ENGINEERING JUDGMENT FIRESTOP DETAIL

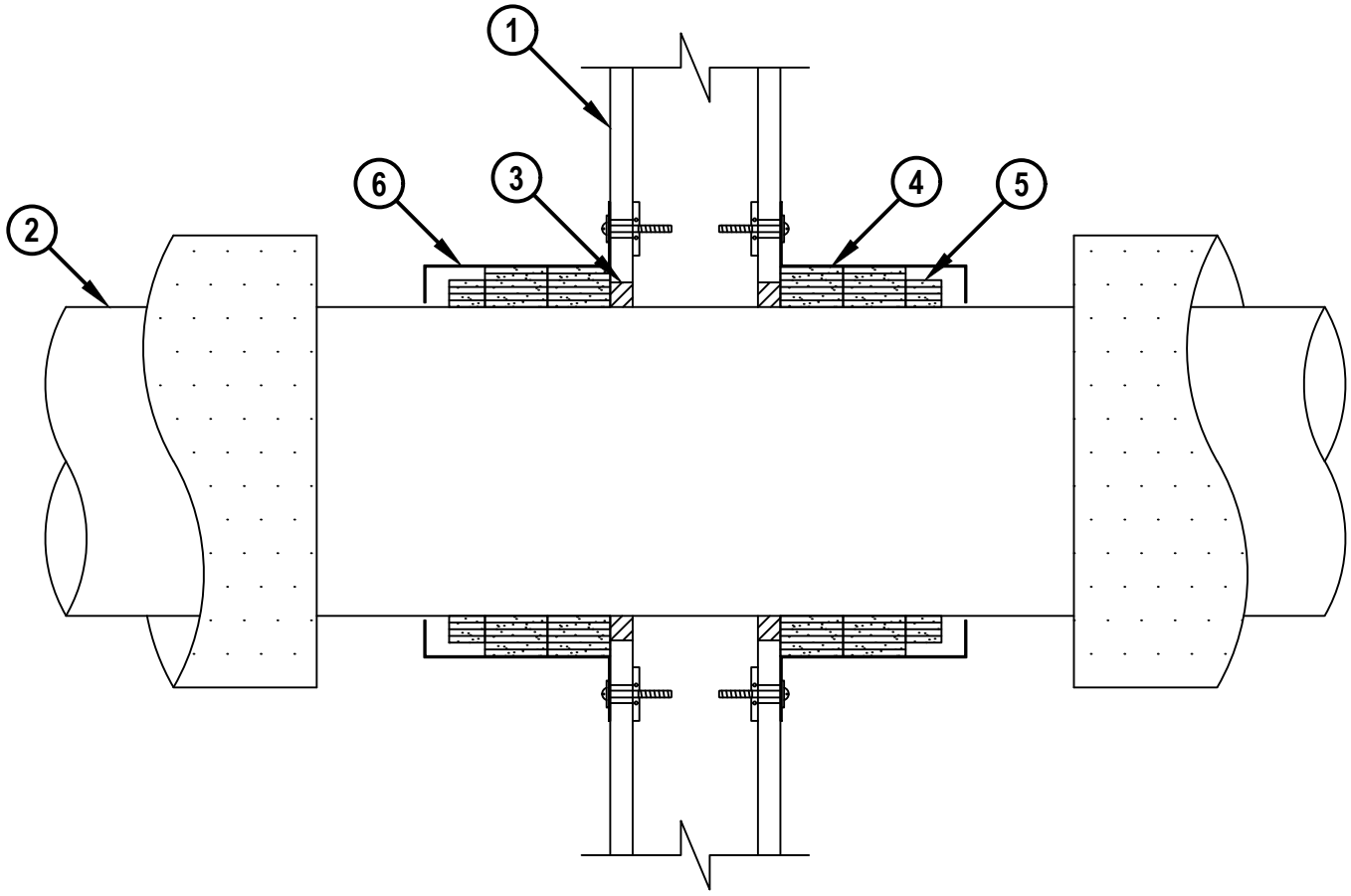
PROJECT : PRISMA ARTS HUB
ADDRESS : 5831 ASH AVE, POWELL RIVER, BC V8A 4R5

ISSUED TO : HANSON LAND & SEA-POWELL RIVER

Ratings

F-RATING = 1-HR.

CROSS-SECTIONAL VIEW



FIRESTOP SYSTEMS FOR NON-METALLIC PIPE(S), IN ACCORDANCE WITH NBCC 2015 ARTICLE 3.1.9.5.(2), 3.1.9.5.(4), 3.1.9.5.(6) AND 3.1.5.19, MAY BE REQUIRED TO BE TESTED TO CAN/ULC S115 AT A 50 Pa PRESSURE DIFFERENTIAL BETWEEN THE EXPOSED AND NONEXPOSED SIDES (WITH THE HIGHER PRESSURE ON THE EXPOSED SIDE). THIS ENGINEERING JUDGMENT IS DESIGNED BASED ON TESTING DONE AT A 2.5 Pa PRESSURE DIFFERENTIAL. CONSULT WITH THE AUTHORITY HAVING JURISDICTION FOR APPROVAL OF THIS ENGINEERING JUDGEMENT PRIOR TO INSTALLATION.

HILTI, Inc.
Plano, Texas USA (800) 879-8000

Designed by Hilti FPE
Jessica Starks

Drafter

Sheet 1 of 3

Scale 3/16" = 1"

Date Oct. 30, 2025

Drawing No.
698747a

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1. **GYPSUM WALL ASSEMBLY (UL CLASSIFIED U300, U400, V400, OR W400 SERIES) (1-HR. FIRE-RATING) TO INCLUDE THE FOLLOWING CONSTRUCTION FEATURES :**
   - **A. [NOT SHOWN] WOOD STUDS TO CONSIST OF NOMINAL 2" x 4" LUMBER (SPACED MAXIMUM 16" OC). STEEL STUDS TO BE MINIMUM 3-1/2" WIDE (SPACED MAXIMUM 24" OC).**
   - **B. NOMINAL 5/8" THICK GYPSUM WALLBOARD. TYPE, NUMBER OF LAYERS, AND SHEET ORIENTATION AS SPECIFIED IN THE INDIVIDUAL UL DESIGN.**
2. **MAXIMUM 8" NOMINAL DIAMETER ABS PLASTIC PIPE (SCHEDULE 40) (CLOSED OR VENTED PIPING SYSTEM) WITH MAXIMUM 2" THICK GLASS-FIBER PIPE INSULATION (SEE NOTE BELOW).**
3. **MINIMUM 5/8" DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT.**
4. **HILTI CP 648E WRAP STRIP (NOMINAL 3/16" THICK x 1-3/4" WIDE) CONTINUOUSLY WRAPPED AROUND THE OUTER CIRCUMFERENCE OF THE PIPE, COVERING SIX TIMES, WITH ENDS BUTTED AND HELD IN PLACE WITH TAPE. BUTTED ENDS IN SUCCESSIVE LAYER SHALL BE OFFSET. TWO STACKS OF SIX LAYERS SHALL BE INSTALLED AND BUTTED TIGHTLY TO WALL SURFACES.**
5. **HILTI CP 648E WRAP STRIP (NOMINAL 3/16" THICK x 1" WIDE) WRAPPED AROUND THE OUTER CIRCUMFERENCE OF THE PIPE, COVERING FOUR TIMES, BUTTED TO OUTER WRAP STRIP (ITEM 4) ON BOTH SIDES OF WALL.**
6. **HILTI Z-FRAME (2" UPPER LEG, 5" DEEP, 1" LOWER LEG) BUTTED TIGHTLY AGAINST WRAP STRIP MATERIAL. Z-FRAME TO FORM AN ENCLOSURE AROUND WRAP STRIP MATERIAL. 2" LEG BUTTED TIGHTLY TO WALL. EVERY TAB OF Z-FRAME SECURED TO WALL WITH MIN 3/16" HOLLOW WALL ANCHORS IN CONJUNCTION WITH 1" WASHERS THROUGH EACH OF THE ROUND 3/8" DIAMETER PRE-MADE HOLES IN OUTER EDGE OF Z-FRAME. UPPER AND BOTTOM SECTIONS OF Z-FRAME EXTENDED TO OVERLAP ONTO STEEL STUD FRAMING TO ENSURE ANCHORING ONTO THE FRAMING.**
7. **[NOT SHOWN] ONE HILTI CP 643N ATTACHMENT CLIP USED AT FOUR CORNERS OF Z-FRAME ENCLOSURE (AT MID-HEIGHT OF ENCLOSURE) AND FASTENED TO Z-FRAME AT EACH LEG WITH 3/4" LONG SHEET METAL SCREWS.**
8. **[NOT SHOWN] STEEL SHEET METAL COVER PLATE (24 GA.) COVERING BOTTOM OF Z-FRAME ENCLOSURE AND CUT TO WITHIN 1/4" OF PIPE. COVER PLATE TO BE TWO PIECES WITH 1" OVERLAP AT THE SEAM. COVER PLATE SECURED TO BOTTOM OF Z-FRAME ENCLOSURE WITH 3/4" LONG SHEET METAL SCREWS (MINIMUM FIVE SCREWS ON EACH SIDE, WITH ONE SCREW AT OVERLAP LOCATION OF TWO PIECE COVER PLATE AND ONE SCREW AT EACH CORNER).**

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Saving Lives through Innovation and Education

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NOTES :

1. MAXIMUM DIAMETER OF OPENING = 10".
2. ANNULAR SPACE = MINIMUM 1/2", MAXIMUM 1-1/2".
3. AS AN ALTERATIVE TO SHEET METAL COVER PLATE (ITEM 8), HILTI CFS-COS COMPOSITE SHEET MAY BE USED AS COVER PLATE MATERIAL.
4. INSULATION TO BE REMOVED THROUGH OPENING AND FIRESTOP MATERIAL.

Referenced Tested Systems
(REFERENCE : UL SYSTEM NO. W-L-2741, C-AJ-2409, & W-L-2447; cUL SYSTEM NO. C-AJ-2836 & W-L-2018)

Project Application Details
CSO0007011

Applicable Test Method
CAN/ULC S115-23

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