



Reduction In Thickness Of Fire Separation By Beams And Joists

The Building Standards Department issues Builder Tips as part of our customer service program. They are designed to provide an improved understanding of the Building Code and to reduce the costs associated with correcting infractions. Please contact your area building inspector for further information or call the Building Standards Department at 905.475.4848 extension 2189

9.10.9.11. Reduction in Thickness of Fire Separation by Beams and Joists

(1) Where pockets for the support of beams or joists are formed in a masonry or concrete fire separation, the remaining total thickness of solid masonry and/or grout and/or concrete shall be not less than the required equivalent thickness shown for Type S monolithic concrete in Table 2.1.1. of MMAH Supplementary Standard SB-2 “Fire Performance Ratings,” for the required fire-resistance rating.

2012 Supplementary Standard SB-2

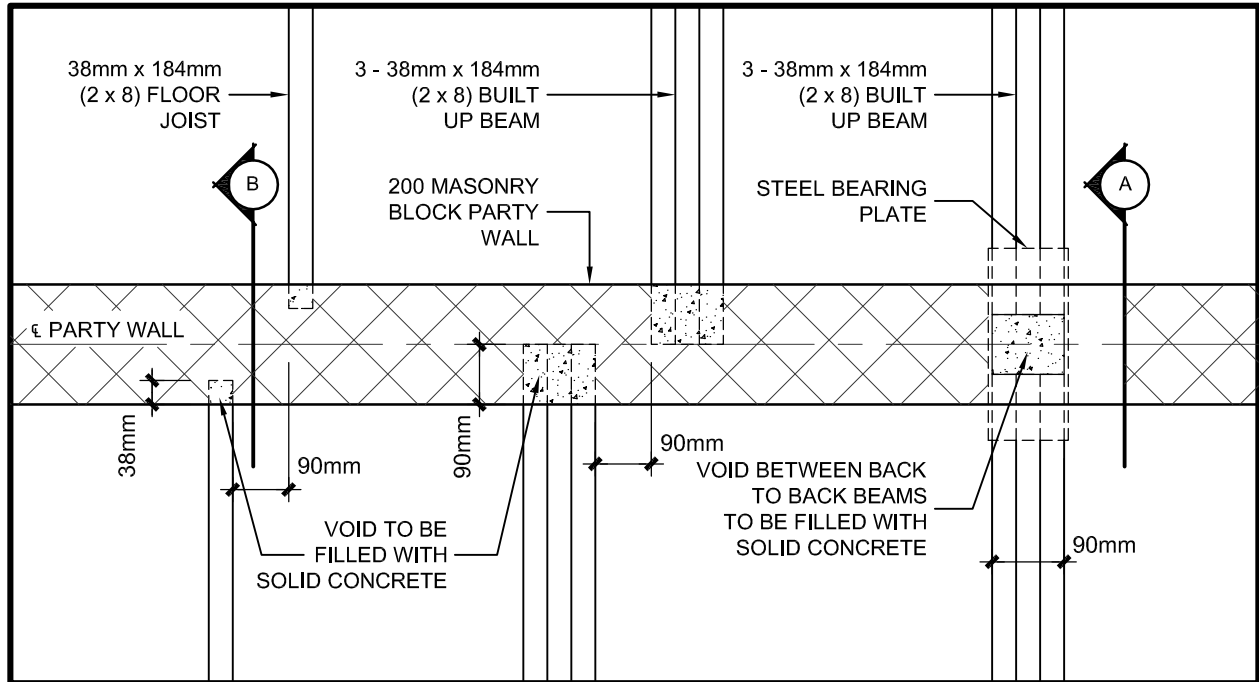
2.2.1. Minimum Equivalent Thickness for Fire Resistance Rating

(1) The minimum thicknesses of unit masonry and monolithic concrete walls are shown in Table 2.1.1. Hollow masonry units and hollow-core concrete panels shall be rated on the basis of equivalent thickness as described in Section 1.6.

OBJECTIVE

Where back to back beams are installed at 8” thick concrete block or poured in place party walls, provisions must be made to ensure the fire separation of the walls are not compromised by the reduction of the masonry thickness caused by the beams bearing requirements. Beams generally require 3.5” min (90mm) bearing. On an 8” (184mm) wall, the space left by the beam bearing would be only 1” (25mm) thick and would not be sufficient to provide the 1 HR fire separation required.

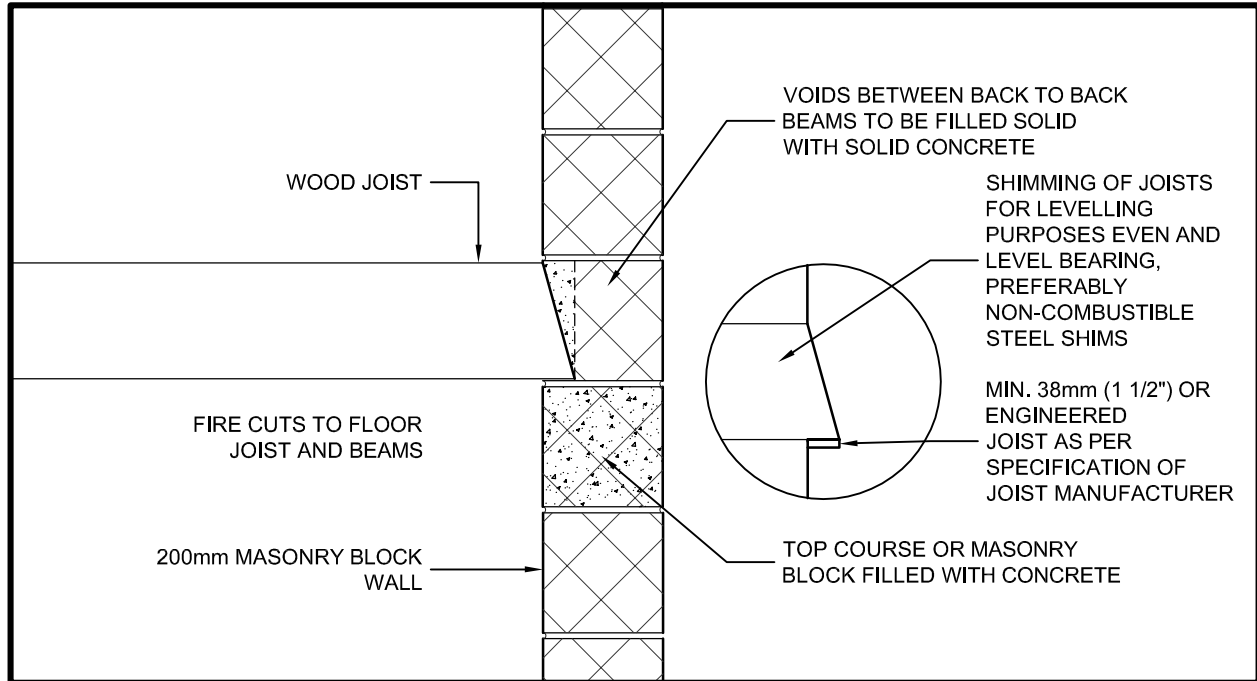
To overcome this problem, a steel bearing plate can be installed to provide proper bearing for the beams and to maintain the fire rating required. An equivalent masonry thickness for 1 hour fire rating shall be provided. Refer to the illustration below for details.



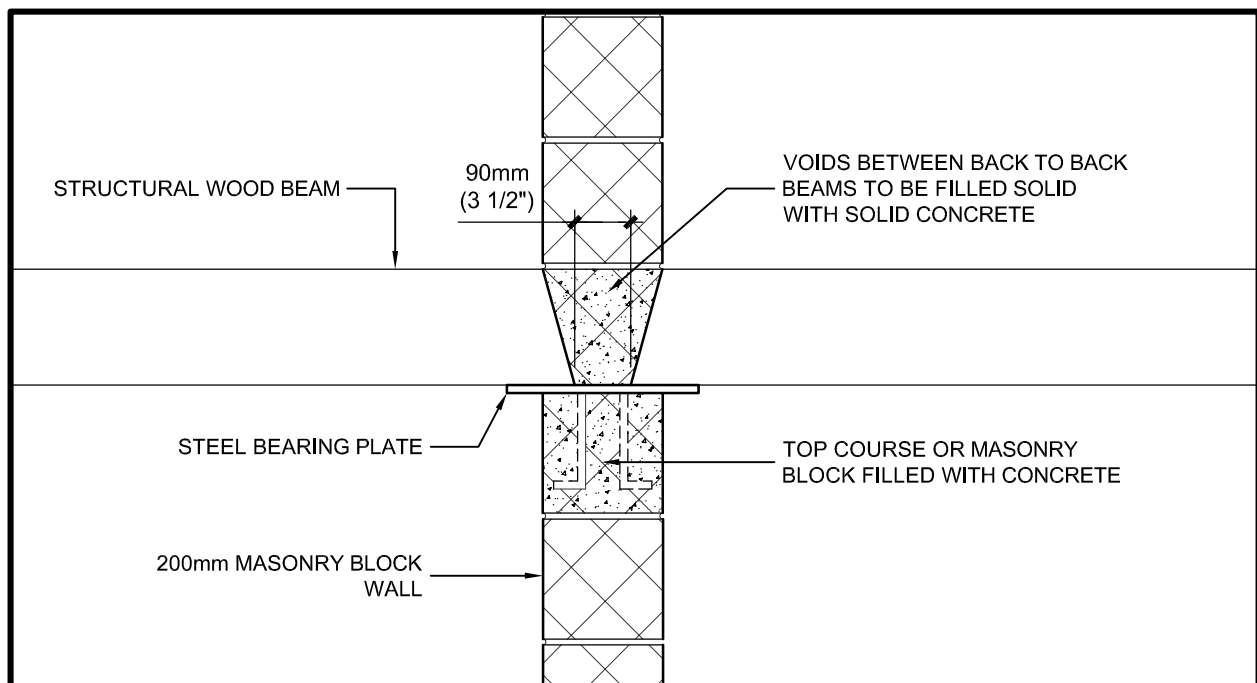
PLAN DETAIL

EXTRACTED FROM TABLE 2.1.1. MINIMUM EQUIVALENT THICKNESS OF UNIT MASONRY AND MONOLITHIC CONCRETE WALL LOADBEARING AND NON-LOADBEARING, mm

TYPE OF WALL	FIRE RESISTANCE RATING
	1 HOUR
MONOLITHIC CONCRETE AND CONCRETE PANELS, EQUIVALENT THICKNESS • TYPE S CONCRETE	90



DETAIL B



DETAIL A