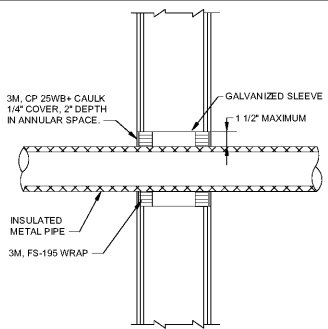


- NOTES:**
- REFER TO LATEST EDITION OF UL BUILDING MATERIAL DIRECTORY.
  - COPPER TUBING (TYPE K,L) SIMILAR (UL-395), 3 HOUR.
  - METAL CONDUIT SIMILAR (UL-49), 3 HOUR.

**NON-INSULATED METAL PIPE AND METAL CONDUIT THROUGH PENETRATION FIRESTOP SYSTEM (UL#CAJ1044) ONE, TWO, AND THREE HOUR CONCRETE AND BLOCK WALL**

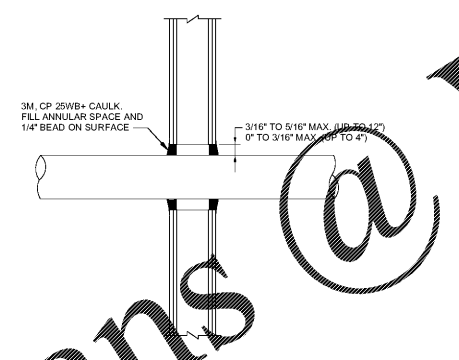
NOT TO SCALE



- NOTES:**
- REFER TO LATEST EDITION OF UL BUILDING MATERIALS DIRECTORY.
  - PROVIDE ONE WRAP FOR EACH INCH OF INSULATION THICKNESS. PROVIDE ADDITIONAL WRAPS UNTIL ANNULAR SPACE IS LESS THAN 1/4".
  - WRAP SHALL BE FRICTION FIT OR HELD IN PLACE BY 18 GAUGE STEEL WIRE

**INSULATED METAL PIPE THROUGH PENETRATION FIRESTOP SYSTEM (UL#WL5011) ONE AND TWO HOUR GYPSUM WALL**

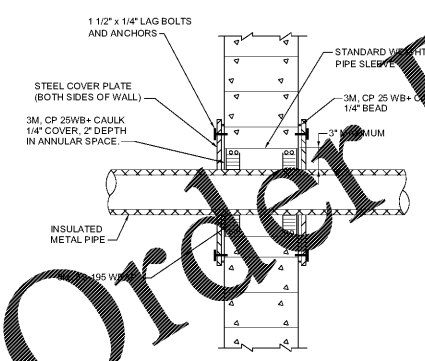
NOT TO SCALE



- NOTES:**
- REFER TO LATEST EDITION OF UL BUILDING MATERIAL DIRECTORY.
  - WALL OPENING SHALL BE CUT NEATLY. PROVIDE A SLEEVE IF THE WALL OPENING IS NOT CUT PROPERLY.

**NON-INSULATED METAL PIPE AND METAL CONDUIT THROUGH PENETRATION FIRESTOP SYSTEM (UL#WL1001) ONE AND TWO HOUR GYPSUM WALL**

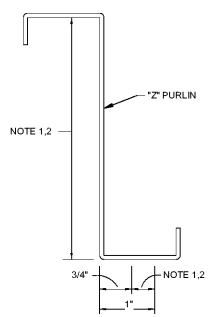
NOT TO SCALE



- NOTES:**
- SEE SPECIFICATIONS FOR PIPE SLEEVES ALLOWED.
  - PIPE SHALL BE CENTERED IN SLEEVE. DO NOT SUPPORT PIPE FROM SLEEVE.
  - PROVIDE ONE WRAP FOR EACH INCH OF INSULATION THICKNESS. PROVIDE ADDITIONAL WRAPS UNTIL ANNULAR SPACE IS LESS THAN 1/4".
  - WRAP SHALL BE FRICTION FIT OR HELD IN PLACE BY 18 GAUGE STEEL WIRE.
  - REFER TO LATEST EDITION OF UL BUILDING MATERIALS DIRECTORY.
  - STEEL COVER PLATE SHALL BE 20 GAUGE MINIMUM. BOLTS SHALL BE 6" O.C. MINIMUM. PLATE SHALL OVERLAP WALL 2" MINIMUM.
  - STEEL PLATE NOT REQUIRED ON ONE AND TWO HOUR CONSTRUCTION.

**INSULATED METAL PIPE THROUGH PENETRATION FIRESTOP SYSTEM (UL#CAJ5001) ONE, TWO, AND THREE HOUR CONCRETE AND BLOCK WALL**

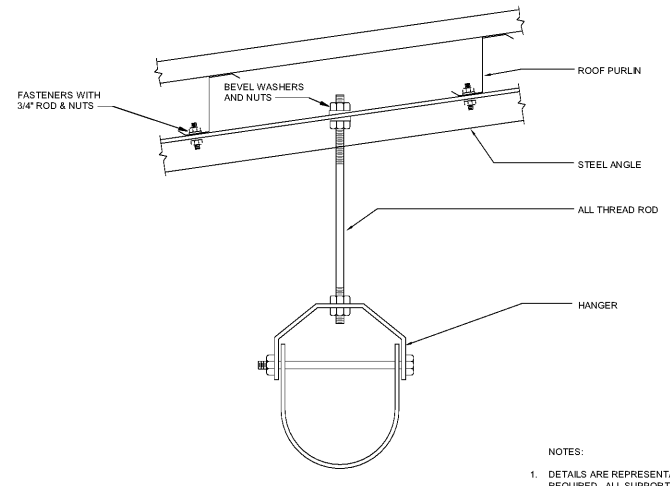
NOT TO SCALE



- NOTES:**
- CONNECTION TO "Z" PURLIN TO BE IN THIS LOCATION WHEN CONNECTION TO PURLINS ARE PERMITTED.
  - ATTACHMENTS ARE TO BE BY SAMMYS ATTACHMENTS OR APPROVED EQUALS.

**"Z" PURLIN HANGER ATTACHMENTS**

NOT TO SCALE

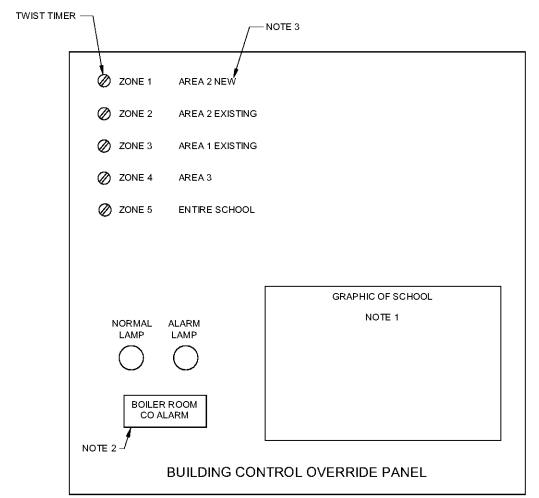


**PIPE PARALLEL TO PURLIN**

NO SCALE

**PURLIN HANGER DETAIL**

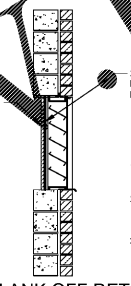
NOT TO SCALE



- NOTES:**
- THE PANEL SHALL INCLUDE A GRAPHIC DISPLAY OF THE SCHOOL WITH EACH ZONE TAGGED.
  - PROVIDE CO ALARM LAMP TO INDICATE WHEN CO LEVELS IN THE BOILER ROOM ARE NORMAL OR IN ALARM.
  - VERIFY SPACE/ZONE DESCRIPTION WITH OWNER PRIOR TO FABRICATION.

**BUILDING CONTROL OVERRIDE PANEL DETAIL**

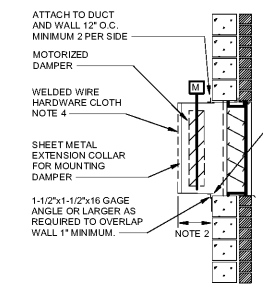
NOT TO SCALE



- NOTES:**
- SIDE OF PANEL VISIBLE FROM LOUVER SHALL HAVE A KYNAR FINISH MATCHING COLOR OF LOUVER.
  - PROVIDE REINFORCING OF PANEL AS REQUIRED ON INSIDE OF ROOM TO PROVIDE RIGIDITY. ALL PANELS OVER 20 SQ. FT. SHALL BE REINFORCED.
  - INSULATION SHALL BE ADHERED TO PANEL WITH ADHESIVE WITH 100% COVERAGE.

**LOUVER BLANK OFF DETAIL**

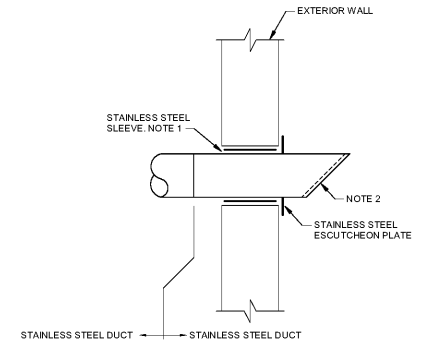
NOT TO SCALE



- NOTES:**
- SEE ARCHITECTURAL DRAWINGS FOR LOUVER SIZE AND ELEVATIONS.
  - SEE ARCHITECTURAL DRAWINGS FOR LOUVER DEPTH. IF DEPTH SHOWN, DEPTH SHALL BE 12" MINIMUM AS REQUIRED FOR DAMPER DAMPERS TO OPERATE AT 90 DEGREES WITH STRIKING LOUVER. IF DEPTH IS GREATER.
  - LOUVER WITH CUT MOTORIZED DAMPERS SHALL BE INSTALLED SIMILARLY.
  - SEE WIRE GRILLE DETAIL.
  - PLENUM WITH DUCT CONNECTIONS ARE SIMILAR BUT WITH A FULL BACK PANEL IN LIEU OF WIRE GRILLE.
  - PROVIDE A FULLY-HINGED ACCESS DOOR IN PLENUM AS SHOWN ON PLAN. IF NONE SHOWN, PROVIDE 16"x16" MIN.

**LOUVER PLENUM DETAIL**

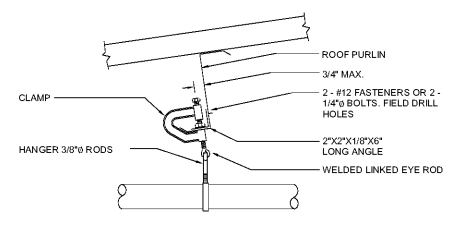
NOT TO SCALE



- NOTES:**
- SLEEVE NOT REQUIRED IN CORED CONCRETE / PRECAST WALLS.
  - 1/4" x 1/4" STAINLESS STEEL MESH.

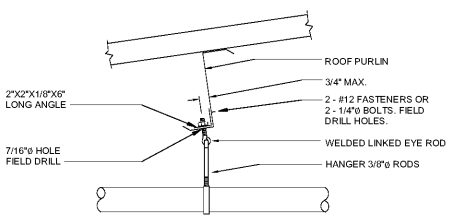
**KILN VENT THROUGH EXTERIOR WALL DETAIL**

NOT TO SCALE



**HANGER - TYPE 1**

NO SCALE



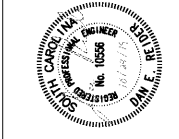
**HANGER - TYPE 2**

NO SCALE

- NOTES:**
- DETAILS ARE REPRESENTATIVE OF TYPES OF SUPPORTS REQUIRED. ALL SUPPORT DETAILS SHALL BE SUBMITTED TO A/E FOR REVIEW BY STRUCTURAL AND MECHANICAL ENGINEERS. ALL SUPPORT DETAILS SHALL BE SUBMITTED TO METAL BUILDING MANUFACTURER FOR WRITTEN APPROVAL OF SUPPORTS AND BUILDING ATTACHMENTS.
  - SEE DETAILS AND SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
  - ALL FASTENERS SHALL HAVE VIBRATION RESISTANT FASTENERS AND NUTS.
  - ALL ATTACHMENT AND SUPPORTS SHALL NOT DISTORT PURLIN SHAPE.
  - ALL ATTACHMENT HOLES IN THE PURLIN SHALL BE BETWEEN 1/4" AND 1" FROM THE VERTICAL PURLIN. THE HOLE SHALL BE SIZED NO LARGER THAN NECESSARY FOR THE ATTACHMENT.



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ISSUE	DATE
BID DOCUMENTS	10.24.19

**MILLBROOK ELEMENTARY SCHOOL - ADDITIONS AND RENOVATIONS**  
255 E PINE LOG RD, AIKEN, SC 29803  
GMC # ACOL180004

**M7.05**

HVAC DETAILS