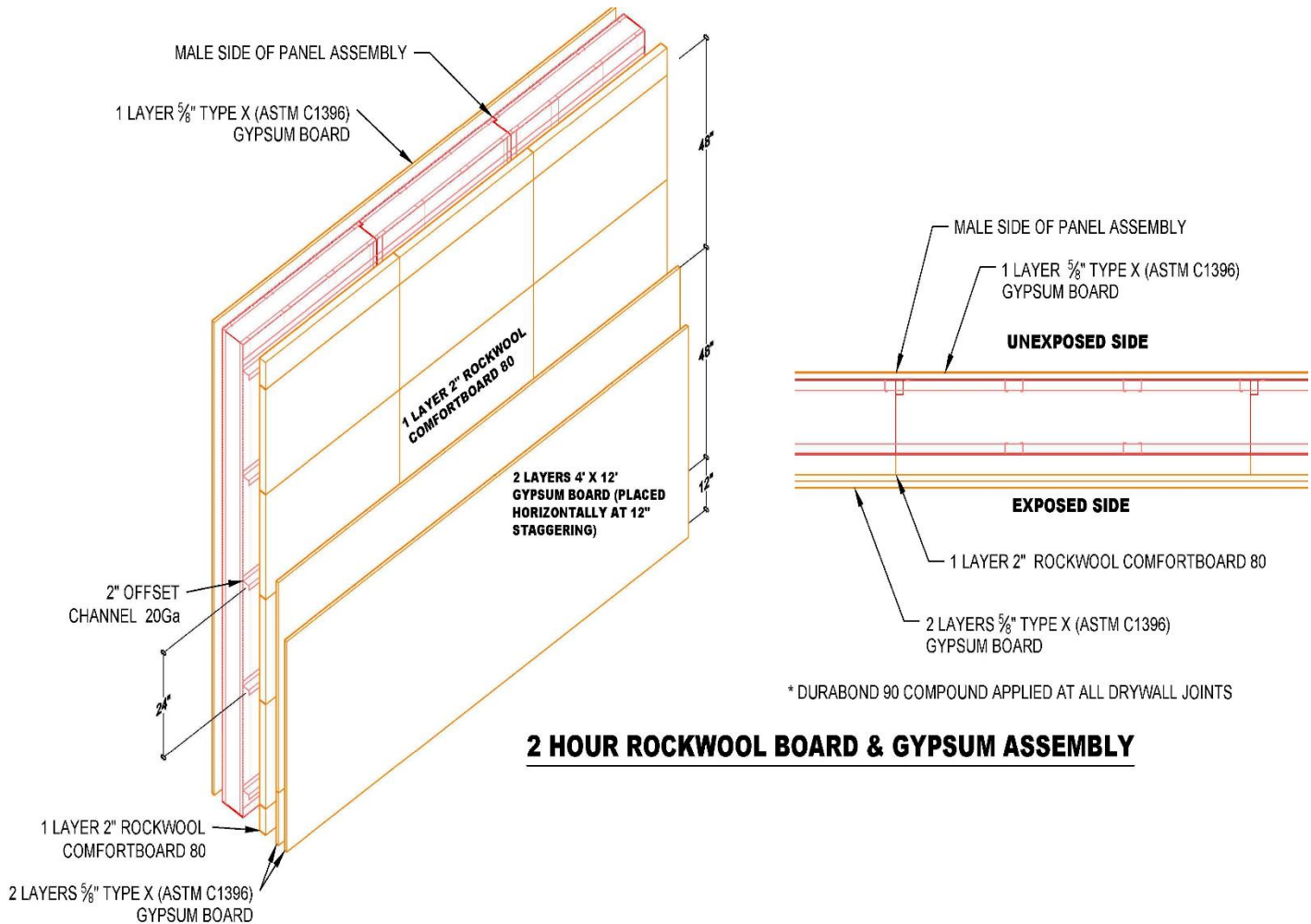


**QAI Design B1122-1b – Greenstone Building Products Ltd. – CAN/ULC-S101 / ASTM E119
 2 Hour Fire-Resistance Rated Non-Load Bearing Prefabricated Wall Assembly – Interior Facing Fire**



2 HOUR ROCKWOOL BOARD & GYPSUM ASSEMBLY

* DURABOND 90 COMPOUND APPLIED AT ALL DRYWALL JOINTS

COMPONENT	DESCRIPTION
Wall Assembly	Manufacturer: Greenstone Insulated Composite Envelope (ICE) Panel.
	Minimum Thickness: 7.5 in. (191 mm).
	Installation Description: ICE panels installed with 2 layers of 5/8 in. (16 mm) Type X gypsum on each panel face. Panel connections to top track, bottom track and adjacent panels per Greenstone Connection details manual and this report. Assembly incorporates mineral batt insulation at 2 in. (51 mm) thickness on assembly side exposed to fire (interior).
Wall Stud¹	Minimum 20 Ga (1.25 mm ¹) x 2-1/2 in. (64 mm) x 1-3/16 in. (30 mm) steel C-channel wall studs. The end studs at the joint have a 1/8 in. (3 mm) x 1 in. (25 mm) jog in the channel along the 2-1/2 in. (64 mm) dimension. Studs are to be spaced at maximum 16 in. (406 mm) on center (OC).
Top Track¹	Minimum 16 Gauge (1.65 mm) x 3-1/2 in. (89 mm) x 1-1/4 in. (32 mm) J-shaped steel channel with a 1/2 in. (13 mm) return. Fastened to the wall studs with #10x3/4 in. length (19 mm) self-tapping pan head screws.
Bottom Track¹	Minimum 2 in. (51 mm) x 2 in. (51 mm) steel angle shall be placed underneath the bottom track on both sides of the wall. Fastened to each stud with one #10x3/4 in. (19 mm) length self-tapping pan head screw.
Connection Plates¹	Minimum 18 Gauge (1.25 mm) x 6 in. (152 mm) x 2 in. (51 mm) steel plates fastened using six #10 x 3/4 in. (19 mm) self-tapping pan head screws. The plates are to be placed at maximum 2 ft (610 mm) starting 6 in. (152 mm) from panel top.

Foam Insulation	Type:	Type II Expanded Polystyrene (EPS) per ASTM C578, listed by approved agency.
	Density:	1.65 lbs/ft ³
Interior Insulation Channel	Dimensions:	20 Gauge (0.95 mm) thickness Z-bar of 3 in x 2 in. x 3 in. (76 mm x 51 mm x 76 mm), connected to the Greenstone ICE wall studs.
	Spacing:	24 inches (610 mm) on center, oriented horizontally.
Interior Mineral Wool Insulation	Manufacturer:	Rockwool
	Type:	ComfortBatt 80
	Thickness:	Minimum 2 in. (51 mm)
	Installation:	Insulation is friction fit between interior insulation channel on the interior Greenstone ICE panel face.
Interior Sheathing	Type:	2 layers of Type X gypsum board compliant with ASTM C1396, listed by approved agency. Gypsum is oriented horizontally.
	Minimum Thickness:	5/8 in. (16 mm).
	Fastener Detail:	Both layers are to be fastened at maximum 8 in. (203 mm) OC along the longitudinal perimeter, and at 24 into each Z-bar at vertical gypsum edges. Spacing of fasteners is 12 in. (305 mm) in the field. The first layer is to be fastened using #6 x 1-1/4 in. (32 mm.) Type S drywall screws. The second layer shall be fastened using #6 x 2 in. (51 mm) Type S drywall screws. Screws are anchored into horizontal insulation Z bar channel. All screw heads are to be covered with code compliant drywall compound. Gypsum joints are offset a minimum of 24 in. (610 mm) OC. Vertical joints of the gypsum board do not require blocking.

Notes:

1. All steel materials shall be size determined in accordance with CSA S136 / AISI S100 with thickness and dimensions of steel noted above met.
2. The listed assembly is evaluated for interior fire exposure to fire only.