



# Donald W. Powers AIA, LEED AP, CNU

*President & Founding Partner*

Education:

Harvard University, Graduate School of Design  
Masters of Architecture

University of Virginia, School of Architecture  
B.S. Architecture - Awarded Annual Design Prize





# Small Solutions to the Housing Crisis

*Tiny Houses in New Hampshire*

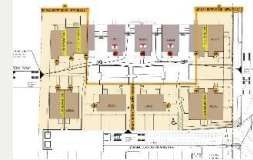




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## *Tiny Houses in New Hampshire*

- A Case Study: *The Cottages on Greene*
- Fitting In and getting approved
- Principles of Compact Neighborhood Design
- Examples in other contexts, at other scales





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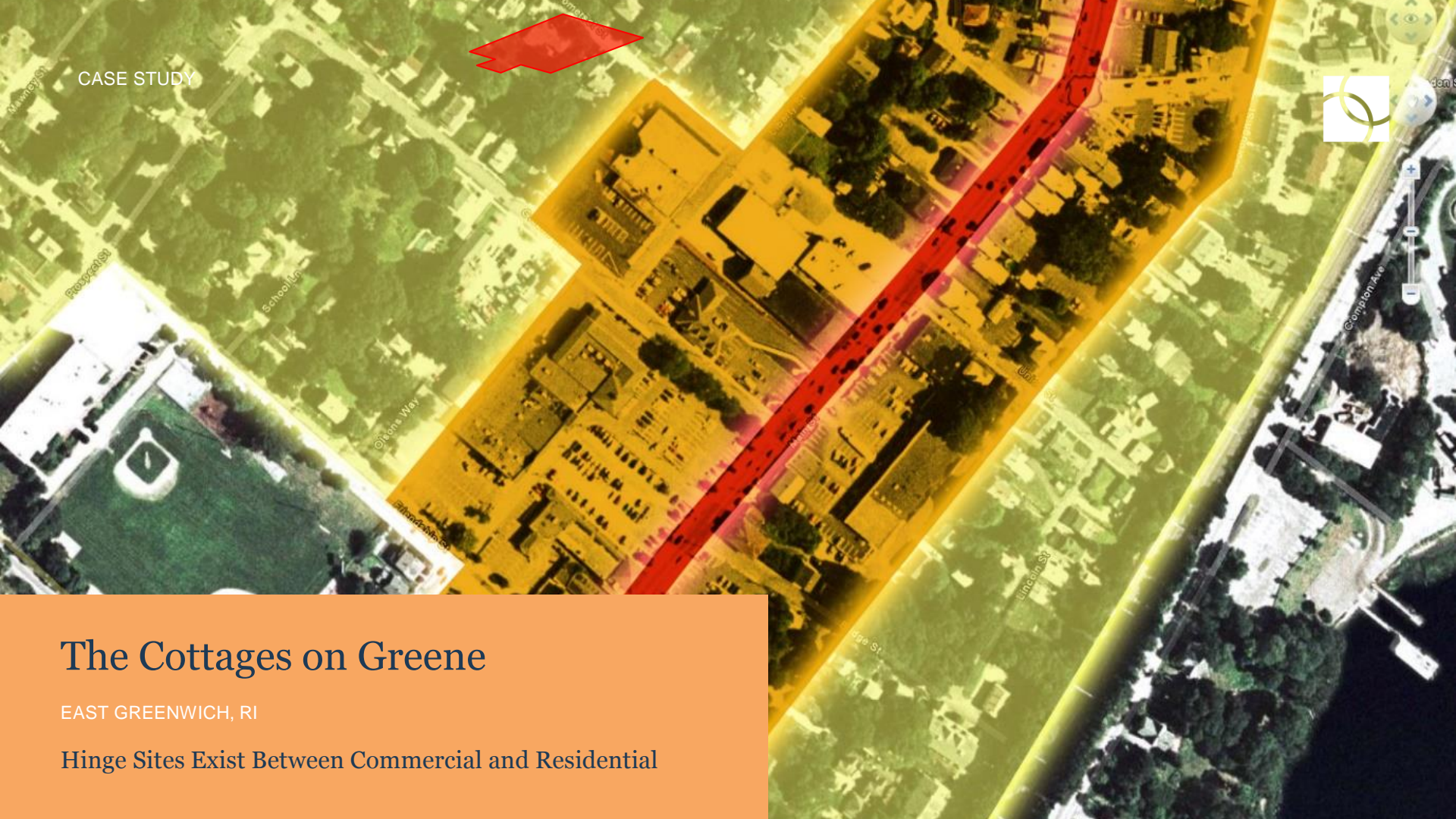
CASE STUDY



# The Cottages on Greene

EAST GREENWICH, RI





CASE STUDY

# The Cottages on Greene

EAST GREENWICH, RI

Hinge Sites Exist Between Commercial and Residential

CASE STUDY



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# The Cottages on Greene

EAST GREENWICH, RI

- 39,000 SF (.89 Acres)
- 15 Units (+/- 17 Units per acre)
- 900 SF 2br units arranged as singles, duplexes and tri's
- Adjacent to town recreational amenities
- ¼ mile from main street
- Common Green and small community garden
- 22 Parking Spaces



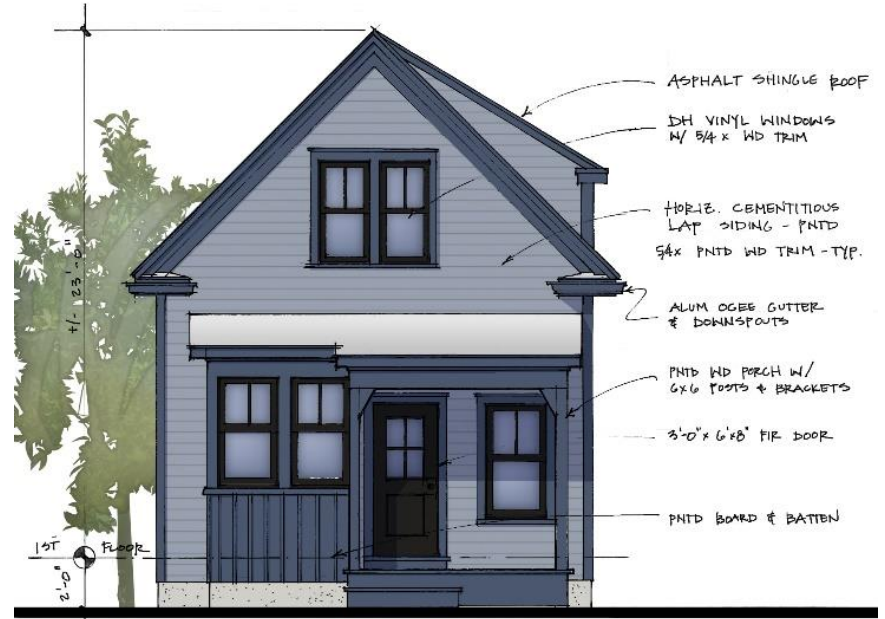


# The Cottages on Greene

EAST GREENWICH, RI



- Two Basic types: 900 – 1000 SF



# The Cottages on Greene

EAST GREENWICH, RI

- Two Basic types: 900 – 1000 SF



# The Cottages on Greene

EAST GREENWICH, RI

- Basic Types combined into duplexes and...



# The Cottages on Greene

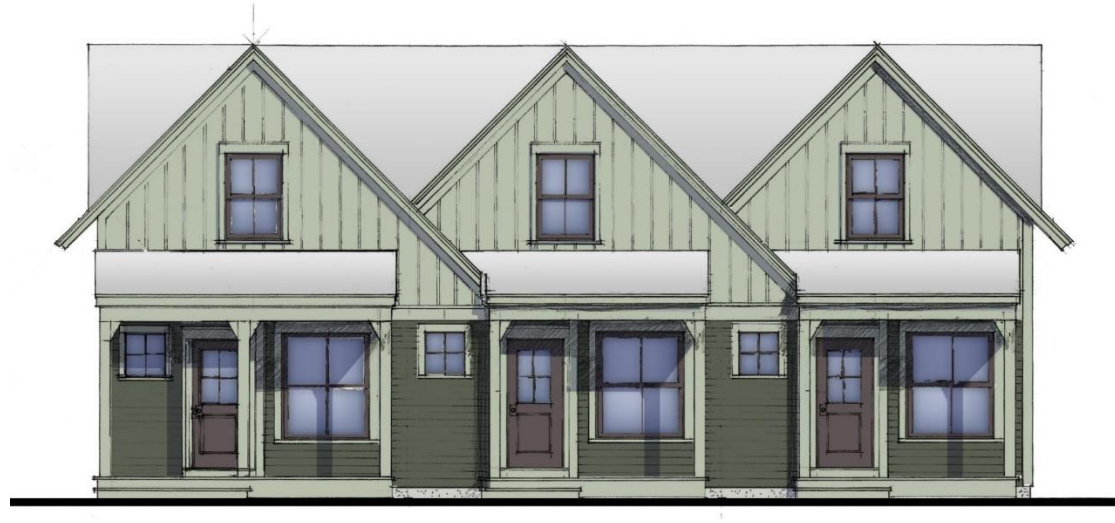
EAST GREENWICH, RI

- ...Triplexes



BUILDING 1 - SECOND FLOOR PLAN  
SCALE: 1/4" = 1'-0"

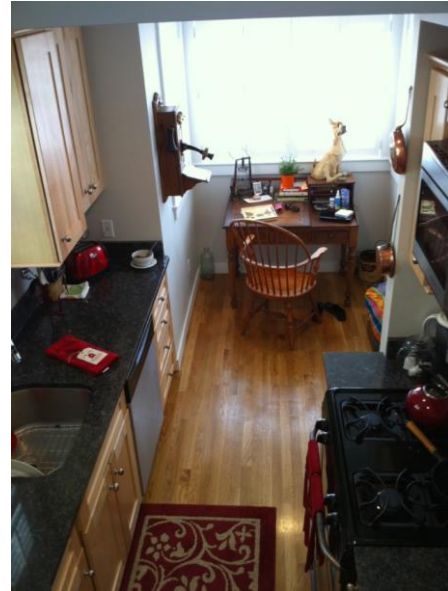
*First Floor*



# The Cottages on Greene

EAST GREENWICH, RI

- Interiors are very efficient – ship like.



# The Cottages on Greene

EAST GREENWICH, RI

- When combined the various combinations and colors create a nice variety.





CASE STUDY



# The Cottages on Greene

EAST GREENWICH, RI





CASE STUDY



# The Cottages on Greene

EAST GREENWICH, RI

CASE STUDY



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CASE STUDY



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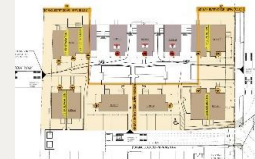
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## FITTING IN AND GETTING APPROVED

Model works well as a transition between different contexts.





## FITTING IN AND GETTING APPROVED

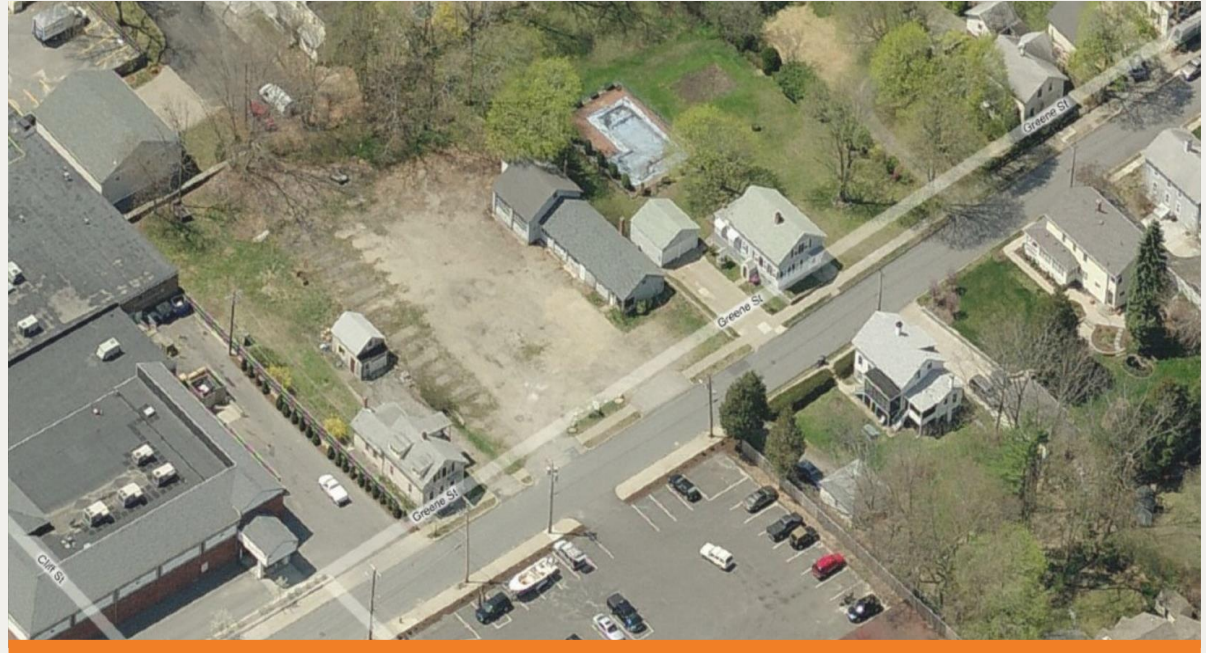
Identified in Town's Comprehensive Plan, as a place for "high density" residential.





FITTING IN AND GETTING APPROVED

This Code for Double  
Loaded Multi-Story,  
Multi-Family  
Construction.





FITTING IN AND GETTING APPROVED

This Code for Double  
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## FITTING IN AND GETTING APPROVED

Project was an experiment in density. Could it be made acceptable to the single-family neighborhood.

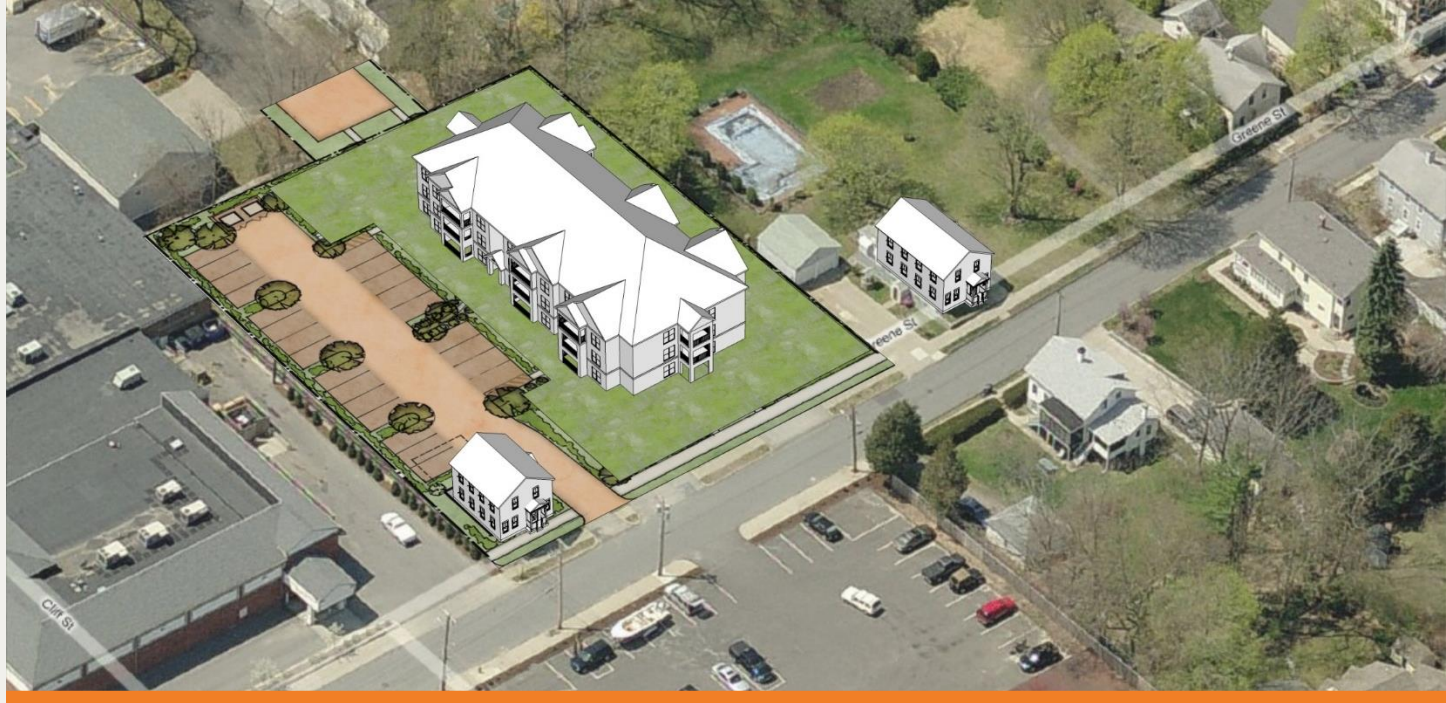
Needed to understand the concept of scale.





FITTING IN AND GETTING APPROVED

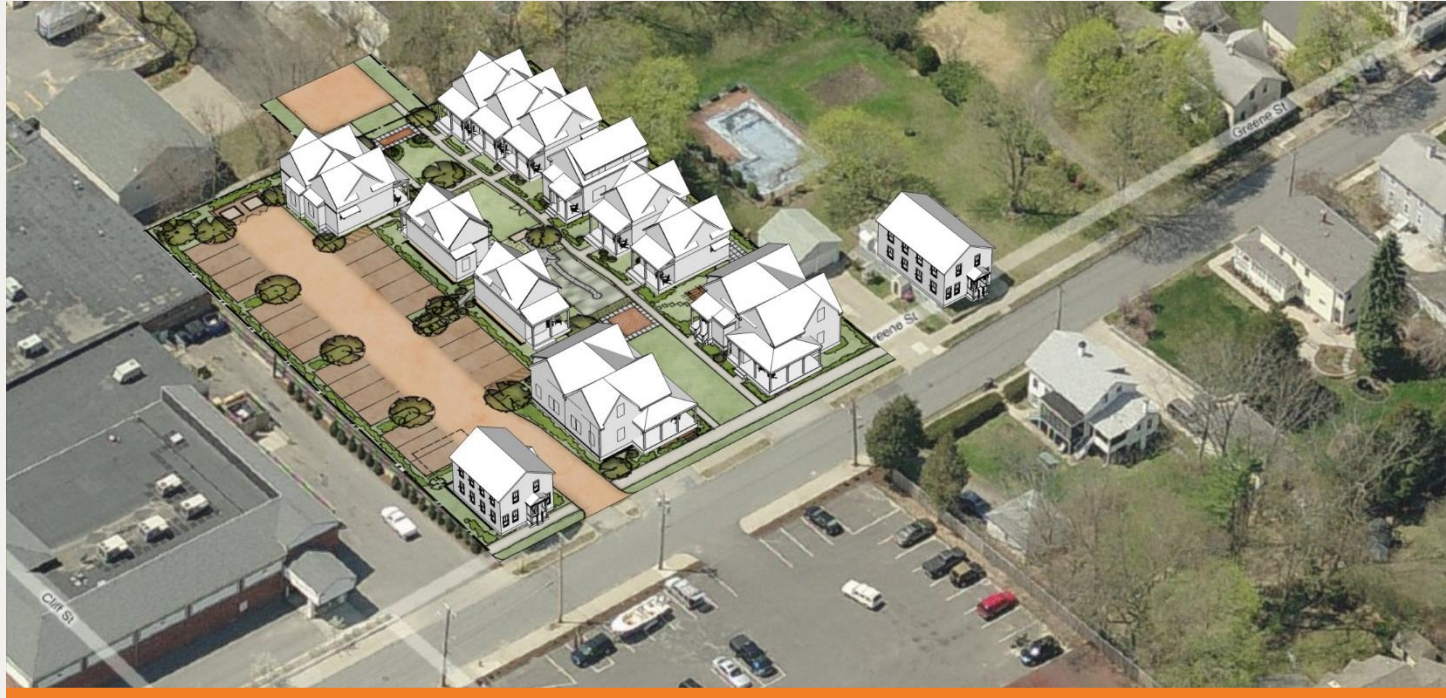
What had  
been feared  
was this...





FITTING IN AND GETTING APPROVED

What was  
**delivered**  
was this.



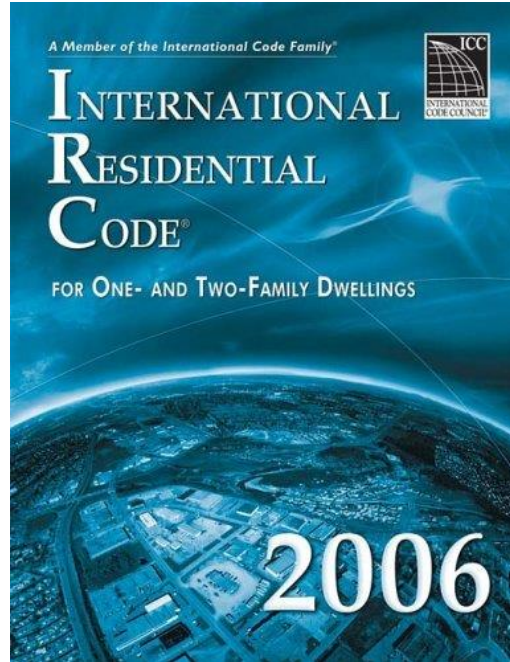
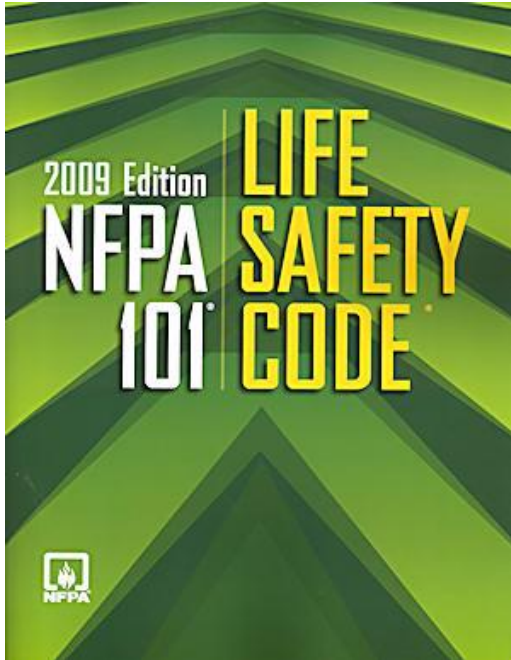


Frontage of the cottages matched that scale



A GREEN STREET ELEVATION  
SCALE 1/8" = 1'-0"  
0 4 8 16 32





TOWN OF EAST GREENWICH  
COMPREHENSIVE COMMUNITY PLAN  
HOUSING ELEMENT  
YEAR 2025 AFFORDABLE HOUSING PLAN

November 17, 2004

ADOPTED BY THE TOWN COUNCIL  
DECEMBER 14, 2004

Prepared By:  
Town of East Greenwich  
Planning Department  
125 Main Street  
East Greenwich, Rhode Island 02818

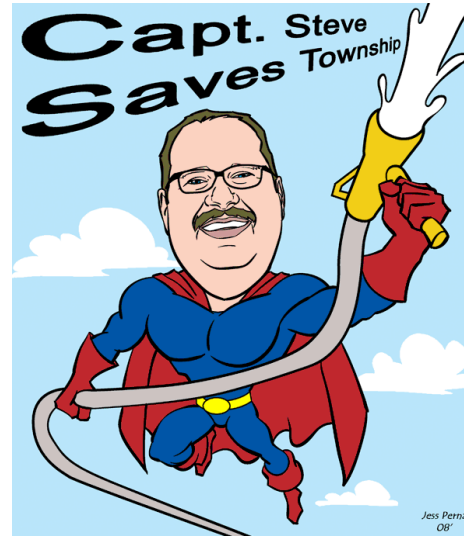
## Know the Codes

## Know The **INTENT**

**1.4.2 Approval.** The system, method, or device shall be approved for the intended purpose by the authority having jurisdiction.

**1.4.3\* Equivalent Compliance.** Alternative systems, methods, or devices approved as equivalent by the authority having jurisdiction shall be recognized as being in compliance with this *Code*.

**1.6 Enforcement.** This *Code* shall be administered and enforced by the authority having jurisdiction designated by the governing authority.



## REGULATORY HURDLES

### NFPA - APPLICABLE REGULATIONS

#### 18.2.3.2 Access to Building

18.2.3.2.1 A fire department access road shall extend to within 50ft of at least one exterior door that can be opened from the outside and that provides access to the interior of the building.

18.2.3.2.2 Fire department access roads shall be provided such that any portion of the facility and portion of an exterior wall of the first floor of the building is located not more than 150ft from fire department access roads as measured by an approved route around the exterior of the building or facility.

18.2.3.4.4 Dead Ends. Dead-end fire department access roads in excess of 150ft in length shall be provided with approved provisions for the fire apparatus turn around.

18.2.3.4.1.1 Fire department access roads shall have an unobstructed width of not less than 20 ft.



## REGULATORY HURDLES



### NFPA - APPLICABLE REGULATIONS

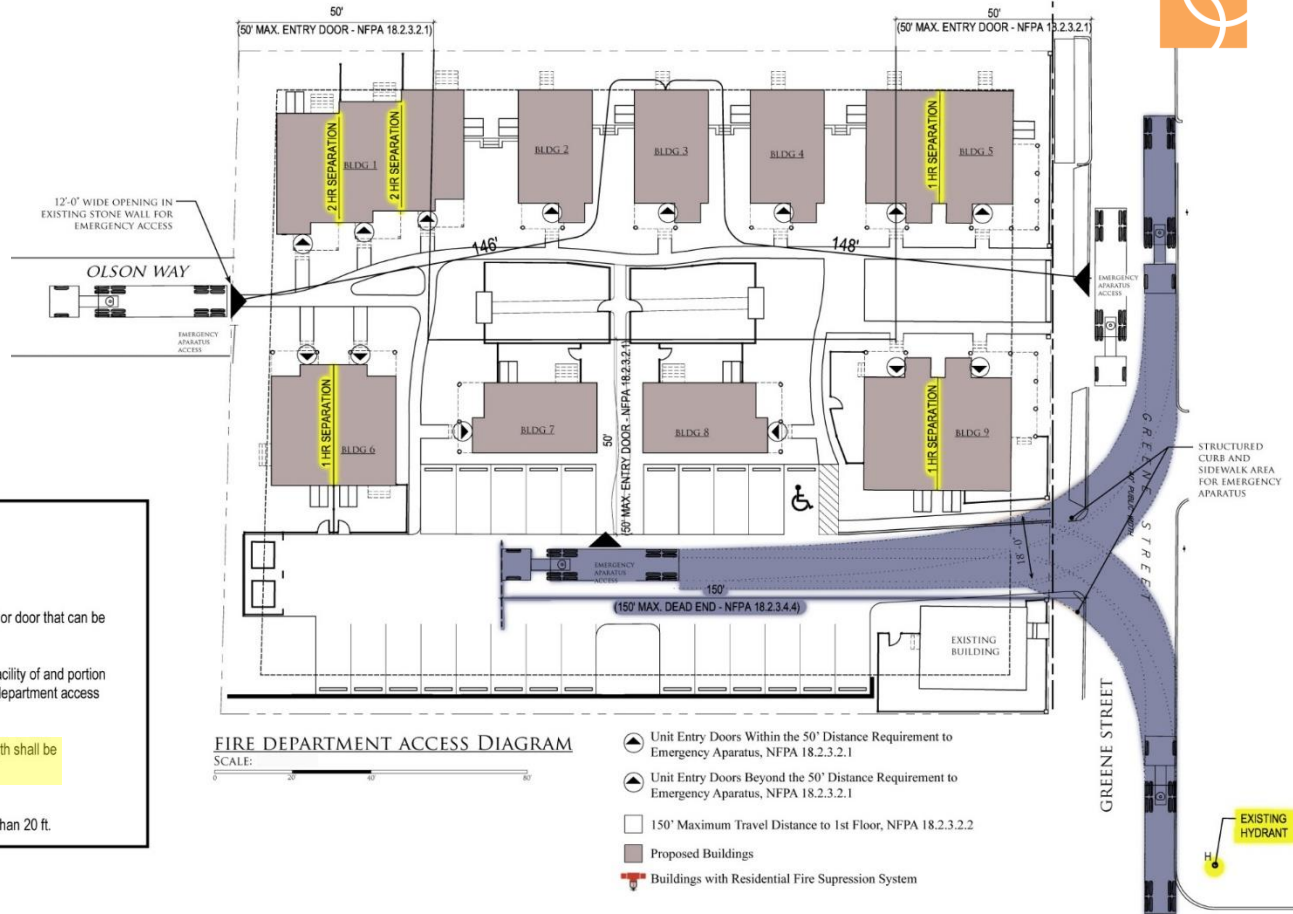
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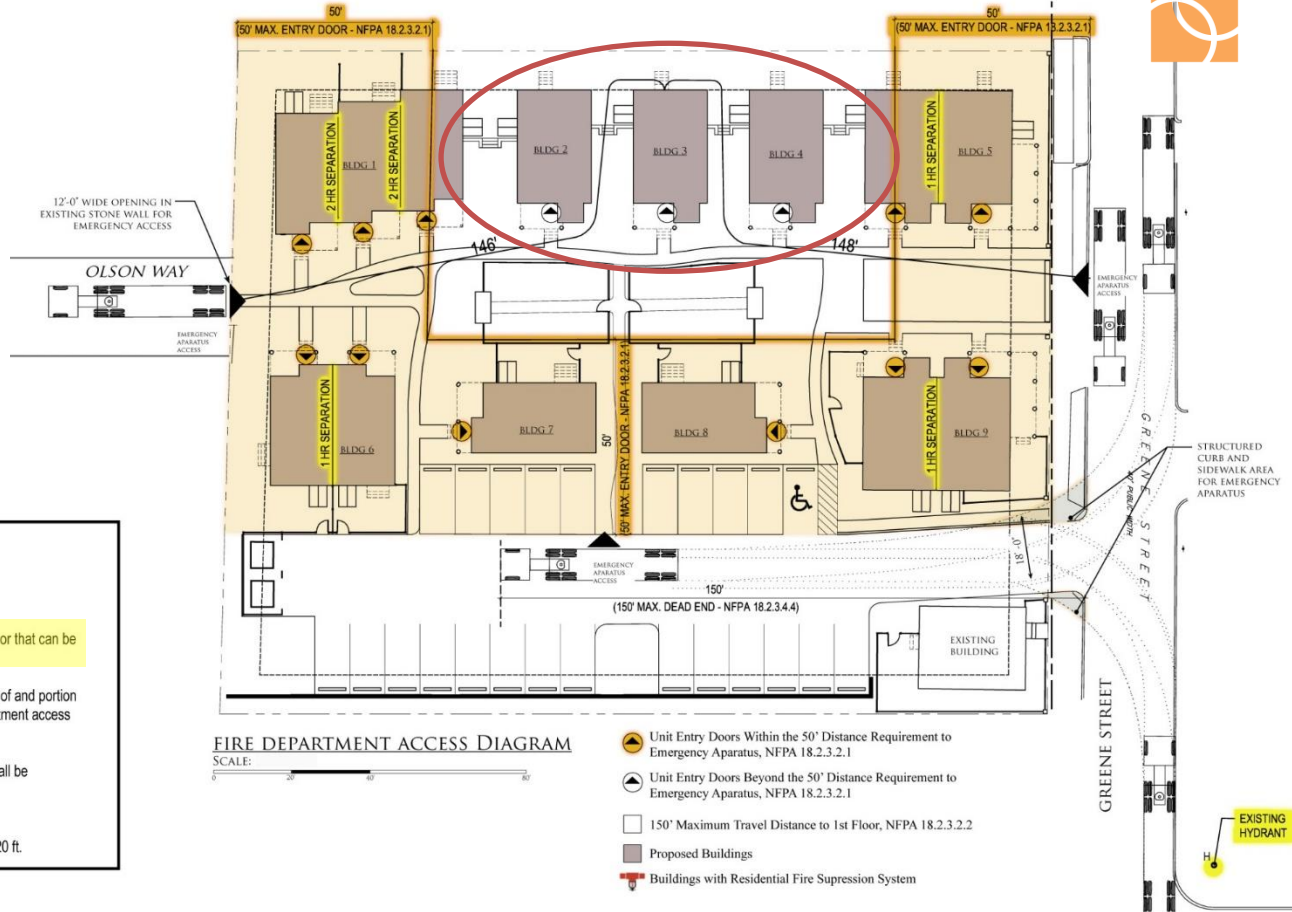
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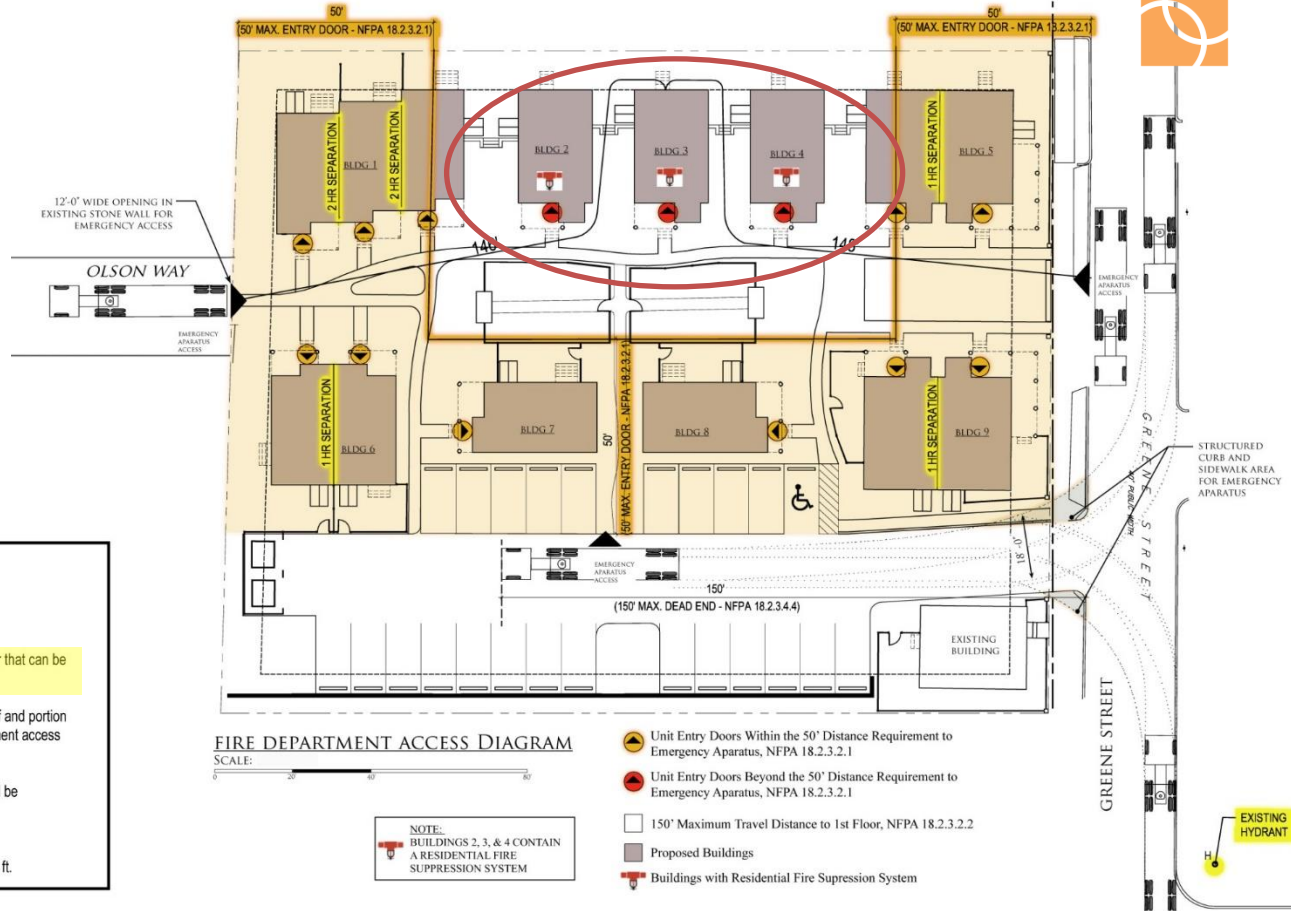
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Provide more than one  
kind of outdoor space



GREENE STREET

Provide more than one  
kind of outdoor space

More Formal Spaces  
Where Abutting the  
R.O.W



GREENE STREET



Provide more than one  
kind of outdoor space

More Formal Spaces  
Where Abutting the  
R.O.W



DESIGN PRINCIPLES FOR POCKET NEIGHBORHOODS

Provide more than one kind of outdoor space

Less Formal as the spaces are more internal



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Less Formal as the spaces are  
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DESIGN PRINCIPLES FOR POCKET NEIGHBORHOODS

*Community agriculture is  
the new “golf course.”*

-Andres Duany





Secondary Common  
Spaces Serving  
Neighbors



GREENE STREET



Some Form of Private  
Outdoor Space for each  
unit



GREENE STREET

DESIGN PRINCIPLES FOR POCKET NEIGHBORHOODS

## Layer Spaces from Public to Private.



REENE STREET

DESIGN PRINCIPLES FOR POCKET NEIGHBORHOODS

Layer Spaces from Public to Private.





DESIGN PRINCIPLES FOR POCKET NEIGHBORHOODS

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REENE STREET

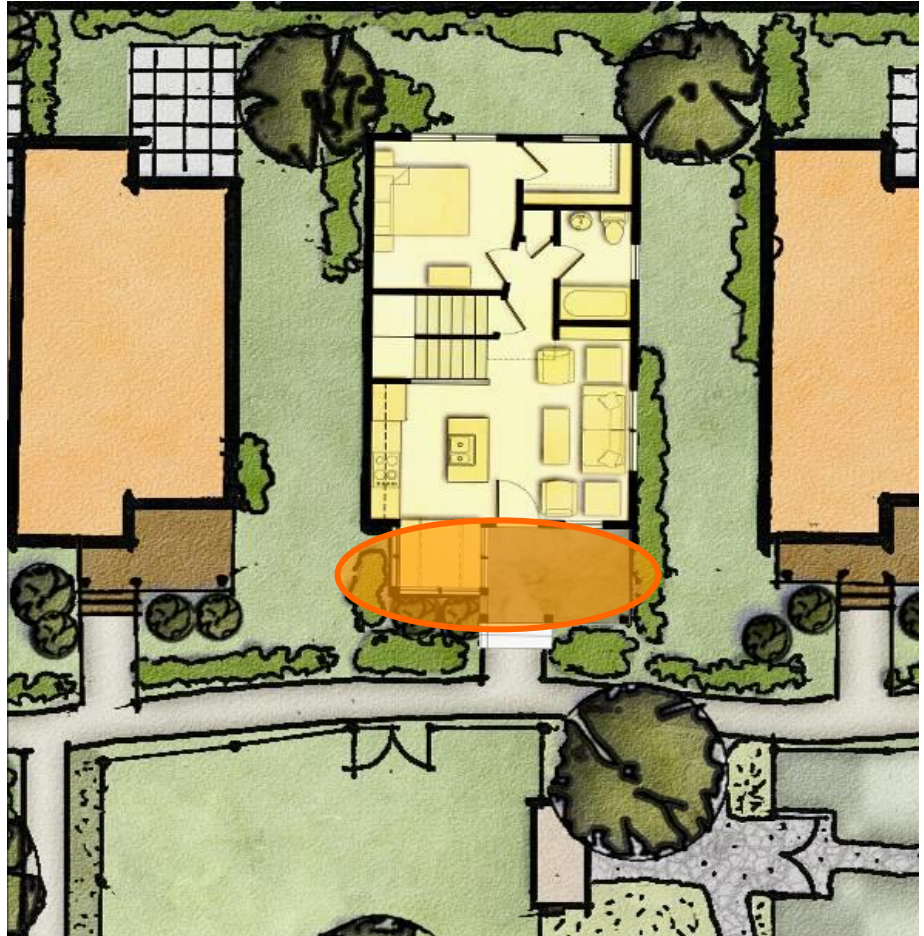
DESIGN PRINCIPLES FOR POCKET NEIGHBORHOODS

## Layer Spaces from Public to Private.



DESIGN PRINCIPLES FOR POCKET NEIGHBORHOODS

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DESIGN PRINCIPLES FOR POCKET NEIGHBORHOODS

Layer Spaces from Public to Private.





DESIGN PRINCIPLES FOR POCKET NEIGHBORHOODS

Compensate for less privacy with increased social connection. Create a reason to give up private amenity.



Understand the pattern of  
the neighborhood

Understand the  
**relationship** of one unit to  
another.



Privacy - Provide Light  
but **Control Views**





Understand the pattern of the neighborhood

Understand the **relationship** of one unit to another.





Understand the pattern of the neighborhood

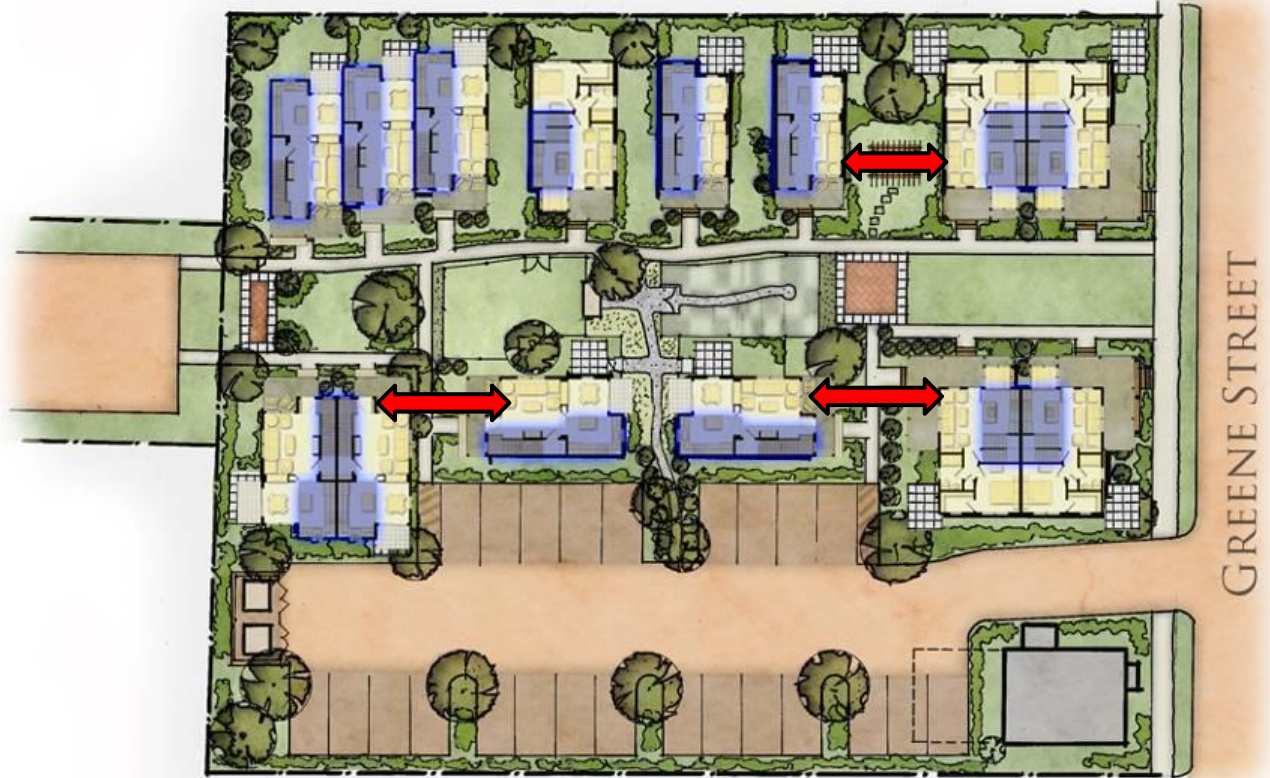
Understand the **relationship** of one unit to another.







Homes each present “dark” side to each other.





DESIGN PRINCIPLES FOR POCKET NEIGHBORHOODS

Study this pattern to really **KNOW** that the spaces will work.





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EXAMPLES IN OTHER CONTEXTS, AT OTHER SCALES

# Concord Riverwalk

WEST CONCORD, MA

- 3.87 Total Acres
- +/- 2 Acres Buildable (6.5 units/acre effectively)
- 13 2-3 bedroom units
- 1,200 – 1,800 SF (+/- 7 units to the acre)
- 1 covered parking space per unit (second space surface)
- Net Zero “possible” construction and mechanical systems
- Connected to riverfront trail system



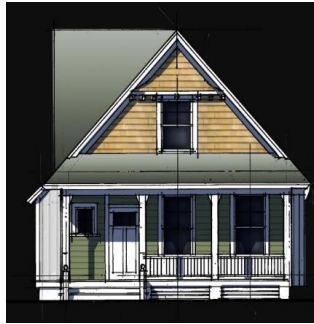
EXAMPLES IN OTHER CONTEXTS, AT OTHER SCALES



# Concord Riverwalk

WEST CONCORD, MA

- Two basic plan types
- One story scale
- Master bedroom on 1<sup>st</sup> floor
- Small private side yard

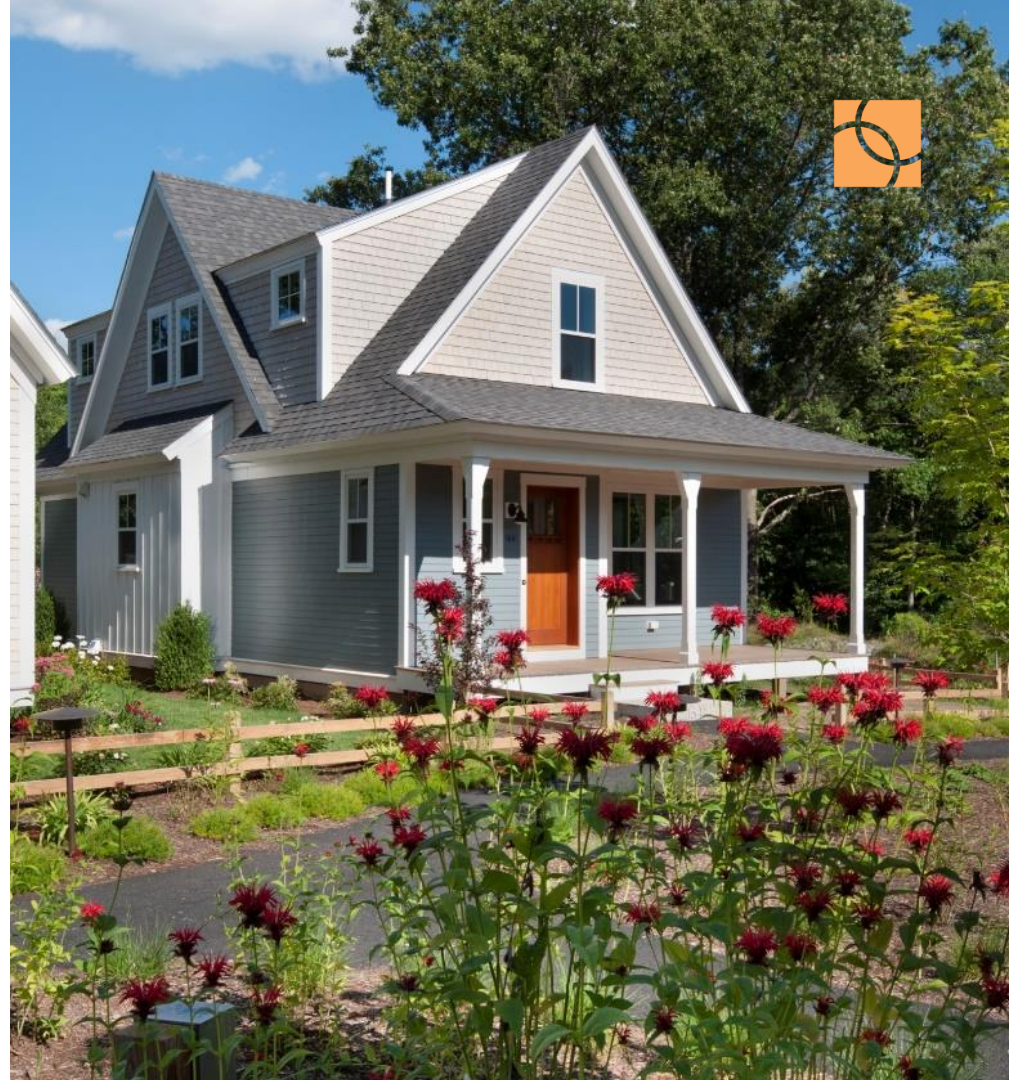


EXAMPLES IN OTHER CONTEXTS, AT OTHER SCALES

# Concord Riverwalk

WEST CONCORD, MA

Porches directed to  
common space



EXAMPLES IN OTHER CONTEXTS, AT OTHER SCALES

# Concord Riverwalk

WEST CONCORD, MA



EXAMPLES IN OTHER CONTEXTS, AT OTHER SCALES

# Concord Riverwalk

WEST CONCORD, MA





EXAMPLES IN OTHER CONTEXTS, AT OTHER SCALES

# Concord Riverwalk

WEST CONCORD, MA





# Heritage Sands

DENNISPORT, MA

- 65 cottages
- 7.9 Acres – 8 units / acre
- 1-3 bedroom units
- Maximum ground floor 900 SF
- Maximum total area 1200 SF
- Walking paths, community parks and pavilions



EXAMPLES IN OTHER CONTEXTS, AT OTHER SCALES

# Heritage Sands

DENNISPORT, MA



1 BEDROOM COTTAGE

FRONT ELEVATION  
SCALE: 3/16" = 1'-0"



FIRST FLOOR PLAN



SECOND FLOOR PLAN



3 BEDROOM COTTAGE

FRONT ELEVATION  
SCALE: 3/16" = 1'-0"



FIRST FLOOR PLAN



SECOND FLOOR PLAN



2 BEDROOM COTTAGE

FRONT ELEVATION  
SCALE: 3/16" = 1'-0"

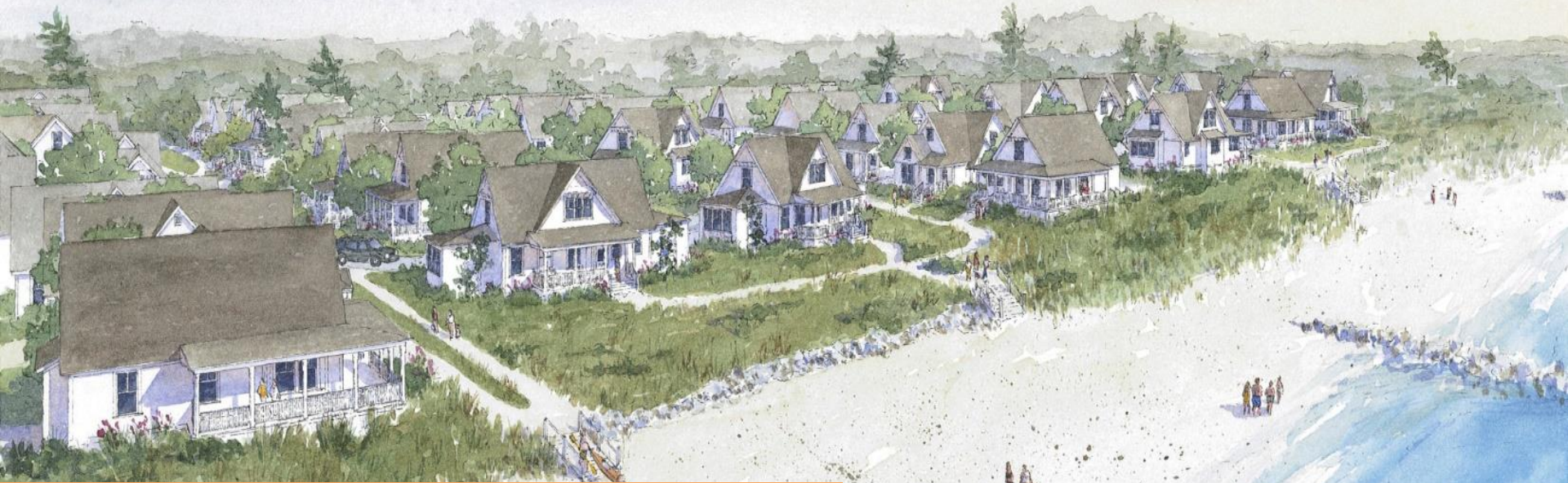


FIRST FLOOR PLAN



SECOND FLOOR PLAN

EXAMPLES IN OTHER CONTEXTS, AT OTHER SCALES



## Heritage Sands

DENNISPORT, MA

Designed as an extension of the seasonal cottage tradition  
in this region

EXAMPLES IN OTHER CONTEXTS, AT OTHER SCALES



## Heritage Sands

DENNISPORT, MA

Landscape is critical for success of pocket neighborhoods.  
Spend more than you think you should.

EXAMPLES IN OTHER CONTEXTS, AT OTHER SCALES



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**Thank You.**