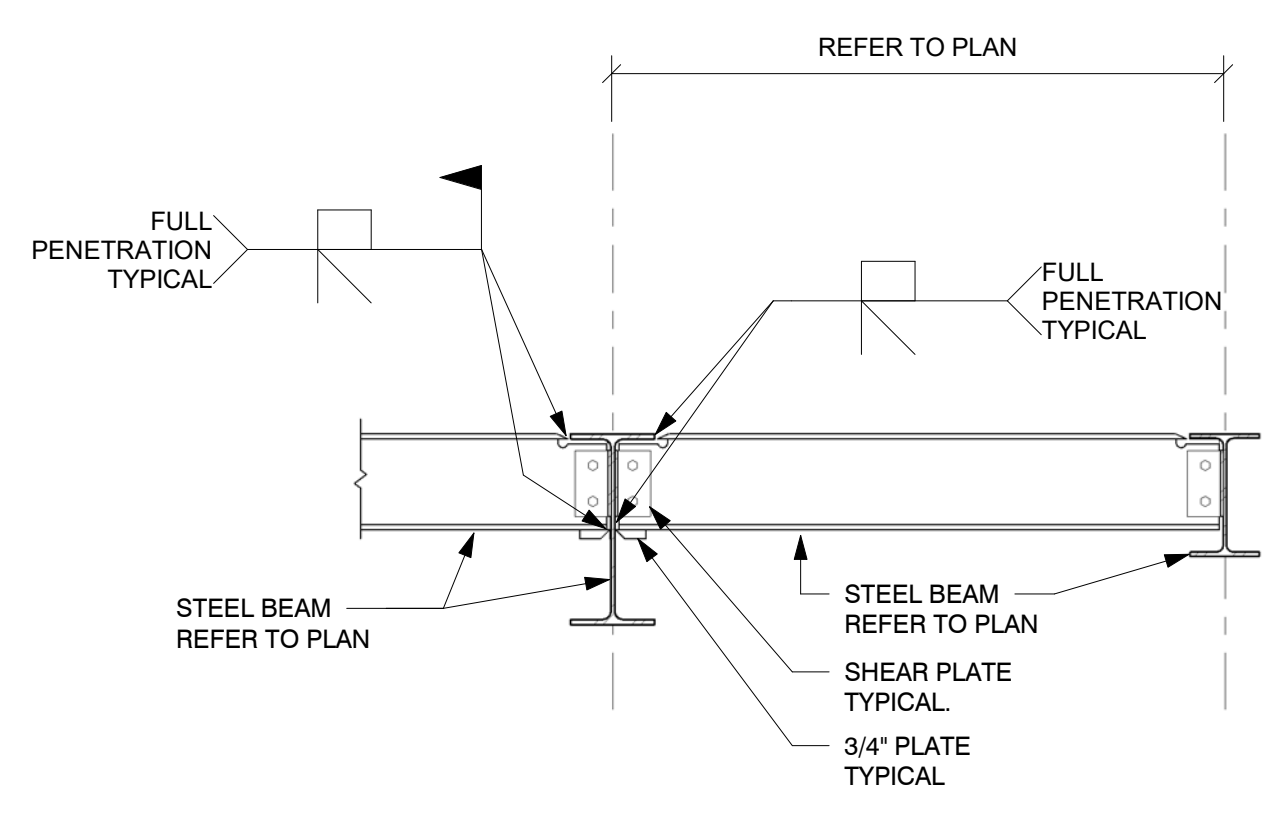
8 TYPICAL PIPE PENETRATION DETAIL  
3/4" - 1'-0"



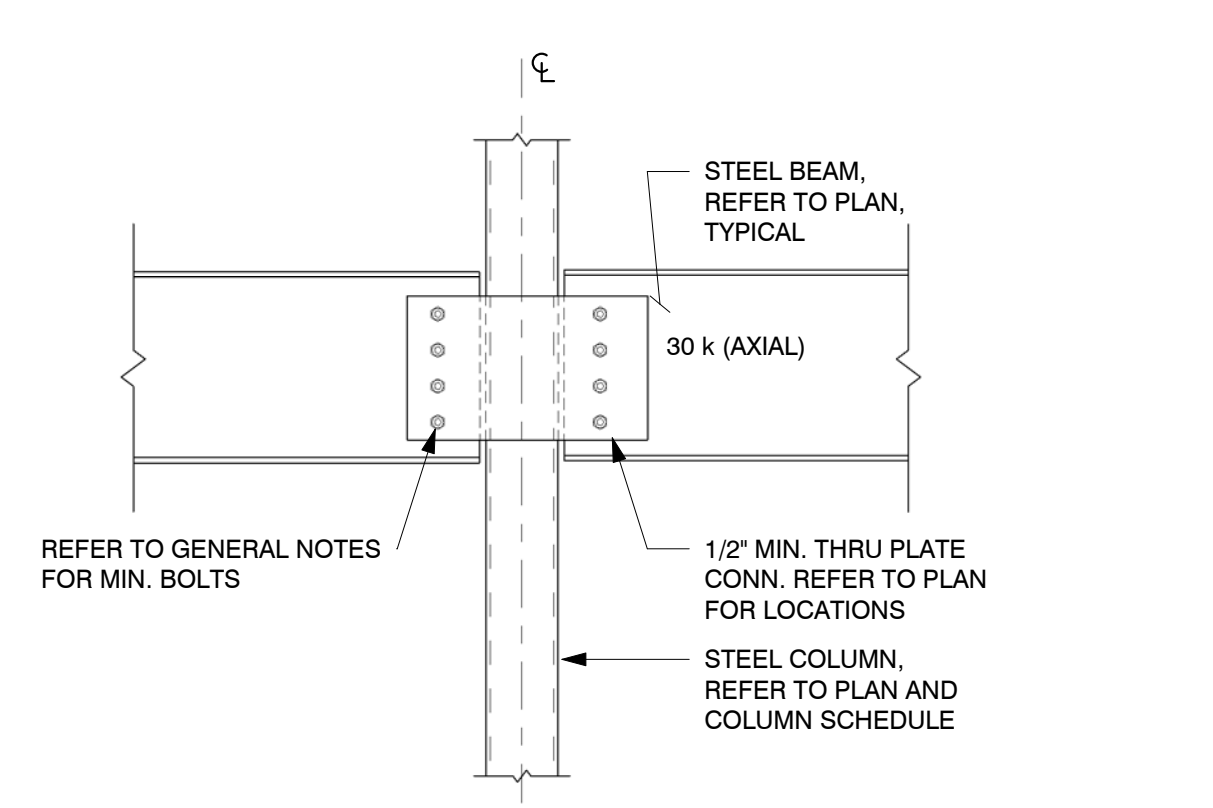
9 TYPICAL MOMENT CONNECTION DETAIL  
3/4" - 1'-0"



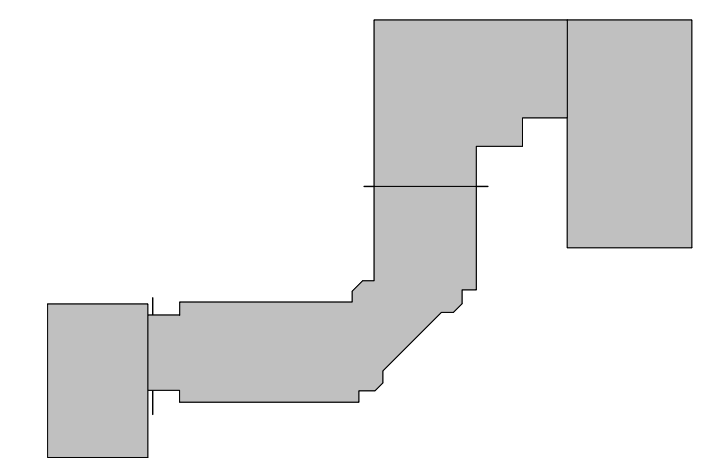
10 TYPICAL MOMENT CONNECTION DETAIL  
3/4" - 1'-0"

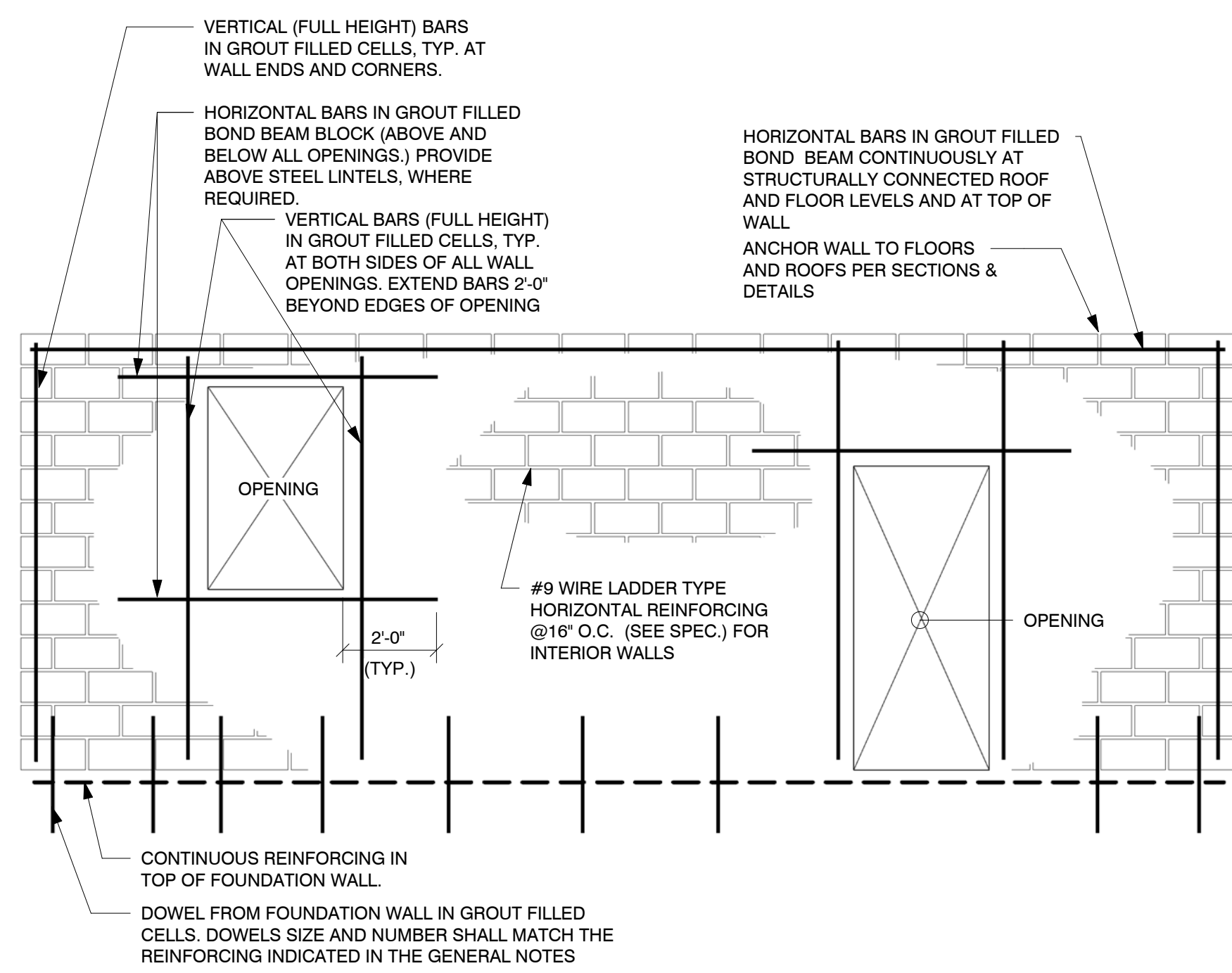


11 TYPICAL WF OUTRIGGER DETAIL  
3/4" - 1'-0"



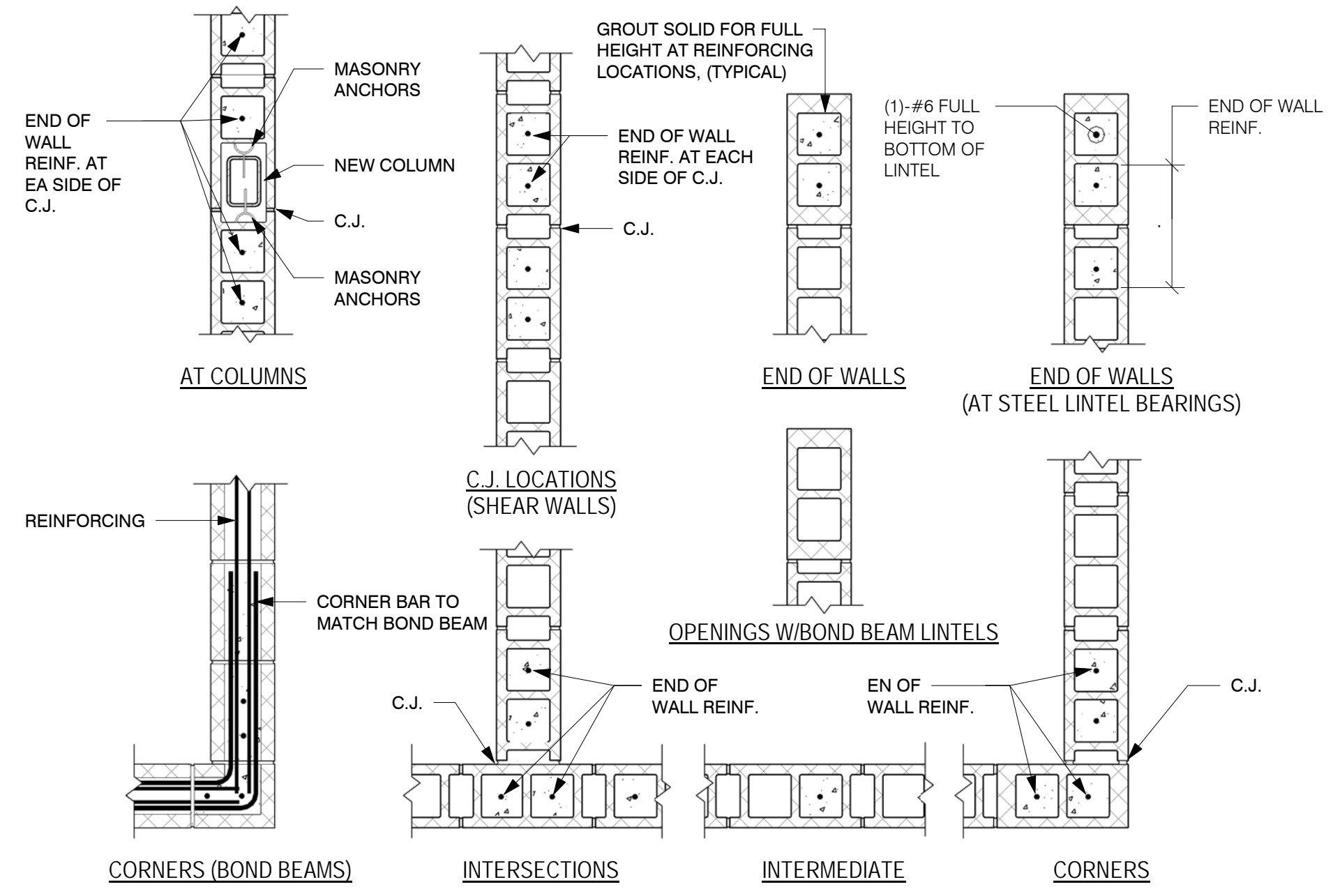
12 TYPICAL THRU PLATE CONNECTION DETAIL  
3/4" - 1'-0"





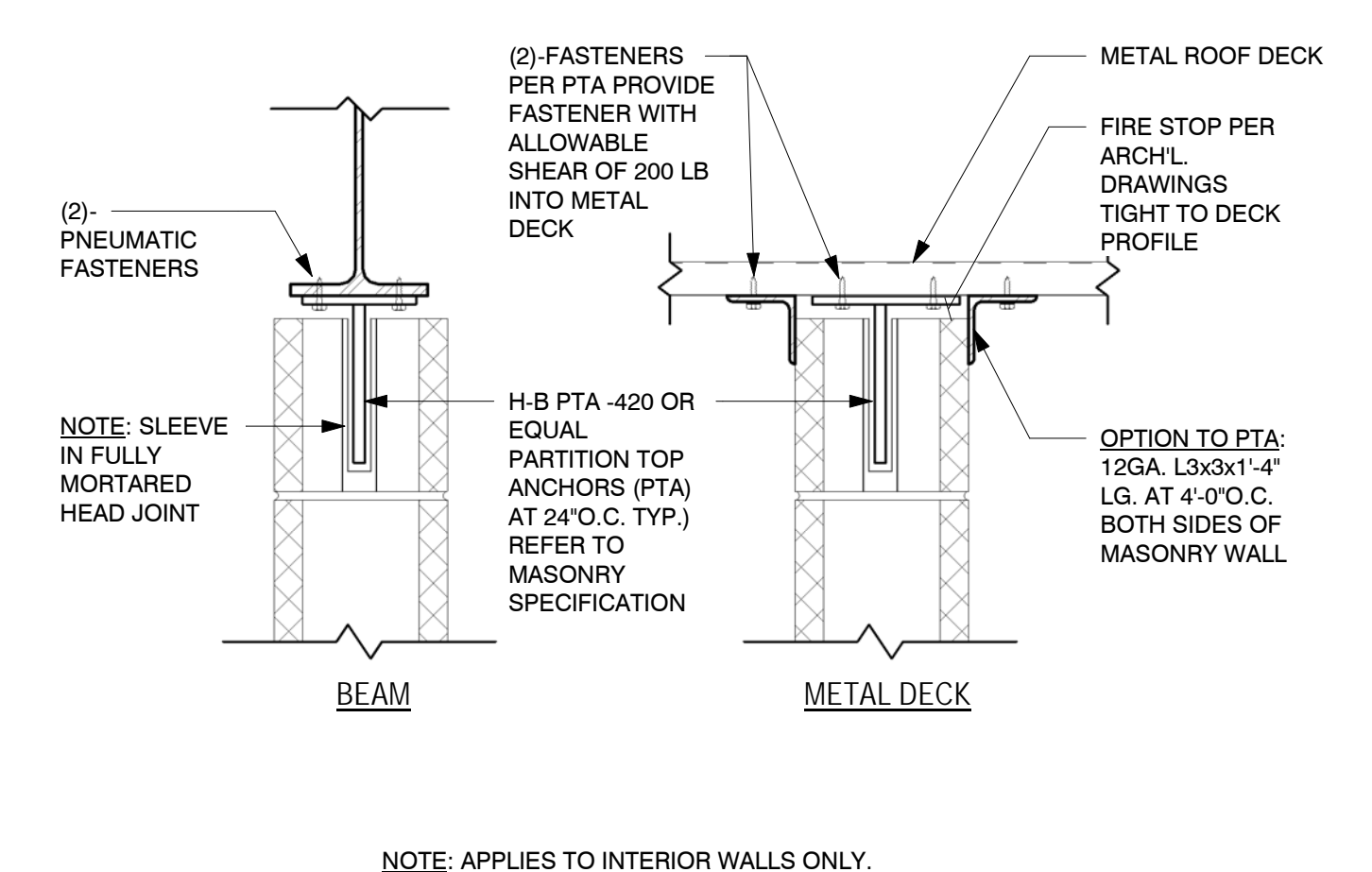
NOTE: REFER TO CONCRETE MASONRY GENERAL NOTES FOR WALL REINFORCING REQUIREMENTS.

**1 TYPICAL CMU WALL REINFORCEMENT DETAIL**  
3/4" = 1'-0"



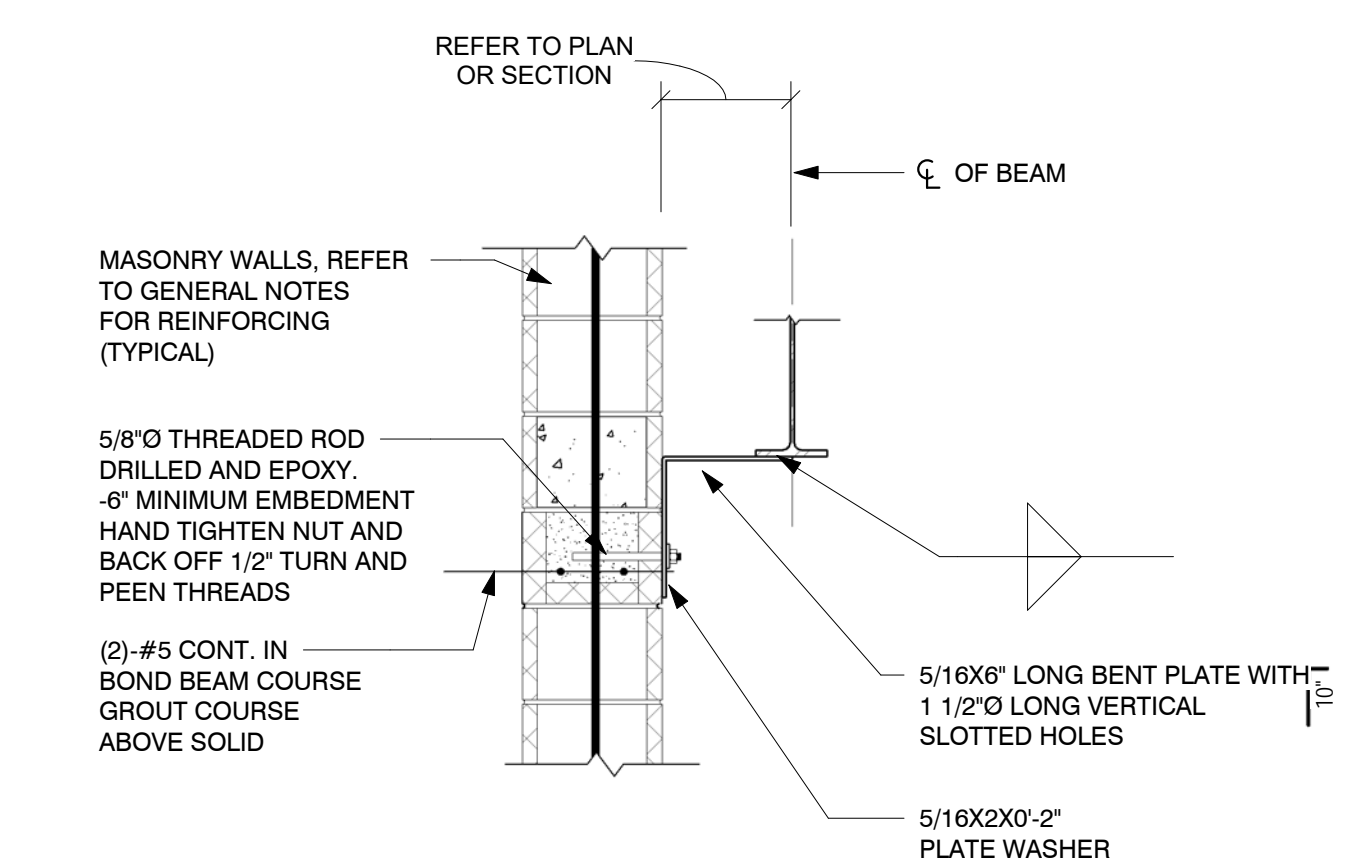
NOTES:  
1. REINFORCING DETAILS APPLY TO ALL CMU WALLS. FOR ACTUAL REINFORCING REQUIREMENTS, REFER TO GENERAL NOTES ON DRAWINGS.  
2. PROVIDE DOWELS FROM CONCRETE FOUNDATIONS TO CMU WALL ABOVE. SIZE AND NUMBER TO MATCH WALL REINFORCING.

**2 TYPICAL CMU REINFORCING PLAN DETAILS**  
3/4" = 1'-0"

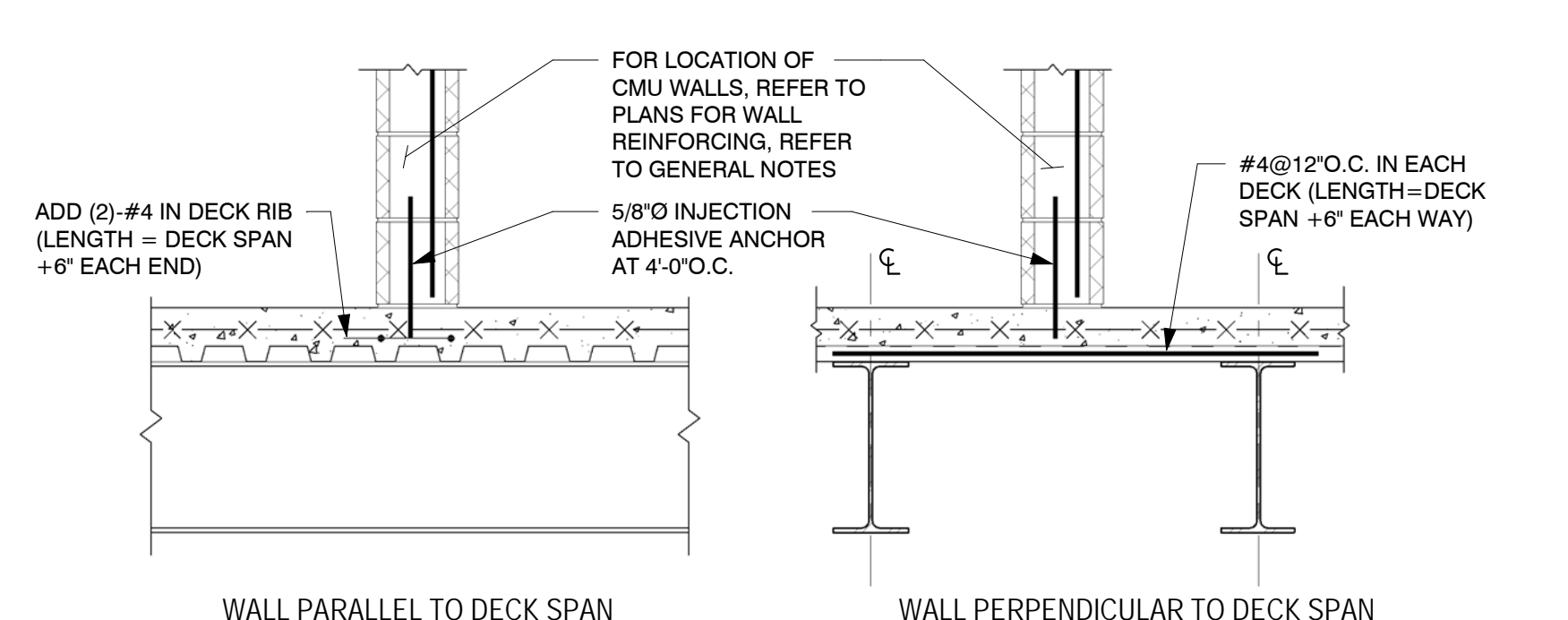


NOTE: APPLIES TO INTERIOR WALLS ONLY.

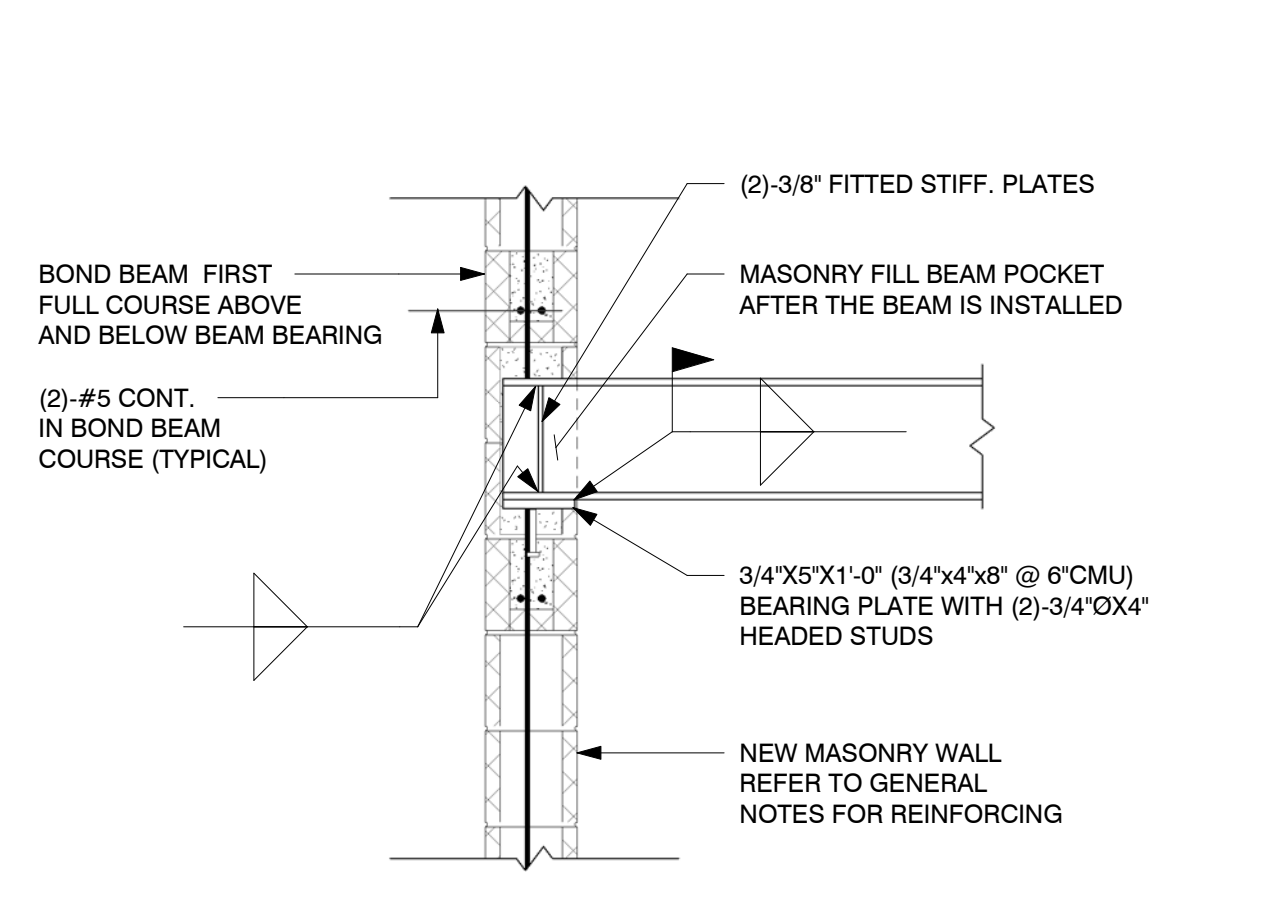
**3 TYPICAL TOP OF WALL MASONRY ANCHORAGE TO STEEL**  
1 1/2" = 1'-0"



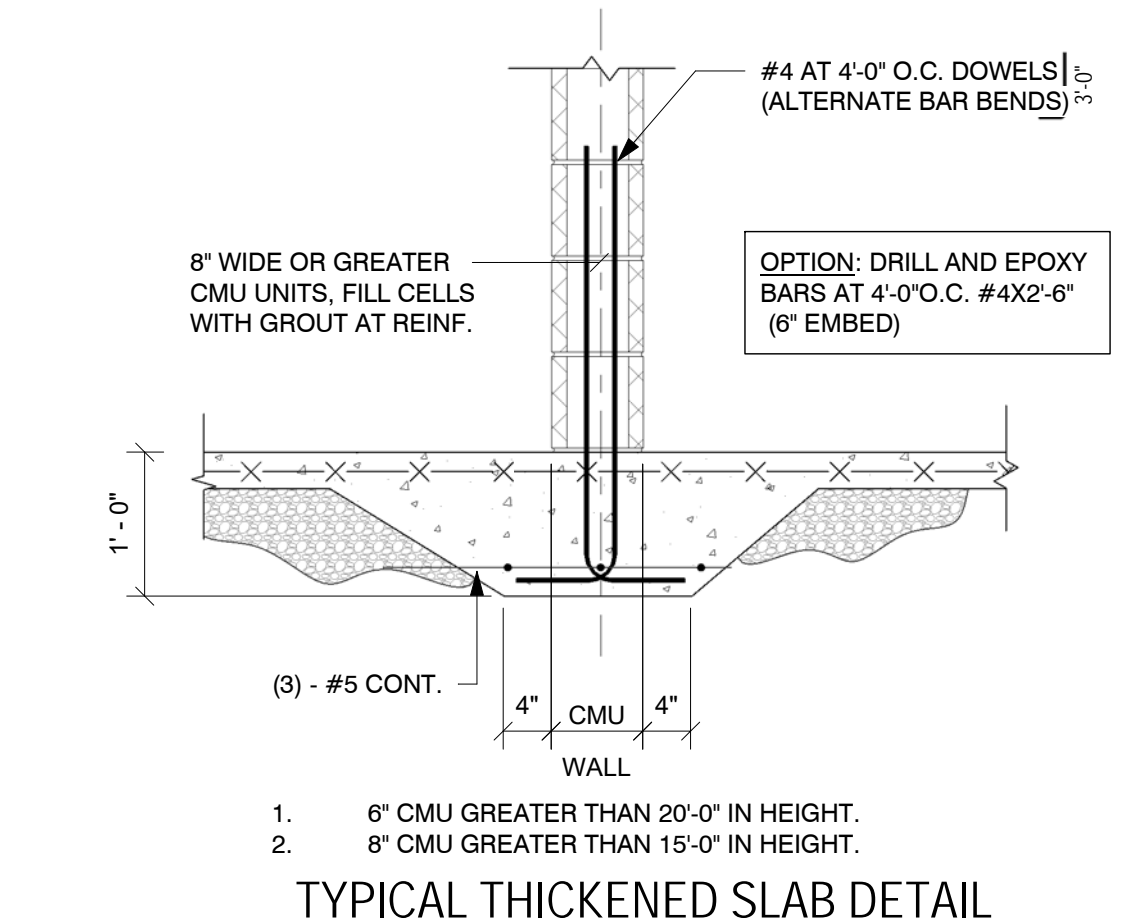
**4 TYPICAL BEAM TO MASONRY CONNECTION**  
3/4" = 1'-0"



**5 TYP. DETAIL OF CMU PARTITION ON SUPPORTED SLAB**  
3/4" = 1'-0"



**6 TYPICAL BEAM BEARING PLATE AT NEW CMU**  
3/4" = 1'-0"



**7 TYPICAL THICKENED SLAB DETAIL**  
3/4" = 1'-0"

GENERAL NOTES

GENERAL

GOVERNING CODE: 2018 CONNECTICUT STATE BUILDING CODE, (2015 INTERNATIONAL BUILDING CODE).

DESIGN LOADS: TOWN OF WINCHESTER

MINIMUM FLOOR LIVE LOADS:

FIRST FLOOR: 100 PSF

ROOF LOAD:

ROOF SNOW LOAD CRITERIA: Pg = 40 PSF Ce = 1.0 Is = 1.0 Ct = 1.0 Ch = 30.8 PSF

WITH INCREASES FOR SNOW DRIFTING, UNBALANCES AND SLIDING PER SECTION 1608 (2015 IBC).

MINIMUM ROOF LIVE LOAD = 30 PSF

ROOF DEAD LOAD = 15 PSF

WIND LOAD CRITERIA: SECTION 1609 (2015 IBC) ULTIMATE WIND SPEED V0 = 125 MPH NOMINAL DESIGN WIND VDES = 95 MPH RISK CATEGORY III W = 1.0 EXPOSURE CLASSIFICATION 'B'

MINIMUM WIND LOAD ON PRIMARY STRUCTURE = 16 PSF

WIND LOADS ON SECONDARY ELEMENTS SHALL CONFORM WITH ASCE 7-10.

COMPONENT AND CLADDING DESIGN WIND PRESSURES:

ROOF ZONE 1: POSITIVE: 11.45 PSF NEGATIVE: -28.15 PSF

ROOF ZONE 2: POSITIVE: 11.45 PSF NEGATIVE: -47.25 PSF

ROOF ZONE 3: POSITIVE: 11.45 PSF NEGATIVE: -71.10 PSF

WALL ZONE 4: POSITIVE: 28.15 PSF NEGATIVE: -30.55 PSF

WALL ZONE 5: POSITIVE: 28.15 PSF NEGATIVE: -37.70 PSF

ROOF OVERHANG ZONE 2: -43.80 PSF

ROOF OVERHANG ZONE 3: -72.10 PSF

DESIGN WIND PRESSURE IS COMPUTED BASED ON ULTIMATE WIND SPEED USING 10 SQUARE FOOT OF AREA. WIND LOADS ARE REDUCIBLE PER ASCE LOAD COMBINATIONS.

SEISMIC LOAD CRITERIA: AS PER SECTION 1613 (2015 IBC) WITH: RISK CATEGORY = III

SEISMIC IMPORTANCE FACTOR, Ie = 1.25, PER ASCE 7-10, TABLE 1.5-2 Ss = 0.1170g, S1 = 0.065g

SOIL SITE CLASS = D

SPECTRAL RESPONSE COEFFICIENTS, Sds = 0.189g, Sd1 = 0.104g

SEISMIC DESIGN CATEGORY, B

BASIC SEISMIC-FORCE-RESISTING SYSTEM, STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE

DESIGN BASE SHEAR, V = 0.078W

RESPONSE MODIFICATION FACTOR, R = 3.0

ANALYSIS PROCEDURE USED: SIMPLIFIED ANALYSIS

ASSUMED BEARING PRESSURE ON UNDISTURBED SOIL: 3000 PSF ASSUMED BEARING PRESSURE ON COMPACTED FILL: 3000 PSF

- 1. SHOULD ANY OF THE DETAILED INSTRUCTIONS SHOWN ON THE PLANS CONFLICT WITH THE GENERAL STRUCTURAL NOTES, THE SPECIFICATIONS, OR WITH EACH OTHER, THE STRICTEST PROVISION SHALL GOVERN. 2. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS FULLY COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE AND TO ENSURE THE SAFETY OF THE BUILDING AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, SHEETING, TEMPORARY BRACINGS, GUYS OR TIEDOWNS WHICH MIGHT BE NECESSARY. SUCH MATERIAL SHALL REMAIN THE CONTRACTOR'S PROPERTY AFTER COMPLETION OF THE PROJECT.

THE CONTRACTOR SHALL PROVIDE SHORING CALCULATIONS AND SHORING DRAWINGS, INDICATING THE WORK TO BE PROVIDED, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF CONNECTICUT.

- 3. LOADS, OPENINGS AND STRUCTURE IN ANY WAY RELATED TO REQUIREMENTS OF OTHER (NON-STRUCTURAL) DISCIPLINES ARE SHOWN FOR BIDDING PURPOSES ONLY. THE CONTRACTOR SHALL OBTAIN FROM THE HEATING AND VENTILATING, ELECTRICAL, PLUMBING AND OTHER SUBCONTRACTORS THE FINAL APPROVED SIZE AND LOCATION OF ALL OPENINGS AND WORK TO BE PROVIDED FOR THEIR TRADE IN ROOFS, FLOORS AND WALLS, WHETHER SHOWN OR NOT SHOWN ON STRUCTURAL DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR TRANSMITTING LOCATIONS AND DETAILS TO STRUCTURAL SUBCONTRACTORS. EXCESS COST RELATED TO VARIATION IN MECHANICAL REQUIREMENTS ARE NOT TO BE BORNE BY THE OWNER.

- 4. MECHANICAL EQUIPMENT WEIGHTS USED IN DESIGN OF SUPPORTING ELEMENTS HAVE BEEN INDICATED ON THE DRAWINGS. CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO INSTALLATION IF ACTUAL WEIGHT EXCEEDS WEIGHT SHOWN ON DRAWINGS.

- 5. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO FOLLOW ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION.

- 6. SHOP DRAWINGS ARE TO BE CHECKED BY THE CONTRACTOR AND SUBCONTRACTOR AND BEAR CHECKERS INITIALS BEFORE BEING SUBMITTED TO THE ARCHITECT FOR APPROVAL.

- 7. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES AND EXISTING CONDITIONS BEFORE PROCEEDING WITH ANY WORK.

- 8. ALL SECTIONS AND DETAILS SHALL BE CONSIDERED TYPICAL AND APPLY FOR THE SAME AND SIMILAR SITUATIONS THROUGHOUT THE BUILDING, UNLESS OTHERWISE SPECIFICALLY NOTED.

- 9. CONTRACTOR SHALL REVIEW ALL ARCHITECTURAL AND STRUCTURAL DRAWINGS PRIOR TO SUBMITTING THEIR BID FOR REFERENCE TO ALL NOTES ON ARCHITECTURAL DRAWINGS REFERRING TO ASSE STRUCTURAL DRAWINGS. IF THE SIZE OF ELEMENTS AND DETAILS OF MEMBERS IS NOT INDICATED, THE CONTRACTOR SHALL CONTACT THE ARCHITECT TO REQUEST THE MISSING INFORMATION IN PREPARATION OF THEIR BID. THESE REFERENCED ITEMS SHALL BE PART OF THE BASE BID.

- 10. IN CASES OF DISCREPANCIES BETWEEN CONTRACT DOCUMENTS AND SUBMITTED SHOP DRAWINGS, THE CONTRACT DOCUMENTS SHALL GOVERN INSTALLATION OF MATERIALS.

FOUNDATIONS

- 1. BACKFILLING SHALL BE ACCOMPLISHED TO EQUAL HEIGHTS ON BOTH SIDES OF FOUNDATION WALLS TO PREVENT MOVEMENTS DUE TO UNBALANCED EARTH PRESSURE. WHERE EARTH IS ON ONE SIDE ONLY, BACKFILLING AND COMPACTION SHALL NOT START UNTIL FLOOR SLAB OR ADEQUATE BRACING IS PROVIDED FOR WALL SUPPORT (EXCEPT AT RETAINING WALLS).

- 2. ALL FOOTINGS ARE TO REST ON UNDISTURBED NATURAL SOIL, AS DEFINED IN THE SPECIFICATIONS, OR CONTROLLED COMPACTED FILL, REGARDLESS OF ELEVATIONS SHOWN ON DRAWINGS. FOOTING BOTTOM ELEVATIONS SHALL NOT BE HIGHER THAN INDICATED ON THE FOUNDATION PLAN, NOR LESS THAN 3'-6" BELOW FINISH GRADES.

- 3. IF FILL MATERIALS ARE ENCOUNTERED AT FOOTING BEARING ELEVATIONS, ALL FILL MATERIAL SHALL BE EXCAVATED AND DISPOSED OF LEGALLY OFF-SITE. THE OVER EXCAVATION SHALL BE BACKFILLED WITH CONTROLLED COMPACTED FILL TO THE BOTTOM OF FOOTING ELEVATION AS REQUIRED.

- 4. ALL CONTROLLED COMPACTED BACKFILL UNDER FOOTINGS AND WITHIN THE FOOTPRINT OF THE STRUCTURE SHALL BE COMPACTED TO 95% OF THE MODIFIED OPTIMUM DENSITY.

- 5. BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE AT LEAST 3'-6" BELOW FINISHED GRADE. PRIOR TO PROCEEDING WITH FOOTING EXCAVATION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF FINISH GRADES AND BOTTOM OF EXTERIOR FOOTING ELEVATIONS TO MAINTAIN THE 3'-6" FROST PROTECTION.

- 6. ALL SOIL SURROUNDINGS AND UNDER ALL FOOTINGS SHALL BE PROTECTED FROM FREEZING AND FROST ACTION DURING THE COURSE OF CONSTRUCTION.

- 7. FOOTING BOTTOMS SHALL STEP AT THE RATE OF 1 UNIT VERTICAL TO 2 UNITS HORIZONTAL WITH A MAXIMUM VERTICAL STEP OF 2'-0".

- 8. WHERE SUBSURFACE PIPING PASSES THROUGH FOUNDATION WALLS, THE TOP OF THE FOOTINGS SHALL BE AT LEAST 8" BELOW THE INVERT ELEVATION OF THE PIPING AND CONDUITS. COORDINATE ALL INVERTS WITH MECHANICAL, PLUMBING, FIRE PROTECTION, ELECTRICAL, SITE AND SITE UTILITY DRAWINGS.

- 9. WHERE FOOTINGS ARE IN CLOSE PROXIMITY OF SUBSURFACE PIPING OR CONDUIT, BOTTOM OF FOOTINGS SHALL BE AT LEAST 8" BELOW INVERT ELEVATION OF PIPING OR CONDUITS.

- 1. KEEP FOUNDATION EXCAVATIONS FREE OF WATER AT ALL TIMES.

- 11. USE LEAN CONCRETE (fc=1500) OR CONTROLLED COMPACTED FILL FOR OVER-EXCAVATION OF FOOTINGS.

- 12. PLACEMENT OF ALL COMPACTED FILL MATERIALS MUST BE UNDER SUPERVISION OF AN APPROVED TESTING LABORATORY (SEE SPECIFICATIONS). CONCRETE FOUNDATIONS SHALL NOT BE PLACED UNTIL SUBGRADE HAS BEEN CHECKED IN PLACE AND APPROVED BY TESTING LABORATORY.

- 13. EXISTING ON-SITE EXCAVATED MATERIALS SHALL NOT BE ACCEPTABLE BACKFILL MATERIAL BELOW BUILDING FOUNDATION OR GRADE, OR FOR BACKFILLING OF FOUNDATION WALLS, OR WITHIN 2 FEET OF PAVEMENT GRADES UNLESS APPROVED BY THE GEOTECHNICAL ENGINEER OF RECORD.

- 14. CONTROL JOINT SPACING IN FOUNDATION WALLS SHALL NOT EXCEED 30 FEET. 50% OF HORIZONTAL REINFORCEMENT SHALL EXTEND THROUGH JOINT AND HAVE A CLASS 'B' SPLICE (PER ACI 318-05).

- 15. WHERE REQUIRED, CONSTRUCTION JOINTS SHALL BE KEVED AND OCCUR AT CONTROL JOINT INTERVALS. PROVIDE BENTONITE WATERSTOP FULL HEIGHT IN ALL WALL CONSTRUCTION JOINTS BELOW GRADE.

- 16. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF BRICK OR CONCRETE MASONRY BLOCK SHELF ELEVATIONS IN THE FOUNDATION WALLS.

- 17. THE LOCATION AND ELEVATION OF EXISTING FOOTINGS INDICATED ARE BASED ON DRAWINGS BY \_\_\_\_\_, DATED \_\_\_\_\_, WHICH HAVE BEEN PROVIDED TO THE DESIGNERS BY THE OWNER. THIS INFORMATION IS PROVIDED FOR BIDDING PURPOSES ONLY. ACTUAL EXISTING FOUNDATIONS MAY VARY FROM WHAT IS INDICATED, AND MUST BE VERIFIED IN FIELD PRIOR TO PREPARATION OF SHOP DRAWINGS. NOTIFY ARCHITECT IF EXISTING CONDITIONS PRECLUDE USE OF DETAILS AS SHOWN.

- 18. THE FOUNDATION DESIGN OF THE STRUCTURE HAS BEEN PREPARED BASED ON THE SOIL BORINGS, SOILS REPORT AND RECOMMENDATIONS PROVIDED BY THE GEOTECHNICAL ENGINEER, \_\_\_\_\_, DATED \_\_\_\_\_. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE MATERIAL PRIOR TO PREPARING HIS BID TO ASSURE HE UNDERSTANDS THE SOIL CONDITIONS AND THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.

- 19. THE FOUNDATION DESIGN OF THE STRUCTURE HAS BEEN PREPARED BASED ON THE SITE GRADING PLAN PREPARED BY \_\_\_\_\_, DATED \_\_\_\_\_, IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE DRAWING PRIOR TO PREPARING HIS BID TO ASSURE HE UNDERSTANDS THE SITE CONDITIONS AND THE REQUIREMENTS OF THE SITE ENGINEER.

- 20. FOUNDATION DESIGN SITE PREPARATION: THE FOUNDATION DESIGN AS INDICATED ON THE STRUCTURAL DRAWINGS HAS BEEN BASED ON THE FOLLOWING SITE PREPARATION. THE SITE HAS BEEN PREPARED BY THE EXCAVATION AND REMOVAL FROM THE SITE OF ALL EXISTING FILL AND CONTAMINATED SOILS. THE FOUNDATION DESIGN IS BASED ON THE CONTROLLED BACKFILLING OF THE SITE EXCAVATION WITH CONTROLLED FILL COMPACTED TO AT LEAST 95% OF THE MODIFIED OPTIMUM DENSITY IN ACCORDANCE WITH ASTM D1557.

- 21. PROVIDE CONTINUOUS BENTONITE WATERSTOPS BETWEEN THE TOP OF FOOTING AND BOTTOM OF ALL WALLS WHERE THE SLAB ON GRADE IS BELOW THE FINISH GRADE. PLACE THE WATERSTOP WITH A MINIMUM OF 2" CLEAR FROM THE FACE OF WALL, OR PER THE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS. ATTACH WATERSTOP TO THE CONCRETE PER THE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.

SLAB ON GRADE

- 1. ALL SLABS ON GRADE SHALL BEAR ON A 15 MIL. CLASS A, VAPOR RETARDER OVER A MINIMUM OF 4 INCHES OF 3/4" COMPACTED PROCESSED AGGREGATE FILL, OVER A MINIMUM OF 6 INCHES OF COMPACTED GRAVEL FILL.

- 2. ALL JOINTS OF THE VAPOR RETARDER SHALL BE SEALED WITH TAPE. TURN THE VAPOR BARRIER UP AT ALL TERMINATIONS AGAINST FOUNDATION WALLS AND SEAL JOINT BY CONTINUOUSLY TAPING.

- 3. IF FILL MATERIALS ARE ENCOUNTERED SLAB SUBGRADE ELEVATIONS, ALL FILL MATERIAL SHALL BE EXCAVATED AND DISPOSED OF LEGALLY OFF-SITE. THE OVER EXCAVATION SHALL BE BACKFILLED WITH CONTROLLED COMPACTED FILL TO THE BOTTOM OF THE SLAB SUBGRADE AS REQUIRED. ALL CONTROLLED COMPACTED BACKFILL UNDER SLABS WITHIN THE FOOTPRINT OF THE STRUCTURE SHALL BE COMPACTED TO 95% OF THE MODIFIED OPTIMUM DENSITY.

- 3. EXISTING ON-SITE EXCAVATED MATERIALS SHALL NOT BE ACCEPTABLE BACKFILL MATERIAL BELOW BUILDING SLABS ON GRADE UNLESS APPROVED BY THE GEOTECHNICAL ENGINEER OF RECORD.

- 4. CONTROL JOINTS ARE TO BE CREATED IN SLABS ON GRADE. JOINTS SHALL BE SAW CUT 1/8" WIDE AND TO A DEPTH EQUAL TO 1/4 OF THE SLAB THICKNESS. LOCATE JOINTS A MAXIMUM OF 12'-0" ON CENTER IN EACH DIRECTION, IN ADDITION TO THOSE LOCATIONS INDICATED ON PLAN.

- 5. CONSTRUCTION JOINTS AS REQUIRED SHALL BE KEVED AND DOWELED AND LOCATED AT INTERVALS OF A MAXIMUM OF 75 FEET ON CENTER.

- 6. SEE ARCHITECTURAL DRAWINGS FOR LOCATION AND SIZE OF DEPRESSED AREAS IN CONCRETE SLABS AND FOR CONCRETE PADS. MAINTAIN FULL SLAB THICKNESS IN DEPRESSED AREAS, UNLESS OTHERWISE SHOWN.

- 7. SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF ALL MASONRY WALLS FOR WHICH NO FOOTING IS SHOWN. SEE DETAILS FOR SLAB REINFORCING REQUIREMENTS AT ALL WALL LOCATIONS.

- 8. CONTRACTOR SHALL CONSOLIDATE ALL SLAB CONCRETE USING VIBRATIONAL METHODS IN CONFORMANCE WITH ACI 309, AGUIDE FOR CONSOLIDATION OF CONCRETE.

CONCRETE

MATERIALS:

CONCRETE SHALL MEET THE REQUIREMENTS OF THE EXPOSURE CATEGORY LISTED BELOW PER ACI 318 CHAPTER 19, AND SHALL HAVE THE MAXIMUM WATER TO CEMENT RATIO, TARGET AIR CONTENT AND DEVELOP STRENGTH IN 28 DAYS AS FOLLOWS:

Table with 5 columns: LOCATION, EXPOSURE CATEGORY, STRENGTH (PSI), MAXIMUM WATER TO CEMENT RATIO, TARGET AIR CONTENT. Rows include FOUNDATIONS, SLABS ON GRADE, and SLABS ON METAL DECK.

- 1. ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS MUST FOLLOW ACI 318-14.

- 2. REINFORCING STEEL SHALL BE ASTM A615, GRADE 60.

- 3. NO TACK WELDING OF REINFORCING WILL BE PERMITTED.

- 4. UNLESS NOTED OTHERWISE, ALL LAP SPLICES SHALL BE CLASS B, IN ACCORDANCE WITH ACI 318-14.

- 5. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185.

- 6. WIRE MESH REINFORCEMENT MUST LAP ONE MESH SIZE AT SIDES AND ENDS AND BE WIRED TOGETHER.

- 7. WELDED WIRE FABRIC SIDE LAPS SHALL BE STAGGERED TO AVOID FOUR MESH THICKNESS AT COINCIDING END LAP AND SIDE LAP LOCATION.

- 8. NO CALCIUM CHLORIDE OR ADMIXTURES CONTAINING MORE THAN 0.1% CHLORIDE BY WEIGHT OF ADMIXTURE SHALL BE USED IN THE CONCRETE.

- 9. BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE AT LEAST 3'-6" BELOW FINISHED GRADE. PRIOR TO PROCEEDING WITH FOOTING FORMWORK, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF BOTTOM OF EXTERIOR FOOTING ELEVATIONS WITH THE FINISH GRADES AND MAINTAINING THE 3'-6" FROST PROTECTION. WHERE SUBSURFACE PIPING PASSES THROUGH FOUNDATION WALLS, THE TOP OF FOOTINGS SHALL BE AT LEAST 8" BELOW THE INVERT ELEVATION OF THE PIPING AND CONDUITS. COORDINATE ALL INVERTS WITH MECHANICAL, PLUMBING, FIRE PROTECTION, ELECTRICAL, SITE AND SITE UTILITY DRAWINGS. PIPING OR CONDUITS SHALL NOT PASS THROUGH COLUMNS OR PIERS.

- 10. CONTRACTOR SHALL ANTICIPATE DEFLECTION OF STEEL MEMBERS AT SUPPORTED ELEVATED SLABS OF 1" INCH MAXIMUM, AND PROVIDE ADDITIONAL CONCRETE AS REQUIRED.

- 11. ALL HORIZONTAL STEEL SHOWN IN SECTIONS AND DETAILS SHALL BE CONTINUOUS, UNLESS OTHERWISE NOTED. ALL LAPS SHALL BE CLASS B SPLICES IN ACCORDANCE WITH ACI 318.

- 12. AT INTERSECTIONS OF REINFORCED CONCRETE WALLS, PROVIDE CORNER DOWELS OF SAME SIZE AND AT THE SAME SPACING AS THE SMALLER HORIZONTAL REINFORCING. DOWELS SHALL HAVE A CLASS B LAP WITH HORIZONTAL REINFORCING IN EACH DIRECTION.

- 13. PROVIDE DRILLED AND EPOXYED DOWELS OF SAME SIZE TO MATCH NEW REINFORCING WHERE NEW CONSTRUCTION ADJUTS EXISTING CONCRETE CONSTRUCTION. LENGTH SHALL BE THE REQUIRED EMBEDMENT DEPTH PER THE ANCHOR BOLT/EPoxy MANUFACTURER PLUS A CLASS B LAP SPLICE FOR THE SIZE OF BAR.

- 14. PROVIDE CORROSION RESISTANT ACCESSORIES IN ALL EXPOSED CONSTRUCTION.

- 15. ALL KEYS IN CONCRETE WALLS SHALL BE 2 X 4 UNLESS NOTED OTHERWISE.

- 16. CONCRETE PIERS: PLACE CONCRETE PIERS AND WALLS TOGETHER. SET PIER REINFORCING AND SET WALL REINFORCING THROUGH PIER VERTICAL BARS. PROVIDE DOWELS WITH STANDARD HOOK FROM FOOTING AT ALL PIERS. SIZE AND QUANTITY OF DOWELS TO MATCH VERTICAL PIER REINFORCING. PROVIDE CLASS 'B' SPLICE.

- 17. SEE ARCHITECTURAL, MECHANICAL, PLUMBING, FIRE PROTECTION, ELECTRICAL, SITE, SITE UTILITY AND EQUIPMENT DRAWINGS FOR CONCRETE PADS, SLEEVES, OPENINGS, RECESSES, AND BUILT-IN WORK IN CONCRETE ELEMENTS.

- 18. THE CONTRACTOR SHALL FURNISH, LOCATE AND INSTALL ALL ACCESSORIES FOR PROPER ANCHORAGE OF WOOD AND METAL FRAMING, WOOD BLOCKING, BRICK WORK AND MASONRY UNITS. HE SHALL BE SOLELY RESPONSIBLE FOR FURNISHING, LOCATING AND ENSURING PROPER QUANTITY OF ALL FASTENING DEVICES.

- 19. ALL CONCRETE TO REMAIN EXPOSED TO VIEW SHALL RECEIVE A SMOOTH RUBBED FINISH (SEE SPECIFICATIONS).

- 20. ALL CONCRETE CORNERS WITH BOTH SIDES EXPOSED TO VIEW SHALL BE SQUARE UNLESS OTHERWISE SHOWN OR NOTED. THE EDGE SHALL BE RUBBED, PRODUCING A SMOOTH, DENSE SURFACE WITHOUT PITS OR IRREGULARITIES.

- 21. PROVIDE CONTINUOUS VERTICAL DOVETAIL SLOTS AT 16 INCH CENTERS HORIZONTALLY FOR ALL CONCRETE WALLS ABUTTING A MASONRY WALL OR MASONRY VENEER, UNLESS OTHERWISE NOTED.

- 22. PROVIDE CLEARANCE FROM EDGE OF REINFORCING TO EDGE OF CONCRETE AS FOLLOWS:

Table with 2 columns: FOOTINGS (AGAINST EARTH) COLUMNS AND PIERS (VERTICAL REINFORCING) WALLS, INTERIOR FACE WALLS, EXTERIOR FACE (4" AND SMALLER) WALLS, EXTERIOR FACE (4" AND LARGER) SLABS (INTERIOR) SLABS (EXTERIOR) SLABS ON GRADE (W.W.F.) TOP SURFACE. Values range from 3" to 1 1/2" X THK. FROM.

- 23. PROVIDE 3 #4 BARS IN TOP OF ALL CONCRETE BEAMS WITH STIRRUPS THAT DO NOT HAVE ANY OTHER TOP STEEL SPECIFIED.

- 24. NO SLEEVES, HOLES OR INSERTS SHALL BE PLACED IN SLABS WITHIN 2'-0" OF THE EDGE OF COLUMNS, OR ANYWHERE IN BEAMS, COLUMNS OR JOISTS WITHOUT APPROVAL OF THE ARCHITECT.

- 25. PROVIDE 1/4" CLOSURE PLATES WITH FULL SEAL WELDS FOR ALL TUBE OR PIPE HOLLOW STEEL SECTIONS, UNLESS OTHERWISE NOTED ON THE DRAWINGS.

- 26. CONTRACTOR IS RESPONSIBLE FOR PROVIDING NEW STEEL FRAMES, AS DETAILED ON THE STRUCTURAL DRAWINGS, AT ALL NEW FLOOR AND ROOF OPENINGS REQUIRED BY ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS IN BOTH NEW AND EXISTING STRUCTURES. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE CONTRACT DOCUMENTS AND INCLUDE THESE FRAMES IN THESE NEW STEEL FRAMES FOR OPENINGS ARE IN ADDITION TO THE FRAMES SPECIFICALLY INDICATED ON THE DRAWINGS FOR SPECIFIC SUPPORT CONDITIONS.

- 27. CONSTRUCTION MANAGER IS RESPONSIBLE TO COORDINATE THE MECHANICAL CURB DIMENSIONS FOR MECHANICAL EQUIPMENT BETWEEN THE MECHANICAL CONTRACTOR AND STRUCTURAL STEEL FABRICATOR. THE STRUCTURAL STEEL SHALL BE LOCATED ON THE CENTERLINE OF MECHANICAL CURB.

- 28. STEEL CONTRACTOR SHALL PROVIDE SKETCHES FOR ALL CORRECTIVE FIELD WORK WHICH SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL. ALL SKETCHES SHALL BE SIGNED AND SEALED BY THE STEEL FABRICATORS CONNECTIONS ENGINEER.

- 29. REINFORCING STEEL SHOP DRAWINGS SHALL INDICATE THE SEQUENCE IN WHICH LAYERS OF CROSSING REINFORCING SHOULD BE PLACED, IN ORDER TO PRODUCE THE CORRECT OUTERMOST LAYER AS INDICATED ON THE DRAWINGS.

- 30. SHOP DRAWINGS SHALL INDICATE LOCATIONS OF ALL WALL CONTROL AND CONSTRUCTION JOINTS.

STRUCTURAL STEEL

MATERIALS:

Table with 2 columns: MATERIALS, SPECIFICATIONS. Includes ASTM A 36, ASTM A 992, GR 50, ASTM A500, GRADE C, ASTM A53, GRADE B, ASTM A325, ASTM F1554, GRADE 36, ASTM F 70, ASTM A706, GRADE 60.

- 1. DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO CURRENT AMERICAN INSTITUTE OF STEEL CONSTRUCTION SPECIFICATION. ALL REACTIONS SHOWN ON PLAN HAVE BEEN DEVELOPED USING ALLOWABLE STRESS DESIGN.

- 2. WELDING SHALL CONFORM TO THE CODE FOR 'ARC AND GAS WELDING IN BUILDING CONSTRUCTION' OF THE AMERICAN WELDING SOCIETY.

- 3. ALL LOOSE BEAM LINTELS SHALL HAVE 8" MINIMUM BEARING. SEE ARCHITECTURAL JAMB DETAILS FOR LENGTHS.

- 4. FOR MISCELLANEOUS STEEL REFER TO ARCHITECTURAL DRAWINGS.

- 5. ALL WELDING SHALL BE DONE BY A CERTIFIED WELDER IN ACCORDANCE WITH A.W.S. STANDARDS.

- 6. PROVIDE LEVELING NUTS FOR ALL COLUMN BASE PLATES WITH FOUR (4) ANCHOR BOLTS AND PROVIDE 1 1/2" MINIMUM, 5000 PSI NON-SHRINK GROUT. PROVIDE DOUBLE NUTS AND WASHER AT THE BOTTOM OF THE ANCHOR BOLT FOR EMBED IN CONCRETE.

- 7. CONNECTIONS:

CONNECTIONS SHALL BE DESIGNED BY THE FABRICATOR AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE A.I.S.C. MANUAL OF STEEL CONSTRUCTION. CONNECTIONS SHALL BE PROVIDED TO CONFORM TO THE REQUIREMENTS OF TYPE 2 CONSTRUCTION UNLESS OTHERWISE DETAILED.

CONNECTIONS SHALL BE DESIGNED TO ACCOMMODATE THE REACTIONS SHOWN ON THE CONTRACT DOCUMENTS. IF NO REACTIONS ARE GIVEN THEN PROVIDE CONNECTION FOR ONE HALF THE ALLOWABLE UNIFORM LOAD BEAM TABLES, PER THE AISC MANUAL, FOR THE SPAN INDICATED ON THE DRAWINGS. MINIMUM CONNECTION DESIGN LOAD IS 6 KIPS.

MINIMUM CONNECTION ANGLE THICKNESS SHALL BE 5/16", MINIMUM SHEAR PLATE IS 3/8".

IN ADDITION TO PROVIDING ADEQUATE BOLTS TO ACCOMMODATE REACTIONS, THE FOLLOWING MINIMUM NUMBER OF BOLT ROWS SHALL BE USED:

Table with 2 columns: MEMBER DEPTH, MINIMUM BOLT ROWS. Values range from 2 to 7.

- 1. #5 VERTICAL BAR AT 32" ON CENTER.

- 2. #6 VERTICAL BARS AT BOTH SIDES OF DOOR, WINDOW AND MECHANICAL OPENINGS.

- 3. #5 HORIZONTAL BAR MINIMUM ABOVE AND BELOW ALL WINDOW AND MECHANICAL OPENINGS AND ABOVE ALL DOOR OPENINGS. PROVIDE ADDITIONAL BARS ABOVE DOORS, WINDOWS AND MECHANICAL OPENINGS AS REQUIRED IN ACCORDANCE WITH LINTEL SCHEDULE ON ARCHITECTURAL DRAWINGS.

- 4. #5 HORIZONTAL AT TOP OF ALL WALLS, AND AT BOND BEAMS CONNECTED TO FLOORS AND ROOFS, UNLESS OTHERWISE INDICATED.

- 5. #6 VERTICAL BARS AT ENDS OF ALL WALLS, AND EACH SIDE OF CONTROL JOINTS. STANDARD LADUR TYPE DESIGN DUR-O-WAL HORIZONTAL REINFORCING @ 16" O.C. VERTICAL. SIDE WIRE SIZE SHALL BE #9 GAGE WIRE.

- 6. INTERIOR SHEAR WALLS, WHERE INDICATED, SHALL HAVE SAME REINFORCING AS EXTERIOR WALLS.

CONNECTIONS SHALL BE MADE USING 3/4" DIAMETER ASTM A325 BOLTS (SNUG TIGHT OR SLIP CRITICAL) OR WELDS, UNLESS NOTED OTHERWISE. IF TENSION CONTROL BOLTS ARE USED, CONNECTIONS SHALL BE DESIGNED FOR SLIP CRITICAL BOLT ALLOWABLE LOAD VALUES USING CLASS A FAYING SURFACE.

USE LARGER OF 1/4" FILLET WELDS OR MINIMUM SIZE PER AISC REQUIREMENTS WHERE NO WELD SIZE IS SHOWN ON DRAWINGS.

WELDS IN EXCESS OF 24" IN LENGTH SHALL BE 3" STITCH WELDS AT 8" ON CENTERS, UNLESS SPECIFICALLY SHOWN ON DRAWINGS TO BE CONTINUOUS.

MOMENT CONNECTIONS SHALL BE DESIGNED TO DEVELOP FULL MOMENT CAPACITY OF THE ELEMENTS CONNECTED, UNLESS SPECIFIC MOMENT IS INDICATED ON THE DRAWINGS.

- 8. NO WELDING OR FINAL BOLTING SHALL BE DONE UNTIL AS MUCH OF THE STRUCTURE THAT WILL BE STIFFENED THEREBY HAS BEEN PROPERLY ALIGNED.

- 9. SEQUENCE OF PLACING WELDS SHALL BE SUCH AS TO AVOID DISTORTION OF MEMBERS.

- 10. SUBSTITUTION OF STRUCTURAL STEEL MEMBERS IS PERMITTED TO FACILITATE DELIVERY AT NO ADDITIONAL COST TO THE OWNER. SUBSTITUTED MEMBERS MUST BE OF THE SAME NOMINAL DEPTH AS THE MEMBER ORIGINALLY INDICATED AND HAVE A WEIGHT GREATER THAN THAT INDICATED. BEAM FLANGES MUST NOT INFRINGE ON ADJACENT ARCHITECTURAL ELEMENTS.

- 11. WHERE MASONRY TIES ARE NOTED ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS, STEEL BEAMS AND COLUMNS ADJACENT TO MASONRY SHALL HAVE THE FOLLOWING MASONRY ANCHORAGE:

16 GAGE GALVANIZED CHANNEL SLOTS, WELDED OR PNEUMATIC FASTENED, TO COLUMNS AND BEAMS WITH 1/4" GALVANIZED STRAP ANCHORS SPACED 1'-4" O.C. AT COLUMNS AND 1'-4" AT BEAMS (UNLESS OTHERWISE NOTED). INSTALL PER MANUFACTURER'S SPECIFICATIONS.

AT LOCATIONS WHERE THE STEEL IS SPRAY FIREPROOFED, THE ANCHOR SHALL EXTEND PAST THE THICKNESS OF FIREPROOFING. CONTRACTOR TO COORDINATE WITH ARCHITECTURAL DRAWINGS FOR SPRAY THICKNESS.

- 12. PROVIDE DEFORMED BAR ANCHORS ON THE TOP OF ALL BEAMS SUPPORTING CONCRETE MASONRY UNIT WALLS OR BRICK WALLS. THE ANCHORS SHALL BE WELDED AT 24" ON CENTER AND SHALL BE THE SAME SIZE AS THE WALL REINFORCING. DEFORMED BAR ANCHORS SHALL BE PLACED BY A TIMED STUD WELDING MACHINE.

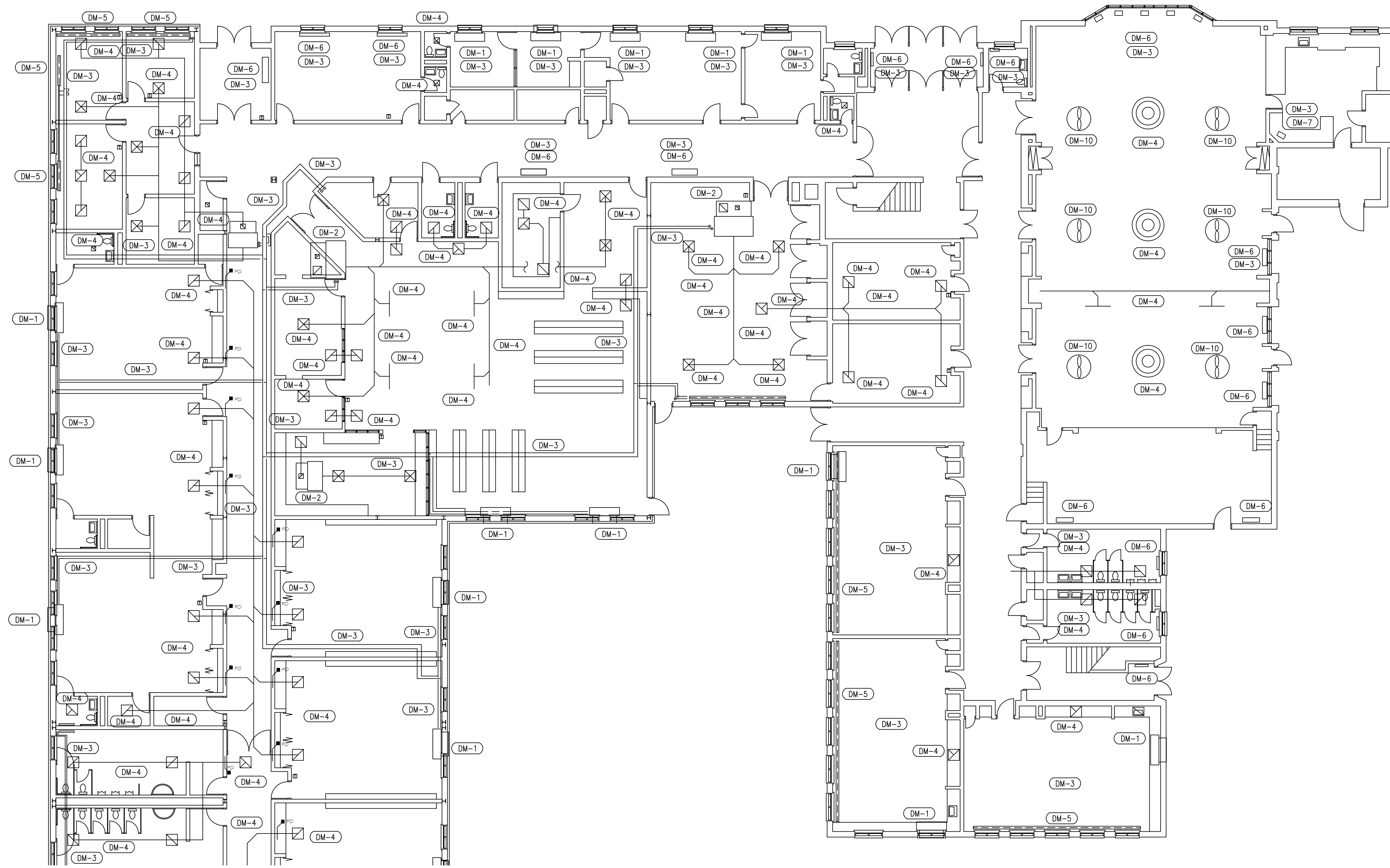
- 13. STEEL MEMBERS SHOWN CONNECTED TO MASONRY WITH EXPANSION ANCHORS SHALL HAVE 3/4" DIAMETER EXPANSION ANCHORS AT 2'-8" ON CENTERS IN VERTICALLY SLOTTED HOLES, UNLESS OTHERWISE INDICATED.

- 14. BEAMS BEARING ON MASONRY SHALL HAVE ANGLE WALL ANCHORS WELDED TO THE BEAM, AS DETAILED IN THE A.I.S.C. MANUAL OF STEEL CONSTRUCTION.

- 15. PROVIDE 8" X 8" X 5/8" BEARING PLATES FOR ALL WALL BEARING BEAMS UNLESS NOTED OTHERWISE. ALL PLATES SHALL HAVE A MINIMUM OF (2) 3/4" DIAMETER X 5" LONG WELDED STUDS ON THE BOTTOM TO SET IN CONCRETE OR MASONRY WALLS.

- 16. SPRAY-ON FIREPROOFING SHALL BE APPLIED TO ALL STRUCTURAL STEEL TO ACHIEVE REQUIRED FIRE RATING, UNLESS OTHER PROTECTIVE COATING IS INDICATED ON THE ARCHITECTURAL DRAWINGS FOR SPRAY THICKNESS.

- 17. ALL STEEL MEMBERS EXPOSED TO WEATHER OR IN CONTACT WITH PRESSURE TREATED LUMBER OR WOOD PRODUCTS IN THE UNCOMPLETED CONSTRUCTION SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123.



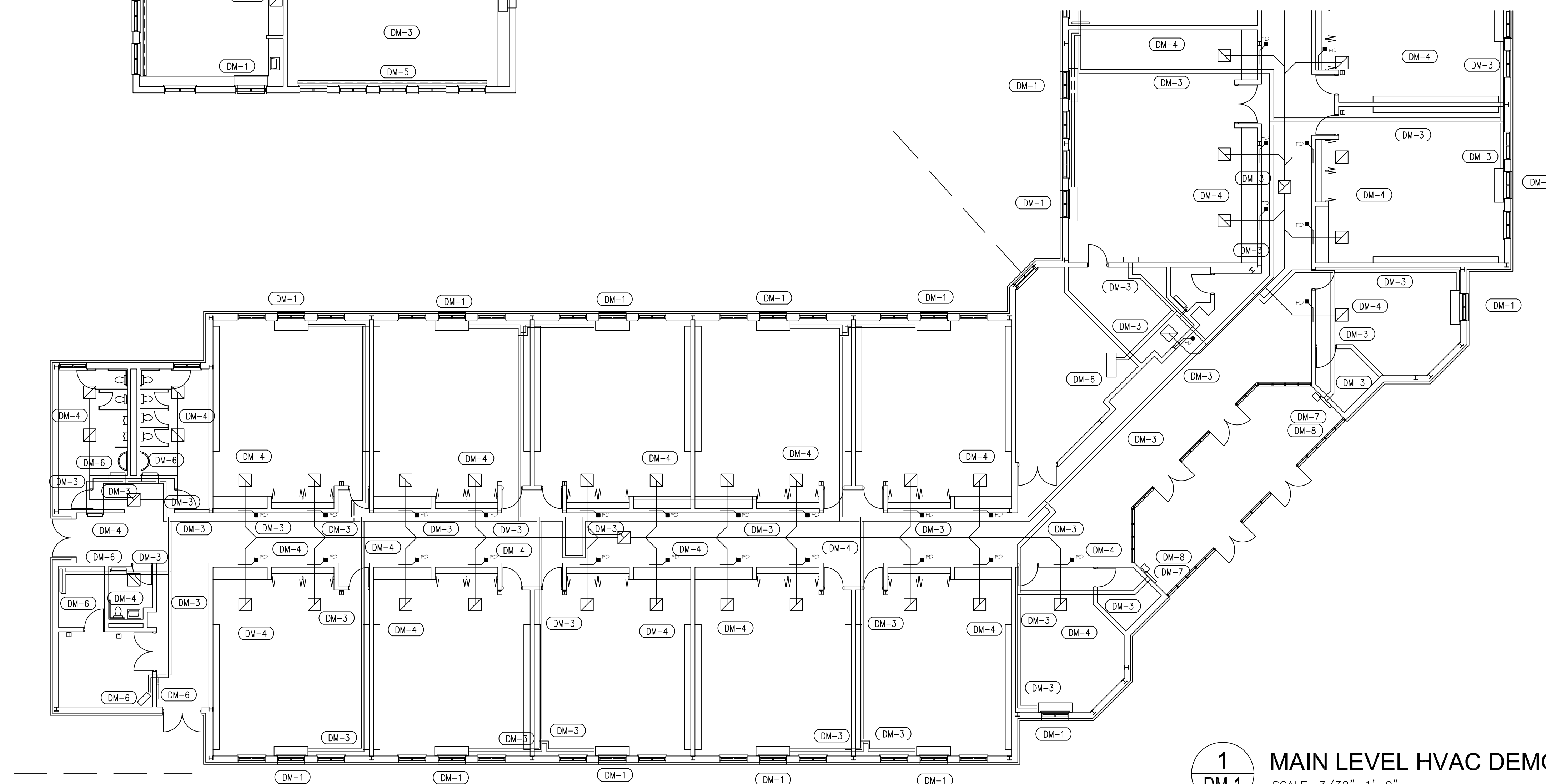
**2 MAIN LEVEL HVAC DEMO PLAN-CONTINUATION**  
 DM-1 SCALE: 3/32"=1'-0"

**GENERAL DEMOLITION NOTES :**

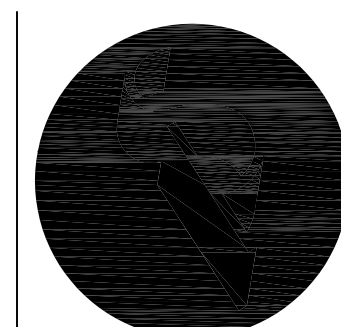
1. CONTRACTOR SHALL COORDINATE WORK WITH WORK OF OTHER TRADES PRIOR TO STARTING.
2. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS BEFORE SUBMITTING BID AND SHALL INCLUDE ALL NECESSARY ALLOWANCES AS REQUIRED TO COORDINATE THIS WORK WITH EXISTING CONDITIONS AND OTHER TRADES. EXISTING CONDITIONS SHOWN ON OWNER'S DRAWINGS MAY VARY.
3. COORDINATE WORK SCHEDULE WITH THE OWNER 72 HOURS IN ADVANCE.
4. CONTRACTOR SHALL DISPOSE OF ITEMS IN A LEGAL AND LAWFUL MANNER.

**MECHANICAL DEMOLITION NOTES :**

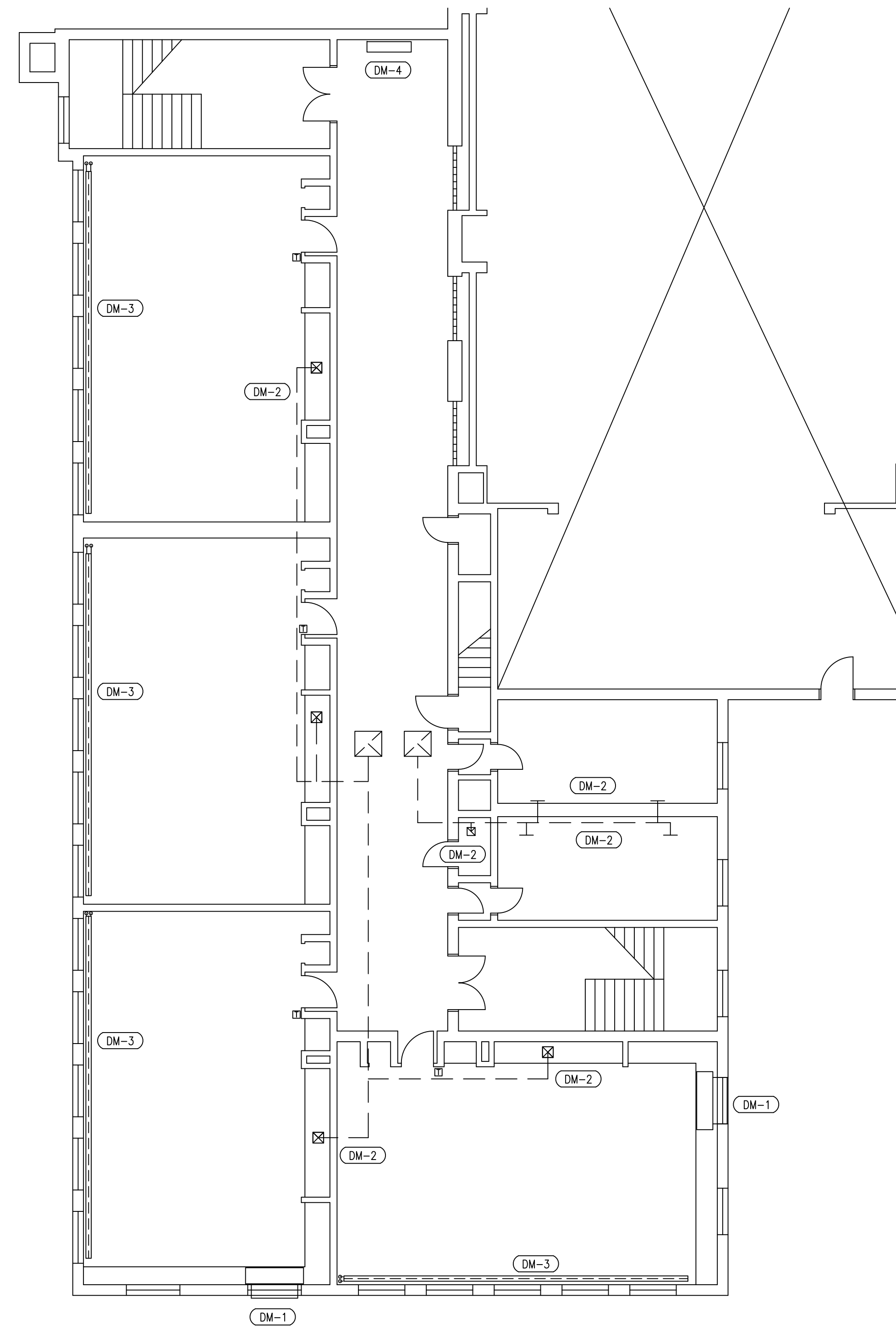
- DM-1 CONTRACTOR SHALL REMOVE EXISTING UNIT VENTILATOR, ASSOCIATED CONTROLS, ASSOCIATED OUTSIDE LOUVER, CONTROLS, WIRING, SUPPORTS, PIPING AND VALVES.
- DM-2 CONTRACTOR SHALL REMOVE FAN COIL UNITS, CONTROLS, ASSOCIATED DUCT CONNECTIONS AND HEATING PIPING.
- DM-3 CONTRACTOR SHALL REMOVE ALL HYDRONIC PIPING, STEAM/CONDENSATE PIPING, STEAM TRAPS, ELBOWS, TEES, EXPANSION LOOPS, VALVES, SUPPORTS, HANGERS AND PIPE INSULATION.
- DM-4 CONTRACTOR SHALL REMOVE ALL DUCT WORK, HANGERS, SUPPORTS, INSULATION, ELBOWS, FLEXIBLE CONNECTIONS, CEILING INLETS, CEILING OUTLETS, DUCT RISERS, DUCT DROPS, SMOKE DAMPERS, FIRE DAMPERS, TRANSFER DUCT ASSEMBLIES AND FITTINGS.
- DM-5 CONTRACTOR SHALL REMOVE EXISTING FIN-TUBE RADIATION, HOUSINGS, PIPE, ELBOWS, CONTROLS, VALVES, ETC.
- DM-6 CONTRACTOR SHALL REMOVE CONVECTORS, CABINET UNIT HEATERS, ASSOCIATED CONTROLS, PIPING AND VALVES.
- DM-7 CONTRACTOR SHALL REMOVE UNIT HEATERS, ASSOCIATED CONTROLS, PIPING AND VALVES.
- DM-8 CONTRACTOR SHALL REMOVE ELECTRIC UNIT HEATERS, SUPPORTS AND CONTROLS.
- DM-9 CONTRACTOR SHALL REMOVE EXHAUST FAN, DUCTWORK AND CEILING INLETS/OUTLETS.
- DM-10 CONTRACTOR SHALL REMOVE EXISTING CEILING FAN AND ASSOCIATED CONTROLS.



**1 MAIN LEVEL HVAC DEMO PLAN**  
 DM-1 SCALE: 3/32"=1'-0"



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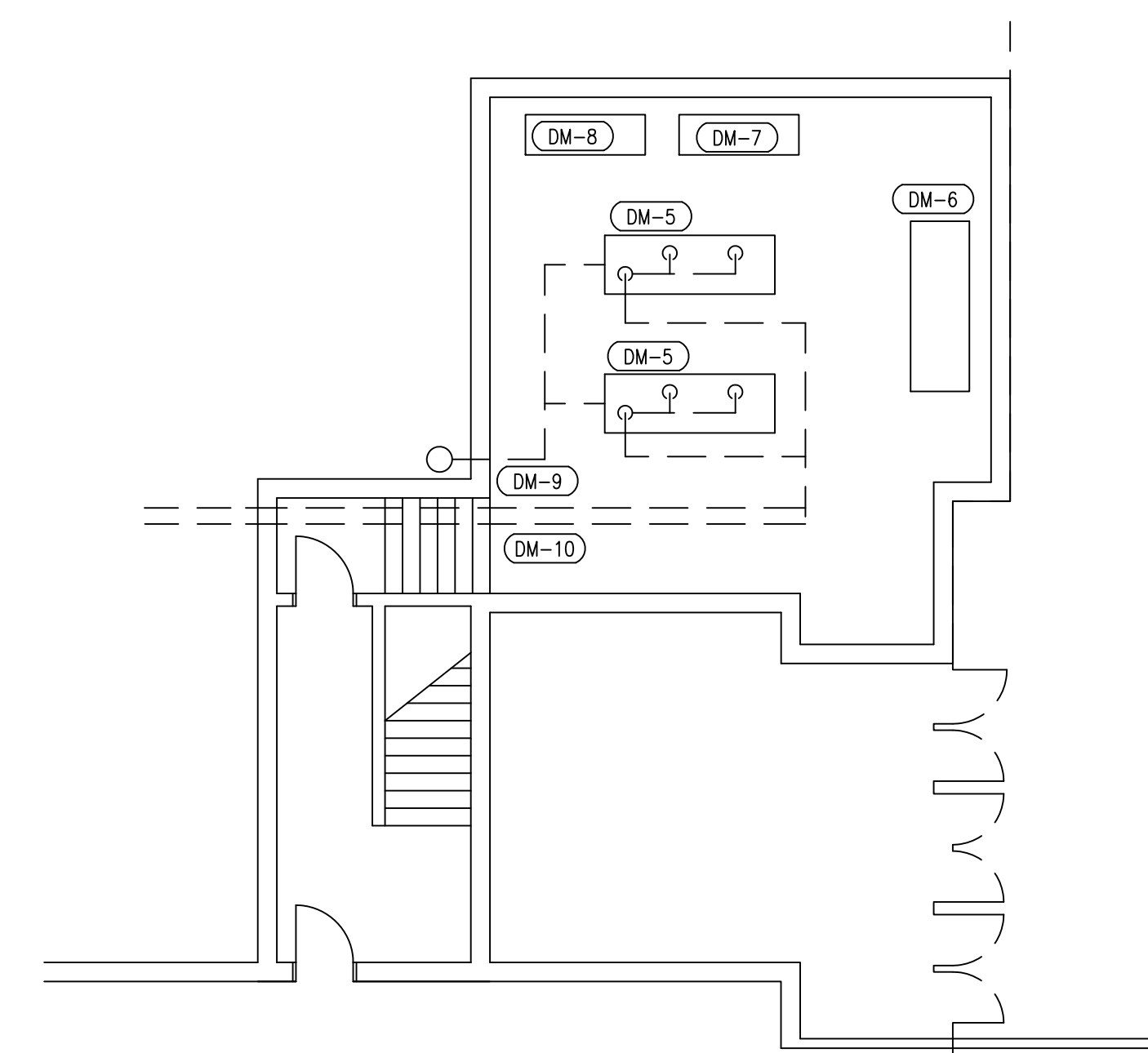
**GENERAL DEMOLITION NOTES :**

1. CONTRACTOR SHALL COORDINATE WORK WITH WORK OF OTHER TRADES PRIOR TO STARTING.
2. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS BEFORE SUBMITTING BID AND SHALL INCLUDE ALL NECESSARY ALLOWANCES AS REQUIRED TO COORDINATE THIS WORK WITH EXISTING CONDITIONS AND OTHER TRADES. EXISTING CONDITIONS SHOWN ON OWNER'S DRAWINGS MAY VARY.
3. COORDINATE WORK SCHEDULE WITH THE OWNER 72 HOURS IN ADVANCE.
4. CONTRACTOR SHALL DISPOSE OF ITEMS IN A LEGAL AND LAWFUL MANNER.

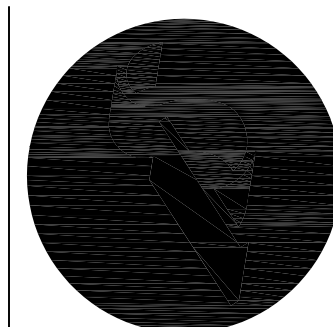
**MECHANICAL DEMOLITION NOTES :**

- DM-1** CONTRACTOR SHALL REMOVE EXISTING UNIT VENTILATOR, ASSOCIATED CONTROLS, ASSOCIATED OUTSIDE LOUVER, CONTROLS, WIRING, SUPPORTS, PIPING AND VALVES.
- DM-2** CONTRACTOR SHALL REMOVE ALL DUCT WORK, HANGERS, SUPPORTS, INSULATION, ELBOWS, FLEXIBLE CONNECTIONS, CEILING INLETS, CEILING OUTLETS, DUCT RISERS, DUCT DROPS, CONTROLS, SMOKE DAMPERS, FIRE DAMPERS, TRANSFER DUCT ASSEMBLIES AND FITTINGS.
- DM-3** CONTRACTOR SHALL REMOVE EXISTING FIN-TUBE RADIATION, HOUSINGS, PIPE, ELBOWS, SUPPORTS, CONTROLS, VALVES, ETC.
- DM-4** CONTRACTOR SHALL REMOVE CONVECTORS, CABINET UNIT HEATERS, ASSOCIATED CONTROLS, SUPPORTS, PIPING, VALVES, ETC.
- DM-5** CONTRACTOR SHALL REMOVE EXISTING STEAM BOILERS, SUPPORT, ASSOCIATED PIPING, VALVES, CONTROLS, ETC.
- DM-6** CONTRACTOR SHALL REMOVE EXISTING CONDENSATE RECEIVER TANK, ASSOCIATED PUMPS, SUPPORTS, PIPING, CONTROLS, ETC.
- DM-7** CONTRACTOR SHALL REMOVE EXISTING STEAM/HOT WATER HEAT EXCHANGER, SUPPORTS, ASSOCIATED PUMPS, PIPING, CONTROLS, ETC.
- DM-8** CONTRACTOR SHALL REMOVE THE EXISTING OVERHEAD AIR EXPANSION TANK, SUPPORTS, PIPING, ETC.
- DM-9** CONTRACTOR SHALL REMOVE, IN ITS ENTIRETY, THE EXISTING BREECHING, INSULATION, THIMBLE, ELBOWS, SUPPORTS, ETC.
- DM-10** CONTRACTOR SHALL REMOVE THE EXISTING PIPE, INSULATION, SUPPORTS, ETC. EXISTING PIPING IN TUNNEL SHALL REMAIN AND CAPPED AS REQUIRED.

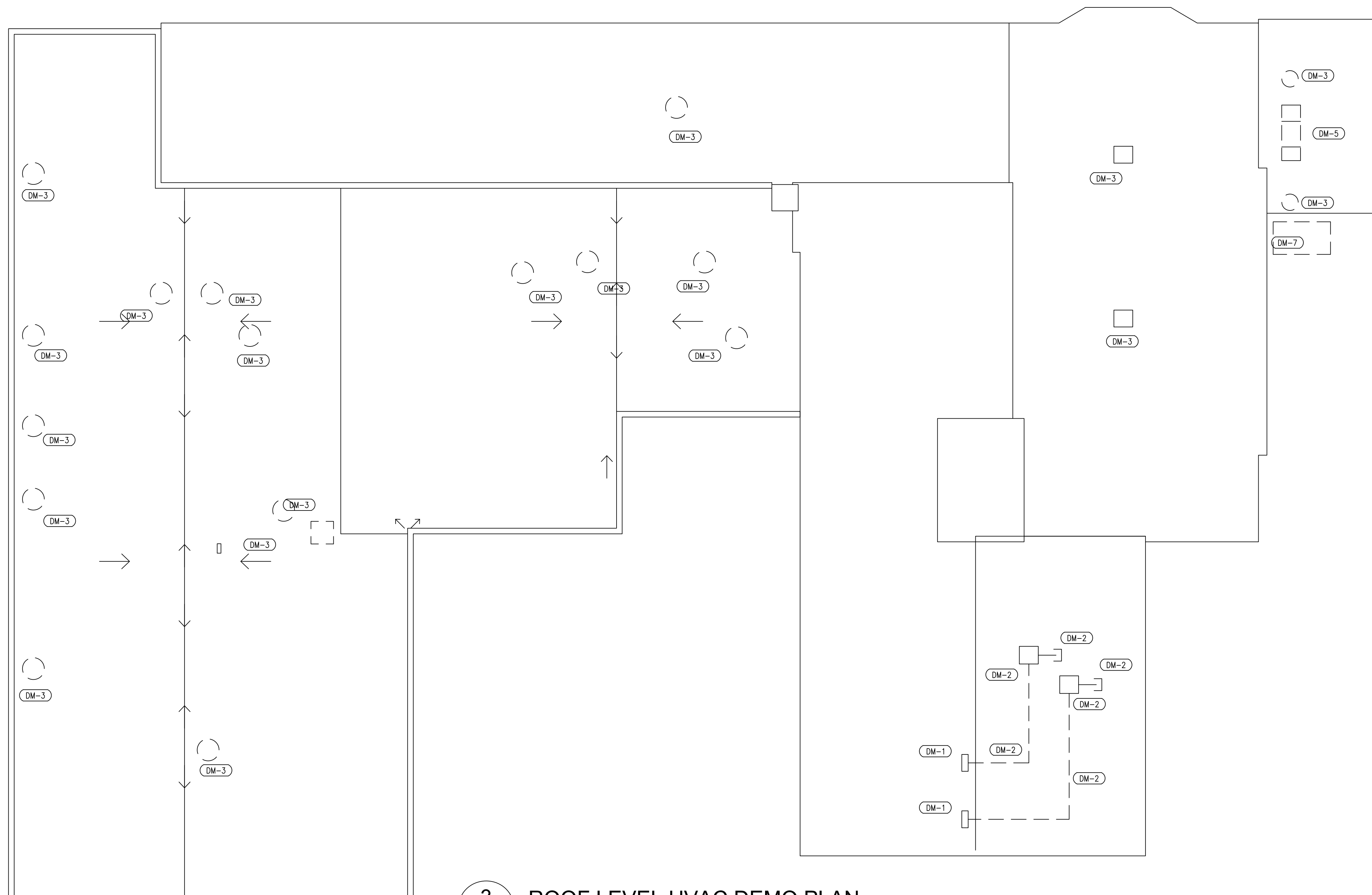
**2 2ND FLOOR HVAC DEMOLITION PLAN**  
 DM-2 SCALE: 1/8"=1'-0"



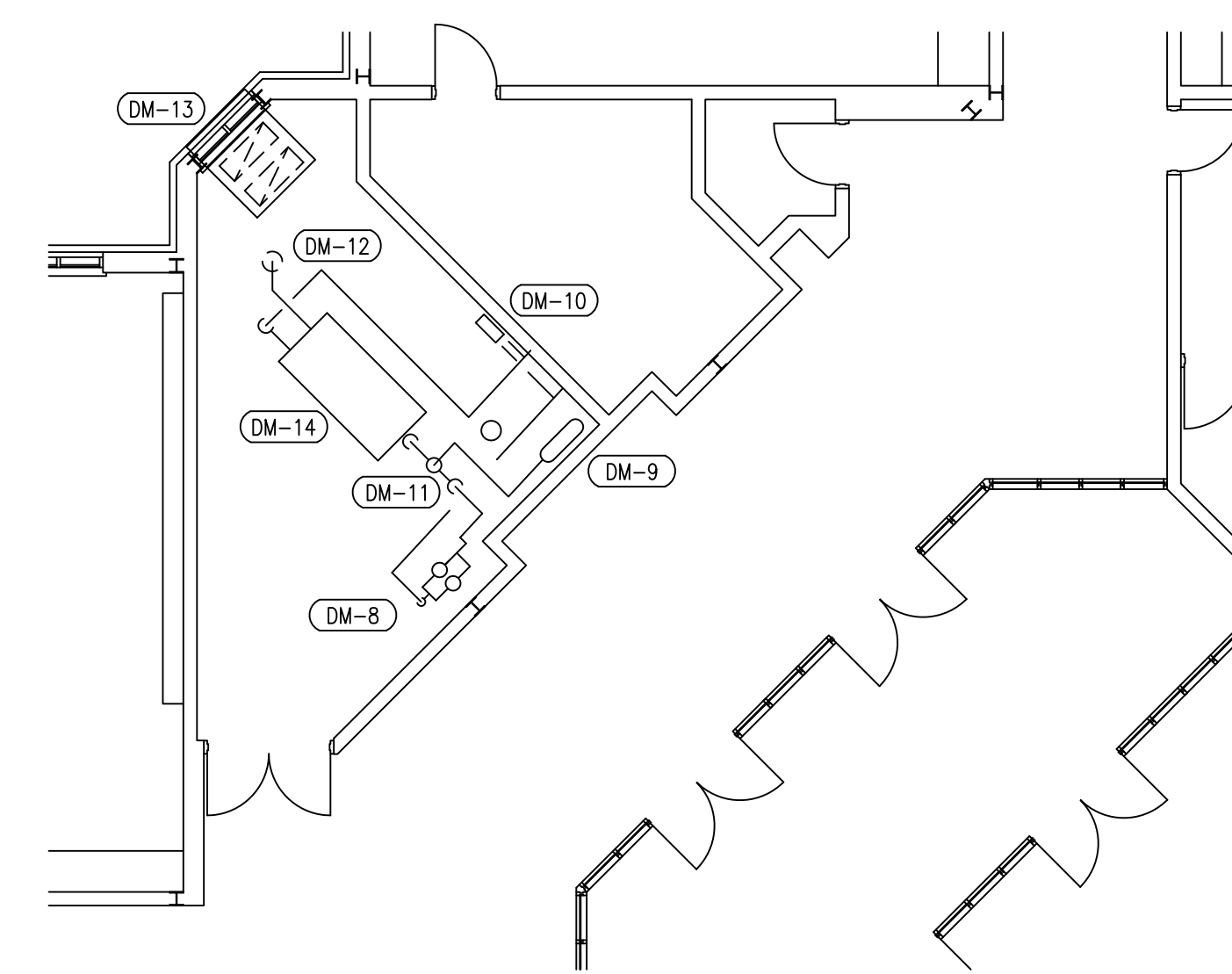
**1 LOWER LEVEL BOILER ROOM DEMO PLAN**  
 DM-2 SCALE: 1/8"=1'-0"



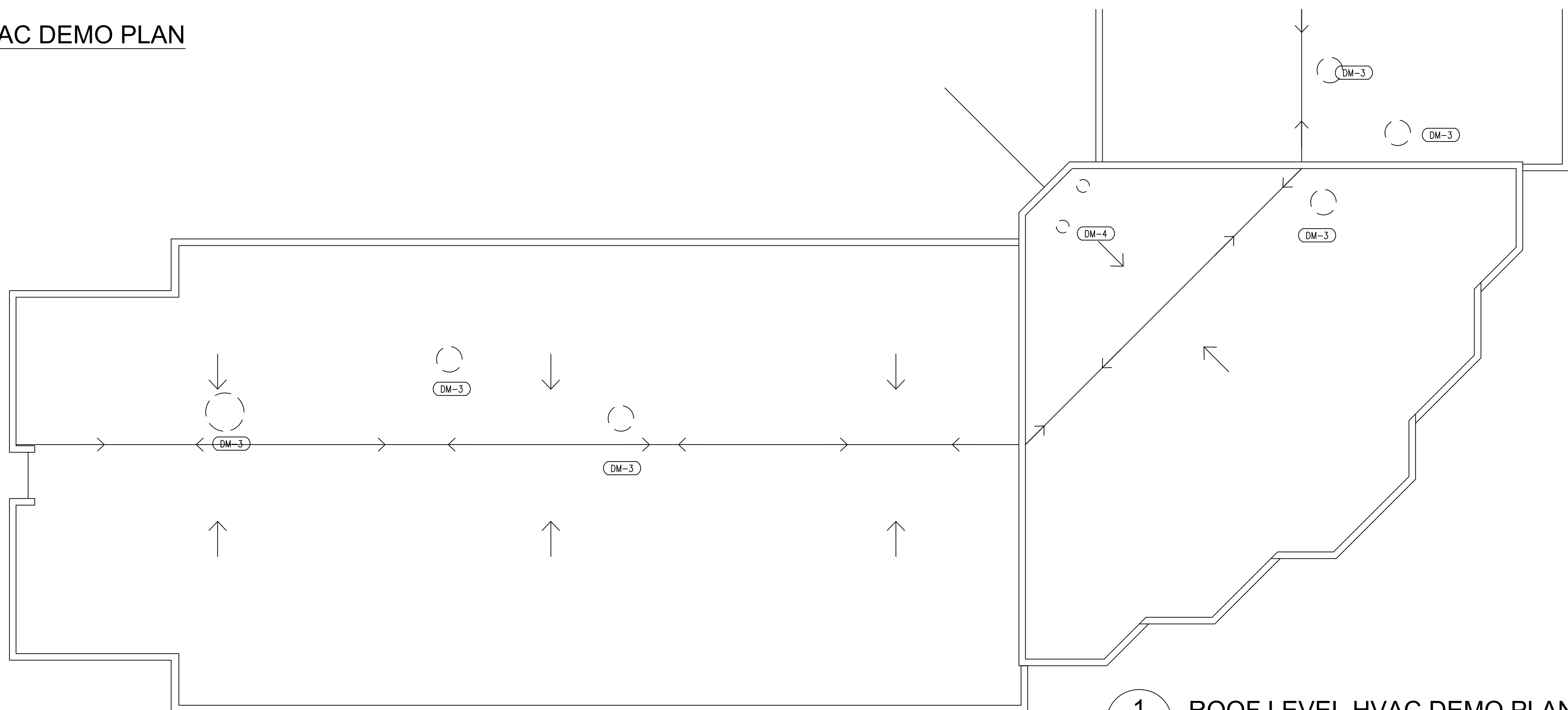
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**3 ROOF LEVEL HVAC DEMO PLAN**  
 DM-3 SCALE: 3/32"=1'-0"



**2 MAIN LEVEL BOILER DEMO PLAN**  
 DM-3 SCALE: 1/8"=1'-0"



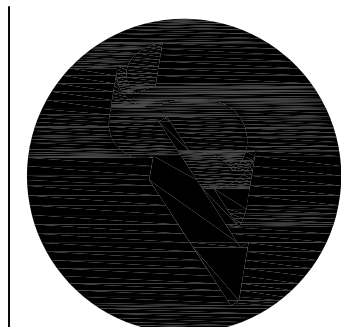
**1 ROOF LEVEL HVAC DEMO PLAN**  
 DM-3 SCALE: 3/32"=1'-0"

**GENERAL DEMOLITION NOTES :**

1. CONTRACTOR SHALL COORDINATE WORK WITH WORK OF OTHER TRADES PRIOR TO STARTING.
2. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS BEFORE SUBMITTING BID AND SHALL INCLUDE ALL NECESSARY ALLOWANCES AS REQUIRED TO COORDINATE THIS WORK WITH EXISTING CONDITIONS AND OTHER TRADES. EXISTING CONDITIONS SHOWN ON OWNER'S DRAWINGS MAY VARY.
3. COORDINATE WORK SCHEDULE WITH THE OWNER 72 HOURS IN ADVANCE.
4. CONTRACTOR SHALL DISPOSE OF ITEMS IN A LEGAL AND LAWFUL MANNER.

**MECHANICAL DEMOLITION NOTES :**

- DM-1 CONTRACTOR SHALL REMOVE EXISTING LOUVER.
- DM-2 CONTRACTOR SHALL REMOVE EXISTING DUCTWORK, SUPPORTS AND ASSOCIATED FAN IN ROOF MOUNTED FAN ROOM.
- DM-3 CONTRACTOR SHALL REMOVE ROOF MOUNTED CURB, SUPPORTS AND ASSOCIATED FAN.
- DM-4 CONTRACTOR SHALL REMOVE BOILER VENT, SUPPORTS AND ASSOCIATED FLUE DOWN TO BOILER.
- DM-5 CONTRACTOR SHALL REMOVE EXISTING MAKE UP AIR UNIT, SUPPORTS AND ASSOCIATED DUCTWORK AND KITCHEN HOOD.
- DM-6 CONTRACTOR SHALL REMOVE EXISTING CONDENSING UNIT, ASSOCIATED REFRIGERANT PIPING, SUPPORTS AND CONNECTED EQUIPMENT.
- DM-7 CONTRACTOR SHALL REMOVE EXISTING KITCHEN COOLERS, REFRIGERANT PIPING, SUPPORTS, CONTROLS, EVAPORATORS AND CONDENSATE PIPE.
- DM-8 CONTRACTOR SHALL REMOVE EXISTING PUMPS, SUPPORTS AND ASSOCIATED PIPING, VALVES, ETC.
- DM-9 CONTRACTOR SHALL REMOVE EXISTING EXPANSION TANKS, SUPPORTS AND ASSOCIATED PIPING, VALVES, ETC.
- DM-10 CONTRACTOR SHALL REMOVE EXISTING UNIT HEATER, SUPPORTS AND ASSOCIATED PIPING, VALVES, ETC.
- DM-11 CONTRACTOR SHALL REMOVE EXISTING AIR SEPARATOR, SUPPORTS AND ASSOCIATED PIPING, VALVES, ETC.
- DM-12 CONTRACTOR SHALL REMOVE EXISTING BOILER FLUE, SUPPORTS AND ETC..
- DM-13 CONTRACTOR SHALL REMOVE EXISTING BOILER FLUE, SUPPORTS AND ETC..
- DM-14 CONTRACTOR SHALL REMOVE EXISTING BOILER, BOILER PAD, BURNER ASSEMBLY, ASSOCIATED PIPING, SUPPORTS AND ETC.



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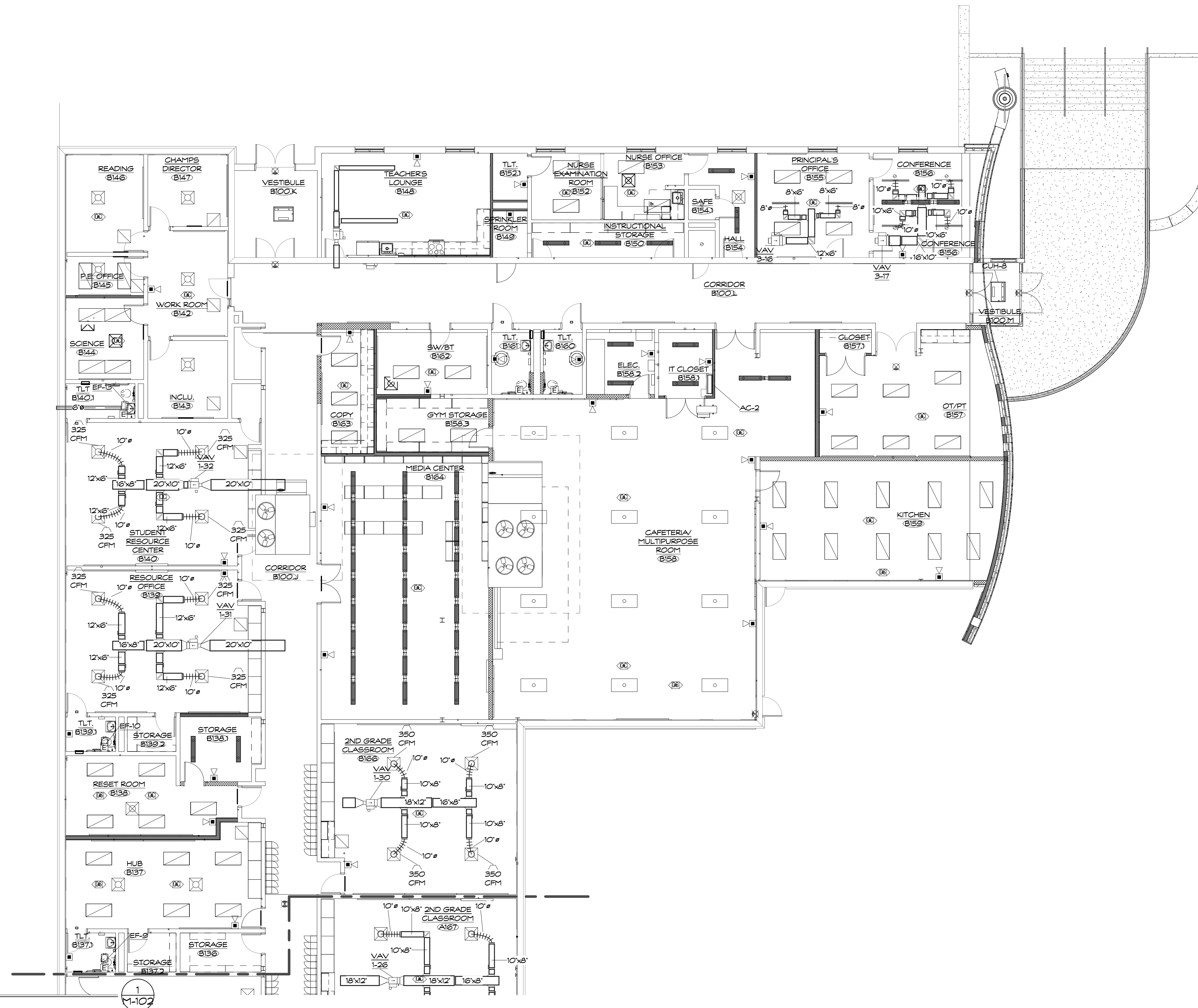
| ABBREVIATIONS              |                                      |        |   |
|----------------------------|--------------------------------------|--------|---|
| (NOT ALL SYMBOLS ARE USED) |                                      |        |   |
| (###)                      | CFM                                  | FA     | FACE AREA                               |
| ABV                        | ABOVE                                | FBO    | FURNISHED BY OTHERS                     |
| AC                         | AIR COMPRESSOR                       |        | INSTALLED BY HVAC SUBCONTRACTOR         |
| ACU-#                      | AIR CONDITIONING UNIT                | FC     | FORWARD CURVE                           |
| AD                         | ACCESS DOOR                          | FCU    | FAN COIL UNIT                           |
| AF                         | AIRFOIL                              | FD     | FIRE DAMPER WITH ACCESS DOOR            |
| AFC                        | ADJUSTABLE FREQUENCY CONTROLLER      | FF     | FINAL FILTER                            |
| AFF                        | ABOVE FINISHED FLOOR                 | FIBO   | FURNISHED AND INSTALLED BY OTHERS       |
| AFMS                       | AIR FLOW MEASURING STATION           | FIN FL | FINISH FLOOR                            |
| AHU-#                      | AIR HANDLING UNIT                    | FL     | FLOOR                                   |
| AL                         | ACOUSTIC LINING                      | FLA    | FULL LOAD AMPERES                       |
| ALD                        | AUTOMATIC LOUVER DAMPER              | FLEX   | FLEXIBLE                                |
| APD                        | AIR PRESSURE DROP                    | FPF    | FINS PER FOOT                           |
| AUTO                       | AUTOMATIC                            | FPV    | FAN POWERED VAV BOX                     |
| B-#                        | BOILER                               | FT     | FEET                                    |
| BC                         | BACKWARD CURVED                      | F.T.   | FLOAT & THERMOSTATIC TRAP               |
| BD                         | BELT DRIVE                           | FTR    | FIN TUBE RADIATION                      |
| BMCS                       | BUILDING MANAGEMENT & CONTROL SYSTEM | FV     | FACE VELOCITY                           |
| IBT                        | INVERTED BUCKET TRAP                 | GC     | GENERAL CONTRACTOR                      |
| BTU                        | BRITISH THERMAL UNIT                 | GH     | GRAVITY INTAKE HOOD                     |
| C-#                        | CHILLER                              | GPH    | GALLONS PER HOUR                        |
| CAP                        | CAPACITY                             | GPM    | GALLONS PER MINUTE                      |
| CB-#                       | CHILLED BEAM                         | GWLS   | GEOTHERMAL WATER LOOP SUPPLY            |
| CC-#                       | COOLING COIL                         | GWLR   | GEOTHERMAL WATER LOOP RETURN            |
| CD                         | CEILING DIFFUSER                     | H/C    | HEATING/COOLING                         |
| CFM                        | CUBIC FEET PER MINUTE                | H-#    | HUMIDIFIER                              |
| CG                         | CEILING GRILLE                       | H-O-A  | HAND-OFF-AUTOMATIC                      |
| CLG                        | CEILING                              | HC-#   | HEATING COIL                            |
| CONV-#                     | HOT WATER CONVECTOR                  | hd     | FEET OF HEAD                            |
| CP                         | CONDENSATE RECEIVER/PUMPING SYSTEM   | HP     | HORSEPOWER                              |
| CR                         | CEILING REGISTER                     | HTG    | HEATING                                 |
| CT-#                       | COOLING TOWER                        | HTR    | HEATER                                  |
| CTD                        | CEILING TRANSFER DUCT                | HV-#   | HEATING AND VENTILATING UNIT            |
| CUH-#                      | CABINET UNIT HEATER HOT WATER        | HVAC   | HEATING, VENTILATING & AIR CONDITIONING |
| CV                         | CONTROL VALVE                        |        |   |
| CW                         | COLD WATER                           | HX-#   | HEAT EXCHANGER CONVERTOR                |
| D&T                        | DRIP AND TRAP                        | ID     | INSIDE DIMENSION                        |
| dB                         | DECIBELS                             | IN     | INCHES                                  |
| DB                         | DRY BULB                             | IV     | INLET GUIDE VANES                       |
| DD                         | DIRECT DRIVE                         | KW     | KILOWATT                                |
| DDC                        | DIRECT DIGITAL CONTROL               | KWH    | KILOWATT HOUR                           |
| DIFF                       | DIFFUSER                             | LD     | LINEAR DIFFUSER                         |
| DL                         | DOOR LOUVER                          | LIN    | LINEAR                                  |
| DN                         | DOWN                                 | LRA    | LOCKED ROTOR AMPERES                    |
| DOAS                       | DEDICATED OUTDOOR AIR SYSTEM         | LPR    | LOW PRESSURE RETURN                     |
| DP                         | DEWPOINT TEMPERATURE                 | LPS    | LOW PRESSURE SUPPLY                     |
| DR                         | DROP                                 | LVG    | LEAVING                                 |
| DWS                        | DUAL TEMPERATURE WATER SUPPLY        | LWT    | LEAVING WATER TEMPERATURE               |
| DTWR                       | DUAL TEMPERATURE WATER RETURN        | MAN    | MANUAL                                  |
| DX                         | DIRECT EXPANSION                     | MAT    | MIXED AIR TEMPERATURE                   |
| EF-#                       | EXHAUST FAN                          | MAX    | MAXIMUM                                 |
| EAT                        | ENTERING AIR TEMPERATURE             | MBH    | 1000 BTU'S                              |
| EER                        | ENERGY EFFICIENCY RATIO              | MCA    | MINIMUM CIRCUIT AMPACITY                |
| EG                         | EXHAUST GRILLE                       | MD     | MOTORIZED DAMPER                        |
| EHC-#                      | ELECTRIC HEATING COIL                | MER    | MECHANICAL EQUIPMENT ROOM               |
| ENT                        | ENTERING                             | MEZZ   | MEZZANINE                               |
| HEPA                       | HIGH EFFICIENCY PARTICULATE FILTER   | MFS    | MAXIMUM FUSE SIZE                       |
| ER                         | EXHAUST REGISTER                     | MIN    | MINIMUM                                 |
| ES                         | END SUCTION                          | MOT    | MOTOR                                   |
| ESP                        | EXTERNAL STATIC PRESSURE             | MUA    | MAKE-UP AIR                             |
| ET-#                       | EXPANSION TANK                       | MV     | MOTORIZED VALVE                         |
| EUH-#                      | ELECTRIC UNIT HEATER                 | NC     | NORMALLY CLOSED                         |
| EW                         | ENTERING WATER TEMPERATURE           | NC     | NOISE CRITERIA                          |
| EXT                        | EXTERNAL                             | NFA    | NET FREE AREA                           |
| EX                         | EXISTING                             | NC     | NOT IN THIS CONTRACT                    |
| EXH                        | EXHAUST                              |        |   |
| F                          | DEGREES FAHRENHEIT                   |        |   |
| F&B                        | FACE & BYPASS DAMPER                 |        |   |

| SYMBOL LEGEND              |   |  |  |  |  |
|----------------------------|---|--|--|--|--|
| (NOT ALL SYMBOLS ARE USED) |   |  |  |  |  |
|                            | PRESSURE/TEMPERATURE PORT               |  | PIPE UNION                             |  | MECHANICAL NOTE REFERENCE, NUMBER INDICATES NOTE |
|                            | TEMPERATURE GAUGE/TEMPERATURE INDICATOR |  | AIR VENT, AUTOMATIC                    |  | CUBIC FEET PER MINUTE                            |
|                            | PRESSURE GAUGE                          |  | AIR VENT, MANUAL                       |  | DUCT STATIC PRESSURE                             |
|                            | BUTTERFLY VALVE                         |  | PUMP OR FAN                            |  | VOLUME DAMPER                                    |
|                            | SHUT-OFF VALVE                          |  | STRAINER                               |  | BACKDRAFT DAMPER                                 |
|                            | ANGLE GATE VALVE                        |  | STRAINER, BLOW OFF                     |  | DUCT STATIC PRESSURE SENSOR                      |
|                            | GLOBE VALVE                             |  | 1" DOOR UNDERCUT                       |  | MOTORIZED DAMPER                                 |
|                            | BALL OR BUTTERFLY VALVE                 |  | RETURN GRILLE                          |  | SUPPLY OR OUTSIDE AIR DUCT UP OR CSD             |
|                            | ANGLE GLOBE VALVE                       |  | THERMOSTAT OR SPACE TEMPERATURE SENSOR |  | SUPPLY OR OUTSIDE AIR DUCT DOWN                  |
|                            | TWO WAY MOTORIZED CONTROL VALVE         |  | PRESSURE SENSOR                        |  | RETURN OR EXHAUST DUCT UP OR CRG/CRR             |
|                            | THREE WAY MOTORIZED CONTROL VALVE       |  | DIRECTION OF FLOW                      |  | RETURN OR EXHAUST DUCT DOWN                      |
|                            | CHECK VALVE                             |  | METER                                  |  | FLEXIBLE CONNECTION                              |
|                            | OS & Y                                  |  | DIA. OR Ø                              |  | DUCT TRANSITION                                  |
|                            | SAFETY RELIEF VALVE (PRESS. & TEMP.)    |  | THERMOMETER                            |  | RECTANGULAR TO ROUND TRANSITION                  |
|                            | DRAIN VALVE W/ HOSE COUPLING W/CAP      |  | PIPE TEE, OUTLET UP                    |  | DUCT WORK, DIRECTION OF FLOW                     |
|                            | CAP                                     |  | PIPE ELBOW, TURNED UP                  |  | POSITIVE PRESSURE DUCT                           |
|                            | PIPE CONNECTION BOTTOM                  |  | PIPE TEE, OUTLET DOWN                  |  | NEGATIVE PRESSURE DUCT                           |
|                            | PIPE CONNECTION TOP                     |  | HWS                                    |  | CHANGE OF ELEVATION, RISE (R) DROP (D)           |
|                            | PIPE COUPLING (JOINT)                   |  | HWR                                    |  | LINED DUCT WORK                                  |
|                            | ELBOW, 90°                              |  | CWS                                    |  | SINGLE LINE LINED DUCT WORK                      |
|                            | PIPE ELBOW, TURNED DOWN                 |  | CWR                                    |  | DIRECTION OF SUPPLY OR OUTSIDE AIR               |
|                            | PIPE TEE                                |  | POINT OF CONNECTION                    |  | DIRECTION OF RETURN OR EXHAUST AIR               |
|                            | CALIBRATED BALANCING VALVE              |  | RETURN OR EXHAUST DUCT UP              |  | AIR TERMINAL UNIT                                |
|                            | HUMIDISTAT/HUMIDITY SENSOR              |  | SUPPLY OR OUTSIDE AIR DUCT UP          |  | DUCT SMOKE DETECTOR                              |
|                            | DUCT MOUNTED HUMIDITY SENSOR            |  | SMOKE DAMPER                           |  | FIRE DAMPER WITH ACCESS DOOR AS REQUIRED         |
|                            | DUCT MOUNTED CARBON DIOXIDE SENSOR      |  | COMBINATION FIRE AND SMOKE DAMPER      |  | DUCT ACCESS DOOR                                 |
|                            | HWS                                     |  | 45 CHWS                                |  | 57° CHILLED WATER SYSTEM SUPPLY                  |
|                            | HWR                                     |  | 45 CHWR                                |  | 57° CHILLED WATER SYSTEM RETURN                  |
|                            | PIPE ANCHOR                             |  | PIPE GUIDE                             |  |  |

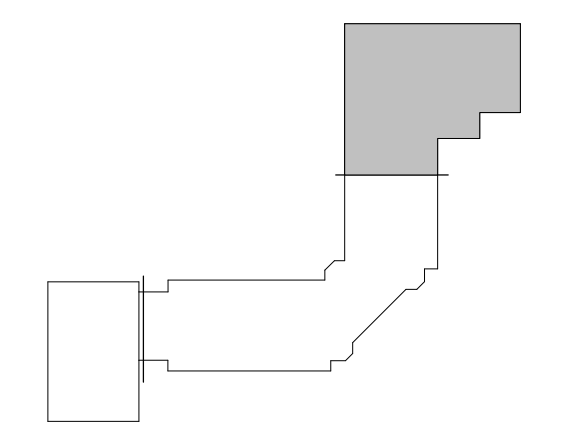
GENERAL

- THE INTENT OF THESE CONTRACT DOCUMENTS IS FOR THE CONTRACTOR TO FURNISH AND INSTALL COMPLETE MECHANICAL SYSTEMS. THESE MECHANICAL SYSTEMS INCLUDE HVAC AND ALL ASSOCIATED SPECIAL SYSTEMS. ALL SYSTEMS SHALL BE COMPLETE IN ALL RESPECTS, OPERATING, TESTED, ADJUSTED, APPROVED BY THE AUTHORITIES HAVING JURISDICTION AND READY FOR BENEFICIAL USE BY THE OWNER.
- THE CONTRACTOR SHALL OBTAIN AND REVIEW ALL CONTRACT DOCUMENTS, INCLUDING PROJECT MANUAL, PLANS AND SPECIFICATIONS OF ALL TRADES BEFORE SUBMITTING BID. REFER TO SPECIFICATIONS, PROJECT MANUAL AND PLANS, INCLUDING ALL EQUIPMENT SCHEDULES FOR MECHANICAL AND ELECTRICAL INFORMATION. CONTRACTOR SHALL WALK THROUGH BUILDING PRIOR TO SUBMITTING BID.
- ALL OF THE CONTRACT DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY TO FORM A TOTAL DESIGN PACKAGE. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER TO DETERMINE WHICH TRADE CONTRACTOR IS RESPONSIBLE FOR VARIOUS PORTIONS OF THE WORK.
- ALL WORK AND ACTION DEPICTED AND DESCRIBED SHALL BE PERFORMED BY THE CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE.
- PROVIDE SUPPORT/BRACING OF EQUIPMENT AND BUILDING SERVICES FOR SEISMIC RESTRAINT AS REQUIRED BY CODE.
- OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND INSPECTIONS.
- ALL EQUIPMENT, MATERIALS AND RELATED SYSTEMS COMPONENTS SHALL BE NEW UNLESS SPECIFICALLY NOTED OTHERWISE.
- REPAIR AND/OR REPLACE AT NO COST TO OWNER ALL EQUIPMENT, BUILDING ELEMENTS, TREES SHRUBS, ETC AND MATERIALS DAMAGED DURING CONSTRUCTION.
- THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. THE CONTRACTOR SHALL COORDINATE LOCATIONS OF EQUIPMENT WITH ALL TRADES BEFORE STARTING CONSTRUCTION. ANY MODIFICATIONS TO THE EQUIPMENT LAYOUT REQUIRED FOR INSTALLATION ARE TO BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER.
- REFER TO THE ARCHITECTURAL DRAWINGS FOR THE EXACT LOCATION OF LIGHT FIXTURES AND MOUNTING HEIGHTS OF EQUIPMENT. INCLUSIVE OF RECEPTACLES, SWITCHES, THERMOSTATS, ETC. ALL SUCH EQUIPMENT AND COLORS SHALL BE COORDINATED WITH THE ARCHITECT. CONTACT ARCHITECT FOR CLARIFICATION OF MOUNTING REQUIREMENTS, IF INFORMATION IS NOT CONTAINED IN THE DRAWINGS.
- ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH THE APPLICABLE CODES IN THE ORDINANCES AND THE REGULATORY AGENCIES HAVING JURISDICTION.
- ALL EQUIPMENT SHALL BE LOCATED IN ACCESSIBLE LOCATIONS. WHEN A PIECE OF EQUIPMENT MUST BE LOCATED ABOVE AN INACCESSIBLE CEILING OR WALL THEN THE APPROPRIATE ACCESS DOOR SHALL BE PROVIDED. THESE SHALL BE COORDINATED WITH THE ARCHITECT.
- WHEN CONFLICTS OCCUR BETWEEN THE DRAWINGS AND/OR SPECIFICATIONS IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE CONTRACTOR SHALL CARRY AS PART OF THE BID THE LARGER QUANTITY AND/OR MORE EXPENSIVE ITEM(S).
- CONTRACTORS SHALL COORDINATE THEIR WORK WITH ALL OWNER-FURNISHED EQUIPMENT, INCLUDING REQUIRED SERVICE CONNECTIONS, RECEPTACLES, ETC. BEFORE INSTALLATION.
- CONTRACTORS SHALL PROVIDE ALL REQUIRED SLEEVES AND SEALS FOR PIPES OR CONDUIT PENETRATING WALLS OR FLOOR SLABS WITH FIRE STOPPING SEALANT WHERE REQUIRED.
- ELECTRICAL CONDUITS & BOXES TO BE CONCEALED IN WALLS OR ABOVE CEILING WHEREVER POSSIBLE.
- COORDINATE ALL PIPING AND CONDUITS LEAVING THE BUILDING WITH THE SITE CONTRACTOR(S) BEFORE INSTALLATION.
- PROVIDE VIBRATION ISOLATION FOR ALL MECHANICAL EQUIPMENT.
- PROVIDE VIBRATION ISOLATORS FOR ALL PIPING SUPPORTS CONNECTED TO AND WITHIN 50 FEET OF ISOLATED EQUIPMENT THROUGHOUT MECHANICAL EQUIPMENT ROOMS.
- LOCATE ALL TEMPERATURE, PRESSURE AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH STRAIGHT SECTION OF PIPE OR DUCT UP/DOWN STREAM AS RECOMMENDED BY THE MANUFACTURER FOR GOOD ACCURACY.
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- PROVIDE ACCESS PANELS FOR INSTALLATION IN WALLS AND CEILINGS, WHERE REQUIRED, TO SERVICE DAMPERS, VALVES, SMOKE DETECTORS AND OTHER CONCEALED MECHANICAL EQUIPMENT.
- LOCATE ALL TEMPERATURE, PRESSURE AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH STRAIGHT SECTION OF PIPE OR DUCT UP/DOWN STREAM AS RECOMMENDED BY THE MANUFACTURER FOR GOOD ACCURACY.
- PROVIDE ACCESS PANELS FOR INSTALLATION IN WALLS AND CEILINGS, WHERE REQUIRED, TO SERVICE DAMPERS, VALVES, SMOKE DETECTORS AND OTHER CONCEALED MECHANICAL EQUIPMENT.
- LOCATE ALL TEMPERATURE, PRESSURE AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH





Mechanical Duct Plan -Area B  
SCALE: 1/8"=1'-0"



Project Title:  
**Hinsdale School Alterations**

15 Hinsdale Ave.  
Winsted, CT 06098



**SILVER / PETRUCCELLI + ASSOCIATES**  
Architects / Engineers / Interior Designers

3190 Whitney Avenue, Hamden, CT 06518-2340  
Tel. 203 230 9007 Fax. 203 230 8247  
silverpetrucci.com

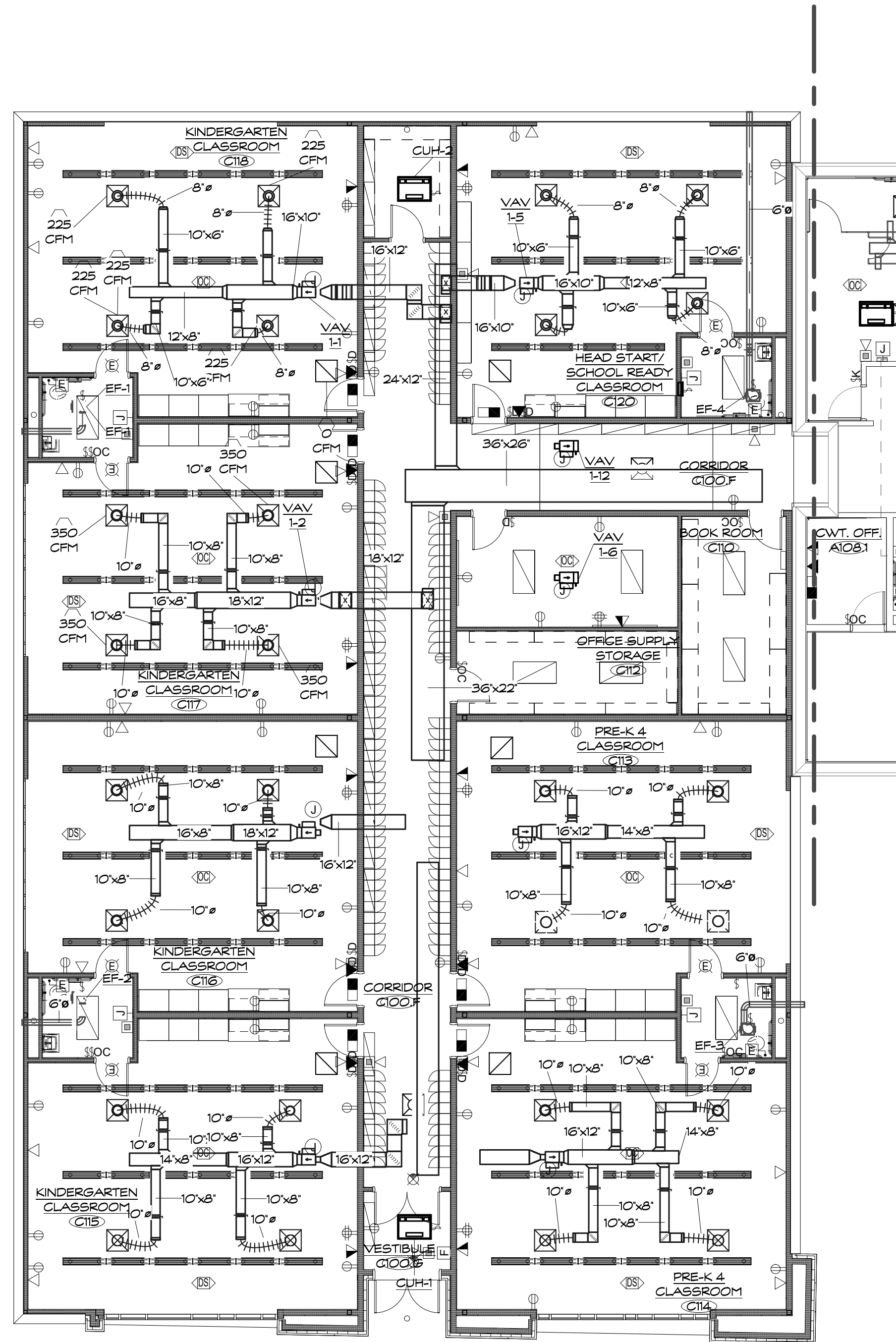
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Drawing Title:  
**MECHANICAL FIRST FLOOR  
BUILDING 'B'**

State Project #: 162-0043RNV

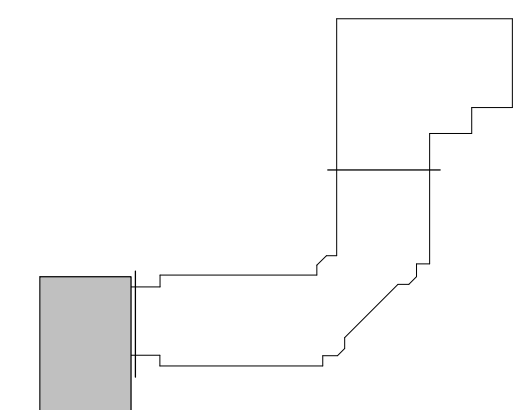
Date:  
June 30, 2020  
Scale:  
1/8" = 1'-0"  
Drawn By:  
MIZ  
Project Number:  
18.223

Drawing Number:  
**M-102**



Mechanical Duct Plan -Area C  
SCALE: 1/8" = 1'-0"

1  
M-103



Project Title:  
Hinsdale School Alterations

15 Hinsdale Ave.  
Winsted, CT 06098



SILVER / PETRUCCELLI + ASSOCIATES  
Architects / Engineers / Interior Designers

3190 Whitney Avenue, Hamden, CT 06518-2340  
Tel. 203 230 9007 Fax. 203 230 8247  
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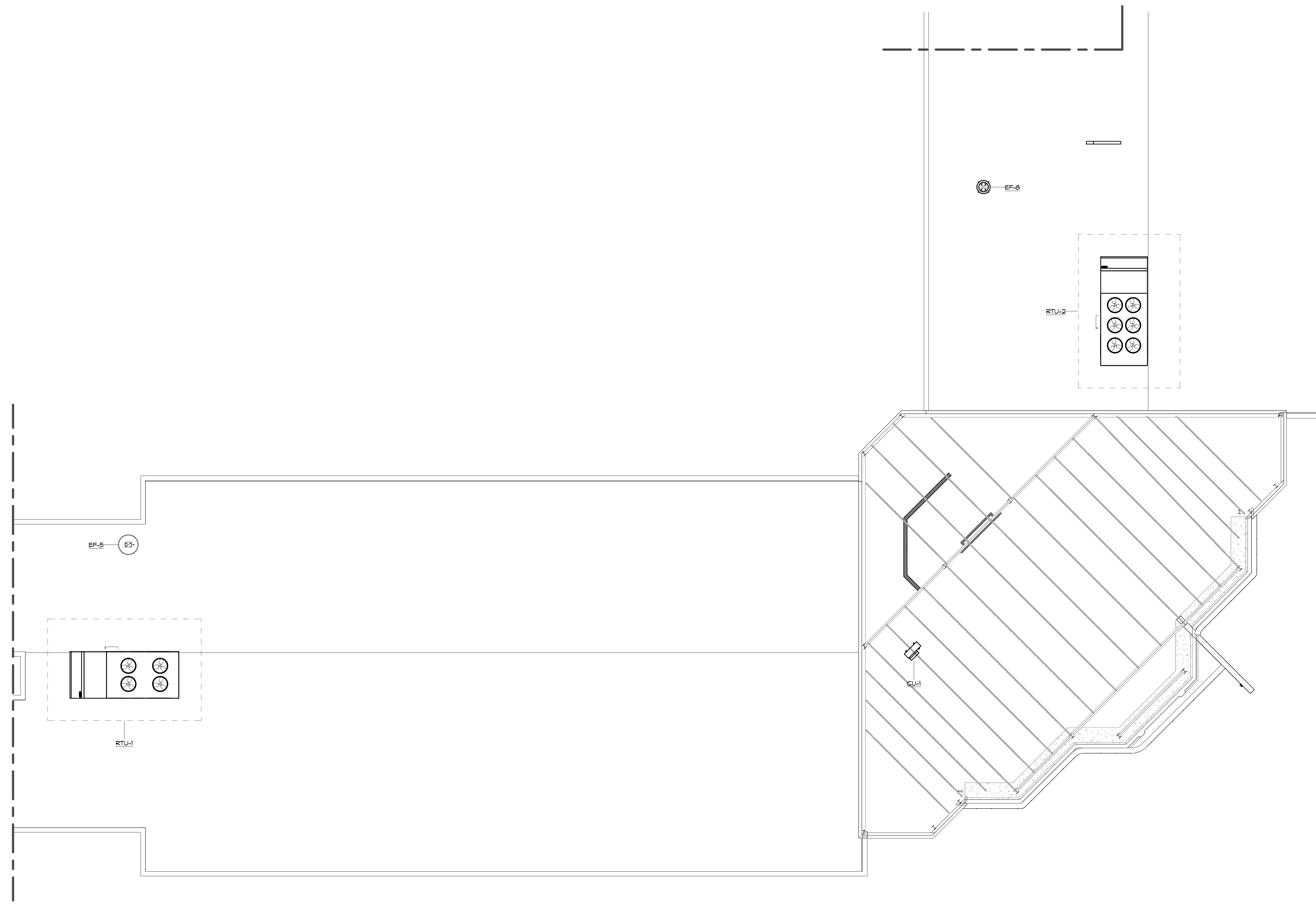
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Drawing Title:  
MECHANICAL FIRST FLOOR  
BUILDING 'C'

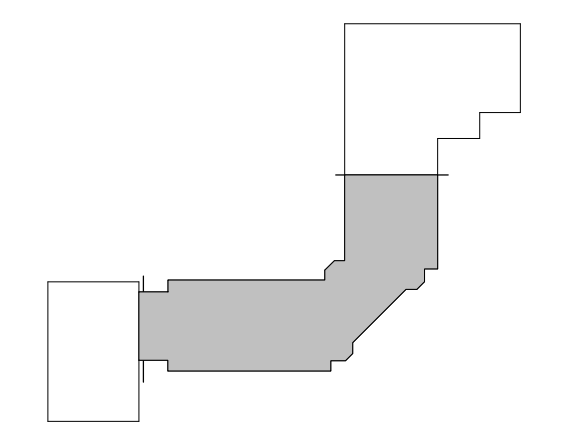
State Project #: 162-0043RNV

Date:  
June 30, 2020  
Scale:  
1/8" = 1'-0"  
Drawn By:  
MIZ  
Project Number:  
18.223

Drawing Number:  
**M-103**



Roof Mechanical Duct Plan - Area A  
Scale: 1/8" = 1'-0"



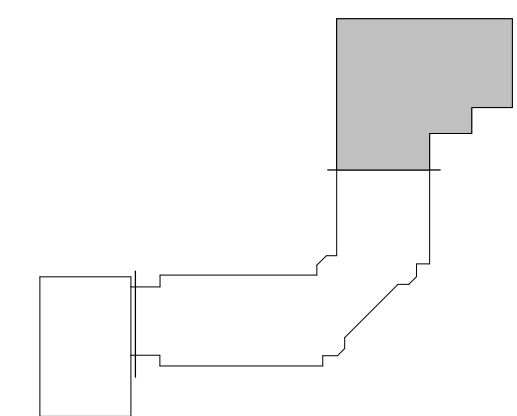
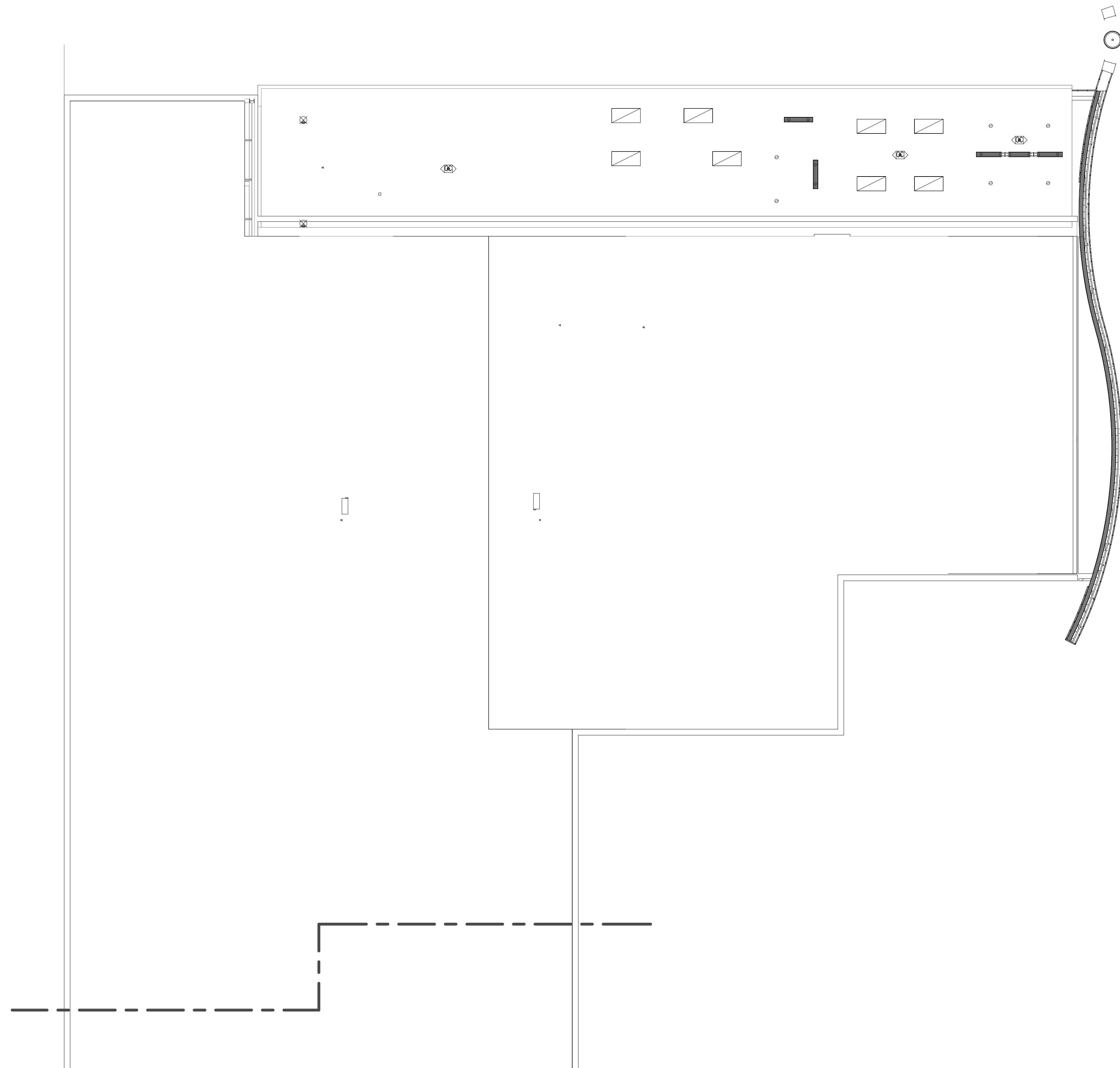
Project Title:  
**Hinsdale School Alterations**  
 15 Hinsdale Ave.  
 Winsted, CT 06098

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 3190 Whitney Avenue, Hamden, CT 06518-2340  
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Drawing Title:  
**MECHANICAL ROOF PLAN  
 BUILDING 'A'**  
 State Project #: 162-0043RNV

Date:  
 June 30, 2020  
 Scale:  
 1/8" = 1'-0"  
 Drawn By:  
 MZ  
 Project Number:  
 18.223  
 Drawing Number:  
**M-104**



Project Title:  
**Hinsdale School Alterations**  
 15 Hinsdale Ave.  
 Winsted, CT 06098



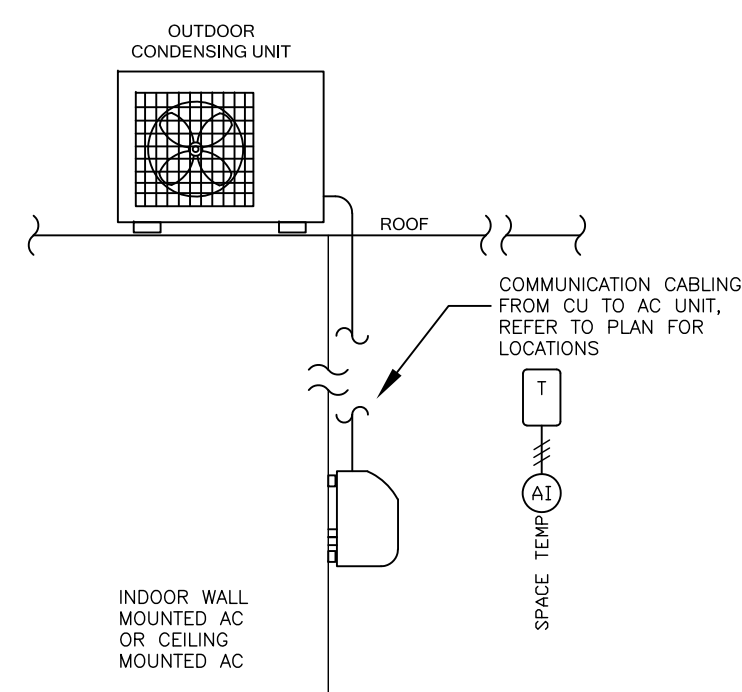
**SILVER / PETRUCELLI + ASSOCIATES**  
 Architects / Engineers / Interior Designers  
 3190 Whitney Avenue, Hamden, CT 06518-2340  
 Tel. 203 230 9007 Fax. 203 230 8247  
 silverpetrucelli.com

| Revision: | Description: | Date: | Revised By: |
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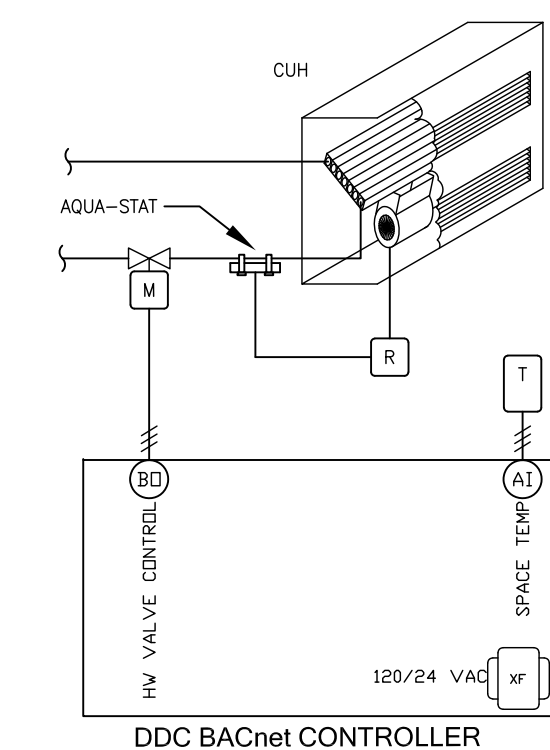
Drawing Title:  
**MECHANICAL ROOF PLAN  
 BUILDING 'B'**  
 State Project #: 162-0043RNV

Date:  
 June 30, 2020  
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 Drawn By:  
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 18.223

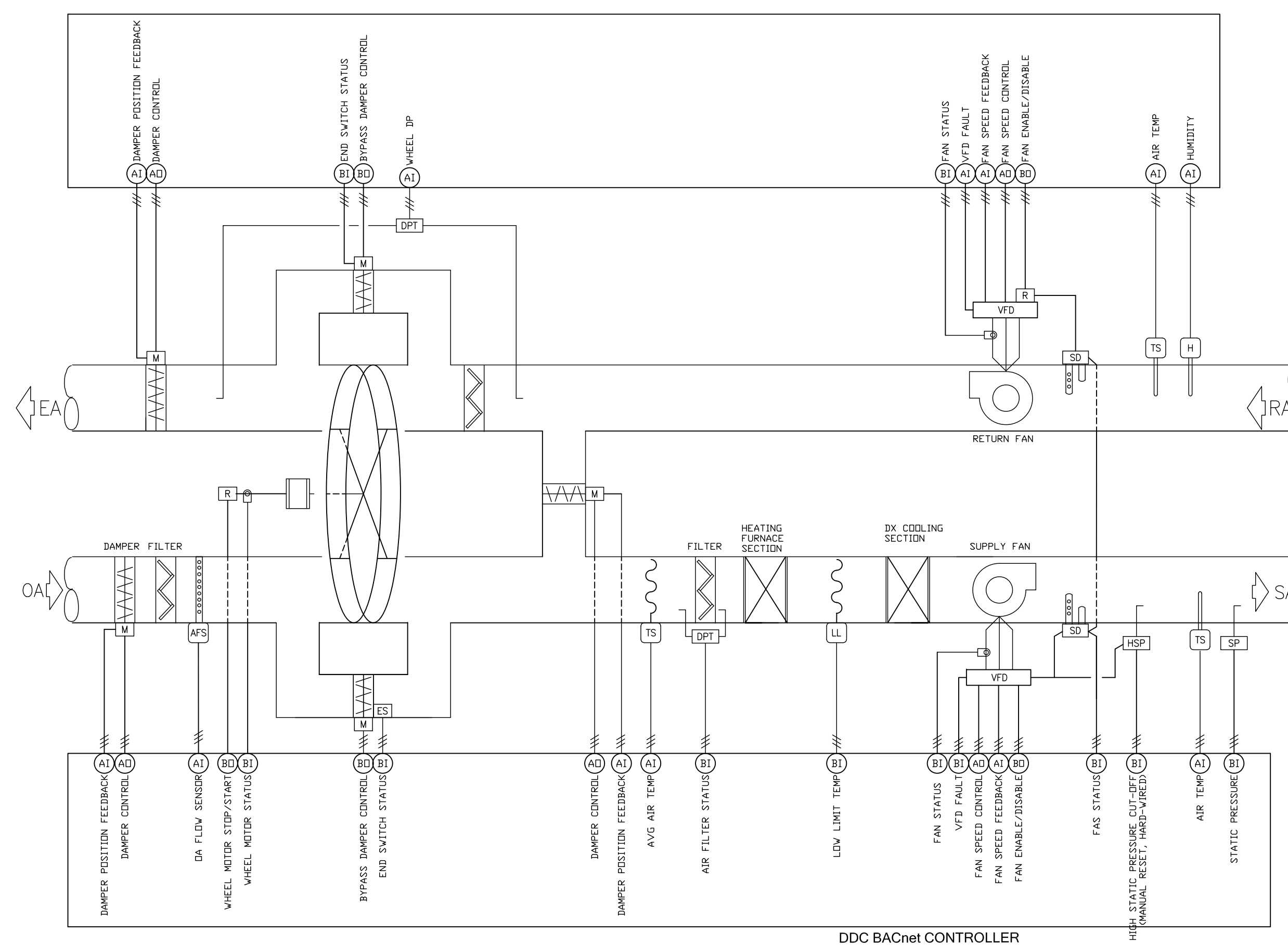
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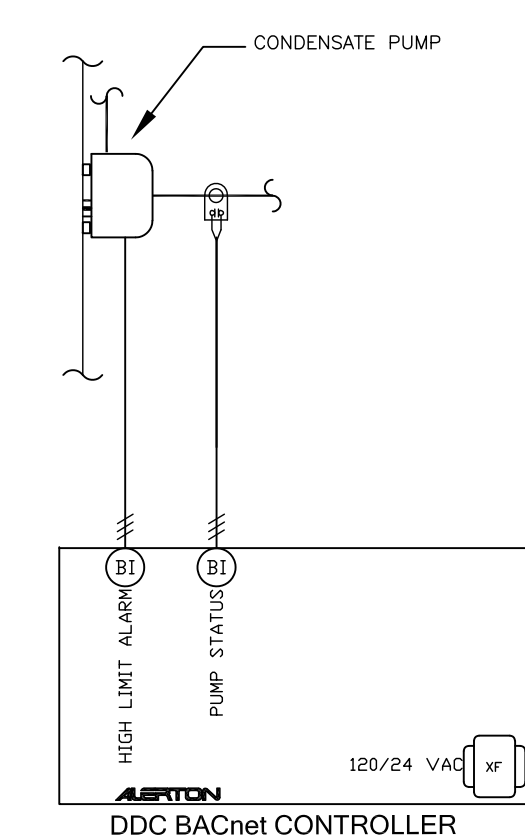
**7 DUCTLESS SPLIT SYSTEM CONTROL DIAGRAM**  
 SCALE: NTS



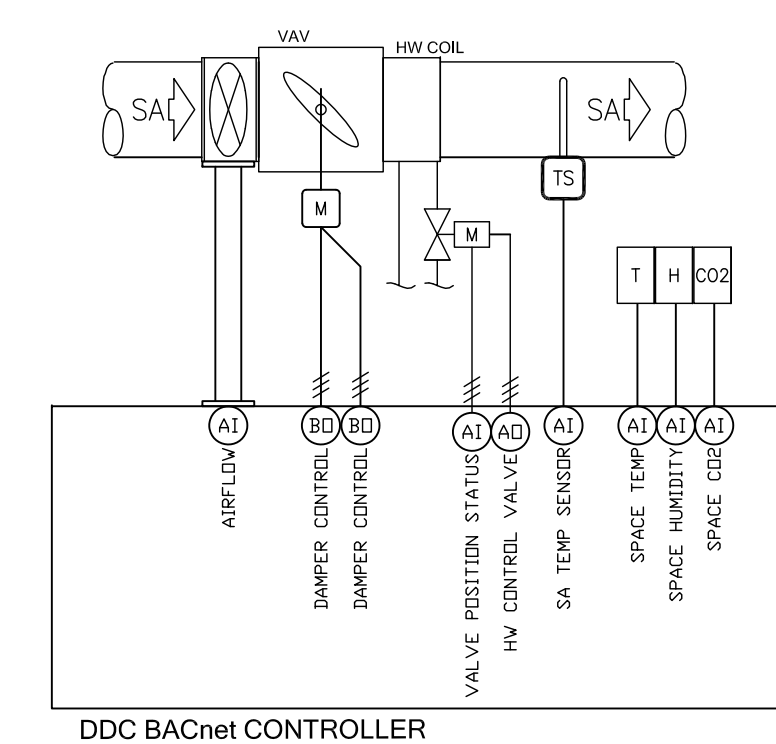
**4 HW CABINET UNIT HEATER**  
 SCALE: NTS



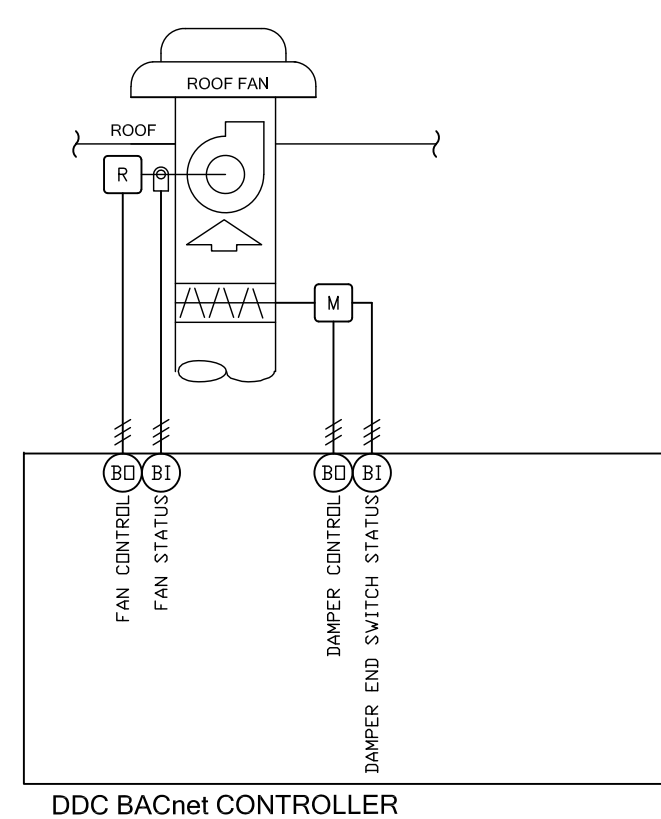
**6 RTU WITH ENERGY RECOVERY CONTROL DIAGRAM**  
 SCALE: NTS



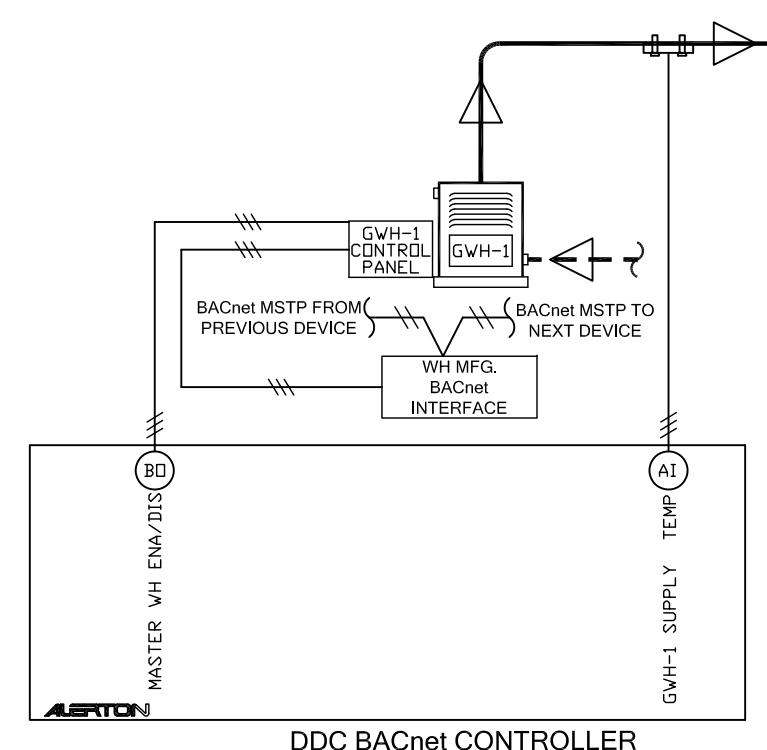
**3 CONDENSATE PUMP CONTROL DIAGRAM**  
 SCALE: NTS



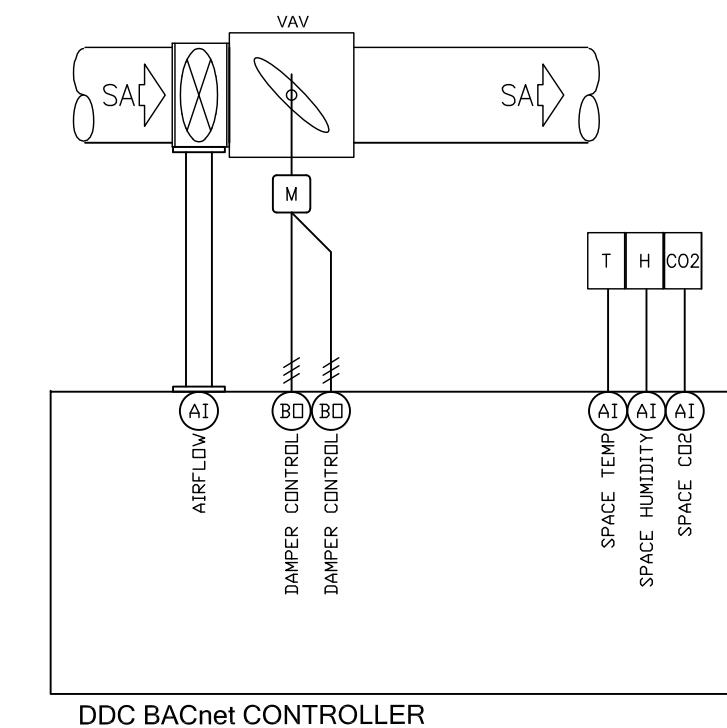
**2 SINGLE DUCT VAV WITH HOT WATER CONTROL DIAGRAM**  
 SCALE: NTS



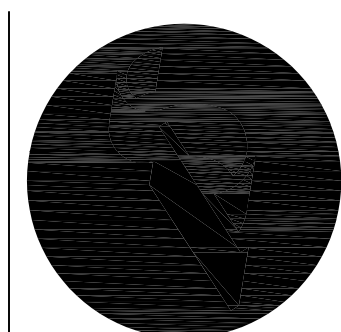
**8 TYPICAL EXHAUST CONTROL DIAGRAM**  
 SCALE: NTS



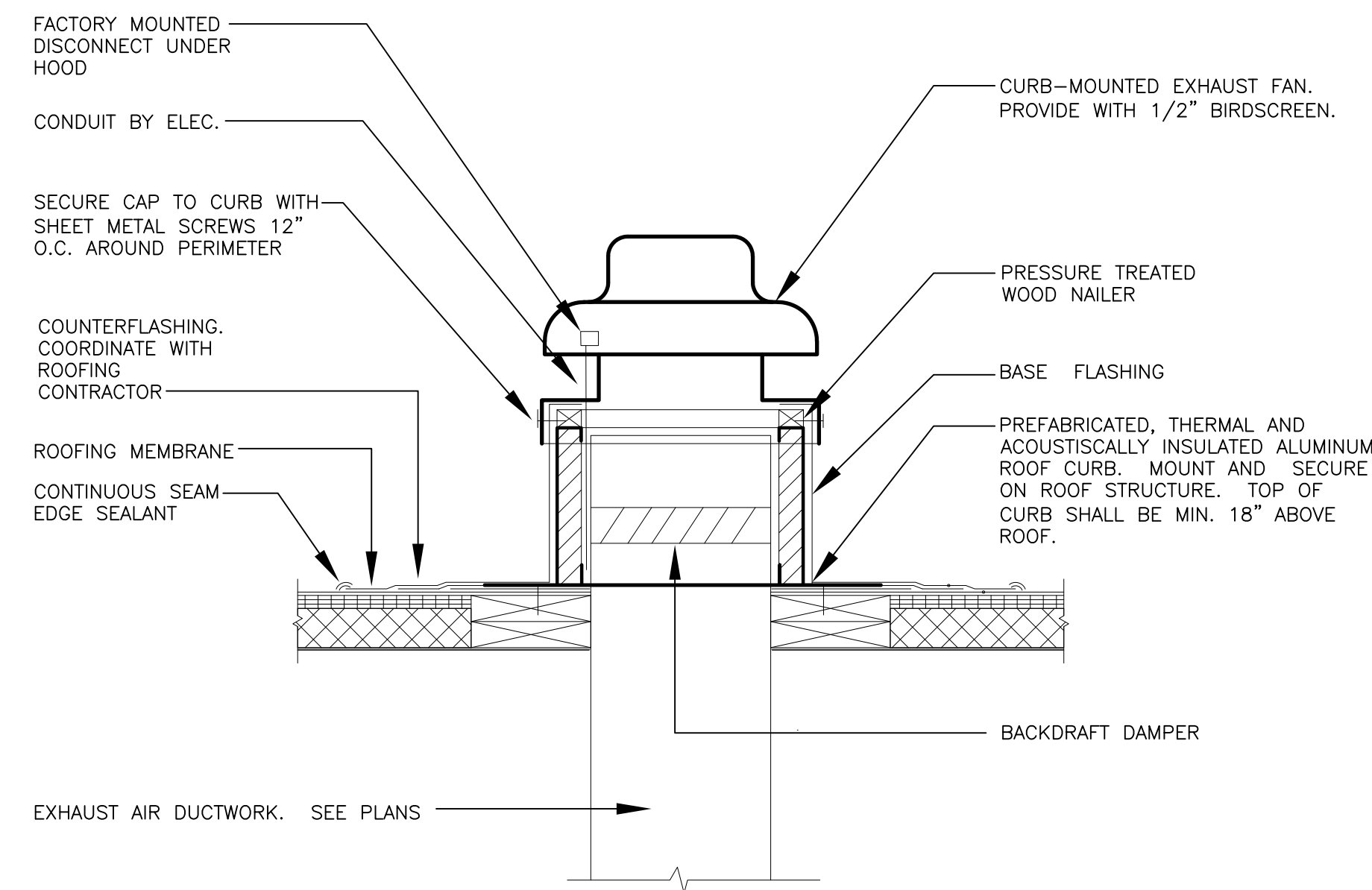
**5 DOMESTIC WATER HEATER CONTROL DIAGRAM**  
 SCALE: NTS



**1 SINGLE DUCT VAV CONTROL DIAGRAM**  
 SCALE: NTS

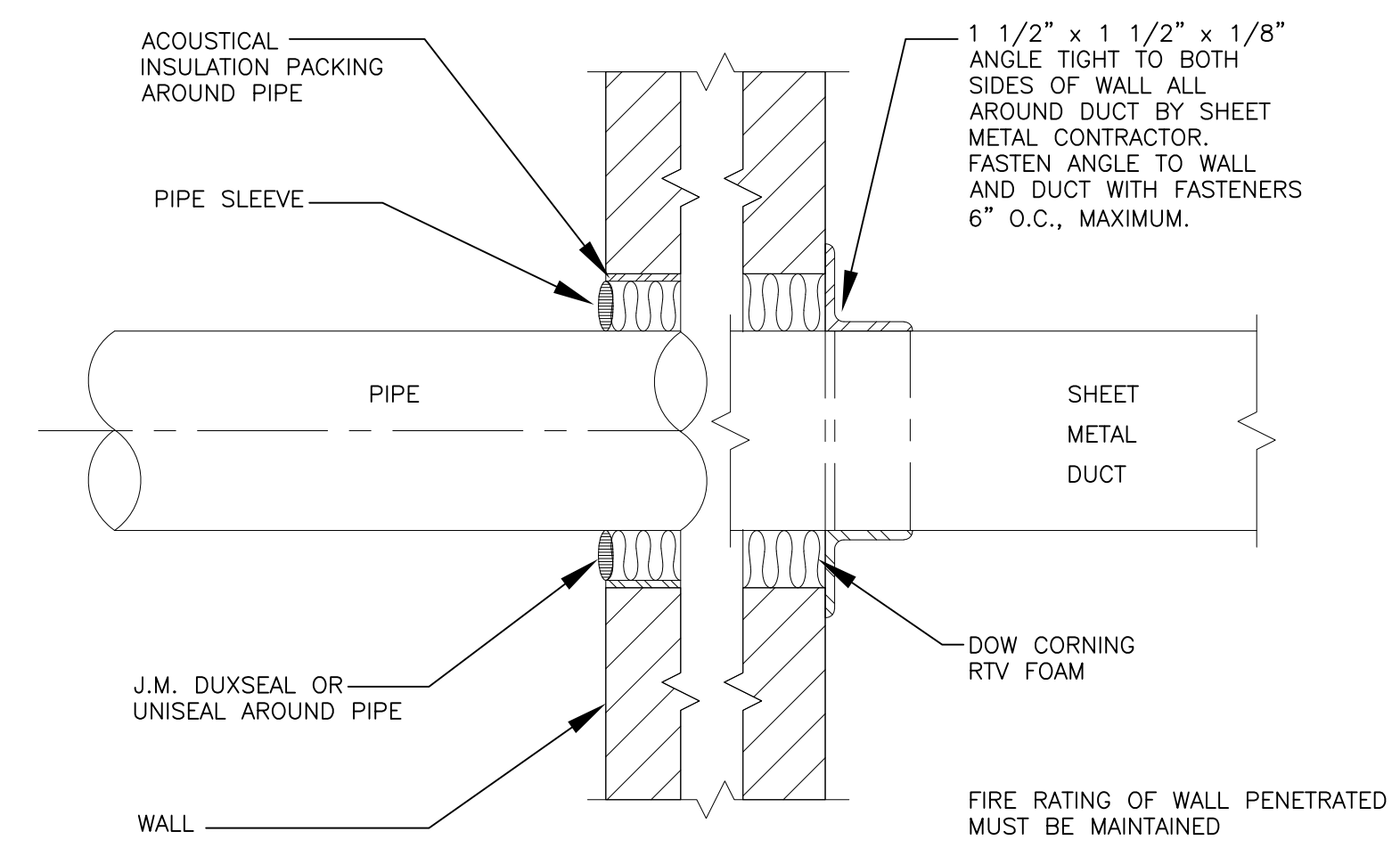


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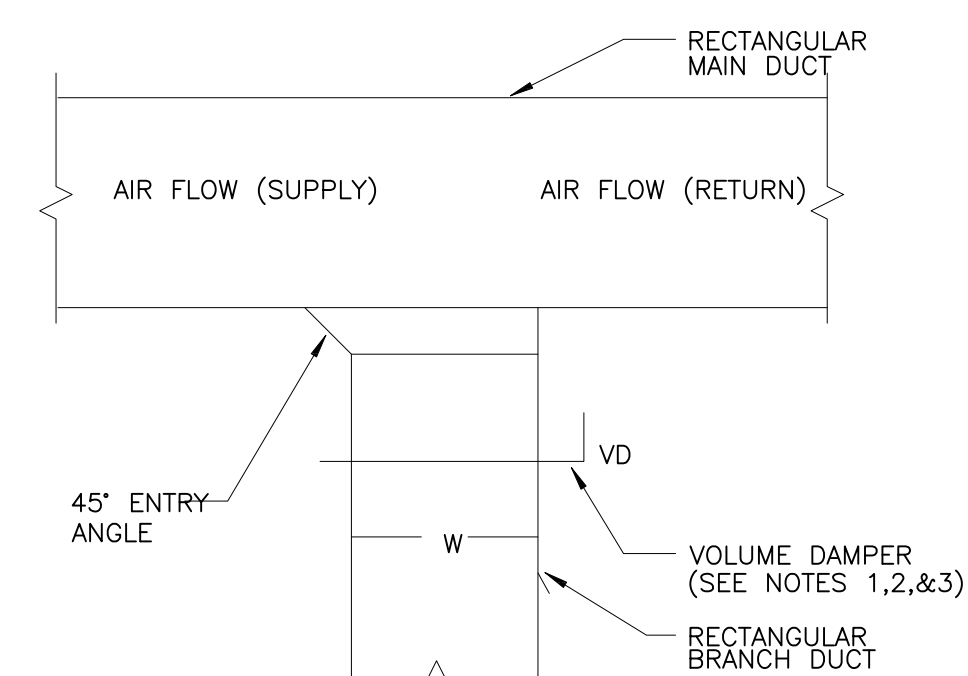


- NOTE:
- DRAWING AS SHOWN ARE FOR INFORMATION ONLY. CONTRACTOR SHALL PROVIDE ALL NECESSARY SUPPORT AS REQUIRED TO SECURE AND SEISMICALLY SUPPORT THE ROOF CURB TO THE STRUCTURE.
  - ALL INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.
  - COORDINATE SEALING AND WATERPROOFING WITH THE ROOFING CONTRACTOR.
  - ROOF CURB, FLASHING AND ROOF CAP SHALL BE EPOXY COATED TO MATCH THE COLOR OF THE ROOF.

**6** CURB MOUNTED EXHAUST FAN DETAIL  
M801 NOT TO SCALE

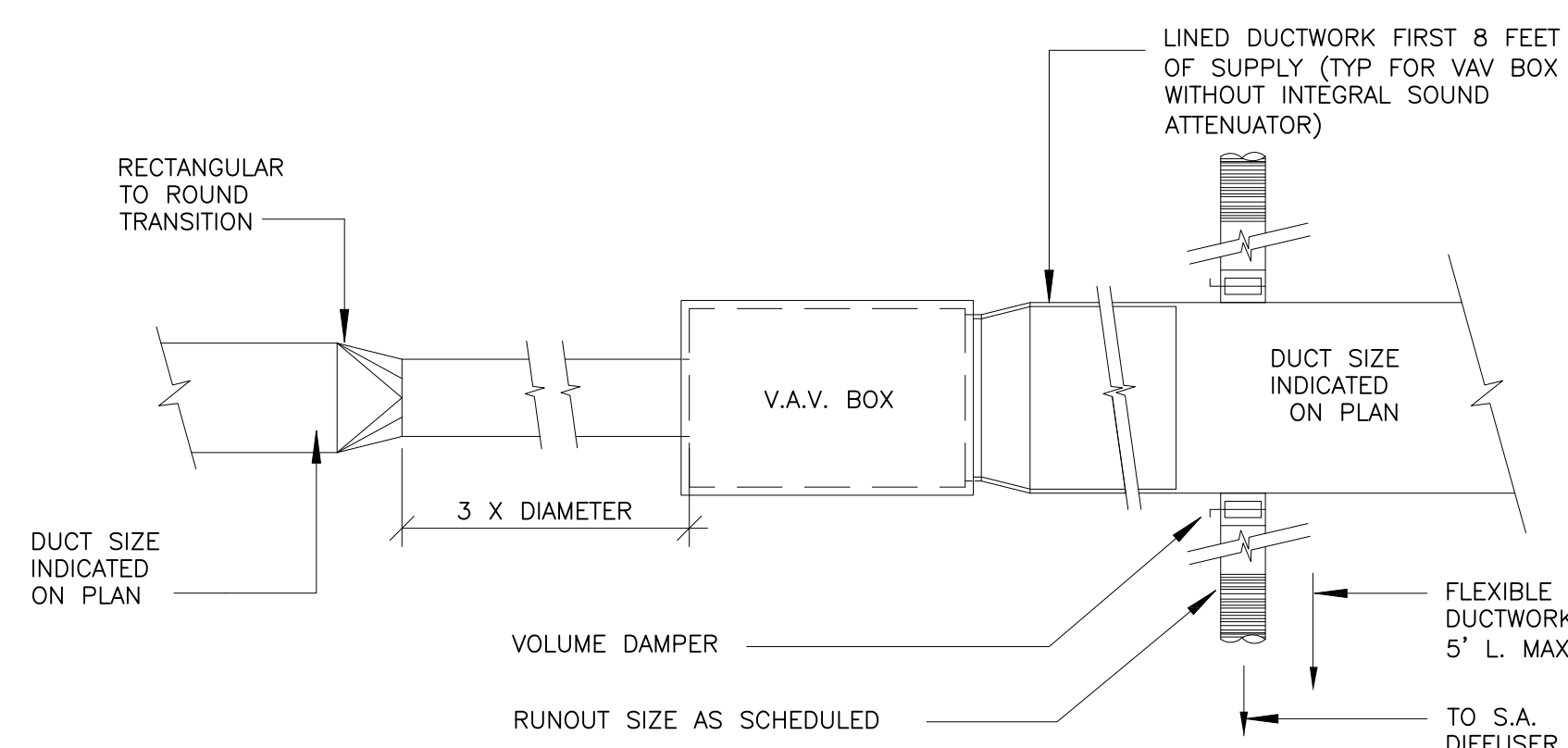


**3** PIPE OR DUCT PENETRATION THROUGH WALL DETAIL  
M801 NOT TO SCALE

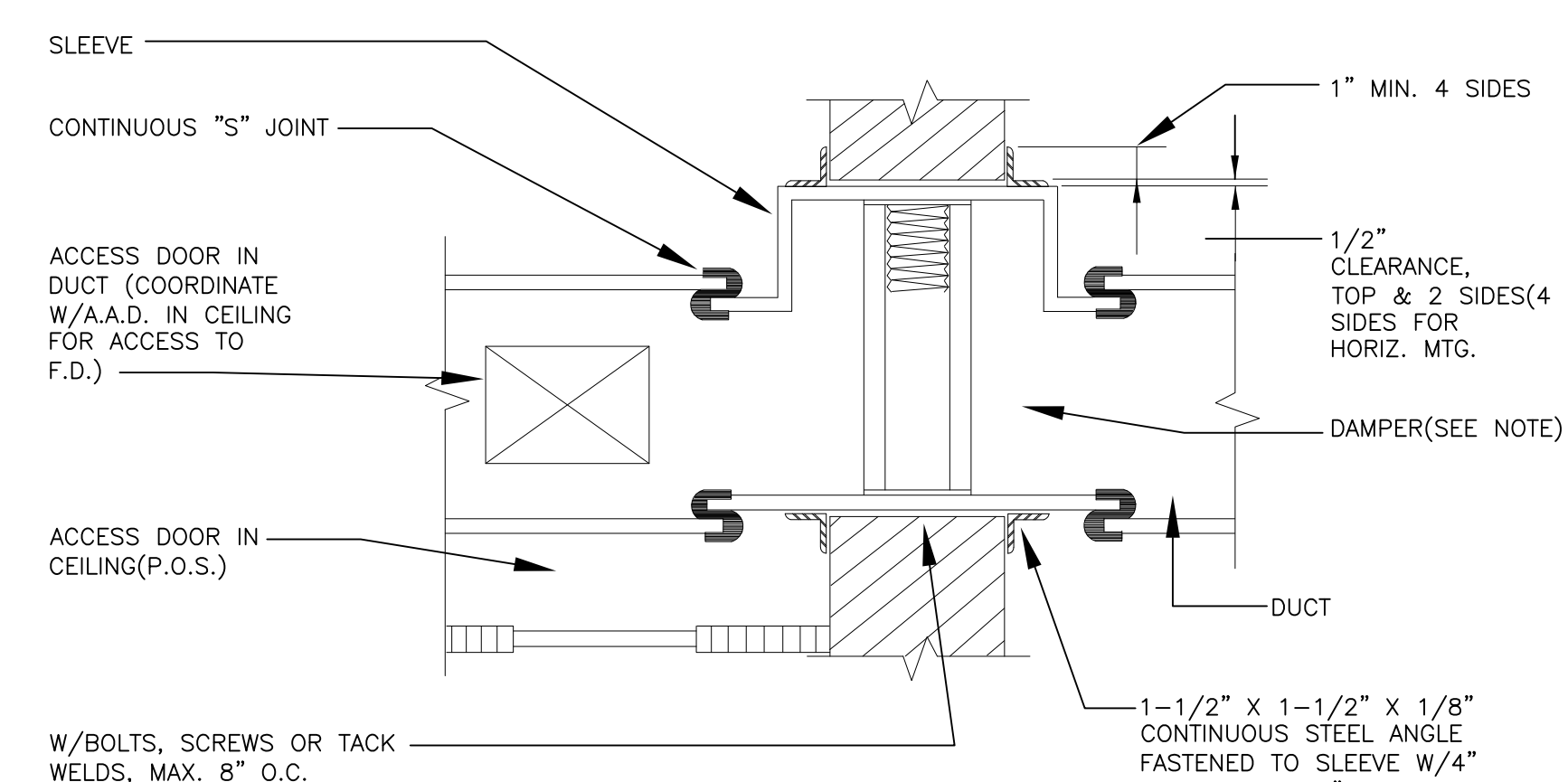


- NOTES:
- UP TO 1.5 SQ. FT. CROSS SECTIONAL AREA AND NOT EXCEEDING 24" IN WIDTH, USE SINGLE BLADE VOLUME DAMPER.
  - FOR CROSS SECTIONAL AREAS FROM 1.5 TO 3.0 SQ. FT. AND NOT EXCEEDING 24" IN WIDTH, USE 3 SINGLE BLADE VOLUME DAMPERS INDIVIDUALLY OPERATED TO FUNCTION IN AN OPPOSED MANNER.
  - FOR CROSS SECTIONAL AREAS GREATER THAN 3.0 SQ. FT. AND/OR EXCEEDING 24" IN WIDTH, USE GANG OPERATED OPPOSED BLADE VOLUME DAMPER AND FRAME ASSEMBLY.

**8** TYPICAL RETURN SUPPLY/RETURN DUCT TAKE-OFF  
M801 NOT TO SCALE

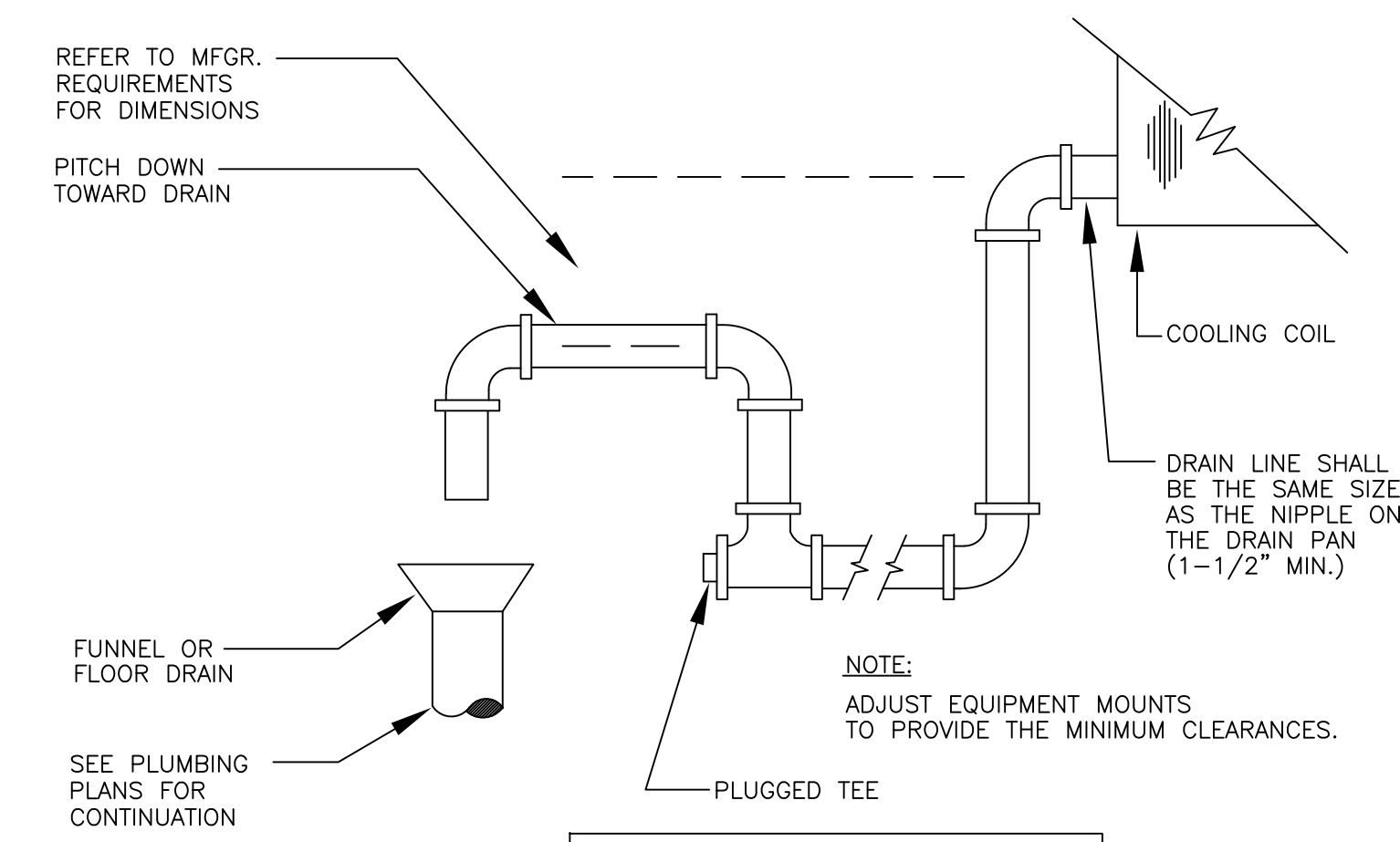


**7** VAV DETAIL  
M801 NOT TO SCALE

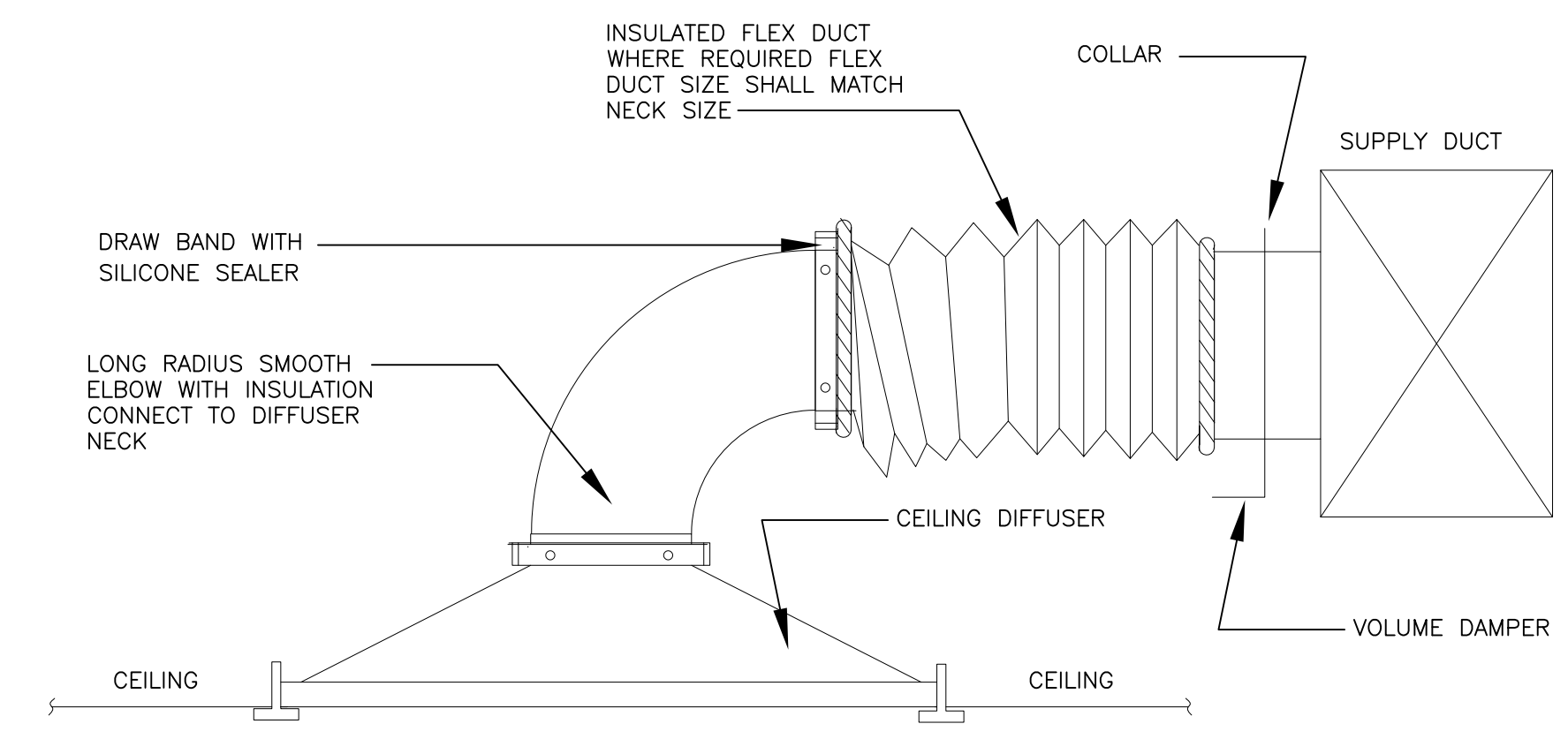


- NOTES:
- DAMPER STYLE & SLEEVE CONFIGURATION IS GOVERNED BY MAINTAINING A MAX. .06 STATIC PRESSURE @ 2500 F.P.M. FACE VELOCITY.
  - DEPTH OF DAMPER TO BE COORDINATED WITH WALL THICKNESS.
  - INSTALLATIONS & MATERIALS PER U.L. 555.

**5** VERTICAL FIRE DAMPER DETAIL  
M801 NOT TO SCALE

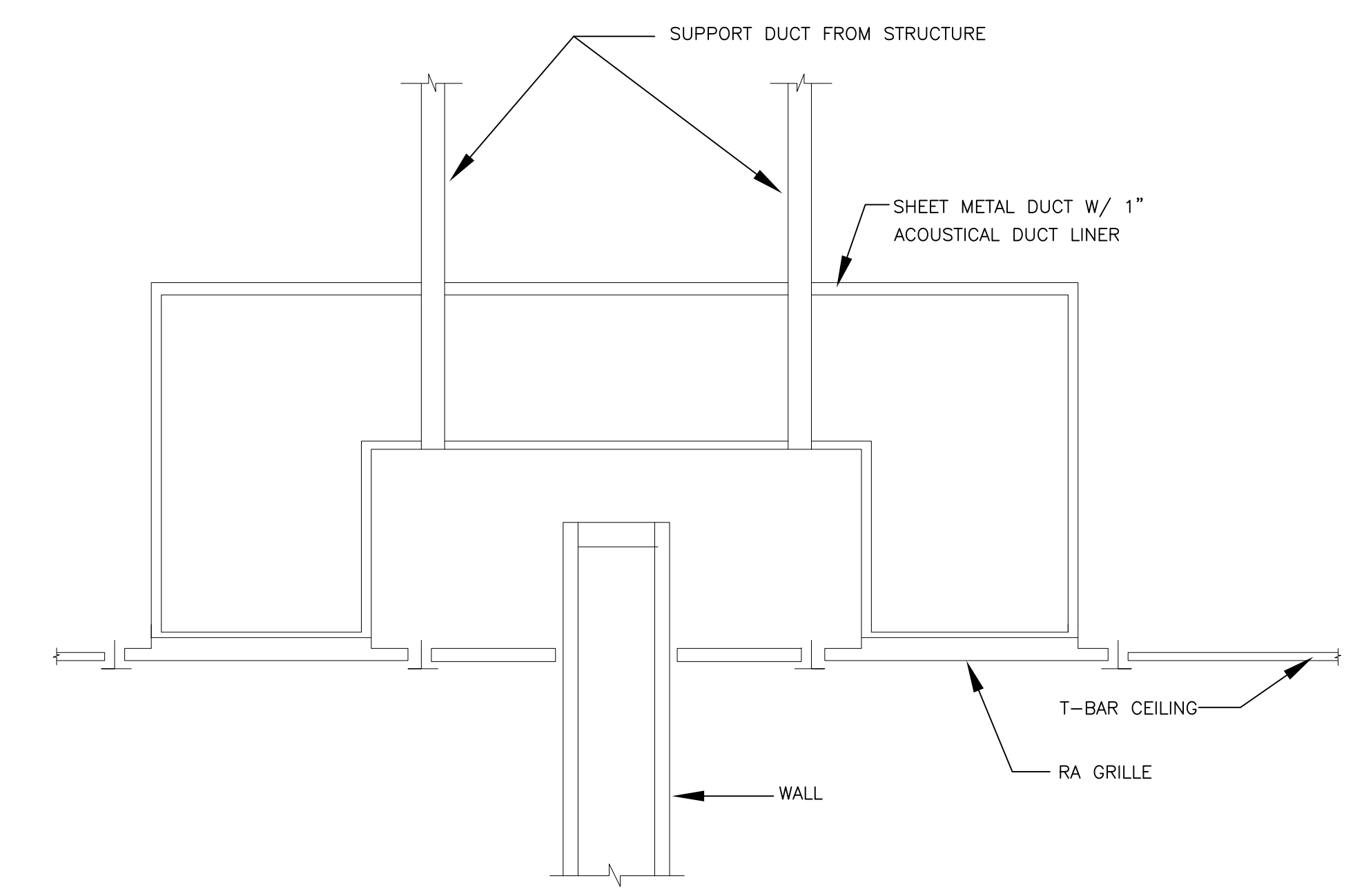


**4** TRAP ASSEMBLY DETAIL  
M801 NOT TO SCALE

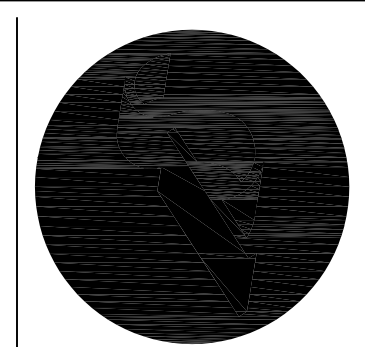


- NOTE:
- PROVIDE AN ELBOW WITH THE SAME SIZE AS THE NECK OF DIFFUSER TO ACHIEVE REQUIRED ACOUSTICAL PERFORMANCE.

**2** TYPICAL DIFFUSER CONNECTION  
M801 NOT TO SCALE

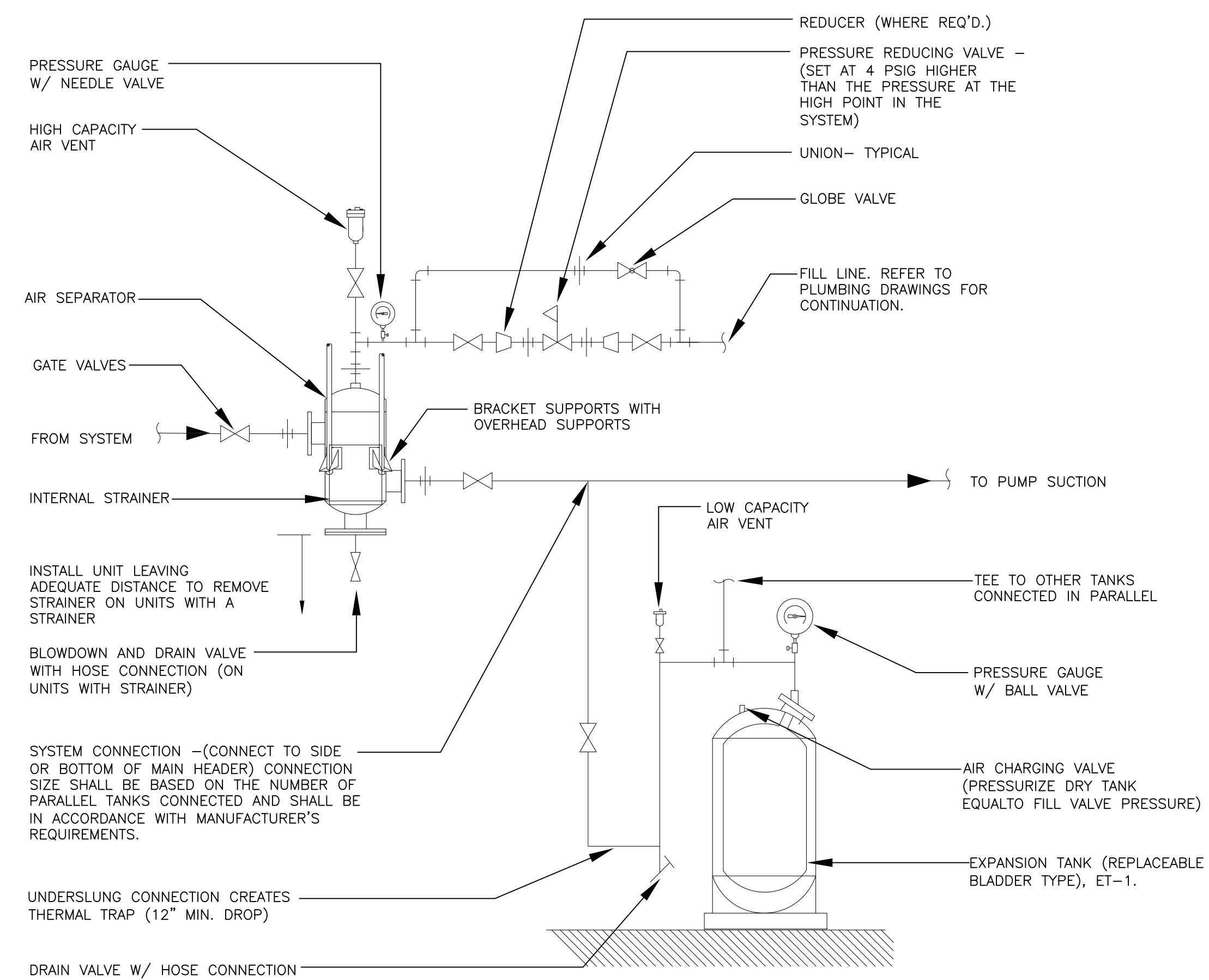


**1** TRANSFER DUCT DETAIL  
M801 NOT TO SCALE

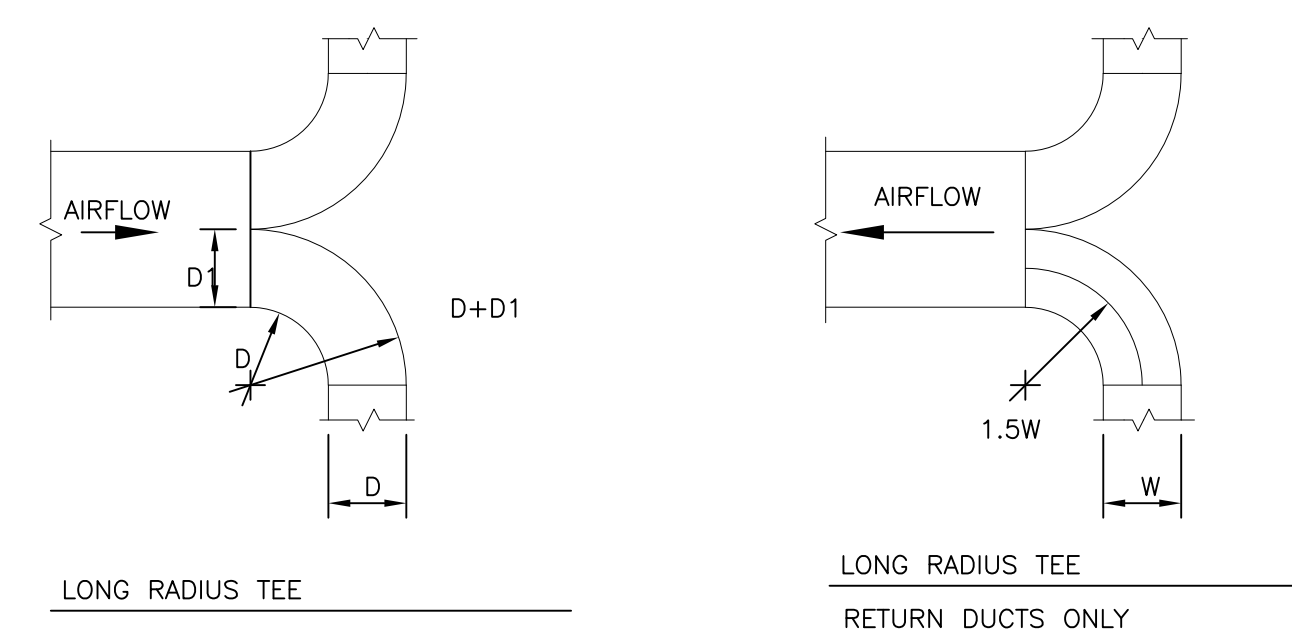
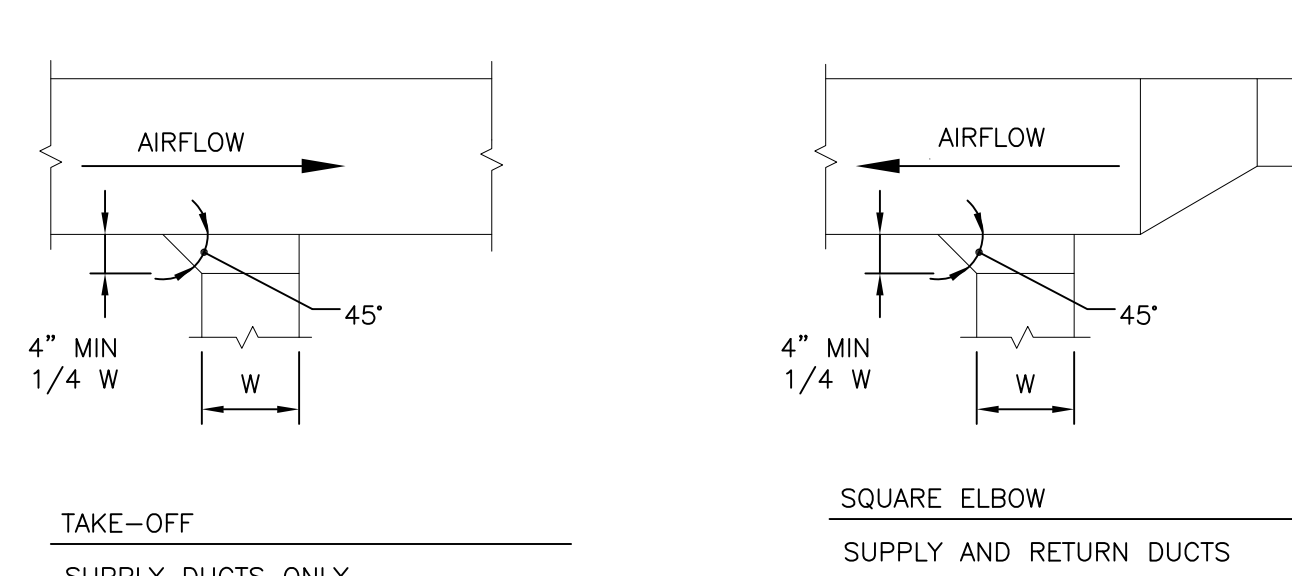
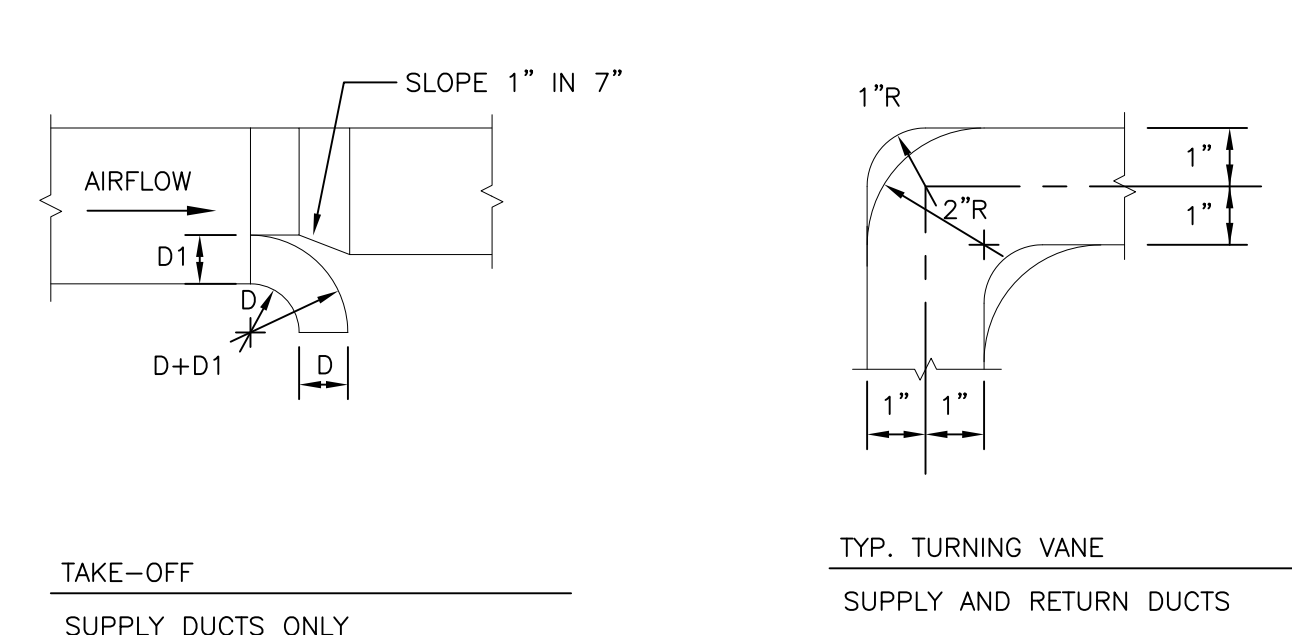
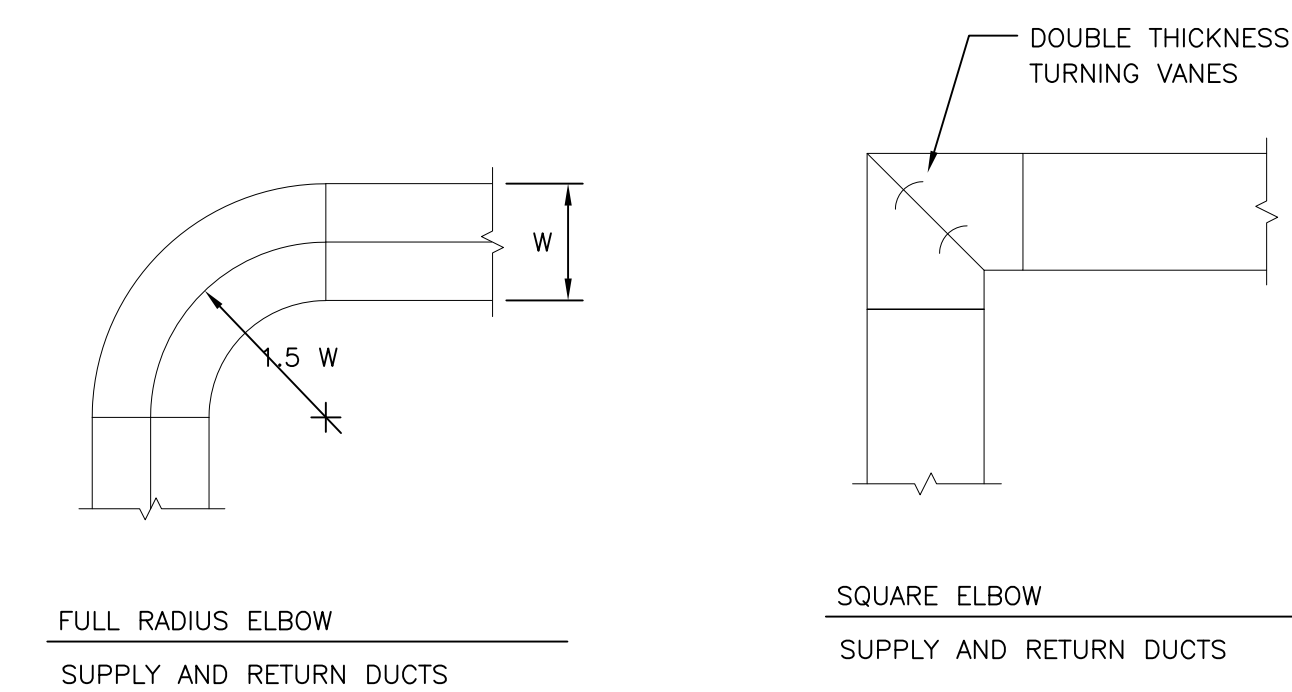


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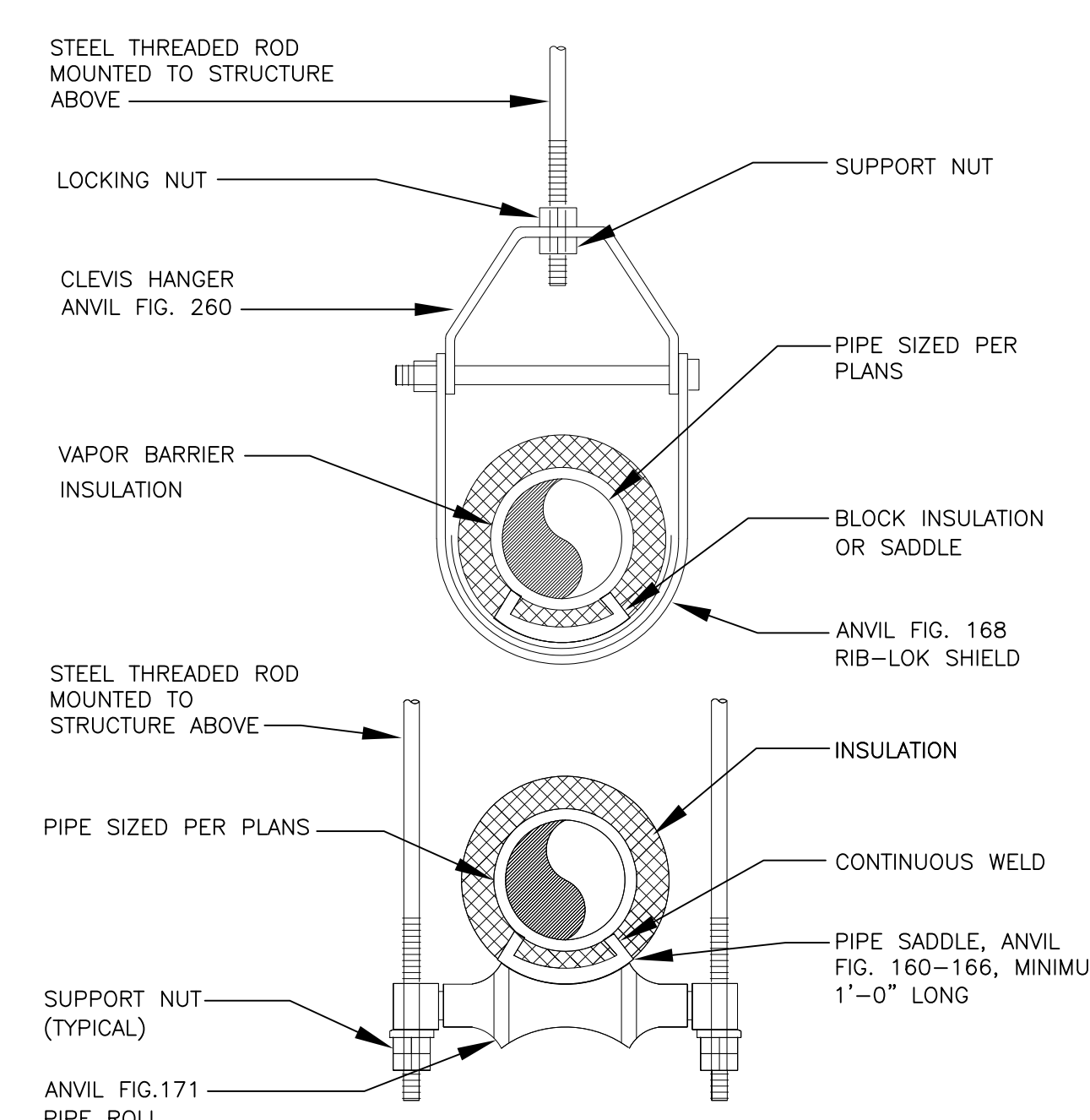




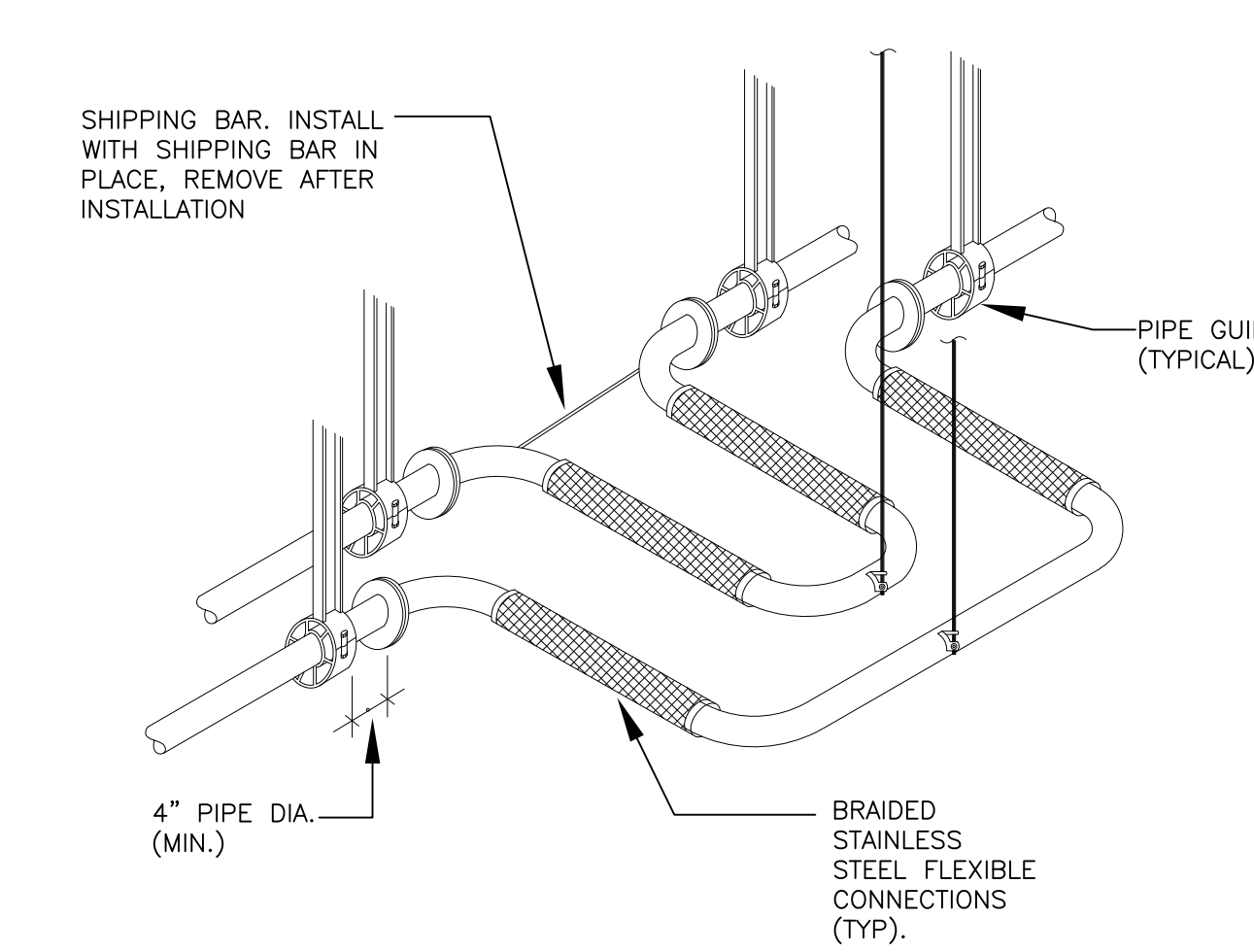
**3 AIR SEPARATOR AND EXPANSION TANK DETAIL**  
SCALE: NTS



**1 TYPICAL DUCT DETAILS**  
SCALE: NTS

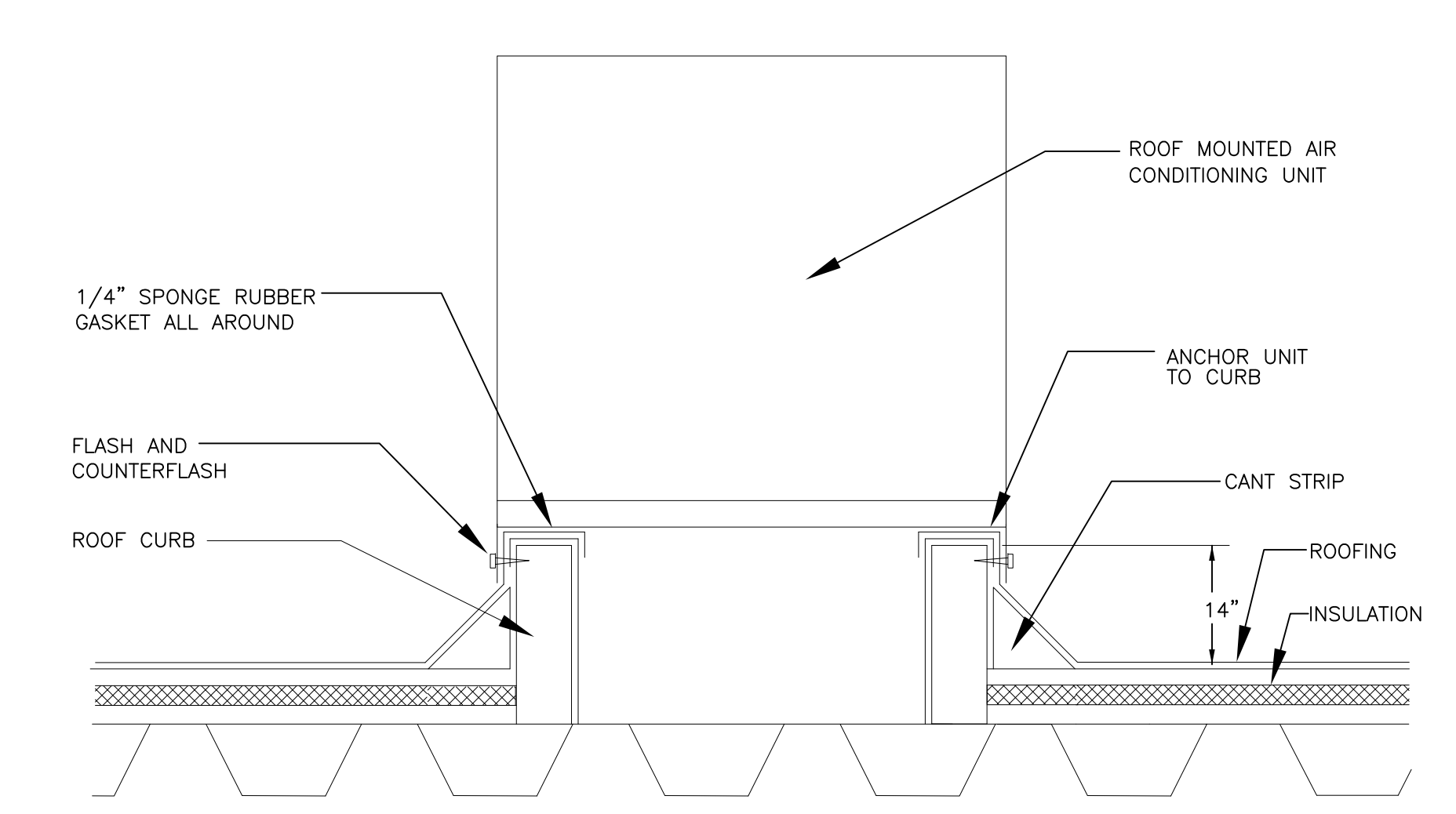


**5 PIPE HANGING DETAIL**  
SCALE: NTS



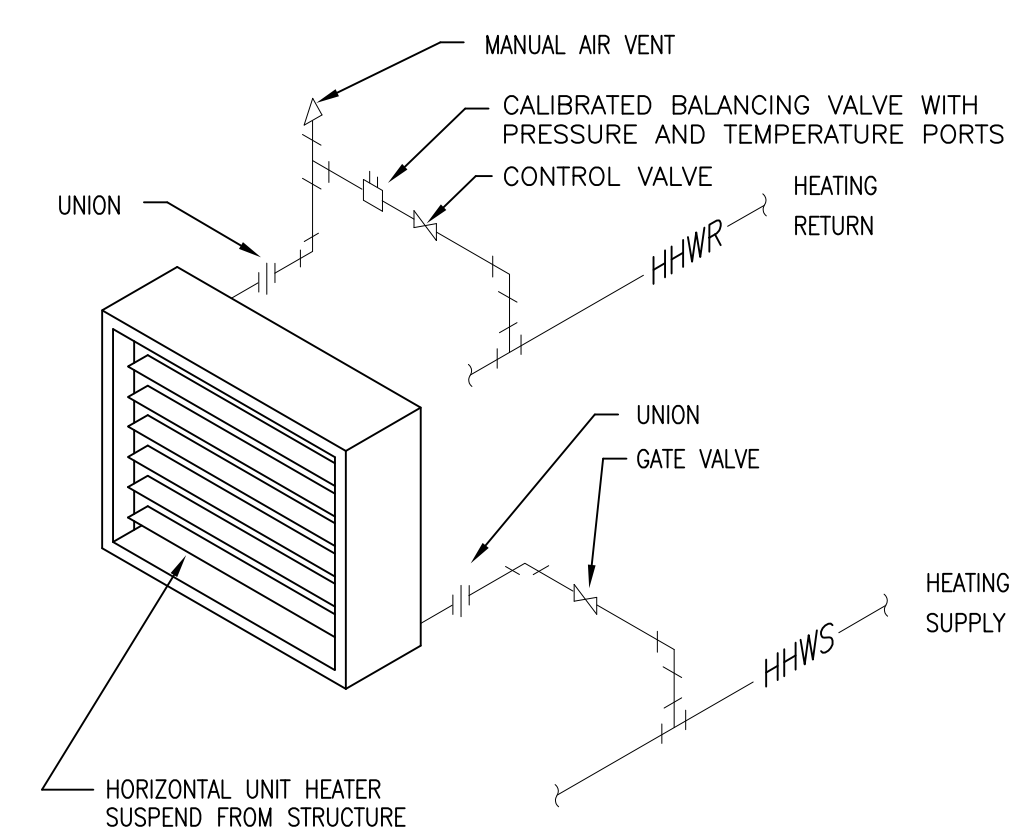
**4 EXPANSION LOOP DETAIL**  
SCALE: NTS

GENERAL NOTES:  
1.) INSTALL IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL REQUIRED SUPPORTS, ANCHORS, GUIDES, ETC AS REQUIRED.  
2.) INSTALL ARMAFLEX INSULATION ON BRAIDED FLEXIBLE CONNECTIONS. INSULATE REMAINING PIPING AS INDICATED IN THE SPECIFICATIONS.



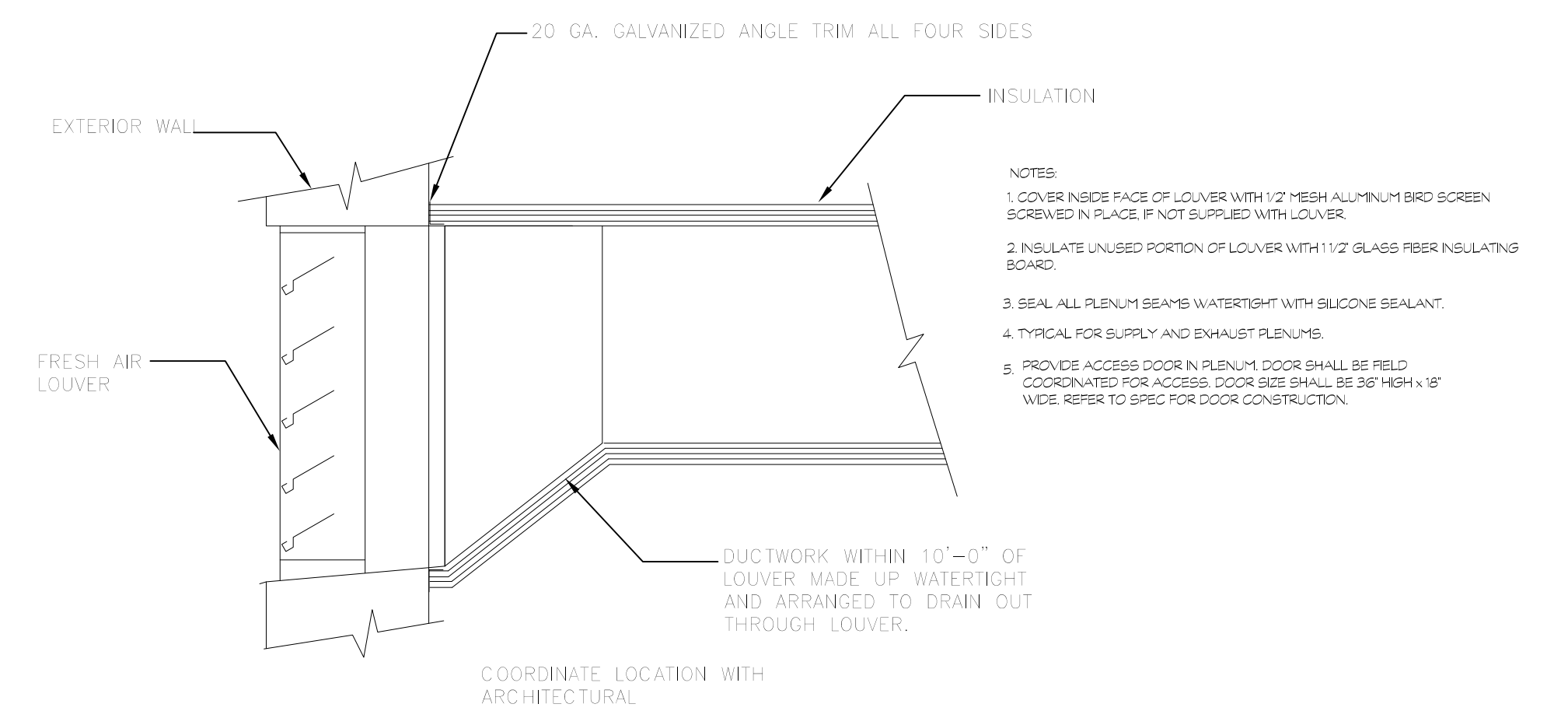
**2 EQUIPMENT MOUNTED ON ROOF CURB DETAIL**  
SCALE: NTS

NOTE: ROOF CURB SHALL BE FACTORY SUPPLIED FOR ALL ROOF MOUNTED EQUIPMENT

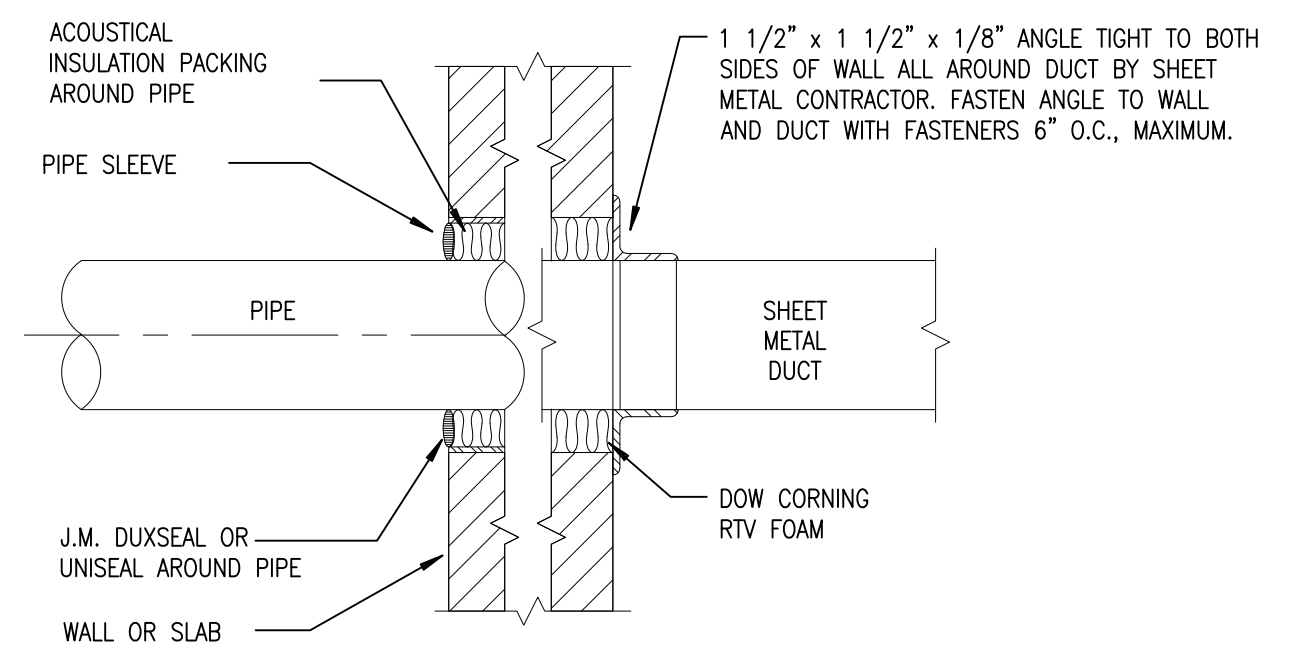


NOTE: ALL VALVES AND FITTINGS SHALL BE THE SAME SIZE AS PIPE UNLESS NOTED OTHERWISE.

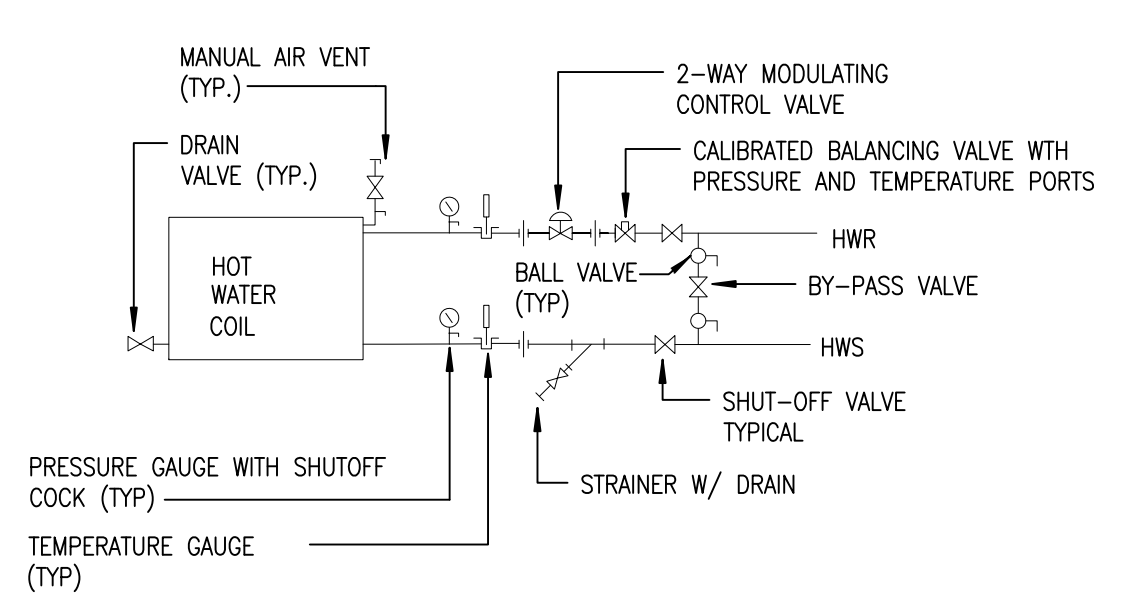
**6**  
M803 **HOT WATER UNIT HEATER DETAIL**  
SCALE: NTS



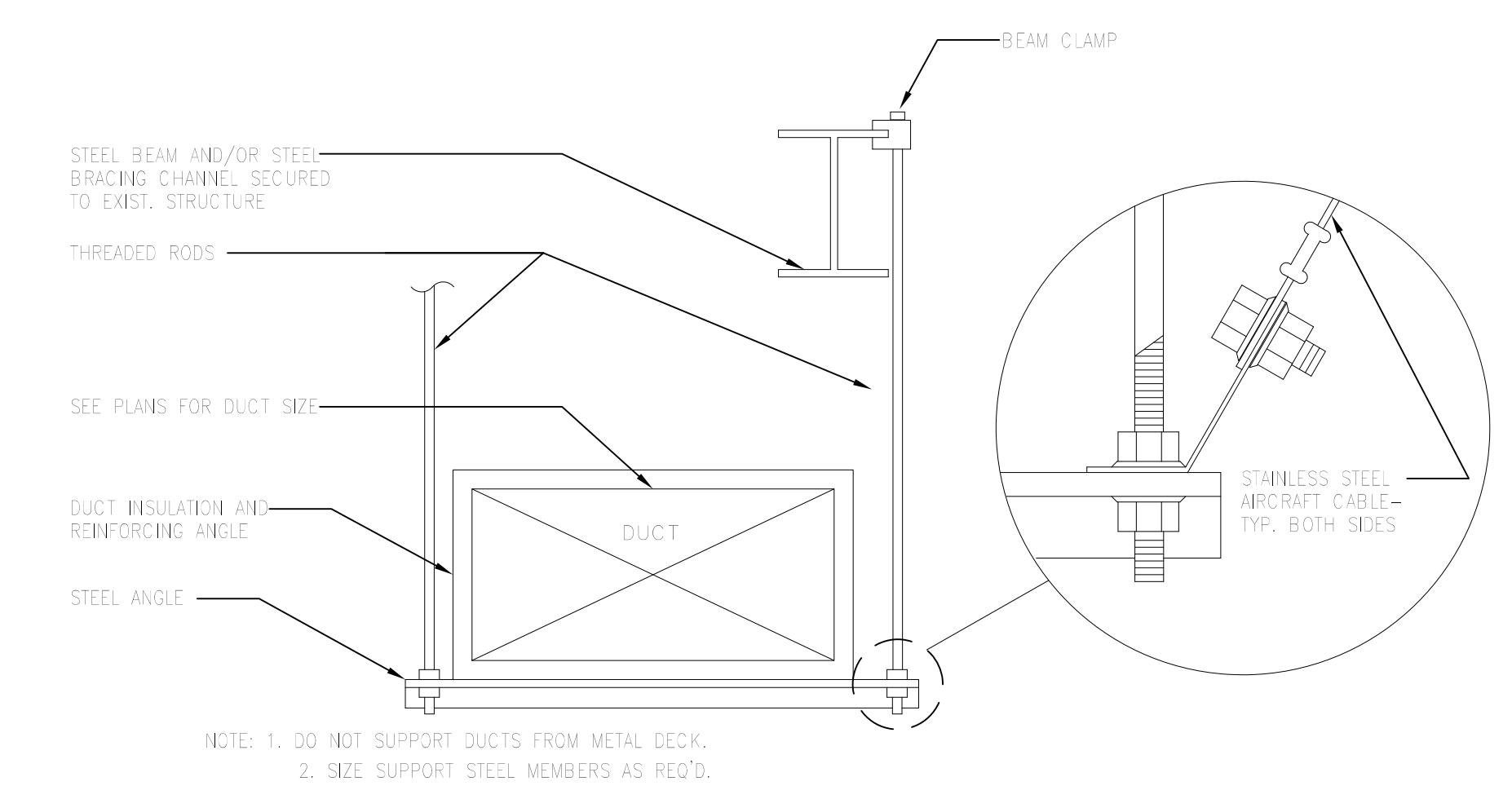
**3**  
M803 **EXTERIOR LOUVER ASSEMBLY DETAIL**  
SCALE: NTS



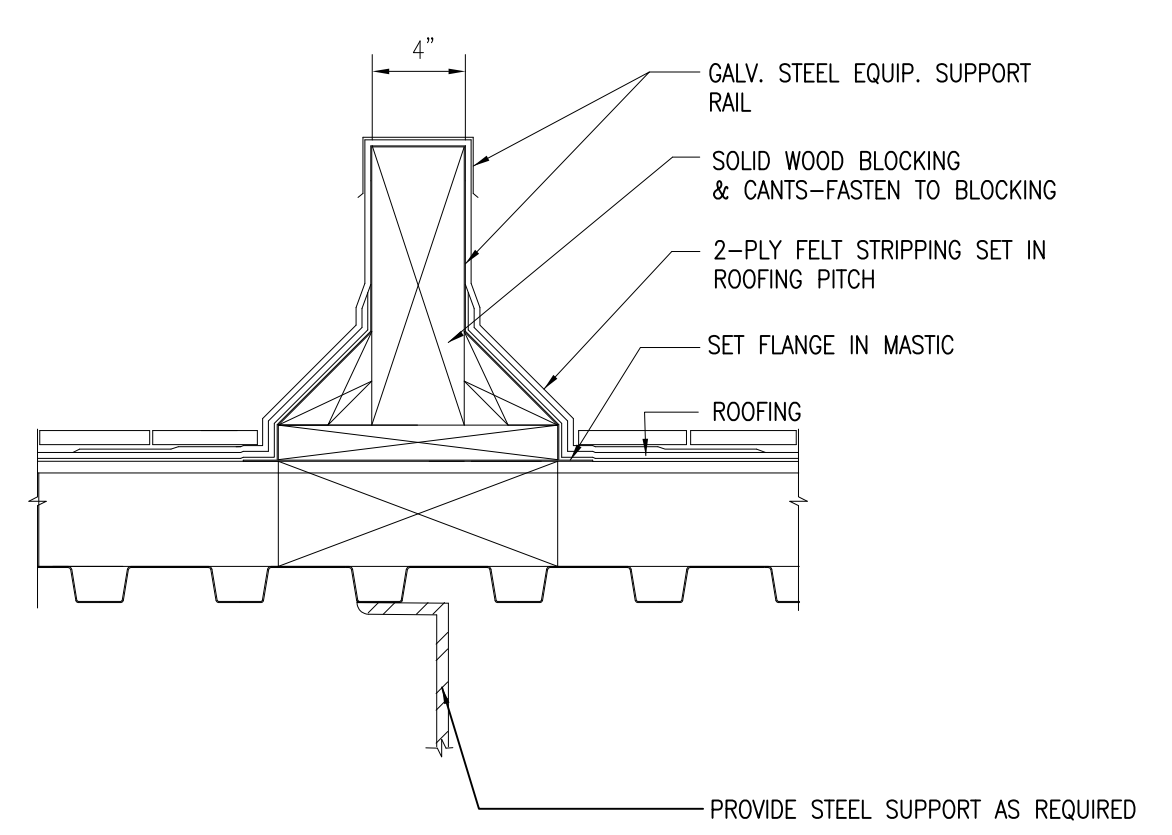
**8**  
M804 **ACOUSTIC CAULKING OF PIPE AND DUCT**  
SCALE: NTS



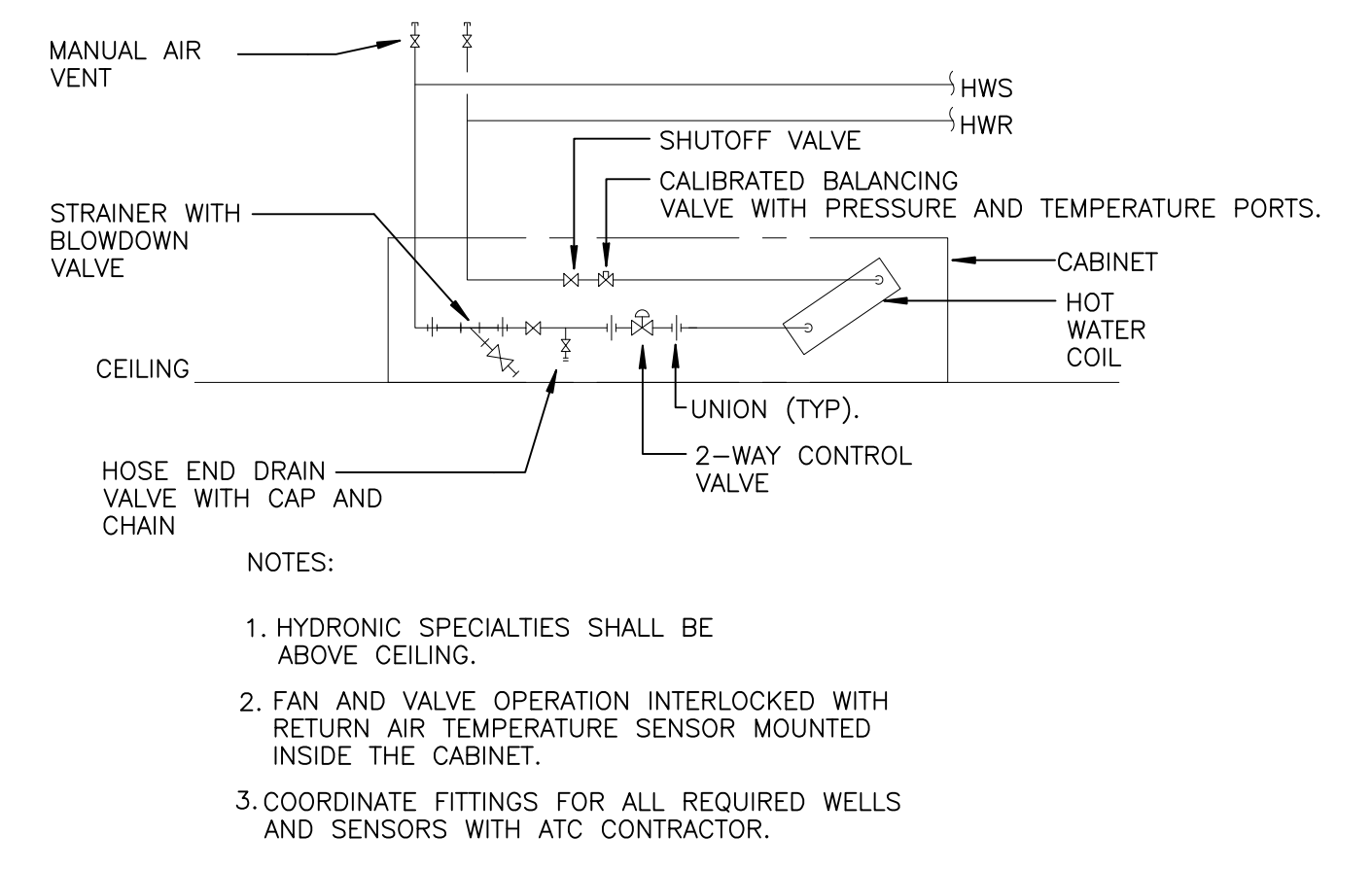
**5**  
M803 **HOT WATER VAV PIPING**  
SCALE: NTS



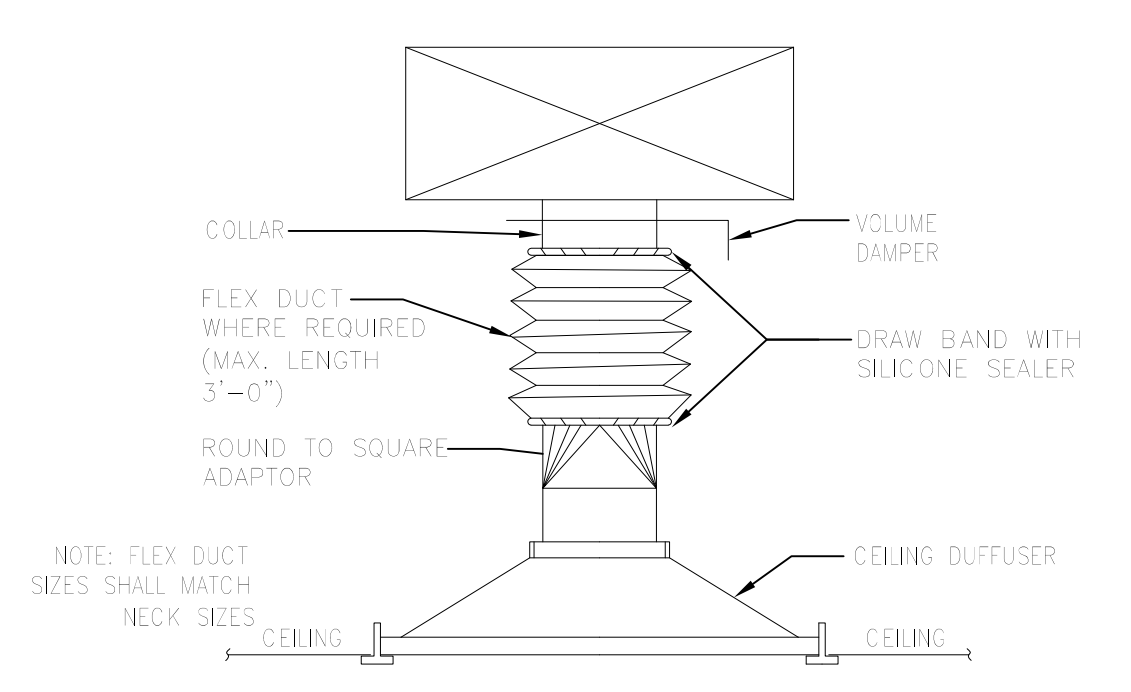
**2**  
M803 **TYPICAL DUCT SUPPORT DETAIL**  
SCALE: NTS



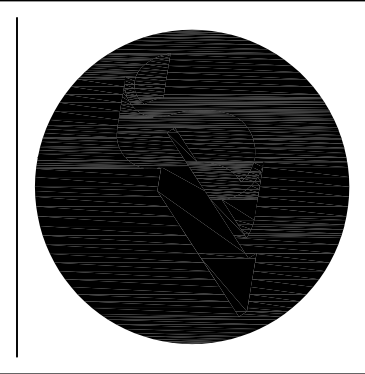
**7**  
M803 **SUPPORT CURB RAIL DETAIL**  
SCALE: NTS



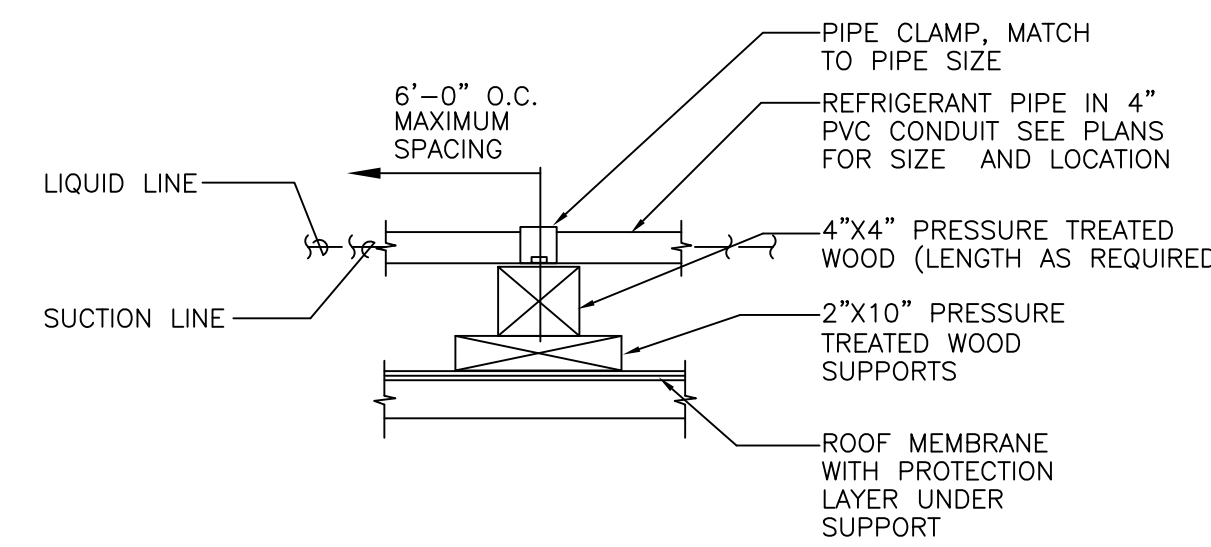
**4**  
M803 **HOT WATER CABINET UNIT HEATER DETAIL**  
SCALE: NTS



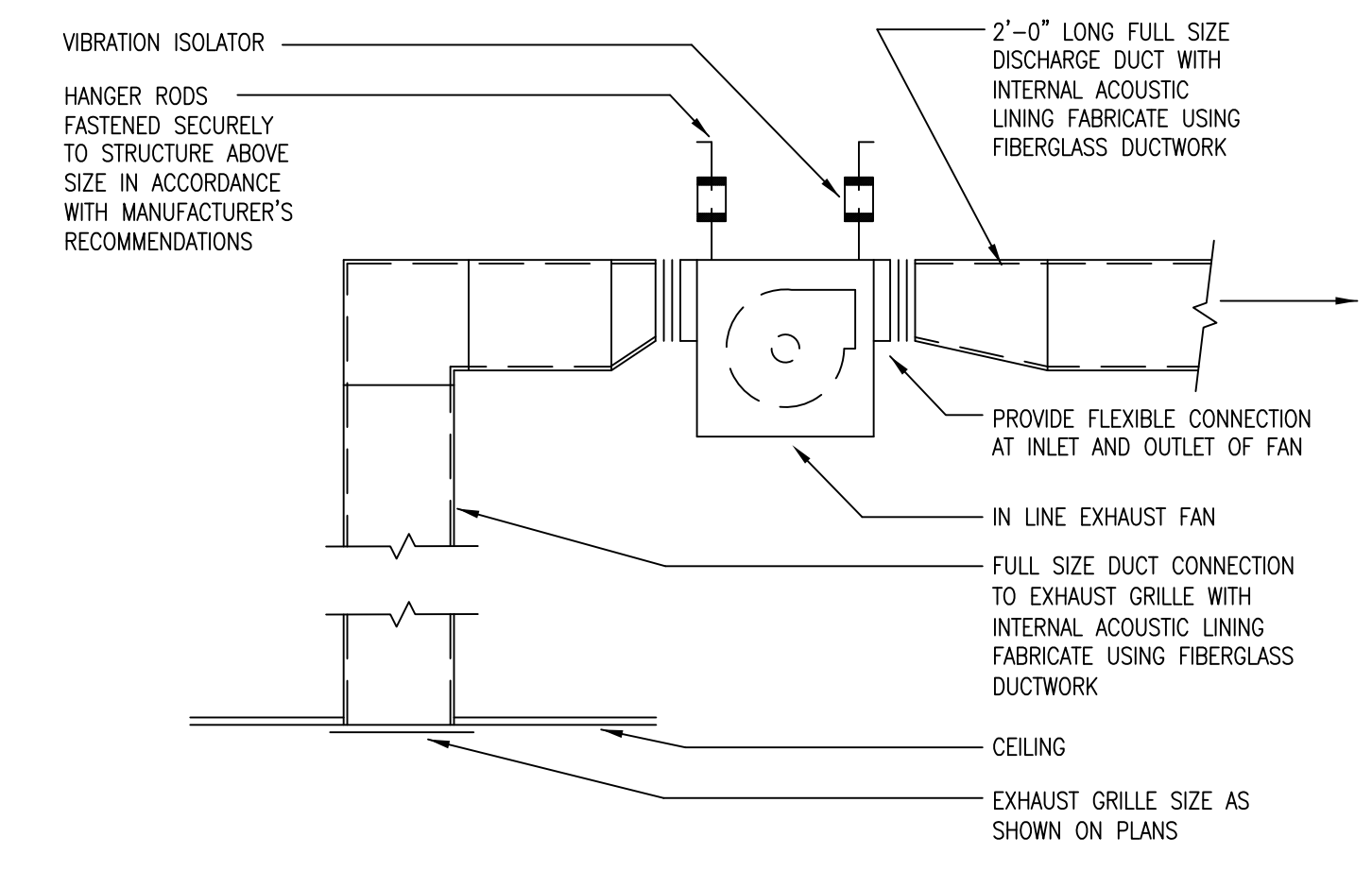
**1**  
M803 **TYPICAL DIFFUSER CONNECTION**  
SCALE: NTS



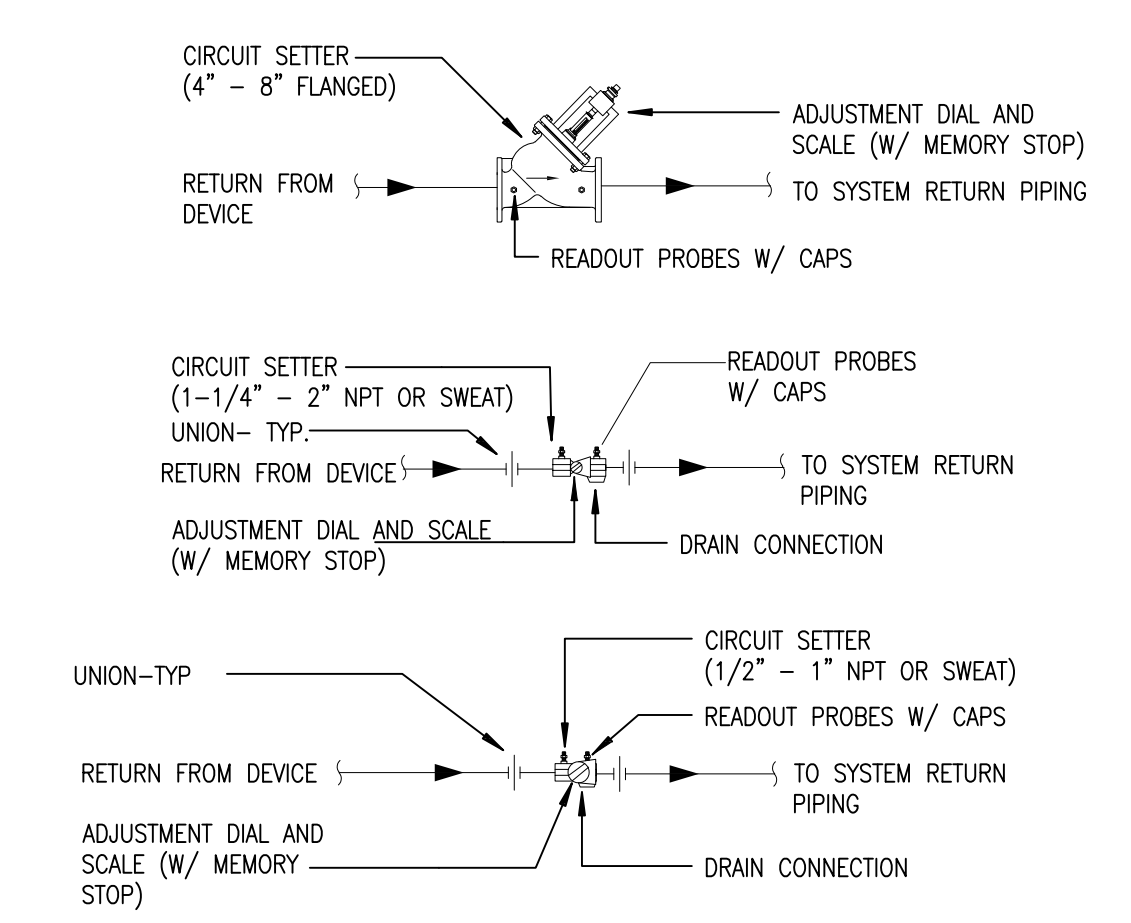
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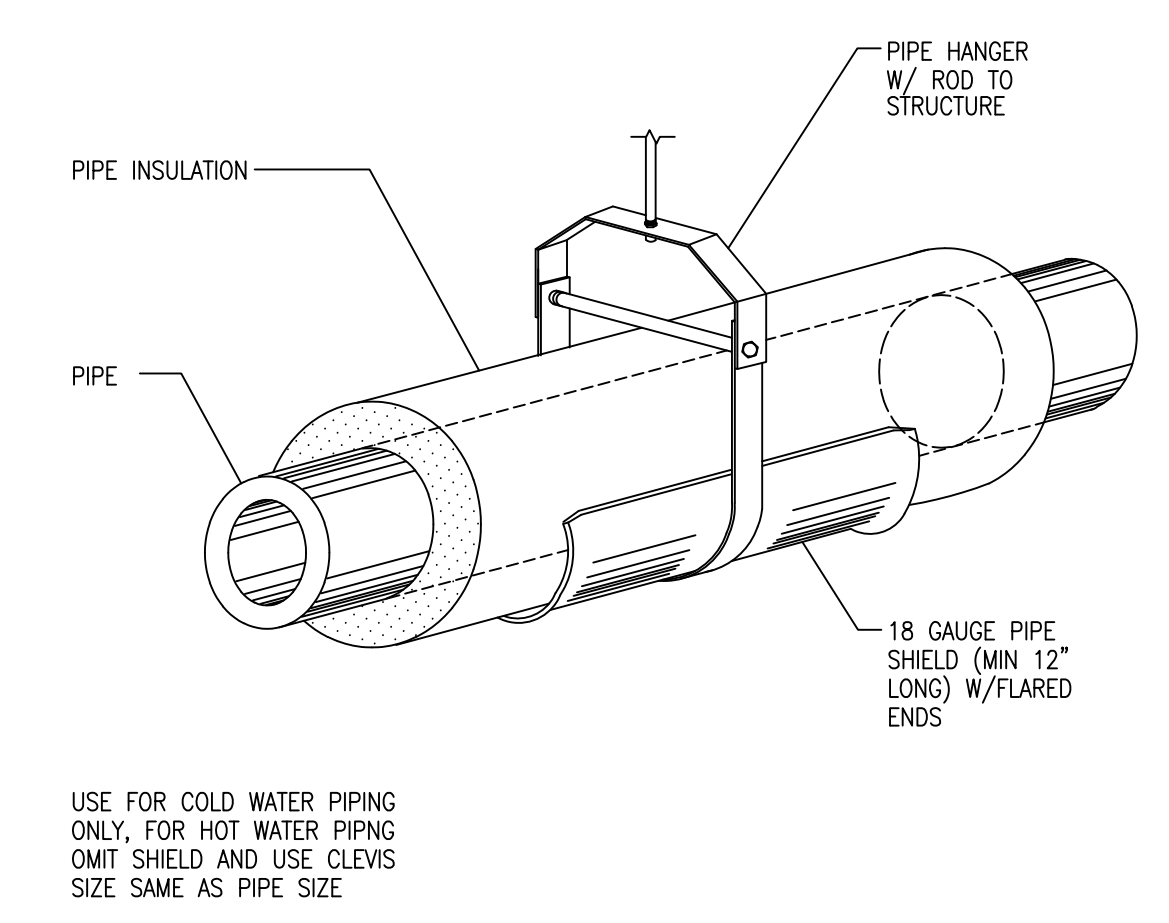
**6**  
M804 **REFRIGERANT PIPING ROOF SUPPORT**  
SCALE: NTS



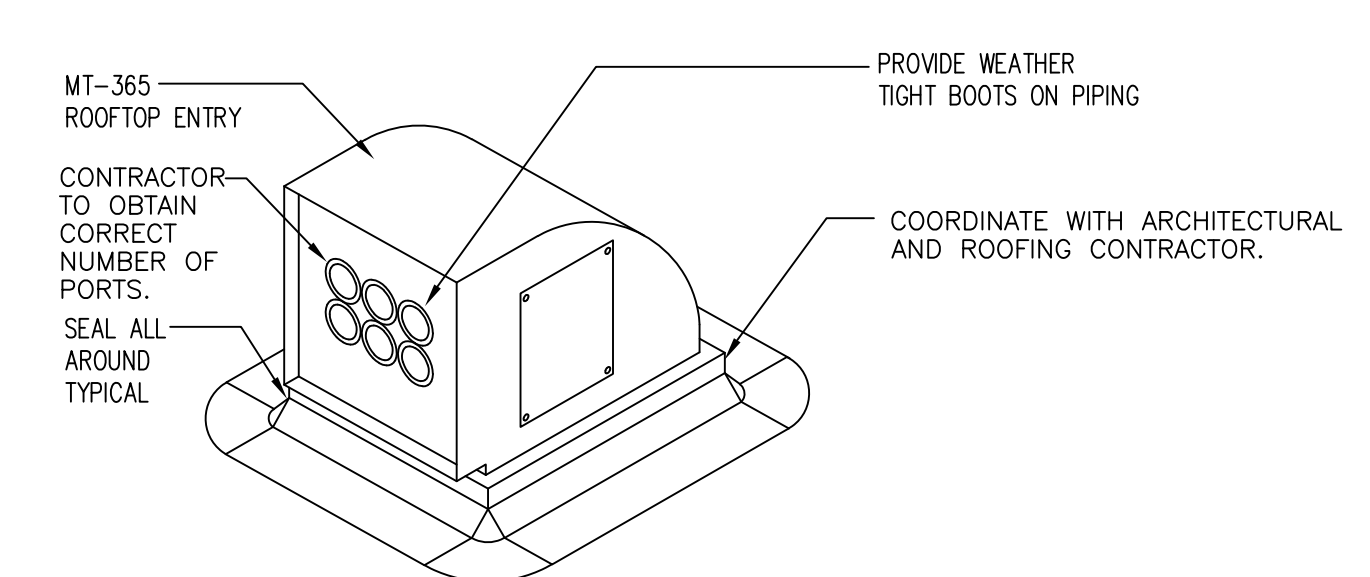
**3**  
M804 **INLINE EXHAUST FAN**  
SCALE: NTS



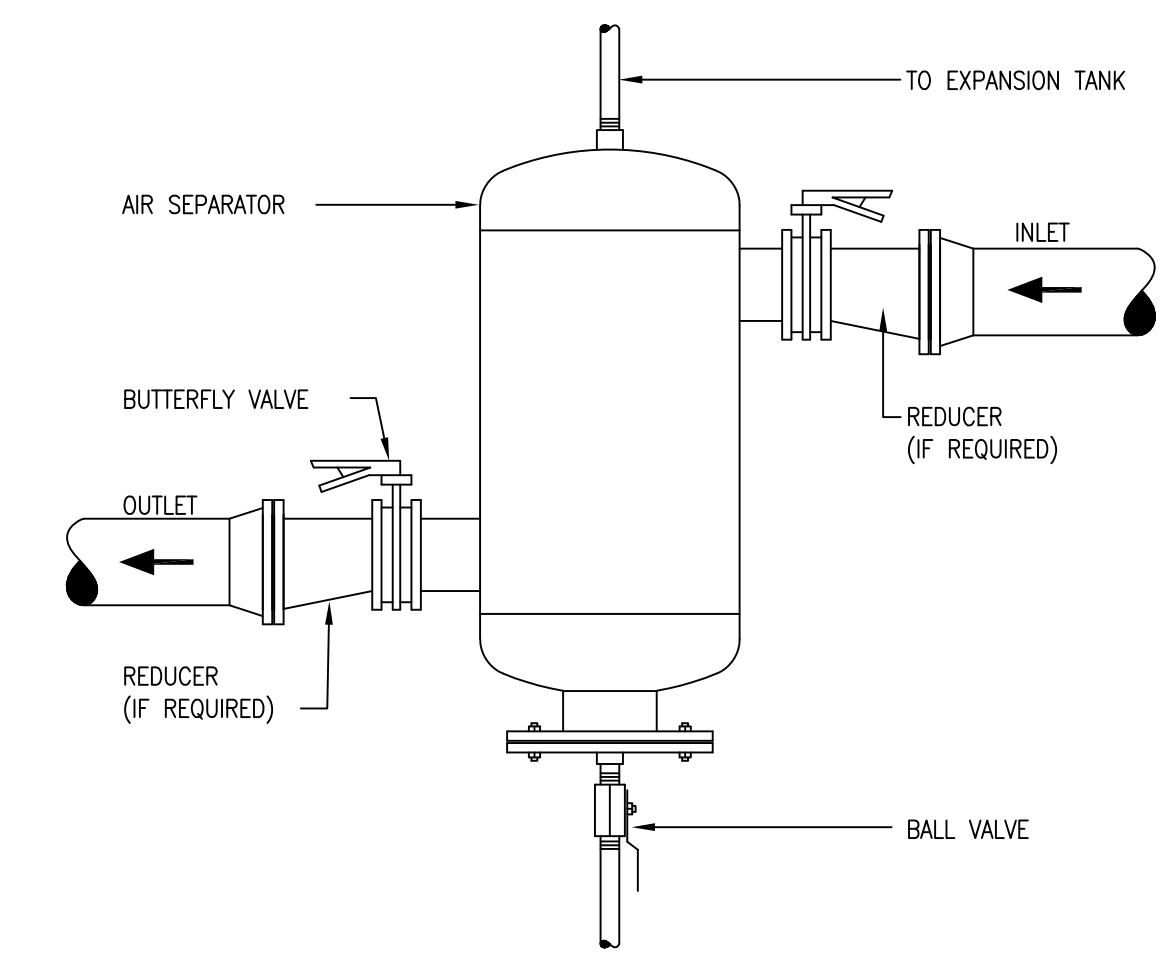
**5**  
M804 **CALIBRATED BALANCING DEVICE**  
SCALE: NTS



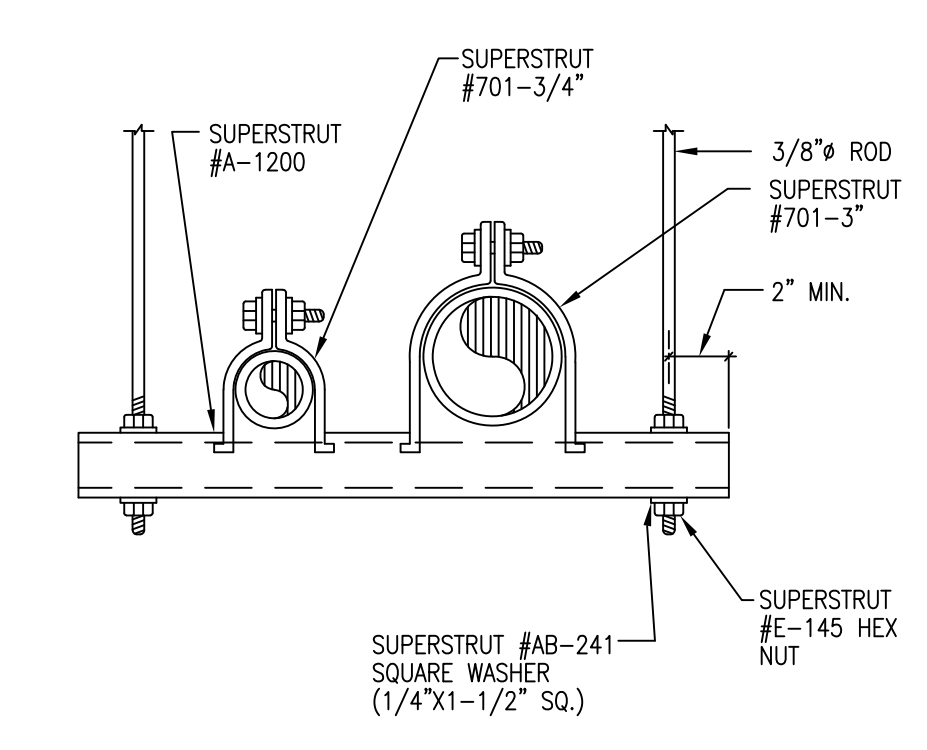
**2**  
M804 **TYPICAL PIPE HANGER DETAIL**  
SCALE: NTS



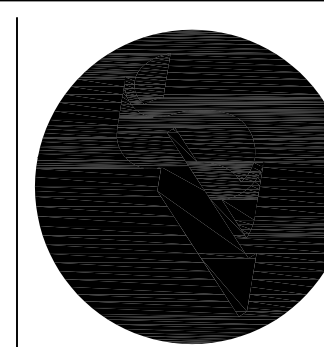
**7**  
M804 **REFRIGERANT PIPING ROOF ENCLOSURE**  
SCALE: NTS



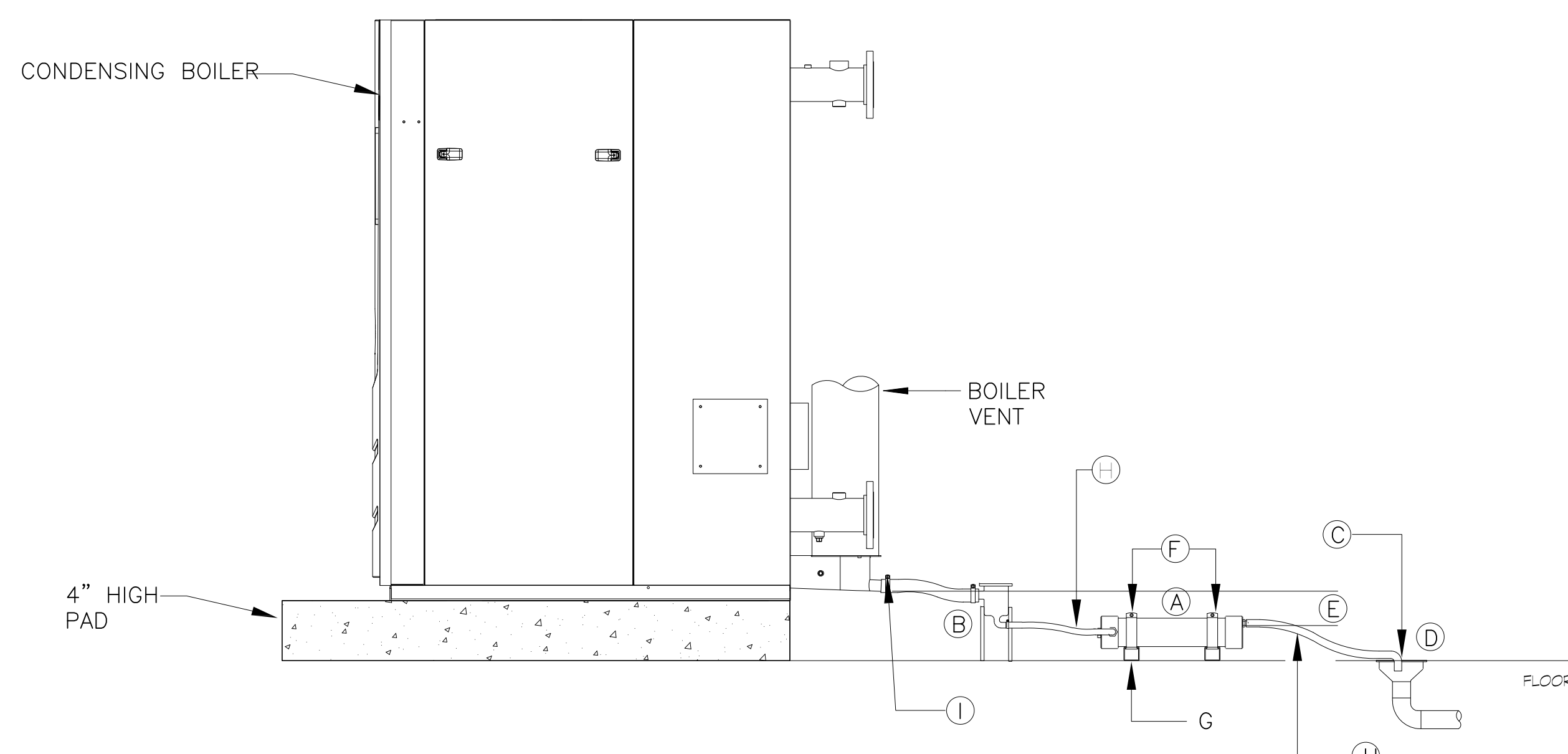
**4**  
M804 **AIR SEPARATOR PIPING DETAIL**  
SCALE: NTS



**1**  
M804 **TRAPEZZE PIPE HANGING DETAIL**  
SCALE: NTS

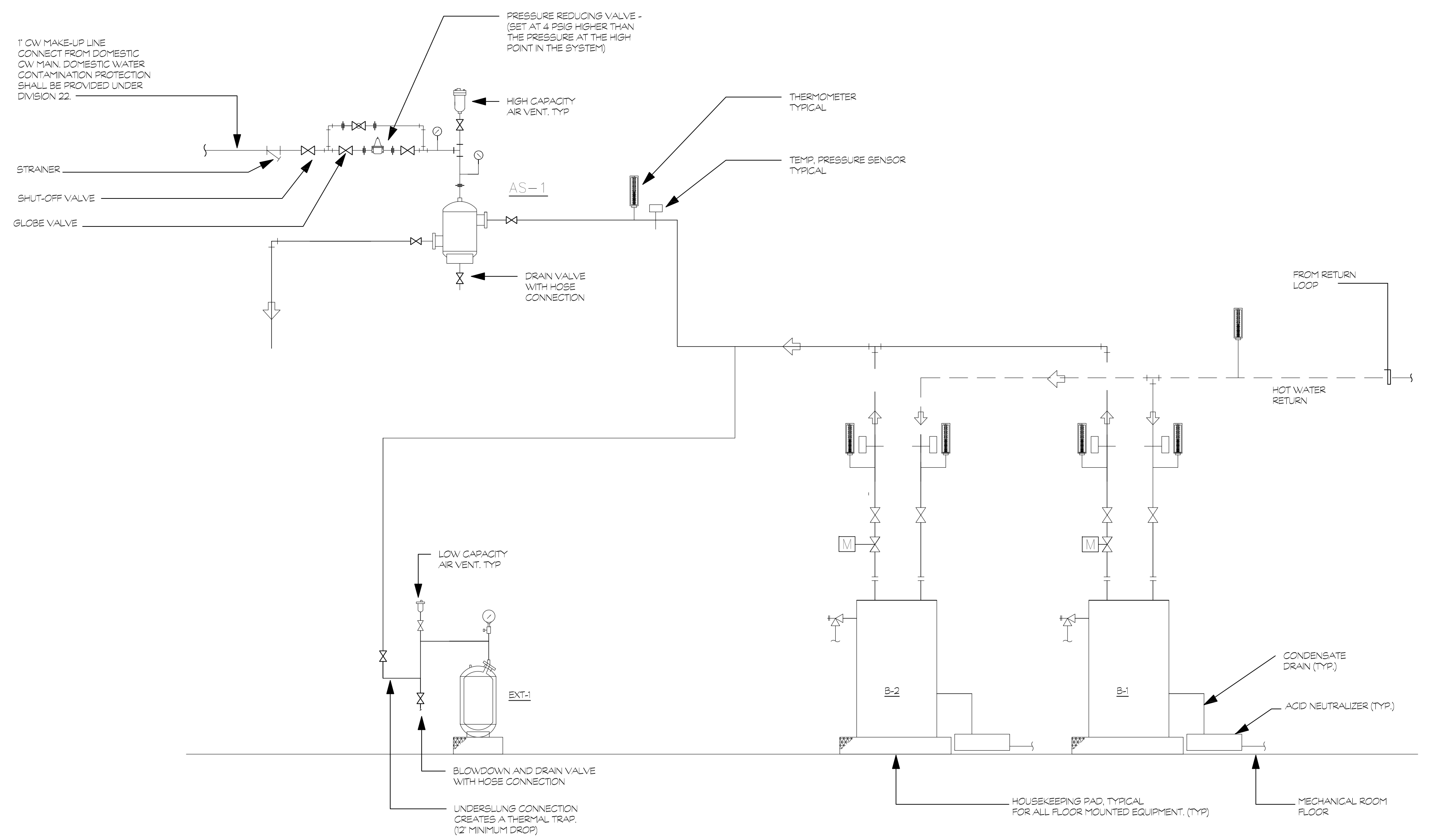


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- A. ANOH1 NEUTRAPRO MODEL RN1TS NEUTRALIZING TANK.
- B. FACTORY SUPPLIED CONDENSATE TRAP. PROVIDE FIELD FABRICATED SUPPORTS AS REQUIRED.
- C. CONDENSATE DRAIN TERMINATION AT FLOOR DRAIN OR CONDENSATE PUMPS RESERVOIR INLET. SECURE IN PLACE AS REQUIRED.
- D. FLOOR DRAIN OR SUMP.
- E. BOTTOM OF BOILER CONDENSATE OUTLET MUST BE ABOVE THE BOTTOM OF THE CONDENSATE TANK OUTLET.
- F. UNISTRUT CLAMPS. SECURE TUBE IN POSITION AND SECURELY. CONDENSATE OUTLET MUST BE ORIENTED UP, WITH CONDENSATE INLET TO THE SIDE.
- G. UNISTRUT BASE. BOLT TO FLOOR OR MOUNTING PAD.
- H. PLASTIC TUBING OR PVC PIPE.
- I. USE HOSE CLAMPS AT ALL CONNECTIONS WHEN USING FACTORY SUPPLIED RUBBER HOSE.

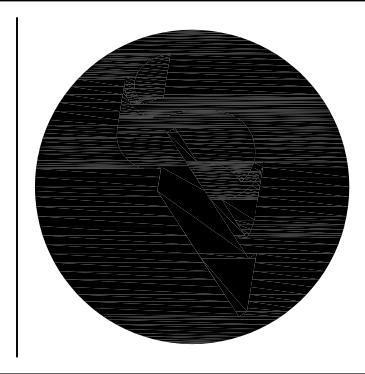
**2 BOILER CONDENSATE SYSTEM**  
 M805 SCALE: NTS



**1 BOILER WATER PIPING DIAGRAM**  
 M805 SCALE: NTS

Project Title:  
**Hinsdale Elementary School**

15 Hinsdale Ave.  
 Winsted, Connecticut 06098



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| Revision: | Description: | Date: | Revised By: |
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Drawing Title:  
**MECHANICAL FLOW DIAGRAMS**

Date: **JUNE 30, 2020**  
 Scale:  
 Drawn By: **M805**  
 Project Number: **18.223**

| ELECTRIC HEATERS |            |                  |       |               |            |         |
|------------------|------------|------------------|-------|---------------|------------|---------|
| TAG              | MODEL #    | HEATING CAPACITY |       | ELECTRIC DATA |            | REMARKS |
|                  |            | WATTS            | BTU/H | VOLTS         | PHASE/AMPS |         |
| BWH-1            | 934J/O'008 | 1000             | 342   | 120           | 1-1-8.7    | 12.3.4  |
| BWH-2            | 934J/O'008 | 1000             | 342   | 120           | 1-1-8.7    | 12.3.4  |
| BWH-3            | 934J/O'008 | 1000             | 342   | 120           | 1-1-8.7    | 12.3.4  |
| BWH-4            | 934J/O'008 | 1000             | 342   | 120           | 1-1-8.7    | 12.3.4  |
| BWH-5            | 934J/O'008 | 1000             | 342   | 120           | 1-1-8.7    | 12.3.4  |
| BWH-6            | 934J/O'008 | 1000             | 342   | 120           | 1-1-8.7    | 12.3.4  |
| BWH-7            | 934J/O'008 | 1000             | 342   | 120           | 1-1-8.7    | 12.3.4  |
| BWH-8            | 934J/O'008 | 1000             | 342   | 120           | 1-1-8.7    | 12.3.4  |
| BWH-9            | 934J/O'008 | 1000             | 342   | 120           | 1-1-8.7    | 12.3.4  |
| BWH-10           | 934J/O'008 | 1000             | 342   | 120           | 1-1-8.7    | 12.3.4  |
| BWH-11           | 934J/O'008 | 1000             | 342   | 120           | 1-1-8.7    | 12.3.4  |

1. PROVIDE WITH 22 GAUGE SECURITY FRONT COVER IN NORTHERN WHITE COLOR
2. PROVIDE WITH BUILT-IN THERMOSTAT
3. PROVIDE WITH FACTORY FURNISHED AUTOMATIC RESET THERMAL OVERLOAD PROTECTOR
4. BASED ON NOBECO

| CABINET UNIT HEATER SCHEDULE |             |     |           |           |     |     |     |     |                      |         |            |       |       |     |            |
|------------------------------|-------------|-----|-----------|-----------|-----|-----|-----|-----|----------------------|---------|------------|-------|-------|-----|------------|
| UNIT NO.                     | MODEL #     | CFM | EAT deg F | LAT deg F | GPM | BWT | LWT | MBH | PRESSURE DROP FT-H2O | ROWS/FR | MOTOR DATA |       |       |     | REMARKS    |
|                              |             |     |           |           |     |     |     |     |                      |         | HP         | VOLTS | PHASE | FLA |            |
| CUH-1                        | RPRC-420-02 | 125 | 65        | 90.1      | 2   | 140 | 10  | 3.4 | .1                   | 1/2     | 1/30       | 120   | 1     | 6   | 12.3.4.5.6 |
| CUH-2                        | RPRC-420-02 | 125 | 65        | 84.3      | .1  | 140 | 100 | 2.6 | .1                   | 1/2     | 1/30       | 120   | 1     | 6   | 12.3.4.5.6 |
| CUH-3                        | RPRC-420-02 | 125 | 65        | 90.1      | 2   | 140 | 10  | 3.4 | .1                   | 1/2     | 1/30       | 120   | 1     | 6   | 12.3.4.5.6 |
| CUH-4                        | RPRC-420-02 | 125 | 65        | 90.1      | 2   | 140 | 10  | 3.4 | .1                   | 1/2     | 1/30       | 120   | 1     | 6   | 12.3.4.5.6 |
| CUH-5                        | RPRC-420-02 | 125 | 65        | 99.6      | 5   | 140 | 120 | 4.7 | .1                   | 1/2     | 1/30       | 120   | 1     | 6   | 12.3.4.5.6 |
| CUH-6                        | RPRC-420-02 | 125 | 65        | 99.6      | 5   | 140 | 120 | 4.7 | .1                   | 1/2     | 1/30       | 120   | 1     | 6   | 12.3.4.5.6 |
| CUH-7                        | RPRC-420-02 | 125 | 65        | 99.6      | 5   | 140 | 120 | 4.7 | .1                   | 1/2     | 1/30       | 120   | 1     | 6   | 12.3.4.5.6 |
| CUH-8                        | RPRC-420-02 | 125 | 65        | 97.4      | 5   | 140 | 120 | 5.3 | .1                   | 1/2     | 1/30       | 120   | 1     | 6   | 12.3.4.5.6 |
| CUH-9                        | ----        | 125 | 65        | 97.4      | 5   | 140 | 120 | 5.3 | .1                   | 1/2     | 1/30       | 120   | 1     | 6   | 12.3.4.5.6 |
| CUH-10                       | ----        | 125 | 65        | 97.4      | 5   | 140 | 120 | 5.3 | .1                   | 1/2     | 1/30       | 120   | 1     | 6   | 12.3.4.5.6 |

1. BASED ON RITTLING
2. PROVIDE WITH 1/4 GAUGE CABINET AND FRONT PANEL
3. PROVIDE WITH ALLEN KEY CAM LOCK FASTENERS
4. PROVIDE WITH FACTORY FURNISHED DISCONNECT SWITCH, MOTOR STARTERS AND V-ORBE VALVE PACKAGE
5. PROVIDE WITH UNIT MOUNTED THERMOSTAT
6. PROVIDE WITH PERMANENT SPLIT CAPACITOR MOTOR

| EXPANSION TANK SCHEDULE |                           |         |          |             |            |                   |             |                 |       |
|-------------------------|---------------------------|---------|----------|-------------|------------|-------------------|-------------|-----------------|-------|
| SYMBOL                  | MANUFACTURER MODEL NUMBER | SYSTEM  | TYPE     | LOCATION    | CONNECTION | TANK VOLUME (GAL) | SIZE (DIAM) | SHIPPING WEIGHT | NOTES |
| EXT-1                   | TACO CA-450               | HEATING | VERTICAL | BOILER ROOM | 1/2"       | 119               | 24X77       | 400             | 12    |

1. PROVIDE ASME TANK
2. MOUNT ON 4" WOODS KEEPING PAD

| AIR SEPARATORS SCHEDULE |                           |            |               |                  |               |      |
|-------------------------|---------------------------|------------|---------------|------------------|---------------|------|
| SYMBOL                  | MANUFACTURER MODEL NUMBER | DIA (INCH) | HEIGHT (INCH) | OPTIMUM FLOW GPM | SYSTEM SERVED | NOTE |
| AS-1                    | TACO 480BAC-125           | 18         | 42            | 816              | HEATING       | 12.3 |

1. PROVIDE ASME TANK
2. PROVIDE WITH AIR VENT
3. PROVIDE WITH BLOWDOWN VALVE AND FLUSH VALVE

| UNIT HEATER SCHEDULE |              |       |                  |     |     |          |          |          |          |                 |      |       |          |
|----------------------|--------------|-------|------------------|-----|-----|----------|----------|----------|----------|-----------------|------|-------|----------|
| TAG                  | MANUFACTURER | MODEL | HEATING CAPACITY |     |     |          |          |          |          | MOTOR           |      | NOTES |          |
|                      |              |       | MBH              | GPM | CFM | EAT (°F) | LAT (°F) | BWT (°F) | LWT (°F) | MAX PS (FT-H2O) | HP   |       | VOLTS/PH |
| UH1                  | RITTLING     | RH-63 | 24.8             | 2.5 | 870 | 55       | 80.5     | 140      | 120      | .1              | 1/10 | 115.1 | 12.3     |

- REMARKS:
1. FURNISH WITH MOTOR WITH INTERNAL THERMAL OVERLOAD PROTECTION
  2. DISCONNECT SWITCH SHALL BE PROVIDED BY DIVISION 26
  3. SEISMICALLY SUPPORT

| CONDENSING BOILER SCHEDULE |                      |                       |                         |                         |        |            |                  |                |            |              |         |         |                    |
|----------------------------|----------------------|-----------------------|-------------------------|-------------------------|--------|------------|------------------|----------------|------------|--------------|---------|---------|--------------------|
| B#                         | MAXIMUM INPUT MBTU/H | MAXIMUM OUTPUT MBTU/H | SUPPLY WATER TEMP DEG F | RETURN WATER TEMP DEG F | BURNER |            |                  |                | ELECTRICAL |              | MODEL # | NOTES   |                    |
|                            |                      |                       |                         |                         | FUEL   | ORAS PRESS | CAPACITY CONTROL | TURNDOWN RATIO | IGNITION   | VOLTS/PHASE  |         |         | THERMAL EFFICIENCY |
| B-1                        | 800                  | 780                   | 140                     | 120                     | 6AS    | 4:4        | MODULATING       | 5 TO 1         | ELECTRONIC | 120 / 1 (ØA) | 93.5    | APX825C | 12.3.4.5.6         |
| B-2                        | 800                  | 780                   | 140                     | 120                     | 6AS    | 4:4        | MODULATING       | 5 TO 1         | ELECTRONIC | 120 / 1 (ØA) | 93.5    | APX825C | 12.3.4.5.6         |

1. CONTRACTOR SHALL PROVIDE STAINLESS STEEL FLUE MATERIAL
2. PROVIDE WITH FACTORY BOILER MANAGEMENT SYSTEM ACS WITH BACKUP COMPATIBILITY
3. PROVIDE WITH BOILER SUPPLIED ISOLATION KIT
4. BASED ON THERMAL SOLUTION-AREX BOILERS
5. PROVIDE WITH CONDENSATE NEUTRALIZATION TANK SYSTEM
6. MOUNT ON 4" WOODS KEEPING PAD

| EXHAUST FAN SCHEDULE |      |              |         |     |                      |         |            |       |            |              |       |                  |                   |          |
|----------------------|------|--------------|---------|-----|----------------------|---------|------------|-------|------------|--------------|-------|------------------|-------------------|----------|
| SYMBOL               | MFR  | MODEL        | TYPE    | CFM | STATIC PRESS (IN WG) | FAN RPM | ELECTRICAL |       |            | WEIGHT (LBS) | SONES | INTERLOCKED WITH | REMARKS           |          |
|                      |      |              |         |     |                      |         | VOLTS      | PHASE | HP (WATTS) |              |       |                  |                   |          |
| EF-1                 | COOK | GOVF-180     | CEILING | 100 | 375                  | 930     | 120        | 1     | (Ø)        | 1.2          | 23    | 2.5              | SPEED CONTROL BMS | 12.3.4.5 |
| EF-2                 | COOK | GOVF-180     | CEILING | 100 | 375                  | 930     | 120        | 1     | (Ø)        | 1.2          | 23    | 2.5              | SPEED CONTROL BMS | 12.3.4.5 |
| EF-3                 | COOK | GOVF-180     | CEILING | 100 | 5                    | 1018    | 120        | 1     | (Ø)        | 1.2          | 23    | 2.5              | SPEED CONTROL BMS | 12.3.4.5 |
| EF-4                 | COOK | GOVF-180     | CEILING | 100 | 5                    | 1018    | 120        | 1     | (Ø)        | 1.2          | 23    | 2.5              | SPEED CONTROL BMS | 12.3.4.5 |
| EF-5                 | COOK | 10IC280 (VF) | ROOF    | 800 | 750                  | 1909    | 120        | 1     | 1/3        | 3.6          | 75    | 12.4             | SPEED CONTROL BMS | 12.3.4.5 |
| EF-6                 | COOK | GOVF-180     | CEILING | 100 | 375                  | 930     | 120        | 1     | (Ø)        | 1.2          | 23    | 2.5              | SPEED CONTROL BMS | 12.3.4.5 |
| EF-7                 | COOK | GOVF-180     | CEILING | 100 | 375                  | 930     | 120        | 1     | (Ø)        | 1.2          | 23    | 2.5              | SPEED CONTROL BMS | 12.3.4.5 |
| EF-8                 | COOK | 10IC280 (VF) | ROOF    | 800 | 750                  | 1909    | 120        | 1     | 1/3        | 3.6          | 75    | 12.4             | SPEED CONTROL BMS | 12.3.4.5 |
| EF-9                 | COOK | GOVF-180     | CEILING | 100 | 375                  | 930     | 120        | 1     | (Ø)        | 1.2          | 23    | 2.5              | SPEED CONTROL BMS | 12.3.4.5 |
| EF-10                | COOK | GOVF-180     | CEILING | 100 | 375                  | 930     | 120        | 1     | (Ø)        | 1.2          | 23    | 2.5              | SPEED CONTROL BMS | 12.3.4.5 |
| EF-11                | COOK | BOCIT02C     | ROOF    | 100 | 5                    | 1349    | 120        | 1     | (Ø)        | 1.2          | 63    | 4.8              | SPEED CONTROL BMS | 12.3.4.5 |
| EF-12                | COOK | BOCIT02C     | ROOF    | 100 | 5                    | 1349    | 120        | 1     | (Ø)        | 1.2          | 63    | 4.8              | SPEED CONTROL BMS | 12.3.4.5 |
| EF-13                | COOK | GOVF-180     | CEILING | 100 | 375                  | 930     | 120        | 1     | (Ø)        | 1.2          | 23    | 2.5              | SPEED CONTROL BMS | 12.3.4.5 |

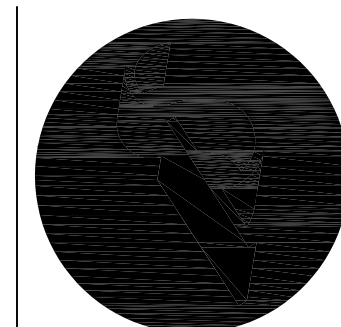
- REMARKS:
1. PROVIDE WITH FACTORY WIRED DISCONNECT AND GRAVITY BACKDRAFT DAMPER
  2. FAN INTERLOCKS INDICATED ABOVE SHALL BE WIRED UNDER DIVISION 26
  3. UNLESS NOTED OTHERWISE, MOUNT SPEED CONTROL SWITCH NEXT TO UNIT FOR BALANCING PURPOSES
  4. TRANSITION DUCTWORK ON INLET AND OUTLET OF EACH FAN TO MATCH SIZES SHOWN ON PLANS
  5. CAPACITIES LISTED ARE WITH UTILITIES FAN SPEED CONTROLLER, NOT THE MAXIMUM CAPACITY

| DUCTLESS SPLIT SYSTEM SCHEDULE |                      |             |                                  |                                  |      |             |                       |            |    |     |      |                   |           |       |         |
|--------------------------------|----------------------|-------------|----------------------------------|----------------------------------|------|-------------|-----------------------|------------|----|-----|------|-------------------|-----------|-------|---------|
| SYMBOL                         | MANUFACTURER / MODEL | AREA SERVED | NOMINAL COOLING CAPACITY (BTU/H) | NOMINAL HEATING CAPACITY (BTU/H) | CFM  | EAT (DB/AB) | AMBIENT AIR TEMP (°F) | ELECTRICAL |    |     |      | REFRIGERANT LINES |           |       | REMARKS |
|                                |                      |             |                                  |                                  |      |             |                       | VOLTS      | PH | MCA | MOCP | LQ (IN)           | SUCT (IN) | TYPE  |         |
| AC-1                           | DAIKIN / PKAA-18HAT  | R1A-102     | 18,000                           | 22,000                           | 425  | 90/73       | ----                  | 208        | 1  | 1.0 | ---  | 1/4               | 1/2       | R410A | 12.3.4  |
| CU-1                           | DAIKIN / PUZ-A18NKAT | ----        | ----                             | ----                             | 1590 | ----        | 95                    | 208        | 1  | 1.1 | 28   | 1/4               | 1/2       | R410A | 5.6.7.8 |
| AC-2                           | DAIKIN / PKAA-18HAT  | R1B-158     | 18,000                           | 22,000                           | 425  | 90/73       | ----                  | 208        | 1  | 1.0 | ---  | 1/4               | 1/2       | R410A | 12.3.4  |
| CU-2                           | DAIKIN / PUZ-A18NKAT | ----        | ----                             | ----                             | 1590 | ----        | 95                    | 208        | 1  | 1.1 | 28   | 1/4               | 1/2       | R410A | 5.6.7.8 |

1. PROVIDE WITH WALL MOUNTED DAIKIN ROOM CONTROLLER #PAR-32HAA
2. CONTRACTOR TO VERIFY PIPE ROUTING WITH WORK OF OTHER TRADES. CONTRACTOR TO VERIFY REFRIGERANT PIPE SIZES WITH MFR. PRIOR TO ORDERING EQUIPMENT
3. CONTRACTOR SHALL FIELD SUPPLY INTERCONNECTING CABLE BETWEEN OUTDOOR CONDENSING UNIT AND INTERIOR EVAPORATOR UNIT
4. PROVIDE WITH MICRO-BLUE CONDENSATE PUMP, EN85-003 AND FASCIA KIT #TB-016. DRAIN TO NEAREST CODE ACCEPTABLE LOCATION
5. PROVIDE WITH LOW AMBIENT HOOD KIT WITH ASSOCIATED WIND BAFFLES
6. PROVIDE WITH LOW AMBIENT HOOD KIT. CONTRACTOR TO VERIFY REFRIGERANT PIPE SIZES WITH MFR. PRIOR TO ORDERING
7. PROVIDE WITH SNOW/HAIL GUARDS KIT
8. PROVIDE WITH BASE PAN HEADER KIT

| PACKAGED ROOFTOP AIR CONDITIONING UNIT SCHEDULE WITH ENERGY RECOVERY WHEELS |                 |            |                 |           |        |          |             |           |      |                       |                      |            |          |              |           |            |          |          |              |                            |                           |                             |                              |                            |                           |                             |                              |                  |                      |       |     |              |       |
|---|-----------------|------------|-----------------|-----------|--------|----------|-------------|-----------|------|-----------------------|----------------------|------------|----------|--------------|-----------|------------|----------|----------|--------------|----------------------------|---------------------------|-----------------------------|------------------------------|----------------------------|---------------------------|-----------------------------|------------------------------|------------------|----------------------|-------|-----|--------------|-------|
| SYMBOL  | MODEL           | SUPPLY FAN |                 |           |        |          | EXHAUST FAN |           |      |                       |                      | COOLING    |          |              |           | HEATING    |          |          |              | ERV DATA SUMMER CONDITIONS |                           |                             |                              | ERV DATA WINTER CONDITIONS |                           |                             |                              | ELECTRICAL       |                      |       |     |              |       |
|   |                 | TOTAL CFM  | QTY / HP        | QTY / BHP | RPM    | ESP      | TSP         | QTY / BHP | RPM  | MIN OUTSIDE AIR (CFM) | CAPACITY TOTAL (MBH) | SENS (MBH) | EAT (°F) | AMBIENT (°F) | INPUT MBH | OUTPUT MBH | EAT (°F) | LAT (°F) | AMBIENT (°F) | VENT SUPPLY GPM / DB / WB  | OUTSIDE AIR GPM / DB / WB | RETURN SUPPLY GPM / DB / WB | EXHAUST SUPPLY GPM / DB / WB | VENT SUPPLY GPM / DB / WB  | OUTSIDE AIR GPM / DB / WB | RETURN SUPPLY GPM / DB / WB | EXHAUST SUPPLY GPM / DB / WB | VOLTS/Ø          | MCA                  | FLA   | MOP | WEIGHT (LBS) | NOTES |
|   |                 | RTU-1      | RN-090-B-0-EAQA | 11,100    | 2 / 20 | 2 / 15.2 | 1538        | 4.0       | ---  | 2 / 7.35              | 131                  | 4.691      | 497.7    | 377.76       | 63.91     | 95         | 810      | 648      | 70.6         | 105.7                      | 0                         | 4.691 / 78.8 / 65           | 4.691 / 95 / 75              | 12.409 / 75 / 62           | 4.691 / 91 / 72           | 4.691 / 59 / 51.6           | 4.691 / 0 / -1               | 12.409 / 75 / 62 | 4.691 / 17.8 / 17.73 | 208/3 | 432 | 417          | 450   |
| RTU-2   | RN-040-B-0-EAQA | 15,970     | 2 / 20          | 2 / 15.5  | 1234   | 4.0      | ---         | 2 / 8.10  | 1234 | 3.715                 | 342.4                | 278        | 63.93    | 95           | 540       | 432        | 72.5     | 98.2     | 0            | 3.715 / 78 / 65            | 3.715 / 95 / 75           | 12.453 / 75 / 62            | 3.715 / 92 / 73              | 3.715 / 62.3 / 53.7        | 3.715 / 0 / -1            | 12.453 / 75 / 60            | 3.715 / 14.7 / 14.6          | 208/3            | 333                  | 318   | 350 | 8,200        | 12.3  |
| RTU-3   | RN-020-B-0-EAQA | 8,016      | 1 / 15          | 1 / 12.5  | 1804   | 4.0      | ---         | 1 / 8.1   | 1804 | 1.902                 | 195.4                | 158.22     | 62.52    | 95           | 270       | 216        | 73       | 98.4     | 0            | 1.902 / 78 / 65            | 1.902 / 95 / 75           | 6.74 / 75 / 62              | 1.902 / 92 / 73              | 1.902 / 64 / 54.4          | 1.902 / 0 / -1            | 6.74 / 75 / 62              | 1.902 / 13.64 / 13.53        | 208/3            | 180                  | 165   | 225 | 4,500        | 12.3  |
| RTU-4   | RN-035-B-0-EAQA | 12,145     | 1 / 20          | 1 / 17.3  | 1557   | 4.0      | ---         | 2 / 9.89  | 1258 | 2.491                 | 308.8                | 242.2      | 62.52    | 95           | 540       | 432        | 73       | 105.6    | 0            | 2.495 / 77.7 / 64.5        | 2.495 / 95 / 75           | 9.695 / 75 / 62             | 2.495 / 92 / 73              | 2.495 / 64 / 55            | 2.495 / 0 / -1            | 9.695 / 75 / 62             | 2.495 / 13.4 / 13.3          | 208/3            | 249                  | 234   | 300 | 7,700        | 12.3  |

1. BASED ON AARL
2. FURNISH UNIT WITH ROOF CURB, MODULATING OA/RA DAMPER WITH ECONOMIZER CONTROL, FACTORY FURNISHED DISCONNECT, SINGLE POINT POWER CONNECTION, MODULATING HOT GAS REHEAT, 4.39 STAINLESS STEEL FURNACE, VARIABLE SPEED DIRECT DRIVE POWERED EXHAUST, 2 INCH WALL CONSTRUCTION, STAINLESS STEEL IAQ APPROVED DRIP PAN, UV LIGHTS, DIGITAL COMPRESSORS, ENERGY RECOVERY WHEELS, HOT GAS RE-HEAT, PROVIDE MERV 8 PRE-FILTERS AND MERV 12 FILTERS
3. DUCT MOUNTED SMOKE DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA-72 REQUIREMENTS.



| RTU-1 VARIABLE AIR VOLUME BOX SCHEDULE |           |                |       |       |          |          |             |                  |     |       |     |         |          |      |         |                |             |
|--|-----------|----------------|-------|-------|----------|----------|-------------|------------------|-----|-------|-----|---------|----------|------|---------|----------------|-------------|
| REF. NO.                               | UNIT SIZE | INLET DIA (IN) | MODEL | MFR   | COOLING  |          | ELECT. DATA | HEATING CAPACITY |     |       |     |         |          |      | REMARKS |                |             |
|  |           |                |       |       | CFM MAX. | CFM MIN. |             | V                | MBH | EWT   | LWT | COL GPM | COL ROWS | EAT  |         | LAT            | W.P.D. (FT) |
| VAV-1-1                                | 10        | 8"             | D3ORV | NALOR | 900      | 450      | 24          | 14.6             | 140 | 121.5 | 1.6 | 1       | 55       | 70   | 2.3     | 12,3,4,5,6,7,8 |             |
| VAV-1-2                                | 12        | 10"            | D3ORV | NALOR | 1400     | 700      | 24          | 22.6             | 140 | 125.5 | 3.1 | 1       | 55       | 70   | 9.6     | 12,3,4,5,6,7,8 |             |
| VAV-1-3                                | 12        | 10"            | D3ORV | NALOR | 1400     | 700      | 24          | 22.6             | 140 | 125.5 | 3.1 | 1       | 55       | 70   | 9.6     | 12,3,4,5,6,7,8 |             |
| VAV-1-4                                | 10        | 10"            | D3ORV | NALOR | 1000     | 500      | 24          | 17.3             | 140 | 126.3 | 2.5 | 1       | 55       | 70   | 5.48    | 12,3,4,5,6,7,8 |             |
| VAV-1-5                                | 10        | 8"             | D3ORV | NALOR | 890      | 445      | 24          | 14.4             | 140 | 121.6 | 1.6 | 1       | 55       | 70   | 2.3     | 12,3,4,5,6,7,8 |             |
| VAV-1-6                                | 6         | 6"             | D3ORV | NALOR | 380      | 190      | 24          | 5.9              | 140 | 116.4 | .5  | 1       | 55       | 70   | .18     | 12,3,4,5,6,7,8 |             |
| VAV-1-7                                | 12        | 10"            | D3ORV | NALOR | 1350     | 675      | 24          | 18.4             | 140 | 117.2 | 1.6 | 1       | 55       | 70   | 2.69    | 12,3,4,5,6,7,8 |             |
| VAV-1-8                                | 12        | 10"            | D3ORV | NALOR | 1350     | 675      | 24          | 17.4             | 140 | 126.2 | 2.5 | 1       | 55       | 70   | 5.49    | 12,3,4,5,6,7,8 |             |
| VAV-1-9                                | 4         | 4"             | D3ORV | NALOR | 60       | 30       | 24          | .9               | 140 | 93.3  | .5  | 1       | 55       | 74.9 | .25     | 12,3,4,5,6,7,8 |             |
| VAV-1-10                               | 6         | 6"             | D3ORV | NALOR | 445      | 222      | 24          | 7.2              | 140 | 120   | .31 | 1       | 55       | 69.4 | .31     | 12,3,4,5,6,7,8 |             |
| VAV-1-11                               | 4         | 4"             | D3ORV | NALOR | 130      | 65       | 24          | 2.0              | 140 | 96.8  | .10 | 1       | 55       | 70.5 | .10     | 12,3,4,5,6,7,8 |             |
| VAV-1-12                               | 4         | 4"             | D3ORV | NALOR | 110      | 55       | 24          | 1.7              | 140 | 98.6  | .10 | 1       | 55       | 72.8 | .10     | 12,3,4,5,6,7,8 |             |
| VAV-1-13                               | 4         | 4"             | D3ORV | NALOR | 165      | 82       | 24          | 2.7              | 140 | 94.3  | .10 | 1       | 55       | 67.6 | .10     | 12,3,4,5,6,7,8 |             |
| VAV-1-14                               | 4         | 4"             | D3ORV | NALOR | 70       | 35       | 24          | 1.10             | 140 | 91.6  | .10 | 1       | 55       | 72.8 | .10     | 12,3,4,5,6,7,8 |             |
| VAV-1-15                               | 10        | 8"             | D3ORV | NALOR | 875      | 437      | 24          | 14.2             | 140 | 121.7 | 1.6 | 1       | 55       | 70.2 | 2.32    | 12,3,4,5,6,7,8 |             |
| VAV-1-16                               | 10        | 8"             | D3ORV | NALOR | 875      | 437      | 24          | 14.2             | 140 | 121.7 | 1.6 | 1       | 55       | 70.2 | 2.32    | 12,3,4,5,6,7,8 |             |
| VAV-1-17                               | 10        | 8"             | D3ORV | NALOR | 875      | 437      | 24          | 14.2             | 140 | 121.7 | 1.6 | 1       | 55       | 70.2 | 2.32    | 12,3,4,5,6,7,8 |             |
| VAV-1-18                               | 10        | 8"             | D3ORV | NALOR | 875      | 437      | 24          | 14.2             | 140 | 121.7 | 1.6 | 1       | 55       | 70.2 | 2.32    | 12,3,4,5,6,7,8 |             |
| VAV-1-19                               | 10        | 8"             | D3ORV | NALOR | 875      | 437      | 24          | 14.2             | 140 | 121.7 | 1.6 | 1       | 55       | 70.2 | 2.32    | 12,3,4,5,6,7,8 |             |
| VAV-1-20                               | 8         | 8"             | D3ORV | NALOR | 560      | 280      | 24          | 9.0              | 140 | 110.5 | .6  | 1       | 55       | 69.4 | .32     | 12,3,4,5,6,7,8 |             |

REMARKS:  
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2. PROVIDE EACH VAV WITH DISCONNECT SWITCH, CONTROL, TRANSFORMER AND SAFETY INTERLOCKS. EACH UNIT SHALL BE CONTROLLED BY WALL MOUNTED THERMOSTAT. THERMOSTAT FURNISHED AND INSTALLED BY CONTROLS CONTRACTOR.  
3. CONTROLS FURNISHED BY TEMPERATURE CONTROL CONTRACTOR AND MOUNTED BY DAMPER MANUFACTURER.  
4. PROVIDE MULTIPLE DAMPERS ACTUATORS CONTROL ETC. AS REQUIRED TO ACHIEVE LISTED QUANTITIES. CONTRACTORS TO DUCT AS REQUIRED.  
5. DAMPERS SHALL BE NALOR, TRANE OR PRICE.  
6. ALL VAV BOXES AND COLS SHALL BE ARI RATED.  
7. PROVIDE WITH ELECTRICAL CONTROL (DDC INTERFACE) TO BMS.  
8. ALL VAV BOXES SHALL BE ARI CERTIFIED.

| RTU-2 VARIABLE AIR VOLUME BOX SCHEDULE |           |                |       |       |          |          |             |                  |     |       |     |         |          |      |         |                |             |
|--|-----------|----------------|-------|-------|----------|----------|-------------|------------------|-----|-------|-----|---------|----------|------|---------|----------------|-------------|
| REF. NO.                               | UNIT SIZE | INLET DIA (IN) | MODEL | MFR   | COOLING  |          | ELECT. DATA | HEATING CAPACITY |     |       |     |         |          |      | REMARKS |                |             |
|  |           |                |       |       | CFM MAX. | CFM MIN. |             | V                | MBH | EWT   | LWT | COL GPM | COL ROWS | EAT  |         | LAT            | W.P.D. (FT) |
| VAV-2-1                                | 12        | 10"            | D3ORV | NALOR | 1300     | 650      | 24          | 21.0             | 140 | 122.6 | 2.4 | 1       | 55       | 69.7 | 5.88    | 12,3,4,5,6,7,8 |             |
| VAV-2-2                                | 12        | 10"            | D3ORV | NALOR | 1300     | 650      | 24          | 21.0             | 140 | 122.6 | 2.4 | 1       | 55       | 69.7 | 5.88    | 12,3,4,5,6,7,8 |             |
| VAV-2-3                                | 12        | 10"            | D3ORV | NALOR | 1300     | 650      | 24          | 21.0             | 140 | 122.6 | 2.4 | 1       | 55       | 69.7 | 5.88    | 12,3,4,5,6,7,8 |             |
| VAV-2-4                                | 12        | 10"            | D3ORV | NALOR | 1300     | 650      | 24          | 21.0             | 140 | 122.6 | 2.4 | 1       | 55       | 69.7 | 5.88    | 12,3,4,5,6,7,8 |             |
| VAV-2-5                                | 10        | 8"             | D3ORV | NALOR | 810      | 405      | 24          | 13.0             | 140 | 116.4 | 1.1 | 1       | 55       | 69.7 | 11.3    | 12,3,4,5,6,7,8 |             |
| VAV-2-6                                | 4         | 4"             | D3ORV | NALOR | 90       | 45       | 24          | 1.4              | 140 | 89.2  | .10 | 1       | 55       | 69.5 | .10     | 12,3,4,5,6,7,8 |             |
| VAV-2-7                                | 6         | 6"             | D3ORV | NALOR | 255      | 127      | 24          | 4.1              | 140 | 101.6 | .3  | 1       | 55       | 70.8 | .1      | 12,3,4,5,6,7,8 |             |
| VAV-2-8                                | 8         | 8"             | D3ORV | NALOR | 490      | 245      | 24          | 8.0              | 140 | 108.2 | .5  | 1       | 55       | 69.8 | .23     | 12,3,4,5,6,7,8 |             |
| VAV-2-9                                | 4         | 4"             | D3ORV | NALOR | 155      | 77       | 24          | 2.5              | 140 | 95.1  | .1  | 1       | 55       | 69.5 | .10     | 12,3,4,5,6,7,8 |             |
| VAV-2-10                               | 8         | 8"             | D3ORV | NALOR | 520      | 260      | 24          | 8.4              | 140 | 111.2 | .6  | 1       | 55       | 70.2 | .320    | 12,3,4,5,6,7,8 |             |
| VAV-2-11                               | 12        | 10"            | D3ORV | NALOR | 1415     | 707      | 24          | 22.9             | 140 | 126.2 | 3.3 | 1       | 55       | 69.7 | 10.87   | 12,3,4,5,6,7,8 |             |
| VAV-2-12                               | 12        | 10"            | D3ORV | NALOR | 1415     | 707      | 24          | 22.9             | 140 | 126.2 | 3.3 | 1       | 55       | 69.7 | 10.87   | 12,3,4,5,6,7,8 |             |
| VAV-2-13                               | 12        | 10"            | D3ORV | NALOR | 1415     | 707      | 24          | 22.9             | 140 | 126.2 | 3.3 | 1       | 55       | 69.7 | 10.87   | 12,3,4,5,6,7,8 |             |
| VAV-2-14                               | 12        | 10"            | D3ORV | NALOR | 1415     | 707      | 24          | 22.9             | 140 | 126.2 | 3.3 | 1       | 55       | 69.7 | 10.87   | 12,3,4,5,6,7,8 |             |
| VAV-2-15                               | 10        | 10"            | D3ORV | NALOR | 1050     | 525      | 24          | 17.0             | 140 | 125.4 | 2.3 | 1       | 55       | 69.5 | 4.6     | 12,3,4,5,6,7,8 |             |
| VAV-2-16                               | 10        | 10"            | D3ORV | NALOR | 1050     | 525      | 24          | 17.0             | 140 | 125.4 | 2.3 | 1       | 55       | 69.5 | 4.6     | 12,3,4,5,6,7,8 |             |
| VAV-2-17                               | 6         | 6"             | D3ORV | NALOR | 355      | 177      | 24          | 5.8              | 140 | 112.9 | .4  | 1       | 55       | 68.9 | .11     | 12,3,4,5,6,7,8 |             |
| VAV-2-18                               | 6         | 6"             | D3ORV | NALOR | 210      | 105      | 24          | 3.4              | 140 | 105.2 | .2  | 1       | 55       | 70.4 | .1      | 12,3,4,5,6,7,8 |             |

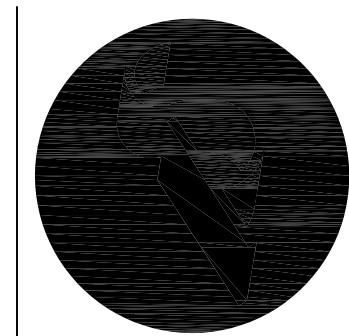
REMARKS:  
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6. ALL VAV BOXES AND COLS SHALL BE ARI RATED.  
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8. ALL VAV BOXES SHALL BE ARI CERTIFIED.

| RTU-3 VARIABLE AIR VOLUME BOX SCHEDULE |           |                |       |       |          |          |             |                  |     |       |      |         |          |       |                |                |             |
|--|-----------|----------------|-------|-------|----------|----------|-------------|------------------|-----|-------|------|---------|----------|-------|----------------|----------------|-------------|
| REF. NO.                               | UNIT SIZE | INLET DIA (IN) | MODEL | MFR   | COOLING  |          | ELECT. DATA | HEATING CAPACITY |     |       |      |         |          |       | REMARKS        |                |             |
|  |           |                |       |       | CFM MAX. | CFM MIN. |             | V                | MBH | EWT   | LWT  | COL GPM | COL ROWS | EAT   |                | LAT            | W.P.D. (FT) |
| VAV-3-1                                | 12        | 10"            | D3ORV | NALOR | 1335     | 667      | 24          | 21.4             | 140 | 123.6 | 2.6  | 1       | 55       | 69.7  | 12,3,4,5,6,7,8 |                |             |
| VAV-3-2                                | 12        | 10"            | D3ORV | NALOR | 1470     | 735      | 24          | 23.8             | 140 | 127.9 | 3.9  | 1       | 55       | 69.7  | 15.0           | 12,3,4,5,6,7,8 |             |
| VAV-3-3                                | 4         | 4"             | D3ORV | NALOR | 110      | 55       | 24          | 1.6              | 140 | 96.2  | .1   | 1       | 55       | 72.3  | .1             | 12,3,4,5,6,7,8 |             |
| VAV-3-4                                | 8         | 8"             | D3ORV | NALOR | 685      | 342      | 24          | 11.1             | 140 | 119.4 | 1.1  | 1       | 55       | 70.10 | 1.04           | 12,3,4,5,6,7,8 |             |
| VAV-3-5                                | 4         | 4"             | D3ORV | NALOR | 170      | 85       | 24          | 2.8              | 140 | 101.6 | .15  | 1       | 55       | 70.5  | .10            | 12,3,4,5,6,7,8 |             |
| VAV-3-6                                | 6         | 6"             | D3ORV | NALOR | 350      | 175      | 24          | 5.7              | 140 | 113.0 | .4   | 1       | 55       | 69.10 | .11            | 12,3,4,5,6,7,8 |             |
| VAV-3-7                                | 6         | 6"             | D3ORV | NALOR | 260      | 130      | 24          | 4.2              | 140 | 110.5 | .3   | 1       | 55       | 70.6  | .10            | 12,3,4,5,6,7,8 |             |
| VAV-3-8                                | 6         | 6"             | D3ORV | NALOR | 240      | 120      | 24          | 4.0              | 140 | 103.8 | .2   | 1       | 55       | 68.7  | .1             | 12,3,4,5,6,7,8 |             |
| VAV-3-9                                | 8         | 8"             | D3ORV | NALOR | 470      | 235      | 24          | 7.6              | 140 | 108.6 | .5   | 1       | 55       | 70.2  | .23            | 12,3,4,5,6,7,8 |             |
| VAV-3-10                               | 8         | 8"             | D3ORV | NALOR | 580      | 290      | 24          | 9.5              | 140 | 116.3 | .85  | 1       | 55       | 70.6  | .63            | 12,3,4,5,6,7,8 |             |
| VAV-3-11                               | 6         | 6"             | D3ORV | NALOR | 400      | 200      | 24          | 6.5              | 140 | 118.4 | .60  | 1       | 55       | 69.8  | .23            | 12,3,4,5,6,7,8 |             |
| VAV-3-12                               | 4         | 4"             | D3ORV | NALOR | 140      | 70       | 24          | 2.3              | 140 | 95.8  | .1   | 1       | 55       | 69.3  | .1             | 12,3,4,5,6,7,8 |             |
| VAV-3-13                               | 4         | 4"             | D3ORV | NALOR | 170      | 85       | 24          | 2.7              | 140 | 94.3  | .1   | 1       | 55       | 67.6  | .1             | 12,3,4,5,6,7,8 |             |
| VAV-3-14                               | 4         | 4"             | D3ORV | NALOR | 145      | 72       | 24          | 2.3              | 140 | 95.6  | .1   | 1       | 55       | 69.2  | .1             | 12,3,4,5,6,7,8 |             |
| VAV-3-15                               | 4         | 4"             | D3ORV | NALOR | 70       | 35       | 24          | 1.1              | 140 | 91.3  | .1   | 1       | 55       | 72.4  | .1             | 12,3,4,5,6,7,8 |             |
| VAV-3-16                               | 6         | 6"             | D3ORV | NALOR | 275      | 137      | 24          | 4.4              | 140 | 110   | .30  | 1       | 55       | 70    | .1             | 12,3,4,5,6,7,8 |             |
| VAV-3-17                               | 10        | 8"             | D3ORV | NALOR | 860      | 430      | 24          | 13.9             | 140 | 119.3 | 1.35 | 1       | 55       | 69.8  | 1.67           | 12,3,4,5,6,7,8 |             |

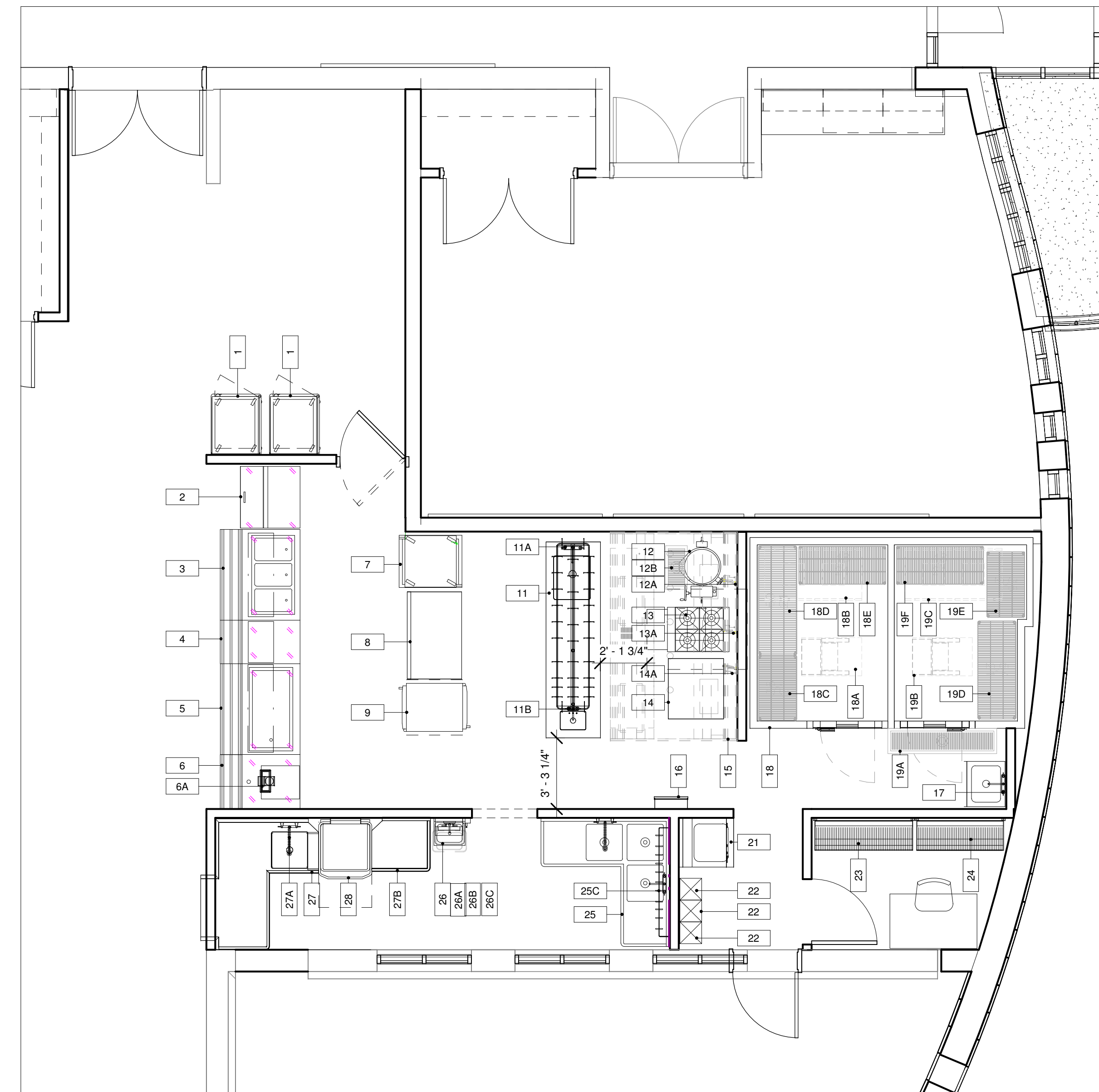
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| RTU-4 VARIABLE AIR VOLUME BOX SCHEDULE |           |                |       |       |          |          |             |                  |     |       |      |         |          |      |         |                |             |
|--|-----------|----------------|-------|-------|----------|----------|-------------|------------------|-----|-------|------|---------|----------|------|---------|----------------|-------------|
| REF. NO.                               | UNIT SIZE | INLET DIA (IN) | MODEL | MFR   | COOLING  |          | ELECT. DATA | HEATING CAPACITY |     |       |      |         |          |      | REMARKS |                |             |
|  |           |                |       |       | CFM MAX. | CFM MIN. |             | V                | MBH | EWT   | LWT  | COL GPM | COL ROWS | EAT  |         | LAT            | W.P.D. (FT) |
| VAV-4-1                                | 16        | 16"            | D3ORV | NALOR | 2500     | 1250     | 24          | 40.4             | 140 | 92    | 1.69 | 2       | 55       | 69.8 | .39     | 12,3,4,5,6,7,8 |             |
| VAV-4-2                                | 4         | 4"             | D3ORV | NALOR | 75       | 37       | 24          | 1.2              | 140 | 89    | .1   | 1       | 55       | 70.5 | .1      | 12,3,4,5,6,7,8 |             |
| VAV-4-3                                | 4         | 4"             | D3ORV | NALOR | 155      | 77       | 24          | 2.5              | 140 | 95    | .1   | 1       | 55       | 68.4 | .1      | 12,3,4,5,6,7,8 |             |
| VAV-4-4                                | 14        | 14"            | D3ORV | NALOR | 2100     | 1050     | 24          | 34.1             | 140 | 88.2  | 1.3  | 2       | 55       | 69.8 | .56     | 12,3,4,5,6,7,8 |             |
| VAV-4-5                                | 24        | 16"            | D3ORV | NALOR | 3400     | 1700     | 24          | 55.2             | 140 | 115.6 | 4.6  | 1       | 55       | 69.9 | 6.27    | 12,3,4,5,6,7,8 |             |

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| FOODSERVICE EQUIPMENT PLAN & SCHEDULE |     |                                       |                           |                                  |   |
|---------------------------------------|-----|---------------------------------------|---------------------------|----------------------------------|---|
| ITEM NO.                              | QTY | EQUIPMENT CATEGORY                    | MANUFACTURER              | MODEL NUMBER                     | EQUIPMENT REMARKS   |
| 1                                     | 2   | COMBO CART PLUS - STANDARD CASTERS    | CAMBRU                    | CMRPS13                          |   |
| 2                                     | 1   | MILK COOLER                           | TURBO AIR                 | TMC-34S-SB                       |   |
| 3                                     | 1   | MODULAR HOT FOOD COUNTER              | MULTITERIA                | HLS-3-GS                         |   |
| 4                                     | 1   | MODULAR UTILITY COUNTER               | MULTITERIA                | HLS-24-GS                        |   |
| 5                                     | 1   | MODULAR COLD FOOD COUNTER             | MULTITERIA                | CLS-3-GS                         |   |
| 6                                     | 1   | MODULAR CASHIER STAND                 | MULTITERIA                | CMO-3R-GS                        |   |
| 6A                                    | 1   | P.O.S. STATION                        | BY OWNER                  |                                  |   |
| 7                                     | 1   | INSULATED STAINLESS STEEL HOT CABINET | GRES DCR                  | H-13-PSJA-120                    |   |
| 8                                     | 1   | WORK TABLE                            | FABRICATOR                | STAINLESS STEEL                  |   |
| 9                                     | 1   | REFRIGERATOR PASS-THROUGH             | VICTORY                   | RS-1D-S1-PT                      |   |
| 10                                    | 1   | SPARE NUMBER                          | -                         | -                                |   |
| 11                                    | 1   | PREP TABLE W/ SINKS                   | FABRICATOR                | STAINLESS STEEL                  |   |
| 11A                                   | 1   | DECK MOUNT FAUCET                     | T&S BRASS                 | B-1121                           |   |
| 11B                                   | 1   | DECK MOUNT FAUCET                     | T&S BRASS                 | B-1110                           |   |
| 12                                    | 1   | DIRECT STEAM KETTLE                   | GRUEN                     | D-20                             |   |
| 12A                                   | 1   | SAFETY SYSTEM MOVEABLE GAS CONNECTOR  | DORMONT MANUFACTURING     | H79KIT2548PS                     |   |
| 12B                                   | 1   | FLOOR TROUGH                          | EALE GROUP                | ASFT-1204-SG                     |   |
| 13                                    | 1   | 4 OPEN BURNERS, SPACE SAVER OVEN      | SOUTHBEND                 | SM4E                             |   |
| 13A                                   | 1   | SAFETY SYSTEM MOVEABLE GAS CONNECTOR  | DORMONT MANUFACTURING     | H79KIT2548PS                     |   |
| 14                                    | 1   | GAS COMBI-STEAMER                     | RATIONAL AG               | SCC / CAP COMBI-DUO 61 G GN 61 G |   |
| 14A                                   | 1   | SAFETY SYSTEM MOVEABLE GAS CONNECTOR  | DORMONT MANUFACTURING     | H79KIT2548PS                     |   |
| 15                                    | 1   | EXHAUST HOOD                          | HALTON                    | HVE                              | REFER TO HALTON DRAWINGS FOR DETAILS & SPECIFICATIONS         |
| 15A                                   | 1   | SAFETY SYSTEM MOVEABLE GAS CONNECTOR  | DORMONT MANUFACTURING     | H79KIT2548PS                     |   |
| 16                                    | 1   | FIRE SUPPRESSION                      | ADVANCE TABCO             | 9-OPC-84                         |   |
| 17                                    | 1   | MOP SINK CABINET                      | ADVANCE TABCO             | 9-OPC-84                         |   |
| 17A                                   | 1   | DECK MOUNT FAUCET                     | T&S BRASS                 | B-1121                           |   |
| 18                                    | 1   | WALK-IN FREEZER                       | AMERICAN PANEL            | CUSTOM                           | REFER TO AMERICAN PANEL DRAWINGS FOR DETAILS & SPECIFICATIONS |
| 18A                                   | 1   | EVAPORATOR COOLER                     | AMERICAN PANEL            | TBD                              | REFER TO AMERICAN PANEL DRAWINGS FOR DETAILS & SPECIFICATIONS |
| 18B                                   | 1   | CONDENSER COOLER                      | AMERICAN PANEL            | TBD                              | REFER TO AMERICAN PANEL DRAWINGS FOR DETAILS & SPECIFICATIONS |
| 18C                                   | 1   | SHELVING, METAL                       | CUSTOM                    | CUSTOM                           |   |
| 18D                                   | 1   | SHELVING, METAL                       | CUSTOM                    | CUSTOM                           |   |
| 18E                                   | 1   | SHELVING, METAL                       | CUSTOM                    | CUSTOM                           |   |
| 19                                    | 1   | WALK-IN FREEZER                       | AMERICAN PANEL            | CUSTOM                           |   |
| 19A                                   | 1   | FLOOR TROUGH                          | EALE GROUP                | ASFT-1260-SG                     |   |
| 19B                                   | 1   | EVAPORATOR COOLER                     | AMERICAN PANEL            | TBD                              | REFER TO AMERICAN PANEL DRAWINGS FOR DETAILS & SPECIFICATIONS |
| 19C                                   | 1   | CONDENSER COOLER                      | AMERICAN PANEL            | TBD                              | REFER TO AMERICAN PANEL DRAWINGS FOR DETAILS & SPECIFICATIONS |
| 19D                                   | 1   | SHELVING, METAL                       | CUSTOM                    | CUSTOM                           |   |
| 19E                                   | 1   | SHELVING, METAL                       | CUSTOM                    | CUSTOM                           |   |
| 19F                                   | 1   | SHELVING, METAL                       | CUSTOM                    | CUSTOM                           |   |
| 20                                    | 1   | SPARE NUMBER                          | -                         | -                                |   |
| 21                                    | 1   | WASHER/DRYER STACKABLE                | GE                        | GU02FSSMWW                       |   |
| 22                                    | 3   | DISPOSER COOKER                       | INERL                     | CS16KS                           |   |
| 23                                    | 1   | MOD-A-FLEX                            | MOD-A-FLEX                |                                  |   |
| 24                                    | 1   | MOD-A-FLEX                            | MOD-A-FLEX                |                                  |   |
| 25                                    | 1   | CORNER SINK, 3-COMPARTMENT            | ADVANCE TABCO             | 94-K2-24D                        |   |
| 25A                                   | 1   | PRE-RINSE FAUCET, WALL MOUNT          | T&S BRASS                 | B-0133                           |   |
| 25B                                   | 1   | DECK MOUNT FAUCET                     | T&S BRASS                 | B-1121                           |   |
| 25C                                   | 1   | WALL POT RACK                         | AERO MANUFACTURING        | SRSPR40                          |   |
| 26                                    | 1   | HAND SINK                             | ADVANCE TABCO             | 7-PS-60                          |   |
| 26A                                   | 1   | PAPER TOWEL DISPENSER                 | BY VENDOR                 |                                  |   |
| 26B                                   | 1   | SOAP DISPENSER                        | BY VENDOR                 |                                  |   |
| 26C                                   | 1   | WASTE RECEPTACLE                      | PERI-RINGOLD              | FGS2400BLA                       |   |
| 27                                    | 1   | SOLEID DISHTABLE                      | SELECT STAINLESS PRODUCTS | 750-L-14                         |   |
| 27A                                   | 1   | PRE-RINSE FAUCET, WALL MOUNT          | T&S BRASS                 | B-0133                           |   |
| 27B                                   | 1   | SOLEID DISHTABLE                      | SELECT STAINLESS PRODUCTS | 750-L-14                         |   |
| 28                                    | 1   | WAREWASHER                            | HOBART                    | AM-15-1                          |   |



1 FOODSERVICE EQUIPMENT PLAN & SCHEDULE  
1/4" = 1'-0"

Project Title:  
**HINSDALE SCHOOL ALTERATIONS**  
  
15 Hinsdale Ave.  
Winsted, CT 06098

**SILVER / PETRUCELLI + ASSOCIATES**  
Architects / Engineers / Interior Designers  
  
3190 Whitney Avenue, Hamden, CT 06518-2340  
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| Revision: | Description: | Date: | Revised By: |
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Drawing Title:  
**FOODSERVICE EQUIPMENT PLAN & SCHEDULE**  
State Project #: 162-0043RNV  
  
Date: **ch 20, 2020**  
1/4" = 1'-0"  
Drawn By:  
**Author**  
Project Number:  
**18.223**  
Drawing Number:  
**FS-1.2.1**

## PLUMBING ABBREVIATIONS

|        |                                    |
|--------|------------------------------------|
| AD     | AREA DRAIN                         |
| AFB    | ABOVE FINISHED FLOOR               |
| BLDG   | BUILDING                           |
| BOP    | BOTTOM OF PIPE                     |
| CC     | CLEANOUT                           |
| CCDP   | CLEANOUT DECK PLATE                |
| CM     | COFFEE MAKER                       |
| CV     | CHECK VALVE                        |
| CVO    | CAPPED AND VALVED OUTLET           |
| CW     | COLD WATER                         |
| CLS    | CEILING                            |
| CONN   | CONNECT                            |
| CONT   | CONTINUATION                       |
| DA     | DIAMETER                           |
| DN     | DOWN                               |
| DR     | DRAIN                              |
| DWS    | DRAWING                            |
| (E)    | EXISTING                           |
| (ER)   | EXISTING TO BE REMOVED             |
| (ERR)  | EXISTING TO BE REMOVED & RELOCATED |
| EJ DIS | EJECTOR DISCHARGE                  |
| EL     | ELEVATION                          |
| EVC    | ELECTRIC WATER COOLER              |
| FA     | FRESH AIR INLET                    |
| FD     | FLOOR DRAIN                        |
| FU     | FIXTURE UNIT                       |
| FL     | FLOOR                              |
| FLH    | FLOOR HYDRANT                      |
| FT     | FEET                               |
| GC     | GENERAL CONTRACTOR                 |
| GAL    | GALLONS                            |
| GPM    | GALLONS PER MINUTE                 |
| HB     | HOSE BIBB                          |
| HCLG   | HUNG CEILING                       |
| HW     | HOT WATER                          |
| HWR    | HOT WATER RETURN                   |
| ID     | INSIDE DIAMETER                    |
| IW     | INDIRECT WASTE                     |
| IN     | INCH                               |
| JS     | JANITORS SINK                      |
| LAV    | LAVATORY                           |
| MAX    | MAXIMUM                            |
| MIN    | MINIMUM                            |
| MR     | MOP RECEPTOR                       |
| NTS    | NOT TO SCALE                       |
| OD     | OUTSIDE DIAMETER                   |
| OSEY   | OUTSIDE SCREW & YOKE GATE VALVE    |
| PC     | PLUMBING CONTRACTOR                |
| PD     | PUMP DISCHARGE                     |
| PO     | PLUGGED OUTLET                     |
| PRV    | PRESSURE REDUCING VALVE            |
| PSI    | POUNDS PER SQUARE INCH             |
| RD     | ROOF DRAIN                         |
| SA     | SHOCK ABSORBER                     |
| SAN    | SANITARY                           |
| SD     | SUMP PUMP DISCHARGE                |
| SH     | SHOWER                             |
| SK     | SINK                               |
| SQ FT  | SQUARE FEET                        |
| ST     | STORM                              |
| TYP    | TYPICAL                            |
| UR     | URNAL                              |
| V      | VENT                               |
| VE     | VACUUM BREAKER                     |
| VTR V  | ENT THROUGH ROOF                   |
| W      | WASTE                              |
| WC     | WATER CLOSET                       |
| WCO    | WALL CLEANOUT                      |
| WH     | WALL HYDRANT                       |

## PLUMBING SYSTEMS DEMOLITION NOTES

- THIS PROJECT IS A PARTIAL DEMOLITION TO AN EXISTING FACILITY.
- ALL WORK SHALL BE PERFORMED PER CURRENT STATE APPLICABLE CODES, ORDINANCES AND PER REQUIREMENTS OF STATE AND LOCAL REGULATORY AGENCIES AND THE AUTHORITY HAVING JURISDICTION.
- REFER TO THE ARCHITECTURAL, DEMOLITION DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS. THE FULL EXTENT OF THE DEMOLITION AND RECONSTRUCTION SCOPE OF WORK SHALL BE DETERMINED BY THE ENTIRE SET OF BID DOCUMENTS.
- BEFORE SUBMITTING BID, THE CONTRACTOR SHALL VISIT THE JOB SITE AND BECOME FULLY FAMILIAR WITH THE EXISTING CONDITIONS AND THE DOCUMENTS OF OTHER TRADES UNDER WHICH HIS WORK WILL BE ACCOMPLISHED. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY ASSUMPTIONS, OMISSIONS OR ERRORS HE MADE AS A RESULT OF FAILURE TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS.
- LOCATION OF EXISTING EQUIPMENT AND PIPING SHOWN ON FLOOR PLANS IS BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF EXISTING EQUIPMENT, APPURTENANCES AND PIPING IN THE FIELD PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- DEMOLITION DRAWINGS ARE STRICTLY DIAGRAMMATIC AND SHOW GENERAL ARRANGEMENT OF EXISTING MECHANICAL AND ELECTRICAL EQUIPMENT LOCATION. IT IS NOT THE INTENT OF THE DRAWINGS TO SHOW THE ENTIRE EXISTING MECHANICAL OR ELECTRICAL SYSTEMS.
- MAJOR COMPONENTS AND MAINS OF SYSTEMS ARE USUALLY INDICATED. FIELD VERIFY LAYOUT AND LOCATIONS OF MISCELLANEOUS SYSTEMS. REMOVE MISCELLANEOUS ITEMS IN THE RENOVATED AREA.
- IT IS NOT THE INTENT OF THESE DRAWINGS TO SHOW ALL EQUIPMENT, PIPING OR CONDUIT TO BE REMOVED. EQUIPMENT NOT BEING REUSED SHALL BE REMOVED, INCLUDING ALL ASSOCIATED HANGERS, SUPPORTS, PIPES, DUCTS, CONDUITS, WIRES, AND CONTROLS BACK TO THE POINT OF ORIGIN.
- ALL EXISTING EQUIPMENT, FIXTURES AND DEVICES TO BE REMOVED SHALL BE FIELD VERIFIED FOR EXACT QUANTITY, NO EQUIPMENT, PIPING, DUCTWORK, OR CONDUIT SHALL BE ABANDONED IN PLACE, UNLESS SPECIFICALLY NOTED.
- THE CONTRACTORS SHALL COORDINATE THE DEMOLITION SCOPE OF WORK PRIOR TO COMMENCEMENT OF WORK. CARE MUST BE TAKEN SO AS NOT TO DESTROY, REMOVE OR DEMOLISH ANY EQUIPMENT, APPURTENANCES OR DEVICES INTENDED TO REMAIN.
- INCLUDE ALL WORK REQUIRED TO ALLOW PARTIAL DEMOLITION AS REQUIRED. COORDINATE WITH TOWN OF GREENFIELD FOR CONSTRUCTION PHASING REQUIREMENTS. PROVIDE TEMPORARY SERVICES AND SYSTEM MODIFICATIONS AS NECESSARY.
- SHOULD THE CONTRACTOR ENCOUNTER, DURING DEMOLITION OF EXISTING WALLS OR CHASSES, ANY PIPING OR CONDUIT WHICH MUST REMAIN ACTIVE, HE SHALL IMMEDIATELY GIVE NOTICE TO THE ENGINEER, GENERAL CONTRACTOR, AND OWNER'S REPRESENTATIVE.
- ALL SALVAGEABLE MATERIALS OR EQUIPMENT TO BE REMOVED SHALL BE TURNED OVER TO THE OWNER AT THE END OF EACH DAY. ITEMS REMOVED AND NOT REUSED OR DISPOSED BY THE OWNER SHALL BECOME PROPERTY OF THE TRADE CONTRACTOR AND SHALL BE TRANSPORTED FROM THE SITE. SITE STORAGE OR REMOVED ITEMS WILL NOT BE PERMITTED.
- PROPERLY DISPOSE OF ALL DEMOLISHED EQUIPMENT IN COMPLIANCE WITH THE CODES AND REGULATIONS. THIS APPLIES TO HAZARDOUS MATERIALS AND CONTAMINATED ITEMS TO BE DEMOLISHED.
- ALL SYSTEMS TO BE REMOVED SHALL BE REMOVED BACK TO THE POINT OF SOURCE. THE CONTRACTOR SHALL VERIFY WHICH SYSTEMS MUST REMAIN ACTIVE TO SERVE ADJACENT SPACES DURING CONSTRUCTION.
- ALL PIPING ASSOCIATED WITH THE PLUMBING FIXTURE OR EQUIPMENT INDICATED TO BE REMOVED OR RELOCATED SHALL BE DISCONNECTED AND REMOVED (INCLUDING HANGERS, INSULATION, AND OTHER COMPONENTS) UP TO NEAREST EXISTING ACTIVE MAIN OR BRANCH LINE AND CAPPED AS CLOSE TO THE ACTIVE LINE AS POSSIBLE.
- DEMOLITION DRAWINGS ARE STRICTLY DIAGRAMMATIC AND SHOW THE GENERAL ARRANGEMENT OF EQUIPMENT LOCATION AND PIPING. IT IS NOT THE INTENT OF THE DEMOLITION CONTRACT DRAWINGS TO SHOW ENTIRE EXISTING PIPING SYSTEM AND EQUIPMENT LAYOUT. ONLY MAJOR PIPING MAINS AND COMPONENTS ARE USUALLY INDICATED.
- THE LOCATION OF EXISTING PLUMBING AND MECHANICAL SYSTEMS, SHOWN ON FLOOR PLANS, IS BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF BRANCH PIPING ASSOCIATED WITH THE FIXTURES OR EQUIPMENT TO BE REMOVED AND ADJUST AS NECESSARY.
- LICENSED PLUMBERS WILL BE REQUIRED TO PERFORM THE DISCONNECTS AND RESPONSIBLE FOR ANY APPLICABLE PERMITS/INSPECTIONS. SEE SPECIFICATIONS FOR MORE INFORMATION.

## SPECIAL REQUIREMENTS OF EXISTING FACILITIES AND CONDUCT OF WORK

THE BUILDING WILL NOT BE OCCUPIED AND NOT IN OPERATION DURING THE PROGRESS OF THE WORK.

NO WORK SHALL BE LEFT INCOMPLETE NOR ANY HAZARDOUS SITUATIONS CREATED WHICH WILL AFFECT THE LIFE OR SAFETY OF THE PUBLIC AND/OR ADJACENT BUILDING OCCUPANTS.

WHEN NECESSARY TO DISCONNECT ANY EXISTING BUILDING UTILITIES AND PIPING SYSTEM, CONFER WITH THE OWNER AND ARRANGE THE PERIOD OF INTERRUPTION FOR A TIME MUTUALLY AGREED UPON.

## IMPORTANT NOTICE:

THE EXISTING CONDITIONS REPRESENTED HEREON ARE BASED ON THE EXISTING DRAWINGS. THEY ARE INCLUDED FOR CONTRACTORS REFERENCE ONLY. ACTUAL LOCATION OF PIPING AND UTILITIES MAY VARY IN FIELD. PIPING CONTRACTOR SHALL VERIFY LOCATIONS IN FIELD AND MAKE ALLOWANCE IN BID FOR LOCATIONS AND ARRANGEMENTS OTHER THAN SHOWN.

SILVER / PETRUCELLI CANNOT GUARANTEE THE CORRECTNESS OF THE EXISTING CONDITIONS SHOWN AND ASSUMES NO RESPONSIBILITY THEREFOR. INCLUSION OF THESE EXISTING CONDITIONS HEREON SHALL IN NO WAY ALLEViate THE CONTRACTOR(S) OF THEIR RESPONSIBILITY TO VISIT THE SITE TO VERIFY ALL EXISTING CONDITIONS.

| PLUMBING DRAWING LIST |  |
|-----------------------|--|
| DRAWING NUMBER        | DRAWING DESCRIPTION                    |
| P001                  | PLUMBING NOTES, ABBREVIATIONS & LEGEND |
| P001                  | PLUMBING DEMOLITION PLAN               |
| P002                  | PLUMBING DEMOLITION ROOF PLAN          |
| P01                   | FLOOR PLAN - AREA A - PIPING           |
| P02                   | FLOOR PLAN - AREA B - PIPING           |
| P03                   | FLOOR PLAN - AREA C - PIPING           |
| P04                   | PLUMBING ROOF PLAN                     |
| P01                   | PLUMBING ENLARGED KITCHEN PLAN         |
| P01                   | PLUMBING RISER DIAGRAMS                |
| P80                   | PLUMBING DETAILS                       |
| P802                  | PLUMBING DETAILS                       |
| P801                  | PLUMBING SCHEDULES                     |
| P802                  | PLUMBING SCHEDULES                     |
| P803                  | PLUMBING SCHEDULES                     |

## PLUMBING SYSTEMS GENERAL NOTES

- THE CONTRACTOR SHALL BECOME THOROUGHLY FAMILIAR WITH THE PROJECT DOCUMENTS OF ALL TRADES. THE DRAWINGS ARE DIAGRAMMATIC AND SHOW THE GENERAL ARRANGEMENT OF EQUIPMENT AND PIPING. THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF EQUIPMENT AND PIPING INSTALLATION WITH ALL TRADES BEFORE COMMENCING WORK.
- THIS CONTRACTOR SHALL INCLUDE ALL THE NECESSARY PIPING, FITTINGS, TRANSITIONS, ETC. AS NECESSARY TO INSTALL PLUMBING SYSTEM, AND TO AVOID ANY CONFLICTS WITH OTHER TRADES AND THE BUILDING STRUCTURE.
- IT IS NOT THE INTENT OF THE DRAWINGS TO SHOW INDIVIDUAL BRANCH PIPING TO EACH PLUMBING FIXTURE. ONLY THE BRANCH PIPING TO GROUPS OF FIXTURES AS INDICATED. THE ENTIRE PLUMBING SYSTEM SHALL BE FULLY OPERATIONAL AND READY FOR BENEFICIAL USE BEFORE THE JOB IS CONSIDERED COMPLETE.
- REFER TO LATEST ARCHITECTURAL PLANS FOR ELEVATIONS, SECTIONS, DETAILS, MOUNTING HEIGHTS, AND LOCATION OF PLUMBING FIXTURES. ALL HANDICAPPED DESIGNATED FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH ANSI AND ADA STANDARDS.
- DO NOT SCALE DRAWINGS. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD AND SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY AND ALL DISCREPANCIES.
- IT IS NOT INTENDED THAT THE DRAWINGS SHOW EVERY PIPE, FITTING, RISE/DROP OR DETAIL. SYSTEM AND COMPONENTS SHALL BE INSTALLED ACCORDING TO THE INTENT AND MEANING OF CONTRACT DOCUMENTS AND IN ACCORDANCE WITH GOOD PRACTICE.
- CONTRACTOR IS RESPONSIBLE TO PROVIDE COMPLETE AND OPERATIONAL SYSTEMS WITH FACILITIES AND SERVICES TO MEET REQUIREMENTS INDICATED AND IN ACCORDANCE WITH APPLICABLE CODES AND ORDINANCES.
- EQUIPMENT AND COMPONENTS HAVING EQUAL PERFORMANCE CHARACTERISTICS BY OTHER MANUFACTURERS MAY BE CONSIDERED, PROVIDED DEVIATIONS IN DIMENSIONS, OPERATION AND OTHER CHARACTERISTICS DO NOT CHANGE DESIGN CONCEPT OR INTENDED PERFORMANCE AS JUDGED BY THE ENGINEER. BURDEN OF PROOF OF EQUALITY OF PRODUCTS IS ON THE CONTRACTOR.
- CONTRACTOR IS RESPONSIBLE FOR THE SAFEKEEPING OF HIS OWN PROPERTY ON THE JOB SITE. OWNER ASSUMES NO RESPONSIBILITY FOR THE PROTECTION OF PROPERTIES AGAINST FIRE, THEFT AND ENVIRONMENTAL CONDITIONS.
- CONTRACTOR IS RESPONSIBLE TO PROPERLY PROTECT OWNER'S PROPERTY AND EQUIPMENT FROM INJURY, AND DAMAGE TO SAME SHALL BE REPLACED BY CONTRACTOR.
- CONTRACTOR IS TO CLEAN JOB SITE DAILY AND REMOVE FROM THE PREMISES ANY DIRT AND DEBRIS CAUSED BY THE WORK INCLUDED IN THIS CONTRACT.
- ALL WORK TO BE PERFORMED IN A CLEAN AND WORKMANLIKE MANNER. CARE SHALL BE EXERCISED TO MINIMIZE ANY INCONVENIENCE OR DISTURBANCE TO OTHER AREAS OF THE BUILDING WHICH ARE TO REMAIN IN OPERATION. ISOLATE CONSTRUCTION AREAS BY MEANS OF TEMPORARY PARTITIONS AND/OR TARPS TO KEEP DUST AND DIRT WITHIN WORK AREA.
- CONTRACTOR IS RESPONSIBLE TO PROPERLY SECURE AREAS OF CONSTRUCTION AT THE END OF EACH WORKING DAY.
- EQUIPMENT AND PIPING TO BE INSTALLED IN ACCORDANCE WITH SEISMIC REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE.
- CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH ALL OTHER TRADES.
- ALL EQUIPMENT SUPPORTS AND PIPE HANGERS TO BE CONNECTED FROM THE BUILDING STRUCTURE.
- ALL NEW PENETRATIONS THRU RATED WALLS, FLOORS AND CEILINGS SHALL BE FRESTOPPED AND SEALED TO MAINTAIN RATINGS. REFER TO SPECIFICATION SECTION 07801.
- PROVIDE ACCESS PANELS/DOORS FOR ALL CONCEALED PLUMBING ITEMS REQUIRING ACCESS. COORDINATE WITH DIVISION 8.
- PROVIDE SHUTOFF VALVES AT ALL BRANCH PIPING TAKEOFFS.
- ALL BRANCH WATER PIPES TO HAVE STOP VALVES AT EACH PLUMBING FIXTURE.
- INSULATE EXPOSED WASTE, HOT AND COLD WATER PIPING UNDER HANDICAP LAVATORIES.
- INSULATE COLD WATER, HOT WATER AND REGULATION PIPING, CONDENSATE DRAIN, STORM PIPING AND ROOF DRAIN BODIES.
- EVERY FIXTURE SHALL BE PROPERLY PIPED TO WATER, SANITARY, WASTE, AND VENT SYSTEMS. REFER TO THE PLUMBING SCHEDULE ON MEP DRAWINGS FOR INDIVIDUAL PIPE SIZES TO EACH FIXTURE.
- WHERE AN INACCESSIBLE CEILING IS INSTALLED (GYP BOARD OR EQUIVALENT) THE CONTRACTOR SHALL COORDINATE THE LOCATIONS OF ACCESS PANELS FOR ALL VALVES, CLEANOUTS, ETC., REQUIRING ACCESS, WITH THE ARCHITECT, PRIOR TO INSTALLATION OF SUCH DEVICES AND OTHER APPURTENANCES.
- NO PIPING SHALL BE INSTALLED WITHIN STAIRS, STAIR WALLS, ELEVATOR MACHINE ROOMS, TRANSFORMERS VAULTS, ELECTRICAL ROOMS OR OVER ELECTRICAL PANELS/EQUIPMENT. ONLY DEDICATED PLUMBING PIPING WILL BE ALLOWED WITHIN EACH OF THE SPACES INDICATED ABOVE. COORDINATE THE LOCATION OF ALL PIPING WITH ALL OTHER TRADES, AND ADJUST AS NECESSARY.
- ALL PIPING TO BE RUN CONCEALED IN CEILINGS OR WALLS. PIPING IS TO BE EXPOSED ONLY WHERE NOTED ON DRAWINGS. IF CONTRACTOR CANNOT RUN PIPING CONCEALED, NOTIFY ENGINEER IMMEDIATELY TO RESOLVE CONFLICT.
- INSTALL WATER HAMMER ARRESTORS (WHA) AT ALL QUICK-CLOSING VALVES (FLUSH VALVES, SOLENOID VALVES, ETC.) THROUGHOUT THE PLUMBING SYSTEM. WATER HAMMER ARRESTORS SHALL BE SIZED BASED ON SUPPLY FIXTURE UNITS PER PLUMBING DRAINAGE INSTITUTE (PDI) STANDARDS AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
- PIPE ALL CONDENSATE DRAINS FROM MECHANICAL EQUIPMENT COOLING COILS, BY GRAVITY (INTERIOR AIR HANDLING UNITS, FAN COIL UNITS, ETC.) TO FLOOR DRAINS OR JANITORS SINKS THROUGH AN AIR GAP. EACH CONDENSATE DRAIN SHALL BE TRAPPED AT THE EQUIPMENT DRAIN OUTLET. REFER TO TRAP DETAILS ON DRAWINGS. COORDINATE EXACT LOCATION WITH THE HVAC CONTRACTOR AND ADJUST AS NECESSARY.
- COORDINATE EXACT LOCATION OF ALL UNDERGROUND UTILITIES (WATER, GAS, SANITARY, ETC.) EXITING OR ENTERING THE BUILDING WITH THE SITE CONTRACTOR AND UTILITY DRAWINGS. COORDINATE ALL FOUNDATION WALL PENETRATIONS AND INVERT ELEVATIONS WITH BOTH THE GENERAL CONTRACTOR AND OR OWNER'S REPRESENTATIVE.
- DOMESTIC WATER DROPS OR RISERS INSTALLED IN EXTERIOR WALLS, SHALL BE INSTALLED ON THE WARM SIDE OF THE BUILDING INSULATION, AND THE LOCATION SHALL BE MADE INFILTRATION FREE.
- INSTALL TRAP PRIMERS FOR EACH INDIVIDUAL FLOOR DRAIN OR, AS AN OPTION, CONTRACTOR MAY UTILIZE UTILITY DISTRIBUTION UNIT FOR MULTIPLE DRAIN. CONNECT TRAP PRIMER TO NEAREST ACTIVE GOLD WATER MAIN. PROVIDE ISOLATION VALVES AND EXTEND TO FLOOR DRAIN.
- INSTALL FLOOR MOUNTED EQUIPMENT, SUCH AS WATER HEATERS, STORAGE TANKS, ETC. ON A 4" HIGH CONCRETE HOUSEKEEPING PAD. COORDINATE SIZE AND FINAL LOCATION OF ALL CONCRETE PADS WITH THE STRUCTURAL ENGINEER. PADS SHALL BE MINIMUM 6" LARGER THAN EQUIPMENT IN BOTH HORIZONTAL DIRECTIONS.
- COORDINATE ALL PLUMBING EQUIPMENT REQUIRING POWER. FORT EXACT LOCATION AND POWER REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR.
- ALL INDIRECT WASTE DRAINS SHALL BE PIPED TO FLOOR DRAINS, FUNNELS OR FIXED AIR GAP FITTINGS, THROUGH AIR GAP OR TO A SINK DRAIN TAILPIECE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ELBOWS, TEES, DROPS, AND MISCELLANEOUS PIPING DUE TO ELEVATION CHANGES, OBSTRUCTIONS, COORDINATION WITH OTHER TRADES, ETC. TO INSTALL A COMPLETE, FUNCTIONAL, PLUMBING SYSTEM.

## PLUMBING SYSTEMS SEISMIC NOTES

PROVIDE SEISMIC RESTRAINTS PER THE INTERNATIONAL BUILDING CODE, SECTION 1610. SEISMIC RESTRAINTS ARE REQUIRED FOR ALL PIPING EXCEPT FOR THE FOLLOWING INSTANCES:

- PIPES SUSPENDED BY INDIVIDUAL HANGERS 12" OR LESS IN LENGTH FROM TOP OF THE PIPE TO THE SUPPORTING STRUCTURE.
- PIPING IN BOILER AND MECHANICAL ROOMS WHICH HAS LESS THAN 1/4 INCHES IN DIAMETER.
- PIPING IN OTHER AREAS WHICH HAS LESS THAN 2-1/2 INCHES IN DIAMETER.

SEISMIC RESTRAINTS ARE REQUIRED FOR ALL GAS (INCLUDING ROOF) AND HAZARDOUS PIPING - NO EXCEPTIONS.

## PLUMBING LEGEND

| SYMBOL | ABBREVIATION | DESCRIPTION  |
|--------|--------------|--|
|        | SAN OR W     | SOL OR WASTE ABOVE FLOOR OR GRADE                        |
|        | SAN OR W     | SOL OR WASTE BELOW FLOOR OR GRADE                        |
|        | ST           | STORM DRAIN ABOVE FLOOR OR GRADE                         |
|        | ST           | STORM DRAIN BELOW FLOOR OR GRADE                         |
|        | V            | VENT PIPING  |
|        | CW           | COLD WATER PIPING  |
|        | HW           | HOT WATER PIPING   |
|        | HWR          | HOT WATER RECIRCULATION PIPING                           |
|        | HW           | HOT WATER PIPING 110°F TEMPERATURE                       |
|        | HW           | HOT WATER PIPING 140°F TEMPERATURE                       |
|        | AW           | ACID WASTE PIPING BELOW GRADE                            |
|        | AV           | ACID VENT PIPING   |
|        | KW           | KITCHEN WASTE PIPING BELOW GRADE                         |
|        | TP           | TRAP PRIMER PIPING                                       |
|        | G            | NATURAL GAS PIPING                                       |
|        | SAN          | EXISTING SANITARY PIPING                                 |
|        | ST           | EXISTING STORM PIPING                                    |
|        | V            | EXISTING VENT PIPING                                     |
|        | CW           | EXISTING COLD WATER PIPING                               |
|        | HW           | EXISTING HOT WATER PIPING                                |
|        | HWR          | EXISTING HOT WATER RECIRCULATING PIPING                  |
|        | CO/WCO       | CLEANOUT/CLEANOUT WALL PLATE                             |
|        | CCDP         | CLEANOUT DECKPLATE                                       |
|        |              | TRAP   |
|        | BV           | BALL VALVE   |
|        | CV           | CHECK VALVE  |
|        | GV           | GATE VALVE   |
|        |              | BUTTERFLY VALVE  |
|        | RPP          | REDUCED PRESS. BACKFLOW PREVENTER                        |
|        |              | GAS COOK   |
|        |              | GAS PRESSURE REGULATOR                                   |
|        |              | GAS SOLENOID VALVE                                       |
|        | HB           | INTERIOR HOSE BIBB W/ VACUUM BREAKER                     |
|        | WH           | EXTERIOR WALL HYDRANT W/ VACUUM BREAKER (NON FREEZE)     |
|        |              | UNION  |
|        |              | CAP  |
|        | TP           | TRAP PRIMER VALVE  |
|        |              | SEISMIC/HOT WATER EXPANSION LOOP                         |
|        | EGO          | EMERGENCY GAS SHUTOFF SWITCH                             |
|        | POC          | POINT OF CONNECTION                                      |
|        | AD           | AREA DRAIN   |
|        | FD           | FLOOR DRAIN  |
|        | RD           | ROOF DRAIN   |
|        | PD           | PLANTER DRAIN  |
|        | WC-HC        | WATER CLOSET (HANDICAPPED ACCESSIBLE)                    |
|        | UR-UR-HC     | URNAL, URNAL (HANDICAPPED ACCESSIBLE)                    |
|        | LAV-HC       | LAVATORY SYSTEM  |
|        | LAV2-HC      | LAVATORY SYSTEM  |
|        | LAV3-HC      | LAVATORY SYSTEM  |
|        | SK #         | SINK   |
|        | MSK          | MOP SINK   |
|        | DF-HC        | DRINKING FOUNTAIN, SINGLE UNIT (HANDICAPPED ACCESSIBLE)  |
|        | DF2-HC       | DRINKING FOUNTAIN, DUAL UNIT (HANDICAPPED ACCESSIBLE)    |
|        | EW1-HC       | ELECTRIC WATER COOLER DUAL UNIT (HANDICAPPED ACCESSIBLE) |
|        | EW2-HC       | ELECTRIC WATER COOLER DUAL UNIT (HANDICAPPED ACCESSIBLE) |
|        | EWC          | EXISTING WATER CLOSET                                    |
|        | ELR          | EXISTING URNAL   |
|        | ELAV         | EXISTING LAVATORY  |
|        | ESK          | EXISTING SINK  |
|        | EEWC         | EXISTING ELECTRIC WATER COOLER                           |

NOTE: SOME SYMBOLS & ABBREVIATIONS MAY OR MAY NOT APPEAR ON THE DRAWINGS.

Project Title:  
Hinsdale School Alterations

15 Hinsdale Ave.  
Winsted, CT 06098



SILVER / PETRUCELLI + ASSOCIATES  
Architects / Engineers / Interior Designers

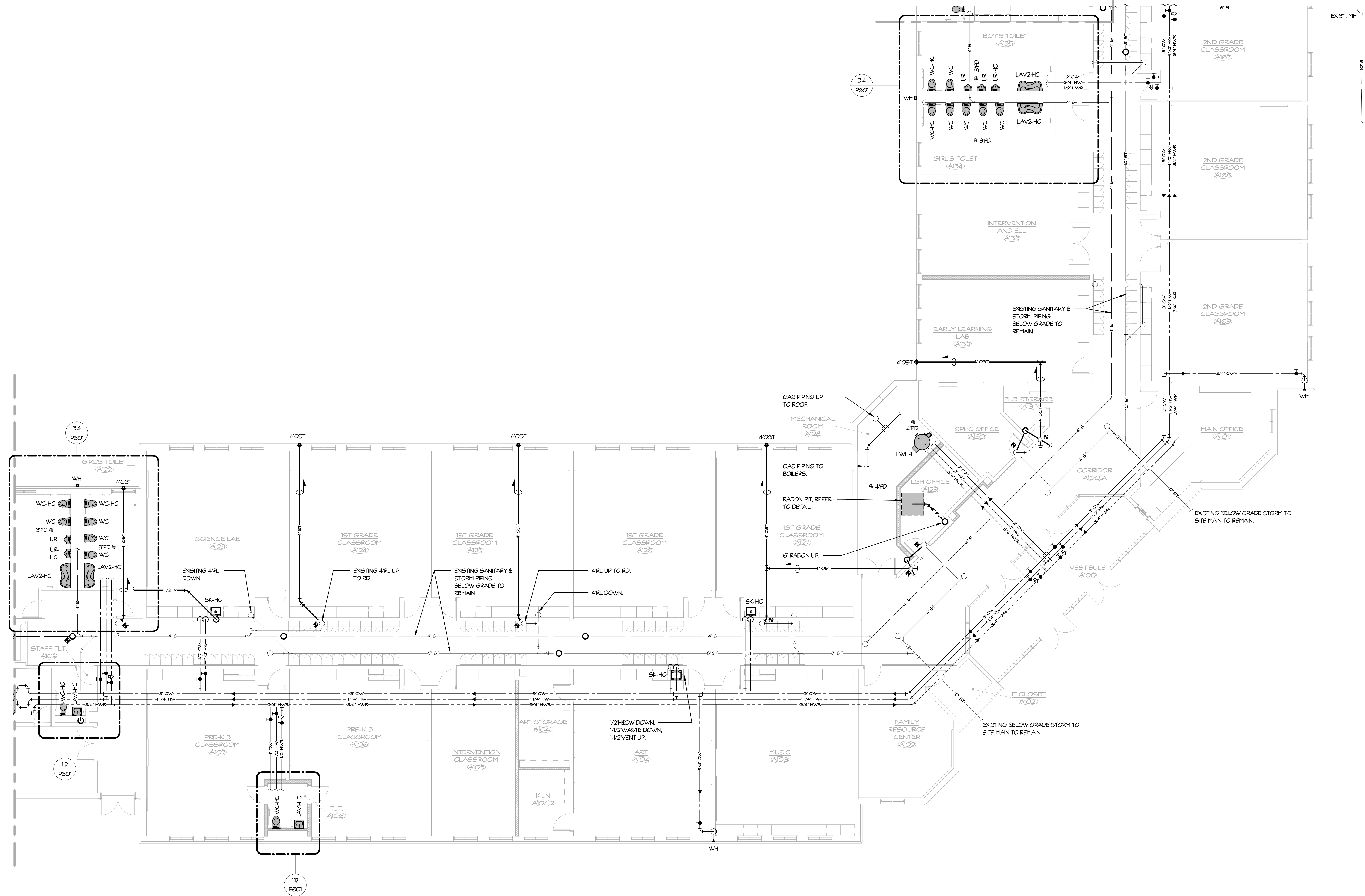
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| Revision: | Description: | Date: | Revised By: |
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Drawing Title:  
PLUMBING NOTES,  
ABBREVIATIONS & LEGEND  
State Project #: 162-0043RNV

Date:  
June 30, 2020  
Scale:  
NTS  
Drawn By:  
JES  
Project Number:  
18-223  
Drawing Number:  
P001



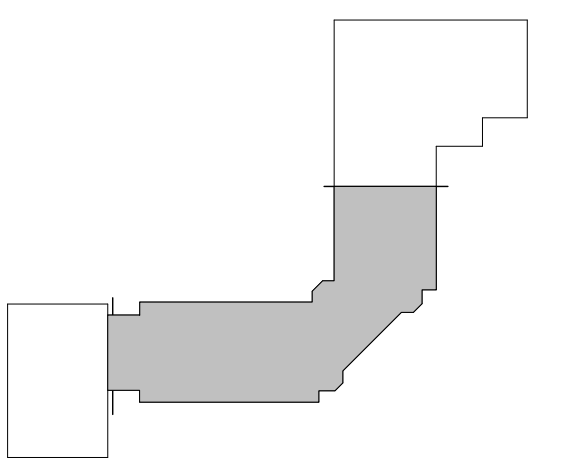


Floor Plan - Area A - Plumbing  
SCALE: 1/8" = 1'-0"

**EXISTING CONDITIONS NOTICE:**

THE EXISTING CONDITIONS REPRESENTED HEREON ARE BASED ON THE EXISTING DRAWINGS. THEY ARE INCLUDED FOR CONTRACTORS REFERENCE ONLY. ACTUAL LOCATION OF PIPING AND UTILITIES MAY VARY IN FIELD. PIPING CONTRACTOR SHALL VERIFY LOCATIONS IN FIELD AND MAKE ALLOWANCE IN BID FOR LOCATIONS AND ARRANGEMENTS OTHER THAN SHOWN.

SILVER PETRUCELLI CANNOT GUARANTEE THE CORRECTNESS OF THE EXISTING CONDITIONS SHOWN AND ASSUMES NO RESPONSIBILITY THEREFOR. INCLUSION OF THESE EXISTING CONDITIONS HEREON SHALL IN NO WAY ALLEVIATE THE CONTRACTOR(S) OF THEIR RESPONSIBILITY TO VISIT THE SITE TO VERIFY ALL EXISTING CONDITIONS. THE EXISTING CONDITIONS REPRESENTED HEREON ARE BASED ON THE EXISTING DRAWINGS. THEY ARE INCLUDED FOR CONTRACTORS REFERENCE ONLY. ACTUAL LOCATION OF PIPING AND UTILITIES MAY VARY IN FIELD. PIPING CONTRACTOR SHALL VERIFY LOCATIONS IN FIELD AND MAKE ALLOWANCE IN BID FOR LOCATIONS AND ARRANGEMENTS OTHER THAN SHOWN.



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15 Hinsdale Ave.  
Winsted, CT 06098

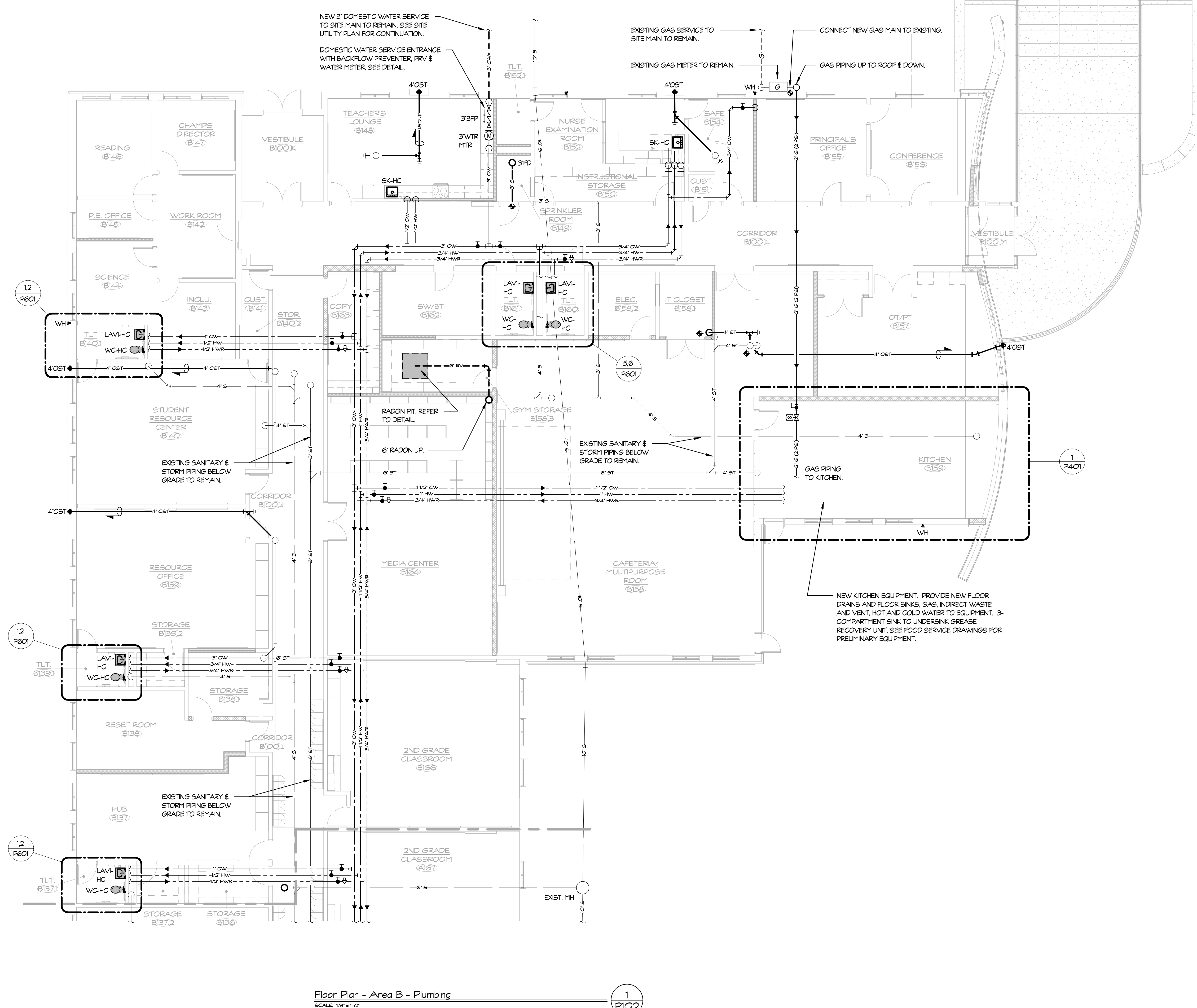


**SILVER / PETRUCELLI + ASSOCIATES**  
Architects / Engineers / Interior Designers  
3190 Whitney Avenue, Hamden, CT 06518-2340  
Tel. 203 230 9007 Fax. 203 230 8247  
silverpetrucelli.com

| Revision: | Description: | Date: | Revised By: |
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Drawing Title:  
**FLOOR PLAN - AREA A - PIPING**  
State Project #: 162-0043RNV

Date: **June 30, 2020**  
Scale: **As Indicated**  
Drawn By: **JES**  
Project Number: **18.223**  
Drawing Number: **P101**

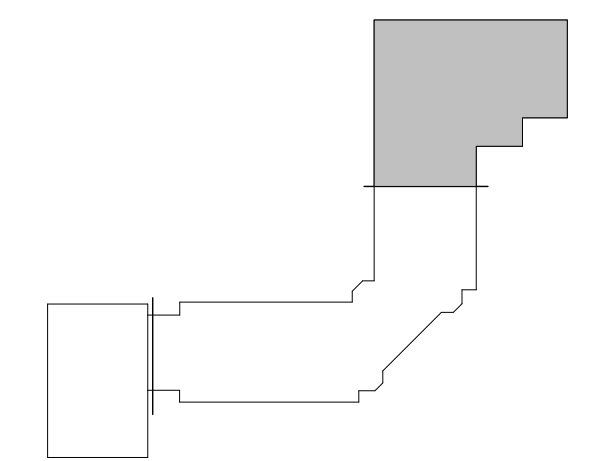


Floor Plan - Area B - Plumbing  
 SCALE: 1/8" = 1'-0"  
 1  
 P102

**EXISTING CONDITIONS NOTICE:**

THE EXISTING CONDITIONS REPRESENTED HEREON ARE BASED ON THE EXISTING DRAWINGS. THEY ARE INCLUDED FOR CONTRACTORS REFERENCE ONLY. ACTUAL LOCATION OF PIPING AND UTILITIES MAY VARY IN FIELD. PIPING CONTRACTOR SHALL VERIFY LOCATIONS IN FIELD AND MAKE ALLOWANCE IN BID FOR LOCATIONS AND ARRANGEMENTS OTHER THAN SHOWN.

SILVER PETRUCELLI CANNOT GUARANTEE THE CORRECTNESS OF THE EXISTING CONDITIONS SHOWN AND ASSUMES NO RESPONSIBILITY THEREFOR. INCLUSION OF THESE EXISTING CONDITIONS HEREON SHALL IN NO WAY ALLEVIATE THE CONTRACTOR(S) OF THEIR RESPONSIBILITY TO VISIT THE SITE TO VERIFY ALL EXISTING CONDITIONS. THE EXISTING CONDITIONS REPRESENTED HEREON ARE BASED ON THE EXISTING DRAWINGS. THEY ARE INCLUDED FOR CONTRACTORS REFERENCE ONLY. ACTUAL LOCATION OF PIPING AND UTILITIES MAY VARY IN FIELD. PIPING CONTRACTOR SHALL VERIFY LOCATIONS IN FIELD AND MAKE ALLOWANCE IN BID FOR LOCATIONS AND ARRANGEMENTS OTHER THAN SHOWN.



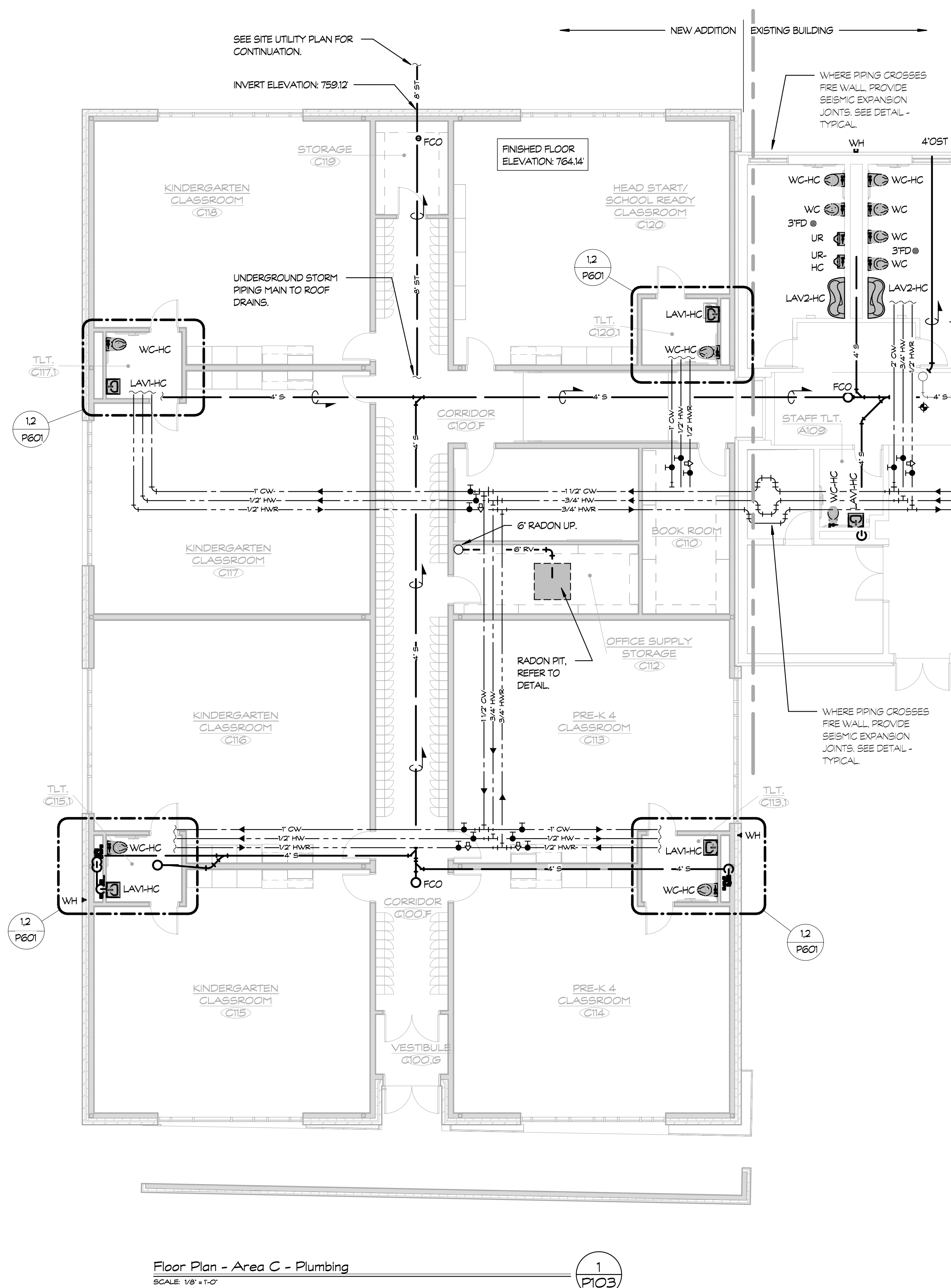
Project Title:  
**Hinsdale School Alterations**  
 15 Hinsdale Ave.  
 Winsted, CT 06098

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Drawing Title:  
**FLOOR PLAN - AREA B - PIPING**  
 State Project #: 162-0043RNV

Date: **June 30, 2020**  
 Scale: **As Indicated**  
 Drawn By: **JES**  
 Project Number: **18-223**  
 Drawing Number: **P102**

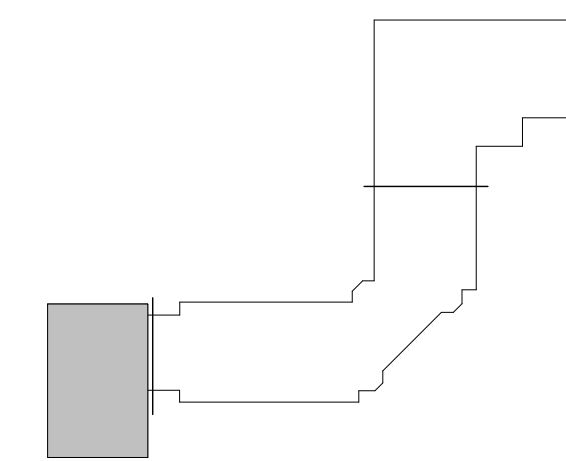


Floor Plan - Area C - Plumbing  
SCALE: 1/8" = 1'-0"

**EXISTING CONDITIONS NOTICE:**

THE EXISTING CONDITIONS REPRESENTED HEREON ARE BASED ON THE EXISTING DRAWINGS. THEY ARE INCLUDED FOR CONTRACTORS REFERENCE ONLY. ACTUAL LOCATION OF PIPING AND UTILITIES MAY VARY IN FIELD. PIPING CONTRACTOR SHALL VERIFY LOCATIONS IN FIELD AND MAKE ALLOWANCE IN BID FOR LOCATIONS AND ARRANGEMENTS OTHER THAN SHOWN.

SILVER PETRUCELLI CANNOT GUARANTEE THE CORRECTNESS OF THE EXISTING CONDITIONS SHOWN AND ASSUMES NO RESPONSIBILITY THEREFOR. INCLUSION OF THESE EXISTING CONDITIONS HEREON SHALL IN NO WAY ALLEVIATE THE CONTRACTOR(S) OF THEIR RESPONSIBILITY TO VISIT THE SITE TO VERIFY ALL EXISTING CONDITIONS. THE EXISTING CONDITIONS REPRESENTED HEREON ARE BASED ON THE EXISTING DRAWINGS. THEY ARE INCLUDED FOR CONTRACTORS REFERENCE ONLY. ACTUAL LOCATION OF PIPING AND UTILITIES MAY VARY IN FIELD. PIPING CONTRACTOR SHALL VERIFY LOCATIONS IN FIELD AND MAKE ALLOWANCE IN BID FOR LOCATIONS AND ARRANGEMENTS OTHER THAN SHOWN.



Project Title:  
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Drawing Title:  
**FLOOR PLAN - AREA C - PIPING**  
  
State Project #: 162-0043RNV

Date: **June 30, 2020**  
Scale: **As Indicated**  
Drawn By: \_\_\_\_\_  
Author: \_\_\_\_\_  
Project Number: **18.223**

**P103**

**UNDERGROUND INSTALLATION OF PLASTIC PIPE**

PLASTIC PIPE SHOULD ALWAYS BE BURIED IN STRICT ACCORDANCE WITH THE ASTM STANDARD RELEVANT TO THE TYPE OF PLASTIC PIPING SYSTEM BEING INSTALLED. THOSE STANDARDS ARE:

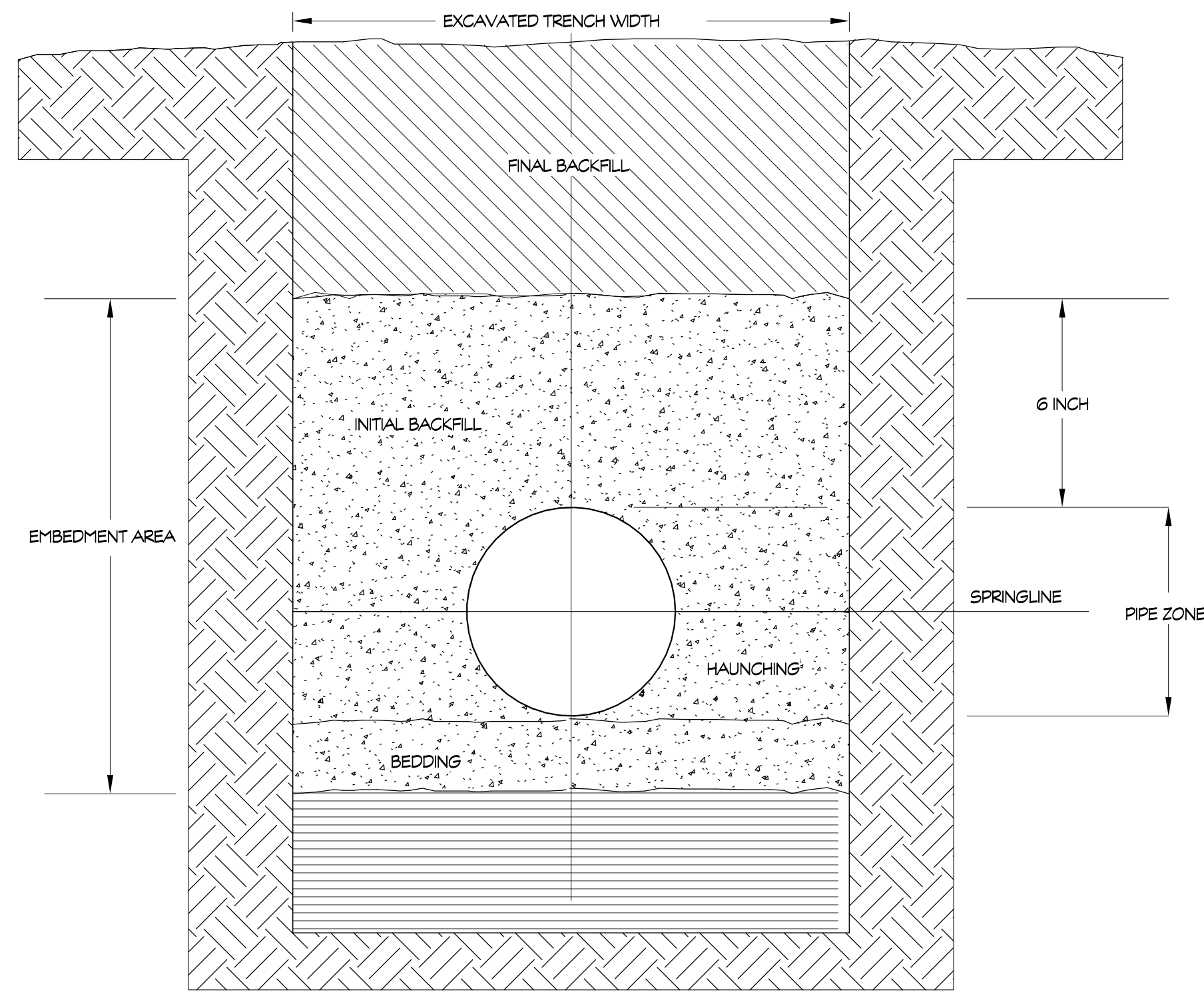
ASTM D2521 STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS.

ASTM D2774 STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PRESSURE PIPING.

NOTE: IN ADDITION TO THESE STANDARDS, PIPE SHOULD ALWAYS BE INSTALLED IN ACCORDANCE WITH ALL LOCAL CODE REQUIREMENTS.

**RECOMMENDATIONS FOR UNDERGROUND INSTALLATION OF PLASTIC DRAINAGE PIPE**

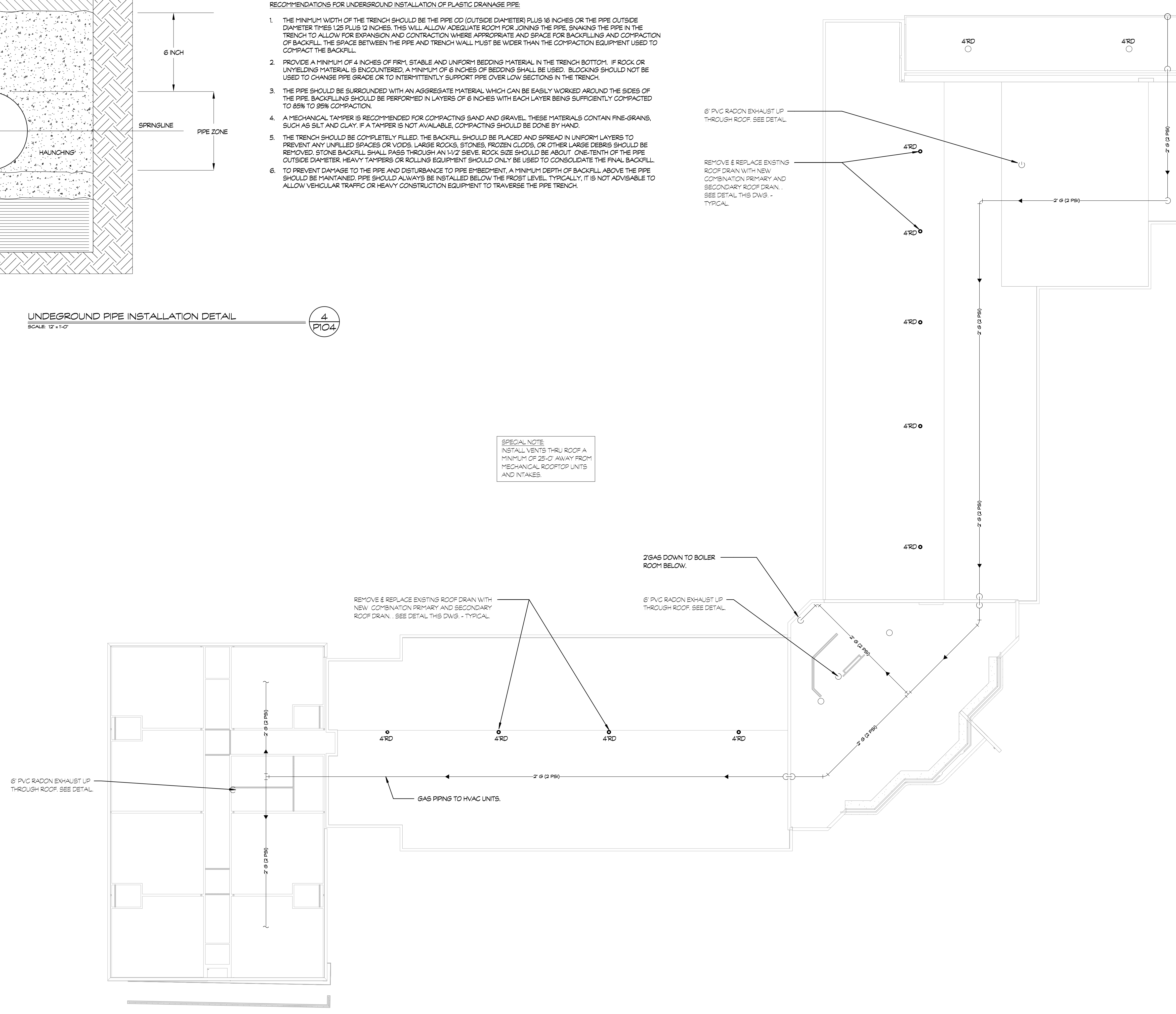
1. THE MINIMUM WIDTH OF THE TRENCH SHOULD BE THE PIPE OD (OUTSIDE DIAMETER) PLUS 16 INCHES OR THE PIPE OUTSIDE DIAMETER TIMES 1.25 PLUS 12 INCHES. THIS WILL ALLOW ADEQUATE ROOM FOR JOINING THE PIPE, SNAKING THE PIPE IN THE TRENCH TO ALLOW FOR EXPANSION AND CONTRACTION WHERE APPROPRIATE AND SPACE FOR BACKFILLING AND COMPACTION OF BACKFILL. THE SPACE BETWEEN THE PIPE AND TRENCH WALL MUST BE WIDER THAN THE COMPACTION EQUIPMENT USED TO COMPACT THE BACKFILL.
2. PROVIDE A MINIMUM OF 4 INCHES OF FIRM, STABLE AND UNIFORM BEDDING MATERIAL IN THE TRENCH BOTTOM. IF ROCK OR UNYIELDING MATERIAL IS ENCOUNTERED, A MINIMUM OF 6 INCHES OF BEDDING SHALL BE USED. BLOCKING SHOULD NOT BE USED TO CHANGE PIPE GRADE OR TO INTERMITTENTLY SUPPORT PIPE OVER LOW SECTIONS IN THE TRENCH.
3. THE PIPE SHOULD BE SURROUNDED WITH AN AGGREGATE MATERIAL WHICH CAN BE EASILY WORKED AROUND THE SIDES OF THE PIPE. BACKFILLING SHOULD BE PERFORMED IN LAYERS OF 6 INCHES WITH EACH LAYER BEING SUFFICIENTLY COMPACTED TO 85% TO 88% COMPACTION.
4. A MECHANICAL TAMPER IS RECOMMENDED FOR COMPACTING SAND AND GRAVEL. THESE MATERIALS CONTAIN FINE-GRAINS, SUCH AS SILT AND CLAY. IF A TAMPER IS NOT AVAILABLE, COMPACTING SHOULD BE DONE BY HAND.
5. THE TRENCH SHOULD BE COMPLETELY FILLED. THE BACKFILL SHOULD BE PLACED AND SPREAD IN UNIFORM LAYERS TO PREVENT ANY UNFILLED SPACES OR VOIDS. LARGE ROCKS, STONES, FROZEN CLODS, OR OTHER LARGE DEBRIS SHOULD BE REMOVED. STONE BACKFILL SHALL PASS THROUGH AN 1/2" SIEVE. ROCK SIZE SHOULD BE ABOUT ONE-TENTH OF THE PIPE OUTSIDE DIAMETER. HEAVY TAMPERS OR ROLLING EQUIPMENT SHOULD ONLY BE USED TO CONSOLIDATE THE FINAL BACKFILL.
6. TO PREVENT DAMAGE TO THE PIPE AND DISTURBANCE TO PIPE EMBEDMENT, A MINIMUM DEPTH OF BACKFILL ABOVE THE PIPE SHOULD BE MAINTAINED. PIPE SHOULD ALWAYS BE INSTALLED BELOW THE FROST LEVEL. TYPICALLY, IT IS NOT ADVISABLE TO ALLOW VEHICULAR TRAFFIC OR HEAVY CONSTRUCTION EQUIPMENT TO TRAVERSE THE PIPE TRENCH.



**UNDEGROUND PIPE INSTALLATION DETAIL**  
SCALE: 12" = 1'-0"

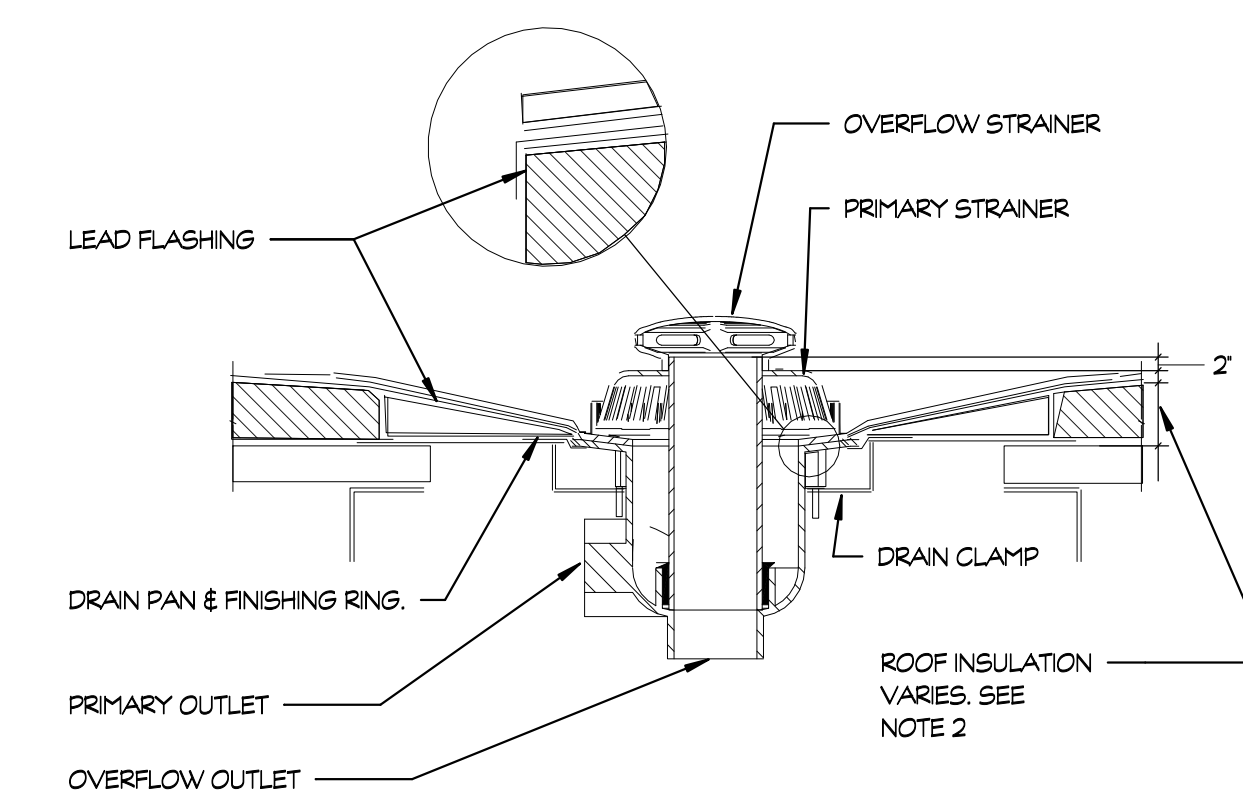
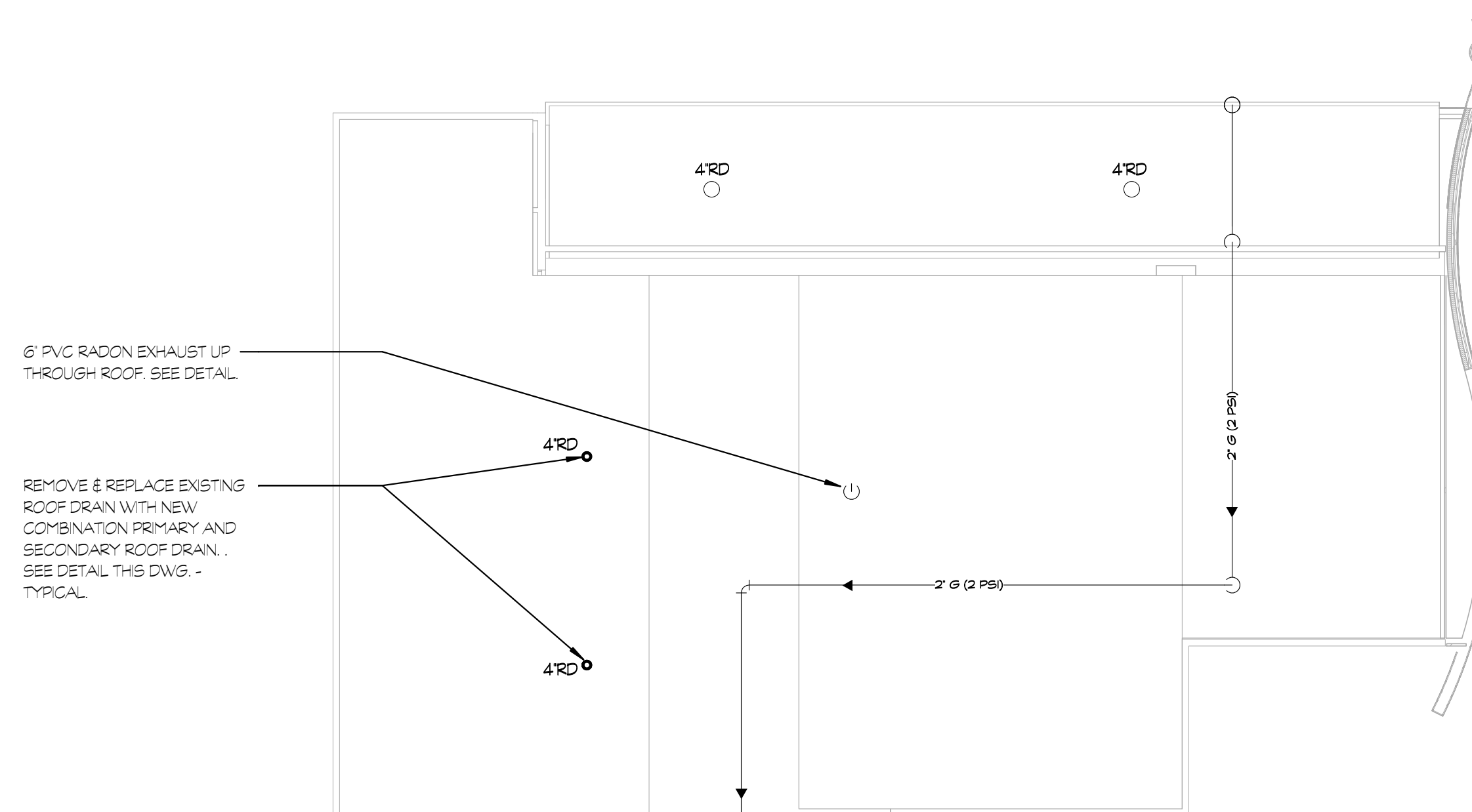
4  
P104

SPECIAL NOTE:  
INSTALL VENTS THRU ROOF A  
MINIMUM OF 25'-0" AWAY FROM  
MECHANICAL ROOFTOP UNITS  
AND INTAKES.



**Plumbing Roof Plan**  
SCALE: 1/8" = 1'-0"

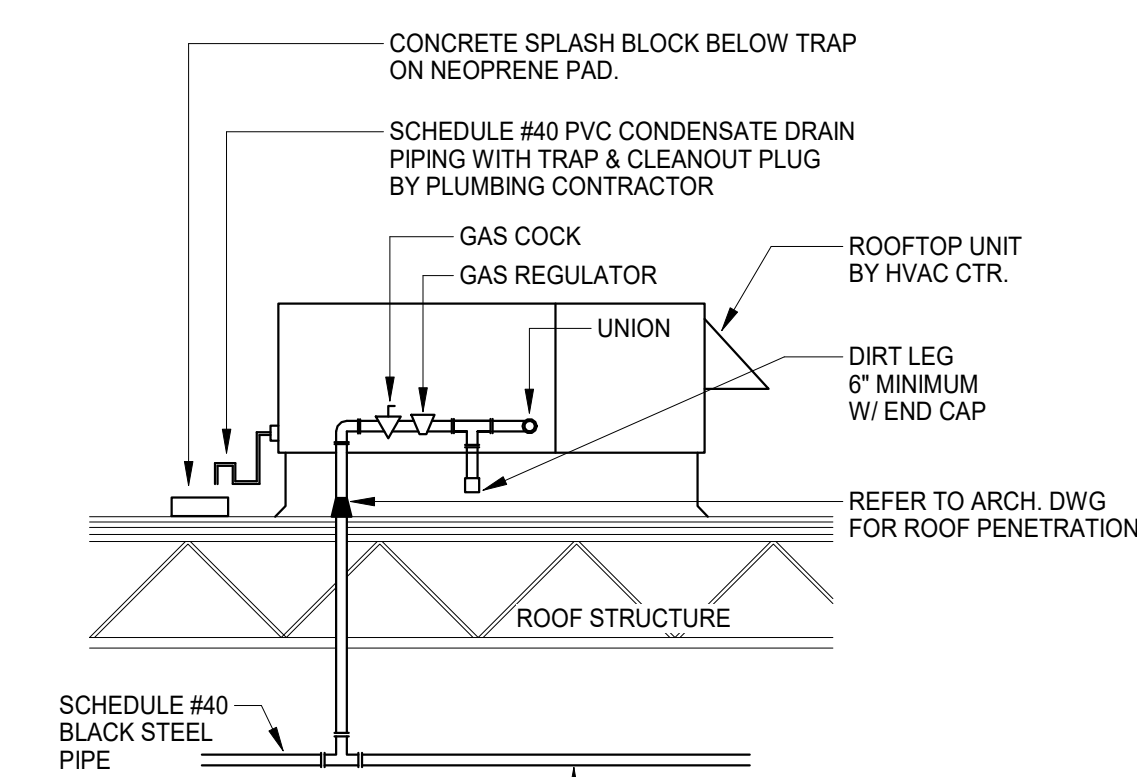
1  
P104



- NOTES:
1. PRIMARY OUTLET CANNOT BE INSTALLED PERPENDICULAR TO FRAMING. MUST BE INSTALLED ASKEW TO CLEAR FRAMING WITH CLOSE ELBOW.
  2. REFER TO ARCHITECTURAL PLANS FOR ROOFING DETAILS.

**COMBINATION OVERFLOW ROOF DRAIN DETAIL**  
SCALE: NTS

3  
P104



NOTE:  
1) ALL GAS PIPING ABOVE ROOF SHALL BE PAINTED WITH 2 COATS OF RUST INHIBITIVE PAINT.

**HVAC ROOFTOP PLUMBING CONNECTIONS DETAIL**  
SCALE: NTS

2  
P104

Project Title:  
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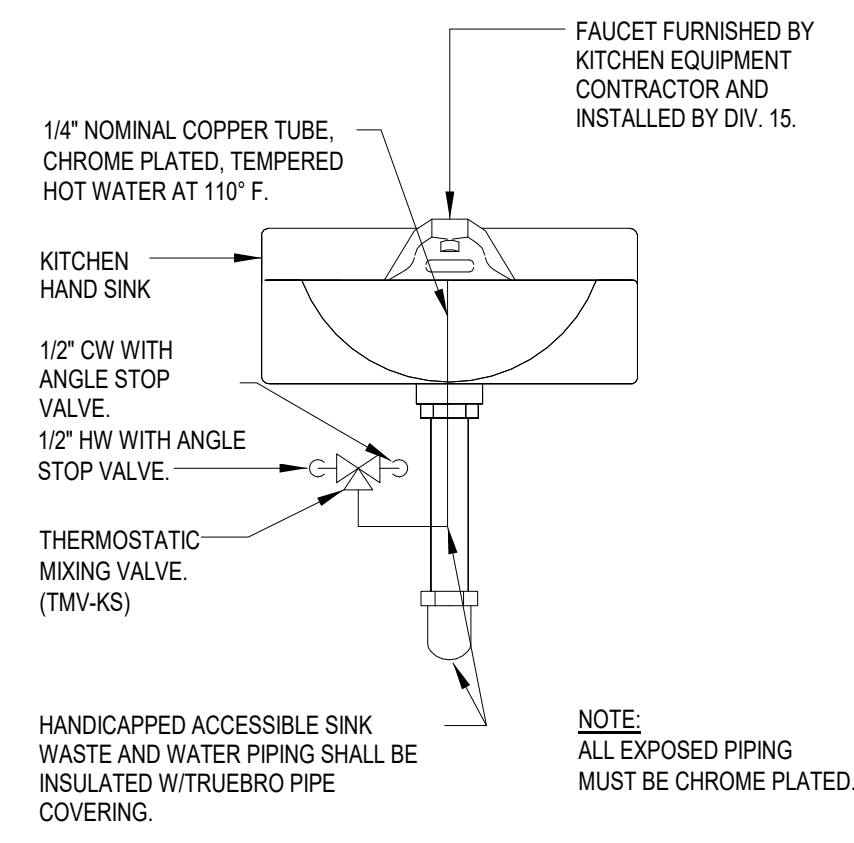
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**PLUMBING ROOF PLAN**

State Project #: 162-0043RNV

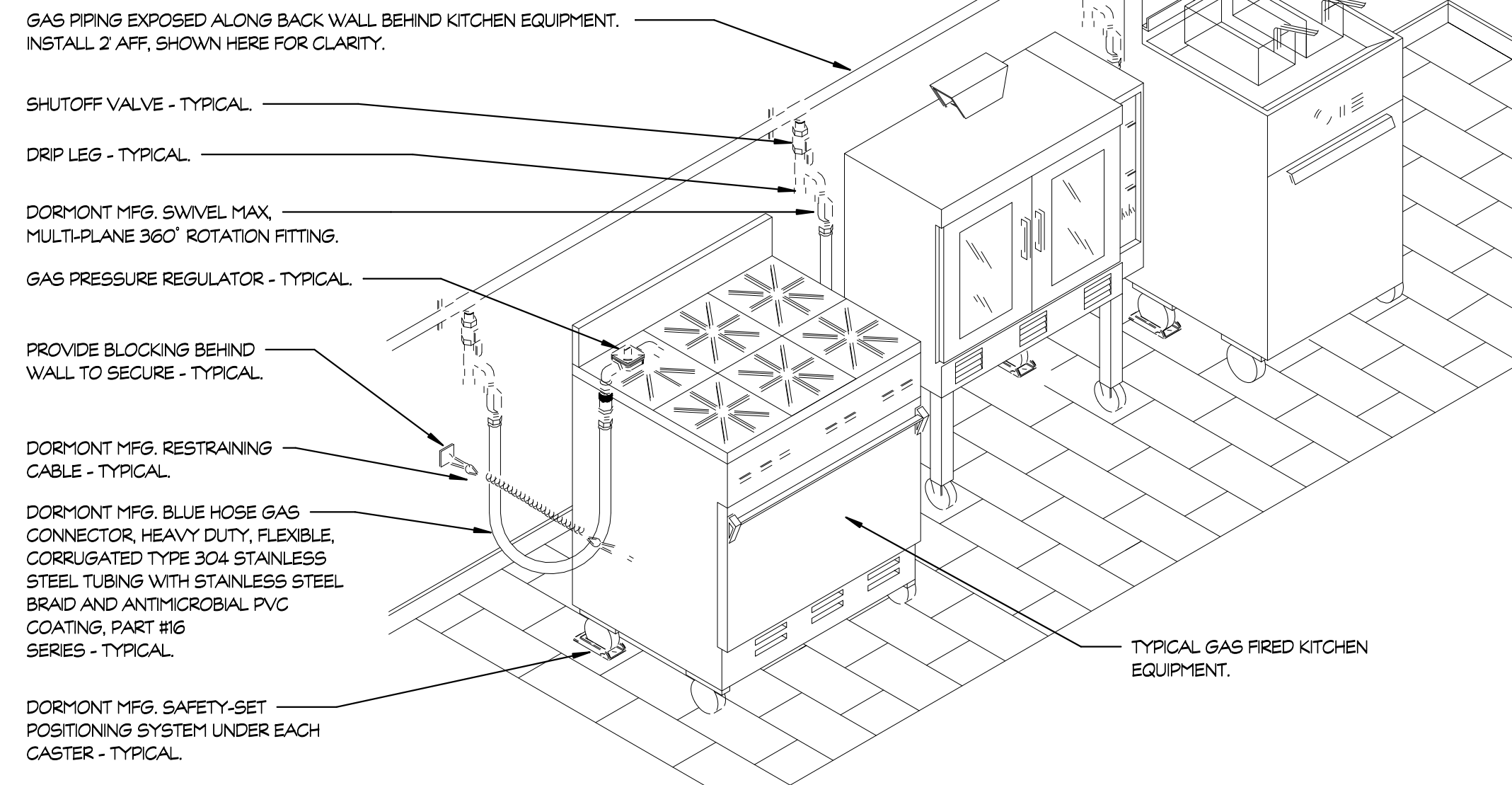
Date:  
June 30, 2020  
Scale:  
As Indicated  
Drawn By:  
JES  
Project Number:  
18-223

Drawing Number:

**P104**



DETAIL OF HAND SINK AT KITCHEN  
SCALE: NTS



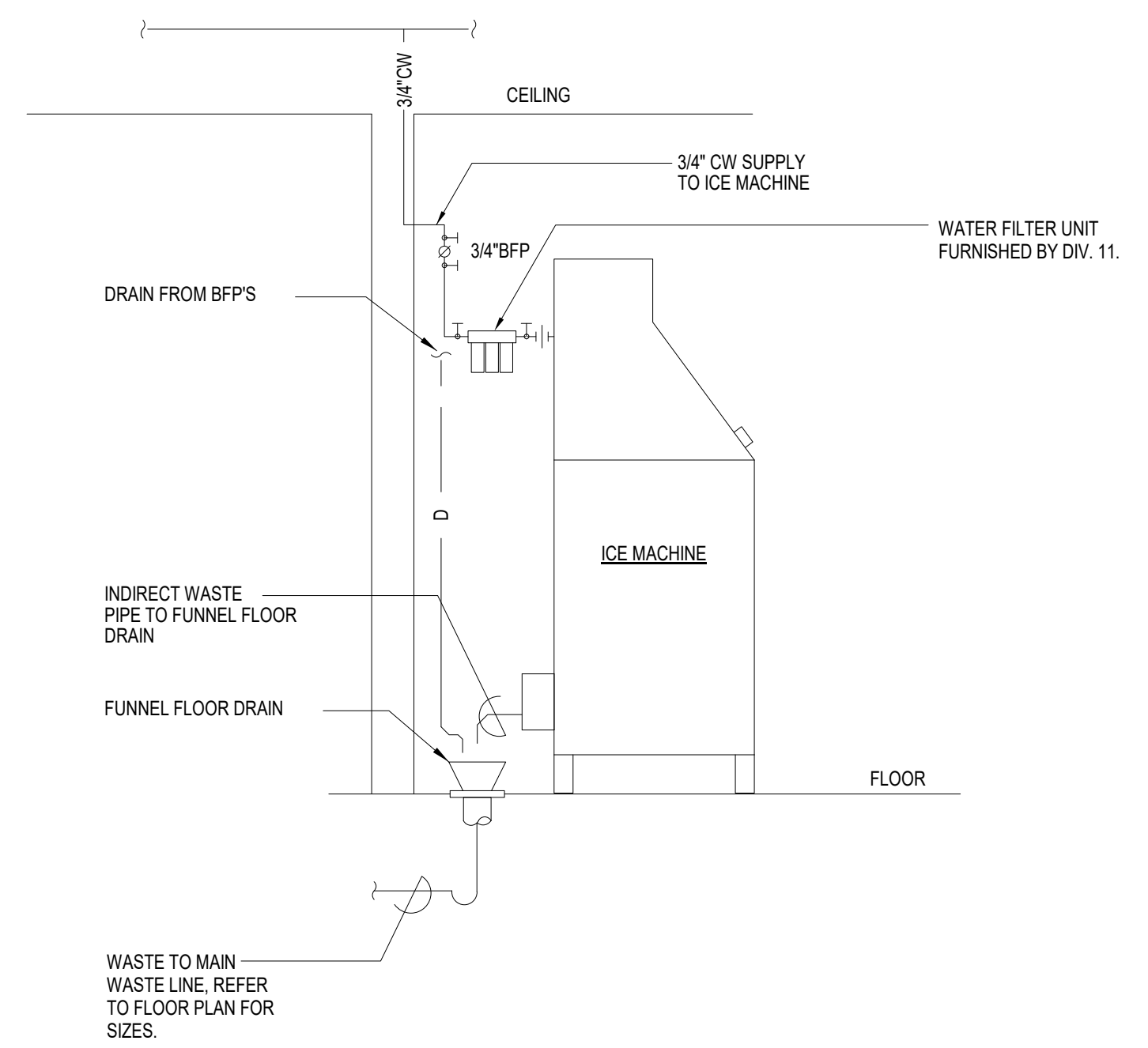
DETAIL OF KITCHEN GAS PIPING  
SCALE: NTS

| SCHEDULE OF FOOD SERVICE EQUIPMENT & CONNECTIONS |                      |          |          |        |       |       |      |      |
|--|----------------------|----------|----------|--------|-------|-------|------|------|
| ITEM NO.   | DESCRIPTION          | PLUMBING |          |        |       |       |      |      |
|  |                      | HW       | CW       | W      | IW    | FD/FS | G    | MBTU |
| AK 01  | SALAD/DELI COUNTER   |          |          |        | X     | FD    |      |      |
| AK 02  | BACKCOUNTER W/SINK   | 1/2"     | 1/2"     |        | X     | FS    |      |      |
| AK 15  | HANDWASH SINK        | 1/2"     | 1/2"     | 1-1/2" |       |       |      |      |
| BK 06  | HANDWASH SINK        | 1/2"     | 1/2"     | 1-1/2" |       |       |      |      |
| BK 07  | PREP TABLE W/SINKS   | 1/2"     | 1/2"     |        | X     | FS    |      |      |
| BK 13  | TILTING SKILLET      | 1/2"     | 1/2"     |        |       |       | 3/4" | 125  |
| BK 14  | FLOOR TROUGH         |          |          | 4"     |       |       |      |      |
| BK 15  | RANGE                | 1/2"     |          |        |       |       | 1"   | 160  |
| BK 16  | CHAR-BROILER         |          |          |        |       |       | 3/4" | 60   |
| BK 18  | DBL. CONVECTION OVEN |          |          |        |       |       | 1"   | 120  |
| BK 19  | CHEF'S TABLE W/SINK  | 1/2"     | 1/2"     |        | X     | FS    |      |      |
| BK 25  | POTWASH SINK         | (2) 1/2" | (2) 1/2" |        | (3) X | FS    |      |      |
| BK 25  | ICE MAKER W/IBN      |          | 1/2"     |        | (2) X | FD    |      |      |
| BK 26  | WASHER               | 1/2"     | 1/2"     |        | X     | FD    |      |      |
| BK 27  | DRYER                |          |          |        | X     |       |      |      |

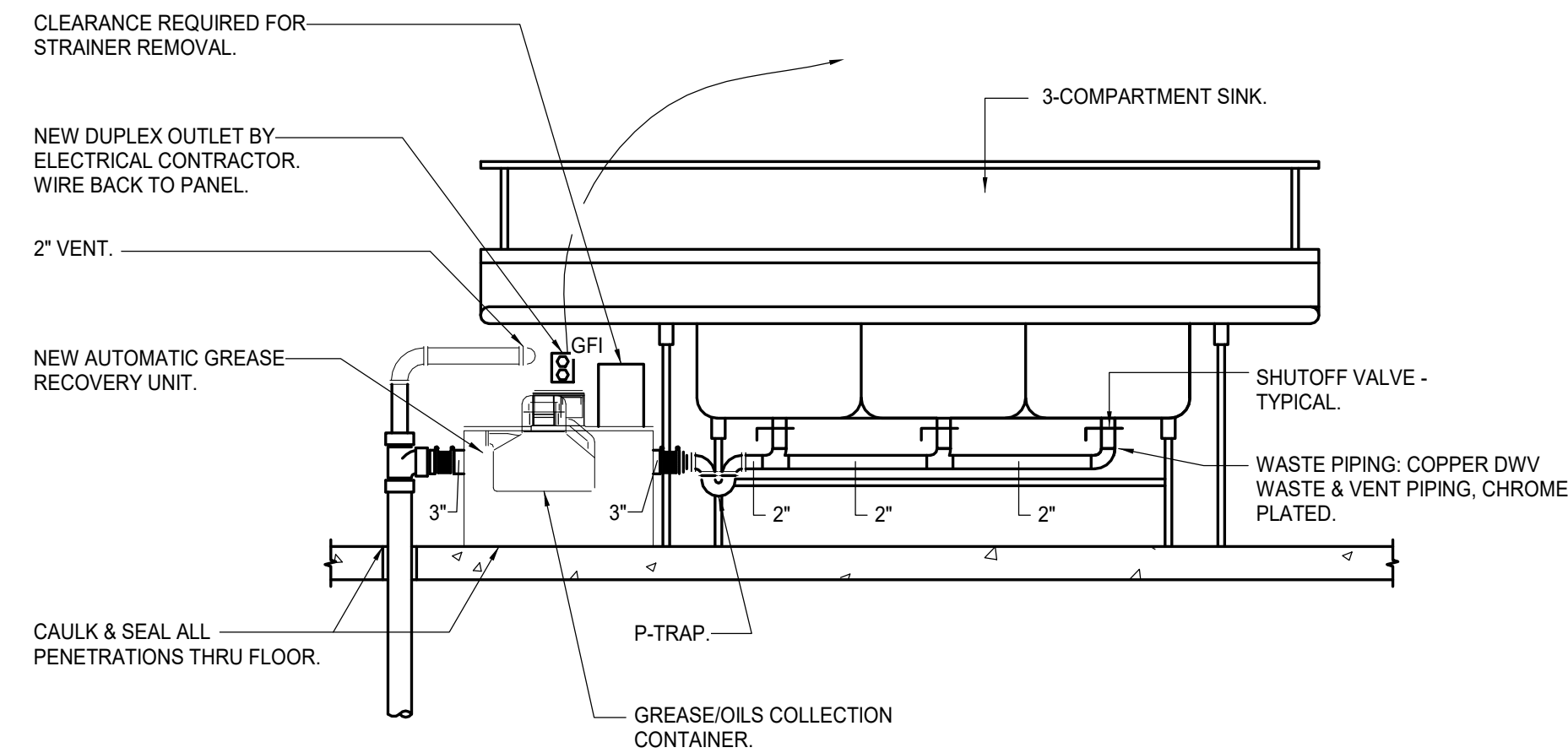
| SYMBOL LEGEND |                      |
|---------------|----------------------|
| FS            | - FLOOR SINK         |
| ID            | - INDIRECT DRAIN     |
| FD            | - FLOOR DRAIN        |
| FFD           | - FUNNEL FLOOR DRAIN |

**PLUMBING KITCHEN GENERAL NOTES**

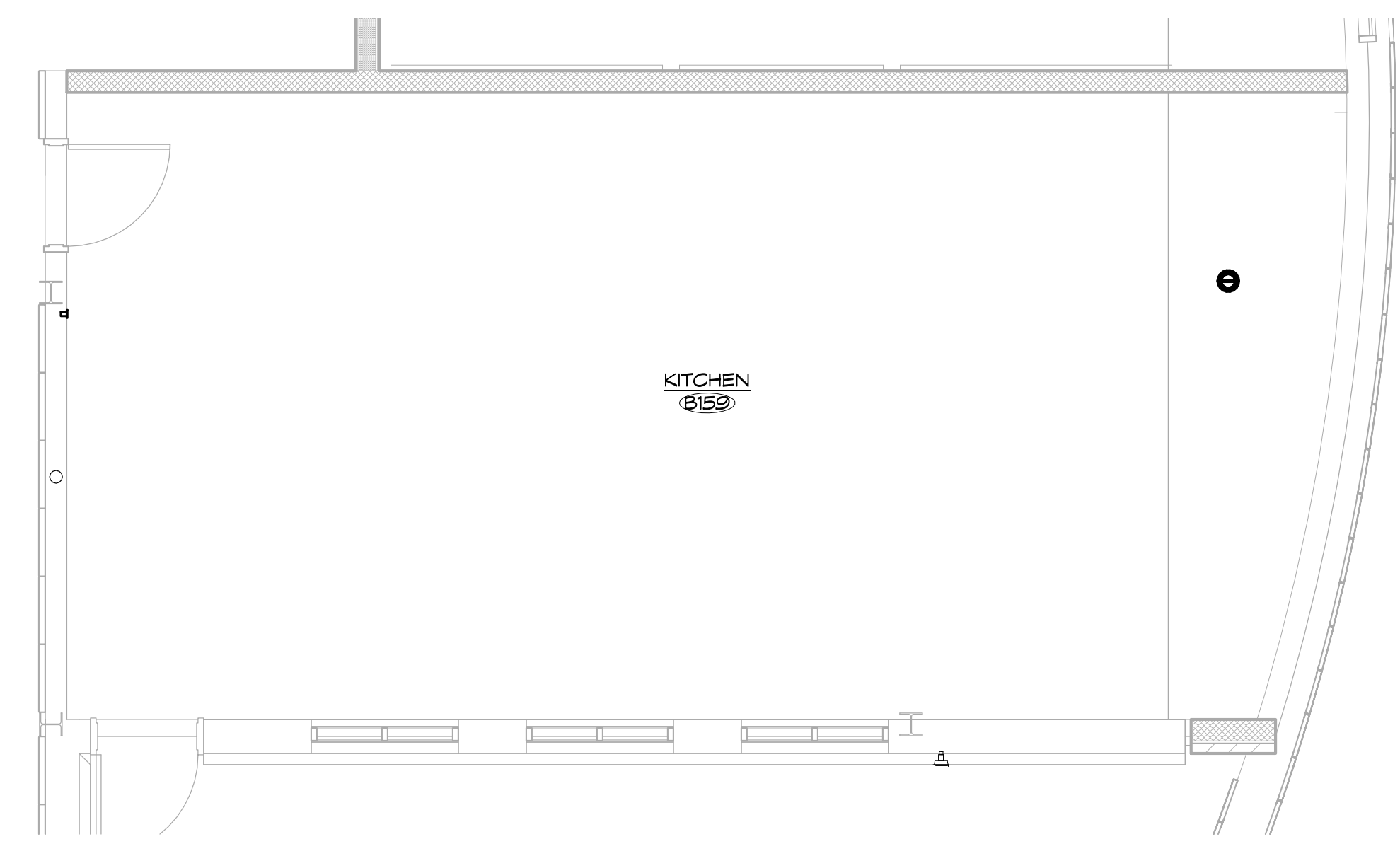
- EXACT LOCATION OF ALL HOT, COLD GAS AND WASTE PIPING SHALL BE DETERMINED FROM FINAL EQUIPMENT ROUGHING DRAWINGS AND SPECIFICATIONS.
- KITCHEN EQUIPMENT AS LISTED IN SCHEDULE SHALL BE FURNISHED BY KITCHEN EQUIPMENT CONTRACTOR.
  - FAUCETS, SINK STRAINERS AND TAILPIECES SHALL BE PROVIDED BY KITCHEN EQUIPMENT CONTRACTOR AND INSTALLED BY PLUMBING CONTRACTOR.
  - PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL TRAPS AND STOP VALVES AS REQUIRED. PLUMBER SHALL INSTALL FAUCETS AND TAILPIECES AND CONNECT TO PLUMBING SERVICES AS REQUIRED.
  - PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL STOP VALVES AT EVERY FIXTURE AND PIECE OF EQUIPMENT.
- PLUMBING CONTRACTOR SHALL EXTEND ALL INDIRECT WASTE LINES FROM EVAPORATOR COILS, COMPRESSORS, HOT FOOD WELLS, STEAM TABLES, COLD PANS, ETC., TO THE NEAREST FLOOR DRAINS OR FLOOR SINKS. FOR EXACT LOCATION OF INDIRECT WASTE LINES, REFER TO KITCHEN EQUIPMENT ROUGH-IN PLANS.
- KITCHEN EQUIPMENT CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY REFRIGERATION LINES FROM ALL COMPRESSORS TO THE EVAPORATOR COILS IN THE WALK-IN BOXES.
- KITCHEN EQUIPMENT CONTRACTOR SHALL FURNISH AND INSTALL RUBBER GROMMETS FOR ALL COUNTER TOP CUTS MADE FOR PIPING CONNECTIONS AS REQUIRED.
- WHEN RUNNING WATER PIPING BELOW THE FLOOR SLAB, PIPING SHALL BE CPVC.
- ALL EXPOSED PIPING SHALL BE CHROME PLATED.
- PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ACCESSIBLE STOP VALVES AT EVERY FIXTURE AND EVERY PIECE OF KITCHEN EQUIPMENT.
- WHERE PIPING IS RUNNING BELOW SLAB, TURN PIPING UP THRU SLAB WITH STOP VALVES AT FLOOR LEVEL.
- ALL INDIRECT DRAINS SHALL BE CUT AT 45° ANGLES.
- ALL FLOOR DRAINS AND FLOOR SINKS SHALL BE STAINLESS STEEL, 4" PIPE SIZE/DIAMETER IN KITCHEN WITH TRAP PRIMERS.



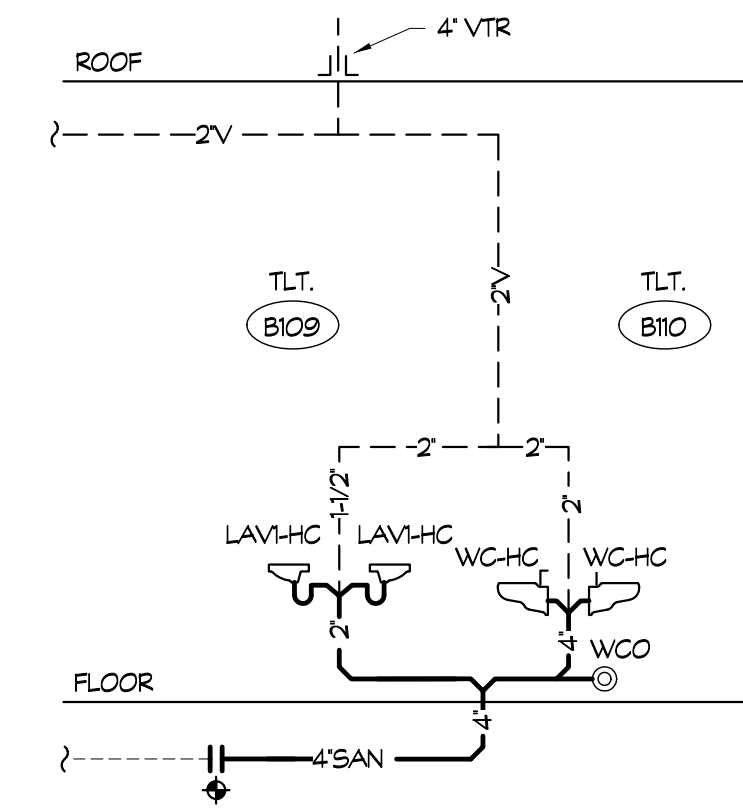
DETAIL OF ICE MACHINE AT KITCHEN  
SCALE: NTS



GREASE RECOVERY UNIT DETAIL  
SCALE: NTS

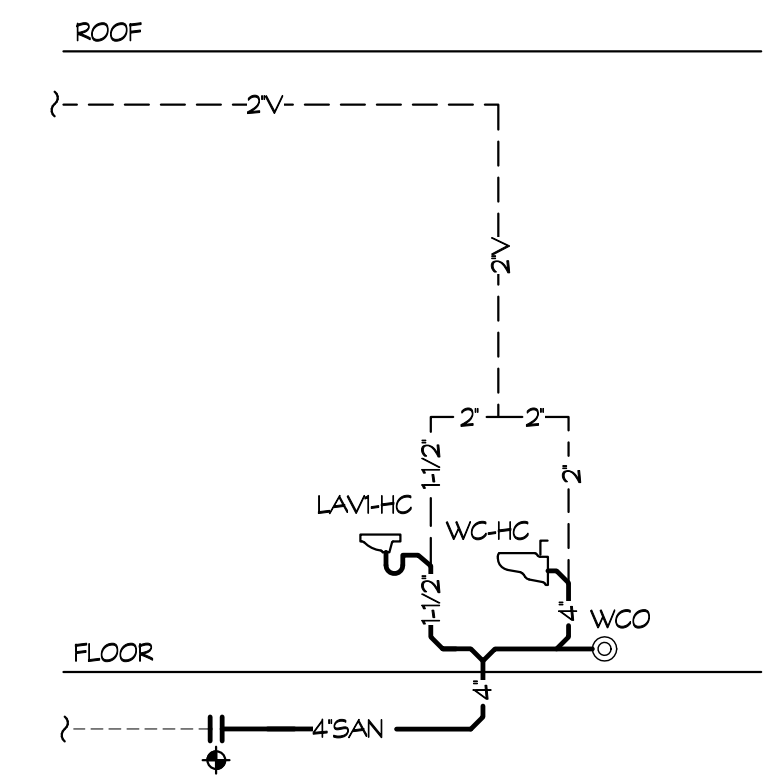


PLUMBING KITCHEN ENLARGED PLAN  
SCALE: 1/4" = 1'-0"



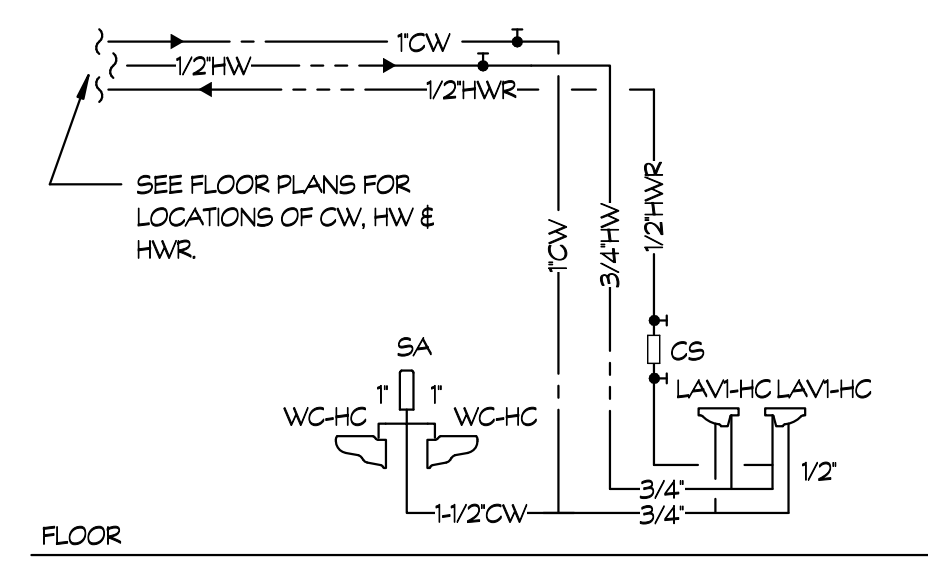
5 SANITARY RISER DIAGRAM  
P-601 SCALE: NONE

REFERENCE PLUMBING DWGS. P102 FOR 1/8\"/>



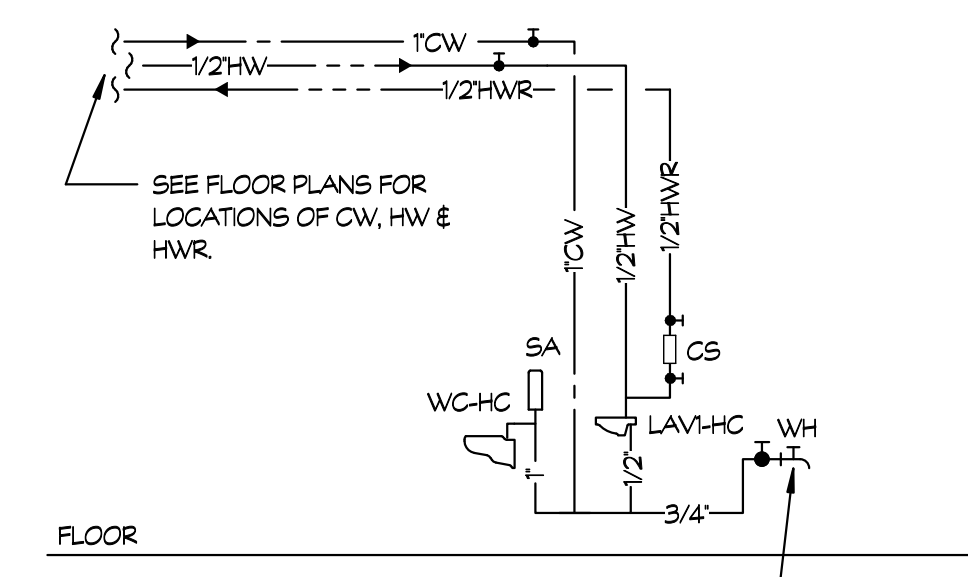
1 SANITARY RISER DIAGRAM  
P-601 SCALE: NONE

REFERENCE PLUMBING DWGS. FOR 1/8\"/>



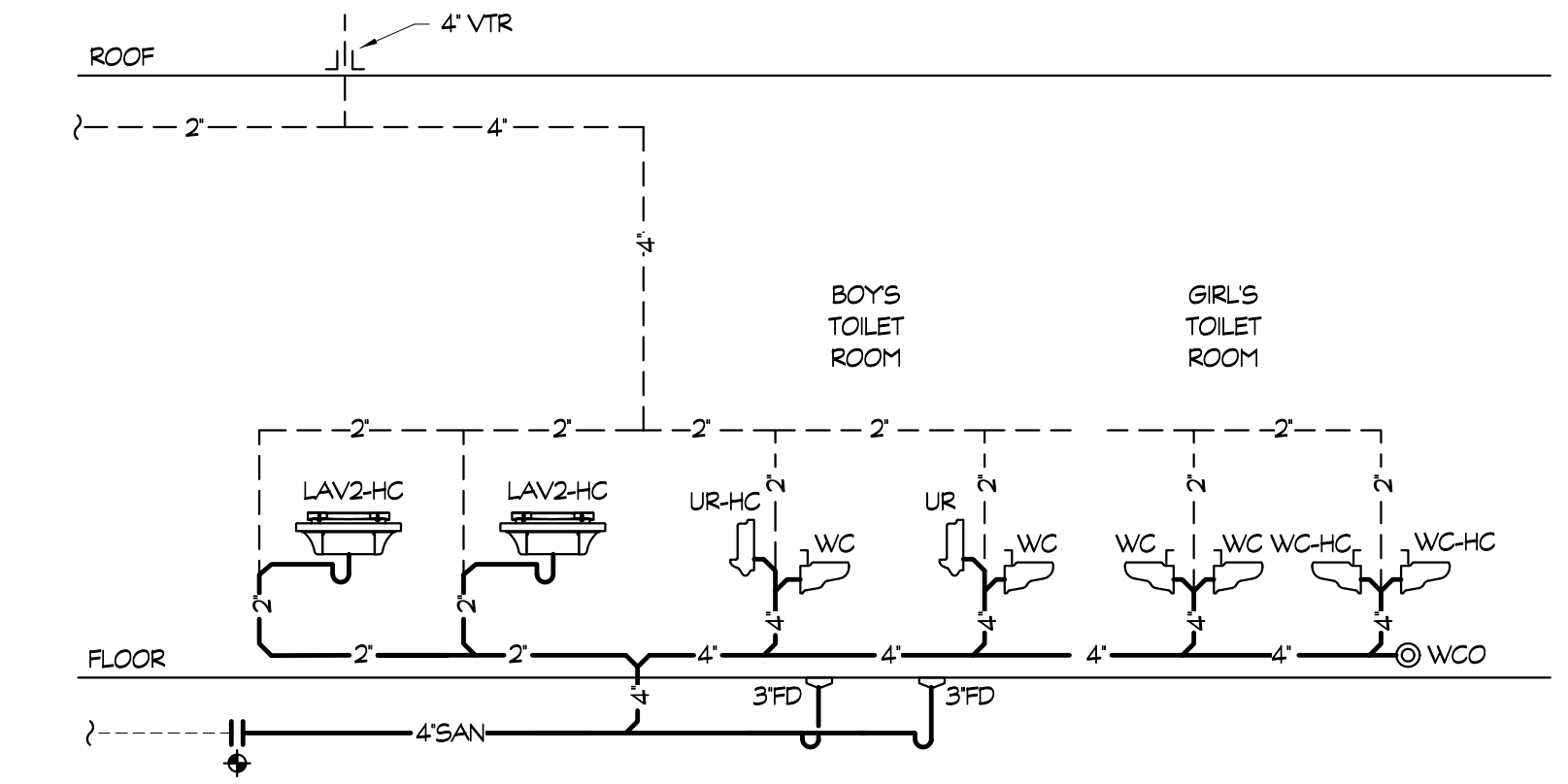
6 WATER RISER DIAGRAM  
P-601 SCALE: NONE

REFERENCE PLUMBING DWGS. P102 FOR 1/8\"/>



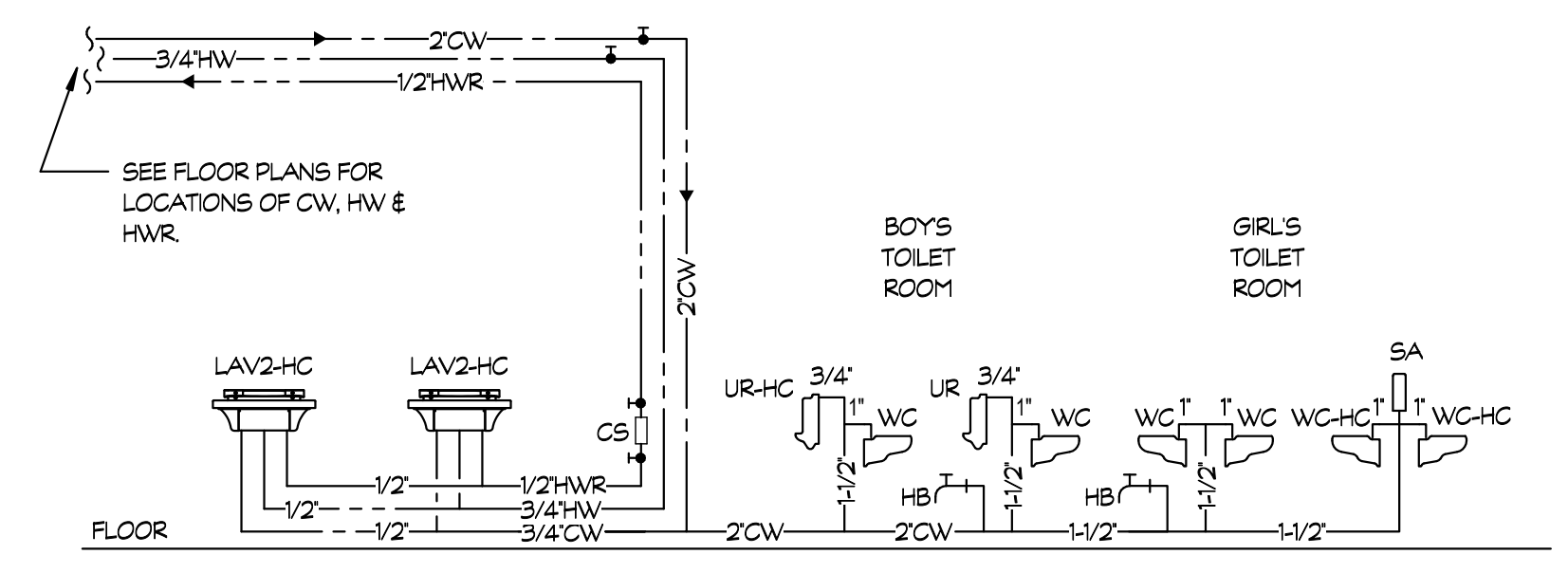
2 WATER RISER DIAGRAM  
P-601 SCALE: NONE

REFERENCE PLUMBING DWGS. FOR 1/8\"/>



3 SANITARY RISER DIAGRAM  
P-600 SCALE: NONE

REFERENCE PLUMBING DWGS. FOR 1/8\"/>

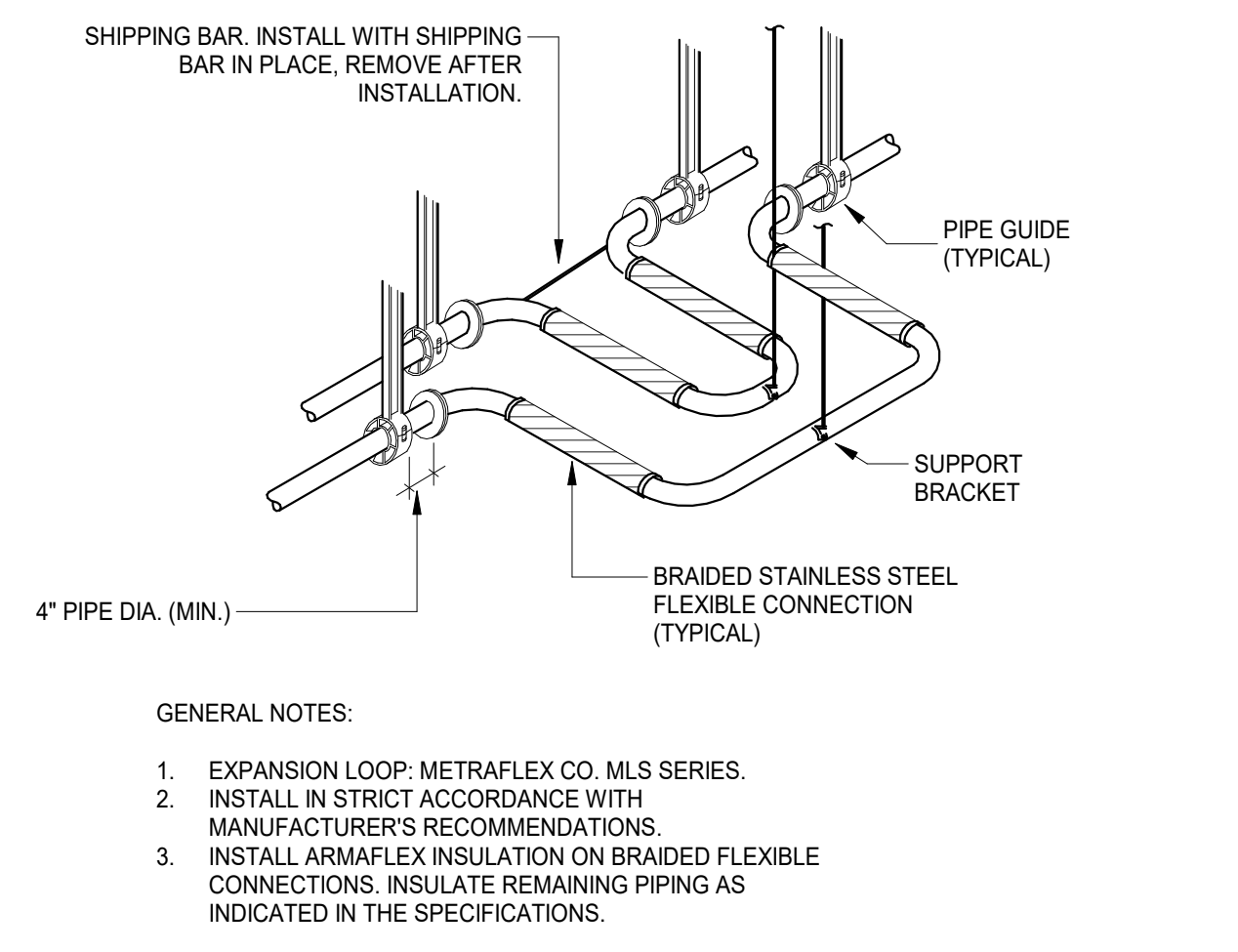


4 WATER RISER DIAGRAM  
P-600 SCALE: NONE

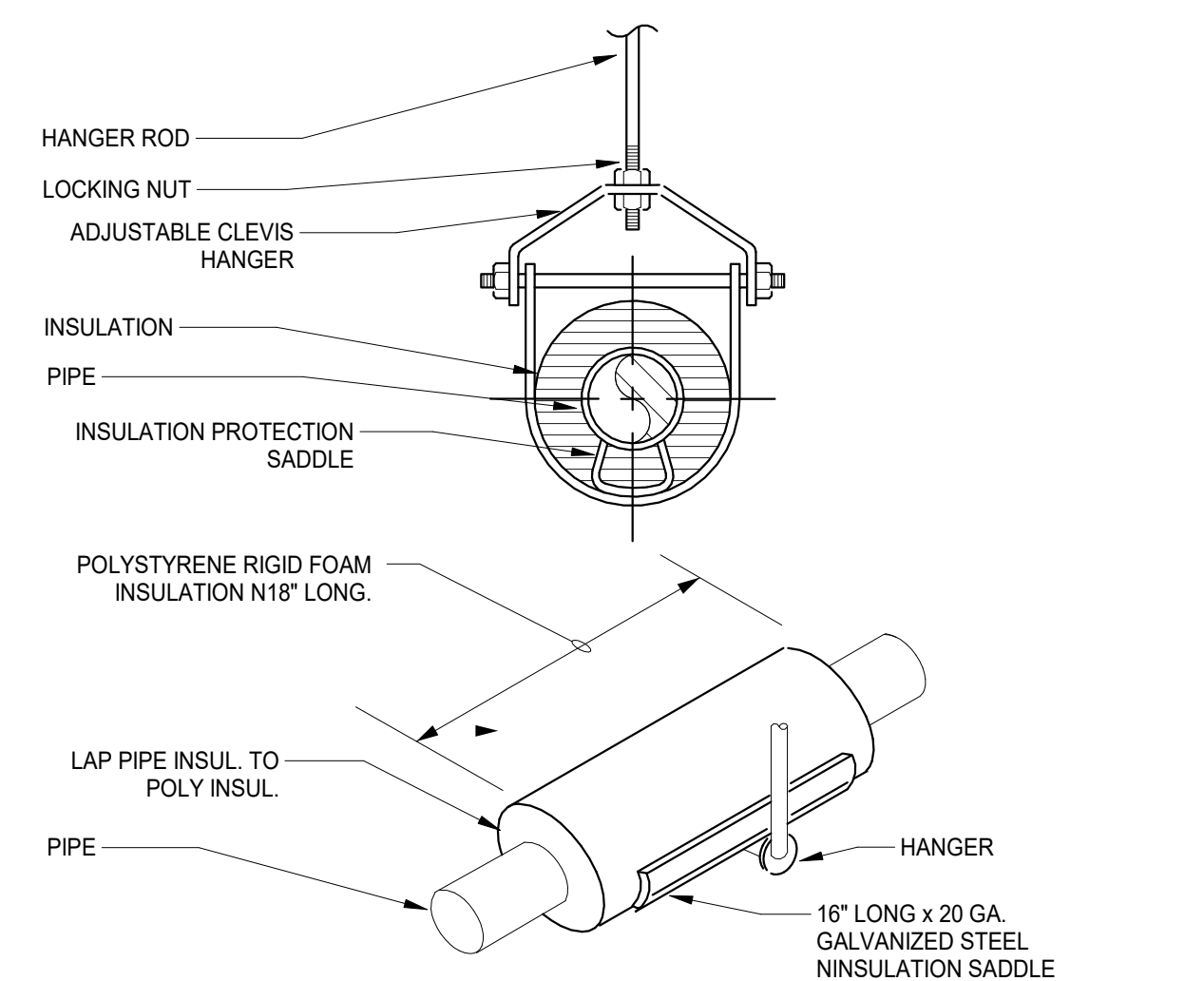
REFERENCE PLUMBING DWGS. FOR 1/8\"/>



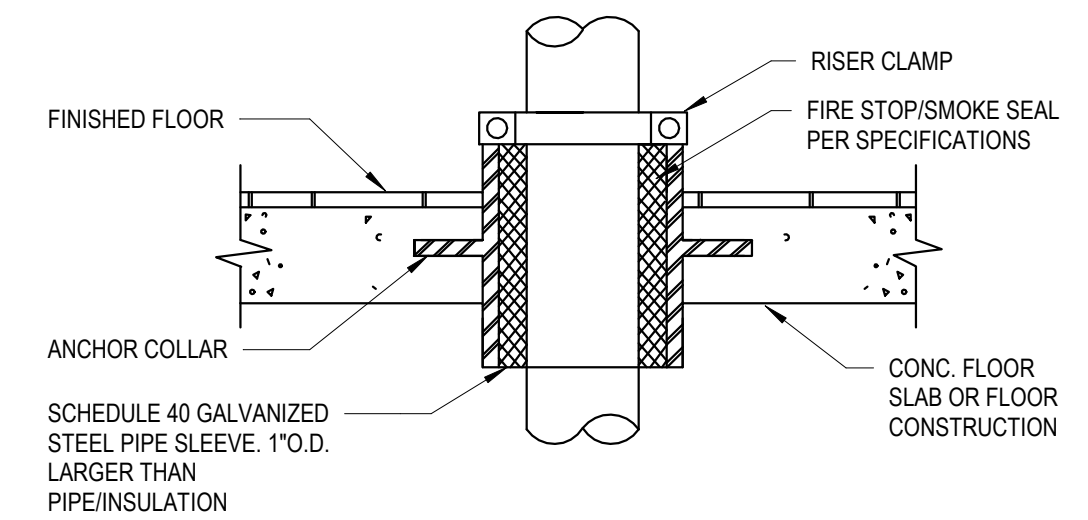
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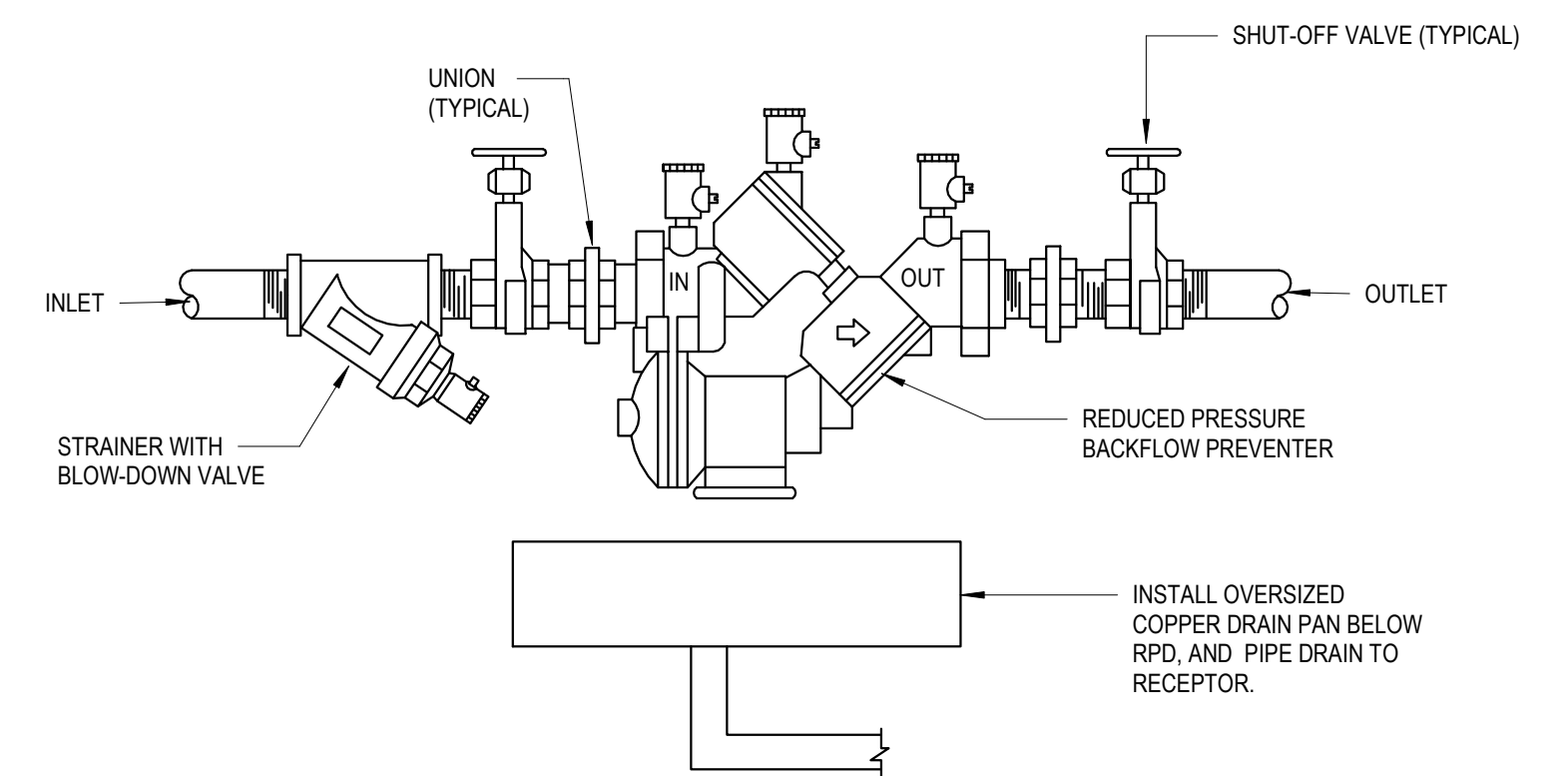
**HOT WATER EXPANSION LOOP DETAIL**  
SCALE: NTS



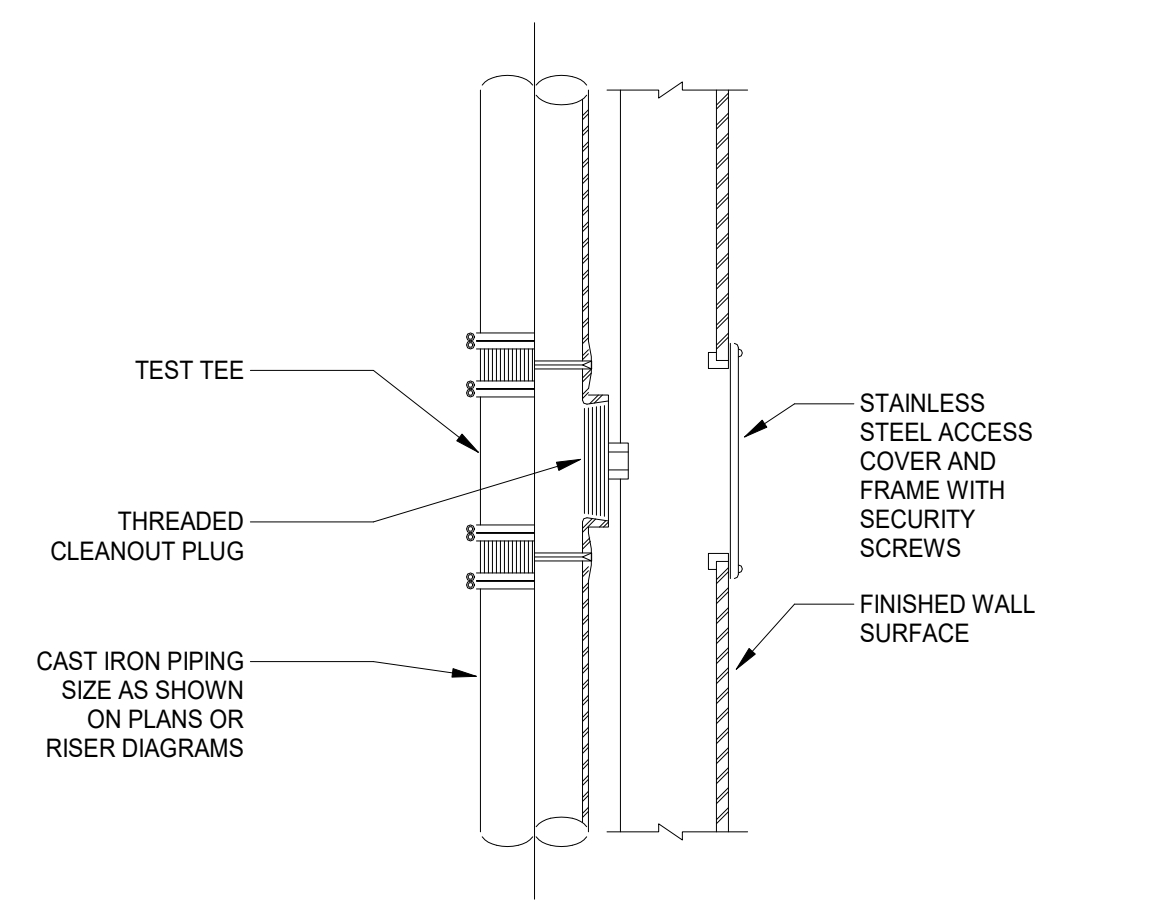
**CLEVIS HANGER WITH SADDLE DETAIL**  
SCALE: NTS



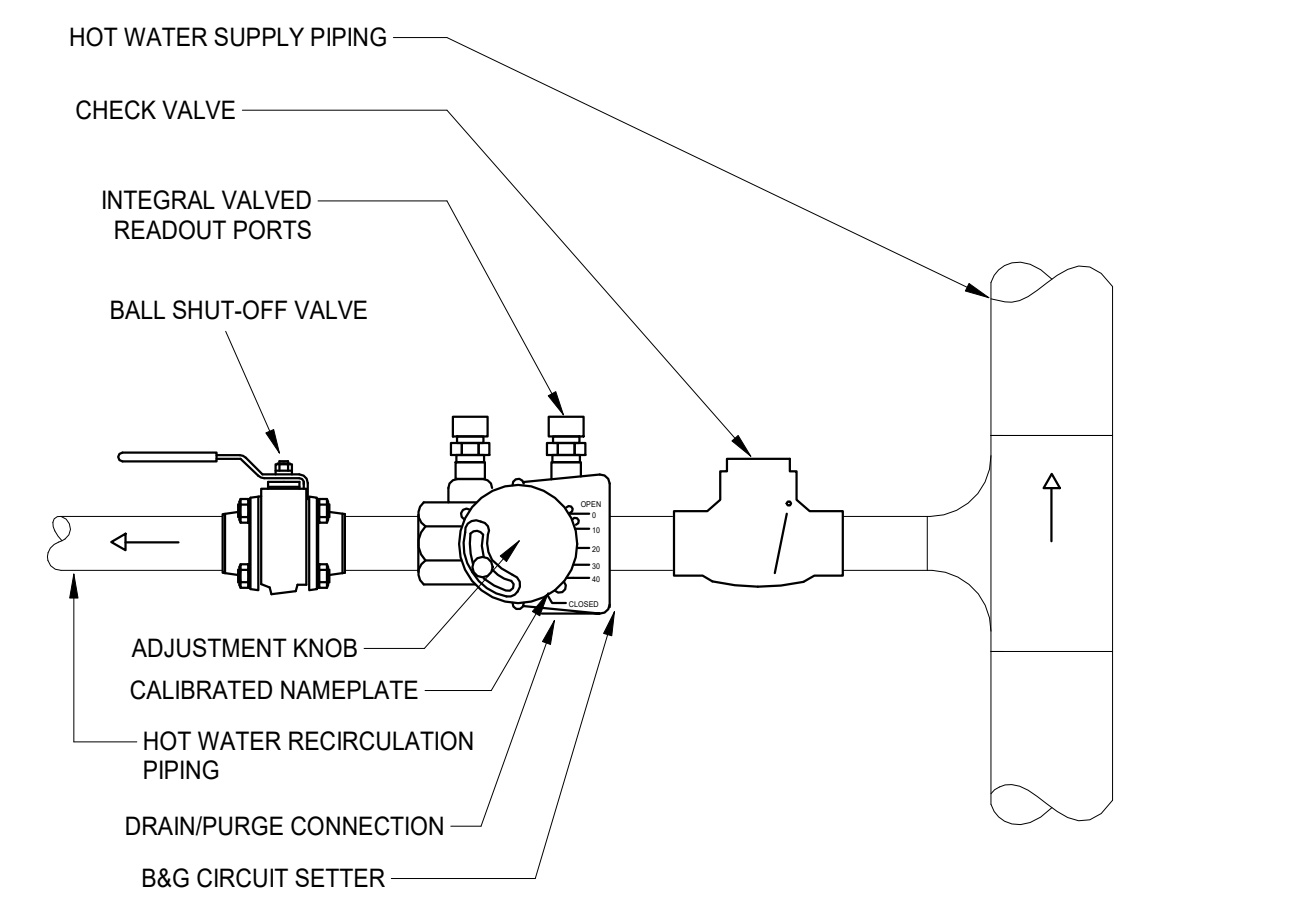
**PIPE PENETRATION DETAIL**  
SCALE: 1/4\"/>



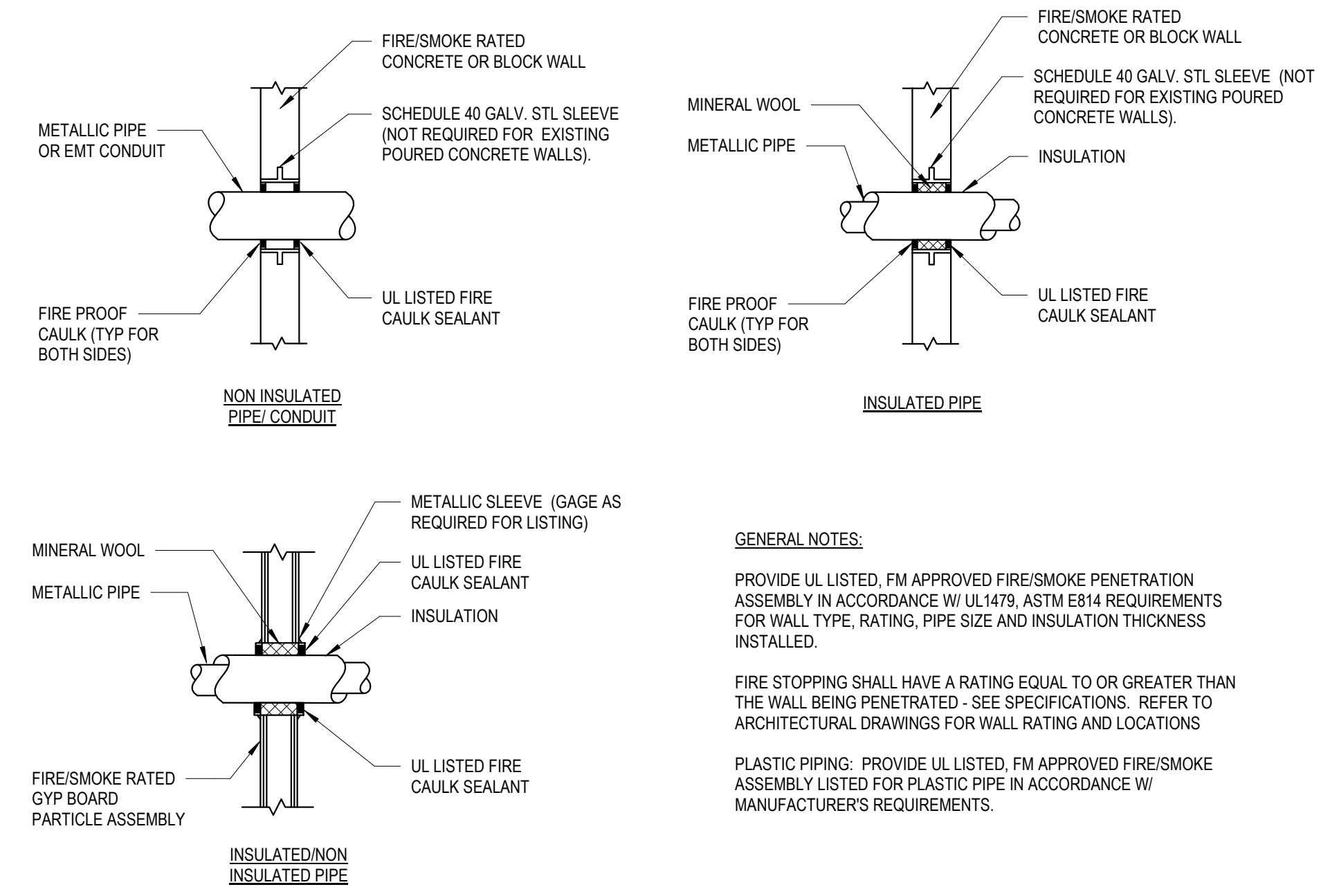
**BACKFLOW PREVENTER DETAIL (2\"/>**



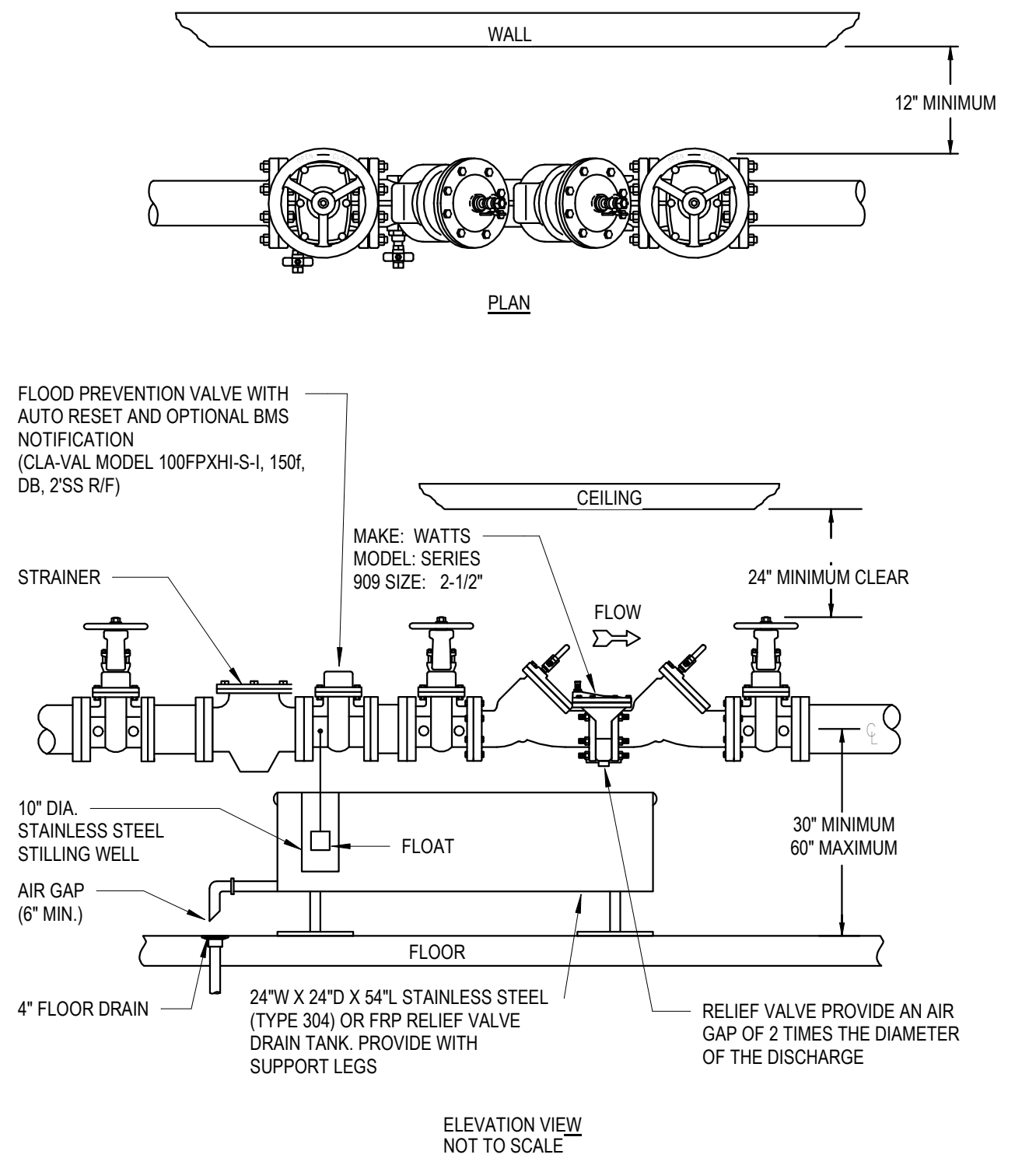
**WALL CLEANOUT DETAIL**  
SCALE: NTS



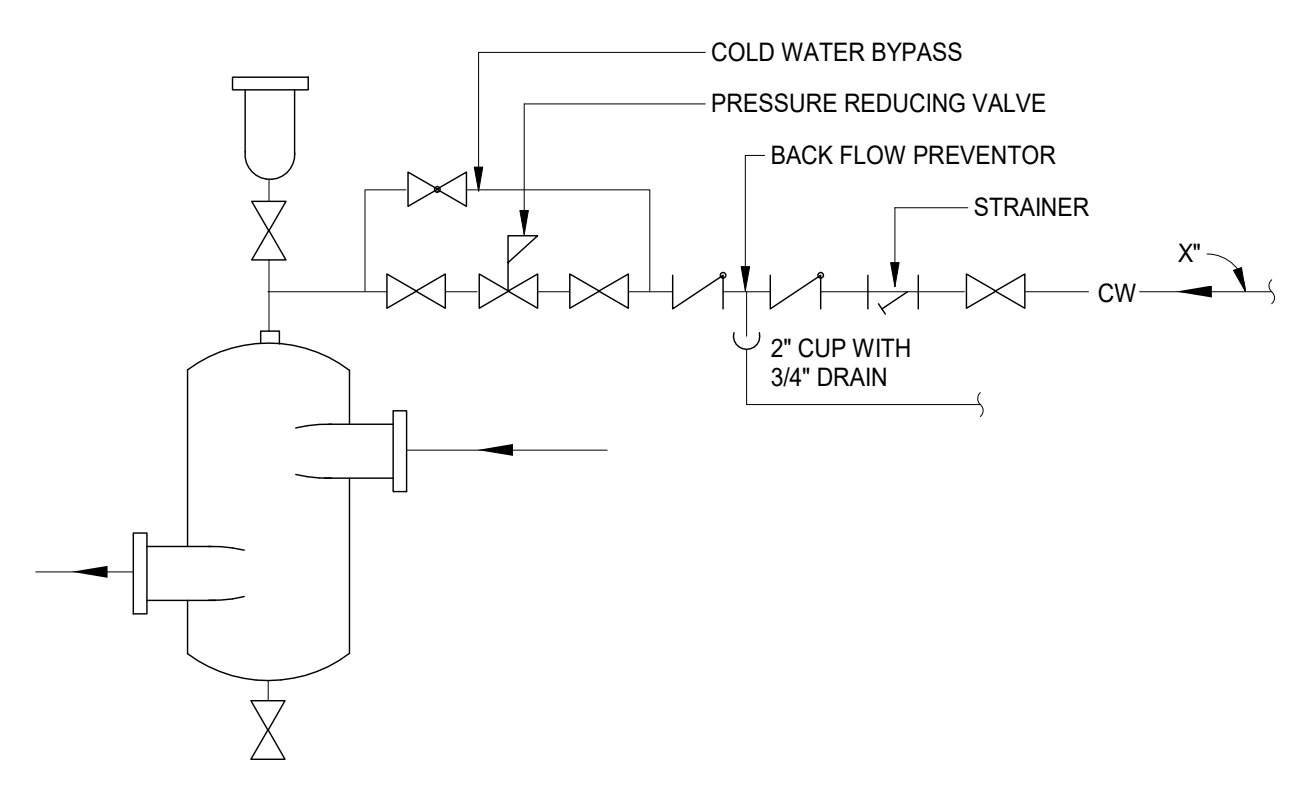
**HOT WATER RECIRCULATING FLOW BALANCE ASSEMBLY**  
SCALE: NTS



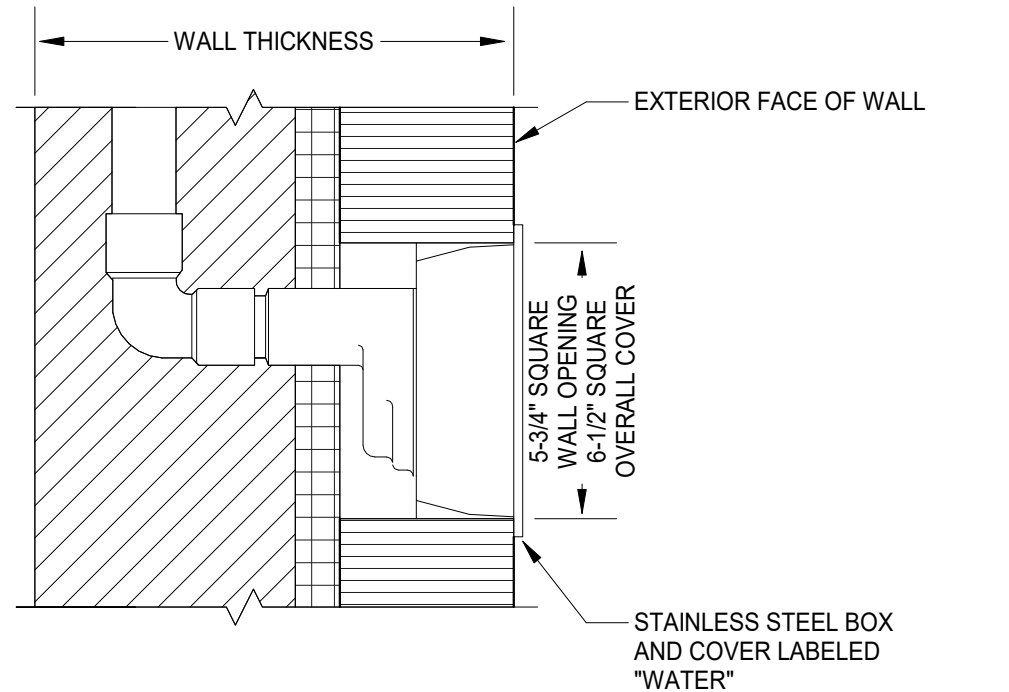
**PIPE PENETRATION WITH FIRE/SMOKE SEAL**  
SCALE: 1/4\"/>



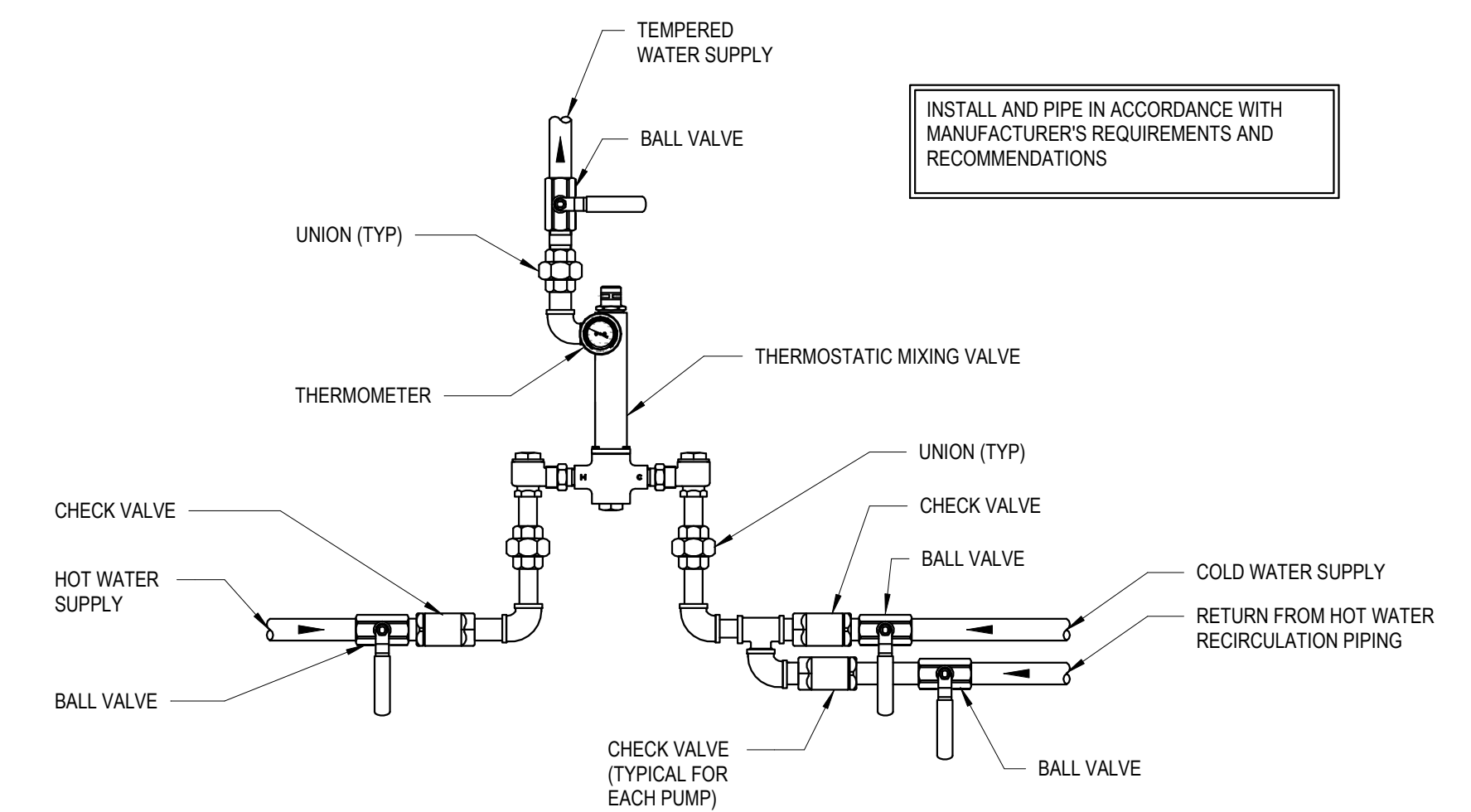
**BACKFLOW PREVENTER DETAIL (2-1/2\"/>**



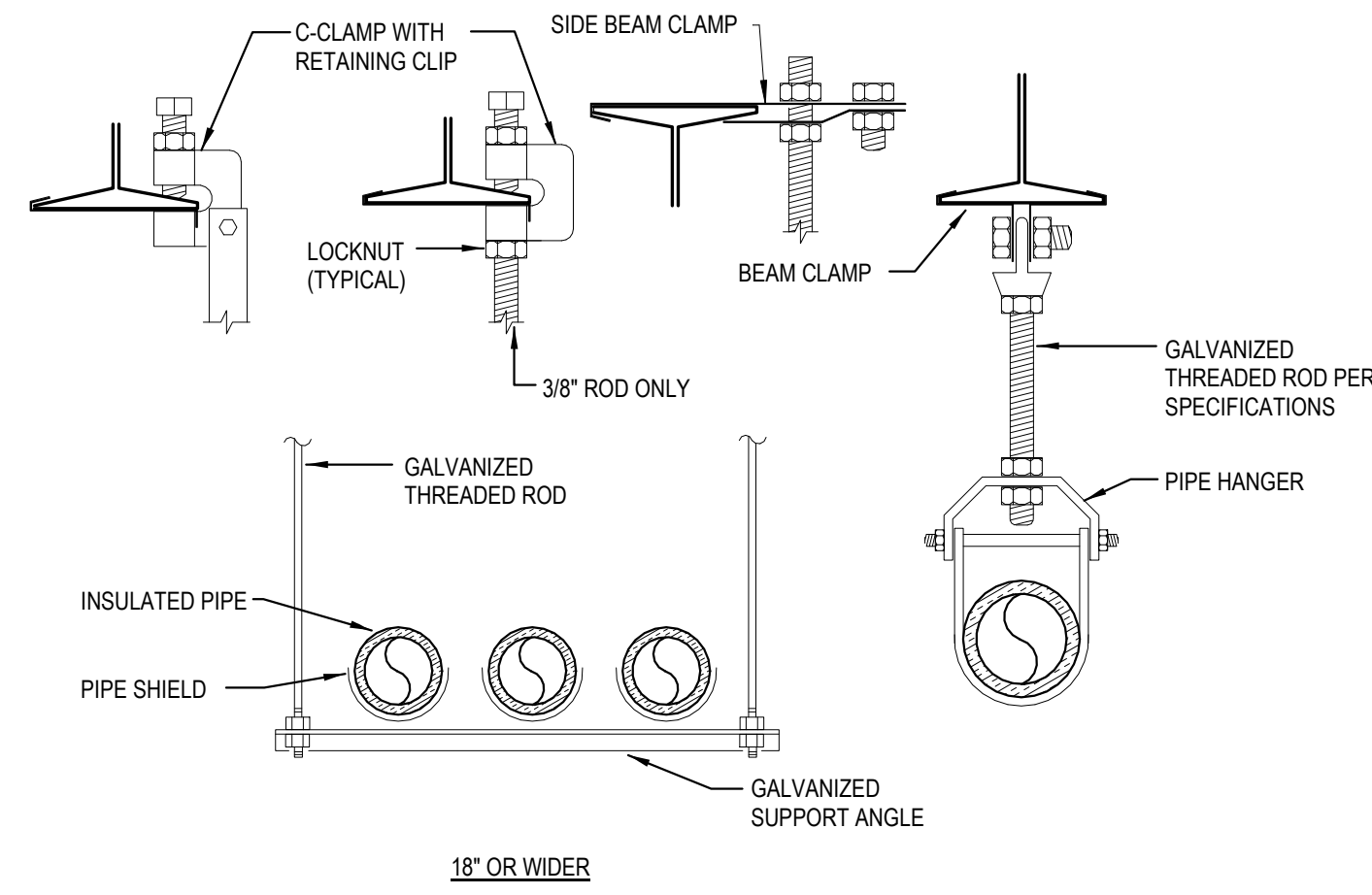
**MAKEUP WATER TO BOILER**  
SCALE: NTS



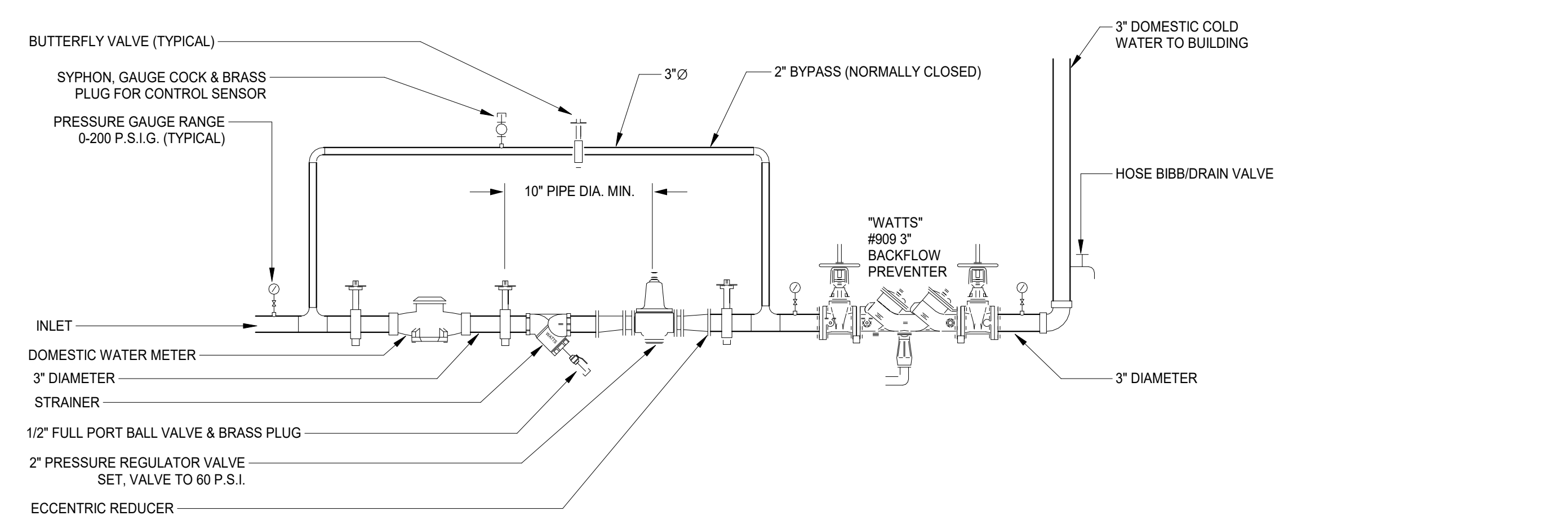
**WALL HYDRANT DETAIL**  
SCALE: NTS



**MASTER THERMOSTATIC MIXING VALVE**  
SCALE: 1/4\"/>



**PIPE SUPPORT DETAIL**  
SCALE: NOT TO SCALE



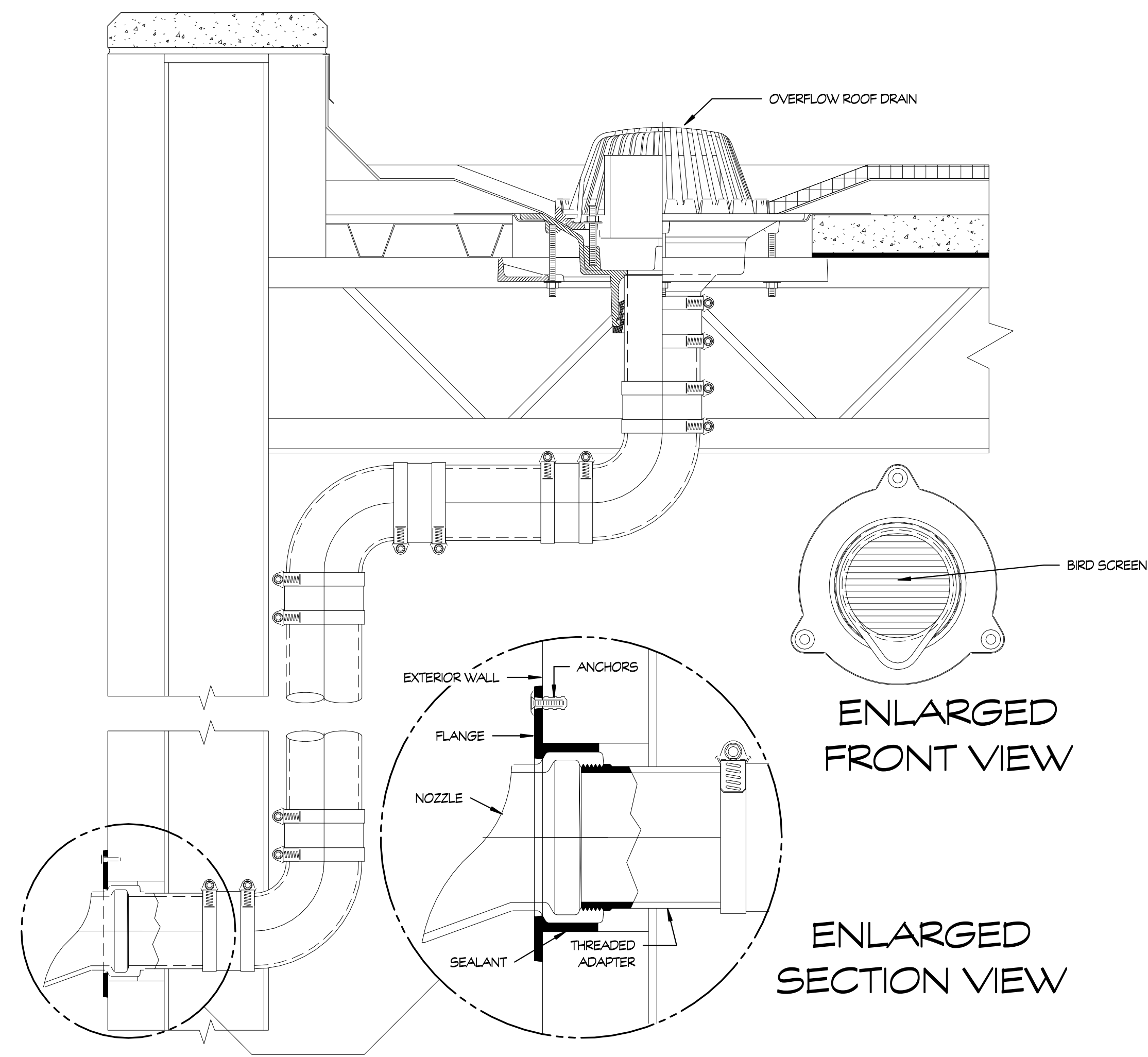
**WATER METER, PRESSURE REDUCING VALVE & BACKFLOW PREVENTER DETAIL**  
SCALE: 1/4\"/>

| PIPE SIZE    | ROD DIA. | SUPPORT ANGLE OR EQUIV. CHANNEL | MAX SPACING STEEL PIPE | MAX SPACING COPPER PIPE | MAXIMUM AREA* |
|--------------|----------|---------------------------------|------------------------|-------------------------|---------------|
| 1/2" TO 1"   | 3/8"     | 1 1/2" X 1 1/2" X 1/8"          | 8'-0" O.C.             | 8'-0" O.C.              | 4 SQ. FT.     |
| 1 1/4" TO 2" | 3/8"     | 1 1/2" X 1 1/2" X 1/8"          | 10'-0" O.C.            | 8'-0" O.C.              | 10 SQ. FT.    |
| 2 1/2" TO 4" | 1/2"     | 2" X 2" X 1/4"                  | 12'-0" O.C.            | 10'-0" O.C.             | 10 SQ. FT.    |

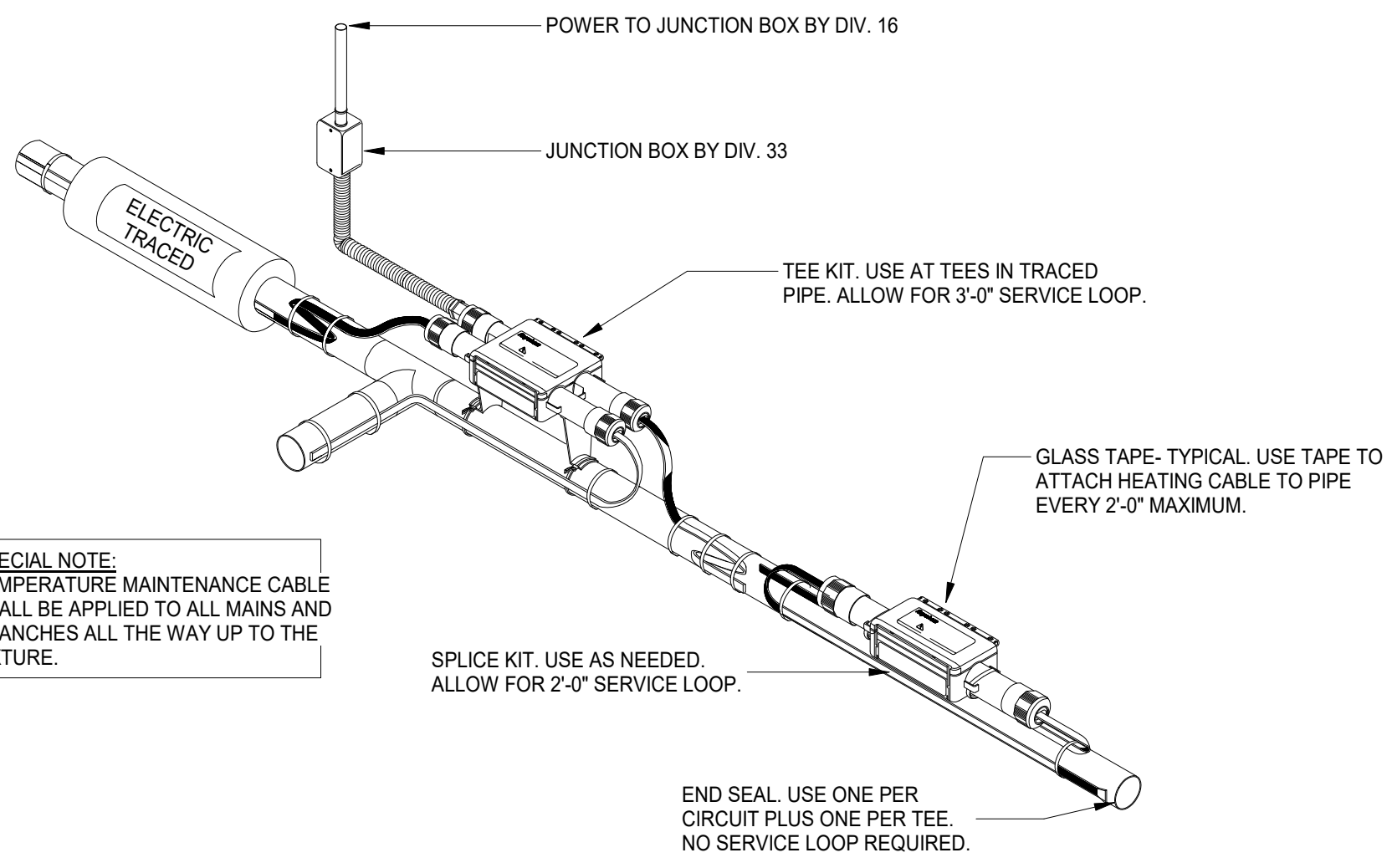
\*REDUCE SPACING TO NEXT SMALLER INTERVAL IF PIPE AREA EXCEEDS MAXIMUM



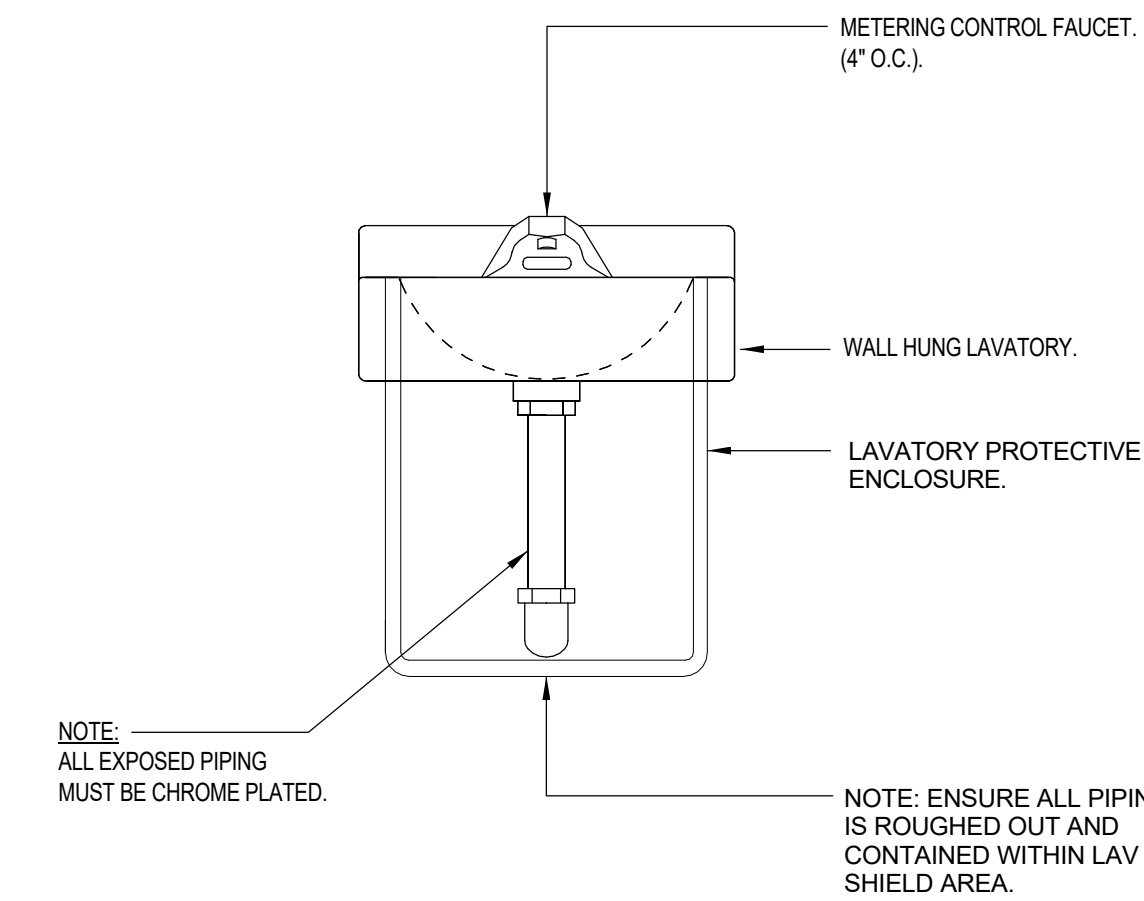
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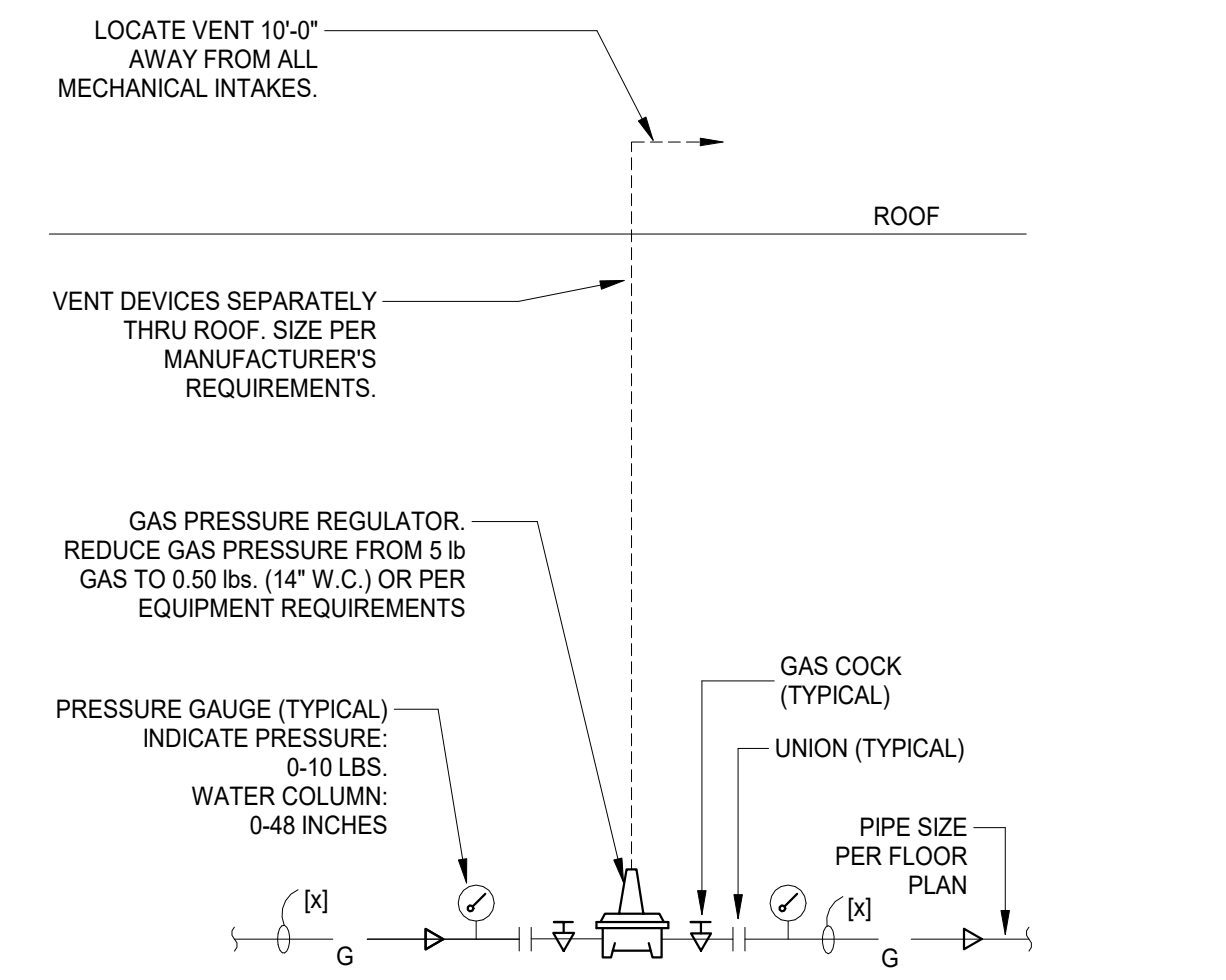
OVERFLOW DOWNSPOUT NOZZLE DETAIL  
SCALE: 1/2" = 1'-0"



HEAT TRACE CABLE DETAIL  
SCALE: NTS



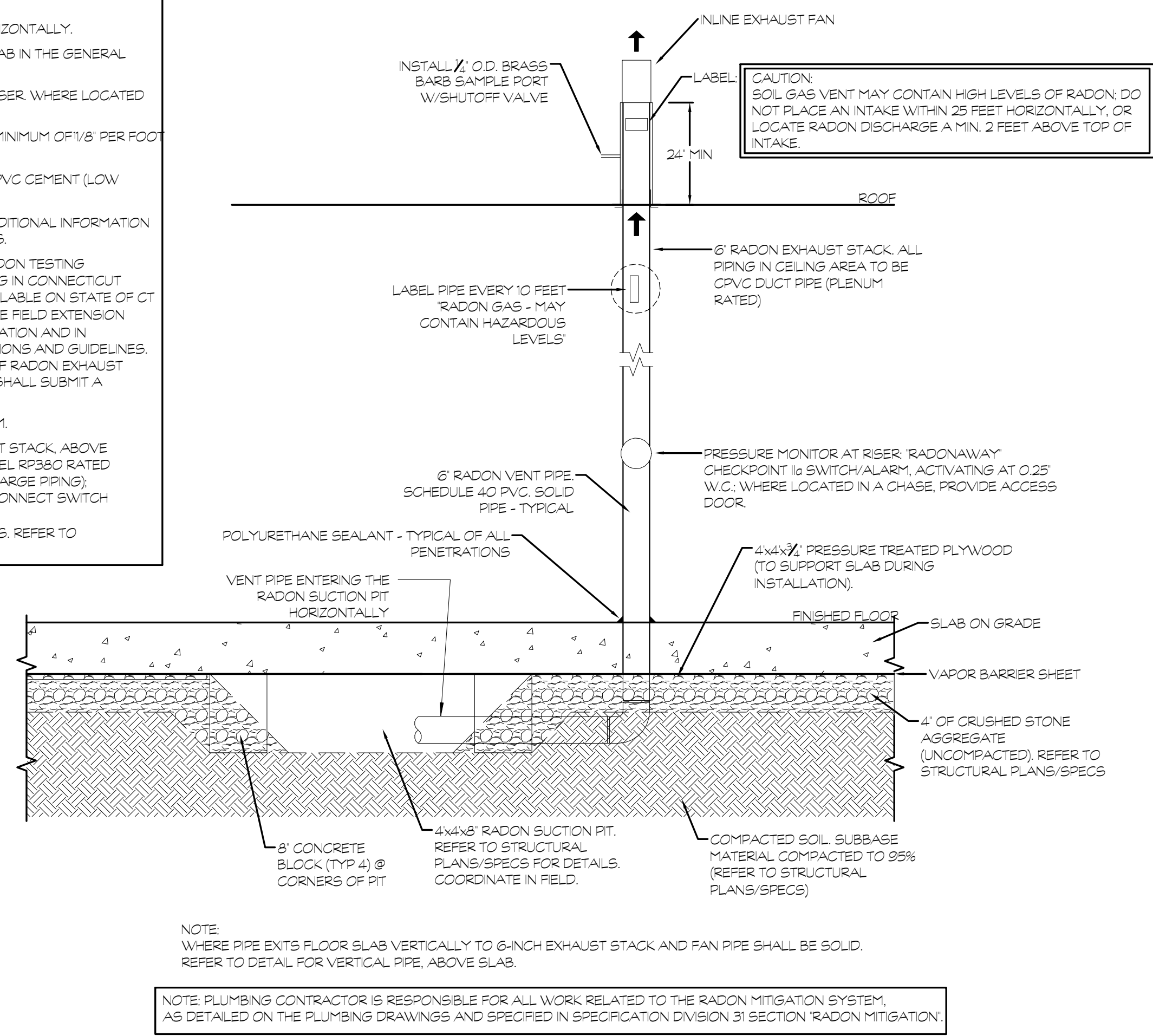
WALL MOUNTED LAVATORY HANDICAP ENCLOSURE DETAIL  
SCALE: NTS



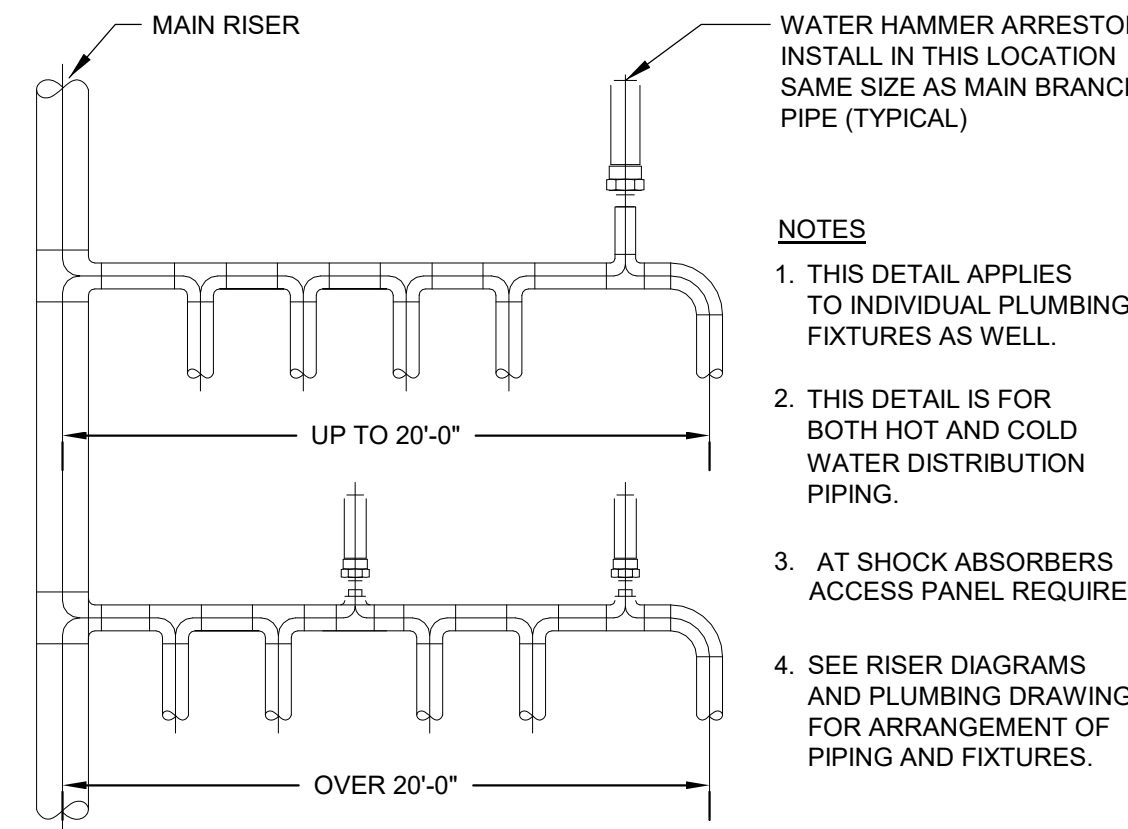
NATURAL GAS PRESSURE REGULATOR DETAIL  
SCALE: NTS

**RADON SYSTEM GENERAL NOTES:**

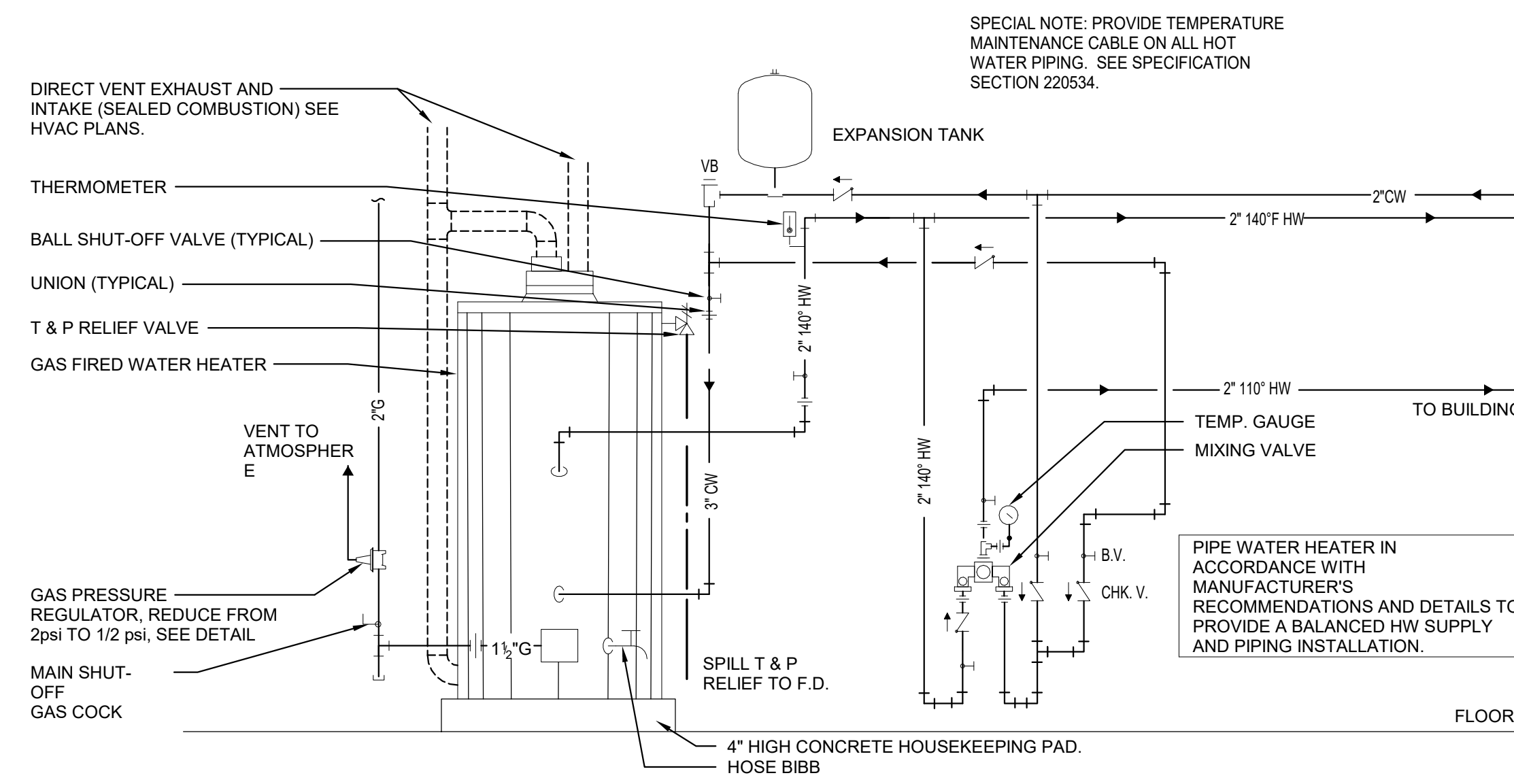
1. RADON SUCTION PIPE SHALL BE CENTRALLY LOCATED AS SHOWN.
2. DO NOT LOCATE SUCTION PIT NEAR SUBSLAB BARRIERS OR NEAR UNSEALED OPENINGS THROUGH THE SLAB.
3. VENT PIPE SHALL ENTER THE RADON SUCTION PIT HORIZONTALLY.
4. RUN VENT PIPE UNDER THE SLAB AND EXIT THE SUBSLAB IN THE GENERAL LOCATION INDICATED ON THE PLANS.
5. PROVIDE PRESSURE MONITOR/WARNING SIGNAL AT RISER WHERE LOCATED IN A CHASE, PROVIDE AN ACCESS DOOR.
6. HORIZONTAL PIPE RUNS IN THE CEILING MUST PITCH A MINIMUM OF 1/8" PER FOOT BACK TO THE RADON SUCTION PIT.
7. ALL PVC PIPING SECTIONS TO BE CONNECTED USING PVC CEMENT (LOW VOC'S)
8. REFER TO OTHER DISCIPLINE DRAWINGS FOR ANY ADDITIONAL INFORMATION ON THE RADON SYSTEM INSTALLATION REQUIREMENTS.
9. CONTRACTOR SHALL PROVIDE THE SERVICES OF A RADON TESTING PROFESSIONAL WHO IS QUALIFIED FOR RADON TESTING IN CONNECTICUT SCHOOLS (LIST OF QUALIFIED PROFESSIONALS IS AVAILABLE ON STATE OF CT DRH WEBSITE). TO TEST RADON LEVELS AND PRESSURE FIELD EXTENSION (PFE) AFTER COMPLETION OF RADON SYSTEM INSTALLATION AND IN ACCORDANCE WITH EPA, STATE AND LOCAL REGULATIONS AND GUIDELINES. TESTING SHALL BE PERFORMED AFTER COMPLETION OF RADON EXHAUST SYSTEM INSTALLATION. THE TESTING PROFESSIONAL SHALL SUBMIT A WRITTEN REPORT CONTAINING THE RESULTS.
10. RADON EXHAUST SYSTEM IS TO BE AN ACTIVE SYSTEM.
- 10a. 1/2" INCH RADON EXHAUST FAN MOUNTED IN RADON VENT STACK, ABOVE RADON VENT ROOF PENETRATION. RADONAWAY MODEL RP380 RATED 400 CFM AT 0.5" ESP. TESTED WITH 6" INLET AND DISCHARGE PIPING. COORDINATE PROVISION OF POWER WIRING AND DISCONNECT SWITCH WITH ELECTRICIAN. FAN IS TO RUN CONTINUOUSLY.
- 10b. COORDINATE WIRING OF PRESSURE MONITOR INTO BMS. REFER TO DIVISION 23 SPECS FOR MORE INFORMATION.



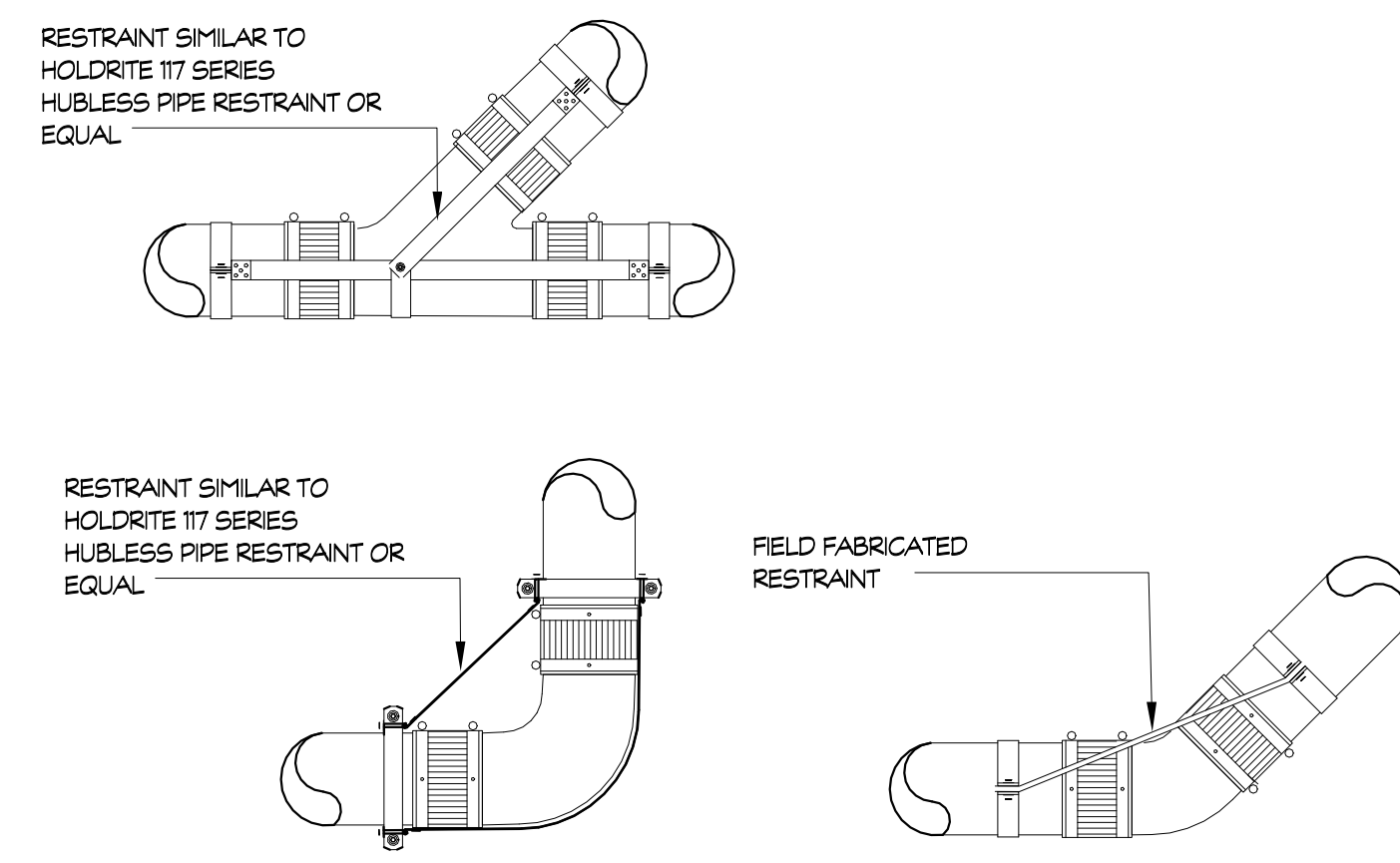
TYPICAL (RADON) SUBSLAB DEPRESSURIZATION PIPING DETAIL  
SCALE: NTS



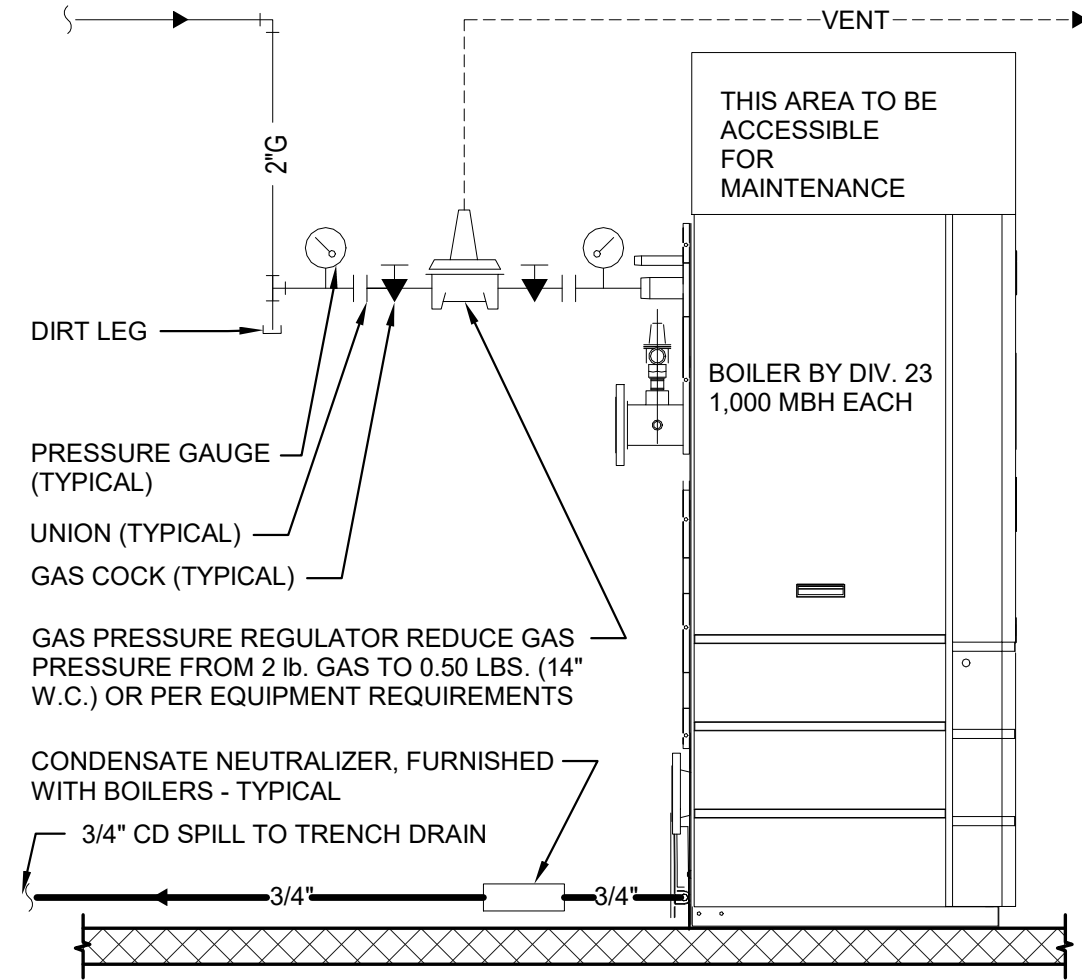
SHOCK ABSORBER DETAIL  
SCALE: NTS



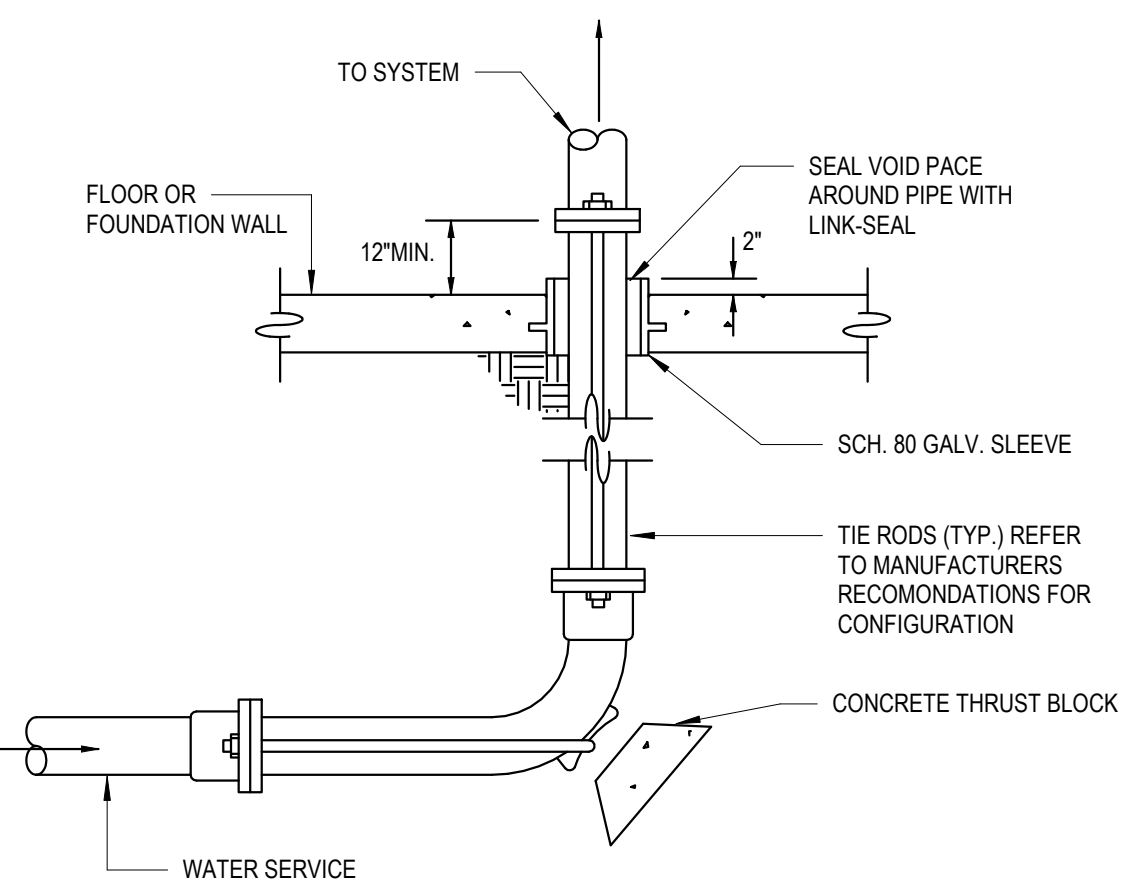
WATER HEATER DETAIL  
SCALE: NTS



THRUST RESTRAINT PIPING DETAIL  
SCALE: 1/2" = 1'-0"



BOILER PIPING DETAIL  
SCALE: 1/2" = 1'-0"



WATER SERVICE ENTRY DETAIL  
SCALE: NTS



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## PLUMBING FIXTURE/EQUIPMENT SCHEDULE

| SYMBOL           | MARK                                     | MFR  | MODEL | DESCRIPTION  |
|------------------|--|--|-------|--|
| →→→              | AAV                                      | STUDOR   | 20301 | AIR ADMITTANCE VALVE - MINI-VENT, SIZE PER DRAWINGS  |
| AD               | WADE                                     | 3100   |       | AREA DRAIN: CAST IRON BODY WITH DUCTILE IRON HEE. PROOF GRATE WITH VANDAL-PROOF SCREWS   |
| BFP              | WATTS                                    | 909  |       | ULFM APPROVED AUTOMATICALLY OPERATING ASSEMBLY OF PRESSURE DIFFERENTIAL RELIEF VALVE, LOCATED BETWEEN TWO POSITIVE SEATING CHECK VALVES, EQUIPPED WITH INLET STRAINER, BRONZE BODY CONSTRUCTION, NPT BODY CONNECTIONS AND OS&Y GATE VALVE SHUT-OFFS.   |
| CLAV-HC FAUCET   | BRADLEY TOTO TRUEBRO                     | LD-3010 SERIES<br>TELS,510-CP 0.5 GPM<br>HAND-LAV-GAURD 102Z-  |       | LAVATORY (COUNTERTOP) SOLID SURFACE. SINKS INTEGRAL WITH COUNTERTOP. SELF-RIMMING 4" FAUCET CENTERS K-7601 LOOSE KEY ANGLE SUPPLY STOPS, K-9010 ONE PIECE CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT & OFFSET DRAIN, K-8015 CHROME PLATED BRASS PIPE WASTE NIPPLE WITH ESCUTCHEON, FOR SIZES AND DIMENSIONS, INSULATE SUPPLIES AND WASTE. REFER TO ARCHITECTURAL DRAWINGS A701. COLOR BY ARCHITECT FAUCET.  |
| COOP             | WADE                                     | 6000-75  |       | INTERIOR SPACES - DUCO CAST IRON BODY w/CAST BRONZE TAMPER THREADED PLUG   |
| COOP             | WADE                                     | 6000Z-75   |       | EXTERIOR SPACES & PARKING AREAS - EXTRA HEAVY DUTY, CAST IRON BODY w/CAST IRON THREADED PLUG   |
| DF-DU            | HAWS                                     | 1025   |       | SINGLE UNIT, FRONT PUSH BAR CONTROLS. 11 GAUGE VANDAL RESISTANT, CONCEALED ARM FLOOR CARRIER, CAST BRASS P-TRAP WITH CLEANOUT PLUG, LOOSE KEY SUPPLY STOP. MOUNT AT ACCESSIBLE HEIGHT PER ARCHITECTURAL PLANS. SEE DWG. A-002.   |
| DF1-HC           | HAWS                                     | 1001MS   |       | SINGLE UNIT, FRONT PUSH BAR CONTROLS. 18 GAUGE VANDAL RESISTANT, CONCEALED ARM FLOOR CARRIER, CAST BRASS P-TRAP WITH CLEANOUT PLUG, LOOSE KEY SUPPLY STOP. MOUNT AT ACCESSIBLE HEIGHT PER ARCHITECTURAL PLANS. SEE DWG. A-002.   |
| DF2-HC           | HAWS                                     | 1011MS   |       | DUAL UNIT, FRONT PUSH BAR CONTROLS. 18 GAUGE VANDAL RESISTANT, CONCEALED ARM FLOOR CARRIER, CAST BRASS P-TRAP WITH CLEANOUT PLUG, LOOSE KEY SUPPLY STOP. MOUNT AT ACCESSIBLE HEIGHT PER ARCHITECTURAL PLANS. SEE DWG. A-002.   |
| DN               | ZURN                                     | Z199-DC-VP   |       | DOWNSPOUT COVER, ROUND FABRICATED TYPE 304 STAINLESS STEEL FRAME WITH FABRICATED SECURED PERFORATED STAINLESS STEEL HINGED STRAINER WITH VANDAL-PROOF SECURED TOP.   |
| DHWH1<br>DHWH2   | PVI<br>WESSELS<br>LAWLER<br>PVI VENT KIT | 60, 130A-GCL<br>TTA-125,<br>805 PI<br>5045B                    |       | DOMESTIC WATER HEATER, GAS FIRED STORAGE TANK, 34" DIAMETER, 81" O.A. LENGTH, PROVIDE FLEXIBLE INSULATING JACKET SYSTEM. 130 GALLON STORAGE TANK, 600 MBH INPUT, 691 GPM RECOVERY @ 100' RISE. FURNISH WITH EXPANSION TANK, WITH CONDENSATE NEUTRALIZER, HEAT TRANSFER PRODUCTS MFG. MODEL N1100. INTAKE AND VENTING: PVC. REFER TO HVAC DRAWINGS AND SPECIFICATIONS.  |
| DHWH3            | PVI<br>WESSELS<br>LAWLER<br>PVI VENT KIT | 20, 100A-GCL<br>TTA-125,<br>805 PI<br>5045B                    |       | DOMESTIC WATER HEATER, GAS FIRED STORAGE TANK, 28" DIAMETER, 72" O.A. LENGTH, PROVIDE FLEXIBLE INSULATING JACKET SYSTEM. 100 GALLON STORAGE TANK, 199 MBH INPUT, 691 GPM RECOVERY @ 100' RISE. FURNISH WITH EXPANSION TANK, WITH CONDENSATE NEUTRALIZER, HEAT TRANSFER PRODUCTS MFG. MODEL N1100. INTAKE AND VENTING: PVC. REFER TO HVAC DRAWINGS AND SPECIFICATIONS.  |
| DHWH4            | EEMAX                                    | MT004120T  |       | INSTANTANEOUS WATER HEATER, 0.5 GPM FLOW RATE, TEMPERATURE RISE 48° F AT 0.5 GPM FLOW RATE, FLOW SWITCH ACTIVATED 120 VAC, 10, 3.5 KW, 29 AMPS. WITH BUILD IN THERMOSTATIC MIXING VALVE.   |
| FFD (KITCHEN)    | WADE                                     | 9698-316<br>9704   |       | STAINLESS STEEL, 12" SQUARE FLOOR DRAIN WITH 8" DEEP ROUNDED SUMP, STAINLESS STEEL SUSPENDED SEDIMENT BUCKET AND 8-INCH ELONGATED FUNNEL.  |
| FD               | WADE                                     | 1100-STD6-27   |       | TOILET SHOWERS: CAST IRON BODY DRAIN w/ROUND NICKEL BRONZE ADJUSTABLE STRAINER HEAD, SEDIMENT BUCKET AND VANDAL-PROOF SCREWS   |
| FD               | WADE                                     | 1314-27  |       | MECHANICAL ROOMS: CAST IRON BODY DRAIN w/ROUND CAST IRON ADJUSTABLE STRAINER HEAD, SEDIMENT BUCKET AND VANDAL-PROOF SCREWS. PROVIDE WITH BACKWATER VALVE & PROSET TO-23 TRAP PRIMER INSERT.  |
| FD (KITCHEN)     | WADE                                     | 9100   |       | STAINLESS STEEL, 12" SQUARE FLOOR DRAIN WITH 8" DEEP ROUNDED SUMP AND STAINLESS STEEL SUSPENDED SEDIMENT BUCKET.   |
| FS (KITCHEN)     | WADE                                     | 9100   |       | STAINLESS STEEL, 12" SQUARE FLOOR DRAIN WITH 10" DEEP ROUNDED SUMP, STAINLESS STEEL SUSPENDED SEDIMENT BUCKET AND HINGED HALF GRATE.   |
| GD (GARAGE)      | WADE                                     | 1214-27  |       | 12- 5/8" DIAMETER CAST IRON FLOOR DRAIN WITH INTEGRAL CLAMPING COLLAR, LOOSE SET HEAVY DUTY DUCTILE IRON GRATE AND LIFT OUT ALUMINUM SEDIMENT BUCKET.  |
| GTRD             | WADE                                     | 3240-B   |       | GUTTER DRAIN: 6" DIAMETER CAST IRON GUTTER DRAIN WITH INTEGRAL CLAMPING COLLAR AND BRONZE DOME. PROVIDE AT ALL GUTTER WHERE PIPING IS CONNECTED TO GUTTERS.  |
| GRU-1            | THERMACO                                 | W-500-IS 50GPM 100+LBS.<br>VFCA-50 20 LB./HR.                  |       | POINT SOURCE AUTOMATIC GREASE REMOVAL SYSTEM. FULLY AUTOMATIC SELF-CLEANING CYCLE. REMOVES COLLECTED GREASE & OILS FROM TANK AUTOMATICALLY. WITH 24-HOUR TIME & GREASE COLLECTOR. STAINLESS STEEL EXTERIOR. 304 STAINLESS STEEL, BRIGHT FINISH, INTERIOR: ROTATIONALLY MOLDED POLYETHYLENE. ELECTRICAL: 115VAC, 60 HZ, 520 WATTS (4.5 AMPS).   |
| HB               | WOODFORD                                 | 28 METAL HANDLE  |       | CAST BRASS, CHROME FINISH, LOOSE KEY, ANTI-SIPHON ASSE RATED VACUUM BREAKER, TRIMLINE WALL HYDRANT w/3/4" INLET.   |
| HT               | RAYCHEM                                  | XL-TRACE EXL-1   |       | 5 WATTS PER FOOT, 277V. SYSTEM CONTROLLED BY AN AMBIENT SENSING THERMOSTAT #AMC-55 SET AT 40 F.  |
| LAV1-HC FAUCET   | TOTO<br>TOTO<br>TRUEBRO                  | LD307A<br>TELS,510 FAUCET<br>2019-TOL LAV SIELD                |       | VITREOUS CHINA, WALL HUNG, w/4"CENTERS, P-TRAP, K-7601 LOOSE KEY STOP ANGLE SUPPLIES, K-9010 CAST BRASS P-TRAP W/ CLEANOUT, K-9015 WASTE NIPPLE WITH ESCUTCHEON & WADE 400 CHAIR CARRIER. INSULATE PIPING w/TRUEBRO LAV-SHIELD 2018. MOUNT AT ACCESSIBLE HEIGHT PER ARCHITECTURAL DWG. A700.   |
| LAV2-HC          | BRADLEY                                  | MG-3 NDT-TMA-HEAT27NDITE<br>POWERED INFRARED                   |       | PREASSEMBLED, MODULAR, LAVATORY SYSTEM WITH SOLID SURFACE TOP AND LAVATORY BOWLS. PUSH BUTTON TOUCHTIME ELECTRONIC METERING CONTROL. FLOW RATE: 0.5 GPM. COLOR BY ARCHITECT w/ITANKLESS HEATER. SEE MOUNT AT ACCESSIBLE HEIGHT PER ARCHITECTURAL DWG. A700.  |
| LAV3-HC          | BRADLEY                                  | CONTROL-TMA-HEAT27NDITE<br>POWERED INFRARED<br>CONTROL         |       | PREASSEMBLED, MODULAR, LAVATORY SYSTEM WITH SOLID SURFACE TOP AND LAVATORY BOWLS. PUSH BUTTON TOUCHTIME ELECTRONIC METERING CONTROL. FLOW RATE: 0.5 GPM. COLOR BY ARCHITECT w/ITANKLESS HEATER. SEE MOUNT AT ACCESSIBLE HEIGHT PER ARCHITECTURAL DWG. A700.  |
| LT               | WADE                                     | 5600-70NK  |       | FABRICATED STEEL LINT INTERCEPTOR WITH REMOVABLE GASKETED COVER, REMOVABLE STAINLESS STEEL FILTER, WHITE ACID-RESISTING COATING, THREADED INLET AND OUTLET.  |
| MSK              | FIAT                                     | MSB 24X24  |       | MOP SINK MOLDED STONE RECEPTOR WITH CAST BRASS DRAIN BODY, STAINLESS STEEL DOME STRAINER-LINT BASKET, VINYL BUMPER GUARD, T&S 8665 CC-BST-MRS SUPPLY FITTING, VACUUM BREAKER, BUCKET HOOK, HOSE END SPOUT, MALE IPS INLETS, FIAT 832 HOSE, BRACKET.  |
| PRV              | WATTS                                    | 2300   |       | BRONZE BODY NON-CORROSIVE INTERNAL PARTS. BUILT-IN THERMAL EXPANSION BY-PASS RENEWABLE SEAT, DISC AND DIAPHRAGM. STRAINER WITH STAINLESS STEEL SCREEN, ADJUSTABLE 25 TO 75 PSI REDUCED PRESSURE RANGE SUITABLE FOR 300 PSI INLET WATER PRESSURE; WATTS 2235 WITH SEALED CAGE CONSTRUCTION.   |
| RD               | FROET                                    | 100C4LP-90   |       | BI-FUNCTIONAL ROOF DRAIN CAST IRON ROOF DRAIN BODY WITH 15" DIAMETER ANCHOR FLANGE, WATERPROOFING MEMBRANE CLAMP RINGS WITH INTEGRAL GRAVEL STOP AND CAST IRON DOME STRAINERS.   |
| SA               | ZURN                                     | Z-1700   |       | PISTON OPERATED WATER HAMMER ARRESTOR WITH HARD DRAWN SEAMLESS "K" COPPER BODY, RYTON PPS PISTON WITH DOUBLE G-RINGS AND CDA 360 BRASS M.P.T. CONNECTION, CERTIFIED TO THE A.S.S.E. 1014-1996 AND ANSI A112.26.1M STANDARDS, ENGINEERED TO LIMIT THE SYSTEM SURGE PRESSURE UP TO 1,500 P.S.I.G.  |
| SD               | WADE                                     | 3290   |       | SCUPPER DRAIN AT SEATS, CAST IRON, 90 DEGREE THREADED SIDE OUTLET PARAPET DRAIN FLUSH SET SECURED NICKEL BRONZE FLASHING CLAMP AND GRATE.  |
| SH               | SYMMONS                                  | 4-141 HEAD, 1.5gpm<br>C-86-2-X VALVE WITH<br>LEVER HANDLE      |       | SHOWER (FLOORS, WALLS AND TOPS TILED BY OTHERS), 3/8"x3/8", 2" CAST BRASS DRAIN WITH CHROME PLATED STRAINER. TEMP/TROL SHOWER WITH PRESSURE BALANCING MIXING VALVE, INTEGRAL SERVICE STOPS, SHOWER HEAD ANCHOR PLATE AND LEVER HANDLE. SEE DWG. A-002.   |
| SH-HC HEAD/VALVE | SYMMONS                                  | 4-141 HEAD, 1.5gpm<br>C-86-500-B30-V-X VALVE<br>W/LEVER HANDLE |       | BARRIER-FREE SHOWER (FLOORS, WALLS AND TOPS TILED BY OTHERS), 2" FLOOR DRAIN CAST BRASS DRAIN WITH CHROME PLATED STRAINER. TEMP/TROL SHOWER WITH PRESSURE BALANCING MIXING VALVE, INTEGRAL SERVICE STOPS, SHOWER HEAD ANCHOR PLATE AND LEVER HANDLE. SEE DWG. A-002.   |
| SI               | JR SMITH                                 | 8710   |       | SOLIDS INTERCEPTOR, WHITE DUCO COATED CAST IRON BODY AND ALUMINUM GASKETED COVER AND SEDIMENT STRAINER WITH REMOVABLE STAINLESS STEEL SCREENS.   |
| SK FAUCET        | ELKAY<br>SYMMONS                         | LR1918<br>S-23-3<br>LEVER HANDLE<br>0.5 GPM FLOW               |       | SINK: 18 GAUGE, TYPE 316 STAINLESS STEEL, 19"x18" LONG X 8" DEEP, TWO-HOLE FAUCET DRILLING, WITH LKAD-35 BASKET STRAINER AND DRAIN TAILPIECE ASSEMBLY, 8" SINGLE LEVER HANDLE, COUNTER MOUNTED FAUCET.   |
| SK-HC FAUCET     | ELKAY<br>SYMMONS                         | LRAD1918<br>S-23-3<br>LEVER HANDLE<br>0.5 GPM FLOW             |       | HANDICAP ACCESSIBLE SINK: 18 GAUGE, TYPE 316 STAINLESS STEEL, 19"x18" LONG X 8" DEEP OFFSET TO THE REAR AND LEFT OR RIGHT, TWO-HOLE FAUCET DRILLING, WITH LKAD-35 BASKET STRAINER AND OFFSET DRAIN REAR/RIGHT OR LEFT TAILPIECE ASSEMBLY, 8" SINGLE LEVER HANDLE, COUNTER MOUNTED FAUCET, PROVIDE "TRUEBRO" INSULATION KIT ON WASTE AND SUPPLIES. MOUNT AT ACCESSIBLE HEIGHT PER ARCHITECTURAL DWG. A-002.   |
| TMC              | RAYCHEM                                  | HWAT-R2<br>C910-485  |       | TEMPERATURE MAINTENANCE CABLE, 208V, SELF-REGULATING CABLE SYSTEM CONTROLLED BY HWAT-ECO CONTROL PANEL, SET AT 110 F. & 140 F. DIGITAL TEMPERATURE CONTROLLER WITH BUILT-IN GROUND-FAULT PROTECTION DEVICE SINGLE CIRCUIT LOCAL DIGITAL CONTROLLER SHALL BE HWAT-ECO-B, 30 AMPS EACH, 208V. PROVIDE ON ALL HOT WATER MAINS AND BRANCH LINES FROM WATER HEATERS UP TO FUTURE, FAUCET OR OUTLET SEE SPECIFICATION SECTION 220534 FOR MORE DETAILS.   |
| TMV              | SYMMONS                                  | 5-110  |       | THERMOSTATIC MIXING VALVE - KITCHEN SINKS, 3/8" INLETS, 3/8" OUTLET.   |
| TD               | ZURN                                     | Z5860  |       | TRENCH DRAIN - SHOWER - All Type 304 (CF8) Fabricated Stainless Steel Linear Shower Drain. Complete with vertically adjustable anchoring support legs, anti-sloping V-shaped channel with 2" No-Hub center outlet, adjustable secured leveling frame with built-in lip edge, and secured, light-duty, slotted heel-proof grate. Drain is designed for installation in a minimum 2" concrete pour and can be adjusted to accommodate 1/4" and 3/8" finished tile thicknesses.   |
| TD               | WADE                                     | 2520-27  |       | TRENCH DRAIN - EXTERIOR - CAST IRON CENTER OUTLET TRENCH SHALL BE MANUFACTURED USING CAST IRON CHANNELS WITH VANDAL-PROOF GRATING WITH NOMINAL, 16" WICH WIDTH. FURNISH WITH OUTLET SECTIONS WITH SEDIMENT BASKETS WHERE DRAIN DISCHARGES. GRATE: DUCTILE IRON FRAME AND RATE, LOAD CLASS: E   |
| TP               | PROSET                                   | TG-23  |       | TRAP PRIMER INSERT, AN ELASTOMERIC, NORMALLY CLOSED TRAP GUARD DEVICE UTILIZES A NORMALLY CLOSED SEAL TO PREVENT EVAPORATION OF THE TRAP SEAL AND ALSO PROTECT AGAINST SEWER GASES FROM BACKING UP INTO HABITABLE AREAS. IT OPENS WITH FLUID AND ALLOWS LIQUID DRAINAGE TO FLOW THROUGH INTO THE BUILDING DRAIN.   |
| UR               | KOHLER                                   | K-4919<br>WATERLESS  |       | VITREOUS CHINA URINAL, WATERLESS, CATRIDGE FREE, WHITE, WALL HUNG, 2" I.P.S. OUTLET. LIP MOUNTED 24" A.F.F. WALL & SPUD FLANGES. WITH REMOVABLE STRAINER, SEALING LIQUID SAMPLE, CLEANER SAMPLE, URINE BALL SAMPLE, UNIVERSAL MOUNTING BRACKET AND HANGERS.  |
| UR-HC            | KOHLER                                   | K-4919<br>WATERLESS  |       | VITREOUS CHINA URINAL, WATERLESS, CATRIDGE FREE, WHITE, WALL HUNG, 2" I.P.S. OUTLET. LIP MOUNTED 17" A.F.F. WALL & SPUD FLANGES. WITH REMOVABLE STRAINER, SEALING LIQUID SAMPLE, CLEANER SAMPLE, URINE BALL SAMPLE, UNIVERSAL MOUNTING BRACKET AND HANGERS.  |
| WC FLUSH         | TOTO                                     | CT-708 EVG<br>SC234 SEAT<br>TETL2LN319SS FLUSH VALVE           |       | VITREOUS CHINA WALL HUNG WATER CLOSET, ELONGATED BOWL, SIPHON JET, TOP SPUD, 1.28 GALLON FLUSH w/SOLID PLASTIC OPEN FRONT SEAT. EXPOSED, CHROME TOP SPUD FLUSH VALVE WANGLE STOP, VACUUM BREAKER, WALL & SPUD FLANGES. WADE 330 CHAIR CARRIER, AUTOMATIC INFRARED SENSOR ACTIVATED, FLUSH VALVE, HEAVY DUTY 14" x 12" STAINLESS STEEL, COVERPLATE WITH SATIN FINISH & VANDAL RESISTANT MOUNTING SCREWS. PISTON VALVE, W/STAINLESS STEEL SELF-CLEANING DISCS SCREEN & SELF-CLEANING SOLENOID, AUTOMATIC FLUSH EVERY 20 HOURS IF NOT USED, ELECTRICAL SENSOR SEPARATED FROM VALVE & SEALED IN A WATERPROOF COMPARTMENT. MANUAL OVERRIDE BUTTON INCORPORATED. FLUSH VALVES WILL FULLY RECHARGE THE VALVE FOR UP TO 10 YEARS.  |
| WC-HC FLUSH      | TOTO                                     | CT-708 EVG<br>SC234 SEAT<br>TETL2LN319SS FLUSH VALVE           |       | VITREOUS CHINA WALL HUNG WATER CLOSET, ELONGATED BOWL, SIPHON JET, TOP SPUD, 1.28 GALLON FLUSH w/SOLID PLASTIC OPEN FRONT SEAT. EXPOSED, CHROME TOP SPUD FLUSH VALVE WANGLE STOP, VACUUM BREAKER, WALL & SPUD FLANGES. WADE 330 CHAIR CARRIER, AUTOMATIC INFRARED SENSOR ACTIVATED, FLUSH VALVE, HEAVY DUTY 14" x 12" STAINLESS STEEL, COVERPLATE WITH SATIN FINISH & VANDAL RESISTANT MOUNTING SCREWS. PISTON VALVE, W/STAINLESS STEEL SELF-CLEANING DISCS SCREEN & SELF-CLEANING SOLENOID, AUTOMATIC FLUSH EVERY 20 HOURS IF NOT USED, ELECTRICAL SENSOR SEPARATED FROM VALVE & SEALED IN A WATERPROOF COMPARTMENT. MANUAL OVERRIDE BUTTON INCORPORATED. FLUSH VALVES WILL FULLY RECHARGE THE VALVE FOR UP TO 10 YEARS. MOUNT AT ACCESSIBLE HEIGHT PER ARCHITECTURAL DWG. A-002. |
| WCO              | JR SMITH                                 | 4422C  |       | DUCO CAST IRON BODY w/CAST BRONZE TAMPER THREADED PLUG AND STAINLESS STEEL ROUND COVER   |
| WH               | WOODFORD                                 | 867  |       | FREEZELESS PROOF, FLUSH MOUNTED WALL BOX WITH BACKFLOW PREVENTER   |
| WHA              | MIFAB                                    | MWH  |       | WATER HAMMER ARRESTOR  |
| WMTR             | HERSEY CO.                               | MVR-160  |       | 2" WATER METER, BRONZE OUSING CHAMBER, MAGNETIC DRIVE, POSITIVE DISPLACEMENT ROTATING DISC TYPE, SELF-LUBRICATING REGISTER HERMETICALLY SEALED BETWEEN GLASS DOME AND METAL HOUSING.   |
| WSH              | SYMMONS                                  | W-602-X  |       | LAUNDRY-MATE AUTOMATIC WASHING MACHINE VALVE WITH SUPPLY AND DRAIN FIXTURE, 1/2" SWEAT UNION ELL CONNECTIONS AND 2" DRAIN CONNECTIONS.   |
| GAS PIPING       | TRACPIPE<br>OMEGA FLEX                   | TRACPIPE PS II   |       | Outdoor or Below Slab Fuel Gas Piping, 0.5 to 5 psig (3.45 to 13.8 kPa). Use the following: NPS 2 (DN 50) and smaller shall be the following: Corrugated stainless-steel tubing with mechanical fittings having socket or threaded ends to match adjacent piping. Vent piping to double walled piping to atmosphere. Piping shall be manufactured by TracPipe OmegaFlex PSII for underground and vented applications.  |

NOTE:  
MANUFACTURES LISTED ARE DESIGN BASED MODEL. REFER TO PLUMBING SPECIFICATIONS FOR EQUALS.

THE DRAWINGS AND SPECIFICATIONS ARE DIVIDED INTO SECTIONS TO MEET THE NEEDS OF THE ARCHITECT, THE ENGINEERS AND THE DESIGN CONSULTANTS. THEY ARE NOT PREPARED INSTRUCTIONS TO THE CONTRACTOR FOR HOW TO BUY OUT OR SUBCONTRACT THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR ALL THE WORK DESCRIBED IN THE CONTRACT DOCUMENTS, REGARDLESS OF WHERE IT IS SHOWN. FOR EXAMPLE, ELECTRICAL WORK MAY BE SHOWN ON "FP" DRAWINGS AS WELL AS ON "M" DRAWINGS AND "E" DRAWINGS. MISCELLANEOUS METALS AND STRUCTURAL MAY BE SHOWN ON "M" DRAWINGS AS WELL AS ON "S" DRAWINGS. STRUCTURAL SUPPORTS ARE REQUIRED BY THE "FP" DRAWINGS. TO AVOID OMITTING ANY COMPONENT OF THE PROJECT, REFER TO ALL THE CONTRACT DRAWINGS IN THEIR ENTIRETY.

| FIXTURE CONNECTION SCHEDULE |                            |                             |     |     |       |       |
|-----------------------------|----------------------------|-----------------------------|-----|-----|-------|-------|
| MARK                        | DESCRIPTION                | MINIMUM PIPE SIZES (INCHES) |     |     |       |       |
|                             |                            | G                           | CW  | HW  | W     | V     |
| WC-HC, WC                   | WATER CLOSET               | -                           | 1   | -   | 4     | 2     |
| LAV                         | LAVATORY                   | -                           | 1/2 | 1/2 | 1-1/2 | 1-1/2 |
| UR                          | URINAL (WATERLESS)         | -                           | -   | -   | 2     | 1-1/2 |
| SK-HC                       | SINK                       | -                           | 1/2 | 1/2 | 1-1/2 | 1-1/2 |
| MS                          | MOP SINK                   | -                           | 3/4 | 3/4 | 3     | 2     |
| SH-HC, SH                   | SHOWER                     | -                           | 1/2 | 1/2 | 2     | 1-1/2 |
| WH                          | WALL HYDRANT               | -                           | 3/4 | -   | -     | -     |
| HB                          | HOSE BIBB                  | -                           | 3/4 | -   | -     | -     |
| EWC                         | ELECTRIC WATER COOLER      | -                           | 1/2 | -   | 1-1/2 | 1-1/2 |
| WSH                         | CLOTHES WASHER             | -                           | 1/2 | 1/2 | 2     | 1-1/2 |
| DW                          | DISHWASHER (BY DIV. 11452) | -                           | 1/2 | -   | 1-1/2 | 1-1/2 |

Project Title:  
**Hinsdale School Alterations**

15 Hinsdale Ave.  
Winsted, CT 06098



**SILVER / PETRUCELLI + ASSOCIATES**  
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| Revision: | Description: | Date: | Revised By: |
|-----------|--------------|-------|-------------|
|           |              |       |             |
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|           |              |       |             |
|           |              |       |             |

Drawing Title:  
**PLUMBING SCHEDULES**

State Project #: 162-0043RNV

Date:  
June 30, 2020  
Scale:  
NTS  
Drawn By:  
JES  
Project Number:  
18-223  
Drawing Number:  
**P901**

| PIPE AND FITTING SCHEDULE   |   |               |   |               |             |   |
|---|---|---------------|---|---------------|-------------|---|
| DESCRIPTION   | SIZE                                    | PIPE          |   | FITTING       |             | REMARKS   |
|   |   | TYPE          | SCHEDULE                                | TYPE          | RATING      |   |
| SOIL WASTE AND VENT ABOVE GROUND  | ALL                                     | C-NH / PVC    | SV / 40                                 | C / PVC       | SV / 40     | 4 BAND FOR 4" AND SMALLER & BAND FOR LARGER THEN 4" |
| SOIL WASTE AND VENT BELOW GROUND  | ALL                                     | C-HES / PVC   | SV / 40                                 | C / PVC       | SV / 40     | --  |
| SOIL WASTE AND VENT BELOW FOOTING   | ALL                                     | D             | 80                                      | --            | --          | --  |
| STORM ABOVE GROUND  | ALL                                     | C-NH / PVC    | SV / 40                                 | C / PVC       | SV / 40     | 4 BAND FOR 4" AND SMALLER & BAND FOR LARGER THEN 4" |
| STORM BELOW GROUND  | ALL                                     | C-HES / PVC   | SV / 40                                 | C / PVC       | SV / 40     | --  |
| STORM BELOW FOOTING   | ALL                                     | D             | 80                                      | --            | --          | --  |
| DOMESTIC WATER WITHIN BUILDING  | ALL                                     | COPPER        | TYPE L                                  | CUS           | STD         | HARD TEMPERED                                       |
| INDIRECT WASTE AND CONDENSATE PIPING  | ALL                                     | COPPER        | TYPE L                                  | CUS           | STD         | HARD TEMPERED                                       |
| DOMESTIC HOT & COLD WATER PIPING WITHIN BUILDING BELOW SLAB   | 1/2" AND SMALLER                        | PEX           | --                                      | --            | --          | NO JOINTS ALLOWED BELOW SLAB                        |
| DOMESTIC HOT & COLD WATER PIPING WITHIN BUILDING ABOVE SLAB   | 2" AND LARGER                           | COPPER        | TYPE K                                  | CUS           | STD         | SOFT TEMPERED, NO JOINTS BELOW SLAB                 |
| DOMESTIC WATER SERVICE PIPING   | 2 1/2" AND SMALLER                      | COPPER        | TYPE K                                  | CUS           | STD         | SOFT TEMPERED, NO JOINTS BELOW SLAB                 |
| DOMESTIC WATER SERVICE PIPING   | 3" AND LARGER                           | CLD           | CLASS 52                                | DMJ           | 250         | --  |
| TRAP PRIMER PIPING  | ALL                                     | PEX           | --                                      | --            | --          | NO JOINTS ALLOWED BELOW SLAB                        |
| NOTES:<br>1. TRANSITION COUPLINGS AND NO-HUB PIPE SHALL NOT BE INSTALLED BELOW SLAB OR IN ANY BURIED CONDITIONS IN CONTACT WITH EARTH<br>2. ALL PIPING IN RETURN AIR CEILING PLENUM INSTALLATIONS SHALL BE UL LISTED FOR THIS APPLICATION<br>3. MECHANICAL JOINTS ARE ALLOWED FOR SERVICE PURPOSES ONLY IN WALLS AND CEILING BUT MUST BE READILY ACCESSIBLE. 25/50 PVDF IS UL LISTED FOR RETURN AIR CEILING PLENUM INSTALLATIONS<br>4. FOR ITEMS INSTALLED IN PLENUM RATED CEILING, MATERIALS SHALL COMPLY WITH ASTM E 84 WITH FLAME-SPREAD INDEX OF 25 OR LESS, AND SMOKE-DEVELOPED INDEX OF 50 OR LESS.<br>5. FIRE-BARRIER PENETRATIONS: MAINTAIN INDICATED FIRE RATINGS OF WALLS, PARTITIONS, CEILING, AND FLOORS AT PIPE PENETRATIONS. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS. SEAL PIPE PENETRATIONS WITH FIRESTOP MATERIALS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION |   |               |   |               |             |   |
| ABBREVIATIONS   | DESCRIPTION                             | ABBREVIATIONS | DESCRIPTION                             | ABBREVIATIONS | DESCRIPTION |   |
| AWWA  | AMERICAN WATER WORKS ASSOCIATION        | MIT           | MALLEABLE IRON THREADED                 |               |             |   |
| C   | CAST IRON                               | NH            | NO HUB W/SUPER DUTY HUSKY 50 4000 CLAMP |               |             |   |
| CLD   | CEMENT LINED DUCTILE IRON               | PEX           | PEX PIPING                              |               |             |   |
| CRVC  | CHLORINATED POLYVINYL CHLORIDE          | PF            | PRESSURE FITTING                        |               |             |   |
| CUS   | WROUGHT COPPER SOLDER (85/5)            | PVDF          | POLYVINYLIDENE FLUORIDE PIPING          |               |             |   |
| D   | DUCTILE IRON                            | POLY-PRO      | POLYPROPYLENE PIPING                    |               |             |   |
| DMJ   | DUCTILE IRON MECHANICAL JOINT           | STD           | STANDARD                                |               |             |   |
| SES   | GROOVED END STEEL                       | STL-BLK       | BLACK STEEL                             |               |             |   |
| GJ  | GROOVED JOINT SYSTEM FITTINGS/COUPLINGS | SV            | SERVICE WEIGHT                          |               |             |   |
| GS  | GALVANIZED STEEL                        | TJ            | THREADED JOINTS                         |               |             |   |
| HES   | HUB AND SPIGOT                          | WE            | BUT WELD                                |               |             |   |
| MJ  | MECHANICAL JOINT                        |               |   |               |             |   |

| VALVE SCHEDULE  |  |              |                                   |              |             |         |        |         |
|---|--|--------------|-----------------------------------|--------------|-------------|---------|--------|---------|
| DESCRIPTION   | SIZE   | TYPE         |                                   |              |             |         | CLASS  | REMARKS |
|   |  | GATE         | CHECK                             | BALL         | PLUG        | BALANCE |        |         |
| DOMESTIC COLD WATER   | 2" AND SMALLER   | GVT          | CVT                               | BVT          | --          | --      | 125PSI | --      |
| DOMESTIC HOT WATER  | 2" AND SMALLER   | GVT          | CVT                               | BVT          | --          | CBV     | 125PSI | --      |
| DOMESTIC COLD WATER   | 2 1/2" AND LARGER  | GVF          | CVF                               | --           | --          | --      | 125PSI | --      |
| DOMESTIC HOT WATER  | 2 1/2" AND LARGER  | GVF          | CVF                               | --           | --          | CBV     | 125PSI | --      |
| BACKFLOW PREVENTER  | 2" AND SMALLER   | --           | --                                | BVT          | --          | --      | 125PSI | --      |
| BACKFLOW PREVENTER  | 2 1/2" AND LARGER  | GVF          | --                                | --           | --          | --      | 125PSI | --      |
| NOTES:<br>1. SOLENOID VALVE: UL LISTED, FM APPROVED FOR GAS SERVICE, EXPLOSION PROOF, TWO-WAY NORMALLY CLOSED, ASCO 8044 SERIES W/MANUAL RESET, (EMERGENCY GAS SHUT-OFF VALVE ASSEMBLY)<br>2. CALIBRATED PRESSURE RELIEF VALVE: INSTALL A MINIMUM OF 12" ABOVE WATER HEATER AND PIPE DISCHARGE TO ADEQUATE LOCATION, WATTS MODEL 5400 |  |              |                                   |              |             |         |        |         |
| ABBREVIATION  | DESCRIPTION  | ABBREVIATION | DESCRIPTION                       | ABBREVIATION | DESCRIPTION |         |        |         |
| BVA   | BALL VALVE COMPRESSED AIR - 3-PIECE, FULL PORT, BRONZE   | CVF          | CHECK VALVE FLANGED - 1"MB        |              |             |         |        |         |
| BVF   | BALL VALVE FLANGED - FULL PORT, BRONZE                   | CVT          | CHECK VALVE THREADED - BRONZE     |              |             |         |        |         |
| PGVT  | PLUG VALVE THREADED - AGA APPROVED                       | GVF          | GATE VALVE FLANGED - 1"MB         |              |             |         |        |         |
| BVT   | BALL VALVE THREADED - 2-PIECE, FULL PORT, 400PSI, BRONZE | GVT          | GATE VALVE THREADED - BRONZE      |              |             |         |        |         |
| CBV   | CALIBRATED BALANCING VALVE - BRONZE                      | PGVF         | PLUG VALVE FLANGED - AGA APPROVED |              |             |         |        |         |
| CRV   | CALIBRATED PRESSURE RELIEF VALVE                         |              |                                   |              |             |         |        |         |

| DRAIN SCHEDULE  |   |                    |                    |                    |         |
|---|---|--------------------|--------------------|--------------------|---------|
| MARK  | FIXTURE, MODEL NUMBER AND DESCRIPTION   | ROUGH-IN           |                    |                    | REMARKS |
|   |   | TRAP               | WASTE              | VENT               |         |
| FD-1  | FLOOR DRAIN (MECHANICAL ROOM), WATTS FD-320-Y, HEAVY DUTY CAST IRON BODY, BOTTOM OUTLET, 8" DIAMETER CAST IRON TOP, TRAP PRIMER CONNECTION, BEEPAGE PAN AND COMBINATION MEMBRANE FLASHING CLAMP   | AS NOTED ON DRWGS. | AS NOTED ON DRWGS. | AS NOTED ON DRWGS. |         |
| FD-2  | FLOOR DRAIN (TOILET ROOM), WATTS FD-102-A5, HEAVY DUTY CAST IRON BODY, BOTTOM OUTLET, 6"x6" SQUARE NICKEL BRONZE TOP, TRAP PRIMER CONNECTION, BEEPAGE PAN AND COMBINATION MEMBRANE FLASHING CLAMP   | AS NOTED ON DRWGS. | AS NOTED ON DRWGS. | AS NOTED ON DRWGS. |         |
| FD-3  | FLOOR DRAIN (KITCHEN), WATTS FD-320-Y, HEAVY DUTY CAST IRON BODY, BOTTOM OUTLET, 8" DIAMETER CAST IRON TOP, TRAP PRIMER CONNECTION, BEEPAGE PAN AND COMBINATION MEMBRANE FLASHING CLAMP   | AS NOTED ON DRWGS. | AS NOTED ON DRWGS. | AS NOTED ON DRWGS. |         |
| FD-4  | FLOOR SINK (KITCHEN), WATTS FS-190-FC-5-6-150, 1/4 GAUGE 304 STAINLESS STEEL, BOTTOM OUTLET, 12"x12"x3" DEEP, CAST STAINLESS STEEL GRATE, DOME BOTTOM STRAINER, BEEPAGE PAN AND COMBINATION MEMBRANE FLASHING CLAMP STAINLESS STEEL SEDIMENT BUCKET, 1/2 GRATE FOR INDIRECT WASTE   | AS NOTED ON DRWGS. | AS NOTED ON DRWGS. | AS NOTED ON DRWGS. |         |
| RD  | ROOF DRAIN, FROST 2000 SERIES, HEAVY DUTY DRAIN WITH 14" - 18" DIAMETER CAST IRON BODY, BOTTOM OUTLET, CAST IRON DOME, ROOF SUMP RECEIVER, UNDER DECK CLAMP AND 2" HIGH OVERFLOW WATER DAM (NOTE: NO GLUE EXTENSION COLLAR AS REQUIRED FOR INSULATION OF CONSTRUCTION THICKNESS) EXTENSION, AND COMBINATION MEMBRANE FLASHING CLAMP/GRAVEL GUARD. | AS NOTED ON DRWGS. | AS NOTED ON DRWGS. | AS NOTED ON DRWGS. |         |
| CD  | ROOF DRAIN, FROST 2000 SERIES, HEAVY DUTY DRAIN WITH 14" - 18" DIAMETER CAST IRON BODY, BOTTOM OUTLET, CAST IRON DOME, ROOF SUMP RECEIVER, UNDER DECK CLAMP AND 2" HIGH OVERFLOW WATER DAM (NOTE: NO GLUE EXTENSION COLLAR AS REQUIRED FOR INSULATION OF CONSTRUCTION THICKNESS) EXTENSION, AND COMBINATION MEMBRANE FLASHING CLAMP/GRAVEL GUARD. | AS NOTED ON DRWGS. | AS NOTED ON DRWGS. | AS NOTED ON DRWGS. |         |
| OST   | DOWNSPROUT NOZZLE, FROST LPS, POWDER COATED ALUMINUM, PROVIDE WITH FLAPPER, COORDINATE COLOR WITH ARCHITECT, COORDINATE SIZING WITH OVERFLOW DRAINAGE. REFER TO DRAWINGS.   | NA                 | AS NOTED ON DRWGS. | NA                 |         |
| NOTES:<br>1. PROVIDE TRAP PRIMERS FOR ALL DRAINS. DRAINS INCORPORATING A CONSTANT AND REGULAR WASTE ARE NOT REQUIRED TO INTERGRATE TRAP PRIMERS (I.E. SHOWER DRAINS, KITCHEN DRAINS, ETC.)<br>2. TRANSITION COUPLINGS AND NO-HUB PIPE SHALL NOT BE INSTALLED BELOW SLAB OR IN ANY BURIED CONDITIONS IN CONTACT WITH BARTH |   |                    |                    |                    |         |

| CLEANOUT SCHEDULE   |  |                  |         |  |
|---|--|------------------|---------|--|
| MARK  | FIXTURE, MODEL NUMBER AND DESCRIPTION  | TRAP SIZE        | REMARKS |  |
| FCO   | FLOOR CLEANOUT (ALL INTERIOR AREAS EXCEPT CARPETED AREAS), WATTS CO-200-RX-C-6, ADJUSTABLE ROUND SCORATED HEAVY DUTY NICKEL BRONZE SECURED TOP WITH FRAME, CAST IRON BODY, FLASHING FLANGE AND CLAMP, BRONZE PLUG. PROVIDE WITH VANDAL PROOF SCREWS. PROVIDE NICKEL BRONZE FRAME IN WET AREAS. | AS NOTED ON DWG. | --      |  |
| FCO   | FLOOR CLEANOUT (CARPETED AREAS), WATTS CO-200-RX-C-6, ADJUSTABLE ROUND SCORATED HEAVY DUTY NICKEL BRONZE SECURED TOP WITH FRAME, CARPET MARKER, CAST IRON BODY, FLASHING FLANGE AND CLAMP, BRONZE PLUG. PROVIDE WITH VANDAL PROOF SCREWS.  | AS NOTED ON DWG. | --      |  |
| YCO   | FLOOR CLEANOUT (EXTERIOR AREAS), WATTS CO-300-MF-6 WITH CO-350 ROUND FLANGED HOUSING WITH HEAVY DUTY SCORATED DUCTILE IRON TOP, CLEANOUT FERRULE BODY WITH BRONZE PLUG. INSTALL CLEANOUTS WITH 18" SQUARE X 6" DEEP CONCRETE ARKON IN NON-PAVED AREAS. PROVIDE WITH VANDAL PROOF SCREWS.       | AS NOTED ON DWG. | --      |  |
| WCO   | WALL PLATE CLEANOUT COVER, WATTS CO-550-RD, PROVIDE AT CAST IRON CLEANOUTS WITH COUNTERSUNK BRASS PLUG AND STAINLESS STEEL COVER SECURED WITH VANDAL PROOF SCREWS.   | --               | --      |  |
| NOTES:<br>1. TRANSITION COUPLINGS AND NO-HUB PIPE SHALL NOT BE INSTALLED BELOW SLAB OR IN ANY BURIED CONDITIONS IN CONTACT WITH EARTH<br>2. PROVIDE ALL POURED IN PLACE CLEANOUTS WITH 24"x24" FLASHING |  |                  |         |  |

| INSULATION SCHEDULE  |           |                             |                      |   |                                  |
|--|-----------|-----------------------------|----------------------|---|----------------------------------|
| SYSTEM   | PIPE SIZE | INSULATION TYPE             | INSULATION THICKNESS | FITTINGS, VALVES, FLANGES INSULATION TYPE         | REMARKS                          |
| DOMESTIC COLD WATER  | ALL       | MINERAL FIBER ASJ, SSL      | 1"                   | MOLDED, PRE-FORMED MINERAL FIBER WITH PVC JACKET  | TYPE 1                           |
| DOMESTIC HOT WATER & HWC   | < 1/2"    | MINERAL FIBER ASJ, SSL      | 1"                   | MOLDED, PRE-FORMED MINERAL FIBER WITH PVC JACKET  | TYPE 1                           |
| DOMESTIC HOT WATER & HWC   | > 1/2"    | MINERAL FIBER ASJ, SSL      | 1"                   | MOLDED, PRE-FORMED MINERAL FIBER WITH PVC JACKET  | TYPE 1                           |
| DOMESTIC WATER UNDERGROUND & INSLAB  | ALL       | CLOSED CELL                 | 1"                   | ARMARLEX  | --                               |
| KITCHEN WASTE UNDERGROUND  | ALL       | CLOSED CELL                 | 1"                   | CELLULAR GLASS (FOAM GLASS)                       | --                               |
| KITCHEN WASTE ABOVE GROUND   | ALL       | MINERAL FIBER ASJ, SSL      | 1"                   | MOLDED, PRE-FORMED MINERAL FIBER WITH PVC JACKET  | TYPE 1                           |
| CONDENSATE   | ALL       | MINERAL FIBER ASJ, SSL      | 1/2"                 | MOLDED, PRE-FORMED MINERAL FIBER WITH PVC JACKET  | TYPE 1                           |
| INTERIOR ROOF DRAIN PIPING   | ALL       | MINERAL FIBER ASJ, SSL      | 1"                   | MOLDED, PRE-FORMED MINERAL FIBER WITH PVC JACKET  | TYPE 1 INCLUDE ROOF DRAIN BODY   |
| FLOOR DRAIN TRAP IN MECHANICAL ROOM  | ALL       | MINERAL FIBER ASJ, SSL      | 1"                   | MOLDED, PRE-FORMED MINERAL FIBER WITH PVC JACKET  | TYPE 1 INCLUDE 8" HORIZONTAL RUN |
| EXTERIOR PIPE  | ALL       | CELLULAR GLASS (FOAM GLASS) | 2"                   | CELLULAR JACKET WITH FREEZE PROTECTION HEAT TRACE |                                  |
| NOTES:<br>1. FIBERGLASS INSULATION: THERMAL CONDUCTIVITY 22 TO 28 BTU x IN/H x FT x F W/ 100°F MEAN TEMP. THICKNESS BASED ON ASHRAE 90.1, 2007 6.8.3<br>2. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS<br>3. ALL KITCHEN WASTE SHALL BE HEAT TRACED FROM FIXTURE TO THE GREASE INTERCEPTOR<br>4. FOR ITEMS INSTALLED IN PLENUM RATED CEILING, MATERIALS SHALL COMPLY WITH ASTM E 84 WITH FLAME-SPREAD INDEX OF 25 OR LESS, AND SMOKE-DEVELOPED INDEX OF 50 OR LESS<br>5. FIRE-BARRIER PENETRATIONS: MAINTAIN INDICATED FIRE RATINGS OF WALLS, PARTITIONS, CEILING, AND FLOORS AT PIPE PENETRATIONS. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS. SEAL PIPE PENETRATIONS WITH FIRESTOP MATERIALS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION |           |                             |                      |   |                                  |

| PLUMBING FIXTURE/EQUIPMENT SCHEDULE   |   |                |        |         |         |         |
|---|---|----------------|--------|---------|---------|---------|
| MARK  | FIXTURE, MODEL NUMBER AND DESCRIPTION   | ROUGH-IN       |        |         |         | REMARKS |
|   |   | WASTE/SANITARY | VENT   | OV      | HW      |         |
| W-1   | WATER CLOSET, WALL HUNG, SLOAN WETS-2450/1001-28, VITREOUS CHINA, ELONGATED BOWL, 1/2" TOP SPUD, SIPHON JET TOILET WITH WALL SUPPLY, 1.28 GPF MANUAL FLUSH VALVE, CHURCH 285CT OPEN FRONT SEAT. PROVIDE ALL ITEMS REQUIRED FOR COMPLETE INSTALLATION.   | 4"             | 2"     | 1"      | --      |         |
| W-1A  | WATER CLOSET, ADA COMPLIANT, WALL HUNG, SLOAN WETS-2450/1001-28, VITREOUS CHINA, ELONGATED BOWL, 1/2" TOP SPUD, SIPHON JET TOILET WITH WALL SUPPLY, 1.28 GPF MANUAL FLUSH VALVE, CHURCH 285CT OPEN FRONT SEAT. ENSURE THAT HANDLE FOR FLUSH VALVE IS ON OPEN SIDE OF STALL FOR ALL ADA INSTALLATIONS. PROVIDE ALL ITEMS REQUIRED FOR COMPLETE INSTALLATION.   | 4"             | 2"     | 1"      | --      |         |
| W-2A  | WATER CLOSET, CHILD HEIGHT, FLOOR MOUNTED, KOHLER PRIMARY K-4321, VITREOUS CHINA, ELONGATED BOWL, 1/2" TOP SPUD, SIPHON JET TOILET WITH WALL SUPPLY, SLOAN ROYAL 1421-6 MANUAL FLUSH VALVE 1.6 GPF, FLUSH VALVE IS CONCEALED IN WALL, KOHLER K-4386-A OPEN FRONT SEAT. PROVIDE ALL ITEMS REQUIRED FOR COMPLETE INSTALLATION.  | 4"             | 2"     | 1"      | --      |         |
| W-3A  | WATER CLOSET, ADA COMPLIANT, WALL HUNG, SLOAN WETS-2450/1001-28, VITREOUS CHINA, ELONGATED BOWL, 1/2" TOP SPUD, SIPHON JET TOILET WITH WALL SUPPLY, SLOAN ROYAL 1421-6 MANUAL FLUSH VALVE 1.6 GPF, FLUSH VALVE IS CONCEALED IN WALL, CHURCH 285CT OPEN FRONT SEAT. PROVIDE ALL ITEMS REQUIRED FOR COMPLETE INSTALLATION.  | 4"             | 2"     | 1"      | --      |         |
| U-1   | URINAL, WALL HUNG, SLOAN WEUS-1000/1001-025, VITREOUS CHINA 3/4" INLET SPUD WALL SUPPLY WASHOUT URINAL WITH FULLY ENCLOSED P-TRAP, SLOAN ROYAL 186-0/125 MANUAL FLUSH VALVE 125 GPF. PROVIDE ALL ITEMS REQUIRED FOR COMPLETE INSTALLATION.  | 2"             | 2"     | 3/4"    | --      |         |
| U-1A  | URINAL, ADA COMPLIANT, WALL HUNG, SLOAN WEUS-1000/1001-025, VITREOUS CHINA 3/4" INLET SPUD WALL SUPPLY WASHOUT URINAL WITH FULLY ENCLOSED P-TRAP, SLOAN ROYAL 186-0/125 MANUAL FLUSH VALVE 125 GPF. PROVIDE ALL ITEMS REQUIRED FOR COMPLETE INSTALLATION.   | 2"             | 2"     | 3/4"    | --      |         |
| L-1A  | LAVATORY, WALL HUNG, SLOAN SS-3009 VITREOUS CHINA WALL MOUNT LAVATORY, CHICAGO FAUCETS MODEL 857-82805-88588AS SINGLE TEMPERATURE, METERS HANDLE PUSH HANDLE FAUCET, 0.5 GPM, 1/2" CHROME PLATED CAST BRASS P-TRAP, SUPPLIES, BRASS ANGLE STOPS WITH LOOSE KEY OPERATION, GRID DRAIN, ETC. FOR EACH GROUPING OF LAVATORIES. PROVIDE CHICAGO FAUCETS MODEL 1314-ENF BELOW DECK, THERMOSTATIC MIXING VALVE, ASSE 1070, IN PLUMBING CHASE BEHIND LOCKING ACCESS DOOR FOR COMPLETE INSTALLATION. COORDINATE MOUNTING HEIGHTS WITH ARCHITECT PRIOR TO INSTALLATION.          | 2"             | 1 1/2" | 1/2"    | 1/2"    |         |
| L-2A  | LAVATORY, WALL MOUNTED, BRADLEY M8-2 / BR3 EXPRESS LAVATORY SYSTEM, TERRENO SOLID SURFACE MATERIAL, CONTINUOUS BOWL WITH TWO LAVATORIES, SPRAYHEAD, FEDERAL STAINLESS STEEL MOUNTING FRAME, BATTERY POWERED ASSE-1070 THERMOSTATIC MIXING VALVE, INFRARED SENSOR FAUCET, 0.5 GPM FLOW RATE 1/2" CHROME PLATED CAST BRASS P-TRAP, SUPPLIES, BRASS ANGLE STOPS WITH LOOSE KEY OPERATION, GRID DRAIN, ETC. FOR COMPLETE INSTALLATION. COORDINATE MOUNTING HEIGHTS WITH ARCHITECT PRIOR TO INSTALLATION. NOTE: PROVIDE ONE HOSE BIB MOUNTED NEAR LAVATORY (H) PER RESTROOM. | 2"             | 1 1/2" | 1/2"    | 1/2"    |         |
| EW-C-A  | ELECTRIC WATER COOLER W/BOTTLE FILLING STATION, ADA COMPLIANT, ELKAY ES21LSBWSK W/ARCON ELKAY UKAPR2L, ADA COMPLIANT WHEN PROPERLY INSTALLED, ADA COMPLIANT CONTROLS, FRONT PUSH BAR CONTROLS, (FRONT MOUNT PUSH BUTTON SHALL BE OPERABLE WITH A 5 LB. MAXIMUM FORCE), ELECTRICAL RATING: 15 VOLTS, 60HZ RATED WATTS:360, FULL LOAD AMPS:4.2, MINIMUM COOLING CAPACITY: 8 GPH   | 2"             | 1 1/2" | 1/2"    | --      |         |
| M8B   | MOP SINK, FLAT M8B2424, MOLDED STONE, 24"x24"x10, SERVICE FAUCET PLATE #830-AAA, HOSE AND HOSE BRACKET PLATE #832-AAA, BUMPER GUARD PLATE #877-AAA, 55" MOP HANGER #888-CC, MOP SINK DRAIN GABLET #2023KH, WALL GUARDS #89524, WITH INTEGRAL DRAIN, PROVIDE THREADED HOSE BIB CONNECTION FOR CHEMICAL FEED SYSTEM (SEE DETAIL), PROVIDE TRAP, SUPPLIES, STOPS, ETC FOR COMPLETE INSTALLATION.   | 3"             | 2"     | 3/4"    | 3/4"    |         |
| S-1A  | SINGLE BOWL SINK, ADA COMPLIANT, ELKAY LR4D-252, 25" X 21" X 8, 18 GAUGE TYPE 302 STAINLESS STEEL, BELT-RIMMING FAUCET, DELTA (LAD FREE) 15 GPM, SINGLE LEVER SWING SPOUT FAUCET, LESS SPRAY, PROVIDE 1/2" CHROME PLATED CAST BRASS P-TRAP, SUPPLIES, BRASS ANGLE STOPS WITH LOOSE KEY OPERATION, GRID DRAIN, ETC. FOR COMPLETE INSTALLATION.   | 1 1/2"         | 1 1/2" | 1/2"    | 1/2"    |         |
| S-2A  | CLASSROOM SINK WITH DRINKING FOUNTAIN, ADA COMPLIANT, ELKAY DRK4D3175(L/R) FOR RIGHT OR LEFT HAND USE. PROVIDE WITH 5" BOWL DEPTH AND DRAIN OFFSET TO REAR. PROVIDE WITH SWING SPOUT FAUCET WITH WRIST BLADES, MODEL LK24389HC AND REMOTE CONTROLLED FLENGUARD BUBBLER MODEL LKRIIA. PUSHBUTTON SHALL BE LOCATED IN FRONT FACE OF COUNTER IN ACCESSIBLE LOCATION. PROVIDE TRAP, SUPPLIES, STOPS, ETC FOR COMPLETE INSTALLATION.   | 1 1/2"         | 1 1/2" | 1/2"    | 1/2"    |         |
| S-3A  | 3 STATION WASH TROUGH, ADA COMPLIANT, INTERNA TM3C, 20 GAUGE TYPE 304 STAINLESS STEEL, TO BE ORDERED WITHOUT FAUCETS AND PLUNGED FOR 8" CENTERSET FAUCETS. FAUCET: T65 BRASS #-0230-132X-CR. PROVIDE 15 GPM FLOW RESTRICTOR, WALL MOUNTED MIXING FAUCET WITH 4" WRIST BLADE HANDLES, PROVIDE SUPPLIES, BRASS ANGLE STOPS WITH LOOSE KEY OPERATION, GRID DRAIN, ETC. FOR COMPLETE INSTALLATION.  | 2"             | 2"     | 1/2 (3) | 1/2 (3) |         |
| H5  | HOSE BIBB (UNFINISHED AREAS), WOODFORD MODEL 34, BRONZE BODY, REMOVABLE VALVE SEAT & STEM ASSEMBLY, THREADED END, INTEGRAL VACUUM BREAKER NOTE: PROVIDE ONE HOSE BIB MOUNTED NEAR LAVATORY (H) PER RESTROOM.  | --             | --     | 3/4"    | --      |         |
| FR-B  | FREEZE PROOF HOSE BIBB, WOODFORD MODEL M67, CAST BRONZE NON-FREEZE WALL HYDRANT WITH STAINLESS STEEL WIPER LOCKING COVER 3/4"HT OUTLETS, INTEGRAL DOUBLE CHECK BACKFLOW PREVENTER PRESSURE RELIEF VALVE AND 3/4" FEMALE & 1" MALE NPT INLER CONNECTION.   | --             | --     | 3/4"    | --      |         |
| SA  | WATER HAMMER ARRESTOR, PRECISION PLUMBING PRODUCTS (PPP), SC SERIES, 1/2-1", SIZE PER MANUFACTURER RECOMMENDATIONS AND REQUIREMENTS   | --             | --     | 1/2-1"  | --      |         |
| TP  | ELECTRIC TRAP PRIMER, PRECISION PLUMBING PRODUCTS (PPP) PT SERIES, CONSISTING OF CIRCUIT BREAKER (MIN. 2 AMP), SWITCH TRIPER, SOLENOID VALVE, ANTI-SIPHON ATMOSPHERIC VACUUM BREAKER, 120V, SINGLE PHASE SURFACE OR RECESSED CABINET BASED ON WALL CONDITIONS (REFER TO DWGS) PROVIDE ACCESS DOOR FOR UNIT. COORDINATE ACCESS PANEL FINISH WITH ARCHITECT. COORDINATE NUMBER OF OUTLETS AS REQUIRED BY QUANTITY OF DRAINS. INSTALL PER MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS  | --             | --     | 3/4"    | --      |         |
| OWC   | WASHER TRM, PRECISION PLUMBING PRODUCTS MM-500 MLB, 20 GAUGE STEEL LAUNDRY BOX WITH WHITE POWDER COAT FINISH, QUARTER TURN BALL VALVES & INTEGRAL WATER HAMMER ARRESTORS  |                |        |         |         |         |
| NOTES:<br>1. LAVATORY & WATER COOLERS SUPPLY SHALL BE BRASS W/ BRASS ANGLE STOPS FOR 1/2" WATER SUPPLY LINES, W/ LOOSE KEY (W/CAP), AND WALL FLANGE. ALL COMPONENTS SHALL BE POLISHED CHROME FINISH, MANUFACTURER, BRASS CRAFT OR APPROVED EQUAL.<br>2. CAST BODY P-TRAP 1/2" & 1/2" WITH HEAVY CAST J-BEND & FLAT CLEANOUT PLUG, SLP NUTS AND WALL FLANGE. ALL COMPONENTS SHALL BE POLISHED CHROME FINISH, MANUFACTURER, BRASS CRAFT OR APPROVED EQUAL.<br>3. STRAINERS SHALL BE FURNISHED WITH FIXTURES AS REQUIRED. FOR H/C LAVATORY OR SINKS PROVIDE OFFSET TAILPIECE.<br>4. PROVIDE TRUBRO MODEL 103 (WHITE), ANTIMICROBIAL HAND LAV-GUARDS INSTALLATION KIT FOR ALL WHEELCHAIR LAVATORY & SINKS FOR WATER SUPPLIES & WASTE LINE.<br>5. PROVIDE WATER SUPPLY & P-TRAP & OPTIONAL WATER FILTERS FOR ELECTRIC WATER COOLERS AS PER MANUFACTURER'S RECOMMENDATIONS.<br>6. THE PLUMBING FIXTURES VENDOR SHALL COORDINATE WITH THE PLUMBING AND GENERAL CONTRACTOR ALL PLUMBING FIXTURES ROUGH IN DIMENSIONS BEFORE CONSTRUCTION BEGINS.<br>7. UNLESS SHOWN ABOVE, PLUMBING FIXTURES MANUFACTURER, TRIM COLOR AND FINISH SHALL BE FURNISHED AS DIRECTED BY OWNER/ARCHITECT.<br>8. REFER TO ARCHITECTURAL DRAWINGS FOR STANDARD, ADA MOUNTING AND CHILD HEIGHTS. REFER TO ARCHITECTURAL FOR LOCATION OF ADA COMPLIANT SHOWER SEAT AND SHOWER BARS<br>9. CONTRACTOR TO PROVIDE AN EXTRA 10% OF BATTERIES, AERATORS, CARTRIDGE, ETC... |   |                |        |         |         |         |

Project Title:  
**Hinsdale School Alterations**

15 Hinsdale Ave.  
Winsted, CT 06098



**SILVER / PETRUCELLI + ASSOCIATES**  
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| Revision: | Description: | Date: | Revised By: |
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Drawing Title:  
**PLUMBING SCHEDULES**

State Project #: 162-0043RNV

Date:  
**June 30, 2020**

Scale:

Drawn By:  
**JES**

Project Number:  
**18-223**

Drawing Number:

**P902**

| BACKFLOW PREVENTER SCHEDULE |      |                                   |  |                            |                   |                      |                           |  |  |
|-----------------------------|------|-----------------------------------|--|----------------------------|-------------------|----------------------|---------------------------|--|--|
| MARK                        | SIZE | LOCATION                          | SERVICE  | BODY MATERIAL              | TEMPERATURE RANGE | MAX WORKING PRESSURE | MANUFACTURER              |  | REMARKS  |
|                             |      |                                   |  |                            |                   |                      | MODEL                     |  |  |
| BFP-1                       | 4"   | WATER SERVICE ROOM                | DOMESTIC WATER                                     | FDA EPOXY COATED CAST IRON | 33°F-10°F         | 175PSI               | WATTS<br>SERIES LF909-05Y |  | LEAD FREE, STAINLESS STEEL INTERNAL PARTS, FLOOD DETECTION DEVICE ON DISCHARGE WITH MONITORING |
| BFP-2                       | 1/2" | BOILER ROOM                       | BOILER MAKE-UP WATER                               | BRONZE                     | 33°F-40°F         | 175PSI               | WATTS<br>SERIES LF908M1   |  | --   |
| BFP-3                       | 1/2" | PUMP ROOM                         | CHILLER MAKE-UP WATER                              | BRONZE                     | 33°F-40°F         | 175PSI               | WATTS<br>SERIES LF908M1   |  | --   |
| BFP-4                       | 3/4" | JANITOR CLOSETS / MISC. LOCATIONS | MOP SINK CHEM. DISPENSER FEED / MISC. MAKE-UP LINE | BRONZE                     | 33°F-40°F         | 175PSI               | WATTS<br>SERIES LF909     |  | --   |

| OIL-FIRED WATER HEATER SCHEDULE |                        |           |             |                       |              |                 |         |
|---------------------------------|------------------------|-----------|-------------|-----------------------|--------------|-----------------|---------|
| MARK                            | MAKE & MODEL           | TYPE      | STORAGE     | RECOVERY @ TEMP. RISE | MIXING VALVE | OIL INPUT (MBH) | REMARKS |
| WH-1                            | A.O. SMITH COF-150-400 | OIL-FIRED | 150 GALLONS | 387 GPH @100°F        | TMV-1        | 400             | --      |
| WH-2                            | A.O. SMITH COF-150-400 | OIL-FIRED | 150 GALLONS | 387 GPH @100°F        | TMV-1        | 400             | --      |

NOTES:  
1. INSTALL WATER HEATER IN ACCORDANCE WITH BUILDING CODE - PLUMBING & MECHANICAL (WITH LATEST AMENDMENTS) CODES, ENERGY CODE, AND APPLICABLE STANDARDS AND MANUFACTURERS RECOMMENDATIONS.  
2. PROVIDE BRASS DRAIN VALVE, & ALL REQUIRED OPTIONS TO COMPLETE THE INSTALLATION.  
3. PROVIDE CONDENSATE NEUTRALIZER TANK FROM WATER HEATER MANUFACTURER.

| PUMP SCHEDULE |             |                        |              |             |     |      |            |         |       |     |                             |   |
|---------------|-------------|------------------------|--------------|-------------|-----|------|------------|---------|-------|-----|-----------------------------|---|
| MARK          | LOCATION    | SERVICE                | PUMP TYPE    | FLUID       | GPM | HEAD | ELECTRICAL |         |       |     | MANUFACTURER                | REMARKS   |
|               |             |                        |              |             |     |      | HP         | VOLTAGE | PHASE | RPM |                             |   |
| RP-1          | BOILER ROOM | HOT WATER              | RECIRC. PUMP | WATER       | 15  | 19'  | 1/6        | 120     | 1     | --  | GRUNDFOS<br>ALPHA UPS 28-89 | STAINLESS STEEL HOUSING                           |
| RP-2          | BOILER ROOM | HOT WATER              | RECIRC. PUMP | WATER       | 15  | 19'  | 1/6        | 120     | 1     | --  | GRUNDFOS<br>ALPHA UPS 28-89 | STAINLESS STEEL HOUSING                           |
| SP-1          | BOILER ROOM | WASTE WATER / EFFLUENT | SUBMERSIBLE  | WASTE WATER | 30  | 25'  | 1/2        | 120     | 1     | --  | LIBERTY PUMPS<br>MODEL 280  | WITH 5" X L 2 1/2" CONTROL PANEL & RECESSED BASIN |

| THERMOSTATIC MIXING VALVE SCHEDULE |  |             |                              |                      |                       |                   |                    |                            |  |
|------------------------------------|--|-------------|------------------------------|----------------------|-----------------------|-------------------|--------------------|----------------------------|--|
| MARK                               | EQUIPMENT BEING SERVED (I.E. WATER HEATER, ETC.) | AREA SERVED | DESIGN PRESSURE DIFFERENTIAL | DESIGN FLOW RATE GPM | MINIMUM FLOW RATE GPM | INLET TEMPERATURE | OUTLET TEMPERATURE | MANUFACTURER               |  |
|                                    |  |             |                              |                      |                       |                   |                    | MODEL                      |  |
| TMV-1                              | WH-1 & WH-2                                      | BUILDING    | 10 PSI                       | 70.4 GPM             | 3 GPM                 | 140°F             | 110°F              | ACORN VALVE<br>MYT-4-OTG   |  |
| TMV-2                              | KITCHEN HAND SINKS                               | KITCHEN     | 10 PSI                       | 21 GPM               | 0.25 GPM              | 140°F             | 110°F              | ACORN VALVE<br>ST-10-12-MB |  |
| TMV-3                              | EEW/SH   | KITCHEN     | 10 PSI                       | 20                   | 1 GPM                 | 140°F             | 85°F               | ACORN VALVE<br>ETH-2       |  |

NOTES:  
1. MINIMUM LOW RATE WHEN VALVE IS INSTALLED AT OR NEAR HOT WATER SOURCE WITH RECIRCULATED TEMPERED WATER AND CONTINUOUSLY OPERATING CIRCULATION PUMP.  
2. WITH DIAL THERMOMETER, ADJUSTABLE SET POINT, INTEGRAL STRAINER CHECKSTOPS ON INLETS, PROVIDE SHUTOFFS/UNIONS AT ALL CONNECTIONS.

| PIPE HANGER SPACING TABLE    |                     |   |   |
|------------------------------|---------------------|---|---|
| PIPE MATERIAL                | PIPE SIZES (INCHES) | HORIZONTAL PIPE MAX. HANGER DISTANCE (FT) | VERTICAL PIPE MAX. HANGER DISTANCE (FEET) |
| COPPER & COPPER ALLOY TUBING | 1/4" & SMALLER      | 8'-0"                                     | 10'-0"                                    |
| COPPER & COPPER ALLOY TUBING | 1/2" & LARGER       | 10'-0"                                    | 10'-0"                                    |
| COPPER & COPPER ALLOY PIPE   | ALL                 | 12'-0"                                    | 10'-0"                                    |
| CAST IRON PIPE               | ALL                 | 5'-0"                                     | 15'-0"                                    |
| STEEL PIPE                   | ALL                 | 12'-0"                                    | 15'-0"                                    |
| STAINLESS STEEL DRAINAGE     | ALL                 | 10'-0"                                    | 10'-0"                                    |
| CPVC PIPE OR TUBING          | 1" & SMALLER        | 3'-0"                                     | 10'-0"                                    |
| CPVC PIPE OR TUBING          | 1 1/4" & LARGER     | 4'-0"                                     | 10'-0"                                    |
| PVC PIPE                     | ALL                 | 4'-0"                                     | 10'-0"                                    |

NOTES:  
1. MAXIMUM HORIZONTAL SPACING OF CAST IRON PIPE HANGERS SHALL BE INCREASED TO 10'-0" WHERE 10'-0" LENGTHS OF PIPE ARE USED.  
2. MIDSTORY GUIDE FOR SIZES 2" AND SMALLER.  
3. NOT ALL PIPE MATERIALS ON THIS TABLE WILL PERTAIN TO THIS PROJECT.

| EXPANSION TANK SCHEDULE |                |             |   |  |
|-------------------------|----------------|-------------|---|--|
| MARK                    | MAKE & MODEL   | SERVICE     | WATER HEATER STORAGE CAPACITY (GALLONS) | REQUIRED MINIMUM ACCEPTANCE VOLUME (GALLONS) |
| EXP-1                   | AMTROL ST-80VC | WH-1 & WH-2 | 350                                     | 25.65  |

NOTES:  
1. BASED OFF 1.5% EXPANSION FACTOR, 140°F HOT WATER STORAGE TEMPERATURE, & 5.7 DESIGN PRESSURE FACTOR, 100 PSI MAXIMUM ALLOWABLE PRESSURE & 80 PSI LINE PRESSURE. (WATER HEATER VOLUME x 1.5% x 5.7).  
2. PROVIDE ALL NECESSARY ACCESSORIES.  
3. PROVIDE AIR CHARGING FITTING.

Project Title:  
**Hinsdale School Alterations**  
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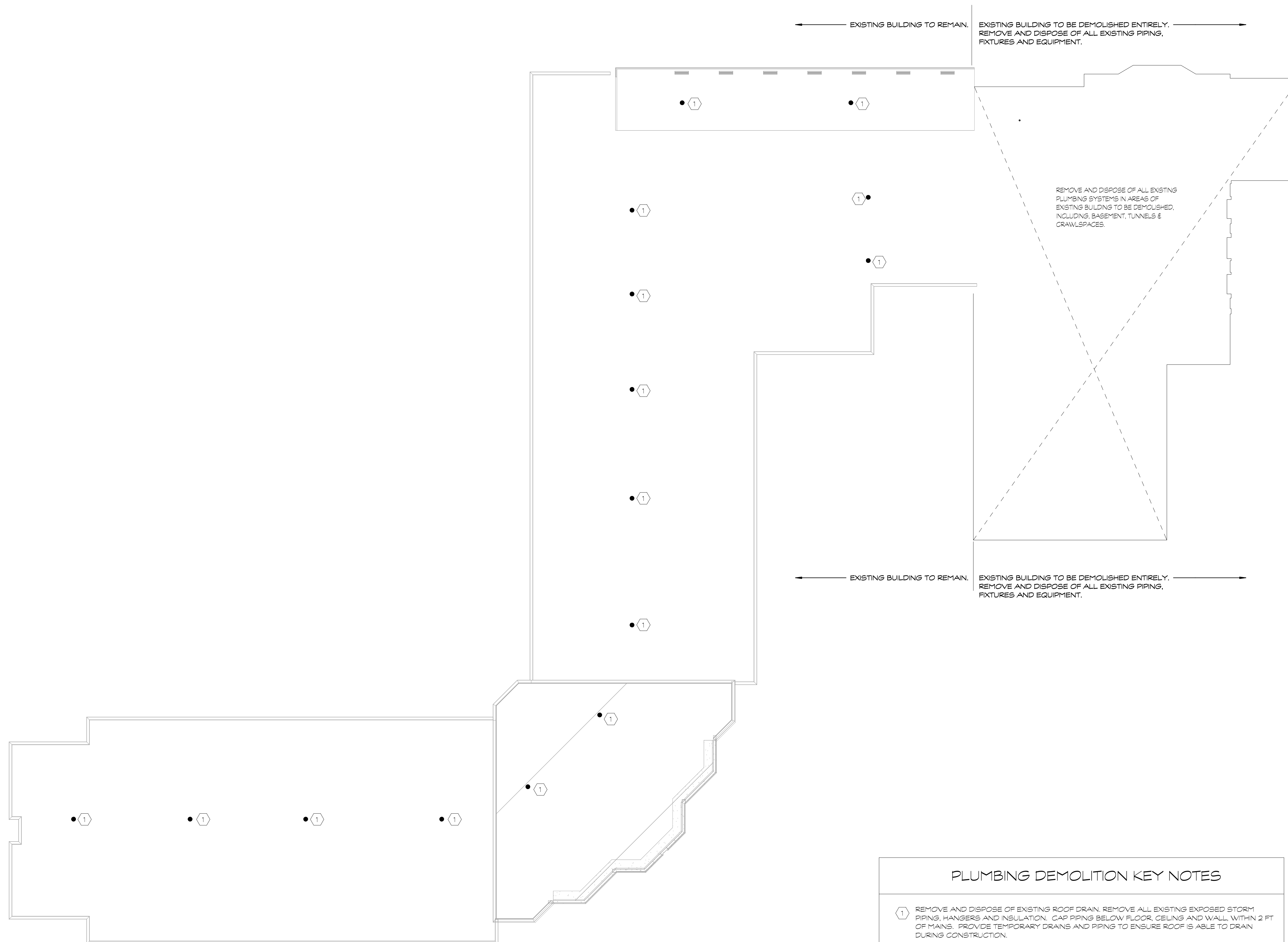
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Drawing Title:  
**PLUMBING SCHEDULES**  
State Project #: 162-0043RNV

Date:  
**June 30, 2020**  
Scale:  
Drawn By:  
**JES**  
Project Number:  
**18-223**

**P903**





PLUMBING DEMOLITION ROOF PLAN  
SCALE: 1/8" = 1'-0"



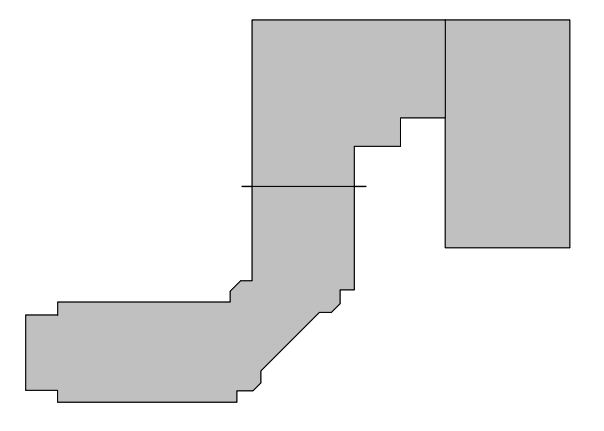
**PLUMBING DEMOLITION KEY NOTES**

- ① REMOVE AND DISPOSE OF EXISTING ROOF DRAIN. REMOVE ALL EXISTING EXPOSED STORM PIPING, HANGERS AND INSULATION. CAP PIPING BELOW FLOOR, CEILING AND WALL WITHIN 2 FT OF MAINS. PROVIDE TEMPORARY DRAINS AND PIPING TO ENSURE ROOF IS ABLE TO DRAIN DURING CONSTRUCTION.
- ② REMOVE AND DISPOSE OF EXISTING VENT THROUGH ROOF PIPING. REMOVE ALL EXISTING EXPOSED WASTE AND VENT PIPING. CAP PIPING BELOW FLOOR, CEILING AND WALL WITHIN 2 FT OF MAINS.

**IMPORTANT NOTICE**

THE EXISTING CONDITIONS REPRESENTED HEREON ARE BASED ON THE EXISTING DRAWINGS. THEY ARE INCLUDED FOR CONTRACTORS REFERENCE ONLY. ACTUAL LOCATION OF PIPING AND UTILITIES MAY VARY IN FIELD. PIPING CONTRACTOR SHALL VERIFY LOCATIONS IN FIELD AND MAKE ALLOWANCE IN BID FOR LOCATIONS AND ARRANGEMENTS OTHER THAN SHOWN.

SILVER / PETRUCELLI CANNOT GUARANTEE THE CORRECTNESS OF THE EXISTING CONDITIONS SHOWN AND ASSUMES NO RESPONSIBILITY THEREFOR. INCLUSION OF THESE EXISTING CONDITIONS HEREON SHALL IN NO WAY ALLEVIATE THE CONTRACTOR(S) OF THEIR RESPONSIBILITY TO VISIT THE SITE TO VERIFY ALL EXISTING CONDITIONS.



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FIRE PROTECTION GENERAL NOTES

**GENERAL**  
 UTILIZE CONCEALED PENDENT SPRINKLERS AND PIPING IN AREAS WITH FINISHED CEILING AND EXPOSED PIPING AND UPRIGHT SPRINKLERS IN AREAS WITHOUT CEILING. CONCEALED SPRINKLER HEADS LOCATED IN ACCIDENTAL FLEXIBLE FLEX HOSE PIPING 6' IN LENGTH. PROVIDE AND INSTALL SPRINKLERS UNDER AND ABOVE ALL OBSTRUCTIONS IN ACCORDANCE WITH NFPA 13.

FIRE PROTECTION PLANS ARE INTENDED TO INDICATE TOTAL COVERAGE AND MAY OR MAY NOT INDICATE ALL SPRINKLER HEADS. SPRINKLER HEADS INDICATED ON DRAWINGS ARE DIAGNOSTIC AND SHALL NOT BE COUNTED FOR BID (IT IS NOT THE INTENT OF THESE DRAWINGS TO SHOW ENTIRE PIPING LAYOUT, PROPOSED MAINS AND DEVICES INDICATED ONLY). THE CONTRACTOR SHALL PROVIDE A COMPLETE SPRINKLER SYSTEM WITH COMPLETE SPRINKLER COVERAGE, INDICATED OR NOT. ITEMS AND SERVICES NOT SHOWN ON DRAWINGS OR SPECIFICATIONS BUT REQUIRED TO RENDER THE WORK COMPLETE, IN ACCORDANCE WITH NFPA INSURANCE COMPANY REQUIREMENTS AND OWNERS, READY FOR OPERATION, SHALL BE PROVIDED AND INSTALLED. THE CONTRACTOR SHALL PROVIDE COMPLETE SPRINKLER COVERAGE AS REQUIRED INCLUDING BUT NOT LIMITED TO CRAWL SPACES, CONCEALED COMBUSTIBLE SPACES, SHIFTS, AND ALL CLOSETS.

DRAWINGS ARE DIAGNOSTIC AND INDICATE A GENERAL ARRANGEMENT OF WORK AND ARE NOT TO BE CONSIDERED SUBCONTRACTOR DOCUMENTS. IT IS THE INTENT OF THESE DOCUMENTS TO INCLUDE THE PROVISION AND INSTALLATION OF ALL NECESSARY WORK AND MATERIALS FOR COMPLETE OPERATIONAL AND CODE COMPLIANT SYSTEMS BY THE CONTRACTOR. GENERAL DESIGN CONCEPTS INDICATED MUST BE FOLLOWED OR BETTERED. THE BID SHALL INCLUDE OFFSETS, ADDITIONAL PIPING VALVES AND EQUIPMENT AND COMPONENTS AS REQUIRED TO MEET CONSTRUCTION CONDITIONS FOR PROPER OPERATION. DO NOT SCALE DRAWINGS. CONSULT ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR SPACE CONDITIONS AND ADDITIONAL REQUIREMENTS.

WHEN A CONFLICT BETWEEN THE DRAWINGS, NOTES AND/OR SPECIFICATIONS OCCUR, THE MORE STRINGENT AND/OR LARGER QUANTITY AND/OR MORE EXPENSIVE SHALL APPLY. THE REQUIREMENTS LISTED WITHIN NOTES OR SPECIFICATIONS SHALL BE REQUIRED, PROVIDED AND INSTALLED WHETHER SPECIFICALLY INDICATED ON THE DRAWINGS OR NOT.

THE CONTRACTOR SHALL COORDINATE SPRINKLER HEAD LOCATIONS WITH THE LATEST ARCHITECTURAL REFLECTED CEILING PLANS. ANY DISCREPANCIES SHALL BE BROUGHT BACK TO THE ARCHITECT/ENGINEER. DO NOT SCALE DRAWINGS FOR DIMENSIONS NOT INDICATED. REFER TO ARCHITECT FOR RESOLUTION FOR ANY DIMENSIONS NOT INDICATED.

IT IS THE INTENTION OF THE SPECIFICATIONS AND DRAWINGS TO PROVIDE FOR FINISHED WORK, TESTED AND READY FOR OPERATION.

THE DESIGN OF ALL FIRE SUPPRESSION SYSTEMS WILL BE IN ACCORDANCE WITH THE LOCAL AND STATE BUILDING CODE, NFPA 13, FM GLOBAL, USE ONLY UL/FM SPRINKLERS, MATERIALS AND DEVICES, UNLESS NOTED OTHERWISE.

CONCEALED SPRINKLERS AND PIPING SHALL BE INSTALLED IN AREAS WITH FINISHED CEILING. AREAS WITH EXPOSED CONSTRUCTION SHALL HAVE EXPOSED PIPING AND SPRINKLERS (CUSTOM COLOR).

THE SPRINKLER CONTRACTOR IS REQUIRED TO VISIT THE SITE AT THE TIME OF BID, TO EXAMINE CONDITIONS AND BECOME FAMILIAR WITH THE JOB, NOTING DEGREE OF DIFFICULTY IN GETTING EQUIPMENT (INCLUDING LIFTS AND SCAFFOLDS) IN AND OUT OF THE BUILDING. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER IN WRITING PRIOR TO SUBMITTING A BID.

NOTIFY PROPER AUTHORITIES (INCLUDING BUT NOT LIMITED TO THE LOCAL A.H.J., INSURANCE COMPANY, ETC.) OF ANY FIRE PROTECTION "SHUT-DOWNS" SCHEDULE ALL WORK TO MINIMIZE THE LENGTH OF TIME THAT THE FIRE PROTECTION SYSTEMS WILL BE OUT OF SERVICE. RETURN THE SPRINKLER SYSTEM BACK IN SERVICE AT THE END OF EACH WORKING DAY. IF A FIRE WATCH IS REQUIRED BY THE LOCAL A.H.J. BUILDING MANAGER, ETC. IT SHALL BE PROVIDED BY THE GENERAL CONTRACTOR. FIRE WATCH SCHEDULING AND PERSONNEL SHALL BE COORDINATED WITH THE LOCAL A.H.J., BUILDING MANAGER AND INSURANCE COMPANY.

ARRANGE PIPING TO FACILITATE FLUSHING. PROVIDE READILY ACCESSIBLE DRAIN AND FLUSHING CONNECTIONS AS REQUIRED BY NFPA 13. PROVIDE AND INSTALL AUXILIARY DRAINS WITH PROVISIONS FOR COMPLETE DRAINAGE. PIPING ALL DRAINS TO AN APPROVED LOCATION.

INSPECTORS TEST CONNECTIONS, DRAIN VALVES AND CONTROL VALVES SHALL BE READILY ACCESSIBLE AND INSTALLED NOT OVER 4'-7" ABOVE THE FINISHED FLOOR. PROVIDE ALL VALVES WITH IDENTIFICATION SIGNS. SUPERVISORY SWITCHES SHALL BE ON ALL CONTROL VALVES. PIPING ALL DRAIN PIPING. INSPECTORS TEST CONNECTIONS, ETC. TO THE EXTERIOR. ENSURE DRAINAGE DOES NOT CAUSE DAMAGE TO BUILDING OR SITE.

INSTALL A PRESSURE GAUGE WITH A BLEEDER MAINTENANCE VALVE AT THE TOP OF ALL RISERS.

PROVIDE A HEAD GUARD ON SPRINKLERS IN AREAS SUBJECT TO MECHANICAL DAMAGE (I.E. SPRINKLERS IN MECHANICAL ROOMS, ETC.).

REFER TO ADDITIONAL NOTES ON ARCHITECTURAL DRAWINGS.

THE CONTRACTOR SHALL COORDINATE SPRINKLER WORK WITH THE OWNERS PHASING SCHEDULE PRIOR TO COMMENCEMENT OF ANY WORK. ALL PHASED SECTIONS OF WORK SHALL COMPLY WITH THE OWNERS SCHEDULE AND BE TESTED, INSPECTED, READY FOR OPERATION IN ACCORDANCE WITH NFPA, OWNERS INSURANCE COMPANY AND A.H.J. REQUIREMENTS.

THE CONTRACTOR SHALL PROVIDE COMPLETE SIGNED AND SEALED (BY LICENSED P.E.) DRAWINGS INDICATING ALL PIPING AND SPRINKLER HEADS. CONTRACTOR SHALL SECURE AND PAY COSTS OF PERMITS, CERTIFICATES, LICENSES, INSPECTIONS AND APPROVALS.

INSTALL SPRINKLERS BELOW DUCTS, AND/OR COMBINATIONS OF DUCTS/EQUIPMENT IN ACCORDANCE WITH THE OBSTRUCTION REQUIREMENTS OF NFPA 13.

PROVIDE SPRINKLER PROTECTION IN ORDER TO AVOID ALL OBSTRUCTIONS IN ACCORDANCE WITH NFPA 13, INCLUDING LIGHTING, CEILING FIXTURES, STRUCTURAL MEMBERS, ETC. WITHIN ALL HAZARD OCCUPANCIES.

ALL DRAIN PIPING AND ANY PIPING SUBJECT TO ALTERNATE WETTING AND DRYING SHALL BE GALVANIZED.

ALL SYSTEM COMPONENTS SHALL BE CAPABLE OF WITHSTANDING A MINIMUM WORKING PRESSURE OF 175 PSI.

THE CONTRACTOR SHALL SEAL AROUND ALL NEW PENETRATIONS THROUGHOUT THE BUILDING WITH SEALANT OF FIRE AND/OR SMOKE RETARDANT TYPE EQUAL IN FIRE RATING TO THE STRUCTURE BEING PENETRATED. SEALANT SHALL BE A UL LISTED ASSEMBLY.

WORK OF THIS SECTION SHALL BE GOVERNED BY THE CONTRACT DOCUMENTS. PROVIDE MATERIALS, LABOR, EQUIPMENT AND SERVICES NECESSARY TO FURNISH, DELIVER AND INSTALL ALL WORK AS SPECIFIED AND AS REQUIRED BY JOB CONDITIONS. WHERE A CONFLICT EXISTS BETWEEN THESE NOTES, THE DRAWINGS AND THE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

PERFORM THE WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT GENERAL CONDITIONS AND WITH THE PROVISIONS OF ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES AND LAWS.

WORK SHALL INCLUDE ALL INCIDENTAL LABOR, MATERIAL, EQUIPMENT, APPLIANCES, SERVICES, HOISTING, SCAFFOLDING, SUPPORTS, TOOLS, CONSUMABLE ITEMS, FEES, LICENSES AND ADMINISTRATIVE TASKS REQUIRED TO COMPLETE AND MAKE OPERABLE WORK SHOWN ON THE DRAWINGS, SPECIFIED HEREIN AND AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.

STORE MATERIALS INSIDE AND PROTECTED FROM DEBRIS, WEATHER AND MOISTURE. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL POWER AND CONTROL WIRING REQUIRED FOR EQUIPMENT OPERATION NOT SPECIFICALLY PROVIDED BY OTHERS, BUT REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. THE CONTRACTOR SHALL PROVIDE MOTOR STARTERS FOR INSTALLATION BY OTHERS. COORDINATE REQUIREMENTS.

**ALTERATION WORK AND DEMOLITION**

EXISTING PIPING AND SPRINKLERS SHOWN DO NOT NECESSARILY REFLECT EXACT FIELD CONDITIONS. FIELD VERIFY EXTENT AND LOCATION OF WORK TO BE REMOVED.

ALL EQUIPMENT, PIPING, ETC. TO BE REMOVED, SHALL BE DISPOSED OF, TURNED OVER TO THE OWNER, OR SALVAGED AS DIRECTED BY THE OWNER. EQUIPMENT, PIPING DEVICES, ETC. SHALL NOT BE REMOVED FROM THE PREMISES WITHOUT THE OWNERS APPROVAL.

NO EXISTING PIPE MAY BE CUT OR DAMAGED WHEN ENCOUNTERED ALONG THE ROUTE DESIGNED FOR NEW SERVICE. ANY EXISTING PIPING SEVERED OR DAMAGED SHALL BE REPLACED INCLUDING DAMAGED AREAS. ANY UNUSED OUTLETS SHALL BE PROPERLY CAPPED.

UPON COMPLETION OF REMOVALS AND MODIFICATIONS, ALL PIPING TO REMAIN SHALL BE PROPERLY FLUSHED, VALVED, CAPPED AND/OR BY PASSED SUCH THAT UPON COMPLETION OF WORK, ALL SYSTEMS TO REMAIN, REMAIN OPERATIONAL.

REMOVE & REPLACE ANY EXISTING SPRINKLER PIPING WHICH DOES NOT PASS THE REQUIRED HYDROSTATIC PRESSURE TESTS. CONDUCT VISUAL, INTERVAL INSPECTIONS ON AT LEAST 5% OF ANY EXISTING PIPING TO REMAIN. NO DEAD ENDS SHALL BE LEFT ON ANY PIPING SYSTEMS UPON COMPLETION OF WORK.

EXISTING EXPOSED PIPING SYSTEMS NOT TO BE REUSED, AND NOT SPECIFICALLY NOTED FOR REMOVAL SHALL BE COMPLETELY REMOVED.

ALL SYSTEMS SHALL BE LEFT IN WORKING ORDER TO THE SATISFACTION OF THE OWNER UPON COMPLETION OF ALL NEW WORK.

ALL EXISTING EXPOSED, UNNECESSARY PIPING RELATED TO NEW WORK SHALL BE COMPLETELY REMOVED.

RE-ROUTE OR REMOVE ALL EXISTING PIPING AND SYSTEMS WHERE NECESSARY TO AVOID NEW EQUIPMENT, STRUCTURAL OR MASONRY WORK AS REQUIRED BY THE PROPOSED ALTERATIONS.

**COORDINATION DRAWINGS**

DEVELOP AND SUBMIT COORDINATION DRAWINGS AS OUTLINED.

SHEET METAL, PLUMBING AND FIRE PROTECTION SHOP DRAWINGS THAT HAVE BEEN COORDINATED WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW. DRAWINGS MUST BE RETURNED FROM ENGINEER EITHER REVISED OR FURNISH AS CORRECTED PRIOR TO BEING USED AS BASIS FOR COORDINATION DRAWINGS.

AFTER SHEET METAL AND PIPING DRAWINGS HAVE BEEN REVIEWED PER ENGINEERS COMMENTS, REPRODUCIBLE COPIES SHALL BE SENT TO THE TRADES IN THE FOLLOWING SEQUENCE FOR THE INCLUSION OF THEIR WORK:

- MECHANICAL SHEET METAL
- PLUMBING PIPING
- MECHANICAL PIPING
- SPRINKLER PIPING
- ELECTRICAL WORK

AFTER ALL TRADES HAVE INCLUDED THEIR WORK ON THE COORDINATION DRAWING AND NOTED CONFLICTS, ALL TRADES SHALL MEET TO RESOLVE CONFLICTS AND AGREE TO ACCEPTABLE SOLUTIONS. EACH TRADE SHALL SIGN COORDINATION DRAWINGS. ITEMS NOT SHOWN ON COORDINATION DRAWING IS RESPONSIBILITY OF OMITTING CONTRACTOR AND CONTRACTOR IS SUBJECT TO ADDITIONAL COSTS INCURRED BY OTHER TRADES.

THE ARCHITECT AND ENGINEER ARE NOT PART OF THE COORDINATION DRAWING PROCESS. THE ENGINEER WILL PROVIDE ASSISTANCE FOR NOTED CONFLICTS ONLY. COORDINATION DRAWINGS ARE NOT TO BE CONSIDERED PIPING OR DUCT SHOP DRAWINGS. THE CONTRACTOR IS REQUIRED TO SUBMIT INDIVIDUAL PIPING AND DUCTWORK SHOP DRAWINGS FOR REVIEW BY THE ENGINEER. PIPING AND DUCTWORK SHOP DRAWINGS SHALL FOLLOW THE DESIGN INTENT OF THE CONTRACT DOCUMENTS.

SUBMIT FINAL SIGNED COORDINATION DRAWING TO ENGINEER FOR REVIEW. ENGINEER WILL REVIEW COORDINATION DRAWINGS FOR GENERAL ARRANGEMENT AND FOR NOTED CONFLICTS ONLY. SPECIFIC INSTALLATION REQUIREMENTS WILL BE REVIEWED ONLY IN INDIVIDUAL TRADE SHOP DRAWINGS.

FIRE PROTECTION DESIGN CRITERIA

FIRE PROTECTION CONTRACTOR SHALL OBTAIN RECENT AREA FLOW TEST RESULTS (WITHIN ONE YEAR OF START OF CONSTRUCTION) OR SHALL ARRANGE WITH THE WATER UTILITY FOR A NEW WATER FLOW TEST.

SPRINKLER SYSTEMS SHALL BE HYDRAULICALLY CALCULATED BASED ON THE FOLLOWING CRITERIA. INCLUDE ANY/ALL FIRE MARSHAL, FM GLOBAL, AND OWNER REQUIREMENTS.

CONTRACTOR RESPONSIBLE FOR DOCUMENTING SIZE AND LENGTH OF EXISTING FIRE PROTECTION WATER SUPPLY INCLUDING VALVING, ETC. AS NECESSARY IN ORDER TO PERFORM HYDRAULIC CALCULATIONS.

THE FIRE PROTECTION WATER SERVICE SHALL BE CONNECTED TO AN EXISTING SPRINKLER FIRE MAIN. THE FIRE PROTECTION CONTRACTOR SHALL CONDUCT A CURRENT FLOW TEST FOR USE IN THE HYDRAULIC CALCULATIONS AND DOCUMENT THE RESULTS.

WHERE DISTRIBUTION PIPING CAN BE RUN ON WARM SIDE OF BUILDING INSULATION, AND SPACE TO BE PROTECTED IS NOT EXPOSED TO FREEZING.

**FM GLOBAL DESIGN CRITERIA**

**LIGHT HAZARD AREAS:**  
 STORAGE ROOMS, OFFICES, STUDIOS, AND COMMON AREAS: MINIMUM DENSITY OF 0.10 GPM/SQ.FT. OVER THE MOST REMOTE 1500 SQ.FT. PLUS 250 GPM FOR HOSE DEMAND. MAXIMUM COVERAGE PER SPRINKLER HEAD IS 130 SQ.FT.

**MECHANICAL EQUIPMENT ROOMS:**  
 TELEPHONE ROOMS, ETC. MINIMUM DENSITY OF 0.15 GPM/SQ.FT. OVER THE MOST REMOTE 2500 SQ.FT. PLUS 250 GPM FOR HOSE DEMAND. MAXIMUM COVERAGE PER SPRINKLER HEAD IS 130 SQ.FT.

**ORDINARY HAZARD (GROUP I) AREAS:**  
 STORAGE ROOMS, LIBRARY STACK AREAS, ETC. MINIMUM DENSITY OF 0.20 GPM/SQ.FT. OVER THE MOST REMOTE 2000 SQ.FT. PLUS 250 GPM FOR HOSE DEMAND. MAXIMUM COVERAGE PER SPRINKLER HEAD IS 130 SQ.FT. SPRINKLERS SHALL HAVE A K FACTOR OF 8.0.

**STANDARD DESIGN CRITERIA**

**LIGHT HAZARD AREAS:**  
 OFFICES, HALLWAYS, LOBBYS, ETC. MINIMUM DENSITY OF 0.10 GPM/SQ.FT. OVER THE MOST REMOTE 1500 SQ.FT. PLUS 100 GPM FOR HOSE DEMAND. MAXIMUM COVERAGE PER SPRINKLER HEAD IS 130 SQ.FT.

**ORDINARY HAZARD (GROUP I) AREAS:**  
 MECHANICAL ROOMS, ELECTRICAL ROOMS, ETC. MINIMUM DENSITY OF 0.15 GPM/SQ.FT. OVER THE MOST REMOTE 1500 SQ.FT. PLUS 250 GPM FOR HOSE DEMAND. MAXIMUM COVERAGE PER SPRINKLER HEAD IS 130 SQ.FT.

WHERE DISTRIBUTION PIPING IS RUN ON WARM SIDE OF BUILDING INSULATION, BUT SPACE TO BE PROTECTED IS EXPOSED TO FREEZING:

PROVIDE DRY SPRINKLER HEADS TO PROTECT SPACE EXPOSED TO FREEZING, EXTENDED FROM WET PIPE SYSTEMS.

WHERE DISTRIBUTION PIPING AND SPACE TO BE PROTECTED ARE EXPOSED TO FREEZING:

PROVIDE DRY PIPE SPRINKLER SYSTEM. ALL PENDENT AND SIDEWALL HEADS SHALL BE DRY TYPE.

**PROTECTION OF EGRESS CORRIDORS WITHIN WORK ZONES**

FIRE PROTECTION CONTRACTOR SHALL MAINTAIN SUPERVISED AUTOMATIC SPRINKLER PROTECTION OF ALL EGRESS CORRIDORS WITHIN WORK ZONES AT ALL TIMES.

WHERE CONFLICTS OCCUR BETWEEN DRAWINGS AND SPECIFICATIONS, OR WITHIN EITHER DOCUMENT, THE CONTRACTOR SHALL ASK FOR AND OBTAIN A WRITTEN CLARIFICATION FROM THE ENGINEER PRIOR TO SUBMITTING HIS BID. OTHERWISE, THE ITEMS OR ARRANGEMENTS OF SUPERIOR QUALITY, GREATER QUANTITY OR HIGHER COST SHALL PREVAIL AND BE INCLUDED IN THE CONTRACT PRICE.

ANY WORK FABRICATED OR INSTALLED PRIOR TO SIGN OFF BY ALL TRADES WHICH IS DEEMED TO BE IN CONFLICT WITH COORDINATION DRAWINGS SHALL BE REMOVED AND RE-INSTALLED IN CONFORMANCE WITH COORDINATION DRAWINGS.

EACH CONTRACTOR (MENTIONED ABOVE) IS RESPONSIBLE FOR THE COORDINATION OF HIS SUB-CONTRACTORS.

THE OVERALL COORDINATION OF THE COORDINATION PROCESS IS THE RESPONSIBILITY OF THE CONTRACTOR. THE ENGINEER IS NOT RESPONSIBLE FOR THE COORDINATION PROCESS. THE ENGINEER WILL RESPOND TO QUESTIONS THAT ARISE FROM THE COORDINATION PROCESS. DRAWINGS SUBMITTED WILL BE REVIEWED FOR CLEARLY IDENTIFIED CONFLICTS ONLY. SOLUTIONS TO CONFLICTS WILL NOT BEAR ADDITIONAL COST.

**AS-BUILT DRAWINGS**

PROVIDE A COMPLETE SET OF AS-BUILT DRAWINGS REFLECTING AS INSTALLED CONDITIONS. AS-BUILT DRAWINGS SHALL INDICATE ALL INSTALLED CONDITIONS OF SYSTEMS WITHIN THIS DISCIPLINE. DRAWINGS SHALL BE OF SIMILAR SCALE AS THE CONSTRUCTION DOCUMENTS AND INCLUDE DETAILS AS NECESSARY TO CLEARLY REFLECT THE INSTALLED CONDITION. DRAWINGS SHALL BE BOUND IN A COMPLETE AND CONSISTENT SET. SUPPLEMENTAL SKETCHES AND LOOSE PAPERWORK WILL NOT BE ACCEPTABLE AND WILL BE RETURNED FOR REVISION. THE CONTRACTOR SHALL COMPLY WITH THE ENGINEERS COMMENTS TO PRODUCE A CLEAR AND COMPLETE SET OF DRAWINGS. DRAWINGS SHALL BE SUBMITTED IN BOTH HARD COPY AND ELECTRONIC (AUTO-CAD AND/ OR VERSION AS REQUIRED BY THE OWNER) VERSION. NUMBER OF COPIES OF EACH AS REQUESTED BY THE OWNER.

INDICATE VALVES AND CONTROL DEVICES LOCATED AND NUMBERED COORDINATED WITH SUBMITTED VALVE CHARTS.

SUBMIT A COMPLETE MAINTENANCE MANUAL OF ALL EQUIPMENT INSTALLED UNDER THIS CONTRACT.

PROVIDE AND INSTALL ACCESS DOORS FOR EACH VALVE, DRAIN, OR FIRE PROTECTION DEVICE REQUIRING ACCESS. ACCESS DOORS SHALL BE RIBD CONSTRUCTION WITH TWO HINGES AND A LATCH. IN PLENUM CEILING, PROVIDE FEEL BETWEEN THE DOOR AND FRAME TO MAKE AN AIR TIGHT SEAL. ACCESS DOORS SHALL BE RATED TO THE SAME OR GREATER RATING OF THE PARTITION IN WHICH THEY ARE INSTALLED. ACCESS DOORS SHALL BE FLUSH MOUNTED, PRIME COATED WITH RUST INHIBITIVE PAINT, CONCEALED UNDER A FLUSH SCREW DRIVER OPERATED LOCKS WITH METAL CANIS AND ANCHORS AS REQUIRED.

ACCESS DOOR SIZES SHALL BE:  
 12" X 12" AT EASILY ACCESSIBLE ITEMS  
 18" X 18" WHERE PARTIAL BODY ACCESS IS REQUIRED  
 24" X 24" WHERE FULL BODY ACCESS IS REQUIRED

**HANGERS AND SUPPORT**  
 SPRINKLER PIPING IN A SUBSTANTIAL MANNER FROM BUILDING STRUCTURE AND INDEPENDENT OF THE CEILING SYSTEM. PROVIDE EARTHQUAKE/SEISMIC BRACING IN ACCORDANCE WITH NFPA 13 AND THE LOCAL CODE. DO NOT USE SPRINKLER PIPING OR HANGERS TO SUPPORT NON-SYSTEM COMPONENTS.

**SEISMIC RESTRAINT:** PROVIDE SEISMIC RESTRAINT AND EXPANSION OF ALL FIRE PROTECTION EQUIPMENT AND SYSTEMS IN ACCORDANCE WITH APPLICABLE NFPA STANDARDS, OWNERS INSURANCE COMPANY, STATE, FEDERAL AND LOCAL BUILDING CODE REQUIREMENTS. SUBMIT SHOP DRAWINGS SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT INDICATING ALL NECESSARY COMPONENT CUTS, PLAN LOCATIONS AND CALCULATIONS FOR A COMPLETE SYSTEM.

PROVIDE ALL NECESSARY STRUCTURAL MEMBERS INCLUDING ADDITIONAL STRUCTURAL SUPPORT TO SUPPORT PIPING AND EQUIPMENT. HANGERS AND SUPPORTS SHALL BE OF AN APPROVED DESIGN NECESSARY TO SUPPORT PIPING, EQUIPMENT AND TO KEEP PIPING IN PROPER ALIGNMENT AND PREVENT TRANSMISSION OF NOISIOUS THRUSTS AND VIBRATIONS. IN ALL CASES WHERE HANGERS, BRACKETS, ETC., ARE SUPPORTED FROM CONCRETE CONSTRUCTION, DO NOT WEAKEN CONCRETE OR PENETRATE WATERPROOFING. ALL HANGERS AND SUPPORTS SHALL BE CAPABLE OF SCREW ADJUSTMENT AFTER PIPING IS ERECTED. HANGERS SUPPORTING PIPING EXPANDING INTO LOOPS, BENDS AND OFFSETS SHALL BE SECURED TO THE BUILDING STRUCTURE IN SUCH A MANNER THAT HORIZONTAL ADJUSTMENT PERPENDICULAR TO THE RUN OR PIPING SUPPORTED MAY BE MADE TO ACCOMMODATE DISPLACEMENT DUE TO EXPANSION. ALL SUCH HANGERS SHALL BE FINALLY ADJUSTED BOTH IN THE VERTICAL AND HORIZONTAL DIRECTION AS REQUIRED.

PROVIDE ADDITIONAL SUPPORT FOR PIPING AND EQUIPMENT WHEN DECK IS NOT CAPABLE OF SUPPORT.

BEAM CLAMPS - HANGERS SUPPORTED FROM STEEL SHALL BE CENTER LOADING. BEAM CLAMPS FOR HANGERS SUPPORTING PIPING 2" NGS- FOR PIPING 2-1/2" NGS- AND LARGER, BEAM CLAMPS SHALL BE FORGED STEEL. C CLAMPS ARE PERMITTED ONLY WHEN PROVIDED WITH RESTRAINING STRAP. BAR JOIST HANGERS SHOULD BE UTILIZED WHEN HANGING FROM BAR JOIST CONSTRUCTION.

ALL HANGERS AND SUPPORTS SHALL BE HOT DIPPED GALVANIZED. ALL THREADED ROD AND HARDWARE SHALL BE HOT DIPPED GALVANIZED.

PROVIDE AND INSTALL EXPANSION COMPENSATION FOR ALL PIPING. SUBMIT PLANS, CALCULATIONS AND EQUIPMENT DATA.

FIRE PROTECTION SYMBOL LEGEND

| SYMBOL | DESCRIPTION                         |
|--------|-------------------------------------|
|        | BALL VALVE                          |
|        | CHECK VALVE                         |
|        | GATE VALVE                          |
|        | PRESSURE GAUGE                      |
|        | REDUCED PRESSURE BACKFLOW PREVENTER |
|        | HYDRANT                             |
|        | ALARM BELL                          |
|        | FIRE DEPARTMENT CONNECTION (FDC)    |
|        | REDUCED PRESSURE DETECTOR ASSEMBLY  |
|        | OSY VALVE                           |
|        | POINT OF NEW CONNECTION             |
|        | POINT OF DISCONNECTION              |
|        | TEST AND DRAIN VALVE                |
|        | FLOW SWITCH                         |
|        | PRESSURE SWITCH                     |
|        | TAMPER SWITCH                       |
|        | PIPE DOWN                           |
|        | PIPE UP                             |
|        | CAPPED PIPE                         |
|        | PIPE OR EQUIPMENT TO BE DEMOLISHED  |

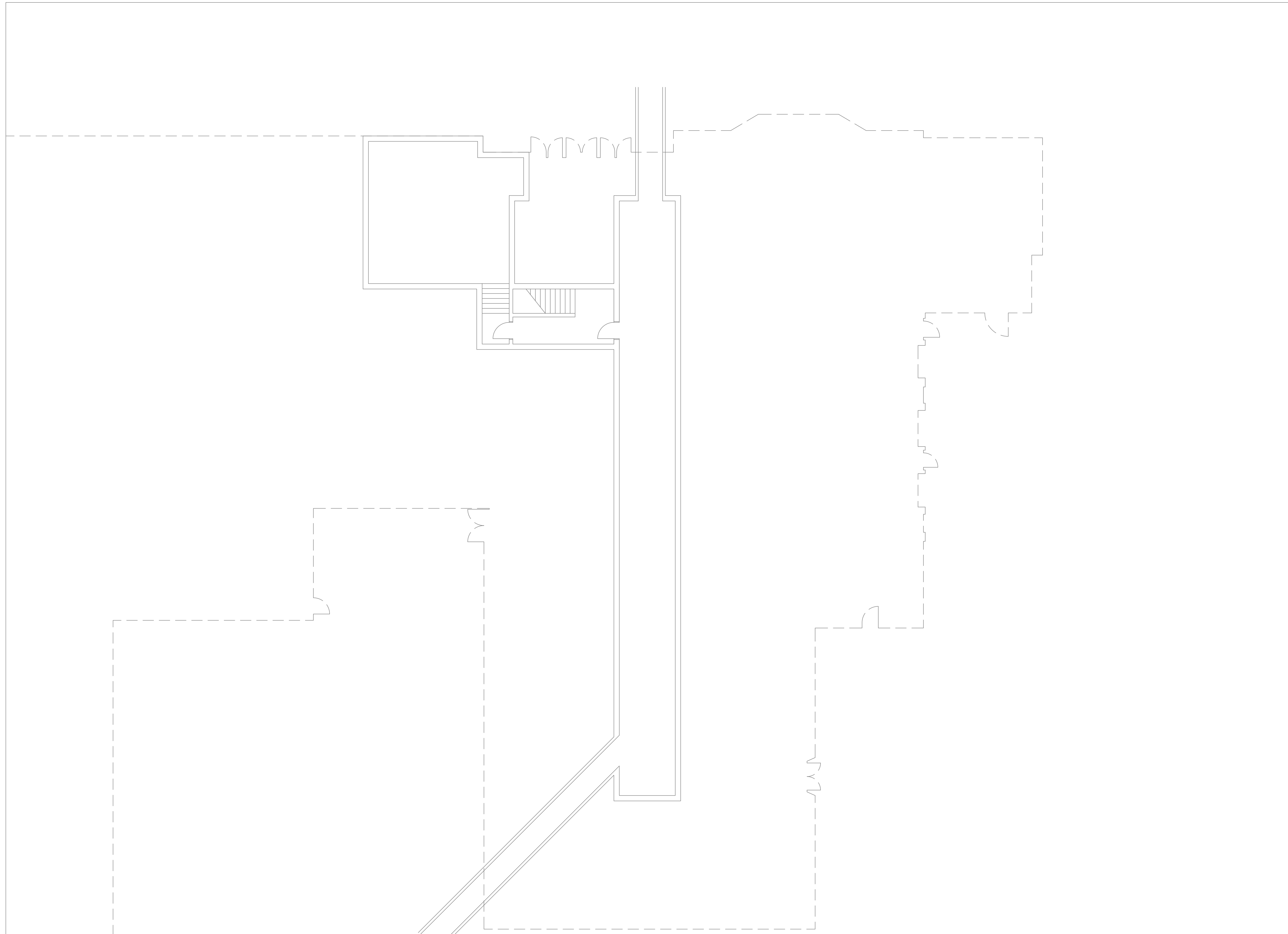
  

| SPRINKLER SYMBOL LEGEND |     |                             |
|-------------------------|-----|-----------------------------|
| EXISTING                | NEW | DESCRIPTION                 |
|                         |     | UPRIGHT                     |
|                         |     | PENDENT                     |
|                         |     | PENDENT - SEMI RECESSED     |
|                         |     | PENDENT - RECESSED          |
|                         |     | PENDENT - CONCEALED         |
|                         |     | DRY PENDENT                 |
|                         |     | DRY PENDENT - SEMI RECESSED |
|                         |     | DRY PENDENT - RECESSED      |
|                         |     | DRY PENDENT - CONCEALED     |
|                         |     | SIDEWALL                    |
|                         |     | SIDEWALL - RECESSED         |
|                         |     | DRY SIDEWALL                |
|                         |     | DRY SIDEWALL - RECESSED     |

NOTE: SOME SYMBOLS AND ABBREVIATIONS SHOWN MAY NOT PERTAIN TO THIS PROJECT.



| Revision | Description | Date | Revised By |
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EXISTING FIRE PROTECTION PLAN  
SCALE: 1/2" = 1'-0"

1  
P010

Project Title:  
**Hinsdale Elementary School**  
  
15 Hinsdale Ave.  
Winsted, Connecticut 06098



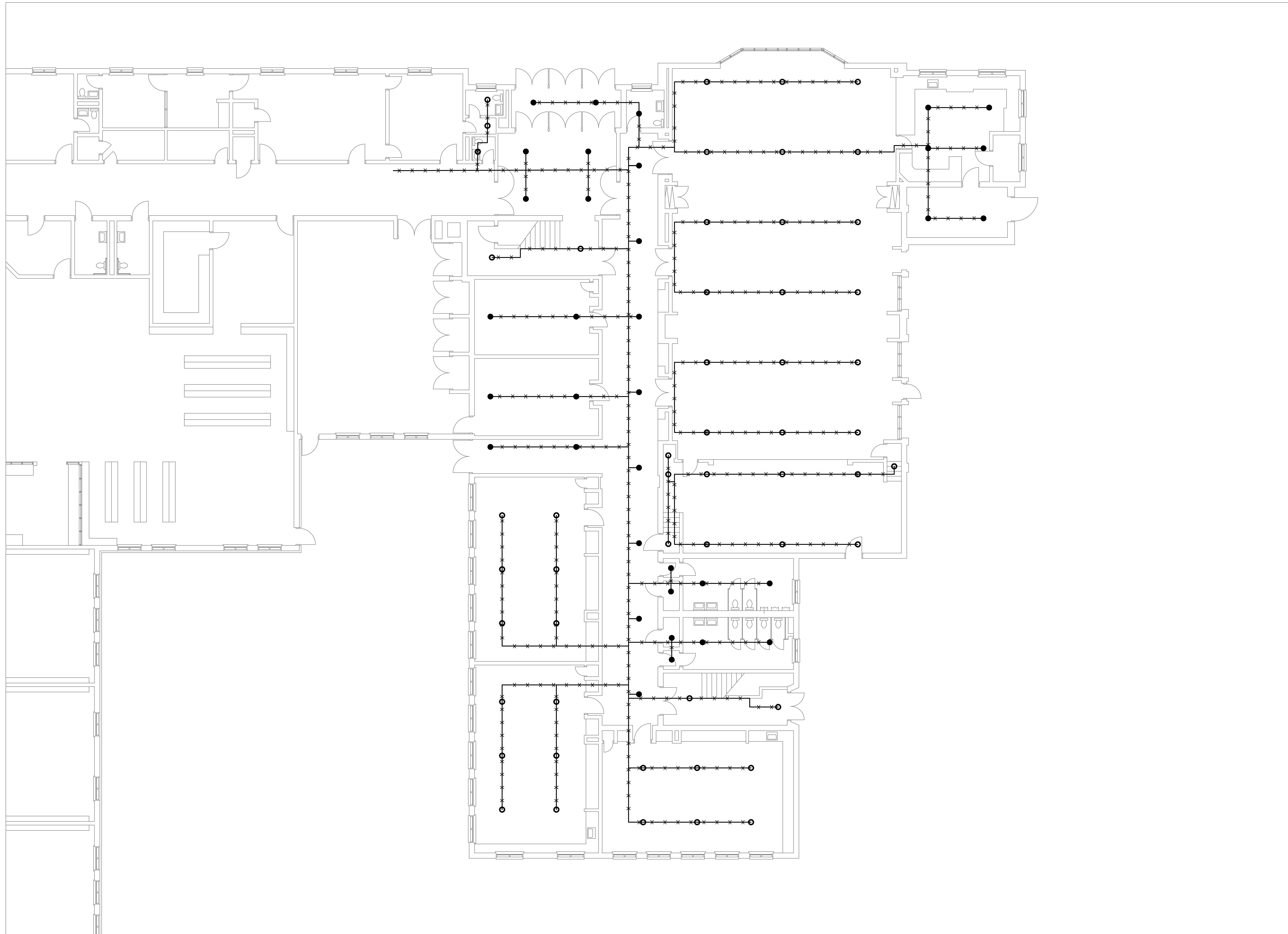
**SILVER / PETRUCELLI + ASSOCIATES**  
*Architects / Engineers / Interior Designers*  
  
3190 Whitney Avenue, Hamden, CT 06518-2340  
Tel. 203 230 9007 Fax. 203 230 8247  
[silverpetrucci.com](http://silverpetrucci.com)

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Drawing Title:  
**FIRE PROTECTION EXISTING  
BASEMENT PLAN**

Date:  
JUNE 30, 2020  
Scale:  
1" = 25'-0"  
Drawn By:  
WVJ  
Project Number:  
18-223

Drawing Number:  
**FP010**



EXISTING FIRE PROTECTION FIRST FLOOR PLAN  
SCALE: 1/2" = 1'-0"

1  
FP011

Project Title:  
Hinsdale Elementary School  
  
15 Hinsdale Ave.  
Winsted, Connecticut 06098



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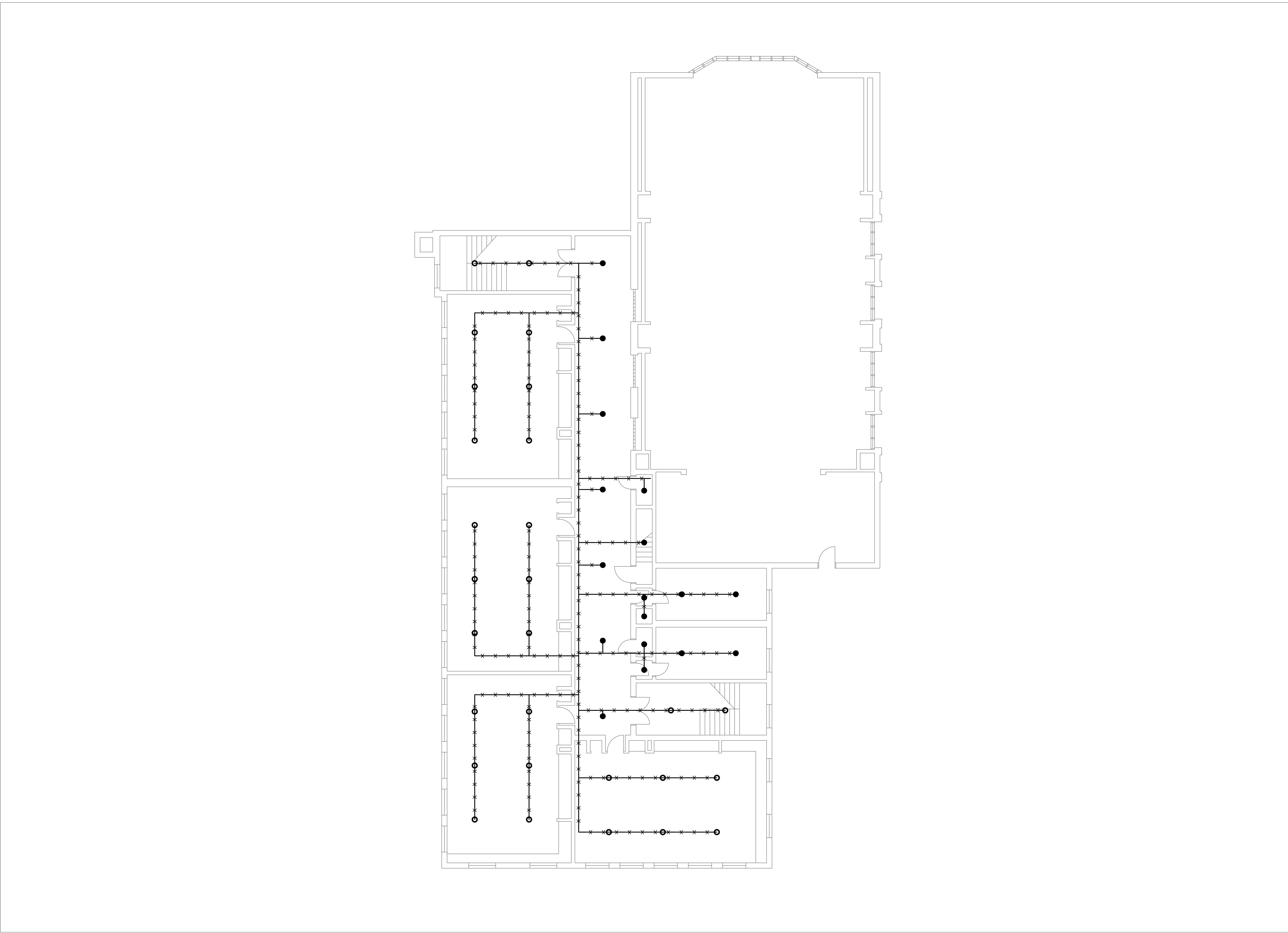
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Drawing Title:  
FIRE PROTECTION EXISTING  
FIRST FLOOR PLAN

Date:  
JUNE 30, 2020  
Scale:  
1" = 25'-0"  
Drawn By:  
WRJ  
Project Number:  
18-223

Drawing Number:  
**FP011**





EXISTING FIRE PROTECTION SECOND FLOOR PLAN  
SCALE: 1/2" = 1'-0"

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FP012

Project Title:  
Hinsdale Elementary School  
  
15 Hinsdale Ave.  
Winsted, Connecticut 06098



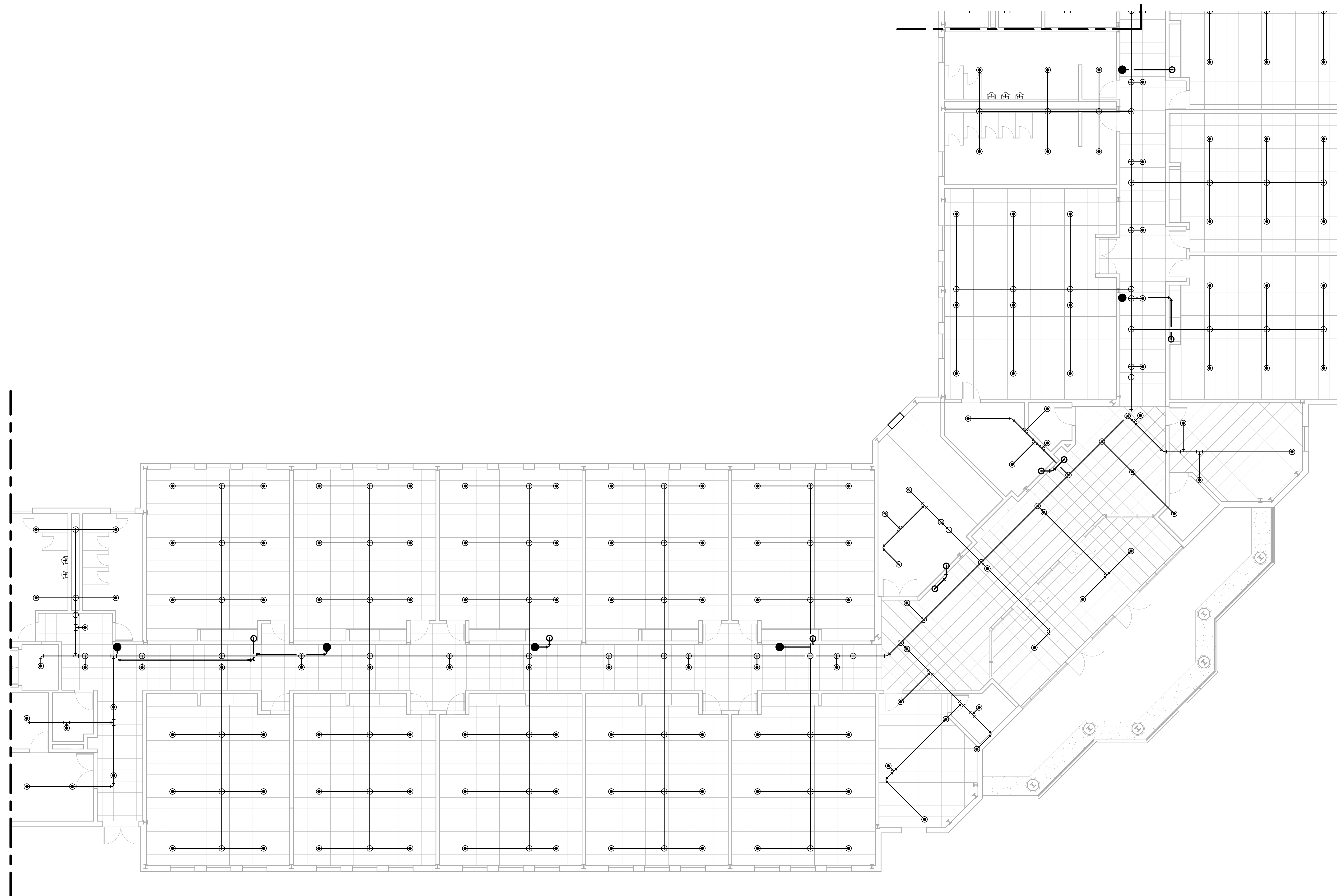
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Drawing Title:  
**FIRE PROTECTION EXISTING  
SECOND FLOOR PLAN**

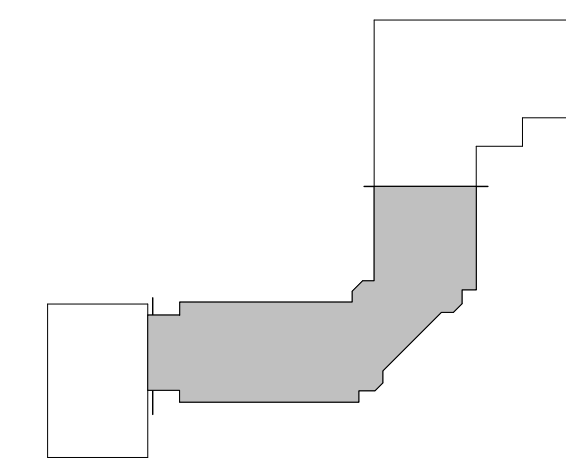
Date:  
JUNE 30, 2020  
Scale:  
1" = 25'-0"  
Drawn By:  
WRJ  
Project Number:  
18-223

FP012



Existing - Fire Protection Reflected Ceiling Plan - Area A  
 SCALE: 1/8" = 1'-0"

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 FP100



Project Title:  
**Hinsdale School Alterations**  
 15 Hinsdale Ave.  
 Winsted, CT 06098



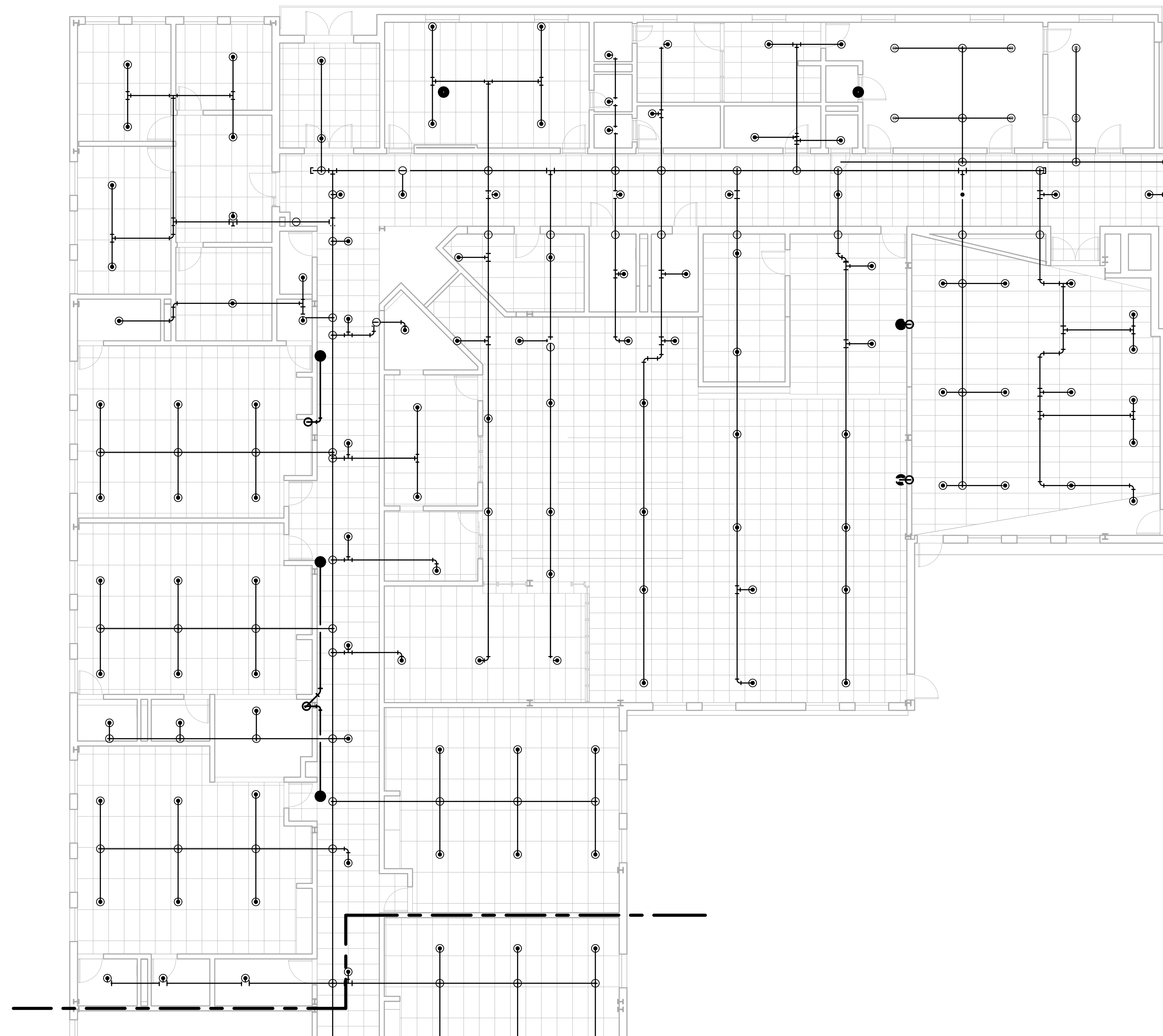
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Drawing Title:  
**Existing Fire Protection - Area "A"**  
 State Project #: 162-0043RNV

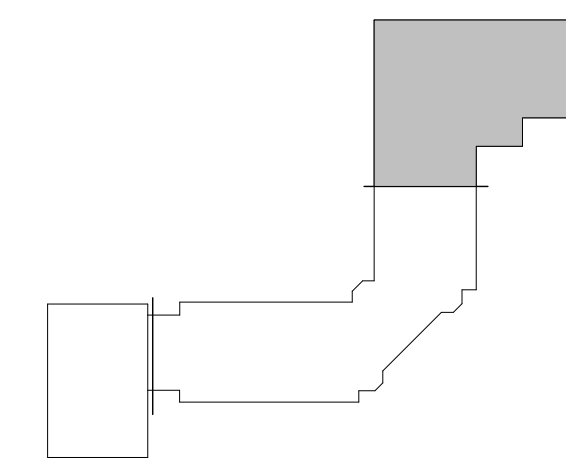
Date:  
 June 30, 2020  
 Scale:  
 1/8" = 1'-0"  
 Drawn By:  
 WRJ  
 Project Number:  
 18-223

Drawing Number:  
**FP100**



Existing - Fire Protection Reflected Ceiling Plan - Area B  
SCALE: 1/8" = 1'-0"

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FP101



Project Title:  
**Hinsdale School Alterations**  
15 Hinsdale Ave.  
Winsted, CT 06098

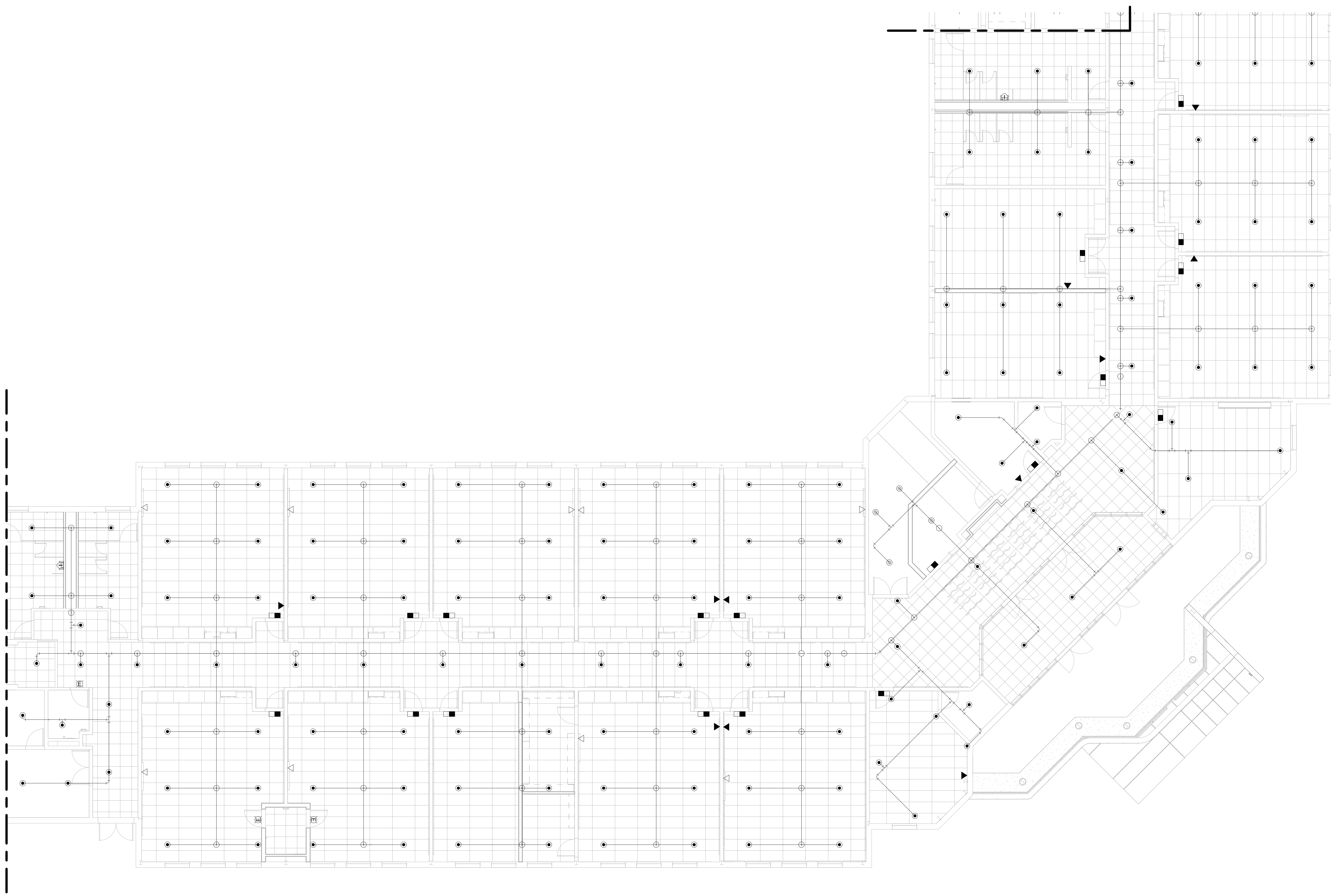


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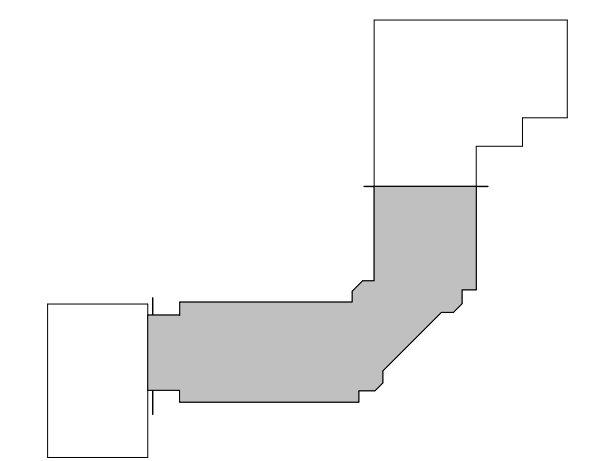
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Drawing Title:  
**Existing Fire Protection - Area "B"**  
State Project #: 162-0043RNV

Date: June 30, 2020  
Scale: 1/8" = 1'-0"  
Drawn By: WRJ  
Project Number: 18.223  
Drawing Number: **FP101**



Fire Protection Reflected Ceiling Plan - Area A  
 SCALE: 1/8" = 1'-0" 1  
 FP200



Project Title:  
**Hinsdale School Alterations**  
 15 Hinsdale Ave.  
 Winsted, CT 06098

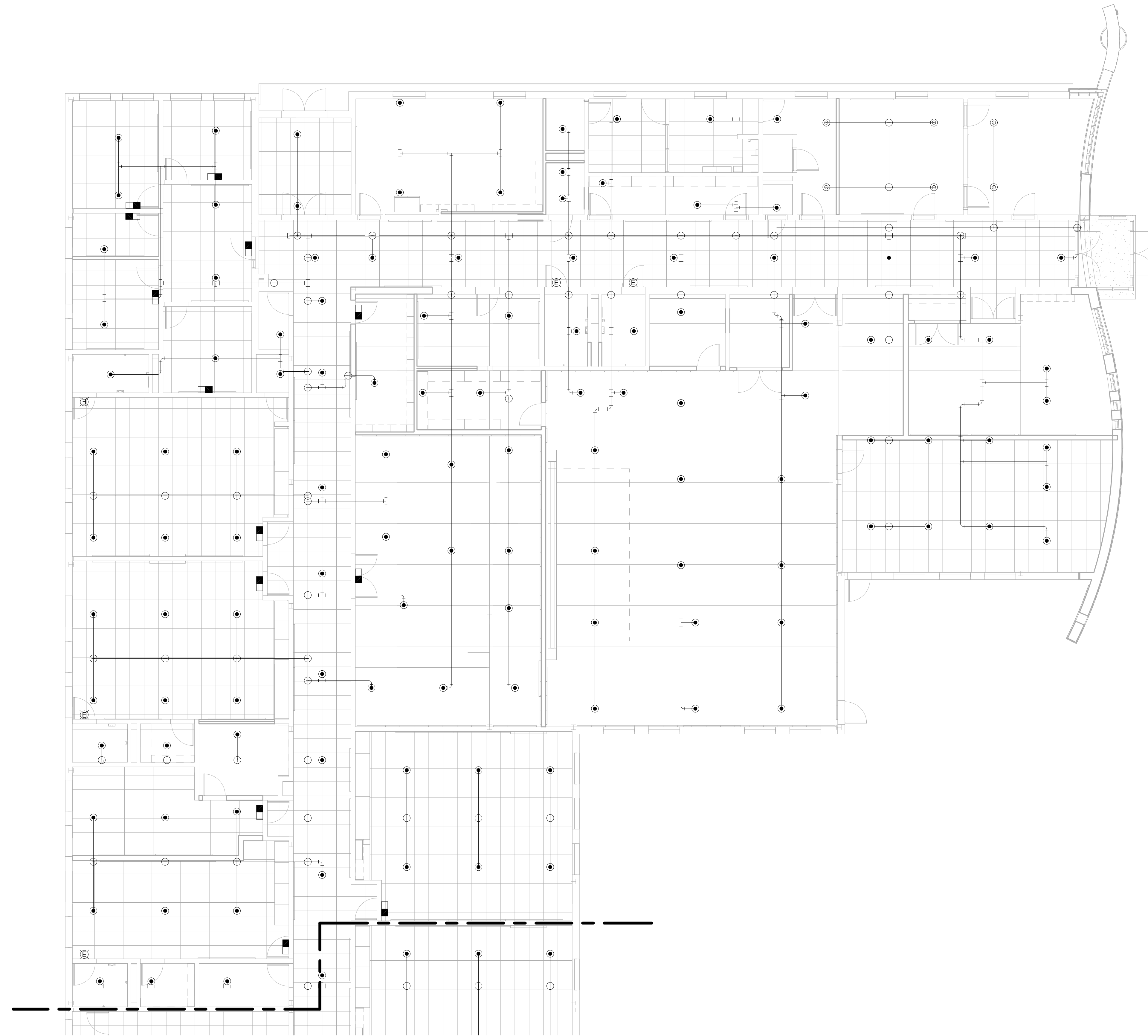


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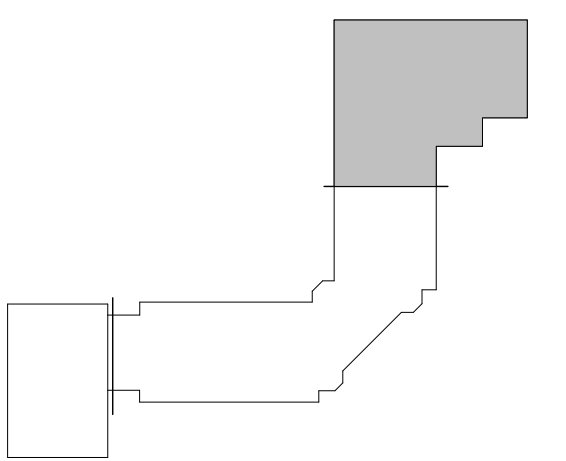
Drawing Title:  
**Fire Protection Plan - Area "A"**  
 State Project #: 162-0043RNV

Date: **June 30, 2020**  
 Scale: **1/8" = 1'-0"**  
 Drawn By: **WRJ**  
 Project Number: **18-223**  
 Drawing Number: **FP200**



Fire Protection Reflected Ceiling Plan - Area B  
SCALE: 1/8" = 1'-0"

1  
FP201



Project Title:  
**Hinsdale School Alterations**  
  
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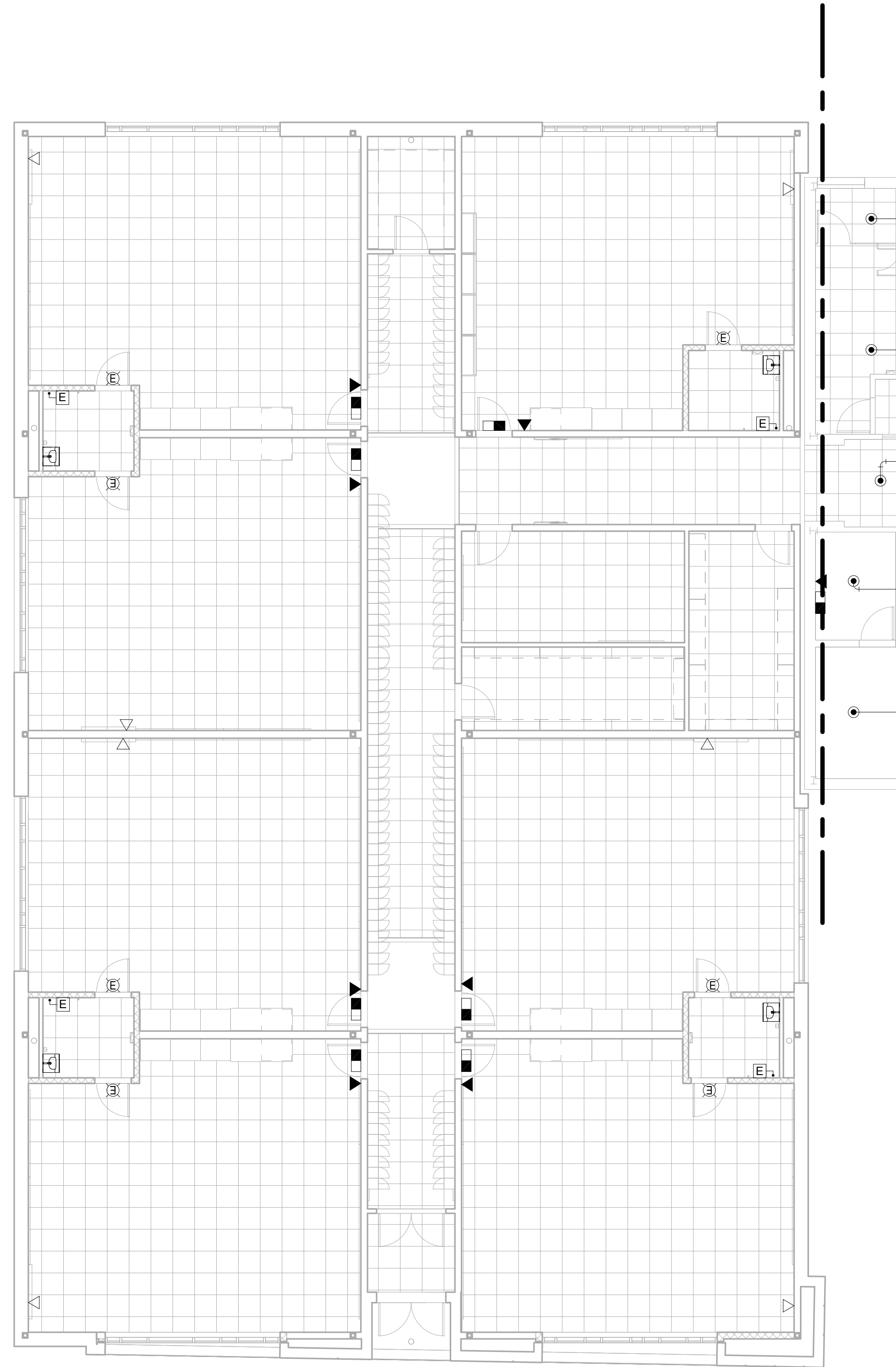
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Drawing Title:  
**Fire Protection Plan - Area "B"**  
  
State Project #: 162-0043RNV

Date:  
June 30, 2020  
Scale:  
1/8" = 1'-0"  
Drawn By:  
WRJ  
Project Number:  
18.223

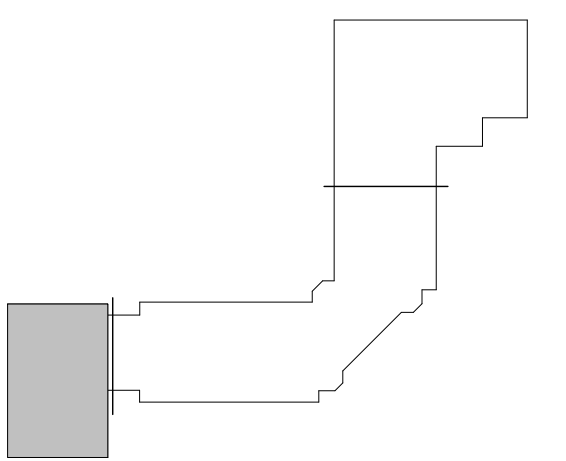
Drawing Number:

**FP201**



Fire Protection Reflected Ceiling Plan - Area C  
SCALE: 1/8" = 1'-0"

1  
FP202



Project Title:  
**Hinsdale School Alterations**  
15 Hinsdale Ave.  
Winsted, CT 06098



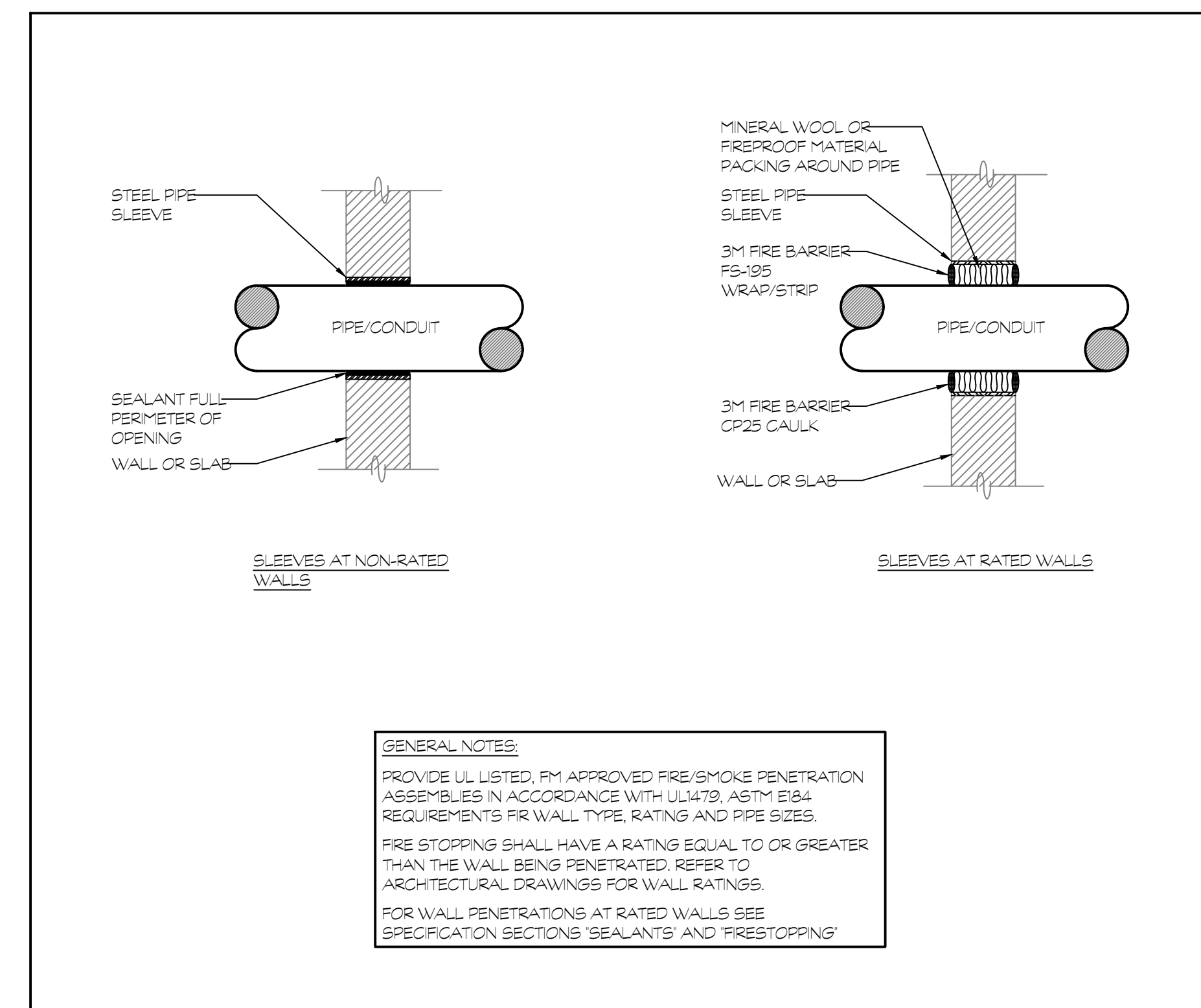
**SILVER / PETRUCELLI + ASSOCIATES**  
Architects / Engineers / Interior Designers  
3190 Whitney Avenue, Hamden, CT 06518-2340  
Tel. 203 230 9007 Fax. 203 230 8247  
silverpetrucci.com

| Revision: | Description: | Date: | Revised By: |
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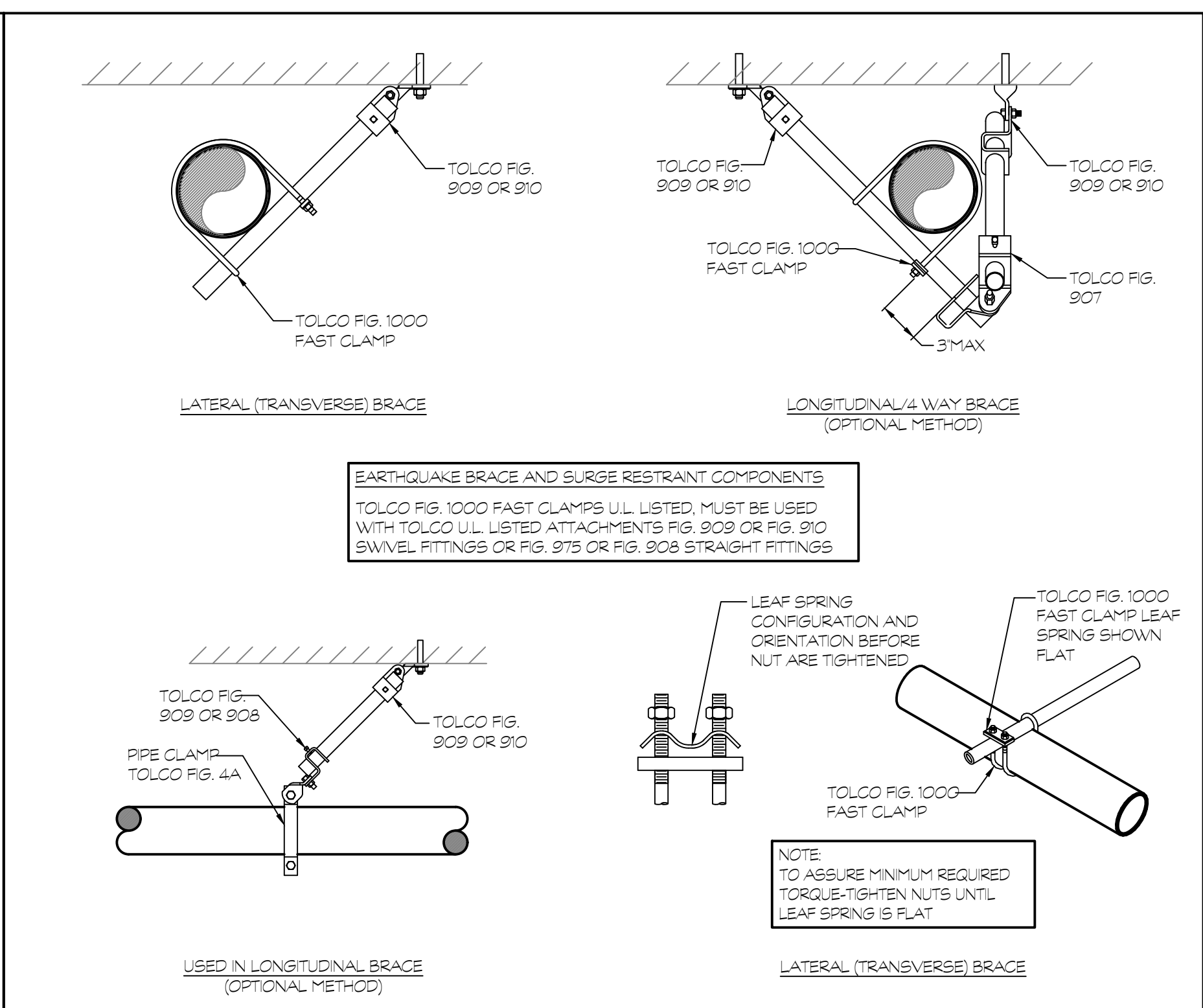
Drawing Title:  
**Fire Protection Plan - Area "C"**  
State Project #: 162-0043RNV

Date: **June 30, 2020**  
Scale: **1/8" = 1'-0"**  
Drawn By: **WRJ**  
Project Number: **18-223**  
Drawing Number:

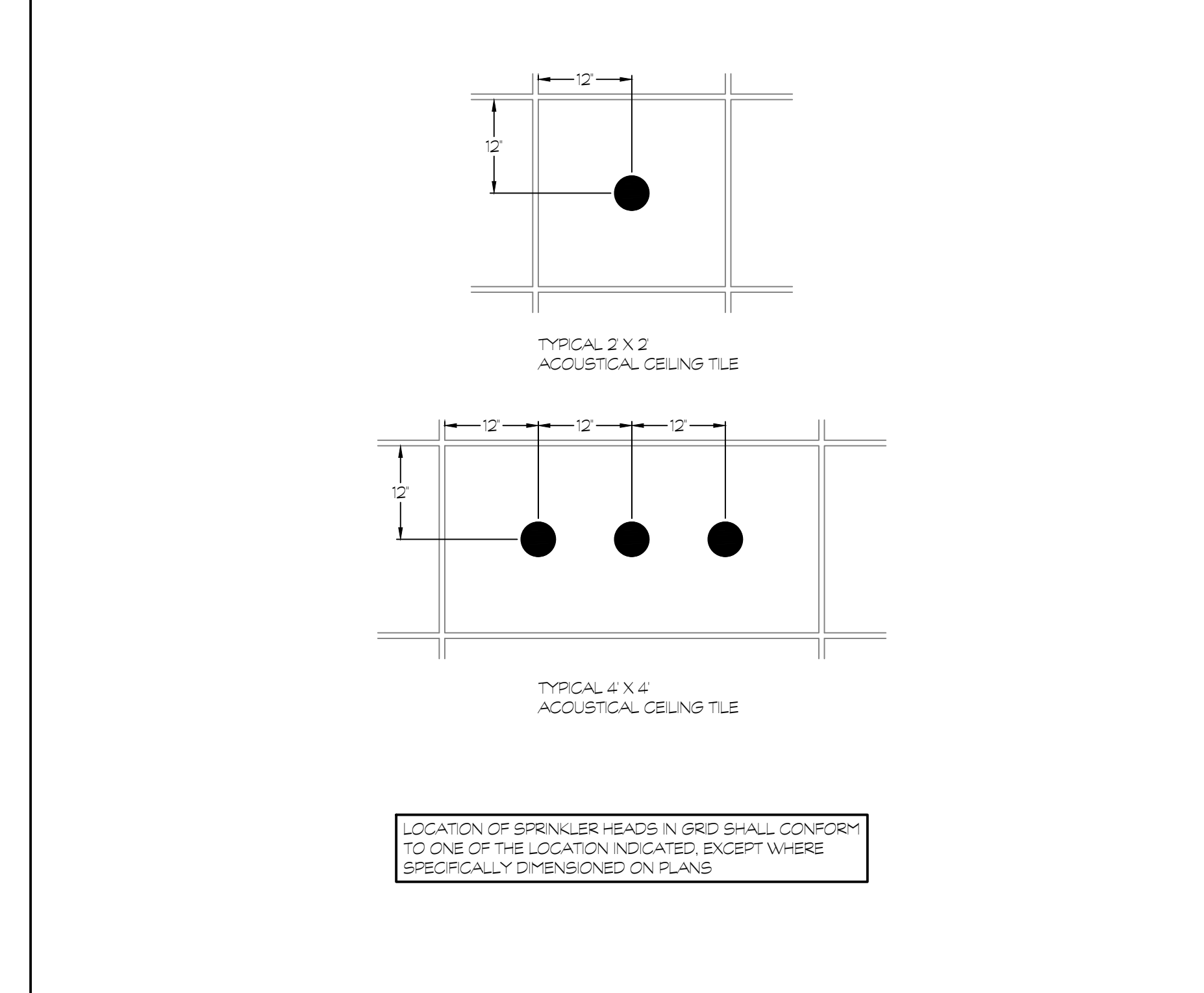
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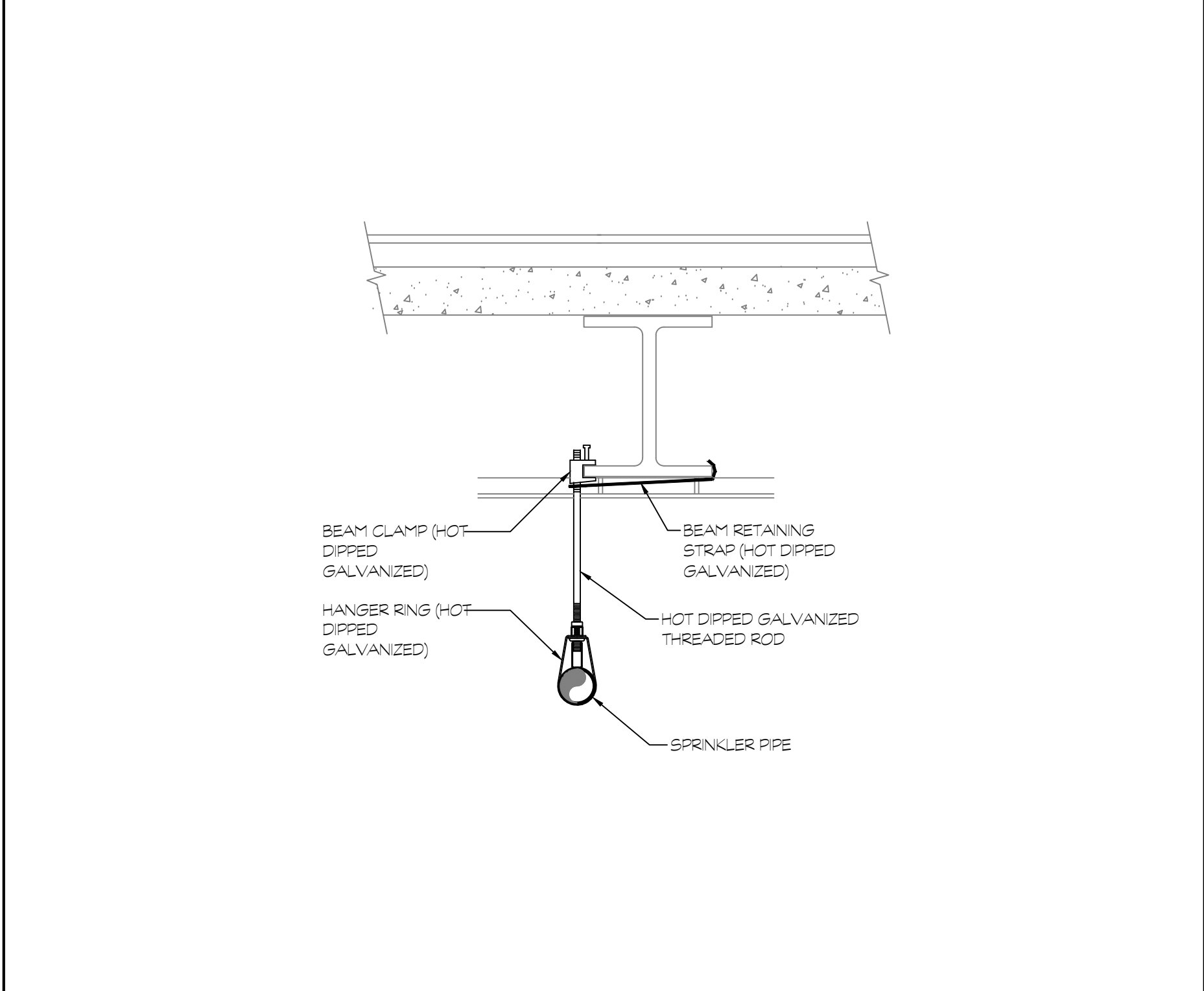
**PIPE PENETRATION DETAIL**  
NOT TO SCALE



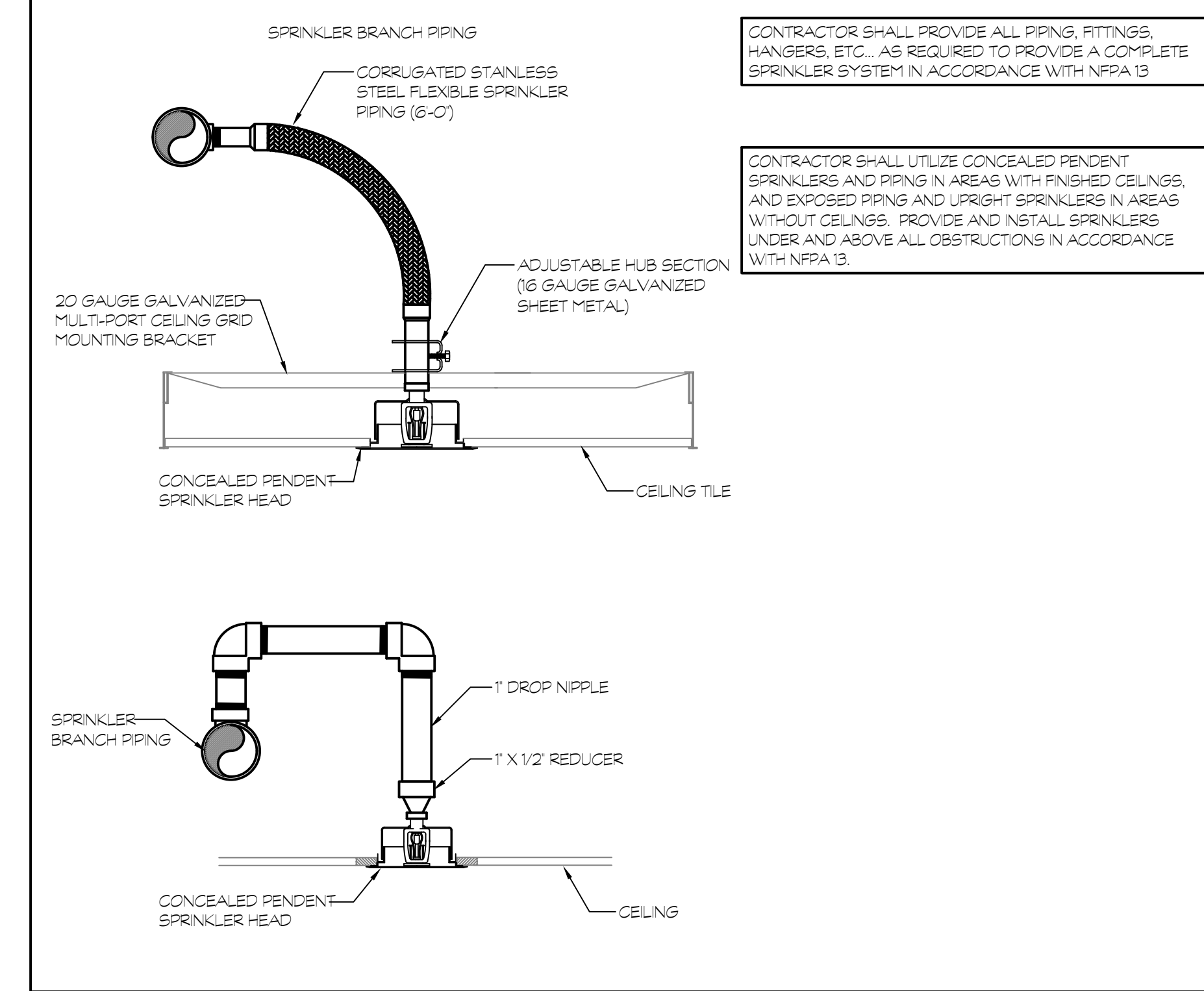
**SEISMIC PIPING HANGER BRACING DETAIL**  
NOT TO SCALE



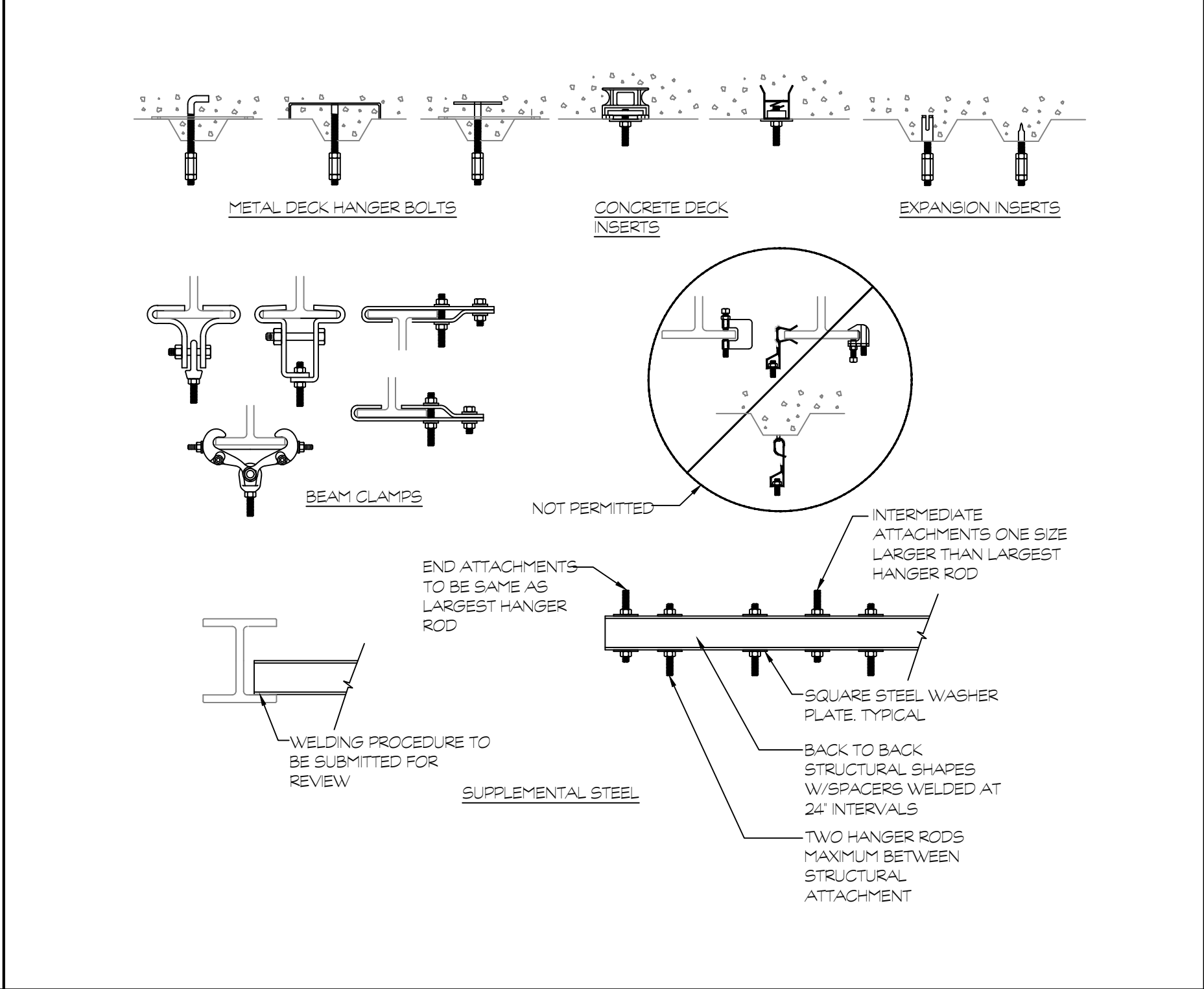
**SUSPENDED CEILING SPRINKLER HEAD LOCATION DETAIL**  
NOT TO SCALE



**PIPE HANGER TO BEAM DETAIL**  
NOT TO SCALE



**CONCEALED PENDENT SPRINKLER HEAD DETAILS**  
NOT TO SCALE



**PIPE HANGER ATTACHMENT DETAIL**  
NOT TO SCALE



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**PIPE AND FITTING SCHEDULE**  
(NOT ALL PIPE SYSTEMS MAY BE USED ON PROJECT)

| DESCRIPTION  | SIZE              | PIPE    |          | FITTING |        | REMARKS                         |
|--|-------------------|---------|----------|---------|--------|---------------------------------|
|  |                   | TYPE    | SCHEDULE | TYPE    | RATING |                                 |
| WET SPRINKLER PIPING   | 2" AND SMALLER    | STL-BLK | 40       | MIT     | STD    | --                              |
| WET SPRINKLER PIPING   | 2-1/2" AND LARGER | STL-BLK | 10 OR 40 | MIT/GRV | STD    | --                              |
| DRY SPRINKLER PIPING   | 2" AND SMALLER    | GALV.   | 40       | MIT     | STD    | ALL FITTINGS MUST BE GALVANIZED |
| DRY SPRINKLER PIPING   | 2-1/2" AND LARGER | GALV.   | 40       | MIT/GRV | STD    | ALL FITTINGS MUST BE GALVANIZED |
| DRY SPRINKLER PIPING ONLY FOR SYSTEMS NORMALLY UNCHARGED               | 2" AND SMALLER    | STL-BLK | 40       | MIT     | STD    | --                              |
| DRY SPRINKLER PIPING ONLY FOR SYSTEMS NORMALLY UNCHARGED               | 2-1/2" AND LARGER | STL-BLK | 10 OR 40 | MIT/GRV | STD    | --                              |
| NORMALLY DRY PIPING (TEST, DRAIN, ETC.)                                | 2" AND SMALLER    | GALV.   | 40       | MIT     | STD    | ALL FITTINGS MUST BE GALVANIZED |
| PDC PIPING, BETWEEN CHECK VALVE AND PDC, AND OTHER NORMALLY DRY PIPING | 2-1/2" AND LARGER | GALV.   | 40       | MIT/GRV | STD    | ALL FITTINGS MUST BE GALVANIZED |

NOTES:  
 1. ALL EXPOSED PIPING AND FITTINGS WITHIN FINISHED AREAS SHALL BE CUSTOM PAINTED IN ACCORDANCE WITH NFPA OWNERS PAINTING REQUIREMENTS AND COORDINATED WITH ARCHITECT. REFER TO DIVISION 9, SECTION INTERIOR PAINTING.  
 2. ALL PIPING IN RETURN AIR CEILING PLENUM INSTALLATIONS SHALL BE UL LISTED FOR THIS APPLICATION.  
 3. FIRE-BARRIER PENETRATIONS: MAINTAIN INDICATED FIRE RATINGS OF WALLS, PARTITIONS, CEILINGS, AND FLOORS AT PIPE PENETRATIONS. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS. SEAL PIPE PENETRATIONS WITH FIRESTOP MATERIALS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

| ABBREVIATIONS | DESCRIPTION                   | ABBREVIATIONS | DESCRIPTION                             |
|---------------|-------------------------------|---------------|---|
| CI            | CAST IRON                     | GRV           | GROOVED JOINT SYSTEM FITTINGS/COUPLINGS |
| CLDI          | CEMENT LINED DUCTILE IRON     | GALV.         | GALVANIZED STEEL                        |
| CUS           | WROUGHT COPPER SOLDER (85/15) | MIT           | MALLEABLE IRON THREADED                 |
| DI            | DUCTILE IRON                  | STD           | STANDARD                                |
| DI-MJ         | DUCTILE IRON MECHANICAL JOINT | STL-BLK       | BLACK STEEL                             |
| FL            | FLANGED                       |               |   |

**VALVE SCHEDULE**

| DESCRIPTION                       | SIZE              | TYPE  |           |       |      | CLASS  | REMARKS |
|-----------------------------------|-------------------|-------|-----------|-------|------|--------|---------|
|                                   |                   | OS&Y  | BUTTERFLY | CHECK | BALL |        |         |
| UNDERGROUND FIRE PROT. SERVICE    | ALL               | OS&YF | BFVF      | CVF   | BVF  | 175PSI | --      |
| WET SPRINKLER PIPING              | 2" AND SMALLER    | OS&YT | BFVT      | CVT   | BVT  | 175PSI | --      |
| WET SPRINKLER PIPING              | 2-1/2" AND LARGER | OS&YG | BFVG      | CVG   | BVG  | 175PSI | --      |
| DRY SPRINKLER PIPING              | 2" AND SMALLER    | OS&YT | BFVT      | CVT   | BVT  | 175PSI | --      |
| DRY SPRINKLER PIPING              | 2-1/2" AND LARGER | OS&YG | BFVG      | CVG   | BVG  | 175PSI | --      |
| DRAIN PIPING                      | ALL               | --    | --        | --    | BVT  | 175PSI | --      |
| FIRE DEPARTMENT CONNECTION PIPING | ALL               | --    | --        | CVG   | --   | 175PSI | --      |

| ABBREVIATION | DESCRIPTION   | ABBREVIATION | DESCRIPTION                     |
|--------------|---|--------------|---------------------------------|
| BVF          | BALL VALVE FLANGED - FULL PORT, BRONZE                  | CVF          | CHECK VALVE FLANGED             |
| BVG          | BALL VALVE GROOVED - FULL PORT, BRONZE                  | CVG          | CHECK VALVE GROOVED             |
| BVT          | BALL VALVE THREADED, 2-PIECE, FULL PORT, 400PSI, BRONZE | CVT          | CHECK VALVE THREADED - BRONZE   |
| BFVF         | BUTTERFLY VALVE FLANGED                                 | OS&YF        | OS&Y RISING STEM VALVE FLANGED  |
| BFVG         | BUTTERFLY VALVE GROOVED                                 | OS&YG        | OS&Y RISING STEM VALVE GROOVED  |
| BFVT         | BUTTERFLY VALVE THREADED                                | OS&YT        | OS&Y RISING STEM VALVE THREADED |

**SPRINKLER HEAD SCHEDULE**

| SYMBOL         | TYPE         | STYLE     | RESPONSE | COVERAGE | COLOR       | DISCHARGE COEFFICIENT (K) | ORIFICE | TEMP. | MANUFACTURE |       | REMARKS        |
|----------------|--------------|-----------|----------|----------|-------------|---------------------------|---------|-------|-------------|-------|----------------|
|                |              |           |          |          |             |                           |         |       | MODEL       | SIN   |                |
| ● <sub>D</sub> | DRY PENDENT  | CONCEALED | QUICK    | STANDARD | WHITE PLATE | 5.6K                      | 1/2"    | 155°F | VICTAULIC   | V3606 | REFER TO NOTES |
| ○              | UPRIGHT      | EXPOSED   | QUICK    | STANDARD | BRASS       | 5.6K                      | 1/2"    | 155°F | VICTAULIC   | V2704 | REFER TO NOTES |
| △ <sub>D</sub> | DRY SIDEWALL | RECESSED  | QUICK    | STANDARD | BRASS       | 5.6K                      | 1/2"    | 155°F | VICTAULIC   | V3610 | REFER TO NOTES |
| ●              | PENDENT      | CONCEALED | QUICK    | STANDARD | WHITE PLATE | 5.6K                      | 1/2"    | 155°F | VICTAULIC   | V2708 | REFER TO NOTES |
| ●              | PENDENT      | EXPOSED   | QUICK    | STANDARD | BRASS       | 5.6K                      | 1/2"    | 155°F | VICTAULIC   | V2704 | REFER TO NOTES |

NOTES:  
 1. CONFIRM FINAL FINISHES WITH OWNER PRIOR TO SUBMITTING PRODUCT DATA FOR REVIEW.  
 2. IN AREAS WITH CEILINGS, CONCEALED PENDENT SPRINKLER HEADS AND CONCEALED PIPING SHALL BE UTILIZED.  
 3. IN AREAS WITHOUT CEILINGS, EXPOSED UPRIGHT OR PENDENT SPRINKLER HEADS AND EXPOSED PIPING SHALL BE UTILIZED. UL LISTED HEAD GUARDS SHALL BE PROVIDED IN AREAS SUBJECT TO DAMAGE (I.E. MECHANICAL ROOMS, DEFLECTORS WITHIN 7 FEET OF FINISHED FLOOR, ETC.)

**FIRE SERVICE BACKFLOW PREVENTER REPLACEMENT (DCDA)**

LEAD-FREE (TO NSF 61) DOUBLE CHECK DETECTOR ASSEMBLY (DCDA), 6" SIZE, WITH SUPERVISED OS&Y GATE VALVES AND METERED DETECTOR ASSEMBLY WITH DOUBLE CHECK BACKFLOW PREVENTER. BODY SHALL BE STAINLESS STEEL OR EPOXY-COATED CAST IRON WITH STAINLESS STEEL INTERNAL PARTS. RATED FOR 33°F-140°F TEMP. RANGE, 175 PSI WORKING PRESSURE FOR ALL FLOWS AT OR BELOW SERVICE FLOW. FLOW AT 15 FT/SEC. PRESSURE DROP SHALL NOT EXCEED 7 PSI. METER SHALL HAVE REGISTRATION IN CUBIC FEET, BASIS OF DESIGN WATTS LF175DCDA-OSY, WILKINS 350DA-CFM OR 350ASTDA-CFM.



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**GENERAL NOTES**

**GENERAL**

- WHEN A CONFLICT BETWEEN THE DRAWINGS, NOTES AND/OR SPECIFICATIONS OCCUR, THE MORE STRINGENT AND/OR LARGER QUANTITY AND/OR MORE EXPENSIVE SHALL APPLY. THE REQUIREMENTS LISTED WITHIN NOTES OR SPECIFICATIONS SHALL BE REQUIRED, PROVIDED AND INSTALLED WHETHER SPECIFICALLY INDICATED ON THE DRAWINGS OR NOT.

**WIRING & RACEWAY**

- THE DRAWINGS SHOW THE GENERAL LAYOUT AND TYPICAL DETAILS. PROVIDE COMPLETE SYSTEMS. DRAWINGS ARE BASED ON THE SPECIFIED EQUIPMENT, RACEWAY LAYOUTS, BOXES, AND WIRING OF THE SYSTEMS ARE SUBJECT TO APPROVED SHOP DRAWINGS.
- ENSURE THAT ITEMS TO BE FURNISHED FIT THE SPACE AVAILABLE. MAKE NECESSARY FIELD MEASUREMENTS TO ASCERTAIN SPACE REQUIREMENTS, INCLUDING THOSE FOR CONNECTIONS, AND PROVIDE SUCH DIMENSIONS AND SHOWN EQUIPMENT THAT FINAL INSTALLATION SHALL SATISFY THE INTENT OF THE DRAWINGS AND SPECIFICATIONS.
- LOCATIONS OF OUTLETS, SWITCHES, APPLIANCES, ETC. AS SHOWN ON ELECTRICAL PLANS ARE APPROXIMATE. COORDINATE WITH ARCHITECTURAL AND MECHANICAL PLANS AND DETAILS, AND WITH JOB CONDITIONS. INSTALL SWITCHES WITH OFF POSITION DOWN. INSTALL RECEPTABLES WITH GROUNDING POLE IN THE UP POSITION FOR VERTICAL MOUNTING AND AT RIGHT FOR HORIZONTAL MOUNTING.
- LOCATE AND INSTALL ELECTRICAL EQUIPMENT, JUNCTION AND PULL BOXES, PANELBOARDS, SWITCHES, CONTROLS, AND OTHER APPARATUS REQUIRING MAINTENANCE, INSPECTION, AND OPERATION SO AS TO BE READILY ACCESSIBLE.

**RACEWAY INSTALLATION**

- IN ALL ARCHITECTURALLY FINISHED SPACES, CONDUITS AND CABLES SHALL BE RUN CONCEALED IN UNFINISHED SPACES, SLABS, MASONRY, AND PARTITIONS UNLESS OTHERWISE INDICATED. SAW CUTTING AND FINISHED PATCHING SHALL BE REQUIRED IN EXISTING SLABS AND MASONRY WALLS. UNFINISHED SPACES, RACEWAYS MAY BE RUN EXPOSED.
- UNLESS OTHERWISE NOTICED, EXACT ROUTING OF RACEWAYS SHALL BE DETERMINED BY THE CONTRACTOR TO SUIT PROJECT REQUIREMENTS AND FIELD CONDITIONS.
- PROVIDE SEPARATE RACEWAYS, JUNCTION BOXES, PULL BOXES AND WIREWAYS FOR ALL EMERGENCY SYSTEM WIRING.

**WIRING INSTALLATION**

- DO NOT USE WIRE SMALLER THAN NO. 12 AWG FOR ANY POWER OR LIGHTING CIRCUIT. USE LARGER SIZES WHERE INDICATED, AS REQUIRED BY CODES, AND AS FOLLOWS:  

|                    |        |
|--------------------|--------|
| 30 AMPERE CIRCUIT: | NO. 10 |
| 40 AMPERE CIRCUIT: | NO. 8  |
| 50 AMPERE CIRCUIT: | NO. 6  |
| 60 AMPERE CIRCUIT: | NO. 4  |
- MINIMUM HOMERUN AND BRANCH CIRCUIT WIRING SIZES AND MAXIMUM HOMERUN CONDUIT FILL FOR 120 VOLT, 20 AMPERE CIRCUITS SHALL BE AS FOLLOWS:  

| LENGTH      | CIRCUIT WIRE SIZE | HOMERUN WIRE SIZE | CONDUIT SIZE (3 WIRES/CONDUIT) |
|-------------|-------------------|-------------------|--------------------------------|
| 0 TO 20'    | #12               | #12               | 3/4"                           |
| 21 TO 100'  | #12               | #10               | 3/4"                           |
| 101 TO 200' | #12               | #8                | 1"                             |

GREATER THAN 200' - REQUEST DIRECTION FROM ARCHITECT.

NOTE: PROVIDE DERATING PER CODE WHEN INSTALLING MORE THAN 3 CURRENT CARRYING CONDUCTORS IN CONDUIT.
- HOMERUNS AND BRANCH CIRCUIT WIRING FOR 277 VOLT, 20 AMPERE CIRCUITS SHALL BE AS FOLLOWS:  

| LENGTH      | CIRCUIT WIRE SIZE | HOMERUN WIRE SIZE | CONDUIT SIZE (3 WIRES/CONDUIT) |
|-------------|-------------------|-------------------|--------------------------------|
| 0 TO 100'   | #12               | #12               | 3/4"                           |
| 100 TO 200' | #12               | #10               | 3/4"                           |

GREATER THAN 200' - REQUEST DIRECTION FROM ARCHITECT.

NOTE: PROVIDE DERATING PER CODE WHEN INSTALLING MORE THAN 3 CURRENT CARRYING CONDUCTORS IN CONDUIT.
- DO NOT USE WIRE SMALLER THAN NO. 14 AWG FOR CONTROL CIRCUITS UNLESS OTHERWISE RECOMMENDED BY THE EQUIPMENT OR SYSTEM MANUFACTURER ON WIRING SHOP DRAWINGS, AND SO APPROVED BY THE ARCHITECT.
- WHERE GREATER THAN THREE (3) CURRENT-CARRYING CONDUCTORS ARE INSTALLED IN ANY ONE CONDUIT OR CABLE, CONDUCTORS MUST BE DERATED AND SIZES INCREASED, IF NEEDED, TO ACCOMMODATE CONDUCTOR DERATING AS REQUIRED BY NEC ARTICLE 310.
- CONDUCTORS SHALL BE COMPLETELY INSTALLED AND CONNECTED. PROVIDE ALL TERMINALS, LUGS, AND CONNECTIONS TO SUIT THE APPLICATION, AND IN COMPLIANCE WITH EQUIPMENT MANUFACTURERS RECOMMENDATIONS.
- UNLESS NO CIRCUMSTANCES SHALL ANY SWITCH OR CIRCUIT BREAKER BREAK A NEUTRAL CONDUCTOR.
- THE CIRCUIT NUMBERS INDICATED ON THE DRAWINGS ARE INTENDED AS A GUIDE FOR PROPER CONNECTION OF CIRCUITS AT PANELS. HOWEVER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THE FINAL CIRCUITING WORK FULFILLS THE FOLLOWING CONDITIONS:  
  - LOADS ON PANEL BUSSES SHALL BE PHASE-BALANCED AS EVENLY AS POSSIBLE.

**GROUNDING INSTALLATION**

- EQUIPMENT GROUNDING  
  - INSTALL AN INSULATED GROUND CONDUCTOR, RUN IN THE RACEWAY WITH THE PHASE CONDUCTORS, FOR EACH FEEDER SERVING PANELBOARDS, LIGHTING DIMMER BOXES, MOTOR CONTROL CENTERS, MOTORS, EQUIPMENT AND APPLIANCES UNLESS OTHERWISE NOTED.
  - INCLUDE AN INSULATED GROUND CONDUCTOR IN ALL CONDUIT RUNS CONTAINING SECTIONS OF FLEXIBLE CONDUIT UNLESS OTHERWISE NOTED.
  - INCLUDE AN INSULATED GROUND CONDUCTOR IN ALL BRANCH CIRCUIT RACEWAYS OR CABLES UNLESS OTHERWISE NOTED.
- TELECOMMUNICATIONS CLOSET GROUNDING  
  - PROVIDE A #4 AWG GROUND CONDUCTOR RISER IN ENTIRE CONDUIT TO EACH TELECOMMUNICATIONS CLOSET GROUNDING BUSBAR (TGB) FROM THE TELECOMMUNICATIONS MAIN GROUNDING BUSBAR (TMGB), AND TO MAIN SERVICE GROUNDING ELECTRODE SYSTEM.
  - CONNECT THE GROUND RISER TO TMGB AND TGBS PER TABLE STANDARD 607 - 1994.
  - PROVIDE ADDITIONAL #4 AWG GROUND CABLE CONNECTIONS FROM EACH TMGB AND TGB TO THE CLOSET BUILDING STEEL AND TO THE GROUND BUS IN THE ELECTRIC PANEL, FEEDING THE OUTLETS AND EQUIPMENT IN THE ASSOCIATED TELECOMMUNICATIONS ROOM/CLOSET.
- GROUND EACH TELECOMMUNICATIONS, FIRE ALARM, SECURITY, AND BMS SYSTEM EQUIPMENT AND CONTROL PANEL WITHIN EACH TELECOMMUNICATIONS ROOM/CLOSET TO THE ASSOCIATED CLOSET TMGB OR TGB WITH A #4 AWG CONDUCTOR PER TABLE STANDARD 607 - 1994.

**ADA SYMBOLS:**

- ALL HANDICAP SIGNAGE IN PROJECT TO USE DYNAMIC PICTOGRAM SYMBOL OF ACCESSIBILITY AS ADOPTED BY CONNECTICUT PUBLIC ACT 16-78. ALL REFERENCES TO OTHER SYMBOLS ON DRAWINGS ARE FOR REFERENCE ONLY.

**ELEVATOR EQUIPMENT WIRING**

- WORK INCLUDED  
  - ELEVATOR EQUIPMENT WIRING INCLUDES POWER SERVICE CONNECTIONS, TELEPHONE SERVICE CONNECTIONS, PUBLIC ADDRESS SYSTEM CONNECTIONS AND FIRE ALARM SYSTEM CONNECTIONS.
  - ELEVATOR CONTROL WIRING AND INTERLOCK CONTROLS ARE NOT INCLUDED.
- COMPONENTS  
  - ELEVATOR FUSED DISCONNECT WITH DRY CONTACTS FOR ELEVATOR DRIVE UNIT POWER, AND POWER WIRING COMPLETE TO THE DRIVE UNIT.
  - PROVIDE BRANCH CIRCUITS FOR ELEVATOR CAB.
  - PROVIDE CONDUIT FOR ELEVATOR COMMUNICATION SYSTEMS.
  - PROVIDE CONDUIT AND WIRE FOR ELEVATOR RECALL SYSTEM. COORDINATE REQUIREMENTS WITH FIRE ALARM SYSTEM.
  - PROVIDE ELEVATOR PIT, RECEPTABLES AND SWITCHES.
  - PROVIDE HEAT DETECTORS AT THE TOP OF THE SHAFT AND INTERLOCK WITH THE DRIVE UNIT POWER SOURCE TO DISCONNECT POWER UPON SENSING OF FIRE AND BEFORE ACTIVATION OF ANY SPRINKLER HEADS. COORDINATE LOCATION OF DETECTOR WITH FP DRAWINGS.
  - PROVIDE LOCKING MECHANISMS FOR OVERCOURING DEVICES ON BRANCH CIRCUITS SERVING ELEVATOR EQUIPMENT INCLUDING CAB, PIT AND MACHINE ROOM LIGHTING, VENTILATION, RECEPTABLES AND CONTROLLER POWER.
- COORDINATION  
  - COORDINATE ENTIRE INSTALLATION WITH ELEVATOR SYSTEM SUPPLIER PRIOR TO COMMENCEMENT OF WORK.
  - IF THE HORSEPOWER RATING OF THE EQUIPMENT FURNISHED BY THE ELEVATOR SUPPLIER DIFFERS FROM THE HORSEPOWER LISTED ON THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO INSTALLING ANY WORK, AND OBTAIN DIRECTION.

**MECHANICAL EQUIPMENT WIRING**

- UNLESS OTHERWISE INDICATED OR SPECIFIED HEREIN, ALL MOTORS, MOTOR STARTERS, MOTOR CONTROLLERS, VARIABLE SPEED FREQUENCY DRIVES, AND ASSOCIATED CONTROL DEVICES ARE FURNISHED AND INSTALLED UNDER THIS DIVISION. COORDINATE INSTALLATION AND LOCATIONS WITH OTHER DIVISION CONTRACTORS.
- POWER WIRING FROM THE INDICATED SOURCE TO THE STARTER/CONTROLLER/DRIVE UNIT AND FROM THE STARTER/CONTROLLER/DRIVE UNIT TO THE MOTOR, INCLUDING ANY LOCAL DISCONNECT SWITCHES PROVIDED AND INSTALLED BY THIS DIVISION, AND ALL ASSOCIATED LUGS, TERMINALS, AND CONNECTIONS IS THE WORK OF THIS DIVISION.
- CONTROL CIRCUIT WIRING IS GENERALLY FURNISHED AND INSTALLED UNDER OTHER DIVISIONS EXCEPT THAT ANY SUCH WIRING SHOWN ON ELECTRICAL DRAWINGS IS WORK OF THIS DIVISION.
- PROVIDE 120 VOLT POWER TO ALL TEMPERATURE CONTROL PANELS (TOPS) SUPPLIED AND INSTALLED BY HVAC CONTRACTOR. USE EMERGENCY POWER SOURCES WHEN AVAILABLE. COORDINATE ALL POWER REQUIREMENTS AND PANEL LOCATIONS WITH TEMPERATURE CONTROLS CONTRACTOR.
- COOPERATE AND COORDINATE WITH THE OTHER TRADES IN THE INSTALLATION, CONNECTION, AND TESTING OF MECHANICAL EQUIPMENT. PERFORM WORK OF THIS SECTION IN ACCORDANCE WITH EQUIPMENT MANUFACTURERS INSTRUCTIONS.

**COORDINATION DRAWINGS**

- DEVELOP AND SUBMIT COORDINATION DRAWINGS AS OUTLINED.  
  - SHEET METAL, PLUMBING AND FIRE PROTECTION SHOP DRAWINGS HAVE BEEN COORDINATED WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW. DRAWINGS MUST BE RETURNED FROM ENGINEER EITHER REVIEWED OR FURNISH AS CORRECTED PRIOR TO BEING USED AS BASIS FOR COORDINATION DRAWINGS.
- AFTER SHEET METAL AND PIPING DRAWINGS HAVE BEEN REVISED PER ENGINEERS COMMENTS, REPRODUCIBLE COPIES SHALL BE SENT TO THE TRADES IN THE FOLLOWING SEQUENCE FOR THE INCLUSION OF THEIR WORK:  
  - MECHANICAL SHEET METAL
  - PLUMBING PIPING
  - MECHANICAL PIPING
  - SPRINKLER IRON
  - ELECTRICAL WORK
- AFTER ALL TRADES HAVE INCLUDED THEIR WORK ON THE COORDINATION DRAWING AND NOTED CONFLICTS, ALL TRADES SHALL MEET TO RESOLVE CONFLICTS AND AGREE TO ACCEPTABLE SOLUTIONS. EACH TRADE SHALL SIGN COORDINATION DRAWINGS. ITEMS NOT SHOWN ON COORDINATION DRAWING IS RESPONSIBILITY OF OMITTING CONTRACTOR AND CONTRACTOR IS SUBJECT TO ADDITIONAL COSTS INCURRED BY OTHER TRADES.
- THE ARCHITECT AND ENGINEER ARE NOT PART OF THE COORDINATION DRAWING PROCESS. THE ENGINEER WILL PROVIDE ASSISTANCE FOR NOTED CONFLICTS ONLY. COORDINATION DRAWINGS ARE NOT TO BE CONSIDERED PIPING OR DUCT SHOP DRAWINGS. THE CONTRACTOR IS REQUIRED TO SUBMIT INDIVIDUAL PIPING AND DUCTWORK SHOP DRAWINGS FOR REVIEW BY THE ENGINEER. PIPING AND DUCTWORK SHOP DRAWINGS SHALL FOLLOW THE DESIGN INTENT OF THE CONTRACT DOCUMENTS.
- SUBMIT FINAL SIGNED COORDINATION DRAWING TO ENGINEER FOR REVIEW. ENGINEER WILL REVIEW COORDINATION DRAWINGS FOR GENERAL ARRANGEMENT AND FOR NOTED CONFLICTS ONLY. SPECIFIC INSTALLATION REQUIREMENTS WILL BE REVIEWED ONLY IN INDIVIDUAL TRADE SHOP DRAWINGS.
- ANY WORK FABRICATED OR INSTALLED PRIOR TO SIGN OFF BY ALL TRADES WHICH IS DEEMED TO BE IN CONFLICT WITH COORDINATION DRAWINGS SHALL BE REMOVED AND REINSTALLED IN CONFORMANCE WITH COORDINATION DRAWINGS.
- EACH CONTRACTOR (MENTIONED ABOVE) IS RESPONSIBLE FOR THE COORDINATION OF HIS SUB-CONTRACTORS.
- THE OVERALL COORDINATION OF THE COORDINATION PROCESS IS THE RESPONSIBILITY OF THE CONTRACTOR. THE ENGINEER IS NOT RESPONSIBLE FOR THE COORDINATION PROCESS. THE ENGINEER WILL RESPOND TO QUESTIONS THAT ARISE FROM THE COORDINATION PROCESS. DRAWINGS SUBMITTED WILL BE REVIEWED FOR CLEARLY IDENTIFIED CONFLICTS ONLY. SOLUTIONS TO CONFLICTS WILL NOT BEAR ADDITIONAL COST.

**AS-BUILT DRAWINGS**

- PROVIDE A COMPLETE SET OF AS-BUILT DRAWINGS REFLECTING AS INSTALLED CONDITIONS. AS-BUILT DRAWINGS SHALL INDICATE ALL INSTALLED CONDITIONS OF SYSTEMS WITHIN THIS DISCIPLINE. DRAWINGS SHALL BE OF SIMILAR SCALE AS THE CONSTRUCTION DOCUMENTS AND INCLUDE DETAILS AS NECESSARY TO CLEARLY REFLECT THE INSTALLED CONDITION. DRAWINGS SHALL BE BOUND IN A COMPLETE AND CONSISTENT SET. SUPPLEMENTAL SKETCHES AND LOOSE PAPERWORK WILL NOT BE ACCEPTABLE AND WILL BE RETURNED FOR REVISION. THE CONTRACTOR SHALL COMPLY WITH THE ENGINEERS COMMENTS TO PRODUCE A CLEAR AND CONSISTENT SET OF DRAWINGS. DRAWINGS SHALL BE SUBMITTED IN BOTH HARD COPY AND ELECTRONIC (AUTOCAD VERSION AS REQUIRED BY THE OWNER) VERSION. NUMBER OF COPIES OF EACH AS REQUESTED BY THE OWNER.
- PROVIDE AS-BUILT DRAWINGS INDICATING IN A NEAT AND ACCURATE MANNER A COMPLETE RECORD OF ALL REVISIONS OF THE ORIGINAL DESIGN OF THE WORK, INDICATE THE FOLLOWING INSTALLED CONDITIONS:  
  - INCLUDE ALL CHANGES AND AN ACCURATE RECORD, ON REPRODUCTIONS OF THE CONTRACT DRAWINGS OR APPROPRIATE SHOP
  - DRAWINGS, OF ALL DEVIATIONS, BETWEEN THE WORK SHOWN AND WORK INSTALLED.
  - EQUIPMENT LOCATIONS (EXPOSED AND CONCEALED), DIMENSIONED FROM PROMINENT BUILDING LINES.
  - APPROVED SUBSTITUTIONS, CONTRACT MODIFICATIONS, AND ACTUAL EQUIPMENT AND MATERIALS INSTALLED.
  - CONTRACT MODIFICATIONS, ACTUAL EQUIPMENT AND MATERIALS INSTALLED.

**DEMOLITION AND REMOVALS**

- WHEN NECESSARY TO TEMPORARILY DISCONNECT ANY EXISTING FEEDER OR BRANCH CIRCUIT SUPPLYING OCCUPIED FACILITIES, CONFER WITH THE OWNER, AND SCHEDULE A MUTUALLY AGREEABLE PERIOD OF INTERFERENCE.
- WHERE REPLACEMENT, RELOCATION OR MODIFICATION OF EXISTING EQUIPMENT IS INDICATED, PROVIDE AND MAINTAIN ALL TEMPORARY FEEDERS, CONNECTIONS, CIRCUIT PROTECTION, AND ANY OTHER MATERIALS AND APPURTENANCES REQUIRED TO MAINTAIN SERVICES TO OCCUPIED AREAS.
- NO WORK SHALL BE LEFT INCOMPLETE, NOR ANY HAZARDOUS SITUATION CREATED, WHICH WILL AFFECT THE LIFE OR SAFETY OF THE PUBLIC AND/OR BUILDING OCCUPANTS. AT NO TIME SHALL THE WORK INTERFERE WITH OR CUT OFF ANY OF THE EXISTING SERVICES WITHOUT THE OWNERS PRIOR WRITTEN PERMISSION.
- THE OWNER RESERVES THE RIGHT TO OPERATE ALL EXISTING ELECTRICAL AND MECHANICAL EQUIPMENT NOT INCLUDED IN THIS WORK, AND TO PERFORM ALL REQUIRED SERVICING AND REPAIRS TO SAME, AT ALL TIMES.
- IT IS REQUIRED THAT THE WORK INDICATED AND/OR SPECIFIED SHALL BE CARRIED OUT WITH A MINIMUM OF INTERFERENCE TO THE ESTABLISHED OPERATIONS OF THE BUILDING.
- REMOVE, ABANDON, REROUTE, OR RELOCATE ANY CONDUIT, WIRING, LIGHTING FIXTURES, OUTLETS, AND OTHER ELECTRICAL ITEMS WHICH ARE IN THE COURSE OF, OR INTERFERE WITH, THE ALTERATIONS. REMOVE ALL EXPOSED OUTLETS, CONDUIT, AND BRANCH CIRCUIT WORK, WHICH INTERFERE WITH THE ALTERATIONS.
- IT IS THE INTENTION OF THESE SPECIFICATIONS TO PROVIDE FOR THE CONTINUANCE OF ALL ELECTRICAL SERVICES PRESENTLY INSTALLED IN THE UNALTERED AREAS. PROVIDE ALL CONDUIT, WIRING, AND DEVICES NECESSARY TO MAINTAIN SERVICES TO THESE AREAS.
- COMPARE THE PLANS WITH THE EXISTING CONDITIONS TO DETERMINE THE AMOUNT OF WORK AFFECTED. REMOVE ALL UNUSED EXPOSED CIRCUIT WORK, OUTLETS, FIXTURES AND THE LIKE NOT REQUIRED BY THE ALTERATIONS.
- ALL MATERIALS REQUIRED TO BE REMOVED AND NOT REINSTALLED UNDER THIS DIVISION OF THE WORK, UNLESS OTHERWISE INDICATED, SHALL BECOME THE PROPERTY OF THE CONTRACTOR, AND SHALL BE REMOVED FROM THE SITE.
- WHERE FEEDERS AND BRANCH CIRCUITS OR DEVICES AND EQUIPMENT ARE INDICATED TO BE REMOVED, CONDUCTORS AND CABLES SHALL BE COMPLETELY REMOVED BACK TO THEIR SOURCE EXPOSED OR ACCESSIBLE CONDUITS SHALL BE REMOVED COMPLETELY. CONDUITS EMBEDDED IN CONCRETE OR MASONRY SHALL BE CUT OFF FLUSH AND THE SURFACE PATCHED SMOOTH AND LEVEL.
- REMOVED MATERIALS SHALL BE DISPOSED OF USING LICENSED CARTING SERVICE.
- HAZARDOUS MATERIALS - CONTAINING PCB'S (BALLASTS), AND THE LIKE SHALL BE DISPOSED OF BY AN EPA APPROVED LICENSED DISPOSAL SERVICE. CONTRACTOR SHALL OBTAIN AND HAVE ON FILE AFFIDAVIT, AND RECEIPTS STATING HOW AND WHERE THE WASTE WAS DISPOSED OF OR CONVERTED.
- CONTRACTOR SHALL REMOVE ALL ELECTRICAL EQUIPMENT IN OR ON WALLS THAT ARE TO BE REMOVED. MAINTAIN CONTINUITY OF ALL EXISTING BRANCH CIRCUITRY TO EXISTING ROOMS NOT BEING RENOVATED. REMOVE ALL EXISTING BRANCH CIRCUITS (THAT ARE TO REMAIN) AS REQUIRED. REFER TO ARCHITECTURAL DEMOLITION DRAWINGS FOR WALLS BEING REMOVED - REFER TO CONSTRUCTION SCHEDULE FOR TIME DELAY.
- CONDUIT IN EXISTING OR NEW CEILINGS THAT IS NOT INTENDED FOR REUSE SHALL BE REMOVED BACK TO THE PANEL FROM WHICH IT ORIGINATES.
- CONDUCTORS THAT ARE NOT DEEMED REUSABLE SHALL BE REMOVED BACK TO THE NEAREST JUNCTION BOX. WHERE THE ENTIRE CIRCUIT IS TO BE REMOVED, THE CONDUCTORS SHALL BE REMOVED BACK TO THE PANELBOARD FROM WHICH THEY ORIGINATE.
- OUTAGES OF EXISTING ELECTRICAL, LIGHTING, POWER, AND SIGNAL SYSTEMS NECESSITATED BY WORK OF ALL TRADES SHALL BE IN ACCORDANCE WITH FIELD SCHEDULES BY THE GENERAL CONTRACTOR AND OWNER. INCLUDE ALL ELECTRIC WORK OVERTHETS AND SUPERVISION TO COMPLY. CONTRACTOR SHALL OBTAIN OWNERS GENERAL CONTRACTORS APPROVAL, PRIOR TO DISRUPTING OF EXISTING ELECTRICAL SYSTEM.
- CONTRACTOR TO MAINTAIN CONTINUITY AND ACCESSIBILITY OF ALL EXISTING SYSTEMS AND SYSTEM EQUIPMENT FEEDERS WHICH MAY BE DISRUPTED FOR WORK OF ANY TRADE.
- CONTRACTOR TO MAINTAIN CONTINUITY AND ACCESSIBILITY OF ALL EXISTING ELECTRICAL (POWER, LIGHTING, AND SIGNAL) SYSTEMS, EQUIPMENT FEEDERS AND BRANCH CIRCUITS ON FLOORS OR AREAS THAT ARE NOT AFFECTED BY DEMOLITION OR NEW CONSTRUCTION - REFER TO CONSTRUCTION SCHEDULE FOR ADDITIONAL INFORMATION.
- ANY EXISTING ELECTRICAL WORK WHICH IS PULLED OUT OR CUT AWAY SHALL BE REMOVED FROM THE SITE AS DIRECTED BY THE GENERAL CONTRACTOR AND THE OWNER.
- EXISTING ELECTRICAL EQUIPMENTS WHICH IS NOT TO BE REUSED SHALL BE REMOVED FROM DRYWALL PARTITIONS. ANY OPENING IN EXISTING PARTITIONS LEFT BY REMOVAL OF EXISTING ELECTRICAL EQUIPMENT SHALL BE PATCHED BY THE CONTRACTOR WITH MATERIALS TO MATCH EXISTING.
- FOR PURPOSES OF THE CONTRACT, WHAT IS NOTED OR SHOWN ON DRAWINGS INDICATES THE SCOPE OF WORK, REQUIRED AND QUALITY OF MATERIALS REQUIRED.
- CONTRACTOR TO EXAMINE ALL CONTRACT DOCUMENTS AND PERFORM ALL DEMOLITION BOTH FOR AREAS BEING RENOVATED AND FOR AREAS WHICH MUST BE REMOVED TO PERMIT THE INSTALLATION OF WORK BY THE VARIOUS TRADES.
- CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE EXTENT OF DEMOLITION AND REMOVALS PRIOR TO THE SUBMISSION OF BIDS. NO CONSIDERATION SHALL BE GIVEN FOR FAILURE TO VISIT THE SITE.

**ABBREVIATIONS**

|        |  |
|--------|--|
| A      | AMPERES  |
| AFB    | ABOVE FINISHED FLOOR   |
| C      | CONDUIT  |
| CB     | CIRCUIT BREAKER  |
| CR     | CIRCUIT  |
| DA     | DIAMETER   |
| EC     | ELECTRICAL CONTRACTOR  |
| EM     | EMERGENCY (WIRED TO GENERATOR LIFE SAFETY DISTRIBUTION)      |
| ETR    | EXISTING TO REMAIN   |
| EWV    | ELECTRIC WATER COOLER  |
| EWH    | ELECTRIC WATER HEATER  |
| REM    | EXISTING TO BE REMOVED                                       |
| HT     | HEAT TRACE   |
| JB     | JUNCTION BOX   |
| LSS    | LOCAL SOUNDER SYSTEM RACK                                    |
| MIB    | MAIN BREAKER   |
| MLO    | MAIN LUG ONLY  |
| MON    | MONITOR  |
| MTO    | MOUNTED  |
| NL     | NIGHT LIGHT (24-7 UNSWITCHED CIRCUIT)                        |
| PNL    | PANELBOARD   |
| RELOC  | RELOCATE/RELOCATED AT THE SAME HEIGHT (PER NEC REQUIREMENTS) |
| SM     | SECURITY SPOT MONITOR & PC                                   |
| U.O.N. | UNLESS OTHERWISE NOTED                                       |
| WG     | WIRE GUARD   |
| WP     | WEATHERPROOF   |

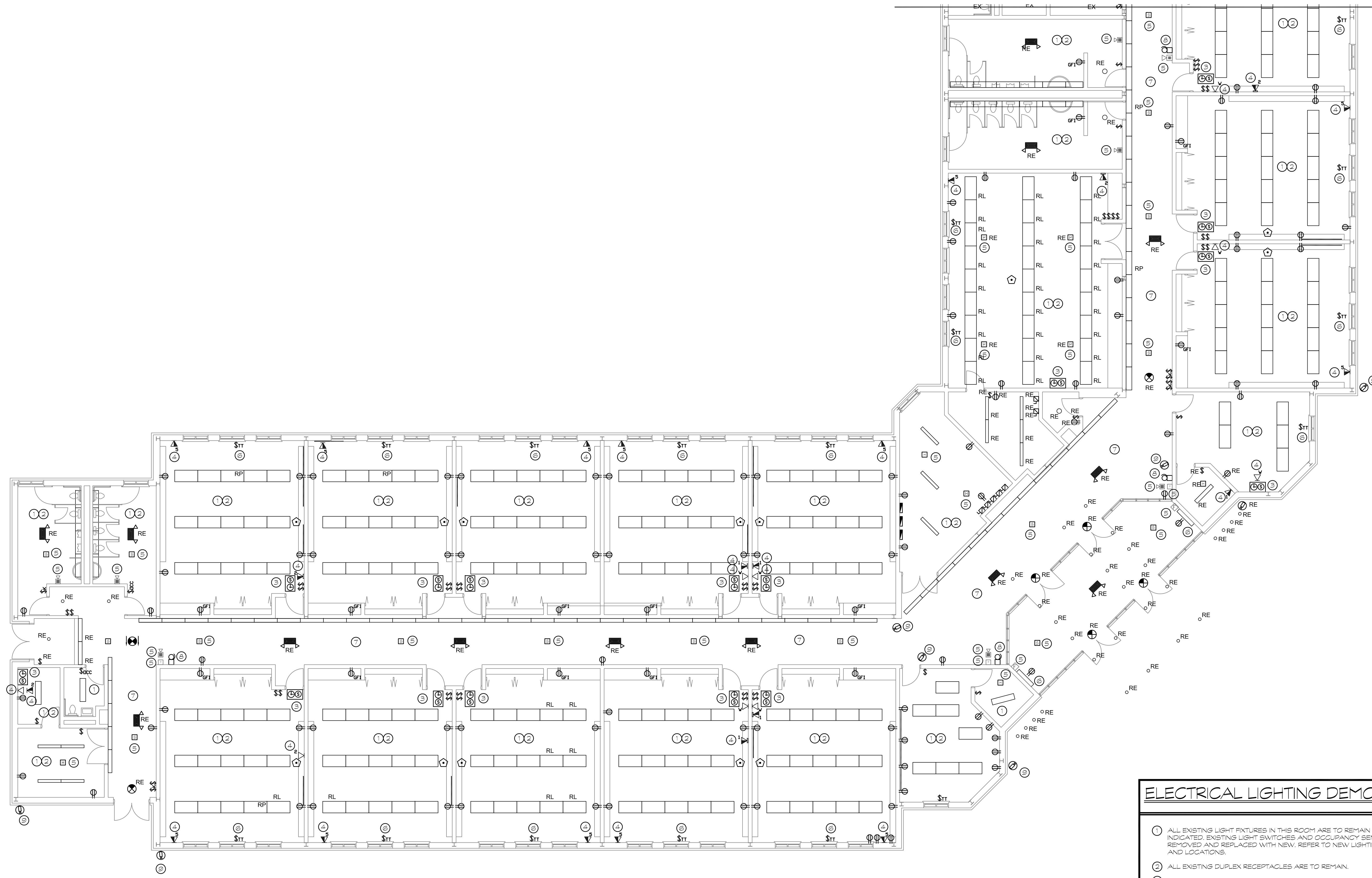
**ELECTRICAL LEGEND**

(NOT ALL SYMBOLS ARE USED)

|  |   |
|--|---|
|  | DISTRIBUTION PANEL, 480/277 VOLT  |
|  | ELECTRICAL PANEL, 480/277 VOLT  |
|  | ELECTRICAL PANEL, 120/208 VOLT  |
|  | PANELBOARD FLUSH MOUNTED  |
|  | PANELBOARD SURFACE MOUNTED  |
|  | NON-FUSED DISCONNECT SWITCH   |
|  | FUSED DISCONNECT SWITCH   |
|  | WALL MOUNTED JUNCTION BOX, ACCORDING TO NEC REQUIREMENTS  |
|  | CABLING MOUNTED JUNCTION BOX, ACCORDING TO NEC REQUIREMENTS   |
|  | MOTOR STARTER, COORDINATE EXACT REQUIREMENTS WITH MOTOR FURNISHED   |
|  | RECESSED LIGHT FIXTURE, LETTER INDICATES FIXTURE TYPE   |
|  | RECESSED LIGHT FIXTURE CONNECTED TO THE GENERATOR   |
|  | TYPICAL RECESSED LED TROFFER, LETTER INDICATES FIXTURE TYPE   |
|  | RECESSED LED LIGHT FIXTURE CONNECTED TO THE GENERATOR   |
|  | RECESSED HIGH EFFICIENCY GLARE CONTROL FIXTURE, LETTER INDICATES FIXTURE TYPE   |
|  | UNDER-CABINET LED FIXTURE, LETTER INDICATES FIXTURE TYPE  |
|  | TYPICAL PENDANT/CHAIN HUNG LED FIXTURE, LETTER INDICATES FIXTURE TYPE   |
|  | WALL MOUNTED FIXTURE, LETTER INDICATES FIXTURE TYPE   |
|  | WALL MOUNTED FIXTURE CONNECTED TO THE GENERATOR   |
|  | WALL MOUNTED SOUNDER FIXTURE CONNECTED TO THE GENERATOR   |
|  | CABLING MOUNTED EXIT SIGN, SHADING INDICATES DIRECTION OF FIXTURE FACE, ARROW INDICATES DIRECTION OF CHEVRON, PROVIDE UNSWITCHED POWER FROM AREA LIGHTING CIRCUIT |
|  | WALL MOUNTED EXIT SIGN, INSTALL AT 7'-6" AFF OR ON EXISTING LOCATION  |
|  | DOUBLE FACE EXIT SIGN   |
|  | FLOOR PROXIMITY EXIT SIGN, INSTALL BETWEEN 6" & 1'-6" AFF   |
|  | SINGLE POLE SWITCH, MOUNT AT 48" AFF  |
|  | 3-WAY SWITCH, MOUNT AT 48" AFF  |
|  | 4-WAY SWITCH, MOUNT AT 48" AFF  |
|  | DUAL TECHNOLOGY, OCCUPANCY SENSOR, MOUNT AT 48" AFF   |
|  | DIMMING SWITCH, MOUNT AT 48" AFF, COMPATIBLE WITH LOAD CONTROLLED   |
|  | KEYED SINGLE POLE SWITCH, MOUNT AT 48" AFF  |
|  | KEYED 3-WAY SWITCH, MOUNT AT 48" AFF  |
|  | OIL BURNER SHUT-OFF SWITCH  |
|  | SINGLE POLE SWITCH WITH PILOT LIGHT   |
|  | TOGGLE DISCONNECT, MOUNT ON OR BY EQUIPMENT   |
|  | DUPLEX RECEPTACLE, MOUNT AT 18" AFF UNLESS OTHERWISE SPECIFIED  |
|  | SINGLE RECEPTACLE, MOUNT AT 18" AFF UNLESS OTHERWISE SPECIFIED  |
|  | QUAD RECEPTACLE, MOUNT AT 18" AFF UNLESS OTHERWISE SPECIFIED  |
|  | GROUND FAULT INTERRUPTING DUPLEX RECEPTACLE, MOUNT AT 18" AFF UNLESS OTHERWISE SPECIFIED  |
|  | RECEPTACLE WITH OUTDOOR RATED COVER PLATE, PROVIDE FLUSH MOUNTED BOX  |
|  | SPECIAL OUTLET CONFIGURATION, REFER TO MANUFACTURERS MANUAL FOR NEMA#   |
|  | CABLING MOUNTED DUPLEX RECEPTACLE, PROVIDE FLUSH MOUNTED BOX  |
|  | FLOOR MOUNTED RECEPTACLE, SEE SPECIFICATION FOR DETAILS   |
|  | HAND DRYER  |
|  | TECH ED CORD REEL DROPS   |
|  | EQUIPMENT TAG   |
|  | ELECTRICAL ALARM BELL, FOR DRY AND WET CONDITIONS   |
|  | CO DETECTOR AUDIO/VISUAL ALARM, MOUNT AT 7'-6" AFF  |
|  | CALL-FOR-AID CORRIDOR LIGHT/BUZZER, MOUNT AT 7'-6" AFF  |
|  | CALL-FOR-AID SWITCH, MOUNT AT 36" AFF WITH PULL CORD HANGING DOWN TO 6" AFF   |
|  | BRANCH CIRCUIT HOMERUN (VOLTAGE BRANCH CIRCUIT POLES)   |
|  | CABLING MOUNTED OCCUPANCY SENSOR (INFRARED/ULTRASONIC) WITH 360° COVERAGE   |
|  | DAYLIGHT HARVESTING SENSOR  |
|  | FIRE ALARM MANUAL PULL STATION - 48" AFF U.O.N.   |
|  | FIRE ALARM SPEAKER/STROBE - 80" AFF U.O.N.  |
|  | FIRE ALARM STROBE LIGHT - 80" AFF U.O.N.  |
|  | SMOKE DETECTOR  |
|  | ELEVATOR RECALL SMOKE DETECTOR  |
|  | HEAT DETECTOR   |
|  | DUCT MOUNTED IONIZATION SMOKE DETECTOR  |
|  | TAMPER SWITCH   |
|  | FLOW SWITCH   |
|  | PRESSURE SWITCH   |
|  | FIRE ALARM MAGNETIC DOOR HOLD OPEN  |
|  | 12" DIAMETER WALL MOUNTED CENTRAL LOCK  |
|  | EMERGENCY POWER OFF SWITCH (EPO)  |



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**ELECTRICAL DEMOLITION PLAN - AREA A**

SCALE 1/8" = 1'-0"

1  
E010

**ELECTRICAL DEMOLITION NOTES**

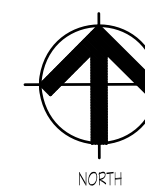
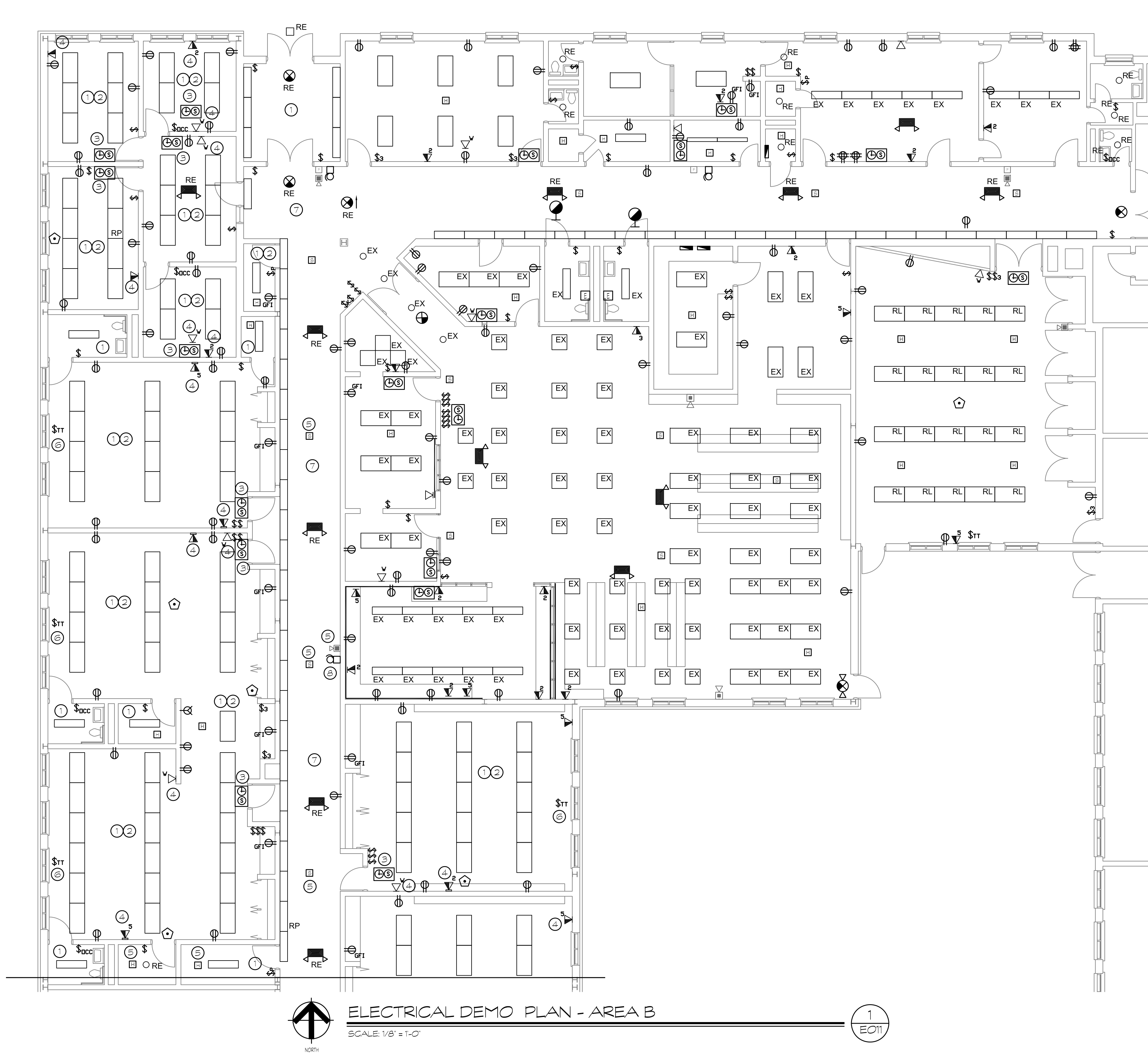
1. ALL LIGHT FIXTURES SHOWN WITH NO DESIGNATION ARE FIXTURES THAT ARE TO REMAIN.
2. ALL LIGHT FIXTURES SHOWN WITH AN 'RL' DESIGNATION ARE FIXTURES WHICH ARE TO BE REMOVED AND RELOCATED TO NEW LOCATIONS. REFER TO THE ELECTRICAL LIGHTING PLAN ON DRAWING E01 FOR FURTHER INFORMATION.
3. ALL LIGHT FIXTURES SHOWN WITH AN 'RE' DESIGNATION ARE FIXTURES WHICH ARE TO BE REMOVED COMPLETE. FIXTURES ARE TO BE PROPERLY DISPOSED OF.
4. ALL LIGHT FIXTURES SHOWN WITH AN 'RE/RL' DESIGNATION ARE FIXTURES WHICH ARE TO BE REMOVED, STORED AND MADE READY TO BE RELOCATED TO NEW LOCATIONS AS NECESSARY.
5. ALL LIGHT FIXTURES WERE FOUND TO BE GOOD WORKING ORDER AS OF THE TIME OF SURVEY. FIXTURES THAT ARE INOPERABLE AND IN NEED OF REPAIR ARE LABELED AS SUCH. ANY INOPERABLE FIXTURES FOUND AT TIME OF DEMOLITION WHICH ARE INDICATED TO REMAIN OR TO BE RELOCATED/REUSED ARE TO BE REPORTED TO THE ENGINEER FOR DIRECTION.
6. ALL EXISTING WALL/CEILING MOUNTED EXIT SIGNS AND CEILING MOUNTED EMERGENCY LIGHTS ARE TO BE REMOVED AND REPLACED WITH NEW FIXTURES.

**ELECTRICAL LIGHTING DEMO KEYNOTES**

1. ALL EXISTING LIGHT FIXTURES IN THIS ROOM ARE TO REMAIN UNLESS OTHERWISE INDICATED. EXISTING LIGHT SWITCHES AND OCCUPANCY SENSORS ARE TO BE REMOVED AND REPLACED WITH NEW. REFER TO NEW LIGHTING PLANS FOR TYPES AND LOCATIONS.
2. ALL EXISTING DUPLEX RECEPTACLES ARE TO REMAIN.
3. EXISTING CLOCK/SPEAKER UNITS ARE TO BE REMOVED COMPLETE AND REPLACED WITH NEW. ALL ASSOCIATED WIRING IS TO BE REMOVED BACK TO THE SOURCE.
4. EXISTING DATAPHONE OUTLETS ARE TO BE REMOVED COMPLETE. ALL ASSOCIATED WIRING IS TO BE REMOVED BACK TO SOURCE DATA RACK.
5. EXISTING FIRE ALARM DEVICES (PULL STATIONS, HORN/STROBES, SMOKE DETECTORS AND HEAT DETECTORS) ARE TO REMAIN UNLESS OTHERWISE NOTED TO BE REMOVED.
6. ALL WALL MOUNTED MECHANICAL EQUIPMENT IS BEING REMOVED. ALL ASSOCIATE ELECTRICAL DEVICES AND ASSOCIATED WIRING IS TO BE REMOVED BACK TO THE SOURCE.
7. ALL CORRIDOR LIGHT FIXTURE ARE TO REMAIN. ALL ASSOCIATED SWITCHES AND WIRING ARE TO BE REMOVED AND REPLACED WITH NEW.
8. ALL EXISTING PROGRAM BILLS AND ASSOCIATED WIRING IS TO BE REMOVED COMPLETE.
9. EXISTING CCTV CAMERAS ARE TO REMAIN AND ARE TO BE REUSED.

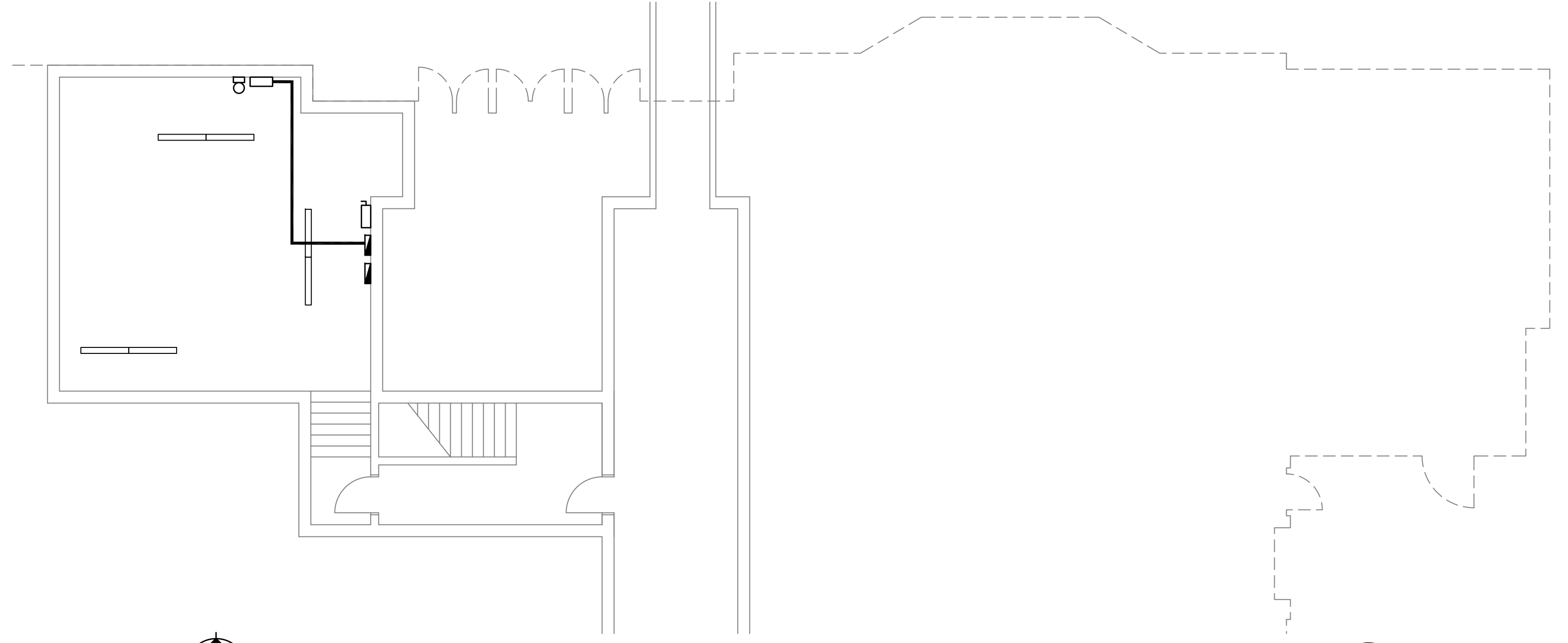


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ELECTRICAL DEMO PLAN - AREA B  
SCALE: 1/8" = 1'-0"

1  
E011



ELECTRICAL DEMO PLAN - BASEMENT BOILER ROOM  
SCALE: 1/8" = 1'-0"

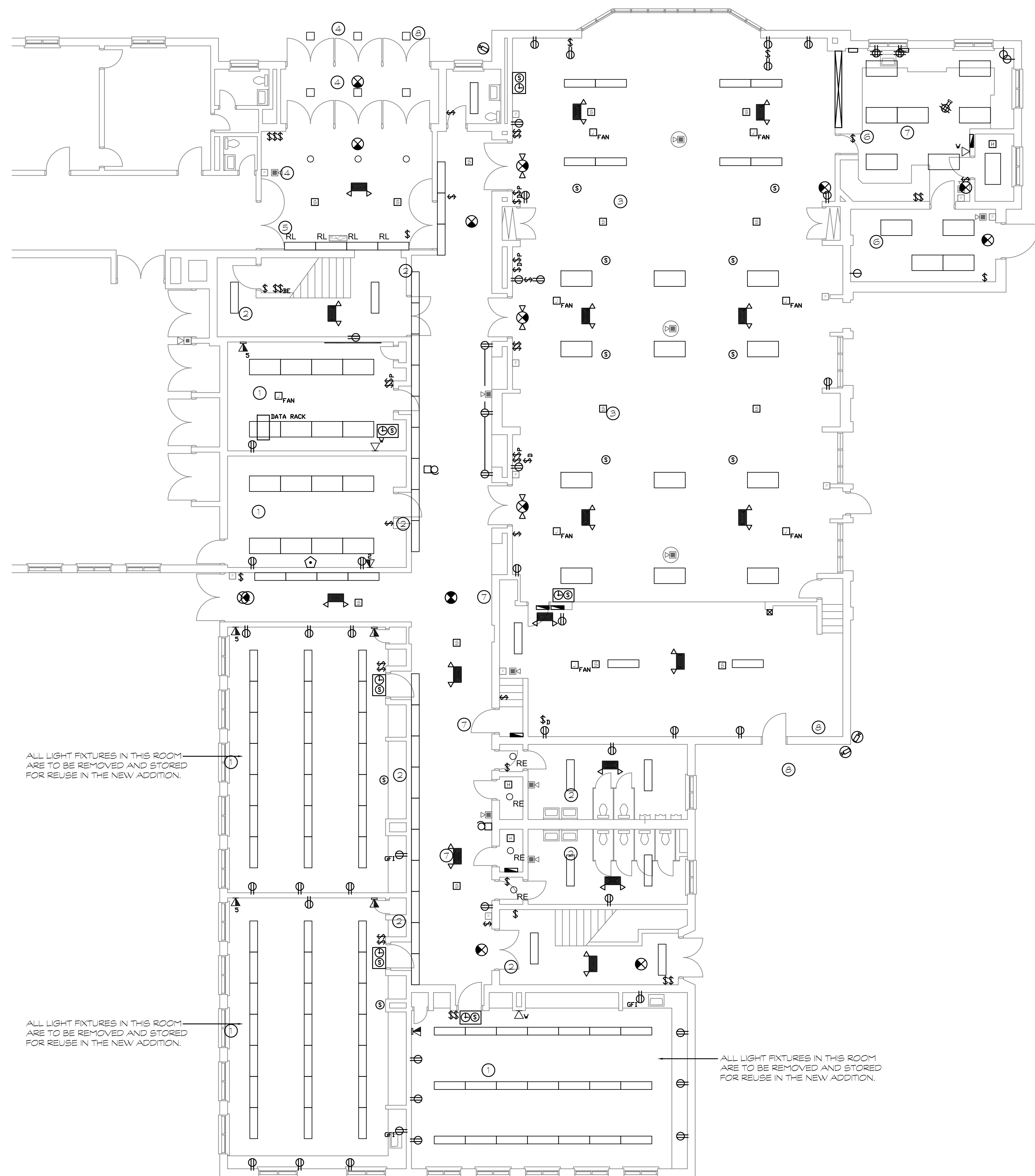
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E011

**ELECTRICAL DEMOLITION NOTES**

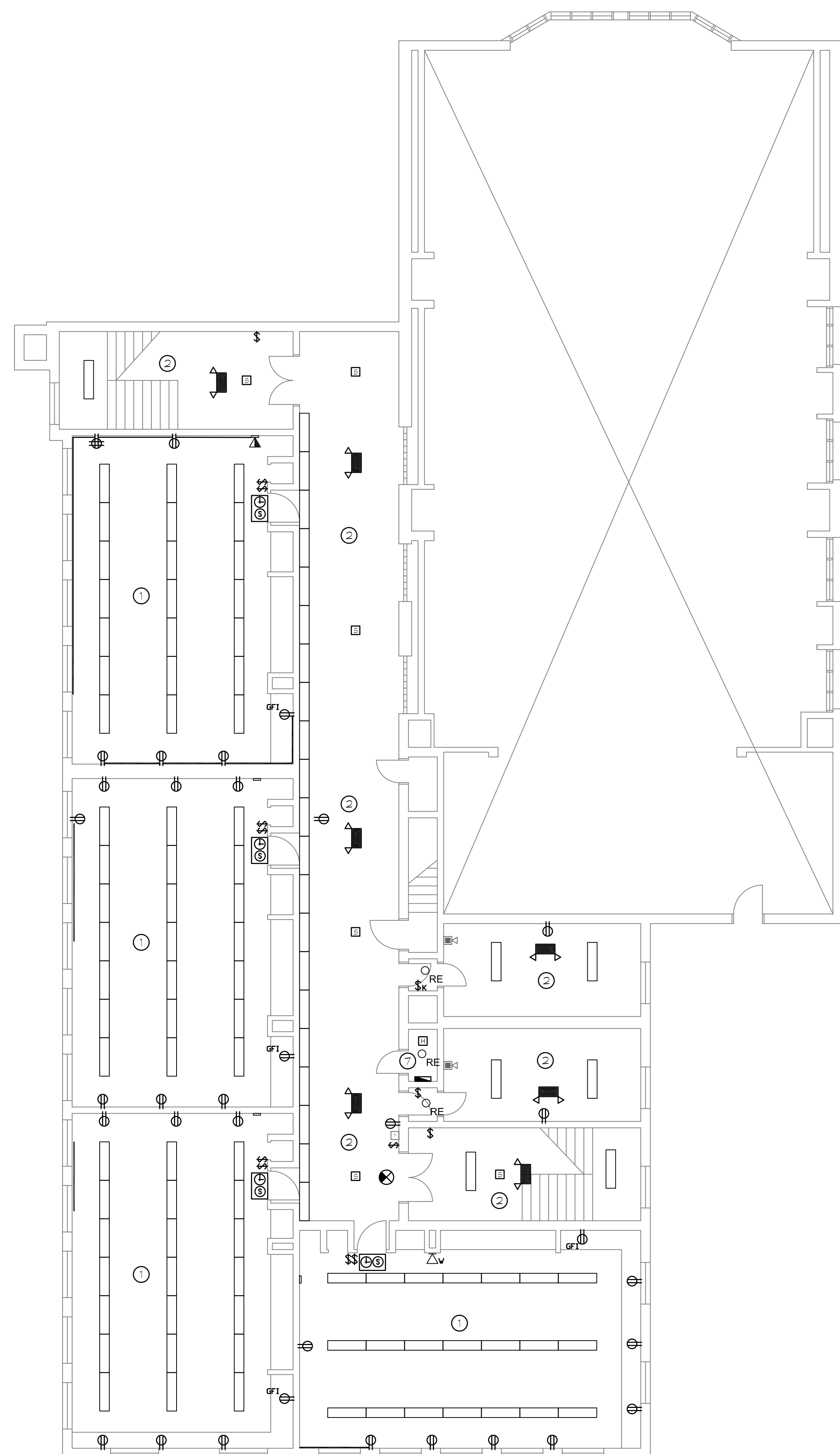
1. ALL LIGHT FIXTURES SHOWN WITH NO DESIGNATION ARE FIXTURES THAT ARE TO REMAIN.
2. ALL LIGHT FIXTURES SHOWN WITH AN 'RL' DESIGNATION ARE FIXTURES WHICH ARE TO BE REMOVED AND RELOCATED TO NEW LOCATIONS. REFER TO THE ELECTRICAL LIGHTING PLAN ON DRAWING E01 FOR FURTHER INFORMATION.
3. ALL LIGHT FIXTURES SHOWN WITH AN 'RE' DESIGNATION ARE FIXTURES WHICH ARE TO BE REMOVED COMPLETE. FIXTURES ARE TO BE PROPERLY DISPOSED OF.
4. ALL LIGHT FIXTURES SHOWN WITH AN 'RE/RL' DESIGNATION ARE FIXTURES WHICH ARE TO BE REMOVED STORED AND MADE READY TO BE RELOCATED TO NEW LOCATIONS AS NECESSARY.
5. ALL LIGHT FIXTURES WERE ARE FOUND TO BE GOOD WORKING ORDER AS OF THE TIME OF SURVEY. FIXTURES THAT ARE INOPERABLE AND IN NEED OF REPAIR ARE LABELED AS SUCH. ANY INOPERABLE FIXTURES FOUND AT TIME OF DEMOLITION WHICH ARE INDICATED TO REMAIN OR TO BE RELOCATED/REUSED ARE TO BE REPORTED TO THE ENGINEER FOR DIRECTION.
6. ALL EXISTING WALL/CEILING MOUNTED EXIT SIGNS AND CEILING MOUNTED EMERGENCY LIGHTS ARE TO BE REMOVED AND REPLACED WITH NEW FIXTURES.

**ELECTRICAL LIGHTING DEMO KEYNOTES**

- ① ALL EXISTING LIGHT FIXTURES IN THIS ROOM ARE TO REMAIN UNLESS OTHERWISE INDICATED. EXISTING LIGHT SWITCHES AND OCCUPANCY SENSORS ARE TO BE REMOVED AND REPLACED WITH NEW. REFER TO NEW LIGHTING PLANS FOR TYPES AND LOCATIONS.
- ② ALL EXISTING DUPLEX RECEPTACLES ARE TO REMAIN.
- ③ EXISTING CLOCK/SPEAKER UNITS ARE TO BE REMOVED COMPLETE AND REPLACED WITH NEW. ALL ASSOCIATED WIRING IS TO BE REMOVED BACK TO THE SOURCE.
- ④ EXISTING DATAPHONE OUTLETS ARE TO BE REMOVED COMPLETE. ALL ASSOCIATED WIRING IS TO BE REMOVED BACK TO SOURCE/DATA RACK.
- ⑤ EXISTING FIRE ALARM DEVICES (PULL STATIONS, HORN/STROBES, SMOKE DETECTORS AND HEAT DETECTORS) ARE TO REMAIN UNLESS OTHERWISE NOTED TO BE REMOVED.
- ⑥ ALL WALL MOUNTED MECHANICAL EQUIPMENT IS BEING REMOVED. ALL ASSOCIATE ELECTRICAL DEVICES AND ASSOCIATED WIRING IS TO BE REMOVED BACK TO THE SOURCE.
- ⑦ ALL CORRIDOR LIGHT FIXTURE ARE TO REMAIN. ALL ASSOCIATED SWITCHES AND WIRING ARE TO BE REMOVED AND REPLACED WITH NEW.
- ⑧ ALL EXISTING PROGRAM BELLS AND ASSOCIATED WIRING IS TO BE REMOVED COMPLETE.



**ELECTRICAL EXISTING DEMOLITION PLAN**  
SCALE: 1/8" = 1'-0"  
1  
E012



**SECOND FLOOR DEMOLITION PLAN**  
SCALE: 1/8" = 1'-0"  
2  
E012

**ELECTRICAL LIGHTING DEMO KEYNOTES**

1. ALL EXISTING LIGHT FIXTURES IN THIS ROOM ARE TO BE REMOVED AND STORED FOR REINSTALLATION IN NEW WING CLASSROOMS UNLESS OTHERWISE NOTED. ALL OTHER ELECTRICAL DEVICES (SWITCHES, OUTLETS, DATA OUTLETS, RACEWAY, CONDUIT, WIRING, ETC) ARE TO BE REMOVED COMPLETE.
2. ALL CORRIDOR, STAIRWAY AND TOILET ROOM LIGHT FIXTURE ARE TO BE REMOVED AND STORED FOR REINSTALLATION IN THE NEW WING CORRIDORS UNLESS OTHERWISE NOTED. ALL OTHER ELECTRICAL DEVICES (SWITCHES, OUTLETS, DATA OUTLETS, RACEWAY, CONDUIT, WIRING, PROGRAM BELLS, FIRE ALARM DEVICES, EXIT AND EMERGENCY LIGHTING, ETC) ARE TO BE REMOVED COMPLETE. EXIT SIGNS AND EMERGENCY LIGHTS ARE NOT TO BE REUSED.
3. ALL GYMNASIUM/CAFETERIA LIGHT FIXTURES ARE TO BE REMOVED AND STORED FOR REINSTALLATION IN THE RENOVATED WING 'B'. ALL OTHER ELECTRICAL DEVICES (SWITCHES, OUTLETS, DATA OUTLETS, RACEWAY, CONDUIT, WIRING, PROGRAM BELLS, FIRE ALARM DEVICES, EXIT AND EMERGENCY LIGHTING, ETC) ARE TO BE REMOVED COMPLETE. EXIT SIGNS AND EMERGENCY LIGHTS ARE NOT TO BE REUSED.
4. ALL ENTRY/LOBBY LIGHT FIXTURES, INCLUDING EXTERIOR, ARE TO BE REMOVED UNLESS OTHERWISE NOTED. ALL OTHER ELECTRICAL DEVICES (SWITCHES, OUTLETS, DATA OUTLETS, RACEWAY, CONDUIT, WIRING, PROGRAM BELLS, FIRE ALARM DEVICES, EXIT AND EMERGENCY LIGHTING, ETC) ARE TO BE REMOVED COMPLETE. EXIT SIGNS AND EMERGENCY LIGHTS ARE NOT TO BE REUSED.
5. EXISTING FIRE ALARM PANELS ARE TO BE REMOVED AND RELOCATED TO THE NEW MAIN OFFICE IN WING 'A'. ALL EXISTING NOTIFICATION AND INITIATION LOOP WIRING (EXCEPT THOSE FROM THE SECTION OF BUILDING BEING DEMOLISHED) SHALL BE EXTENDED TO NEW FIRE ALARM PANEL LOCATION.
6. ALL KITCHEN AREA LIGHT FIXTURES ARE TO BE REMOVED AND STORED FOR REINSTALLATION IN NEW KITCHEN AREA IN WING 'B'. ALL OTHER ELECTRICAL DEVICES (SWITCHES, OUTLETS, DATA OUTLETS, RACEWAY, CONDUIT, WIRING, HOOD CONTROL PANELS, FIRE ALARM DEVICES, EXIT AND EMERGENCY LIGHTING, ETC) ARE TO BE REMOVED COMPLETE. EXIT SIGNS AND EMERGENCY LIGHTS ARE NOT TO BE REUSED.
7. EXISTING ELECTRICAL PANEL TO BE REMOVED. ALL ASSOCIATED CONDUIT AND WIRING TO BE REMOVED BACK TO BASEMENT SOURCE PANEL.
8. EXISTING CCTV CAMERAS AND BRACKETS ARE TO BE REMOVED AND STORED FOR REINSTALLATION. REFER TO NEW POWER DRAWINGS FOR LOCATIONS. ALL EXISTING CAMERA CABLING IS TO BE REMOVED COMPLETE BACK TO THE SOURCE.

**ELECTRICAL DEMOLITION NOTES**

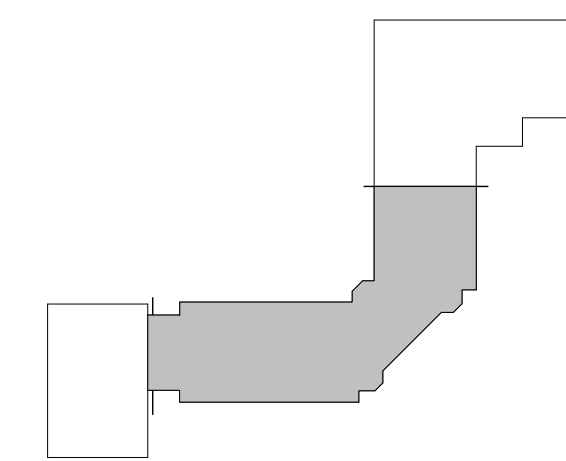
1. ALL LIGHT FIXTURES SHOWN WITH NO DESIGNATION ARE FIXTURES THAT ARE TO BE REMOVED AND STORED FOR REINSTALLATION IN BUILDING BEING RENOVATED.
2. ALL LIGHT FIXTURES SHOWN WITH AN 'RL' DESIGNATION ARE FIXTURES WHICH ARE TO BE REMOVED AND RELOCATED TO NEW LOCATIONS. REFER TO THE ELECTRICAL LIGHTING PLAN ON DRAWING E101 FOR FURTHER INFORMATION.
3. ALL LIGHT FIXTURES SHOWN WITH AN 'RE' DESIGNATION ARE FIXTURES WHICH ARE TO BE REMOVED COMPLETE. FIXTURES ARE TO BE PROPERLY DISPOSED OF.
4. ALL LIGHT FIXTURES SHOWN WITH AN 'RE/RL' DESIGNATION ARE FIXTURES WHICH ARE TO BE REMOVED, STORED AND MADE READY TO BE RELOCATED TO NEW LOCATIONS AS NECESSARY.
5. ALL LIGHT FIXTURES WERE ARE FOUND TO BE GOOD WORKING ORDER AS OF THE TIME OF SURVEY. FIXTURES THAT ARE INOPERABLE AND IN NEED OF REPAIR ARE LABELED AS SUCH. ANY INOPERABLE FIXTURES FOUND AT TIME OF DEMOLITION WHICH ARE INDICATED TO BE RELOCATED/REUSED ARE TO BE REPORTED TO THE ENGINEER FOR DIRECTION.
6. ALL EXISTING WALL/CEILING MOUNTED EXIT SIGNS AND CEILING MOUNTED EMERGENCY LIGHTS ARE TO BE REMOVED.



| Revision | Description | Date | Revised By |
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Electrical Power Plan -Area A  
 SCALE: 1/8" = 1'-0"  
 1  
 E100



Project Title:  
**Hinsdale School Alterations**  
 15 Hinsdale Ave.  
 Winsted, CT 06098

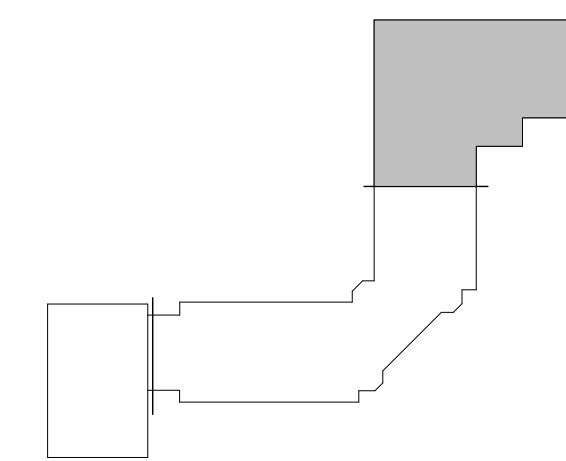
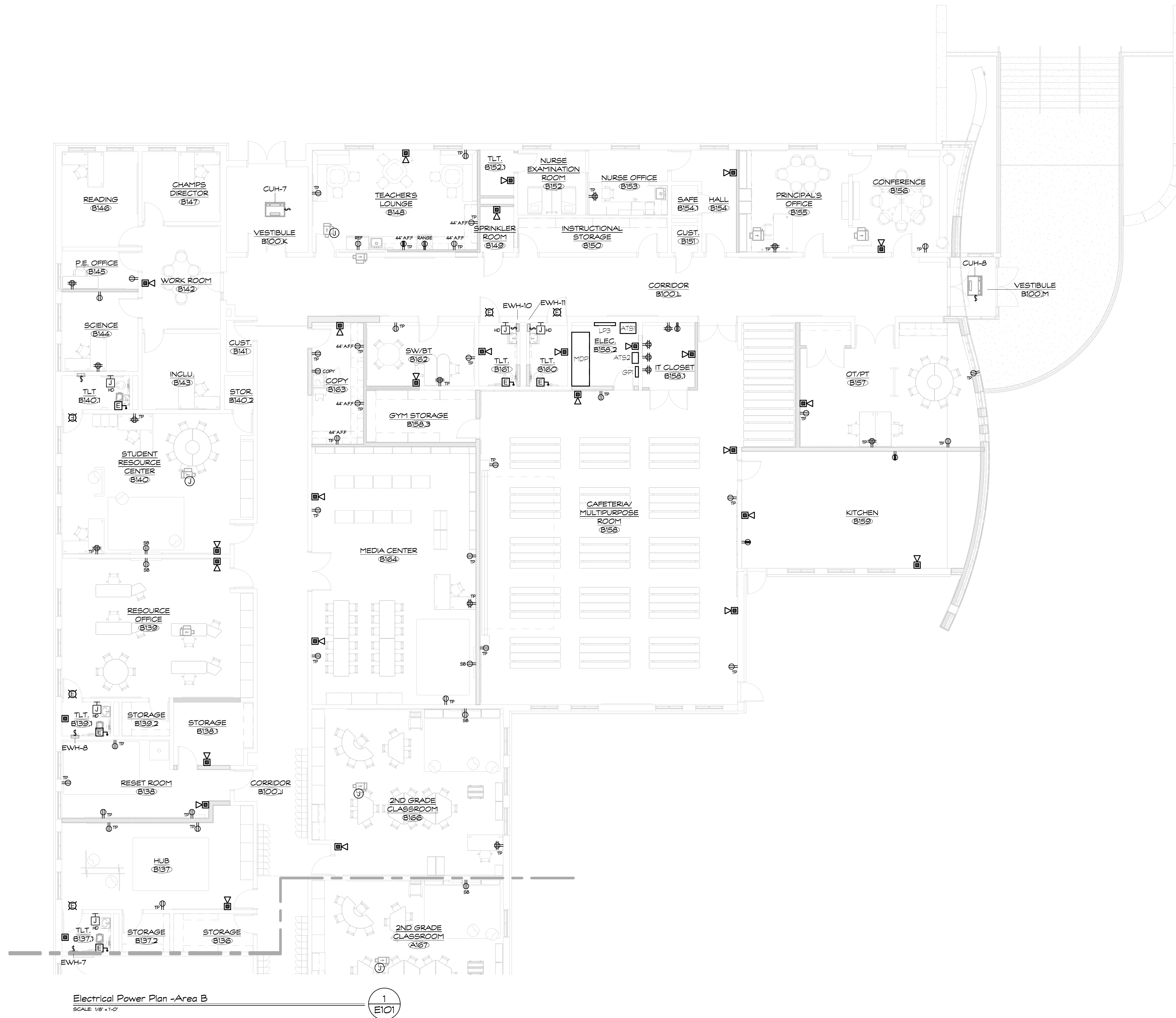


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 3190 Whitney Avenue, Hamden, CT 06518-2340  
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| Revision: | Description: | Date: | Revised By: |
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Drawing Title:  
**ELECTRICAL POWER PLAN -  
 AREA A**  
 State Project #: 162-0043RNV

Date: June 30, 2020  
 Scale: 1/8" = 1'-0"  
 Drawn By: MTG  
 Project Number: 18.223  
 Drawing Number: **E100**



Project Title:  
**Hinsdale School Alterations**  
 15 Hinsdale Ave.  
 Winsted, CT 06098

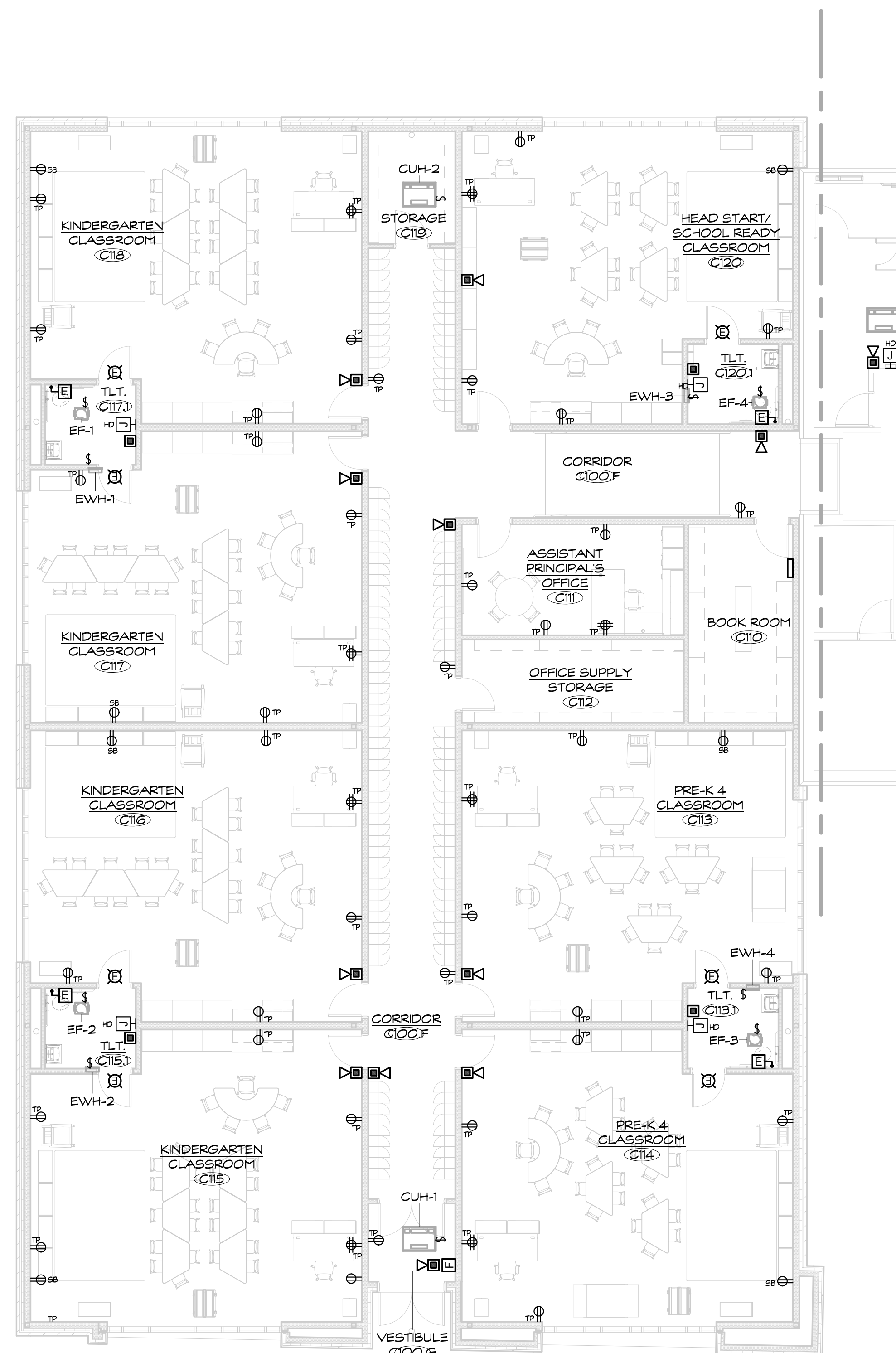


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 Tel. 203 230 9007 Fax. 203 230 8247  
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| Revision: | Description: | Date: | Revised By: |
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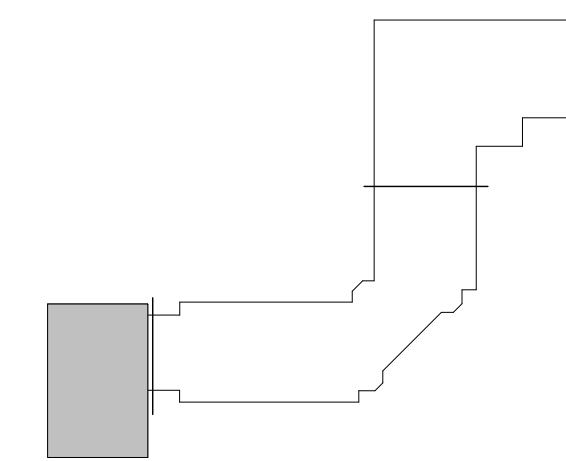
Drawing Title:  
**ELECTRICAL POWER PLAN -  
 AREA B**  
 State Project #: 162-0043RNV

Date: June 30, 2020  
 Scale: 1/8" = 1'-0"  
 Drawn By: MTG  
 Project Number: 18.223  
 Drawing Number: **E101**



Electrical Power Plan -Area C  
SCALE: 1/8" = 1'-0"

1  
E102



Project Title:  
**Hinsdale School Alterations**  
  
15 Hinsdale Ave.  
Winsted, CT 06098



**SILVER / PETRUCELLI + ASSOCIATES**  
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Drawing Title:  
**ELECTRICAL POWER PLAN -  
AREA C**  
  
State Project #: 162-0043RNV

Date:  
June 30, 2020  
Scale:  
1/8" = 1'-0"  
Drawn By:  
MTG  
Project Number:  
18.223

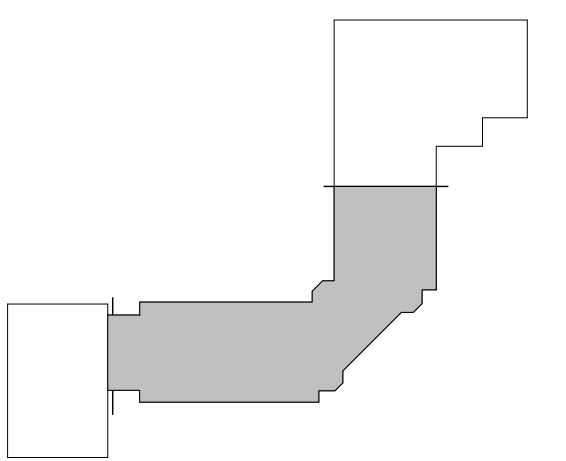
Drawing Number:

**E102**



Electrical Lighting Plan - Area A  
SCALE: 1/8" = 1'-0"

1  
E200



Project Title:  
**Hinsdale School Alterations**  
15 Hinsdale Ave.  
Winsted, CT 06098



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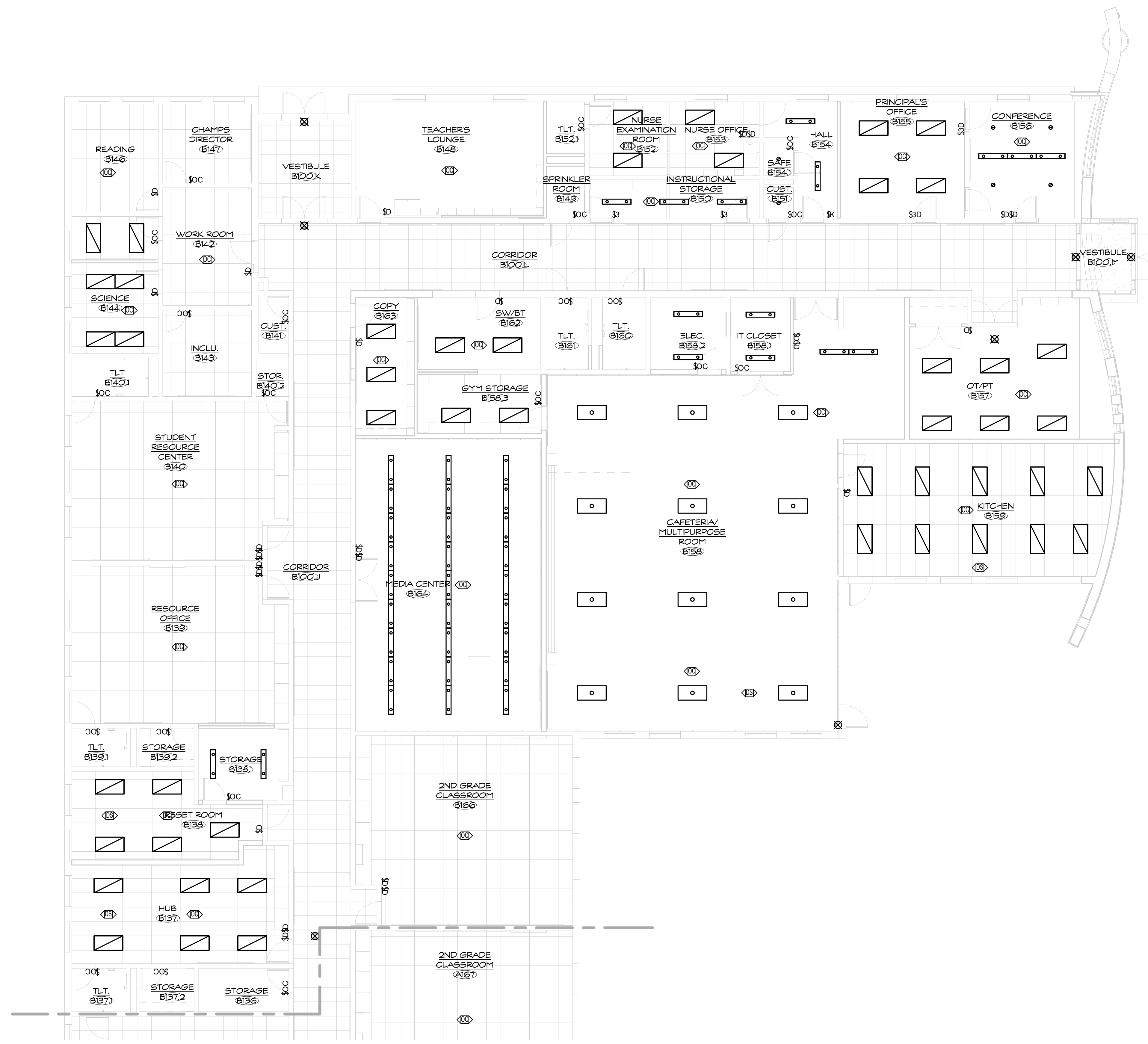
Drawing Title:  
**ELECTRICAL LIGHTING PLAN**  
**- AREA A**  
State Project #: 162-0043RNV

Date:  
June 30, 2020  
Scale:  
1/8" = 1'-0"  
Drawn By:  
MTG  
Project Number:  
18-223

Drawing Number:

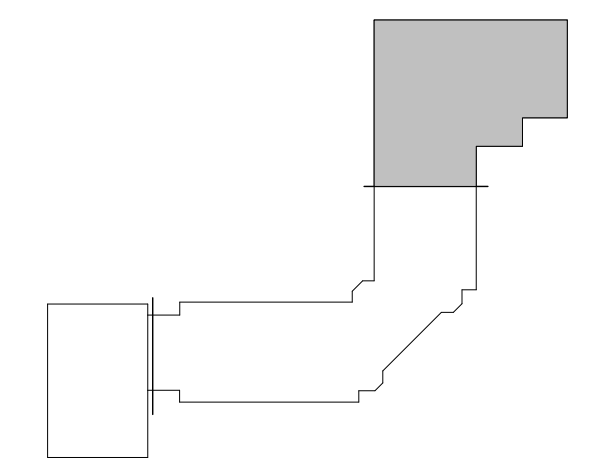
**E200**





Electrical Lighting Plan - Area B  
SCALE: 1/8" = 1'-0"

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E201



Project Title:  
**Hinsdale School Alterations**  
  
15 Hinsdale Ave.  
Winsted, CT 06098

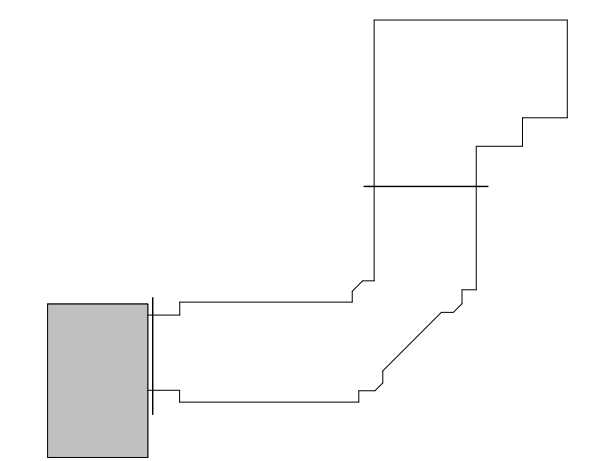
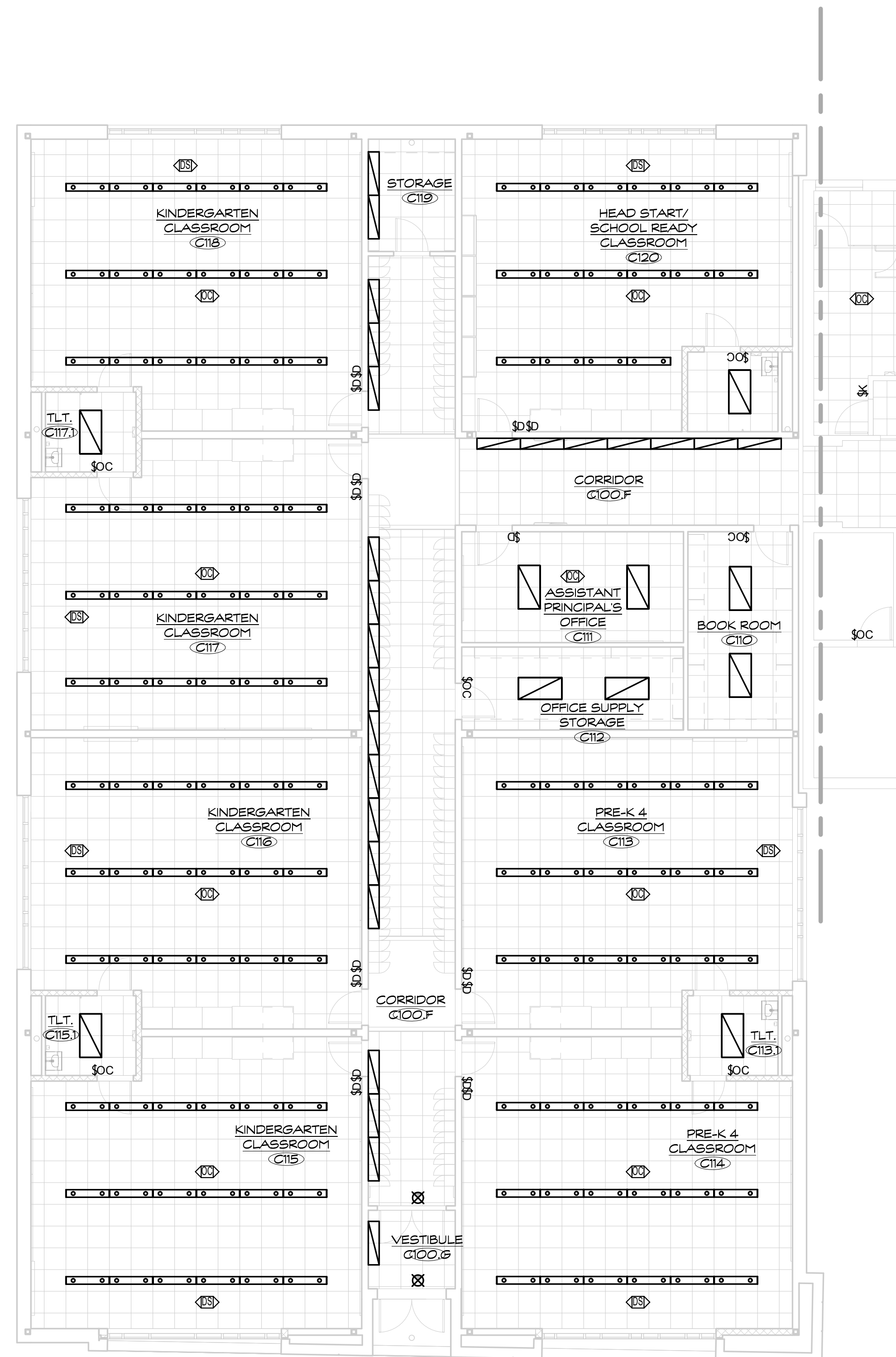


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Drawing Title:  
**ELECTRICAL LIGHTING PLAN**  
**- AREA B**  
  
State Project #: 162-0043RNV

Date: **June 30, 2020**  
Scale: **1/8" = 1'-0"**  
Drawn By: **MTG**  
Project Number: **18-223**  
Drawing Number: **E201**



Project Title:  
**Hinsdale School Alterations**  
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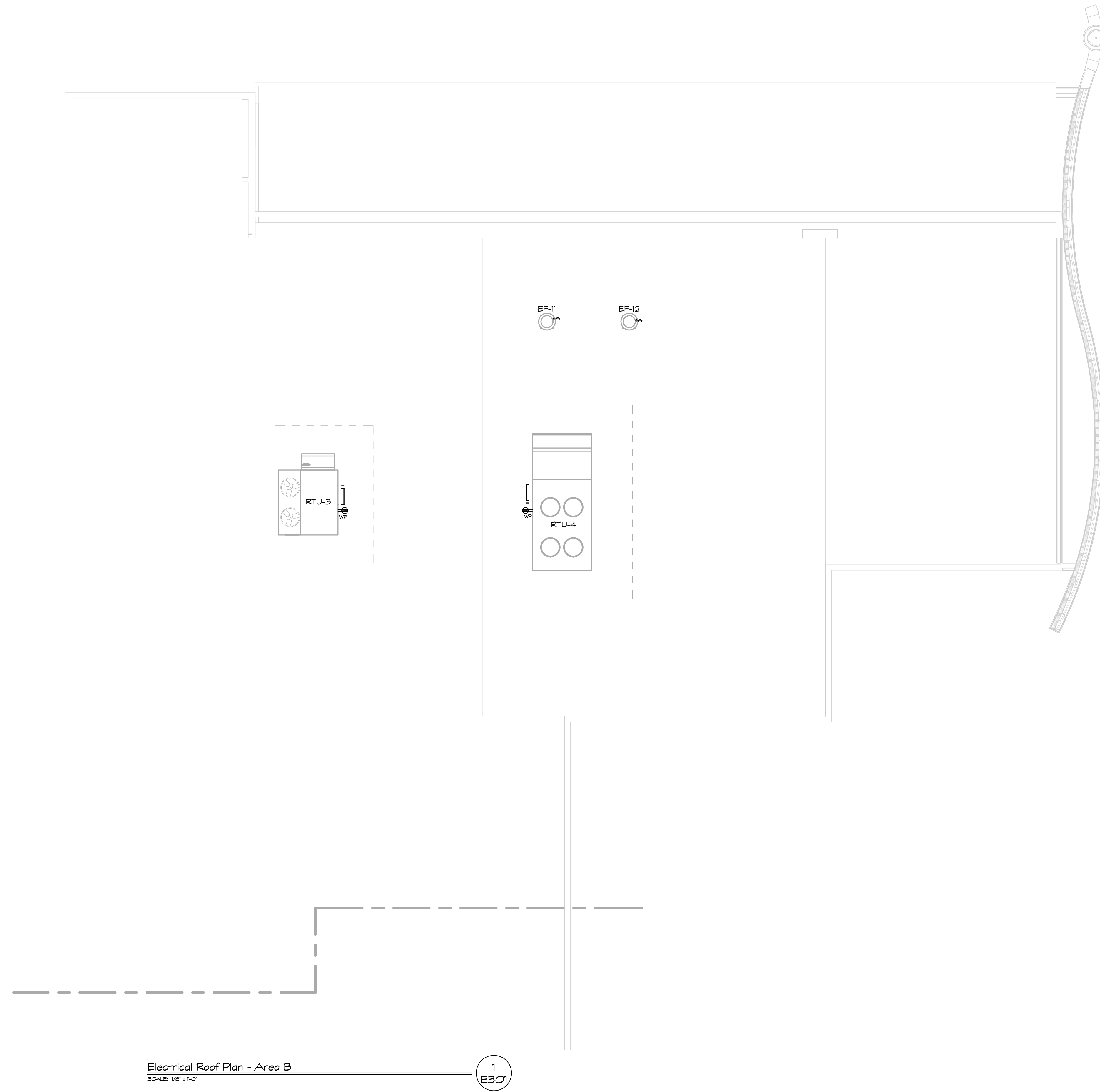
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Drawing Title:  
**ELECTRICAL LIGHTING PLAN**  
**- AREA C**  
 State Project #: 162-0043RNV

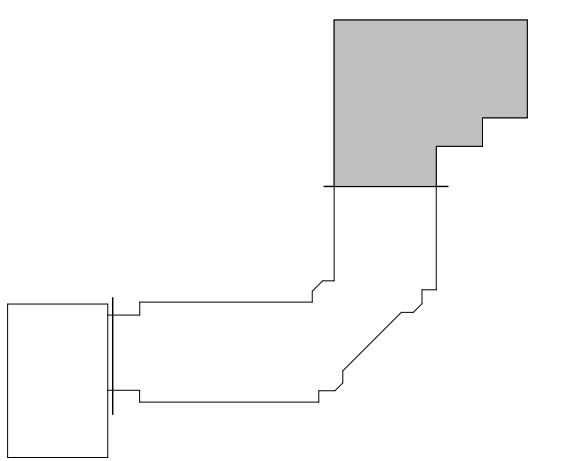
Date:  
**June 30, 2020**  
 Scale:  
**1/8" = 1'-0"**  
 Drawn By:  
**MTG**  
 Project Number:  
**18.223**

Drawing Number:  
**E202**





Electrical Roof Plan - Area B  
SCALE: 1/8" = 1'-0"



Project Title:  
**Hinsdale School Alterations**  
15 Hinsdale Ave.  
Winsted, CT 06098



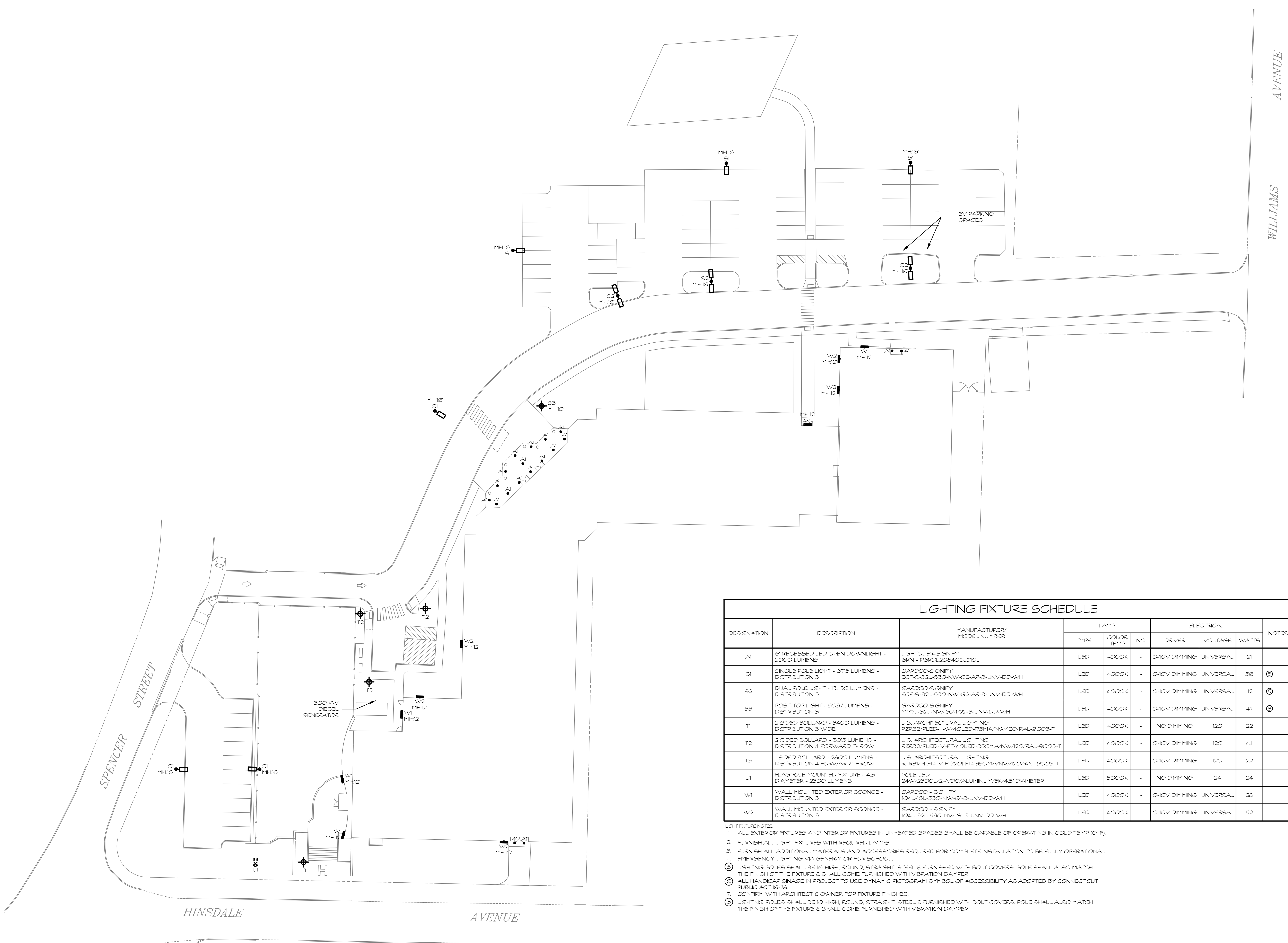
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Drawing Title:  
**ELECTRICAL ROOF PLAN - AREA B**  
State Project #: 162-0043RNV

Date:  
**June 30, 2020**  
Scale:  
1/8" = 1'-0"  
Drawn By:  
MTG  
Project Number:  
18-223

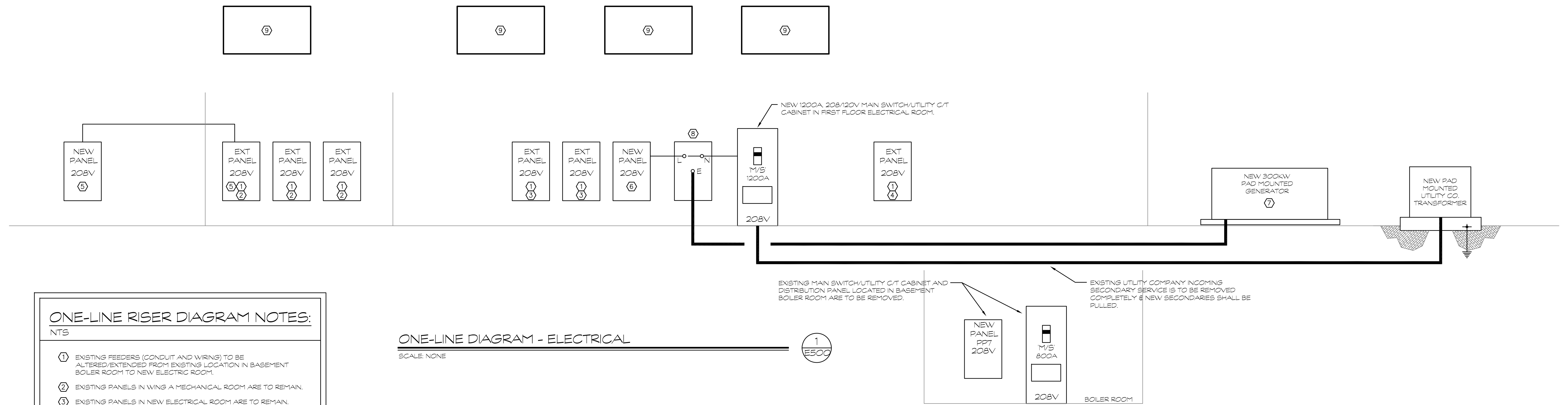
Drawing Number:  
**E301**



| LIGHTING FIXTURE SCHEDULE |  |   |      |               |    |               |           |       |       |
|---------------------------|--|---|------|---------------|----|---------------|-----------|-------|-------|
| DESIGNATION               | DESCRIPTION  | MANUFACTURER/<br>MODEL NUMBER   | LAMP |               |    | ELECTRICAL    |           |       | NOTES |
|                           |  |   | TYPE | COLOR<br>TEMP | NO | DRIVER        | VOLTAGE   | WATTS |       |
| A1                        | 6" RECESSED LED OPEN DOWNLIGHT - 2000 LUMENS                 | LIGHTOLIER-SIGNIFY<br>ERN - PERDL20840CL210U                                  | LED  | 4000K         | -  | 0-10V DIMMING | UNIVERSAL | 21    |       |
| S1                        | SINGLE POLE LIGHT - 675 LUMENS - DISTRIBUTION 3              | GARDCO-SIGNIFY<br>ECF-S-32L-530-NV-S2-AR-3-UNV-DD-WH                          | LED  | 4000K         | -  | 0-10V DIMMING | UNIVERSAL | 56    | Ⓢ     |
| S2                        | DUAL POLE LIGHT - 1340 LUMENS - DISTRIBUTION 3               | GARDCO-SIGNIFY<br>ECF-S-32L-530-NV-S2-AR-3-UNV-DD-WH                          | LED  | 4000K         | -  | 0-10V DIMMING | UNIVERSAL | 112   | Ⓢ     |
| S3                        | POST-TOP LIGHT - 5037 LUMENS - DISTRIBUTION 3                | GARDCO-SIGNIFY<br>MPTL-32L-NV-G2-P22-3-UNV-DD-WH                              | LED  | 4000K         | -  | 0-10V DIMMING | UNIVERSAL | 47    | Ⓢ     |
| T1                        | 2 SIDED BOLLARD - 3400 LUMENS - DISTRIBUTION 3 WIDE          | U.S. ARCHITECTURAL LIGHTING<br>RZR82/PLED-ILV-40LED-ITS-MA/NV/120/RAL-8003-T  | LED  | 4000K         | -  | NO DIMMING    | 120       | 22    |       |
| T2                        | 2 SIDED BOLLARD - 5015 LUMENS - DISTRIBUTION 4 FORWARD THROW | U.S. ARCHITECTURAL LIGHTING<br>RZR82/PLED-IV-FT/40LED-350MA/NV/120/RAL-8003-T | LED  | 4000K         | -  | 0-10V DIMMING | 120       | 44    |       |
| T3                        | 1 SIDED BOLLARD - 2800 LUMENS - DISTRIBUTION 4 FORWARD THROW | U.S. ARCHITECTURAL LIGHTING<br>RZR8/PLED-IV-FT/20LED-350MA/NV/120/RAL-8003-T  | LED  | 4000K         | -  | 0-10V DIMMING | 120       | 22    |       |
| U1                        | FLAGPOLE MOUNTED FIXTURE - 4.5' DIAMETER - 2300 LUMENS       | POLE LED<br>24W/2300L/24VDC/ALUMINUM/3K/4.5' DIAMETER                         | LED  | 5000K         | -  | NO DIMMING    | 24        | 24    |       |
| W1                        | WALL MOUNTED EXTERIOR SCONCE - DISTRIBUTION 3                | GARDCO - SIGNIFY<br>104L-16L-530-NV-S1-3-UNV-DD-WH                            | LED  | 4000K         | -  | 0-10V DIMMING | UNIVERSAL | 28    |       |
| W2                        | WALL MOUNTED EXTERIOR SCONCE - DISTRIBUTION 3                | GARDCO - SIGNIFY<br>104L-32L-530-NV-S1-3-UNV-DD-WH                            | LED  | 4000K         | -  | 0-10V DIMMING | UNIVERSAL | 52    |       |

- LIGHT FIXTURE NOTES:**
1. ALL EXTERIOR FIXTURES AND INTERIOR FIXTURES IN UNHEATED SPACES SHALL BE CAPABLE OF OPERATING IN COLD TEMP (0° F).
  2. FURNISH ALL LIGHT FIXTURES WITH REQUIRED LAMPS.
  3. FURNISH ALL ADDITIONAL MATERIALS AND ACCESSORIES REQUIRED FOR COMPLETE INSTALLATION TO BE FULLY OPERATIONAL. EMERGENCY LIGHTING VIA GENERATOR FOR SCHOOL.
  4. LIGHTING POLES SHALL BE 16' HIGH, ROUND, STRAIGHT, STEEL & FURNISHED WITH BOLT COVERS. POLE SHALL ALSO MATCH THE FINISH OF THE FIXTURE & SHALL COME FURNISHED WITH VIBRATION DAMPER.
  5. ALL HANDICAP SIGNAGE IN PROJECT TO USE DYNAMIC PICTOGRAM SYMBOL OF ACCESSIBILITY AS ADOPTED BY CONNECTICUT PUBLIC ACT 18-78.
  6. CONFIRM WITH ARCHITECT & OWNER FOR FIXTURE FINISHES.
  7. LIGHTING POLES SHALL BE 10' HIGH, ROUND, STRAIGHT, STEEL & FURNISHED WITH BOLT COVERS. POLE SHALL ALSO MATCH THE FINISH OF THE FIXTURE & SHALL COME FURNISHED WITH VIBRATION DAMPER.

**1** ELECTRICAL SITE PLAN  
E300 SCALE: 1" = 25'-0"



- ONE-LINE RISER DIAGRAM NOTES:**  
NTS
- ① EXISTING FEEDERS (CONDUIT AND WIRING) TO BE ALTERED/EXTENDED FROM EXISTING LOCATION IN BASEMENT BOILER ROOM TO NEW ELECTRICAL ROOM.
  - ② EXISTING PANELS IN WING A MECHANICAL ROOM ARE TO REMAIN.
  - ③ EXISTING PANELS IN NEW ELECTRICAL ROOM ARE TO REMAIN.
  - ④ EXISTING PANEL IN JANITORS CLOSET IS TO BE REMOVED AND REPLACED WITH NEW PANEL.
  - ⑤ NEW PANEL FOR NEW WING CLASSROOMS.
  - ⑥ NEW DISTRIBUTION PANEL. ALL CIRCUITS IN EXISTING DISTRIBUTION PANEL SHALL BE EXTENDED TO NEW DISTRIBUTION PANEL.
  - ⑦ NEW DIESEL-FIRED EMERGENCY GENERATOR LOCATED ON CONCRETE AND DAY TANK.
  - ⑧ NEW 800A AUTOMATIC TRANSFER SWITCH LOCATED IN NEW ELECTRICAL ROOM.
  - ⑨ NEW 200A UNIT WITH NEW FEEDERS TO NEW DISTRIBUTION PANEL IN ELECTRICAL ROOM.

**ONE-LINE DIAGRAM - ELECTRICAL**  
SCALE: NONE

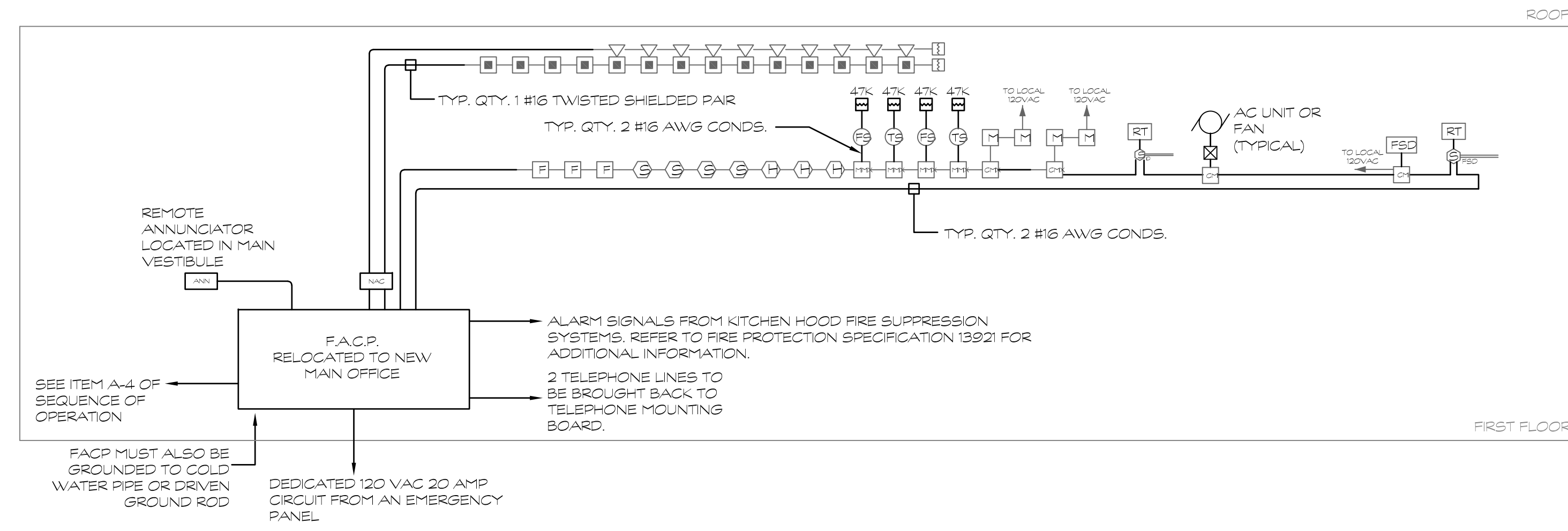
**CONDUCTOR AND CONDUIT SIZING TABLE, 30**

| NOTE | CIRCUIT BREAKER | CONDUCTOR (THW/N/THHN)<br>(3 PH. 3W) WITH GROUND | CONDUCTOR (THW/N/THHN)<br>(3 PH. 4W) WITH GROUND | CONDUIT SIZE | NOTE | CIRCUIT BREAKER | CONDUCTOR (THW/N/THHN)<br>(3 PH. 3W) WITH GROUND | CONDUCTOR (THW/N/THHN)<br>(3 PH. 4W) WITH GROUND | CONDUIT SIZE |
|------|-----------------|--|--|--------------|------|-----------------|--|--|--------------|
| ①    | 20.25 AMP       | 3 #12 @ 1 #12 GND                                | 4 #12 @ 1 #12 GND                                | 3/4"         | ①    | 225 AMP         | 3 #4/0 @ 1 #4 GND                                | 4 #4/0 @ 1 #4 GND                                | 2 1/2"       |
| ②    | 30.35 AMP       | 3 #10 @ 1 #10 GND                                | 4 #10 @ 1 #10 GND                                | 3/4"         | ②    | 250 AMP         | 3 #250cmil @ 1 #4 GND                            | 4 #250cmil @ 1 #4 GND                            | 3"           |
| ③    | 40.450 AMP      | 3 #8 @ 1 #10 GND                                 | 4 #8 @ 1 #10 GND                                 | 7"           | ③    | 300 AMP         | 3 #350cmil @ 1 #4 GND                            | 4 #350cmil @ 1 #4 GND                            | 3 1/2"       |
| ④    | 80 AMP          | 3 #6 @ 1 #10 GND                                 | 4 #6 @ 1 #10 GND                                 | 7"           | ④    | 400 AMP         | 3 #600cmil @ 1 #3 GND                            | 4 #600cmil @ 1 #3 GND                            | 4"           |
| ⑤    | 70.80 AMP       | 3 #4 @ 1 #8 GND                                  | 4 #4 @ 1 #8 GND                                  | 1 1/4"       | ⑤    | 500 AMP         | (2 SETS) @ 3 #250cmil @ 1 #2 GND                 | (2 SETS) @ 4 #250cmil @ 1 #2 GND                 | (2) 3"       |
| ⑥    | 80 AMP          | 3 #3 @ 1 #8 GND                                  | 4 #3 @ 1 #8 GND                                  | 1 1/2"       | ⑥    | 600 AMP         | (2 SETS) @ 3 #350cmil @ 1 #1 GND                 | (2 SETS) @ 4 #350cmil @ 1 #1 GND                 | (2) 3 1/2"   |
| ⑦    | 100 AMP         | 3 #2 @ 1 #8 GND                                  | 4 #2 @ 1 #8 GND                                  | 1 1/2"       | ⑦    | 800 AMP         | (2 SETS) @ 3 #600cmil @ 1 #1/0 GND               | (2 SETS) @ 4 #600cmil @ 1 #1/0 GND               | (2) 4"       |
| ⑧    | 125 AMP         | 3 #1 @ 1 #8 GND                                  | 4 #1 @ 1 #8 GND                                  | 2"           | ⑧    | 1000 AMP        | (3 SETS) @ 3 #400cmil @ 1 #2/0 GND               | (3 SETS) @ 4 #400cmil @ 1 #2/0 GND               | (3) 5 1/2"   |
| ⑨    | 150 AMP         | 3 #1/0 @ 1 #8 GND                                | 4 #1/0 @ 1 #8 GND                                | 2"           | ⑨    | 1200 AMP        | (4 SETS) @ 3 #350cmil @ 1 #3/0 GND               | (4 SETS) @ 4 #350cmil @ 1 #3/0 GND               | (4) 3 1/2"   |
| ⑩    | 200 AMP         | 3 #3/0 @ 1 #8 GND                                | 4 #3/0 @ 1 #8 GND                                | 2 1/2"       | ⑩    | 1600 AMP        | (4 SETS) @ 3 #600cmil @ 1 #4/0 GND               | (4 SETS) @ 4 #600cmil @ 1 #4/0 GND               | (4) 4"       |

- CONDUCTOR NOTES:**
- ALL VALUES BASED ON COPPER CONDUCTORS.
  - FEEDERS:** UPGRADE WIRE TO MAINTAIN MAXIMUM OF 2% VOLTAGE DROP.  
**BRANCH CIRCUITS:** UPGRADE WIRE TO MAINTAIN MAXIMUM OF 3% VOLTAGE DROP.
  - NUMBER OF WIRES SHALL BE DETERMINED WITH EQUIPMENT ELECTRICAL NAMEPLATE CHARACTERISTICS.
  - WHERE NEUTRALS ARE REQUIRED, IT SHALL MATCH FEEDER CONDUCTOR SIZE.



| Revision | Description | Date | Revised By: |
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### SEQUENCE OF OPERATION

- |  |  |
|--|--|
| <p>A. THE SYSTEM ALARM OPERATION SUBSEQUENT TO THE ALARM ACTIVATION OF ANY MANUAL STATION, AUTOMATIC DETECTION DEVICE OR SPRINKLER FLOW SWITCH IS TO BE AS FOLLOWS:</p> <ol style="list-style-type: none"> <li>1. ALL AUDIBLE ALARM INDICATING APPLIANCES SHALL SOUND A DIGITIZED TONE AND VOICE MESSAGE UNTIL SILENCED BY THE ALARM SILENCE SWITCH AT THE CONTROL PANEL.</li> <li>2. ALL VISUAL ALARM INDICATING APPLIANCES (XENON STROBES) SHALL DISPLAY A CONTINUOUS PATTERN UNTIL EXTINGUISHED BY THE ALARM SILENCE SWITCH.</li> <li>3. ALL DOORS NORMALLY HELD OPEN BY DOOR CONTROL DEVICES SHALL RELEASE.</li> <li>4. A SUPERVISED SIGNAL TO NOTIFY AN APPROVED CENTRAL STATION MONITORING SYSTEM SHALL BE ACTIVATED.</li> <li>5. ALL AIR HANDLING SYSTEMS (2000 CFM OR GREATER) WITH DUCT MOUNTED SMOKE DETECTION SHALL BE AUTOMATICALLY SHUTDOWN.</li> <li>6. FIRE ALARM SYSTEM SHALL PROVIDE GENERAL ALARM SIGNAL TO BMS SYSTEM WITH INDICATION THRU THE FACP OF THE STATUS OF EACH DAMPER.</li> <li>7. FIRE ALARM SYSTEM SHALL PROVIDE AN INTERFACE WITH THE LOCAL SOUND/PAGING SYSTEM TO MUTE THEM OUT DURING AN ALARM.</li> <li>8. UPON RESTORATION OF THE FIRE ALARM SYSTEM FOLLOWING AN ALARM THE SYSTEM SHALL PROVIDE A SIGNAL TO THE BMS FOR SYSTEM RESET.</li> <li>9. ALARMS SHALL BE DISPLAYED ON THE PANEL DISPLAY. THE ALARM LED SHALL FLASH ON THE CONTROL PANEL UNTIL THE ALARM HAS BEEN ACKNOWLEDGED AT THE CONTROL PANEL. ONCE ACKNOWLEDGED, THIS SAME LED SHALL LATCH ON. A SUBSEQUENT ALARM RECEIVED FROM ANOTHER ZONE AFTER ACKNOWLEDGED SHALL FLASH THE ALARM LED ON THE CONTROL PANEL AND THE PANEL DISPLAY SHALL SHOW THE NEW ALARM INFORMATION. A PULSING ALARM TONE SHALL OCCUR WITHIN THE CONTROL PANEL AND THE REMOTE ANNUNCIATOR UNTIL ACKNOWLEDGED.</li> </ol> | <p>C. THE CONTROL PANEL SHALL HAVE A DEDICATED SUPERVISORY SERVICE LED AND A DEDICATED SUPERVISORY SERVICE ACKNOWLEDGE SWITCH.</p> <p>D. THE ACTIVATION OF ANY STANDPIPE OR SPRINKLER VALVE TAMPER SWITCH SHALL ACTIVATE THE SYSTEM SUPERVISORY SERVICE AUDIBLE SIGNAL AND ILLUMINATE THE LED AT THE CONTROL PANEL.</p> <ol style="list-style-type: none"> <li>1. ACTIVATING THE SUPERVISORY SERVICE ACKNOWLEDGE SWITCH WILL SILENCE THE SUPERVISORY AUDIBLE SIGNAL, WHILE MAINTAINING THE SUPERVISORY SERVICE LED ON INDICATING THE TAMPER CONTACT IS STILL IN THE OFF-NORMAL STATE.</li> <li>2. RESTORING THE VALVE TO THE NORMAL POSITION SHALL CAUSE THE SUPERVISORY SERVICE LED TO EXTINGUISH THUS INDICATING RESTORATION TO NORMAL POSITION.</li> </ol> <p>E. ALARM AND TROUBLE CONDITIONS SHALL BE IMMEDIATELY DISPLAYED ON THE CONTROL PANEL FRONT ALPHANUMERIC DISPLAY. IF MORE ALARMS OR TROUBLES ARE IN THE SYSTEM THE OPERATOR MAY SCROLL TO DISPLAY NEW ALARMS.</p> <p>F. THE SYSTEM SHALL HAVE AN ALARM LIST KEY THAT WILL ALLOW THE OPERATOR TO DISPLAY ALL ALARMS, TROUBLES, AND SUPERVISORY SERVICE CONDITIONS WITH THE TIME OF OCCURRENCE.</p> <p>G. FIRE SMOKE DAMPER DUCT DETECTORS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR AND INSTALLED BY THE HVAC CONTRACTOR. UPON SMOKE DETECTION THE DUCT DETECTOR SHALL NOTIFY THE FACP WHICH IN TURN WILL ACTIVATE A CONTROL RELAY TO SHUTDOWN THE AC UNIT ASSOCIATED WITH THE PARTICULAR FIRE SMOKE DAMPER. 120 VOLTS SHALL BE CONNECTED TO THE CONTROL RELAY FROM A LOCAL 120 VOLT SOURCE AS INDICATED ON THE DRAWINGS.</p> |
|--|--|

### FIRE ALARM NOTES

1. REFER TO PLANS FOR QUANTITIES AND LOCATIONS OF ALL DEVICES.
2. ALL FIRE ALARM DEVICES SHALL BE WIRED VIA ADDRESSABLE LOOPS FROM THE FIRE ALARM PANEL PER MANUFACTURERS RECOMMENDATIONS. LEAVE SPACE FOR THE ADDITION OF 10 FUTURE DEVICES PER LOOP MINIMUM.
3. ALL FIRE ALARM WIRING THAT IS RUN EXPOSED SHALL BE RUN IN EMT CONDUIT, WHEN RUN CONCEALED ABOVE CEILINGS OR IN WALLS PLENUM RATED CABLE IS ALLOWED WHERE APPROVED BY AHJ.
4. ALL FIRE ALARM SYSTEM POWER SUPPLIES SHALL BE POWERED VIA CIRCUIT BREAKERS IN LOCAL EMERGENCY PANEL. PROVIDE ALL SUCH CIRCUIT BREAKERS WITH LOCKING HANDLES.
5. THE FIRE ALARM PANEL SHALL SEND A SIGNAL TO THE BMS SYSTEM INDICATING THAT A FIRE ALARM CONDITION HAS OCCURRED.
6. THE FIRE ALARM CONTROL PANEL SHALL BE PROVIDED WITH AN INTEGRAL MOUNTED DUPLEX RECEPTACLE.
7. TABS MUST BE BROKEN ON CMX WHEN USED AS A RELAY. FAILURE TO DO SO WILL CAUSE DAMAGE TO EQUIPMENT.
8. RISER DIAGRAM INDICATES TYPICAL WIRING REQUIREMENTS ONLY. REFER TO SPECIFICATIONS AND MANUFACTURERS INSTALLATION INSTRUCTIONS FOR EXACT REQUIREMENTS AND FLOOR PLANS FOR QUANTITIES.
9. CONTRACTOR SHALL PROVIDE POWER TO ALL DEVICES FROM LOCAL PANEL.
10. FIRE SPEAKERS AND STROBES SHALL BE WIRED VIA VOICE EVACUATION LOOPS AS SCHEDULED ON THIS DRAWING.
11. ALL FIRE ALARM DEVICES SHALL BE WIRED VIA ADDRESSABLE LOOPS FROM THE FIRE ALARM DISPS PER MANUFACTURERS RECOMMENDATIONS. LEAVE SPACE FOR THE ADDITION OF 10 FUTURE DEVICES PER LOOP MINIMUM.
12. ALL WIRING FOR FIRE ALARM SYSTEM DEVICES SHALL BE RUN IN EMT CONDUIT THROUGHOUT BUILDING OR FIRE ALARM CABLE AS APPROVED BY LOCAL AHJ.
13. ALL DOORS ON MAGNETIC HOLD-OPENS SHALL BE RELEASED AUTOMATICALLY UPON ANY FIRE ALARM CONDITION. ALL GAS SOLENOID VALVES SHALL CLOSE UPON ANY FIRE ALARM CONDITION. REFER TO FLOOR PLANS FOR LOCATIONS.
14. AFTER DATE OF SUBSTANTIAL COMPLETION, CONTRACTOR SHALL TEST THE FIRE ALARM SYSTEM COMPLYING WITH TESTING AND VISUAL INSPECTION REQUIREMENTS IN NFPA 72. CONTRACTOR SHALL SUPPLEMENT AUDIBLE DEVICES TO MEET CODE SOUND LEVELS.

### SYMBOL LEGEND

|  |  |
|--|--|
|  | PULL STATION                                 |
|  | SMOKE DETECTOR                               |
|  | HEAT DETECTOR                                |
|  | MONITOR MODULE                               |
|  | CONTROL MODULE                               |
|  | SPEAKER/STROBE                               |
|  | STROBE LIGHT                                 |
|  | REMOTE ANNUNCIATOR PANEL                     |
|  | END OF LINE RESISTOR                         |
|  | MAG. DOOR HOLDER                             |
|  | FLOW SWITCH                                  |
|  | TAMPER SWITCH                                |
|  | CARBON MONOXIDE DETECTOR                     |
|  | DUCT SMOKE DETECTOR                          |
|  | FIRE SMOKE DAMPER DETECTOR                   |
|  | FIRE SMOKE DAMPER                            |
|  | NOTIFICATION APPLIANCE CIRCUIT BOOSTER PANEL |
|  | REMOTE TEST SWITCH                           |

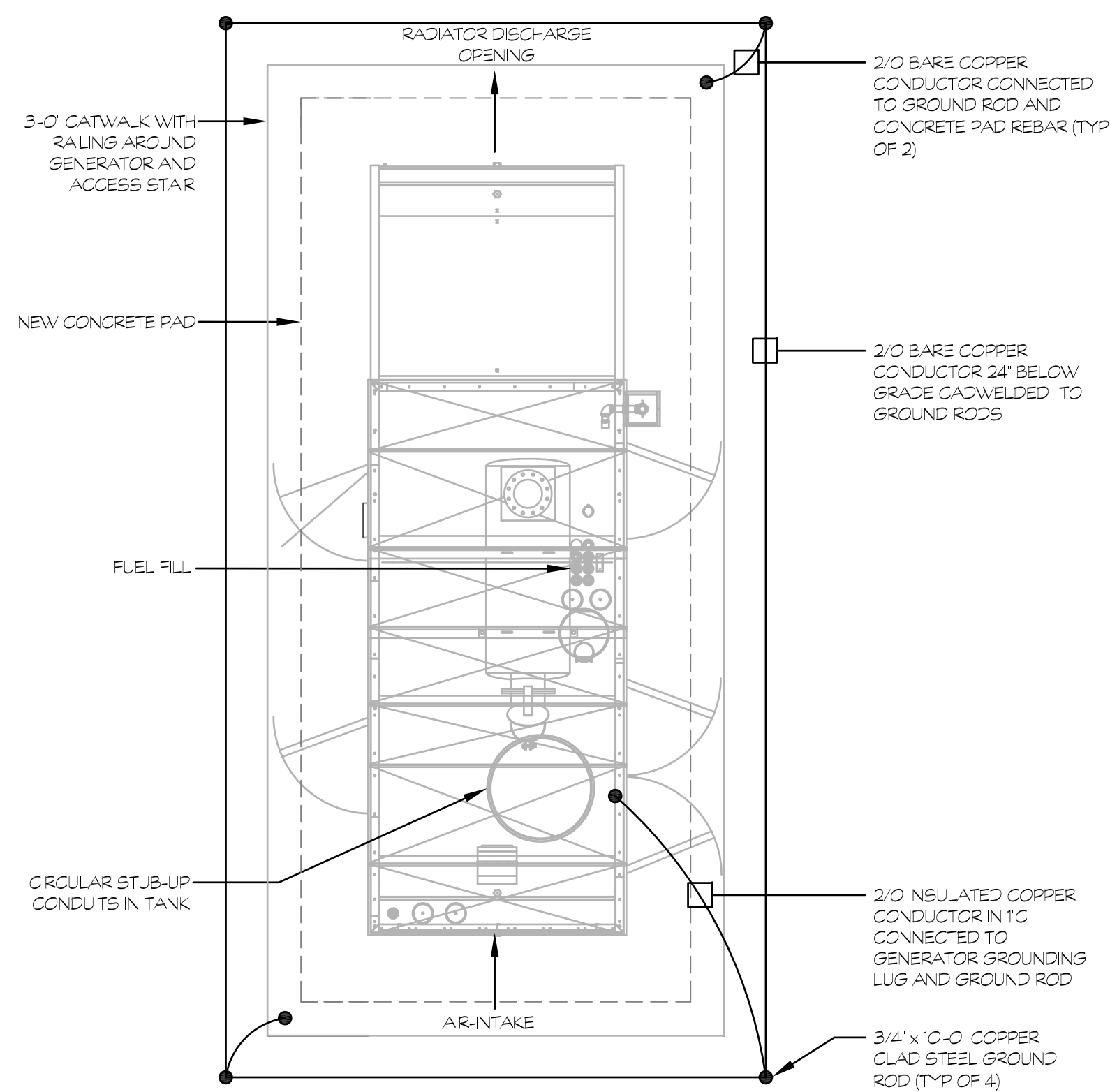
### FIRE ALARM RISER DIAGRAM

SCALE: NONE

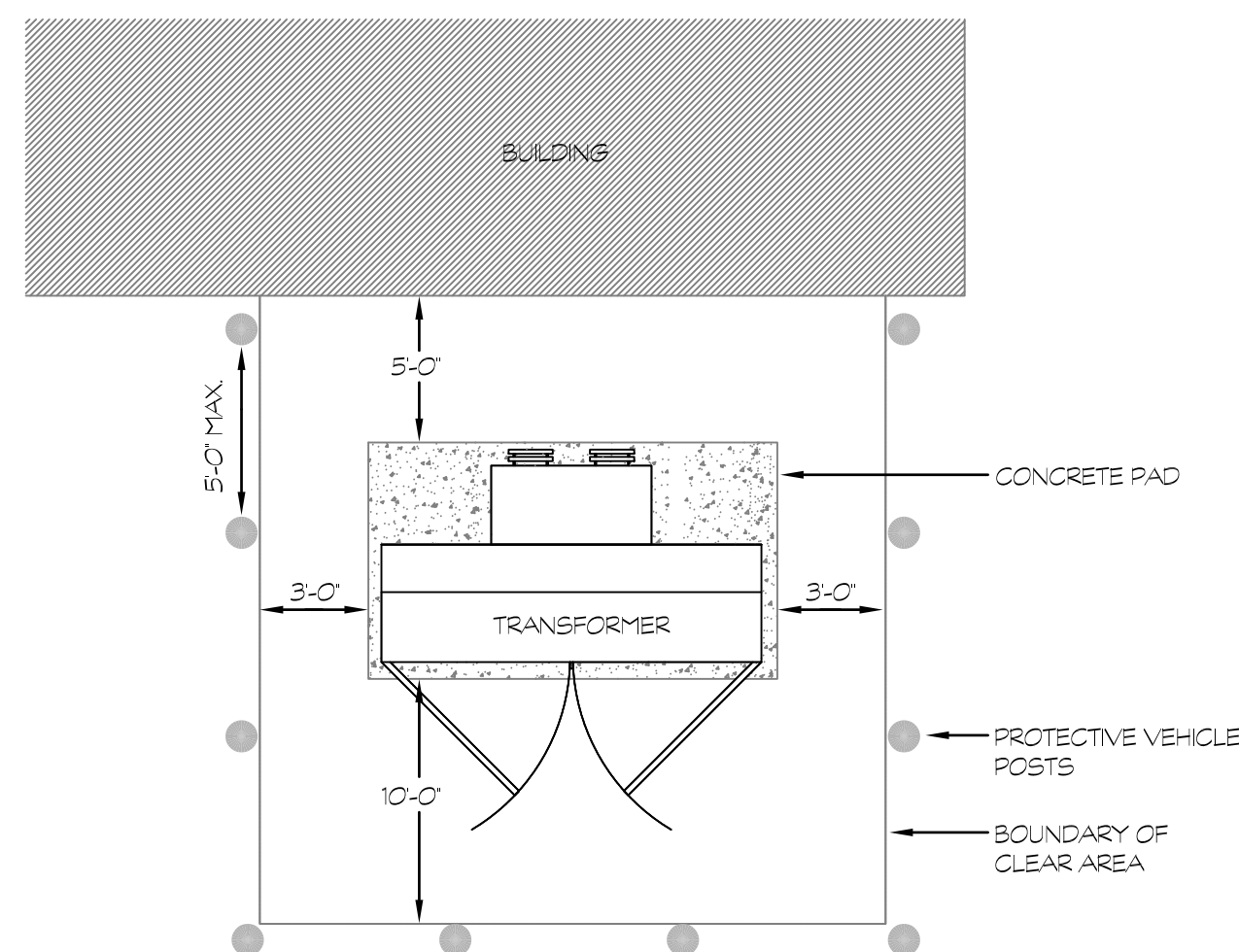
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E501



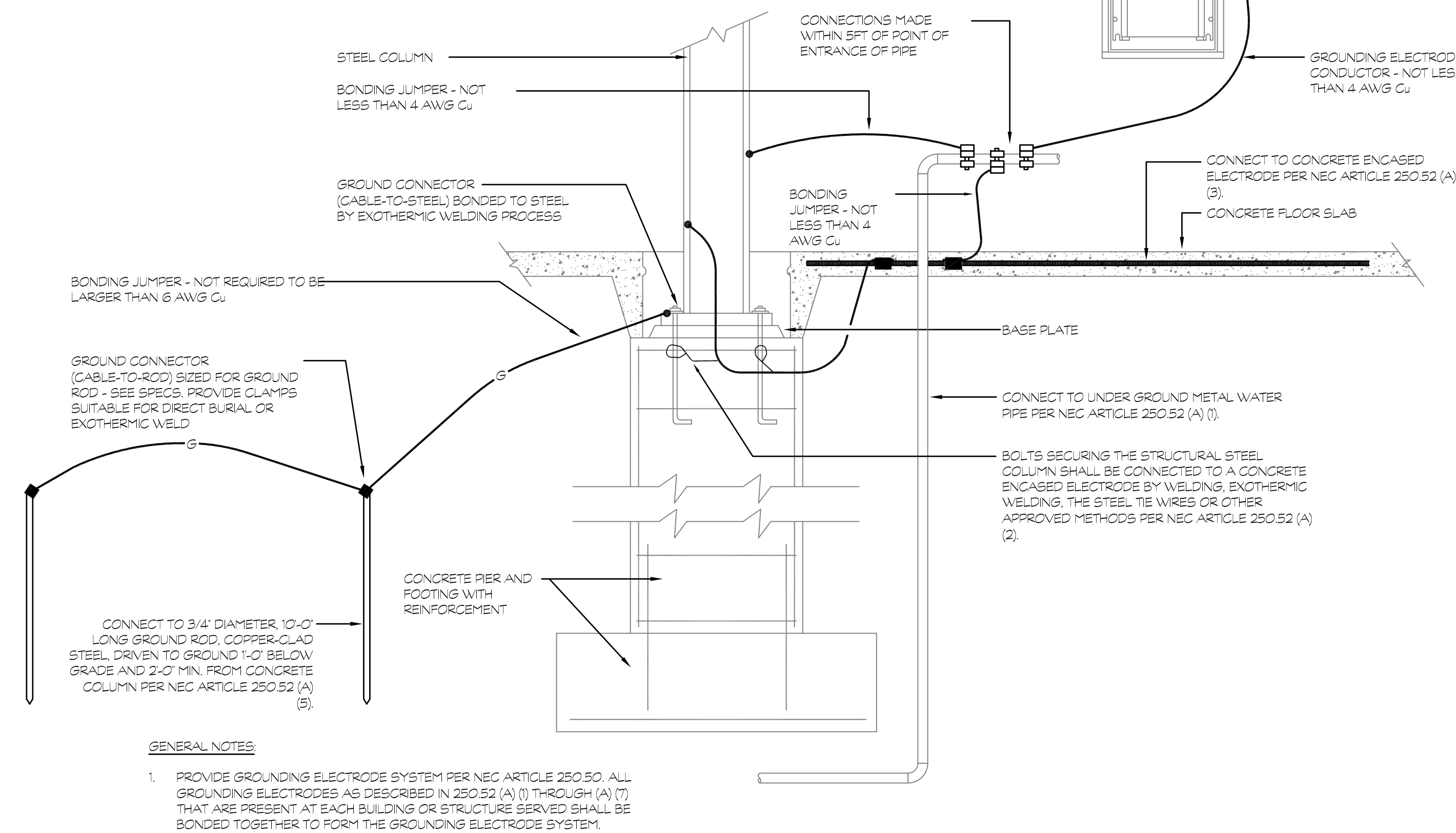
| Revision | Description | Date | Revised By |
|----------|-------------|------|------------|
|          |             |      |            |
|          |             |      |            |
|          |             |      |            |
|          |             |      |            |
|          |             |      |            |



1 GENERATOR GROUNDING DETAIL  
NTS



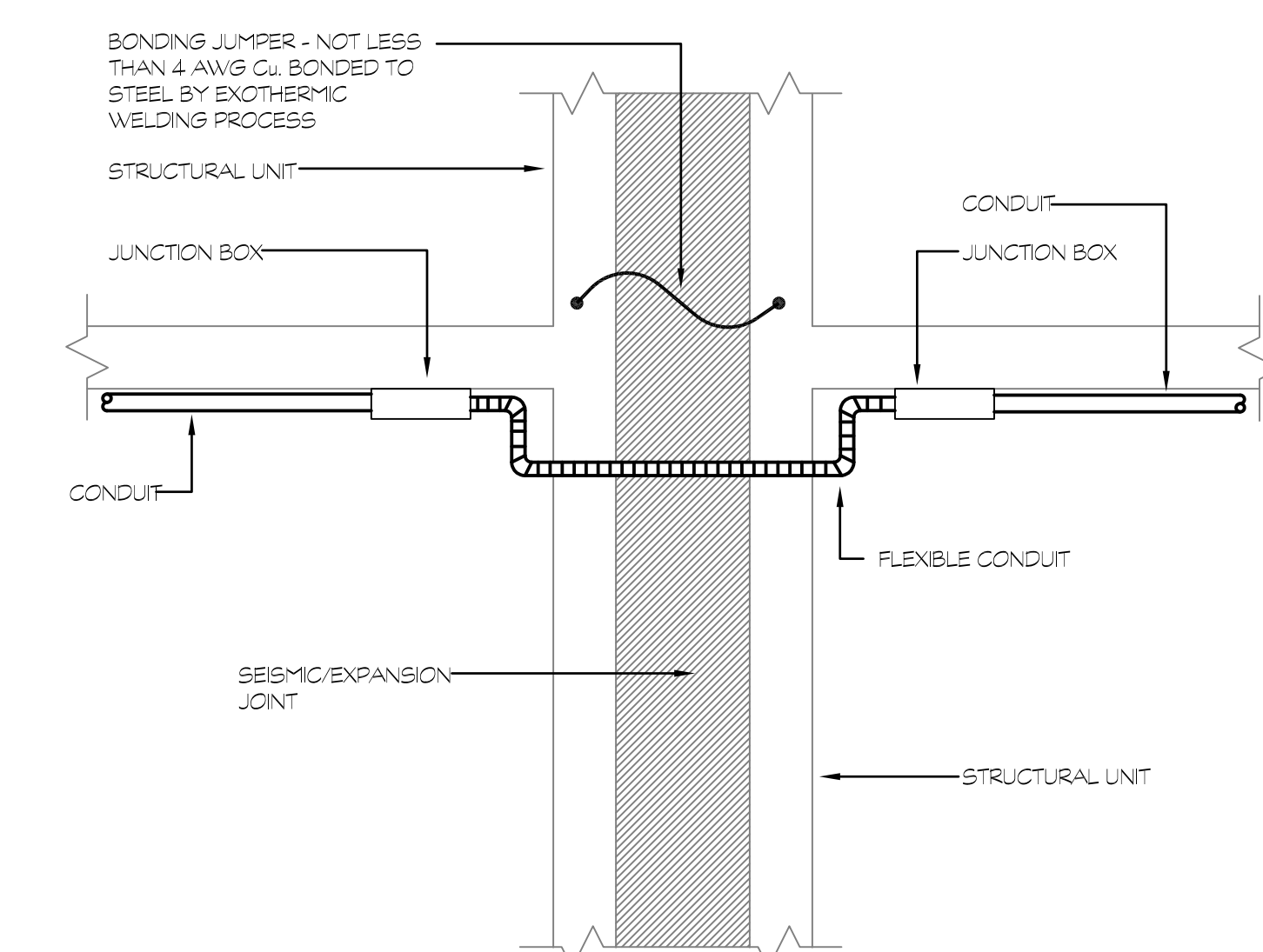
2 TYPICAL PAD MOUNTED TRANSFORMER  
NTS



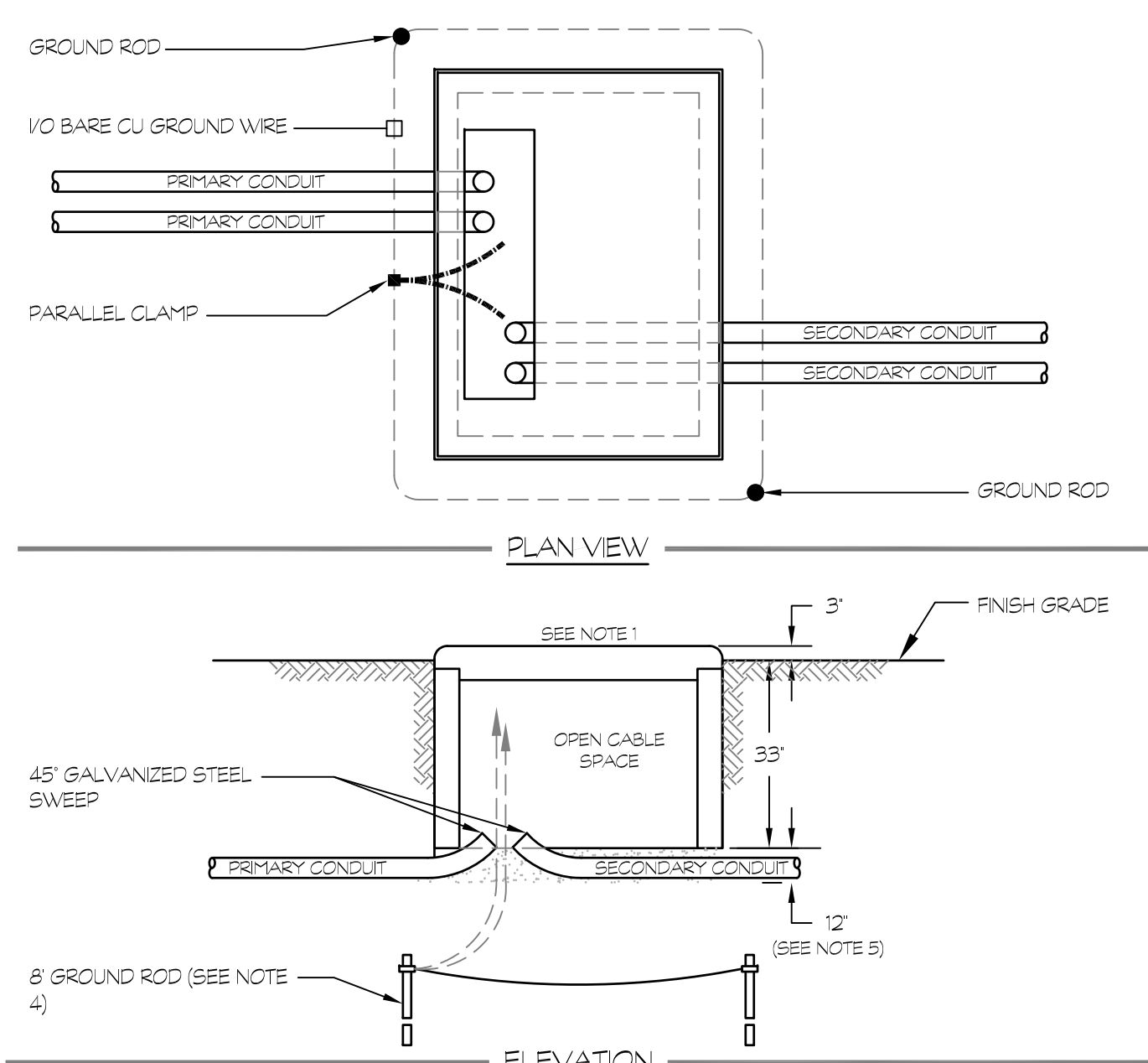
3 TYPICAL GROUNDING DETAIL  
NTS

GENERAL NOTES

1. PROVIDE GROUNDING ELECTRODE SYSTEM PER NEC ARTICLE 250.50. ALL GROUNDING ELECTRODES AS DESCRIBED IN 250.52 (A) (1) THROUGH (A) (7) THAT ARE PRESENT AT EACH BUILDING OR STRUCTURE SERVED SHALL BE BONDED TOGETHER TO FORM THE GROUNDING ELECTRODE SYSTEM.



4 EXPANSION/SEISMIC JOINT FITTING DETAIL  
NTS

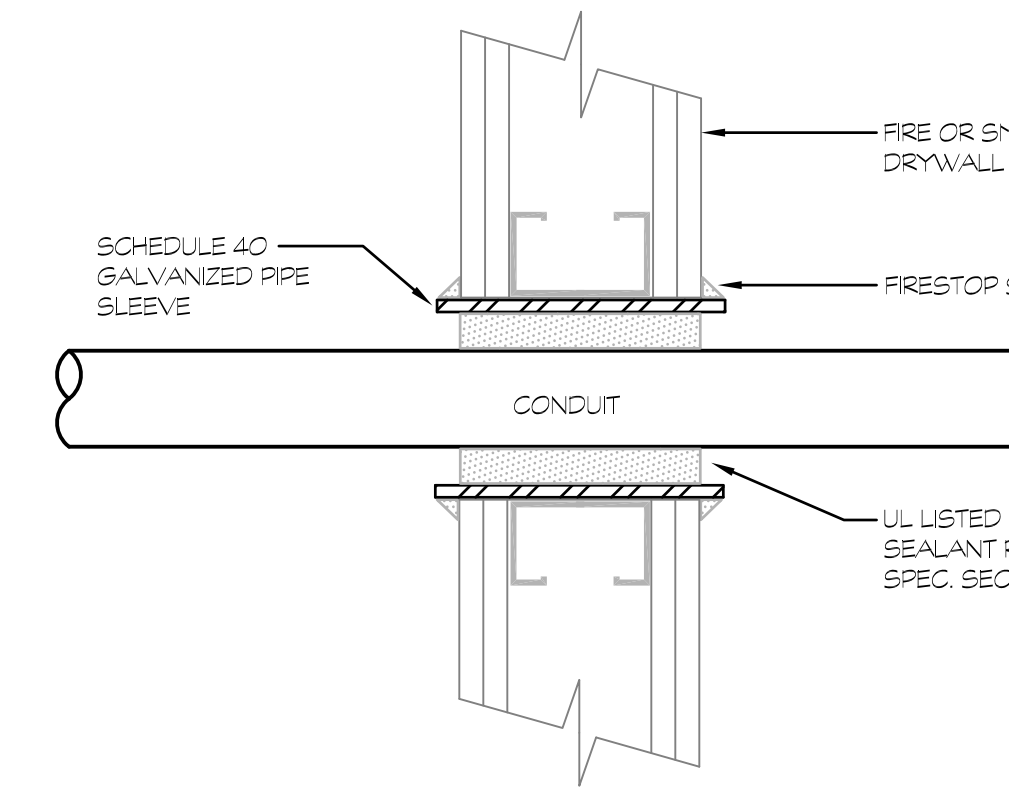


5 PRECAST CONCRETE TRANSFORMER PAD DETAIL  
NTS

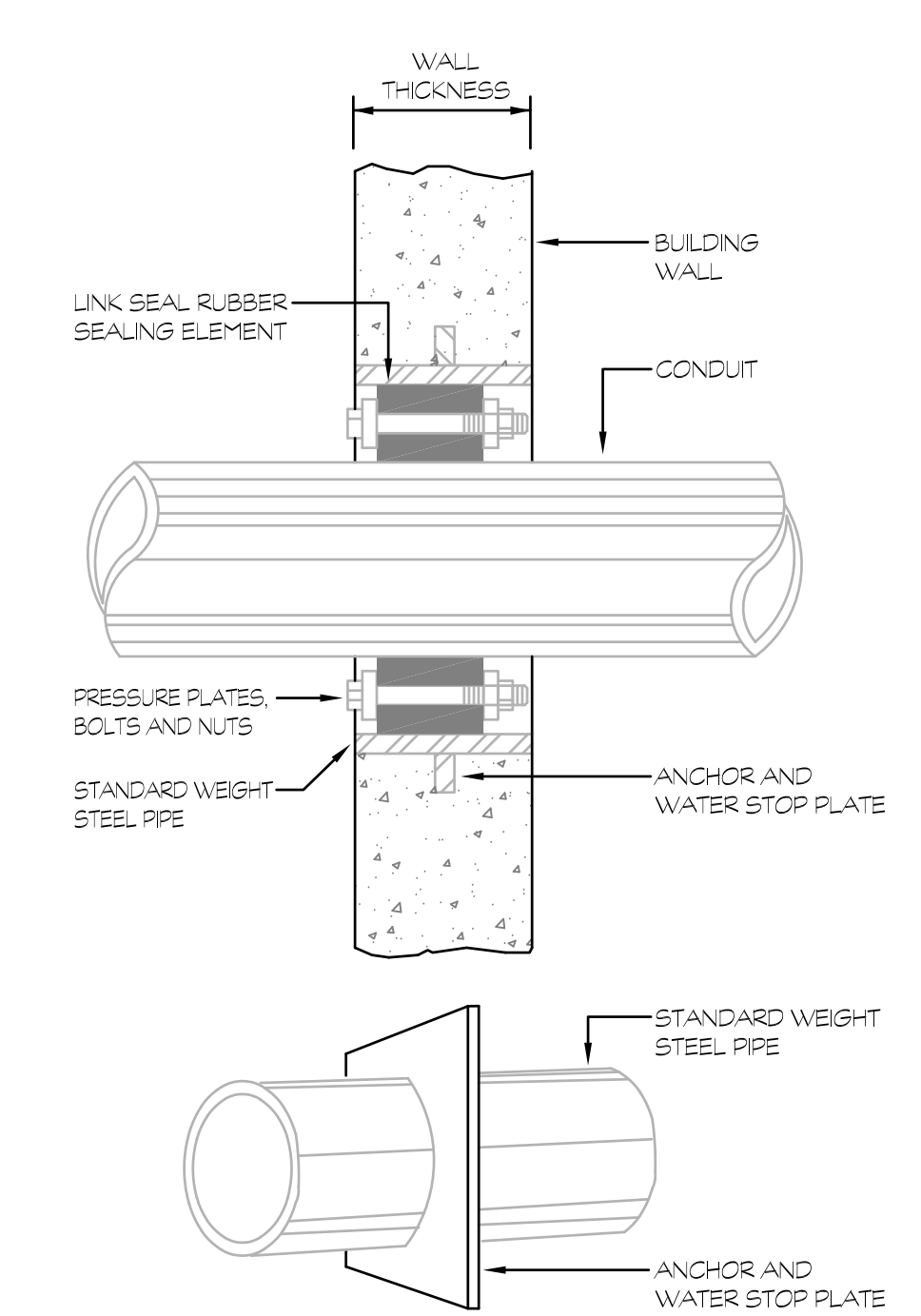
- NOTES:
1. 75-300 KVA: INSTALL 76" X 54" X 36" PAD PER SPEC PAGES P106, P107.
  2. 500-2500 KVA: INSTALL 76" X 70" X 36" PAD PER SPEC PAGES P106, P107.
  3. PRIMARY CABLE
    - A. INSTALL CABLES IN CONDUIT A MINIMUM OF 30" BELOW GRADE.
    - B. LOOP CABLES IN CABLE VAULT BEFORE MAKING CONNECTIONS.
  4. SECONDARY CABLE
    - A. LEAVE SLACK FOR FUTURE RECONNECTING TO TRANSFORMERS WITH HIGHER SECONDARY TERMINALS.
  4. COPPER WELD GROUND RODS: INSTALL IN TRENCH AND CONNECT A BARE 1/0 COPPER CONDUCTOR FROM RODS THROUGH PAD OPENING AND EXTENDING 5 FT. ABOVE PAD.
  5. THE EXCAVATION FOR THE PAD SHALL BE CARRIED TO A DEPTH OF 12" BELOW THE BOTTOM OF THE PAD WALLS. THE BACKFILL UNDER THE PAD WALLS SHALL BE A CLEAN GRAVEL FREE OF FOREIGN MATTER AND CONSTRUCTION DEBRIS, AND IN ACCORDANCE WITH CONN. D.O.T. SPEC. MOD. 0208 GRADING 'A'. BACKFILL SHALL BE PLACED IN 6" LAYERS AND COMPACTED WITH MECHANICAL TAMPERS TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY STANDARD COMPACTION TESTS, AASHTO T98 OR ASTM D698.

GENERAL NOTES

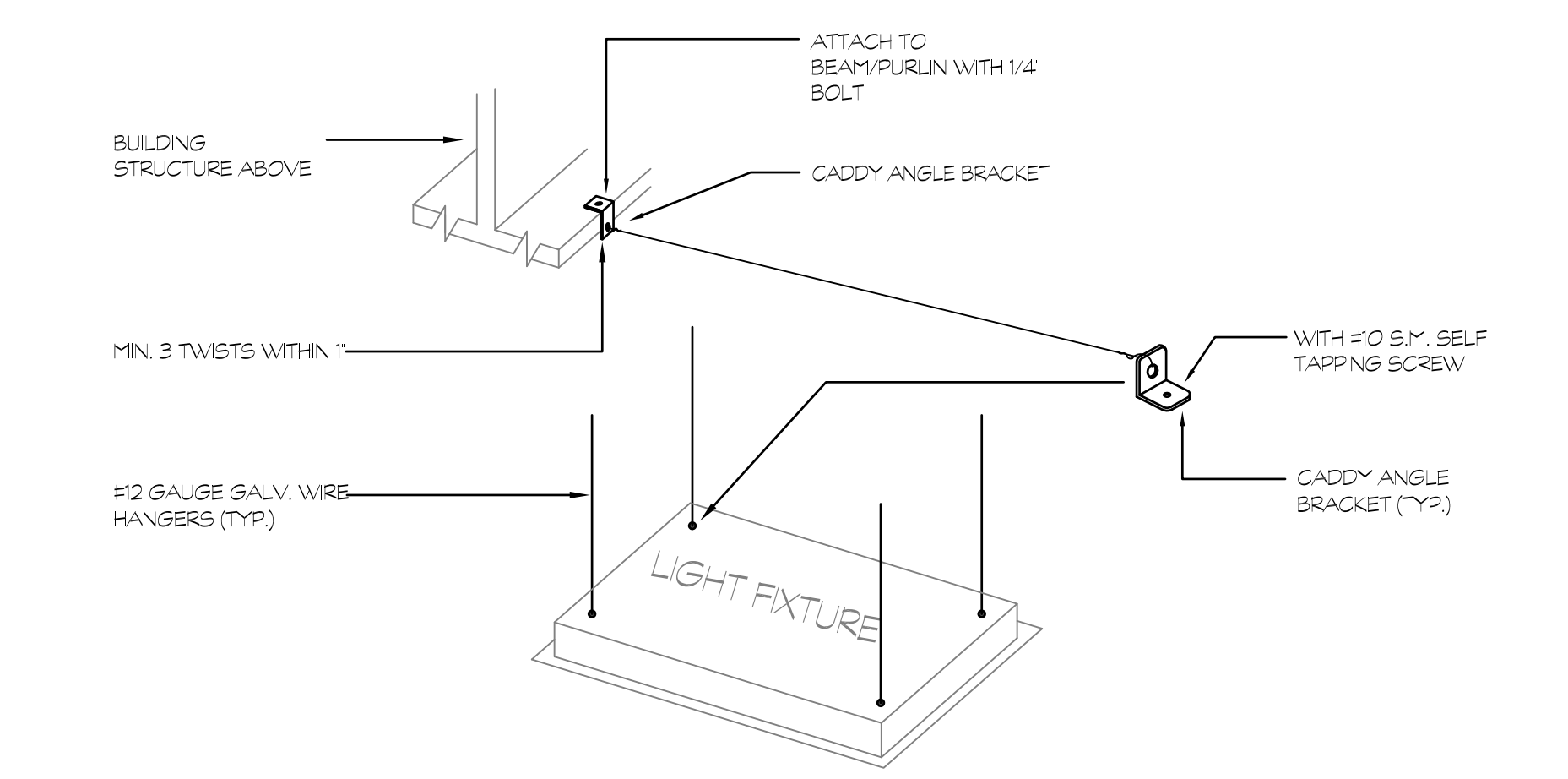
1. PROVIDE UL LISTED FIRE/SMOKE PENETRATION ASSEMBLY IN ACCORDANCE W/ UL1785, ASTM E84 REQUIREMENTS FOR WALL TYPE, RATING, PIPE SIZE INSTALLED.



6 WALL PENETRATION W/FIRE-SMOKE SEAL DETAIL  
NTS



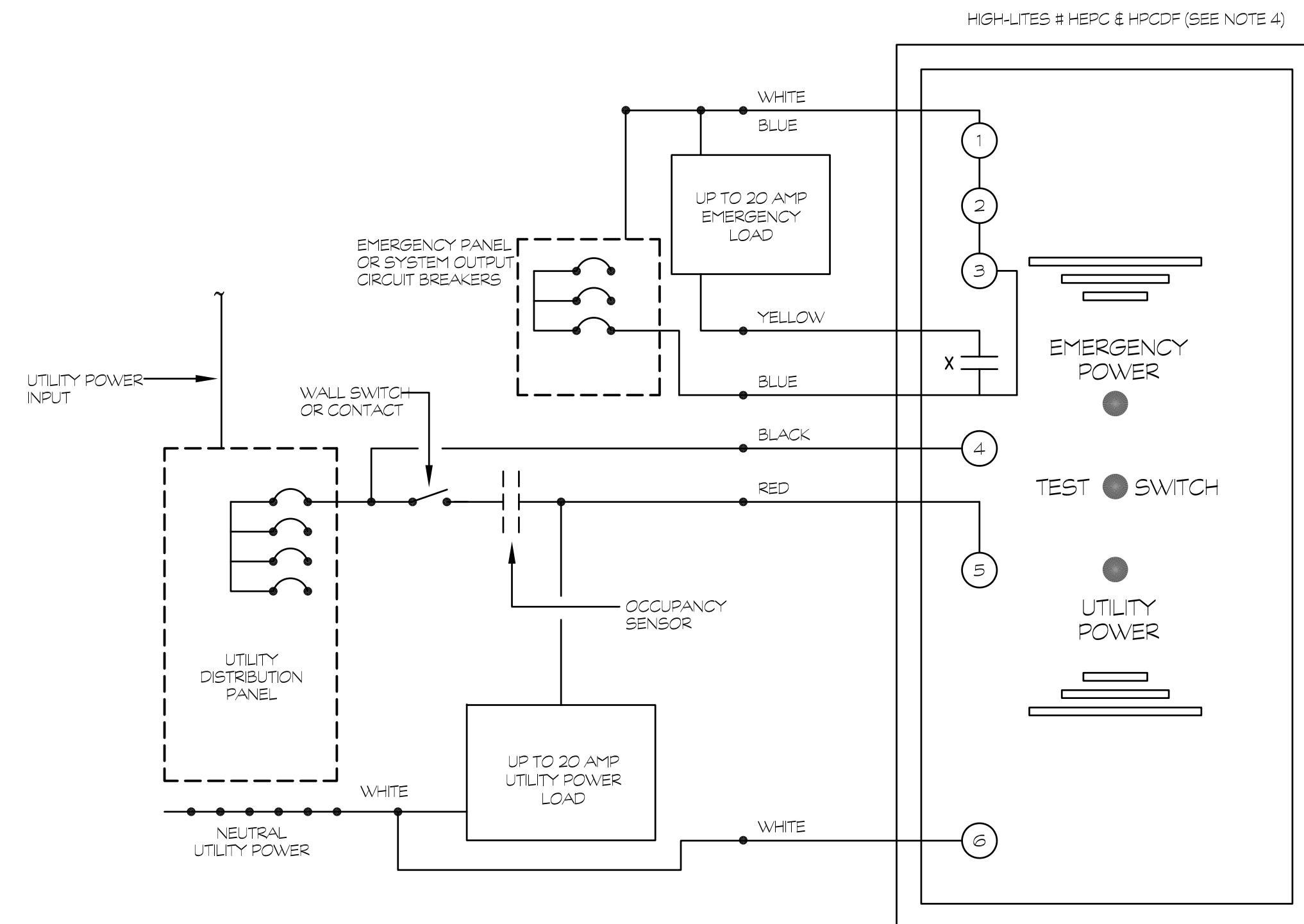
7 WATER-TIGHT WALL SLEEVE  
NTS



8 TYPICAL LAY-IN GRID LIGHTING FIXTURE SUPPORT/MOUNTING DETAIL  
NTS

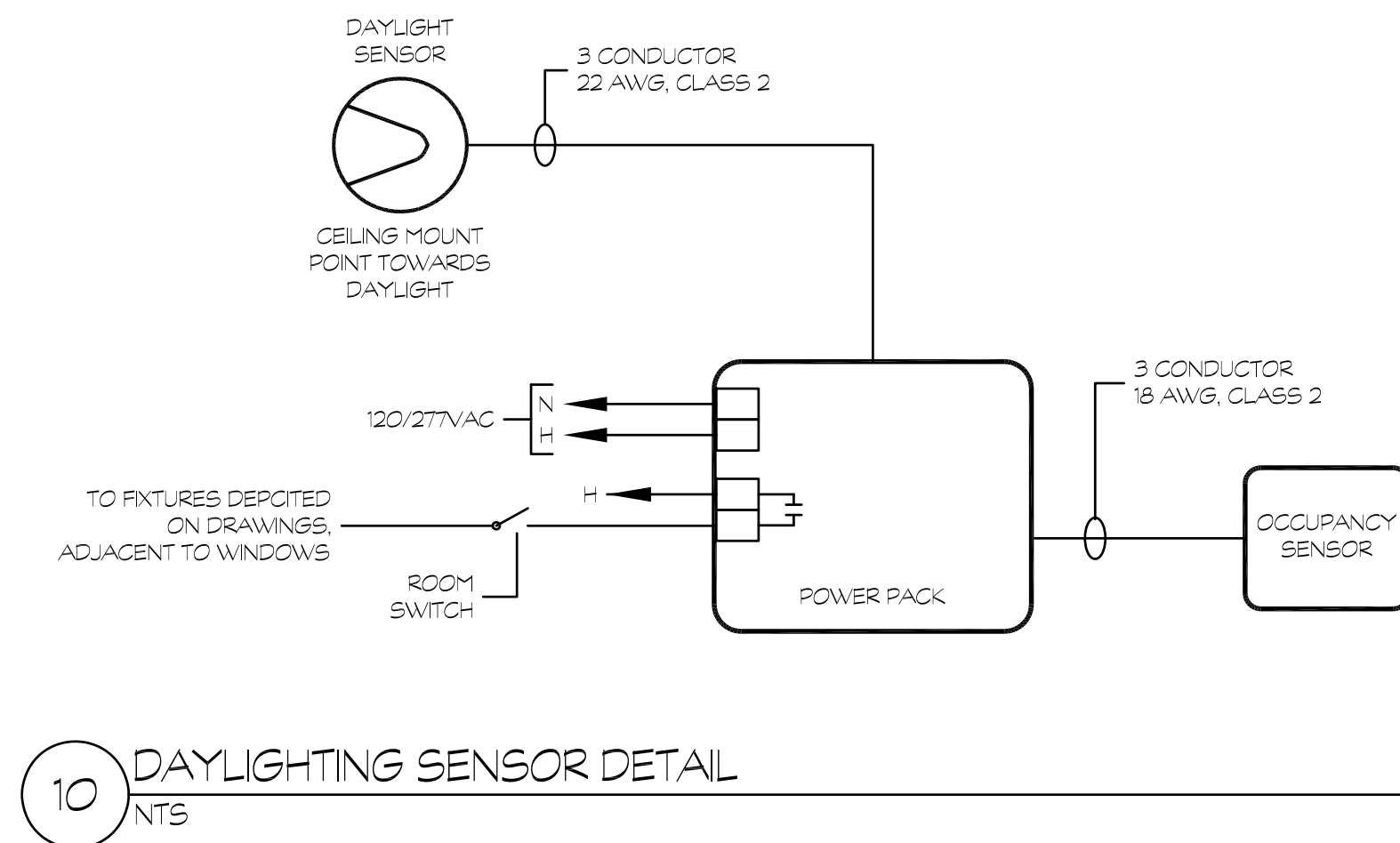
1. ALL LIGHTING FIXTURES SHALL BE SECURED TO THE STRUCTURE BY THE ELECTRICAL CONTRACTOR.
2. FLUSH OR RECESSED LIGHT FIXTURES LESS THAN 50 POUNDS SHALL HAVE 2 - 12 GA. BLACK SAFETY WIRES FROM DIAGONAL CORNERS TO BUILDING STRUCTURE BY TRADE CONTRACTOR.
3. FLUSH OR RECESSED LIGHT FIXTURES MORE THAN 50 POUNDS SHALL HAVE 4 - 12 GA. BLACK SAFETY WIRES FROM DIAGONAL CORNERS TO BUILDING STRUCTURE BY TRADE CONTRACTOR.
4. SECURE SURFACE MOUNTED LIGHT FIXTURES W/ MINIMUM OF 2 - POSITIVE CLAMPING DEVICES OF 1/4 GA. MINIMUM STEEL AND W/ 12 GA. WIRE TO BUILDING STRUCTURE.



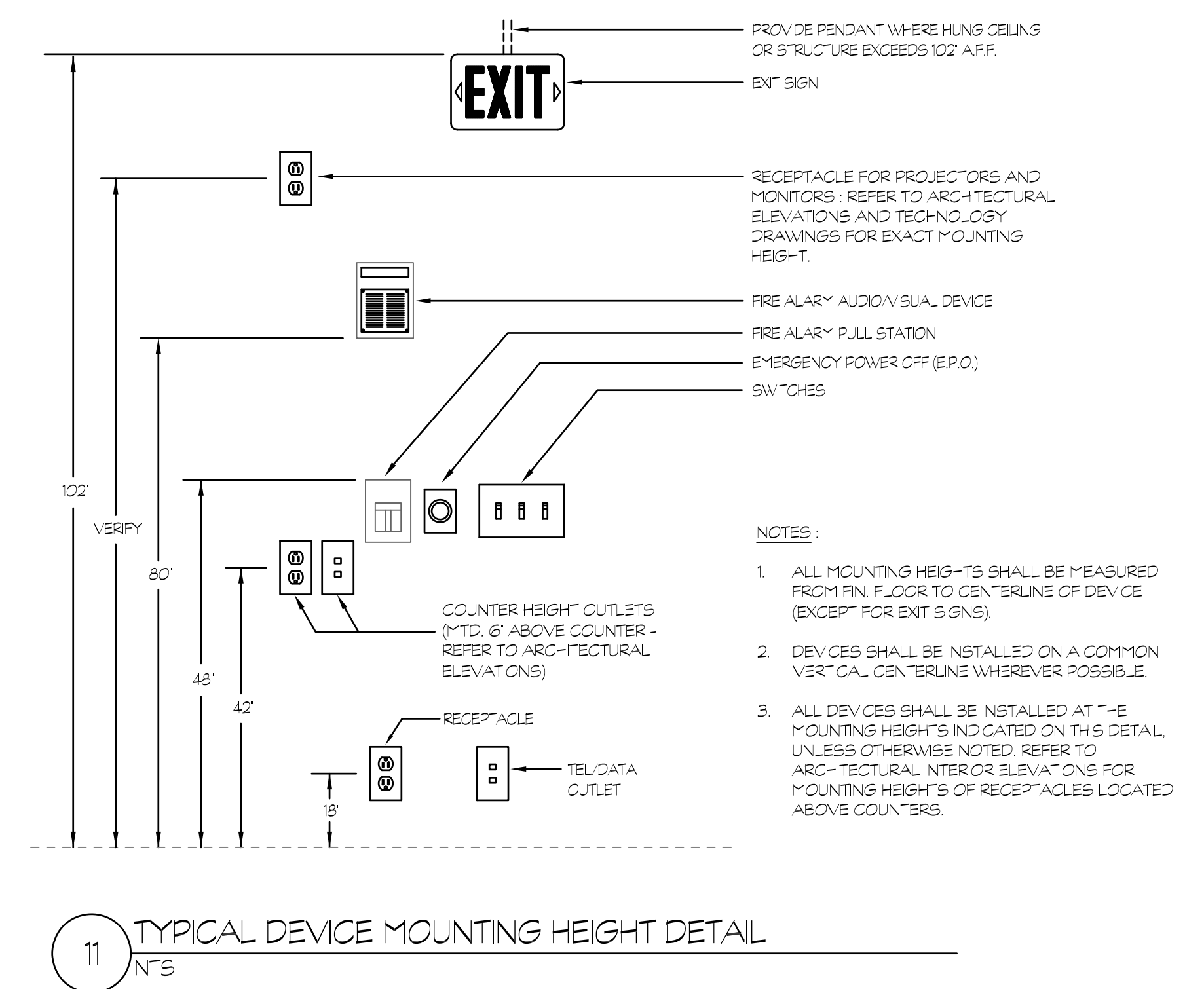


- BY-PASS RELAY NOTES**
- CIRCUIT #000 MONITOR THE 24 HOUR EMERGENCY PANEL POWER. ANY INTERRUPTION OF THE EMERGENCY POWER WILL GENERATE AN AUDIBLE ALARM AT THE EPG DEVICE (BY LVS).
  - CIRCUIT #000 MONITORS UTILITY POWER AND PROVIDES POWER TO THE AUDIBLE DEVICE. ANY INTERRUPTION WILL CLOSE CONTACT X.
  - CIRCUIT #0 SENSES WHEN ROOM SWITCH IS ON AND THEN CLOSSES CONTACT X, PROVIDING POWER TO THE EMERGENCY LOAD.
  - PROVIDE HIGH-LITES HEP/CDP SERIES EMERGENCY LIGHTING POWER CONTROL FOR DIMMABLE FIXTURES. VERIFY EXACT QUANTITY AND LOCATION WITH LIGHTING PLANS.
  - ALL ROOMS WITH FIXTURES WIRED TO THE LIFE SAFETY DISTRIBUTION SYSTEM SHALL HAVE A BY-PASS RELAY INSTALLED IN CONJUNCTION WITH CONTROL DEVICE. VERIFY QUANTITY WITH LIGHTING PLANS.

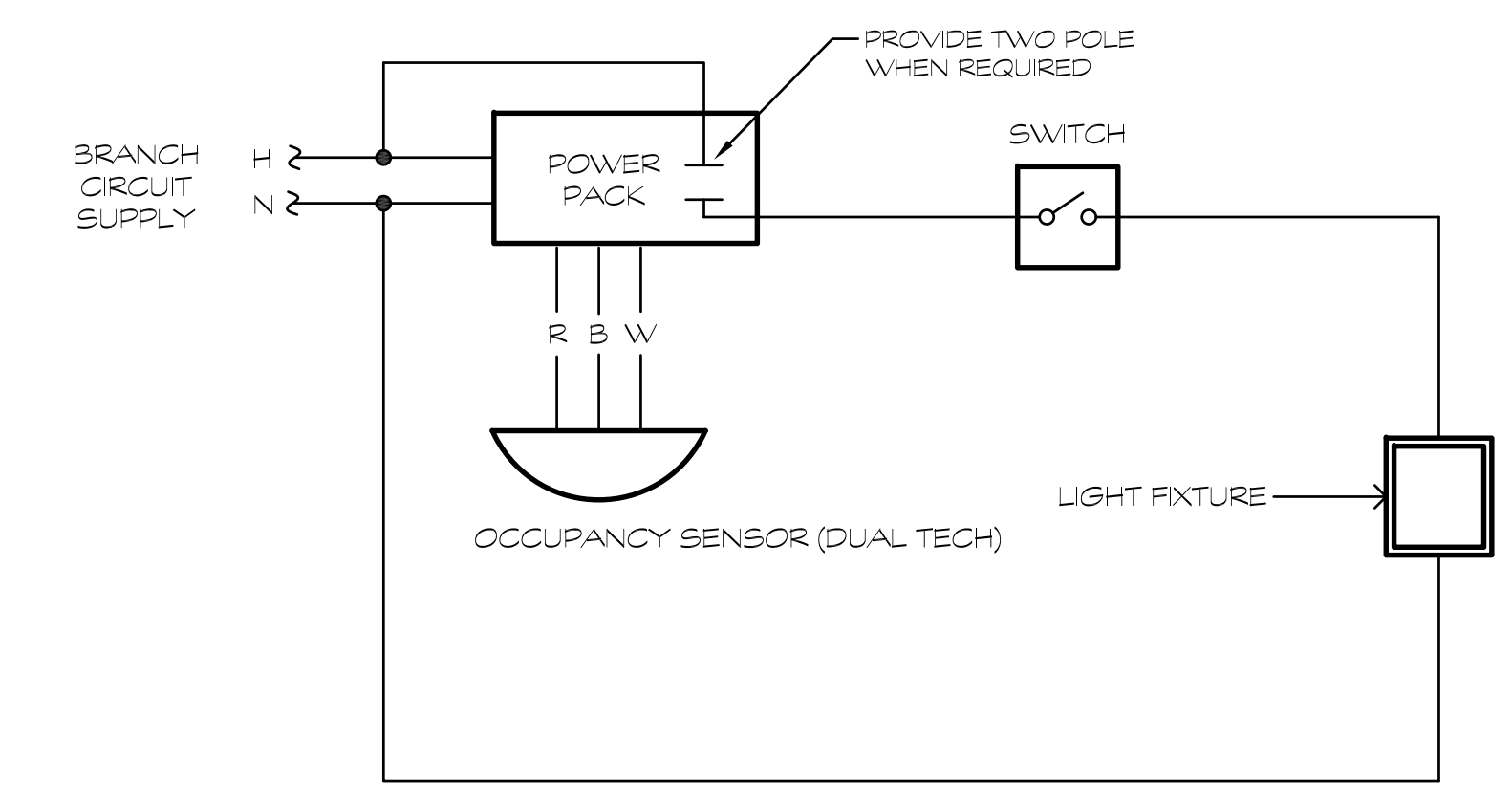
9 BY-PASS RELAY WIRING DIAGRAM  
NTS



10 DAYLIGHTING SENSOR DETAIL  
NTS

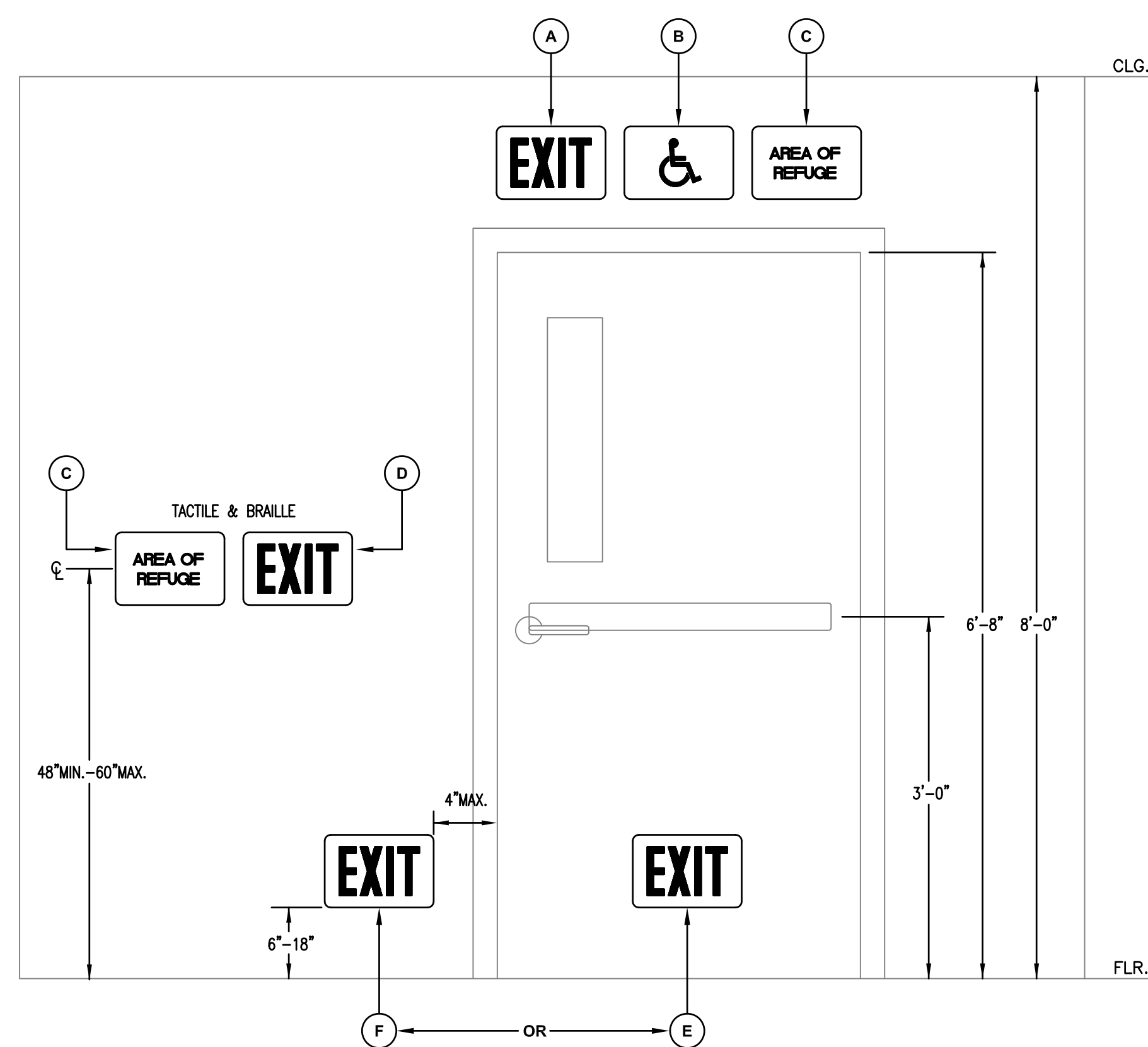


11 TYPICAL DEVICE MOUNTING HEIGHT DETAIL  
NTS



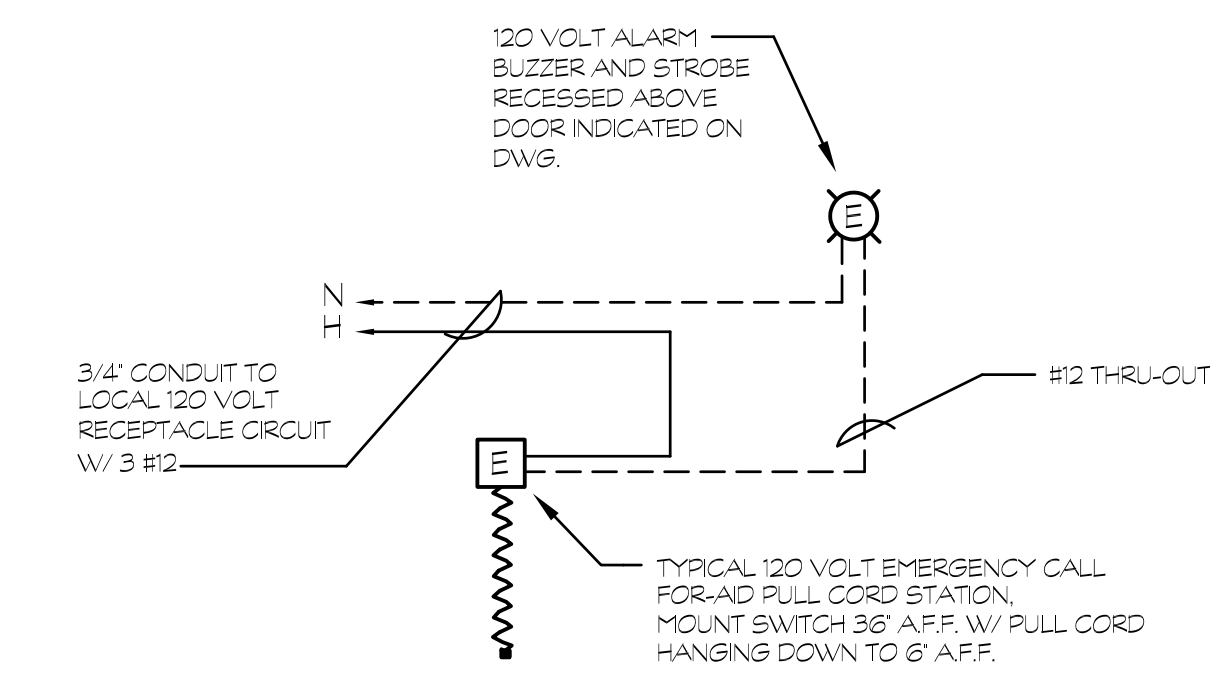
13 CEILING OCCUPANCY SENSOR DETAIL  
SCALE: NONE

- NOTE**
- TYPICAL CEILING OCCUPANCY SENSOR FOR CORRIDORS AND ROOMS.
  - EXACT QUANTITY OF DEVICES MAY DIFFER FROM THIS DETAIL. CONTRACTOR SHALL PROVIDE ACTUAL QUANTITY REQUIRED. REFER TO LIGHTING FLOOR PLAN.

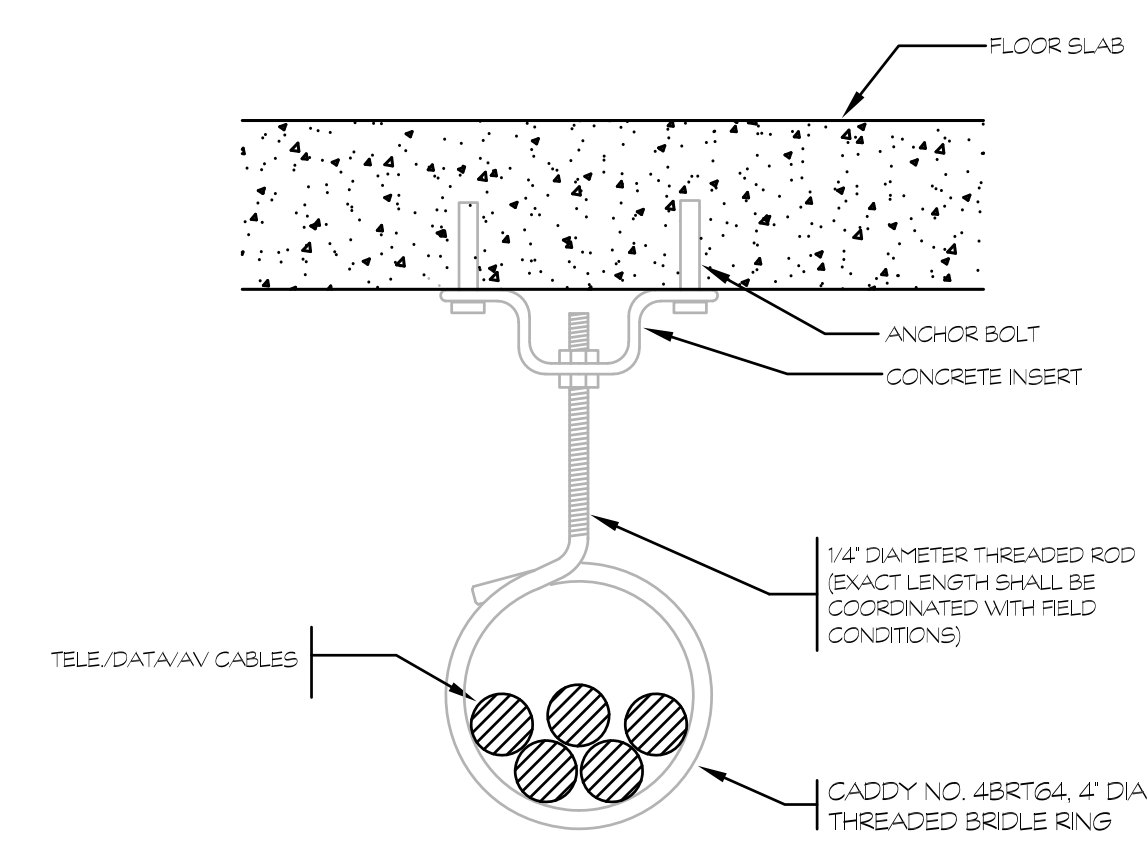


12 EXIT SIGN MOUNTING DETAIL  
NTS

- NOTES IN ACCORDANCE WITH 2005 CONNECTICUT STATE BUILDING CODE**
- A** SECTION 101.1 WHERE REQUIRED, EXITS AND EXIT ACCESS DOORS SHALL BE MARKED BY AN APPROVED EXIT SIGN READILY VISIBLE FROM ANY DIRECTION OF EGRESS TRAVEL. ACCESS TO EXITS SHALL BE MARKED BY READILY VISIBLE EXIT SIGNS IN CASES WHERE THE EXIT OR THE PATH OF EGRESS TRAVEL IS NOT IMMEDIATELY VISIBLE TO THE OCCUPANTS. EXIT SIGN PLACEMENT SHALL BE SUCH THAT NO POINT IN AN EXIT ACCESS CORRIDOR IS MORE THAN 100 FEET OF THE LISTED VIEWING DISTANCE FOR THE SIGN, WHICH IS LESS FROM THE NEAREST VISIBLE EXIT SIGN.
- SECTION 101.2 ILLUMINATION. EXIT SIGNS SHALL BE INTERNALLY OR EXTERNALLY ILLUMINATED. EXCEPTION: TACTILE SIGNS REQUIRED BY SECTION 101.3 NEED NOT BE PROVIDED WITH ILLUMINATION.
- B** **CT 2008 AMENDMENT**  
SECTION 101.2 ACCESSIBLE EXITS. WHERE EXIT SIGNS ARE REQUIRED BY SECTION 101.1 OF THIS CODE, ACCESSIBLE EXIT DOORS AT THE LEVEL OF ENT DISCHARGE THAT LEAD DIRECTLY TO ACCESSIBLE PATHS OF ENT DISCHARGE SHALL ADDITIONALLY BE MARKED BY THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. SUCH SYMBOL SHALL BE NOT LESS THAN 6 INCHES HIGH AND SHALL BE INCORPORATED INTO THE REQUIRED EXIT SIGN OR SHALL BE LOCATED DIRECTLY ADJACENT TO IT. SUCH SYMBOL SHALL MEET THE REQUIREMENTS OF SECTION 101.
- C** SECTION 1007.6.5 IDENTIFICATION. EACH DOOR PROVIDING ACCESS TO AN AREA OF REFUGE FROM AN ADJACENT FLOOR AREA SHALL BE IDENTIFIED BY A SIGN COMPLYING WITH ICC A117.1, STATING AREA OF REFUGE AND INCLUDING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. WHERE EXIT SIGN ILLUMINATION IS REQUIRED BY SECTION 101.2, THE AREA OF REFUGE SIGN SHALL BE ILLUMINATED.
- ADDITIONALLY, TACTILE SIGNAGE COMPLYING WITH ICC A117.1 SHALL BE LOCATED AT EACH DOOR TO AN AREA OF REFUGE. (TACTILE AND BRAILLE IS REQUIRED ON TACTILE SIGNAGE. ANSI A117.1-2003, T03.3 AND T03.4.)
- D** SECTION 101.3 TACTILE EXIT SIGNS. A TACTILE EXIT SIGN STATING EXIT AND COMPLYING WITH ICC A117.1 SHALL BE PROVIDED ADJACENT TO EACH DOOR TO AN EGRESS STAIRWAY, AN EXIT PASSAGEWAY AND THE EXIT DISCHARGE. (TACTILE AND BRAILLE IS REQUIRED ON TACTILE SIGNAGE. ANSI A117.1-2003, T03.3 AND T03.4.)
- CT 2008 AMENDMENT**  
SECTION 110.4 INTERIOR SIGNAGE. INTERIOR SIGNS DESIGNATE PERMANENT ROOMS AND SPACES SHALL BE RAISED TEXT CHARACTERS AND BRAILLE, DESIGNED AND LOCATED IN ACCORDANCE WITH ICC A117.1.
- SECTION 110.4.1 MOUNTING LOCATION FOR SIGNAGE SHALL BE SUCH THAT ANY PERSON APPROACHING THE SIGNAGE WILL NOT ENCOUNTER PROTRUDING OBJECTS, OR STAND WITHIN THE SWING OF ANY DOOR. (STAR INFORMATION SIGNAGE IS REQUIRED IN TACTILE AND BRAILLE. ANSI A117.1-2003, T03.3 AND T03.4.)
- E** **CT 2008 AMENDMENT**  
SECTION 101.11 LOCATION AND ILLUMINATION. FLOOR PROXIMITY EXIT SIGNS SHALL BE LOCATED WITH THE BOTTOM OF THE SIGN NOT LESS THAN 6 INCHES NOR MORE THAN 18 INCHES ABOVE THE FINISHED FLOOR. THE SIGNS SHALL BE LOCATED ON THE DOOR OR ADJACENT TO THE DOOR WITH THE NEAREST EDGE WITHIN 4 INCHES OF THE DOOR. FLOOR PROXIMITY EXIT SIGNS SHALL BE ILLUMINATED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 101.4 OR SECTION 101.5 OF THIS CODE. NON-POWERED PHOTOLUMINESCENT SIGNS SHALL BE ACCEPTABLE.

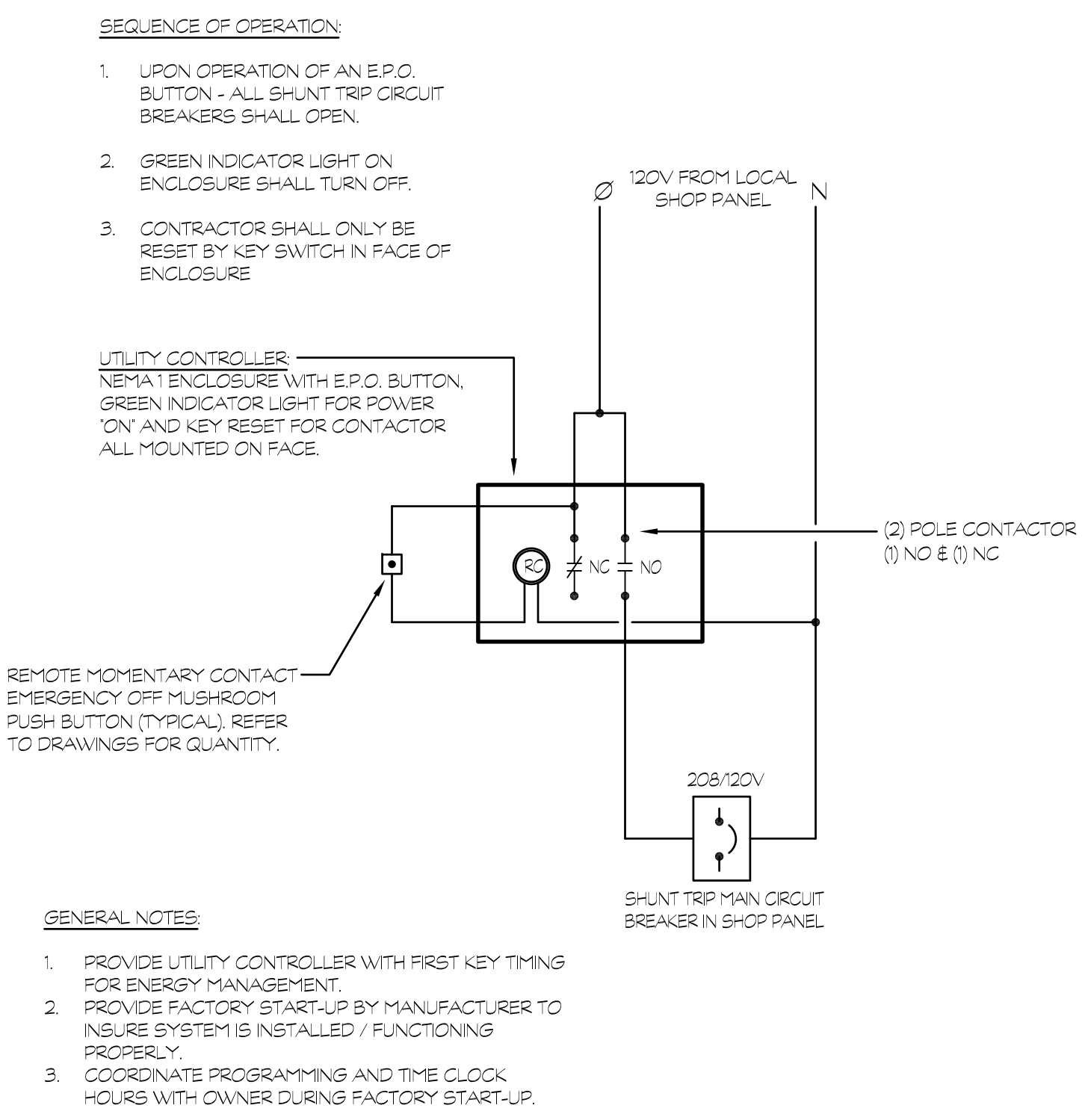


14 HANDICAPPED CALL-FOR-AID SYSTEM  
NTS

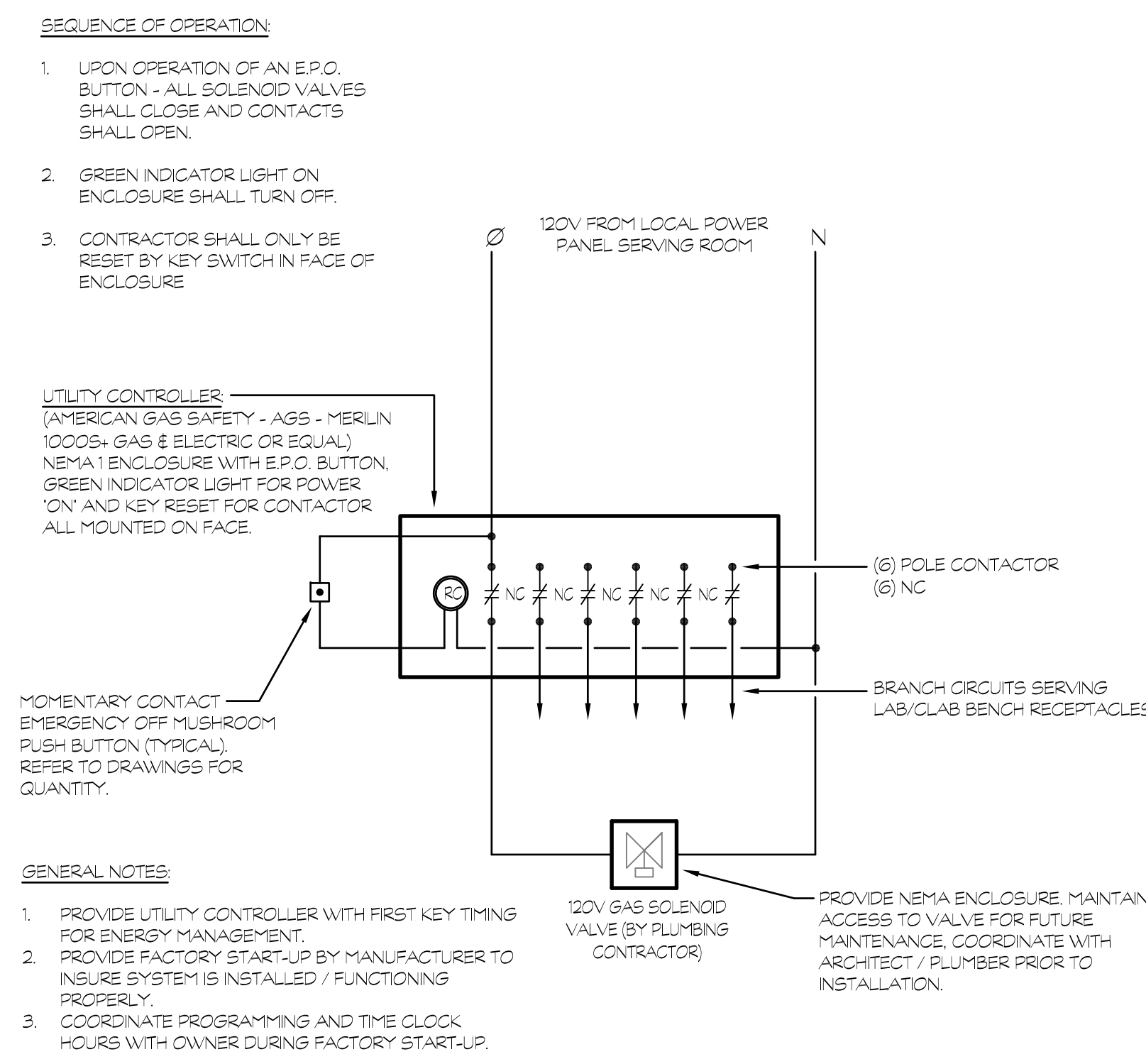


15 CABLE RING DETAIL  
NTS

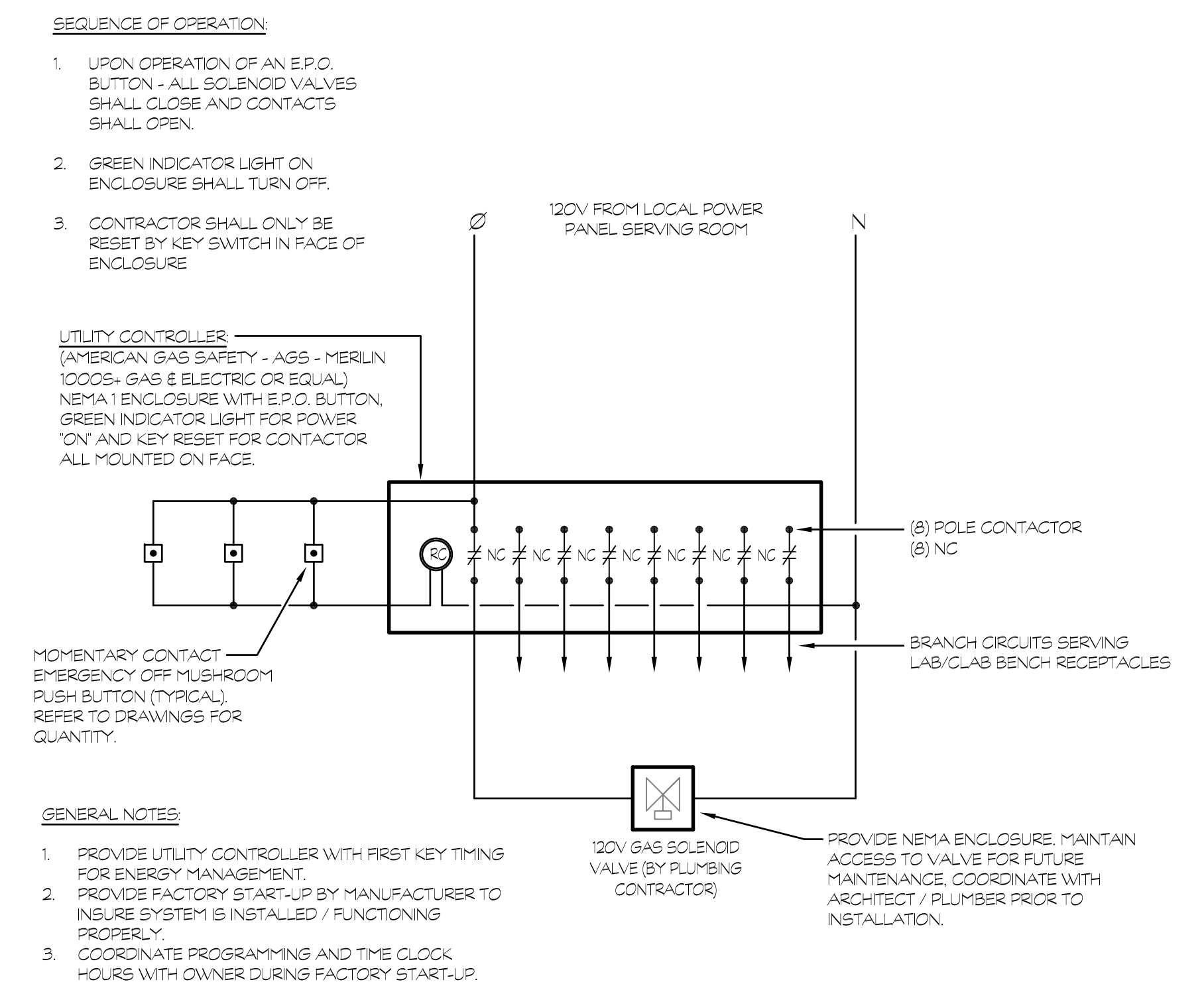




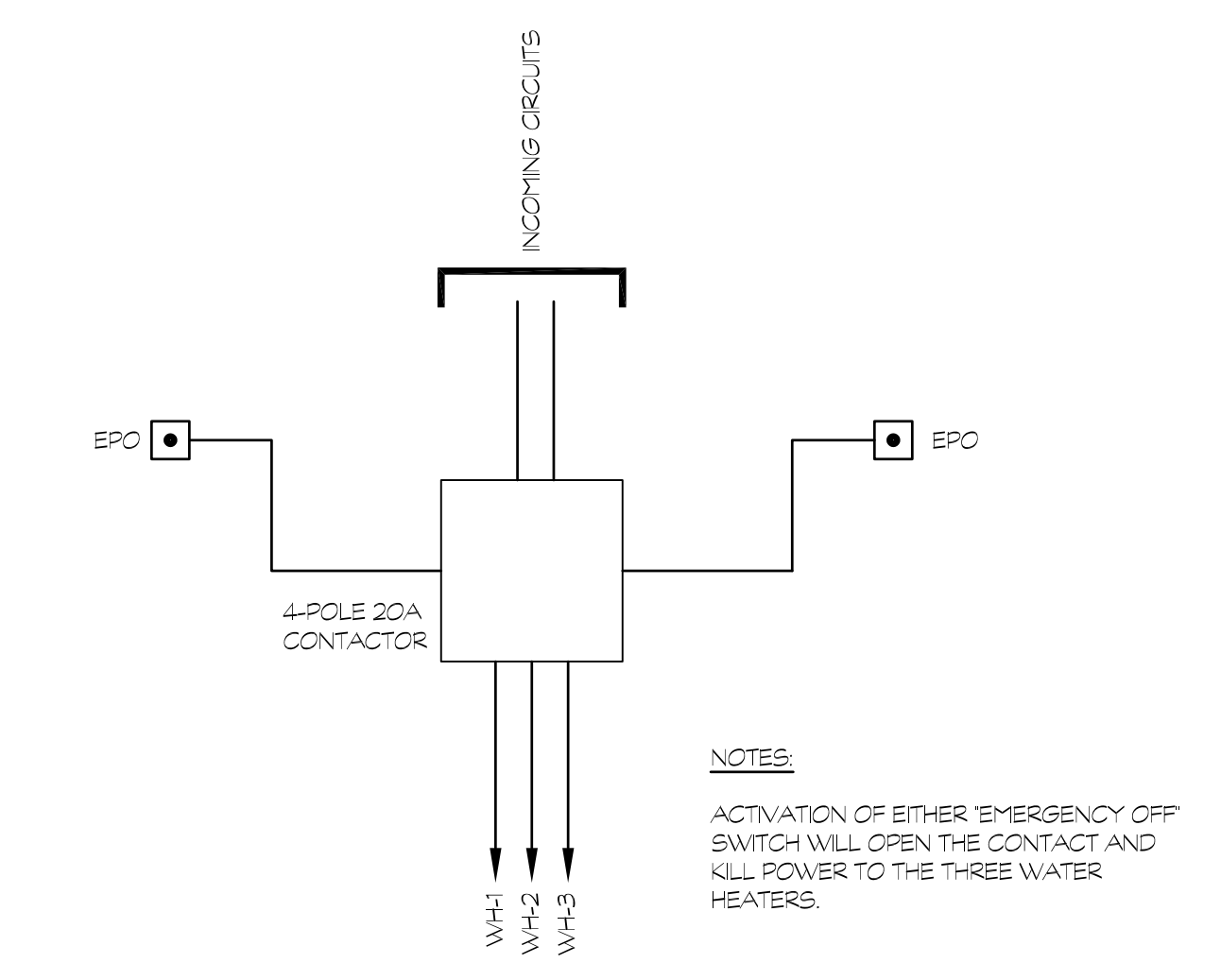
16 TYPICAL SHOP E.P.O. WIRING DIAGRAM  
NTS



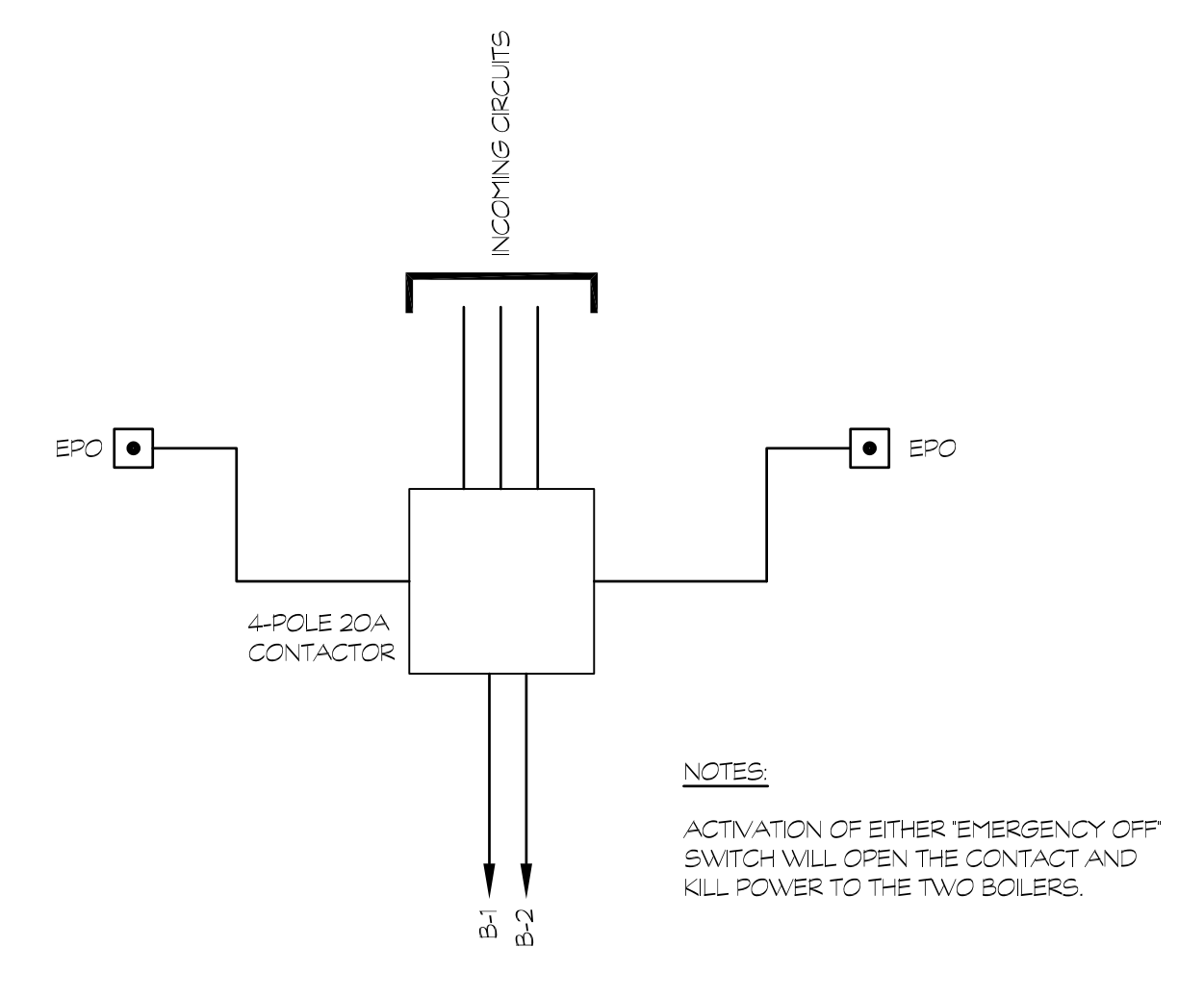
17 TYPICAL E.P.O. WIRING DIAGRAM (6-POLE CONTACTOR)  
NTS



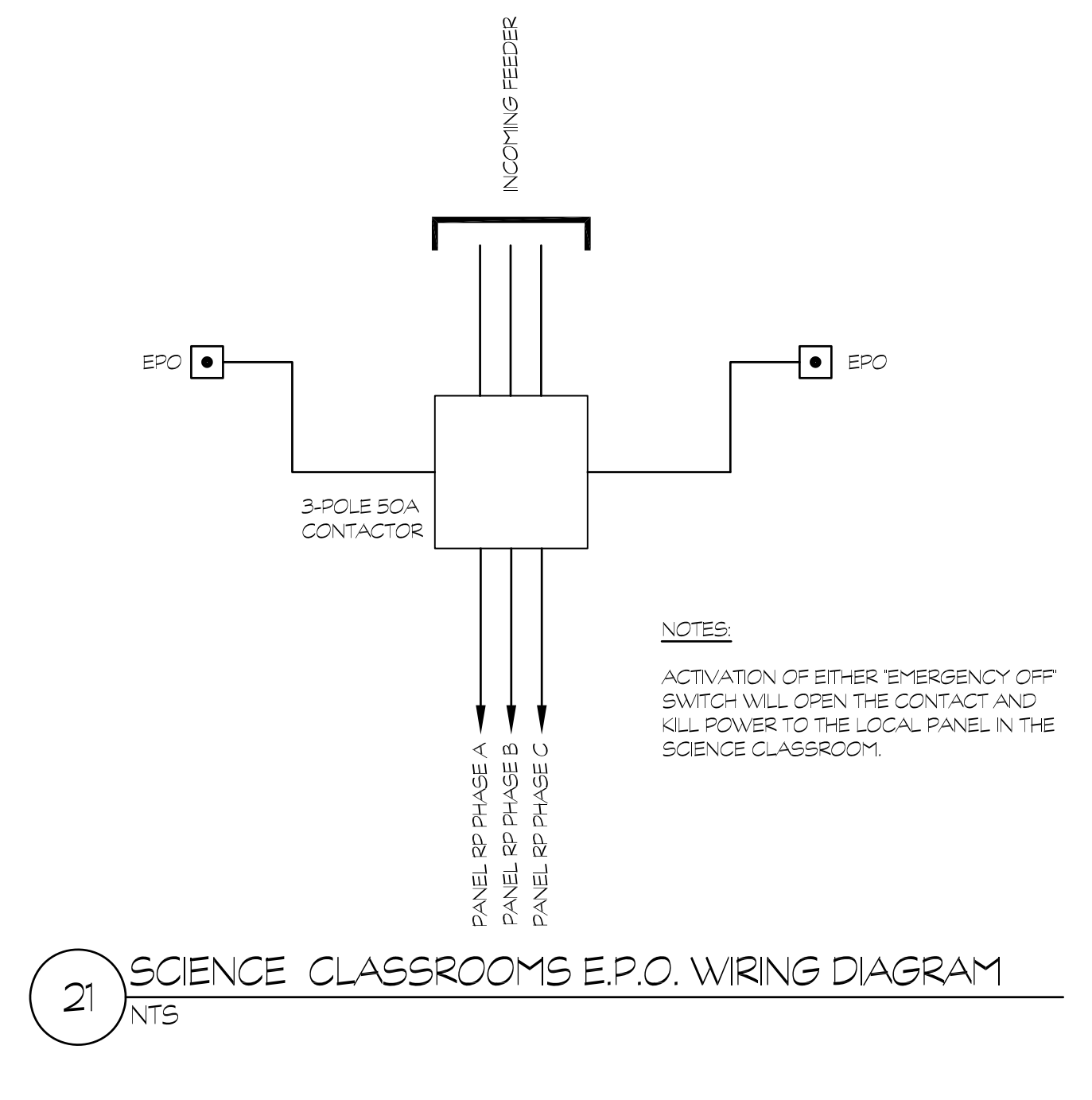
18 TYPICAL E.P.O. WIRING DIAGRAM (8-POLE CONTACTOR)  
NTS



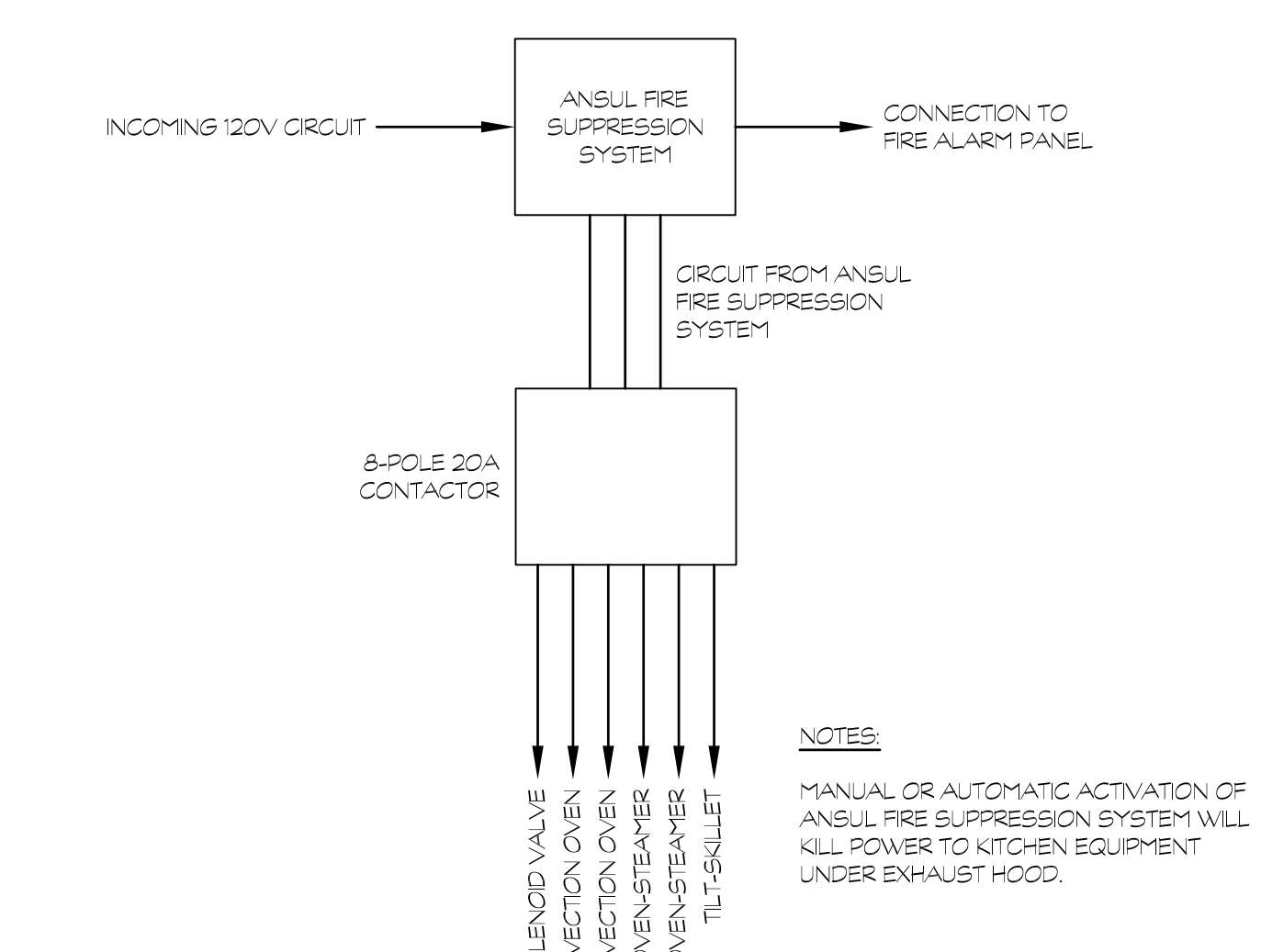
19 WATER HEATER E.P.O. WIRING DIAGRAM  
NTS



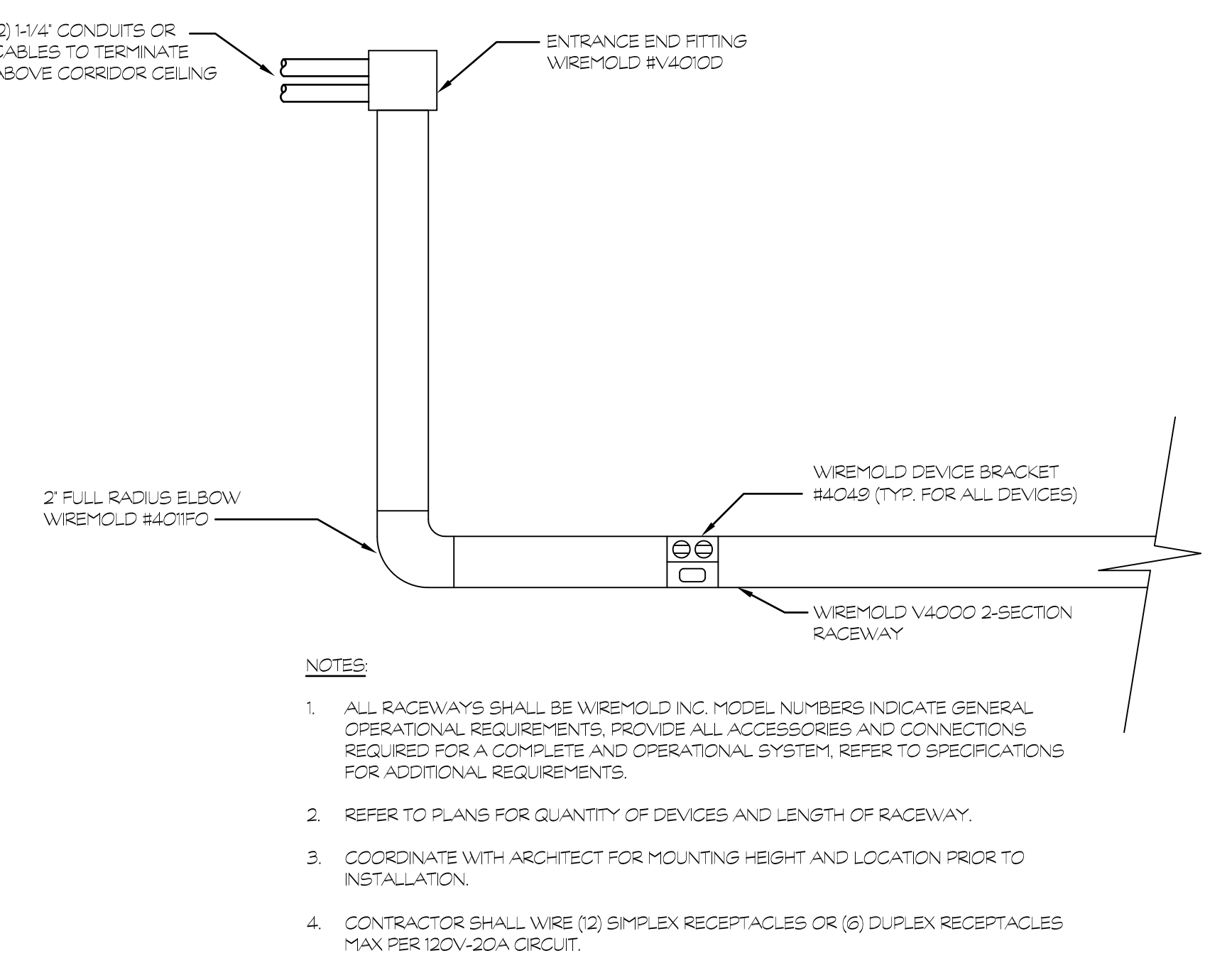
20 BOILER ROOM E.P.O. WIRING DIAGRAM  
NTS



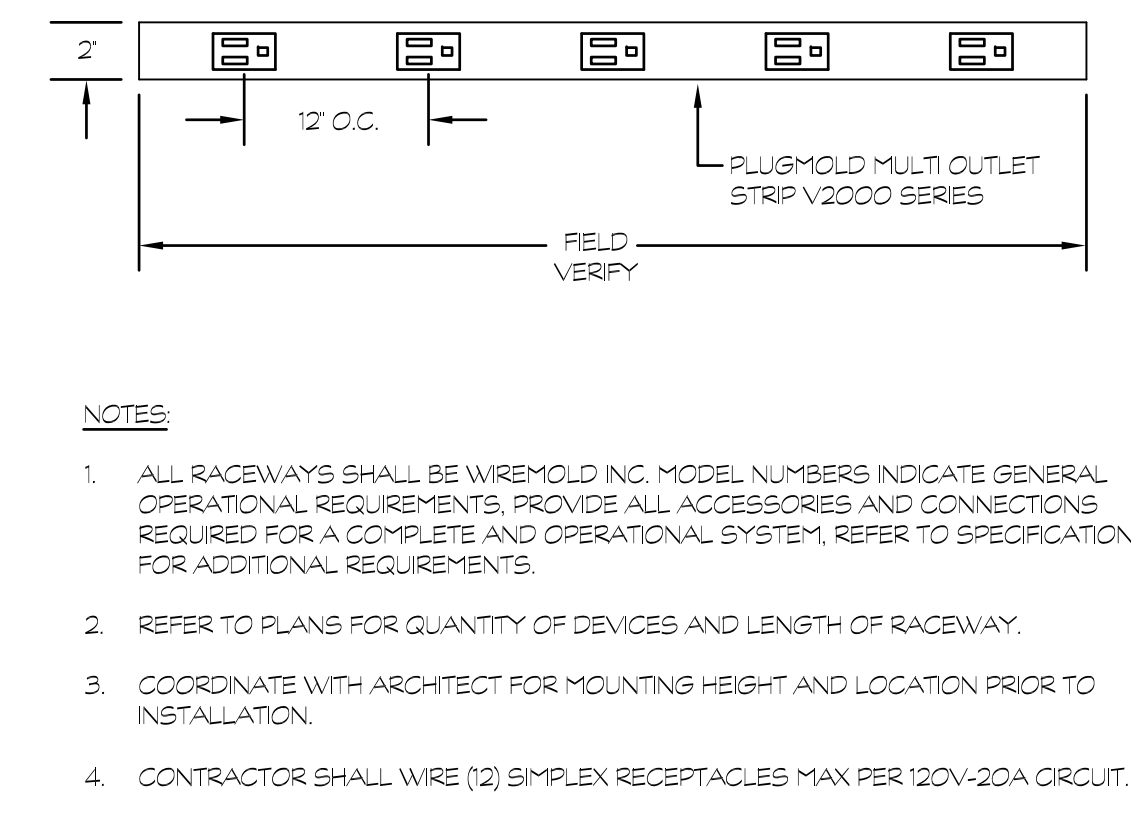
21 SCIENCE CLASSROOMS E.P.O. WIRING DIAGRAM  
NTS



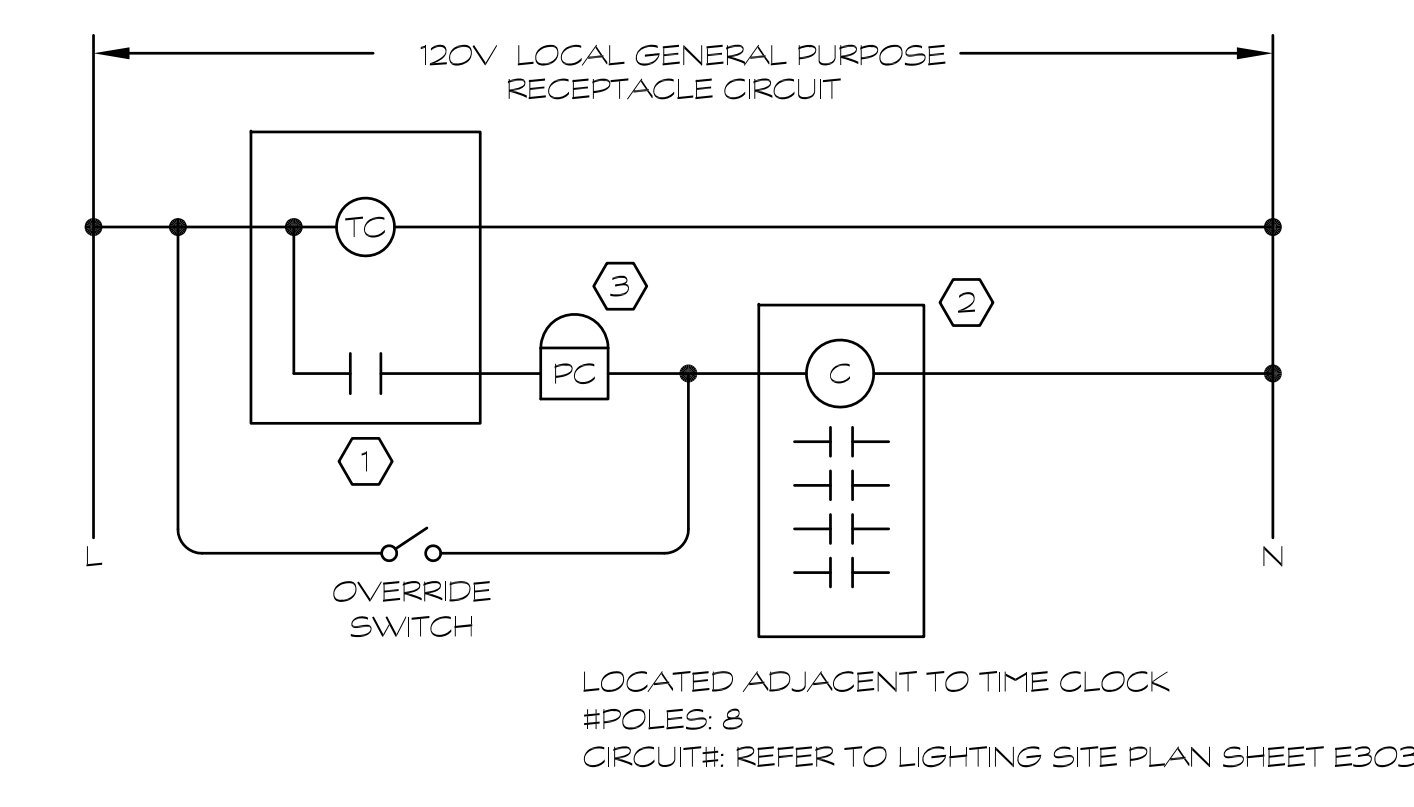
22 KITCHEN HOOD FIRE SUPPRESSION DETAIL  
NTS



23 TYPICAL MULTI SERVICE RACEWAY DETAIL  
NTS



24 TYPICAL PLUGMOLD RACEWAY DETAIL  
NTS



| TAB | DESCRIPTION   | MODEL NO.   | REMARKS |
|-----|---|---|---------|
| 1   | DIGITAL PROGRAMMABLE TIME CLOCK 24HR. 7DAY 365DAY. SEASONAL SCHEDULING. 80 ON/OFF POINTS. PERMANENT SCHEDULE RETENTION ON POWER LOSS. POWER OUTAGE BACKUP. AUTOMATIC LEAP YEAR AND DAYLIGHT SAVING TIME ADJ. MECHANICALLY HELD CONTACTS. MULTI VOLTAGE INPUT. | TORX 033202A OR EQUIVALENT INTERMATIC OR SQUARE D                       | 1,2     |
| 2   | CONTACTOR ELECTRICALLY OPERATED. MECHANICALLY HELD 20A LIGHTING CONTACTOR. CONTROL VOLTAGE AS LISTED FROM LOCAL GENERAL PURPOSE RECEPTACLE CIRCUIT.   | ASCO 817 SERIES WITH 2 WIRE CONTROL OPTION OR EQUIVALENT GE OR SQUARE D |         |
| 3   | PHOTOCELL 1800V. 15A. 40 DEG. TO 140 DEG. SOLID STATE SPST DRY CONTACT. LIGHT LEVEL RANGE IS TO 10FC WITH ADJUSTMENT. THE DELAY IS SEC. MINIMUM.  | TORX 2100 SERIES OR EQUIVALENT INTERMATIC OR SQUARE D                   | 3       |

**NOTES:**

- TIMECLOCK SHALL BE PROGRAMMED TO TURN SITE LIGHTING ON AT DUSK (VIA PHOTOCELL) AND OFF AT 09PM DAILY AS PER TOWN ZONING REQUIREMENTS.
- LOCATE TIME CLOCK ADJACENT TO ELECTRICAL PANEL.
- PHOTOCELL TO BE LOCATED ON SOUTHERN EXPOSURE.

25 LIGHTING TIME CLOCK & CONTACTOR DETAIL  
NTS

**Switchboard: MDP**

Location: ELEC. B158.2  
 Supply From:  
 Mounting: Surface  
 Enclosure: NEMA 1

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

A.I.C. Rating: 100K  
 Mains Type: MCB  
 Mains Rating: 1200 A  
 MCB Rating: 1200 A

Notes:

| CKT | Circuit Description | # of Poles | Frame Size | Trip Rating | Load | Remarks |
|-----|---------------------|------------|------------|-------------|------|---------|
| 1   |                     |            |            |             |      |         |
| 2   |                     |            |            |             |      |         |
| 3   |                     |            |            |             |      |         |
| 4   |                     |            |            |             |      |         |
| 5   |                     |            |            |             |      |         |
| 6   |                     |            |            |             |      |         |
| 7   |                     |            |            |             |      |         |
| 8   |                     |            |            |             |      |         |
| 9   |                     |            |            |             |      |         |
| 10  |                     |            |            |             |      |         |
| 11  |                     |            |            |             |      |         |
| 12  |                     |            |            |             |      |         |
| 13  |                     |            |            |             |      |         |
| 14  |                     |            |            |             |      |         |
| 15  |                     |            |            |             |      |         |
| 16  |                     |            |            |             |      |         |
| 17  |                     |            |            |             |      |         |
| 18  |                     |            |            |             |      |         |
| 19  |                     |            |            |             |      |         |
| 20  |                     |            |            |             |      |         |

Total Conn. Load: 0 VA  
 Total Amps: 0 A

Legend:

| Load Classification | Connected Load | Demand Factor | Estimated Demand | Panel Totals                   |
|---------------------|----------------|---------------|------------------|--------------------------------|
|                     |                |               |                  | Total Conn. Load: 0 VA         |
|                     |                |               |                  | Total Est. Demand: 0 VA        |
|                     |                |               |                  | Total Conn. Current: 0 A       |
|                     |                |               |                  | Total Est. Demand Current: 0 A |

Notes:

**Branch Panel: GP1**

Location: ELEC. B158.2  
 Supply From:  
 Mounting: Surface  
 Enclosure: Type 1

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

A.I.C. Rating: 22k  
 Mains Type: MLO  
 Mains Rating: 100 A  
 MCB Rating:

Notes:

| CKT | Circuit Description | Wire & Conduit | Trip | Poles | A | B | C | Poles | Trip | Wire & Conduit | Circuit Description | CKT |
|-----|---------------------|----------------|------|-------|---|---|---|-------|------|----------------|---------------------|-----|
| 1   |                     |                |      |       |   |   |   |       |      |                |                     | 2   |
| 3   |                     |                |      |       |   |   |   |       |      |                |                     | 4   |
| 5   |                     |                |      |       |   |   |   |       |      |                |                     | 6   |
| 7   |                     |                |      |       |   |   |   |       |      |                |                     | 8   |
| 9   |                     |                |      |       |   |   |   |       |      |                |                     | 10  |
| 11  |                     |                |      |       |   |   |   |       |      |                |                     | 12  |
| 13  |                     |                |      |       |   |   |   |       |      |                |                     | 14  |
| 15  |                     |                |      |       |   |   |   |       |      |                |                     | 16  |
| 17  |                     |                |      |       |   |   |   |       |      |                |                     | 18  |
| 19  |                     |                |      |       |   |   |   |       |      |                |                     | 20  |
| 21  |                     |                |      |       |   |   |   |       |      |                |                     | 22  |
| 23  |                     |                |      |       |   |   |   |       |      |                |                     | 24  |
| 25  |                     |                |      |       |   |   |   |       |      |                |                     | 26  |
| 27  |                     |                |      |       |   |   |   |       |      |                |                     | 28  |
| 29  |                     |                |      |       |   |   |   |       |      |                |                     | 30  |
| 31  |                     |                |      |       |   |   |   |       |      |                |                     | 32  |
| 33  |                     |                |      |       |   |   |   |       |      |                |                     | 34  |
| 35  |                     |                |      |       |   |   |   |       |      |                |                     | 36  |
| 37  |                     |                |      |       |   |   |   |       |      |                |                     | 38  |
| 39  |                     |                |      |       |   |   |   |       |      |                |                     | 40  |
| 41  |                     |                |      |       |   |   |   |       |      |                |                     | 42  |

Total Load: 0 VA 0 VA 0 VA  
 Total Amps: 0 A 0 A 0 A

Legend:

| Load Classification | Connected Load | Demand Factor | Estimated Demand | Panel Totals                   |
|---------------------|----------------|---------------|------------------|--------------------------------|
|                     |                |               |                  | Total Conn. Load: 0 VA         |
|                     |                |               |                  | Total Est. Demand: 0 VA        |
|                     |                |               |                  | Total Conn. Current: 0 A       |
|                     |                |               |                  | Total Est. Demand Current: 0 A |

Notes:

**Branch Panel: RP1**

Location: BOOK ROOM C110  
 Supply From:  
 Mounting: Surface  
 Enclosure: Type 1

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

A.I.C. Rating: 22k  
 Mains Type: MLO  
 Mains Rating: 100 A  
 MCB Rating:

Notes:

| CKT | Circuit Description | Wire & Conduit | Trip | Poles | A | B | C | Poles | Trip | Wire & Conduit | Circuit Description | CKT |
|-----|---------------------|----------------|------|-------|---|---|---|-------|------|----------------|---------------------|-----|
| 1   |                     |                |      |       |   |   |   |       |      |                |                     | 2   |
| 3   |                     |                |      |       |   |   |   |       |      |                |                     | 4   |
| 5   |                     |                |      |       |   |   |   |       |      |                |                     | 6   |
| 7   |                     |                |      |       |   |   |   |       |      |                |                     | 8   |
| 9   |                     |                |      |       |   |   |   |       |      |                |                     | 10  |
| 11  |                     |                |      |       |   |   |   |       |      |                |                     | 12  |
| 13  |                     |                |      |       |   |   |   |       |      |                |                     | 14  |
| 15  |                     |                |      |       |   |   |   |       |      |                |                     | 16  |
| 17  |                     |                |      |       |   |   |   |       |      |                |                     | 18  |
| 19  |                     |                |      |       |   |   |   |       |      |                |                     | 20  |
| 21  |                     |                |      |       |   |   |   |       |      |                |                     | 22  |
| 23  |                     |                |      |       |   |   |   |       |      |                |                     | 24  |
| 25  |                     |                |      |       |   |   |   |       |      |                |                     | 26  |
| 27  |                     |                |      |       |   |   |   |       |      |                |                     | 28  |
| 29  |                     |                |      |       |   |   |   |       |      |                |                     | 30  |
| 31  |                     |                |      |       |   |   |   |       |      |                |                     | 32  |
| 33  |                     |                |      |       |   |   |   |       |      |                |                     | 34  |
| 35  |                     |                |      |       |   |   |   |       |      |                |                     | 36  |
| 37  |                     |                |      |       |   |   |   |       |      |                |                     | 38  |
| 39  |                     |                |      |       |   |   |   |       |      |                |                     | 40  |
| 41  |                     |                |      |       |   |   |   |       |      |                |                     | 42  |

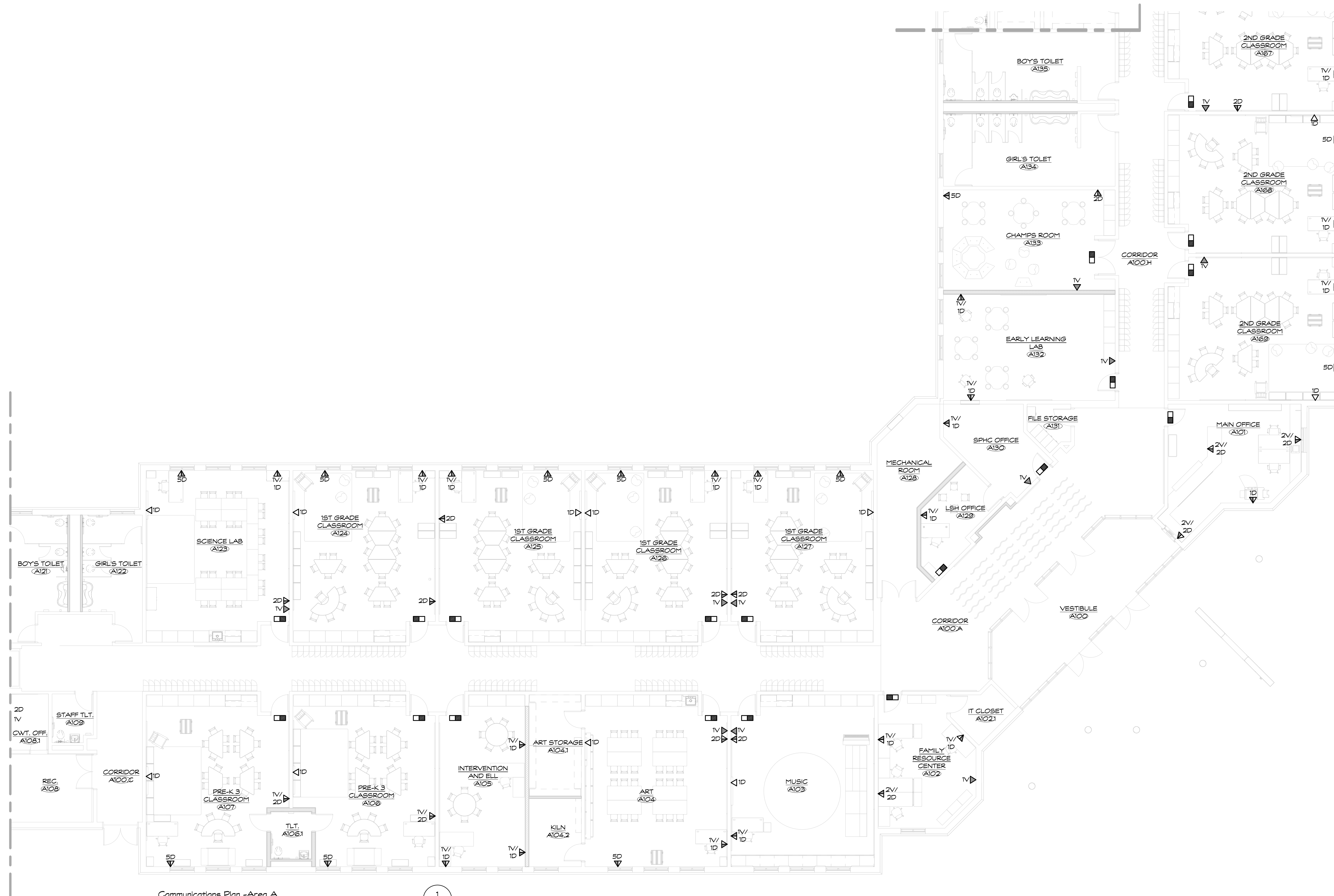
Total Load: 0 VA 0 VA 0 VA  
 Total Amps: 0 A 0 A 0 A

Legend:

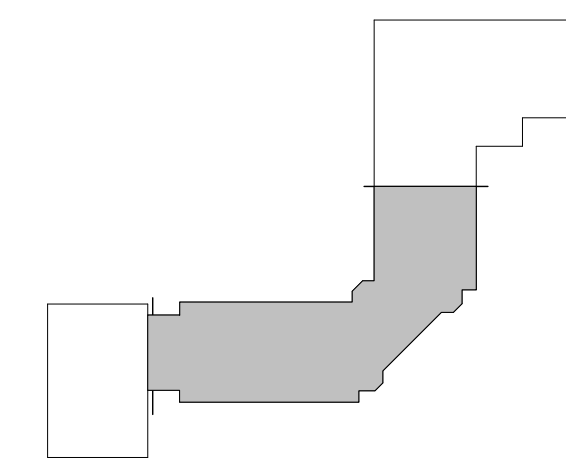
| Load Classification | Connected Load | Demand Factor | Estimated Demand | Panel Totals                   |
|---------------------|----------------|---------------|------------------|--------------------------------|
|                     |                |               |                  | Total Conn. Load: 0 VA         |
|                     |                |               |                  | Total Est. Demand: 0 VA        |
|                     |                |               |                  | Total Conn. Current: 0 A       |
|                     |                |               |                  | Total Est. Demand Current: 0 A |

Notes:





Communications Plan -Area A  
 SCALE: 1/8" = 1'-0"  
 1  
 T100



Project Title:  
**Hinsdale School Alterations**  
 15 Hinsdale Ave.  
 Winsted, CT 06098

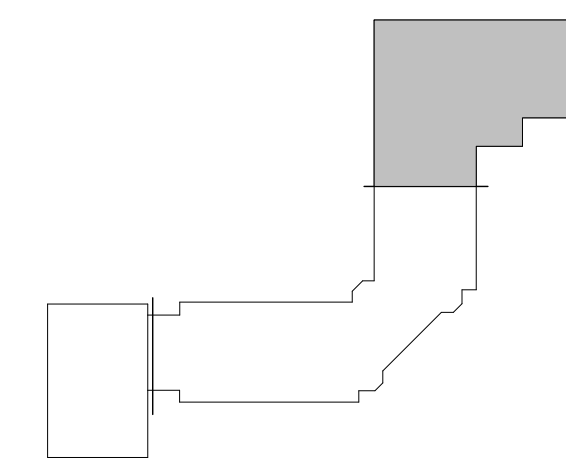
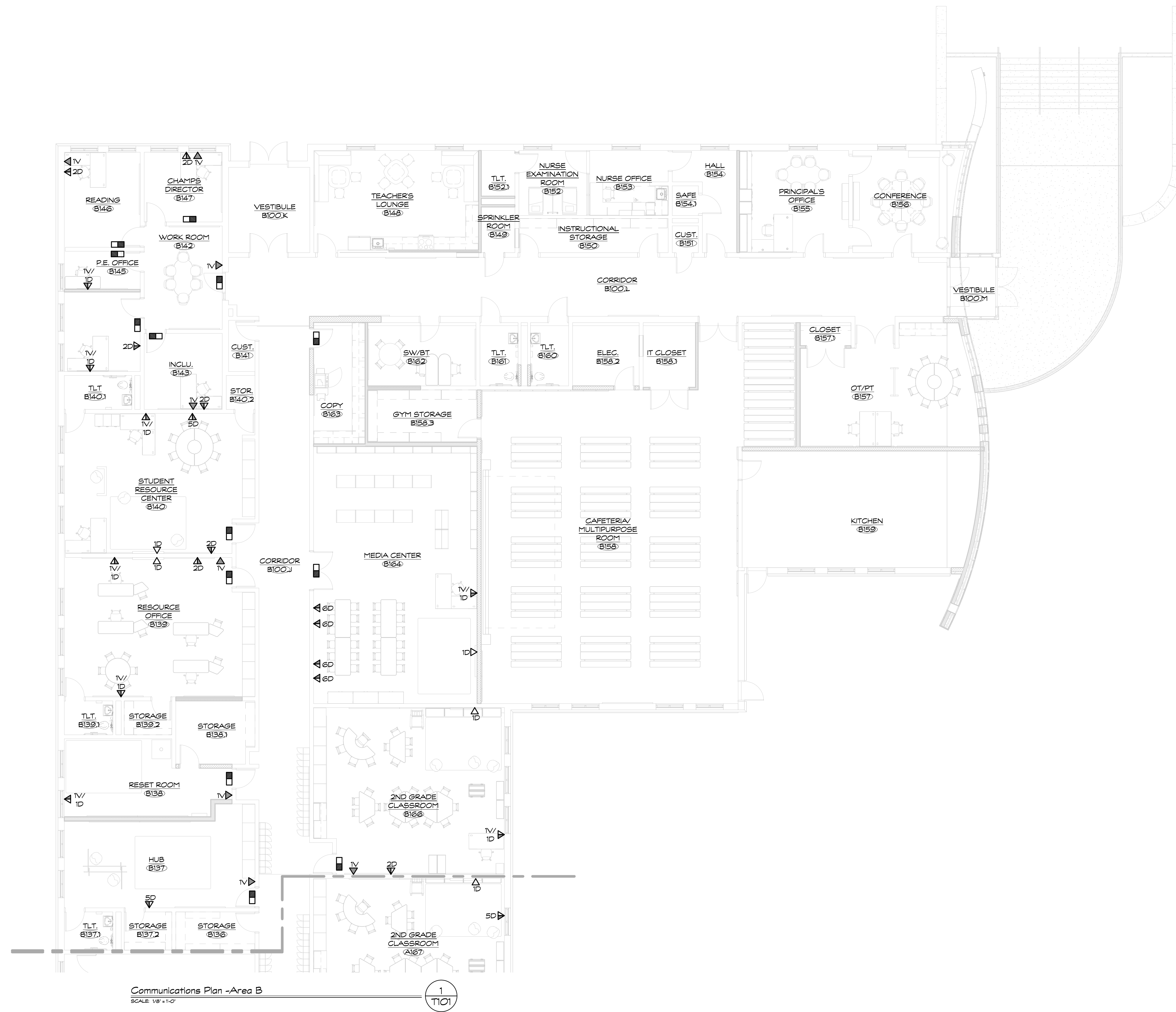


**SILVER / PETRUCELLI + ASSOCIATES**  
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 3190 Whitney Avenue, Hamden, CT 06518-2340  
 Tel. 203 230 9007 Fax. 203 230 8247  
 silverpetrucci.com

| Revision: | Description: | Date: | Revised By: |
|-----------|--------------|-------|-------------|
|           |              |       |             |
|           |              |       |             |
|           |              |       |             |
|           |              |       |             |

Drawing Title:  
**COMMUNICATIONS PLAN - AREA A**  
 State Project #: 162-0043RNV

Date: June 30, 2020  
 Scale: 1/8" = 1'-0"  
 Drawn By: MTG  
 Project Number: 18-223  
 Drawing Number: **T100**



Project Title:  
Hinsdale School Alterations  
15 Hinsdale Ave.  
Winsted, CT 06098



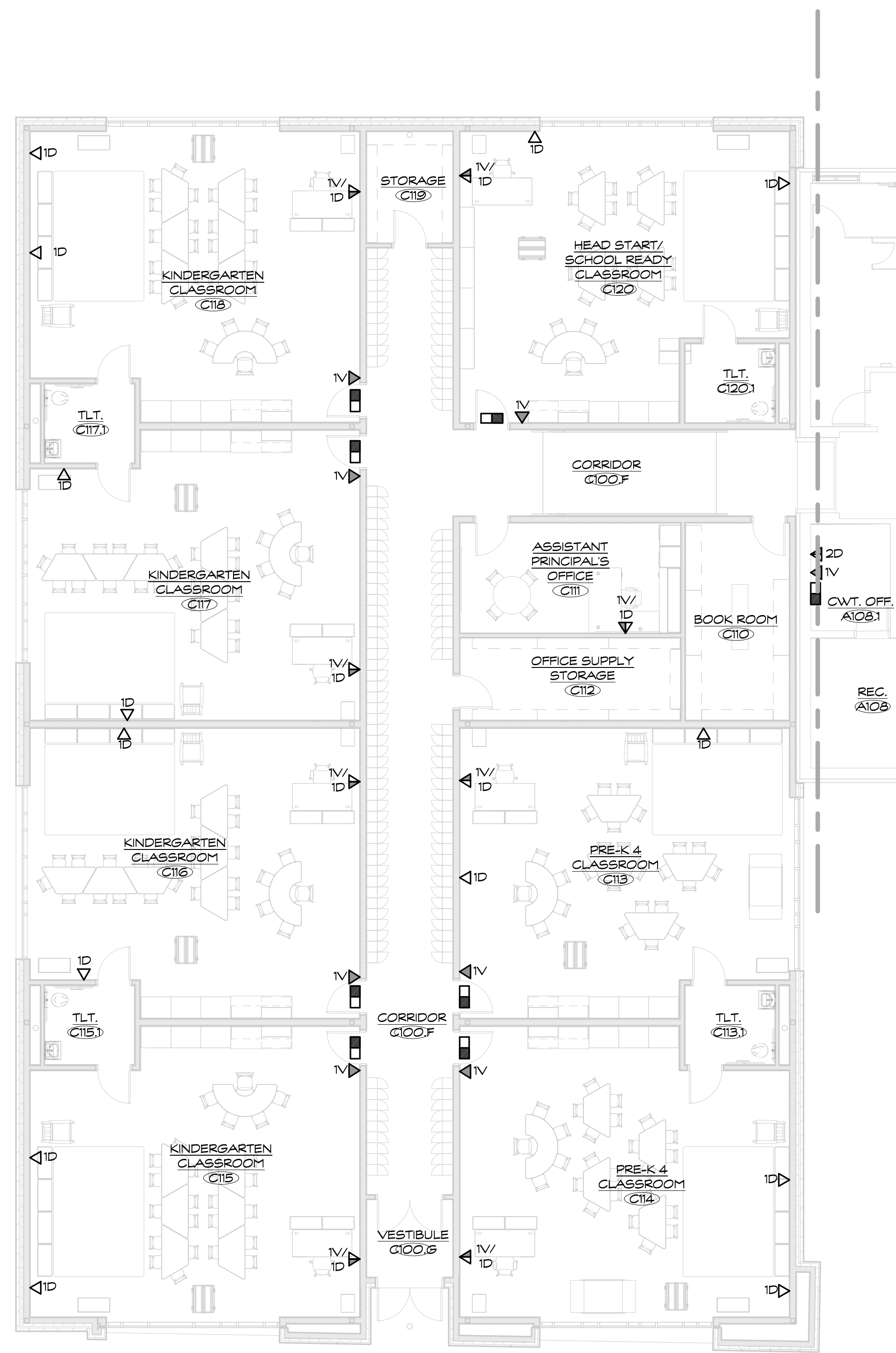
SILVER / PETRUCELLI + ASSOCIATES  
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3190 Whitney Avenue, Hamden, CT 06518-2340  
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| Revision: | Description: | Date: | Revised By: |
|-----------|--------------|-------|-------------|
|           |              |       |             |
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Drawing Title:  
COMMUNICATIONS PLAN -  
AREA B  
State Project #: 162-0043RNV

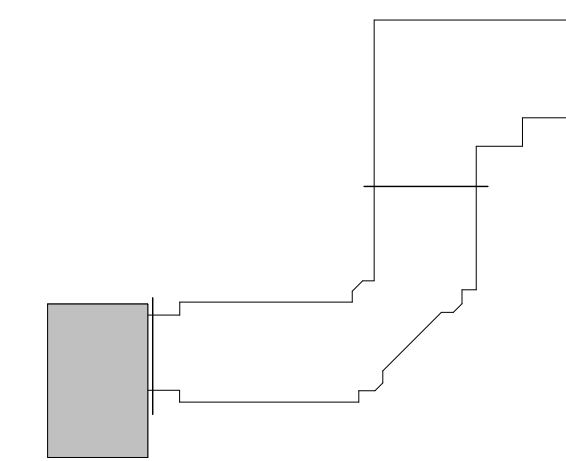
Date:  
June 30, 2020  
Scale:  
1/8" = 1'-0"  
Drawn By:  
MTG  
Project Number:  
18.223

Drawing Number:  
**T101**



Communications Plan -Area C  
SCALE: 1/8" = 1'-0"

1  
T102



Project Title:  
**Hinsdale School Alterations**  
  
15 Hinsdale Ave.  
Winsted, CT 06098



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| Revision: | Description: | Date: | Revised By: |
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|           |              |       |             |
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Drawing Title:  
**COMMUNICATIONS PLAN -  
AREA C**  
  
State Project #: 162-0043RNV

Date:  
June 30, 2020  
Scale:  
1/8" = 1'-0"  
Drawn By:  
MTG  
Project Number:  
18-223

Drawing Number:

**T102**