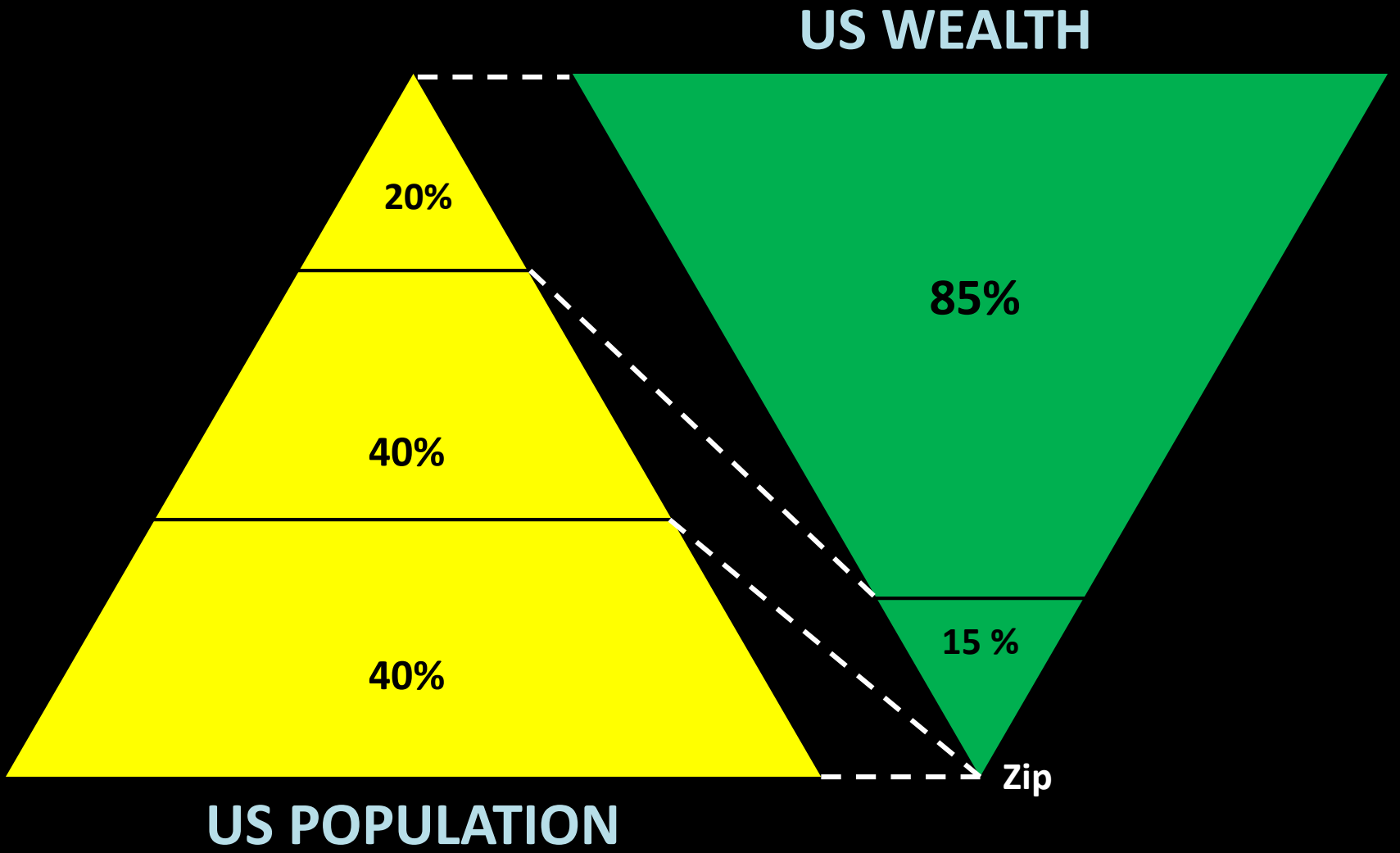
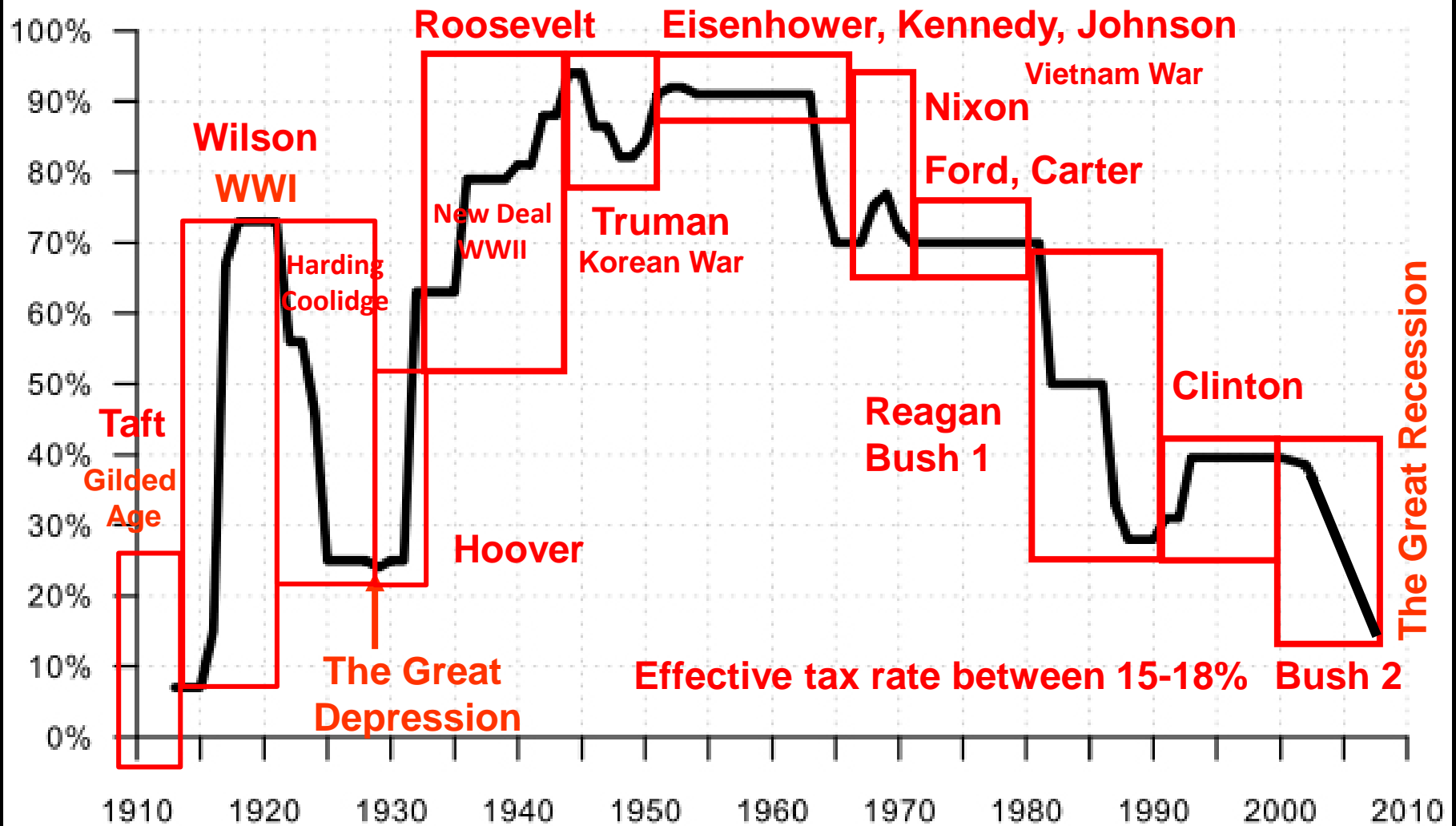


# Affordable Housing:

## Strategies for Short-Term and Long-Term Savings

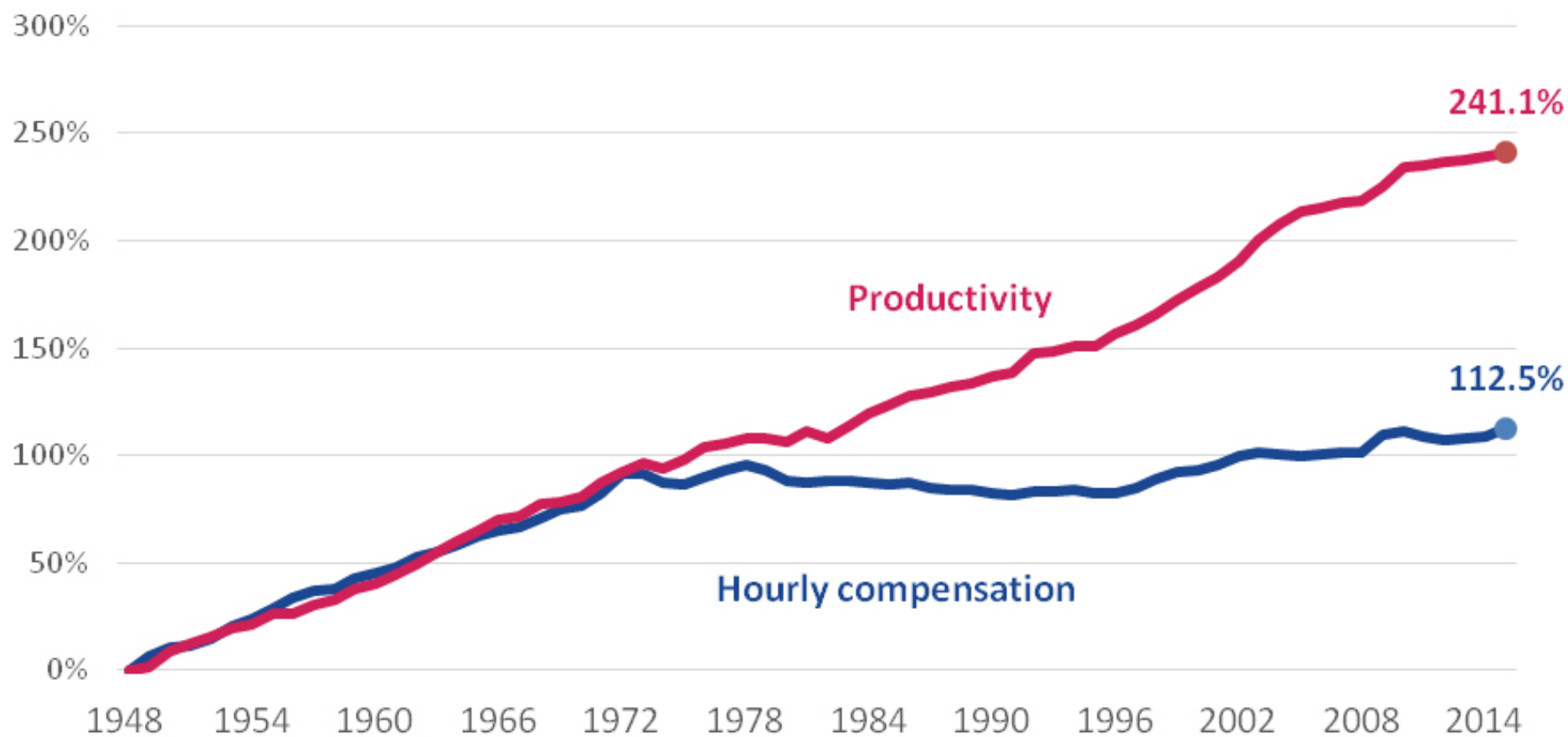
Michael Pyatok, FAIA  
NCSHA, 2018



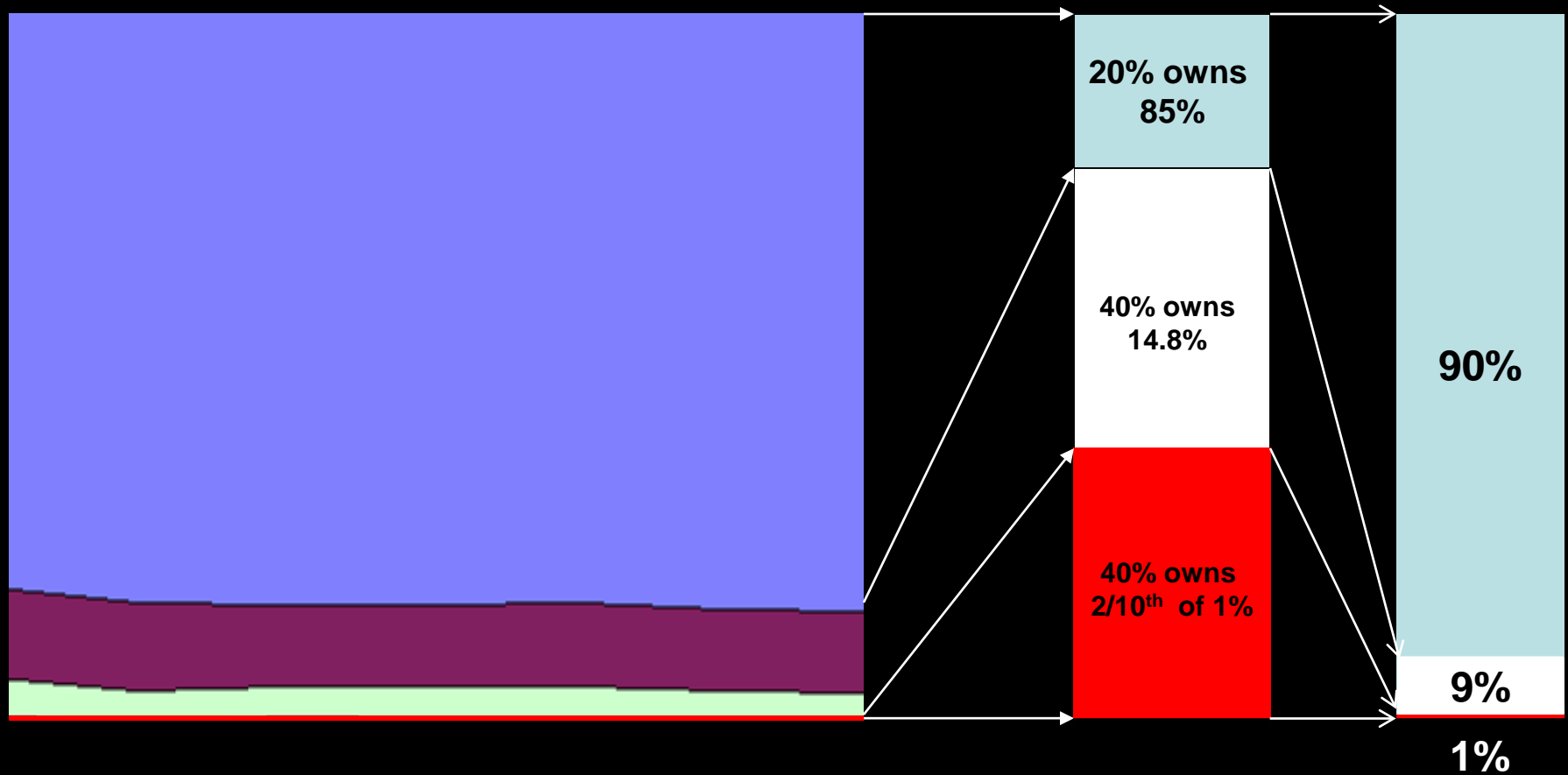


**U.S. Federal income tax rate on top 10% from 1913 to 2011**

## U.S. Productivity and Real Hourly Compensation, 1948-2015



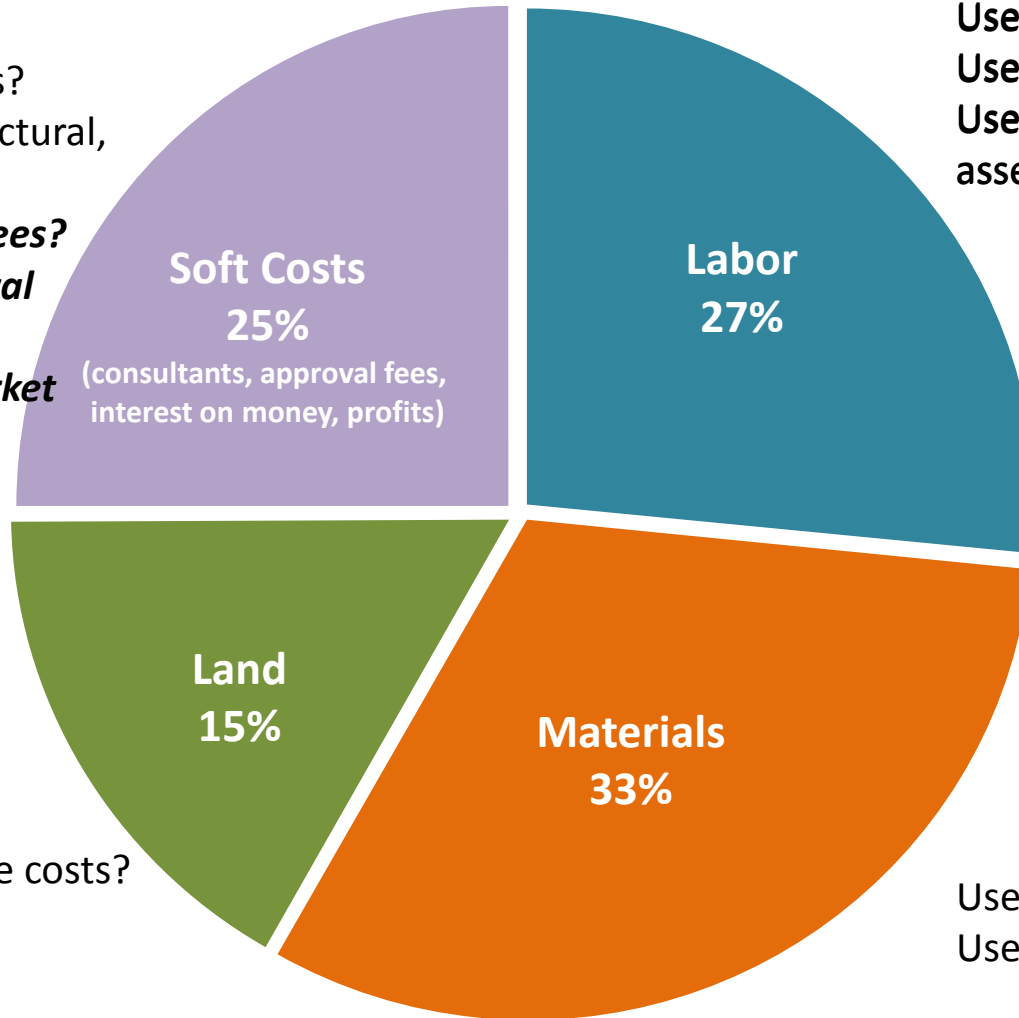
# From what class do members of Congress come?



Given this larger economic context, the housing affordability gap is larger than ever. How can we lower development and construction costs to narrow the gap?

# How should we lower development costs?

Lower profits?  
Lower interest rates?  
Lower legal, architectural,  
engineering fees?  
**Lower processing fees?**  
**Shorten the approval  
process?**  
**Impact fees on market  
rate housing?**



Use cheaper labor?  
Use manufacturing methods?  
Use more standardized  
assemblies?

Lower infrastructure costs?  
Lower land values?

Use cheaper materials?  
Use local suppliers?

# 1. Community Process

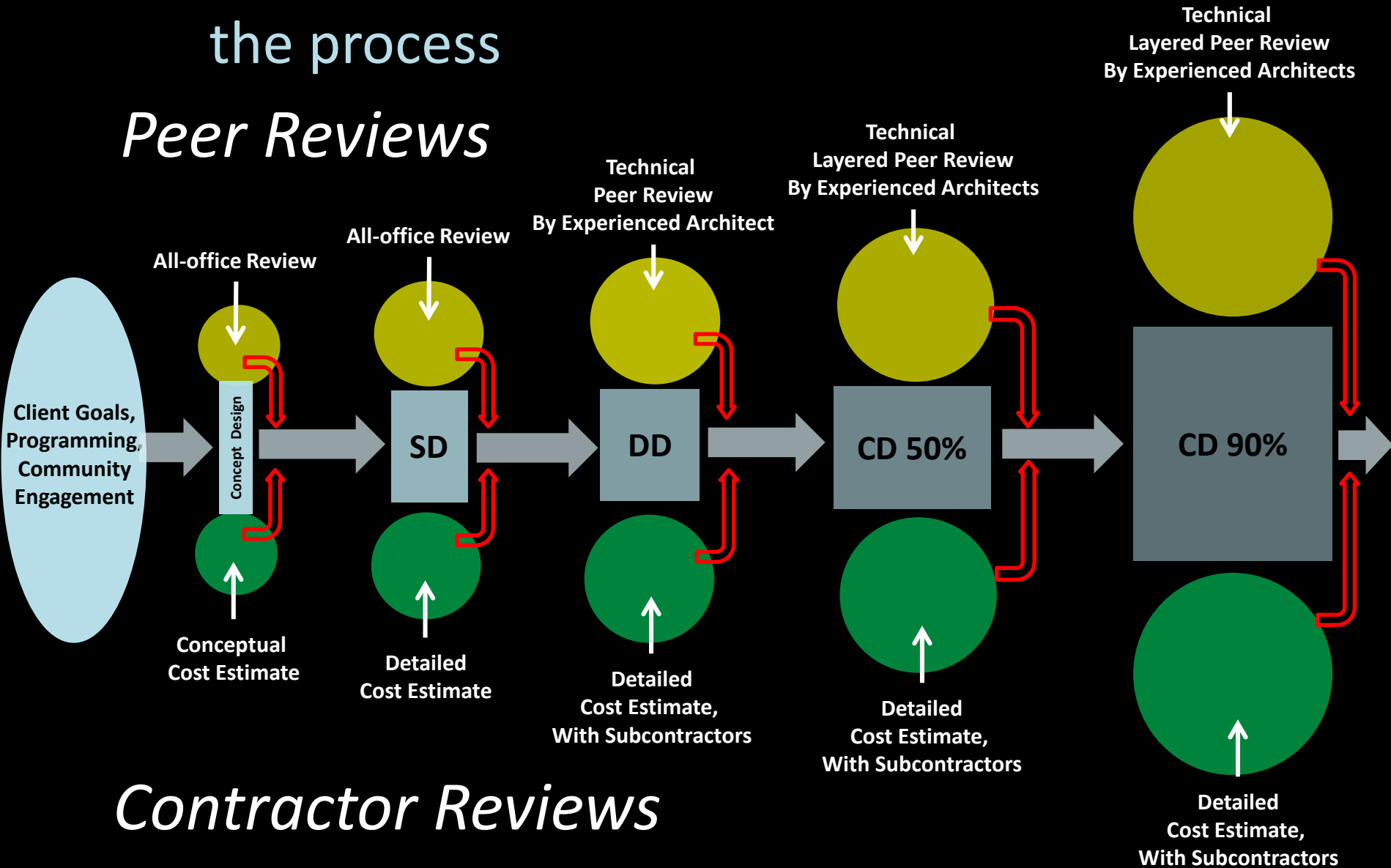
Always engage the community to ward off opposition and to gain support,  
With real hands-on design methods, *not* passive show-and-tell marketing



Saves time and money in the long run, and gains political support

## 2. Quality Control, Involve GC early in the process

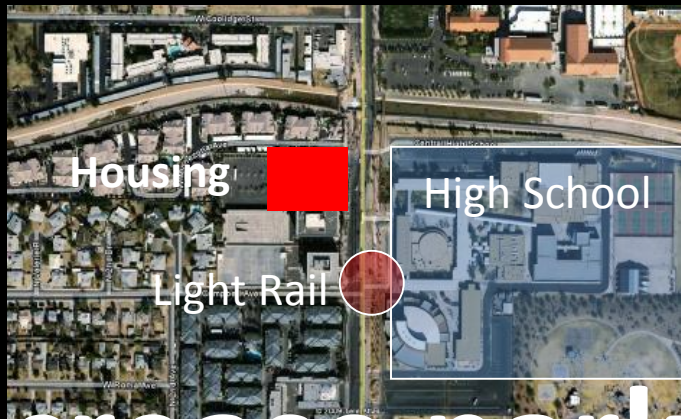
### *Peer Reviews*



### *Contractor Reviews*

# 3. Site Choice and Site Planning

Choose sites near infrastructure, transit and amenities

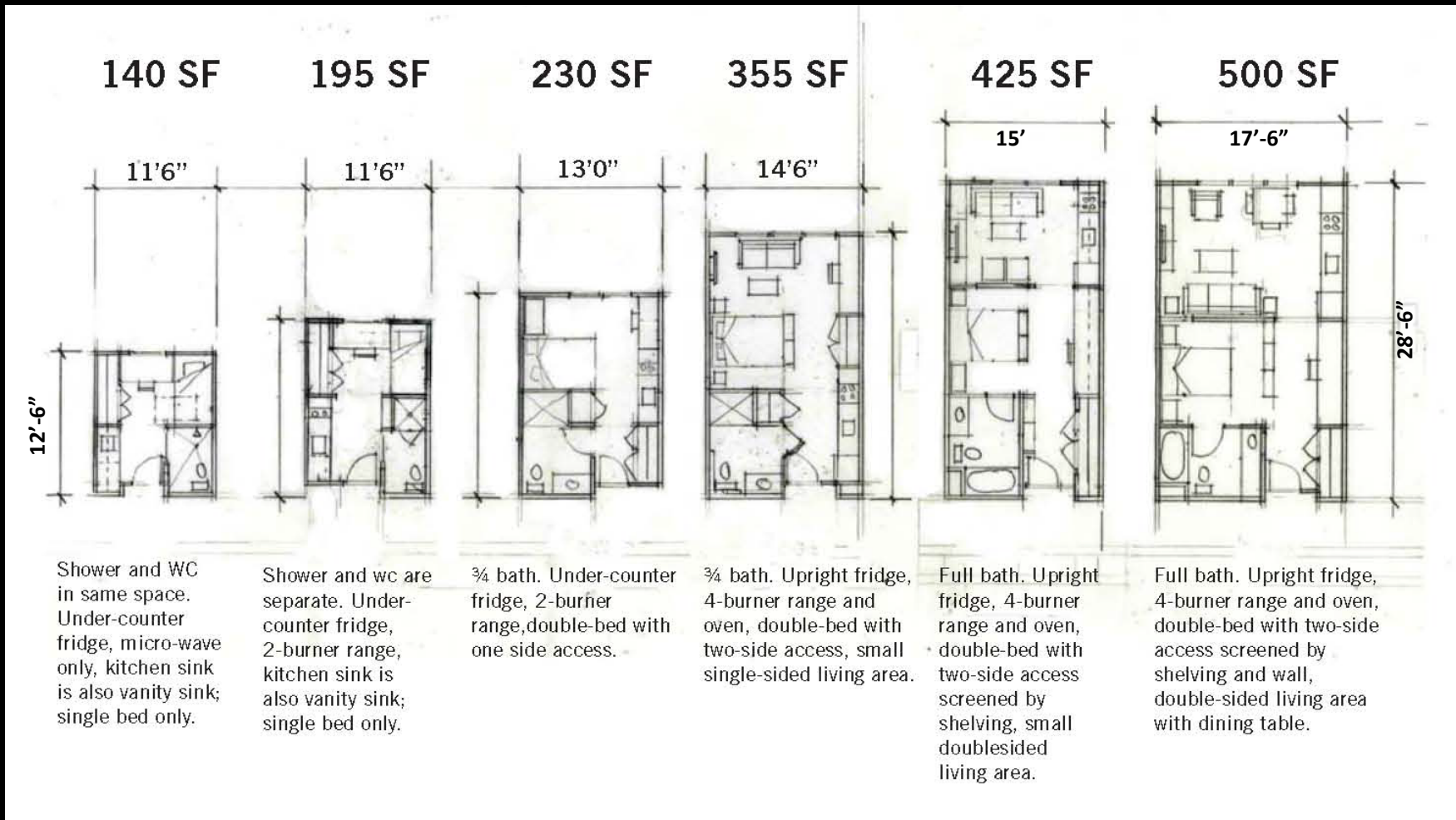


# Decrease parking requirements

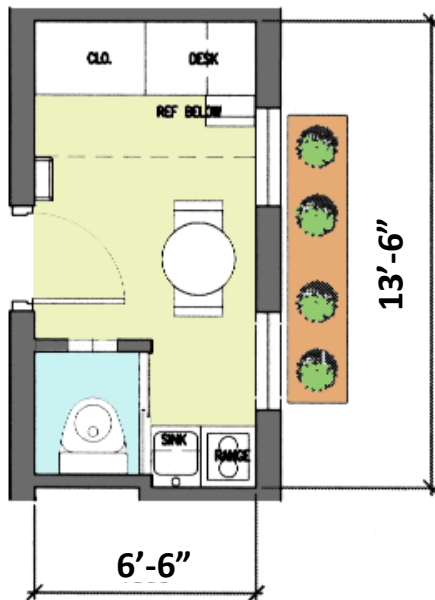
Increase density to lower land costs, *if* the increase in construction costs is worth it



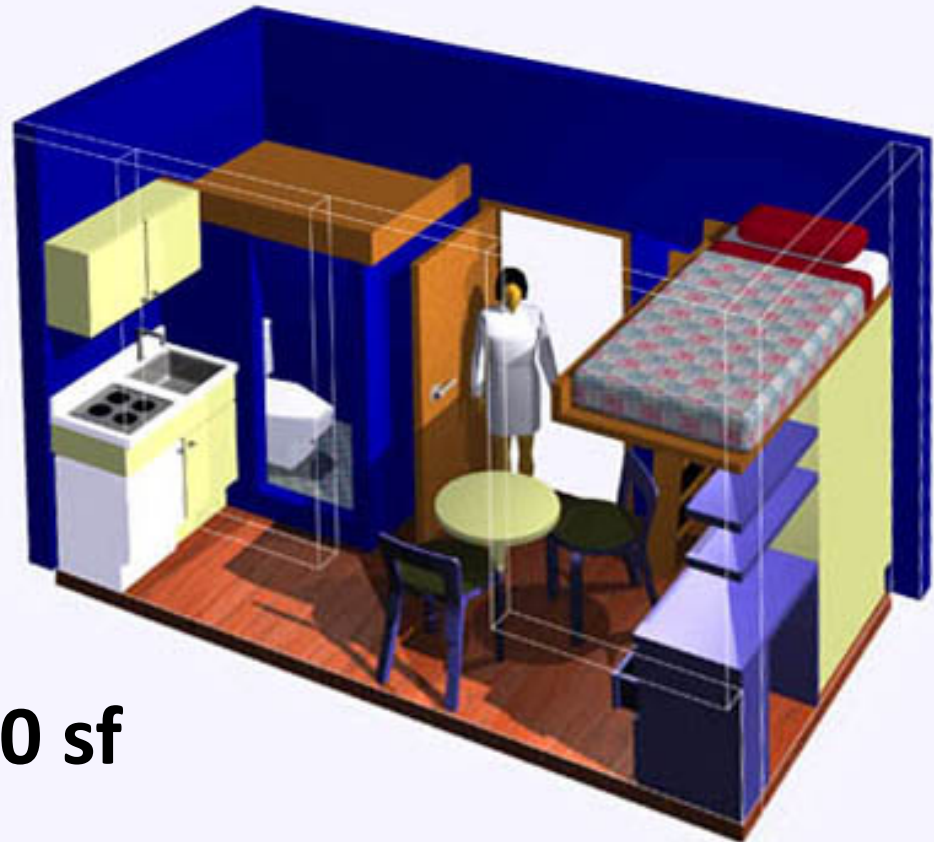
# 4. Shrinking expectations: Studios/Tiny Houses less at home while living more in the public realm



## 4. Shrinking expectations: Studios/Tiny Houses less living at home while living more in the public realm

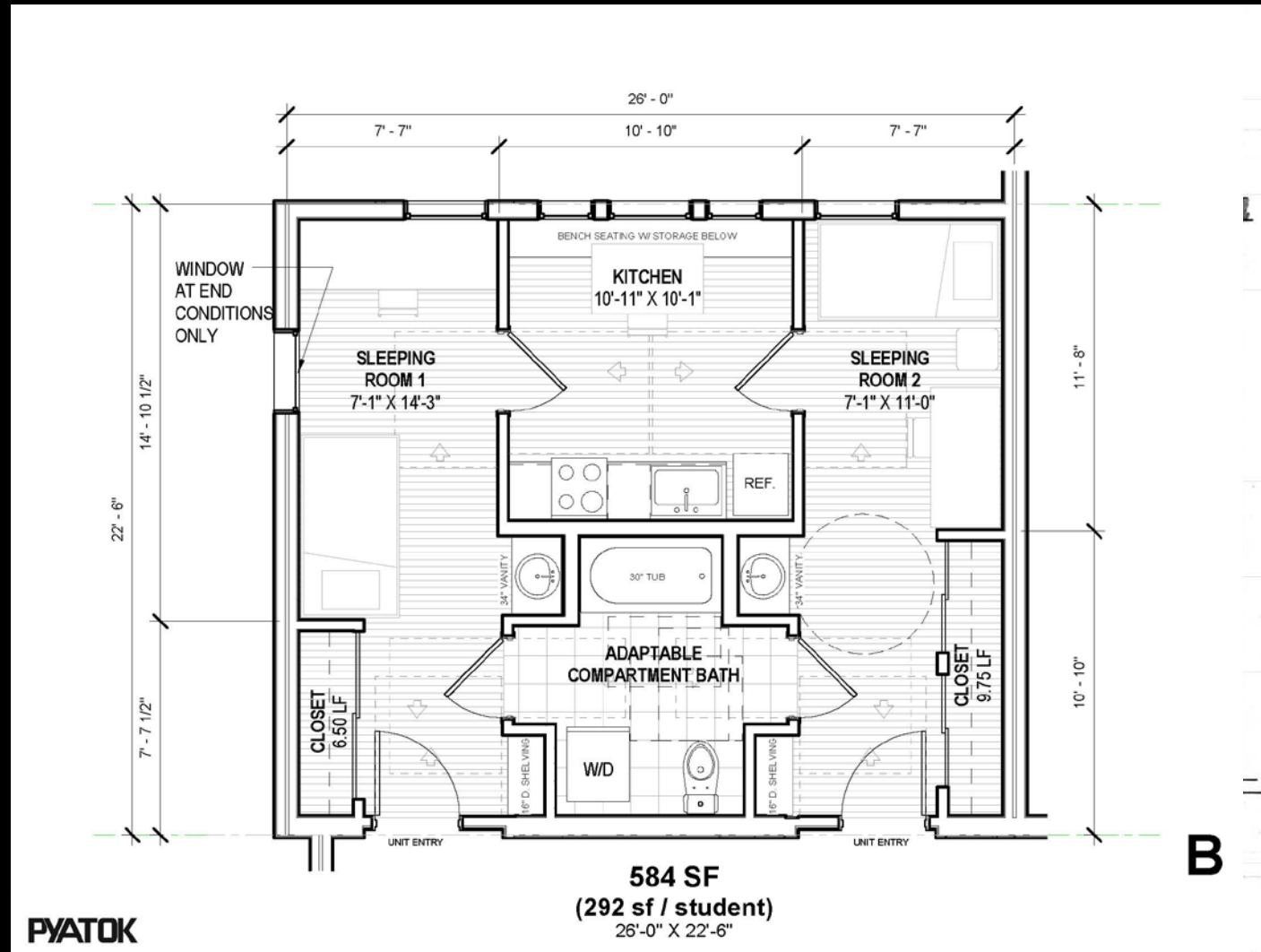


**90 sf**



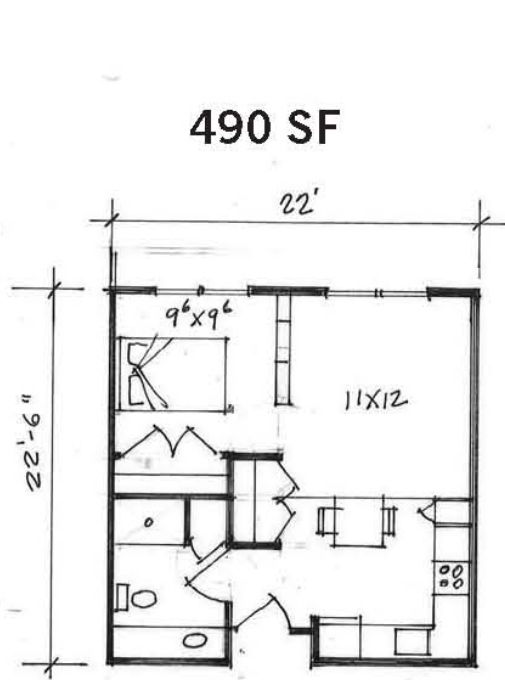
# 4. Shrinking expectations: 'Shudios'

less at home while living more in the public realm

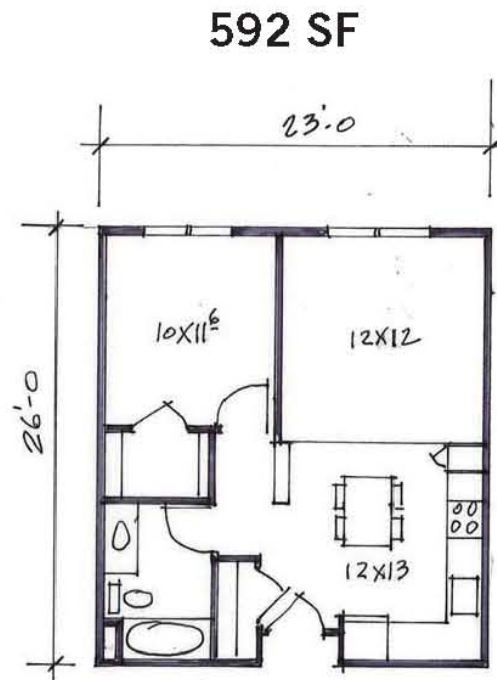


# 4. Shrinking expectations: One Bedroom

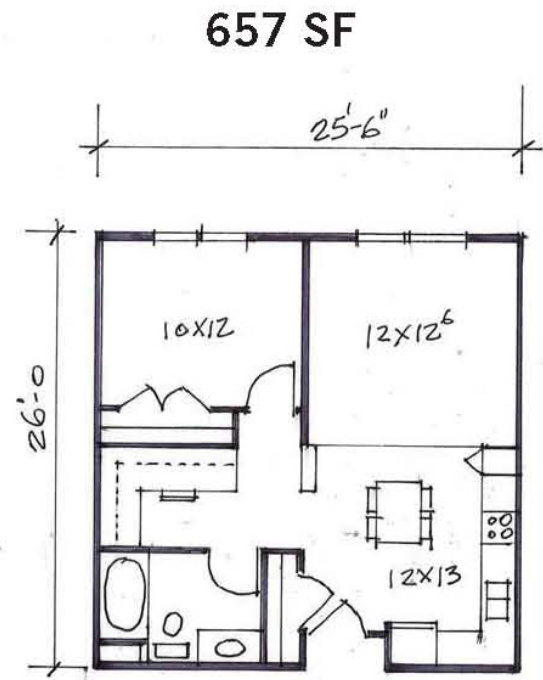
less at home while living more in the public realm



**Junior:** sleeping area separated by shelving; Shower, no tub

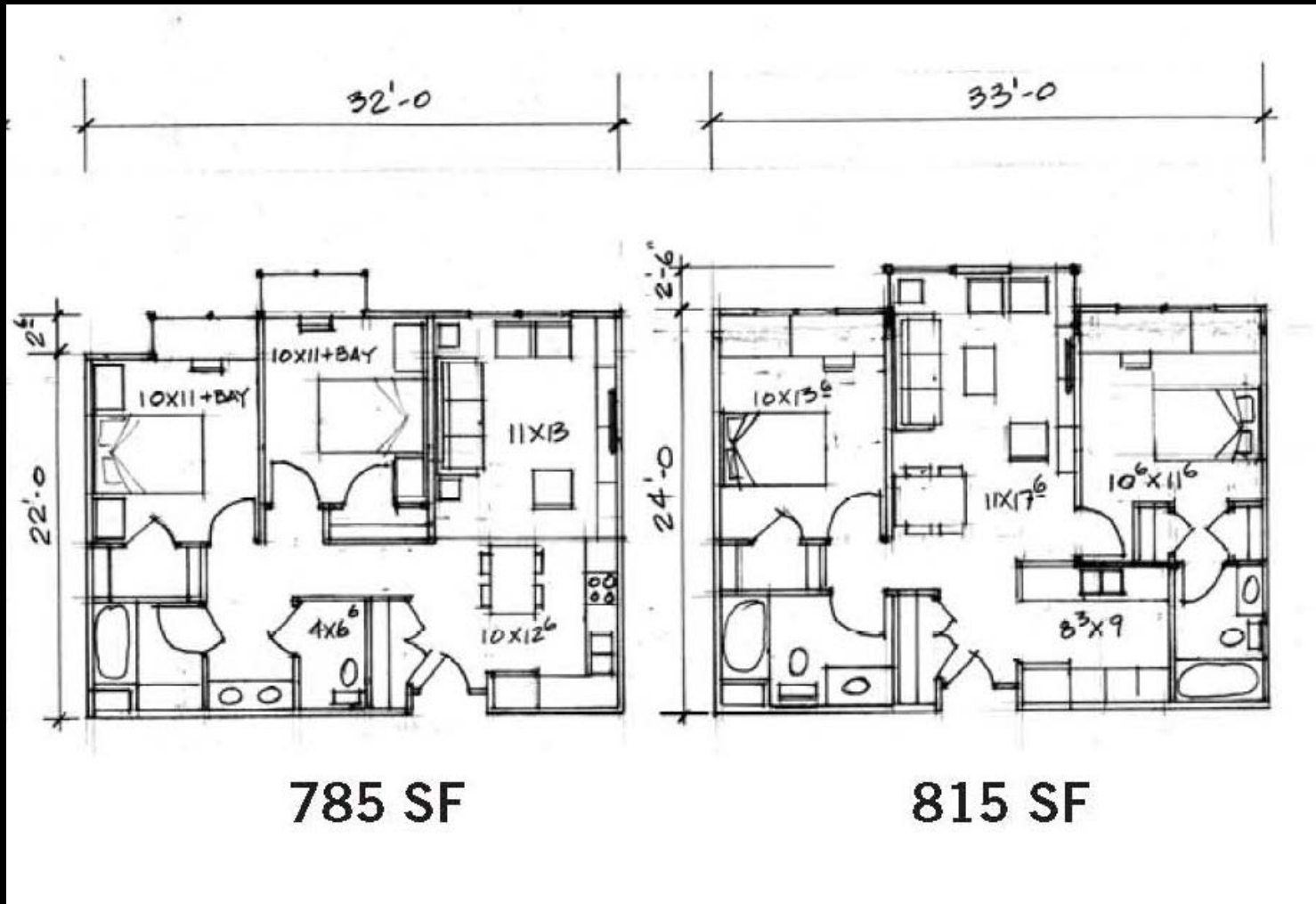


**Standard:** larger rooms than Junior, full bath, incl. private bedroom

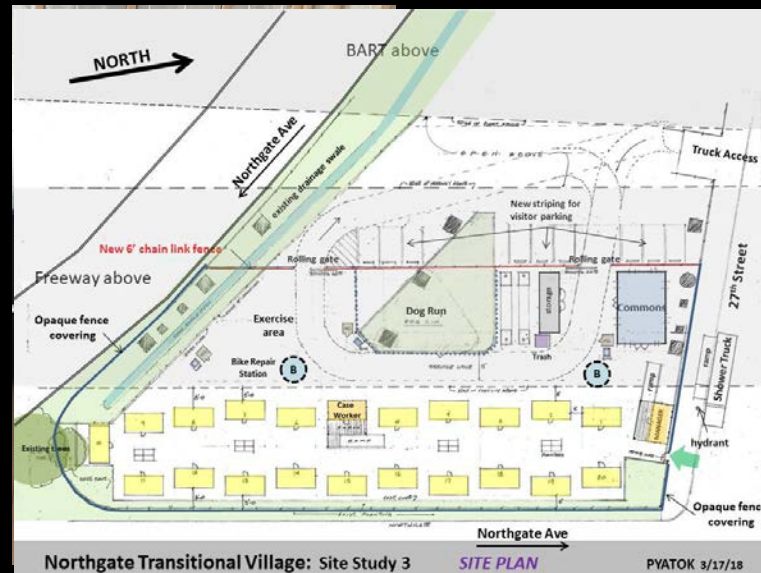


**Luxury:** larger rooms than Standard, incl. study/office

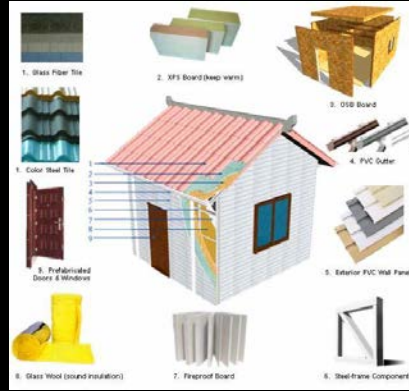
# 4. Shrinking expectations: Two Bedroom less at home while living more in the public realm



# 4. Tiny Homes for the Homeless



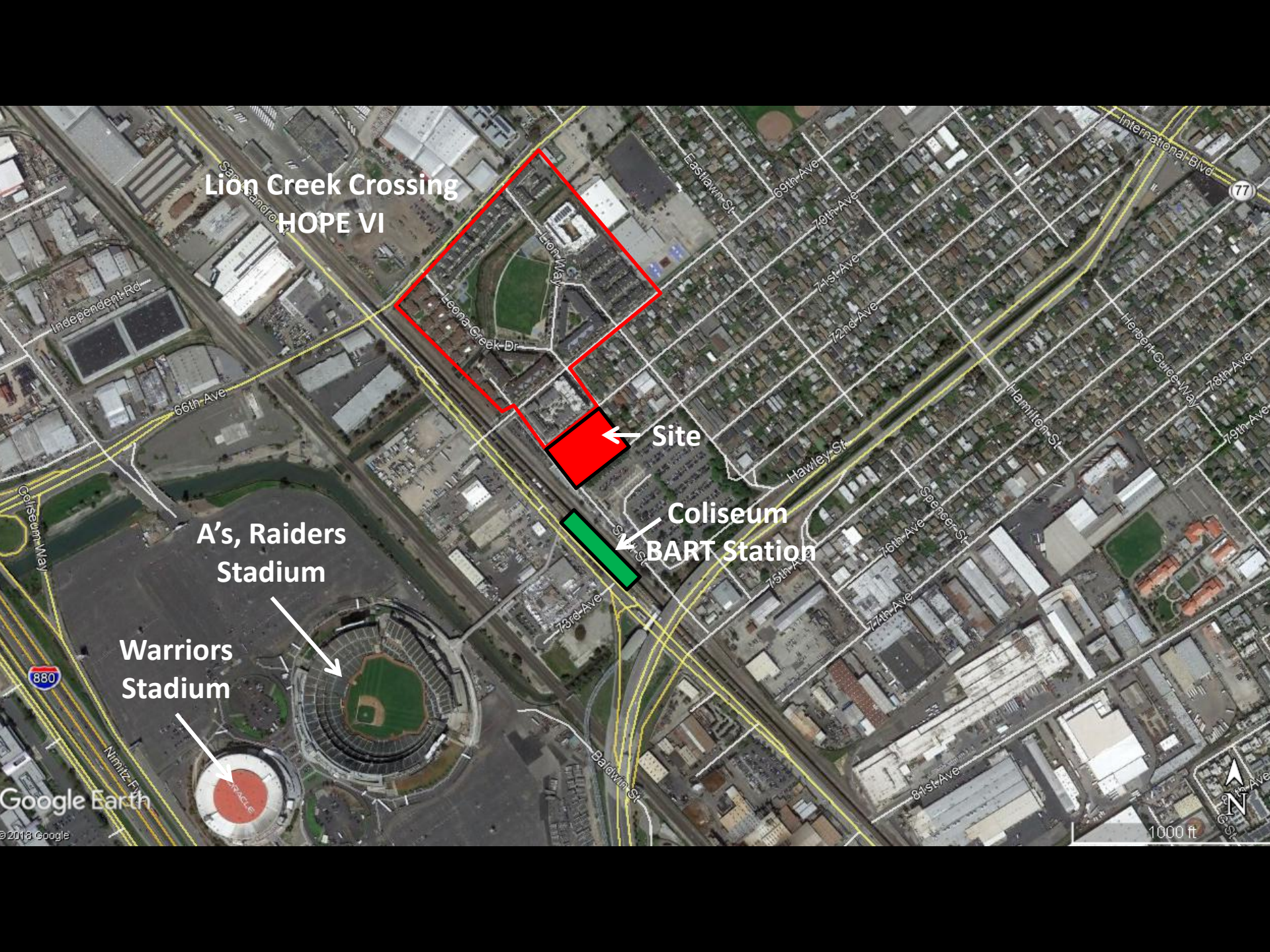
# 5. Prefab Paneling of floors, walls, roofs



# 6. Modular Wooden Boxes, Stacking



Coliseum Connections



Lion Creek Crossing  
HOPE VI

Site

Coliseum  
BART Station

A's, Raiders  
Stadium

Warriors  
Stadium

Google Earth  
© 2018 Google

1000 ft



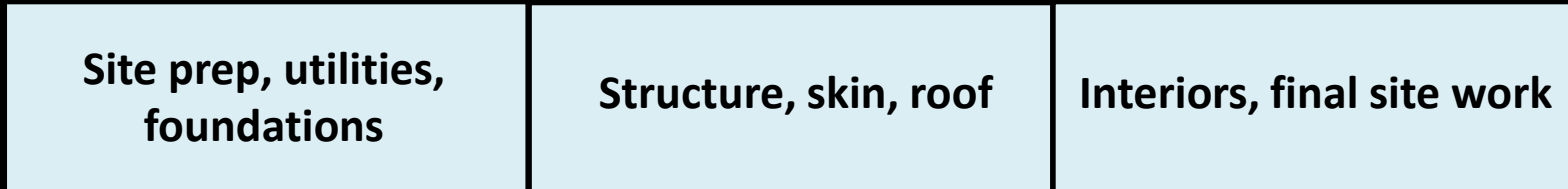
San Antonio  
Independent Rd  
66th Ave  
Coliseum Way  
Nimitz Fwy  
880  
Lion Creek Dr  
Leona Creek Dr  
Eastwin St  
69th Ave  
70th Ave  
71st Ave  
72nd Ave  
Hawley St  
73rd Ave  
74th Ave  
75th Ave  
76th Ave  
77th Ave  
78th Ave  
79th Ave  
Hamilton St  
Herbert Guice Way  
International Blvd  
77  
Spencer St  
Balwin St  
81st Ave

# 6. Modular Wooden Boxes, Stacking

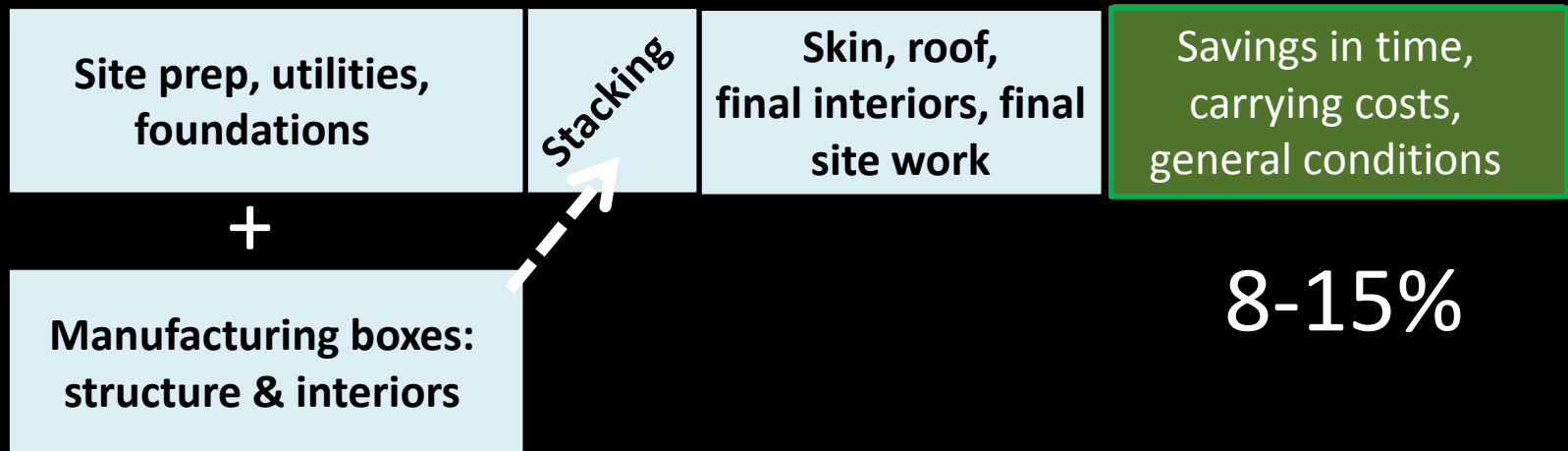


# 6. Benefits of Manufactured Modules, Stacking

## *Conventional Construction*



## *Modular Construction*



## 6. Modular Metal Boxes: structure, interiors and skin



# 6. Modular Metal Boxes: Shipping Containers



# 7. Long-Term Savings: energy, water, land

Sun Screens facing south

Greywater recycling in court

Solar Hot Water

Dual use: carport or outdoor shaded living room

Recycled Concrete Slab Pieces

Aerated Concrete Block: R-38

SIPs Panels: R-40

Reflective Roof

Re-purposed 'chipper' logs as beams



# 7. Long-Term Savings: energy, water, land

Shaded Roof Terrace, Future  
2 bedrooms and bath

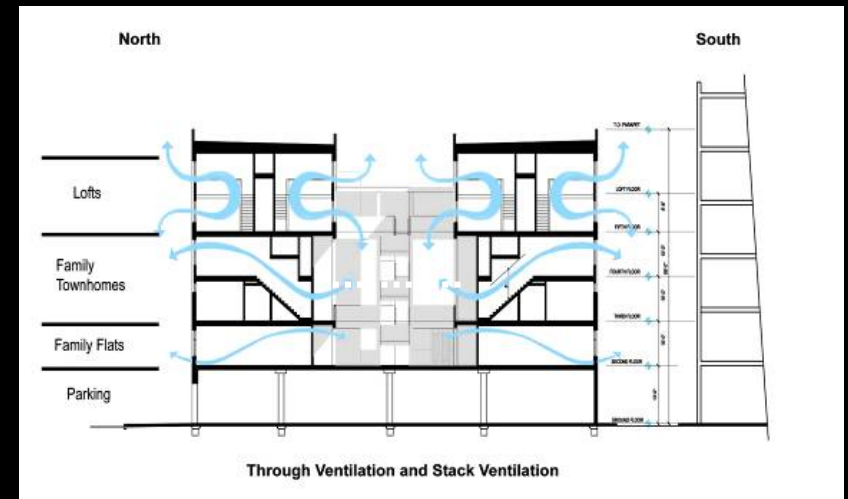
Detached Casita for  
Extended Family

Captured Rain Water





# 7. Long-Term Savings: energy, water, land, natural ventilation





# 8. Simple Rectangles, simple plans, simple stacking: design where it counts



# 9. Opportunities for Personalization



# 10. Opportunities for Art



Frieze Panels



Entry Gates



Murals



Mosaics



Wood Carvings



Tile Pavers

# 10b. Opportunities for Art



