

EXECUTIVE SUMMARY

The Department of City Planning's *Resilient Retail* study addresses the ongoing challenges that commercial retail corridors continue to face in the aftermath of Hurricane Sandy and within a new regulatory environment. While this study focuses on New York City's floodplain retail corridors, it identifies challenges and opportunities that urban coastlines throughout the region face.

The study is guided by two main goals:

Support the continuing vitality of retail corridors and the neighborhoods they serve by addressing short-term needs and long-term regulatory challenges related to flood risk.

Promote retrofitting and rebuilding strategies that reduce flood risk to individual businesses, while ensuring they remain accessible, viable and able to meet community needs for critical goods and services.

Hurricane Sandy left many small retailers heavily damaged and unable to reopen quickly – or at all. At the same time the gradual reduction of flood insurance subsidies, stringent building requirements for properties in the floodplain, and updated Federal flood maps that will expand the 1% annual chance floodplain to encompass thousands of additional properties in New York City are having profound impacts on coastal businesses and residents. Many businesses that were largely unaffected by Sandy's direct impact still remain at risk from future floods and the associated economic challenges of community recovery and flood mitigation.

Challenges to Supporting Retail Corridors

Urban retail corridors are diverse. Across neighborhoods, a corridor's mix of businesses reflects the communities it supports, while its built form is a product of historical development patterns and zoning regulations.

The *Resilient Retail* study focuses on local retail corridors in New York City, typically comprised of older, attached street wall buildings, and drawing customers primarily from within the surrounding neighborhoods. As customers in many parts of the city usually depend on local providers of goods and services to meet many of their day-to-day needs, these types of retail corridors are particularly critical throughout the floodplain. To a lesser extent this study also considers resiliency challenges faced by newer, more automobile-oriented commercial corridors, where buildings are likelier to be detached and set back from the street and where customers may be more reliant on cars or buses to reach their shopping destination.

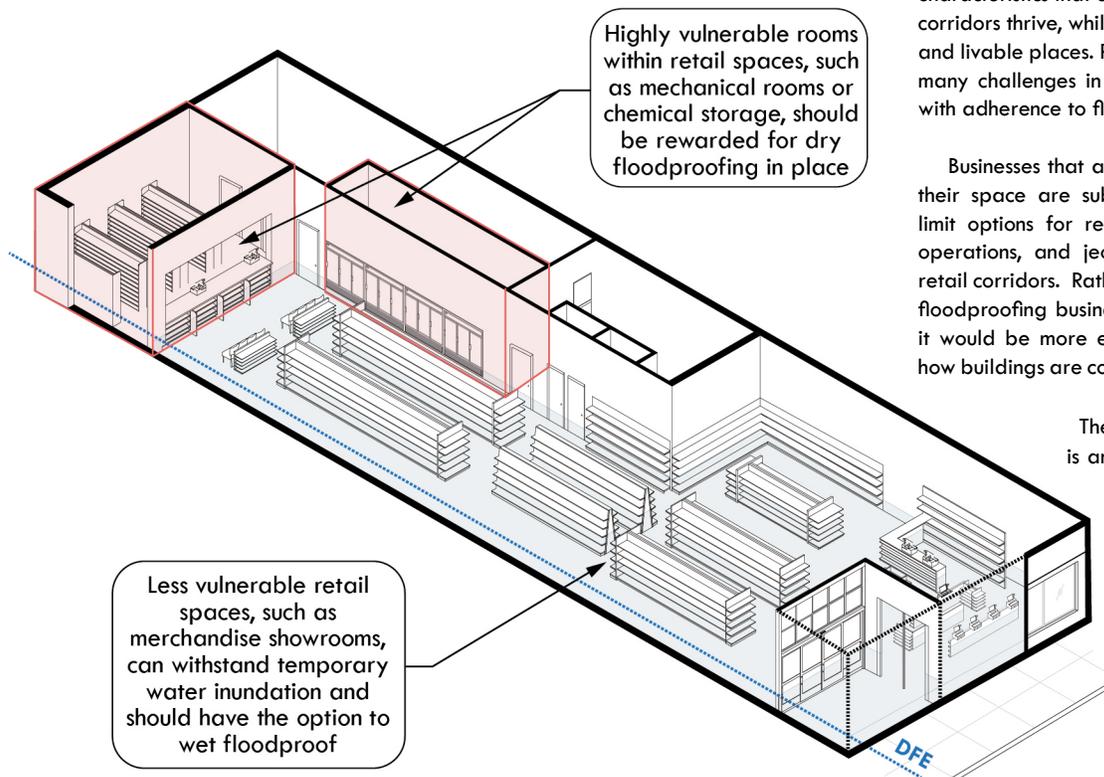
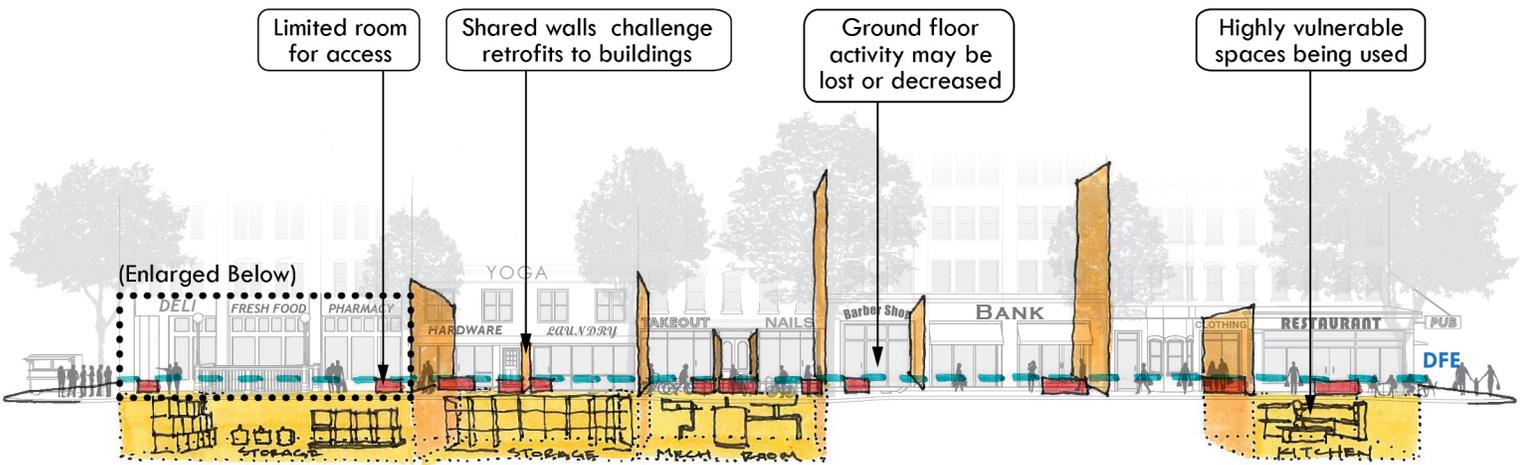
Across New York City's five boroughs, corridors face a range of coastal flood risks. In some areas potential flood waters exceed 10 feet above grade during heavy storms, while other areas may only have to prepare for a foot or two of water during storm events. While the corridors explored in this study all face some variation of storm surge or other coastal flood risk, their potential approaches to resiliency and challenges will vary based on their built typologies, the strength of their business markets, and the magnitude of potential flooding. Nonetheless, the questions confronting New York City's corridors have many commonalities with denser urbanized coastal communities and inland riverine towns and cities throughout the country.

Floodplain regulations for commercial buildings typically require elevating the lowest occupied floor to a level above which base flood waters are expected to rise, or dry floodproofing the entire portion of a structure below the flood elevation if businesses hope to remain at street level. However,

A Healthy Main Street ...



... Can Face Major Challenges To Floodproofing



The urban retail block above illustrates some of the characteristics that ensure businesses remain healthy and retail corridors thrive, while helping keep our neighborhoods vibrant and livable places. Retailers located within the floodplain face many challenges in balancing cost-effective flood mitigation with adherence to floodplain construction regulations.

Businesses that are interested in or required to floodproof their space are subject to stringent requirements that may limit options for retrofit strategies, greatly impact business operations, and jeopardize the vibrancy of neighborhood retail corridors. Rather than prescribing a singular strategy to floodproofing businesses and other non-residential buildings, it would be more effective to develop strategies based on how buildings are constructed and how the businesses operate.

The pharmacy or convenience store to the left is an example of how risk can be distributed differently across components of a retail space. By offering partial credit for partial mitigation, there are more opportunities to protect businesses and keep retail corridors, and the neighborhoods that depend on them, active and resilient.

this prescriptive approach to mitigating flood risk in commercial buildings is often impractical for properties located in dense urban environments.

The physical complexity of most of New York City's buildings, many of which include sub-grade cellars, and the importance of connecting and organizing retail space that sits alongside other uses and is accessible to customers, often means that currently permitted regulatory solutions are structurally infeasible or cost-prohibitive. The physical challenges are compounded by the difficulty of finding affordable flood insurance and the nuanced relationships between businesses and property owners, making the task of ensuring that neighborhood retail corridors remain vibrant and secure even more challenging. This study identifies specific physical and regulatory challenges associated with maintaining healthy and flood-resilient commercial corridors and offers policy and operational strategies to assist businesses in floodplains to become more resilient and meet existing regulatory requirements.

Local Strategies to Support Resilience

Local changes to land use policy, zoning and other actions will seek to help businesses, and the neighborhoods they serve, withstand and recover quickly from future flood events. Strategies will build on the Flood Resilience Zoning Text Amendment, adopted in October 2013 to make it easier for property owners to retrofit existing buildings throughout designated flood zones, and ongoing technical support programs that the City has in place to assist small businesses.

LAND USE STRATEGIES

Review how zoning regulations can support existing and new retail businesses in adapting to federal flood resiliency standards while remaining operational and accessible year-round.

The Flood Resilience Zoning Text Amendment will sunset following adoption of any future flood maps. DCP is continuing to review existing coastal neighborhood conditions to identify which temporary provisions should be made permanent and find other ways that zoning changes can better enable property owners to make building retrofits that mitigate flood risk.

Review opportunities for supporting resiliency of critical retail uses, such as supermarkets, banks, hardware stores, and pharmacies, within the floodplain.

The City will continue to identify ways that local land use strategies may be able to support the construction and operation of buildings that provide critical neighborhoods retail goods and services. Hurricane Sandy demonstrated the importance of access to essential retail goods and services following the disaster when lack of transportation or information and language barriers kept many residents from accessing businesses outside their neighborhoods.

BUSINESS ASSISTANCE STRATEGIES

Provide technical, operational and financial assistance for flood mitigation to property owners.

Ongoing initiatives to provide direct technical and operational expertise, along with added financial resources to support private investments, will be critical to ensuring small businesses and property owners are assisted in making retrofitting decisions.

Improve printed and online resources available to individual property owners to help them make better-informed decisions on flood mitigation.

There has been insufficient guidance published to date offering businesses and non-residential property owners clear information on mitigating flood risk within dense, built-up communities. More material, such as this report, will be required to work in tandem with on-the-ground technical assistance to support businesses in incorporating flood mitigation strategies.

Federal Reforms to Support Resilience

Local strategies alone will likely be insufficient to enable floodplain businesses to rebuild and adapt to future flood risk. Further reforms to federal floodplain requirements will also need to be explored.

PARTIAL MITIGATION STRATEGIES AND NFIP REFORM

Partial mitigation strategies for commercial buildings that provide more options for flood mitigation, while still minimizing losses from flooding, should be recognized.

Current federal regulations guiding floodproofing measures for non-residential buildings in the 1% annual chance floodplain are restrictive, inflexible and imply wholesale redevelopment of existing neighborhood retail streets; a highly disruptive and impractical outcome. Federal regulations do not recognize the full range of lower-cost and less onerous opportunities available to businesses to mitigate flooding such as dry floodproofing mechanicals in place, or wet floodproofing commercial retail space. Despite acknowledging that such alternative mitigation investments may lower flood risk, FEMA neither recognizes the cost savings of many of these strategies nor grants these investments partial credit towards lower NFIP premiums for businesses and property owners.

Increased flexibility should be provided to retail, office and community facility spaces to accommodate safe exit out of the building to households located above ground floors.

Under current federal regulations, buildings must either fit stairways that rise up and over dry floodproofed ground floors with limited floor to ceiling heights, or implement completely separate dry- and wet- floodproofing systems for the separate non-residential areas and residential access points. This creates conflicts that compromise the ability to implement effective floodproofing strategies for mixed-use buildings. Federal mitigation guidance should address the unique challenges to retrofitting such buildings, particularly on narrow lots where residential entryways with stairwells leading upstairs are adjacent to businesses.

Insurance rates and design standards should also consider the inherent durability of the masonry and steel frame construction techniques that characterize much of the building stock in New York and other cities.

Sandy only minimally affected the structure of masonry and steel frame-constructed buildings. Most of the damage was to electrical, mechanical, and other accessory support systems located in cellars, basements, and elsewhere below the Base Flood Elevation (BFE), as well as to building contents. Few commercial or mixed use buildings were deemed Substantially Damaged and required to rebuild anew, as compared to the many light-frame homes that were destroyed by the storm.

Moving Towards Resilient Retail

Long-term resilience will require mitigating flood risk to existing buildings and incorporating new floodproofed construction in a way that preserves access to goods and services while upholding neighborhood character and diversity. This process requires long-term coordination between individual businesses, merchant groups, public agencies, and community-based organization to ensure that New York City and other flood-prone cities are prepared to manage future flood risks and other challenges.

DCP will continue to work together with partner agencies and community stakeholders to review local zoning and other land use policies that ensure communities are supported in mitigating flood risk. In order to secure the long-term access to essential goods and services coastal communities will continue to require, the City will also continue to advocate for revisions in Federal floodplain regulations to allow greater flexibility for businesses and commercial property owners to reduce flood risk.