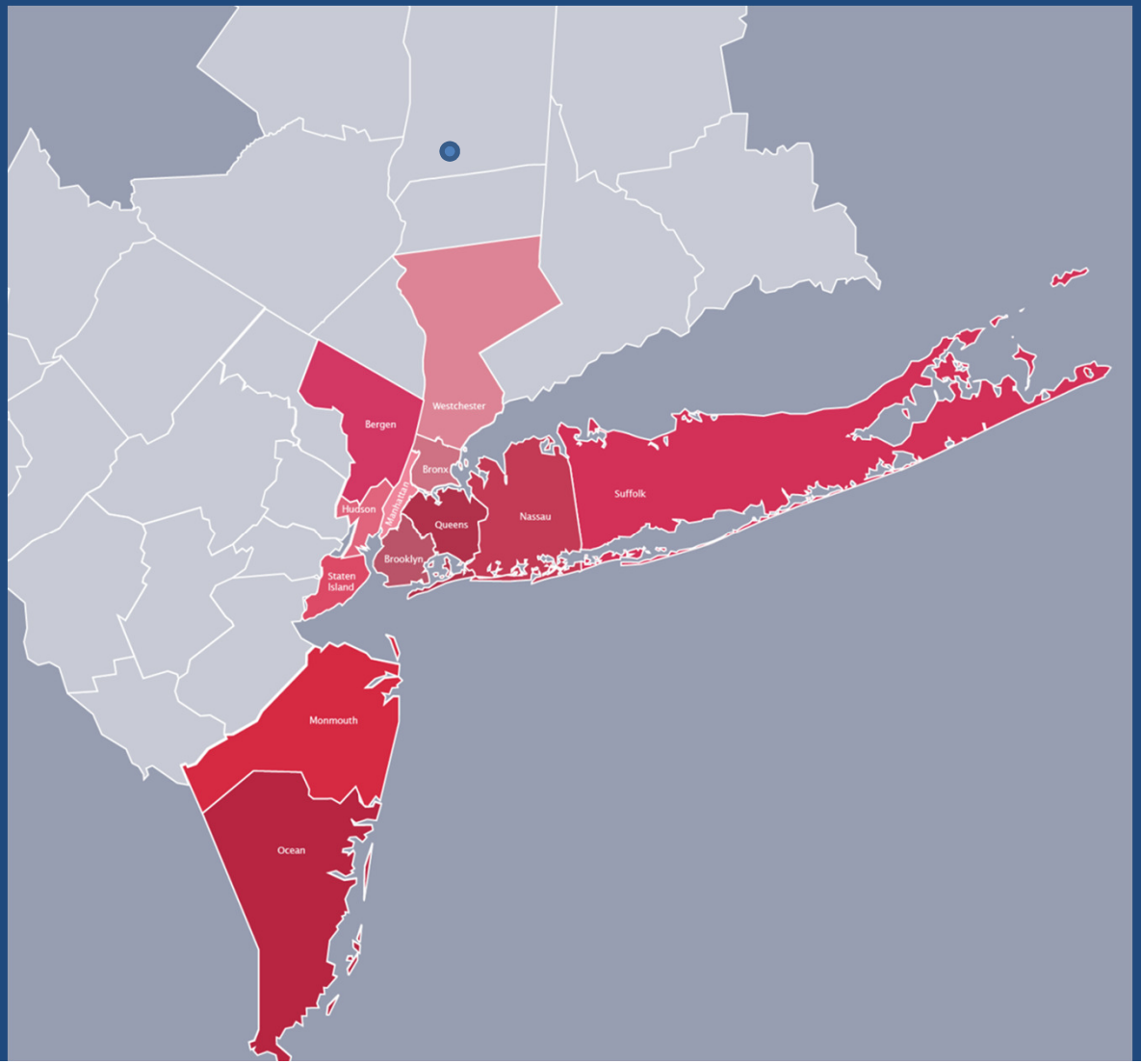
FEMA – Promising Practices



FEMA Promising Practices

a webinar

2016.09.08

brian baer ra leed ap ncarb

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FEMA – Promising Practices

What is the call to action?

We need to promote the principles of Universal Design during the first 3-4 months of the disaster's Relief phase

NOT

Into year 3 or 4 of Recovery. It is a collaborative process across service areas.

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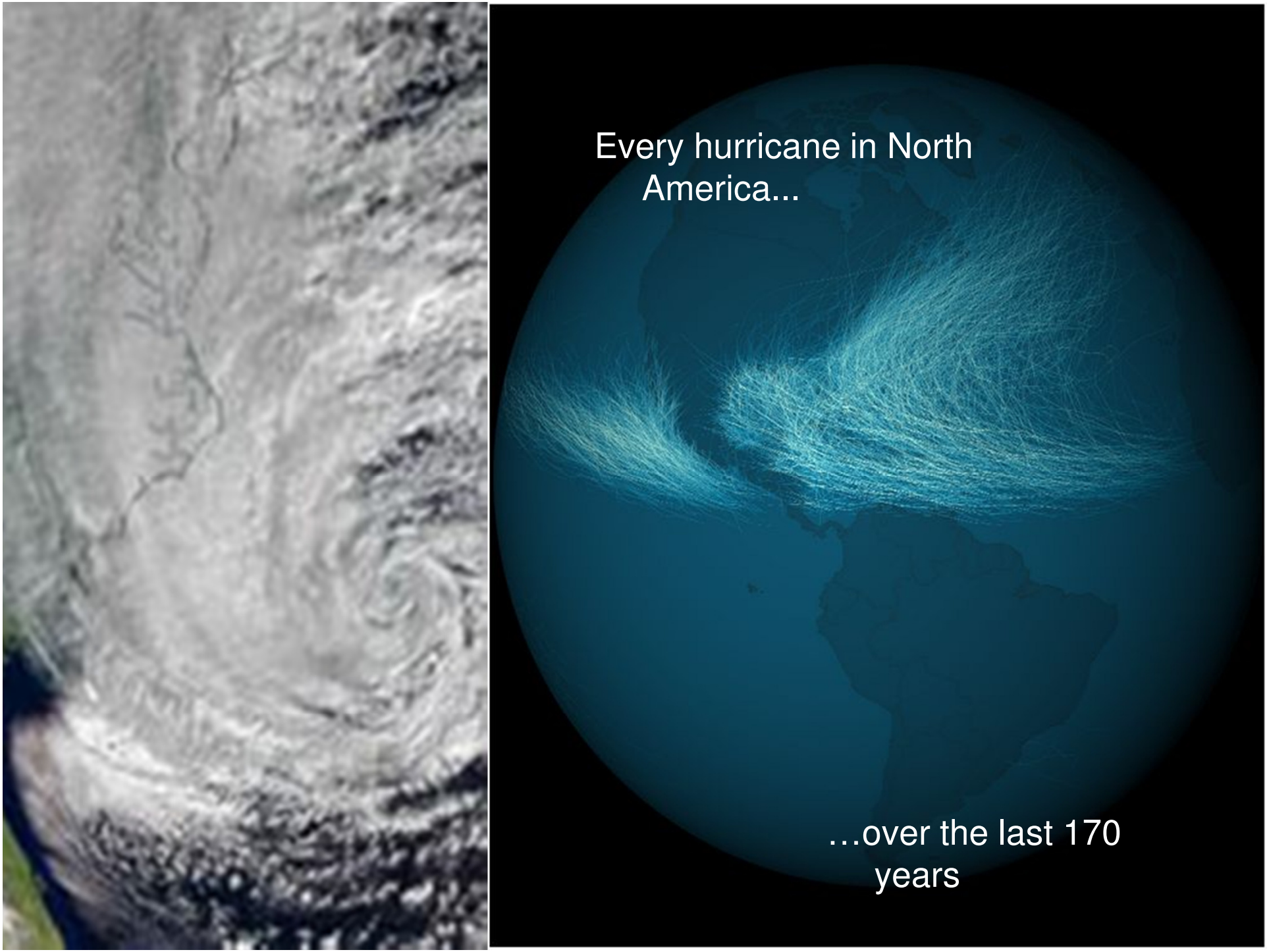
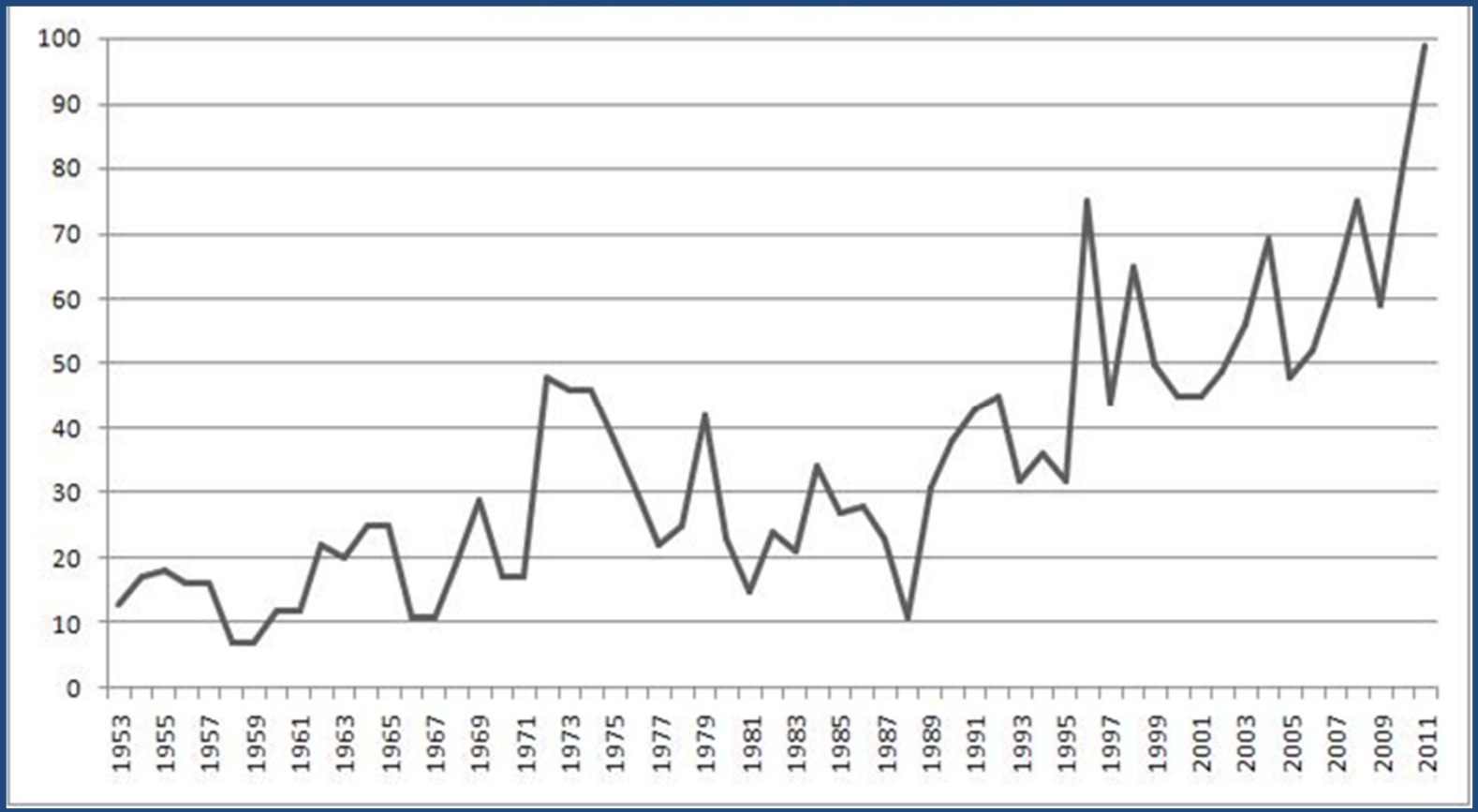
We see a beautiful place...


Every hurricane in North America...
…over the last 170 years

HURRICANE SANDY

- 80+ US Casualties
- 7.5 million people without power
- 14 feet average storm surge
- effected 5 million residents
- $90 billion in losses
- **largest hurricane on record**

Federal Disaster Declarations since 1953



Foresight: the trends

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Where is the Risk?

What are the issues that face us in this region?

Aged built environment

Aging in place population

I want what I want

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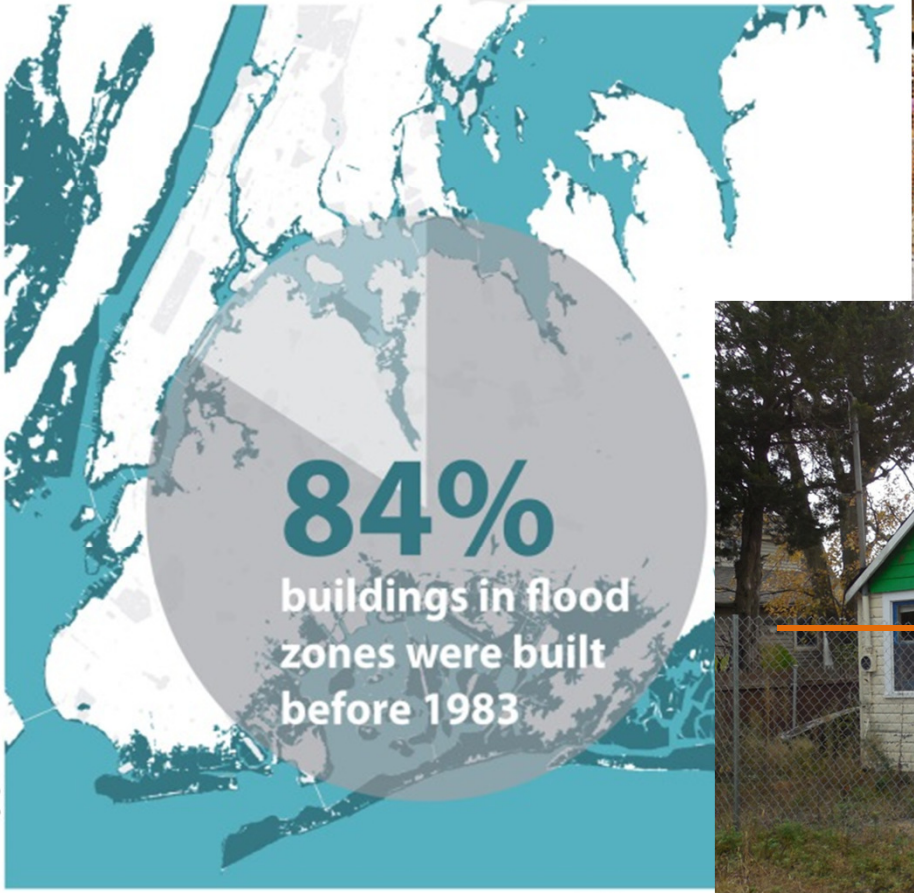
Where is the Risk?

1983 New York City incorporated floodproofing requirements into the Building Code



94% red-tagged buildings built before 1983

98% destroyed buildings built before 1983

Where is the Risk?

Metropolitan Statistical Area
US Rank: 1
Total Population: 20.1MM

Population Increases
60 years or older: 14.1% or 2.8MM

In 2020: Projected 14.8%
In 2030: Projected 18.1%

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Where is the Risk?

I want what I want. (*And that is…*)

basement safety back in my home

security my life back accessibility

a well-built home to be made whole to elevate

my home a garage more space

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Where are the Holes?
Opportunities?

When do people think about accessibility at the residential level?

➔ Once there is an issue (reactive)

➔ When someone else tells me to think about it (also reactive)

What do they think about?

➔ How am I going to get into my home?

➔ Once I'm in, how do I…use the bathroom? Cook? Clean? Move around the house?

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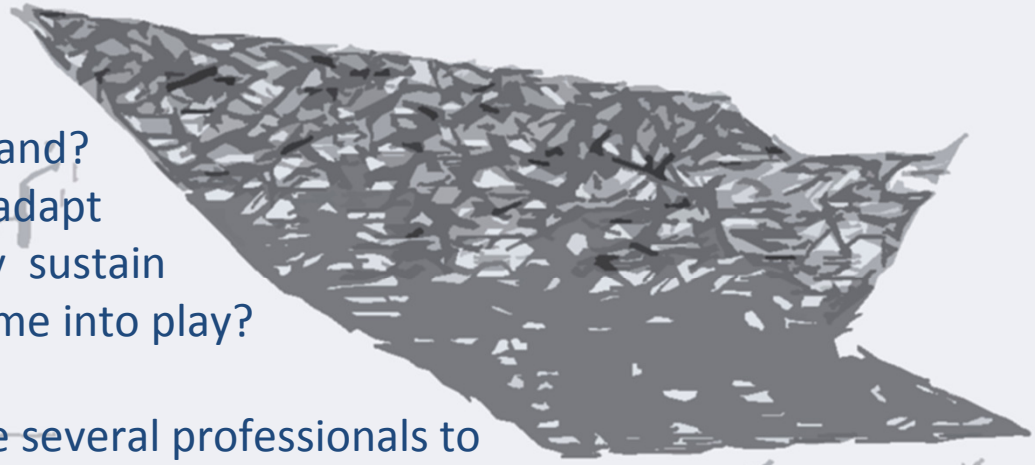
Where are the Holes? Opportunities?

Lack of education and miss-information



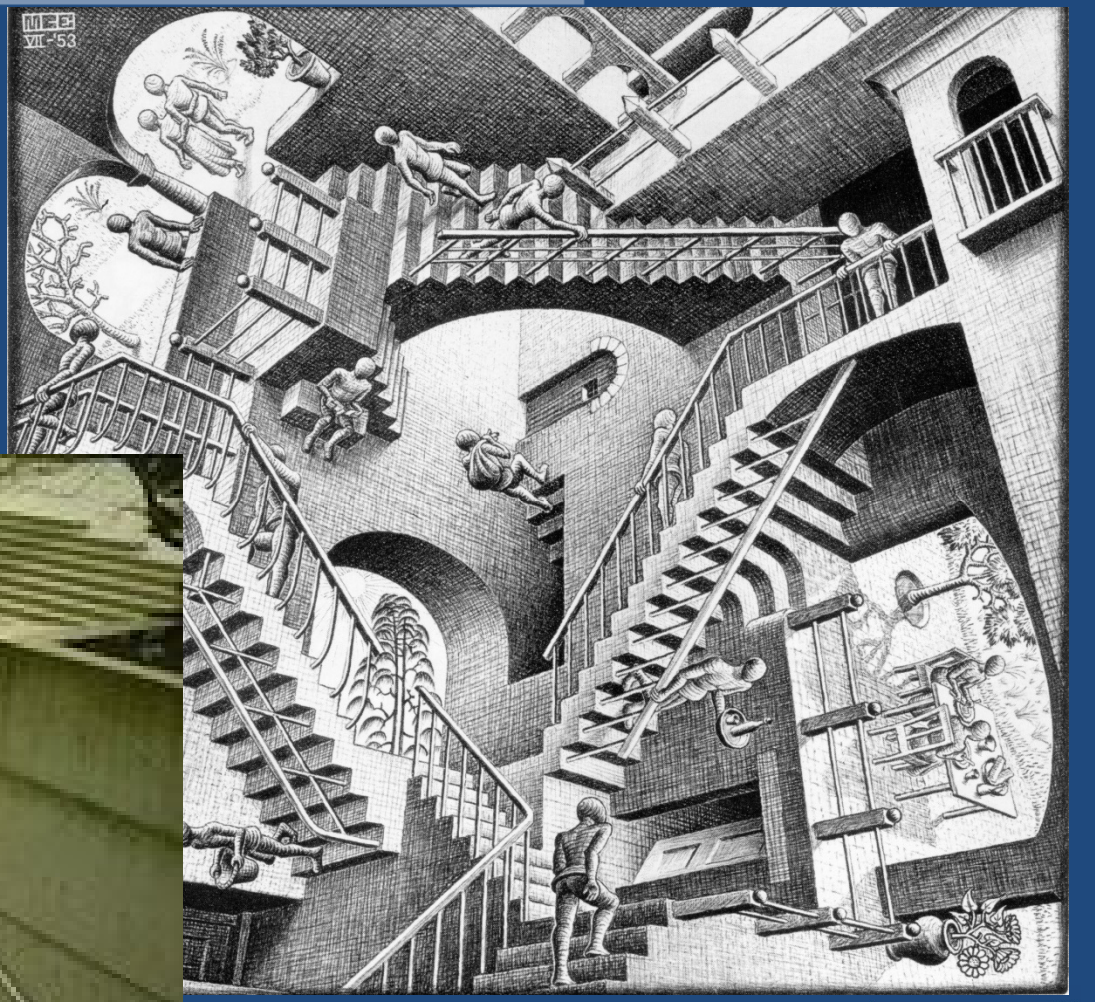
RESIDENT: **What** do they understand? About themselves? How do they adapt to their new world? How will they sustain their life? How does resilience come into play?

ARCHITECTS: **Should** be one of the several professionals to **teach and guide** the resident about the opportunities.
How can the profession be more proactive than being more reactive? How frequently does the profession use cost as a deciding factor? How often does the profession use design constraints as a rationale for exclusion?

The opportunity to the residence/resident is challenging, as both change at a different rate of time.

Where are the Holes? Opportunities?

How do we resolve the accessibility issues when we're talking about elevating a residence?



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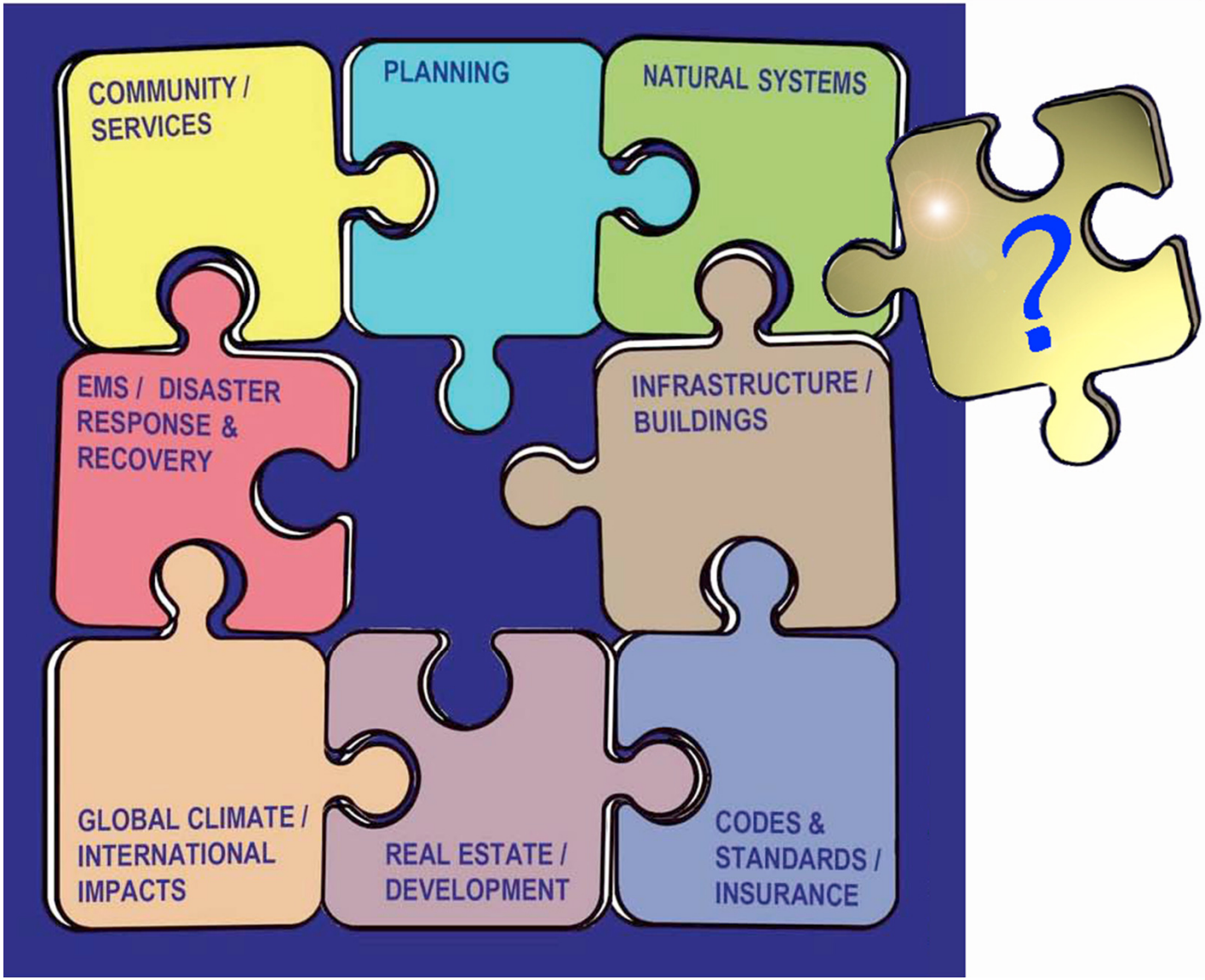
Where are the Holes? Opportunities?



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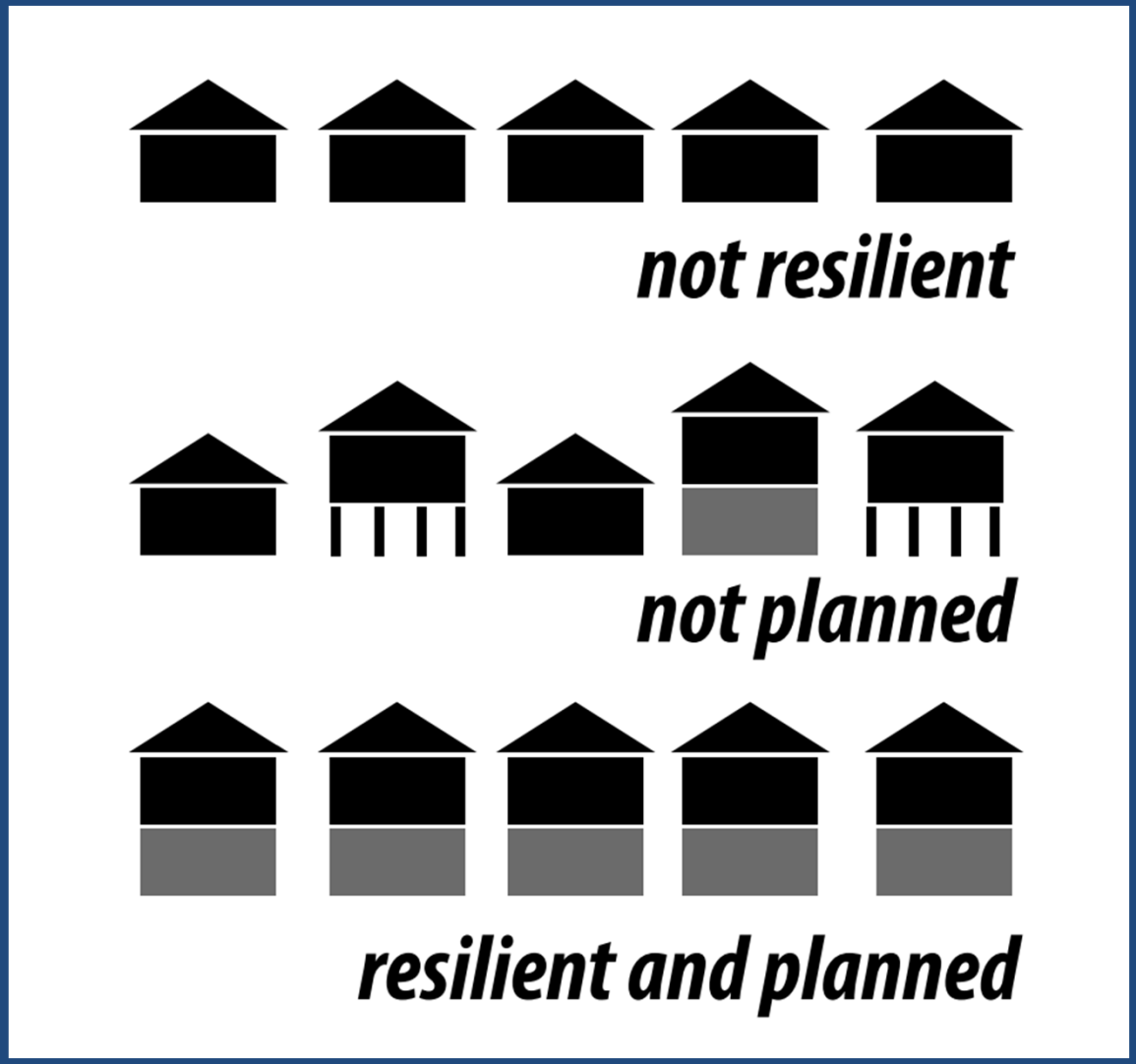
Where are the Holes? Opportunities?



Past

- Existing towns not resilient

Present

- Rebuilding not cohesive; ruins character

Future

- Coastal communities should be cohesive

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Where are the holes? Opportunities?

What should we do?

- Review current population in affected region who have some functional need;
- Review building codes and holes to fill;
- Work with constituencies to modify codes;
- FEMA / HUD "Program in a Box" should require single family housing stock to adapt or be made using U.D. principles.

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When Universal Design meets Elevation

Design Professionals →

Construction Professionals →

Jurisdictions →

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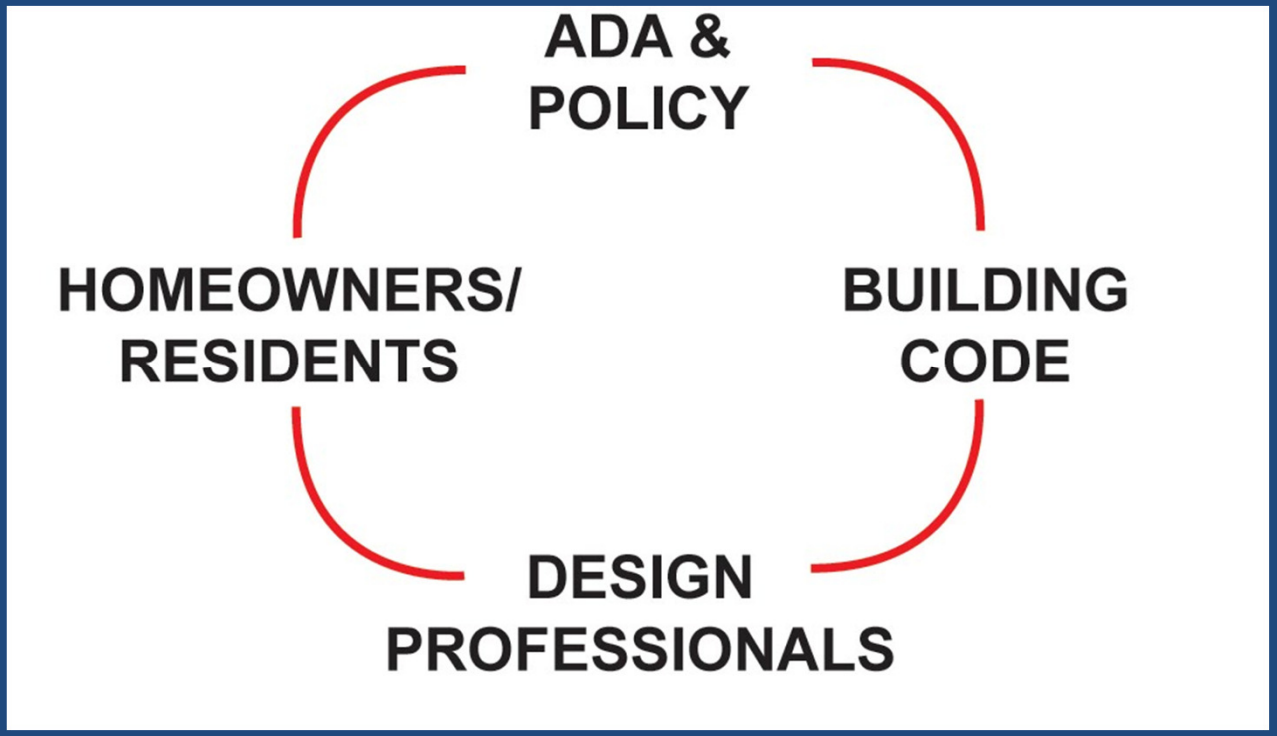
Universal Design is…

Education Advocacy Collaboration



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Uncoupling the Myths

Myths:

Universal design is incredibly expensive.

Universal design is only for the mobility disabled.

Universal design is hard to make aesthetically pleasing.

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Uncoupling the Myths

Truths: Implementing Universal design principles during the design phase shows little to now increase in cost over "traditional" construction(~0 - 3%), however less expensive over the life cycle of the building and the tenant. **Universal design is for all.** While mobility challenges can present opportunities, the Americans with Disabilities Act identifies also includes wide range of individuals with constant, chronic or in-remission conditions. (Just because someone is HIV+ and able-bodied, doesn't mean that they should be discriminated against in the built environment). **Designing with all people in mind presents a multitude of design opportunities rather than challenges.** It allows the design professional to exercise their design muscle to solve the problem...**technically, efficiently, and artistically**.

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Universal Design is…

…designing products and spaces so that they can be used by the widest range of people possible. Universal Design evolved from Accessible Design, a design process that addresses the needs of people with disabilities. Universal Design goes further by recognizing that there is a wide spectrum of human abilities. Everybody, even the most able-bodied person, passes through childhood, periods of temporary illness, injury and old age. By designing for this human diversity, we can create things that will be easier for **all people** to use.

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Universal Design is…

- **Equitable Use**: The design is useful and marketable to people with diverse abilities.
- **Flexibility in Use:** The design accommodates a wide range of individual preferences and abilities.
- **Simple and Intuitive Use:** Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.
- **Perceptible Information:** The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.
- **Tolerance for Error:** The design minimizes hazards and the adverse consequences of accidental or unintended actions.
- **Low Physical Effort:** The design can be used efficiently and comfortably with minimum fatigue.
- **Size and Space for Approach and Use:** Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.

*Developed by Ronald L. Mace cc

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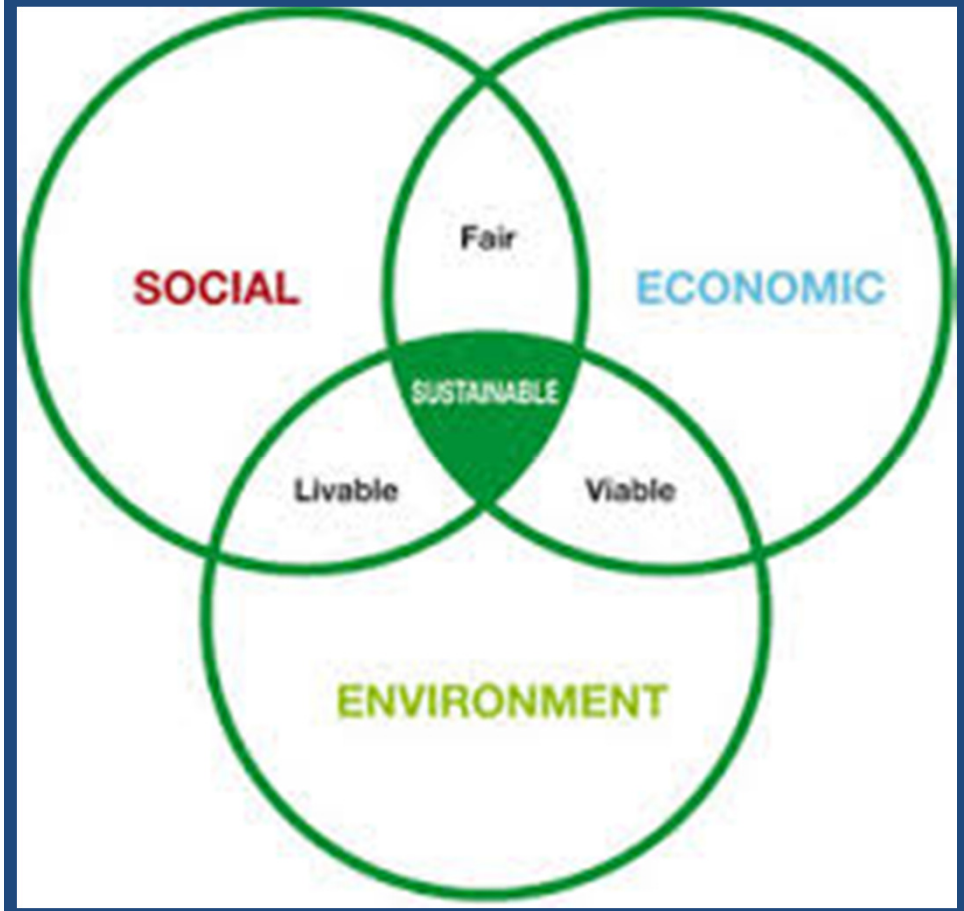
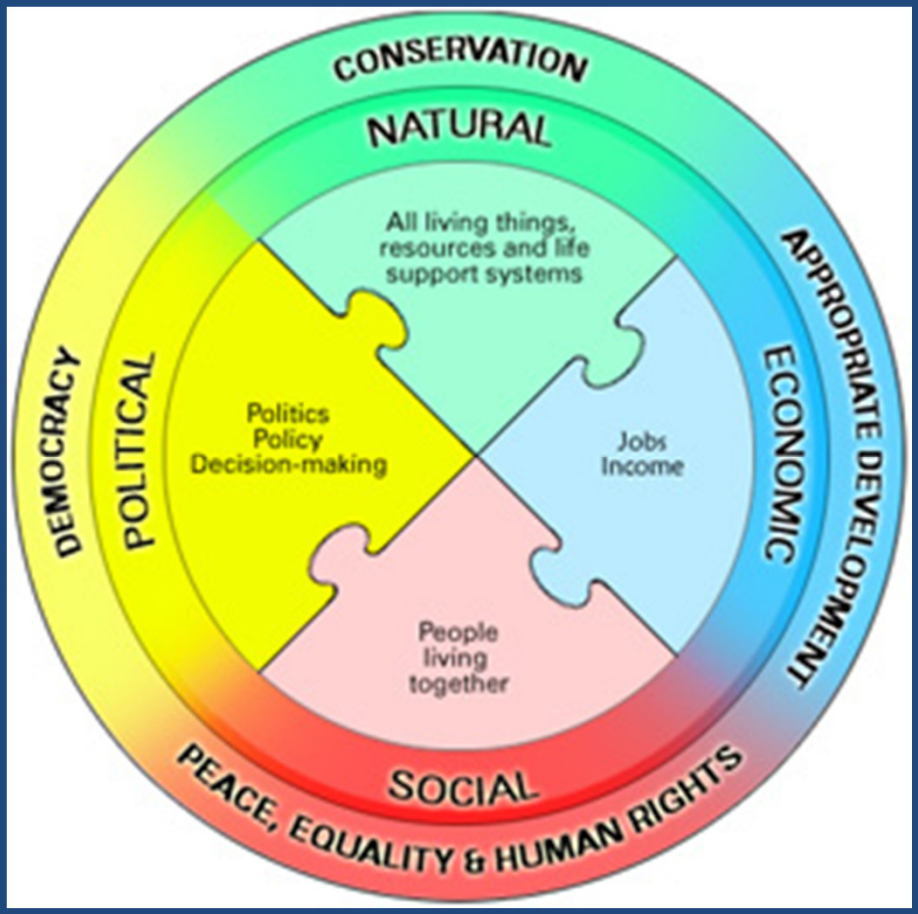
Why is this important?





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Our Strategy

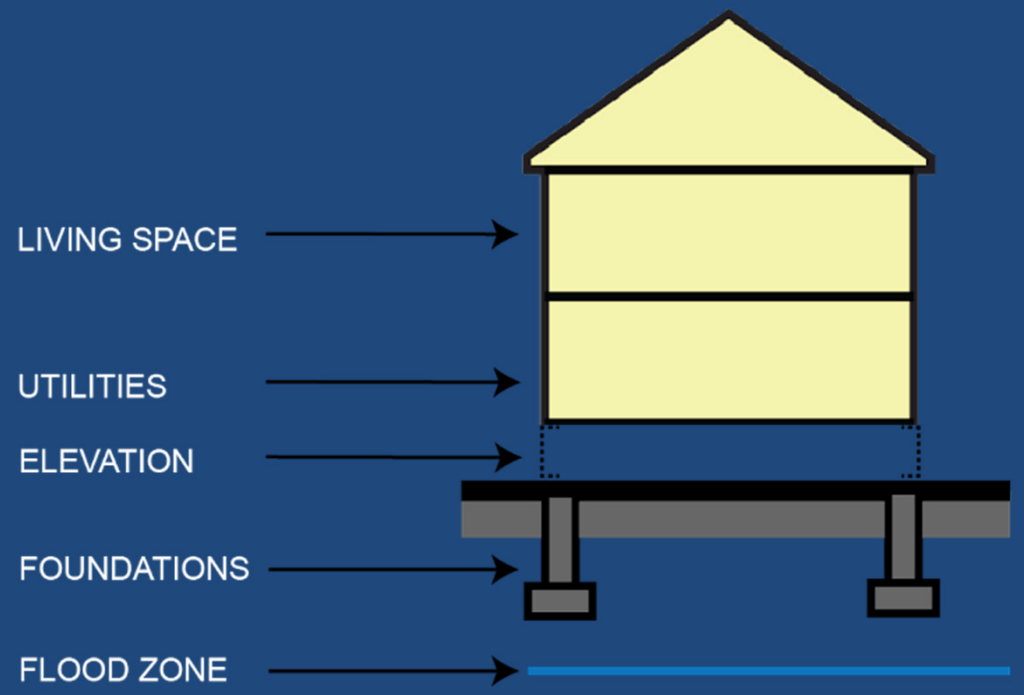
Sustainable

Mitiga[ed]tion

Adapta[ed]tion

Resilience

Timeless



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Why is this important?

"(today)…**Every dollar spent reducing people's vulnerability to disasters saves around seven dollars** in economic losses. Investing in prevention not only increases the resilience of countries to future disaster, but protects economic growth and other development achievements from being lost in a single catastrophic event."

- United Nations Development Program

10 years ago, it was 1 in 4.

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Design Like You Give A Damn

Case Study #1 – Long Beach, NY

Case Study #1 – 72’-0” long ramp

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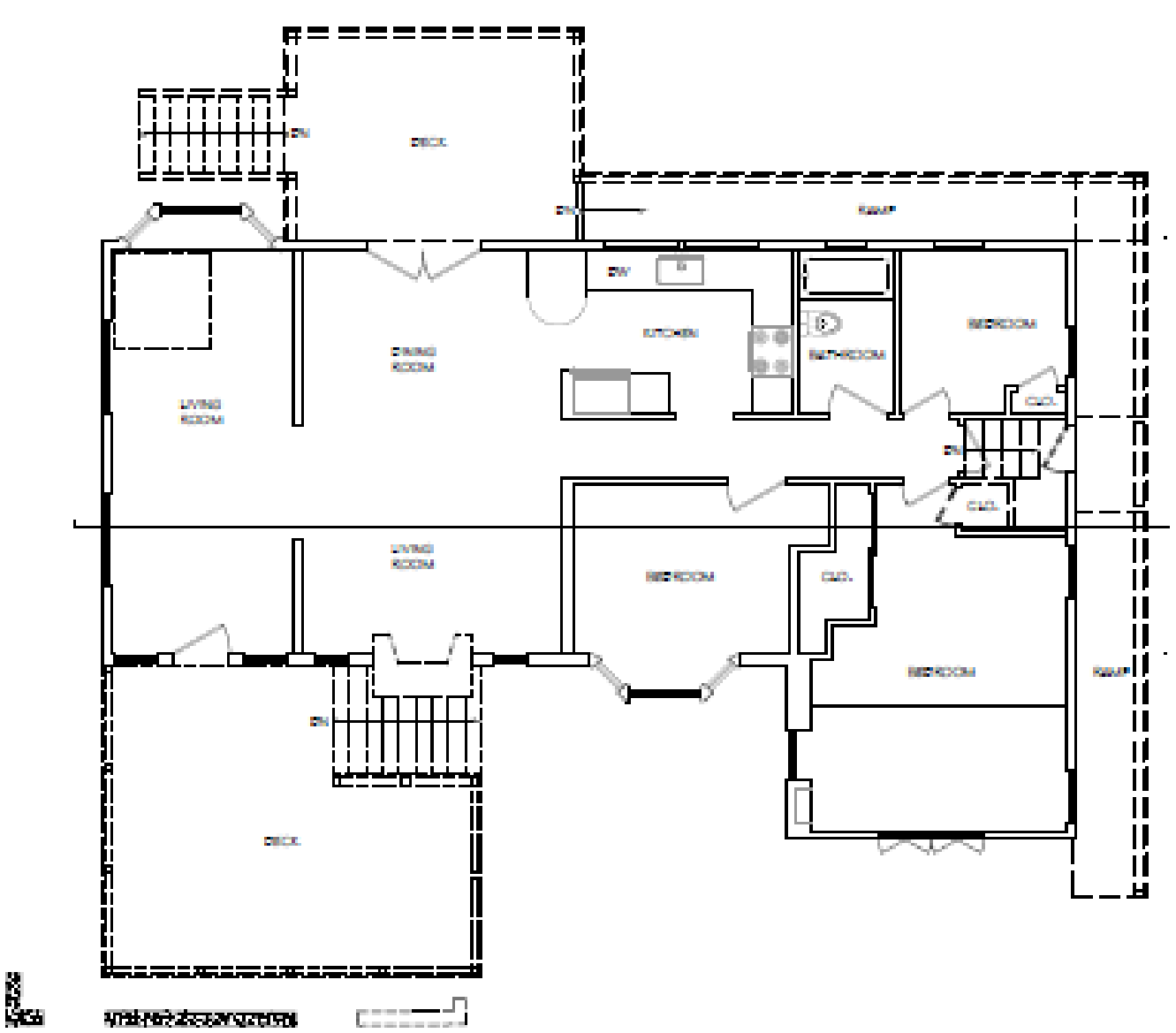
Case Study #1 – Existing plan



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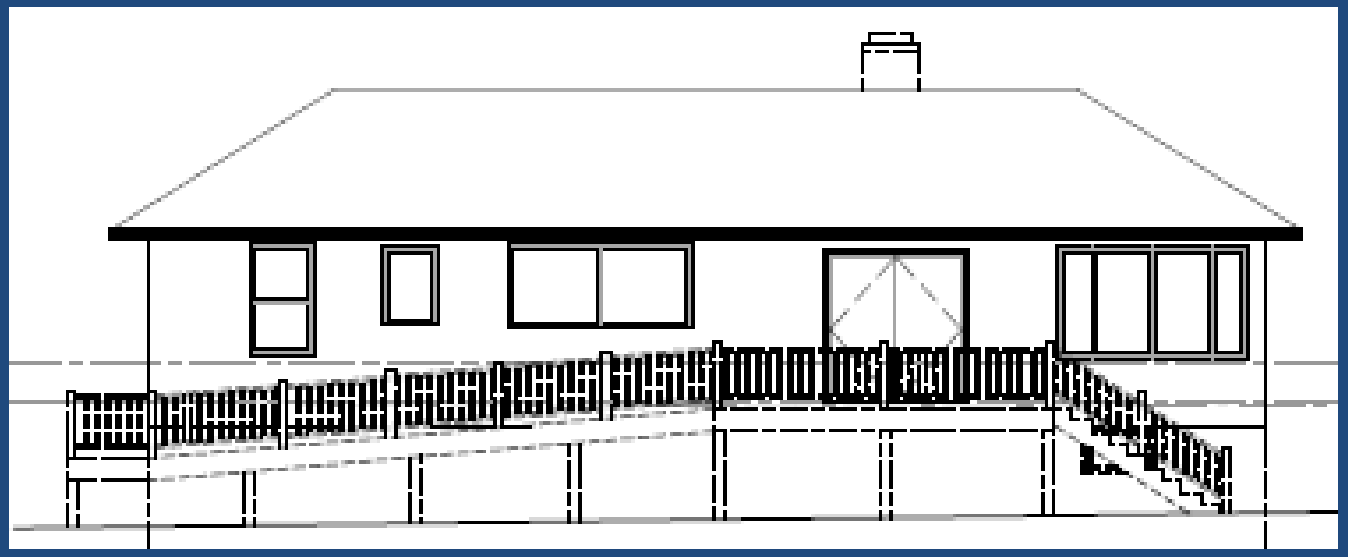
Case Study #1 – Existing Elevations



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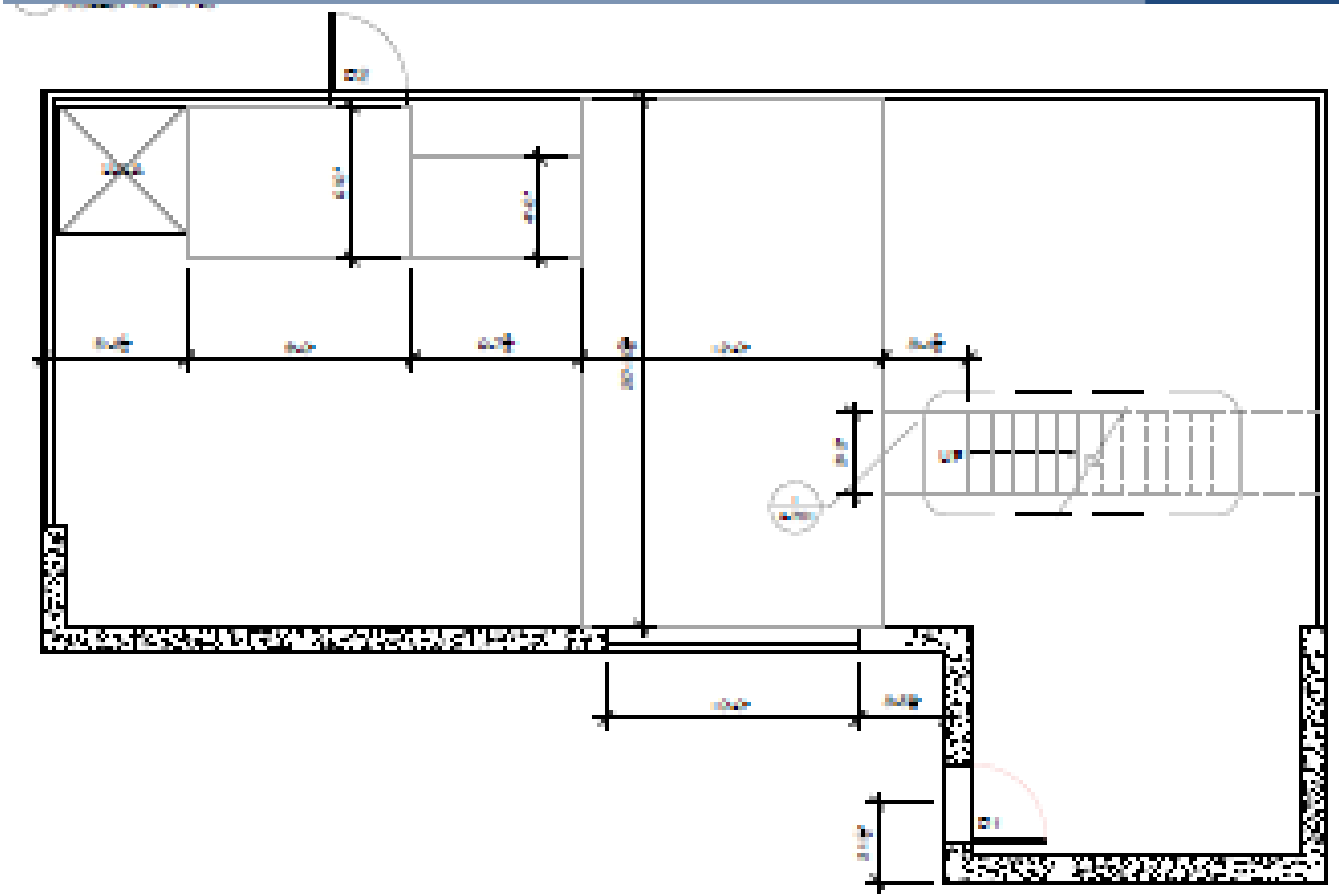
Case Study #1 – Proposed Lower Plan



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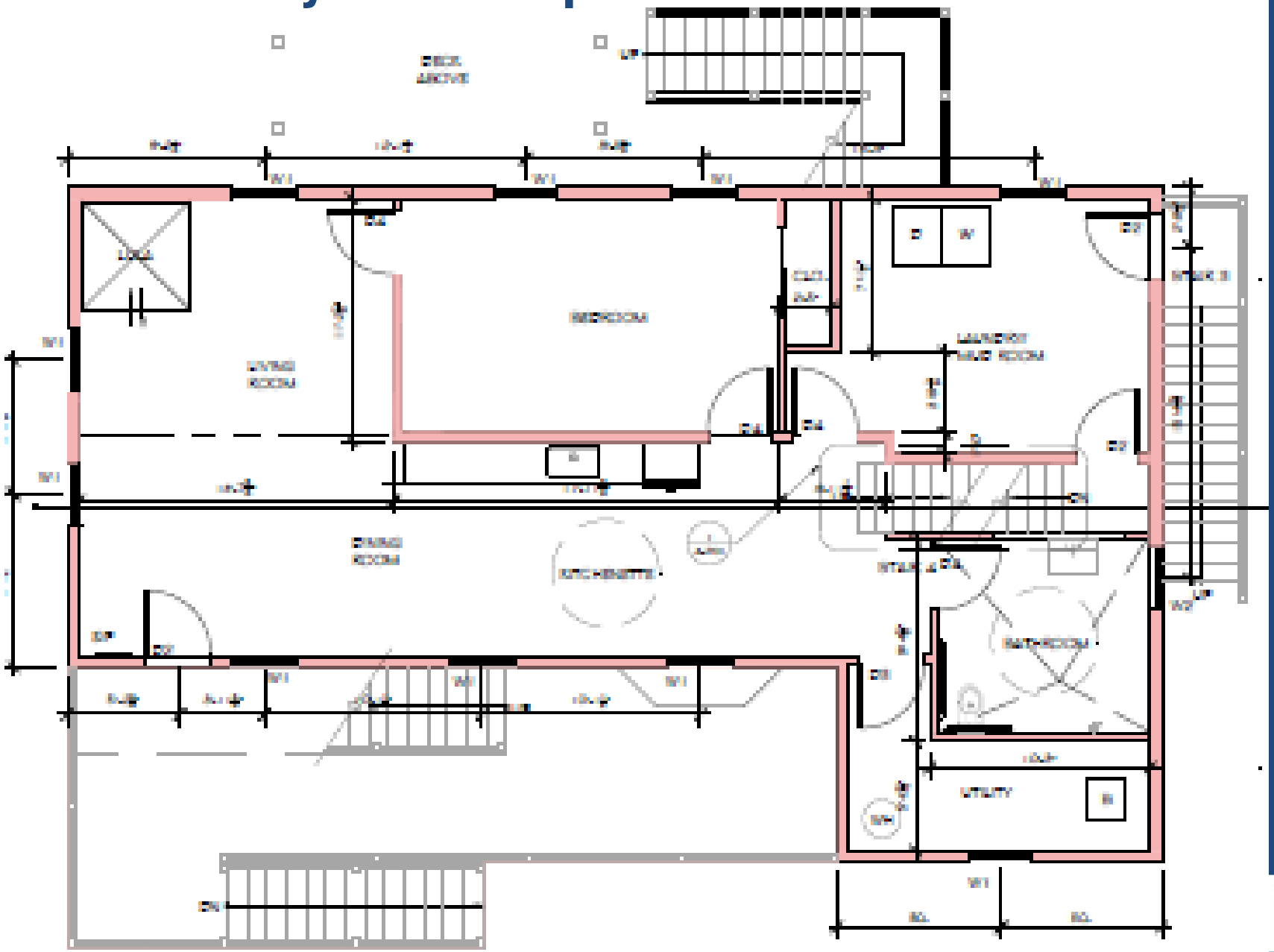
Case Study #1 – Proposed First Floor



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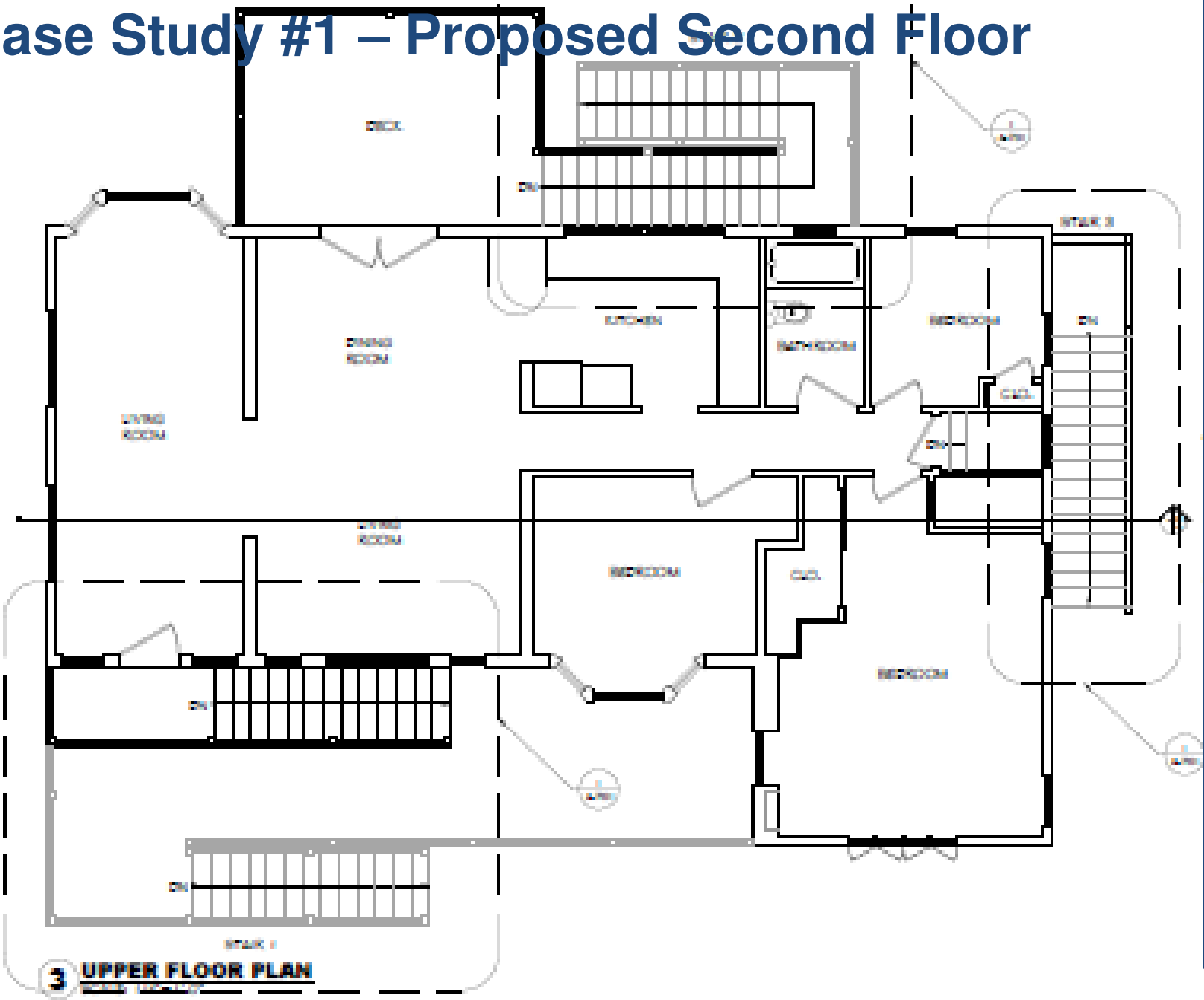
Case Study #1 – Proposed Second Floor



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Case Study #1 – Proposed front

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Case Study #1 – Proposed rear

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Case Study #2 – Babylon, NY

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Case Study #2 – Babylon, NY

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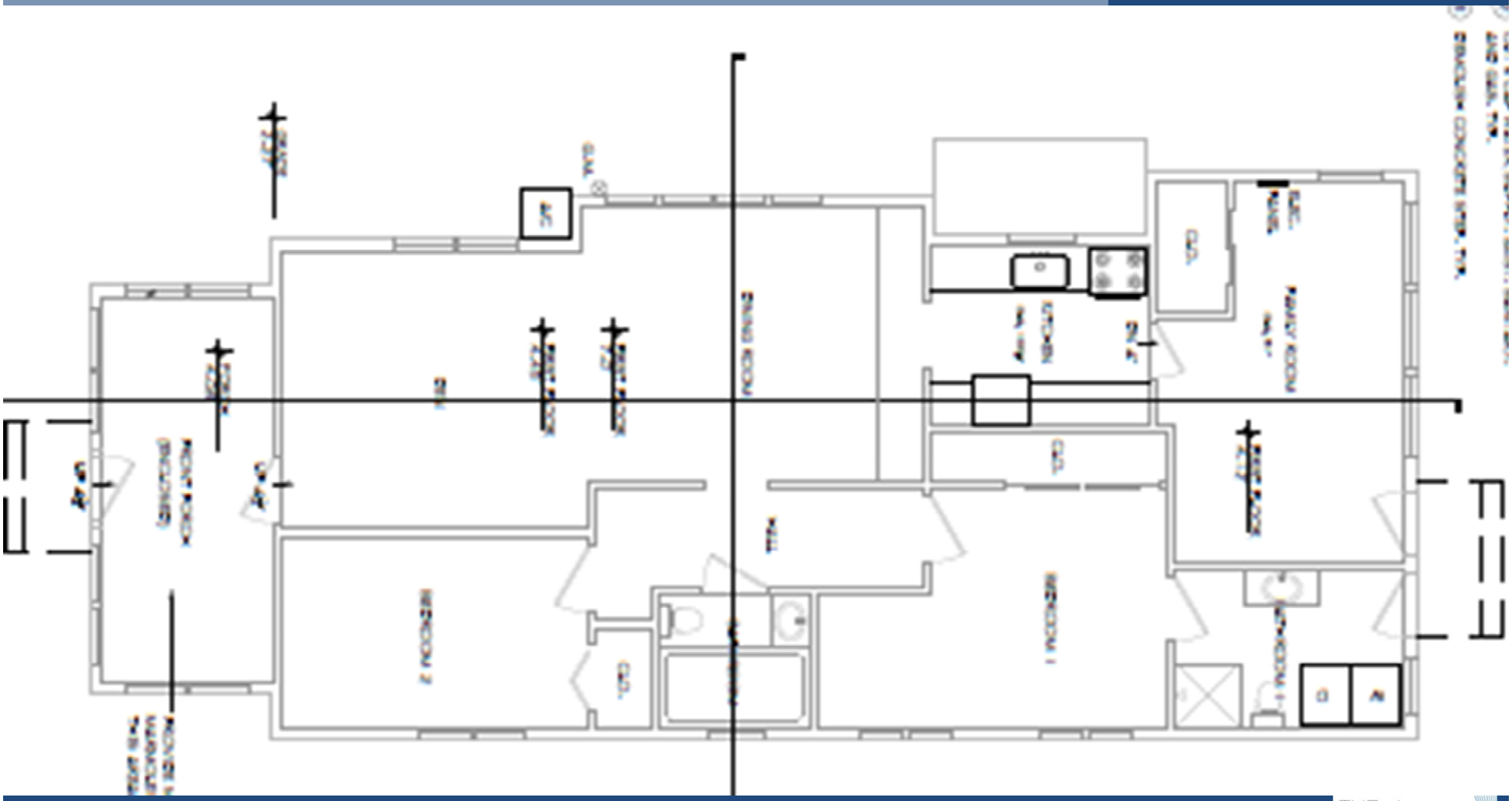
Case Study #2 – Existing Plan



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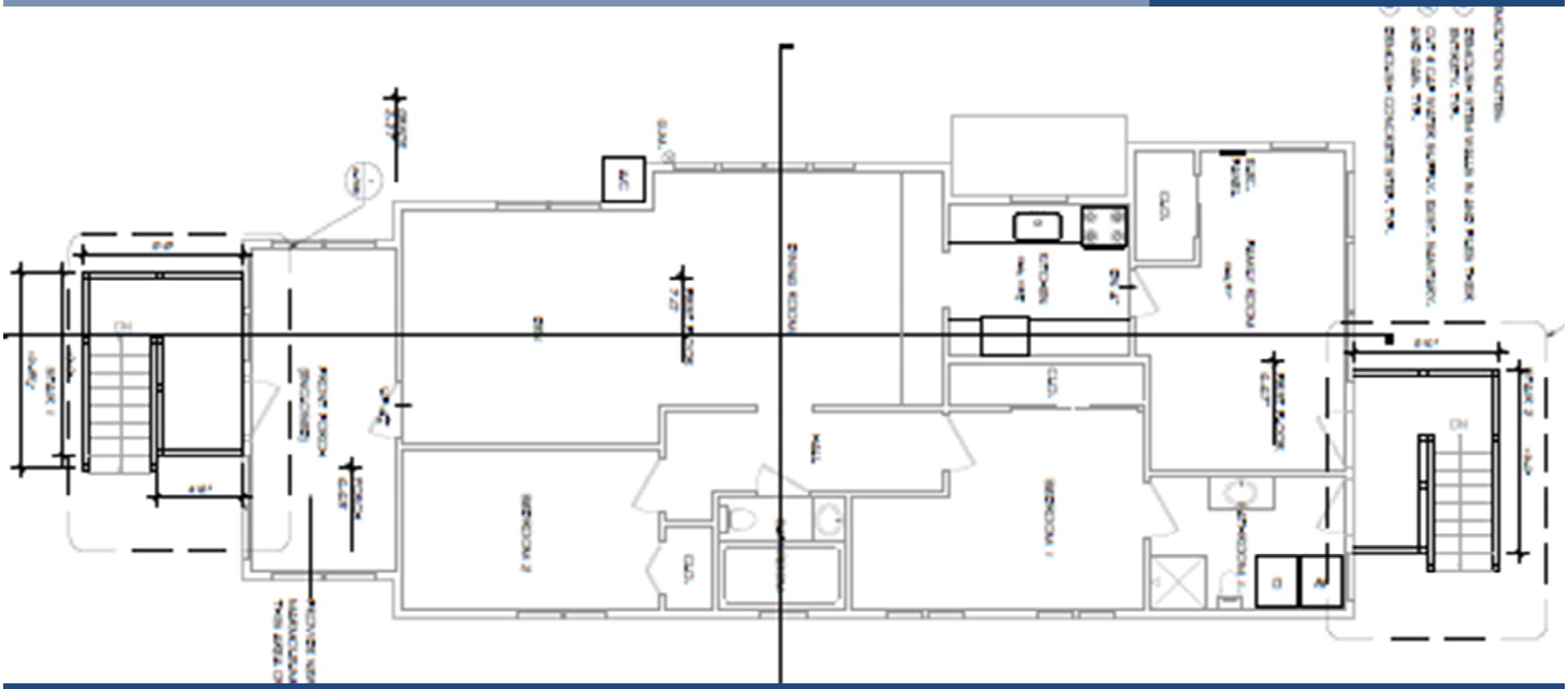
Case Study #2 – Proposed Plan



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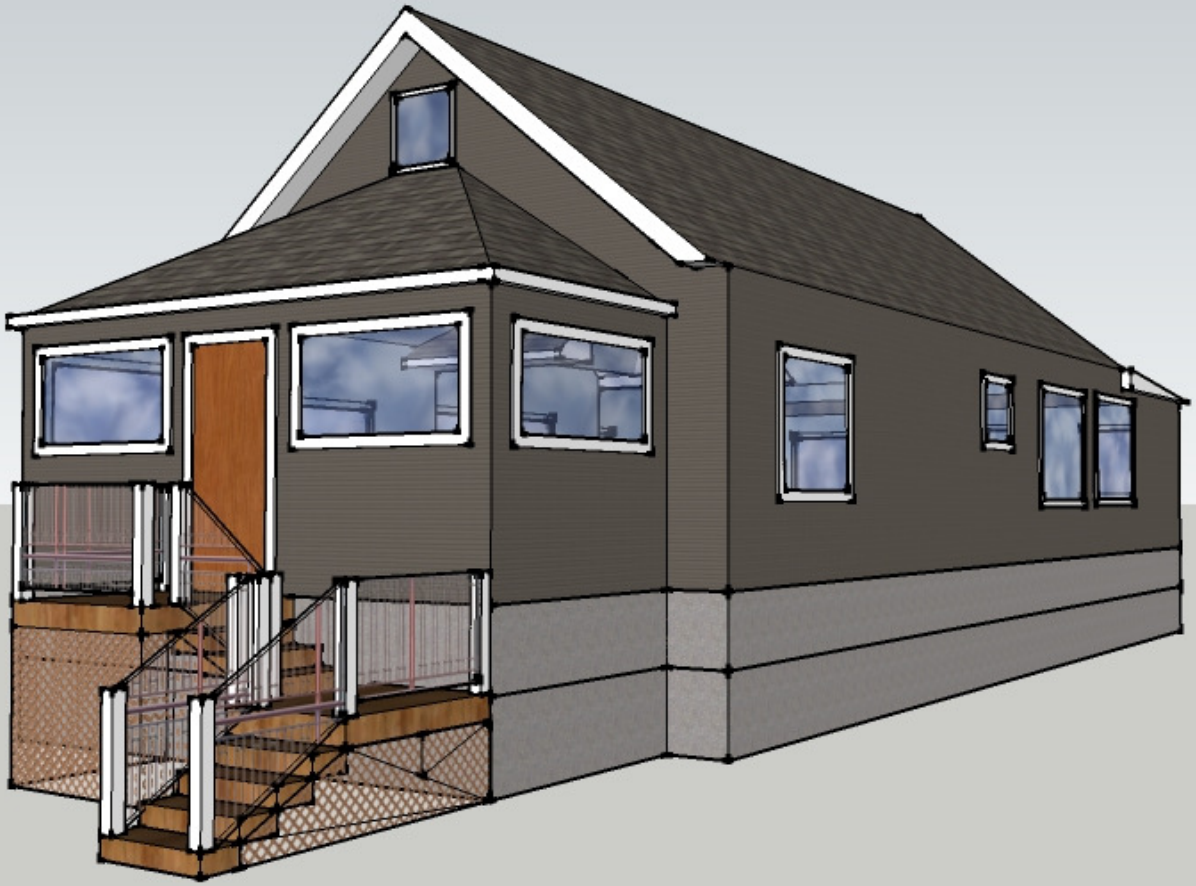
Case Study #2 – Proposed Front



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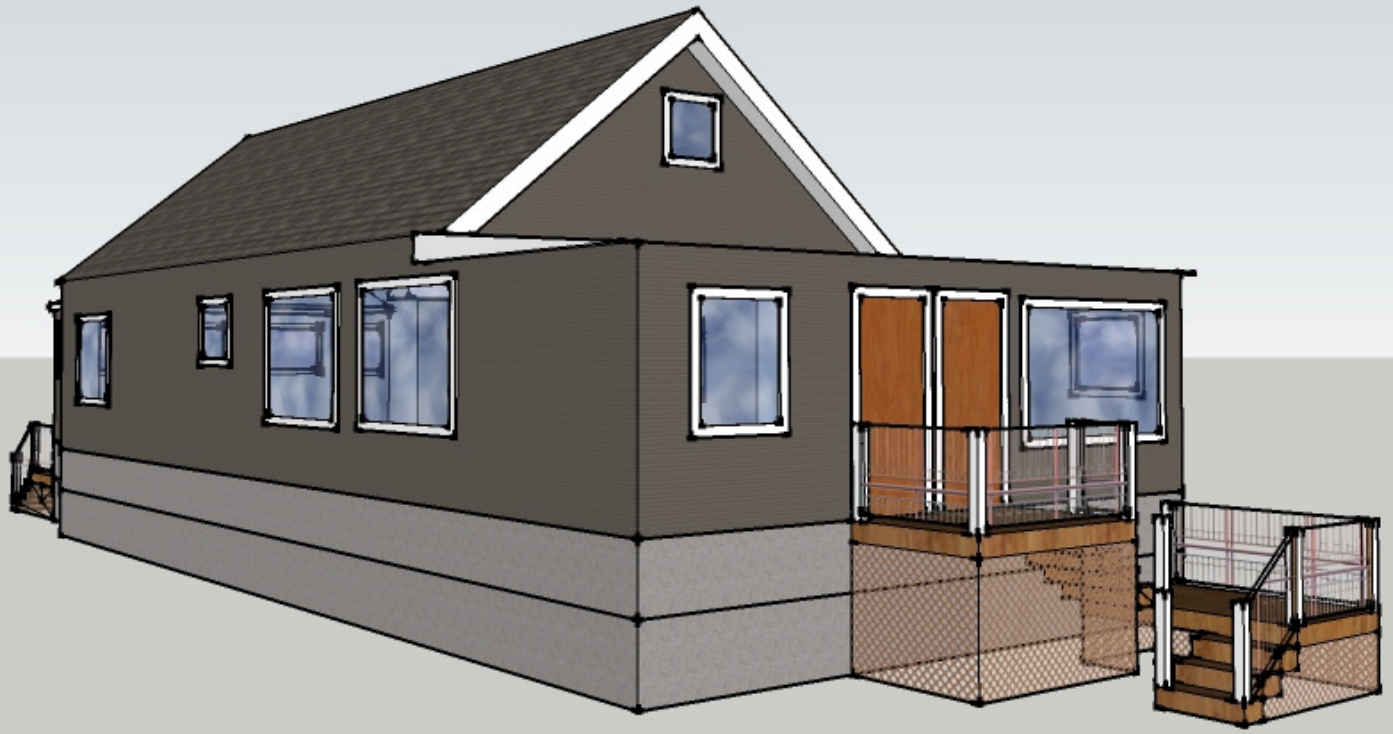
Case Study #2 – Proposed Rear



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We see a beautiful place...
646.470.9594
brianbaer@theelevatedstudio.org
the elevated studio
brian baer ra leed ap ncarb
executive director