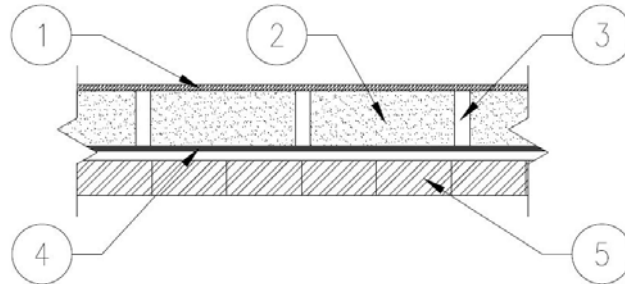


**Canadian Plastics Industry Association**  
**Design No. CPIA/CWP 45-01**  
**Asymmetrical Exterior Wall Assembly**  
**CAN/ULC S101 – 2007 Edition; ASTM E119 – 2015 Edition**  
**Rating: 3/4 Hour (Rated from the Interior Side Only)**  
**Superimposed Load: 58.23 kN/m**



1. **GYP SUM BOARD:** One layer of 5/8 in. Type X gypsum wallboard complying with ASTM C1396, oriented horizontally on the interior side and fastened using 1-1/2 in. Type S drywall screws, spaced 8 in. on center (oc) along the edges and 12 in. in the field.
2. **INSULATION:** Min. R-20 un-faced glass fiber insulation compression fit into the stud cavity resulting in an R-19 insulation.
3. **WOOD STUDS:** Nominal 2 x 6 Douglas Fir No. 1/2 wood studs spaced at a max. 16 in. oc spacing with wood blocking every 4 ft. vertically.
4. **FOAM SHEATHING:** Min. 1/2 in. up to a max. 4 in. thick foam sheathing certified as meeting the requirements stated in Table 1, attached directly to the exterior side of the wood studs using steel spiral ring nails, embedded 1 in. into the studs, and 1 in. diameter metal cap washers, spaced 6 in. oc along the edges and 12 in. in the field.
5. **EXTERIOR CLADDING:** Masonry units must comply with CSA A82 or ASTM C216 for clay brick, CSA A165.2, ASTM C55 or ASTM C1634 for concrete brick, CSA A165.1 or ASTM C90 for concrete block, or ASTM C73 for calcium silicate brick. The masonry units must have a min. 3-1/2 in. (90 mm) bed depth and not more than 25% voids, and be installed as follows:
  - a) Corrugated strip ties having a width of not less than 22 mm and thickness of not less than 22 GA, attached through the foam sheathing to the wood studs at spacings not exceeding 16 in. oc horizontally and 24 in. vertically, using fasteners having a pullout capacity not less than that provided by steel spiral nails embedded not less than 1-1/4 in. into the wood studs.
  - b) Max. 1 in. air space between the masonry units and foam sheathing.
  - c) Type N or Type S mortar.
  - d) Raked or concave mortar joint profile.

**Table 1 – Foam Sheathing Types**

Foam Sheathing	Material Standard	Type Specifications
Expanded Polystyrene (EPS)	CAN/ULC S701	Types 1, 2, or 3
	ASTM C578	Types I, II, VIII, IX, XIV or XV
Extruded Polystyrene (XPS)	CAN/ULC S701	Types 2, 3, 4
	ASTM C578	Types IV, V, VI, VII or X
Polyisocyanurate	CAN/ULC S704	Types 1, 2 or 3 faced
	ASTM C1289	Types I or II faced