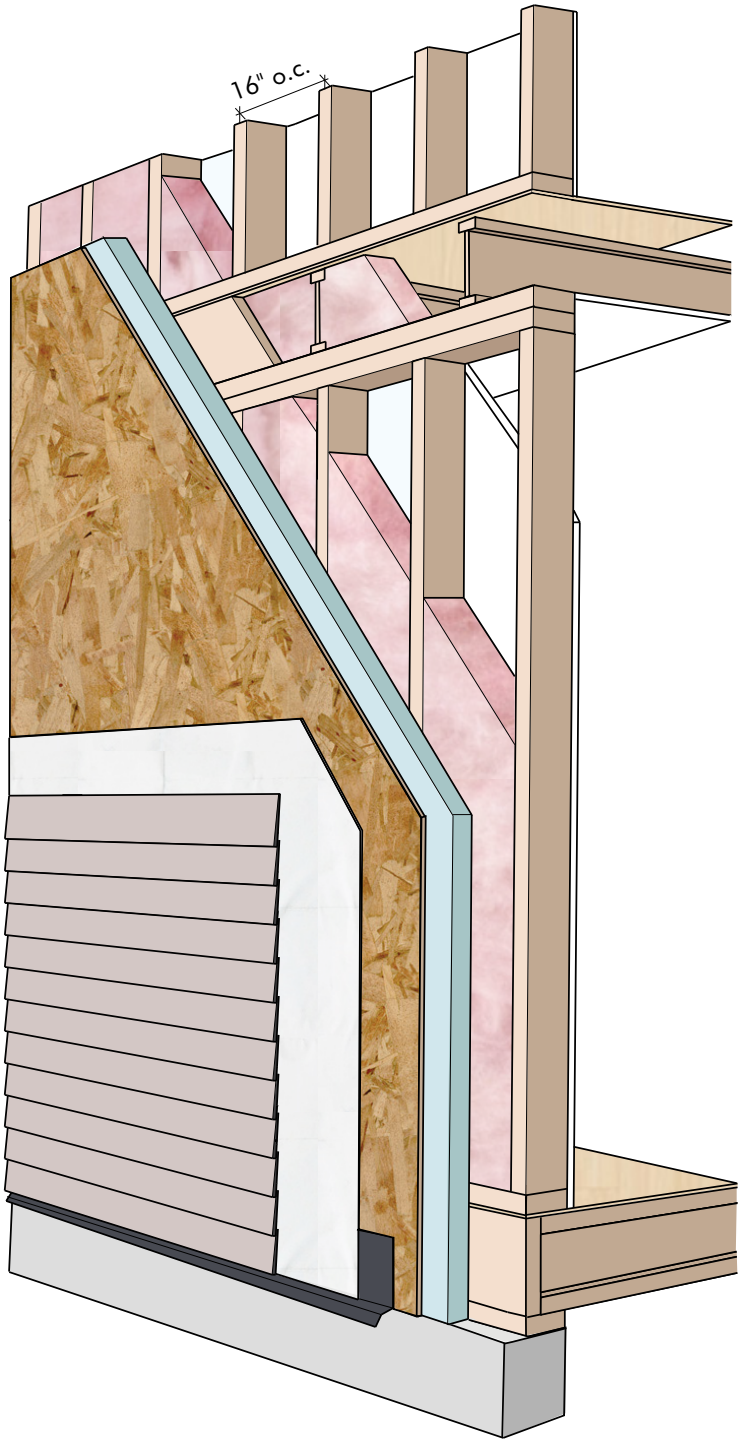
WALL 2N



Notes:
1. Wood structural panels can be installed vertically or horizontally.
2. Provide proper gap between wood structural panel and concrete as per local code requirements and manufacturer recommendations.
3. Nail lines, panel terminations, and flashing depicted in this graphic are for illustrative purposes only. Actual construction details may differ depending on local code and application requirements.

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WALL 2N

WALL ASSEMBLY #2 – 2N

REQUIRED NOMINAL R (RSI): 14 + 7.5 CI (2.46 + 1.32 CI)

EFFECTIVE R (RSI)	OUTSIDE	NOMINAL R (RSI)
0.17 (0.03)	Exterior Air Film	7.5 ci (1.32 ci) 14 (2.46)
0.62 (0.11)	Vinyl Cladding (No Air Space)	
0	Building Paper	
0.62 (0.11)	7/16" (11.1mm) Wood Structural Panel Sheathing	
7.57 (1.33)	1.5" (38.1mm) XPS	
9.20 (1.62)	2x4 SPF w. R14 batt @ 16" o.c.	
0	Polyethylene	
0.45 (0.08)	1/2"(12.7mm) Gypsum Board	
0	1 Coat Latex Primer and Paint	
0.68 (0.12)	Interior Air Film	
19.31 (3.40)	**INSIDE**	**14 + 7.5 CI (2.46 + 1.32 CI)**

Complexity

This wall is moderately easy to construct. Trades can easily understand the methodology used to construct this assembly. Special care must be taken to ensure adequate fasteners for thicker levels of rigid insulation. The structural wood panel may act as a nailing base for the vinyl siding as well as brick tie attachment and may also be used as a substrate for stucco and/or foam plastic sheathing. A wood sheathing panel thickness of 7/16" is recommended to provide adequate racking resistance for the assembly. It may be possible to build this wall in a prefabrication process.

Cost

This wall may be expensive to construct. Material costs are typically high for some of the wall assembly components such as thick Exterior insulating sheathing. Labour unions may charge premiums for installation of some Exterior insulating sheathings depending on type and location in the assembly. Additional time for construction details may result in added labour costs.

Moisture Vulnerability

This wall is moderately durable. The vinyl siding acts as a rain screen and is non-absorptive, helping to avoid solar-driven moisture issues. To improve drying to the inside, a variable permeance smart vapour retarder may be used as an alternative to polyethylene. Proper detailing around penetrations such as windows and doors is required to minimize any risk of moisture related issues. On-site construction moisture must also be appropriately managed.