

ARCHITECT SPECIFIER PRIMER

Designing Better Building Envelopes Starts Earlier.

PrimeWall helps architects deliver high-performance façades with factory-built precision, faster enclosure, and greater control over envelope outcomes.

AUDIENCE

Architects, specifiers,
façade & envelope
consultants

SYSTEM

Prefabricated, non-
combustible unitized
wall • Patent-pending

PROJECT TYPES

Mid-rise • High-rise •
Mixed-use • ICI •
Retrofit • Mass timber

ENGAGE AT

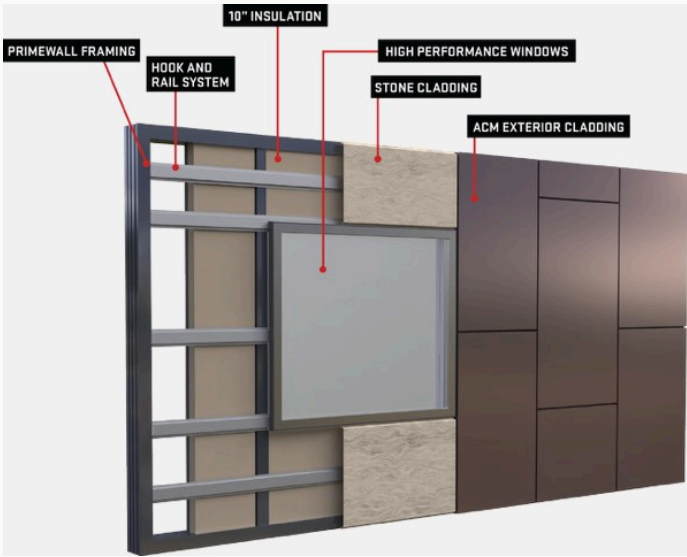
Schematic design /
design development



02 · SYSTEM OVERVIEW WHAT IT IS · HOW IT ASSEMBLES

A factory-built wall system for high-performance projects.

FIG. 01 · TYPICAL ASSEMBLY NON-COMBUSTIBLE



ALUMINUM FRAME · HOOK-AND-RAIL ANCHORING · INSULATED CORE · INTEGRATED GLAZING · MULTI-CLADDING

PrimeWall is a large-format, prefabricated, non-combustible, **patent-pending** unitized wall that integrates structure, insulation, thermal breaks, glazing, cladding, and weather/air-control layers into a single factory-built panel, engineered for speed, performance certainty, and architectural flexibility.

- L01 Aluminum structural frame**
Engineered primary structure. Dimensionally stable, lightweight, recyclable.
- L02 Hook-and-rail anchoring**
Repeatable connection system enabling fast, predictable site installation.
- L03 10" insulated core + thermal breaks**
Continuous insulation strategy minimizes thermal bridging across framing.
- L04 Integrated air & weather barrier**
Continuous control layers detailed and tested at the panel scale.
- L05 High-performance glazing**
Pre-installed windows and doors aligned to envelope performance targets.
- L06 Architectural cladding**
ACM, stone, metal panel, and other finishes, multi-system compatible.

R-46_{eff.} UP TO · EFFECTIVE R-VALUE	12 lbs/ft² APPROX. SYSTEM WEIGHT	1 unit FRAME · INSULATION · GLAZING · CLADDING	100k ft² MIDLAND, ON · MANUFACTURING
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Designed around the pressures architects face today.

Higher energy targets. Tighter envelope tolerances. Compressed schedules. Labour and weather risk on site. PrimeWall moves the hardest parts of the envelope into a controlled environment, so design intent survives construction.

▣ THE PROBLEM

What's pushing on every façade brief.

- **Higher envelope performance expectations**
TEDI, Passive House, and Toronto Green Standard pressure on every project.
- **Thermal bridging complexity**
Effective R-values increasingly diverge from nominal when detailed conventionally.
- **Site-built envelope variability**
Trade-by-trade assembly introduces tolerance, sequence, and quality risk.
- **Labour shortages & coordination risk**
Skilled-trade scarcity collides with multi-trade façade scopes.
- **Weather exposure during construction**
Extended open-envelope conditions delay enclosure and damage interior work.
- **Faster enclosure & occupancy**
Owners need a credible path to dry-in and turnover earlier in the schedule.

→ THE PRIMEWALL RESPONSE

A unitized envelope, engineered upstream.

- **Factory-controlled assembly**
Repeatable tolerances, indoor conditions, single-source quality control.
- **Reduced thermal bridging**
Thermal-break strategy and continuous insulation detailed at panel scale.
- **Up to ~R-46 effective**
Performance certainty for TEDI, PH, and Toronto Green Standard targets.
- **Lightweight at ~12 lbs/sq ft**
Reduced structural and crane demand vs. heavier panelized systems.
- **Multi-cladding compatibility**
ACM, stone, metal, and other finishes, design language stays open.
- **Faster, predictable enclosure**
Integrated façade, glazing, and barriers shipped as one panel.

Where PrimeWall fits best.

A.01 · Primary Fit



Mid-Rise & High-Rise Residential

PrimeWall is engineered around the demands of vertical residential, with fast enclosure, repeatable tolerances, and high envelope performance per floor cycle. Featured project: **444 Logan Avenue.**

A.02 Mixed-Use Developments Retail-podium and residential-tower combinations.	A.03 ICI & Commercial Buildings Industrial, commercial, institutional envelopes.
A.04 Institutional Projects Schools, healthcare, public-sector buildings.	A.05 Retrofit & Over-Cladding Deep-energy retrofits over existing structures.
A.06 Mass Timber Projects Lightweight envelopes for CLT and hybrid timber.	A.07 Prefab Construction Panelized and prefabricated delivery models.

Best-fit signal: PrimeWall is strongest where envelope performance, schedule compression, and constructability need to be solved early. The gain compounds when panelization is part of the design narrative, not a tender-stage substitution.

05 · DESIGN-ASSIST FIVE-STEP PROCESS

Engage early. Design smarter. Build faster.

Early coordination, typically at schematic design or design development, is where panelization unlocks its biggest gains. It avoids redesign, tender-stage compromises, and missed opportunities for performance and schedule.

01

SD · SCHEMATIC DESIGN

Early project review

PrimeFab reviews program, massing, structural grid, and envelope ambitions to flag panelization opportunities and constraints.

ARCHITECT RECEIVES

- Initial fit assessment
- Panelization feasibility note
- Reference projects

02

SD → DD

Envelope performance & design intent alignment

TEDI, Passive House, or Toronto Green Standard targets are mapped to panel build-ups, glazing, and thermal break strategies.

ARCHITECT RECEIVES

- Effective R-value pathways
- Air-barrier strategy
- Glazing performance options

03

DD · DESIGN DEVELOPMENT

Panelization strategy & typical details

Panel layout, joint logic, transitions to roof, base, and openings, coordinated with structure and interior fit-out.

ARCHITECT RECEIVES

- Panel layout diagrams
- Typical joint & corner details
- Cladding compatibility matrix

04

DD → CD

Budgeting & constructability review

Realistic per-panel and per-square-foot ranges, logistics review, crane and sequencing implications, schedule modelling.

ARCHITECT RECEIVES

- Order-of-magnitude pricing
- Schedule scenario inputs
- Site logistics review

05

CD · CONSTRUCTION

Mock-up, fabrication & installation planning

Performance mock-up, factory sequencing, just-in-time delivery and crane planning to align with the on-site enclosure schedule.

ARCHITECT RECEIVES

- Performance mock-up plan
- Fabrication schedule
- Install sequence package

06 · PROOF & CTA TRACK RECORD · HOW TO ENGAGE

Built on proven envelope expertise.

PrimeFab is backed by Triumph's decades of building envelope experience, vertically integrated across roofing, glazing, cladding, and in-house manufacturing from a 100,000 sq. ft. facility in Midland, Ontario, spanning design-assist through fabrication and installation.

CASE STUDY
444 Logan Avenue

PANELIZED NET-ZERO RETROFIT · TORONTO, ON

444 LOGAN PANELIZED NET ZERO RETROFIT

SYSTEMS

- ① ERV units
- ② Facade integrated mechanical and electrical riser
- ③ Direct fresh air
- ④ Suite exhaust connected to central ERV
- ⑤ Door Seal

ENVELOPE

- ⑥ Window integrated facade panel
- ⑦ PV integrated facade panel

CONSTRUCTABILITY AND MAINTENANCE

- ⑧ Panel hoisted into place
- ⑨ Removal Access Panel

EXTERIOR WORK

- ① Install Mechanical Riser
- ② Install Facade Panels

INTERIOR WORK

- ① Connect suite to central fresh air
- ② Install ERV units
- ③ Remove interior Windows

INSTALL

DETAIL

38+ yrs

Triumph building envelope experience backing PrimeFab.

100,000 ft²

Advanced manufacturing facility in Midland, Ontario.

Vertical

Roofing · Glazing · Cladding · Manufacturing under one roof.

ENGAGE PRIMEFAB

Two ways to start the conversation.

Recommended

Request to Book a Factory Tour, Midland



Contact us

info@triumphinc.ca

416 534 8877


PrimeFab

A DIVISION OF TRIUMPH

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