

BUILDING THE FUTURE WITH LGS INNOVATION

Advanced LGS / Cold-Formed Steel Building Solutions



DESIGN



ENGINEER



MANUFACTURE



DELIVER



INSTALL

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WE DON'T JUST BUILD FRAMES. WE BUILD BETTER BUILDINGS.

Precision-engineered LGS building systems designed for modern living, working and building.



Project-specific design coordination and disciplined structural thinking



Controlled fabrication, cleaner assembly, and repeatable quality



A coordinated workflow from concept to installation and handover

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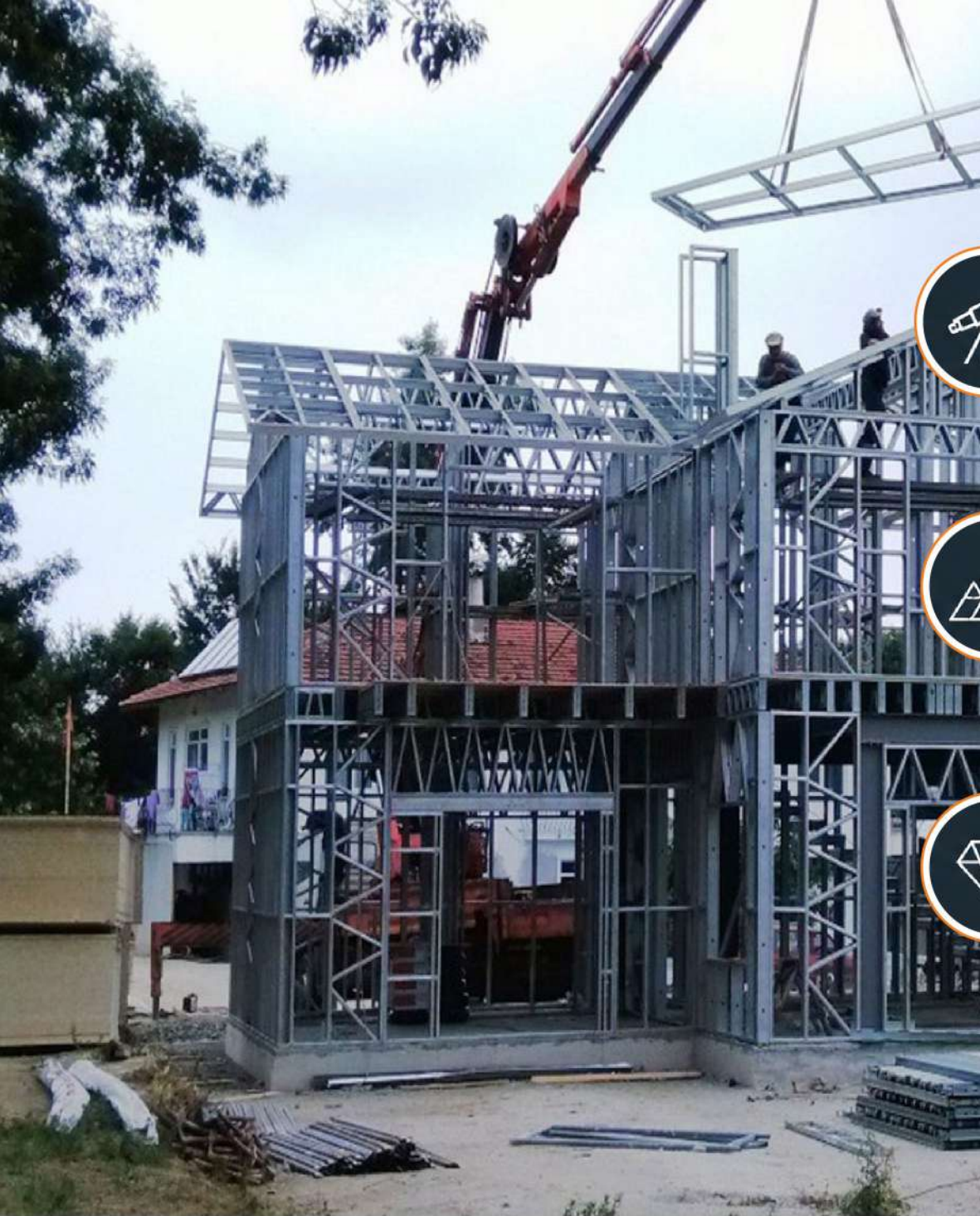
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ABOUT XHOUSE

Technology-driven
LGS / CFS building
solutions for modern
construction.



- XHouse specializes in Light Gauge Steel (LGS), also known as Cold-Formed Steel (CFS), building systems.
- Integrated approach: concept, engineering, manufacturing, delivery, installation and project support.
- Solutions for residential, multifamily, commercial, institutional and industrial applications.
- Positioned as a building-systems company, not simply a prefab contractor – XHouse integrates design, engineering, manufacturing, construction, and project delivery into one end-to-end platform, from concept to move-in.



Vision

redefine modern construction with smarter, more predictable building systems.



Mission

combine LGS engineering, precision manufacturing and coordinated delivery.



Values



INNOVATION



PRECISION



QUALITY



SUSTAINABILITY



ACCOUNTABILITY

WHY XHOUZE?

Six reasons clients should see XHouze as a serious building-systems partner.

Precision-Engineered LGS Structural Systems.

Factory-Focused Quality & Repeatable Production Methods.

Efficient Project Delivery Through Coordinated Design, Manufacture & Installation.

Design Flexibility Across Multiple Building Types.

One Coordinated Path From Concept To Handover.

U.S.-Focused, Project-Specific Engineering Language.





WHAT IS LGS/CFS?

Light Gauge Steel, also known as Cold-Formed Steel, is the structural language of this catalogue.

- Use galvanized steel members formed into studs, tracks, joists trusses and bracing components.
- Frame walls, floors and roofs as an integrated structural system.
- Show real steel profiles here, not only beautiful house renderings.
- This page must educate the customer before selling applications

WHY BUILD WITH LGS?

The core benefits should be accurate,
simple and defensible.

- ◆ High strength-to-weight ratio and dimensional stability.
- ◆ Precision manufacturing reduces improvisation on site.
- ◆ Noncombustible steel framing and termite-resistant material characteristics.
- ◆ Design flexibility for residential and commercial layouts.
- ◆ Recyclable steel and efficient material use.
- ◆ Do not use unsupported universal claims such as Magnitude 9 or 100+ years





U.S. LGS/CFS BUILDING SYSTEMS

TECHNICAL SPECIFICATION CATALOGUE

Cold-Formed Steel framing for residential and commercial application

BUILDING SYSTEM

From foundation to finish, show the full integrated system



Foundation



LGS Structure



Roof System



Floor System



Exterior Wall



Insulation



Plumbing



Windows



Doors



Electrical



American Design Load Criteria

All values use U.S. customary units and ASCE/SEI 7 / IRC conventions.

95-180+ mph Vult

ULTIMATE WIND SPEED

Risk Category II residential range across U.S. regions; exact value is site-specific.

0-100+ psf Pg

GROUND SNOW LOAD

National range varies substantially by location and elevation; exact Pg from ASCE hazard data.

SDC A-F

SEISMIC DESIGN

Mapped Ss and S1 values in g; Site Class and SDC established for each project location.

Sleeping rooms 30 psf uniform

Other habitable rooms 40 psf uniform

Exterior balconies / decks 40 psf uniform

Stairs 40 psf uniform + 300 lb concentrated

Passenger vehicle garage 50 psf uniform + 2,000 lb concentrated

Uninhabitable attic - no storage 10 psf uniform

Uninhabitable attic - limited storage 20 psf uniform

Habitable attic / fixed stair attic 30 psf uniform

Guards / handrails 200 lb concentrated

Other Structural Criteria

DEAD LOAD

Actual self-weight of framing, finishes, roofing, ceilings, MEP and permanent equipment.

ROOF LIVE LOAD

Per adopted code and roof use; snow governs where greater.

RAIN LOAD

ASCE/SEI 7 where ponding or drainage conditions require.

WIND UPLIFT

Components & cladding and MWFRS pressures from site-specific wind design.

SEISMIC FORCE

Calculated from ASCE/SEI 7 seismic parameters; not expressed as a universal psf value.

Cold-Formed Steel Framing

U.S. customary dimensions and code-oriented specifications.

Structural Framing

- Load-bearing studs, tracks, joists, rafters and truss components are project engineered CFS members.
- Structural framing members: ASTM C955 where applicable; engineered to adopted IBC and AISI requirements.
- Nonstructural interior framing: ASTM C645 / AISI S220 where applicable.
- Common residential stud depths: 3-5/8 in., 4 in., 6 in. or deeper as required by engineering.
- Member spacing commonly 16 in. or 24 in. on center where permitted by design.
- Steel grade, coating, member thickness, connections, anchorage and bracing are defined by approved structural drawings.



EXTERIOR WALL-TYPICAL ASSEMBLY

Typical Exterior Wall

- Cladding / drainage plane / WRB / structural sheathing / CFS studs / cavity insulation / continuous insulation / interior
- Thermal performance is selected to satisfy the adopted energy code and climate zone.
- Fire-resistance and acoustic ratings apply only to complete tested/listed assemblies.



INTERIOR WALL-TYPICAL ASSEMBLY



EXTERIOR WALL

Roof & Environmental Loads

U.S. load figures and criteria are coordinated with ASCE/SEI 7-22.

Roof / ceiling

- Roof framing: engineered CFS rafters or trusses.
- Typical residential roof live load: per adopted code; snow load governs where greater.
- Ground snow load P_g : 0-100+ psf nationally, site-specific.
- Ultimate wind speed V_{ult} : approximately 95-180+ mph nationally for Risk Category II, site-specific.
- Wind uplift and component/cladding pressures are calculated from actual building geometry, exposure and enclosure classification.
- Ceiling gypsum and insulation configured for required fire, acoustic and energy performance.



PITCHED ROOF - TYPICAL CFS RAFTER / TRUSS CONCEPT

STRUCTURAL & LIFE-SAFETY DESIGN FEATURES

WIND	95-180+ mph V_{ult}	ASCE/SEI 7-22; exact site wind speed, exposure, MWFRS and component/cladding pressure.
SNOW	0-100+ psf P_g	ASCE/SEI 7-22; exact ground/roof snow load, drift and unbalanced loading.
SEISMIC	SDC A-F	ASCE/SEI 7-22 + AISI S400; mapped S_s/S_1 , Site Class, SDC and CFS seismic detailing.
FIRE	1-2 hr assemblies	Typical rated residential separations where required; final rating from listed/tested assemblies.
ROOM LIVE LOAD	40 psf	Typical minimum for habitable rooms other than sleeping rooms.
BEDROOM LIVE LOAD	30 psf	Typical minimum uniformly distributed live load.
DECK / BALCONY	40 psf	Typical minimum uniformly distributed live load.
GARAGE FLOOR	50 psf + 2,000 lb	Passenger vehicle garage uniform and concentrated design load.

WINDOWS & EXTERIOR DOORS

Performance-rated fenestration is selected for project wind pressure, water penetration, air leakage, egress, safety glazing and adopted energy-code requirements, including U-factor and SHGC where applicable.

Cold-Formed Steel Floor System

American residential floor design loads and CFS framing criteria.

Typical floor construction

- Primary framing: engineered CFS floor joists, rim tracks, blocking and bridging sized for span, load and vibration criteria.
- Typical joist spacing: 16 in. or 24 in. on center where engineering permits.
- Subfloor: structural wood panel, cementitious panel or approved sheathing system.
- Ceiling below: gypsum board directly attached or supported on resilient channels/furring as required.
- Acoustic control: cavity insulation and tested floor/ceiling assemblies for required STC/IIC performance.
- Fire resistance: 1-hour or 2-hour floor/ceiling assemblies where required by occupancy/separation conditions.



TYPICAL CFS FLOOR / JOIST ASSEMBLY

RESIDENTIAL FLOOR DESIGN LOADS

SLEEPING ROOMS	30 psf uniform live load
OTHER HABITABLE ROOMS	40 psf uniform live load
EXTERIOR DECKS / BALCONIES	40 psf uniform live load
STAIRS	40 psf uniform + 300 lb concentrated
PASSENGER VEHICLE GARAGE	50 psf uniform + 2,000 lb concentrated
HABITABLE ATTIC	30 psf uniform live load
ATTIC - LIMITED STORAGE	20 psf uniform live load
ATTIC - NO STORAGE	10 psf uniform live load
GUARD / HANDRAIL	200 lb concentrated load

U.S.-Market Specification

Code-oriented requirements for complete residential and commercial project delivery.

Electrical

Electrical work is coordinated with the locally adopted electrical code, typically NFPA 70 (NEC), and state/local amendments. Circuits, conductor sizes, receptacles, GFCI/AFCI protection, lighting and equipment connections follow the approved electrical design.



Plumbing

Water distribution, sanitary drainage, fixtures and water-heating systems are coordinated with the plumbing code adopted by the AHJ, including applicable state/local amendments. Materials, pipe sizing and penetrations are project-specific.



REFERENCE COMPLIANCE FRAMEWORK

2024 IBC

Building-code framework and CFS light-frame construction requirements.

ASCE/SEI 7-22

Dead, live, wind, snow, rain, seismic and load-combination criteria.

AISI S100 / S240

CFS structural member and framing-system design, manufacture, installation and quality.

AISI S220 / S400

Nonstructural framing and seismic CFS system requirements, as applicable.

ASTM C955 / C645

Structural and nonstructural CFS framing member specifications.

ASTM E119 / UL 263

Fire-resistance testing for rated assemblies.

IECC / adopted energy code

Building-envelope thermal performance and fenestration criteria.

NFPA 70 (NEC)

Electrical systems, as adopted and amended by the project jurisdiction.

IPC / UPC / local code

Plumbing systems as adopted by the Authority Having Jurisdiction.

DOORS

- Exterior Door: Steel door
- Interior Door: American panel door



WINDOWS

- Type: PVC windows (TSE certified)
- Dimensions: As per the plan
- Glass: double glazed 4+12+4 mm



SANITARY

- Clean water pipes: PVC (TSE certified)
- Waste water pipes: PPRC (TSE certified)
- Sanitary ware and armatures: high quality TSE certified products
- Shower cabinets



PRODUCT CATEGORIES

If your development project is a fit for our manufacturing capabilities our experts can help produce affordable homes quickly. Our offsite construction process, combined with your expertise, accelerates timelines, improves returns, and helps create more attractive communities.



RESIDENTIAL

- SINGLE-FAMILY HOMES
- VILLAS & DUPLEXES
- ADUS & TINY HOMES
- MULTIFAMILY HOUSING
- TOWNHOMES
- BUILD-TO-RENT COMMUNITIES



COMMERCIAL

- ▲ OFFICES
- ▲ RETAIL & SHOWROOMS
- ▲ RESTAURANTS & CAFE
- ▲ HOSPITALITY
- ▲ EDUCATION & HEALTHCARE



INDUSTRIAL

- ▲ WAREHOUSES
- ▲ WORKSHOPS
- ▲ LIGHT INDUSTRIAL BUILDINGS
- ▲ WORKFORCE ACCOMMODATION



GOVERNMENT

- ▲ GOVERNMENT FACILITIES
- ▲ SCHOOLS & TRAINING FACILITIES
- ▲ HEALTHCARE FACILITIES
- ▲ EMERGENCY & DISASTER-RELIEF BUILDINGS

R E S I D E N T I A L

We are a modern residential modular construction company dedicated to creating high-quality, efficient, and sustainable homes for today's evolving lifestyles. Our approach combines innovative engineering, precision manufacturing, and contemporary architectural design to deliver homes that are built smarter, faster, and with greater consistency.

From concept and design to manufacturing, transportation, and installation, we provide integrated modular housing solutions tailored to the needs of homeowners, developers, and communities. Our modern construction methods help reduce construction time, minimize material waste, and maintain high standards of quality and durability.

- Single-Family Homes • ADUs & Tiny Homes • Duplexes & Triplexes.
- Townhouses • Villas • Custom Homes.
- Images should feel American: suburban, modern farmhouse, contemporary, or traditional styles.
- Do not mix container homes into the main residential LGS section



COMMERCIAL

We are a modern commercial construction and building solutions company dedicated to creating innovative, efficient, and high-performance spaces for today's businesses. Our expertise combines contemporary architectural design, advanced construction technology, and quality engineering to deliver commercial buildings that are built for functionality, durability, and long-term value.

From offices and retail spaces to corporate facilities and large-scale commercial developments, we provide solutions tailored to the unique requirements of every project. We focus on smart planning, efficient construction, quality materials, and attention to detail to ensure every building meets modern standards and business needs.

- Use modern commercial/retail development images, not temporary container offices.
- Include mixed-use and storefront examples for developers and commercial clients.
- This page should communicate investment-grade design flexibility.
- Relabel any fake project locations as "Concept Design."



I N D U S T R I A L

We are a modern Industrial House specializing in innovative, efficient, and durable building solutions designed to meet the evolving needs of today's industries. Our approach combines advanced engineering, modern construction technology, and quality materials to deliver reliable industrial spaces built for performance and long-term value.

From manufacturing facilities and warehouses to production plants, logistics centers, and specialized industrial structures, we provide practical solutions that balance functionality, safety, aesthetics, and cost efficiency.

- Use industrial steel/LGS building imagery and factory-based credibility.
- Show large spans, clean interiors, loading/logistics and robust framing.
- Industrial content should feel practical and technically strong.



M U L T I F A M I L Y H O U S I N G

We deliver advanced Government Building Solutions engineered to meet the evolving needs of modern public infrastructure across the USA. Our focus is on creating high-performance government facilities that combine architectural excellence, operational efficiency, security, sustainability, and long-term durability.

From government offices and administrative facilities to public service centers and institutional buildings, our solutions are designed around the unique requirements of each project. We integrate modern engineering, precision manufacturing, innovative construction methods, and high-quality materials to create efficient and resilient spaces.

- Low-rise apartments, townhome communities, workforce housing and affordable housing concepts.
- Best image: a 3-5 story American-style apartment building, partially finished and partially framed.
- Keep the tone professional and developer-focused.
- Do not label as completed project unless it is a real XHouze project.



HOSPITALITY



- Use elegant hospitality imagery - not overly futuristic or unrealistic renderings.
- Show that XHouse can support repeatable room modules and premium finishes.
- Keep claims general unless specific hospitality projects are available.
- Caption the image as conceptual when it is not a completed project.

**Hotels, resorts, guest houses,
eco-lodges and extended-stay
concepts.**

ON-SITE LGS PRODUCTION

BRING THE FACTORY TO YOUR PROJECT



With the UNBAK IC-XMOBILE, XHouze delivers fully mobile, on-site production of high-quality LGS framing members - right at your project location. No need to transport bulky materials. Just bring the machine and build smarter.

On-Site Production

Reduced Logistics Cost

Custom Lengths & Profiles

Less Material Waste

Faster Project Completion

Sustainable Building

DELIVERY & INSTALLATION

From factory to site-practical, visible and construction-focused.



- Packing • Loading • Transportation • Site delivery • Foundation prep.
- Frame erection • Envelope • MEP • Finishing • Handover.
- Replace “all houses installed in 2-4 weeks” with project-specific wording.
- Recommended: efficient on-site assembly based on project scope, site conditions and delivery strategy.

QUALITY & PERFORMANCE

Keep performance claims credible and project-specific.



- Project-specific engineering and coordinated design review.
- Precision fabrication, material traceability and quality inspection.
- Connection verification and final project inspection.
- Use: high-wind design capability, seismic design, noncombustible steel framing, energy-efficient envelope options and acoustic performance options.
- Remove: Magnitude 9, universal 155 mph, R-30 universal, STC 55 universal, 100 years and 50-year warranty.



SUSTAINABILITY

Use careful sustainability language: no unsupported “zero waste” or exact carbon percentages.

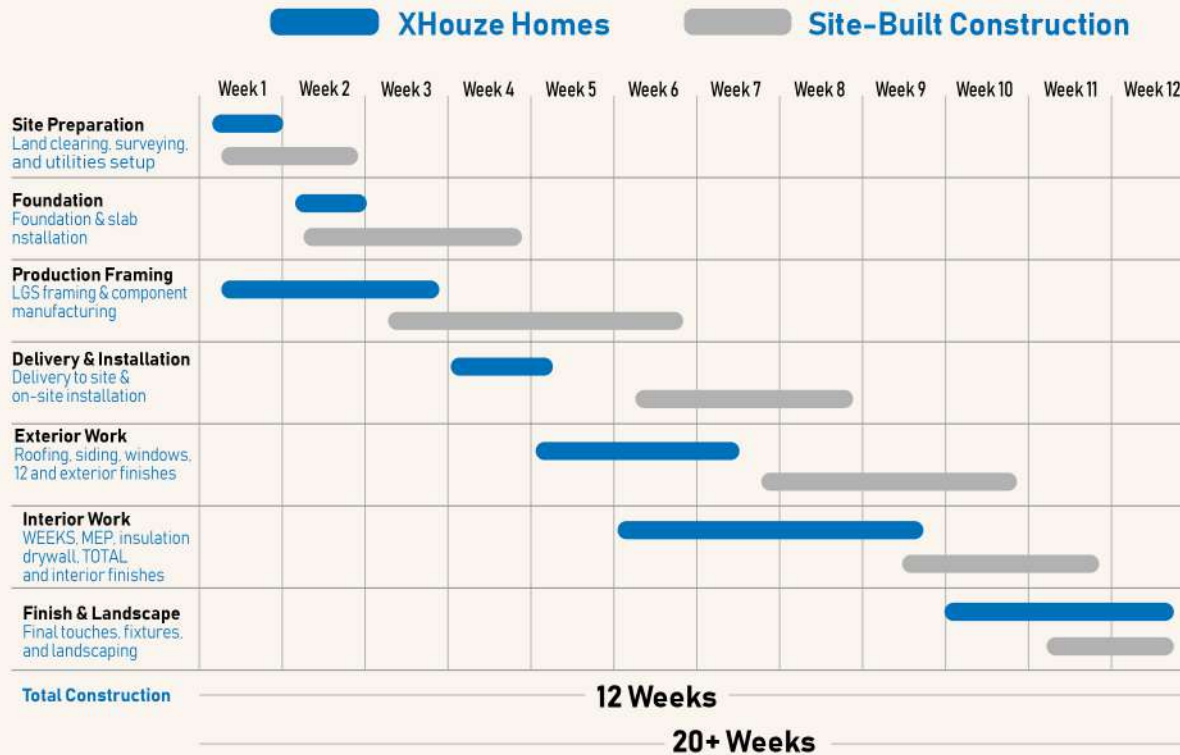


- Recyclable steel and precision material use.
- Reduced site waste potential through off-site fabrication.
- Energy-efficient envelope options and solar-ready planning.
- Long-term adaptability and durable material selection.
- Make it premium, practical and credible.



Accelerated Timelines

XHouse Homes vs Site-Built Construction Timeline



3
DAYS

Order
Process



8
WEEKS

Factory
Construction



1
DAY

Delivery
to Site



12
WEEKS

Final
Finish

TOTAL PROJECT TIME

12 WEEKS
TOTAL



FASTER. SMARTER. BUILT BETTER.

Delivering high-quality homes in less time, so you can move in sooner.



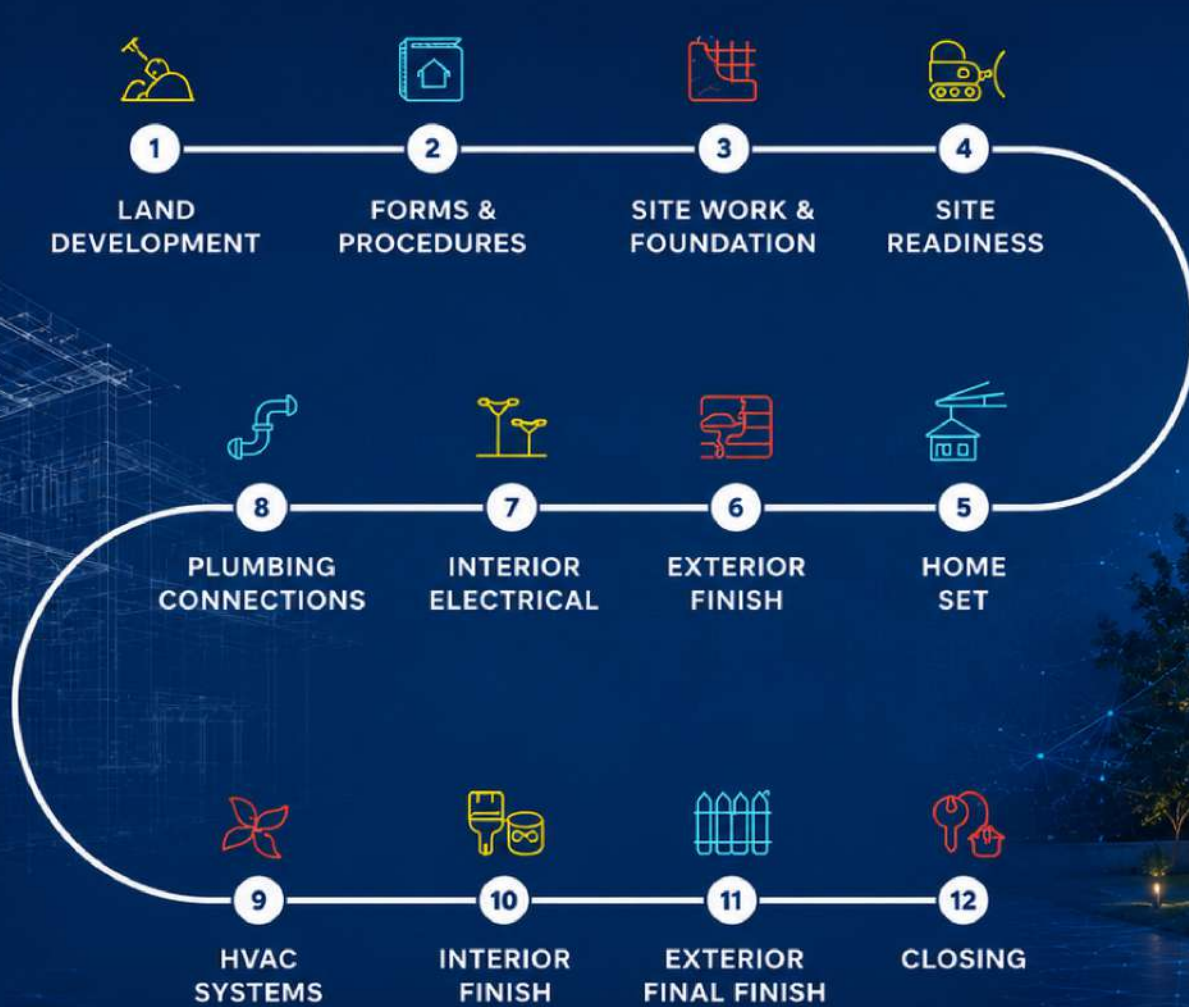
Code-Based Structural Engineering

Final design is coordinated with the adopted code and Authority Having Jurisdiction.

Primary U.S. references

2024 IBC	Building-code framework for cold-formed steel light-frame construction.
AISI S100 / S240	CFS member and structural framing design, manufacture, installation and quality.
AISI S220	Nonstructural cold-formed steel framing.
AISI S400	Seismic design and detailing of CFS structural systems where applicable.
ASCE/SEI 7-22	Dead, live, wind, snow, rain, seismic and other design loads and load combinations.
ASTM C955 / C645	Structural and nonstructural steel framing member specifications.
ASTM E119 / UL 263	Fire-resistance testing basis for rated building assemblies where required.

12-Step Offsite Solution





1



LAND DEVELOPMENT

Clear title
Site access for transporter
Perk/Probe test
Land surveyed
Utilities and streets in place

2



LAND DEVELOPMENT

Select a model and options
Contracts signed
Secure financing
Obtain permits
Site survey



3



SITE WORK & FOUNDATION

Clear title
Site access for transporter
Perk/Probe test
Land surveyed
Utilities and streets in place

* If Modular

4



SITE READINESS

Foundations and footings are completed
Obstacles for delivery have been removed
Access for modules are ready
Crane pad is confirmed* Vendors are confirmed
Payment for delivery day confirmed



5



HOME SET

Set home on foundation
Close up home to ensure
waterproof





6



EXTERIOR FINISH

Siding and masonry work completed
Prime, paint, or stain exterior surfaces
Install shutters, gutter and downspouts
Optional garages, porches,
decks, and patios completed

7



INTERIOR ELECTRICAL

Connect wiring Electrical inspection
Make crossover connections
between boxes as needed per
manufacturer's instructions
Test all systems



8



PLUMBING CONNECTIONS

Connect to water/sewer systems
Check shut-off valves Plumbing inspection
Connect gas lines if needed
Make crossover connections between
boxes as needed per manufacturer's
instructions Test all systems

9



HVAC SYSTEMS

Install & connect AC system
Mechanical inspection
Make crossover connections
between boxes as needed per
manufacturer's instructions
Test all systems



10



INTERIOR FINISH

Finish and patch drywall
Touchup interior walls as needed
Finish trim, door adjustments,
and flooring
Interior clean up

11



EXTERIOR FINAL FINISH

Complete garage, steps,
and service walks
Install exterior lighting
Finish grading, landscaping,
and garage doors,
Exterior clean up



12



CLOSING

Punch list Final clean up
Final building inspection
Occupancy permit
Owner occupancy

DESIGN & FINISH OPTIONS

Your building. Your style.



- Exterior facades: siding, fiber cement, stone, brick veneer, metal panels and wood-look finishes.
- Flooring: LVP, tile, stone-look, carpet and other options.
- Kitchens: cabinet styles, countertops, backsplashes and fixtures.
- Bathrooms: tiles, vanities, fixtures, shower options and accessories.
- This page can reuse the current “Choose Your Finish” concept with improved branding

LET'S BUILD SMARTER.

Whether you're planning a home, multifamily development, commercial property or specialized facility, XHouze brings engineering, manufacturing and project delivery together under one coordinated building solution.

Design

Engineering

Manufacturing

Delivery

Installation

Have a site? Have a concept? Let's explore what XHouze can build with you.



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