Zoning for Coastal Flood Resilience

Preliminary Recommendations

Summary

Staten Island Community Board 2
September 4, 2019
Today’s Agenda

1. Introduction | Context

2. Preliminary Recommendations | Summary

3. Project Timeline | Public Review
1. Introduction

Context
NYC’s 520-mile waterfront is large and diverse. These areas face different flood risks and issues with the current regulatory framework, and require particular strategies to make them resilient.
Citywide Flood Risk
NYC’s flood risk is high and will increase.

The city’s current flood risk is high with ~782,800 residents in the floodplain.

Sandy inundated all lots in the high-risk zone, but also 50% of lots in the moderate-risk area.

The current moderate-risk zone will likely become the future high-risk flood zone.
FEMA Flood Map
Flood Risk in Staten Island

<table>
<thead>
<tr>
<th>Total # of Lots</th>
<th>100 YR (FIRM+PFIRM)</th>
<th>500 YR (FIRM+PFIRM)</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td># Built</td>
<td>10,734</td>
<td>4,839</td>
<td>15,573</td>
</tr>
<tr>
<td># Vacant</td>
<td>2,608</td>
<td>289</td>
<td>2,897</td>
</tr>
<tr>
<td>% Built</td>
<td>80%</td>
<td>94%</td>
<td>84%</td>
</tr>
<tr>
<td>% Vacant</td>
<td>20%</td>
<td>6%</td>
<td>16%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total # of Buildings</th>
<th>100 YR (FIRM+PFIRM)</th>
<th>500 YR (FIRM+PFIRM)</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>13,276</td>
<td>6,245</td>
<td>19,521</td>
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</table>
Common Building Typologies
Flood Risk in Staten Island
A more resilient NYC is one where neighborhoods, buildings and infrastructure can withstand and recover quickly from flooding and climate events.

Coastal defenses are strengthened as first line of defense against flooding and sea level rise.

Buildings are designed to withstand and recover from flooding.

Infrastructure is protected from climate hazards.

Residents and businesses are prepared.
How are buildings in the floodplain regulated?

- **Flood Insurance Rate Maps (FIRMs)**
  - Determine where floodplain regulations apply

- **National Flood Insurance Program**
  - Set up Insurance Rates depending on building elevation and other requirements

- **Construction Standards (ASCE 24)**
  - Design minimum construction requirements for flood hazard areas

- **Building Code (DOB)**
  - Requires new buildings and substantial improvements to meet FEMA standards (Appendix G)

- **Zoning Resolution (DCP)**
  - Zoning accommodates these regulations
DCP’s work since Sandy
From recovery to long-term resiliency

**Zoning Text Amendments**
(emergency-basis)

- **2013- FT1**
  Temporary Provisions to remove zoning barriers

- **2015- SRNR**
  Removed additional zoning barriers and simplify documentation requirements

**Outreach Process**

- **Citywide / Neighborhood Studies**
  Learn about specific neighborhood challenges faced after Sandy

- **Community Outreach Workshops**
  (2016-2018)
  Learn about challenges communities faced to recover from Sandy but also to build future resiliency

**Proposal**
(permanent-basis)

- **Zoning for Coastal Flood Resiliency**
  (2018-2019)
  A plain-language description of the proposal to encourage resiliency in the long-term
Overview of zoning issues identified by communities
From Community Outreach Summary document

1. More flexibility with height to reduce insurance rates and “future-proof”
2. Allow for resilient buildings that better fit context
3. Allow homes in industrial areas to recover
4. Need better design controls for all building types
5. Keep active uses at the sidewalk level
6. More options are needed for businesses to retrofit
Zoning for Coastal Flood Resiliency

2. Preliminary Recommendations
Summary
Zoning for Coastal Flood Resiliency
From recovery to long-term resiliency

1. Encourage resiliency throughout the city’s current and future floodplains
2. Support long-term resilient design of all building types by offering flexibility in the zoning framework
3. Save on cost by allowing for adaptation over time through partial resiliency strategies
4. Facilitate future-storm recovery by removing regulatory obstacles
Zoning for Coastal Flood Resiliency
An expanded geography

1. Encourage resiliency throughout the current and future floodplains

EXISTING RULES

- Are only available to buildings within the 100-year floodplain

PROPOSED RULES

- Will be available to lots within the 500-Year floodplain
2. Support long-term resilient design of all building types through flexibility in zoning

**Height Allowances**
Measure building envelope from the Design Flood Elevation (DFE) or a higher Reference Plane (10’ or 5’, depending on the 100-year or 500-year floodplain)

**Floor Area Exemptions**
For active uses (commercial and community facilities) that are dry-floodproofed and kept at grade, and any wet-floodproofed spaces
Optional *Building Envelope* would facilitate the **construction, reconstruction, and retrofit** of homes located on pre-existing substandard lots, and better reflect the scale of traditional cottage buildings.

**Existing Rules:** maximum height of 35' as measured from the DFE or 9' Reference Plane

**Proposed Rules:** maximum height of 25' as measured from the DFE up to 10' Reference Plane

* Rules available if the building fully meets Appendix G of the Building Code
Zoning for Coastal Flood Resiliency
Alternatives for the relocation of important equipment

3. Allow for adaptation over time through incremental retrofits

Floor Area Exemptions for existing industrial buildings allow the creation of small mezzanine space or a 2nd floor to store important spaces/equipment.

More flexible permitted obstructions provide more options for MEP to be relocated to either above the roof or within separate structures.
Zoning for Coastal Flood Resiliency

Future storm recovery

4. Facilitate future storm recovery

Reconstruction allowances
Substantially-damaged non-conforming or non-complying buildings can rebuild to at least minimum resiliency standards

Documentation process
Aerial photographs/tax bills can be used to establish the existence of a building. A survey may be used to document non-compliances
3. Project Timeline & Outreach Resources
Zoning for Coastal Flood Resiliency

Project Timeline

2017 2018 2019 2020

Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3

- Broad public engagement on resiliency (newsletter, events, video)
- Interagency Coordination on Non-Zoning Recommendations
- Interagency Coordination on Zoning Items
- Finalize Recommendations and Write Zoning Text
- Environmental Review
- Scoping
- Referral
- Public engagement on plain-language proposal
- Public Review Process
- Outreach Summary
- Plain Language Proposal

* Timeline subject to change
Outreach Resources

NYC Flood Hazard Mapper
www.nyc.gov/floodhazardmapper

Info briefs on Flood Resilience Zoning, Flood Risk, Flood Resilient Construction, and Flood Insurance
www.nyc.gov/resilientneighborhoods