

Zoning for Coastal Flood Resiliency

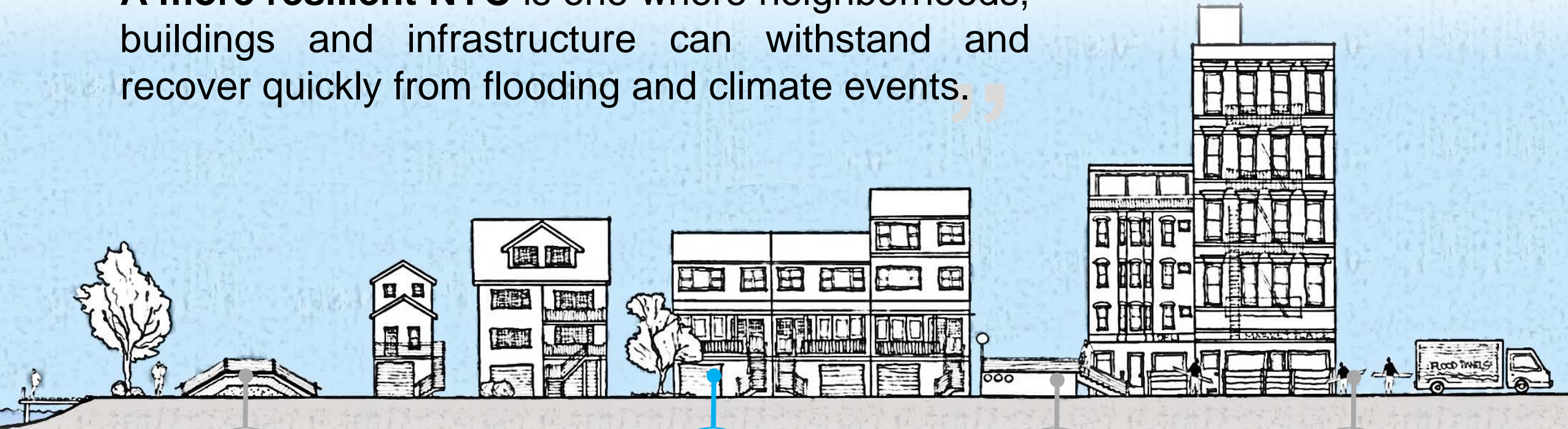
Resilient Neighborhoods: Gerritsen Beach and Sheepshead Bay



Update for Brooklyn Community Board 15
May 21, 2019

#ONENYC

“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

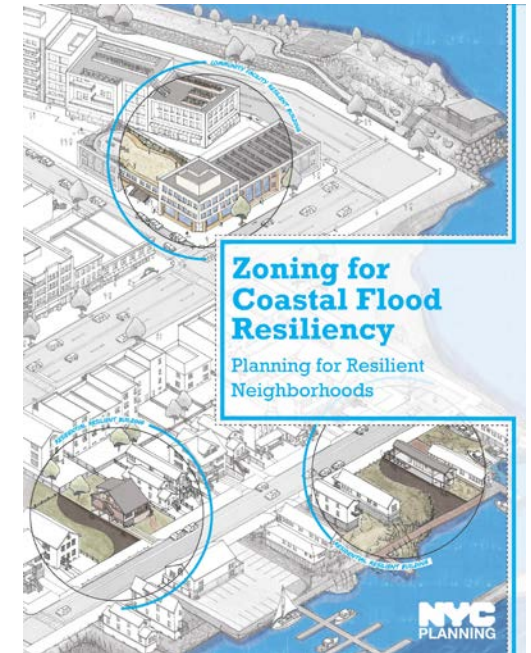
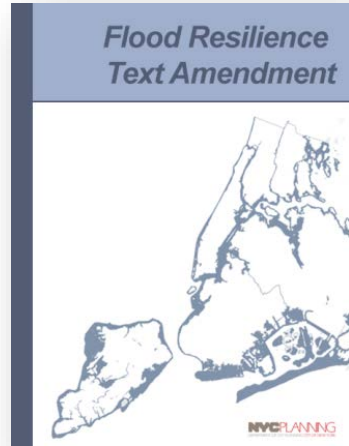
is protected from climate hazards



Residents and businesses

are prepared

DCP's work since Hurricane Sandy



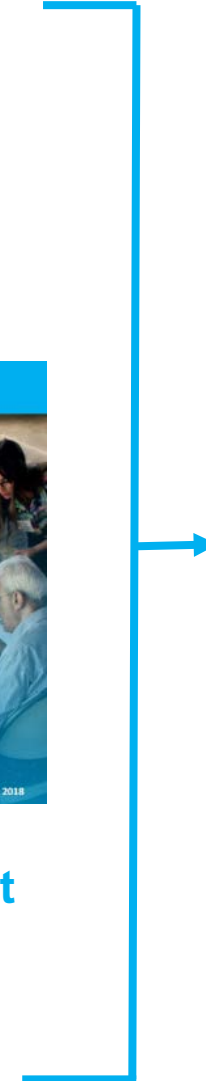
2013
Flood Resilience Zoning Text Amendment:
Initial temporary regulations to facilitate recovery

2015
Special Regulations for Neighborhood Recovery:
Additional temporary regulations to expedite recovery in certain neighborhoods

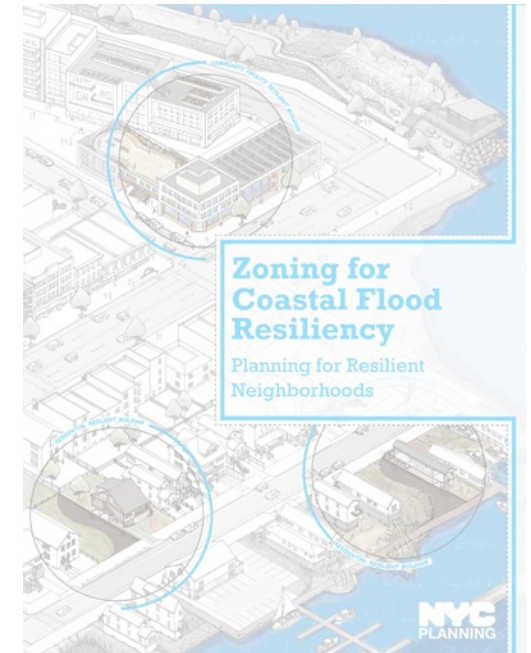
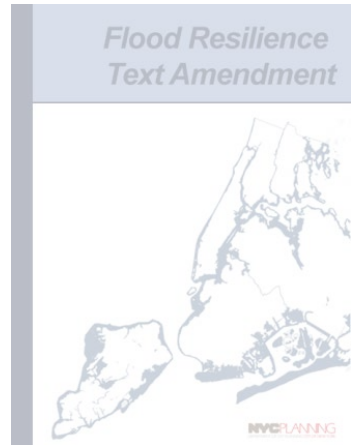
2014 - 2017
Citywide / Neighborhood Studies

2016 - Present
Community Outreach

2019
Zoning for Coastal Flood Resiliency and Resilient Neighborhood Actions



DCP's work since Hurricane Sandy



2013
**Flood Resilience
 Zoning Text
 Amendment:**
 Initial temporary
 regulations to facilitate
 recovery

2015
**Special Regulations
 for Neighborhood
 Recovery:**
 Additional temporary
 regulations to expedite
 recovery in certain
 neighborhoods

2014 - 2017
**Citywide /
 Neighborhood
 Studies**

2016 - Present
**Community
 Outreach**

2019
**Zoning for Coasta Flood
 Resiliency
 and
 Resilient Neighborhood
 Actions**



Zoning for Coastal Flood Resiliency

Citywide Proposal

Zoning for Coastal Flood Resiliency would provide building owners flexibility to design or retrofit buildings to reduce damage from flooding, be resilient in the long-term, reduce flood insurance costs, and expedite future-storm recovery.



1. Encourage resiliency throughout the current and future floodplains



2. Support long-term resilient design of all building types through flexibility in zoning



3. Allow adaptation through incremental retrofits



4. Facilitate future storm recovery

Zoning for Coastal Flood Resiliency

Citywide Proposal

Zoning for Coastal Flood Resiliency would provide building owners flexibility to design or retrofit buildings to reduce damage from flooding, be resilient in the long-term, reduce flood insurance costs, and expedite future-storm recovery.



1. Encourage resiliency throughout the current and future floodplains

2. Support long-term resilient design of all building types through flexibility in zoning

3. Allow adaptation through incremental retrofits

4. Facilitate future storm recovery

Applicability extended

Building Envelope flexibility

Partial Resiliency allowances

Emergency Rules

Ground Floor Design

Resilient Neighborhoods

Gerritsen Beach



Resiliency Challenges in Gerritsen Beach

- **Limited street widths**

Streets as narrow as 20 feet pose safety risks and accessibility issues during emergencies.

- **Sunken lots, residential use below DFE**

Vulnerability to coastal flooding exacerbated by high DFEs.

- **Shallow lots, large homes**

Narrow yards pose challenges for existing zoning compliance, light and air access, elevation strategies, access, streetscape, neighborhood character.

- **Density allowance**

Current zoning designation allows multi-family development, which could over-stress existing infrastructure.



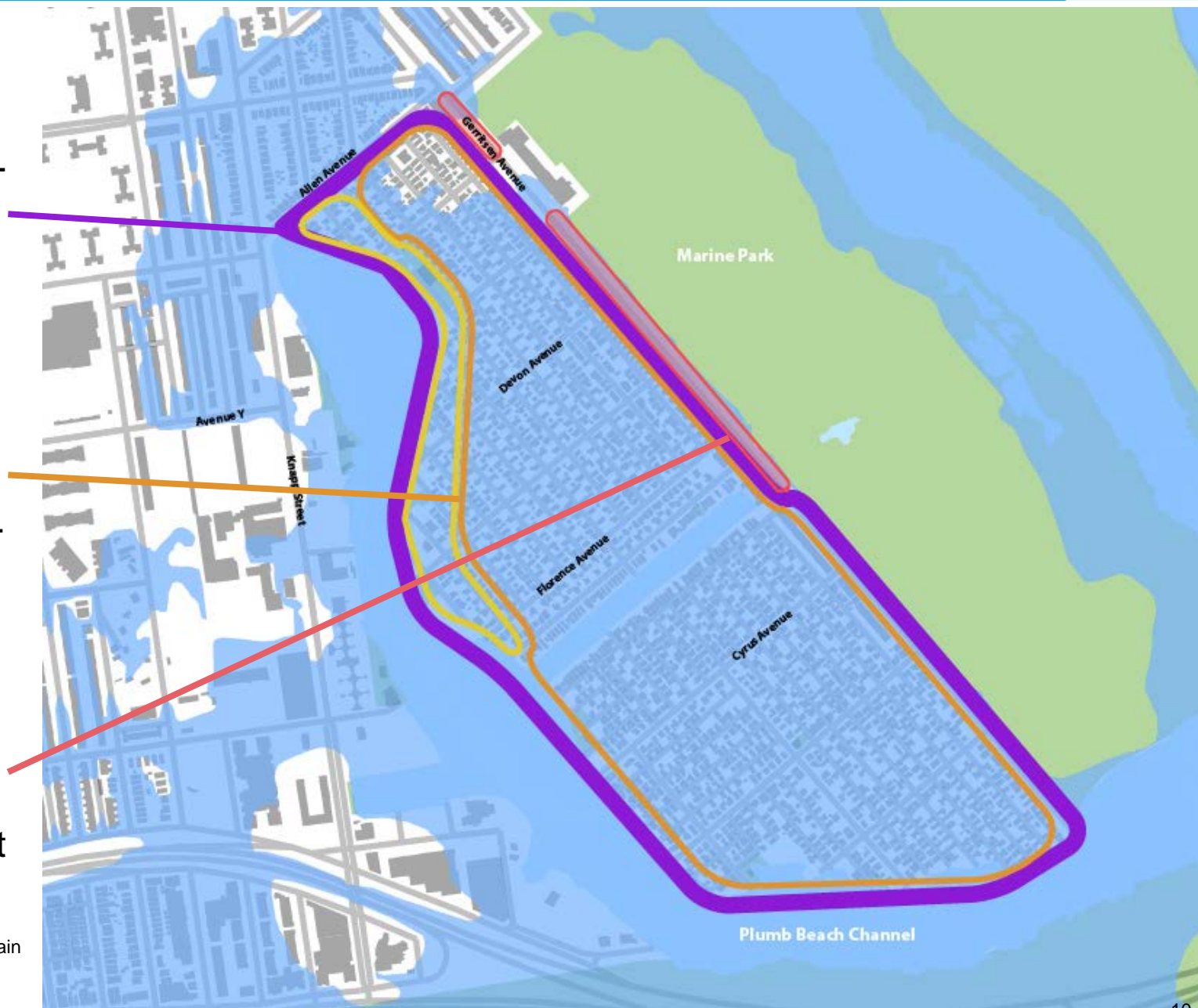
- **Limited services in commercial corridor**
Current zoning limits uses on Gerritsen Avenue. Some business uses that could support residents and homes in flood preparation and recovery – including plumbing, electrical, and appliance repair – are not allowed today.



Gerritsen Beach Proposed Actions

- **New Special Coastal Risk District:** Limit new residential development to only single-family homes on small lots (< 3,000 sf), with height limit to two stories above the flood elevation/Reference Plane.
- **Residential areas:** Current R4 and C3 districts allow attached and multi-family homes. Proposed zoning to R4-1 and C3A will limit new development to one- and two-family homes in residential areas.
- **Gerritsen Avenue:** Expand variety of uses allowed to enable provision of a wider range of services that can better support the local community, and reduce parking requirement to reflect existing development on Gerritsen Ave.

1% Chance Floodplain (2015)

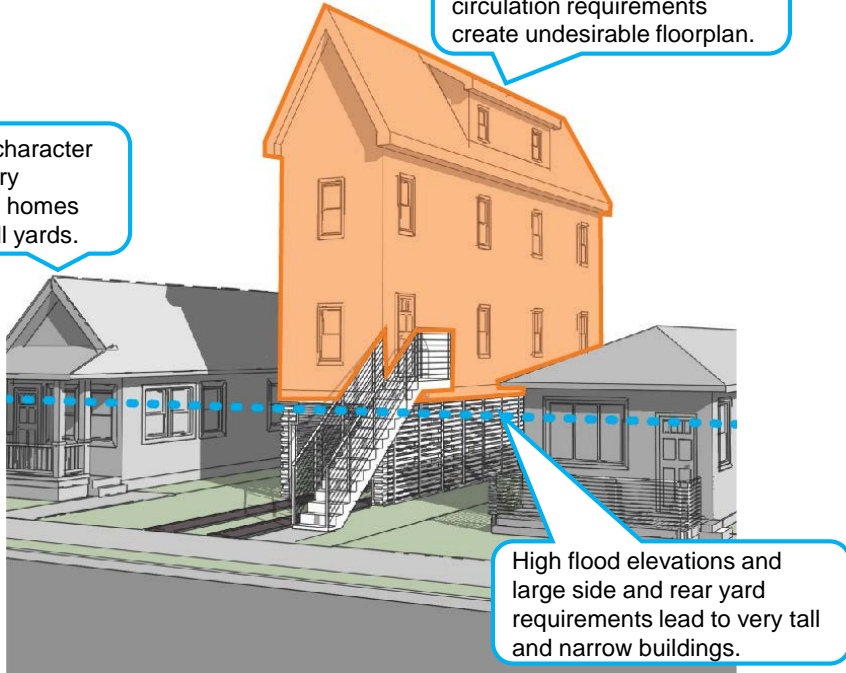


CURRENT

Existing character is 1-2 story detached homes with small yards.

Narrow frontage, limited footprint, and internal circulation requirements create undesirable floorplan.

High flood elevations and large side and rear yard requirements lead to very tall and narrow buildings.

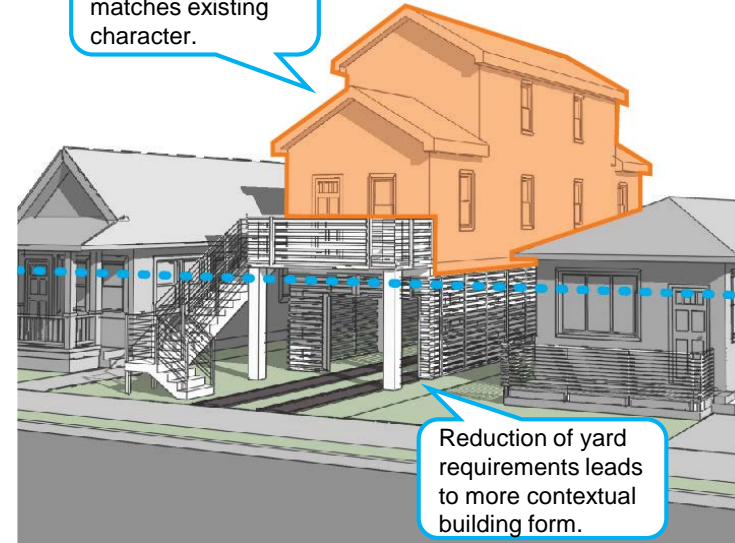


- Allows for multi-family buildings
- Maximum building height is 35 feet above DFE (6-8 feet above street level)
- Challenging side yard requirements encourage taller buildings on narrow lots

PROPOSED

Proposed building envelope better matches existing character.




Reduction of yard requirements leads to more contextual building form.



- **Reduce side yard requirements** to allow for a better building layout
- **Limit height** to two stories to match existing built character
- **Further limit new development** to one-family homes for lots <3,000 sf through Special Coastal Risk District

Gerritsen Beach Zoning – Gerritsen Avenue



-  C1-2
-  C2-2
-  Proposed C2-3



- **Update commercial overlays to C2-3** to allow uses to serve community needs and reduce parking requirement to match existing conditions
- **Reduce overlay depth** to Gerritsen Ave. frontage only; prevent retail, parking on residential Aster Ct.

Resilient Neighborhoods

Sheepshead Bay



Special Sheepshead Bay District



Restaurants and cafes on western end of Emmons



Public plaza



Seven-story apartment building on eastern end



SSBD was created in 1973 to promote waterfront related uses and encourage the creation of new public open space.

- Special District does not have any guidance on resiliency.
- Public open space requirements are not aligned with today's resiliency design standards.
- Plazas are allowed to be sunken two feet below grade, which creates risk of flooding and safety hazard.

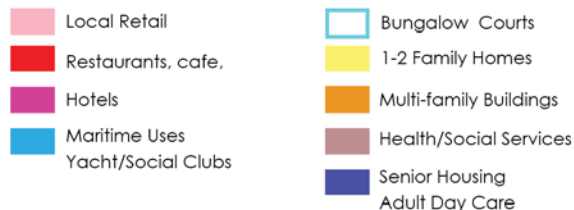


Below grade retail space in cellar



Attached buildings

Current Uses in Special Sheepshead Bay District by Subarea



Resiliency Challenges in Special Sheephead Bay District

- High flood elevation (4-6 ft. BFE)
- Flood-prone public open spaces without resilient design standards
- Below-grade retail

Residential development built with additional 20% FAR Open Space Bonus



The Lohemann's property after Sandy



Special Sheepshead Bay District Report Recommendations

SUPPORT ACTIVE GROUND FLOORS

Require retail spaces have optimal floor to ceiling heights to allow for a range of uses.



UPDATE PUBLIC SPACE REGULATIONS

Align SSBD text with resiliency and urban design best practices to ensure open space is accessible and can withstand flooding



Special Sheephead Bay District Report Recommendations

SUPPORT ACTIVE GROUND FLOORS

Require retail spaces have optimal floor to ceiling heights to allow for a range of uses.

PROPOSED CITYWIDE



UPDATE PUBLIC SPACE REGULATIONS

Align SSBD text with resiliency and urban design best practices to ensure open space is accessible and can withstand flooding

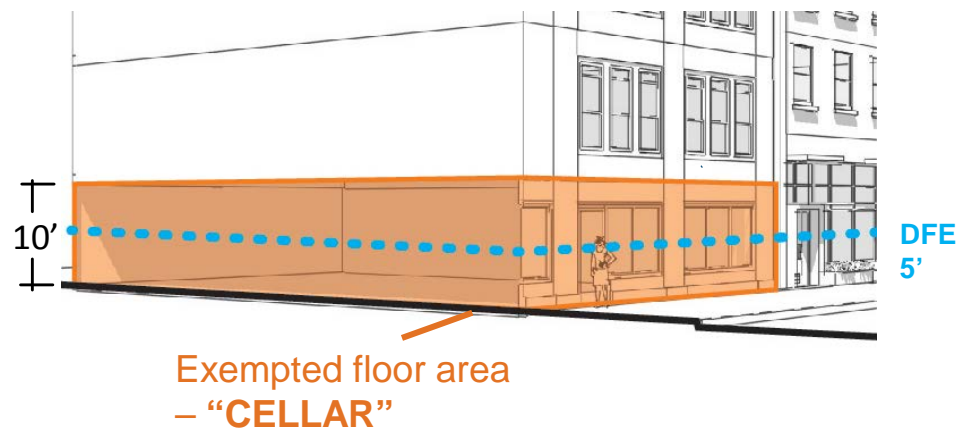
PROPOSED SPECIAL DISTRICT UPDATE



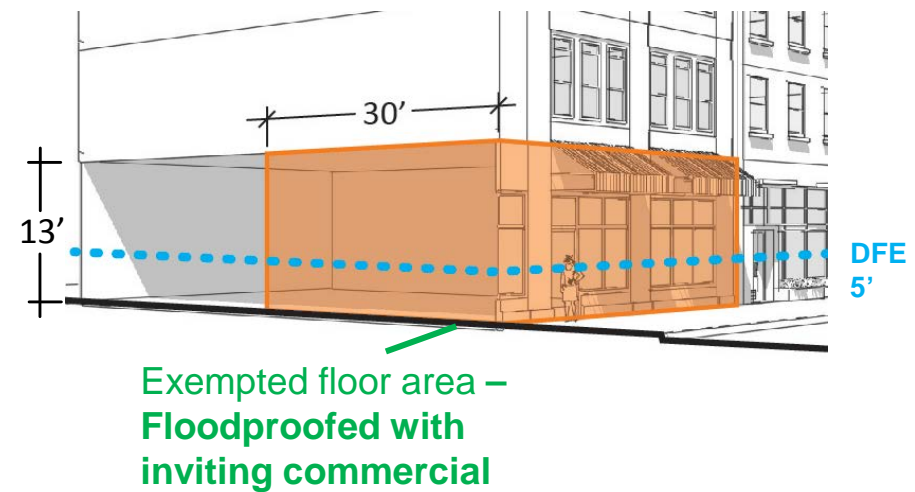
Sheepshead Bay Proposed Zoning – Citywide

- Update Special Sheepshead Bay District (SSBD) regulations with citywide Zoning for Coastal Flood Resiliency
 - PROPOSED: Floor area exemption available to **floodproofed commercial ground floor spaces** built to full height (13')

Current:



Proposed citywide:



Sheepshead Bay Proposed Zoning – Plaza Design

- Update SSBD regulations to encourage flood-resilient and active public realm design

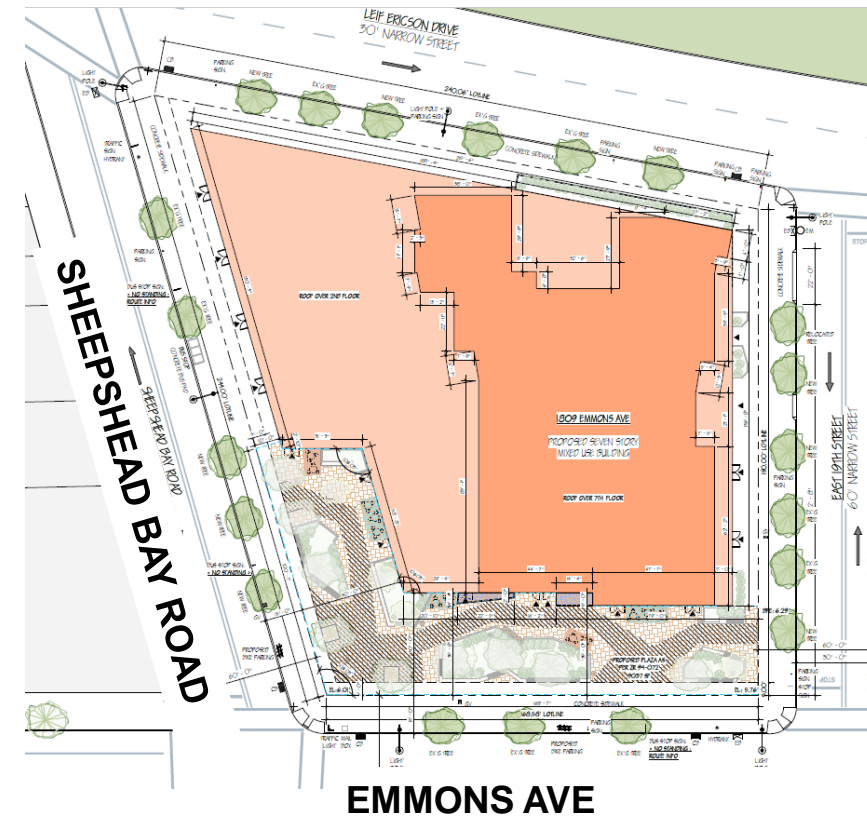
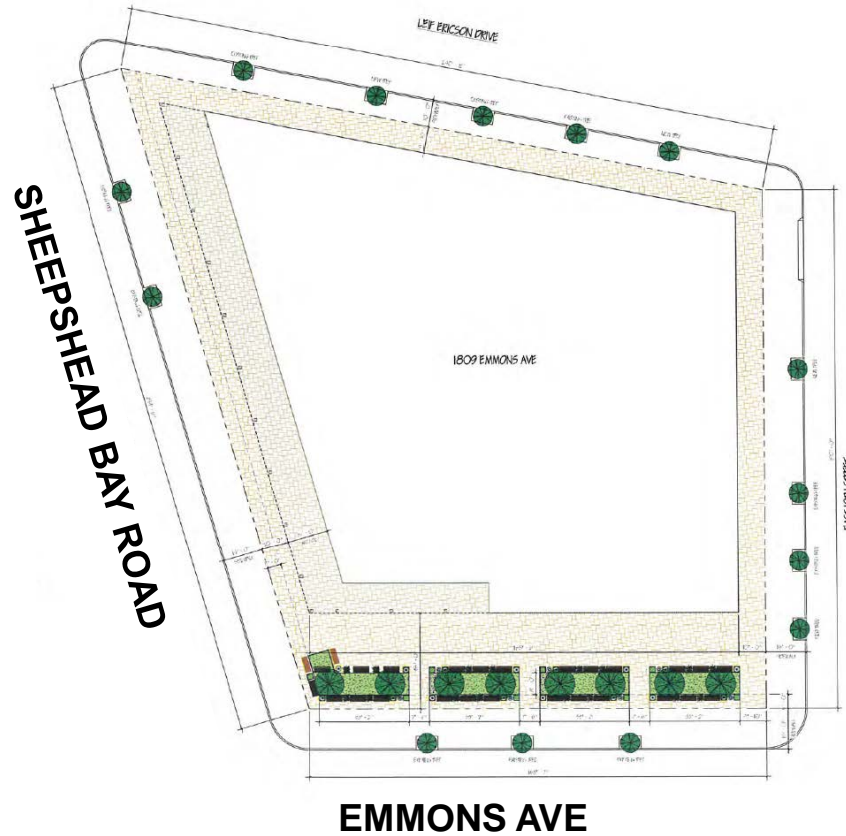
Text updates to SSBD:

- Establish resilient design requirements for Plazas:
 - **Planting and seating types**
 - **Grading** requirements – no ‘sunken’ plazas
 - **Maintenance standards**



Sheepshead Bay Proposed Zoning – Plaza Design

- Update SSBD regulations to encourage flood-resilient and active public realm design



Zoning for Coastal Flood Resilience Update

Project Timeline

* Timeline subject to change

