

KEEPING HISTORY ABOVE WATER 2017

RISING ABOVE THE STORM

A CASE STUDY OF GERRITSEN BEACH



Tony Daniels

AIA, Certified Passive House Designer,
LEED AP BD + C

Caitlin Martusewicz

Certified Passive House Designer

**RISING ABOVE THE STORM
A CASE STUDY OF GERRITSEN BEACH**

New York City

NEW JERSEY

THE BRONX

MANHATTAN

QUEENS

LONG ISLAND

● **CYCLE ARCHITECTURE**

BROOKLYN

STATEN ISLAND

GERRITSEN BEACH ●

2 mi



RIISING ABOVE THE STORM
A CASE STUDY OF GERRITSEN BEACH

Gerritsen Beach

SHEEPSHEAD BAY

MANHATTAN BEACH

image: bing.com/maps

KEEPING HISTORY ABOVE WATER 2017

1000'



RISING ABOVE THE STORM
A CASE STUDY OF GERRITSEN BEACH



Image: jsah.ucpress.edu

KEEPING HISTORY ABOVE WATER 2017

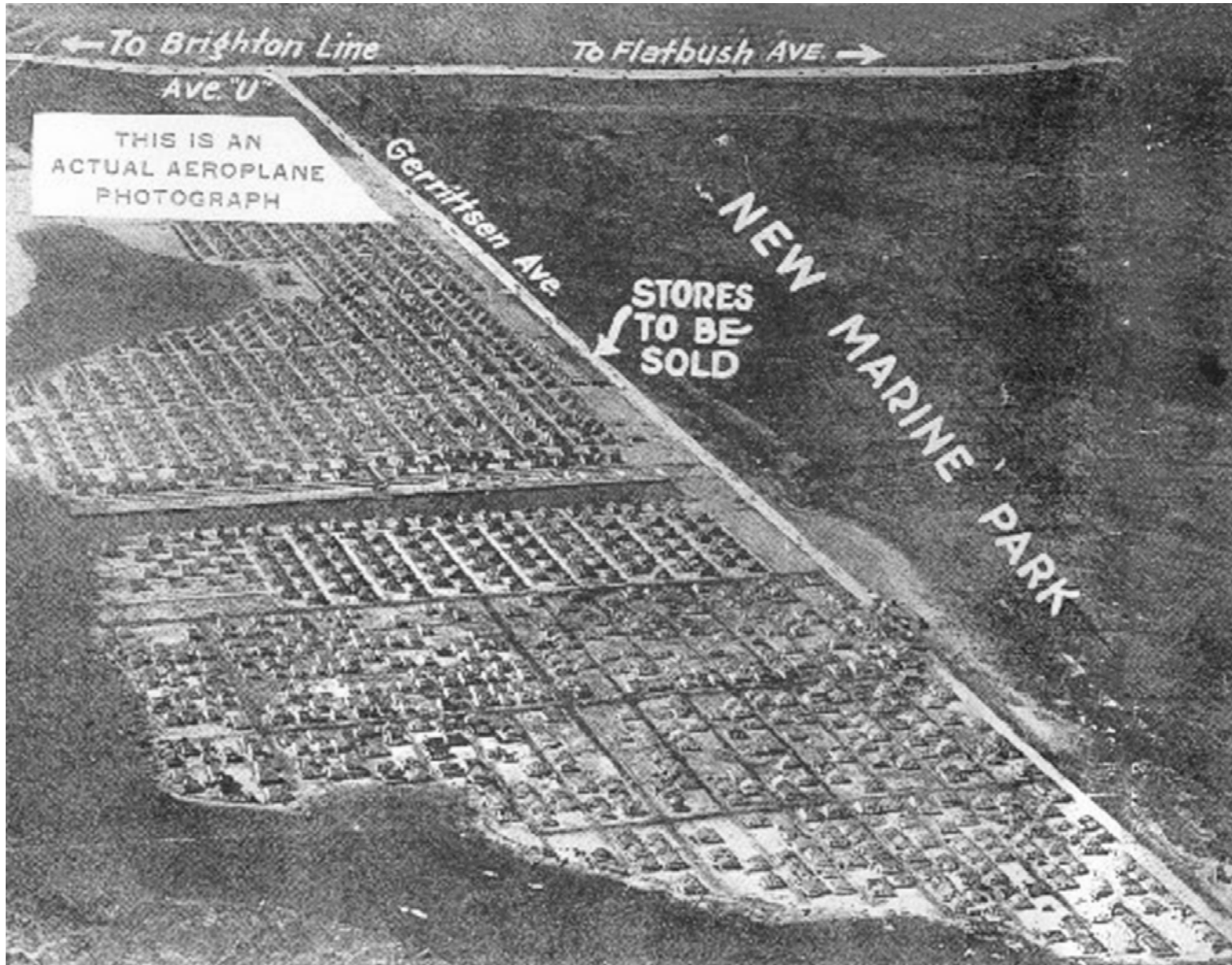




Original Street View (1922)

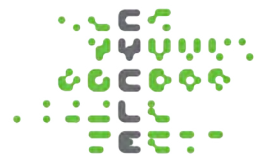


RISING ABOVE THE STORM
A CASE STUDY OF GERRITSEN BEACH

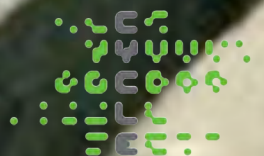




Volunteer Fire Department (est. 1922, circa 1933)



RISING ABOVE THE STORM
A CASE STUDY OF GERRITSEN BEACH



RIISING ABOVE THE STORM
A CASE STUDY OF GERRITSEN BEACH

Gerritsen Beach

EVERETT AVE

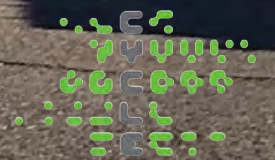
FLORENCE AVE

GOTHAM AVE

BARTLETT PL



RISING ABOVE THE STORM
A CASE STUDY OF GERRITSEN BEACH

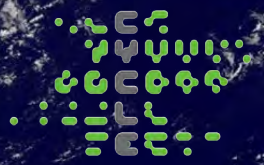


RISING ABOVE THE STORM
A CASE STUDY OF GERRITSEN BEACH

Superstorm Sandy

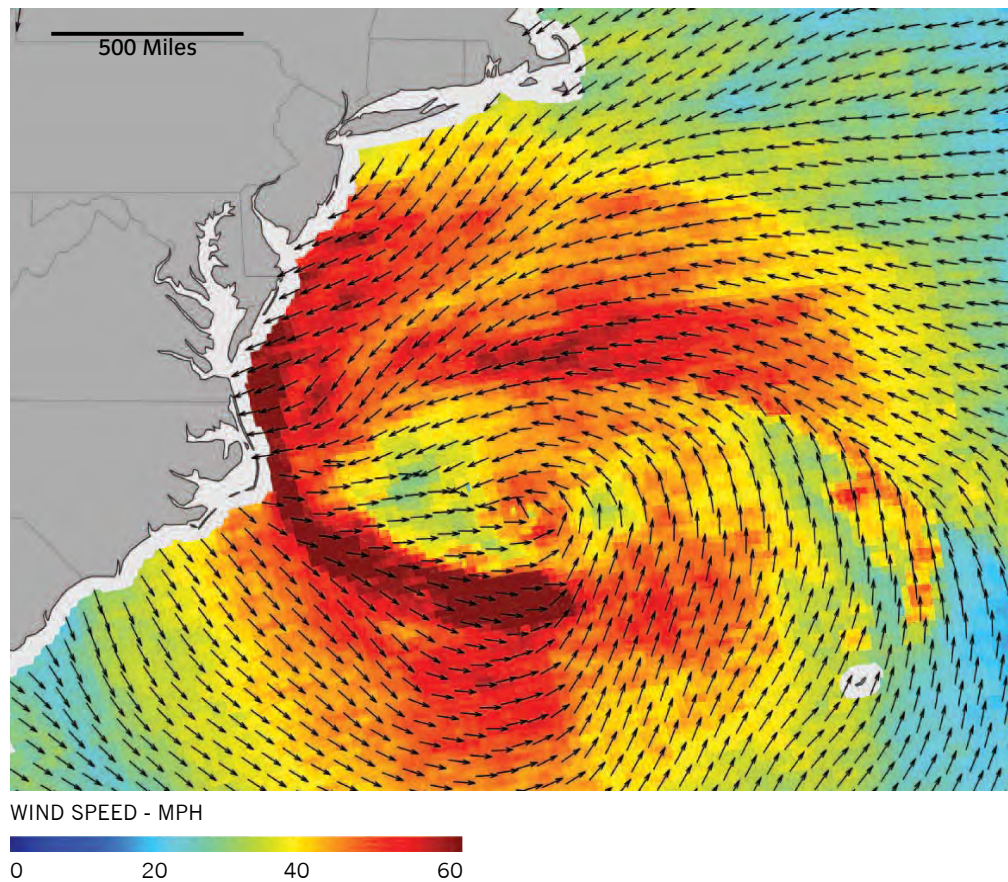
photo: NY Post

KEEPING HISTORY ABOVE WATER 2017



- 43 deaths
- Almost 90,000 buildings in inundation zone
- Nearly 2 million without power
- \$19 billion in damage

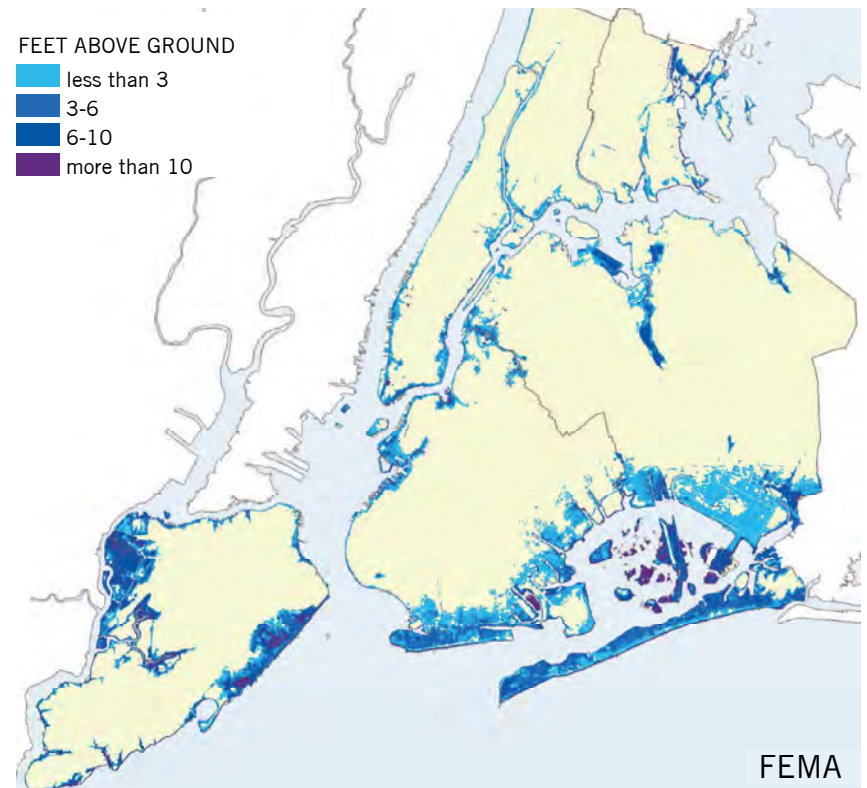
SANDY SIZE AND WINDSPEED



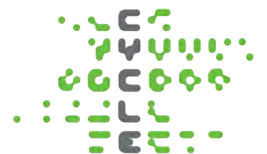
INUNDATION

FEET ABOVE GROUND

- less than 3
- 3-6
- 6-10
- more than 10



source: nyc.gov, "Sandy and its Impacts" c. 1





NFIP

PANEL 0358F

FIRM
FLOOD INSURANCE RATE MAP

CITY OF
NEW YORK, NEW YORK
BRONX, RICHMOND, NEW YORK,
QUEENS, AND KINGS COUNTIES

PANEL 358 OF 457


(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

| COMMUNITY | NUMBER | PANEL | SUFFIX |
|-------------------|--------|-------|--------|
| NEW YORK, CITY OF | 360497 | 0358 | F |

- NOTE -
THIS MAP INCLUDES COASTAL BARRIER RESOURCES SYSTEM BOUNDARIES ESTABLISHED UNDER THE COASTAL BARRIER RESOURCES ACT OF 1982 AND/OR SUBSEQUENT LEGISLATION.

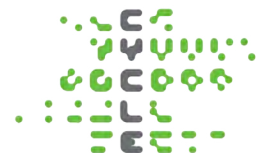
Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

 **MAP NUMBER**
3604970358F

MAP REVISED
SEPTEMBER 5, 2007

Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM





PANEL 0358G

FIRM

FLOOD INSURANCE RATE MAP

CITY OF,
NEW YORK,
NEW YORK
BRONX, RICHMOND, NEW YORK,
QUEENS, AND KINGS COUNTIES

PANEL 358 OF 457
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)


CONTAINS:

| COMMUNITY | NUMBER | PANEL | SUFFIX |
|-------------------|--------|-------|--------|
| NEW YORK, CITY OF | 360497 | 0358 | G |

- NOTE -
THIS MAP INCLUDES BOUNDARIES OF THE COASTAL BARRIER RESOURCES SYSTEM ESTABLISHED UNDER THE COASTAL BARRIER RESOURCES ACT OF 1982 AND/OR SUBSEQUENT ENABLING LEGISLATION.

REVISED PRELIMINARY
JANUARY 30, 2015

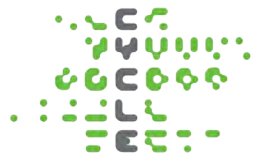
Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
3604970358G

MAP REVISED

Federal Emergency Management Agency



RIISING ABOVE THE STORM
A CASE STUDY OF GERRITSEN BEACH

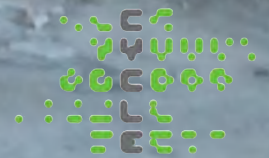


Breezy Point
photo: Huffington Post

KEEPING HISTORY ABOVE WATER 2017



RISING ABOVE THE STORM
A CASE STUDY OF GERRITSEN BEACH

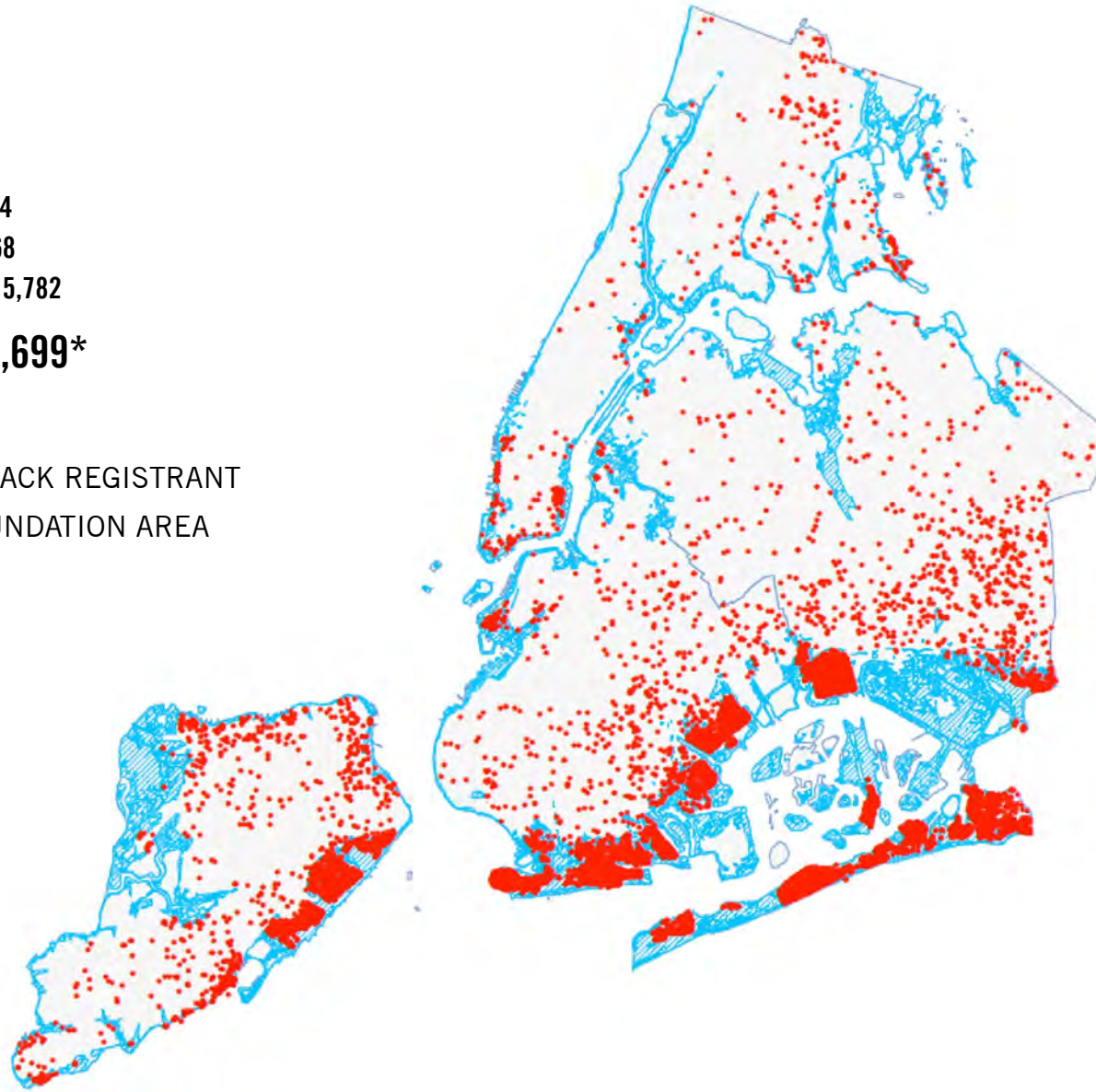


Build It Back

Registrants and Inundation Areas

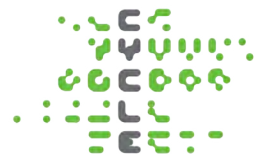
Queens: 11,374
Brooklyn: 7,968
Staten Island: 5,782
TOTAL: 25,699*

- BUILD IT BACK REGISTRANT
- SANDY INUNDATION AREA



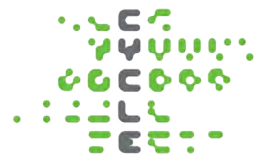
*as of September 2014

source: NYC Housing Recovery

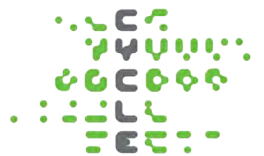




- Roughly 5,000 homes to be elevated (1-4 unit homes)
- An estimated 10,000 1-4 unit single family homes require repairs and reconstruction
- Over 200 registrants from Gerritsen Beach

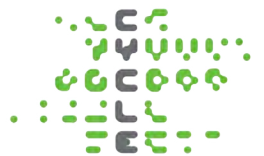


RISING ABOVE THE STORM
A CASE STUDY OF GERRITSEN BEACH





HOUSING
RECOVERY OFFICE



DEPARTMENT OF
BUILDINGS



HOUSING
RECOVERY OFFICE

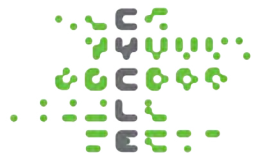


DEPARTMENT OF
ENVIRONMENTAL
PROTECTION



DEPARTMENT OF
BUILDINGS

HOUSING
RECOVERY OFFICE



DEPARTMENT OF
ENVIRONMENTAL
PROTECTION

DEPARTMENT OF
BUILDINGS



ASBESTOS
INSPECTOR

HOUSING
RECOVERY OFFICE



DEPARTMENT OF
ENVIRONMENTAL
PROTECTION

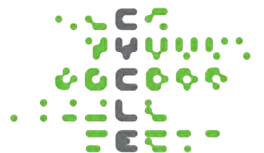
DEPARTMENT OF
BUILDINGS



ASBESTOS
INSPECTOR

DEPARTMENT OF
FINANCE

HOUSING
RECOVERY OFFICE



DEPARTMENT OF
ENVIRONMENTAL
PROTECTION

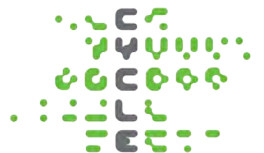
DEPARTMENT OF
BUILDINGS

INSURANCE
ASSESSOR

ASBESTOS
INSPECTOR

DEPARTMENT OF
FINANCE

HOUSING
RECOVERY OFFICE



DEPARTMENT OF
ENVIRONMENTAL
PROTECTION

DEPARTMENT OF
BUILDINGS

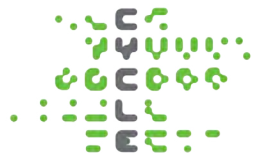
INSURANCE
ASSESSOR

DEPARTMENT OF
FINANCE

ASBESTOS
INSPECTOR

HOUSING
RECOVERY OFFICE

LEAD INSPECTION



DEPARTMENT OF
ENVIRONMENTAL
PROTECTION

DEPARTMENT OF
BUILDINGS

ARCHITECT

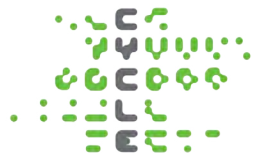
INSURANCE
ASSESSOR

DEPARTMENT OF
FINANCE

ASBESTOS
INSPECTOR

HOUSING
RECOVERY OFFICE

LEAD INSPECTION



DEPARTMENT OF
ENVIRONMENTAL
PROTECTION

DEPARTMENT OF
BUILDINGS

SURVEYOR

ARCHITECT

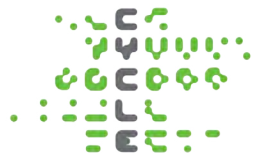
INSURANCE
ASSESSOR

ASBESTOS
INSPECTOR

DEPARTMENT OF
FINANCE

HOUSING
RECOVERY OFFICE

LEAD INSPECTION



DEPARTMENT OF
ENVIRONMENTAL
PROTECTION

ENGINEER

ARCHITECT

INSURANCE
ASSESSOR

ASBESTOS
INSPECTOR



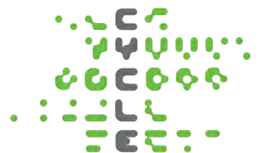
DEPARTMENT OF
BUILDINGS

SURVEYOR

DEPARTMENT OF
FINANCE

HOUSING
RECOVERY OFFICE

LEAD INSPECTION



DEPARTMENT OF
ENVIRONMENTAL
PROTECTION

ENGINEER

ARCHITECT

INSURANCE
ASSESSOR

ASBESTOS
INSPECTOR

CONTRACTOR

DEPARTMENT OF
BUILDINGS

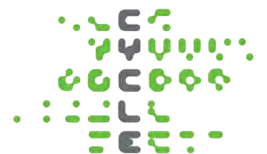
SURVEYOR

FEMA

DEPARTMENT OF
FINANCE

HOUSING
RECOVERY OFFICE

LEAD INSPECTION



?!

DEPARTMENT OF
ENVIRONMENTAL
PROTECTION

ENGINEER

ARCHITECT

INSURANCE
ASSESSOR

ASBESTOS
INSPECTOR

CONTRACTOR

PLUMBER

DEPARTMENT OF
BUILDINGS

SURVEYOR

FEMA

NATIONAL GRID

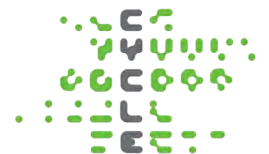
CON EDISON

DEPARTMENT OF
FINANCE

HOUSING
RECOVERY OFFICE

LEAD INSPECTION

ELECTRICIAN



Design Build

FEDERAL FUNDING



NEW YORK CITY



HOUSING RECOVERY OFFICE



DEPT. OF DESIGN & CONSTRUCTION

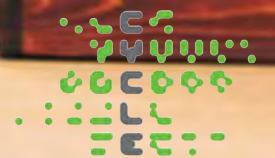


DESIGN BUILD TEAM

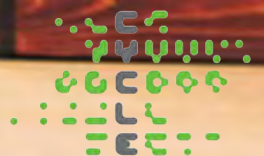
Department of Environmental Protection
Housing Recovery Office
Department of Buildings
Department of Finance
Insurance Assessor
Asbestos Inspector
Lead Inspection
National Grid
Electrician
Con Edison
Contractor
Engineer
Architect
Surveyor
Plumber
FEMA



RISING ABOVE THE STORM
A CASE STUDY OF GERRITSEN BEACH



HOMEOWNER



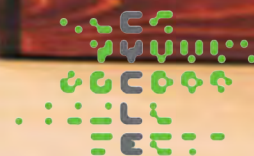


HOMEOWNER





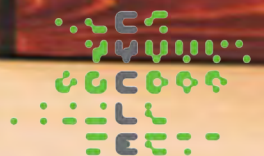
HOMEOWNER





HOMEOWNER

CITY OFFICIAL

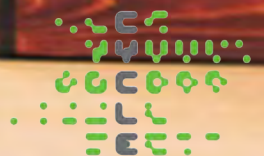


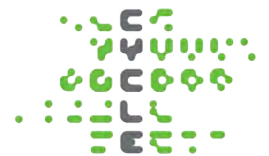
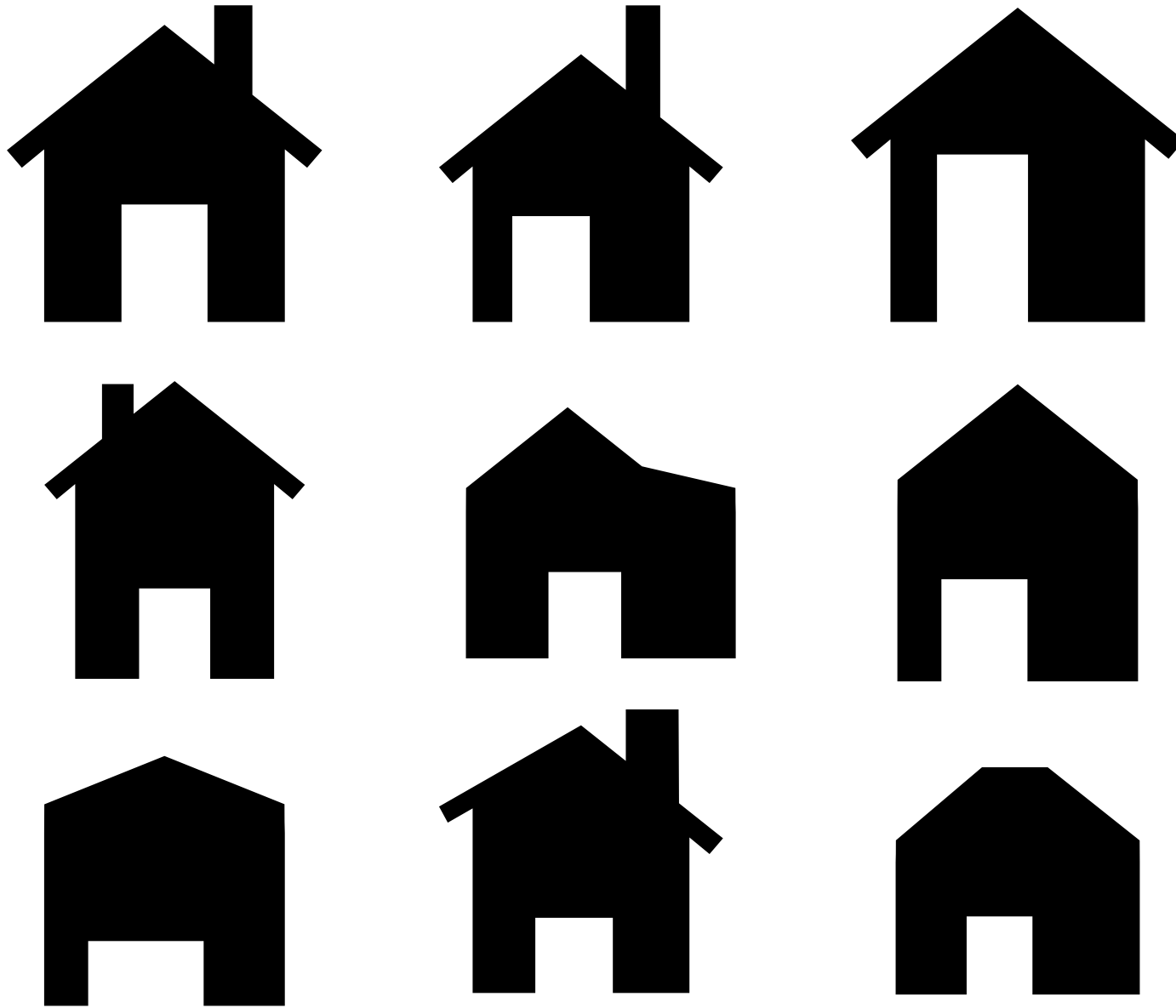


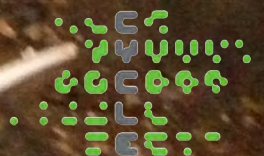
HOMEOWNER

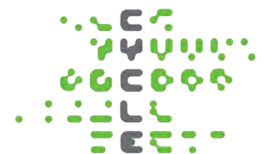


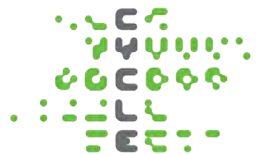
CITY OFFICIAL

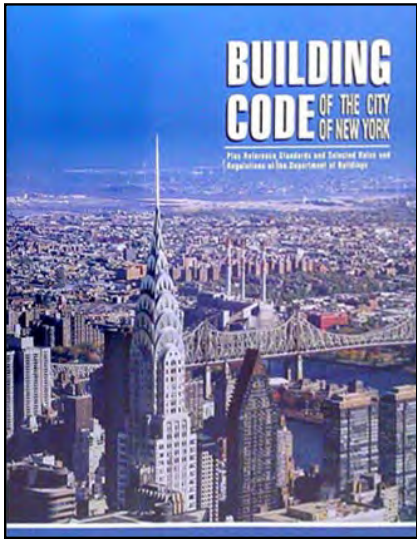








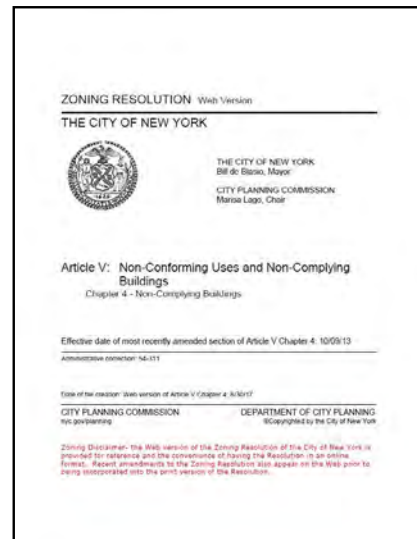




NYC BUILDING CODE



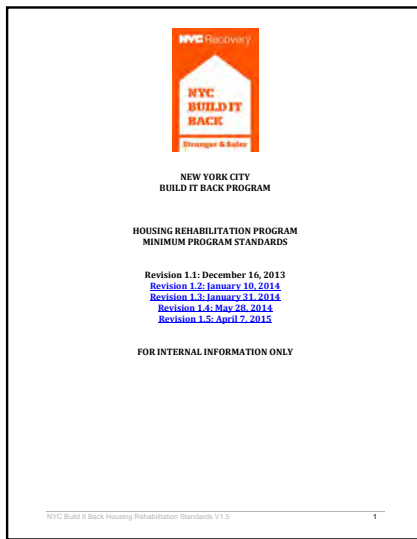
NYC ZR SECTION 64



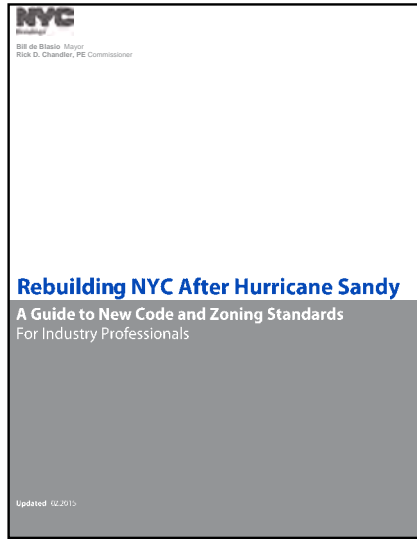
NYC ZR SECTION 54



NYC BC APPENDIX G



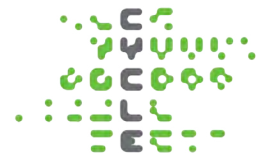
MIN. PROGRAM STANDARDS



DOB REBUILDING GUIDE

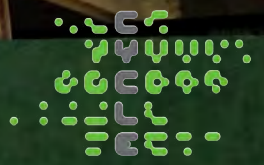


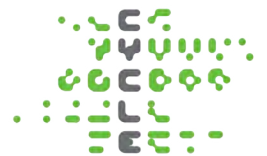
SPECIAL REGULATIONS



RIISING ABOVE THE STORM
A CASE STUDY OF GERRITSEN BEACH

Elevation



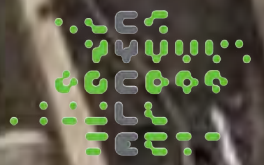


RISING ABOVE THE STORM
A CASE STUDY OF GERRITSEN BEACH

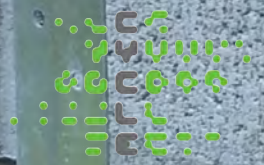


image: Build it Back Twitter

KEEPING HISTORY ABOVE WATER 2017

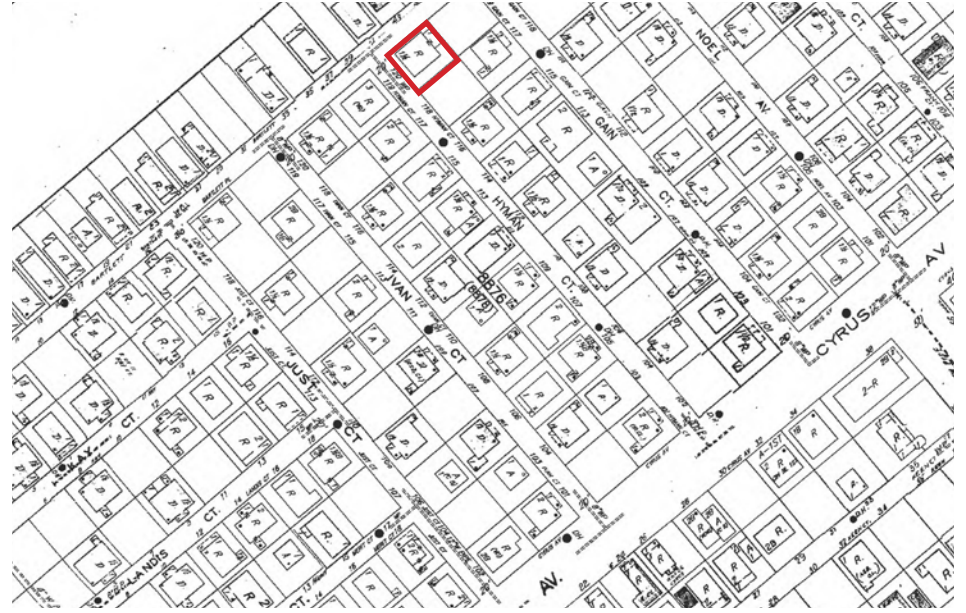


RIISING ABOVE THE STORM
A CASE STUDY OF GERRITSEN BEACH

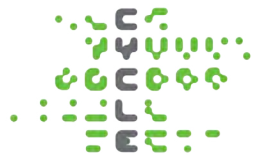
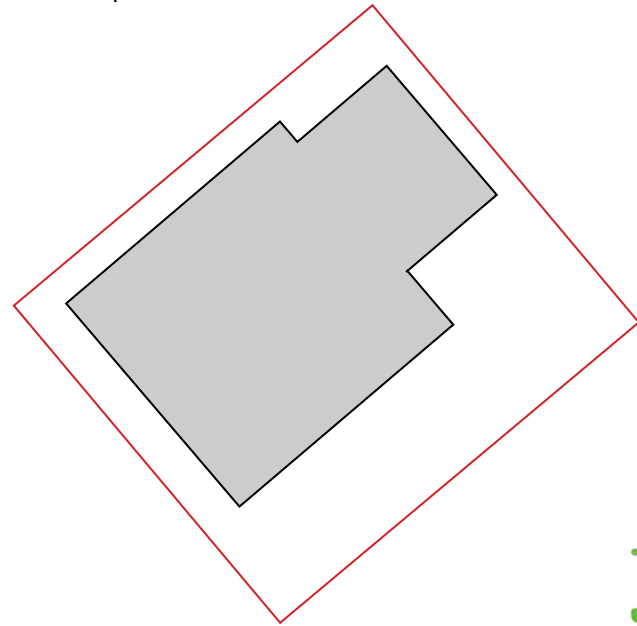
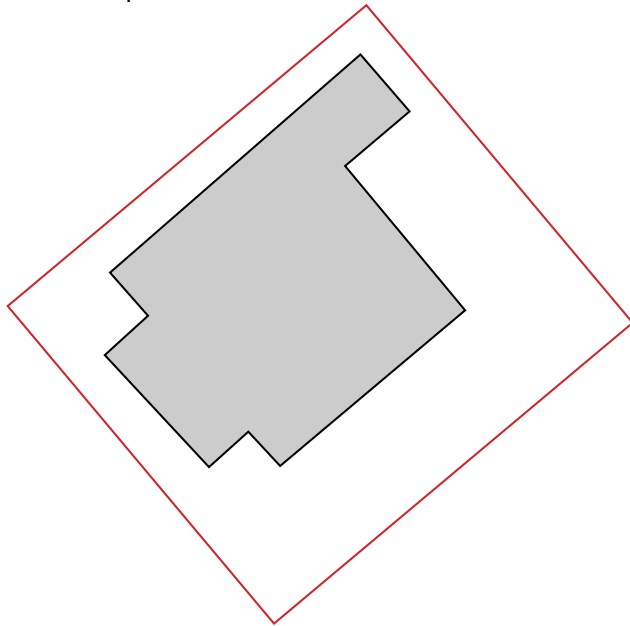




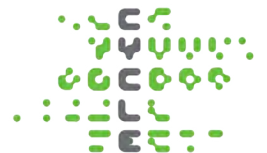
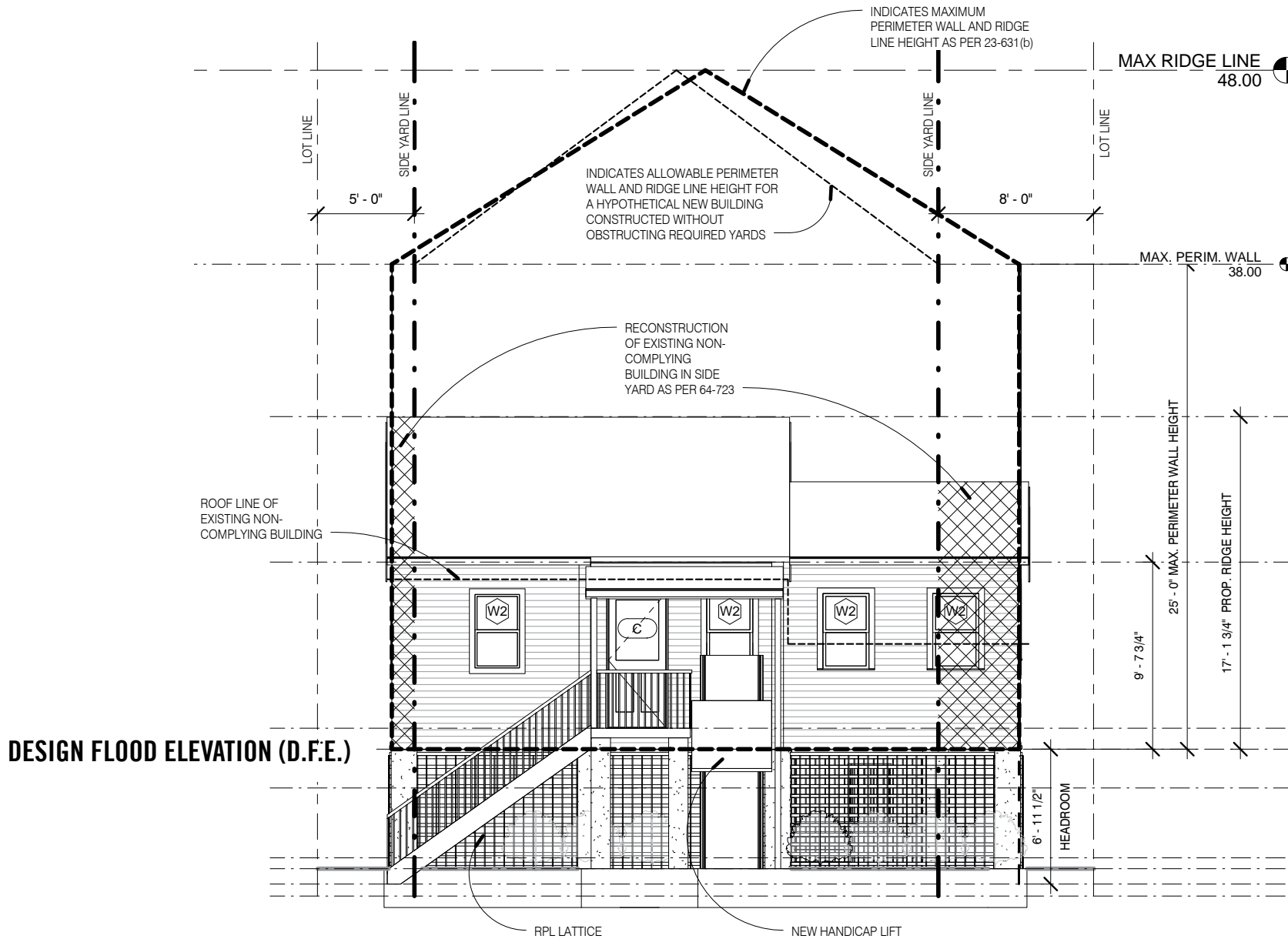
1950 Sanborn Map



2007 Sanborn Map

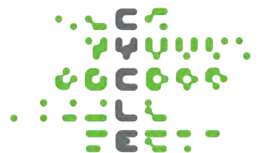
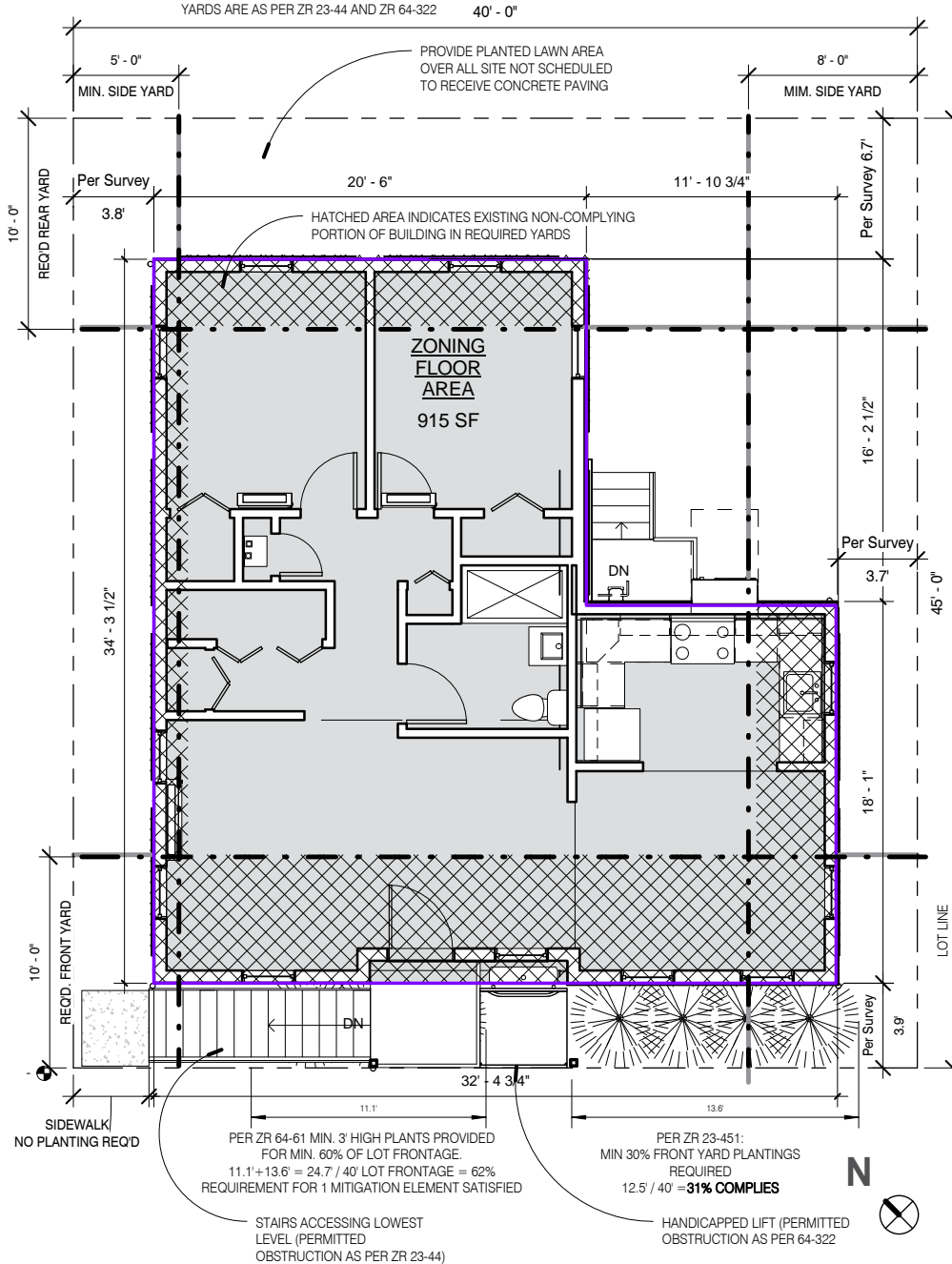


Reconstruction in Original Footprint

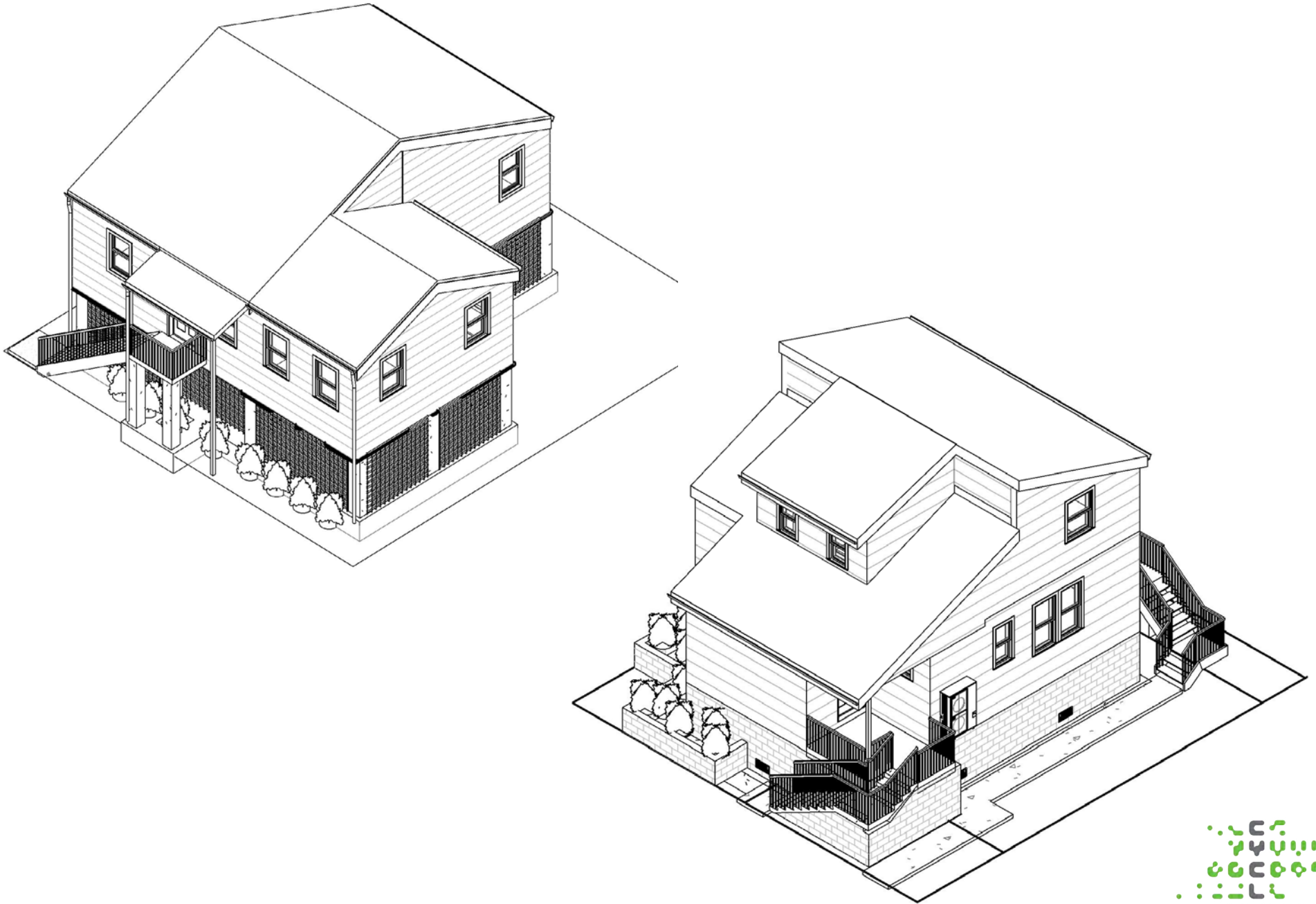


Reconstruction in Original Footprint

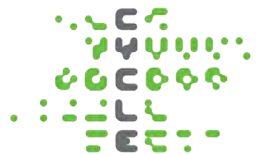
NOTE: AS PER ZR 12-10, A YARD IS AN UNOBSTRUCTED AREA FROM BASE PLANE TO SKY, MEASURED BY DEPTH OR WIDTH FROM THE LOT LINE, PERMITTED OBSTRUCTIONS IN YARDS ARE AS PER ZR 23-44 AND ZR 64-322



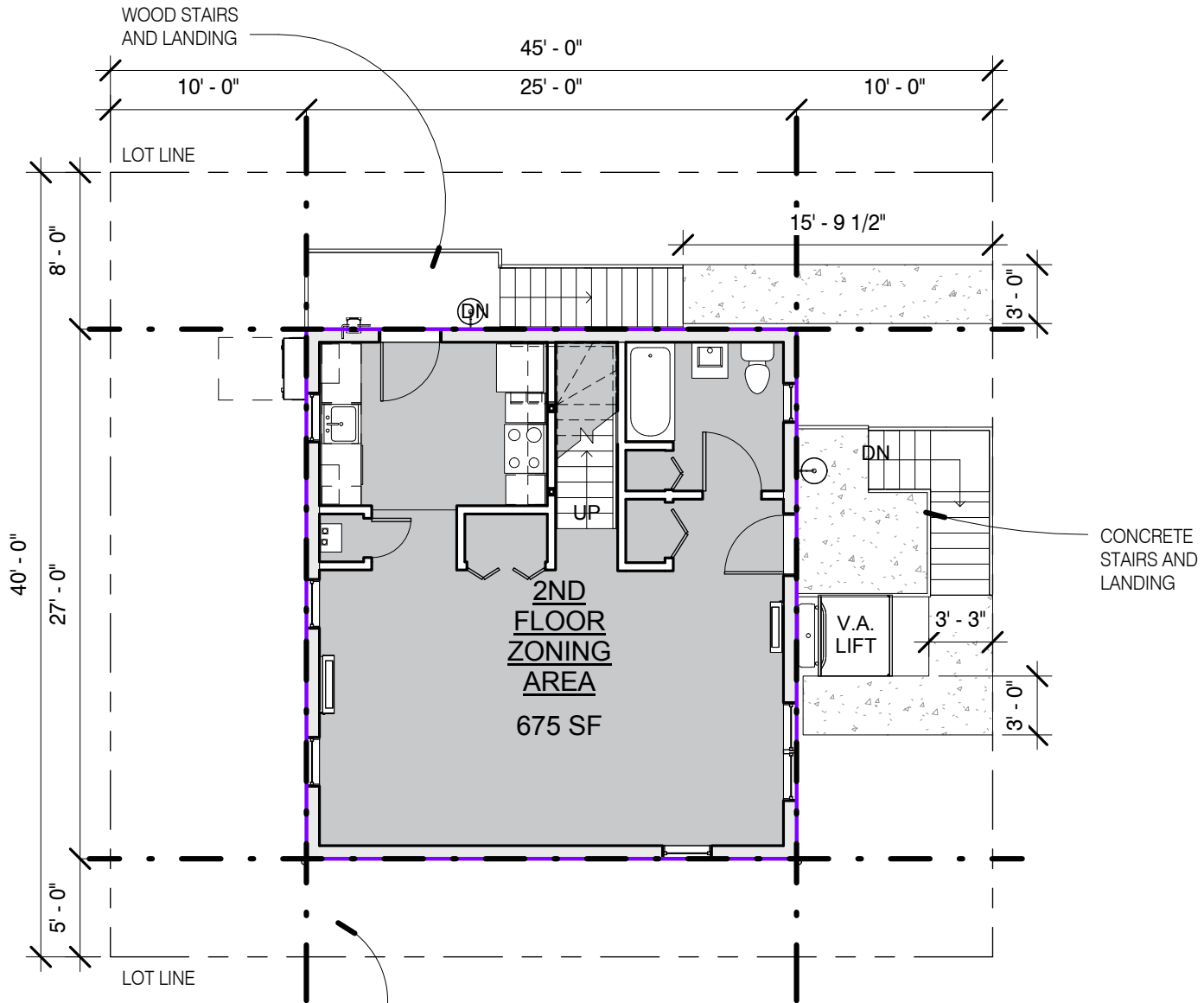
Reconstruction in Original Footprint



Reconstruction in Original Footprint

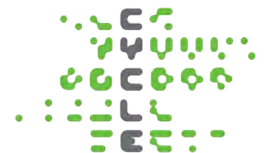


Reconstruction Permitted by Zoning

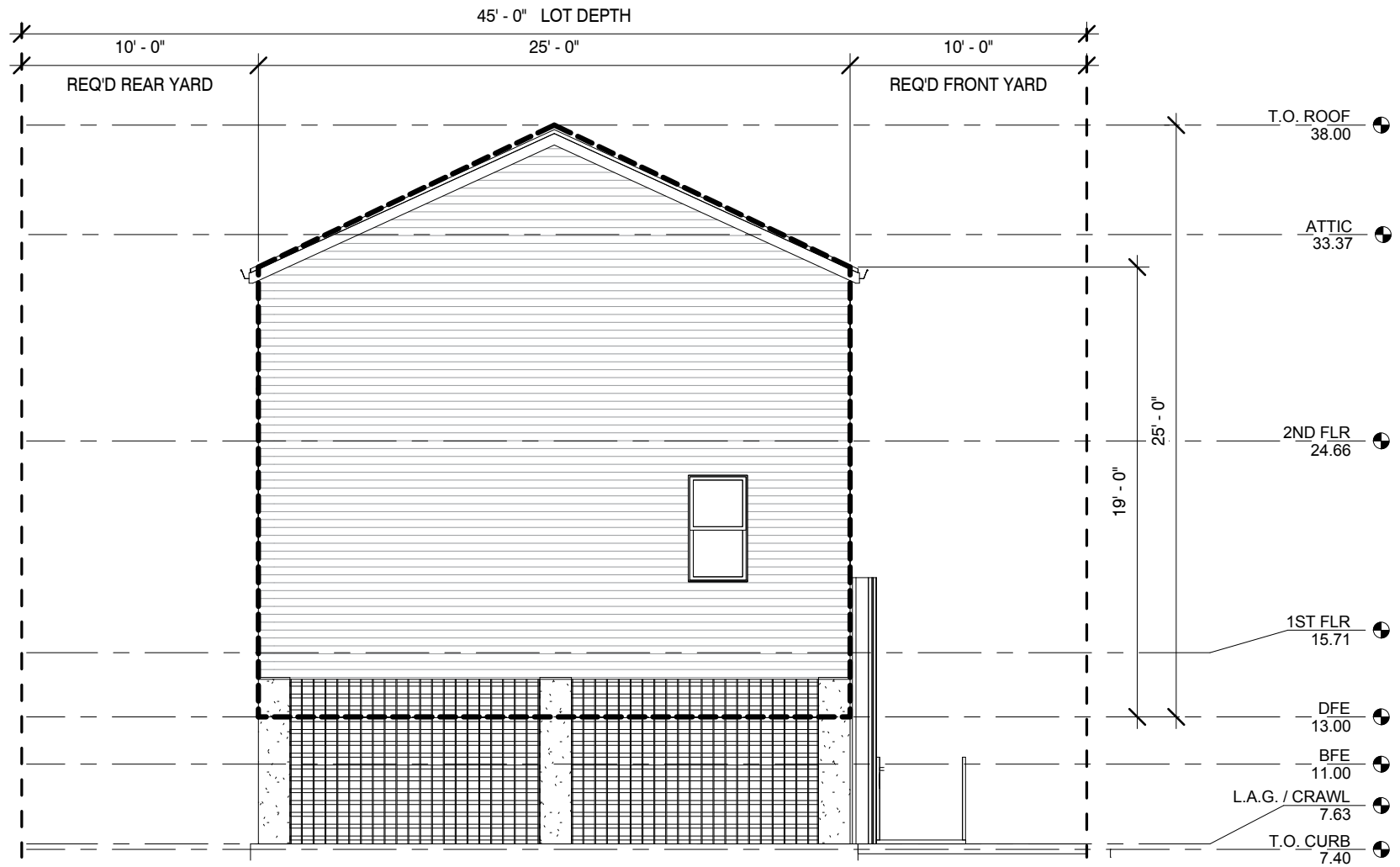


PROVIDE SEEDED LAWN AREA
OVER ALL SITE NOT SCHEDULED
TO RECEIVE CONCRETE PAVING

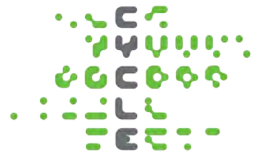
PER ZR 64-61: STAIR CHANGE IN DIRECTION
PROVIDED AS VISUAL MITIGATION ELEMENT



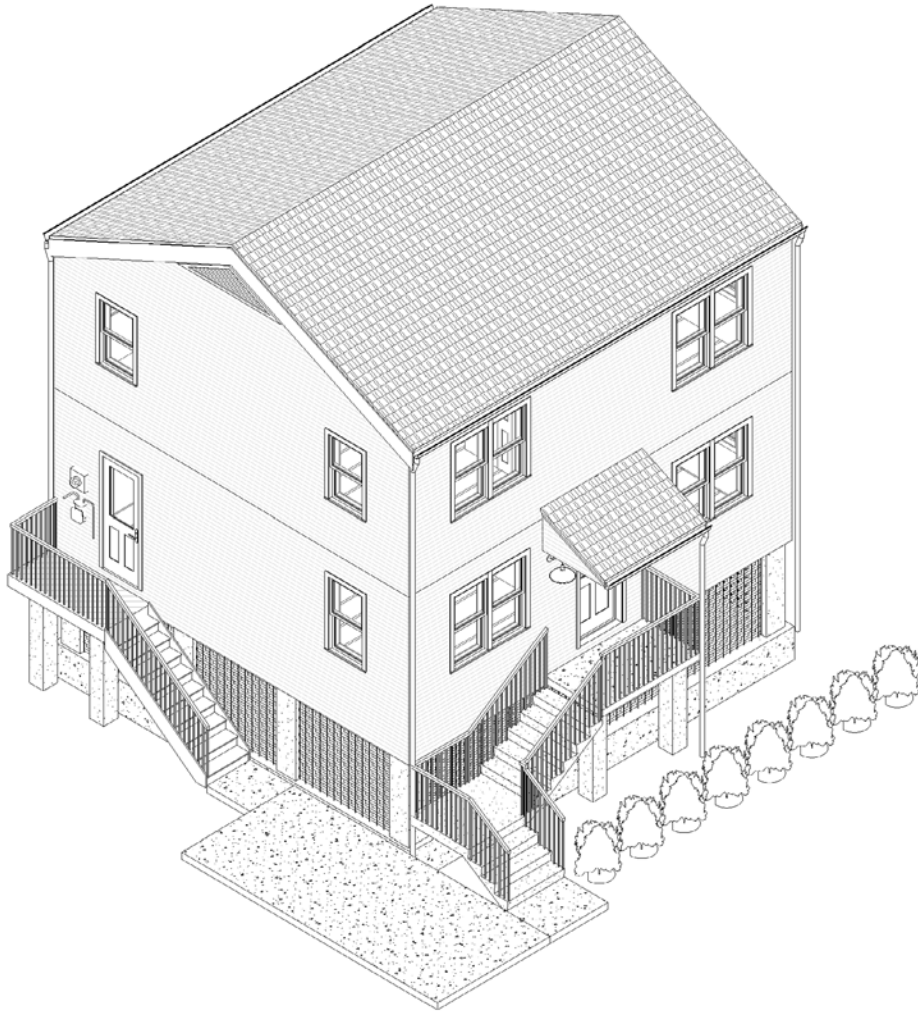
Reconstruction Permitted by Zoning



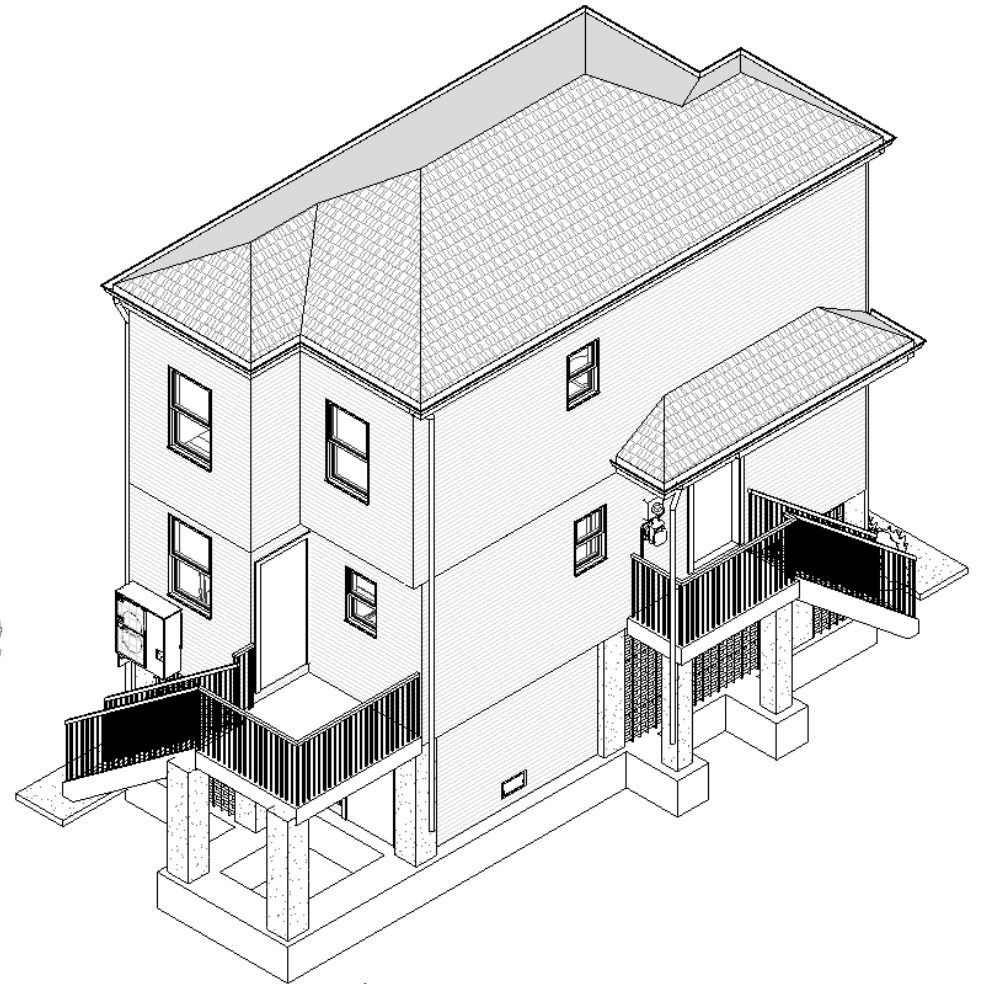
② ZONING ELEVATION SOUTH
3/16" = 1'-0"



Reconstruction Permitted by Zoning



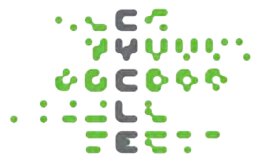
‘Model A’
Rectangular lot



‘Model B’
Irregular lot



RISING ABOVE THE STORM
A CASE STUDY OF GERRITSEN BEACH



RISING ABOVE THE STORM
A CASE STUDY OF GERRITSEN BEACH

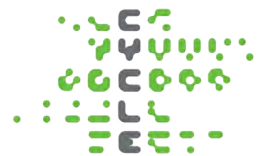


Before



After

image: Build it Back Twitter



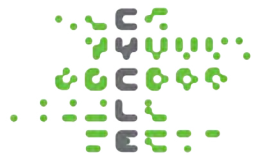
RIISING ABOVE THE STORM
A CASE STUDY OF GERRITSEN BEACH



Before



After



RIISING ABOVE THE STORM
A CASE STUDY OF GERRITSEN BEACH

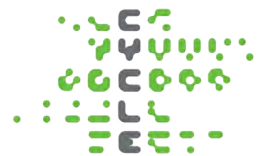


Before



After

image: Build it Back Twitter



RISING ABOVE THE STORM
A CASE STUDY OF GERRITSEN BEACH

Before



After



RISING ABOVE THE STORM
A CASE STUDY OF GERRITSEN BEACH

Thank you!

cycle architecture + planning
232 third street, suite c301
Brooklyn, NY 11215 USA
646. 308. 1603
inquiries@c-ap.net

