



**BOLD  
THINKERS  
DRIVING  
REAL-WORLD  
IMPACT**

# Using Economies of Scale to Produce Starter Homes

A Market-Based Approach to  
Increasing the Supply of Starter  
Homes in States with Large Rural  
Populations

# Are starter homes extinct?



**The housing shortage isn't  
just a coastal crisis  
anymore**

New York Times, June 14, 2022

**Do Starter Homes  
Still Exist?**

Apartment Therapy, May 18, 2022

**Whatever  
happened to the  
starter home?**

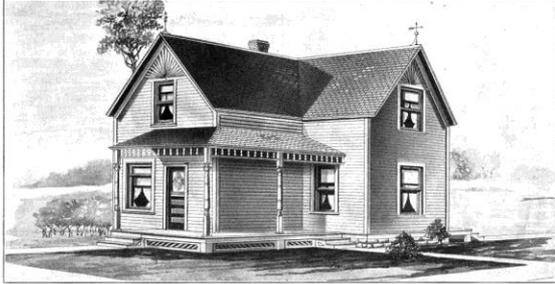
New York Times, Sept. 25, 2022

# Why is it so hard to build housing of any kind, let alone starter homes?

- Large-lot zoning
- NIMBYism
- High land prices
- Local fees
- Rapidly increasing construction costs
- Rising interest rates
- ... even in rural areas where land is cheap(er)

**\$725<sup>00</sup>** and Our **FREE BUILDING PLANS**  
WILL BUILD, PAINT AND COMPLETE, READY FOR OCCUPANCY,  
THIS INVITING \$1,100.00 SIX-ROOM COTTAGE.

We tell you on page 2 how we furnish, free, the plans for this house, or any of the many houses shown in this book.



**MODERN HOME No. 115**  
With Wood Foundation. Not Excavated.

On the opposite page we illustrate a few of the materials we specify on this, our \$725.00 house.

The arrangement of this house is as follows:

**FIRST FLOOR.**

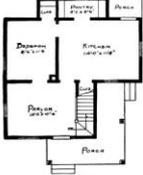
Parlor	- - -	12 feet by 10 feet 6 inches
Bedroom	- - -	8 feet 6 inches by 11 feet 9 inches
Kitchen	- - -	14 feet by 11 feet 9 inches
Pantry	- - -	8 feet 2 inches by 3 feet 6 inches

**SECOND FLOOR.**

Front Bedroom	- - -	8 feet 3 inches by 10 feet 6 inches
Rear Bedroom	- - -	8 feet 6 inches by 11 feet 9 inches
Large Attic	- - -	14 feet by 11 feet 9 inches

All bedrooms have roomy closets.

Size: Width, 24 feet; length, 28 feet, exclusive of porch.



**GOOD MATERIALS MAKE GOOD HOUSES**

When planning our houses it is a question of how good, not how cheap. This statement is easily proven by referring to some of the materials we illustrate and describe on opposite page. In using our plans, you take no risk of getting poor materials, such as might occur if the work were done by some unscrupulous contractor. The mill work specified is the best in each grade. You take no risk when building from our plans, as we positively guarantee every piece of material we furnish, and if each piece is not entirely satisfactory, it may be returned and your money will be refunded, together with all transportation charges.

BOOK OF MODERN HOMES Sears, Roebuck & Co., Chicago, Ill.

# Testing a concept through a pilot program



Can **local collaboration** combined with **off-site construction** techniques bring **economies of scale** to high-opportunity smaller markets to build housing affordable to middle-income buyers?



Park City, Utah  
*Population: 8,467*

# Off-site construction offers potential for ...



- Economies of scale
- Bulk purchase of construction materials
- Less need for labor/skilled labor
- Year-round construction jobs with lower risk to workers than site-built construction



Off-site construction can achieve economies of scale similar to that achieved through production building

# ... off-site construction can also ...



- Reduce weather-related delays
- Shorten construction timeframes because of parallel rather than sequential process
- Make more efficient use of labor and materials
- Have a smaller environmental impact than site-built
- Be higher quality than site-built construction

**Savings from modular construction could reach 20%**

Terner Center estimate

# Effective solutions must help solve four challenges



- Obstacles to achieving full potential of economies of scale
- Risk of adding manufacturing capacity
- Access to appropriate capital
- Regulatory barriers and stigma



Home built using modular construction techniques.

# Concept 1: Pilot bulk/advance purchases



- Concept:** Create a partnership between an existing modular manufacturer and a purchaser or consortium of purchasers for a long-term commitment to buy a minimum number of units
- Built on a diverse working group of stakeholders and funders
  - Based on a standardized design that allows for modest customization
  - Support provided to purchaser or consortium of purchasers throughout the pilot
  - In a region with sufficient demand and suitable geography
  - In a region with government officials who are supportive of the effort

# Concept 1: Approach to challenges



- Standardized unit design plus a commitment to purchase a minimum number of homes per year produced in batches of about 50 allows for appreciable savings from **economies of scale**
- Advance commitments to buy units plus a long-term agreement **reduces risk of expanding capacity** for the manufacturer
- Capital from philanthropies and ESG investors provides **access to capital** suitable for the time horizon for a manufacturer to become profitable
- Coalition of champions based on the working group provides **leadership to overcome barriers**

# Concept 2: Creating a new factory

- Concept:** Organize a partnership of potential purchasers to contribute equity and/or patient capital to a new manufacturer
- Minimum \$20 million investment
  - Manufacturer to prioritize producing units for partners
  - Built on efforts of a diverse working group
  - Offers much more control over the factory and ability to meet specific local needs and priorities – or franchise an existing model



Fading West, one of Time's 100 most influential companies, 2022

# Initial steps to lay the groundwork



- Undertake a more modest public/private partnership
- Undertake a housing project using modular construction techniques
- Assess regional readiness
- Implement best practices in policy and regulatory reform
- Pilot marketing/education project
- Identify sources of patient capital
- Explore the feasibility of using New Markets Tax Credits
- Conduct a construction financing pilot

# Shortening the learning curve



- A key purpose of the pilot is to reduce the “lift” for new entrants to the industry
- Monitoring and evaluation throughout the pilot will produce:
  - Lessons learned
  - Case studies of completed projects
  - Best practices
  - Tools

# Thank you!



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