

STEP Buildings™

Upper Midwest APA

October 13, 2020

Jim Kumon - Executive Director
Incremental Development Alliance

What Does It Stand For?

SMALL-SCALE

STEP Buildings are small enough for local people to develop and own. They create human-scaled urbanism where people know their neighbors and can get around without a car.

STEP Buildings max out at three stories and 12 residential units. Avoiding the cost of an elevator makes these buildings more affordable to build and lease.

TIME-ENHANCED

STEP Buildings are flexible and resilient enough to improve with age. They learn, evolving with the needs of their occupants and neighborhood.

STEP Buildings become more valuable through better cash flow and contribution to the neighborhood over time, not just passive appreciation.



What Does It Stand For?

ENTREPRENEURIAL

STEP Buildings earn an income, turning a building into a business. Profitability is what makes them so resilient over time - they can pay for their own maintenance and adaptation.

Entrepreneurial people develop these buildings by finding creative ways to make space more valuable.

PURPOSEFUL

STEP Buildings are an answer to “What does this neighborhood need?” They have a job to do and are brought to life by people who care about the building itself and the place it serves.

Without purpose, these are simply profitable buildings. With purpose, they become STEPs to a better neighborhood and can give more than they take.



House Hacks (Mortgage Helpers)



Entrepreneurial adaptations to an existing home that diversify housing options or generate an income



Middle Housing



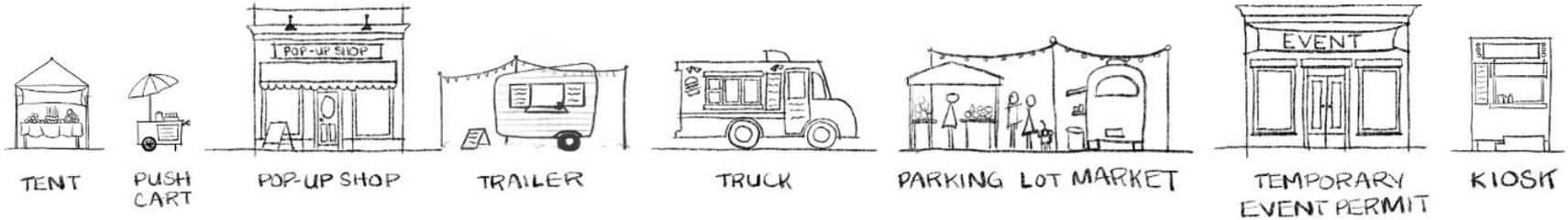
Multi-unit residential buildings that blend well into single-family areas



Commercial Incubation



Low-cost ways to grow and validate an early-stage business

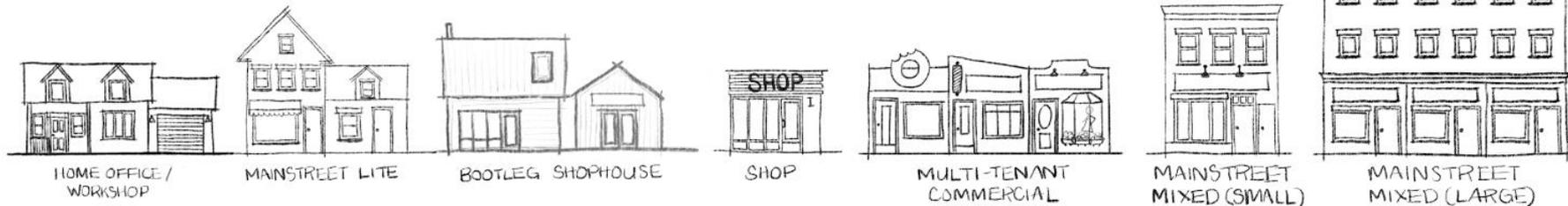


Neighborhood Node

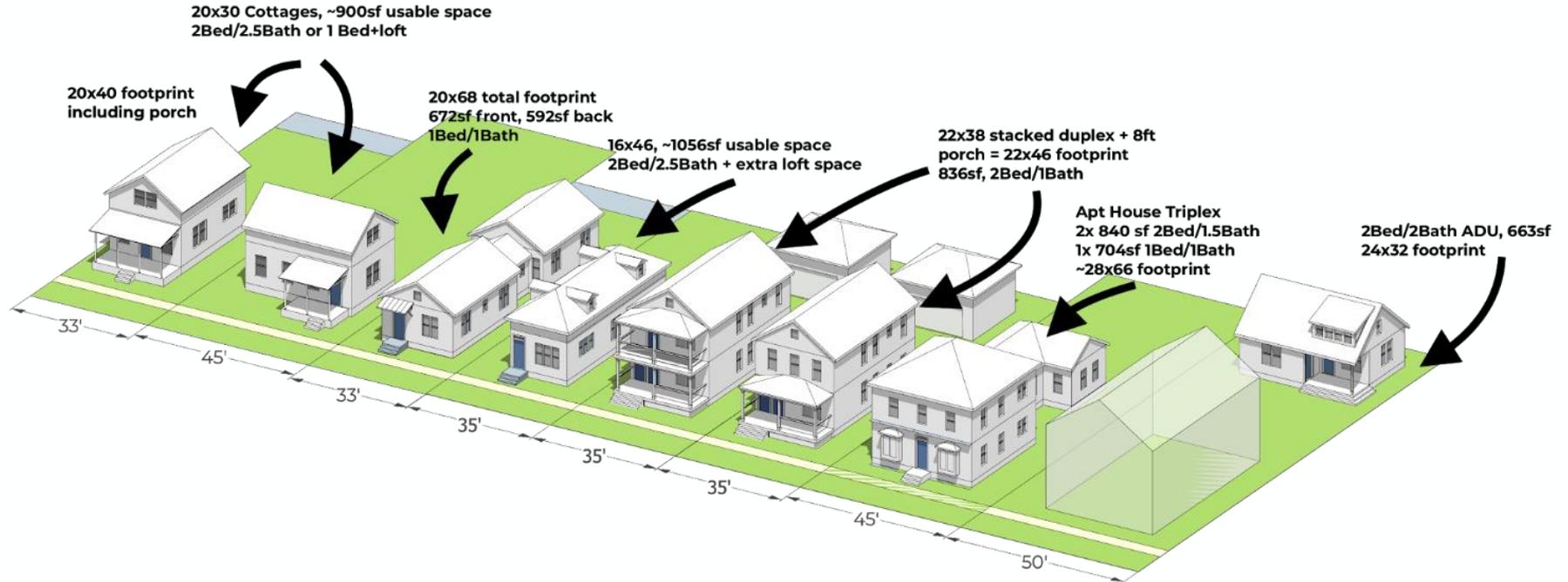


Walkable neighborhood destinations like corner stores and workspaces. Mixed-use or pure commercial, but small enough to be welcomed in residential areas

COMMERCIAL INCUBATION → NEIGHBORHOOD NODE



Compact Singles (and Cousins)



Small Building Thresholds



.....

Building Code

Financing Mechanism

International Residential
Code (IRC)

Residential Mortgage
(30 Year Term)

International Building
Code (IBC)

Commercial Loan
(3-10 Year Term)

ZONING

Financing Primer



(Illustrative numbers)



As building complexity rises, more rent is needed



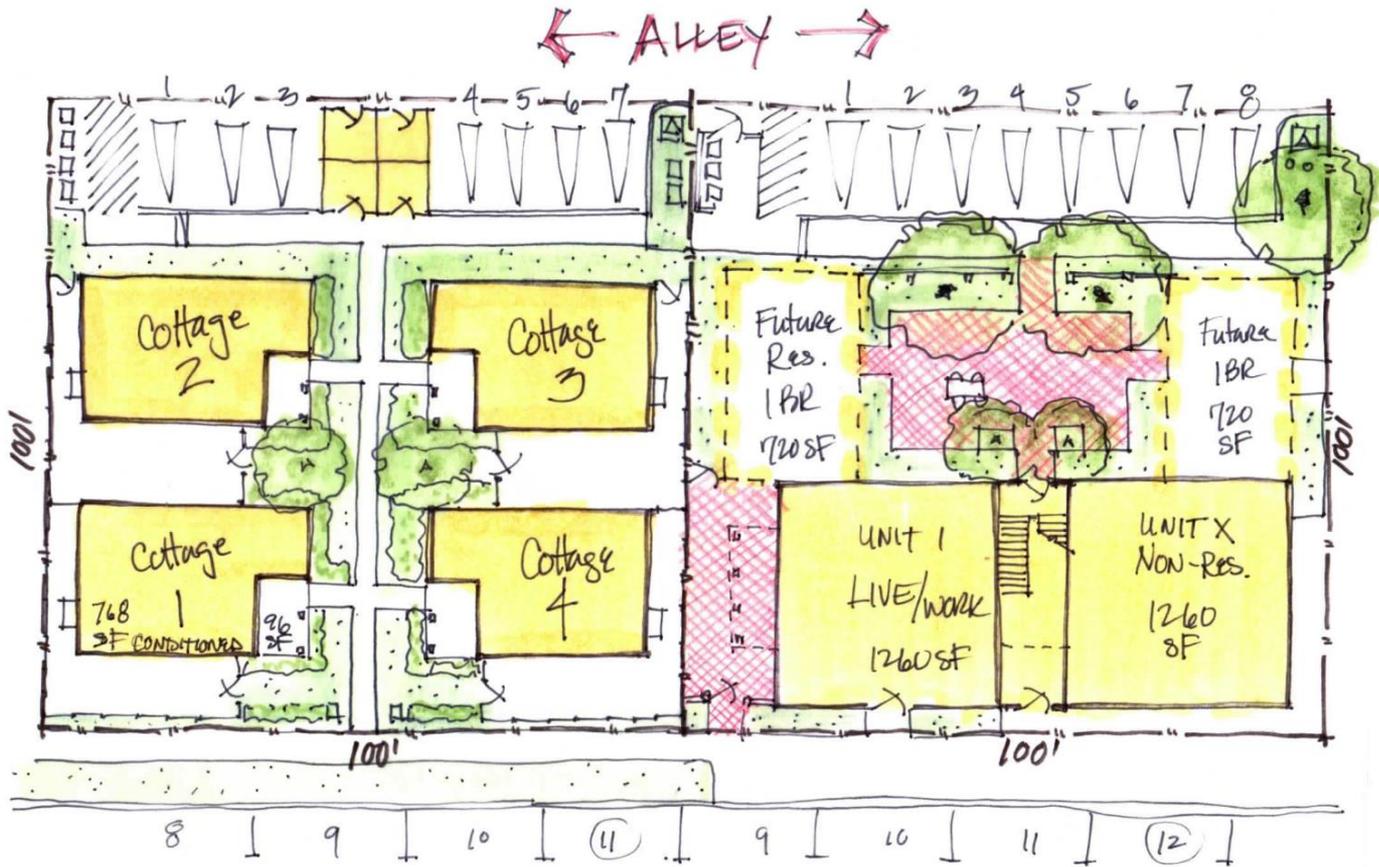
Personal debt

More complexity

“Residential” mortgages

Even more complexity

“Commercial” mortgages



1-4 units is a house
 Two options with equivalent financing



Entering Building Code Land



**Building code is applied
and interpreted locally.
These are generalizations.**



Why does this matter to us?



.....

1. We want safe, compliant buildings.
2. But life safety requirements are not always applied in a proportional or reasonable way.
3. Elevators are too expensive for a small-scale project.
4. Sprinklers are a massive expense to account for.
5. Our building design has to either avoid or pay for these costs. Building code literally shapes buildings.

IRC & IBC



**Most jurisdictions in the US
exempt IRC buildings from the
sprinkler req's suggested in the
latest code.**



IRC Buildings



HOUSE HACKS



renovation
ACCESSORY UNIT

Boho basement, attic chic.

© STEP Buildings™

HOUSE HACKS



Detached
ACCESSORY UNIT

CAS backyard cottage.
Make sure it's legal.

© STEP Buildings™

COMMERCIAL INCUBATION



Office / Workshop
HOME BUSINESS

"We got started in my garage."
Tax deductible square footage.

© STEP Buildings™

HOUSE HACKS



New or renovation
CO-LIVING HOUSE

Full house! (With enough privacy
that you can still love each other)

© STEP Buildings™

HOUSE HACKS



Attached
GUEST SUITE

Hot plate apartment.

© STEP Buildings™

IRC Buildings



MIDDLE HOUSING

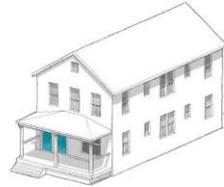


Side-by-side
DUPLEX

"We're having twins!"

© STEP Buildings™

MIDDLE HOUSING



Stacked
DUPLEX

Tall, slim, and charming solution for narrow lots.

© STEP Buildings™

MIDDLE HOUSING



Front-back
DUPLEX

Business in the front,
part-2 in the back.

© STEP Buildings™

COMPACT SINGLES



Fee simple
ROWHOUSE

Attached singles, no garage.

© STEP Buildings™

IRC Hacks



● ● ●

NEIGHBORHOOD NODE ▲ ▲ ▲



townhouse
LIVE/WORK

The entrepreneur lives upstairs.

© STEP Buildings™

● ● ●

COMBO ▲ ▲ ▲



New build
BOOTLEG SHOPHOUSE

No sprinklers, no problem.

© STEP Buildings™

● ● ●

COMBO ▲ ▲ ▲



Age in place
DUPLEX COURT

Senior-friendly option on a non-profit's budget.

© STEP Buildings™

BOOTLEG TRIPLEX



Units	2 but 3ish
Minimum lot width	25ft
Finance	self-financed or mortgage

Where accessory units are permitted, this building program can provide two affordable rental spaces in addition to the primary house, each with private entry. House + detached ADU + attached guest suite (no stove).

© STEP Buildings™

30 YR IRC IBC

Live/work is a building code term



.....

“LIVE/WORK UNIT. A *dwelling unit* or *sleeping unit* in which a significant portion of the space includes a nonresidential use that is operated by the tenant.”

- Total and relative size cap
- Must be ground floor
- Can fall under IRC

SECTION 419 LIVE/WORK UNITS

419.1 General. A *live/work unit* shall comply with Sections 419.1 through 419.9.

Exception: Dwelling or sleeping units that include an office that is less than 10 percent of the area of the *dwelling unit* are permitted to be classified as *dwelling units* with accessory occupancies in accordance with Section 508.2.

419.1.1 Limitations. All of the following shall apply to live/work areas:

1. The *live/work unit* is permitted to be not greater than 3,000 square feet (279 m²) in area.
2. The nonresidential area is permitted to be not more than 50 percent of the area of each *live/work unit*.
3. The nonresidential area function shall be limited to the first or main floor only of the *live/work unit*.
4. Not more than five nonresidential workers or employees are allowed to occupy the nonresidential area at any one time.

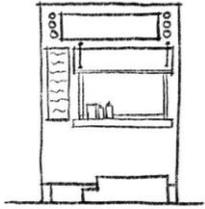
Now entering IBC



IBC Buildings - No Sprinklers**



COMMERCIAL INCUBATION

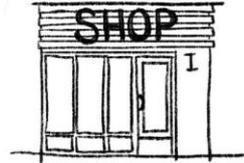


Food or retail
KIOSK

Cute-as-shit counter service.

© STEP Buildings™

NEIGHBORHOOD NODE

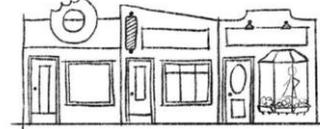


Simple
SHOP

Single storefront, straight up.

© STEP Buildings™

NEIGHBORHOOD NODE



Multi-tenant
COMMERCIAL

Strip mall... But make it
mainstreet.

© STEP Buildings™

NEIGHBORHOOD NODE



Grandfathersed
MAINSTREET MIXED

Pre-1991 buildings.
Don't rock the boat!

© STEP Buildings™

****Conditions Apply**

IBC Buildings - Res. Sprinklers



MIDDLE HOUSING ▲▲▲



New build
APARTMENT HOUSE

Triplex or quadplex camouflaged as a big house.

© STEP Buildings™

MIDDLE HOUSING ▲▲▲



Small
APARTMENT BLDG

Stealth density.
Now entering the deep end.

© STEP Buildings™

NEIGHBORHOOD NODE ▲▲▲



the 30yr mortgage
MAINSTREET LITE

The entry point for flexible use.

© STEP Buildings™

MAINSTREET LITE



1-3 res. + small non-res.
12' mortgage

minimum lot width
12' mortgage

possible "Live/Work Unit" (per IBC Residential Occupancy Type) on ground floor + to 3 other units. Check specific loan terms non-res. allowance.

STEP Buildings™ 30 YR IBC

IBC Buildings – Res. Sprinklers



MIDDLE HOUSING

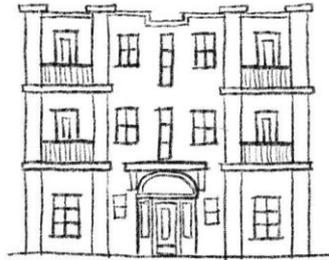


Attached
STACKED FLATS

For the love of Jane Jacobs...
Give the people a stoop.

© STEP Buildings™

MIDDLE HOUSING



Walkup
APARTMENT BLDG

Build 'em like they used to.
So handsome.

© STEP Buildings™

MIDDLE HOUSING



Walkup
COURTYARD APT

Basically an elegant multi-family
castle. Live like royalty.

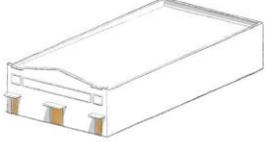
© STEP Buildings™

IBC Buildings - No Joke Sprinklers



● ● ●

**COMMERCIAL
INCUBATION** ▲ ▲ ▲



light industrial
MAKERSPACE

Small spaces for small businesses
that build things.

© STEP Buildings™

● ● ●

**NEIGHBORHOOD
NODE** ▲ ▲ ▲



Existing
SHOPHOUSE

Little shop attached to a house
like the old days.

© STEP Buildings™

● ● ●

**NEIGHBORHOOD
NODE** ▲ ▲ ▲



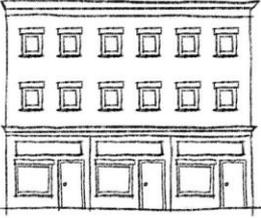
Small
MAINSTREET MIXED

Beautiful urbanism, but you're in
for a world of hurt.

© STEP Buildings™

● ● ●

**NEIGHBORHOOD
NODE** ▲ ▲ ▲



Large
MAINSTREET MIXED

The Holy Grail

© STEP Buildings™

Maybe not if your reno is
minimal and occupancy
does not change.

ADA Thresholds



MIDDLE HOUSING ▲▲▲



New build
APARTMENT HOUSE

Triplex or quadplex camouflaged
as a big house.

© STEP Buildings™

NEIGHBORHOOD
NODE ▲▲▲



the 30yr mortgage
MAINSTREET LITE

The entry point for flexible use.

© STEP Buildings™

- 4+ units? You need a ground floor accessible unit.
- Ground floor non-res. should always be accessible
- Keep your non-res on the ground floor

Thresholds for Elevators and Sprinklers

Elevators required:

- Four stories or more.
- Commercial uses upstairs.
- No accessible unit downstairs (for 4+ units).
- More than four units per landing.

• Sprinklers required:

- Mixing uses.
- Building 3 or more units.
- Most commercial.

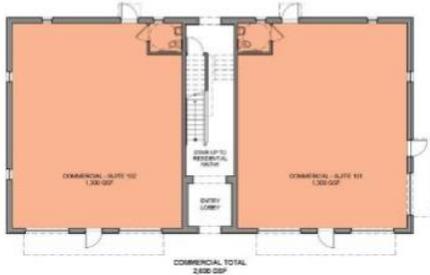
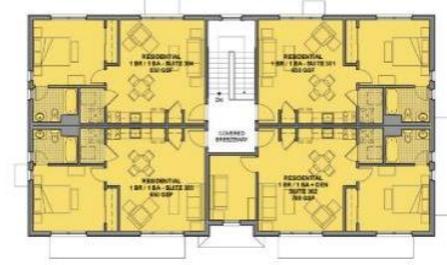




Elevator threshold

No elevator required for this building,
but it does require sprinklers.





Accessibility threshold

No accessible unit required for the mixed-use triplex on the left.



Things to look out for



- Elevators
- Sprinklers
- Side setbacks and fire-rated windows
- Egress requirements (windows, stairs)
- Fire separation between units / townhouses
- Minimum dimensions (ceiling height, room size)



Things to do



- Keep it 1-3 storeys
- Max. 4 units per stair, per floor on a walkup
- Consider multiple small buildings to separate occupancies and stay in IRC zone.
- Keep commercial space under sqft thresholds for sprinklers
- Make use of live/work classification
- Accessible unit(s) on ground floor
- Stack your plumbing and your noise from floor to floor.
- Existing building: don't make it *more* dangerous

Resurrecting Missing Middle Housing in Chattanooga



