Mill River District

Planning Study
New Haven, Connecticut

June 2013

Prepared by Utile, Inc.
and Ninigret Partners for
Mayor John DeStefano, Jr.

EDC New Haven
Economic Development Corporation of New Haven

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Nelson\Nygaard Consulting Associates
Stoss Landscape Urbanism

Additional acknowledgements:

Special thanks to; Matt Goldstein, project manager for the EDC; Carlos Eyzaguirre of the EDC; Mike Piscitelli, Jim Travers, Tony Bialecki, and Helen Rosenberg of the City of New Haven; and Dr. Karen Dubois-Walton, Jimmy Miller, and Patricia Perugini of Housing Authority of New Haven; Anne Haynes, former CEO of the EDC; and Corey Zehngebot, former project manager for Utile

Also special acknowledgements to the residents, businesses, and property owners that contributed their time and advice: John and Pedro Soto of Space-Craft Manufacturing; Charles Negaro, Sr. and Charles Negaro, Jr. of Chabaso Bakery; David Bender and James Narduzzo of Bender Plumbing; Rob Bolduc of Boldwood Interiors; Rob Goldenthal of New England Seating; Patrick Palmieri of Palmieri Foods; Joe and Joanne Montesano of Something Sweet; Giuliana Maravalle of Gelato Giuliana; Robert Fecke of Reclamation Lumber, Casper “Cappy” Amodio of Erector Square LLC and the Powerhouse Building; Steven and Julie Bernblum of 26 Mill St, Bill Neale of Radiall, Ray Pagliaro of Grand Paint, Ian Alderman of Alderman-Dow, the residents of Farnam Courts, and the Grand Avenue Special Services District.

We also extend our thanks to the elected officials that supported the planning initiative and offered feedback along the way: Honorable Alderman Michael Smart, Honorable Alderwoman Migdalia Castro, Honorable Alderman Ernie Santiago, Honorable Alderman Jorge Perez, President of the New Haven Board of Alderman, State Senator Martin Looney, State Senator Toni Harp, State Representatives Juan Candelaria and Roland Lemar.

Contents

Executive Summary 4

Introduction 6

Existing Conditions 8

Planning Framework 10
Overview 12
Planning Framework 14
- Transportation 14
- Waterfront Planning 15
- Land Use and Zoning 15
- Strategic Interventions 16
- Redevelopment Challenges 18

Three Economic Strategies 20
- New Haven Industrial Village 22
- New Haven Home Improvement Marketplace 24
- New Haven Mercantile Food Hub 26

Streetscapes, Parking, and Transportation 28
Overview 30
Circulation & Access 31
- Service Road: Segregating Truck Traffic 32
- Truck Access 33

Surface Parking and Parking Management 34
- Potential Locations for New Parking 35
- Street Parking 36
- Angle Parking 37

Prioritized Streetscape Improvements 39
- Streetscape Improvements for Key Streets 40

Waterfront Planning 44
City-wide Flood Planning 46
Existing Conditions 48
Scenarios 50
- Natural Attenuation 50
- Paired Capacity Investment 52
- Intensive Infrastructure Investment 54

Zoning and Land Use 58
Overview 60
New Approaches for Mill River District 62
- Industrial Preservation District 63
- Transition Districts 64

PDD and MDP 66

Building Type Matrix 68
Overview 70
Industrial/Commercial/Retail Hybrid 71
Multistory/Multipurpose Light Manufacturing Loft Building 72
Mercantile Food Hub 73
Industrial Condo 74
Urban Agriculture / Greenhouses 75
Live/Work Loft Building 76
Ground Floor Uses 77

Temporary Use Strategies 78
Overview 80
Preempting Undesirable Temporary Uses 81
Temporary Uses 82
Interim Uses 85
Categories of Future Temporary Uses 88

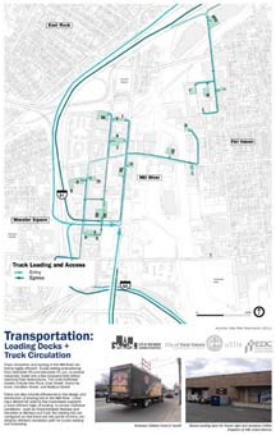
Test Fits 90
Overview 92
The Aggregation of Development Test-Fits 93
Bender Plumbing / Grand Light 94
Bender Plumbing / Long Wharf 95
Space Craft 96
Clock Tower 97
Chabaso 98
Farnam Courts 100

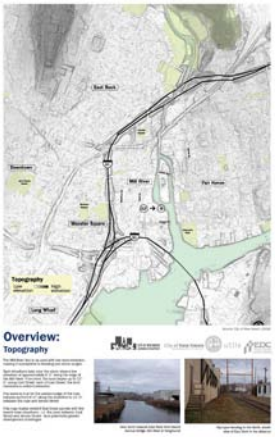
Moving Forward 104
Mill River District– How Does It Happen? 107
- I. City as facilitator 107
- II. City as an active development partner 108

Making Capital Investments 110
Prioritizing Next Steps 111

Executive Summary

New Haven's economy is witnessing a revival of its industrial base and will need state-of-the-art infrastructure and economic catalysts to properly encourage this growth. For the city to increase its competitiveness in the 21st century, it will also need to direct growth to shovel-ready districts that are well-suited for manufacturing and distribution businesses. The Mill River District is one target area, given the District's history as an economic center and its adjacency to Downtown and regional transportation infrastructure. Importantly, the District is also a key source of employment for nearby residents and already an urban environment where residents walk, bike, and take mass transit. Finally, it represents one of the last remaining places in the city with large parcels of underdeveloped land and buildings able to capture the commercial and industrial economic growth in the region. What follows are three themes for the future of the District, a comprehensive urban framework, a catalogue of smaller scale "test fits" based on a suite of building prototypes developed for the Mill River District, a set of long-range strategies for the Mill River's waterfront, and a clearly-defined set of mechanisms for implementation.





Above are a selection of maps developed during Phase I of the Mill River District Study. Nearly 50 maps were created by the consultant team in an effort to represent a complete and accurate picture of the District. While the Mill River District is widely recognized as a thriving industrial base, understanding the range of present conditions was a useful exercise for the consultant team, the City of New Haven Office of Economic Development, and stakeholders before embarking on any planning recommendations or redevelopment strategies. Informed by this comprehensive data collection, mapping, community meetings, and interviews, Phase II - whose work is encompassed in this report - worked to create a robust urban framework that will continue to support the vitality already in place.

Introduction

The City of New Haven's Office of the Economic Development Administration (EDA) and the Economic Development Corporation (EDC) of New Haven have partnered in the Mill River District planning study as part of Mayor John DeStefano's policy to promote a diverse economy with jobs at all skill levels. The multi-phase study aims to expand the City's commercial and industrial base and better connect adjacent neighborhoods to the Mill River District, creating a viable planning framework tailored for growth in the light industrial sector. The plan aims to outline a set of nimble planning interventions that encompass site recommendations, new regulatory tools, and infrastructure improvements.

The first phase of the study consisted of primary market research from Ninigret Partners and a mapping exercise by Utile (see page 5) to document and analyze existing conditions in the District and how the district fits within the local and regional economy. Phase I also sought to understand what works and what does not for existing businesses in the District. The key findings of this phase are encapsulated in a Phase I planning report. The second phase builds on the knowledge derived from Phase 1, and focus on planning strategies for the Mill River District. It asks, what industries and sectors are best fit for the District? What businesses are growing and could be nurtured? And what tools, physical and regulatory, can we use to facilitate this growth? This phase also began to develop a specific policy and regulatory framework for implementation.

The following pages represent a comprehensive synthesis of planning recommendations developed in Phase II. After a brief review of existing conditions from Phase I, the report will articulate the planning framework, which enables three development concepts for the Mill River District, each of which present a different strategy and character for the district. The report will then develop in greater detail strategies that compose this planning framework: transportation, zoning and land use, development test fits, new building types, and temporary use strategies. Finally, the report puts forth a specific implementation framework for realizing these recommendations.


EXPRESS
aundry &
y Cleaners
FREE DRYING
SECADA GRATI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Rafe's Car Audio
Luis Auto Sales
Benjamin Moore
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Existing Conditions

Historically an important center of industry, the Mill River District today retains a diverse industrial base.

Straddling the Mill River at its southern terminus in New Haven, the Mill River District is bounded by I-91 to the north and west, by I-95 to the south, and St. James Street in Fair Haven to the east.

Many of its businesses are housed in physical plants dating from the postwar period forward, situated within a regular, relatively fine-grained, often tree-lined street grid unfamiliar to today's mega-industrial parks. A few older buildings, such as the Clock Tower and the English Station, serve as reminders of an older industrial heritage.

Many of the Mill River District's characteristics, products of its development history as a primarily post-war, waterfront industrial area in the center of a post-industrial northeastern city, bring with them both advantages for, and challenges to, future development. This planning exercise begins by assessing those opportunities and challenges inherent in the Mill River District's existing conditions.

Access

Located at the junction of I-91 and I-95, and a short distance away from freight rail and the Port of New Haven, the Mill River District has excellent access, particularly for industrial uses. Preserving this easy industrial access is an important priority in any future development of the District.

The close proximity of the Mill River District to nearby residential neighborhoods of Wooster Square, East Rock, and Fair Haven also makes it a potentially accessible destination on foot, by bike, and by transit. Hemmed in as it is by interstate highways, its regular, legible, and fine-grained street grid is an excellent basis for a walkable district, and is conceivably an asset to future development.

At the same time, Grand Avenue and Chapel Street, two of New Haven's main east-west thoroughfares that bisect the Mill River District, remain under-used assets. Although they serve as active, mixed-use retail corridors for much of their length through the city, the sections of these two streets within the District are visually and functionally discontinuous from the rest, detracting from their full potential as an urban amenity for the District.

Land Use

By the estimate of Phase I of this study, 28% of the land area in the Mill River District is vacant or underutilized. This land exists in the form of parcels of up to several acres in size, opportunities rarely found in the city. Given their history as former heavy industrial facilities, however, many of these parcels may require significant remediation in advance of any development. Some of the vestigial prewar industrial buildings such as the Clock Tower, while architecturally compelling, may also need potentially significant renovation to be habitable.

Additional significant uses also exist within the District, including public housing at Farnam Courts and a large salt pile storage bounded by East Street, Chapel Street, and the Mill River. These land uses' future fate will have a great impact on the District's development trajectory.

Environment

As previously discussed, many of the large development parcels in the Mill River District are contaminated as a result of their history as heavy industrial sites. The type and severity of contamination have been comprehensively analyzed and documented in Phase I of the study.

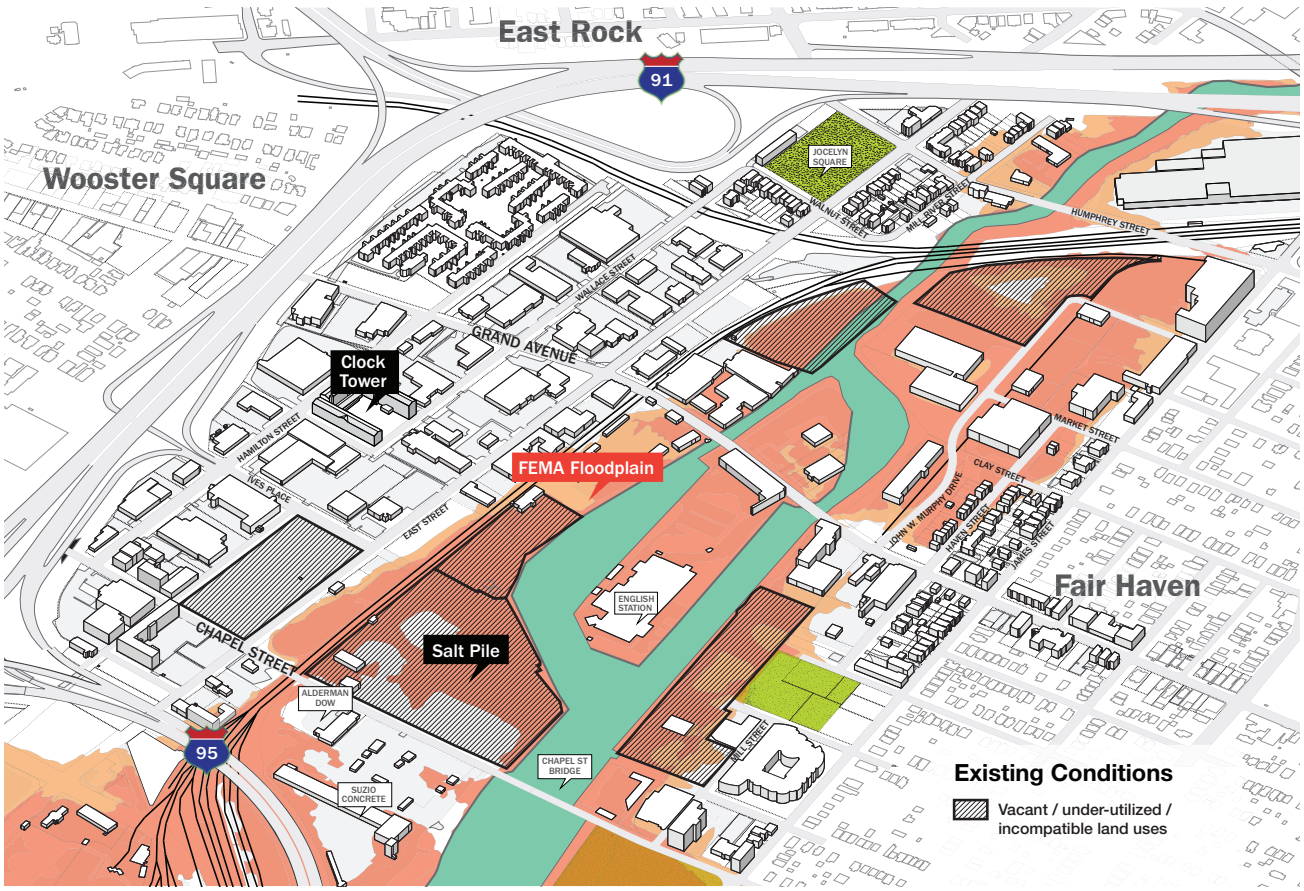
The Mill River District's waterfront location adds to the environmental complexities of future development. Much of the District's land along the water's edge is in the FEMA 1% Annual Flood Risk floodplain; an even larger inland swath is subject to storm surge risks. Both factors represent potentially significant impediments to development because of added regulatory and building design complexities and increased insurance premiums.

Long-range planning must also wrestle with the effect of climate change on the District. Both passive interventions—accommodative land use, site and building design—and proactive infrastructural investment will be needed to meet the new reality of more frequent and destructive flooding.

Existing Businesses

The Mill River District is home to successful businesses in food processing and distribution, precision manufacturing, design and construction support, specialty building supplies fabrication, and other diverse commercial enterprises, which collectively represent a critical part of New Haven's industrial and employment base. Of the 3,000 people employed by these businesses, many commute from nearby.

The District's health as an industrial area depends on the continued viability of these businesses. Any investment in the area must take full account of their need for growth, visibility, accessibility, and critical infrastructural support. Future industrial and commercial development in the District should also complement and contribute to the existing business activities.



Planning Framework

Rather than promoting a single master plan for the Mill River District, a robust planning framework that can support many possible futures, while complementing the active and successful businesses already present in the District, is the primary objective.

Overview

A planning framework is an important tool to influence the character, place-making potential, and programmatic synergies of physical development.

The future of this historically industrial district is predicated on a balanced mix of uses that preserves easy transportation access for the District's diverse industrial and commercial businesses and also promotes walkability to create a more vibrant urban area for workers and future development. An improved pedestrian and physical environment makes the District more attractive to both industrial and retail businesses and their customers.

In addition to large floorplate industrial and distribution buildings constructed during the urban renewal era, there are a small number of late 19th/early 20th century buildings in the Mill River and River Street area. These buildings are typically masonry and multistory, and are thereby attractive to smaller "knowledge economy" companies looking for "cool" space. Furthermore, the river frontage offers a unique opportunity for innovative open space, thus creating an additional amenity for these businesses and neighboring residential communities. For Mill River to retain and attract a wide range of businesses, an integrated network of neighborhood amenities and thoughtfully planned streets and open spaces will need to be created.

The planning framework for the Mill River District comprises several key economic development objectives:

- ***Protect and maximize the job and tax generation potential for the District*** through land use planning, protective zoning, and design covenants to protect existing business activity and spur additional investment.

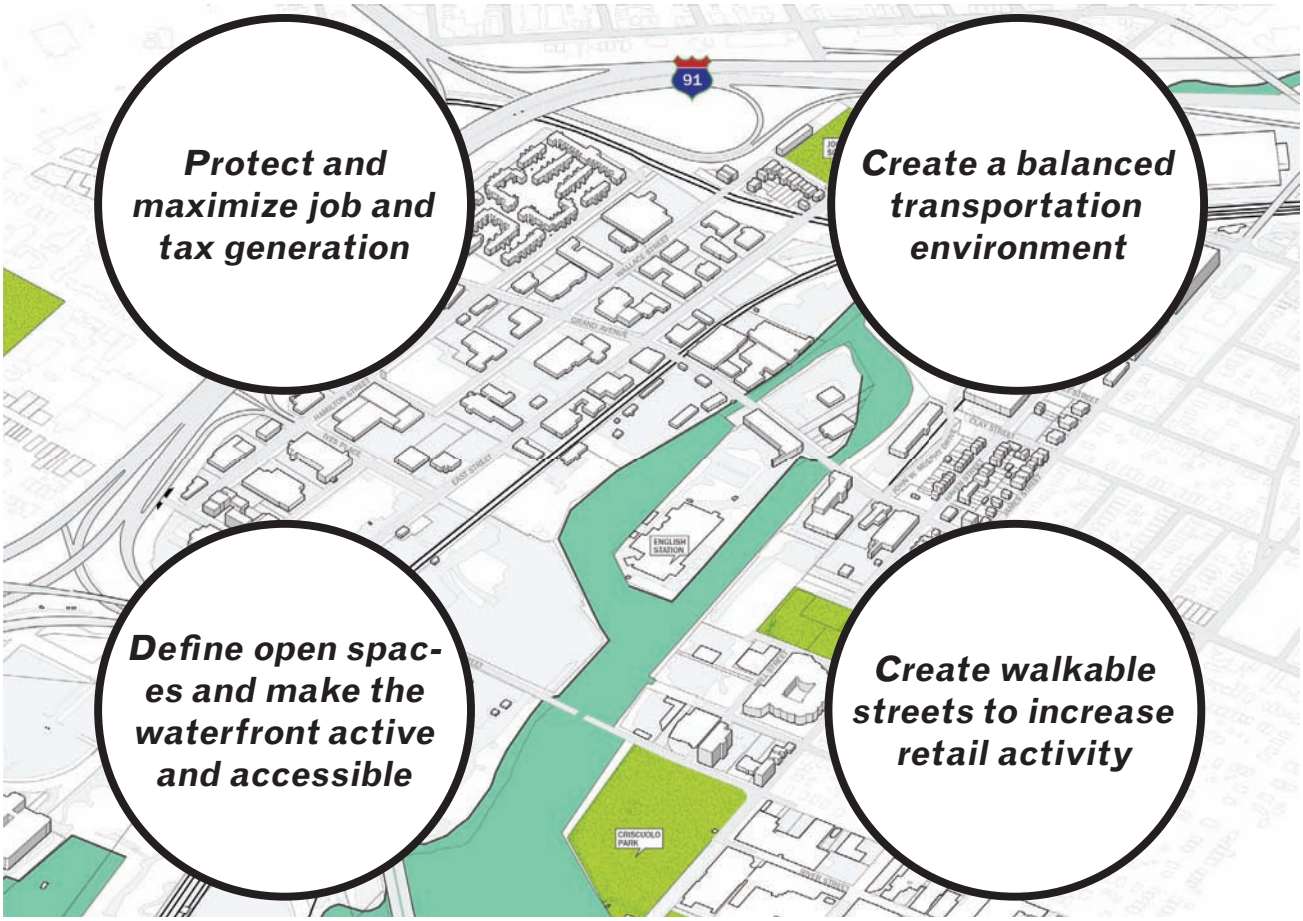
- ***Create a balanced transportation environment*** that reflects the need for viable east-west connections, well-functioning truck access to service local businesses, and an improved pedestrian environment to encourage walkability. This is accomplished by creating a hierarchy of streets that better distribute vehicle movement and parking and include traffic calming strategies and shared parking approaches.

- ***Define open spaces and make the waterfront active and accessible*** by creating green walkable streets, an accessible waterfront, and phytoremediation strategies for dirty and/or land-banked parcels that create the appearance of open space. Coordinating open space locations with remediation or flood control strategies will create performative landscapes to serve recreational purposes and mitigate environmental threats to the Mill River District.

- ***Improve the walkability and retail potential.*** It is important to strengthen connections to well-established residential neighborhoods of Fair Haven, Wooster Square, and East Rock. This can be accomplished by encouraging ground-level retail along east-west corridors, establishing design guidelines for new development, and coordinating streetscape improvements with transit and bicycle networks. Temporary uses, such as food trucks or outdoor markets in the public realm, can create a buzz and draw additional retail activity.

These objectives can find themselves woven within four overarching elements that structure the planning framework for Mill River. They are ***Transportation, Waterfront Planning, Land Use and Zoning, and Strategic Interventions***

Objectives for Mill River Redevelopment



Planning Framework

The following four elements provide the structure for the Mill River District Plan

Transportation

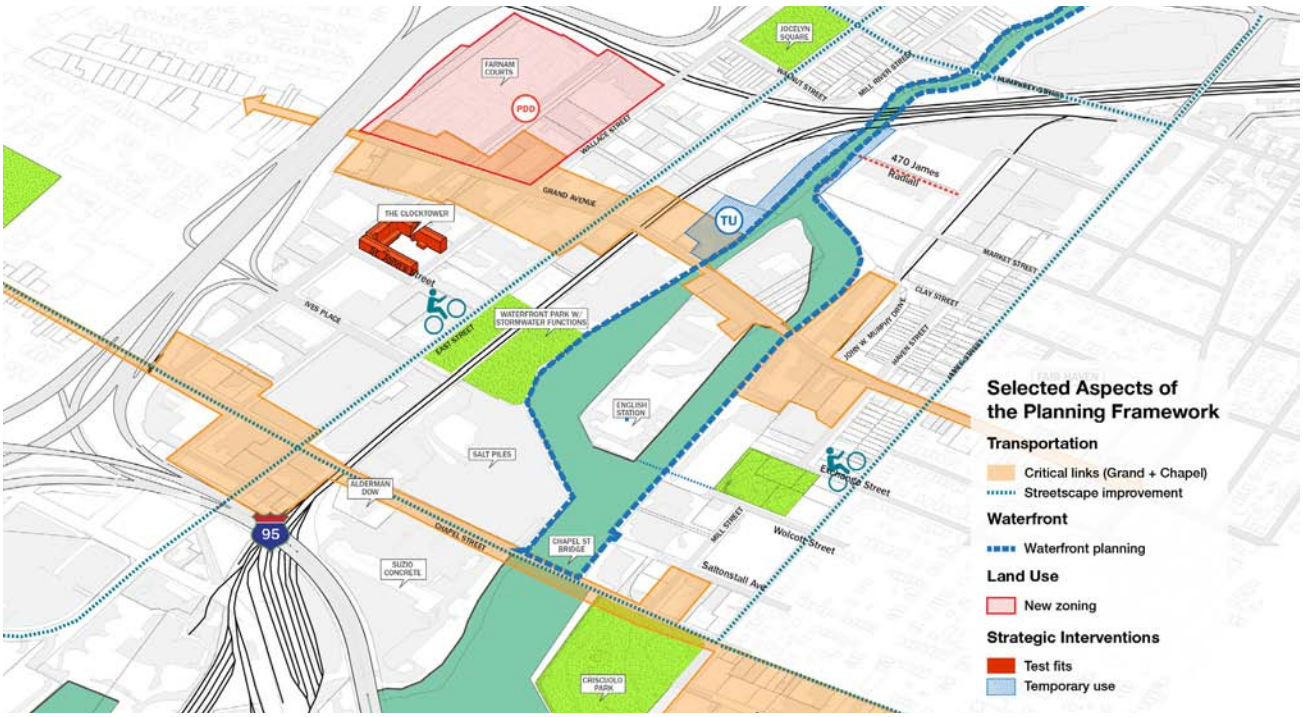
Transportation networks are a primary part of the planning framework and determine the physical structure of the plan. They improve circulation in the district and focus attention on key streets. Some of these are streets are prioritized as "complete streets" and others focus on service and access for trucks. In essence, creating a definitive catalogue of streets that address ease of movement and appeal of the public realm is one of the first key steps.

The District is an important "crossroads" for the City of New Haven. Its economic vitality is contingent on continued easy access to the interstate highway system, and thus a well-balanced transportation plan, accommodating all modes of transportation, is necessary.

Circulation networks in the District should address the larger concerns of highway access from I-95 and I-91 for both truck and vehicular access. Inside the study area, the circulation network becomes "fine grained", with the need to consider pedestrian traffic, service drives and access. Primary north-south and east-west streets and main commercial streets, where appropriate, should facilitate movement across the district and create a destination.

Given the goal to weave improved pedestrian accommodation, specific streetscape improvements are recommended that allow trucks to move products in and out of the District and also attract customers to the various retail showrooms in the area. Recommended approaches include

- the clarification and enhancement of the existing shared service drives and loading areas,
- the addition of on-street angled parking to promote retail businesses, and
- the creation of a hierarchy of streets to improve wayfinding, segregate truck traffic to specific streets, and allow for the introduction of appropriately located traffic calming devices.



Considering the regional customer base the District is hoping to draw from, the transportation plan uses an improved pedestrian network to complement a shared parking approach, thus encouraging customers and workers to "park once and then walk" to the businesses and amenities that are both existing and anticipated to grow in the District.

Waterfront Planning

The signature feature of the Mill River District that both divides the two sides and simultaneously acts as a unifying device is the river itself. Currently, the river splits the District in half with English Station as an island between the two sides. However, future plans for its waterfront could be a unifying feature for the District, either through open space opportunities or as interventions for storm surge and flood control.

The waterfront along the Mill River is in transition. Its future as usable maritime infrastructure is questionable and many of the industries that fall within the District are being threatened by increased flooding by stormwater and hurricane surges.

In addition, the requirement of putting in place a district plan must include a response to the question of maintaining the marine infrastructure and/or creating accessible open space along the riverfront as outlined by the Costal Zone Management guidelines. The team has explored three scenarios that address these issues in various ways related to up front investments and long term payoffs, they are: natural attenuation, paired capacity investment, and intensive infrastructural investment. These approaches will be explored further in the Waterfront Planning chapter.

Land Use and Zoning

Land use and zoning will be a critical component to protect the Mill River District's industrial base and its viability as a future employment center. The Mill River District's building stock, waterside location, and large and relatively easy to assemble parcels create substantial pressure for development that may compromise the future of the District by increasing property taxes, such as residential development. Creating discrete locations for residential development, while maintaining the area's industrial focus will be a factor in determining the land use and zoning for the Mill River District.

Existing bulkhead along the Mill River

Changes in manufacturing practices and building design challenge the basis for Euclidean-based zoning approaches that define the District. Performance-based standards for residential and industrial, rather than the classic zoning model, is the recommended regulatory framework.

A model zoning approach will allow the integration of industrial, commercial, and residential that have been otherwise segregated on the basis of use rather than compatibility. A new standard that defines zones based around issues such as noise, noxious uses, and environmental contaminants will structure where these zones occur. In this sense, uses such as advanced manufacturing and commercial spaces may be placed together or adjacent to one another allowing production and commercial activity to occur in tandem.

This land use approach will also help structure the type of streets in the Mill River District, promoting some streets as commercial oriented, while others maintain a heavier industrial presence. This coordination of transportation and land use will together help to form the planning framework.

Strategic Interventions

The planning framework is established by both the long-term strategies and larger scale physical alterations, but it is also affected and given subtle definition by exercising short-term interventions to satisfy more immediate development scenarios. These shorter term strategic interventions are defined by

- Establishing temporary uses,
- Creating building prototypes to be used for development scenarios and
- Test-fitting sites for "real time" planning to satisfy development interest.
- Identifying buildings in the Mill River District that present opportunities for retrofitting for multi-tenant spaces.

Temporary Use

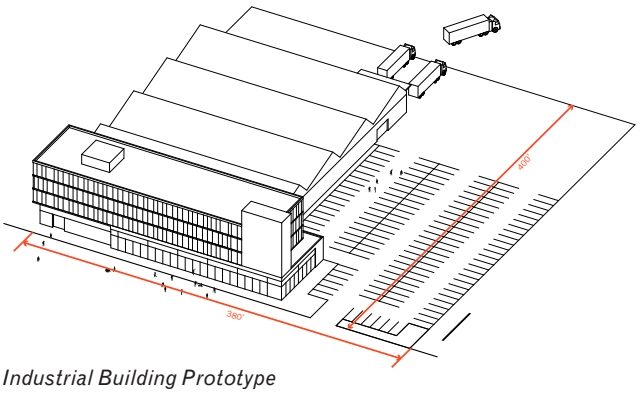
Well-conceived temporary and interim uses—strategically located throughout the Mill River District and coordinated by time of the day and season—can attract a new and diverse population to the District. Locating interim uses on parcels where there are short-term impediments to development can complement the development of other parcels (e.g., parcels that do not have flood hazards or contamination). Moreover, the buzz generated by creative programming can help market the District for more permanent development.

Flower trucks can act as a seasonal temporary use

Building Prototypes

Given the unique mix of uses proposed for the Mill River District—from light industrial and precision manufacturing businesses to small-scale creative economy companies and live-work lofts—prototypical buildings were created to "plug into" the planning framework. Multiple prototypes were generated, as building requirements to support industrial and commercial activity vary significantly based on their functional needs, economics, and logistics accessibility. Embedded in these prototypes are metrics for the required footprints, bay heights, and loading facilities, as well as other functional considerations. The prototypes promote test-fitting of a range of development scenarios on specific parcels.

These building types can be used on a "real-time" basis to do test fits on certain properties, which allow planners and developers to understand the development potential of target sites.



Industrial Building Prototype

Test Fits

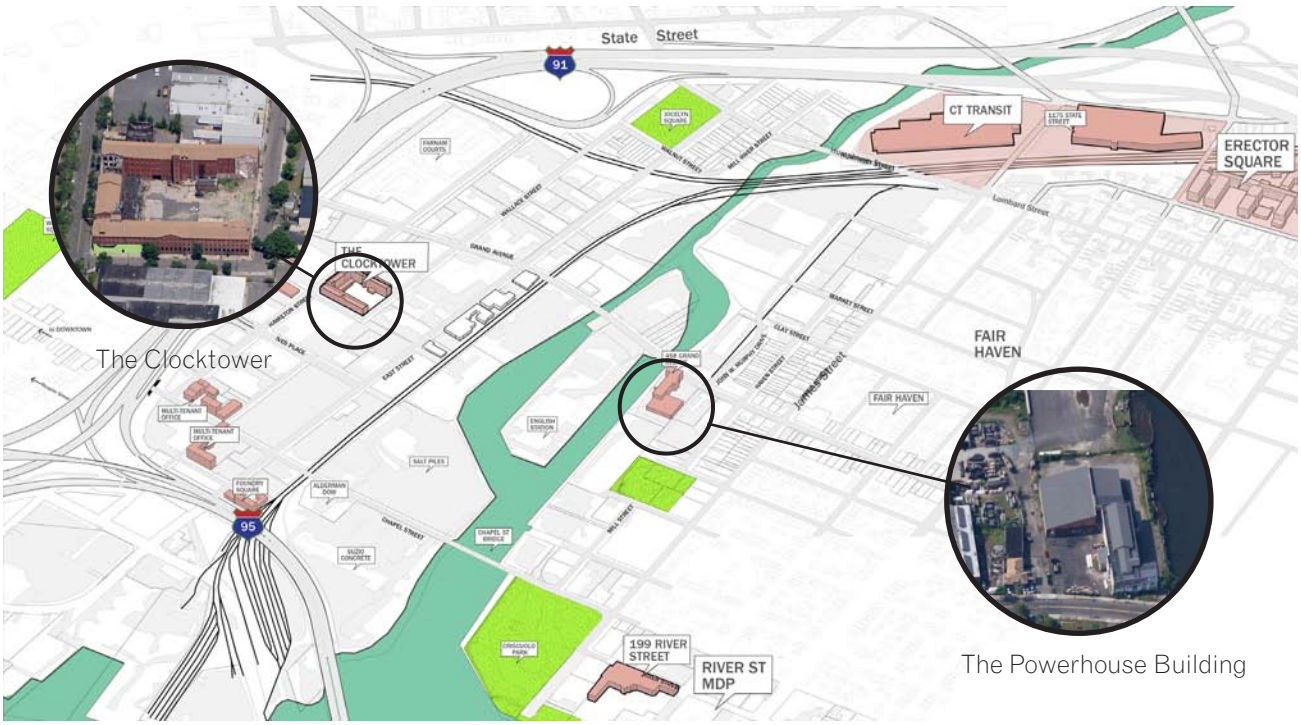
Sites can be analyzed both physically and financially, to understand the potential barriers to redevelopment. Creating alternatives will allow the team to examine key issues such as footprints, development economics, and transportation dynamics. As a result of the test fits, it became clear that many of the sites require careful site planning and design to accommodate the logistics of the businesses. Key insights gained by looking at the test-fit scenarios in aggregate include both a better understanding of the emerging overall vision for the Mill River District and the need to change zoning to incentivize the preferred alternatives.

The establishment of an overarching guiding framework along with such opportunistic interventions will define the future character of Mill River, as it evolves making sure the short-term interventions align with the intent of the longer-term planning.

Multi-tenant Uses

A number of the buildings in the Mill River District that stand vacant or underutilized offer opportunities for retrofitting to accommodate multiple tenants. This can provide cheaper space for potential tenants, in particular start-ups, and provide a synergy for industries that can benefit from such adjacencies. There are selected properties that have been identified as having potential for such an arrangement.

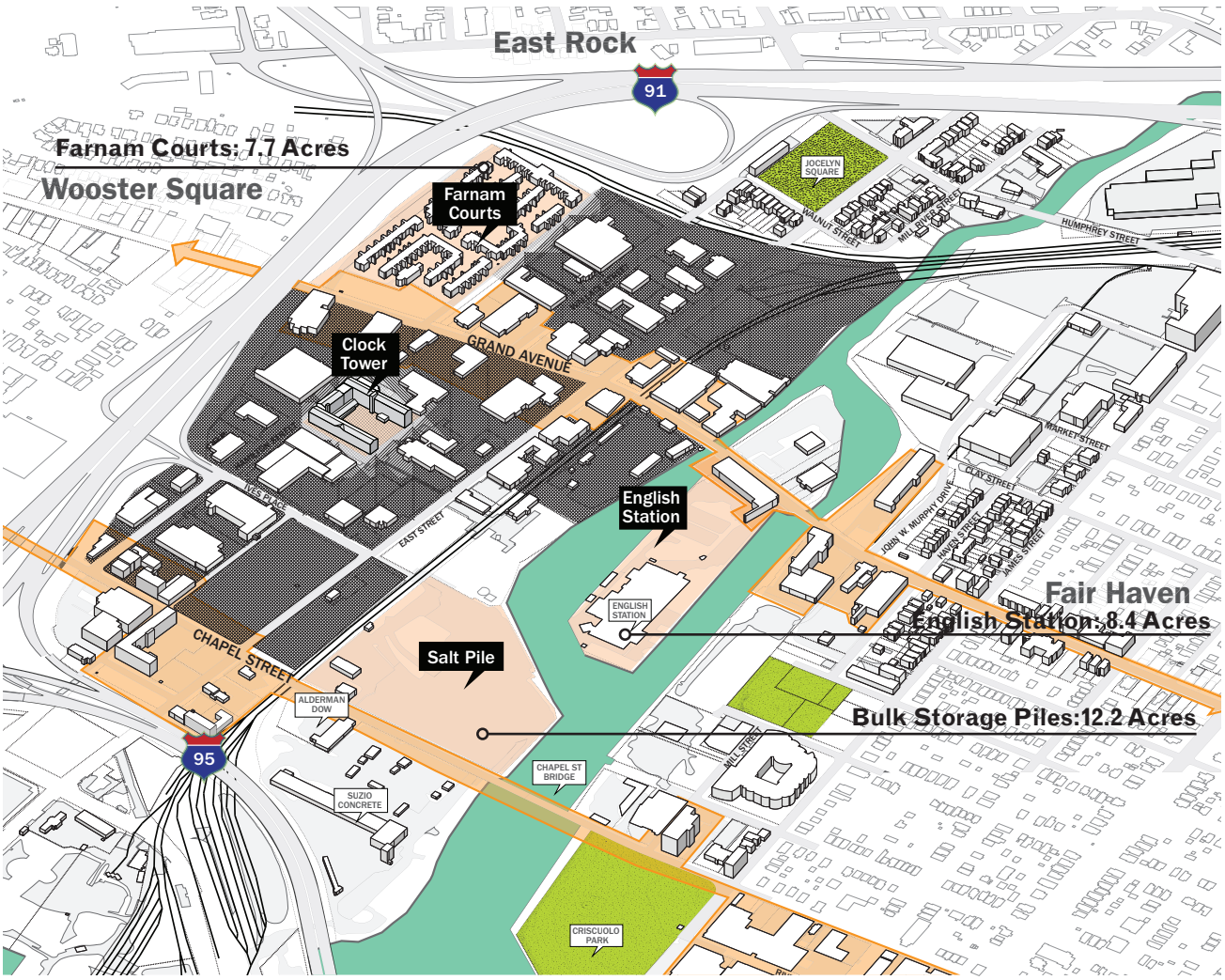
- Currently, the one major cluster of multi-tenant uses in the Mill River District is located on the Fair Haven side and consists of Erector Square and 1575 State Street.
- There is a smaller enclave of multi-tenant spaces south of Chapel Street in multistory buildings that are typically of an older vintage than the other buildings in the District. These are likely to remain, and more commercial and possibly residential uses could be explored in the buildings on the north side of Chapel Street.
- There is potential to develop the former state-owned CT Transit parcel, which is currently vacant, into a multi-tenant space. This study recommends that undesirable uses, such as a tow lot, not be permitted.
- The Powerhouse Building, developed by the same developer (Cappy Amodio) as Erector Square, has recently been rehabilitated and is currently being leased to tenants. This is a key "gateway" property into the District from Fair Haven, and essential to developing the vitality of Grand Avenue.
- The other catalytic project is the Clock Tower, whose future use is harder to predict. As part of this study, converting the property into a vibrant live-work space was explored, but the immediate challenge to moving this project forward lies in its multi-generational family ownership and the high costs of rehabilitating an older property.



Potential Multi-tenant Sites

Redevelopment Challenges

A major challenge to implementing a vision for the Mill River District is the lack of ownership by public entities. Most of the properties are privately owned businesses. The framework for the District will continue to support the business activity that presently exists, while acknowledging that there are limitations to the change that the City can affect on parcels that they do not control. It is important to note that the uncertain future of four large parcels, in particular, may have a great impact on the District: Farnam Courts, English Station, the Clock Tower and the salt pile storage area. Together the sites equal 30 acres).



A thoughtful relationship should be negotiated between future development areas and existing challenges to development.

Farnam Courts: 7.7 Acres
Farnam Courts is poised for redevelopment by the Housing Authority of the City of New Haven. Good planning is required to make the residential community better connected with the larger urban fabric while protecting the units and open spaces from incompatible industrial uses. A transition zone between pockets of residential use and industrial areas should be considered as part of any recommended zoning changes.

English Station: 8.4 Acres
Difficult to access due to its island location, the decommissioned power plant is situated completely within the flood zone and has been identified as a major brownfields site. Until environmental issues are resolved, the future of the site and building remain uncertain.

Bulk Storage (Salt Pile): 12.2 Acres
The large salt pile storage is a necessary, but unsightly use to overcome. Until land values increase in the District, the salt piles are likely to remain. Since there are no other logical locations for the salt storage, creative solutions might be deployed to ameliorate the effects of unsightly storage.

Clock Tower:1.92 Acres
The Clock Tower, a series of linked and partially abandoned early 20th century brick manufacturing buildings, represents an opportunity for live-work loft conversion space in the Mill River District. However, the poor condition of the buildings means that public and foundation resources will be necessary to redevelop the building.

Three Economic Strategies

A number of industrial economic opportunities have emerged in one of the city's primary industrial zones, the Mill River District. These economic opportunities require specialized building space and land to meet the unique needs of those business operations.

The Mill River District's waterfront location and industrial land use history present challenges that must be managed against desired growth. These include flood plain and storm surge concerns, as well as environmental remediation on recently vacated former manufacturing sites.

Despite these very real environmental challenges, the Mill River District already operates as a vital economic center for the city and is one of the last remaining places with large parcels of underutilized land available to attract the commercial and industrial economic opportunities emerging in the region. Finding balance between the District's physical constraints and existing assets will be the key driver for future development.

Existing advantages and disadvantages of the district include the following:

Advantages:

- The Mill River District already has vibrant existing retail and wholesale presence in the home improvement/hardware merchandise categories.
- The District's location is excellent for cottage/custom manufacturing businesses that are growing in Connecticut. Easy highway access to I-95 and I-91 supports logistics and market access, relatively low-cost buildings, and access to available labor.

Disadvantages:

- Tier 2 and 3 suppliers to major supply chains—other than those that already exist—probably do not make sense. There is already a glut of existing available industrial inventory in the immediate vicinity of New Haven, although the trade zone could be helpful for government contractors.
- With few exceptions, most of the Mill River District does not make sense for later stage life science companies due to the coastal risk factors such as flooding and hurricane storm surge.

In addition, New Haven has emerged as the creative capital of Connecticut, but needs a catalyst to improve its position within the larger regional creative economy. The Mill River District already possesses some attributes that make it suitable for creative development:

- Industrial arts and food manufacturing are creatively driven manufacturing businesses that typically start small and gain size as the customer base builds.
- Linking the creative capital positioning with a strategy to build the cottage/custom manufacturing could be a thrust that is mutually reinforcing.

Given the market factors and land constraints in New Haven, a new vision of an adaptive mixed-use district has emerged. This vision should build on existing activities in the District and use them to propel related economic development opportunities.

An emerging vision for the Mill River District to be a unique generative economic force in the city is organized around three distinct strategies, each of which builds on existing assets and the latent potential inherent in the Mill River District :

❶ Mill River Industrial Village

❷ New Haven Home Improvement Marketplace

❸ New Haven Mercantile Food Market

Map of existing businesses in the Mill River District.


East Rock
Fair Haven
Mill River
Wooster Square
State St
Humphrey St
Lombard St
Mill River St
Jocelyn Square
Walnut St
Wallace St
East St
James St
Grand Ave
Chapel Street
Ives Pl
Hamilton St
East Street
Water St
Sperry Automative
Teamster Union
Farnam Courts (HANH)
Fastenal
Wesco Distribution
Baptist Shelter Social Services
Edsan Chemical (vacant)
ABACON
Medical Office
Colonial Restaurant Supply
Lindley Foods
Grand Plaza (multi-tenant)
BDI
HANH (vacant)
Grand Lighting
Jamaican Gourmet Coffee Roasters
Bender's Plumbing
United Illuminating
Bender's Showroom
Earthwise Analytical Lab
Spacecraft Technologies
Former Clock Factor (multi-tenant)
Palmieri Foods
Rexel
Something Sweet
Ferraro's Market
La Michoacana Taqueria
Urbane Builders
Goodcopy Printing & Digital Graphics
Tile America
Vari Dome
GNHWPCA
Former Saint Gobain (vacant)
Former Simkins (vacant)
English Station
McVac Ecotab
Radiall
Grand Paint
Powerhouse Building
Reclamation Lumber
auto shop
New England Seating
Boldwood Interiors
Acorn Management Group
Achievement First Amistad Academy
Chabaso Bakery
Creative Stone + Tile
New Haven Masonry
(Stone/masonry wholesale)
Accustandard
Apicella's Bakery
DS Sewing
Martinez School
Miller Marine Services
Eastern Electric Supply
Concrete Creations
Lobster Haven
Gateway Terminal (storage)
Unicast Development
Church of the Rock
Easter Seals
Ingersoll Rand (leased to DOT)
Joseph Cohn & Son
Electrical Wholesalers
Merritt Graphics
multi-tenant
Berkley Hall and Sons Upholstering
CT DOT
multi-tenant
Pearl Lounge
Alderman-Dow Iron & Metal
Suzio Concrete
Foundry Square
Criscuolo Park
0
1000'
91
95

1

New Haven Industrial Village

Physically, Mill River is a mix of working and obsolete industrial waterfront uses and classic manufacturing buildings, both of which border several diverse residential neighborhoods. When considered in combination with New Haven's in-place creative capital, the Mill River District's mix of industrial activity, creative energy and physical character creates the potential for a viable live-work environment not unlike other creative centers such as Brooklyn, Seattle, Portland (Oregon), and Providence.

This strategy aims to harness the energy and economic activity already taking place in the District. Focused development and investment in infrastructure could accelerate live-work development and compatible light industrial activity, which is critical for the ultimate regeneration of the area. A live-work environment—both at the district level as well as at the parcel level—expands the opportunities to better utilize parcels in the District. Moreover, a live-work model reduces the risk for redeveloping some of the abandoned or underutilized classic industrial buildings found in the District and along River Street in Fair Haven.

This concept supports the development of small-scale manufacturing and assembly operations that have storefronts for their goods and manufacturing operations in the rear. Growth will be encouraged in this sector by developing a "Tech Shop." This model reduces risk for entrepreneurs interested in making physical goods by providing them with access to manufacturing equipment - a strategy that does not require up-front capital expenditures, thereby depleting the savings of entrepreneurs. Secondly, a Tech Shop facility could also provide a place to train students and displaced workers with the necessary technical skills to support future businesses.

These activities alone will not be enough; any modifications to zoning must manage the risk of gentrification and high-value residential development against preserving a core manufacturing base. Nevertheless, improvements to the physical environment are necessary to the short-term and long-term viability of a live-work environment. Finally, since many of these businesses lack money for major facility renovations or upgrading of existing buildings including cleaning, repowering, and other facilities upgrades, a development program that either invests in "ready-to-go" buildings or provides capital to businesses to improve their physical spaces could differentiate New Haven from other locations.

The Mill River district contains several properties (above, red) that are well-suited to adaptive reuse for industrial arts and other cottage industries. Redeveloping these scattered properties and sites while maintaining existing truck circulation is critical for future development.
There are several precedents (right and below) that represent the character of the industrial building types that might be appropriate in the Mill River.

2

New Haven Home Improvement Marketplace

Economic research found that the existing home improvement businesses in the area have a combined total sales volume that approximates a big box retailer such as Home Depot. In contrast to a conventional big box home improvement retailer, the wholesale/retail operations in the Mill River District are separated into specialized merchandise categories (plumbing, paints, lighting) and offer significantly more product options. Consequently, this home improvement/home goods activity operates as a traded retail sector for New Haven—i.e., it brings revenue from outside of New Haven into the city.

This has three important considerations for future development in the Mill River District. A visitor-friendly environment that addresses issues of safety (both perceived and real), cleanliness, and wayfinding is important for the continued viability of these retail operations. Second, accommodating the logistical requirements (truck traffic, warehousing) in the District is critical. Third, the deconstructed nature of the storefronts creates challenges for leveraging the existing customer activity and boosting overall sales through merchandising techniques typically found in a single-roof retailer.

When combined with the growing industrial arts presence in the District, the creation of a pedestrian-friendly marketplace environment could serve as a magnet for additional industrial arts and wholesale/retail activity. Innovative programming and building approaches to vacant or underutilized spaces between the key storefronts—such as "pop-up" kiosks or carts—could assist in increasing the foot traffic between the storefronts and improving the overall character of the District.

The Mill River District is home to a critical mass of home improvement businesses, highlighted in blue.

Bender Plumbing

Stone/masonry wholesale

Creative Stone and Tile

Reclamation Lumber

3

New Haven Mercantile Food Hub

Food-related businesses have a long history in New Haven. Although food manufacturing and processing businesses are distributed throughout the city, the greatest concentrations can be found in Long Wharf's food terminal or scattered throughout the Mill River District. Today New Haven's food businesses consist of active manufacturers of gourmet food products, bakers, food processing businesses, grocery manufacturers, and wholesalers. These businesses have benefited from the local foods movement, which has spurred demand for food processing and production space, particularly those with small-batch capabilities and retail space.

The economic analysis conducted for this study revealed a significant gap in capacity in the grocery merchandise category. Indeed, these findings indicate there could be upwards of $150 million in unmet retail grocery capacity.

However, when one considers precedents across the country, the demographic profile of Connecticut, the growth in the local food movement, New Haven's historic relationship to food production, and the city's clear need for additional grocery merchandise capacity, the notion of the Mill River District as a Mercantile Food Hub emerges as a compelling idea. The Hub blends two scales: the wholesale food terminal with distinct retail outlets. Prominent, locally-owned food companies already combine wholesale and retail operations under one roof, a model for the Hub concept. In addition, small-scale grocery manufacturing and urban agriculture might play supporting roles.

Since this study began, several similar concepts have launched in the region, including in Philadelphia and Newark; notably, no such concept exists in New England.

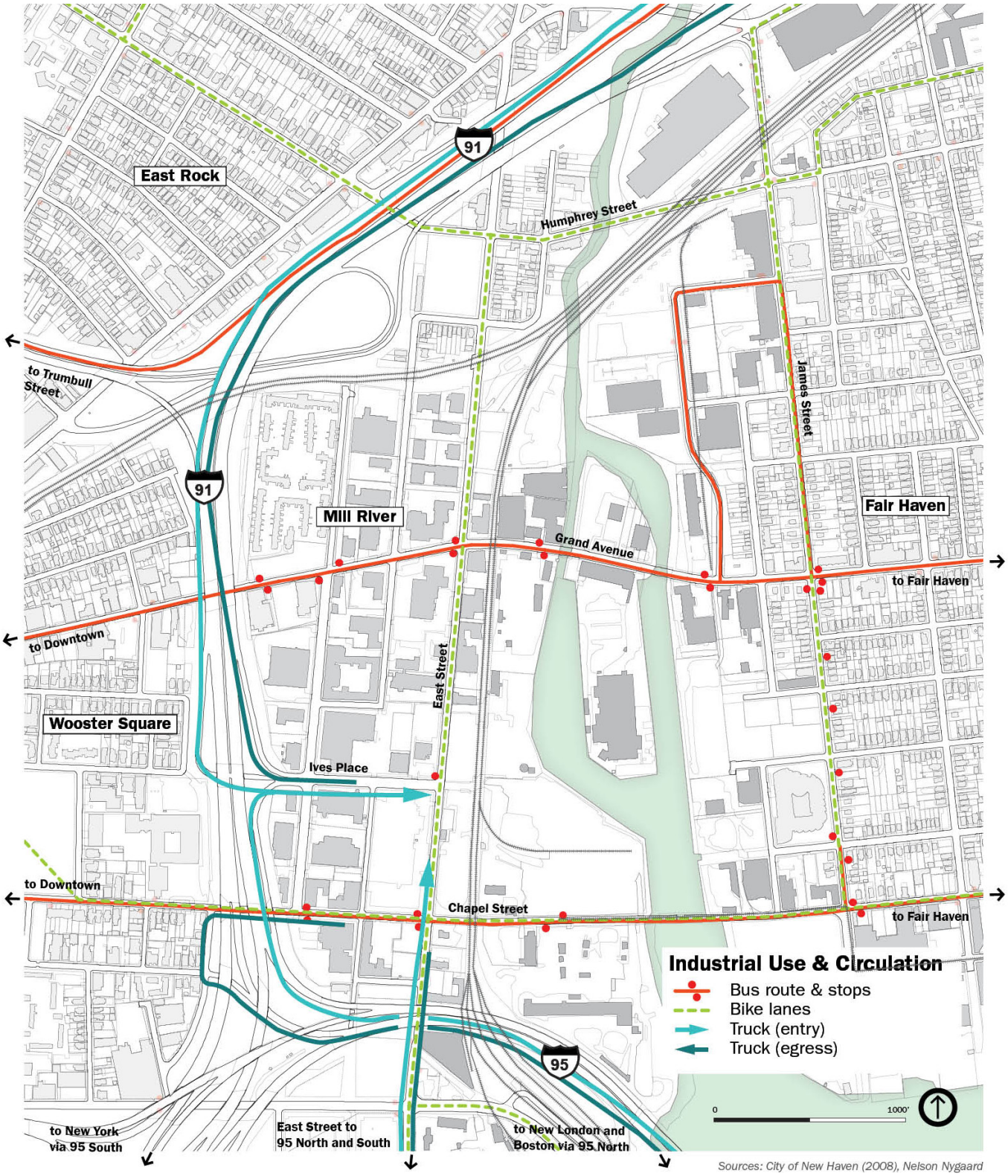
A key question remains as to whether the Mercantile Food Market should be located in the Mill River District or in Long Wharf. Regardless, the concept has several attractive features:

- Mercantile markets get better leverage from expensive infrastructure such as cold storage (already present in Long Wharf).
- Residents get access to grocery products
- A well-programmed retail market attracts foot traffic—critical for retail operations.
- Start-up food businesses (particularly local foods) can get access to two important commodities in a single location: customers and infrastructure.
- A well-designed and well-programmed food mercantile market can function as a tourist attraction.

Food related businesses in the District rely heavily on frequent movement of trucks. Functional loading docks and highway access are critical to business operations.

Ontario Food Terminal

Existing Food Terminal at Long Wharf



Sources: City of New Haven (2008), Nelson Nygaard

Transportation, Parking, and Streetscapes

The Mill River District is dependent on a robust transportation system that provides local businesses with convenient access to regional markets.

A well-connected grid with north-south streets serving highways and the Port makes truck access direct and logical. East-west streets provide convenient access to New Haven, Fair Haven, and surrounding neighborhoods to support local commerce and circulation. All streets have sufficient width to accommodate trucks and also serve as resources for loading and parking as well as walking, biking, and transit where appropriate. With safety, connectivity, and streetscape improvements, the attractiveness of the District as a place to work and live can grow while increasing its appeal to future industrial businesses.

Overview

As a mixed-use enterprise district whose economic vitality is contingent on continued easy access to the interstate highway system, a well-balanced transportation and parking plan is necessary.

Given the goal to improve pedestrian accommodation, specific streetscape improvements are recommended that allow trucks to move products in and out of the District and also attract customers to the various retail showrooms in the area. Recommended approaches include the clarification and enhancement of the existing shared service drives and loading areas, the addition of on-street angled parking to promote retail businesses, and the creation of a hierarchy of streets to improve wayfinding, segregate truck traffic to specific streets, and allow for the introduction of appropriately located traffic calming devices.

Given the regional customer base from which the District is hoping to draw, the recommended transportation plan uses an improved pedestrian network to complement a shared parking approach, thus encouraging customers and workers to "park once and then walk" to the businesses and amenities that are both existing and anticipated to grow in the District.

The photos illustrate the different forms of transportation in the Mill River District and the street conditions to accommodate them.

Circulation and Access

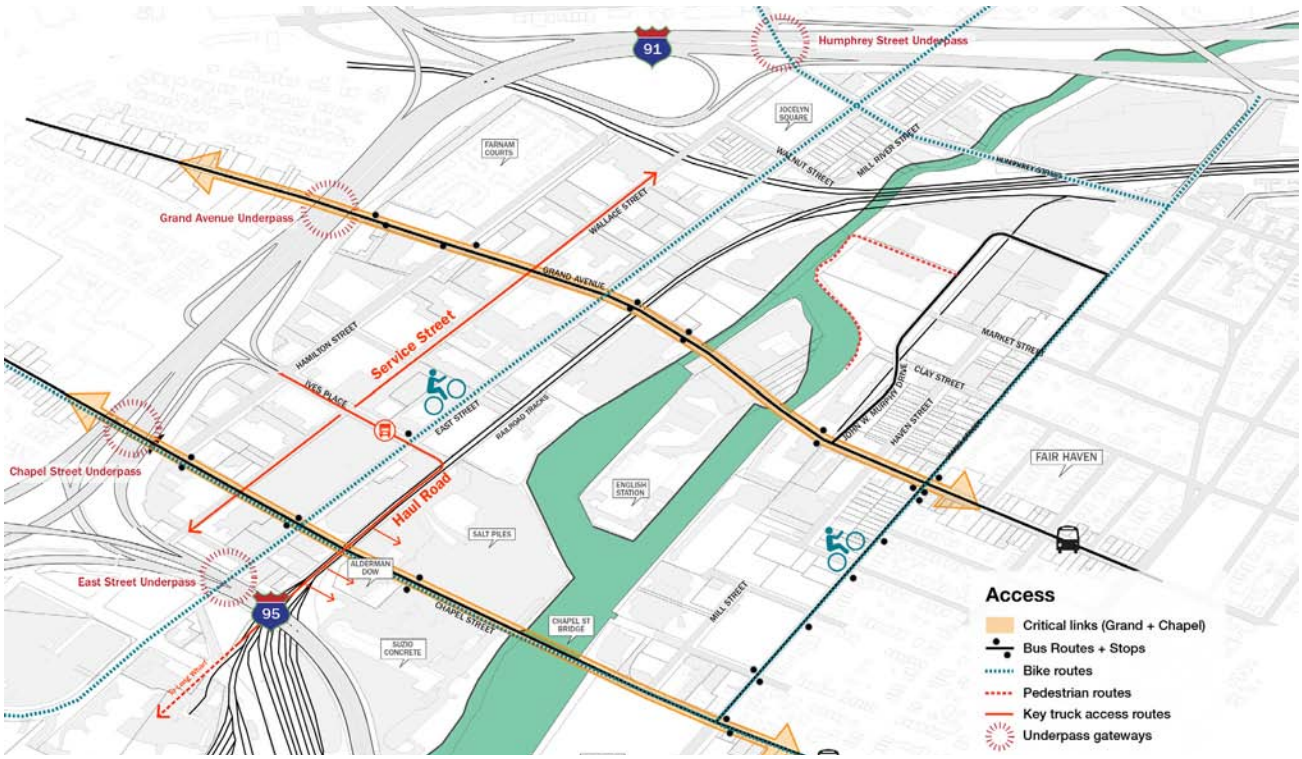
An efficient and accommodating circulation network is essential to the success of the Mill River District.

The district is currently an industrial zone where trucks vastly outnumber pedestrian and cyclists, and it is an important "crossroads" for the City of New Haven. Internally, its circulation functions primarily on a north-south axis—with East Street, Hamilton Street, and James Street operating as the major streets for businesses.

Despite north-south connections forming the backbone of the internal circulation logic of the District, it is Grand Avenue and Chapel Street that are the critical east-west connections. Grand Avenue—with its small amount of existing retail and relationship to Fair Haven—has been identified as the more important mixed-use corridor for development as part of the emerging urban framework for the District. Moreover, the redevelopment of Farnam Courts has the opportunity to change the character of Grand Avenue.

The Chapel Street Bridge, located adjacent to Suzio Concrete and Alderman Dow, presents some long-term challenges for converting large stretches of Chapel Street into a more active streetscape. Moreover, the Chapel Street drawbridge has variable opening times and a large number of trucks coming in and out of Suzio Concrete and Alderman Dow, making Chapel Street a less attractive candidate for mixed-use development.

Other important considerations are the underpasses underneath I-91 and I-95, which physically and perceptually divide the Mill River District from adjacent neighborhoods. As important thresholds into the District, a guiding concept that supports creative uses of these underpass locations could help ameliorate the perceptual divide. Developing a creative strategy to better activate the underpass at Grand Avenue between the Mill River District and the Wooster Square neighborhood will help support the concept of Grand Avenue as an important mixed-use connector street.

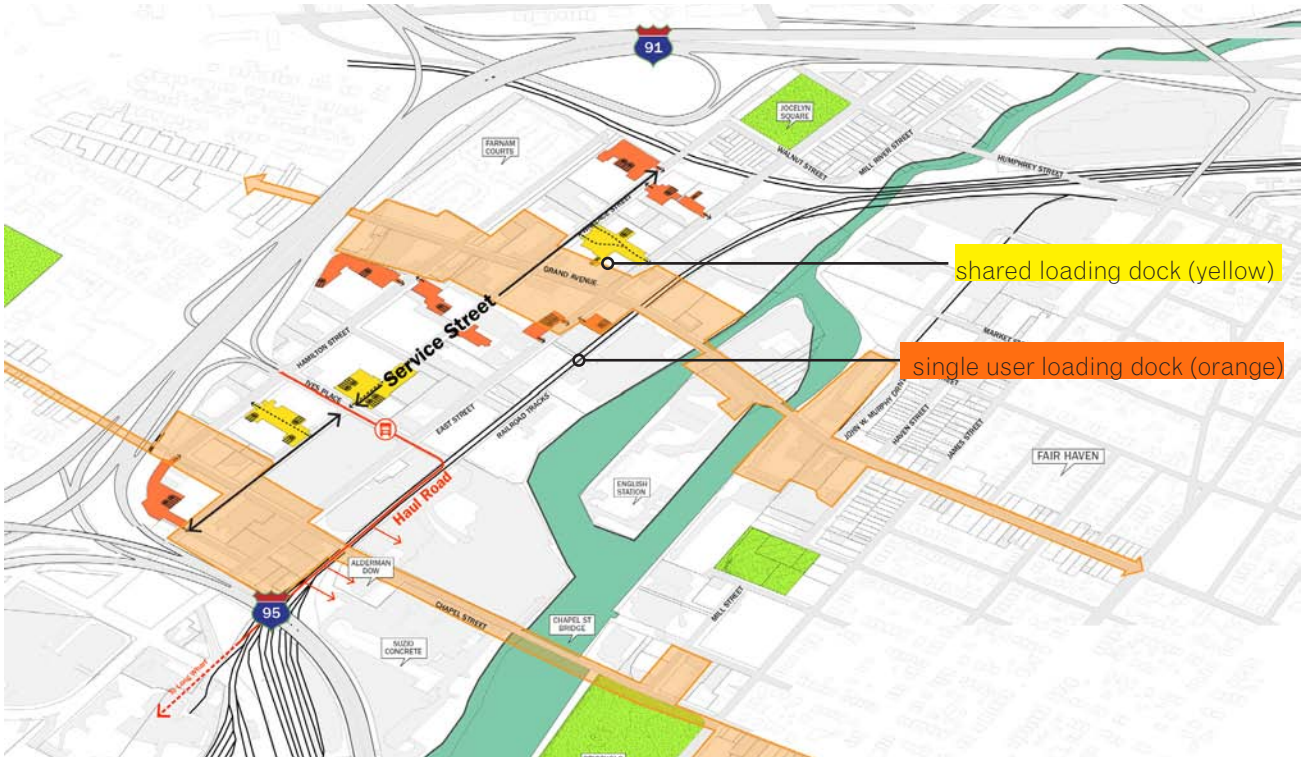


Service Road: Segregating Truck Traffic

The City is committed to preserving the Mill River area as an industrial district, recognizing that maintaining a balanced portfolio of land uses supports the health of the city. The Mill River District, despite the cyclical ups and downs in New Haven's economy, has always thrived given its adjacencies to I-91 and I-95. Indeed, interviews with business owners during the early phases of this planning study identified highway proximity as the leading driver for locating their business operations in the District. To that end, maintaining a functioning network of streets that can support large volumes of trucks—both large and small—is essential.

Examination of the existing logic of loading docks revealed an interesting pattern. Blocks are sized in such as a way that smaller footprint industrial buildings developed in the 1940s, '50s, and '60s typically face the north and south ends, with a shared loading dock in the center. Capitalizing on this existing internal block logic Wallace Street is recommended as the main truck artery and service street. At the present, there is not a continuous through-connection along Wallace Street from Grand Avenue to St. Ives. For Wallace Street to function as a dedicated service road, it should become a priority to continue this road from north to south.

Complementing Wallace Street is a longer term strategy for transforming the land adjacent to the rail spur into a dedicated haul road for trucks only. This haul road would originate at the intersection of St. Ives and East Street and then continue south outboard of the rail line to service the current businesses located along that waterfront zone—the salt piles, Alderman Dow, and Suzio Concrete—and also function as a potential link between Long Wharf and the Port. Long term, this would also have the benefit of opening up the edge along Chapel Street, eliminating curb cuts and truck queuing, and creating a framework in which alternatives uses might begin to animate Chapel Street. Supplementing the rail spur with a haul road does not compromise its long-term viability as an active rail line should the City wish to reinstate service in the future.

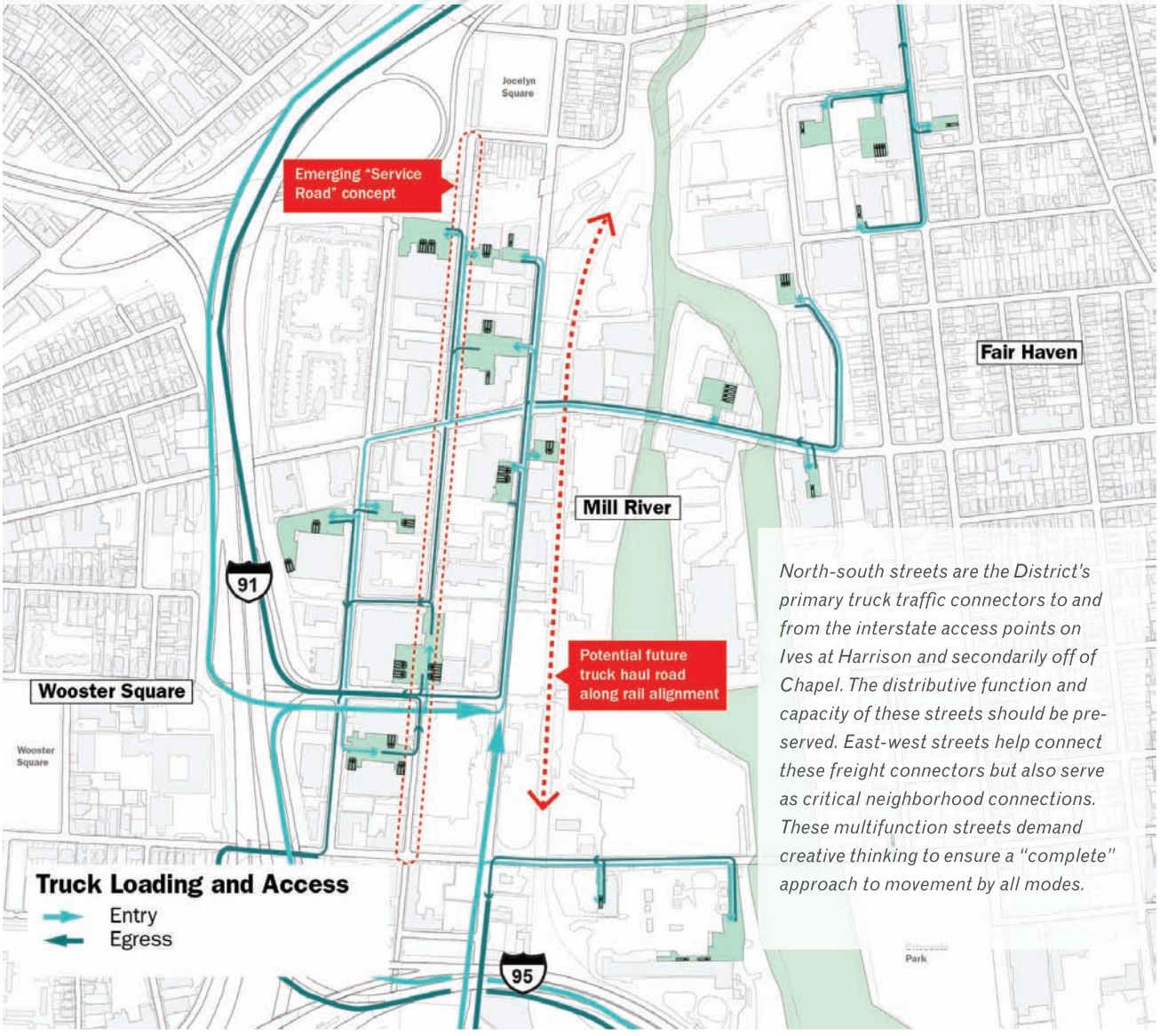


Service street and loading locations

Truck Access

The presence of truck activity in the Mill River District creates a need to manage the access routes for trucks, cars, transit, cyclists, and pedestrians. To avoid as much conflict as possible, focusing truck circulation on north-south streets and local automobile and non-auto circulation on east-west streets helps minimize most conflicts to safely controlled intersections. This allows for the creation of clear customer access points, helps to move people and goods more efficiently, and makes the District a more pleasant environment to navigate.

For truck delivery and loading, Wallace Street is an excellent District resource, running parallel to the north-south connective streets. Trucks are able to approach businesses on either side of Wallace Street and use alleyways to reach surrounding businesses. With this approach, Hamilton Street can also serve as needed customer access and parking, while East Street can provide good regional connectivity without loading conflicts.



North-south streets are the District's primary truck traffic connectors to and from the interstate access points on Ives at Harrison and secondarily off of Chapel. The distributive function and capacity of these streets should be preserved. East-west streets help connect these freight connectors but also serve as critical neighborhood connections. These multifunction streets demand creative thinking to ensure a "complete" approach to movement by all modes.

Surface Parking and Parking Management

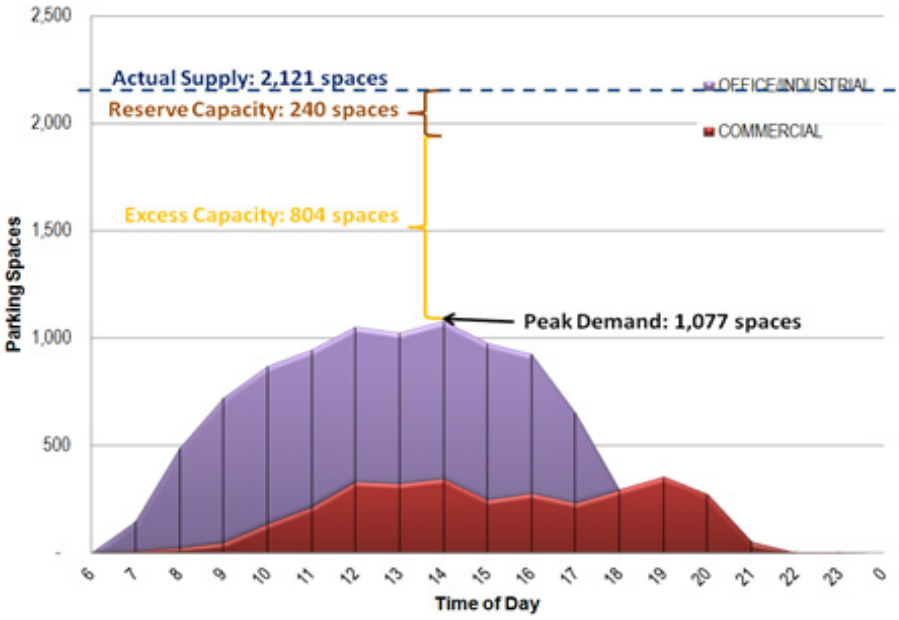
A shared parking district would help to eliminate concerns about the availability, restrictions, and confusion about parking in the Mill River District.

The Mill River District has ample surface lot parking throughout the entire neighborhood. Although the parking supply is more than sufficient for the surrounding land uses, the organization is lacking, with many more informal spaces than striped spaces. It is difficult to understand where parking is permitted and not permitted due to lack of signage and poor lot delineation. Creating a rationalized approach to surface lot parking in the Mill River District will help the neighborhood be more inviting to those arriving by car.

A critical aspect of better delineating surface lot parking is adopting a shared parking strategy. Shared parking helps facilitate a "park once" district, where a customer or employee can park in one parking space and walk to multiple destinations in the area. Shared parking helps to reduce the amount of surface parking needed, provides more space for open spaces and walkways, and attracts new patrons to the area. Shared parking can be facilitated through a number of approaches, including informal arrangements, contractual agreements between land owners, and municipal parking management districts.

A parking management or benefit district includes multiple property owners within an entire district. Under a contractual agreement, the owners would agree that the parking spaces would be shared, meaning that any user in the district would have access to all the parking spaces at any given time. With these type of agreements, municipal parking requirements are typically reduced or waived, and the maintenance and operations costs associated with creating a friendly and open customer parking environment are paid for by the district fund. Any district-wide development strategy will be enhanced by the cost-saving potential of a district-wide shared parking strategy.

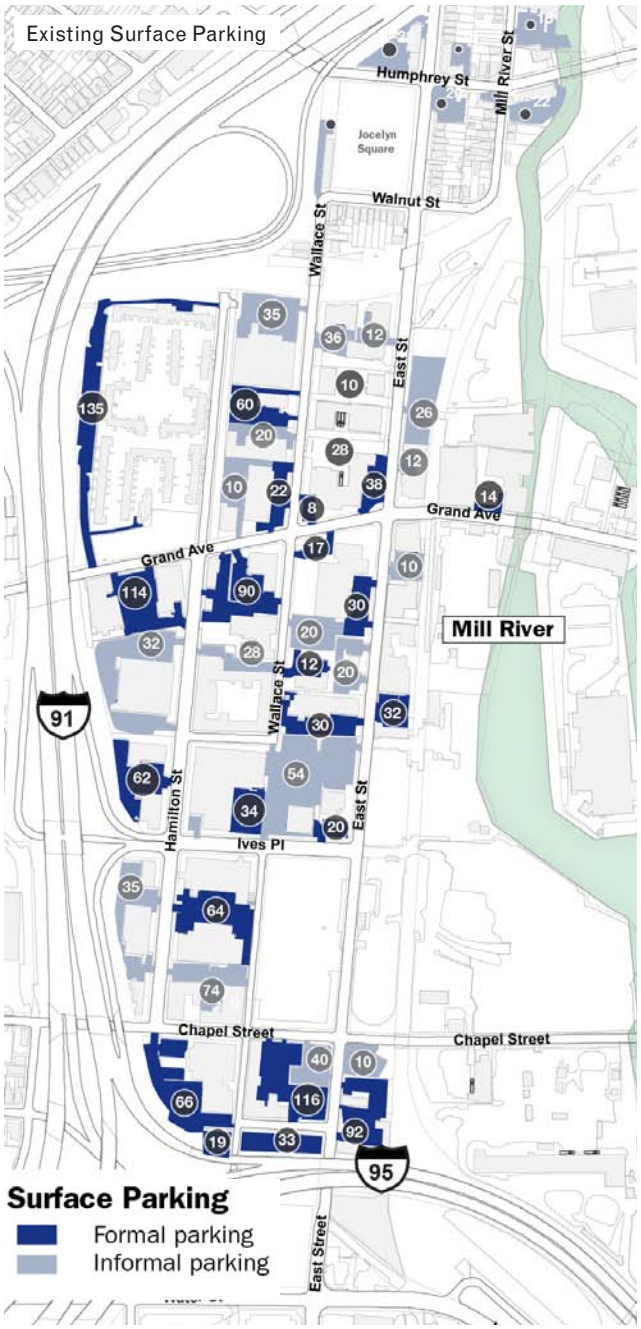
In addition, existing adjacent surface lots can be combined, making striping and circulation more efficient, increasing the total supply of parking.

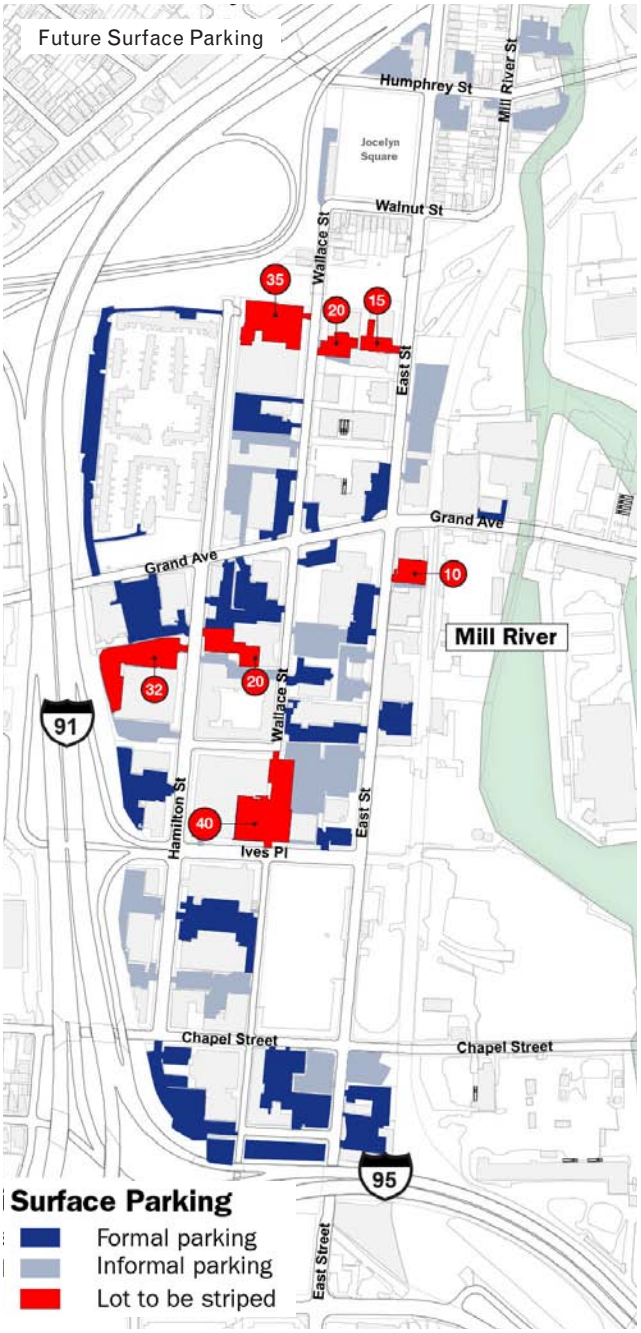


The hour-by-hour shared parking curve for all existing Mill River District land uses shows that peak modeled demand is only half of the existing supply, with more than 800 empty spaces before approaching reserve capacity.

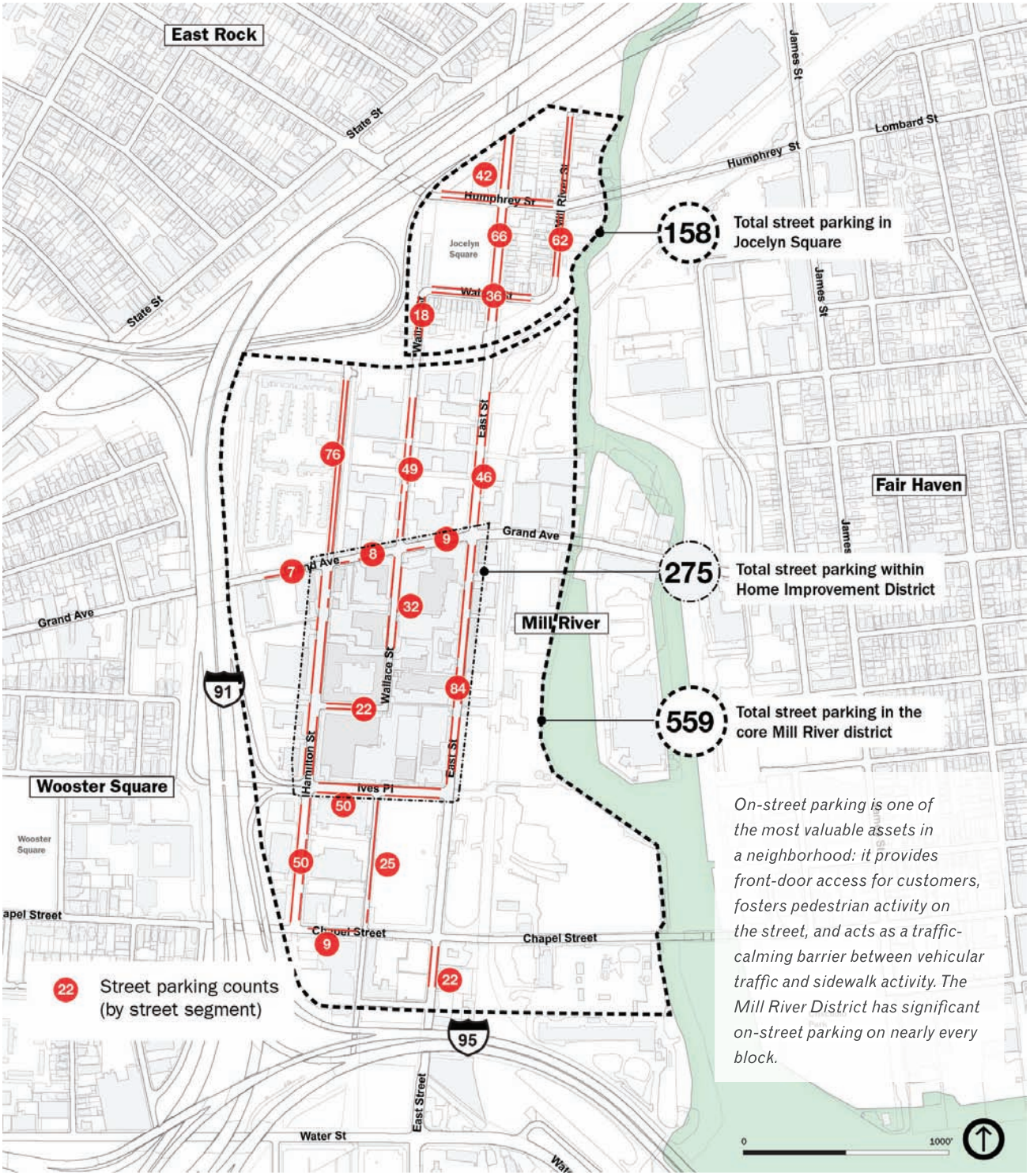
Potential Locations for New Parking

The lots in red signify important opportunities for shared surface parking in the district. Better parking management, coupled with increase in on-street parking and an improved wayfinding program, will help accommodate future parking demands.





Street Parking



Angle Parking

The supply of more than 700 on-street spaces is notable in aggregate, but lacking in certain front-door locations where customer access is a priority, with only 275 spaces in the core retail-oriented blocks. Given the size of many District streets, additional on-street parking can be accommodated with angled parking stalls. Head-out angle parking is recommended for its customer appeal as well as multimodal safety. Similar to parallel parking, the driver enters the stall by stopping and backing up but need not maneuver the front of the vehicle against the curb. When leaving the stall, the driver can simply pull out of the stall, and has a superior view of oncoming traffic.

For customers, this configuration provides direct access to the trunk, hatch, or bed, making loading very convenient. Open vehicle doors automatically direct passengers (particularly children) to the curb and avoid roadway conflicts. When leaving, the driver is able to easily see oncoming vehicles—particularly cyclists. Several cities where back-in angle parking has been implemented have seen a reduction in the number of crashes compared to regular parallel parking designs. Tucson went from an average of three to four bike/car accidents per month to no reported accidents for four years following implementation.

Head-out parking:

- ➔ Is safer for all by slowing traffic
- ➔ Improves pedestrian visibility and makes crossings easier
- ➔ Provides more parking spaces by using less curb space than parallel parking
- ➔ Is safer for loading and unloading cargo and children, since one side of the car is not abutting oncoming traffic
- ➔ Makes biking more attractive, since motorists are better able to see cyclists in the roadway

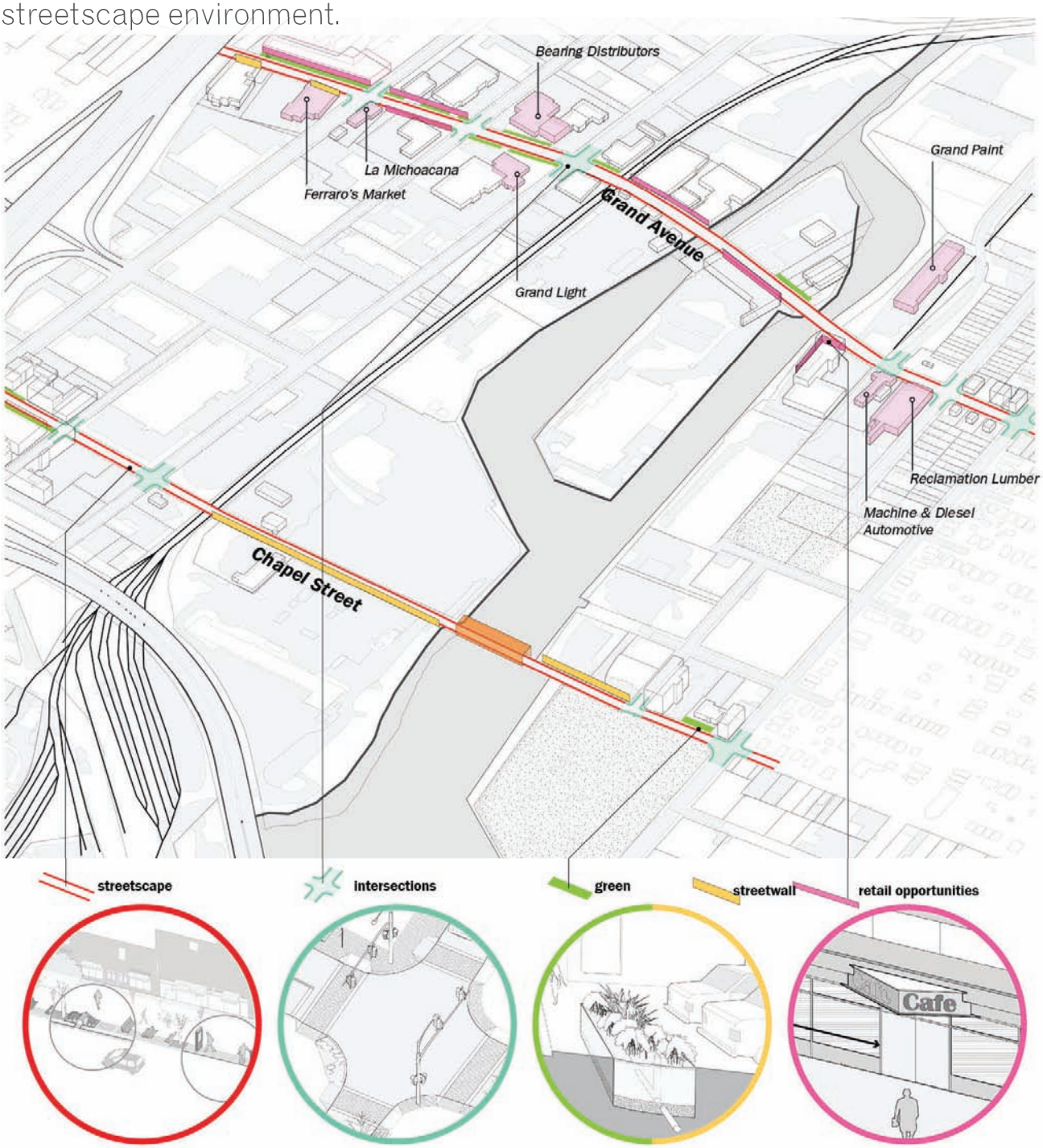
Existing parking in the District

Head-out parking examples

Head-out angle parking is recommended for one-side of both Hamilton Street and Grand Avenue, increasing the curbside customer parking supply in these core retail blocks while reducing the crossing distances for pedestrians parking outside the core. The angle parking also serves to calm traffic, encouraging more pedestrian-oriented activity on Grand.

Prioritized Streetscape Improvements

Improvements such as better intersection design, planting and stormwater management, and retail opportunities will have a significant impact on the streetscape environment.



Streetscape Improvements for Key Streets

A number of focused design treatments help reinforce the multimodal east-west connections through the District:

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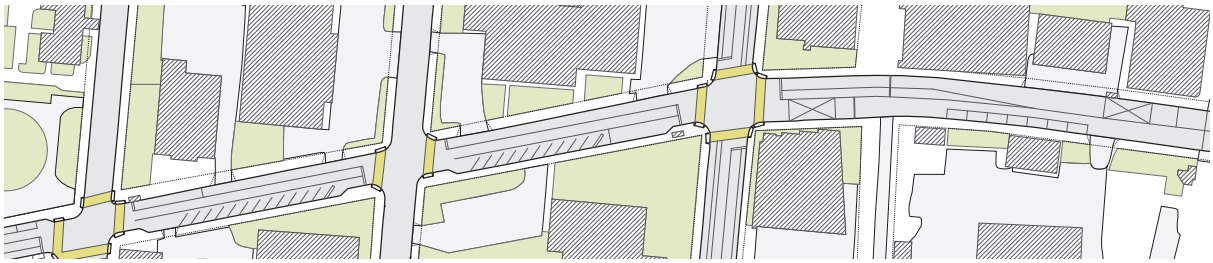
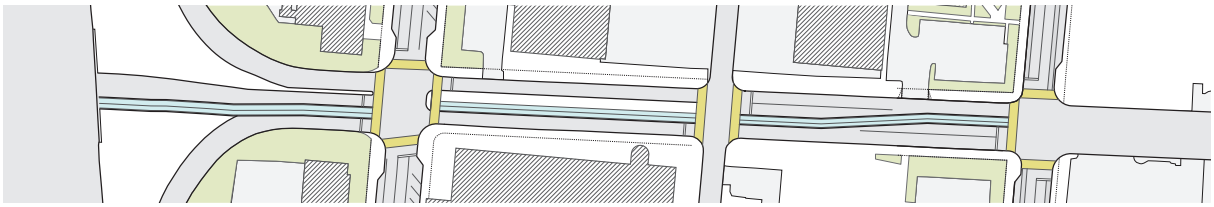


Grand Avenue

As a mixed-use corridor, Grand Avenue has been redesigned to accommodate on-street parking and transit stops. Wayfinding along Grand Avenue is critical, directing workers and visitors to surface lots located within the District.

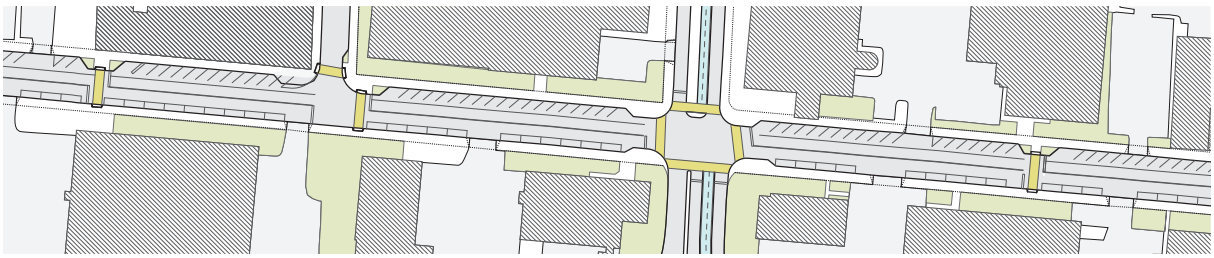
2



Hamilton Street and Ives Place

The intersection design at Hamilton Street and Ives Place provides a safe refuge for cyclists and pedestrians in a buffered median. The signal phasing would allow for those on foot and bike to cross Hamilton safely, while preserving the important truck access role that Ives serves for the District. The median extends east to the river, creating a new community green corridor that will not diminish truck access and will improve safety for all users.

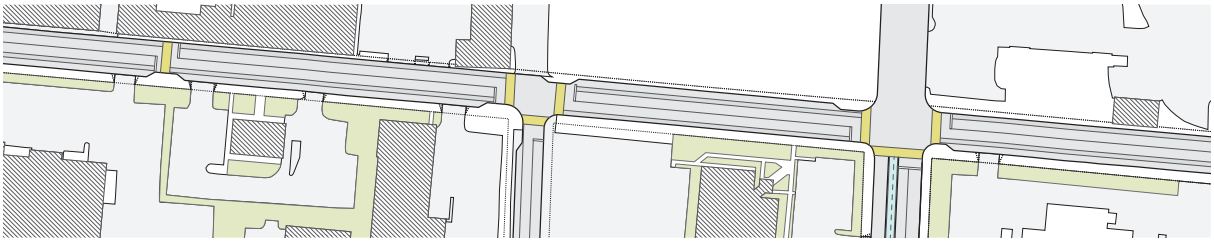
3



Hamilton Street

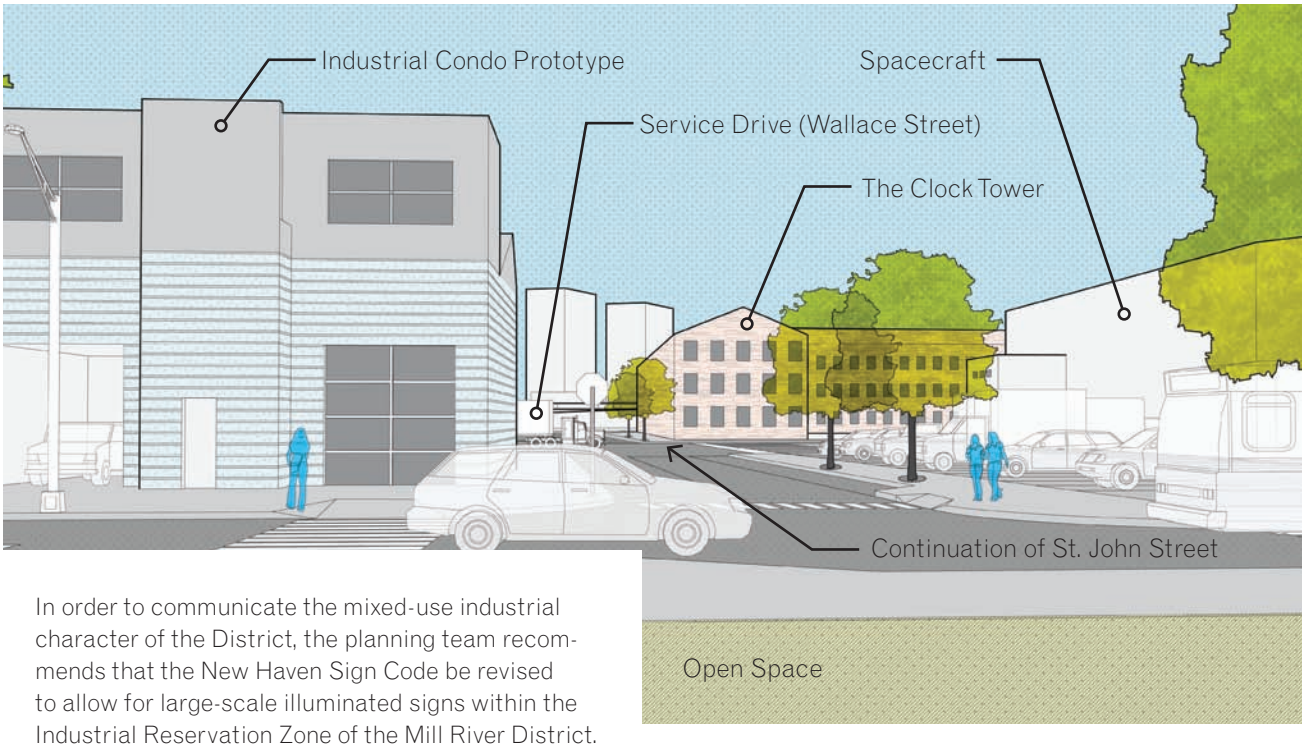
Simple paint and lighting treatments can transform on-street parking on Hamilton Street into head-out parking and parallel parking.

4



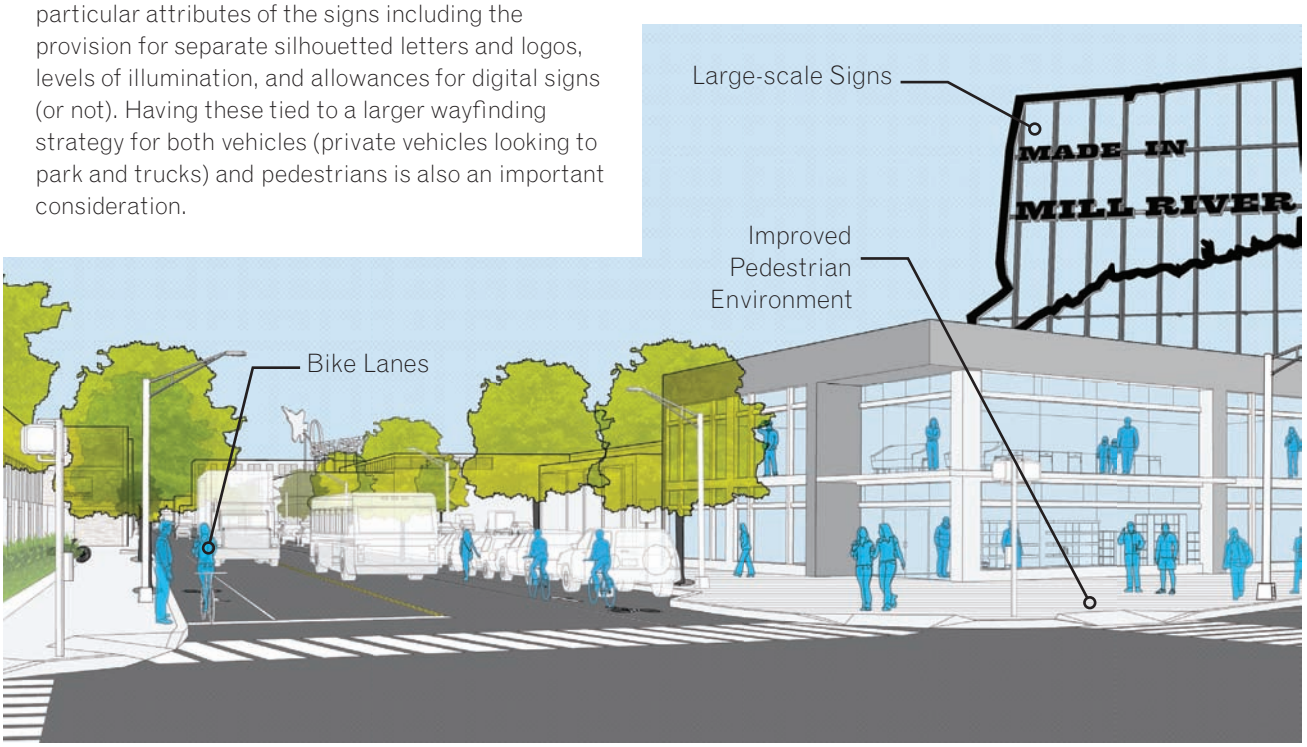
East Street Chicanes

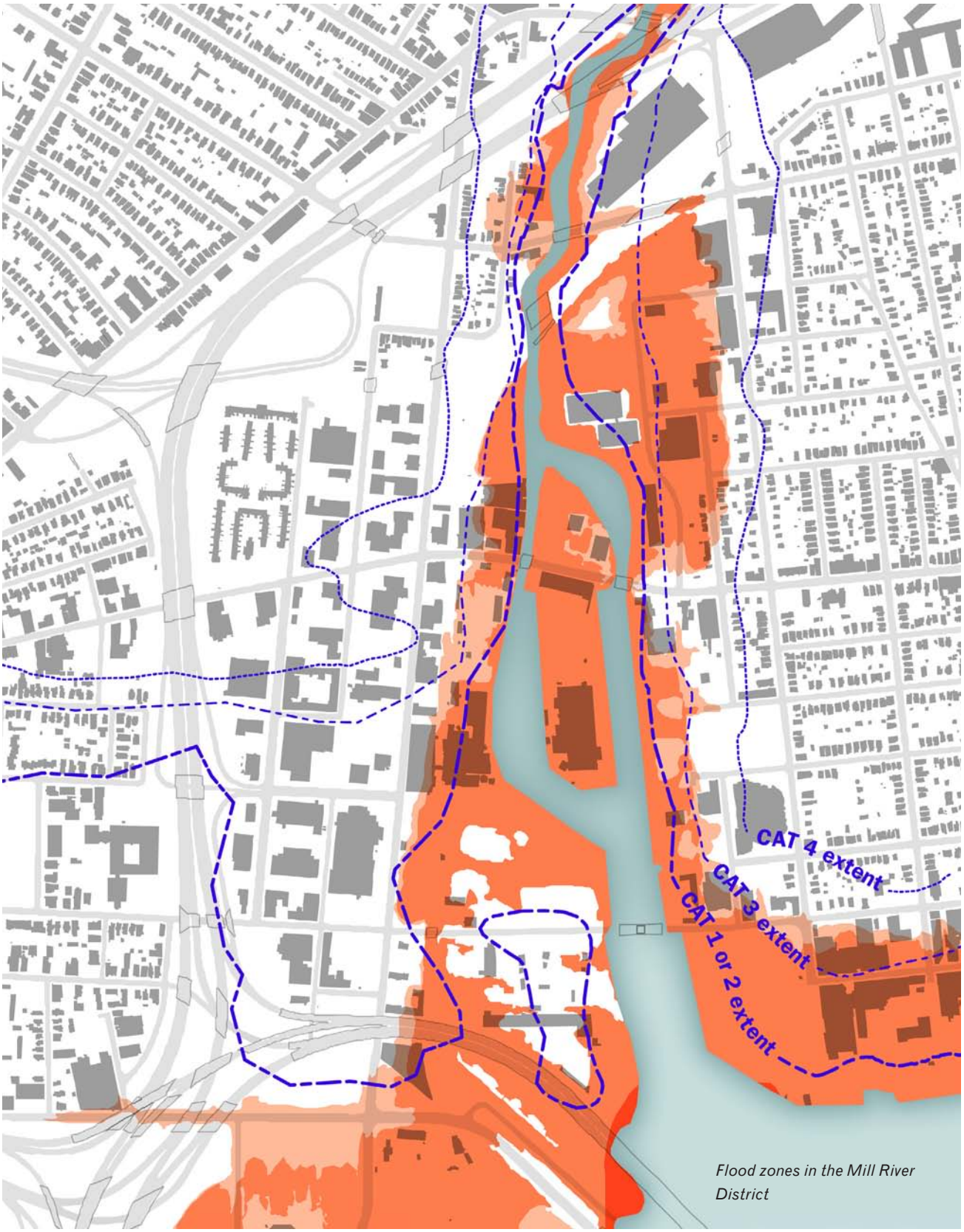
As part of slowing traffic while accommodating bikes safely on East Street, the single parallel parking lane should alternate sides across intersections, "chicaning" traffic with a shifted centerline that reduces straight-line speeding potential.



In order to communicate the mixed-use industrial character of the District, the planning team recommends that the New Haven Sign Code be revised to allow for large-scale illuminated signs within the Industrial Reservation Zone of the Mill River District.

The new form-based sign code should spell out particular attributes of the signs including the provision for separate silhouetted letters and logos, levels of illumination, and allowances for digital signs (or not). Having these tied to a larger wayfinding strategy for both vehicles (private vehicles looking to park and trucks) and pedestrians is also an important consideration.





Flood zones in the Mill River District

Waterfront Planning

The waterfront along the Mill River is in transition; currently its future as usable maritime infrastructure is questionable as the industries that fall within the district are being threatened by increased flooding by stormwater and hurricane surges.

The district plan must include a response to the question of maintaining the marine infrastructure and/or creating accessible open space along the riverfront as outlined by the Costal Zone Management guidelines. The team has explored three scenarios that address these issues in various ways related to upfront investments and long-term payoffs, they include: Natural Attenuation, Paired Capacity Investment, and Intensive Infrastructural Investment.

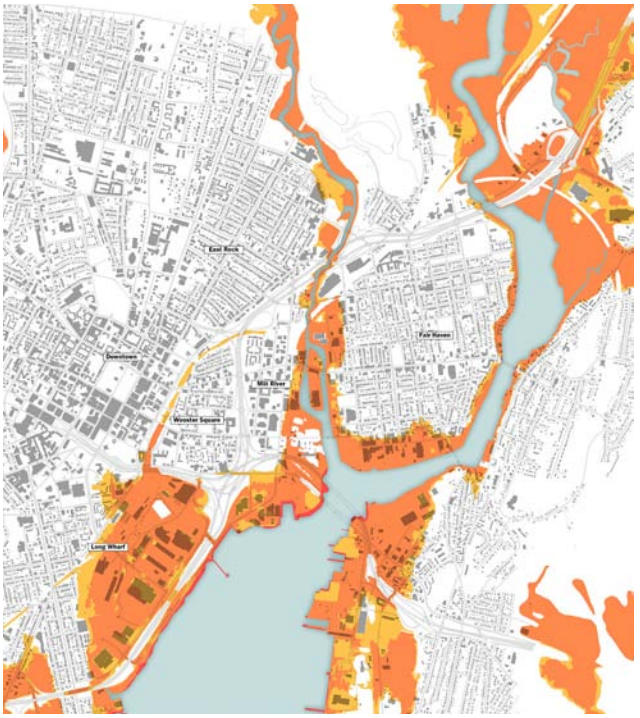
City-wide Flood Planning

Protecting the Mill River against flooding and storm surge must be contextualized within larger city-wide planning for sea level rise and climate change.

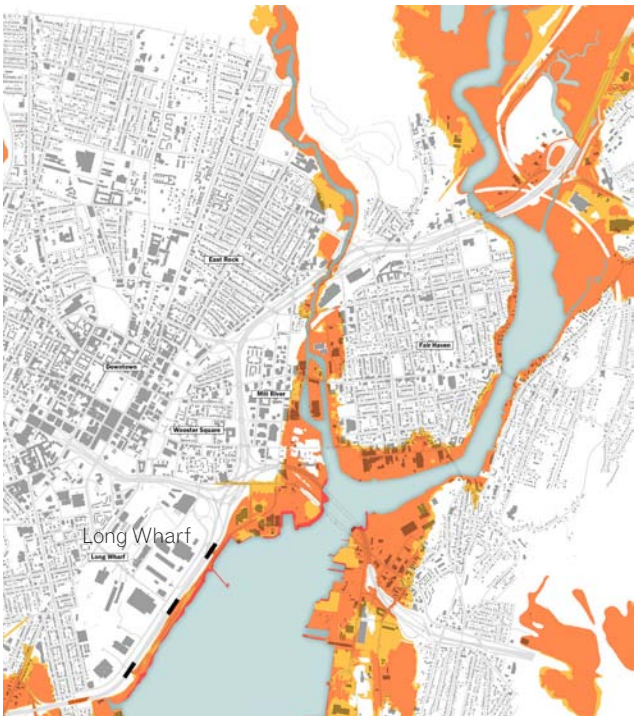
The Mill River District is a comparatively small district relative to other waterfront areas in the city, including Long Wharf, the Port of New Haven, and River Street. Long Wharf is a more defendable area for flooding, due to simple mechanisms such as flood gates ,while the Mill River District requires the construction of berms, flood gates, and detention/retention basins.

Port of New Haven

Example of Flood Gate



Areas city-wide prone to flooding



Reduction in flood impacts in Long Wharf using flood gates

River Street

River Street

River Street

Long Wharf

Long Wharf

Long Wharf

Port of New Haven

Long Wharf

Existing Conditions

Existing Conditions

North of Grand Avenue

- Non-navigable waterway (no dredging, low bridge); no usable waterfront
- Mostly soft edge (rip-rap, grass, earth, and vegetation)
- Remnants of prior wood structures

Grand Avenue to Chapel Street

- Mostly usable waterfront; various conditions (newly installed to completely degraded)
- Interspersed soft edges where infrastructure has been removed

South of Chapel Street

- Mostly rip-rap as river widens

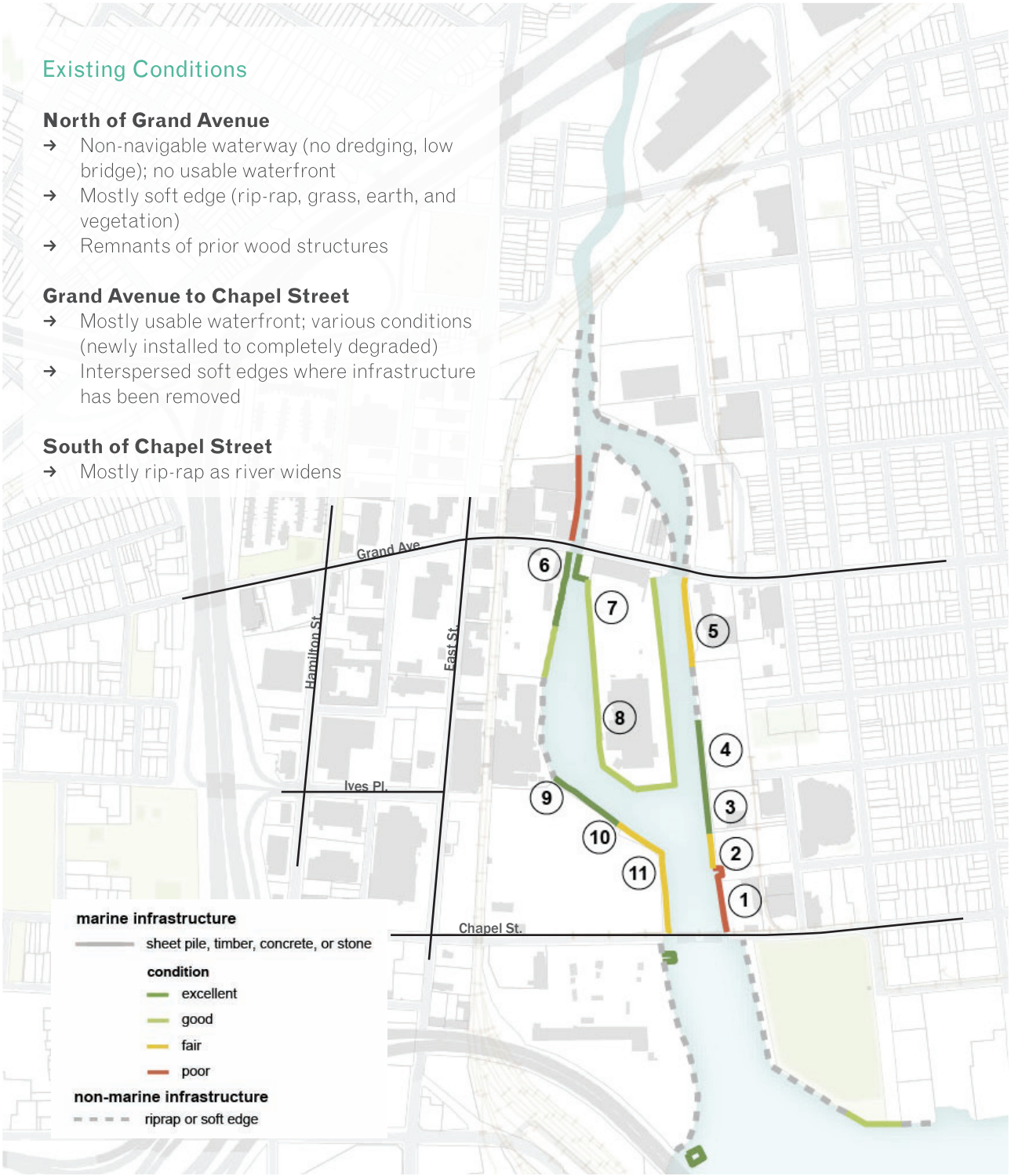


Image and photos by Stoss Landscape Urbanism

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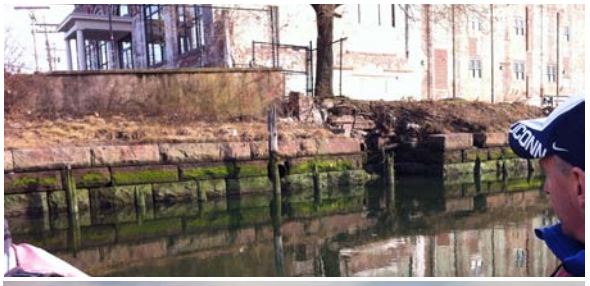

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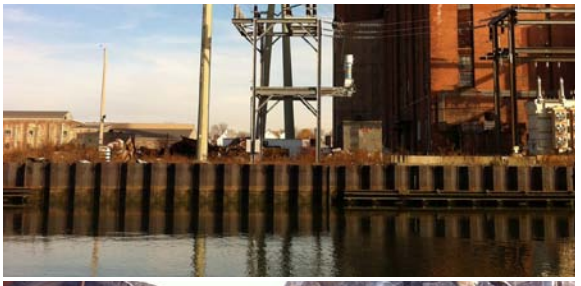

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Scenario: Natural Attenuation

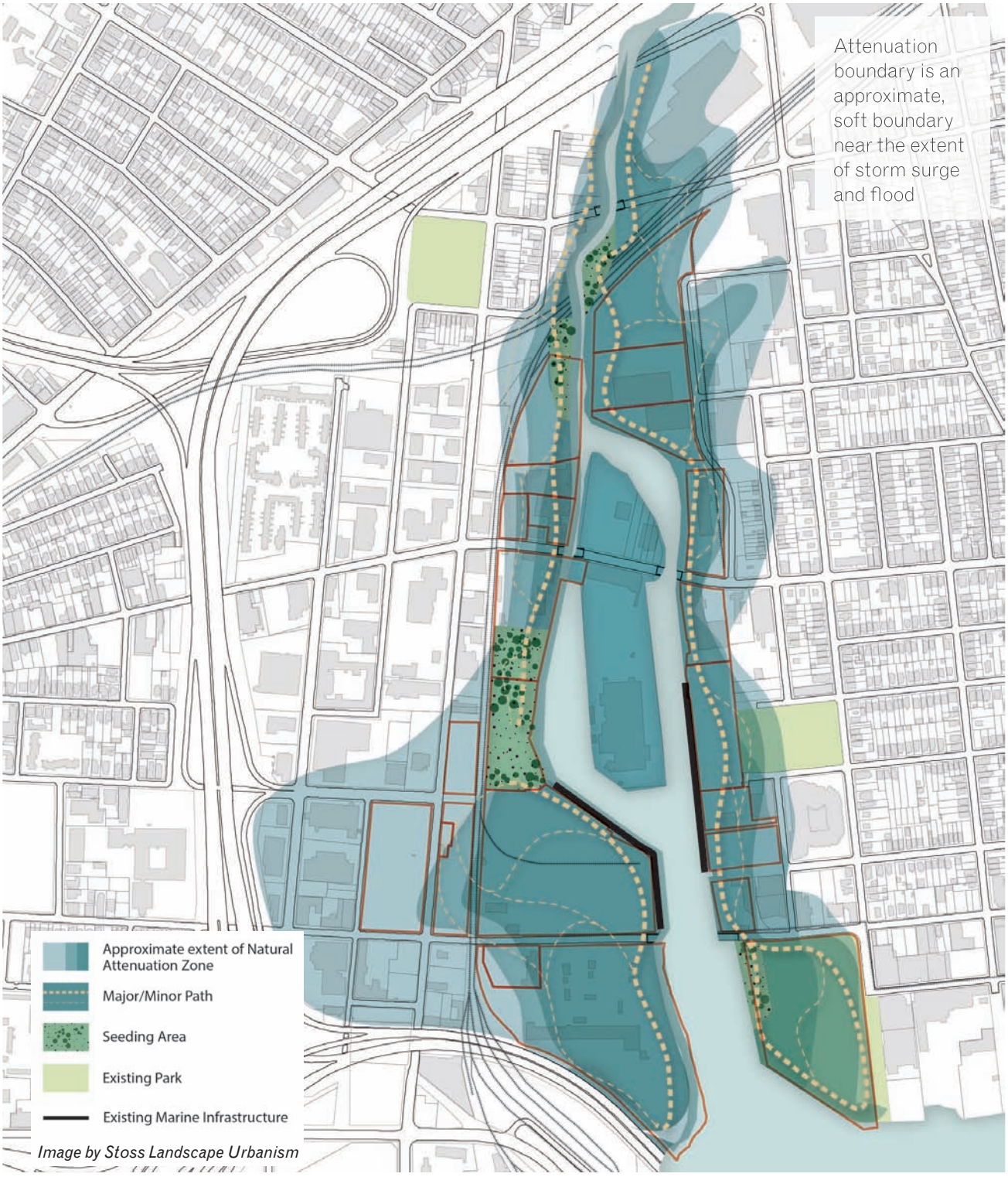


Image by Stoss Landscape Urbanism

Natural Attenuation

This scenario involves minimal intervention. Waterfront parcels continue to flood, and businesses relocate elsewhere. Natural ecological succession is augmented by targeted seeding sites. The naturally reclaimed land serves as a nature park that has recreation access and trails. Select locations of existing marine infrastructure are maintained.

Interim Uses (0-10 years):

- ➔ No infrastructural investment are made in flood/storm surge control.
- ➔ There is limited intervention to assist natural restoration processes (e.g., seeding strategies).
- ➔ Sites at most risk, such as Simkins, are utilized as interim open space.

Long-term Strategies (10-50 years):

- ➔ Businesses in flood area move elsewhere due to financial pressure from risk and real damage.
- ➔ Natural processes reclaim land.
- ➔ Sites regain some flood resilience and can be reclaimed as passive recreation space and networks.
- ➔ The working waterfront can be maintained, but it should integrate stormwater management (0-15 years).

Scenario: Paired Capacity Investment

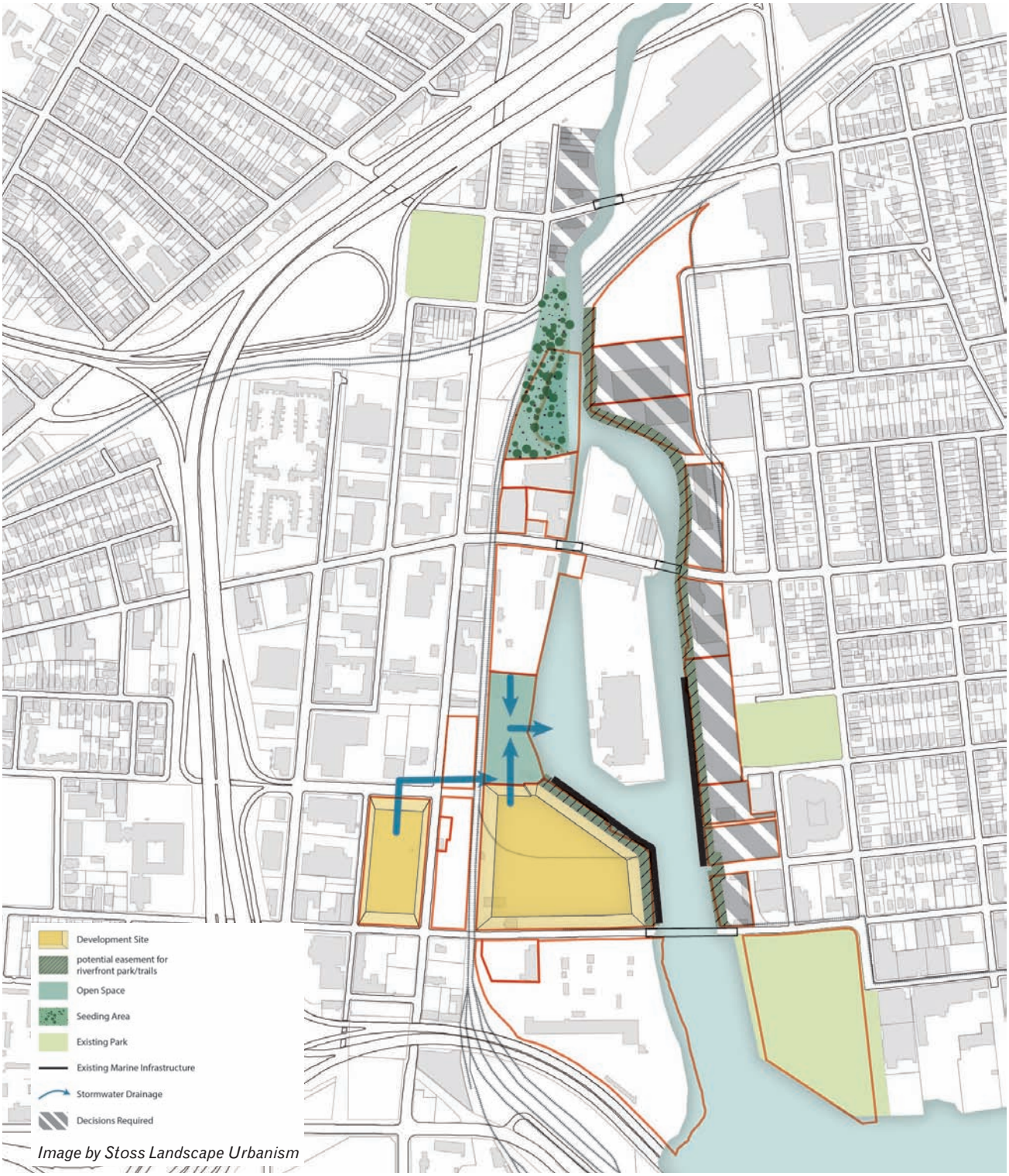


Image by Stoss Landscape Urbanism

Paired Capacity Investment

This scenario raises and protects two specific development parcels and lowers two other sites to create high-performance stormwater parks and regain capacity. Parcels to the east are not protected and are addressed on a case-by-case basis. Select locations of existing marine infrastructure are maintained or abandoned based on value and performance.

Interim Uses (0-10 years):

- ➔ Interim uses are established for the Simkins site as open space.
- ➔ Decisions are made about keeping the Mill River navigable and for what duration.

Long-term Strategies (10-50 years):

- ➔ Cut Simkins site for flood/surge capacity and both above and below mean high tide. Site will serve as an intensive stormwater management for the adjacent salt pile site, and will also have integrated long-term open space programming.
- ➔ Cut Saint-Gobain site for flood resilience above mean high tide.
- ➔ Program low-intensity recreation (i.e., paths).
- ➔ Fill salt pile site for flood prevention out of floodplain to create development potential and link stormwater management to Simkins site.
- ➔ Large development site(s) on the west side of the Mill River District are raised out of the floodplain and incorporate hybrid typologies for truck loading and deliveries.
- ➔ Decisions about sites on the eastern shore of the Mill River can be made on a site-by-site basis as the market determines or can be converted to open space if vacancies persist.

Erie Street Plaza, Milwaukee, WI, designed by Stoss

Images by Stoss Landscape Urbanism

Scenario: Intensive Infrastructure Investment

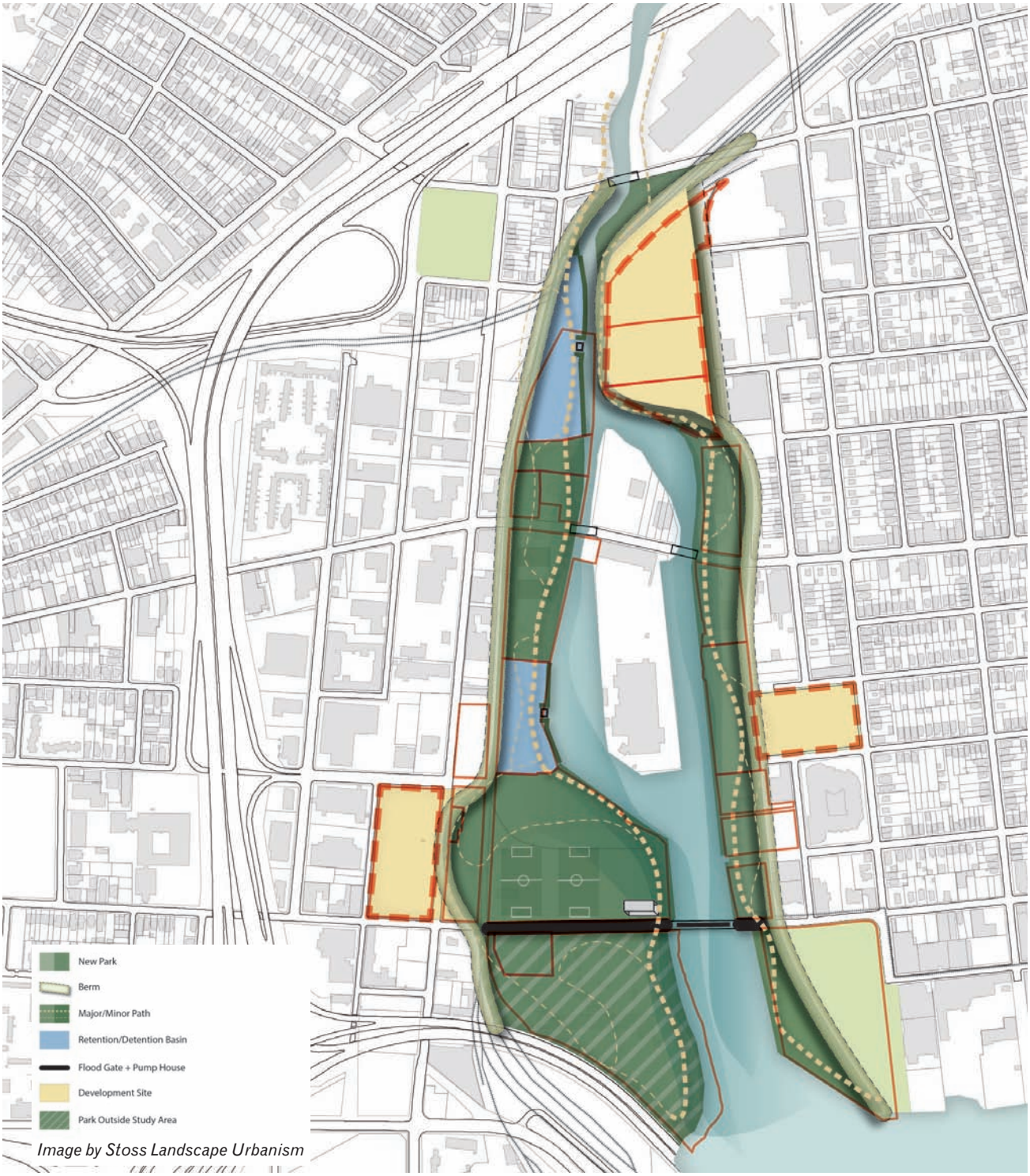


Image by Stoss Landscape Urbanism

Intensive Infrastructure Investment

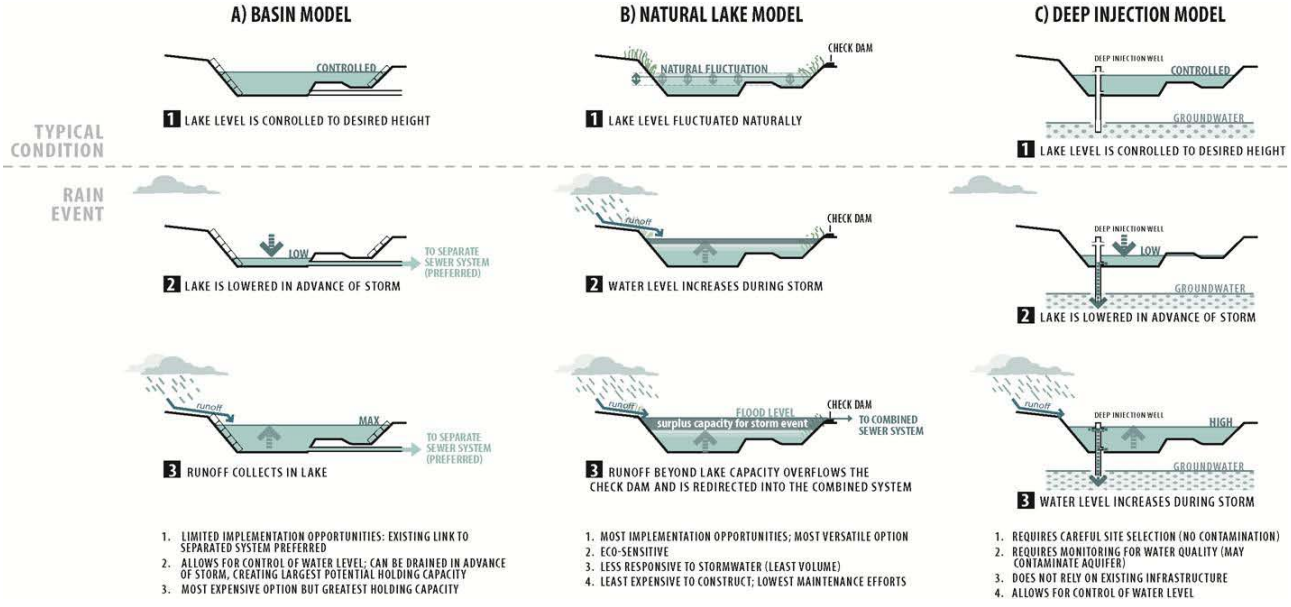
This scenario employs significant infrastructure to create flooding and storm surge capacity to protect surrounding properties for future development. This capacity is achieved through a flood gate, berm, and pumps. The protected land outside the berm benefits from the new park amenity located inside the berm. The river is not dredged in this scenario and use of the river for industry ceases.

Interim Uses (0-10 years):

- Interim uses are established for the Simkins site as an open space.
- Dredging in the Mill River above Chapel Street bridge should be stopped.

Long-term Strategies (10-50 years):

- Flood gate and pumps are installed at the Chapel Street bridge.
- Create berms on east and west sides of river to protect areas outside of surge area from sea level rise and flooding.
- Saint-Gobain and the Simkins site are cut to create large surge capacity.
- Radial site is filled to create a development site out of the flood plain.
- River basin is used for diverse programmed open space (big park) as well as major flood control and surge protection. Development sites can be created along the berm and the riverine open space.

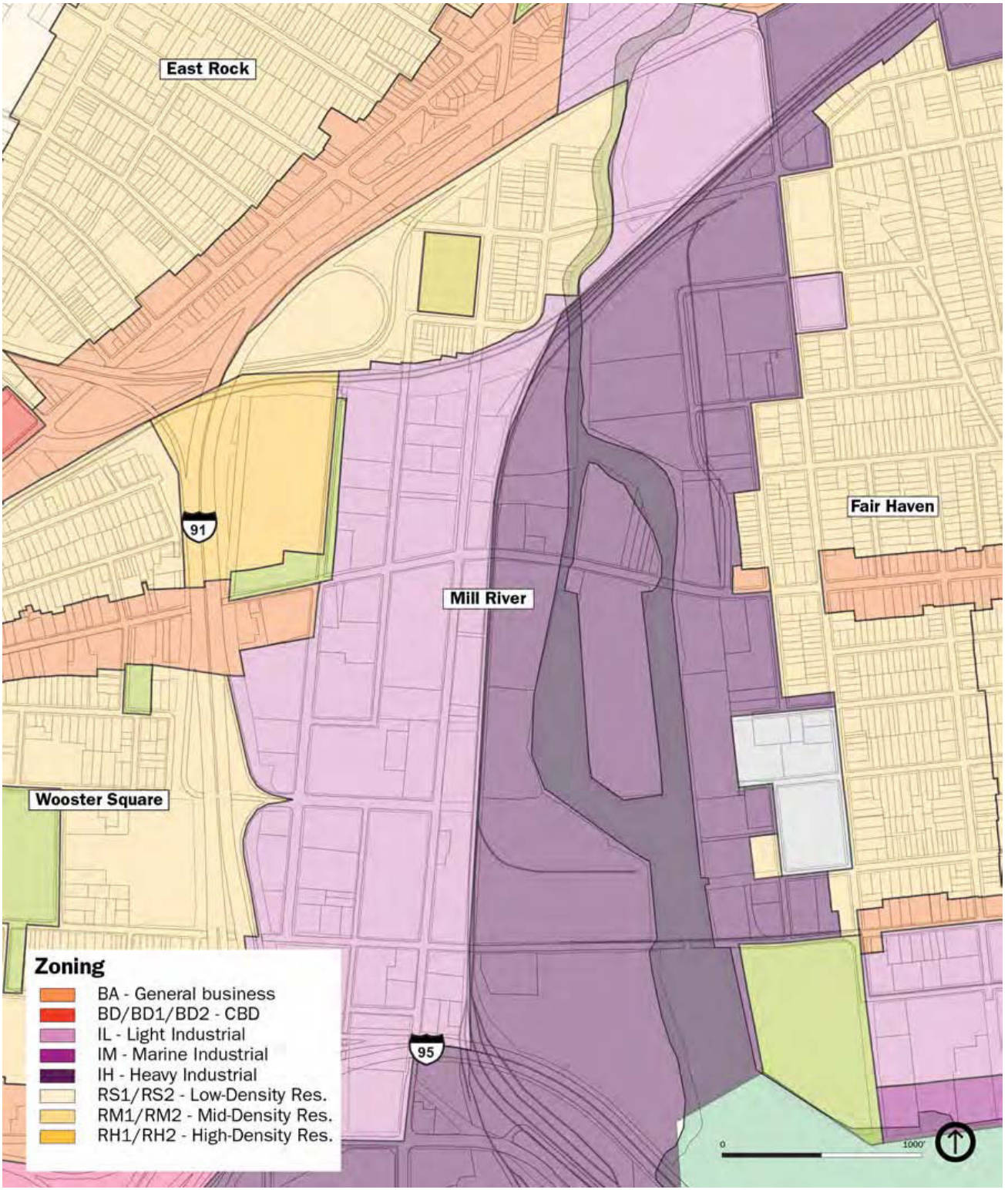


Images by Stoss Landscape Urbanism

Temporary use interventions on the Simkins site.

For the longer term, the Simkins site may become an open space with vegetation and art or light programming focused on English Station.

Existing Zoning



Zoning

Jobs involving manufacturing and logistics industries are vital components of New Haven's economy. In particular, the Mill River District serves as an important source of jobs for the Fair Haven community. Preserving the industrial nature and employment focus of the District is critical to preserving the vitality of Fair Haven and for providing future economic opportunities for the residents of New Haven more generally. Zoning is a critical key to maintaining these uses while also facilitating future growth.

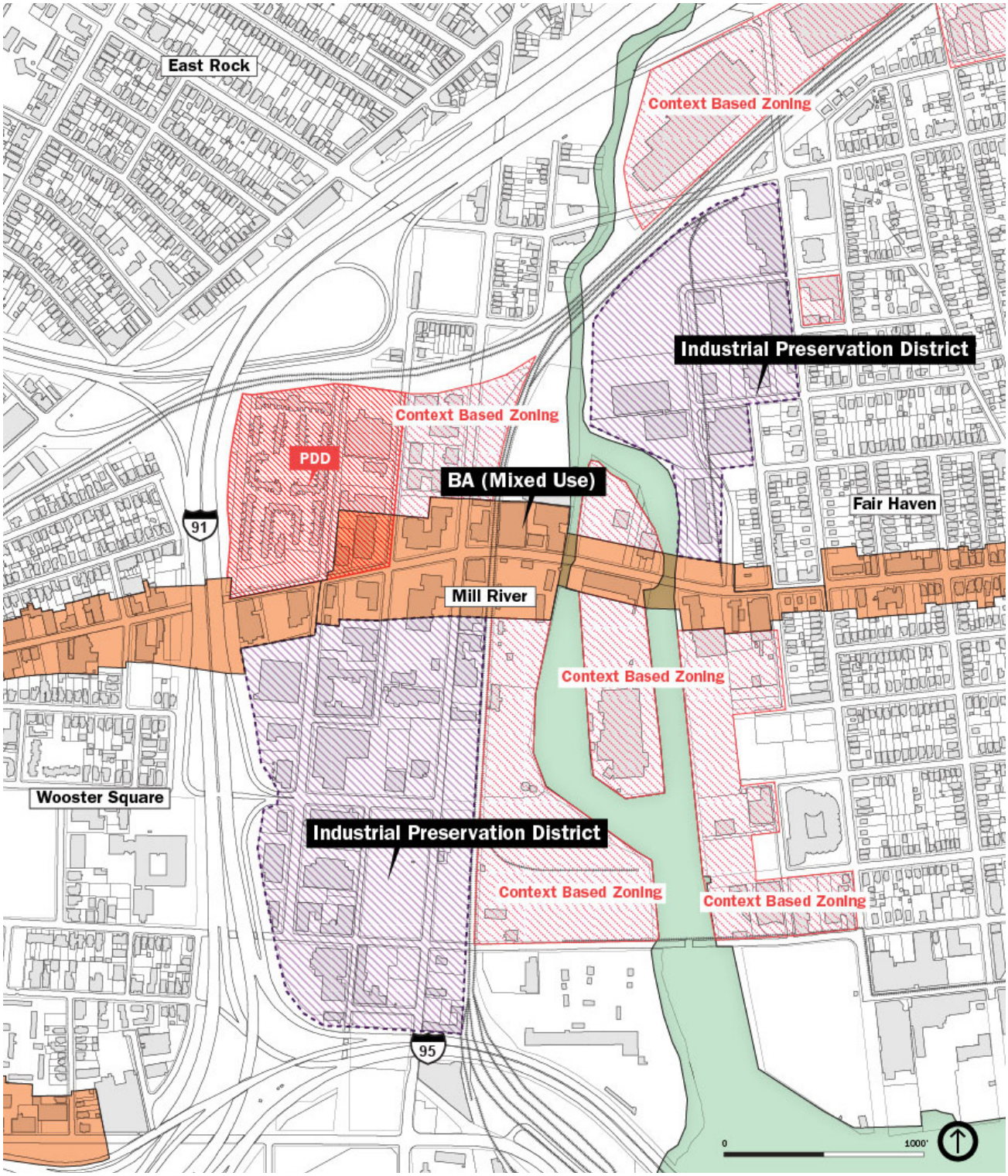
Overview

Land use and zoning will be a critical component to protect the Mill River District's industrial base and its viability as a future employment center.

The Mill River District's building stock, waterside location, and large and relatively easy-to-assemble parcels create substantial pressure for increased residential encroachment. Residential uses have historically been seen as conflicting with industry, due to traffic, noise, emissions, and other by-products of industrial processes. However, changes in contemporary manufacturing practices and building design challenge the basis for Euclidean-based zoning approaches. Performance-based standards for residential and industrial, rather than the classic zoning model, is the best regulatory frame to achieve these goals.

Mill River Conceptual Zoning

Maintaining a diverse portfolio of land uses for the City of New Haven



New Approaches for the Mill River District

The existing zoning at Mill River (Light Industrial and Heavy Industrial) needs to be reevaluated. A transition from a piecemeal zoning altered over time to a performance-based zoning will permit strategic adjacencies previously prohibited that can cater to new modes of production and manufacturing. The following concepts will set the structure for future zoning districts by determining their character and use.

Industrial Preservation Zone for the District Core
An industrial preservation district centered on a property tax stabilization structure is recommended to protect the industrial nature of sections of the district. This strategy is conceived to offset land value pressure caused by increased development activity in Farnam Courts and other buffer areas along the District's perimeter.

Business Zoning (BA) District for the Grand Avenue Corridor
New Haven should consider making several changes to zoning in the Mill River District that can facilitate economic regeneration. As a first step, connect the missing link of the business zoning district (BA) along Grand Avenue to facilitate the development of the street into a vibrant mixed-enterprise corridor that builds on existing retail and office-space activity and continues the pedestrian activity in Fair Haven to the west.

Context-based Zoning for Vintage Buildings
Context-based zoning, using form and performance criteria for industrial and wholesale operations, can facilitate the reuse of all or part of vintage industrial buildings that have limited applicability for industrial uses but may have utility for live/work, live/make, and office space uses.

Context-based Zoning for the Waterfront
A transitional zoning model along the western edge of the Mill River can encourage maritime industrial uses for appropriately located properties and also acknowledge flood and storm surge management issues.

Some older industrial buildings have the potential to be reused for newer industries

Waterfront uses should be reevaluated in light of storm surge issues and the relevance of maritime uses in the Mill River District

Planned Development District for Farnam Courts
Converting Farnam Courts and adjacent sites into a planned development district provides an opportunity for the single most impactful transformation of the Grand Avenue Corridor. In addition, the development of Farnam Courts also provides the City with an opportunity to create a model for how to manage of potential conflicts between industrial and residential uses through thoughtful urban design and zoning.

Industrial Preservation District

The Economic Threat of Gentrification

Today many of the industrial buildings purpose-built in these segregated districts are no longer compatible with large-scale manufacturing operations due to the limitations of building design and construction. Increasingly across the country, prewar industrial buildings with "character" are being converted to residential lofts, commercial space, and boutique product manufacturing spaces. Despite this trend, which is helping to bring energy and jobs back to depopulated urban districts, a balance must be struck between the desire to preserve these buildings through gentrification and the need to protect industrial properties that can support more intensive manufacturing employment. Within the Mill River District, larger parcels are available that can serve as future job centers for the City.

The Specific Risks of Residential Encroachment

Residential encroachment creates two major dilemmas for an industrial/wholesale business: rising land values and use conflicts. Since residential development yields higher returns on initial land investment, residential development pressure, enabled by precedent for zoning variances, can raise the cost of buildings and land for industry. In addition, new residents in formerly exclusively industrial districts can complain about odors, noise, truck traffic, and other impacts of manufacturing and logistics/distribution operations. Since industrial buildings and development parcels are also available in more isolated and lower-cost suburban "industrial parks," New Haven will need to be especially vigilant about seeking the proper balance between residential/office and manufacturing/logistics uses in the Mill River District.

Boundaries and Tools of an Industrial Preservation District

An Industrial Preservation District with clear boundaries is one potential tool that can help tamp down the kind of real estate speculation that can drive out viable existing businesses and promote the land banking of property—thus increasing the number of vacant parcels in the area. This zone should be carefully sized and configured, however, so it does not preclude appropriately scaled and programmed housing and retail to also be developed in the District. Several tools can be used to manage the balance:

- Clear limitations on the types of residential units allowed within the District
- A property tax stabilization scheme for land and buildings used predominately for manufacturing and logistics operations
- Residential notification and acknowledgement requirements

Example of a Residential Notification Requirement

For each parcel subject to the requirement for notification, the developer/ applicant shall record the following notice in the Official Records of Sonoma County, and shall include the following notice in all sale, lease or rental agreements concerning any portion of such property: "This document shall serve as notification that you have purchased property or you are leasing or renting premises in an area where river-dependent and/or agricultural support industrial operations are located which may cause off-site effects including without limitation, noise, dust, fumes, smoke, light, and odors, and which may operate at any time of night or day. The nature and extent of such operations and their effects may vary in response to fluctuations in economic circumstances, business cycles, weather and tidal conditions and other conditions. *This statement is notification that these off-site effects are a component of the industrial operations in the Central Petaluma Specific Plan area of the City of Petaluma, and you should be fully aware of this at the time of purchase, lease or rental."*

Transition Districts

New Opportunities for a "Managed Mixed-Use District"

Historically, industrial and residential uses were seen as incompatible. In the late 19th century, the need for larger lots just outside the central city (but within walking distance of the workforce) and access to moving water provided an organic rationale for the separation of uses. Later, Euclidean zoning was devised as the primary strategy to separate the uses into protected districts. Given the evolution of certain categories of "clean" and precision manufacturing today, there are opportunities to create performance and form-based codes that can allow formerly separated functions to coexist in mutually beneficial ways.

Context-based Zoning

In most jurisdictions, zoning is communicated with use tables that seek to minimize conflicts through the separation of functions. Recently, technology, environmental standards, workplace safety standards, and other factors have significantly reduced the environmental impact of contemporary manufacturing. At the same time, the spatial requirements for certain categories of manufacturing have radically changed. A context-based approach considers the role of form, building reuse potential, and external impacts in former industrial districts in order to support changing business models and new processes and technologies.

The team has identified three broad categories of contemporary industrial uses and operating characteristics that can serve as a framework for a new context-based zoning code:

❶ **Type 1:** Enclosed economic activity that can take place in the existing building stock. Operations require minimal need for open air facilities. External impacts are low or indistinguishable from nonindustrial uses. Does not operate on a 24 hour basis.

❷ **Type 2:** Enclosed economic activity that involves fabricating, processing, finishing, packaging and/or distributing activities that may have an external impact involving noise, smell, dust, emissions, vibration, and/or truck traffic. Operation also requires outdoor facilities for storage, staging, or uses related to its business operations. May operate on a 24-hour basis.

❸ **Type 3:** Economic activity that does not take place inside standard building forms. Piping, conveyors, and other components in the process are visible on the exterior of buildings. Activity creates substantial external impacts involving noise, smell, dust, emissions, and/or truck traffic. Hazardous materials may be substantially involved in the enterprise as an input or an output. Operation also requires outdoor facilities for storage, staging, or uses related to its business operations. May operate on a 24-hour basis.

Performance standards are critical to making a context-based zoning approach work.

Typical performance management standards include a 50 foot impact assessment for the following issues:

- → Sound/Noise
- → Smell
- → Dust
- → Emissions (and steam generation)
- → Vibration

Nondistance related Impacts

- → Visual
- → Lighting
- → Storage
- → Level of activity through volume-driven controls using height and footprint
- → Bulk storage within 300 feet of existing residential development are subject to stricter levels of review
- → Volume levels
  - 1: By right
  - 2: Zoning approval
  - 3: City council action
- → Blast radius
- → Hazardous material
- → Traffic / congestion

In addition waterfront/maritime industrial uses are often measured on the following:

- → Buffer/setback from waterline for bulk open air storage
- → Stormwater management

Utilizing New Haven's Existing Performance Standards

In addition to these more nuanced categories of industrial uses, a new zoning code should include specific performance standards that qualify levels of emissions and odors, noise and vibration, and light levels. New Haven has existing performance standards in a variety of city ordinances and within the zoning code. For example, Article 5 Section 47 and Section 48 of the zoning ordinance includes performance standards, with specific measurable standards, relating to transition zones, noise levels, and vibration tolerances. Despite the existence of several relevance performance standards that can be integrated in a new code, several important standards are missing. Exterior lighting, for example, is qualified by design standards, such as shielding requirements, but not specific performance standards such as lumens levels. In another example, blast regulations are focused on blast control mechanisms but not limits on nearby land uses or required protections for structures within a potential blast zone.

To fully implement comprehensive form and performance model, new performance standards will need to be created. Both new and existing standards will need to be linked to newly designated zones through threshold performance levels.

Code of Ordinances

Most of the external impacts are mentioned or covered in the City's Code of Ordinances which can be accessed through the City's website at cityofnewhaven.com. Relevant codes include:

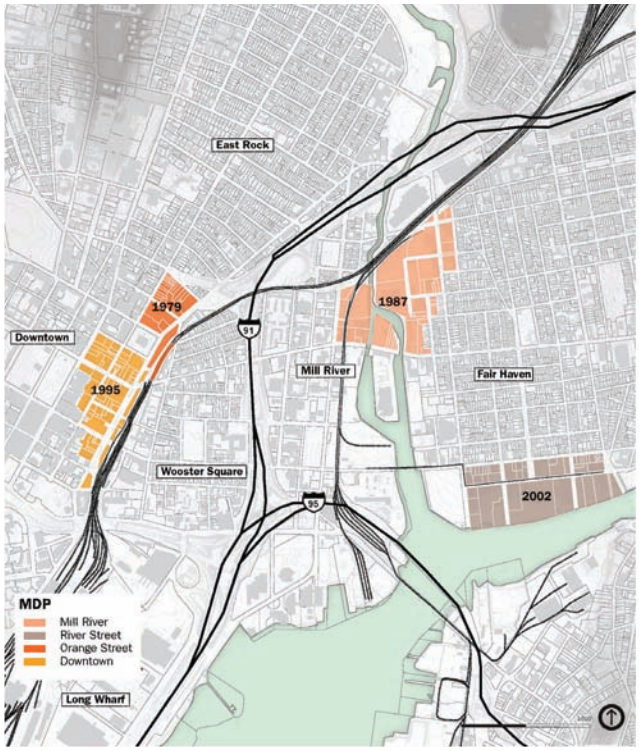
- Noise Code of Ordinances (Title III Chapter 18 Article II)
- Dust and emissions (Title III Chapter 3)
- Emissions & Hazardous Materials Fire Prevention Code (Chapter 13)
- Blast (Chapter 13-807)
- Outdoor Storage Zoning Ordinance (Section 46)
- Transition Zones between Industrial and Residential Zoning Ordinance (Section 47)
- Exterior Lighting Zoning Ordinance (Section 60.1)
- Reflective Heat Impact Zoning Ordinance (Section 60.2)

Bender Plumbing, an example of Type 1 industrial use, has minimal external impacts.

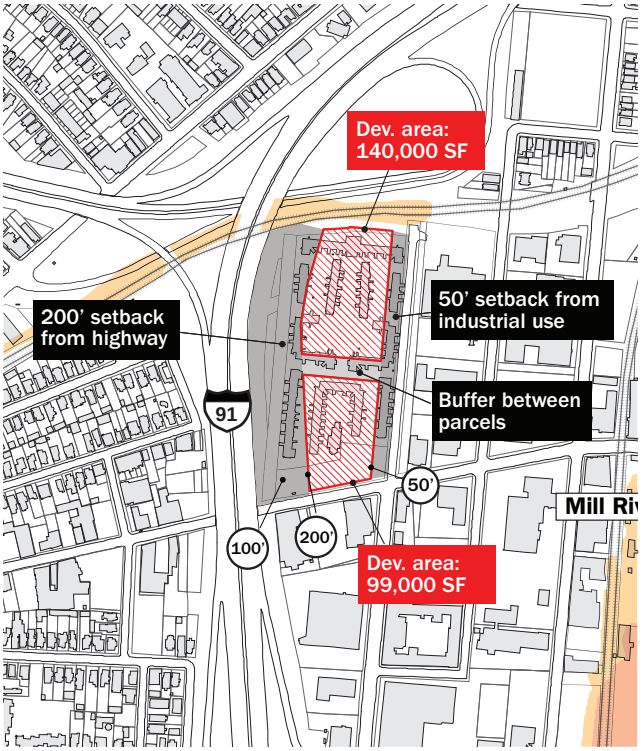
Palmieri Food, an example of Type 2 industrial use

Suzio Concrete, an example of Type 3 industrial use, contains significant outdoor operations and has large external impacts.

Previous MDP Map (1987)



Farnam Court Residential Development

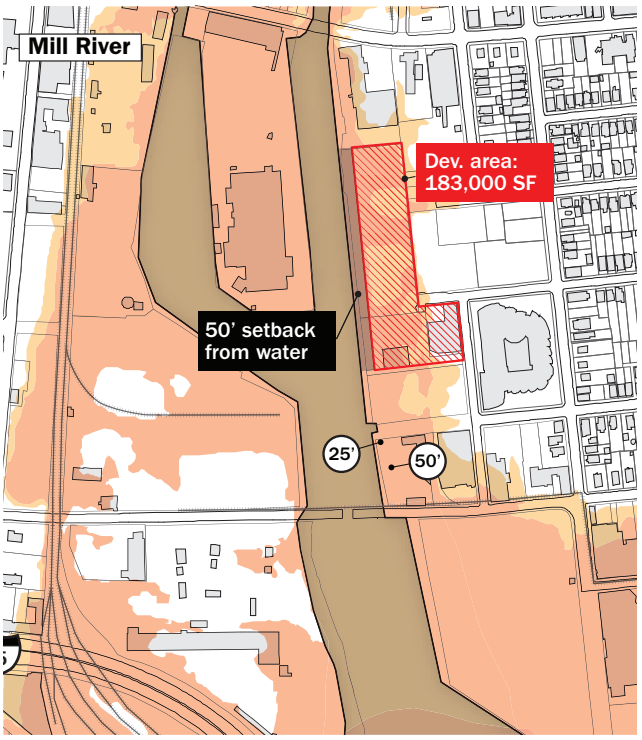


PDD and MDP

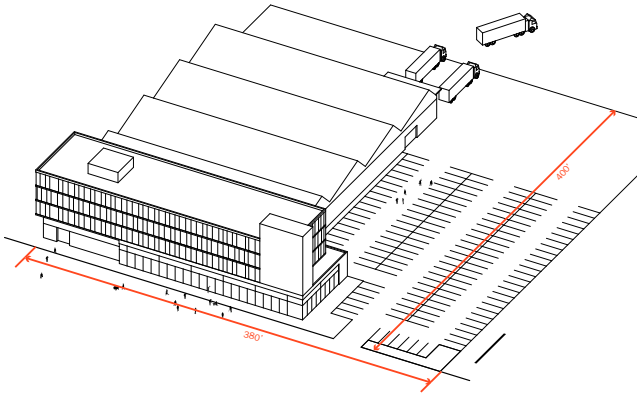
Farnam Courts is the only primarily residential development in the Mill River and will likely remain so for the foreseeable future. The Farnum Courts area may be subject to redevelopment over time. In anticipation of this, the City should create a Planned Development District (PDD) for the Farnam Courts area (including adjacent parcels) that takes into consideration appropriate buffering strategies, building design approaches, and related subjects to mitigate the impact of its location in an industrial district. *More information on redevelopment of Farnam Court can be found in the Test Fits Chapter.*

Also, the Mill River District was the site of a much smaller Municipal Development Plan (MDP) in 1987. This study looked at the area more broadly. Though a revised MDP boundary has not been ruled out, better understanding of potential funding opportunities should be explored before the decision to pursue an MDP.

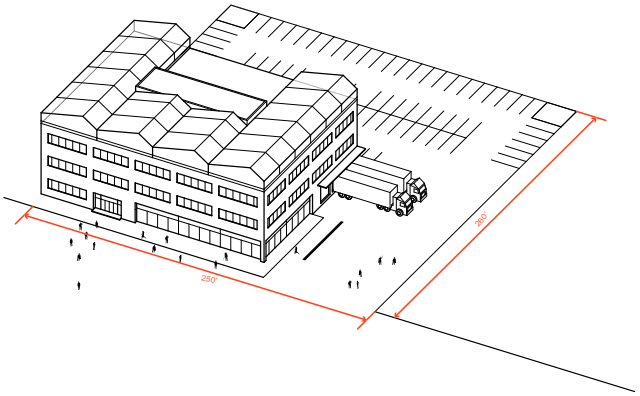
Additional development considered for PDA



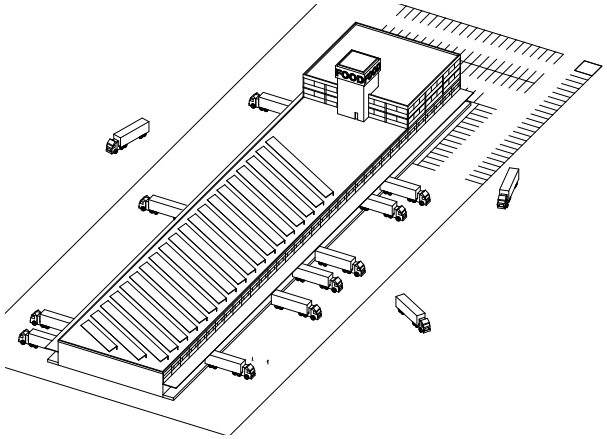
❶ Industrial/Commercial/Retail Hybrid



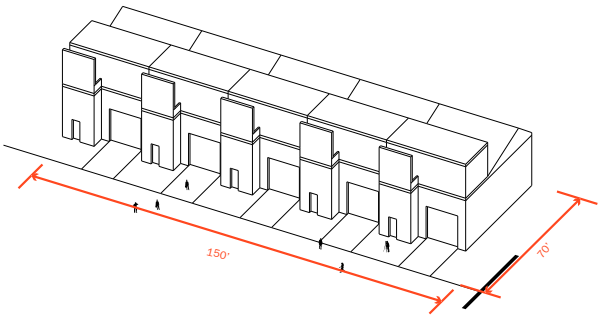
❷ Multistory/Multipurpose
Light Manufacturing Loft Building



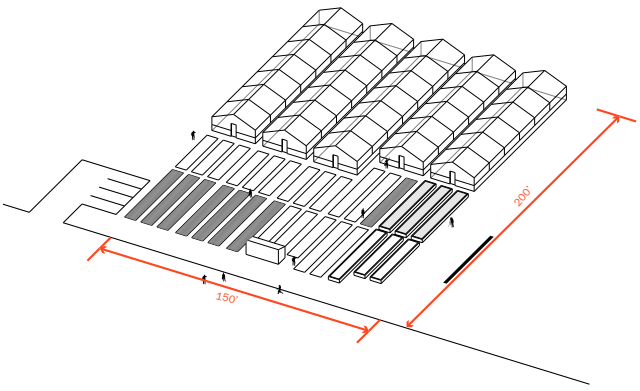
❸ Mercantile Food Hub



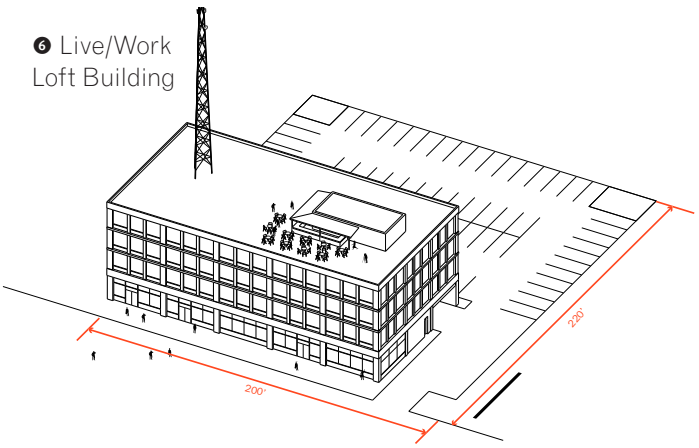
❹ Industrial Condo



❺ Urban Agriculture / Greenhouses



❻ Live/Work
Loft Building



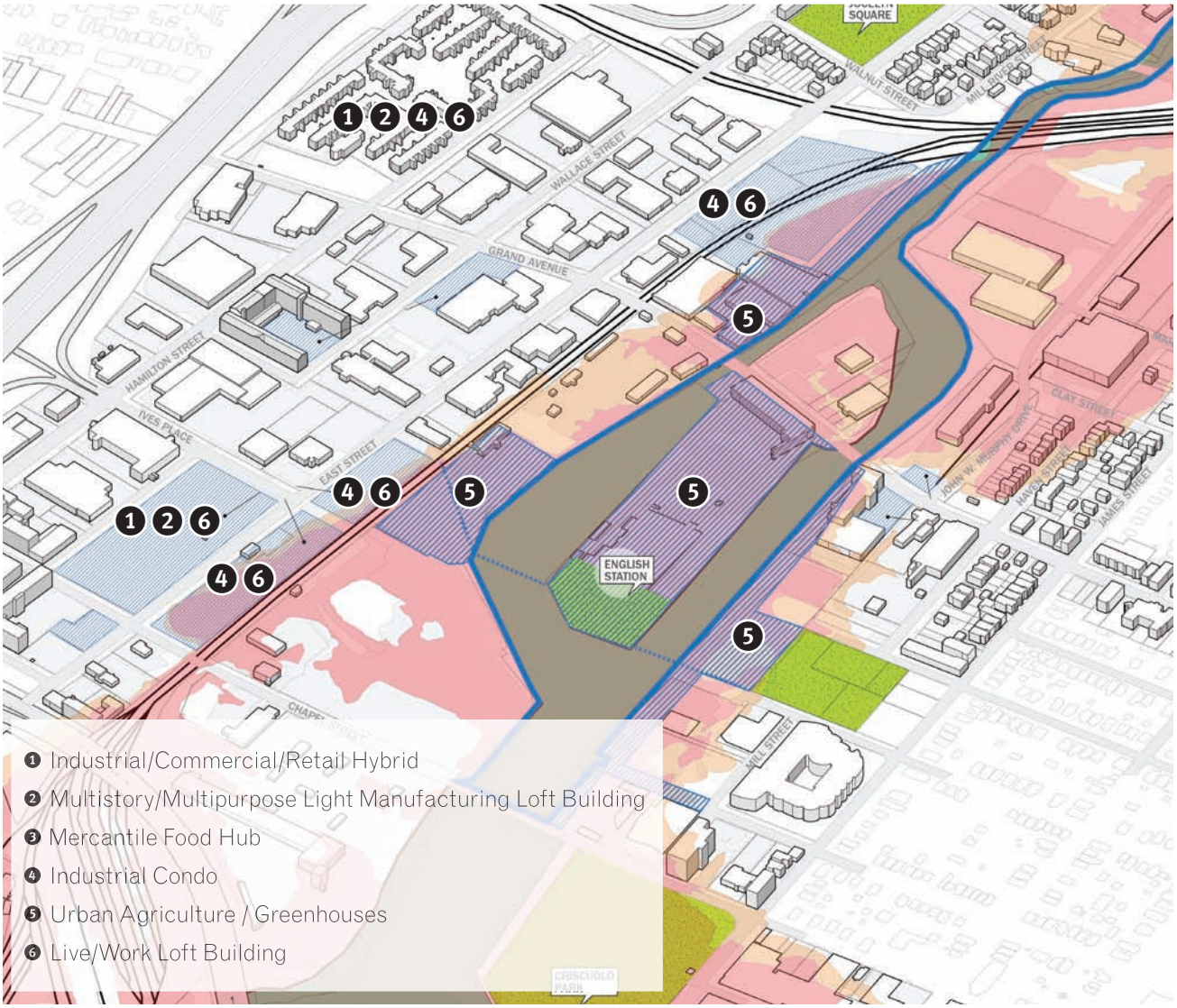
Building Type Matrix

The Mill River District's origins as an industrial district was coincident with the Federal Highway Administration's development of the interstate highway system. Many of the District's buildings date to the mid-century, when ease of highway access was paramount. Highway access is still critical for operations today; however, The existing building stock in Mill River is not appropriate for most kinds of contemporary manufacturing because a) the buildings are too small, b) the ceilings are too low, and/or c) the condition of the buildings requires a level of investment in excess of resulting value of the building and parcel. A new set of building typologies is needed to help meet the demands of contemporary businesses.

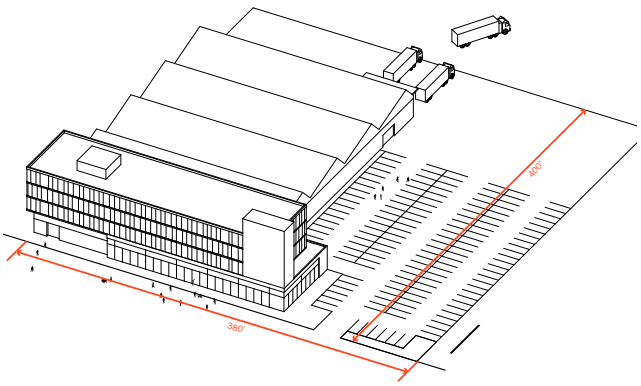
Overview

Given the unique mix of uses proposed for the Mill River District—from light industrial and precision manufacturing businesses to small-scale creative economy companies and live-work lofts—prototypical buildings were created to "plug into" the study area. Multiple prototypes were generated, as building requirements to support industrial and commercial activity vary significantly based on their functional needs, economics, and logistics. These prototypes take into account the required footprints, bay heights, and loading facilities, as well as other functional considerations. The prototypes enable test-fitting of a range of development scenarios on specific parcels. In addition, the catalogue of prototypes illustrates how a range of building configurations might aggregate. Importantly, the prototypes also suggest how the architectural character of the buildings, both individually and collectively, work together to create a coherent and compelling vision for a unique kind of urban district.

Potential Prototype Locations



❶ Industrial/Commercial/Retail Hybrid



Metrics	Light manufacturing: 50,000 SF, 24' clear ceiling minimum Wholesale/retail showroom up to 8,000 SF at most visible corner of the building, 20' floor-to-floor minimum Upper commercial floors 30,000 SF with a 13' floor-to-floor minimum (12' if cast-in-place concrete structure)
Signage / Branding	Taller element in the same corner as the showroom to create skyline variety and to provide a space for signs
People / Trucks / Cars	Truck Docks: 1 dock/15,000 SF = 4 docks Jobs: 1 job/2,000 SF for the ground floor (25 jobs), 1 job/500 SF above (60 jobs) Parking: 1 space/1,000 SF for light manufacturing (40 spaces), 1 space/400 SF for upper floor commercial (81 spaces), 1 space/500 SF for showroom retail (16 spaces)*

Designed for industrial areas with active through-district corridors, this prototype includes a large light manufacturing space on the ground level, up to 8,000 SF for an associated wholesale/retail showroom, and four levels of flexible leasable commercial space above. The companies in the upper floor spaces can be subtenants of the prime business leasing the ground floor spaces. The prototype is meant to encourage a broader mix of compatible uses on streets that are good candidates for relatively active pedestrian activity.

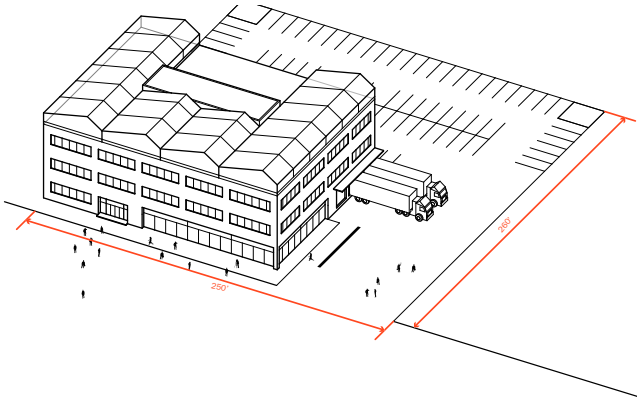
*Parking figures reflect reduced ratios based on shared parking management.

Precedents

Harpoon Brewery, South Boston, MA

Granville Island Brewery, Vancouver, BC

❷ Multistory/Multipurpose Light Manufacturing Loft Building *with optional greenhouses on roof*



Metrics	Light manufacturing: 20,000 SF per floor, 13' floor-to-floor minimum (12' if cast-in-place concrete structure) Wholesale/retail showroom, event space, restaurant/retail, and/or a shared fabrication shop on the ground floor (see Preferred Ground Floor Use Table), 18-20' floor-to-floor height
Signage/ Branding	Greenhouses are visible from ground level, creating a translucent crown for the building
People / Trucks / Cars	Truck Docks: 1 dock/15,000 SF = 4 docks Jobs: 1 job/1,000 SF for the ground floor (20 jobs), 1 job/750 SF above (53 jobs) Parking: 1 space/1,000 SF for light manufacturing (32 spaces), 1 space/500 SF (42 spaces)*

This multifloor light manufacturing and fabrication space has greater structural capacity than a typical commercial building. Because of the oversized freight elevator and the additional load capacity, an urban agricultural operation requiring greenhouses is recommended for the roof space. The ground floor can be associated wholesale/retail showroom, neighborhood amenity retail, and/or a restaurant.

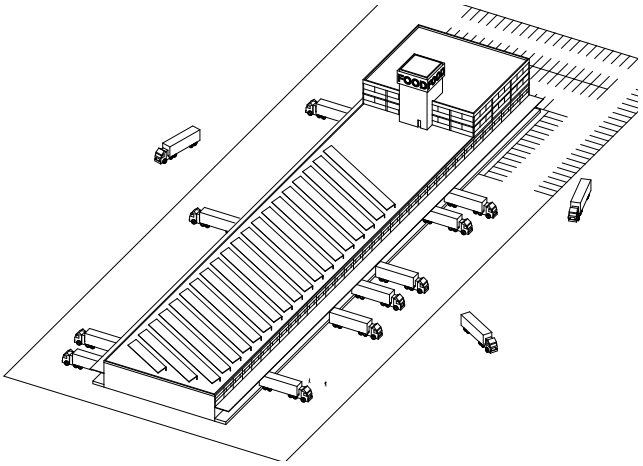
*Parking figures reflect reduced ratios based on shared parking management.

Precedents

Gotham Greens, Greenpoint, Brooklyn, NY

il laboratorio del gelato, New York, NY

❸ Mercantile Food Hub *with cold storage, docks, and food prep*



Metrics	The building depth is based on the existing New Haven Food Terminal with a total ground floor area of 80,000 SF. More than 50% of the floor area for laydown and pallets and 25% of the floor area for refrigeration. In addition to a partial second floor over the entire building footprint totaling 24,000 SF, there are two additional floors of office space at 12,500 SF. A 25-30' ceiling height is required
Signage / Branding	Office headhouse and associated sign is located to maximize visibility from the highway and minimize impacts on PV array.
People / Trucks / Cars	Truck Docks: 68 Jobs: 1 job/2,000 SF for the ground floor (40 jobs), 1 job/500 SF above (50 jobs) Parking: 1 space/2,500 SF for warehousing (25 spaces), 1 space/500 SF for general retail (42), 1 sapce/400 SF for office (64)*

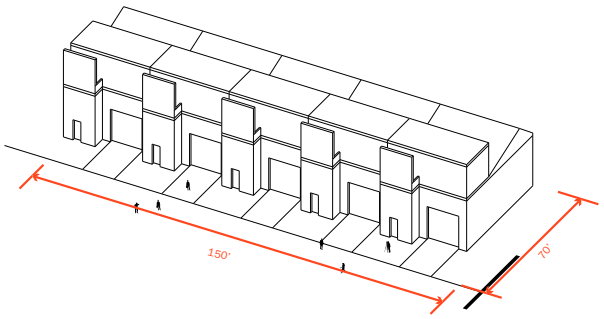
The Mercantile Food Hub was conceived as a replacement for the New Haven Food Terminal (if the existing Terminal is redeveloped for higher-and-better uses). The proposed facility includes shared cold storage, the infrastructure to support processing equipment, a second floor of office and storage space directly associated with the functions below, and a highly visible "headhouse" for additional small-scale office space. Given the scale of the lower roof, it is a good candidate for a PV array installed and managed by a third-party operator.

*Parking figures reflect reduced ratios based on shared parking management.

Precedents

Beecher's Handmade Cheese, New York, NY

❹ Industrial Condo



Metrics	5,000 SF/unit
Signage/ Branding	Each unit has a space for a company sign over the office door.
People / Trucks / Cars	Truck Docks: 1 each, double-sided Jobs: 2 jobs/unit Parking: 2/unit

*Parking figures reflect reduced ratios based on shared parking management.

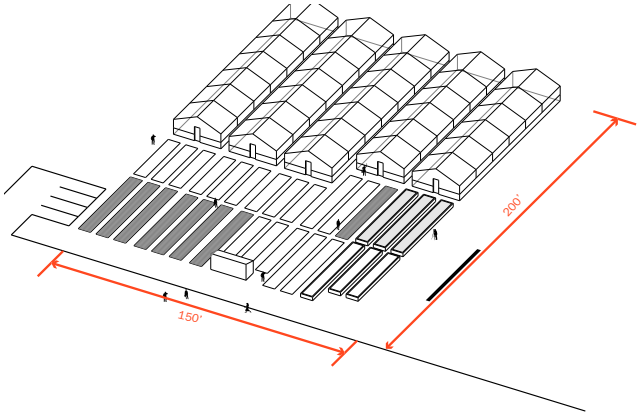
Single-bay industrial condos have been conceived for small business owners such as landscaping contractors and auto repair companies that require garage space for two vehicles (parked in a back-to-back tandem arrangement). The units have rolldown doors on both ends, allowing for vehicle access from either side. The units also include a ground-level office space, accessed through a separate door, with storage space above.

Precedents

Commercial Condos, Oakland, CA

Commercial Live|Work Condos, New Zealand

❺ Urban Agriculture / Greenhouses



Seasonal hoophouses and agricultural plots may be the highest and best use on parcels that fall within specific flood and storm surge zones.

Metrics	20,000 SF minimum area for greenhouses and outdoor cold frame and growing space
Signage/ Branding	Greenhouses and outdoor growing areas will contribute to the overall character of the district.
People / Trucks / Cars	Truck Docks: None, but truck staging area required Jobs: Variable, but assume 1 job/5,000 SF of greenhouse space and 1 job/10,000 SF of exterior growing space. Parking: 1 car/5,000 SF of greenhouse space (4 spaces)*

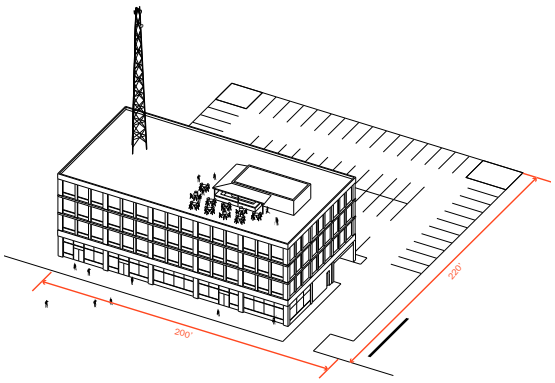
*Parking figures reflect reduced ratios based on shared parking management.

Precedents

Urban farm, Chicago, IL

Rooftop urban farm, Chicago, IL

❻ Live/Work Loft Building



Given the lack of viable candidates for live/work conversion in the Mill River District, a new ground-up loft building was conceived that would include the dimensions and attributes of a "perfect" rehab candidate. The building would include an oversized elevator and corridors, cast-in-place concrete floors, a social space on the roof, and a structurally expressive cell phone tower to contribute to the district skyline and provide a revenue stream for the building.

Metrics	Live/Work loft space: 80' plan depth (yielding 32' deep units), 18,000 SF/floor, 11' minimum ceiling heights; 18,000 SF ground floor general retail Assume 1,200 SF/unit Wholesale/retail showroom, event space, restaurant/retail, and/or a shared fabrication shop on the ground floor (see preferred Ground Floor Use Table), 18-20' floor-to-floor height
Signage/ Branding	Expressive cell phone tower, visible social space, and environmental super-graphics painted on the facade
People / Trucks / Cars	Truck Docks: 1 dock near freight elevator and to service ground level program Jobs: 1 job per live/work unit (45 jobs) and 1 job/400 SF on the ground level (45 jobs) Parking: 1.38 space/unit (51 spaces), 1 space/500 SF on the ground level (38 spaces)*

*Parking figures reflect reduced ratios based on shared parking management.

Precedents

Live|Work building, Emeryville, CA

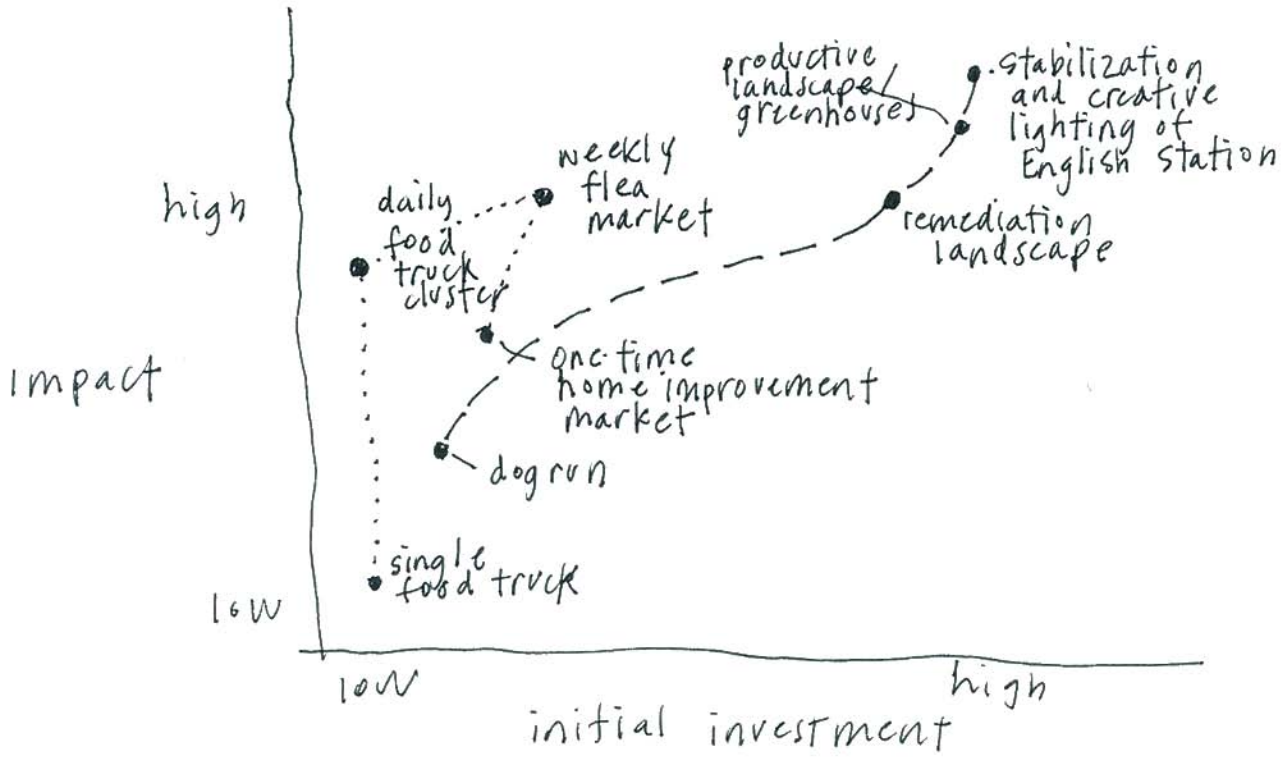
Live|Work building, Los Angeles, CA

Ground Floor Uses

can be included in the previous building prototypes

	General Information	Dimensional Criteria	People/ Jobs	Truck Docks	Candidate Sites
Tech Shop	Shared tech shop space, potential loading associated with retail and live-work on upper floors	20,000 SF	30	1 dock	Clock Tower, 510 Grand Avenue, Edsan Chemical
Shared manufacturing facility	Shared shop and manufacturing space with loading and small office space, tailored to "DIY" demographic	20k SF	30	2 docks	Clock Tower, 510 Grand Avenue, Edsan Chemical
Retail	Showroom for back-of-house warehouse or production facility, gourmet food showcase for gourmet producer	7,500 SF showroom (varies)	5	varies	Saint Gobain Site, Farnam Court Retail liner, 458 Grand Avenue
Restaurant	Destination restaurant associated with food producer, neighborhood amenity restaurant for worker population	5,000-7,000 SF	14	varies	458 Grand Avenue
Event space	Flexible space (with character)	2,500-7,000 SF	N/A	varies	Clock Tower, 510 Grand Avenue

Detailed parking information can be found in Chapter 6, Transportation.



Potential temporary and interim uses can be evaluated and prioritized by understanding the relationship between the initial capital investment and their economic, social, and physical impact. The relative difficulty of permitting and on-going management needs to be considered too.

Temporary Use Strategies

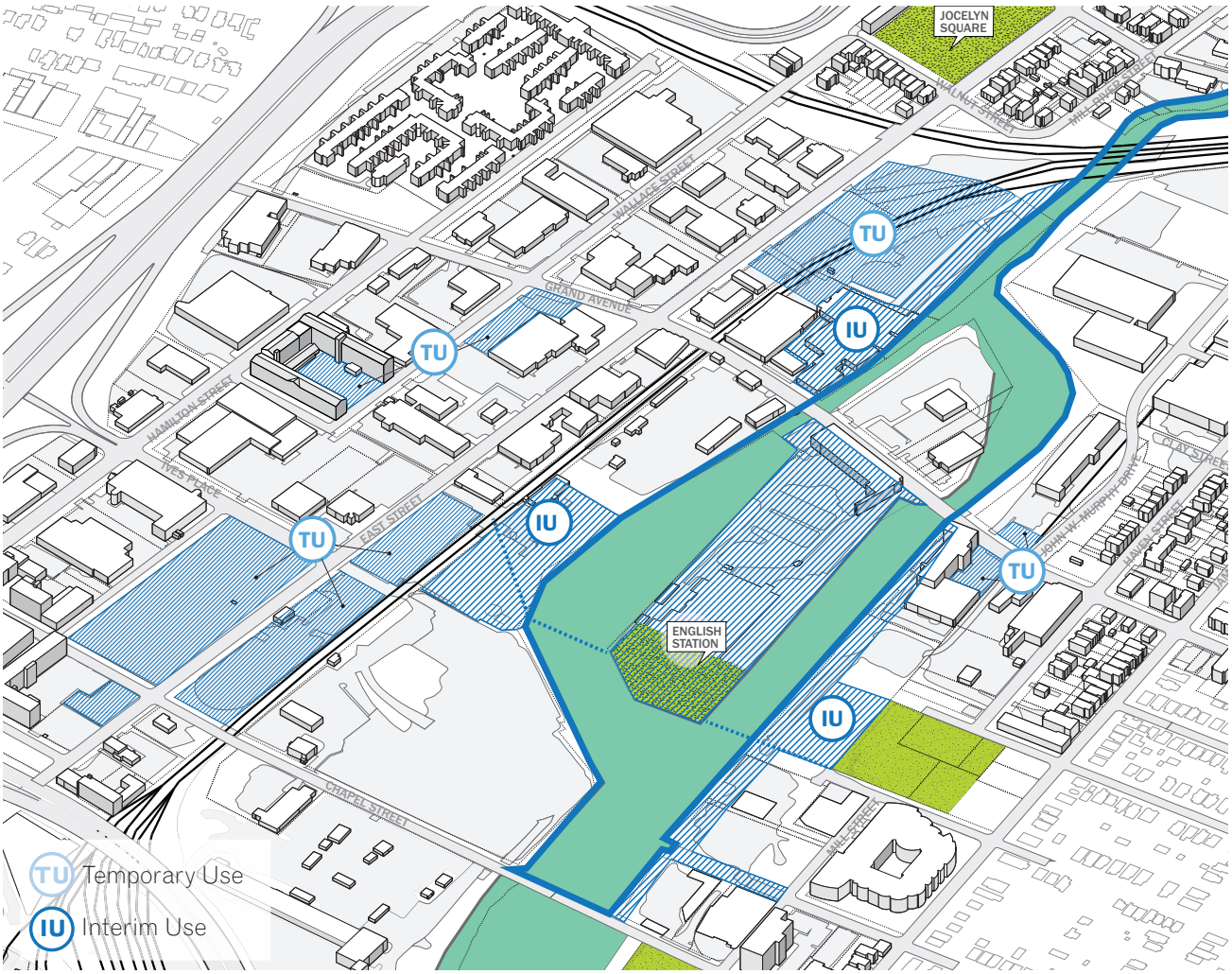
Well-conceived temporary and interim uses—strategically located throughout the Mill River District and coordinated by time of the day and season—can attract a new and diverse population to the District. Locating interim uses on parcels where there are short-term impediments to development can complement the development of other parcels (e.g., parcels that do not have flood hazards or contamination). Moreover, the buzz generated by creative programming can help market the District for more permanent development.

Overview

Temporary or interim uses help generate early activity in targeted areas and increase land value in the long term.

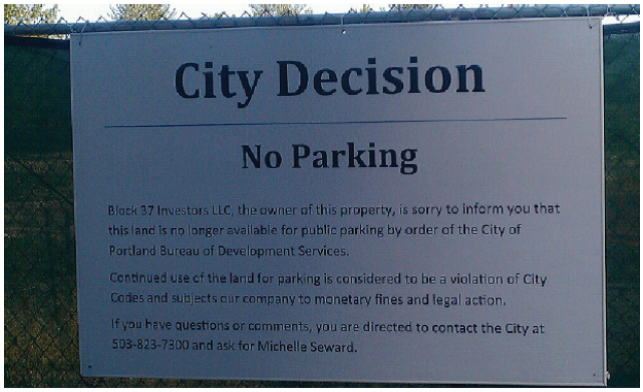
Several major sites in Mill River face significant financial challenges to their redevelopment. A key mechanism to increasing the land value of the area is to promote temporary and interim uses—generating local and regional interest in the District, momentum from early "wins," and increased pedestrian activity. Temporary uses, by definition, are short in duration and are often one-time events that help to bring activity to an area in a concentrated burst. Interim uses, by contrast, are longer in duration, and are perceived as more of an amenity over time. In addition, interim uses can serve to "test market" ideas and concepts prior to making major capital investments. For the Mill River District, a diverse mix of interim uses—including pop-up retail, open space/phytoremediation strategies, outdoor markets, and events—are recommended. Interim and temporary uses are particularly well-suited to areas of the Mill River District that are prone to flooding (seen in peach below). Strategically locating temporary uses inside the flood zones is a desirable strategy until land costs become more valuable and redevelopment is possible.

Possible Temporary and Interim Use Locations



Preempting Undesirable Temporary Uses

Unfortunately, the potential exists for undesirable temporary uses as these properties essentially become land banked while waiting for development opportunities. The City may want to be proactive and prohibit certain temporary uses—such as parking, scrap metal storage, and salt piles—that may hinder the development of the character and positioning described in this report for the Mill River District. The remainder of this chapter discusses temporary uses that will contribute to the regeneration and transformation potential of the Mill River District.



South Waterfront District, Portland, OR

Allens Avenue, Providence, RI

Salt piles, Troy, NY

Different sites lend themselves to a range of temporary use strategies, because of the site dimensions, flooding, and relative contamination of the ground. A diversity of programming also provides an excellent early test of the marketability of the District to different demographics.

Categories of Future Temporary Uses

Temporary

Entrepreneurs
Food Trucks

Non-profits
De-paving, Weed Bombing, Chair bombing

City-led
Flea/"makers"/food market
Home improvement market
Building salvage market
PV market
Cultural festivals
Food festivals
Solar Decathlon
Temporary art installations
Painted/graphic crosswalk

Interim

Entrepreneurs
Pop-up retail kiosks
PV array
Urban Farming
Greenhouses

Non-profits
Community farms and gardens
Dog runs
Fabrication and Tech shops

City-led
Remediation landscapes
Waterfront walkway networks
Stablizations of industrial ruin


JOCELYN SQUARE
TU
IU
TU
IU
ENGLISH STATION
IU
CRISCUOLO PARK
CHAPEL STREET
EAST STREET
WALNUT STREET
HUMPHREY STREET
MARKET STREET
CLAY STREET
W. MURPHY DRIVE
QUEEN STREET
JAMES STREET
RIVER STREET

Temporary

Food Trucks at City Hall Plaza, Boston, MA

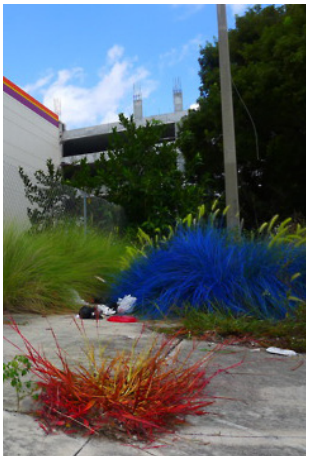
The Flower Truck, Los Angeles, CA

Le Fashion Truck, Los Angeles, CA

Entrepreneurs
Food Trucks

Food trucks have become a popular and low-cost strategy for activating underused public and private spaces. Given the relatively low density of existing lunchtime customers, early implementation of a food truck program should focus on special events that include a critical mass of vendors. These events should include picnic tables for on-site eating and associated programming such as live music. Ideally, food truck festivals would be timed with other weekend events in the city that draw a large number of out-of-town visitors, but not at precisely the same time as the competing events themselves. Once established, food trucks may prove viable as a more permanent feature of the Mill River District, particularly as part of open space programming, or marketed in such a way to appeal to local workers and residents from East Rock, Wooster Square, and Fair Haven.

Depaving *(top row): The Fargo Forest Garden in Portland Oregon, replaced 3,000 square feet of asphalt with a community garden.*



Weedbombing: *Weed bombs highlight disparities in where public and private maintenance dollars are spent; in Miami artists and activists "tag" giant weeds with outrageous day-glo shades of yellow, red, blue and orange; weed bomb just north of downtown Miami; weedbombing can make overgrowth look more like flowers (photo credits: Grant Stern and Kerry McLaney).*

Chair Bombing *(above row, right images): collecting discarded pallets; building chairs from pallets; chairs and astroturf; chairs placed in front of Brooklyn's Blue Bottle coffee (project|photo credits: Ted Ullrich and Aurash Khawarzad).*

Nonprofits
Depaving, Weed Bombing, Chair bombing

Community and arts nonprofits, as well as individuals, can organize quick beautification projects in the District. A community-focused event is depaving—a project that includes both the removal of derelict and underutilized parking lots by volunteers from nearby communities and the replacement of the asphalt with a low-maintenance landscape. Depaving events should include residents from both Fair Haven and East Rock—to help to build bridges between the neighborhoods. Weed bombing and chair bombing, both more guerilla-like interventions, are typically done by smaller artist-activist teams. All three strategies can generate buzz for the District.

Solar Decathlon, Washington D.C.

Bat-Yam Landscape Urbanism Biennale, Bat-Yam, Israel

Arts Installation

Bat-Yam Landscape Urbanism Biennale, Bat-Yam, Israel

City-led

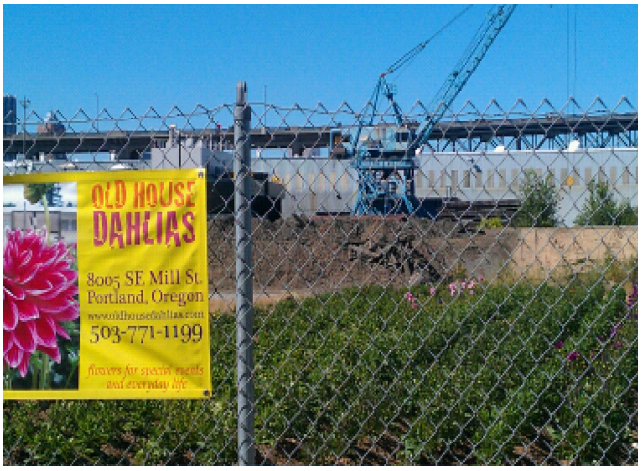
Flea market/food market
Home improvement market
Building salvage market
PV market
Cultural festivals
Food festivals
Solar Decathlon
Temporary art installations
Painted/graphic crosswalk

The City of New Haven can take the lead on a myriad of temporary use strategies, including a regular craft and/or farmers market, a building salvage or PV panel event, cultural festivals that include programming and food vendors, and temporary art installations. Given the proximity of the Yale School of Architecture, the City of New Haven should consider offering open space for temporary structures or other creative competitions.

Interim

Grow Bags

Rooftop Gardens



Old House Dahlias, Portland, Oregon

Moveable Type (printing press truck)

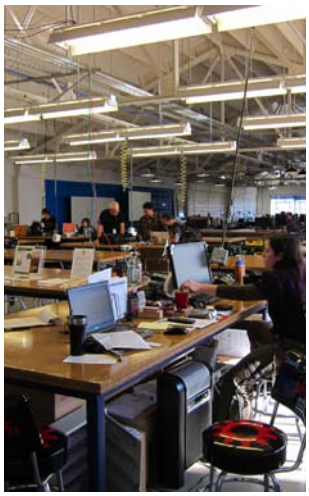
Entrepreneurs

Pop-up retail kiosks
PV array
Urban farming
Greenhouses

interim uses are relatively permanent installations that have lifespans of two-to-ten years or more, depending on development pressure caused by rising land values. For example, pop-up retail kiosks located along busy Grand Avenue would help to create an active street wall and provide amenities for residents and workers in advance of redevelopment of the parcels along the street. Urban agriculture and PV arrays may be an ideal uses for sites along East Street and the Mill River, given that insurance premiums necessitated by the location of parcels within the FEMA flood zone will preclude more intensive development until, and if, expensive infrastructure improvements are made to the sites.

Community Garden

Dog Run, Portland, Oregon



Tech Shop, Palo Alto, CA

Soma Chocolates, Toronto, Canada

Nonprofits

Community farms and gardens
Dog runs
Fabrication and tech shops

Interim uses can be conceived and managed by nonprofit groups. Community gardens and farms might be feasible, but the industrial history of the sites might require raised planting beds. A privately operated dog run may also be a good option, and may draw people from a larger area of the City, especially if it is large and well-managed. Inexpensive prefabricated industrial buildings can also be temporarily located on sites—perhaps housing a fabrication and tech shop that can be used by area businesses. A tech shop or other associated fabrication space might also be a good use for an existing building in the District.

Landschaftspark, Duisburg Nord, Germany

Landschaftspark, Duisburg Nord, Germany

Qiaoyuan Park, Tianjin, China

Qiaoyuan Park, Tianjin, China

City-led

Remediation landscapes
Waterfront walkway networks
Stablizations of industrial ruin

In advance of the investment by the City in public parks, lower cost landscape strategies can be implemented that provide public access and help stabilize and clean the soil. Walkways can be simple paths of decomposed granite, with new fencing keeping visitors from unsafe areas. In addition, industrial ruins like English Station can be stabilized and dramatically lit to create a visual focal point for the District.

Mill River District
Planning Study
New Haven, Connecticut












Test Fits

To better understand the development issues in the District, targeted development scenarios were tested on specific parcels. These test fits were either triggered by developer and business owner interests or the priorities of the EDC, City, and consultant team. The sites selected were the most promising in terms of location and availability, but often challenging in terms of economics, contamination, and the flood and insurance issues.

During the winter of 2010, tours and information interviews of Mill River businesses and properties were conducted to better understand the broad range of industrial activity in the District.

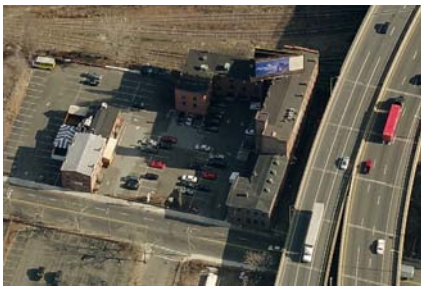
Overview

A range of options were explored for each site, and were analyzed both physically and financially, to understand the potential barriers to redevelopment. The alternatives allowed the team to examine key issues such as footprints, development feasibility, and transportation dynamics. As a result of the test fits, it became clear that many of the sites require careful site planning and design to accommodate the logistics of both existing and potential new businesses. Key insights gained by looking at the test-fit scenarios in aggregate include both a better understanding of the emerging overall vision for the Mill River District and the need to change zoning to incentivize the preferred alternatives.

After examining the development scenarios both on a site-by-site basis and in aggregate, it became clear that the City needs to play a major role to promote and incentivize redevelopment in the District. How the City chooses to engage private developers and businesses will depend on the nature of the opportunity and how much direct influence the City wishes to exercise on the development process.



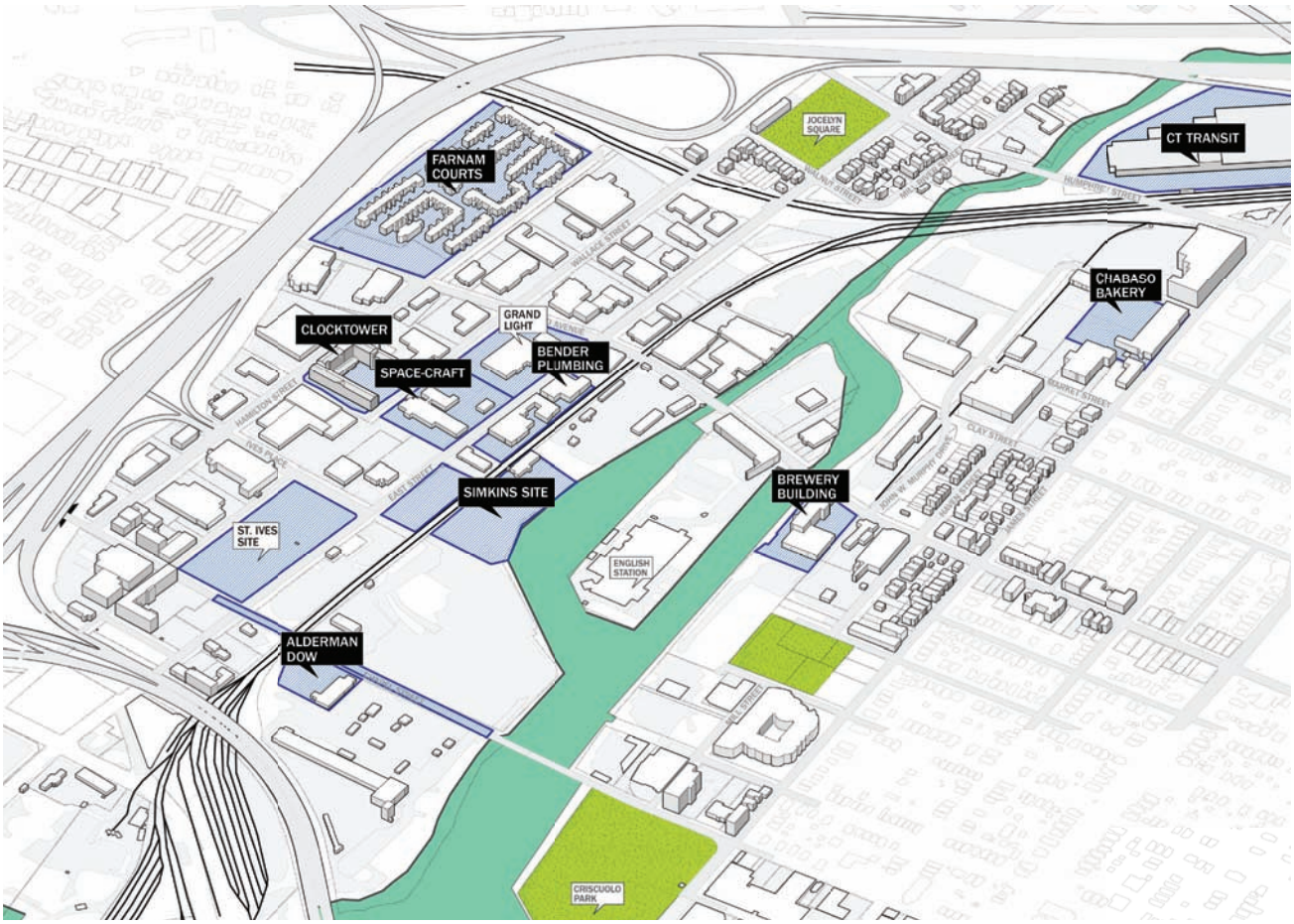



The Aggregation of Development Test-Fits

When considered in aggregate, the development test-fit scenarios suggest a vision for the Mill River District that includes intensified land use and a complementary mix of uses, and informs future infrastructure and transportation demands. In addition, the wide range of sites and businesses tested during the study helped frame the different roles the City can play to incentivize development.

Large-scale Industrial Signs
In order to communicate the mixed-use industrial character of the District, the planning team recommends that the New Haven Sign Code be revised to allow for large-scale illuminated signs within the Industrial Preservation Zone of the Mill River District. The new form-based sign code should spell out particular attributes of the signs including the provision for separate silhouetted letters and logos, levels of illumination, and allowances for digital signs (or not). Having these tied to a larger wayfinding strategy for both vehicles (private vehicles looking to park and trucks) and pedestrians is also an important consideration.



Potential locations for test-fits

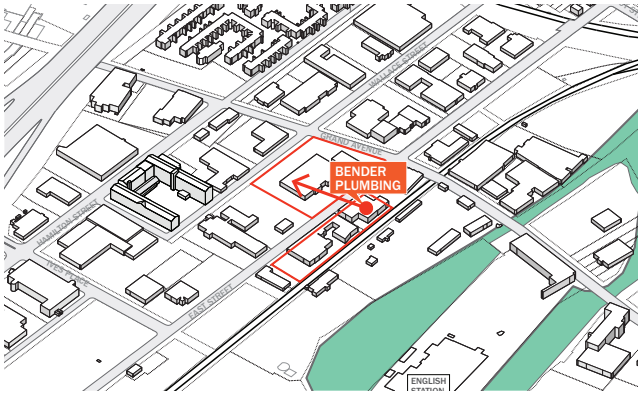
Bender Plumbing / Grand Light

Bender Plumbing, a regional retail/wholesale kitchen and bath supplier—with locations also in Hartford, Waterbury, Torrington, Bridgeport, Norwalk, and Wallingford—expressed a desire to move to a new location. This is driven partly by the need to invest in an upgrade of their Kohler showroom, a product line that represents 80% of their stock. In addition, Bender Plumbing and the City were both frustrated by the logistical challenges of their current Mill River District warehouse and showroom, which does not have dedicated off-street loading docks. As a result, the City asked the planning team to test a few nearby sites as possible relocation options.

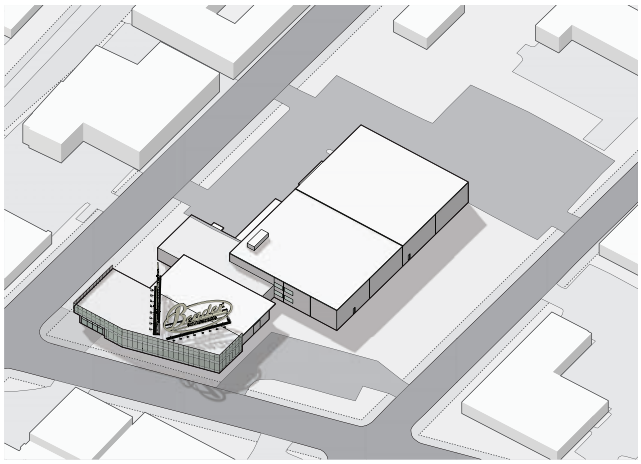
The first attempt was to test whether the business in the current Grand Light facility located across directly across East Street could accommodate Bender's needs. The Grand Light building and parcel were tested because Grand Light is now primarily an internet-focused business and therefore does not require as large a showroom or a customer parking area. In addition, the City and EDC were eager to promote businesses with a retail component along Grand Avenue—one of the tenets of the emerging plan.

To accommodate Bender Plumbing's need for a 15,000 SF showroom and to activate the sidewalk along Grand Avenue, a 7,500 SF addition was proposed, topped by a new sign visible from I-91. Industrial scale signage that identifies important businesses in the District is one of the overall recommendations of the plan. The existing Grand Light Building also includes on-site loading docks and an ample off-street parking lot for customers, two additional features not provided in their current facility.

- ~35,000 SF for distribution and storage
- ~15,000 SF product showroom
- ~ 2,500 SF of office space



Relocation of Bender to Grand Light



Bender Plumbing test fit with new showroom addition

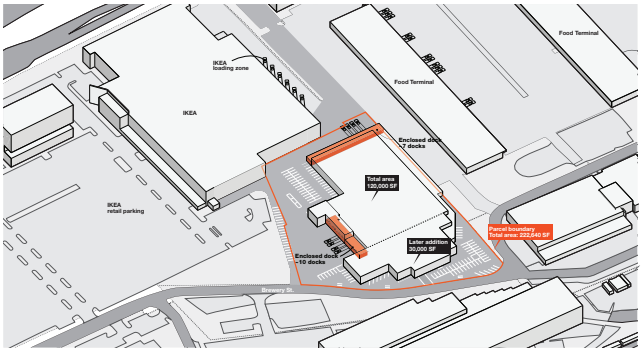
Bender Plumbing / Long Wharf

An existing 120,000 SF building, formerly housing CT Freezers, Inc., was tested as a possible new location for Bender Plumbing. The advantages of the site include its immediate adjacency to Ikea, which provides excellent visibility to home product customers from across the region and easy access and high visibility from I-95 and I-91. In addition, the infrastructure of the existing building includes 17 loading bays, high bay storage/ distribution space, office space, and the capacity for a product showroom.

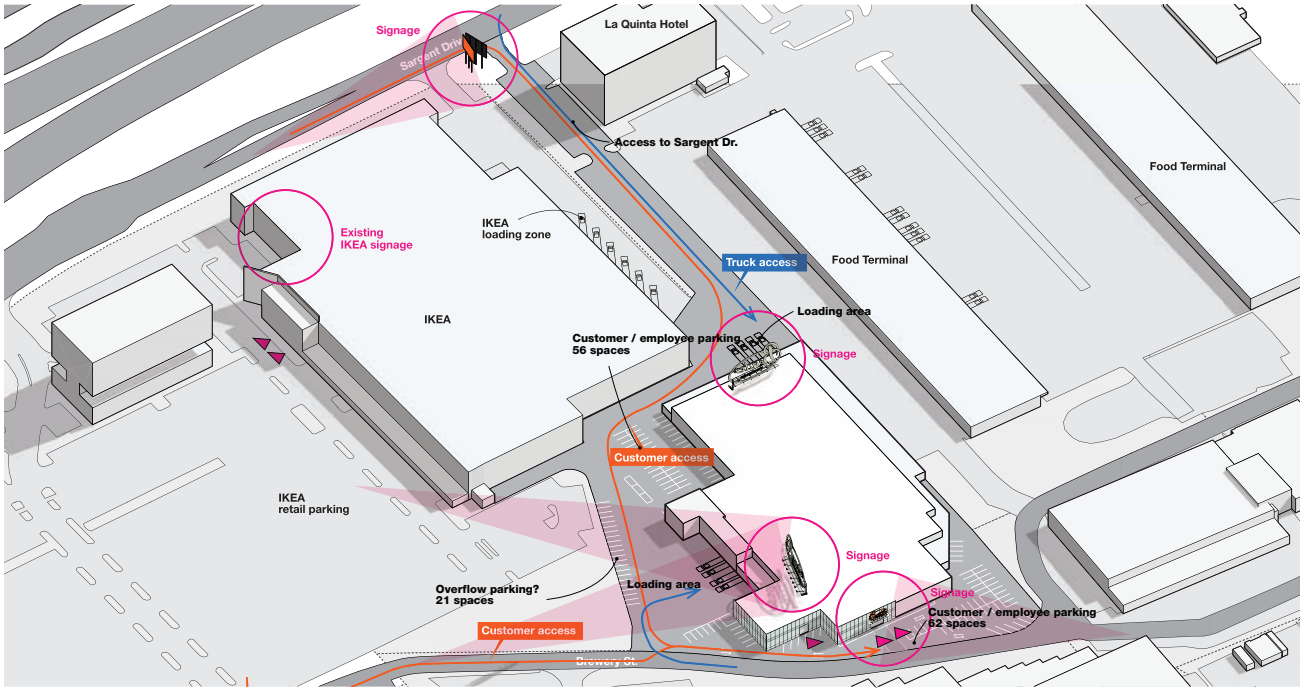
- 95,000 SF for distribution and storage space
- 16,000 SF product showroom
- 2,500 SF office space
- 10 loading bays
- 62 customer/employee parking
- Large-scale industrial signs visible from both Brewer St. and Sargent Dr., in accordance with the proposed industrial signage regulations

Note: As a direct result of this analysis, Bender decided to purchase the cold storage facility and relocate to this facility.

Cold storage facility located next to IKEA in Long Wharf



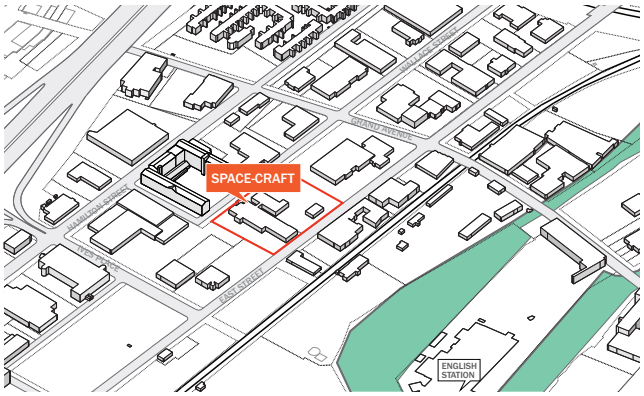
Bender Plumbing test fit in cold storage facility



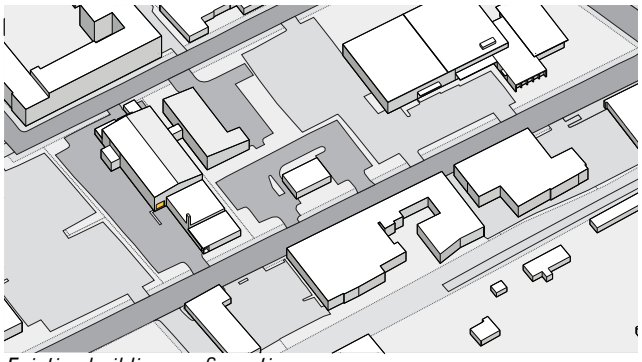
Space Craft

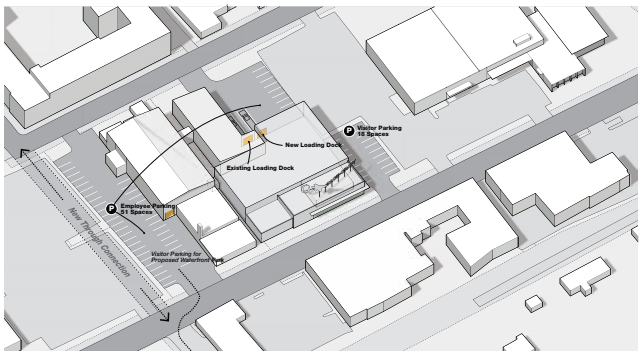
Space Craft, a manufacturer of high-precision aircraft parts, was eager to remain on their current parcel but needed to expand to remain competitive in their business; they also recently were awarded several large contracts that will require expansion in order to meet demand. The consultant team recommended a phased approach that would allow the company to maintain current operations during the construction of the expanded facilities. The plan demolishes an existing bank teller building located on their parcel, which is currently used as office space by the company. This plan was preferable to some of the other options the business was considering, as those would have required negotiations with adjacent property owners. Like the other development scenarios, the plan recommends a large-scale sign, visible from the surrounding highways. The proposed scenario includes the provision of visitor parking during the weekend and nonbusiness hours for the adjacent Simkins site, a parcel that has been recommended to be converted into public open space.

- → Current building is ~28,000 SF with 16,500 SF dedicated to manufacturing, 4,400 SF for warehouse/distribution, 2,100 SF for inspection, and 4,400 SF for office space
- → The planned addition is 22,000 SF and accommodates an expansion of all of the existing functions
- → The planned addition needs to maintain the functional relationships of the existing facility
- → Space Craft is currently not located in a HUB zone given the demographics of nearby Wooster Square, thus limiting potential federal funding sources for expansion



Location of Spacecraft on East Street

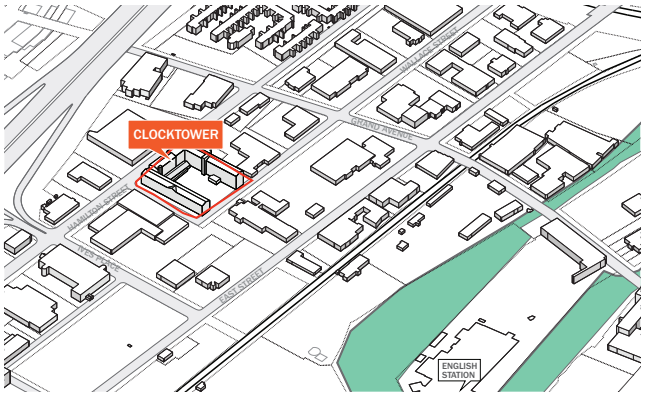

Existing building configuration



Proposed addition

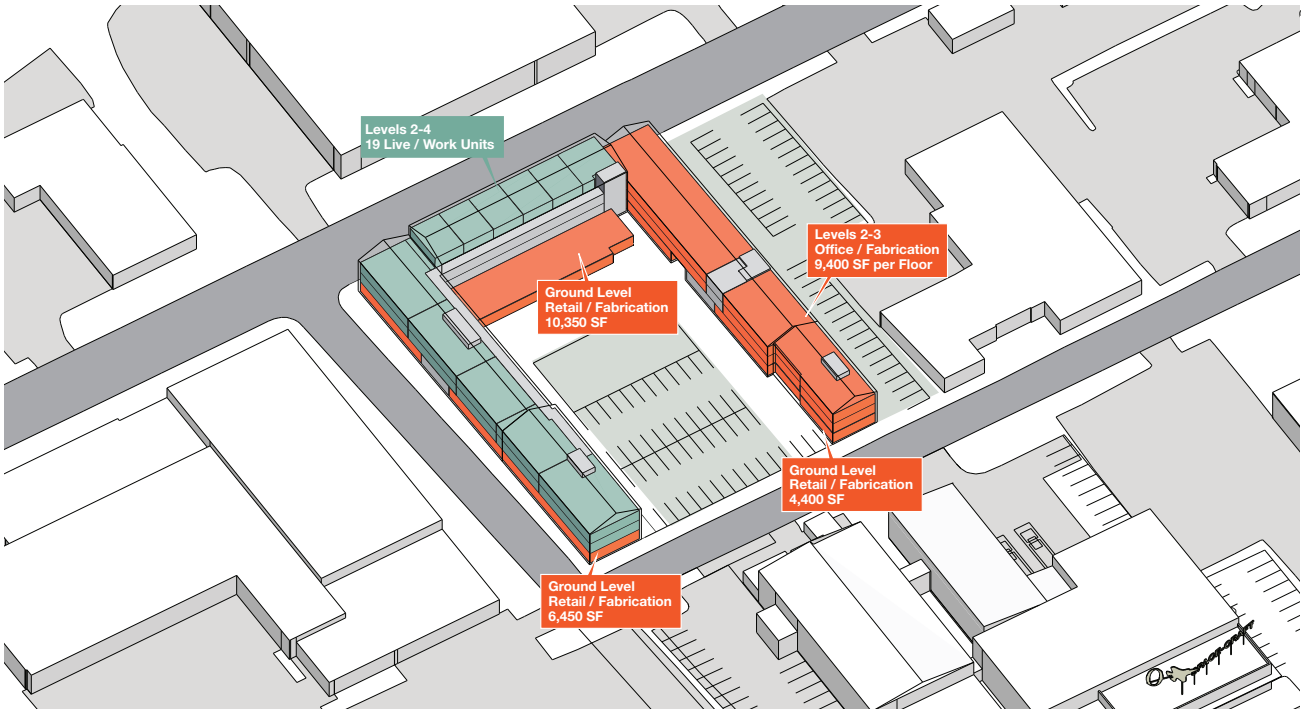
Clock Tower

The Clock Tower, a series of linked and partially abandoned early 20th century brick manufacturing buildings, represents the best opportunity for live-work loft conversion space in the District. The development scenario looked at opportunities for office space, live-work units, and smaller-scale studios. The chief driver of the study was the relatively narrow dimension of each of the wings of the existing buildings. An efficient vertical circulation and corridor system resulted in limited options for future plan layouts and unit sizes. The poor condition of the buildings means that public and foundation resources will be necessary to redevelop the building. The sole tenant—a popular strip club—is part of a larger existing "adult entertainment district" that the City hopes to eliminate as the larger Mill River District plan is implemented. This project is seen as a "catalytic project" for the district and integral to the development of the District as an industrial arts village. The ground-floor use might become an important amenity. For this scenario, a ground floor "tech shop" modeled on precedents from other cities was proposed. It could be adjacent to a large outdoor courtyard that can be shared with residents.



Location of the Clock Tower on Hamilton Street

- 90 parking spaces
- 21,000 SF ground-floor retail/fabrication space, divisible into units ranging from 2,000 to 6,000SF
- 18,800 SF upper-floor office/fabrication space, available as ~5,000 SF open-concept spaces
- 19 live-work units, ranging in size from 1,500 SF to 2,230 SF
- 5,000 SF courtyard space
- Opportunities for smaller scale retail to complement the tech shop

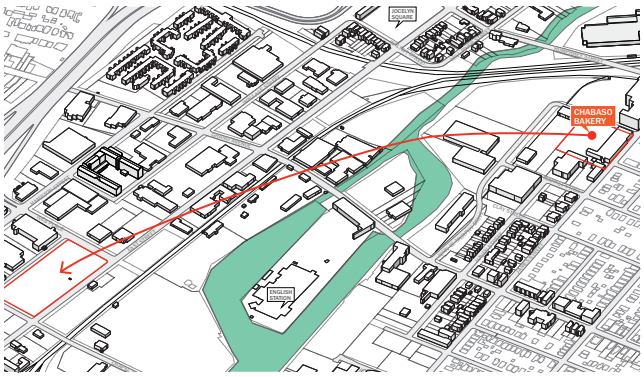


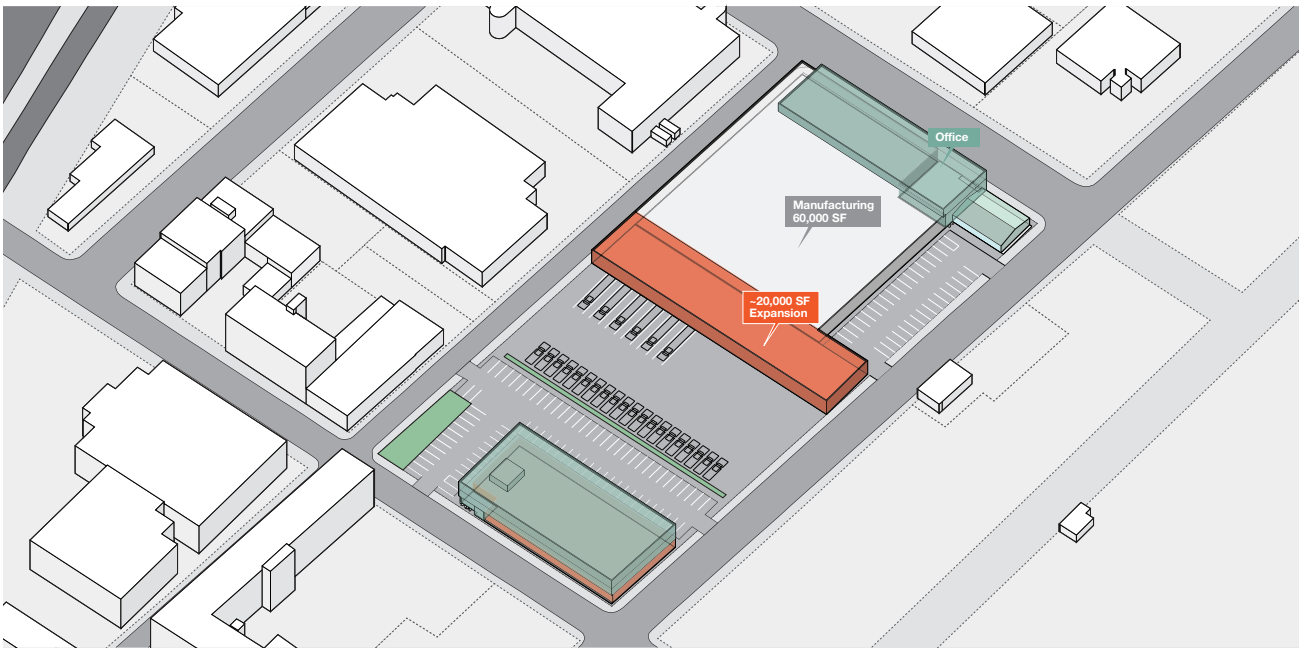
Chabaso

Like Space Craft and Bender Plumbing, Chabaso, a company that makes artisanal bread that is distributed throughout New England, is one of the leading businesses in the Mill River District. Although the company is currently investing $12-15 million in its existing 40,000 SF facility, located at the edge of the Fair Haven neighborhood on James Street, the company is in the early stages of exploring options for expanding by 20,000-40,000 SF. It needs the additional space to pursue new product lines such as gluten-free products and sliced bread. An initial site planning exercise revealed that this scale of expansion cannot be accommodated on Chabaso's existing parcel.

The planning team looked at the feasibility of moving the entire Chabaso facility—including projected expansion—to the St. Ives site at the corner of St. Ives and East Streets, approximately a half a mile away. The St. Ives site has several advantages to the business and City. First, the St. Ives site is current vacant and owned by a large REIT, making redevelopment relatively viable. Secondly, the St. Ives site has ideal highway access and is highly visible from both I-91 and I-95 making a new facility there—with district-appropriate large-scale signs—an excellent marker for the economic development priorities and character of the entire District.

- While the current facility has a small retail outlet, the new facility would not include retail
- Chabaso currently operates a small demonstration greenhouse on their parcel that they want to relocate and slightly enlarge on the new site
- The proposed new facility is 60,000 SF with the on-site capacity for 20,000 SF of additional space
- A quarter of the St. Ives site facing Chapel Street can be subdivided into a separate parcel for uses that are more appropriate for the Chapel Street corridor, including ground-level retail and upper-level loft commercial space. The test fit shows building with a 20,000 SF floorplate.





There are several additional sites in the Mill River District that are ripe for redevelopment or re-use.

259 East Street (Simkins site)

470 James Street (CT Transit Bus Depot)

1175 State Street (existing multi-tenant space)

555 Grand Avenue (former Saint Gobain site)

458 Grand Avenue (now The Powerhouse, a multi-tenant space)

436 East Street (former Edson Chemicals building)

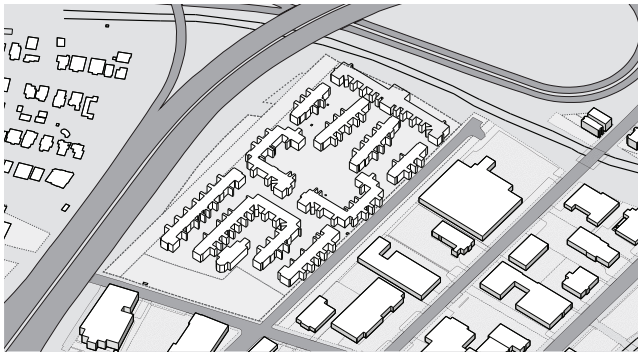
Farnam Courts

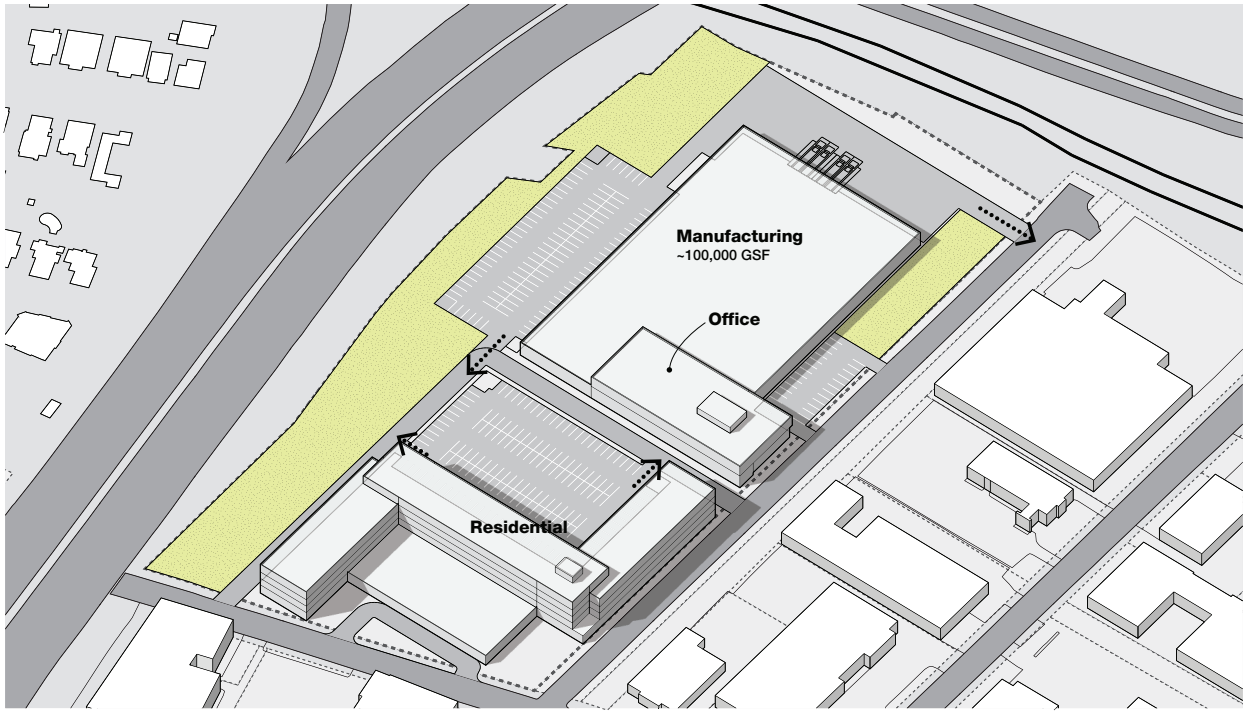
Farnam Courts is an isolated housing project adjacent to I-91. It represents a significant redevelopment opportunity for the District and the residents that live there. The consultant team was asked to test several redevelopment scenarios, including an all-commercial/industrial scheme and a scheme that included targeted replacement housing as part of a mixed-income residential program with reparcelization options that would facilitate new industrial development. Simultaneous to the consultant team's work, the New Haven Housing Authority worked to develop a comprehensive plan for Farnam Court that included a detailed unit relocation and replacement plan, engagement with a potential development partner, and a larger look at future housing sites along Grand Avenue, Chapel Street, and in the Fair Haven neighborhood.

Option 1: Residential + Large-Scale Manufacturing
- ➔ 130 residential units
- ➔ 25,000 SF retail space100,000 SF large-scale manufacturing space, with an associated 18,000 SF office space
- ➔ 300 parking spaces

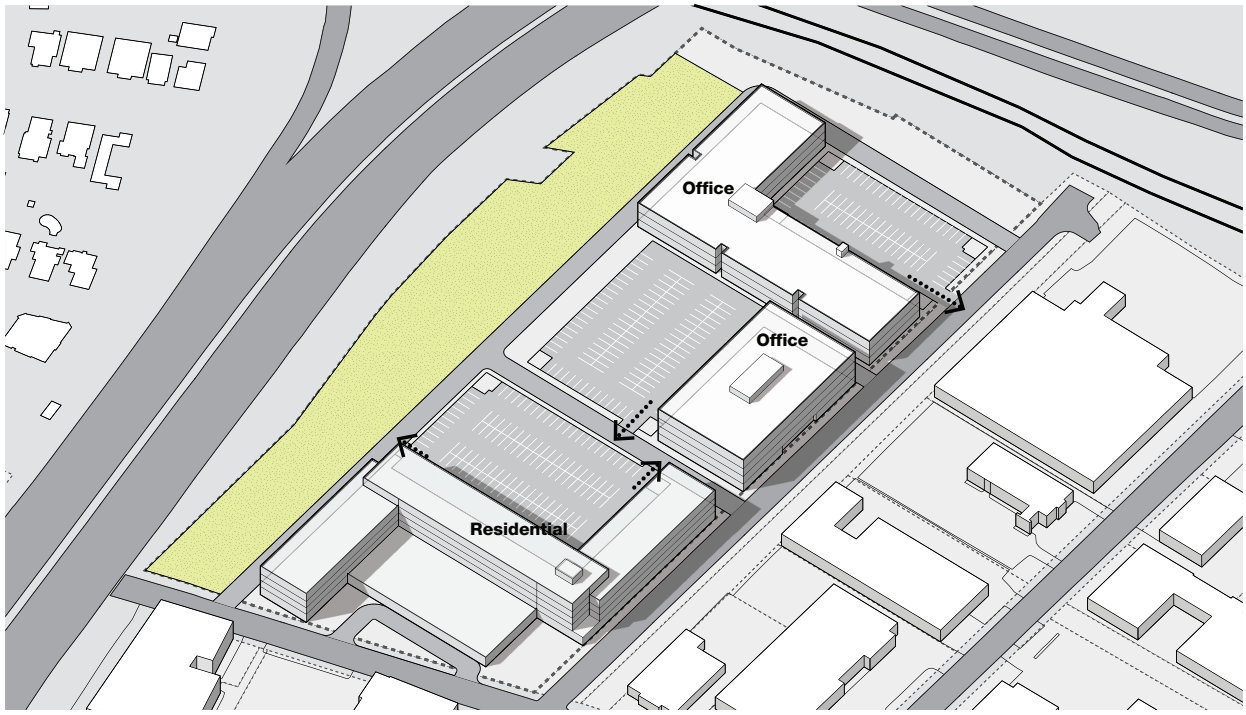
Option 2: Residential + Office
- ➔ 130 residential units
- ➔ 25,000 SF retail space
- ➔ 170,000 SF office space
- ➔ 370 parking spaces

Location of Farnam Court


Existing configuration of housing

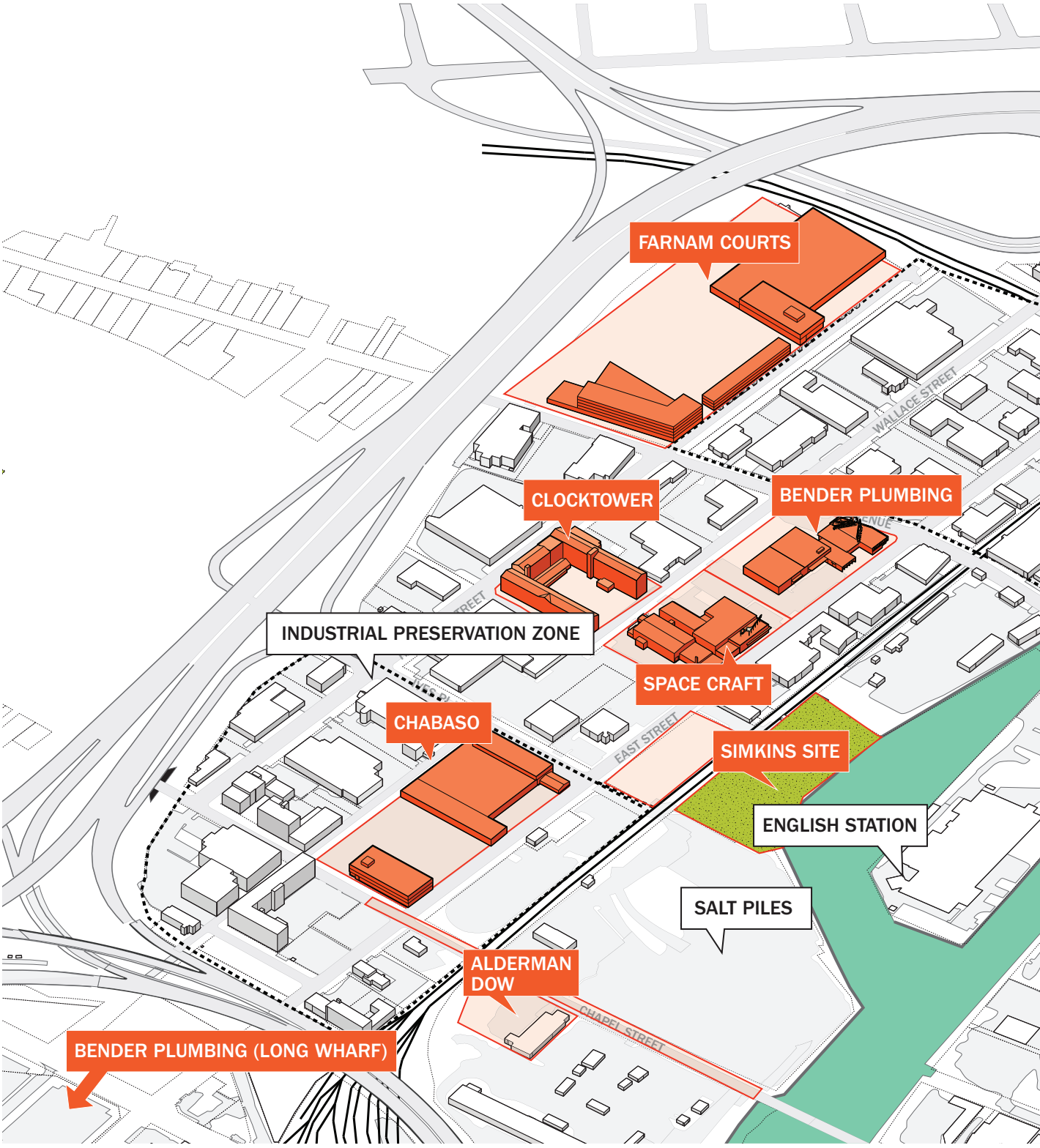


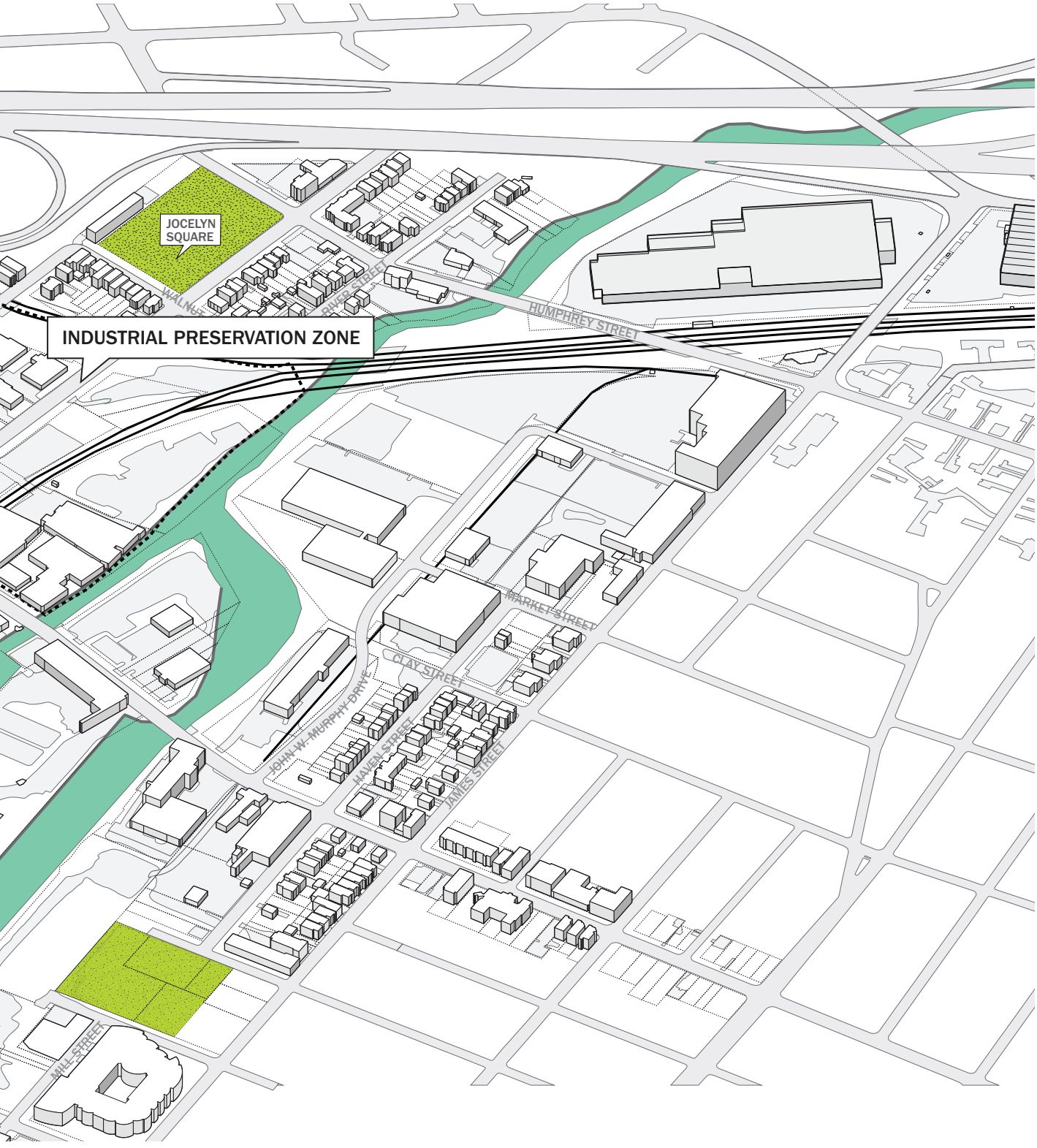
Option I : Mixed-use development on Grand Avenue with 100,000 SF industrial building at the rear of the site



Option II : Mixed-use development on Grand Avenue with two smaller office buildings at the rear of the site

A map of the locations of potential test fits in the Mill River District

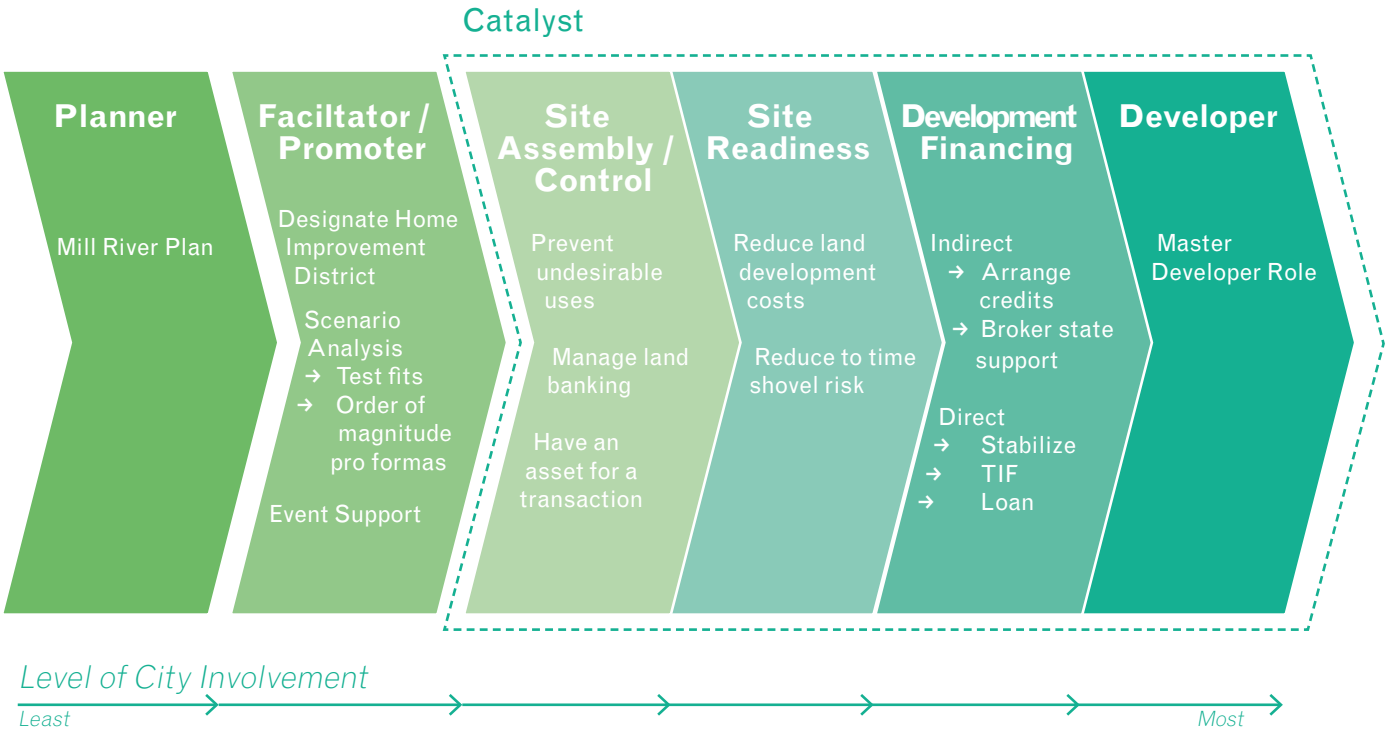



JOCELYN SQUARE
INDUSTRIAL PRESERVATION ZONE
HUMPHREY STREET
MARKET STREET
CLAY STREET
JOHN W. MURPHY DRIVE
HAVEN STREET
JAMES STREET
MILL STREET

Moving Forward

A coordinated plan for the Mill River District provides the City of New Haven with a vision and planning framework that can help steer appropriate development and businesses to the District and direct future City initiatives, including new zoning that encourages the recommended redevelopment, potential site acquisition, and infrastructure improvements. As the report makes clear, the Mill River District has several challenging parcels, because of site clean-up costs and/or their elevation relative to the flood plain. As a result, the City should also consider becoming a more active development partner.

Making Mill River Happen



Mill River District – How Does It Happen?

The Mill River District is a key piece of the City of New Haven's larger economic development strategy; how implementation is framed, phased, and financed is critical. The City can play two different roles, depending on the environmental condition of a potential development parcel, the financial capacity of a targeted business or developer, and/or the infrastructure requirements to retain or lure targeted businesses.

I. City as facilitator

With rare exceptions, companies currently located in the Mill River District have few internal resources to fund physical expansion of their operations. Rather than outright subsidy, many of these businesses can be best supported by the City and the EDC with technical assistance. The City and the EDC can serve as an "internal" consultant to both businesses already located in the District that need to expand and companies from other areas of New Haven and elsewhere that may be well-suited for the District.

The following services might be provided the City:

- Test potential development scenarios for specific sites and business requirements. This approach allows existing businesses to determine quickly whether expansion can take place on a prospective site. Development scenarios for new businesses can be one tool for attracting new businesses to the District.
- Create development pro formas to provide companies with order of magnitude estimates for development costs. This also helps the City identify the cost differential between a District site and a potential or already-identified suburban lease option.
- Identify potential sources of public funds to offset development costs.
- Provide assistance for tax credit, incentives, and/or low interest loan applications.

Another potential facilitation role for the City is to modify zoning to encourage innovative approaches to redevelopment of existing sites, specifically:

- Lot coverage requirements
- Parking requirements
- Allowable uses

Bldg Sq Ft	**10,000**	**22,000**	**20,000**	**80,000**
Land Acquisition	$-	$-	$100,000	$100,000
Development Costs (soft)	$120,000	$241,500	$260,000	$950,000
Development Costs (site)	$50,000	$50,000	$300,000	$300,000
Development Costs (Bldg)	$1,150,000	$2,365,000	$2,300,000	$9,200,000
shell	$625,000	$1,375,000	$1,400,000	$5,600,000
shell + fit out (no mfg equip)	$1,150,000	$2,365,000	$2,300,000	$9,200,000
Total Development Costs	**$1,320,000**	**$2,656,500**	**$2,860,000**	**$10,450,000**
Annual Amortization Cost	*$(95,540)*	*$(192,275)*	*$(214,966)*	*$(764,322)*
Annual Square Foot Pre Tax Carrying Cost	$10	$9	$11	$10
Annual NNN Lease @ $6.50	$65,000	$143,000	$130,000	$520,000
Differential before taxes	$30,540	$49,275	$84,966	$244,322

II. City as an active development partner

There are several sites in the District that may require more active city involvement, given specific redevelopment challenges and/or their strategic value to the District. These sites may have environmental clean-up requirements and/or may be situated within flood plain and storm surge zones thereby necessitating expensive mitigation strategies and high insurance costs. Sites that the City prioritizes may also serve as catalytic parcels whose redevelopment could set the tone and character of the Mill River District.

These parcels raise two important questions for the city to consider:

❶ Is taking site control in the interest of the City?
❷ Does the City have the capacity and desire to be a financial partner to help close the financial feasibility gap between a Mill River District site and suburban locations?

Site Control

Site control is a tool that should be considered to prevent undesired new uses on targeted parcels. Several Mill River District sites have the potential to be revenue generators as passive uses such as lay-down areas for the port, material storage yards, or for any other uses where open flat land is needed. While these are necessary uses in any city, the quality of the material being stored can be a visual blight, thus becoming an impediment to more ambitious redevelopment. Site control by the City would provide greater control over the destiny of these parcels.

The City might also consider acting as an active development partner to work with the owners to get parcels "shovel-ready" for development. Two steps are necessary to understand the technical challenges, the costs, and a potential implementation plan:

❶ *Environmental Analysis ("What's there and what needs to be done")*
→ Determine clean-up scope and costs (to make parcel development-ready)
→ Determine need for associated public infrastructure improvements

❷ *Costs and How to Finance It (to get it development-ready)*
→ Determine cost-sharing scope and financing (public/private phased site improvements)
→ Determine subsidies for clean-up

These are the necessary first steps regardless of whether the City owns the parcel or if it is under private ownership. However, depending on specific development dynamics and the timing of potential tenants, it may be in the best interest of the City to gain control of the property and more actively facilitate its clean up as an intermediate step, before transferring it to another potential owner. Whether this is the right course will depend on the risk tolerance of the potential tenant and their financial capacity.

Financial Partner

In addition to assisting private owners in obtaining state or federal money, it may be necessary for the City to be directly involved in the capitalization of development through two potential mechanisms:

→ Tax stabilization
→ Tax increment financing

Many of the potential tenants that may be interested in the Mill River District are likely to be smaller businesses with limited access to capital. Tax stabilization or tax increment financing techniques can effectively increase the capital capacity of these companies. It is important for the City to remember that the capital needs of an expansion are not typically limited to the

physical development, but may also include the acquisition of equipment or additional inventory to support the expansion. Therefore, helping a company preserve its own sources of capital can be critical for a successful expansion.

The City, through the EDC or the Redevelopment Authority, can also be an active financial partner with a business by acting as the principal developer for the land or a building. After development is complete, the City would lease the land and/or the core-and-shell to the company in question. Under this arrangement, the City or one of its development entities would be responsible for arranging and carrying the financing of the project. The lease agreement would cover the amortization costs.

The decision on how to best engage as a financial partner is centered on two questions:

- How expensive is it to close the urban/suburban gap and does the City's role as the developer / lessor make a project competitively feasible?
- Is the financial capacity of the targeted company a major impediment to choosing the Mill River District as a location?

Making Capital Investments

Over a five year period, the City should consider budgeting between up to $5 million to support the transportation and place-making aspects of the Mill River plan.

This could be structured as a "Mill River Fund" to support infrastructure improvements, brownfield remediation, and façade and aesthetic enhancements as a match to leverage private capital investments in the district.

In addition, the City should work with existing landowners, Connecticut DEEP, and federal agencies on implementing a storm resiliency strategy for the District. Specifically, grants should be sought to support phytoremediation and enhanced flood capacity efforts. A wide range of potential implementation projects are listed below along with a budget range and a relative schedule for implementation.

Action	Cost	Relative Time to Implement
Select Pedestrian Improvements Curb extensions, curb ramps, signal indications	$70,000 - $85,000	
Grand/Hamilton/East Landscape and sidewalk improvements	$425,000 - $450,000	
Branding and Wayfinding Street signs Large-scale signs	$12,000 - $20,000	
Parking Striping for street parking, shared lots and biking	$12,500 - $17,500	
Haul Road and Service Street (Wallace Street) New pavement and markings	$ 300,000 - $350,000	
Interim and Permanent Landscapes After site prep for installation of surface and initial planting	$5-15/sq ft	
Programming Events and Temporary Uses	$ 0-5/sq. ft	
Land Acquisitions and Site Readiness	$ 5-15/sq. ft	To be determined
Storm Surge and Stormwater Solutions Storm surge solution can be accommodated with grading or infrastructure	$ 40-400/sq. ft	

Prioritizing Next Steps

Implementation of this plan needs to be structured by an understanding of key development dynamics.

The City should determine the critical path for implementing the Mill River District plan by balancing efforts that indirectly influence positive redevelopment, such as zoning with actions, like site acquisition and infrastructure improvements that have a more direct impact. Success of implementation will also depend on the overall health of the economy, over which the City has little control. As a result, the City will need to carefully manage expectations at the same time that it is marketing both the vision and details of the plan. In addition, infrastructure spending should be phased and targeted to maximize private investment based on real-time market cycles.

Another critical implementation strategy is to integrate the City's placemaking efforts with the investment activities of major stakeholders (employers, landowners, developers and nearby residents). The City should host a follow-up work session with these groups to prioritize public investments.

A "Priority Setting Matrix" is one potential tool for facilitating discussions with stakeholders.

June 2013

Prepared by Utile, Inc. and Ninigret Partners for

Mayor John DeStefano, Jr.

City of New Haven
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