



# Header Wrap Air Barrier

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

## 9.25.3.1. Required Barrier to Air Leakage

(1) Wall, ceiling and floor assemblies that separate conditioned spaces from unconditioned spaces or from the ground shall be constructed so as to include an air barrier system that will provide a continuous barrier to air leakage

(a) from the interior of the building into wall, floor, attic or roof spaces sufficient to prevent excessive moisture condensation in such spaces during the winter, and

(b) from the exterior or the ground inward sufficient to

(i) prevent moisture condensation on the room side during winter,

(ii) ensure comfortable conditions for the occupants, and

(iii) minimize the ingress of soil gas.

(See Note A-9.25.3.1.(1))

(2) The continuity of the air barrier system shall extend throughout the basement.

## 9.25.3.2. Air Barrier System Properties (See Note A-9.25.5.1.(1))

(1) Sheet and panel type materials intended to provide the principal resistance to air leakage shall have an air leakage characteristic not greater than 0.02 L/(s•m<sup>2</sup>) (0.004 cfm/ft<sup>2</sup>) measured at an air pressure differential of 75 Pa (0.011 psi).

(2) Where polyethylene sheet is used to provide the airtightness in the air barrier system, it shall conform to CAN/CGSB-51.34-M, "Vapour Barrier, Polyethylene Sheet for Use in Building Construction".

## 9.25.3.3. Continuity of the Air Barrier System

(1) Where the air barrier system consists of an air impermeable panel type material, all joints shall be sealed to minimize air leakage.

(2) Where the air barrier system consists of flexible sheet material all joints shall be

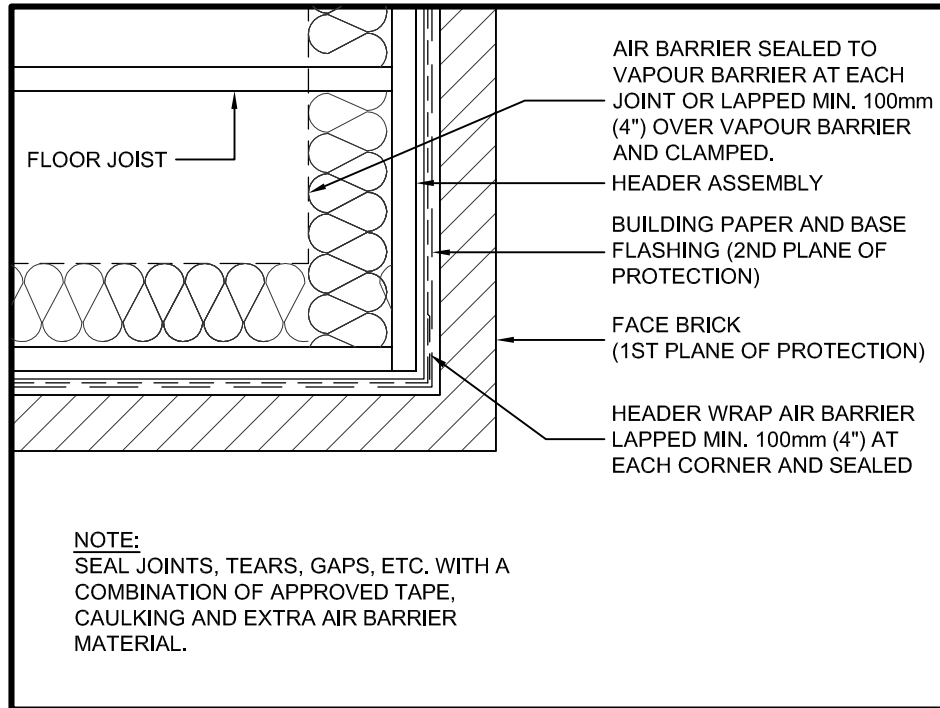


- (a) sealed with compatible material such as tape or flexible sealant, or
  - (b) except in Sentence (2.1), lapped at least 100 mm (4 in) and clamped, such as between framing members, furring or blocking and rigid panels.
- (5.1) Where a header wrap is used as an air barrier, it shall be sealed or lapped to the wall air barrier above and below in accordance with Sentences (1) and (2).

## **OBJECTIVE**

Negative pressures induced by the stack effect and exhaust appliances contribute to multiple leaks at various locations in the building envelope. The junction at the foundation and the floor header assembly is a major source of air leakage. Wrapping the header assembly with a flexible sheet air barrier is a common method of achieving an effective air barrier system.

To achieve an effective air barrier at the corners of the header assemblies, the air barrier material must be continuous. Sealing these areas with an acoustical sealant or an approved sheathing tape is necessary at all seams. Bridging gaps with the air barrier material may also be necessary. Refer to the accompanying illustration for more details.



## PLAN VIEW