

OFFSITE COMPONENT-BASED CONSTRUCTION ENABLED BY BIM

Wood framing and mass timber succeed when design decisions are informed by how buildings are actually built.

The QB approach integrates BIM coordination, structural engineering, prefabrication strategy, logistics planning, and installation expertise before details are locked and risk escalates.

WHY OFFSITE/ COMPONENT BASED?

Design Resolved Once— Not Reinterpreted in the Field

Engineering and estimating collaborate to evaluate options, spans, grids, and system choices with cost clarity.

BIM-Driven Coordination (Structure + MEP + Envelope) Eliminates Conflicts

QB-led BIM/VDC coordination aligns structure, MEP, envelope, and prefabrication early—reducing RFIs, field conflicts, and rework.

Prefabrication= the Future

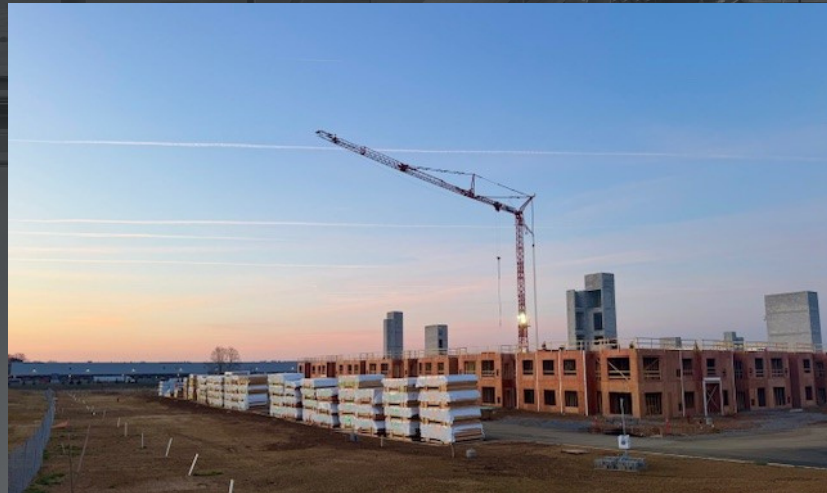
Panels, trusses and MT assemblies engineered for optimal installation. Prefabricated panelized framing improves safety, reduces waste, shortens schedules, increases quality, and minimizes labor requirements— resulting in a cleaner, faster, and more predictable jobsite.

Install-Informed Detailing

Connection concepts, sequencing logic, access planning, and lift strategy are considered early—so drawings reflect reality, not ideal conditions.

Reduced Project Risk & Protected Design Intent

Early VE/VM keeps projects buildable, predictable, and aligned with budget—protecting mass timber and prefab scopes from late-stage value engineering.



THE QB ADVANTAGE

- Design | Supply | Install alignment
- Prefabrication-first thinking
- Installation-informed coordination
- BIM/VDC-led planning
- Field-proven sequencing and logistics expertise
- Accountability beyond design alone

Prefab isn't a trend; it's a necessity. It is the only model aligned with a digital, coordinated, industrialized future.

OFFSITE CONSTRUCTION FRAMEWORK

1) ALIGN

- Confirm project goals + delivery approach
- Establish prefab / MT intent
- Budget and schedule alignment

2) MODEL

- BIM/VDC coordination kickoff
- Structure, MEP, envelope interfaces
- Clash detection before fabrication logic is set

3) OPTIMIZE

- Panelization + sequencing strategy
- Install efficiency analysis
- System comparisons (cost + schedule impact)

4) DETAIL

- Connection approach (build-led)
- Access, lift, and site constraints
- Fabrication-ready geometry inputs

5) ENABLE

- Supply + install readiness
- Clear handoff into procurement
- Predictable transition to construction

WHO BENEFITS?

Architects

Preserve design intent while ensuring details are buildable, coordinated, and code-compliant early.

Developers

Gain early cost certainty, schedule predictability, and reduced value-engineering risk.

General Contractors

One integrated partner helping align design decisions with real-world execution.

Owners / Project Teams

Clear sequencing, fewer RFIs, smoother installs, and reduced field surprises, cleaner jobsites.

OFFSITE CONSTRUCTION FRAMEWORK

Traditional Design-Bid-Build

- Design finalized in isolation
- Conflicts discovered during construction
- Field cutting, rework, and schedule volatility

VERSUS

Offsite, Component-Based Delivery

- Design coordinated digitally
- Assemblies engineered and prefabricated
- Faster installs, fewer surprises, predictable outcomes

Design is resolved once—via BIM-driven coordination—rather than being re-interpreted repeatedly in the field.

MEASURABLE OUTCOMES

- 40–60% reduction in framing waste
- Cleaner, safer jobsites with fewer high risk tasks
- Improved worker health, safety, and welfare
- More consistent code compliance and inspections
- Accelerated schedules through parallel workflows
- Up to 30% faster framing timeline when compared to traditional stick-built methods

Prefabricated panelized framing improves safety, reduces waste, shortens schedules (often by ~ 30%), and results in a cleaner, faster, more predictable jobsite.

Adopting offsite component construction is not just an innovation. It is the responsible, efficient, and forward-thinking way to build the next generation of structures—one that honors design intent, protects the workforce, and delivers exceptional value for every stakeholder.