PrimeFab

PRIME Panels

PrimePanel
PH-FR

Prefabricated High-Performance Wood Panel System

A factory-built, precision-framed wall panel system **designed to support Passive House-aligned and low-TEDI enclosure strategies** - delivering a weather-tight building envelope in days, not weeks

Up to R-32	Precision Panels	Days, Not Weeks
EFFECTIVE R-VALUE	FACTORY BUILT	WEATHER-TIGHT

3. BEST-FIT APPLICATIONS

Where PrimePanel PH-FR Performs

- Low-rise residential
- Mid-rise residential with Mass-Timber Structure
- Multifamily housing and townhome clusters
- Educational, civic, and light commercial
- Accelerated community housing and infill projects
- Projects targeting low-TEDI or near-Passive House design intent

4. SYSTEM OVERVIEW

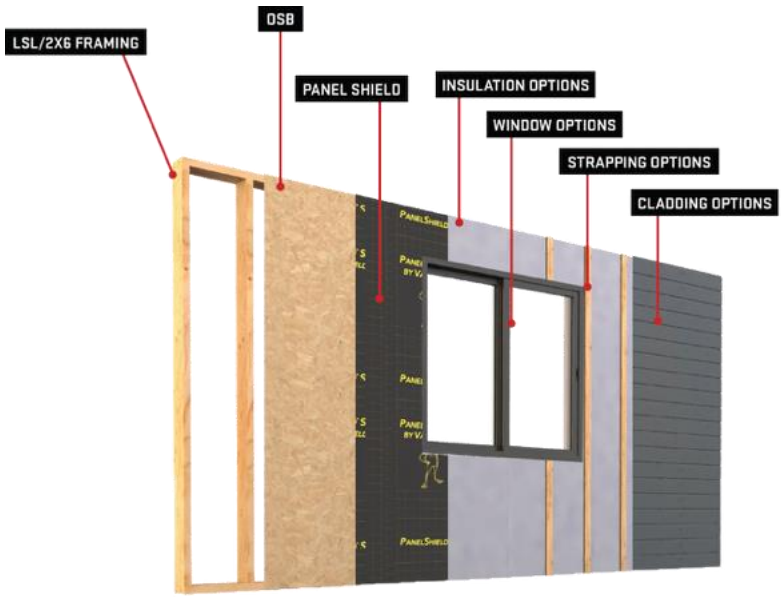
Engineered to Build Better

PrimePanel PH-FR is an off-site manufactured structural wall panel system that consolidates framing, sheathing, air/weather barrier, and optional insulation and cladding into a single crane-ready unit. PrimePanel design, engineering, and drafting is handled by PrimeFab. Panels are precision-fabricated in a controlled manufacturing environment using Laminated Strand Lumber (LSL) and project-specified sheathing. Each panel arrives pre-drilled and pre-assembled to support a faster, more efficient installation sequence

The result: fewer trades on site, a more predictable schedule, and a consistent envelope foundation that supports high-performance thermal and airtightness targets.

6. ASSEMBLY & COMPONENT OVERVIEW

Layer-by-Layer Build-Up



Assembly diagram: PrimePanel PH-FR representative assembly showing LSL/2×6 framing core, project-specified sheathing, WRB membrane, continuous insulation, strapping, window integration, and cladding system. ******OSB and cladding shown are for illustrative purposes only; alternate sheathing, insulation, and cladding options are available based on project requirements******

Standard Components

- **LSL/2×6 Framing Core:** Top/bottom plates and end caps with 2×6 stud cavity
- **Sheathing:** Structural sheathing for rigidity and load transfer
- **Air & Weather Barrier:** Factory-applied WRB membrane; taped joints for airtightness continuity

Configuration Options

- **Insulation:** Continuous exterior mineral wool or rigid foam
- **Strapping:** Ventilated rainscreen strapping options
- **Window Integration:** Pre-installed or rough-in; pre-flashed openings
- **Cladding:** Wide range of exterior cladding systems

Expanded Options

- **Interior partitions:** Factory-built partition panels available
- **Subfloor panels:** Integration for floor assemblies
- **Triumph products:** Optional compatibility with Triumph roofing, glazing, and cladding

Thermal & Envelope Performance

Thermal

- Effective R-value up to R-32 depending on insulation configuration
- Continuous insulation options: mineral wool or rigid foam
- Designed to support Passive House-aligned and low-TEDI strategies

Airtightness

- Factory-applied WRB membrane with taped joints
- Designed to support low ACH targets when site-sealed at panel joints

Structural

- LSL framing: higher dimensional stability vs. standard lumber
- Superior screw-holding strength and resistance to warping
- Pre-drilled connections for repeatable site alignment

Fire Performance

- A highly adaptable envelope system custom-engineered to exceed the most stringent building codes and energy models

What This Means on Your Project

Speed & Schedule

- Weather-tight envelope in days, not weeks
- Predictable fabrication and delivery schedule
- Crane-assisted installation reduces erection time
- Fewer weather-dependent critical path activities

Reduced Labour & Coordination

- Structure, sheathing, and WRB arrive as one unit
- Fewer trades required for envelope scope
- Pre-drilled connections reduce field errors
- Reduced waste and cleaner site conditions

Envelope Quality

- Factory quality control at tight tolerances
- Consistent airtightness detailing - less field variation
- LSL framing reduces thermal bridging risk
- Repeatable performance across panels and projects

Integration & Compatibility

- Works with roofing, window, cladding, and modular systems
- Supports hybrid and panelized construction methodologies
- Scalable from single-family to mid-rise multifamily

8. TECHNICAL DATA

Performance & Specification Reference

Parameter	Value / Range	Notes / Status

Effective R-Value	Up to R-32 (assembly dependent)	*Configuration-dependent*
Insulation Type	Mineral wool or rigid foam — CI exterior	*Configuration-dependent*
Panel Weight	Approx. 15–20 lbs/sq ft with insulation	*Varies by assembly*
Framing Material	LSL top/bottom plates, end caps; 2×6 studs (or larger per project requirements)	*Standard*
Sheathing	Structural sheathing (various options available per project specifications)	*Standard*
Air / Weather Barrier	Factory-applied WRB — taped joints	*Product specification to be confirmed with PrimeFab for project requirements*
Airtightness Target	Designed to support low ACH targets	*Site sealing at panel joints required*
Fire Resistance Rating	Assembly designed to meet project requirements	*Confirm with engineer of record for project-specific compliance*
Code Reference	CSA Wood Construction Codes	*Project-specific compliance by EOR*
Delivery Format	Crane-ready, pre-drilled, pre-assembled	*Site-ready on delivery*
Window Integration	Optional pre-installed or rough-in	*Pre-flashed openings standard*
Cladding Compatibility	Wide range — terracotta, rainscreen, FC, metal, wood	*Strapping options available*
PH Alignment	Designed to support PH-aligned performance	*Certification status to be confirmed as design develops*