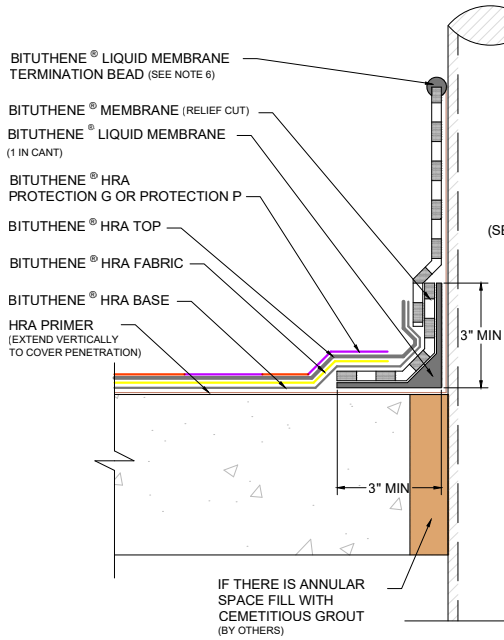
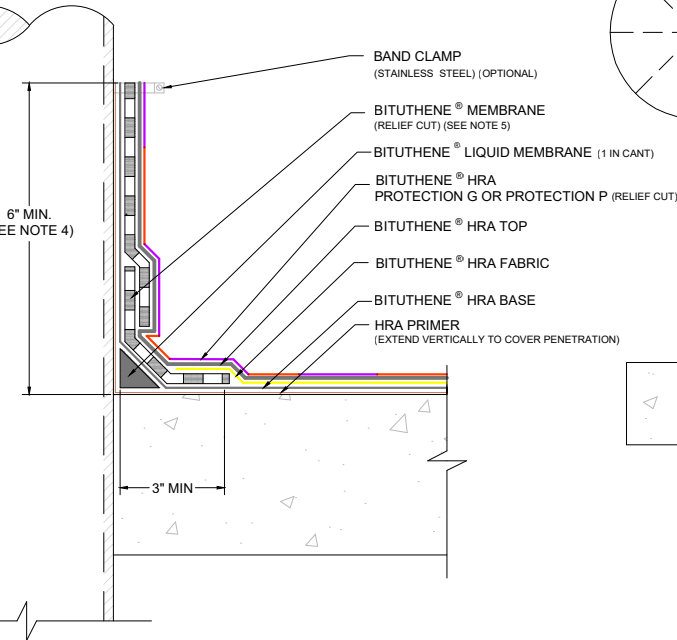


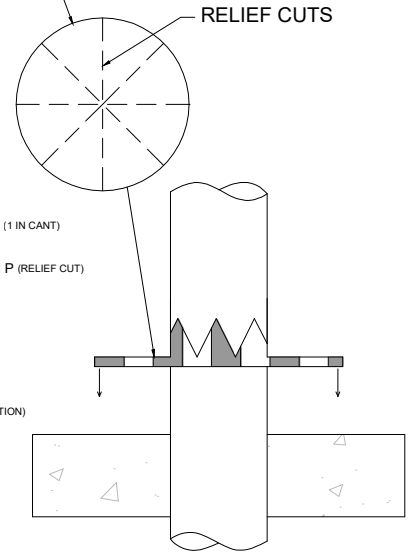
OPTION A



OPTION B



PENETRATION PROFILE



NOTES:

1. PENETRATION MUST BE PROPERLY SECURED TO STRUCTURE TO PREVENT VERTICAL OR LATERAL MOVEMENT. EXPOSED DECK CLAMPS ARE NOT APPROPRIATE.
2. PIPE MATERIALS (PVC, COPPER, BRASS) MAY REQUIRE ABRASION, IN ADDITION TO WIPING WITH SOLVENT FOR PROPER ADHESION OF HRA. METAL PIPES MUST BE FREE OF ALL OIL AND RUST.
3. THE SAME DETAILING ABOVE WOULD BE EMPLOYED FOR PENETRATIONS THROUGH VERTICAL/FOUNDATION WALL APPLICATIONS.
4. IN COVERED/BURIED CONDITIONS, THE FLASHING DETAIL SHOULD BE EXTENDED AS HIGH AS POSSIBLE. FLASHING MUST BE TERMINATED AT OVERBURDEN LEVEL AND NO LESS THAN 6" ABOVE SUBSTRATE
5. BITUTHENE[®] 3000, 4000, OR LT ARE ACCEPTABLE
6. BITUTHENE[®] MASTIC OR BITUTHENE[®] HRA CAN BE USED IN PLACE OF BITUTHENE[®] LIQUID MEMBRANE TERMINATION BEAD
7. FOR PERMANENTLY EXPOSED AREAS, BITUTHENE[®] HRA CAP IS ALSO ACCEPTABLE AS A PROTECTION COURSE



PIPE PENETRATION

BITUTHENE[®] HRA WATERPROOFING SYSTEM

DRAWING: HRA-003

SCALE: NOT TO SCALE

EFFECTIVE DATE: 01-30-2026

SUPERCEDES: N/A