INDIA BASIN

Design Standards and Guidelines

6 July 2018

View of Downtown from Site

INDIA BASIN

Historical Map of San Francisco (1895)

Preface

The India Basin Design Standards and Guidelines (DSG) provide a comprehensive framework for the transformation of the project site into a human-scaled, socially vibrant, amenity-rich, active and distinctive San Francisco neighborhood. This document represents the project sponsors' and community's collective values and aspirations for urban development. Explicit, actionable, site-specific improvements will leverage public and private investments to advance design vision. The DSG, in concert with associated project documents, comprise the regulatory construct for project implementation. The family of project documents includes:

- Environmental Impact Report (EIR) – fulfills project approval requirements with respect to the California Environmental Quality Act (CEQA), including the documentation of anticipated impacts and the identification of appropriate mitigation measures.

- Design Standards and Guidelines (DSG) – describes the project vision and conceptual framework for proposed improvements, and elaborates development controls for the open space and public realm, district sustainability, land use, urban form, architecture, wayfinding, and signage. Each reference in these Design Standards and Guidelines to the Planning Code or a specific section thereof shall mean the Planning Code in effect as of the date of the Development Agreement, except as otherwise set forth in the Development Agreement. For the purposes of this document, the terms 'Standards,' 'Guidelines,' and 'Goals' are understood to mean the following:

  Standards Mandatory, objective, and quantifiable specifications or other requirements applicable to the Project. Modifications to Standards require formal approval by the Planning Commission.

  Guidelines Specifications or requirements that are inherently subjective and therefore require discretionary interpretation by the Planning Department Staff. Guidelines differ from Standards in that variation from them does not require formal modification by the Planning Commission. Compliance may be evaluated, and guidelines amended or waived administratively, by Planning Staff.

  Goals Specifications or components of the project that the sponsors will pursue if financially feasible. Goals are ultimately non-binding and are aspirational.

- Infrastructure Plan – defines the infrastructure required to support implementation of the project.

- Shoreline Permit Application – details the specific improvements within the shoreline sub-area of the project including access, recreation, habitat, planting, materials, and adaptation elements submitted to agencies having jurisdiction.

- Special Use District – details the location, boundary, and conditions of the district to ensure the orderly, efficient, and effective development of the India Basin Plan Area.

- Development Agreement – details the terms of agreement between the project sponsor and the City and County of San Francisco for development in compliance with these Design Standards and Guidelines and with applicable regulatory statutes.

The vision for India Basin has been developed through a collaborative process, with input from community members, local agencies and departments, public advocacy organizations, and design and engineering experts. The Design Standards and Guidelines are a mechanism to realize this vision, building on substantial prior and parallel planning efforts including the India Basin Transportation Action Plan, the India Basin Waterfront Parks and Trails Vision Plan, the Blue Greenway Plan, the India Basin Shoreline Subarea Plan, and the India Basin Neighborhood Association's Shoreline Community Vision, among others.

User Guide

CHAPTER NUMBER

CHAPTER TITLE

Land Use

Chapter 04: Land Use

San Francisco is a city of vibrant mixed-use neighborhoods. Most neighborhoods in San Francisco offer residents a variety of services and amenities with a comfortable, attractive pedestrian environment and convenient access via public transit. The land use standards and guidelines detailed in the following pages support the goal of creating a vital, distinctive, and walkable neighborhood.

In order to create a complete neighborhood, India Basin includes allowance for a variety of social amenities and services including a grocery store, a school, small scale retail and commercial spaces, and food and beverage options, in addition to a spacious public park with recreational facilities and waterfront access. A public market is the centerpiece of the neighborhood with the flexibility to accommodate a range of social activities including: farmers and craft markets, music and art festivals and large community gatherings. The land use strategy for India Basin focuses social interaction along main routes and around key open spaces. Within a comfortable walking distance for all residents, these spaces encourage neighbors and visitors to engage with and inhabit the public realm, experience the San Francisco Bay ecosystem, and enjoy community-serving amenities and services without needing to use a car.

India Basin Design Standards and Guidelines 227

CHAPTER SECTIONS

CHAPTER INTRODUCTION

SECTION NUMBER AND TITLE

INTRODUCTION

Description of rationale and intents

STANDARDS AND GUIDELINES

As Defined On Page i

FIGURES

Indicate the locations specified in the standards and guidelines, and illustrations that exemplify a range of means by which one might achieve the standards and guidelines

4.7 Loading

Loading

Adequate loading spaces and facilities are necessary to the operation of a complete neighborhood. India Basin will accommodate loading in a seamless, space-efficient manner that services its range of programs effectively while upholding the pedestrian-focused design of the neighborhood.

Standards

4.7.1 Shared Loading Spaces Loading spaces shall be shared across uses and may not be assigned to any particular use or tenant.

4.7.2 Off-Street Loading Space Quantities Off-street loading spaces shall be provided in the quantities specified on "Table 24. Required Loading Space Table" and allocated as shown in Figure 4-9. These quantities are required amounts and providing either less or more than the specified amounts shall require an Active Loading Management Plan as outlined in Standard 4.7.7.

4.7.3 Off-Street Loading Locations Off-street loading spaces shall be located in the same project sub area (Hillside, Cove, and Flats) as the uses they serve.

4.7.4 Loading Entry/Exit Locations Loading entries shall comply with 4.6.5, 4.6.6, and 4.6.9 of these Design Standards and Guidelines.

4.7.5 Subterranean Loading Where subterranean service delivery loading is provided, the loading space shall be located no lower than the first subterranean level. The first subterranean level is defined as one story below the point of entry at grade.

4.7.6 Public Market Vehicular Access and Loading There shall be a vehicular loading access route to the Public Market where shown on Figure 4-9 at the raised table top intersection of Arelious Walker and New Hudson. Public Market loading shall be limited to loading related to the permitted and conditional Public Market uses as outlined on Table 23 and Chapter 4 of these Design Standards and Guidelines.

4.7.7 Active Loading Management Plan Exceptions to the specified loading space quantities shown on Table 24 and or modifications to Standards and Guidelines 4.7.1-4.7.11 and 4.7.8-4.7.11 shall require the submittal of an Active Loading Management Plan by the project sponsor to the Planning Department and SFMTA for their review and approval. The Active Loading Management Plan shall, at a minimum:

a) Indicate location of loading spaces.

b) Coordinate loading hours of joint use.

c) Satisfy the loading demands equal to or better than the Standards and Guidelines.

Guidelines

4.7.8 Loading Access Points To minimize conflicts with pedestrians and bicyclists, the number of loading access points per building shall be kept to a minimum.

4.7.9 Pedestrian Right-of-Way Pedestrian movement shall be prioritized at curb cuts through the use of a continuous material treatment.

4.7.10 Exterior Loading Docks Exterior loading docks shall be prohibited.

4.7.11 Waste Collection Exterior waste collection shall be prohibited.

	Off-Street Loading Spaces	On-Street Loading Spaces	Total
Cove	5	9	14
Hillside	7	9	16
Flats	2	2	4
Total	14	20	34

Table 24. Required Loading Space Table

Table Number and Name

Figure Number, Name, Legend, and Scale

Project Vision

The India Basin project reimagines urban life as integral with nature, creating a connected, complete, and human-scale urban village that contributes to the surrounding community and ecosystem.

In a once-isolated corner of San Francisco lies a quiet outcrop of overgrown and tranquil land, with lingering traces of an older age of craftsmanship. These reclaimed tidal flats are on the edge between wild, natural terrain and urban life; a perfect juxtaposition of both the city's past and its future. This is India Basin.

The India Basin redevelopment project presents an unparalleled vision for that future. The transformation of primarily vacant land through this multiphase, mixed-use development will create a uniquely pedestrian-first, human-scale neighborhood where amenities are accessible with a short walk. It reimagines urban life as integral with nature, creating a connected, complete, and human-scale urban village that contributes to the surrounding community and ecosystem. More than a development venture or park expansion, this innovative Public-Private Partnership advances the City's and community's aspirations for housing, jobs, shoreline adaptation, waterfront access, essential recreation space and vital community services.

Design for the India Basin project—and development of these Design Standards and Guidelines—has been guided by the principles listed on the following pages.

Guiding Principles

Complete the Neighborhood

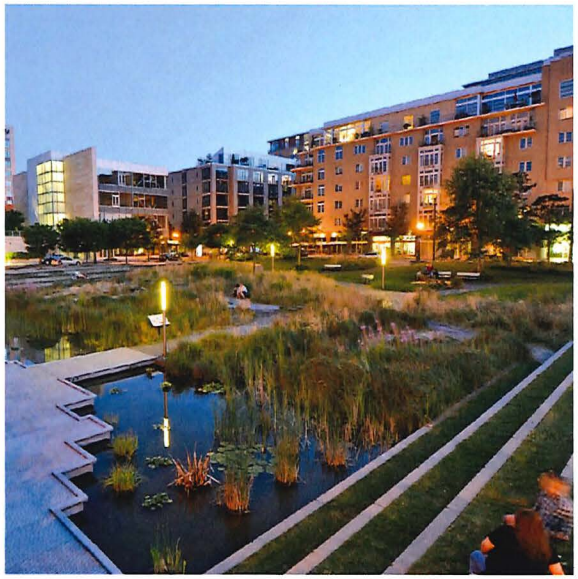
At present, the India Basin community lacks many of the basic amenities found in San Francisco's more walkable neighborhoods. Evidence suggests increases in exercise and a reduction in pollution can be the results of access to amenities within walking or biking distance in a neighborhood. India Basin augments the existing neighborhood by adding a wide range of public services, retail businesses, and recreation options so the surrounding community can meet basic needs. Housing, transportation options, and access to open space are expanded as well.

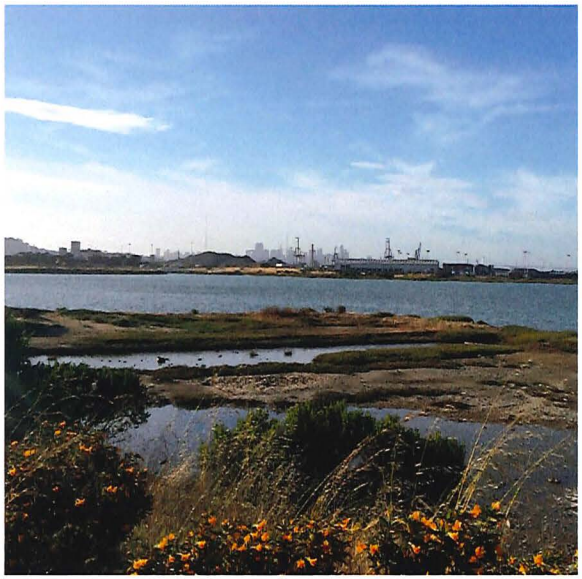
Shape Public Space for Public Life

India Basin's focus on public life integrates a dynamic open space system, interweaving parks, plazas, and gathering places with an extensive pedestrian and bicycle network. Gathering places are varied and flexible—from the intimate Town Triangle to the Public Market to expansive waterfront terraces and boardwalks edging the shoreline—all combining in a way that can respond to and sustain population growth and change. Reinforcing the region's waterfront parklands, the project is structured for the neighborhood, while being connected to something larger.

Craft a Human-Scale Village

Contemporary development often lacks the attention to detail and subtle nuance which signifies the richness of experience found in pre-modern construction. The India Basin project emphasizes form, size, texture, proportion, and articulation of physical elements at the scale of human sensory perception. Using the composition of buildings and spaces, lower-floors of development, open space, and modular construction enables and enhances a broader range of human-scale experience.





Cultivate a Robust Urban Ecology

India Basin is a dynamic coastal environment with unique hydrology, topography, and habitat conditions representing a distinctive cross-section of San Francisco Bay ecology. The site presents a rare opportunity to achieve the degree of horizontal and vertical open space needed to nurture urban biodiversity. Streetscape, understory planting, tree selection, green roofs, and other elements work in concert to optimize ecological potential.

Foster an Authentic Sense of Place

The project embraces the history and unique physical characteristics of the site—harnessing its idiosyncratic qualities to create an authentic sense of place. Climate, topography, hydrology, ecology and maritime industrial heritage are evoked in the design of landscape, open space features, surfacing and material choice, architectural guidelines, and wayfinding to amplify the sharp juxtaposition between wilderness and urban living, surrounded by nature and kinetic energy within an urban framework that provides a sense of tranquility and community.

Grow a Legacy of Stewardship

A new non-profit entity—the India Basin Trust—with responsibility for operations, maintenance, programming, social capacity-building, and community resilience, has been created for the long term management and care of the India Basin project. The Trust's strategies for water, energy, waste, ecology, and resilience will highlight the India Basin sponsors' desire to be true stewards for this community and its natural ecology.


PUBLIC MARKET

India Basin, originally an overlooked and abandoned part of our industrial past, will be a revitalized, human-scale destination for nature and art lovers, and a home for a growing community looking for a place which combines nature and urban life in all its forms.

With its connection to the natural ecosystem, as well as its urban amenities, this project is the culmination of everything a thriving community needs to come together and last for generations.

01

View of Site From Hillside

Master Plan Framework

Chapter 01: Master Plan Framework

As an important piece of the Bayview-Hunters Point neighborhood transformation effort, the India Basin Design Standards and Guidelines (DSG) provides a comprehensive framework for the transformation of the primarily vacant site into a vibrant, mixed-use, pedestrian-oriented, human-scaled neighborhood, with safe and convenient access to retail and service amenities and a variety of public open spaces. The project also strives to support a diverse range of habitats and ensure a sustainable and resilient future for India Basin.

This chapter presents the project background, context, planning concept and overall framework, which serves as the foundation for the India Basin Design Standards and Guidelines. Subsequent chapters detail specific design guidelines and development controls for the Public Realm and Open Space, District Sustainability and Resilience, Land Use, Urban Form, Architecture, and Signage and Wayfinding.

1.1 Introduction

1.1.1

Project Background

San Francisco is booming. The City and surrounding communities have enjoyed several years of strong growth, and the Metro's economy remains vibrant. Employment and wages are on the rise; the City's unemployment rate is among the lowest in the nation; and San Francisco's labor force participation rate is ten-percent higher than the national average. Population growth is at a 40-year high. As San Francisco's dynamic urban environment, quality of life and idyllic climate make the City a highly-attractive locale for both employers and the high-quality talent they seek, the City's innovation-fueled growth continues to draw people from across the country and around the world.

However, the latest economic boom is faced with an imbalance of housing supply and demand. Rising costs of living are contributing to displacement and a feeling of unease that the city is becoming less diverse and inclusive.

In the midst of this complex environment, India Basin presents a significant opportunity. With an iconic waterfront setting, stunning views, and close proximity to downtown San Francisco, India Basin is a chance for the City and the Bayview Hunters Point community to expand employment, increase housing options, augment public amenities, improve transit service, and create a regional-scale waterfront attraction which serves local residents and elevates the profile of the neighborhood. Beyond a development venture or park expansion, this innovative Private-Public Partnership advances the City's and community's aspirations for housing, jobs, shoreline adaptation, waterfront access, essential recreation space and vital community services.

As project co-sponsors, BUILD and the San Francisco Recreation and Parks Department (RPD) propose to redevelop adjacent parcels along the India Basin shoreline of San Francisco Bay. Towards this end, RPD and BUILD have formed a public-private partnership to transform privately owned vacant land and publicly owned but underutilized parkland into a new mixed-use waterfront community connected by a rich network of public parks. The project, detailed in the pages which follow, presents an unparalleled vision of the future—reimagining urban living as integral with natural ecology to create a connected, complete, and resilient village which contributes to the surrounding Bayview Hunters Point community.

View of Downtown from Site

Context

Figure 1-1: Regional Context

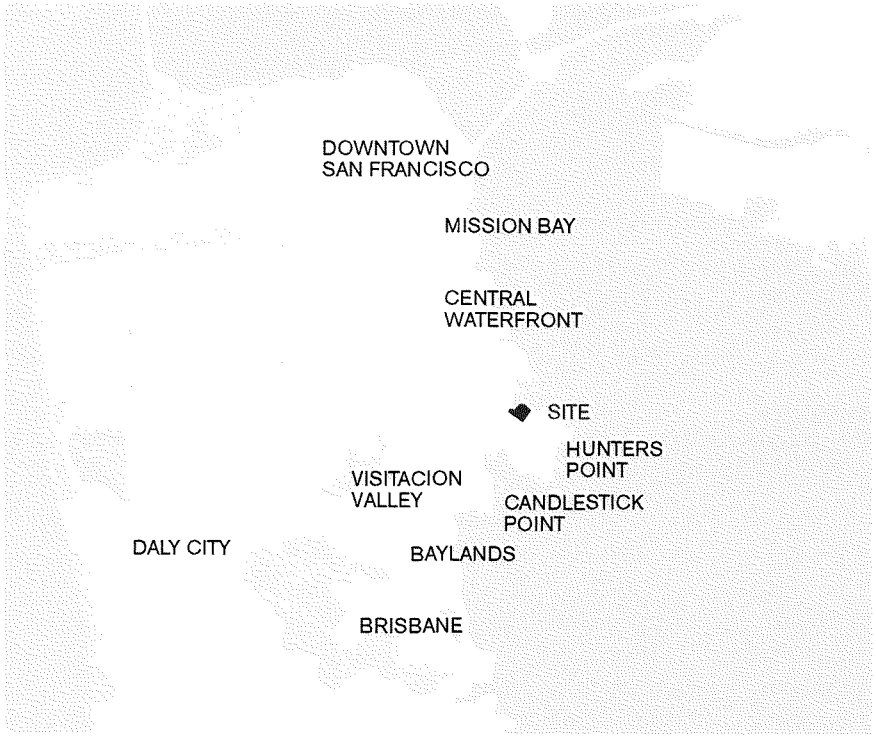


Figure 1-2: Project Location

Regional Context

India Basin is located in the south-eastern quadrant of the city of San Francisco, at the heart of the Bay Area. The larger Bayview Hunters Point neighborhood—of which India Basin is a part—enjoys ready access to downtown San Francisco, Oakland and San Francisco International Airports, South San Francisco, San Mateo, and a number of other peninsula communities.

Project Location

The India Basin project site is centrally located among a number of the city's rapidly transforming eastern neighborhoods. Major redevelopment efforts in Mission Bay, Pier 70, Visitacion Valley and the Brisbane Baylands—among others—are expanding housing options and extending transit, community services, and neighborhood amenities into these under-served areas.

Neighborhood Context

The project site is located in the Bayview Hunters Point neighborhood, in the southeast quadrant of the city. Bayview is the sunniest neighborhood in San Francisco, home to a rich history and burgeoning creative scene complementing areas of picturesque landscape and a rich ecology.

South of India Basin, hundreds of acres of historically industrial land are undergoing transformation. The Shipyard and Candlestick Point redevelopment projects are bringing over 12,000 residences along with over 3 million square feet of research and development space focused on "green" and clean technology. Facilities will include a clean tech business incubator and the headquarters for the United Nations Global Compact Sustainability Center. Development of the two sites incorporates over 300 acres of parks and open space, including a complete renovation of the Candlestick Point State Recreation area. In total, Phase 1 and Phase 2 will generate hundreds of new construction jobs each year, and ultimately will create more than 10,000 permanent jobs.

Figure 1-3: Neighborhood Context

1" = 1/4 mile
0 1/8 1/4 3/8 1/2mi

India Basin Transportation Action Plan

Expansion of the city's existing transit systems is proposed to connect the India Basin project to other districts, through a network of pedestrian, bicycle, and bus routes. The India Basin Transportation Action Plan (Action Plan) is a comprehensive vision for streetscape and mobility improvements to accelerate construction of the India Basin transportation corridor along Innes Avenue, Hunters Point Boulevard, and Evans Avenue, consistent with the Hunters Point Shipyard Environmental Impact Report (HPS EIR).

Transit stops for local and express buses are consolidated near major entries to the site along Innes Avenue, allowing all parts of the development to be accessible in a less than five-minute walk. A combination of Class I and Class II bikeways through the site promote cycling as a dominant mode of transportation, and trails are expanded into a diverse and comprehensive network to promote a more pedestrian-oriented district.

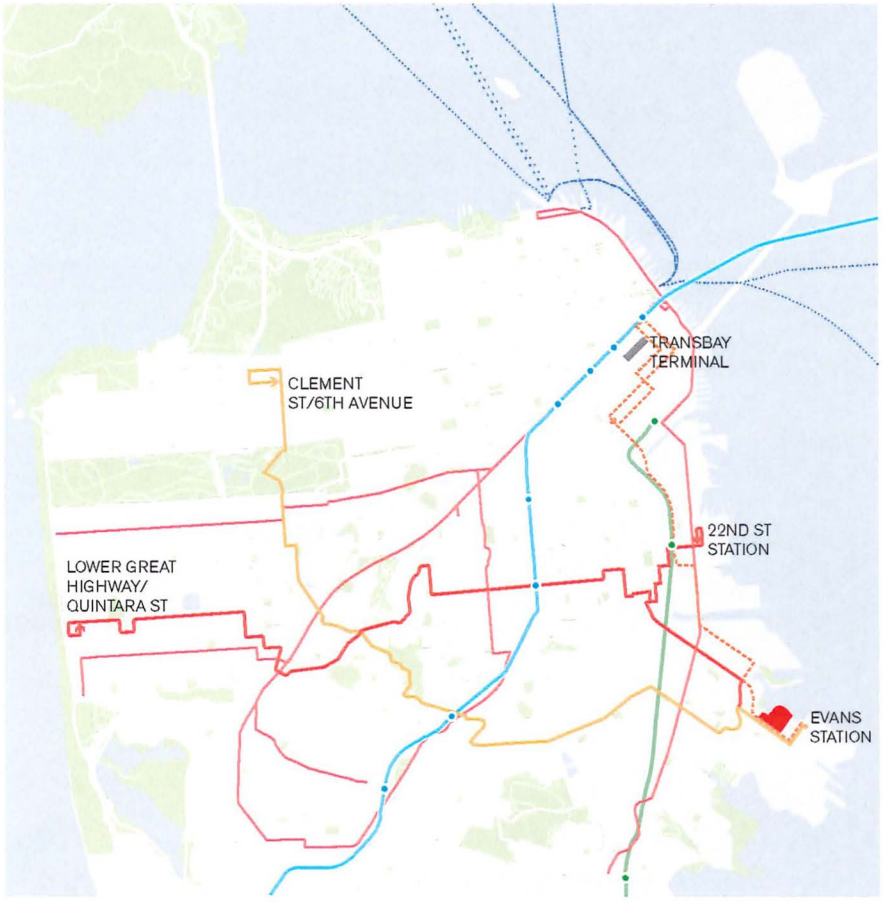
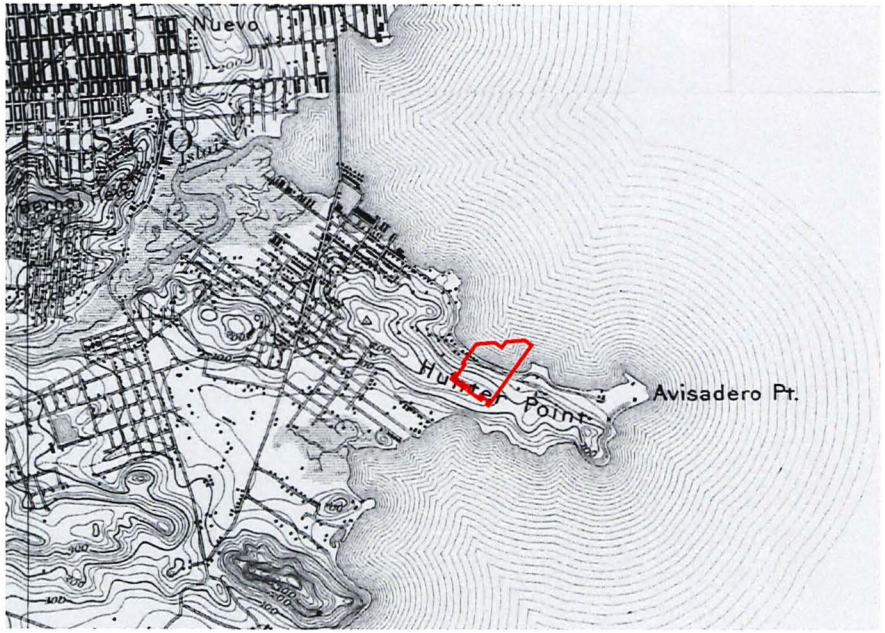


Figure 1-4: Citywide Transit Access to Site

History

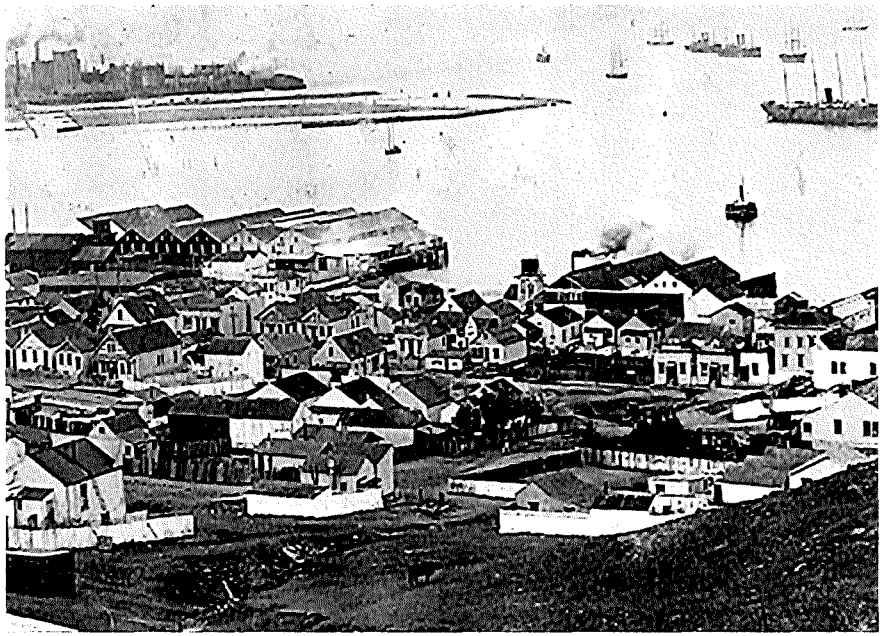


Site location overlayed on historic map of San Francisco,1895.

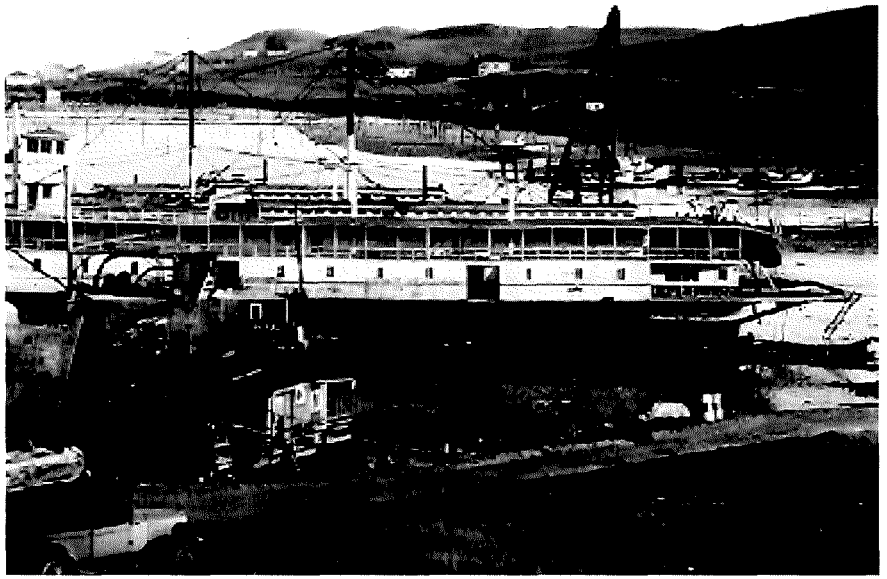
India Basin, c.1900

Site History

India Basin and the surrounding Hunters Point neighborhood share a storied history. Much of the peninsula and tidal flats remained uninhabited until the 1860s when proximity to a booming San Francisco made the area a strategic location. Construction of the California Dry Dock Company at the eastern tip of the peninsula in 1866 presaged the growth of maritime manufacturing and commerce. Beginning around 1870, San Francisco's bay scow schooner building industry began relocating to India Basin from Potrero Point and Islais Creek. Attracted by the availability of inexpensive land with deep water access, boat builders lined the southern edge of India Cove with boatyards alongside several Chinese shrimp camps. Most of the early yards were family-owned businesses operated by English, Scandinavian, and German immigrants. Boat yard owners and employees lived alongside one another in buildings designed for every day use rather than aesthetic, creating a linear "village" along 9th Avenue South (now Innes Avenue). The bay scow building industry began to decline in the 1920s with the introduction of the gas-powered launch, competition from short haul truckers, and the opening of the Bay Bridge in 1936. The Anderson & Cristofani yard endured for another half century however, concentrating on repair and maintenance work.



India Basin, 1920s

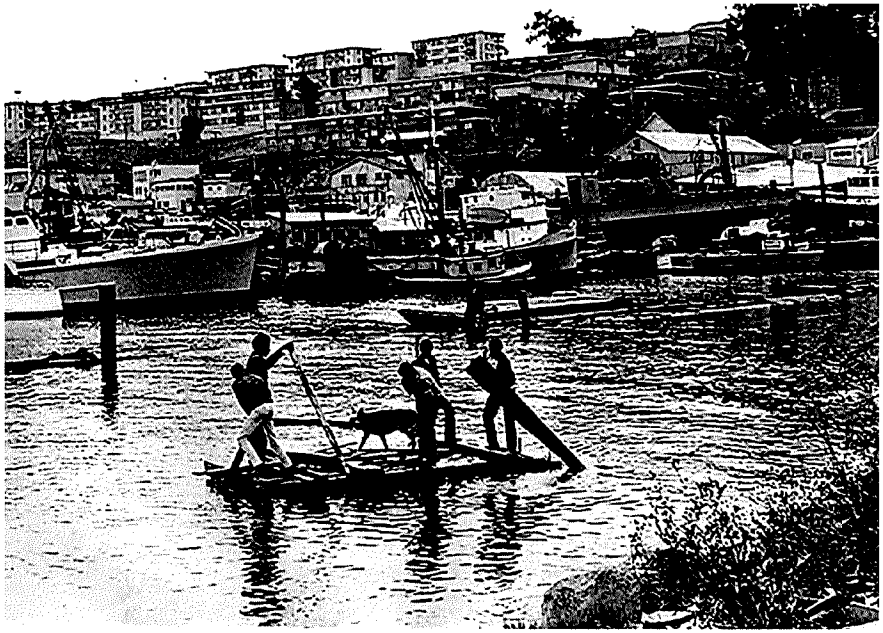


India Basin, 1928

India Basin remained a distinct and largely self-contained community until the eve of the Second World War, when the U.S. Navy's decision to purchase the Hunters Point Shipyard transformed the district. Well-paying jobs lured thousands of workers to San Francisco. Many of these new residents occupied new FHA-financed "junior fives," a home design focused on conformity and necessity, along Innes Avenue. Others took up residence in the rows of "temporary" war worker housing constructed by the FHA on along the ridge above India Basin.

Following the end of World War II, India Basin experienced dramatic demographic shifts and economic dislocation. In the immediate post-war period, operations at the shipyard scaled back, and residents suffered as employment opportunities declined. The remaining industries tended to be heavily polluting, contributing to the increasingly distressed reputation of the district. Continued ethnic tensions led to white flight from the area, particularly after riots erupted in 1966.

In 1965, owners of several dozen water lots north of Hudson Avenue between Griffith and Earl Streets filled them with debris from the construction of Interstate 280—in time to avoid restrictions on fill soon to be enacted by the Bay Conservation and Development Commission (BCDC). From the late 1960s until the late 1990s, India Basin did not change



India Basin, 1969

Historic Shipwright's Cottage, 900 Innes

dramatically; the surviving boatyards remaining in business until recently. The last one to close was Allemand Brothers' yard at the foot of Griffith Street. Other light industrial businesses set up operations due to the availability of large lots and low land values. Beginning in the late 1990s, the availability of large undeveloped lots began to attract the interest of real estate developers who constructed a number of condominiums along the north side of Innes Ave.

Historic Resources

Although many of the older, nineteenth-century dwellings are long gone, the majority of the boat yard area still survives along India Cove, as well as a handful of historic dwellings dating from the last quarter of the nineteenth century and the first quarter of the twentieth century. The Shipwright's Cottage, located on RPD's adjacent 900 Innes site, dates from 1875 and is California Register of Historic Resources-eligible. A principle objective of RPD's proposal is to preserve and celebrate historic resources through the restoration of the historic Shipwright's Cottage and revitalization of the boatyard cultural landscape on this site.

Existing Conditions

Existing Site Conditions

The approximately 30-acre project site is generally bounded by San Francisco Bay on the north, the Hunters Point Shipyard Development project area on the east, and the 900 Innes site—the historic India Basin Boatyard owned by the San Francisco Recreation and Parks Department (RPD)—on the west. Innes Avenue runs along the southern side of the project site and is a main thoroughfare from Cesar Chavez Street to the Hunters Point Shipyard area. Along the project site, Innes Avenue is a four-lane, two-way road. The site itself is generally flat with a slope toward the Bay at the north-east corner, with the highest elevation along Innes Avenue and the lowest elevation along the shoreline.

Figure 1-5 shows the project site and the general property ownership boundaries. The parcels collectively referred to as 700 Innes total approximately 17 acres and are owned or will be acquired by BUILD. The 6.2 acre India Basin Open Space parcel is owned by RPD. Portions of accepted and unaccepted street rights-of-way are also included in the project site. New alignments for rights-of-way have been developed as part of the proposal and will be confirmed through the Development Agreement (DA). Proposed rights-of-way are detailed in Chapter 2: Public Realm and Open Space.

The 30 parcels which comprise the 700 Innes property are primarily reclaimed tidal flats, generally consisting of fill materials, and covered by light brush, debris, dirt, and gravel mounds. The property is undeveloped, aside from a handful of permanent and temporary structures of varying size, function and condition—a number of which are vacant. Descriptions and status of existing structures are detailed in the Environment Impact Report, Table 2-2: Existing Buildings on the Project Site.

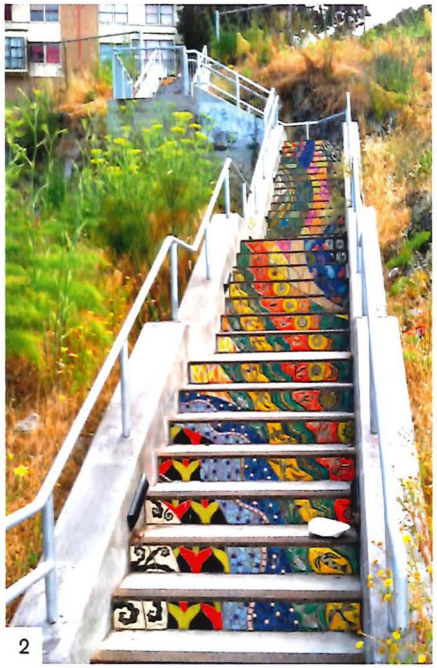
The India Basin Open Space property is an existing open space bordering the Bay. This property includes a portion of the Blue Greenway/Bay Trail along its shoreline, and contains limited improvements along with upland habitat, tidal salt marsh, mudflats, sand dunes, and native vegetation. Tidal salt marsh habitat occupies 2.5 acres of the property; habitat management and protection areas are fenced from public access. A storm drain and an overflow storm outfall are located on the northeastern shoreline, but are currently not operable. Legal public access to the shoreline is limited to the Blue Greenway/Bay Trail. Two easements to the shoreline exist, but they are not paved or designated for public access. Shoreline access also occurs via informal pathways.

The existing public rights-of-way within the project site total approximately 6 acres. The project site surrounds Arelious Walker Drive and it generally is bounded by Earl Street, Griffith Street, and Innes Avenue. An undeveloped portion of Hudson Avenue runs through the project site, starting at Hunters Point Boulevard and terminating at Earl Street. Griffith Street, Arelious Walker Drive, and Earl Street are partially paved where they meet Innes Avenue, but in general they are unpaved and/or partially paved, unimproved, and fenced from public access. All of the existing streets on the site are unaccepted by the City.

Figure 1-5: Existing Site Conditions

- Recreation & Parks Department (6.2 Acres IB Open Space and 1.8 Acres 900 Innes)
- Build Property (14.66 Acres)
- Separate Ownership Included in 700 Innes Project (2.46 Acres)
- Existing Rights-of-Way (7.52 Acres Mostly Unimproved)
- 900 Innes Boundary
- ① PDR
- ② Commercial/Live-Work
- ③ Residential Mixed-Use
- ④ Multi-family Residential
- ⑤ Storage Cluster

1



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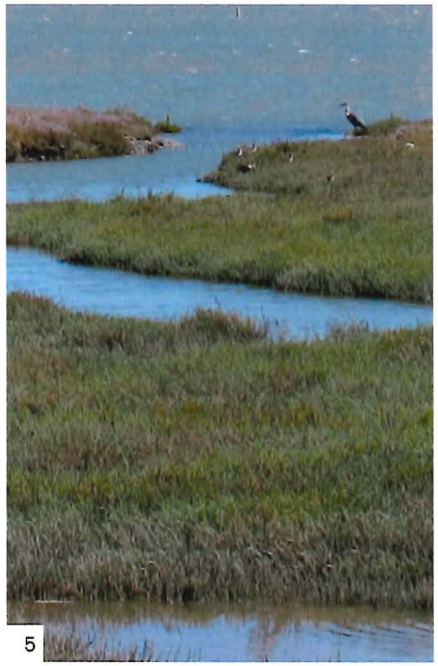


5

1. Site as Seen from India Basin Shoreline Park
2. Stairway along Innes Avenue at Arelious Walker Intersection
3. 900 Innes site
4. View of Downtown
5. India Basin Shoreline Park

1

2

3

4

5

1. Existing Storage Yard
2. Undeveloped Area of Site
3. Existing Earl Street Right-Of-Way
4. India Cove 828 Innes Avenue
5. Arelious Walker

Geotechnical Area

The orange dashed line in Figure 1-6 shows the historical shoreline. The area north of the historic shoreline was a result of land reclamation between 1946 and 1968. The south-west end of the site fronting Innes Avenue is the highest in elevation. Grades slope down towards the edge of the site fronting the Bay.

The numbered dashed lines indicate the top of the load-bearing layer.

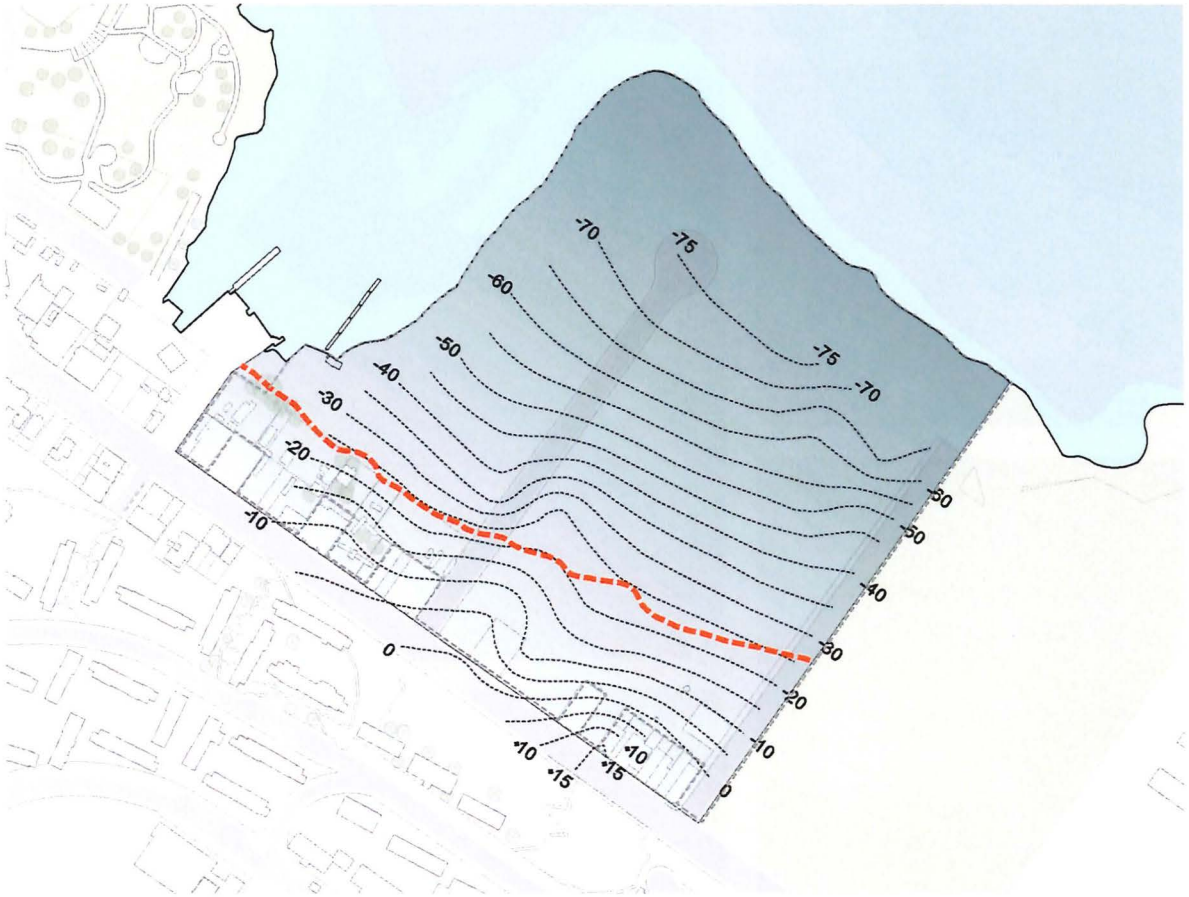


Figure 1-6: Geotechnical area diagram

Figure 1-7: Settlement Zones diagram

Settlement

As a bay-fill site, soils will continue to settle. It is anticipated that additional vertical settlement will occur as fill material and structures are loaded onto existing soils. Strategies to load and settle material in earlier stages may reduce long term settlement. Examples include pre-loading and pre-settling fill material in early construction phases, localized fill, additions of stair treads, use of lightweight fill alternatives where applicable, paving zones, and hinged slabs.

Coastal Assessment

India Basin is a dynamic coastal environment. The shoreline is directly impacted by the coastal processes and requires consideration of existing conditions, wave energy and erosion, bathymetry, shoaling and sedimentation, sea level rise, and flooding.

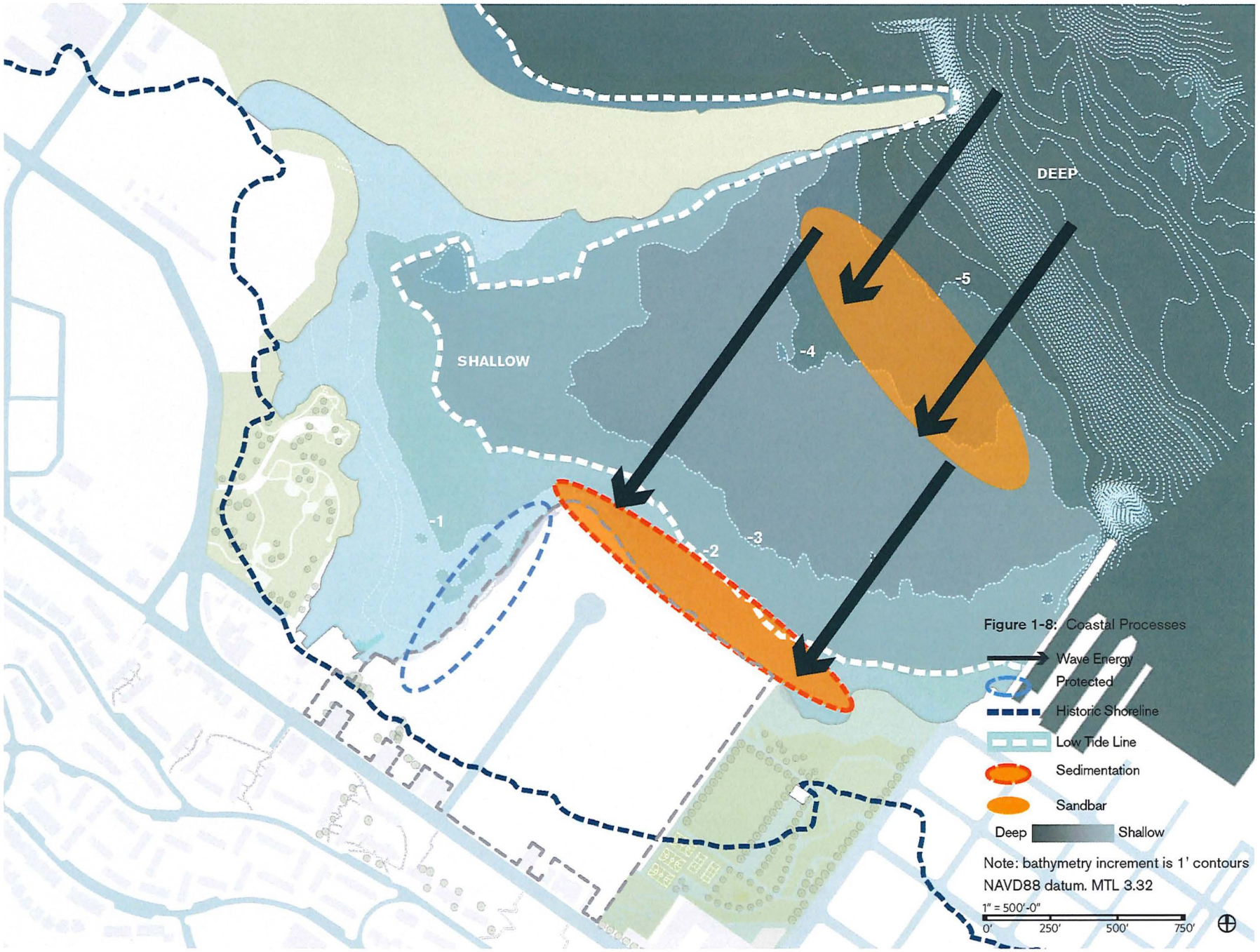
Existing Conditions: The current shoreline extends beyond the historic shoreline as a result of bay fill which occurred through 1965.

Wave Energy & Erosion: Wave energy enters the basin from 2 primary directions: north and northeast. The northeast shoreline receives continuous wave action from tidal currents having up to a 4-mile fetch. The northwest shoreline receives limited wave action and is relatively protected.

Bathymetry: The basin is relatively shallow. At the lowest tide, the mud line is offshore from the northeastern shoreline approximately 40'. Boat launch access should be located where the mud line is closest to the existing shoreline.

Shoaling & Sedimentation: The wave direction and energy is causing an offshore sandbar at the edge of India Basin through the process of shoaling. As a result of the shallow bathymetry in the basin, the sandbar accumulation and the continuous wave energy, sedimentation is occurring on the north-eastern shoreline of India Basin Open Space. This natural process has resulted in the accumulation of sand and naturally forming sand dunes at the northern tip of the shoreline.

Sea Level Rise & Flooding: Sea level rise and flooding are significant design drivers. See Section 3.8 for Sea Level Rise adaptation strategies.


DEEP
SHALLOW
-5
-4
-3
-2
-1
Figure 1-8: Coastal Processes
Wave Energy
Protected
Historic Shoreline
Low Tide Line
Sedimentation
Sandbar
Deep
Shallow
Note: bathymetry increment is 1' contours
NAVD88 datum. MTL 3.32
1" = 500'-0"
0'
250'
500'
750'

Regulatory Constraints

Multiple regulatory Agencies Having Jurisdiction (AHJs) over the property, including the US Army Corps of Engineers (USACE), the California Regional Water Quality Control Board (RWQCB), the Bay Conservation and Development Commission (BCDC), and the State Public Trust Lands. Permits will be required for proposed improvements within these areas. Proposed changes to existing wetland and tidal habitats will require mitigation. Designs and land uses have been reviewed with AHJs and final designs will be approved by AHJs prior to implementation.

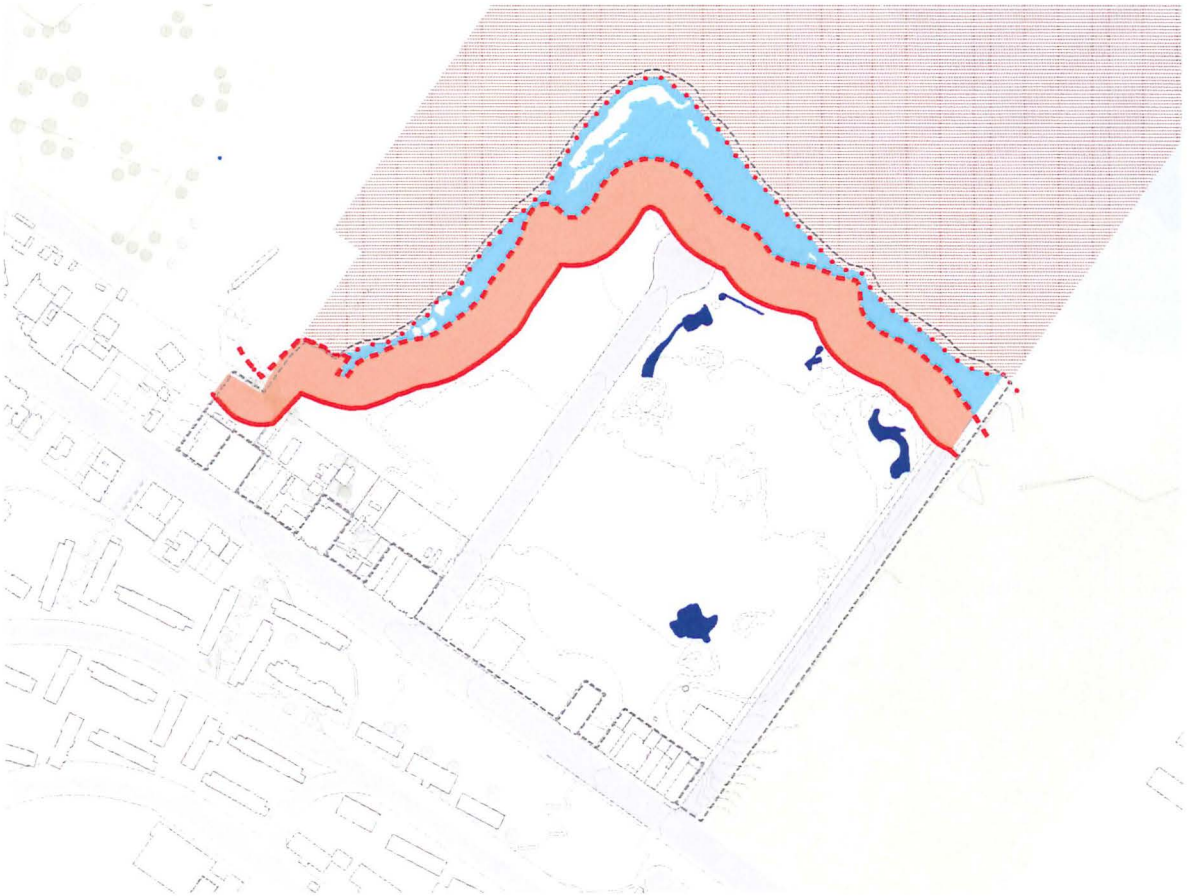


Figure 1-9: Regulatory Jurisdiction

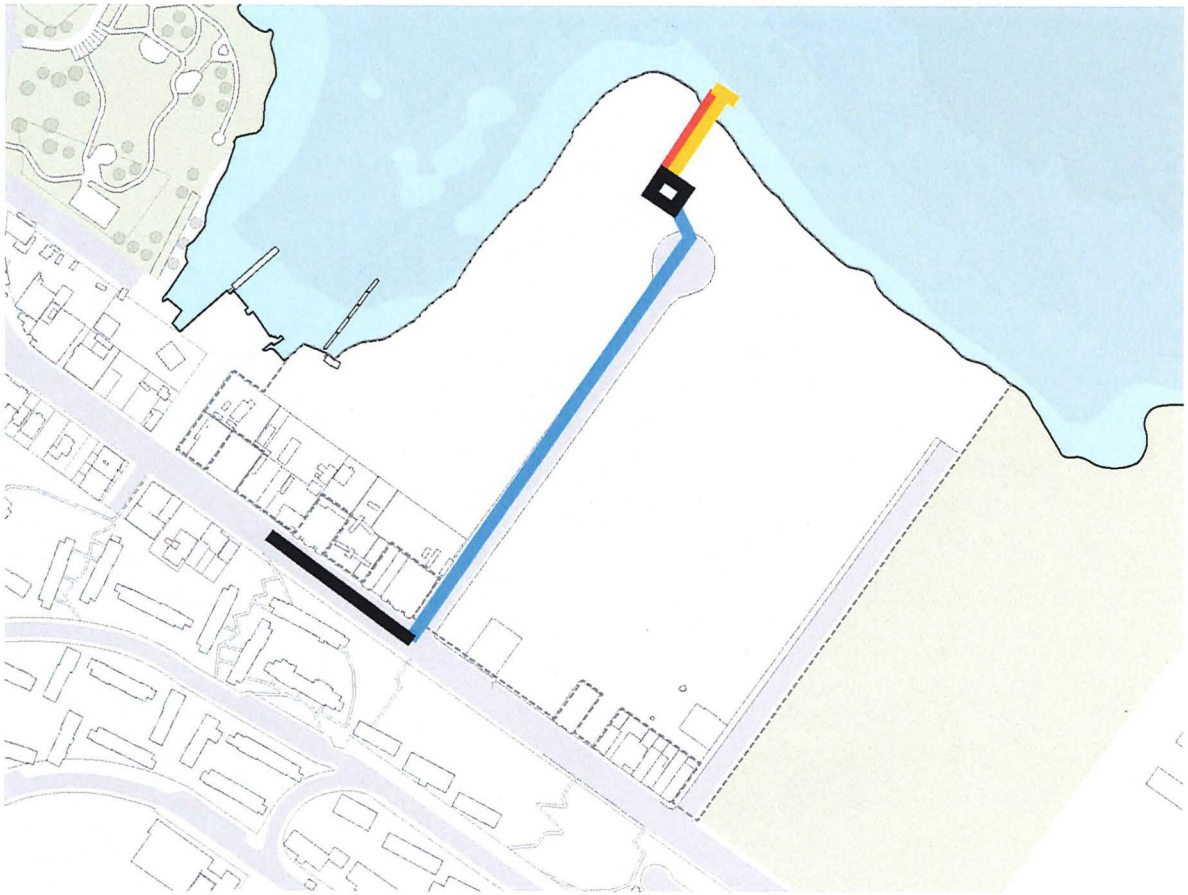


Figure 1-10: Existing Hydrology System

- Combined Storm Sewer
- Combined Sewer Force Main (unaccepted & non-operational)
- Existing Combined Sewer Pump Station (unaccepted & non-operational)
- Overflow Storm Sewer Outfall (unaccepted & non-operational)
- Storm Drain (unaccepted & non-operational)

1" = 400'-0"

0' 200' 400' 600'

Existing Hydrology

A combined storm and sewer overflow line currently runs from Innes Avenue northeast beneath Arelious Walker Drive with a pump station located at the cul-de-sac of Arelious Walker Drive and an outfall located on the northeast shoreline of the India Basin Open Space. A storm drain outfall also exists at this location. Neither the existing overflow storm and sewer outfall nor the storm drain have been accepted by the City Public Utilities Commission. These outfalls have never been utilized and remain non-operational today. It is anticipated these existing utilities will be removed and replaced with new utility lines and outfalls in a different configuration suitable to the proposed design.

Existing Habitats

700 Innes

The site consists of fill material with barren areas, small patches of native habitat, rubble, and gravel mounds. No protected or endangered species were found on site. The upland site also contains 0.31 acres of seasonal wetlands.

India Basin Open Space

The existing shoreline consists of salt marsh conditions resulting from a 2002 wetlands mitigation project for the San Francisco International Airport expansion. Conditions include upland habitat, tidal salt marsh, sand dunes, native vegetation, debris and rubble, and a rip rap breakwater. Eel grass has been known to exist off of the northeastern shoreline in the past.

No protected or endangered species were identified as currently existing on the site. Suaeda californica (California seablite) has been previously found on site. Field surveys were conducted in summer 2016 and none was found.

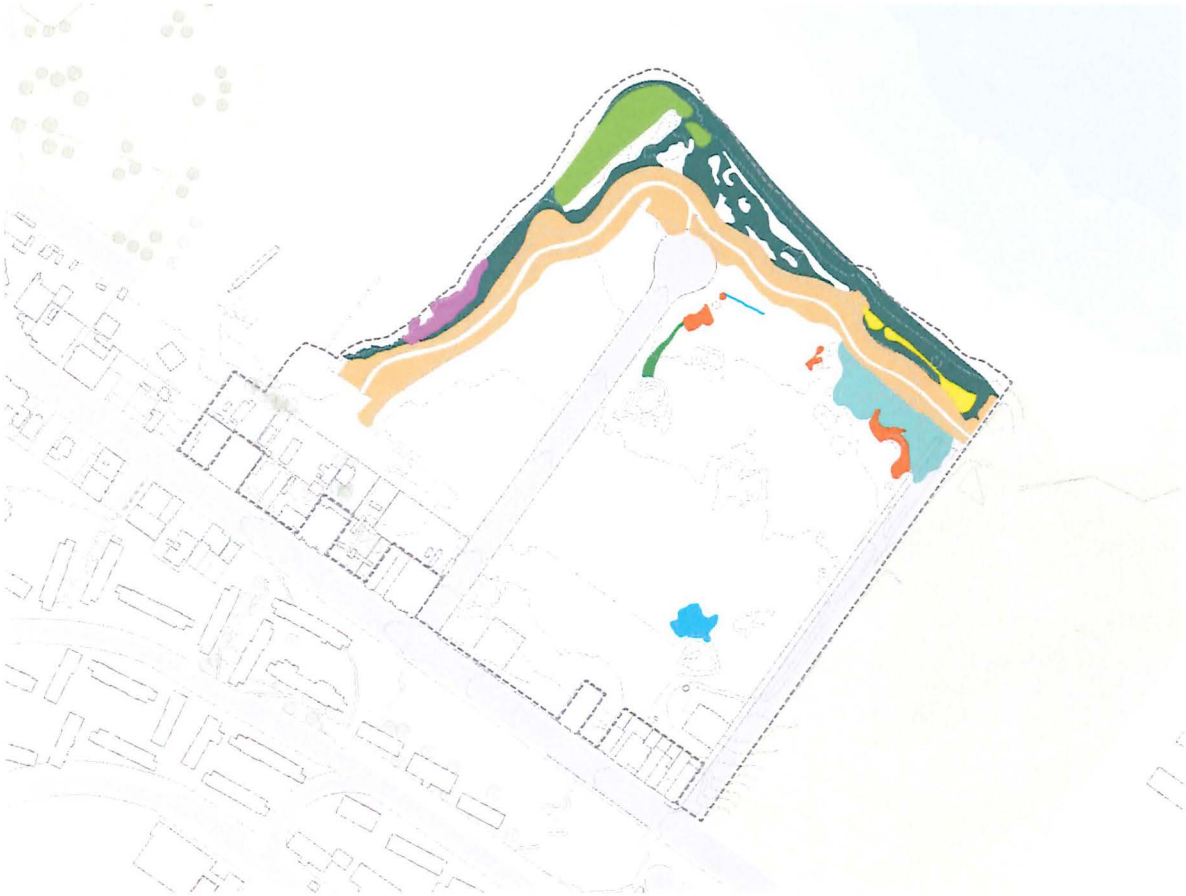


Figure 1-11: Existing Habitats and Wetlands

Figure 1-12: Existing Mitigation Wetlands

- 2.1 Acres Created Mitigation Wetlands
- 0.4 Acres Enhanced Mitigation Wetlands
- 0.31 Acres Seasonal Wetlands

Existing Wetlands

The shoreline located in the India Basin Open Space includes 2.5 acres of mitigation wetlands created in 2002.* According to the ten year monitoring report, the two wetland zones located on the northwest shoreline achieved a greater target criterion (85% and 82%) than the two zones located on the northeast shoreline (72% and 53%).**

Wetland improvements or creation of new wetlands will likely perform better on the northwest shoreline. Any shoreline improvements which impact the existing mitigation wetlands will likely require greater mitigation ratios. The project proposes to retain the existing tidal wetlands in place. New tidal marsh wetlands are proposed for the northwest shoreline as mitigation for impacts and bayfill.

The site also contains 0.3 acres of seasonal wetlands. The USACE will require the seasonal wetlands be relocated within the Shoreline and Big Green at a defined mitigation ratio, and function the same as or better than they exist currently.

** See CRWQCB Order No. 99-037, and BCDC Permit No. 10-93.*
*** See Tenth Annual Monitoring Report for the India Basin wetlands creation and enhancement project completed by LSA*

Sea Level Rise

At the time of this publication, the City of San Francisco, BCDC, and the State of California all have slight variations in their guidelines and recommendations on predicted sea level rise and flooding conditions. The project uses the following sea level rise predictions per the 2016 San Francisco Sea Level Rise Action Plan: 2050: +24", 2100: +66". The site is also impacted by extreme conditions including king tides and 100-year storm events. Storm surges are measured as an additional 42" of temporary inundation.

Due to the uncertainty of future conditions, the project proposes a long-term strategy to protect major infrastructure and the development on a 100-year horizon, combined with a robust adaptation approach for the shoreline which can adapt and evolve as tide levels become better defined (see Section 3.8).

All major capital improvements, the Bay Trail, and the development will be located with an elevation at or above the extreme predicted elevations plus a buffer should predictions rise, for protection from worst case flooding by end of century. Major capital improvements include utilities, roads, restrooms, permanent structures and facilities, buildings, infrastructure, and bridges.

Figure 1-13: Sea Level Rise (Existing conditions for MHHW)

- 2100: Storm Surge
- 2100: +66" (2050 Storm Surge)
- 2050: +24"
- Today: Elevation at 6.37ft (76")

** Per SF SLR Action Plan 2016. Storm Surge is 42"+ SLR*

Existing Site

1.2 Planning Concept

The combination of room for nature along the coast, increased waterfront access, wind mitigation via the shifted offset grid, preserved view corridors and the making of memorable public spaces drives the design of the India Basin project.

The three sets of concepts presented in this section stem from the guiding principles of the project and are the cornerstones of the planning framework.

Open spaces are created along the coast and in the heart of the site to support a diverse range of habitats, as well as vibrant public life.

Larger parcels along the hillside transition to smaller parcels toward the waterfront. Varying the scale of the grid and massing facilitates the ability of different housing types to coexist within a site, and allow for a varied street level experience. Each block is sized to encourage a walkable neighborhood.

The street system serves as a collection of integrated, ecological, viewing, and activity corridors. The staggered streets mitigate wind, improving pedestrian comfort at grade while the shifting blocks create a non-orthogonal street grid that allows for discovery and an overall interesting streetscape.

Ecology

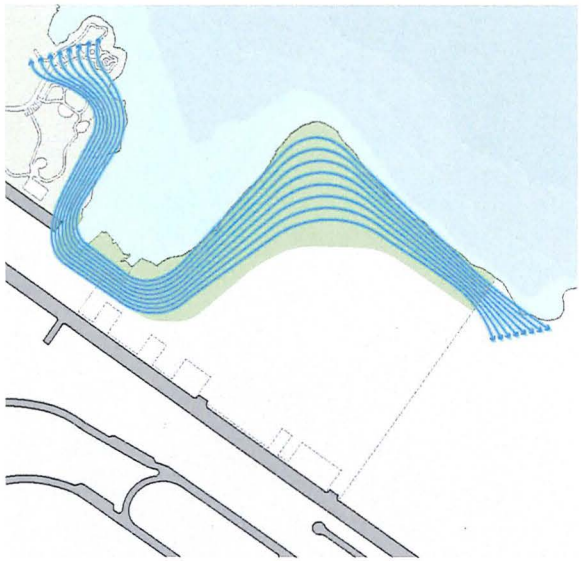


Figure 1-14: Blue Green Coastal Zone

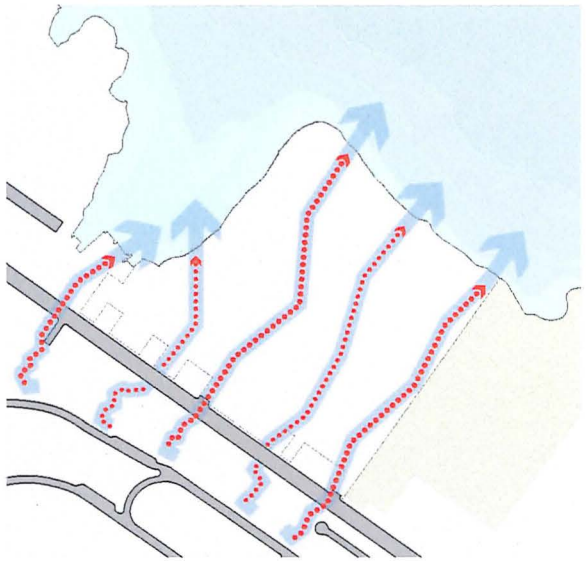


Figure 1-15: Eco-Corridors - Hillside to Bay

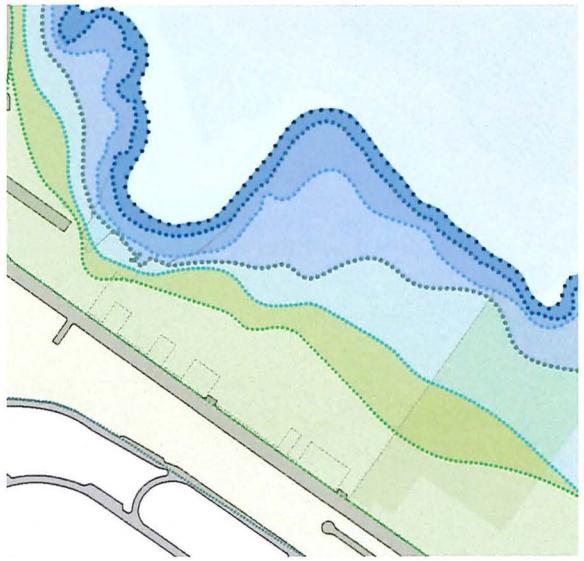


Figure 1-16: Eco-Bands (Terracing)

Blue Green Coastal Zone

The shoreline creates a continuous waterfront open space along India Basin. Rather than a fixed edge, it presents a dynamic, continuously-shifting zone which moves with the daily tide, the cycle of seasons, and ongoing global climate change. The shoreline is ecologically, economically, and culturally important as it filters pollutants and absorbs terrestrial nutrients, buffers coastlines from waves and storm surge, supports nurseries for fish and other marine animals, and provides delight for residents and visitors.

Eco-Corridors - Hillside to Bay

Eco-corridors preserve hydrological and ecological flows from the hillside to the Bay—water, plant life, fauna, and people are all directed toward the waterfront. The continuation of this fundamental movement pattern resonates in the design of the public realm, where urban and ecological systems are intertwined, and elevating the quality of life in the neighborhood.

Eco-Bands (Terracing)

The transition from the hillside, through the project site and toward the waterfront is reinforced in landscape. Each eco-band terrace connects an elevation and distance from the water to the types of habitat it supports, and consequently, coordinates it with the design of landscape, planting and surfacing, public realm programming, and to the range of uses and activities in each stratum.

Urban Form

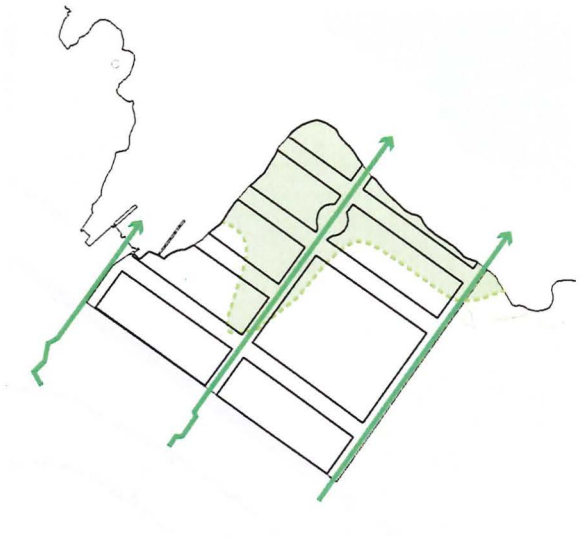


Figure 1-17: Typical Grid

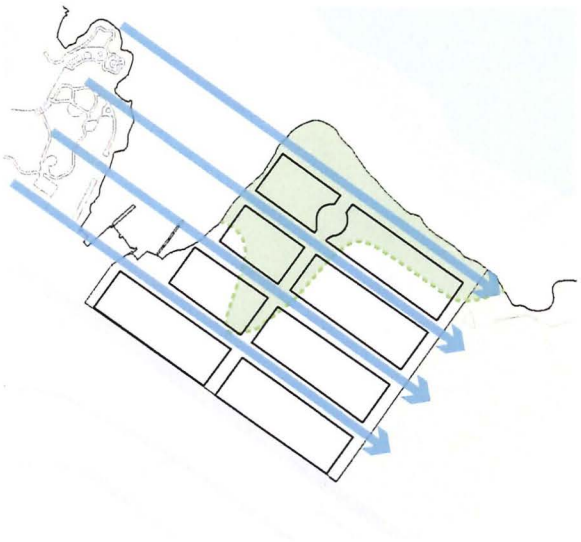


Figure 1-18: Adjusted Grid to Mitigate Wind

Figure 1-19: Broken Grid Creates Diverse Spaces

City Grid Extension

The mapped extension of the city grid on the site consists of long blocks (600' long) limiting access to the Waterfront. The India Basin project subdivides large blocks to increase waterfront access, and restricts development to areas with more suitable load bearing capacity.

Wind

Prevailing winds in this part of the city are oriented from Northwest to Southeast. The mapped extension of the city grid allows wind to pass through unabated, creating wind tunnels though the site. To avoid wind tunnels and create a more comfortable street level experience, the India Basin project grid is staggered such that both landscape and building mass help decelerate and block wind.

Broken Grid

The shifted grid is further staggered and offset to create intimate pockets of open space within the site for parklets and courtyards. Primary and secondary access ways are preserved. The scale of massing is broken down to accommodate a variety of uses and programs. The shifted massing, broken grid, and small pockets of space create unique places, differentiated by site-specific conditions, to allow diversity of experience and opportunities for discovery.

View and Movement

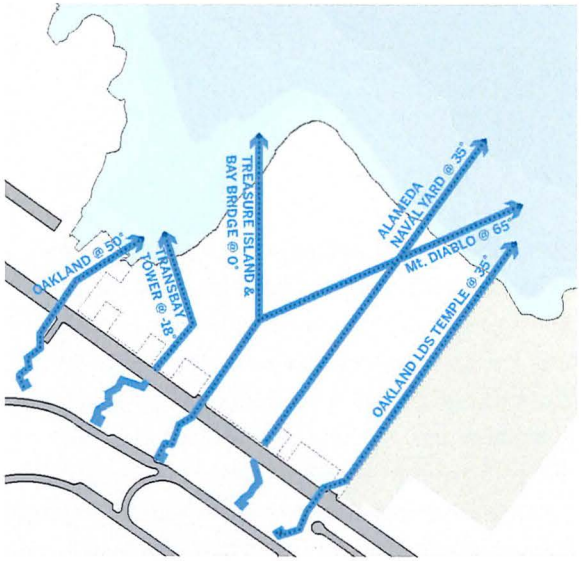


Figure 1-20: Public Views

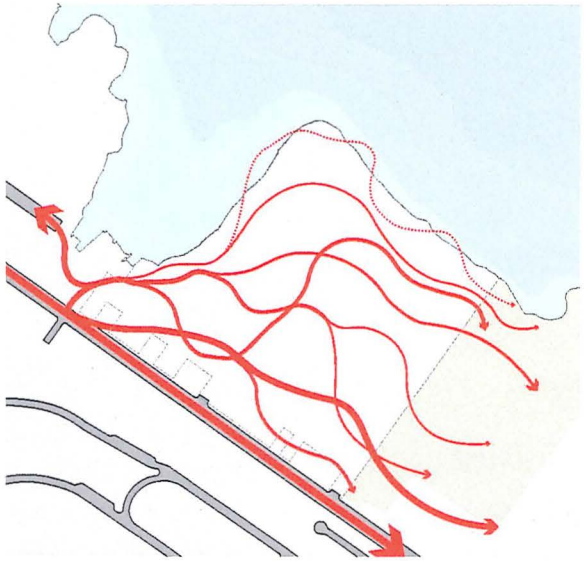


Figure 1-21: Unbraided Cord - Parallel to Shoreline

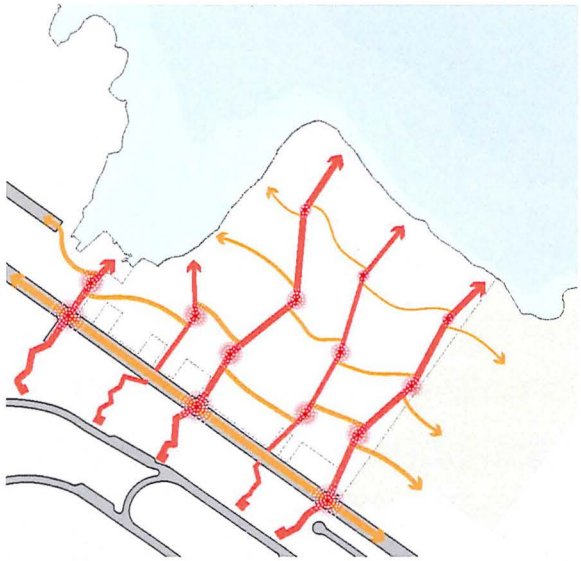


Figure 1-22: Nodes/ Places

Public Views

Views from the Ridgeline to the Bay are enhanced in urban form with fine grain, pedestrian focused routes from the hillside and uplands down toward Innes Avenue and through the site to the water. The routes are aligned to frame view corridors to the waterfront and beyond, providing both physical and visual access to the Bay and making way-finding intuitive.

Unbraided Cord - Parallel to Shoreline

Lateral movement through the site is interpreted as an unbraided cord. A hierarchy of paths of varying characters and experiences are created to accommodate different modes and paces of movement across the site. Paths for quiet contemplative strolling diverge from recreational walking and cycling, which are kept distinct from the more hurried movement of bicycle commuters and from neighborhood traffic and transit arterials.

Nodes/Places

The intersection between lateral and longitudinal movement and ecological systems form the basis of placemaking at a variety of scales. Each place derives their character and uniqueness from the specific components of their intersection, which create opportunities for differentiation, surprise and discovery.

1.3 Planning Framework

"Yet there are fundamental functions of which the city forms may be expressive: circulation, major land-uses, key focal points. The common hopes and pleasures, the sense of community may be made flesh. Above all, if the environment is visibly organized and sharply identified, then the citizen can inform it with his own meanings and connections. Then it will become a true *place*, remarkable and unmistakable."

– Kevin Lynch, *The Image of the City*

The Physical Framework described in this section—and further detailed in subsequent chapters—illustrates the opportunities and challenges of India Basin's contextual setting and the fundamental organizing concepts for movement, placemaking, function and physical form. The framework shapes and connects the public and private realms—the streets, plazas and parks, buildings and infrastructure, the shoreline and the Bay itself. Systems of movement are layered and woven throughout, intersecting with gathering areas and moments for interaction or quiet repose. Ecology is integrated across public and private territory, creating a structured environment which nurtures habitat, residents and visitors alike.

The following pages depict the principle organizing systems for site Access and Circulation, Public Realm Design, Open Space, Key Places, District Sustainability and Urban Form. Associated Standards and Guidelines for realizing the project are detailed in Chapters 2 through 7.

Figure 1-23: Illustrative Site Plan

Ecology and Biodiversity

Diverse Ecologies

Located at the edge of the San Francisco Bay in a relatively protected water basin, the project offers a rare opportunity to support a diverse range of habitats from mudline to ridge-line for the optimal cross-section of vertical habitat continuity and enhanced urban biodiversity.

Local residents like the site's wild and "feral" character. To preserve existing habitats, create new habitats, promote the unique, wild character of the site, and also introduce a range of programs and ecologies across the site, all interventions in the landscape serve an ecological purpose to promote diverse site ecologies that persist and evolve. Plantings should range from active, urban, and upland zones to wild tidal zones.

The long-term success of these interventions will rely on the cultivation of a knowledgeable and committed community of stewards and advocates. See Section 2.4

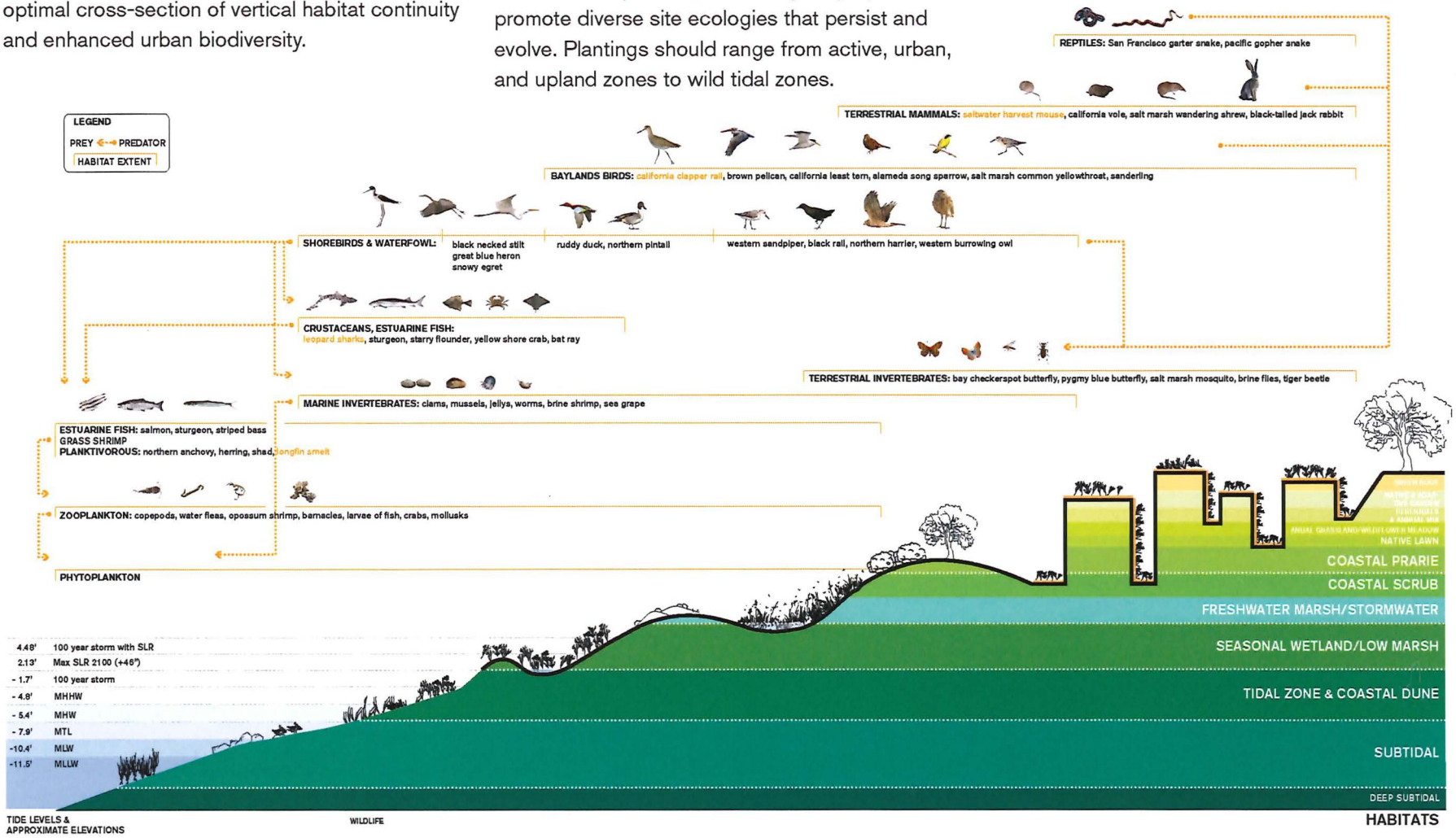


Figure 1-24: Biodiversity Cross-section & Vertical Connectivity

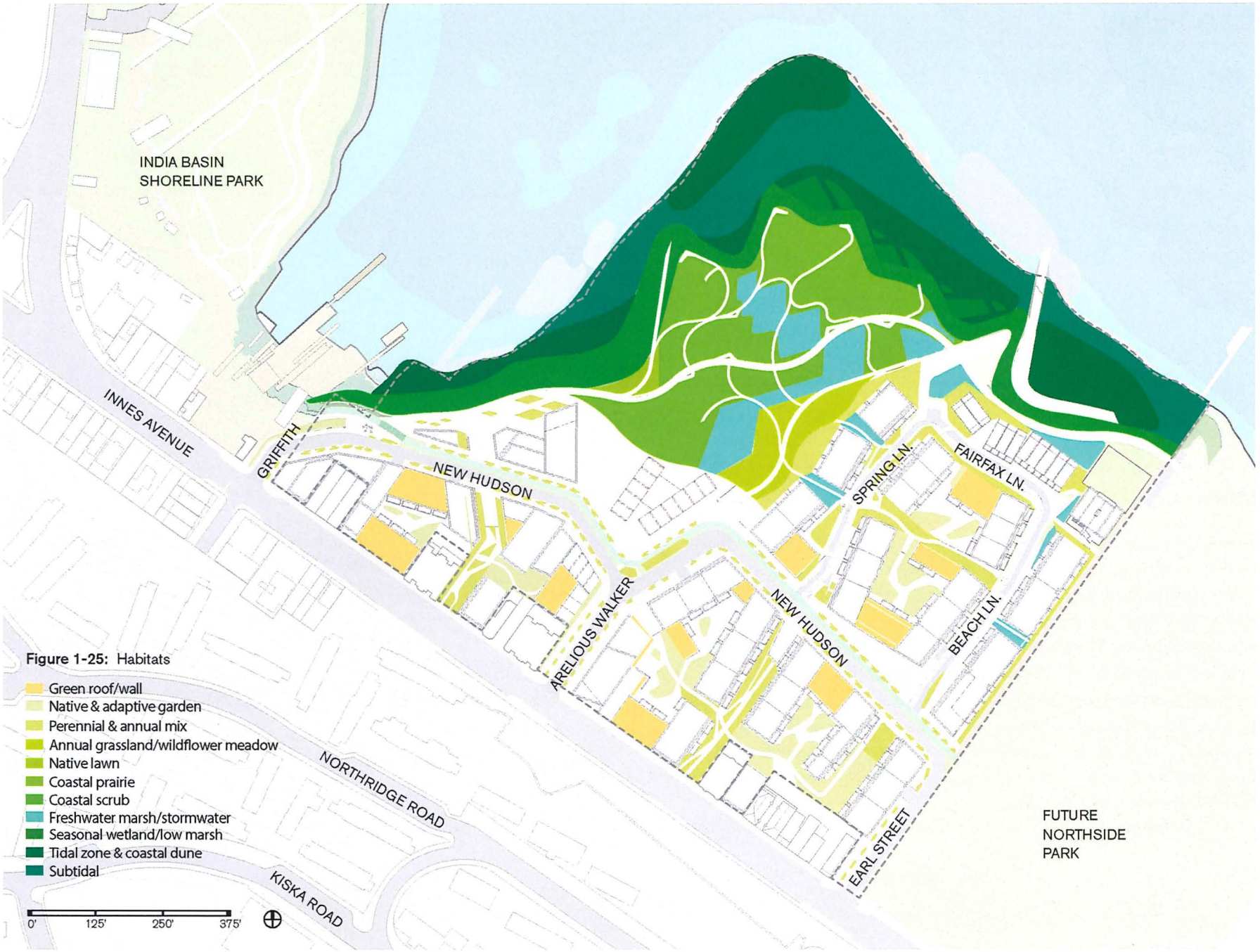


Figure 1-25: Habitats

Land Use

Land Use

The land use plan for India Basin advances a 21st Century model for a healthy, vibrant and complete neighborhood. A complete neighborhood is one offering daily services and amenities to residents and visitors which are convenient and accessible to all. The project connects into and completes the Hunters Point neighborhood by adding a wide range of essential public services and retail amenities so that the surrounding community can meet basic needs within a 10-15 minute walk. Employment, recreation options, and access to open space are expanded as well. The development of India Basin will include a significant quantity of new, multi-family residential units in a mixed-use setting that is essential to San Francisco's housing supply.

The allowable development program for the site was studied through the Environmental Impact Report (EIR). The development program limits and land use provisions are confirmed in the Special Use District (SUD).

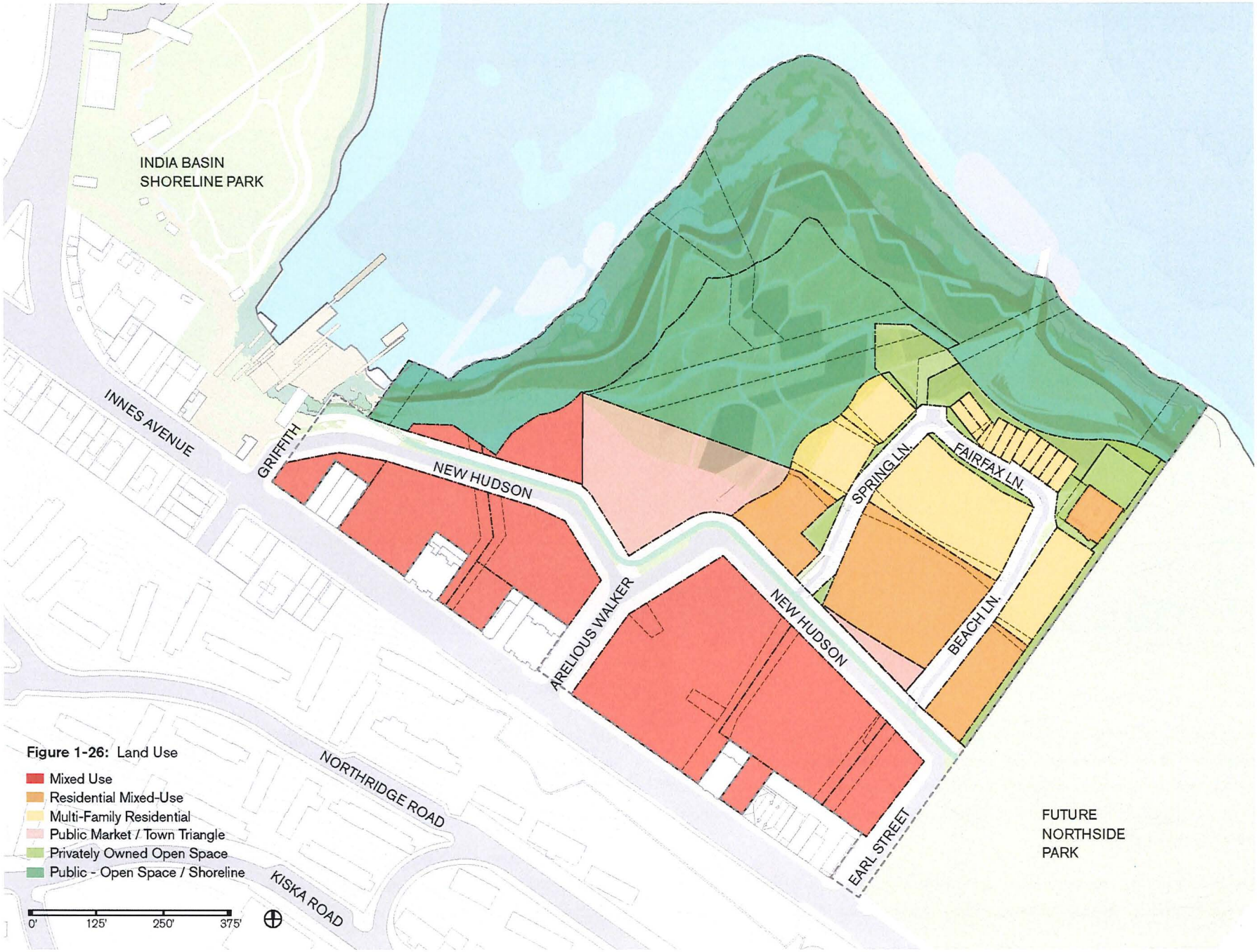


Figure 1-26: Land Use

Urban Form

Figure 1-27: Urban Form

As a pedestrian-priority community, India Basin is intended to be experienced at a walkable pace. This requires the calibration of form, proportion, articulation, variation, modulation, depth, materiality, texture and color of physical elements to the speed, range and capabilities of human sensory perception.

Detail has been focused on the zone of experience in the public realm—to the open space network, streets and pathways, lower-floors of buildings and to the threshold interface between public and private. The massing and scale of development gradually steps down from Innes Avenue towards the waterfront—accentuating the city's topography—and intuitively guiding people to the Bay.

The composition of buildings and spaces emphasizes diversity with consistency. Flexibility is preserved to enable and encourage a variety of architectural responses.

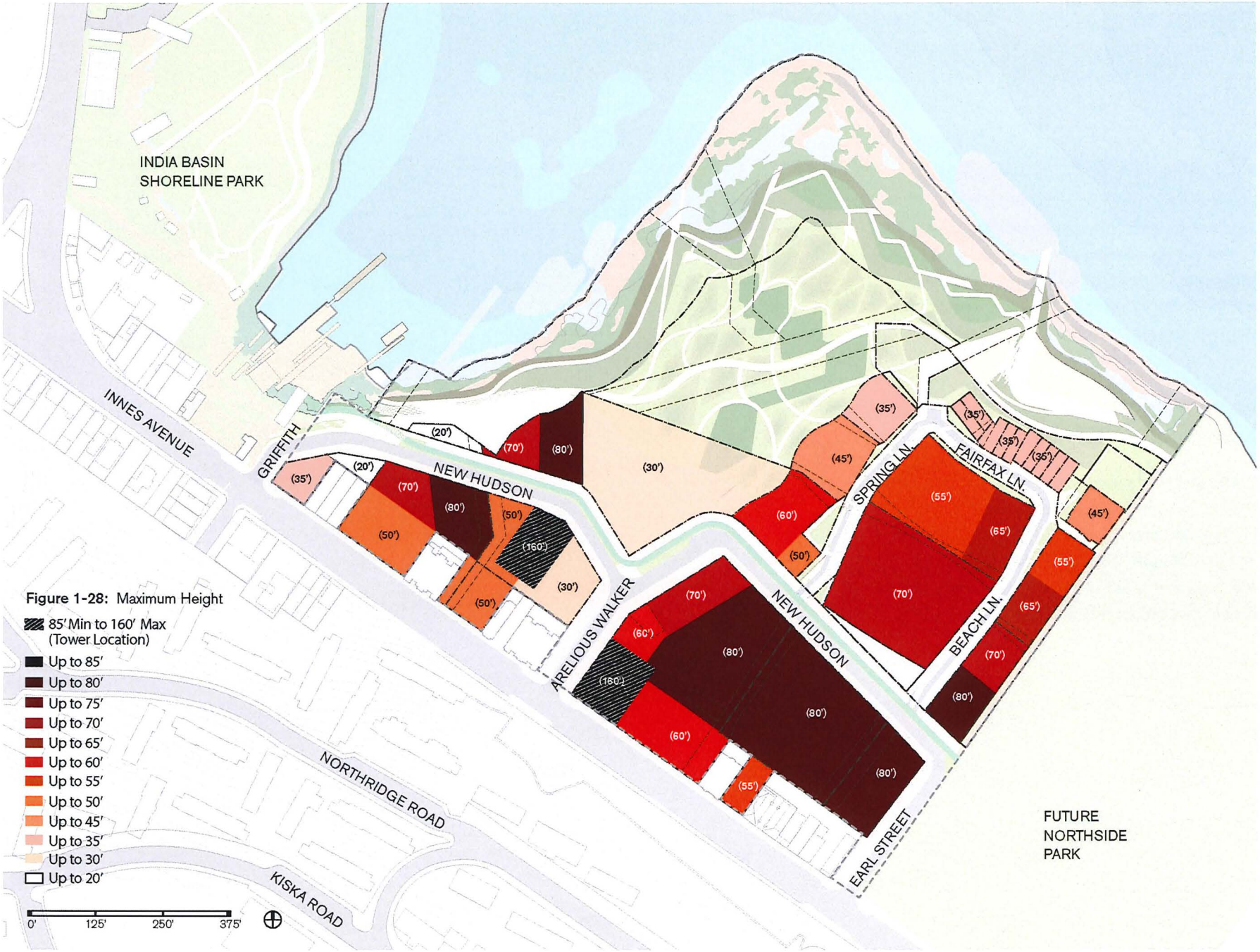


Figure 1-28: Maximum Height

Views

Views to the city's hilltops, open areas, and surrounding water allow people to orient themselves within their community and beyond. Protected public view corridors and vistas preserve and maintain scenic views from the public realm. India Basin protects view corridors through the site to the waterfront by means of the thoughtful configuration of streets, parcels, and building massing. New vistas from the Big Green and Shoreline to Bay Area landmarks are provided through the open space design.

Protected view corridors and vistas strengthen the visual connection between the site, its immediate context, and iconic sights such as: The Bay Bridge, Downtown San Francisco, Alameda Point, Twin Peaks, Sutro Tower, Mount Diablo and the East Bay Mountains.

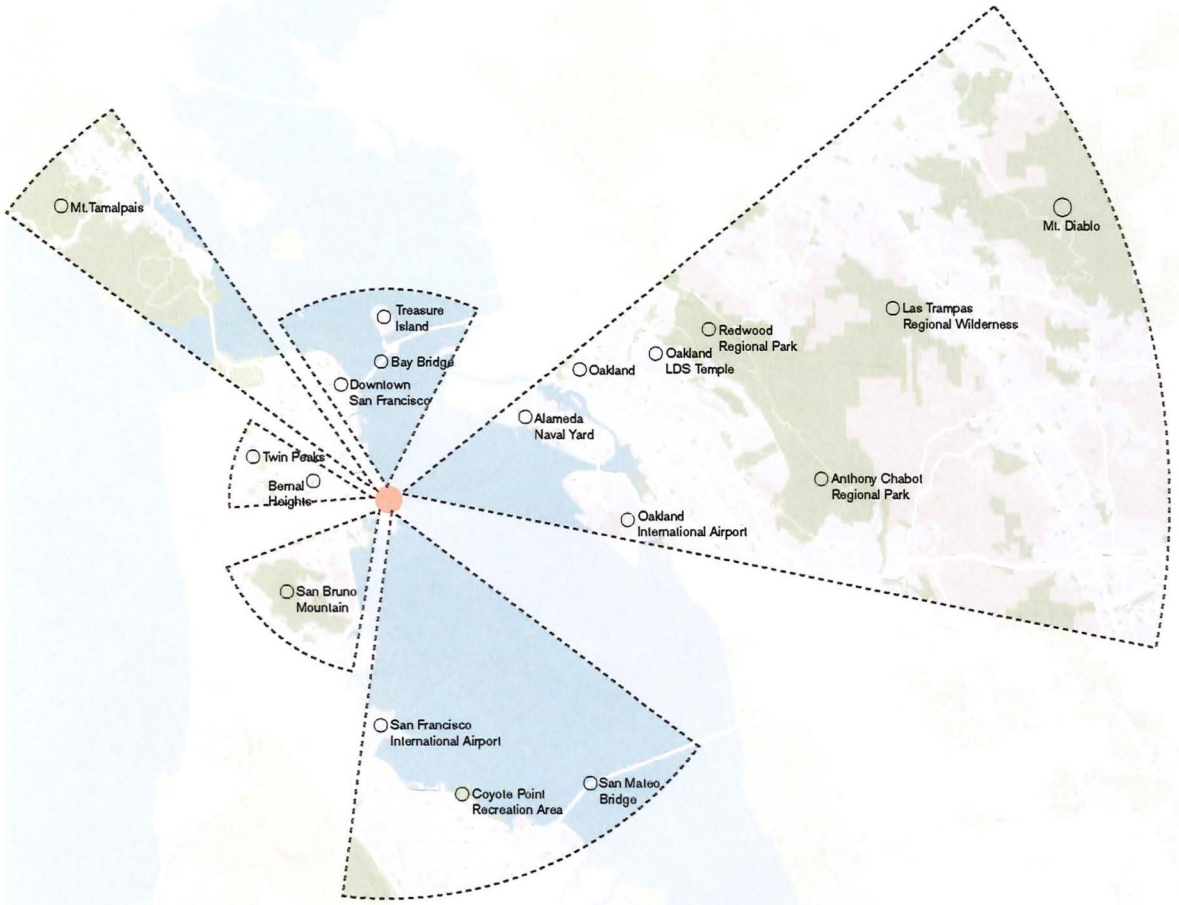


Figure 1-29: Regional Views

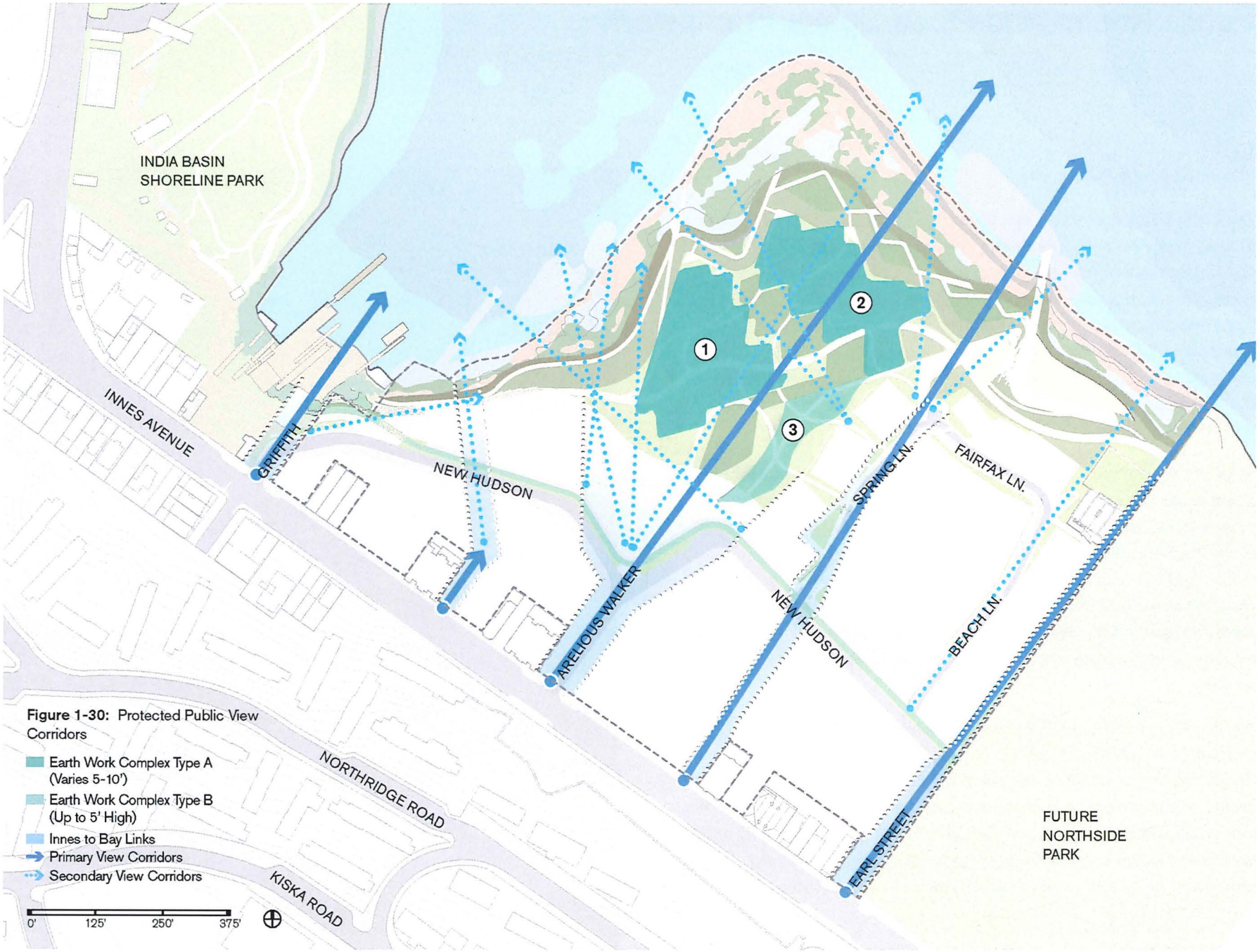


Figure 1-30: Protected Public View Corridors

Public Realm And Open Space Framework

Public Realm & Public Life

The emphasis of the India Basin project on supporting civic life seeks to foster a vibrant public life through the development of a high-performance public realm, interweaving parks, plazas and gathering places with an extensive network of complete streets, stairs, pathways, trails, pedestrian and bicycle routes. The public realm is integral to this new pedestrian-priority neighborhood, providing a wide range of active and passive uses and experiences—from the dynamic energy of the Public Market, the small-scale neighborhood plazas, to the expansive wilds of the shoreline.

Activity is focused around the Public Market, which functions as the social heart of the project. Micro-retail and rotating food and craft programs will animate the market, and retail shops lining Arelious Walker Drive and New Hudson Avenue will extend this energy to create a real neighborhood shopping district. Secondary gathering places are provided at the intersections of project sub-areas: the Cove Terrace, the Town Triangle and the Perched Beach. Small-scale courtyards within the blocks provide intimate, sheltered open space for local residents and families.

The Big Green and Shoreline are the signature open spaces. Part of a regional-scale seven-site network of waterfront parks, the Big Green and Shoreline provide excellent access to the San Francisco Bay. Areas for events, active recreation and play are interwoven with a network of trails, foot-paths and boardwalks, amongst earthworks, wetlands, constructed habitat and native landscape—together offering a full and varied experience of the Bay environment, views and microclimates.

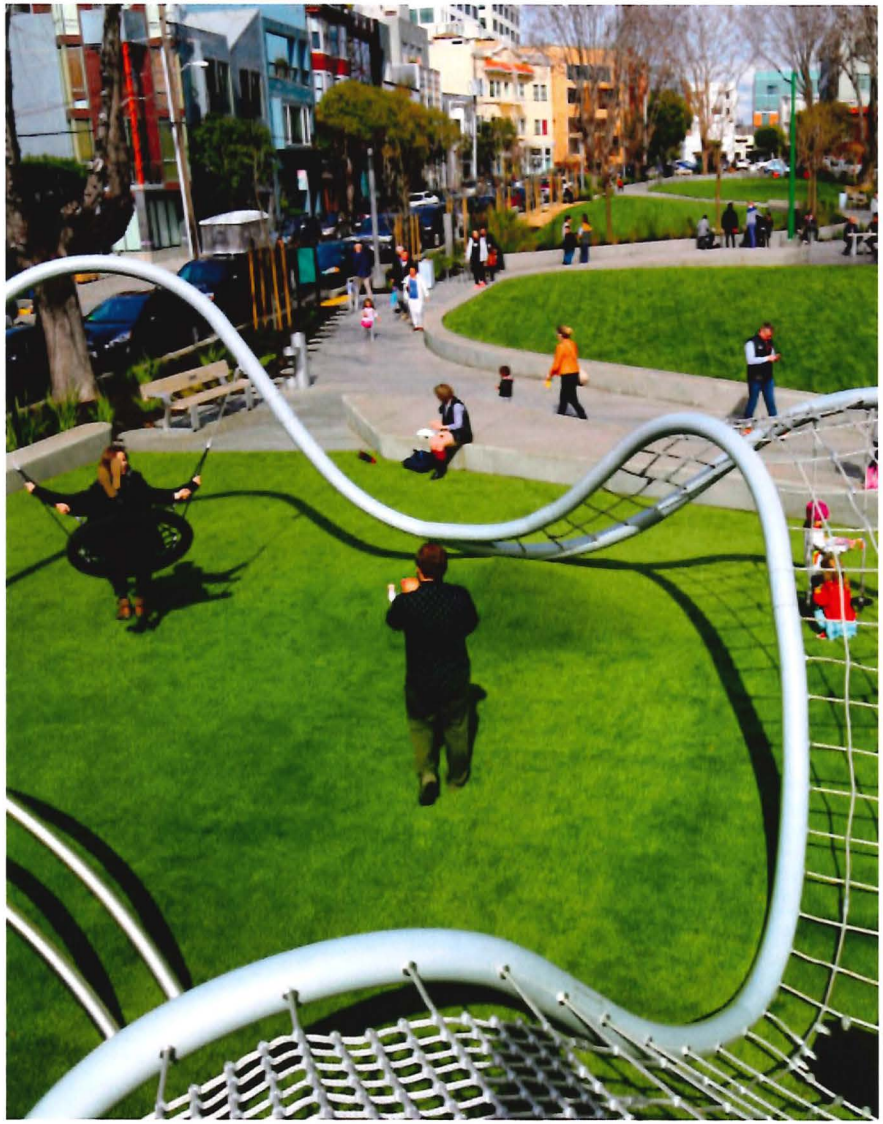


Figure 1-31: Public Realm and Open Space Diagram

Circulation

Transit Access

Essential to the development of India Basin are access and mobility improvements expanding transportation options and promoting walking, cycling, and public transit use over dependence on private automobiles.

This spirit echoes the City of San Francisco's pioneering Transit First Policy, and reaffirms the community's commitment to healthy, sustainable, equitable transportation alternatives.

The use of public transportation by a significant proportion of residents, employees and visitors is critical to meeting sustainability commitments, providing economic opportunity, and achieving a high quality of life at India Basin. The project provides a convenient and attractive transit plaza at the intersection of Innes Avenue and Arelious Walker Drive—the main entry to the site. This location places the entire project site, and significant uphill areas, within a five-minute walk, facilitating access to improved local and express bus services. Transit stops also can serve as placemaking elements, providing places enjoyable to be while waiting and creating interaction with adjacent programs such as retail, recreation and public spaces.

Recommendations detailed in the India Basin Transportation Access Plan (IBTAP)—including configuration of dedicated bus lanes to provide rapid bus service along Innes Avenue, as well as stop locations to access Northside Park, 900 Innes, and India Basin Shoreline Park—are currently being studied by SFMTA. These will be implemented as part of the Candlestick Point/Hunters Point Shipyard redevelopment effort.

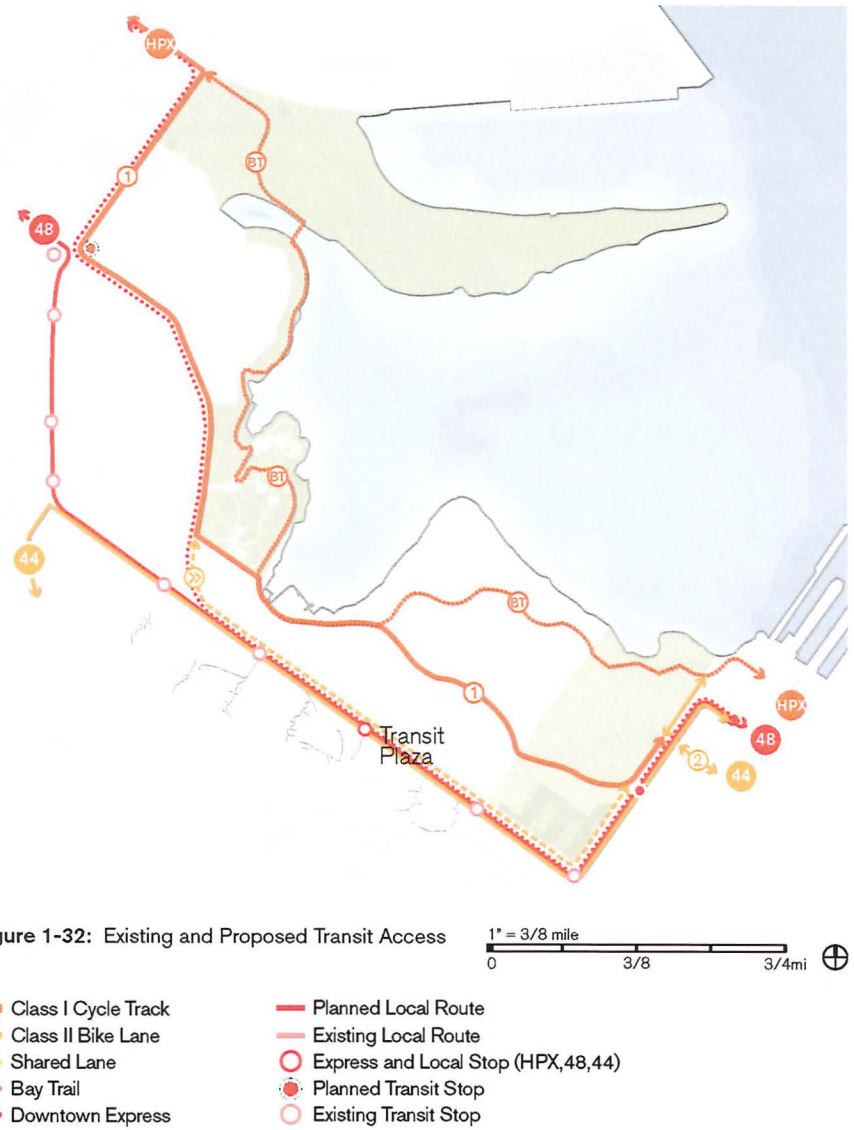


Figure 1-32: Existing and Proposed Transit Access

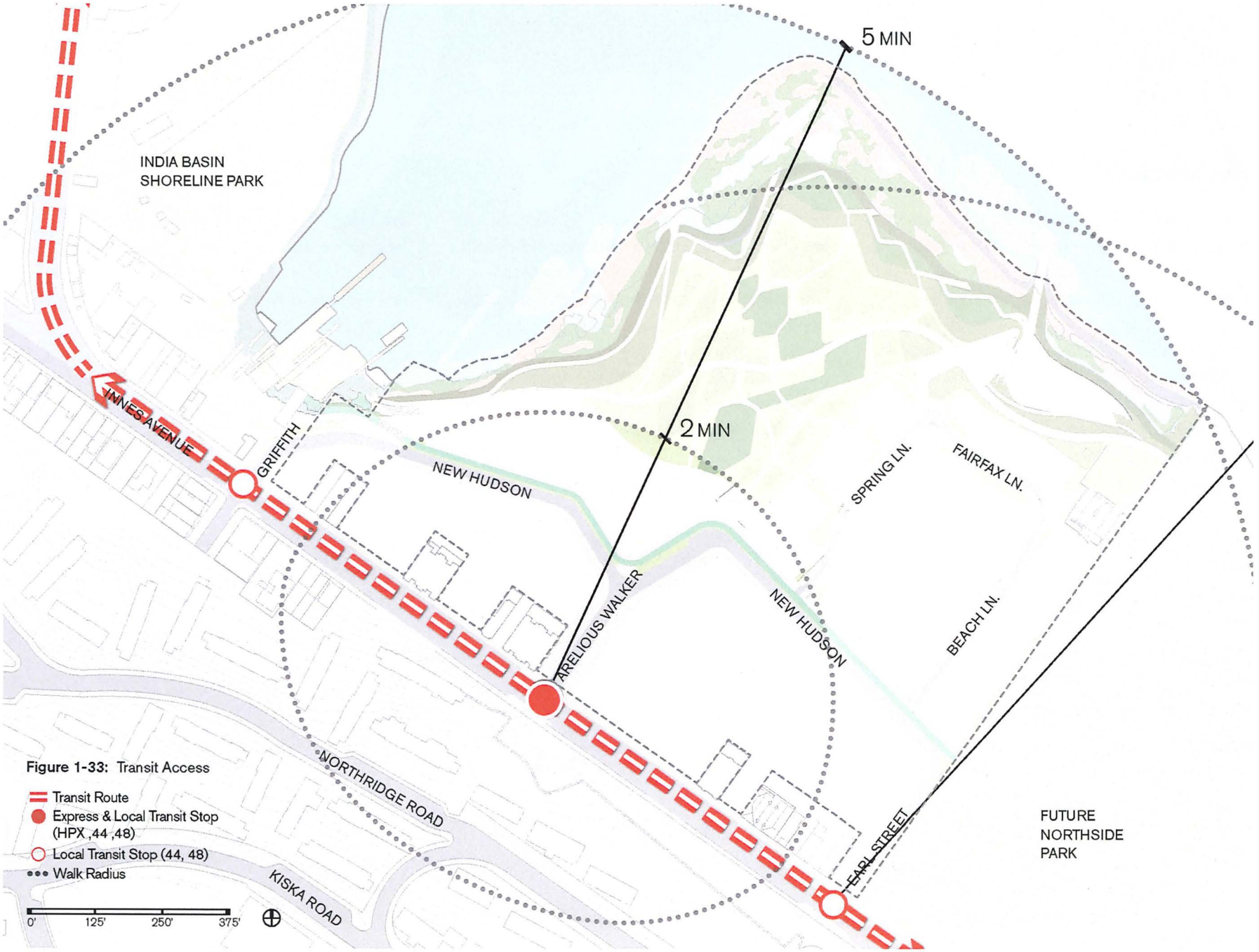


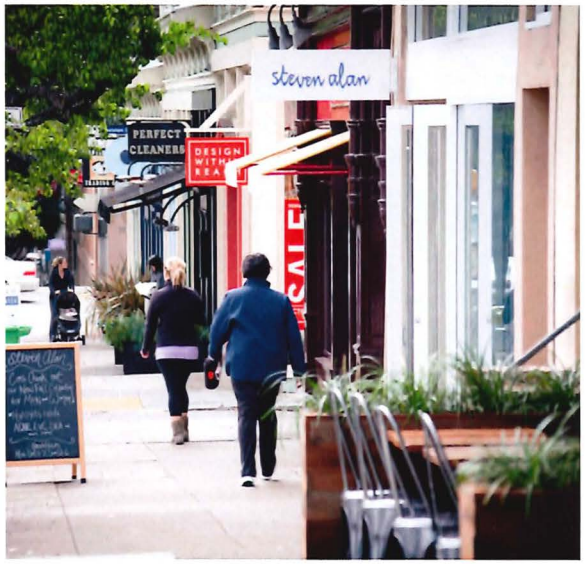
Figure 1-33: Transit Access

Complete Streets

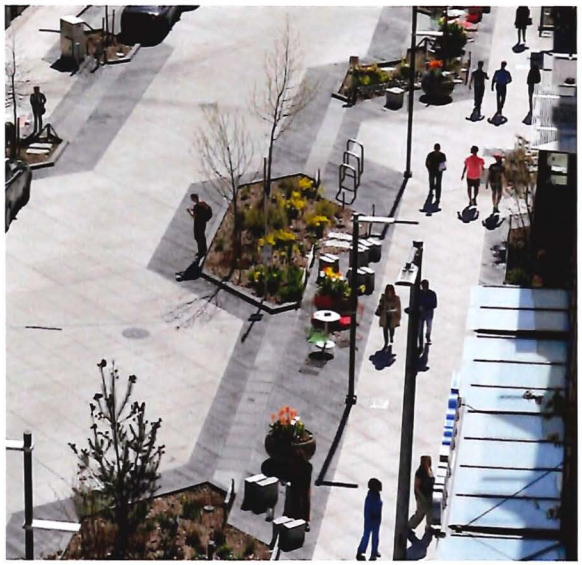
Accessibility and pedestrian safety are a priority for public realm improvements. To promote healthy life styles and reduce auto-traffic and emissions, street designs are intended to support walking, the use of bicycles, and public transportation. Complete streets create a pedestrian-focused environment which is safe, comfortable, inviting and visually legible as a way-finding system. Through thoughtful consideration of a full right-of-way cross-section, Complete Streets provides ample space for walking, sitting, and gathering to encourage social interaction among residents and visitors. Bicycle and pedestrian pathways connect India Basin to surrounding sites, as well as the city-wide network of bicycle and pedestrian routes. In conjunction with overall sustainability goals for the neighborhood, an integral part of the streetscape is a network of planters and bioswales which captures, directs and treats stormwater.

As a result of these priorities, neighborhood streets are designed with the minimum automobile travel lane dimension. Travel lanes are widened only where required for service and emergency vehicle access standards.

Neighborhood Commercial



Neighborhood Commercial



Shared Public Way

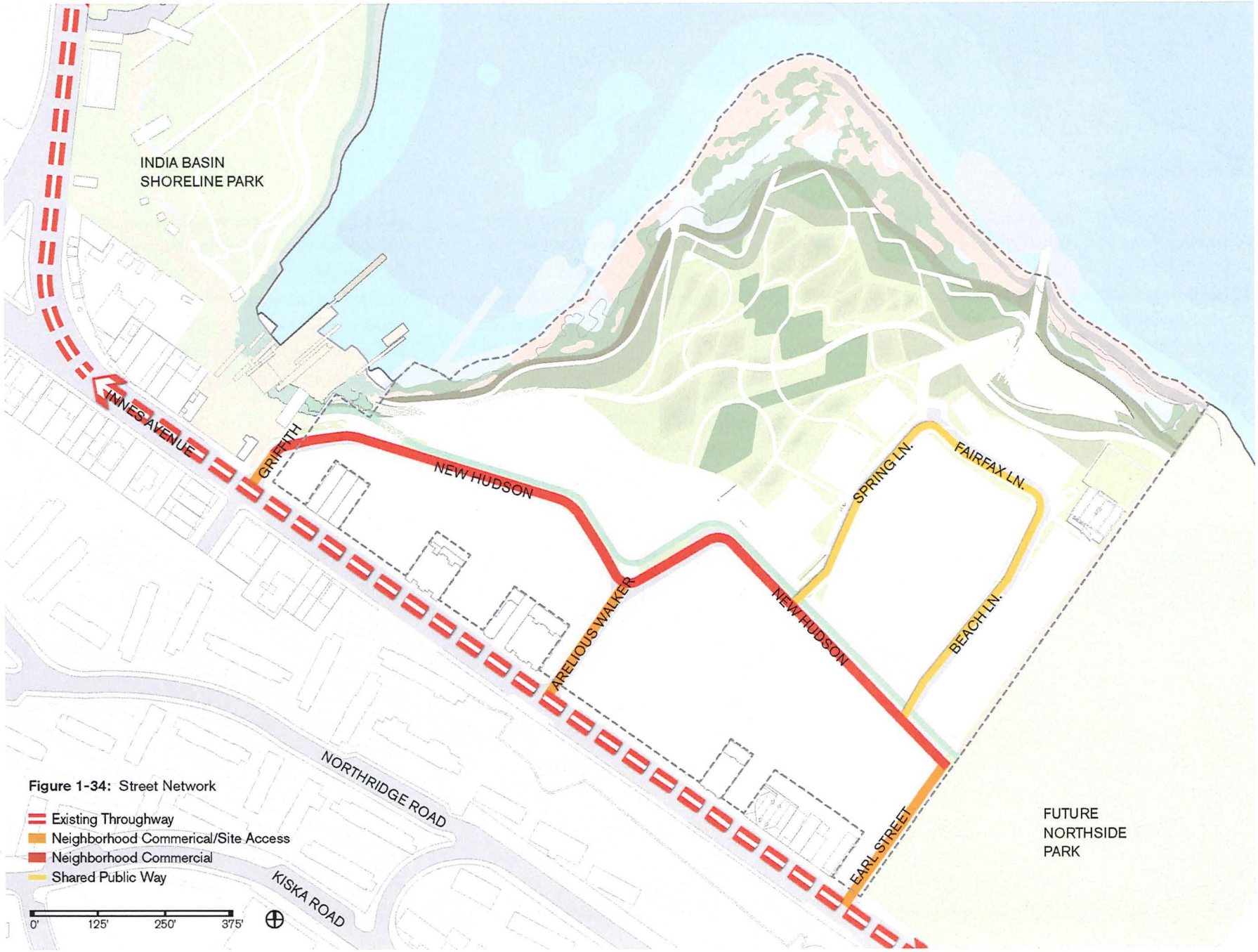


Figure 1-34: Street Network

Bicycle Network

Prior Planning efforts—including the India Basin Waterfront Parks and Trails Plan (IBWPTP) and the India Basin Transportation Action Plan (IBTAP)—have focused on expanding access for pedestrians and bicyclists, resulting in an integrated transportation network providing convenient non-motorized access to the India Basin neighborhood and beyond. A major feature of this network is a new Class I, dedicated and protected cycle track connecting India Basin Shoreline Park through the 900 Innes Site, along New Hudson Avenue and into Northside Park. This course is intended to become an important commuter bike route, linking the southeast waterfront all the way to downtown.

Additional multi-use shared paths weave through the Big Green, along the shoreline, and within the shared public ways. Class III routes along Earl Street connect Innes to Earl Path—a shared multi-use trail at the edge of Northside Park providing additional bike access to the beach. Bike parking and bike-share facilities are concentrated along Arelious Walker Drive, to accommodate bike access to retail, food and beverage, and other community amenities.

Class I Cycle Track

Multi-Use Shared Path

Class III

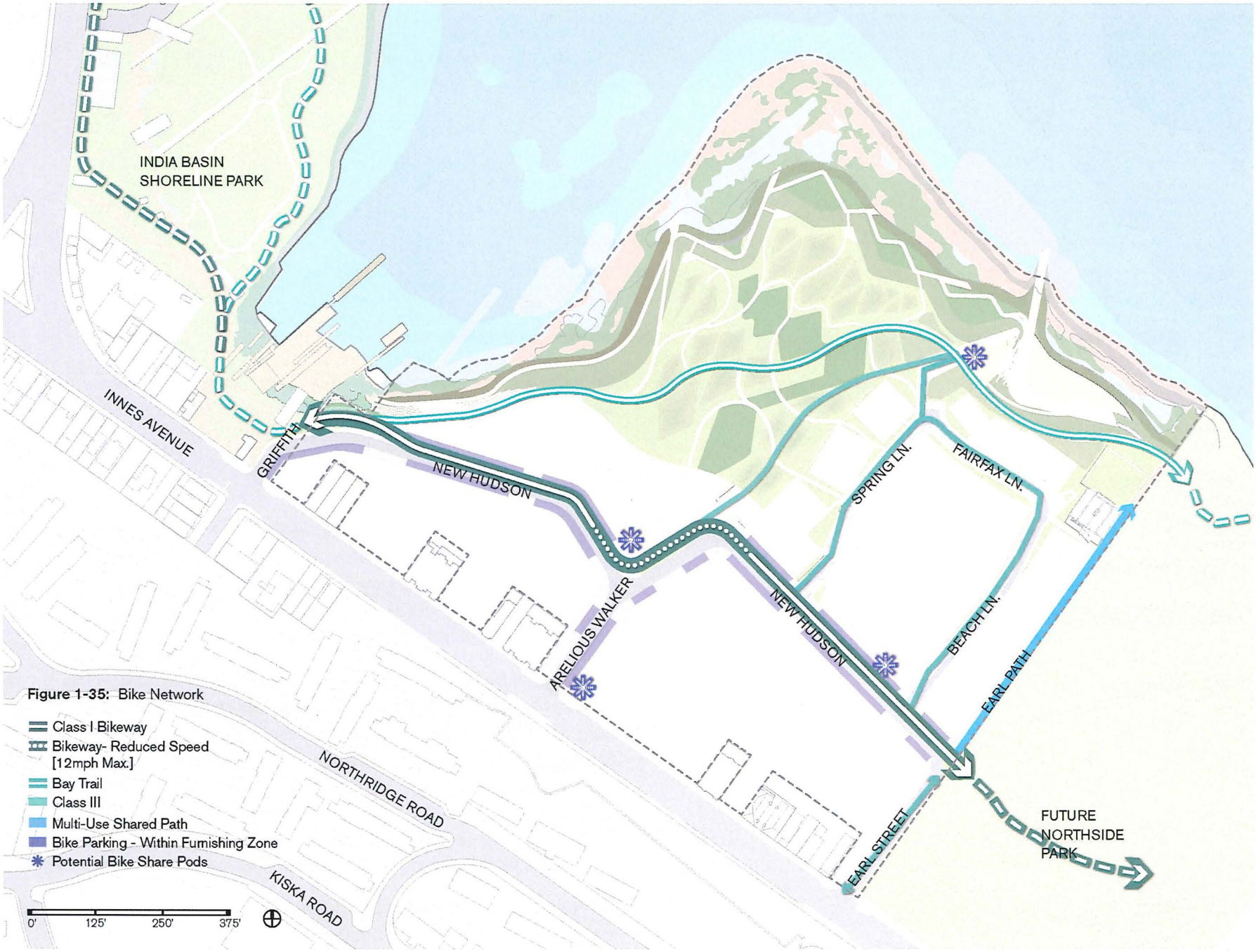


Figure 1-35: Bike Network

"Above all, do not lose your desire to walk. Every day I walk myself into a state of well-being and walk away from every illness. I have walked myself into my best thoughts, and I know of no thought so burdensome that one cannot walk away from it."

- Søren Kierkegaard

Pedestrian Network

The existing site is essentially a blank slate with long blocks. As a pedestrian-priority district, the urban design framework for the project shifts the site's monolithic proportions to the scale of the pedestrian. Pedestrian passages are provided at mid-block distances on Innes Avenue to increase permeability and prioritize access to the shoreline.

A network of pedestrian pathways permeate the site to offer a range of access routes and experiences from direct and intuitive passages, to meandering trails providing a sense of discovery. Dimensions are designed for a future intensity of use and to create variety, choice, and character. Trails vary from urban and hard to soft and intimate.

The project advances the vision of San Francisco's Better Streets Plan for multi-functional networks providing corridors of movement while at the same time reaching their potential for enhanced community life, recreational opportunities, and ecological benefits. Better Streets are designed and built to strike a balance between all users regardless of physical abilities or mode of travel. A Better Street attends to the needs of people first—considering pedestrians, bicyclists, transit, street trees, stormwater management, utilities, and livability, as well as vehicular circulation and parking.

Connections are designed to be seamless with adjacent sites for continuity and to reinforce both the waterfront and regional trail network.

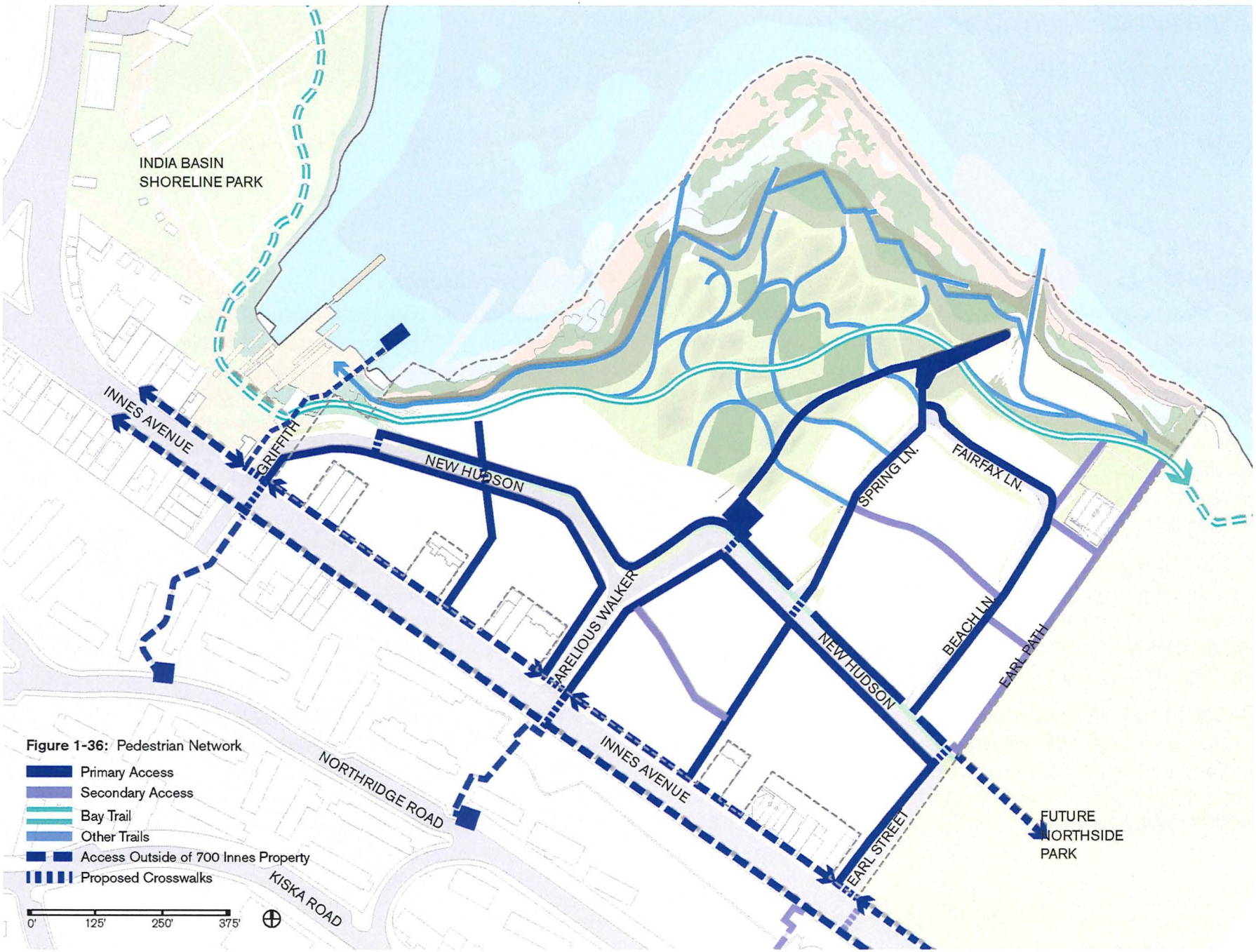


Figure 1-36: Pedestrian Network

1.3.7

Sustainability and Resilience

District Sustainability

India Basin can serve as a model of progressive, performance-based sustainable design. The master plan for the district takes advantage of the site's waterfront location and topographic variation by consolidating the majority of buildings on the upper portion of the site in order to designate a large portion of Bayside land as a public park. The scale of the project, along with its unique site conditions, enable it to leverage district-wide strategies to achieve a meaningful and measurable reduction in environmental impact. Urban and ecological systems are arranged for enhanced social interaction and district resilience.

The project's 'supernatural landscape' is central to sustainability. It includes a diverse range of symbiotic habitats, performs as critical stormwater infrastructure, defines the site's adaptation strategy, and promotes recreational and educational opportunities for sustained social engagement and stewardship.

India Basin leverages district-wide solutions to reduce potable water demand and conserve energy. Performance goals have been established for water and energy efficiency at both a district and building scale. The project's approach to sustainable design and resilience is outlined in Chapter 3 and Chapter 6 of this document.

Resilience and Adaptation

Resilience refers to the ability to withstand and recover quickly from an extreme event. For India Basin and other projects in San Francisco, extreme events can include seismic hazards, such as earthquakes, or weather-related hazards, such as coastal flooding or extreme storm events. India Basin may also provide disaster preparedness relief for those living on the site and in adjacent neighborhoods by leveraging on-site energy production and storage, as well as water storage.

Adaptability is the capacity to withstand changing environmental conditions and adjust relationships and systems for a sustained lifespan. Adaptable design is integrated into the site in several ways: from initial remediation of soil to the creation of a terraced wetland system which will allow habitat to migrate upland as sea levels rise. An adaptive management ethos allows the landscape to be dynamic and flexible, rather than rigid and vulnerable to disruption.

Social resilience and adaptation is also addressed at India Basin via strategies associated with public realm and mobility. Public space and urban design ensure the future evolution of mobility, proximity of public space to homes and offices, and human-centered design to enhance social interaction. This focus on vibrant, public gathering spaces will allow the community to reorganize and respond to gradual social change or potential economic or natural disruptions.

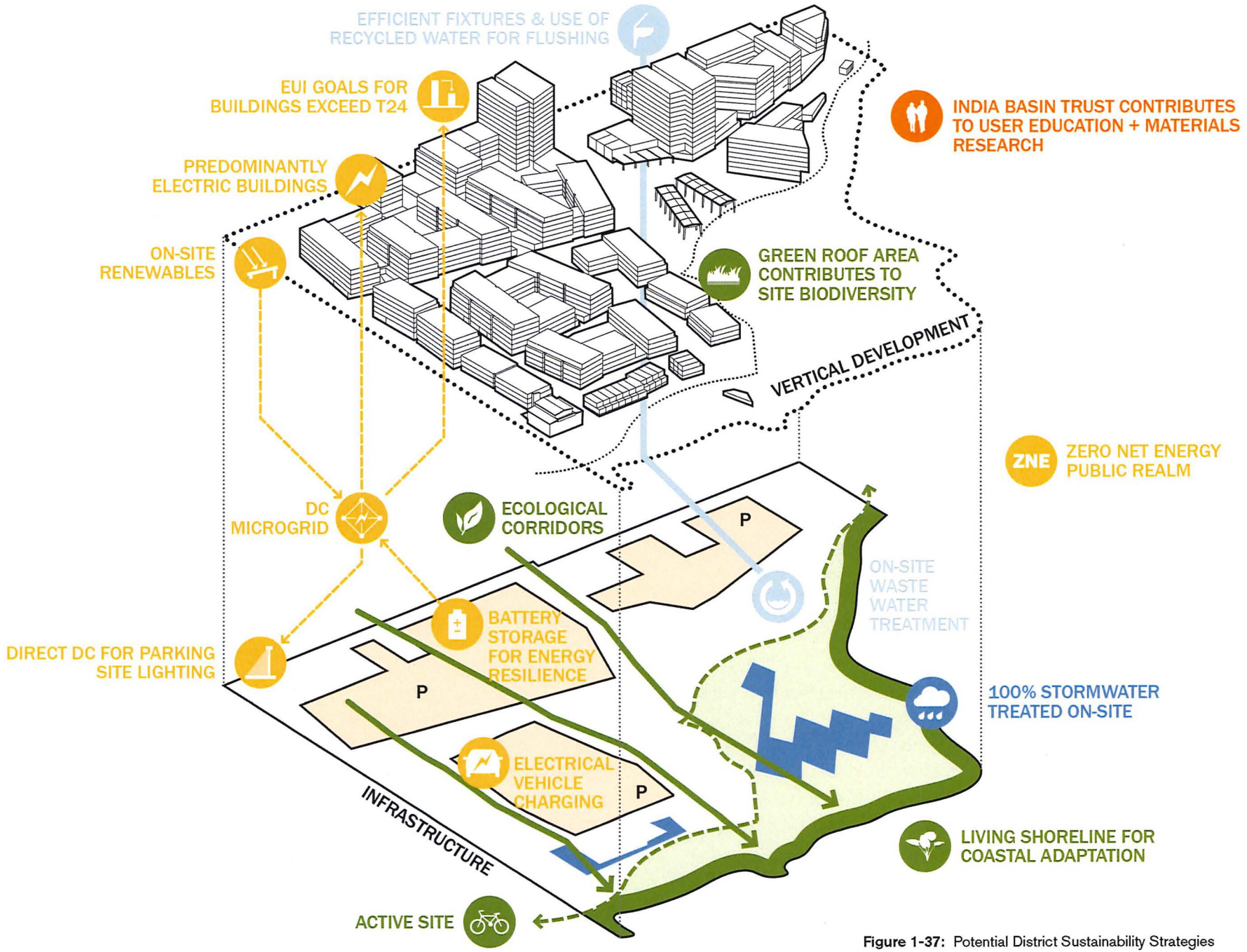


Figure 1-37: Potential District Sustainability Strategies

1.4 Placemaking

1.4.1

Project Sub-Areas

India Basin is organized as a group of five interconnected sub-areas. Each sub-area features a different character and distinct sense of place to provide a diversity of experiences across the site.

The Hillside is bounded by Innes Avenue, Earl Street, New Hudson Avenue, and Arelious Walker Drive. The Hillside is mixed-use, urban, and dense. Making use of the site's existing topography, a podium extends from below grade along Innes Avenue to ground-floor level along New Hudson, with parking concealed by active use frontage. The Transit Plaza, at the corner of Innes Avenue and Arelious Walker, serves as a welcoming gateway to the neighborhood. The Streetwall of this sub-area features public realm active retail frontages and public streets, intimate courtyards, public stairs, and laneways, which maintains the human scale and permeability of blocks.

The Cove while similar to the Hillside in physical structure, opens onto the India Basin cove landscape with panoramic views to downtown San Francisco and onto the Public Market. Delineated by Innes Avenue and Arelious Walker Drive, and by substantial frontage directly onto the Big Green and Shoreline, proximity to the Bay is the defining feature of this area. Here too topography is used to extend a podium from below grade along Innes to ground-floor level along New Hudson, with parking concealed by active use frontage. The main attraction of this part of the site is the Cove Terrace, providing active ground floor retail and restaurant uses facing the waterfront and connecting through to the Public Market.

The Flats are edged by New Hudson Avenue, and front onto the future Northside Park, the Big Green and the Shoreline. The Flats are modestly scaled, lower density, more family-oriented, and quieter in character. Arranged around an internal, pedestrian-priority shared public way, buildings in the Flats feature direct street-level access to ground-floor live-work and residential units with stoops, decks, porches and other socially-engaging outdoor spaces. Small plazas, the Town Triangle, and courtyards are tucked into this pedestrian-oriented place where paths toward the Bay and paths parallel to the Shore intersect.

The Big Green and Public Market support active recreation alongside habitat, stormwater management, and other ecological functions, which results in a rich open space where urban meets wild. Trails meander through the earthworks and public art, allowing for engagement with a range of program offerings and educational moments.

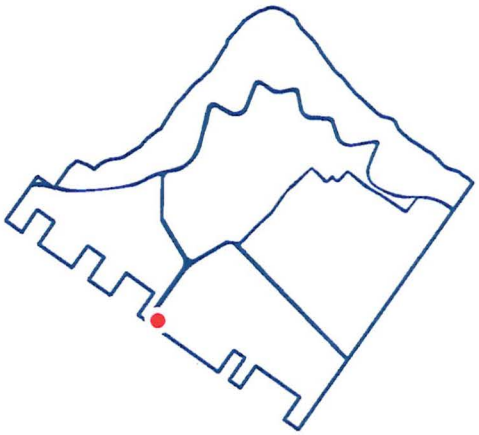
The Shoreline is a landscape defined by the ever-evolving Bay edge. Existing tidal marshes and natural forming sand dunes are retained and expanded to increase ecological potential. A perched sand area and deck terrace, along with boardwalks and trails, serve as a regional attraction for sunbathing, beach sports, and kayaking. Natural and constructed adaptation measures are improved with sand dunes, bird islands, a bioengineered breakwater, brackish lagoons, scrub upland planting, wind-mitigating tree stands and new wetlands for long-term resilience.

Figure 1-38: Project Sub-Areas

Key places

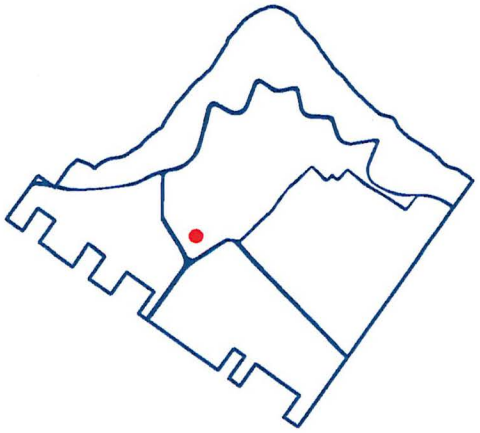
Transit Plaza

The Transit Plaza is a primary entry into the site, located at the corner of Innes Avenue and Arelious Walker. It welcomes people arriving by public transit, and is inviting and comfortable. The plaza is robust in nature for durability on a primary transit corridor.



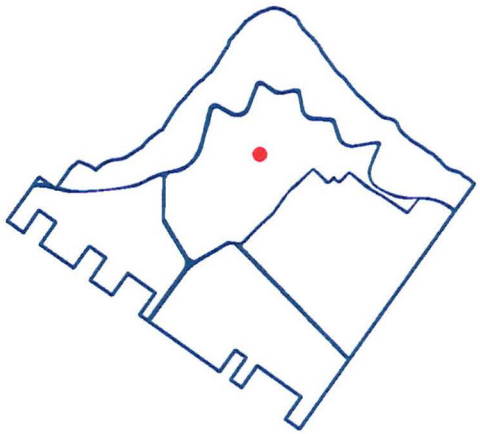
Public Market

Located at the heart of the village and the foot of the Big Green, the Public Market serves as a major destination and gathering place for India Basin. Flexible pavilions designed to be modular and evolve over time provide seating, shade, community spaces, and stalls for local vendors and artisans, as well as restrooms and other park amenities. The Public Market spills onto a generous plaza design to accommodate daily users, as well as large events, gatherings, and farmers markets. As a regional destination, the Public Market orients users to the India Basin public realm and acts as a gateway to the Big Green. It is also intended to serve as an emergency evacuation site for the greater India Basin neighborhood.



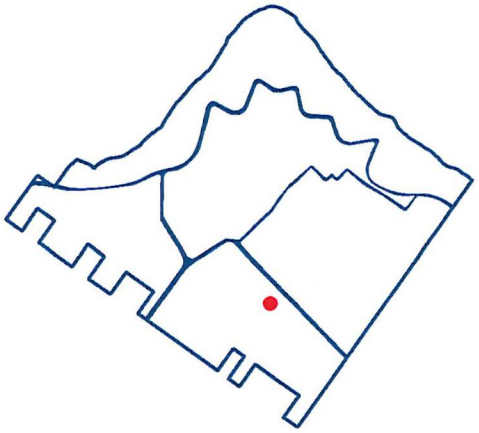
Big Green

The Big Green is the heart of the open space system and functions as a dynamic landscape with diverse ecologies and programs. It balances a range of active, passive, and water related recreation with habitats, stormwater treatment, and earthworks, resulting in a diverse open space where urban meets wilderness. Design emphasis will be placed on preserving the character of the Big Green as natural, rugged, and feral. Where feasible, the Big Green will also treat blackwater and reuse recycled water to create habitats.



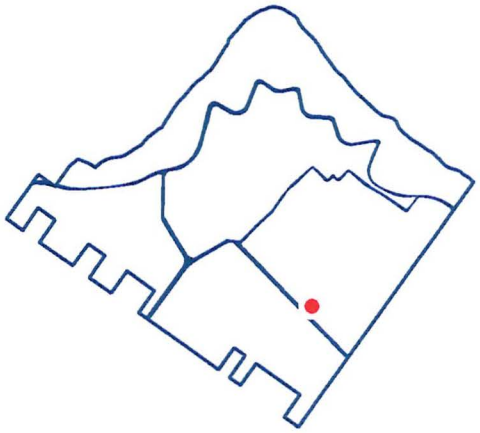
Hillside Steps

The Hillside steps provide an important functional pedestrian connection from Innes Avenue down to New Hudson Avenue, the retail heart of the neighborhood. The steps are designed to feel welcoming, generous, and comfortable to the larger existing India Basin community. Planting, art and water can be incorporated into the stairs to increase comfort and animate this critical public space.



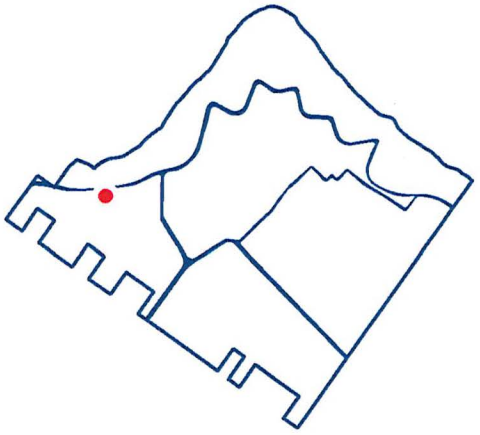
Town Triangle

The Town Triangle functions as the secondary gathering space for the residents of the Flats and the Hillside, distinct and different from the larger-scale Public Market. Lined with neighborhood-serving retail, the Triangle's public realm role is to provide flexible plaza space for small-scale gatherings and activities. Accordingly, the plaza incorporates a large paved area, as well as more intimate gathering spaces.



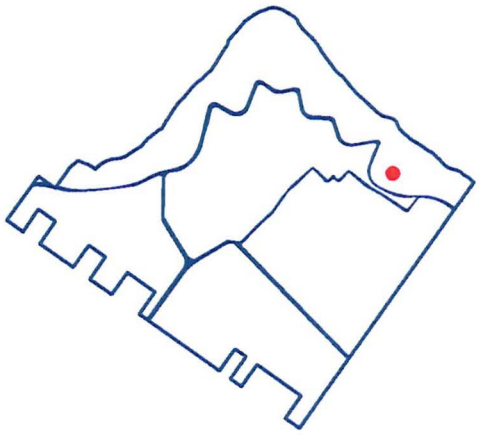
Cove Terrace

The Cove Terrace is a prominent public and private plaza, lined with active ground floor restaurants and cafes, located at the top of a terraced bank with panoramic views to downtown San Francisco. Pedestrians and bicycles intermix along the Bay Trail as it weaves through an active plaza with restaurants and concessions. The Cove Terrace steps down with generous terraces to a newly created tidal marsh. The intersection of the urban and the wild offers a rare experience along the San Francisco waterfront.



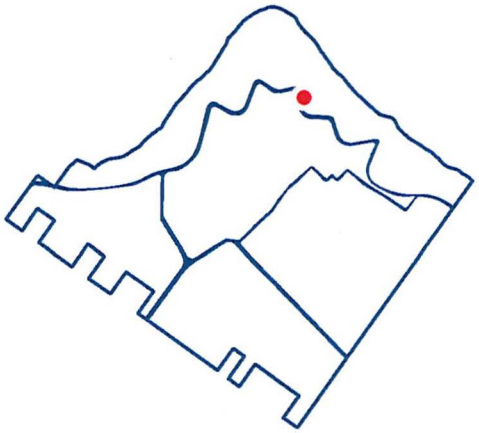
Perched Beach

The Perched Beach provides recreational amenities at the Bay's edge, and is designed to adapt into a tidally influenced beach with rising sea levels.



Shoreline

The open spaces along the Shoreline provide important habitats, diverse ecologies, and waterfront access. Visitors can experience the dynamic tidal marshes and seasonal wetlands from on top of the bank, terraced boardwalk, and overlooks.



02

Public Realm and Open Space

Chapter 02: Public Realm and Open Space

Following on the guidelines and best practices detailed in the San Francisco Better Streets Plan (BSP), and the recommendations elaborated in the India Basin Transportation Action Plan (IBTAP), access and circulation at India Basin are considered holistically – integrating transit, bike, and pedestrian routes along with automobile, service and emergency vehicle access. The robust network of streets, laneways, pedestrian paths, trails, boardwalks, terraces, stairs and promenades creates a highly-walkable, pedestrian-priority precinct that links into the surrounding neighborhood, connecting the site to greater Bayview Hunters Point, and beyond.

Internally, India Basin has been configured to feature small blocks with many intersections and a network of open spaces providing a variety of engaging pedestrian focused streets, lanes, paths, and trails that encourage walking and biking. The open space plan for India Basin offers opportunities for a wide array of outdoor activities, fostering social interaction among residents. Intimate semi-private residential courtyards, community plazas, the Public Market, Shoreline and Big Green all provide a wide range of scales and experiences. The landscape is visually rich and varied, featuring areas for both active recreation and passive enjoyment, while also supporting district wide sustainability objectives for water management and biodiversity. Water plays an important role in shaping the public realm. An advanced network collects and conveys rain water via planted rooftops, courtyards, swales, flow-through planters, bio-retention areas, and wetlands to the Bay—a complex system that informs the design of specific landscape elements and makes the commitment to Sustainability visible in the Public Realm.

This chapter details the design intent, Standards and Guidelines for the Public Realm, including Rights of Way, Public Pathways, Parcel Breaks and Laneways, Parklands, Plazas, Courtyards, and other unique places.

2.1 Streets, Laneways, and Trails

2.1.1

Streets

The streets strive to balance the needs of vehicular access with the development of a vibrant, active and safe pedestrian realm. Particular attention is given to division of blocks to foster a more permeable and walkable urban form.

Street Design Objectives

Accessibility and pedestrian safety are a priority for public realm improvements. To promote healthy life styles and reduce auto-traffic and emissions, street designs are intended to support walking, the use of bicycles and public transportation. Complete Streets create a pedestrian focused environment that is safe, comfortable, inviting and visually legible as a way-finding system. Through thoughtful consideration of the full right-of-way cross-section, Complete Streets provide ample space for walking, sitting and gathering to encourage social interaction among residents and visitors. Bicycle and pedestrian pathways connect India Basin to surrounding sites, as well as the city-wide network of bicycle and pedestrian routes. In conjunction with overall sustainability goals for the neighborhood, an integral part of the streetscape is a network of planters and bioswales that capture, direct and treat stormwater.

As a result of these priorities, neighborhood streets are designed with the minimum travel lane dimension. Travel lanes are widened only where required for service and emergency vehicle access standards.

Street Index Plan

Figure 2-1 identifies street names and rights of way for all streets within the site boundary. Specific street designs and characteristics are described further in the Standards and Guidelines section.

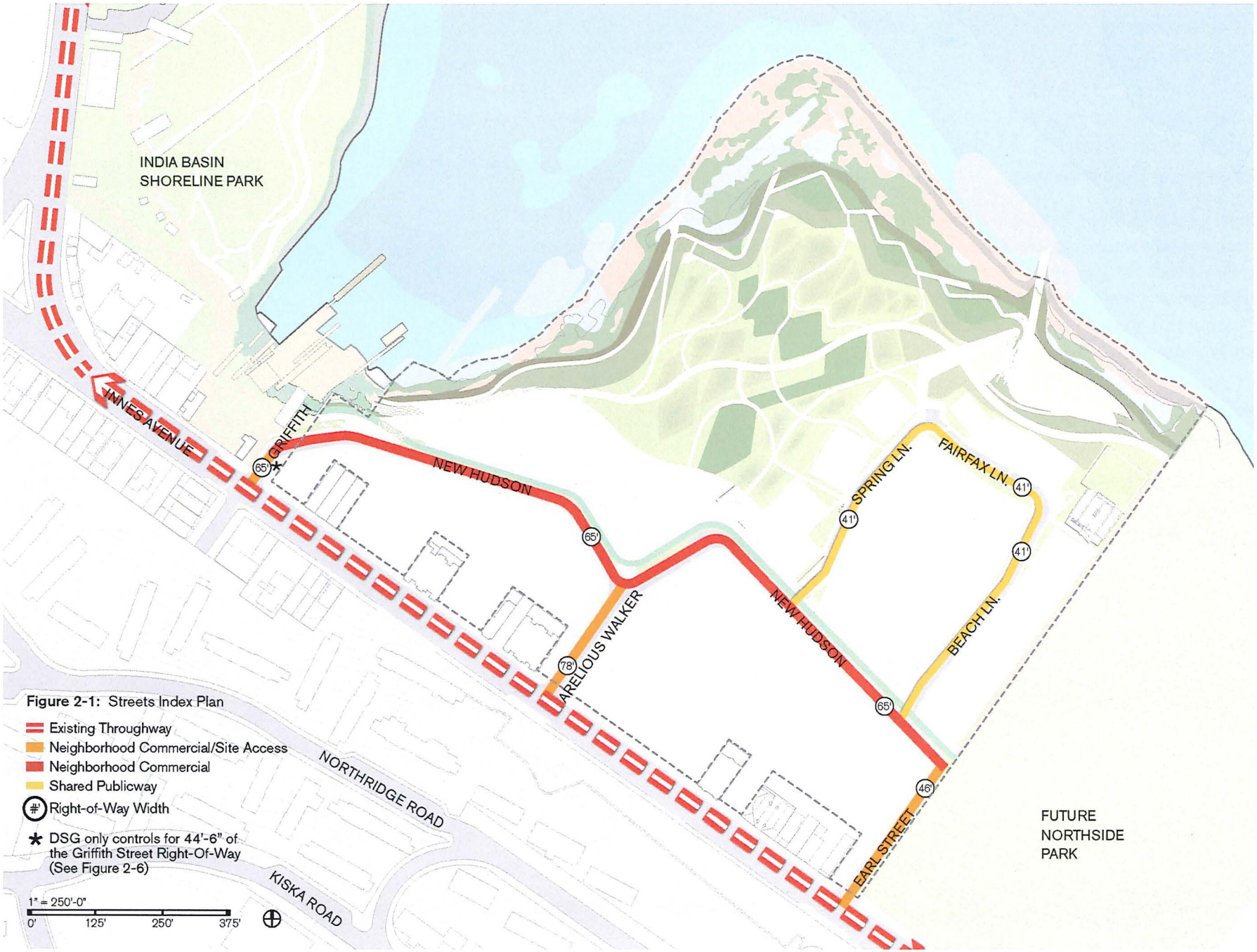


Figure 2-1: Streets Index Plan

Emergency Vehicle Access

The India Basin street network is designed to accommodate the requirements of emergency vehicle access. Street widths and turning radii accommodate San Francisco Fire Department requirements and emergency vehicle access is provided throughout the street network.

Standards

2.1.1.1 Street Dimensions Shared Public Way Emergency Vehicle Access dimensions shall be as shown in Figure 2-2.

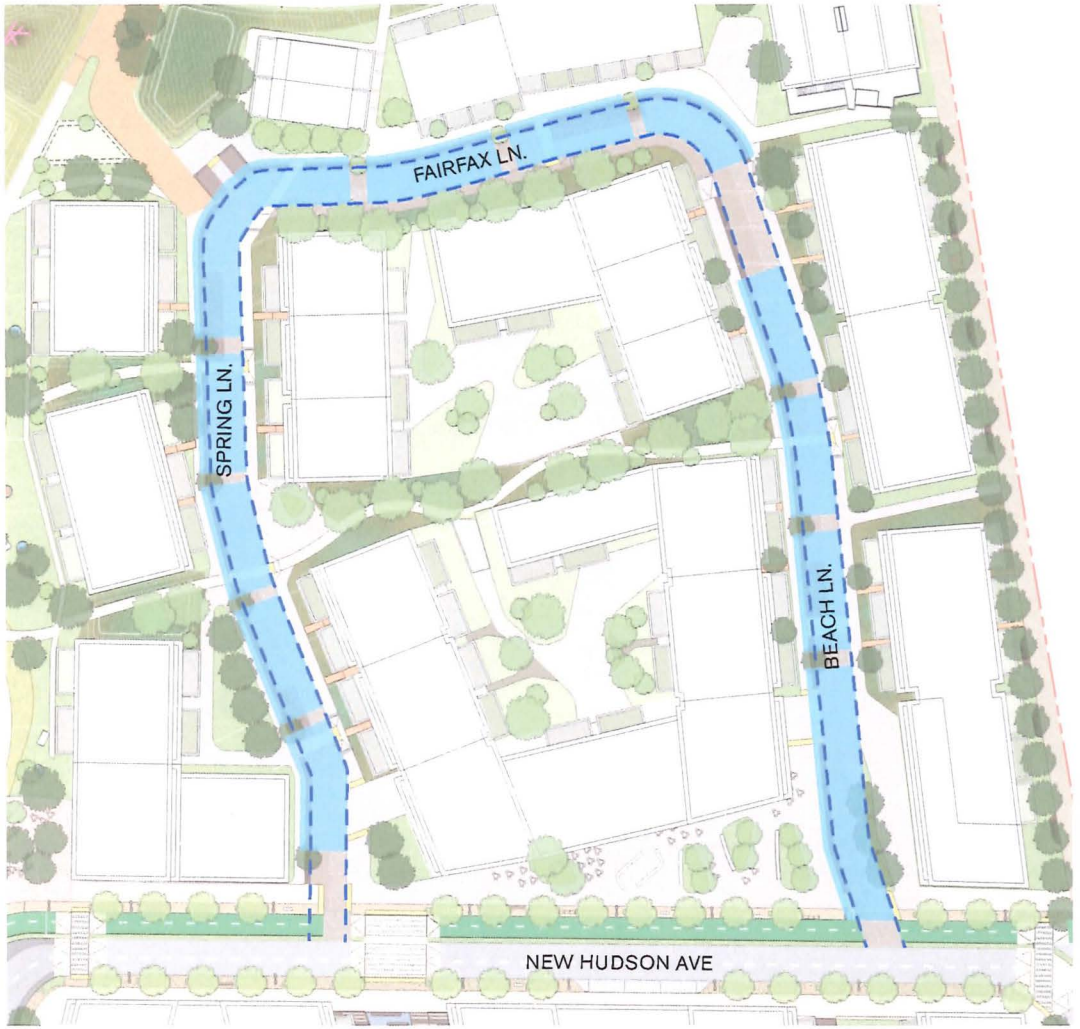


Figure 2-2: Shared Public Way Emergency Vehicle Access

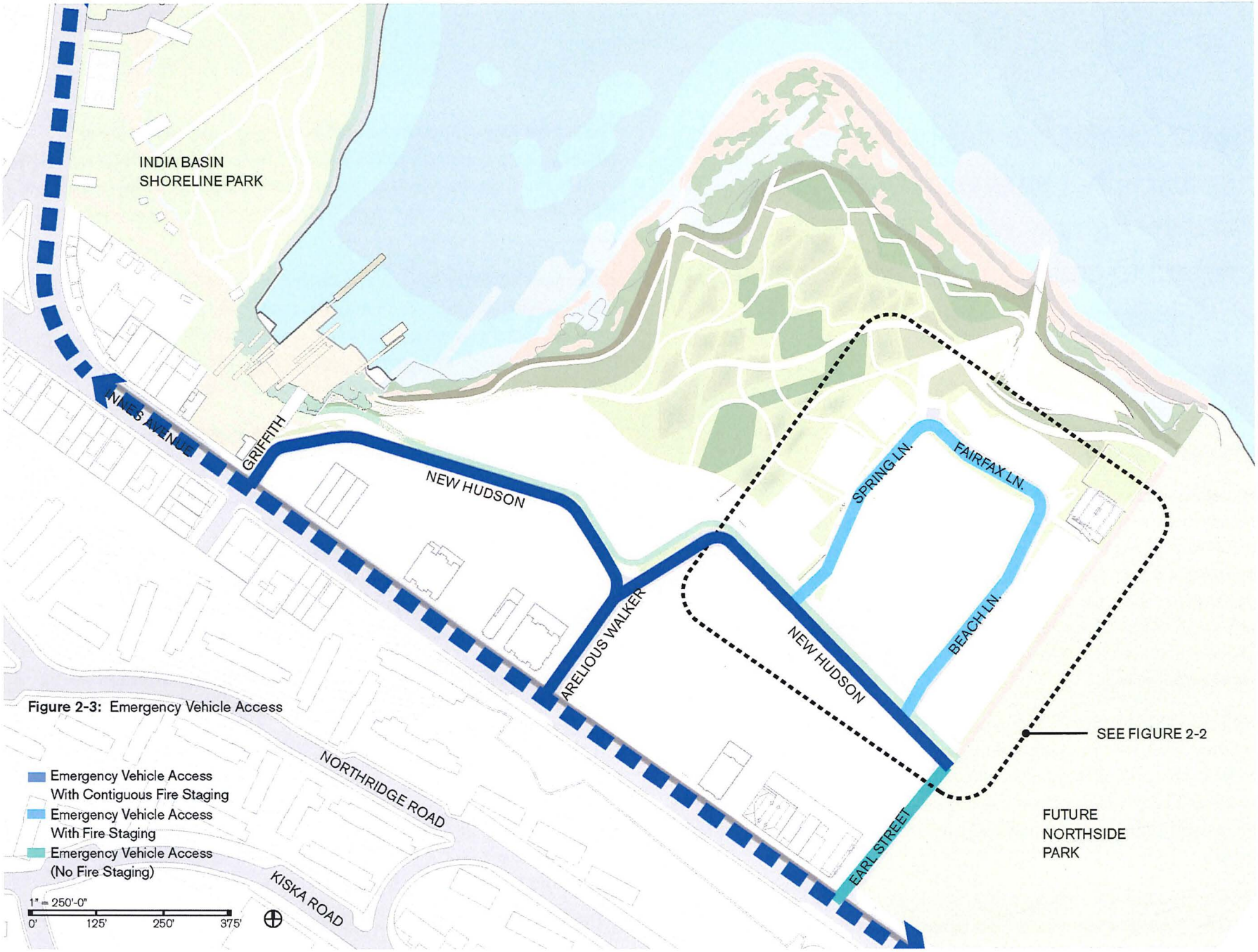


Figure 2-3: Emergency Vehicle Access

Good streetscape design begins with an approach that emphasizes wholeness, considering how various elements interact to create an overall streetscape composition.

SF Better Streets Plan, 2010

Streetscape Zones

Streetscape Zones are used to define the use of the area between the faces of buildings defining a street, which include the setback zones and the street right-of-way. There are six Streetscape Zones referenced throughout the street standards and guidelines that follow. The width and use of five of them are consistent with the five sidewalk zones as defined and controlled in the City of San Francisco Better Streets guidelines. These Standards and Guidelines include a sixth zone to describe the vehicular travel way.

Frontage Zone The area adjacent to the property line where transitions between the public sidewalk and the space within buildings occur. This zone can be occupied by adjacent uses for outdoor displays, café or restaurant seating, and planting. Architectural elements that encroach into the street such as awnings, canopies, and marquees may also occupy this zone.

Where there are continuous building setbacks, the setback zone can be used for frontage zone uses and for wider sidewalks.

Pedestrian Throughway Zone This is the zone maintained clear of obstructions for pedestrian through-travel. The surface should be firm, stable and slip resistant. The width of this zone should accommodate anticipated foot-traffic. A minimum clear travel path of 6' should be maintained at all times.

Furnishing/Planting Zone The furnishing zone provides a buffer between the pedestrian walking area (throughway zone) and the street traffic. This zone can accommodate a range of furnishing elements, as well as street trees and planting. The furnishing zone may be differentiated from the throughway zone through material or paving scoring change.

Edge Zone The area intended for use by people accessing parked cars. The edge zone should have a walkable surface.

Parking Lane/Bike Lane/Extension Zone The portion of the street intended for on-street parking, bike lanes or sometimes the extension zone. SF Better Street Plan refers to the extension zone as "specific conditions where the sidewalk extends into the parking lane". Specific examples include curb extensions, flexible use of parking lanes, and bicycle parking, tree planting, and stormwater features in the parking lane.

Travel Zone The portion of the street allocated to vehicular travel. In pedestrian and cycle-priority neighborhoods like India Basin, this zone should be minimized.

Figure 2-4: Streetscape Zones

General Standards and Guidelines

India Basin streets support a robust public realm by being oriented toward pedestrians and bicycles. The streets will have a distinct look and feel, and the materials and furnishings will reflect the unique character of India Basin.

The standards and guidelines included on this page apply to all India Basin streets. On the pages that follow, specifications, guidelines and standards are provided for specific streets.

Standards

2.1.1.2 Tree Size Street trees shall be in a minimum 24-inch box at installation. See Sections 2.3.7 and 2.4.2 for more information on street trees.

2.1.1.3 Tree Pit Street trees shall have a minimum of 1000 cubic feet of soil per tree to maximize habitat potential. This may include use of a structural cell system (see Section 2.3.7, Figures 2-75 through and 2-77, for Tree Pit Types) to maximize soil volume.

2.1.1.4 Throughway Zone Surfacing in the throughway zone shall be distinct from surfacing in the furnishing zone. Variation may include jointing pattern, paving type, texture and color. Throughway zone surfacing shall conform to DPW standards for accessibility and shall be firm, stable and slip resistant. A minimum clear travel path of 6' shall be maintained at all times.

2.1.1.5 Street Lights Street lights shall be placed to meet foot candle requirements per Figure 2-71.

Guidelines

2.1.1.6 Furnishing Zone Furnishing zone shall be surfaced with cast in place concrete, concrete unit pavers or stone cobble. Fixed furnishings shall be located in this zone and placed outside of the throughway zone.

2.1.1.7 Placement of Furnishings Placement of furnishings including bike racks, refuse receptacles, seating and news stands shall be coordinated with building design and entry locations. Furnishings shall be located adjacent to primary building entries. Furnishings shall not conflict with or obstruct building entries.

2.1.1.8 Tree Spacing Where regular spacing of trees is not possible due to curb cuts, subgrade utilities or other obstacles, regular spacing shall be maintained for as much of the street as possible. A gap of no more than one tree shall be permitted. Where loading zones or garage entries occur, a street tree shall be planted on both sides of loading zone / garage entry to bookend loading zone / garage entry and minimize gaps in street tree placement. See Sections 2.3.7 and 2.4.2 for more information on street trees.

2.1.1.9 Garage Entry Garage entry surfacing shall match adjacent furnishing zone and throughway zone surfacing.


COFFEE
SOUP:

Griffith Street

Griffith Street is a point of convergence. It is the northernmost entry street and serves as a gateway to the site. Griffith Street provides a connection from the North between the neighborhood and the primary retail street, New Hudson. In addition, Griffith St. forms the interface with 900 Innes, the future India Basin Boatyard Park, where terraces accommodate the grade difference between sites while allowing for an accessible path of travel from Innes to New Hudson. Griffith features a generous pedestrian-oriented entry creating a distinct gateway to India Basin.

Figure 2-5: Griffith Street View

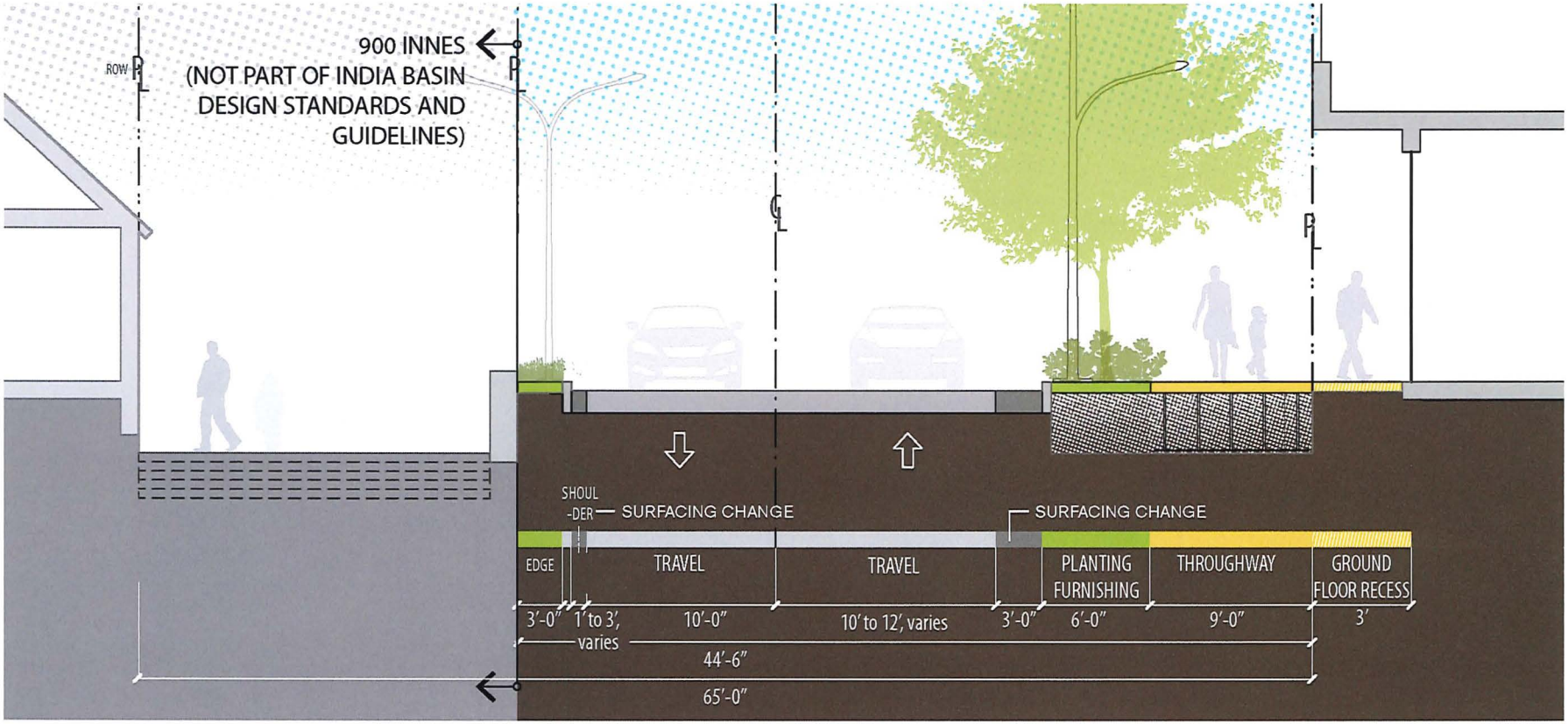


Figure 2-6: Griffith Street Section

1" = 12'-0"
0' 6' 12' 18'

Standards

2.1.1.10 Street Zone Dimensions Right-of-way cross-section dimensions shall be as shown in Figure 2-6.

2.1.1.11 Elements All elements shown in Figures 2-6 and 2-7 are required. Dimensions may vary.

2.1.1.12 Specifications Specifications shall conform to Table 1 Griffith Specifications. See Section 2.3 for Public Realm and Open Space Elements.

2.1.1.13 Street Trees Street trees are required on the south side of Griffith and shall be spaced at a maximum of 30' on center.

2.1.1.14 Raised Crosswalk Crosswalk at intersection of Griffith Street and Innes Avenue shall be raised.

Guidelines

2.1.1.15 Surfacing Where travel lanes exceed 10 feet wide, surfacing shall change adjacent to curb in the curb zone to a contrasting material, such as textured paving.

Table 1. Griffith Specifications

(See Section 2.3 for Public Realm & Open Space Elements)

R.O.W. WIDTH: 65 FEET (44'-6" feet documented in DSG only)
BIKE FACILITIES: NO

SURFACING		(See 2.3.4)
P1	RAISED CROSSWALK ZONE	TYPE H, I
P2	FURNISHING ZONE	TYPE I, J, K
P3	TRAVEL ZONE	TYPE G, H
P4	THROUGHWAY ZONE	TYPE H, I, J
P5	CURB ZONE	TYPE H, I, J, K
CURBS		(See 2.3.7)
C1	CURB AND GUTTER	DPW STANDARD
C2	CURB RAMP	DPW STANDARD
PLANTING		(See 2.4.2)
L1	TREE	ENTRY STREET
L2	STREETSCAPE PLANTING	UNDERSTORY TYPE C
L3	TREE	COMMERCIAL CORRIDOR
LIGHTING		(See 2.3.5)
LT1	STREET LIGHT	TYPE A
FURNISHING		(See 2.3.4)
F1	SEATING	TYPE A, B, D
F2	BIKE RACK	

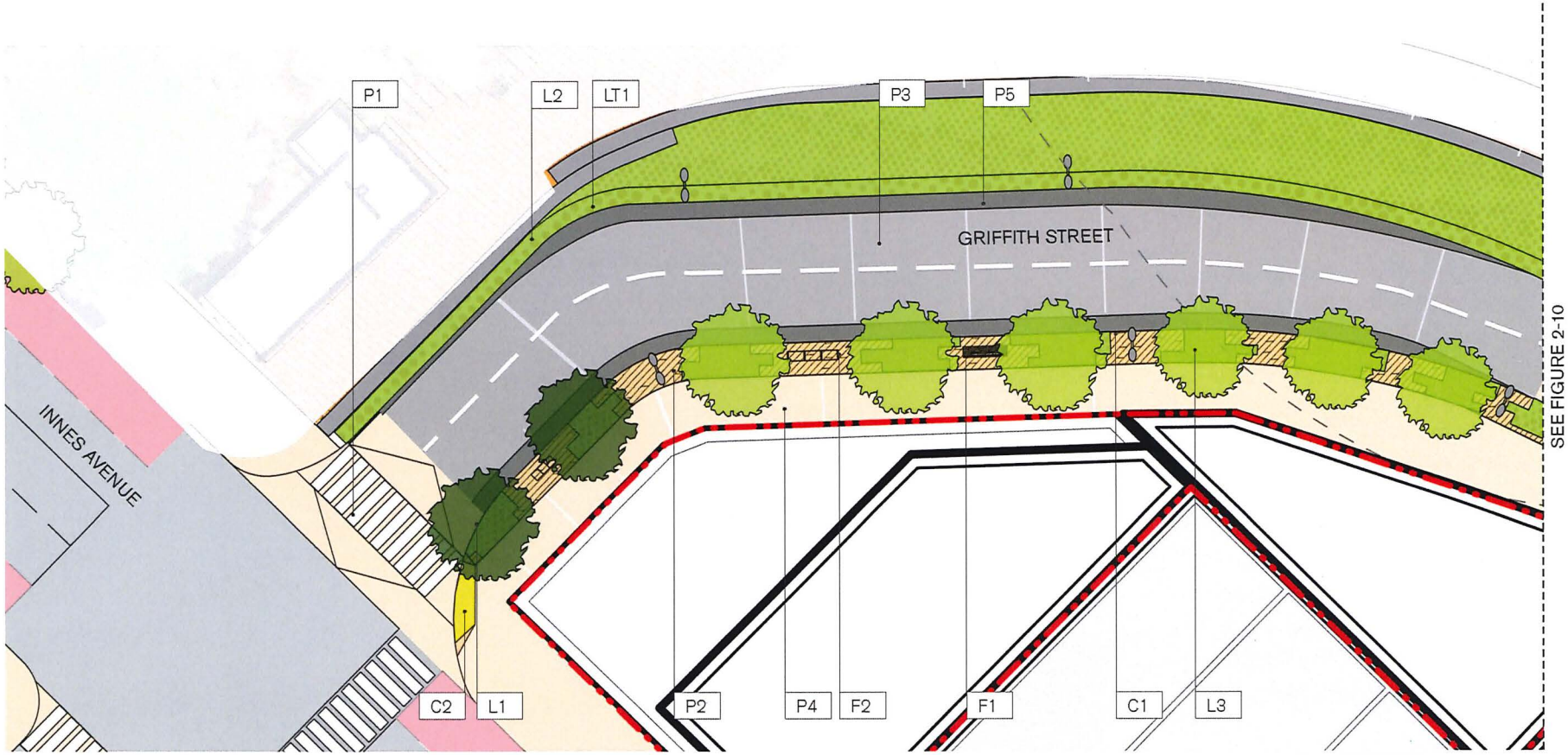


Figure 2-7: Griffith Enlarged Plan

1″ = 30′-0″

0′ 15′ 30′ 45′

Seating
Light
Refuse Receptacles
Curb Ramp
Raised Crosswalk
Property Lines
Parcel Break Lines

New Hudson Avenue

New Hudson serves as the primary circulation route and retail corridor for India Basin. New Hudson is also the primary bicycle thoroughfare traversing the site, it includes a dedicated 2-lane Class 1 Bikeway that is separated from the vehicular zone by a 3' planted buffer and 2" curb. New Hudson links the primary public spaces of the site, including the Public Market, Town Triangle, and Big Green to each other and adjacent properties. The Right-of-Way configuration features pedestrian-oriented treatments with generous sidewalk dimensions and an ample zone for plantings and furnishings to enable a robust public realm.

Figure 2-8: New Hudson Avenue View

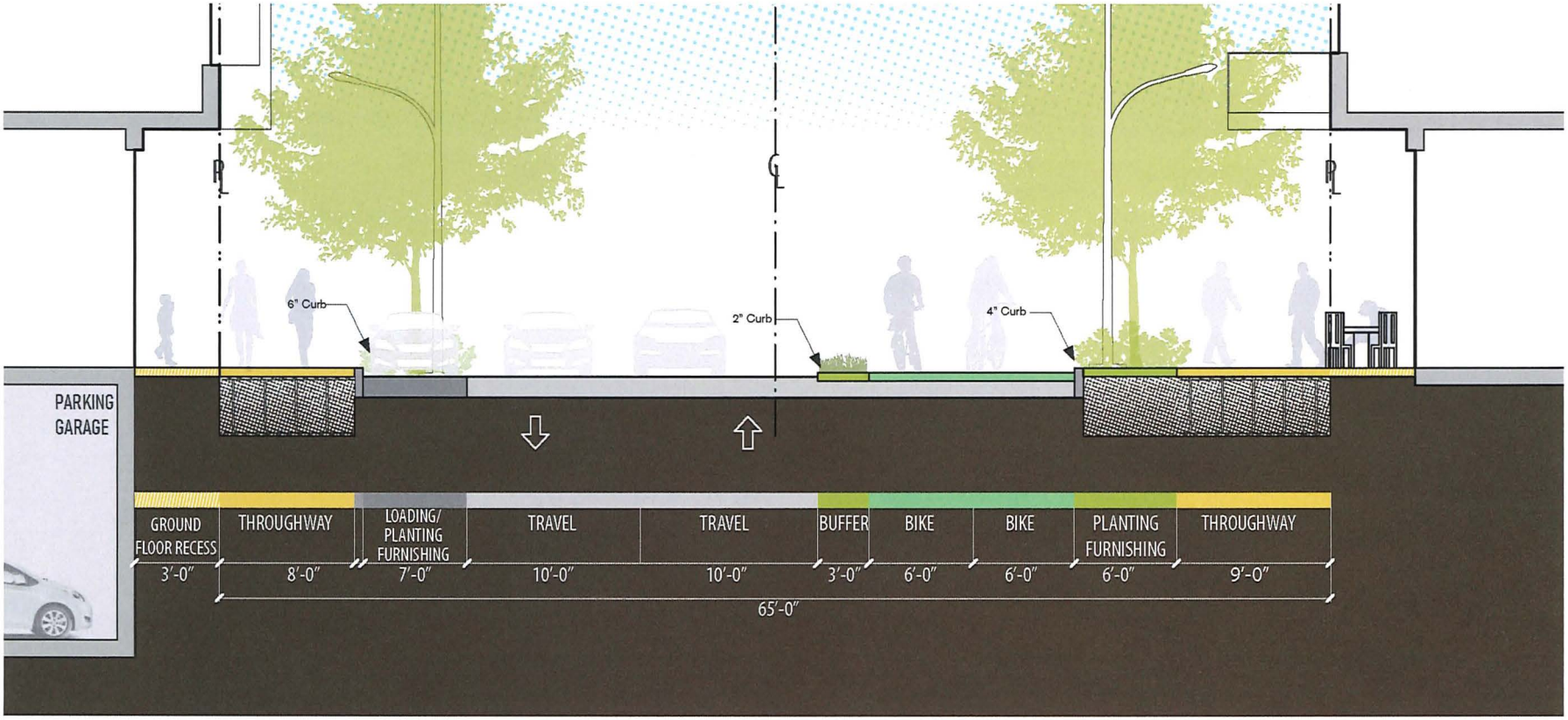


Figure 2-9: New Hudson Avenue Section - Typical

1" = 12'-0"
0' 6' 12' 18'

Standards

2.1.1.16 Street Zone Dimensions Right-of-way cross-section dimensions shall be as shown in Figure 2-9.

2.1.1.17 Elements Elements per Figure 2-9 and Figure 2-10 . All elements shown shall be included. Dimensions vary.

2.1.1.18 Specifications Specifications shall conform to Table 2. New Hudson Specifications. See Section 2.3 for Public Realm & Open Space Elements.

2.1.1.19 Street Trees Street trees are required and shall be spaced at a maximum of 30'-0" on center.

2.1.1.20 Loading Loading per Section 4.6 Parking and 4.7 Loading.

2.1.1.21 Garage Entry Garage entries per Section 4.6 Parking and Figure 4-8 Parking.

Guidelines

2.1.1.22 Surfacing Where travel lanes exceed 10 feet wide, surfacing shall change adjacent to curb in the curb zone to a contrasting material, such as textured paving.

Table 2. New Hudson Specifications
(See Section 2.3 for Public Realm & Open Space Elements)
R.O.W. WIDTH: 65'-0"
BIKE FACILITIES: CLASS I BIKEWAY

SURFACING		(See 2.3.3)
P1	RAISED CROSSWALK ZONE	TYPE H, I
P2	FURNISHING / PLANTING ZONE	TYPE I, J, K
P3	TRAVEL ZONE	TYPE G, H
P4	THROUGHWAY ZONE	TYPE H, I, J
P5	CLASS I BIKEWAY	TYPE L
P6	CURB ZONE	TYPE H, I, J, K
CURBS		(See 2.3.7)
C1	CURB AND GUTTER	DPW STANDARD
PLANTING		(See 2.4.2)
L1	TREE	COMMERCIAL CORRIDOR
L2	PLANTING	UNDERSTORY TYPE C
L3	TREE	ENTRY
LIGHTING		(See 2.3.5)
LT1	STREET LIGHT	TYPE A
FURNISHING		(See 2.3.4)
F1	BIKE RACK	
F2	SEATING	TYPE A, B, D
PARKING & LOADING		(See Section 4.6 and 4.7)
PA1	LOADING ZONE	
PA2	GARAGE ENTRY / CURB CUT	

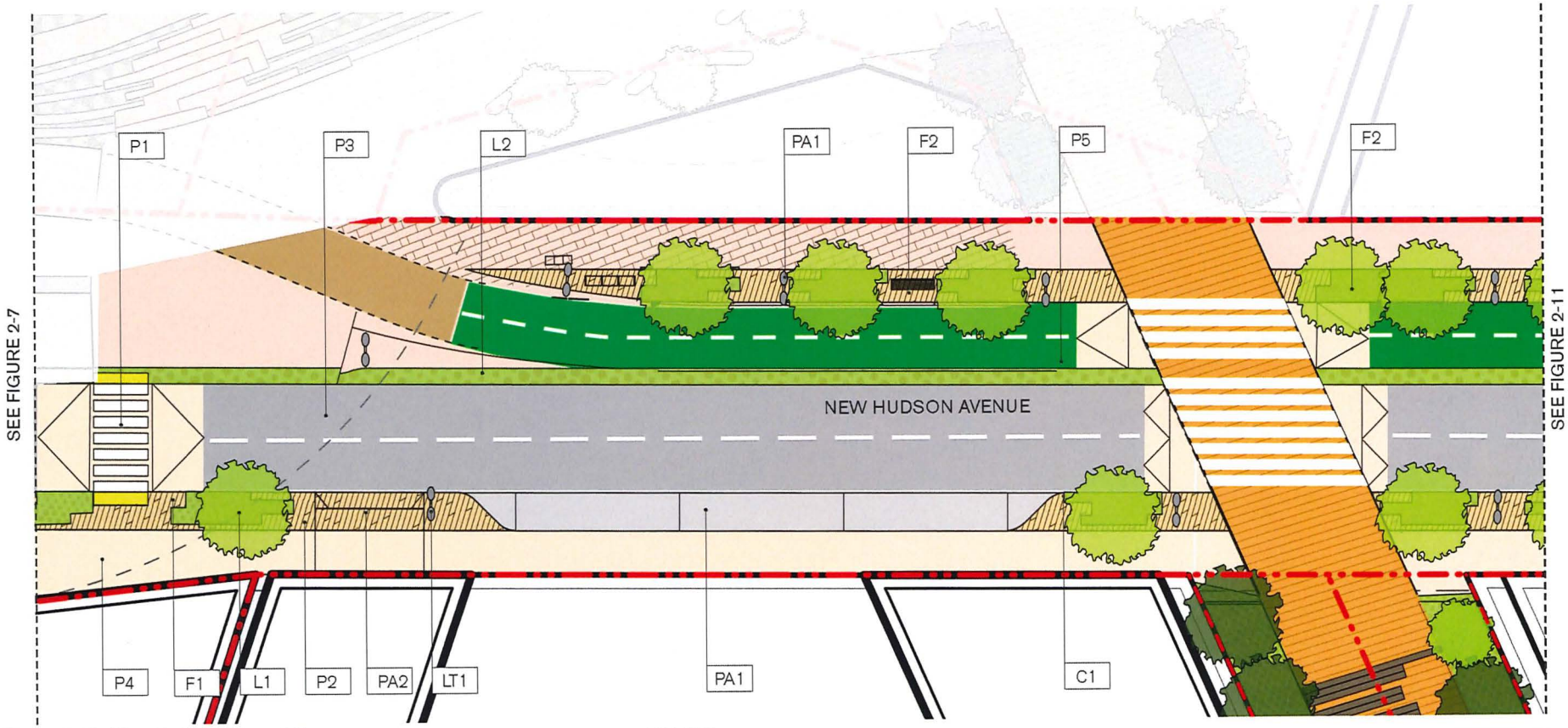


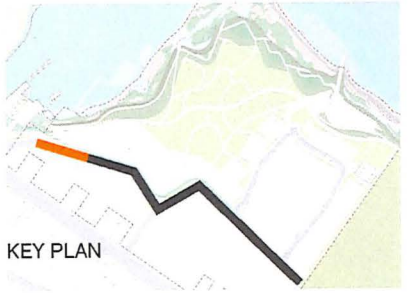
Figure 2-10: New Hudson Enlarged Plan

1" = 30'-0"

0' 15' 30' 45'

LEGEND

- Seating
- Light
- Refuse Receptacles
- Curb Ramp
- Raised Crosswalk
- Garage Entry / Curb Cut
- Loading
- Property Lines
- Parcel Break Lines



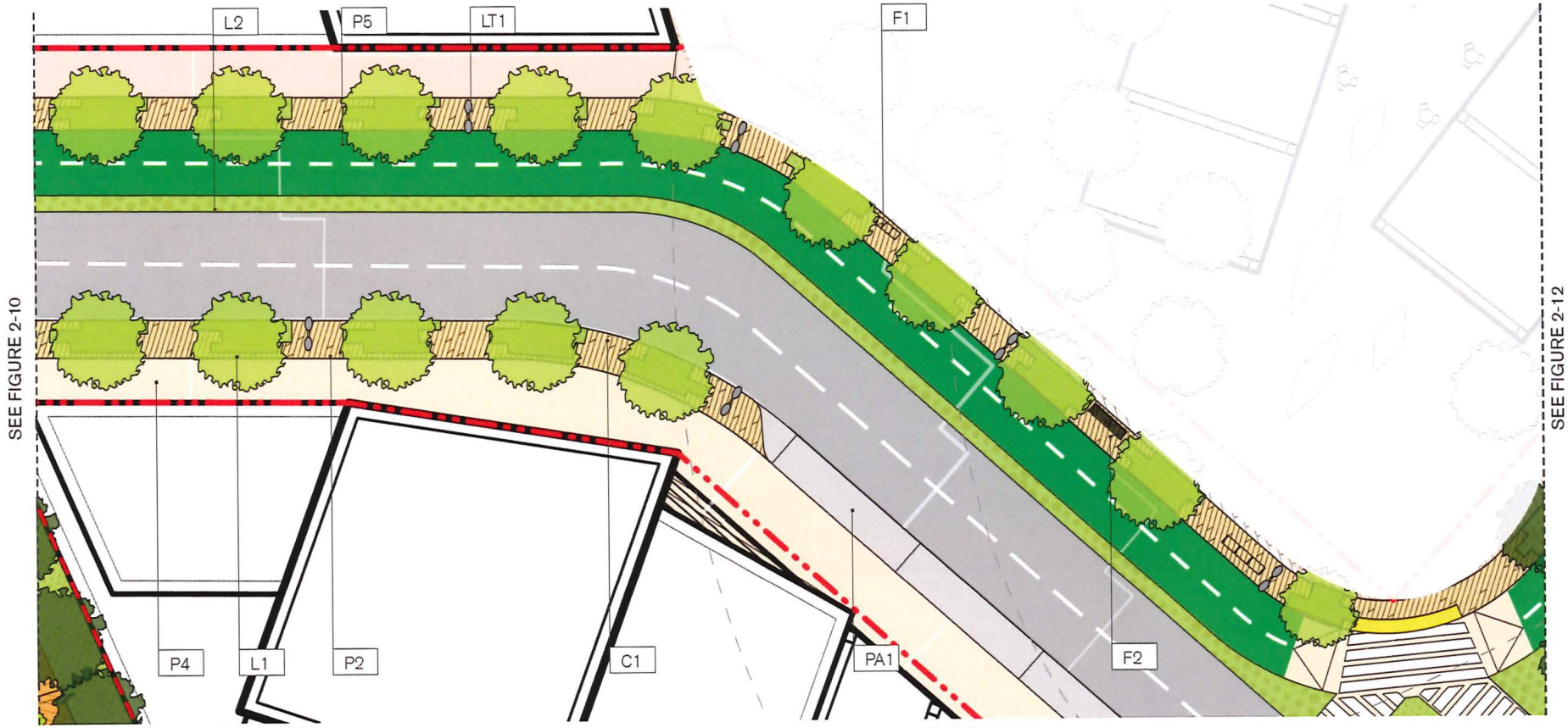


Figure 2-11: New Hudson Enlarged Plan

1" = 30'-0"

0' 15' 30' 45'

LEGEND

- Seating
- Loading
- Light
- Refuse Receptacles
- Raised Crosswalk
- Property Lines
- Parcel Break Lines

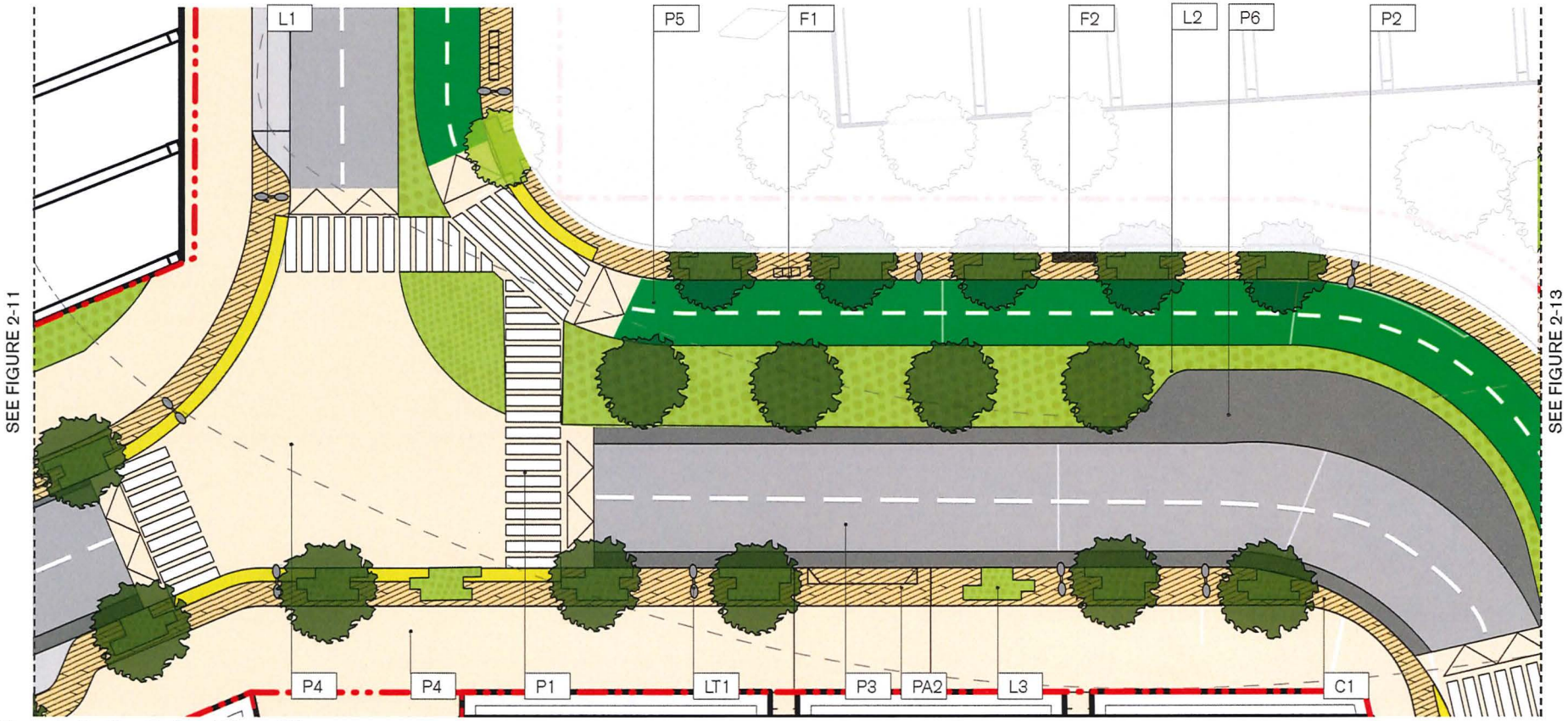


Figure 2-12: New Hudson Enlarged Plan

1″ = 30′-0″

0′ 15′ 30′ 45′

LEGEND

- Built-in Seating
- Seating
- Light
- Refuse Receptacles
- Raised Crosswalk
- Garage Entry / Curb Cut
- Property Lines
- Parcel Break Lines

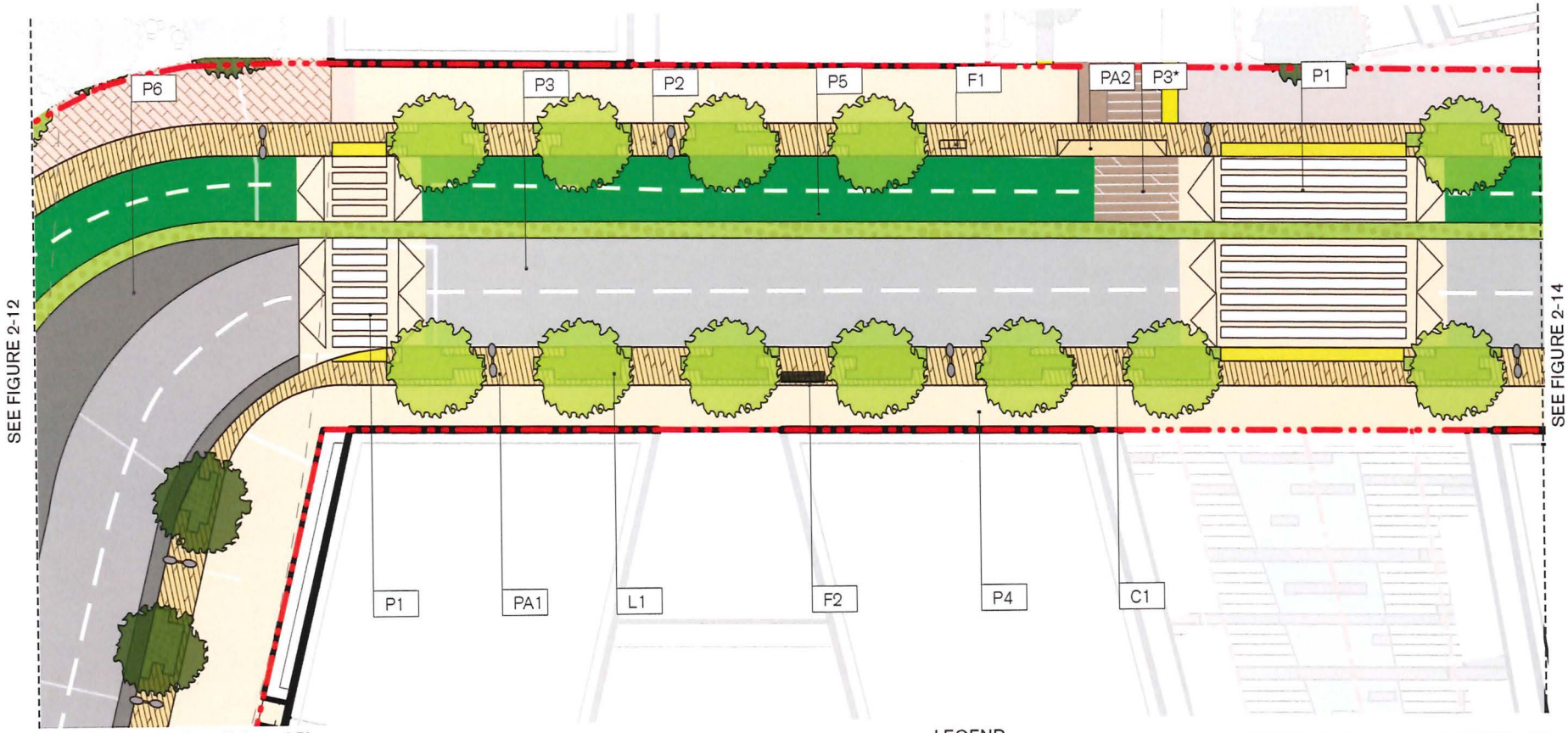


Figure 2-13: New Hudson Enlarged Plan

1" = 30'-0"

0' 15' 30' 45'

LEGEND

- Seating
- Light
- Refuse Receptacles
- Raised Crosswalk
- Garage Entry / Curb Cut
- Property Lines
- Parcel Break Lines

* See Figure 2-28

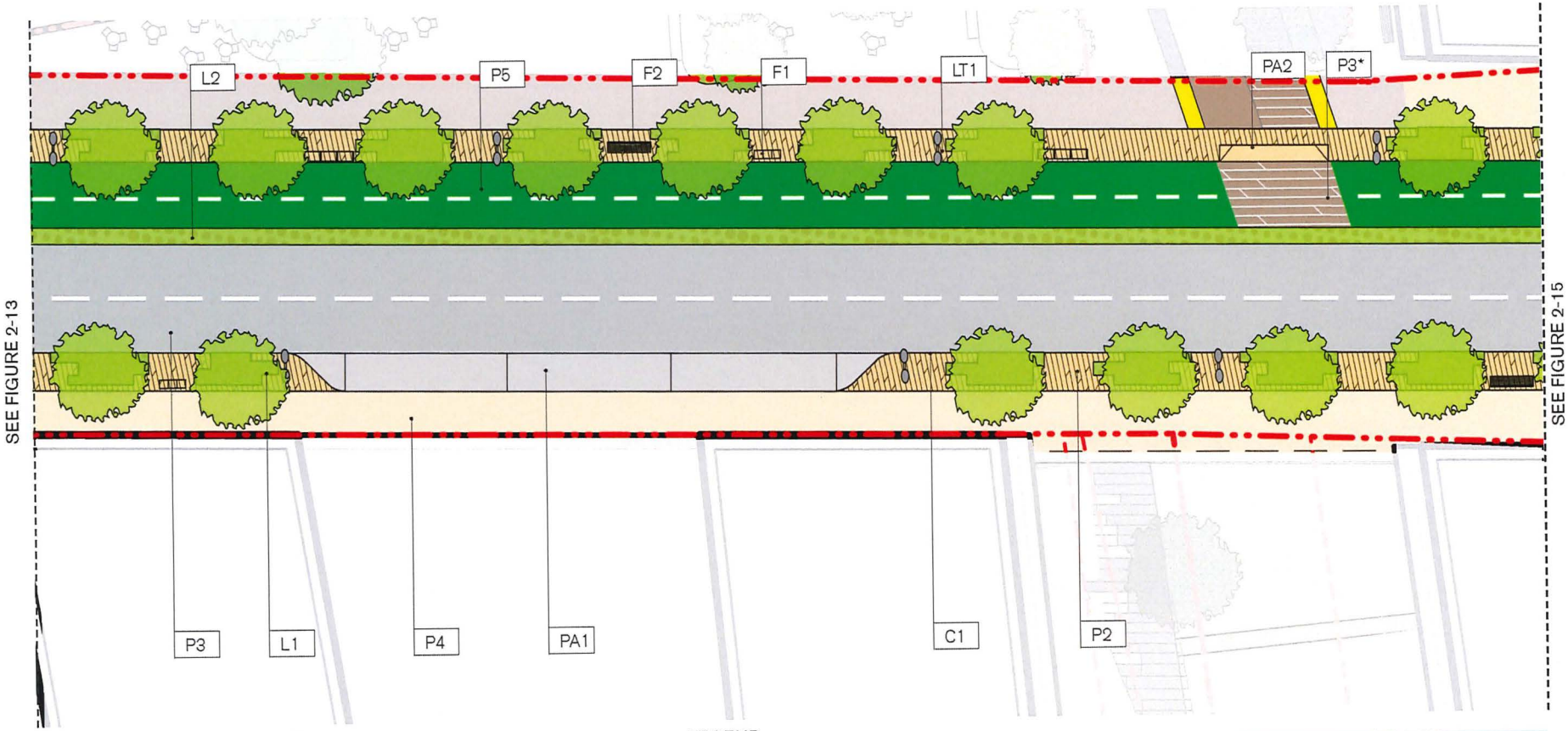


Figure 2-14: New Hudson Enlarged Plan

1″ = 30′-0″

0′ 15′ 30′ 45′

LEGEND

- Built-in Seating
- Seating
- Movable Seating

* See Figure 2-24

- Light
- Refuse Receptacles
- Raised Crosswalk
- Garage Entry / Curb Cut
- Loading
- Property Lines
- Parcel Break Lines

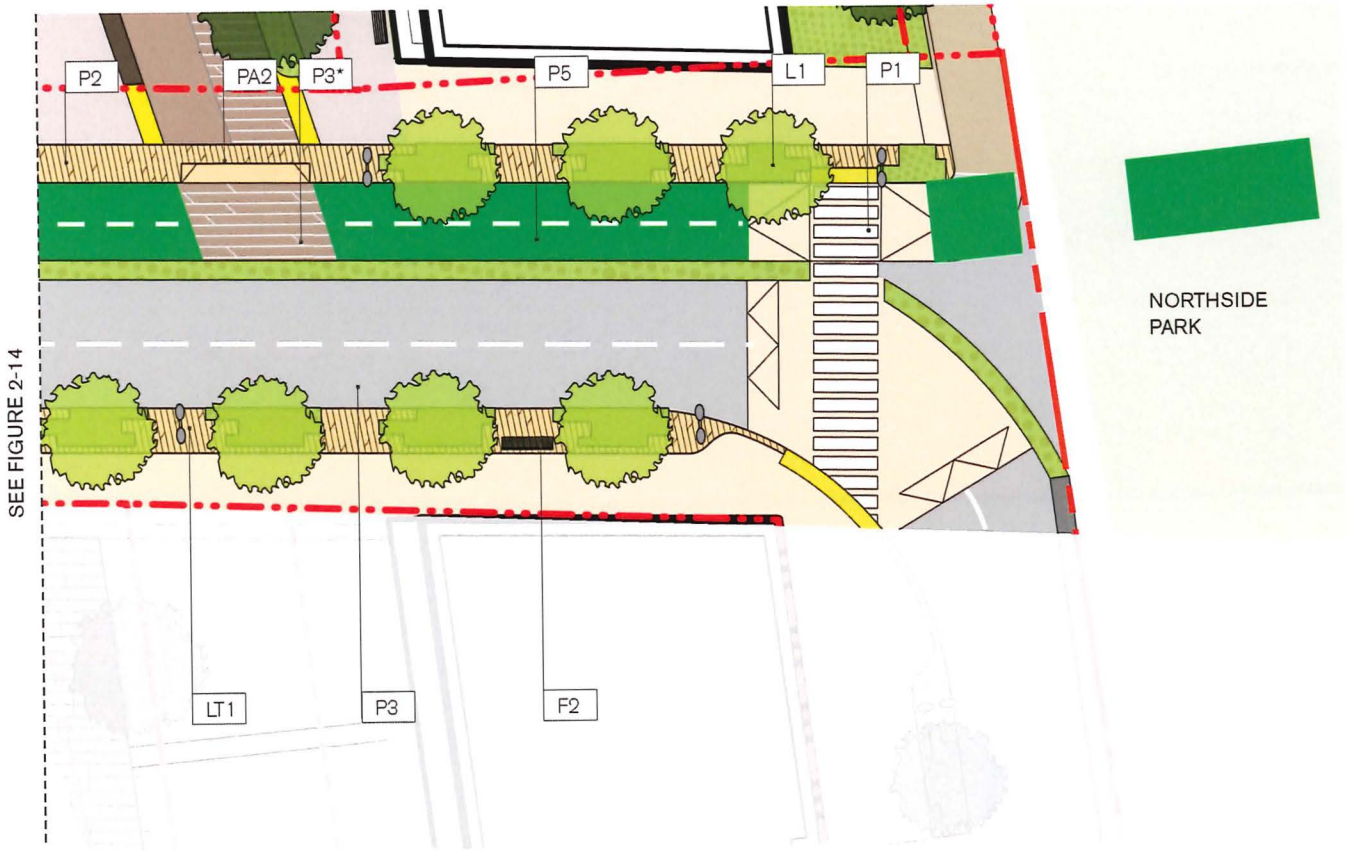


Figure 2-15: New Hudson Enlarged Plan

1" = 30'-0"

0' 15' 30' 45'

LEGEND

- Seating
- Light
- Refuse Receptacles
- Raised Crosswalk
- Garage Entry / Curb Cut
- Property Lines
- Parcel Break Lines

* See Figure 2-24

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Arelious Walker Drive

Arelious Walker is the primary point of entry into the site for residents and visitors. Arelious Walker provides a generous pedestrian entry to the site accommodating multiple modes of arrival. A transit plaza with a major bus stop on Innes Ave and bike sharing node on Arelious Walker welcome those arriving by bus. The pedestrian zone is widened on the south. Loading is located on both sides of the street.

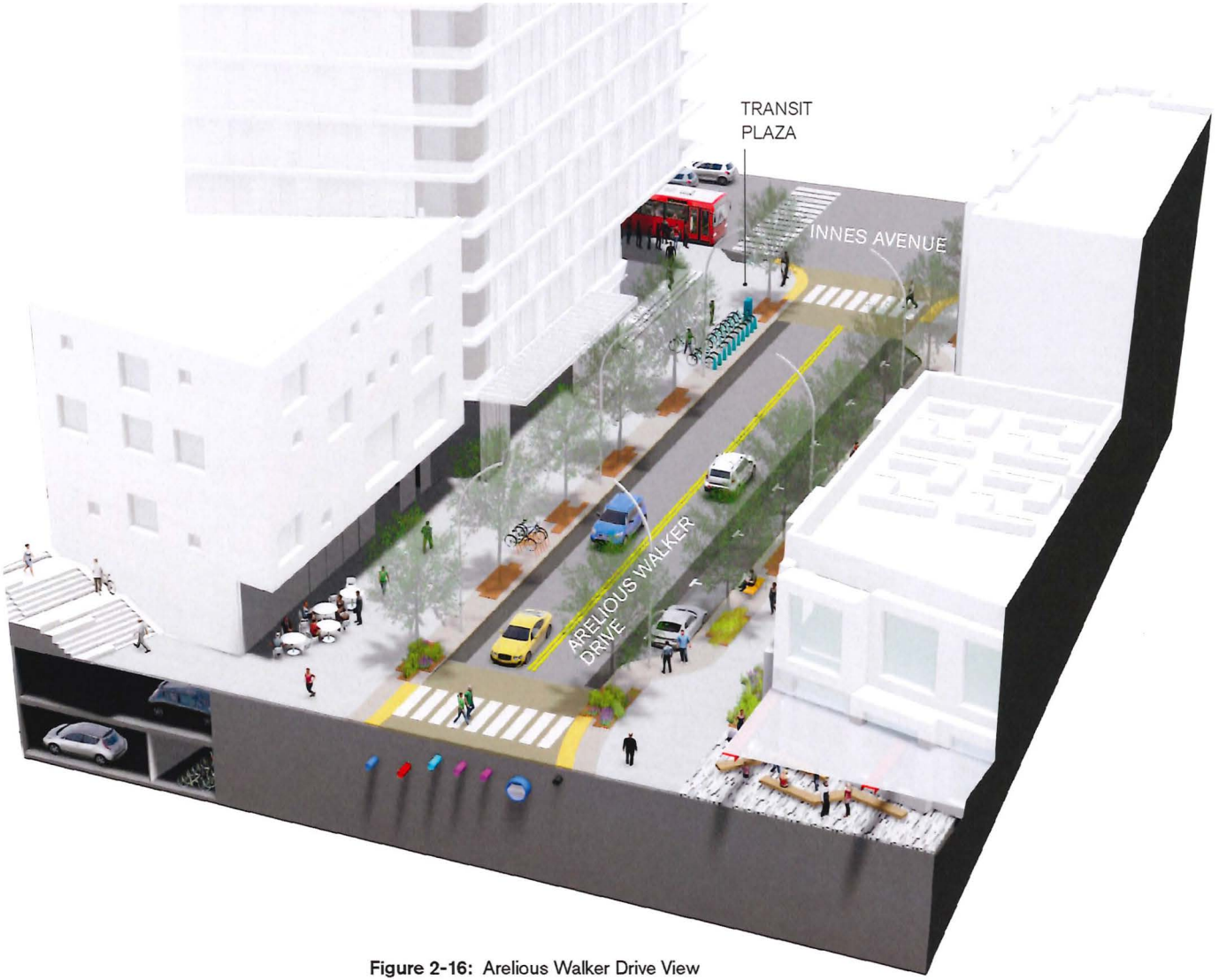


Figure 2-16: Arelious Walker Drive View

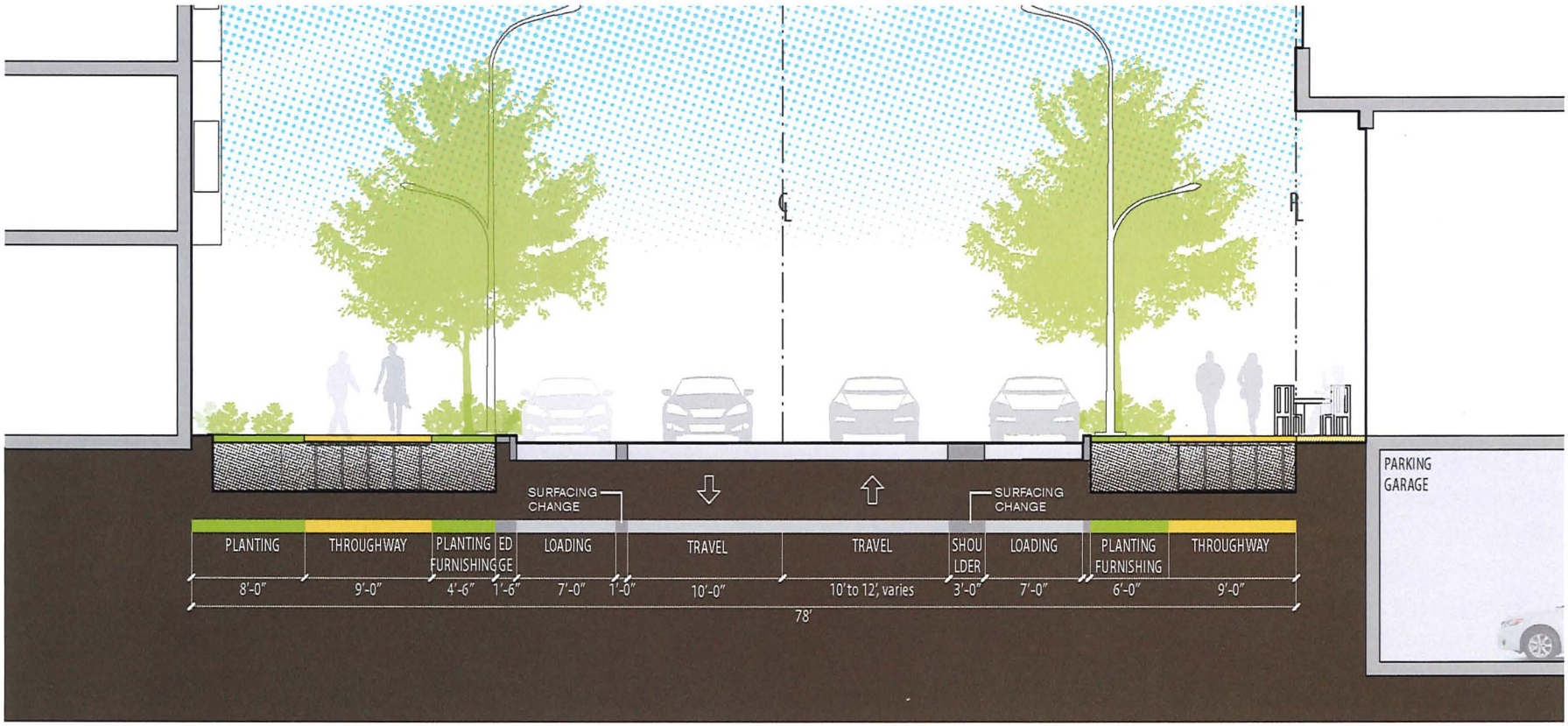


Figure 2-17: Arelious Walker Drive Section - Typical

1" = 12'-0"

0' 6' 12' 18'

Standards

2.1.1.23 Street Zone Dimensions Right-of-way cross-section dimensions shall be as shown in Figure 2-17.

2.1.1.24 Elements Elements per Figure 2-18. All elements shown shall be included. Dimensions vary.

2.1.1.25 Specifications Specifications shall conform to Table 3. Arelious Walker Specifications. See Section 2.3 for Public Realm and Open Space Elements.

2.1.1.26 Street Trees Street trees are required and shall be spaced at a maximum of 30' on center.

2.1.1.27 Daylighting Loading shall be inset in edge zone as shown in Figure 2-18 and shall be setback at least 10' from intersection, measured from raised crosswalk.

2.1.1.28 Surfacing Where travel lanes exceed 10 feet wide, surfacing shall change adjacent to curb in curb zone to a contrasting material, such as textured paving.

2.1.1.29 Loading Loading per Section 4.6 Parking and 4.7 Loading.

Table 3. Arelious Walker Specifications
(See Section 2.3 for Public Realm & Open Space Elements)

R.O.W. WIDTH: 78 FEET
BIKE FACILITIES: BIKE SHARE

SURFACING		(See 2.3.3)
P1	RAISED CROSSWALK	TYPE H, I
P2	FURNISHING ZONE	TYPE I, J, K
P3	TRAVEL ZONE	TYPE G, H
P4	THROUGHWAY ZONE	TYPE H, I, J
P5	CURB ZONE	TYPE H, I, J, K
P6	TRUNCATED DOMES	TYPE R
CURBS		(See 2.3.7)
C1	CURB RAMP	DPW STANDARD
C2	CURB EXTENSION	DPW STANDARD
C3	CURB AND GUTTER	DPW STANDARD
PLANTING		(See 2.4.2)
L1	TREE	ENTRY STREET
L2	STREETSCAPE PLANTING	UNDERSTORY TYPE C
LIGHTING		(See 2.3.5)
LT1	STREET LIGHT	TYPE A
FURNISHING		(See 2.3.4)
F1	BIKE SHARE NODE	
F2	BIKE RACK	
F3	SEATING	TYPE A, B, D
PARKING & LOADING		(See Sections 4.6 and 4.7)
PA1	LOADING ZONE	DPW STANDARD
TRANSIT		(See 2.2.2)
T1	TRANSIT PLAZA	

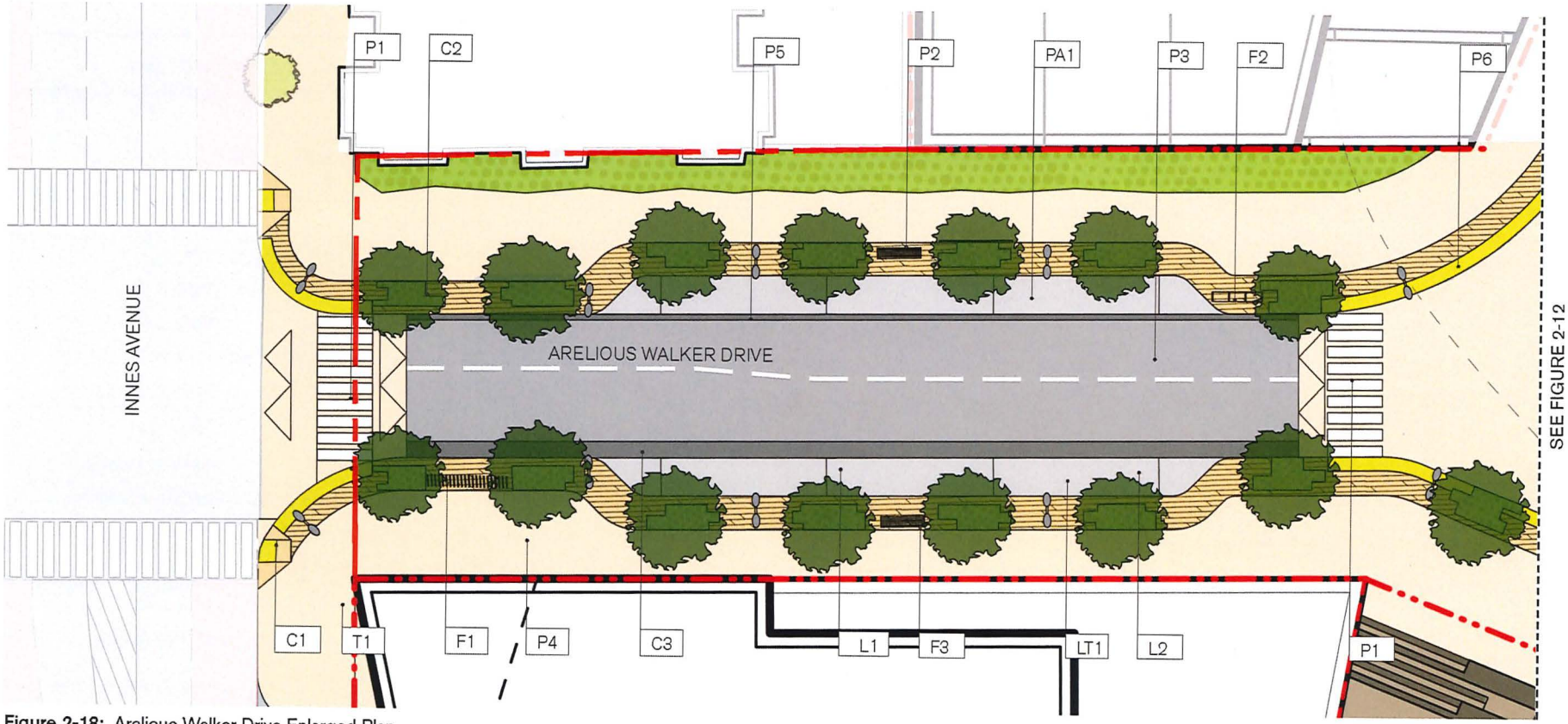


Figure 2-18: Arelious Walker Drive Enlarged Plan

1" = 30'-0"

0' 15' 30' 45'

LEGEND

- Seating
- Light
- Refuse Receptacles
- Curb Ramp
- Raised Crosswalk
- Loading
- Property Lines
- Parcel Break Lines

Earl Street

Earl Street serves as a secondary point of entry. In addition, Earl Street creates an edge between the Site and Northside Park. A generous pedestrian zone is provided. Large trees mark the entry to the site. A zone is provided on the northwest side for on-street parking and drop-off.

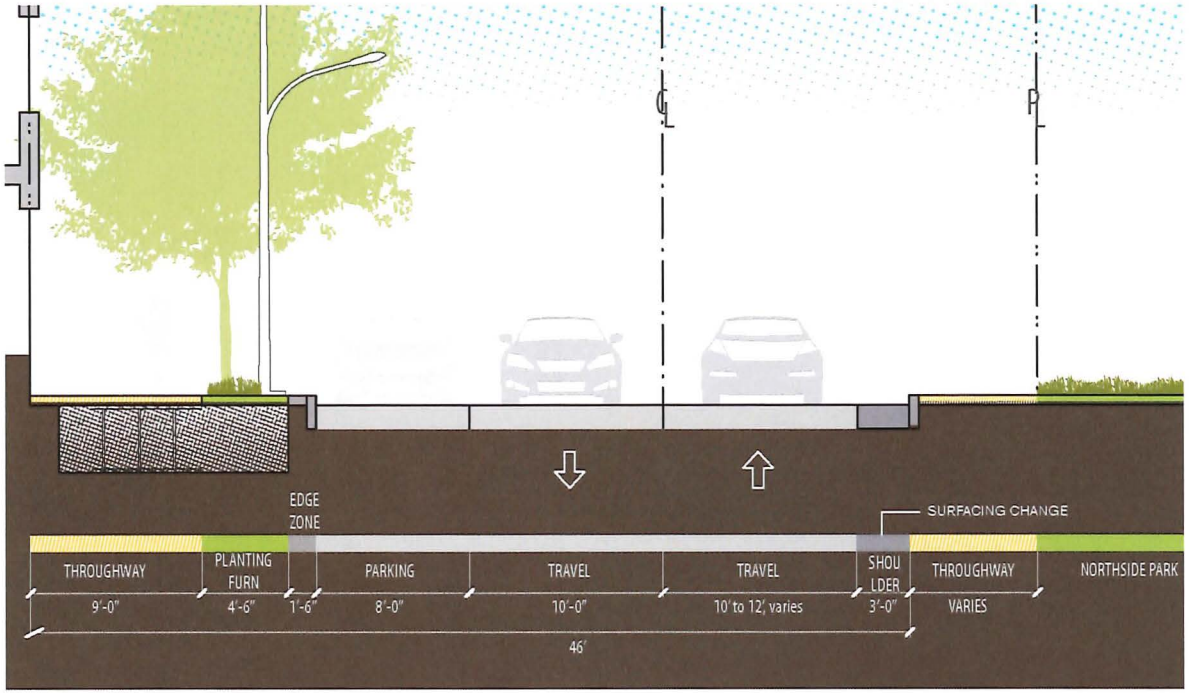


Figure 2-19: Earl Street Section

Table 4. Earl Street Specifications

(See Section 2.3 for Public Realm & Open Space Elements)

R.O.W. WIDTH: 46 FEET
BIKE FACILITIES: CLASS III

SURFACING		(See 2.3.3)
P1	RAISED CROSSWALK	TYPE H, I
P2	FURNISHING ZONE	TYPE I, J, K
P3	TRAVEL ZONE	TYPE G, H
P4	THROUGHWAY ZONE	TYPE H, I, J
P5	CURB ZONE	TYPE H, I, J, K
CURBS		(See 2.3.7)
C1	CURB RAMP	DPW STANDARD
C2	CURB EXTENSION	DPW STANDARD
C3	CURB AND GUTTER	DPW STANDARD
C4	GARAGE ENTRY	See Sections 4.6 and 4.7
PLANTING		(See 2.4.2)
L1	TREE	ENTRY STREET
L2	STREETSCAPE PLANTING	UNDERSTORY TYPE C
LIGHTING		(See 2.3.5)
LT1	STREET LIGHT	TYPE A
FURNISHING		(See 2.3.4)
F1	SEATING	TYPE A, B, D
PARKING & LOADING		(See Sections 4.6 and 4.7)
PA1	LOADING ZONE	

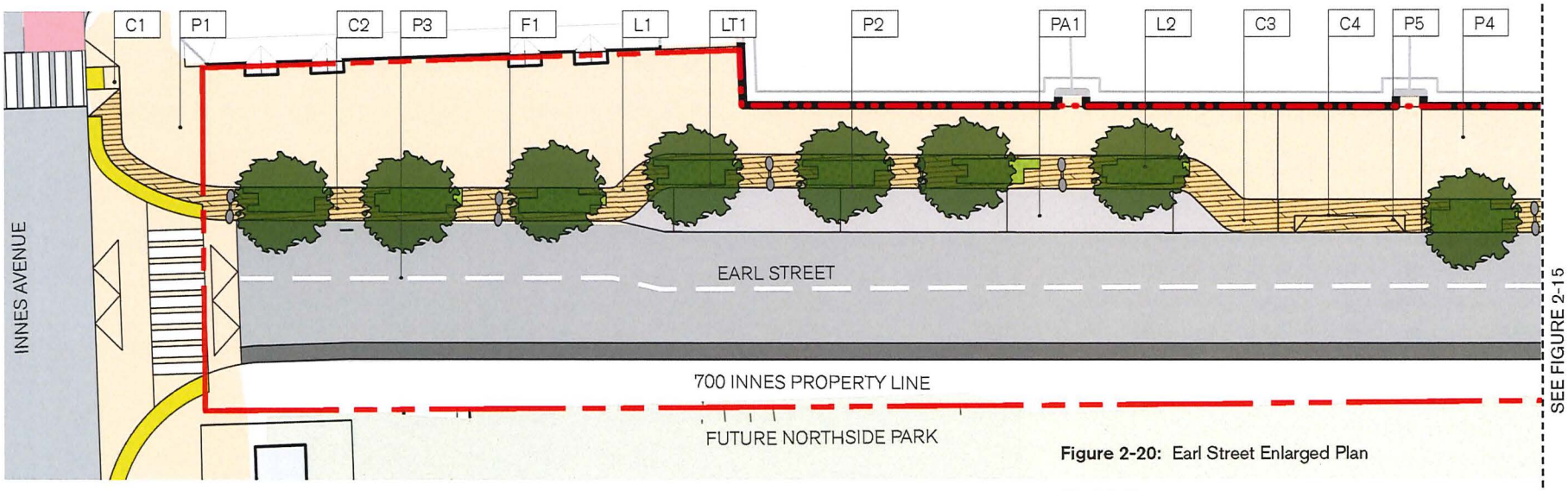


Figure 2-20: Earl Street Enlarged Plan

1″ = 30′-0″

0′ 15′ 30′ 45′

LEGEND

- Seating
- Light
- Refuse Receptacles
- Curb Ramp
- Raised Crosswalk
- Garage Entry / Curb Cut
- Loading

Standards

2.1.1.30 Street Zone Dimensions Right-of-way cross-section dimensions shall be as shown in Figure 2-19.

2.1.1.31 Elements Elements per Figure 2-19 and Figure 2-20. All elements shown shall be included. Dimensions vary.

2.1.1.32 Specifications Specifications shall conform to Table 4. Earl Street Specifications. See Section 2.3 for Public Realm and Open Space Elements.

2.1.1.33 Street Trees Street trees are required and shall be spaced at a maximum of 30' on center.

2.1.1.34 Daylighting Loading shall be inset in edge zone as shown in Figure 2-20 and shall be setback at least 10' from intersection, measured from raised crosswalk.

2.1.1.35 Surfacing Where travel lanes exceed 10 feet wide, surfacing shall change adjacent to curb in curb zone to a contrasting material, such as textured paving.

2.1.1.36 Loading Loading per Section 4.6 Parking and 4.7 Loading.

Shared Public Way

The shared public way prioritizes pedestrians -- accommodating requirements for infrequent, low-volume vehicular access in a one way loop while maintaining flexible community use. The shared public way includes Beach Lane, Fairfax Lane, and Spring Lane. Vehicular access is limited to slow speeds to facilitate the creation of a vibrant pedestrian space. The shared public way fosters a unique identity and venue for public life in the Flats neighborhood. Planting is accommodated where possible, with an emphasis on habitat creation and stormwater treatment, reducing infrastructure required for stormwater elsewhere on site and expanding public realm amenities.

Shared Public Way

The shared public way is configured to provide varied experiences, be performative, and provide places of discovery within the Flats neighborhood. At strategic moments, spaces for public gathering and signature furnishings and installations are provided. Extents of the shared way expand to create wider areas for pedestrian use and informal gathering spaces, as well as staging areas for emergency vehicles.

KEY PLAN

Figure 2-21: Shared Public Way - Spring Lane

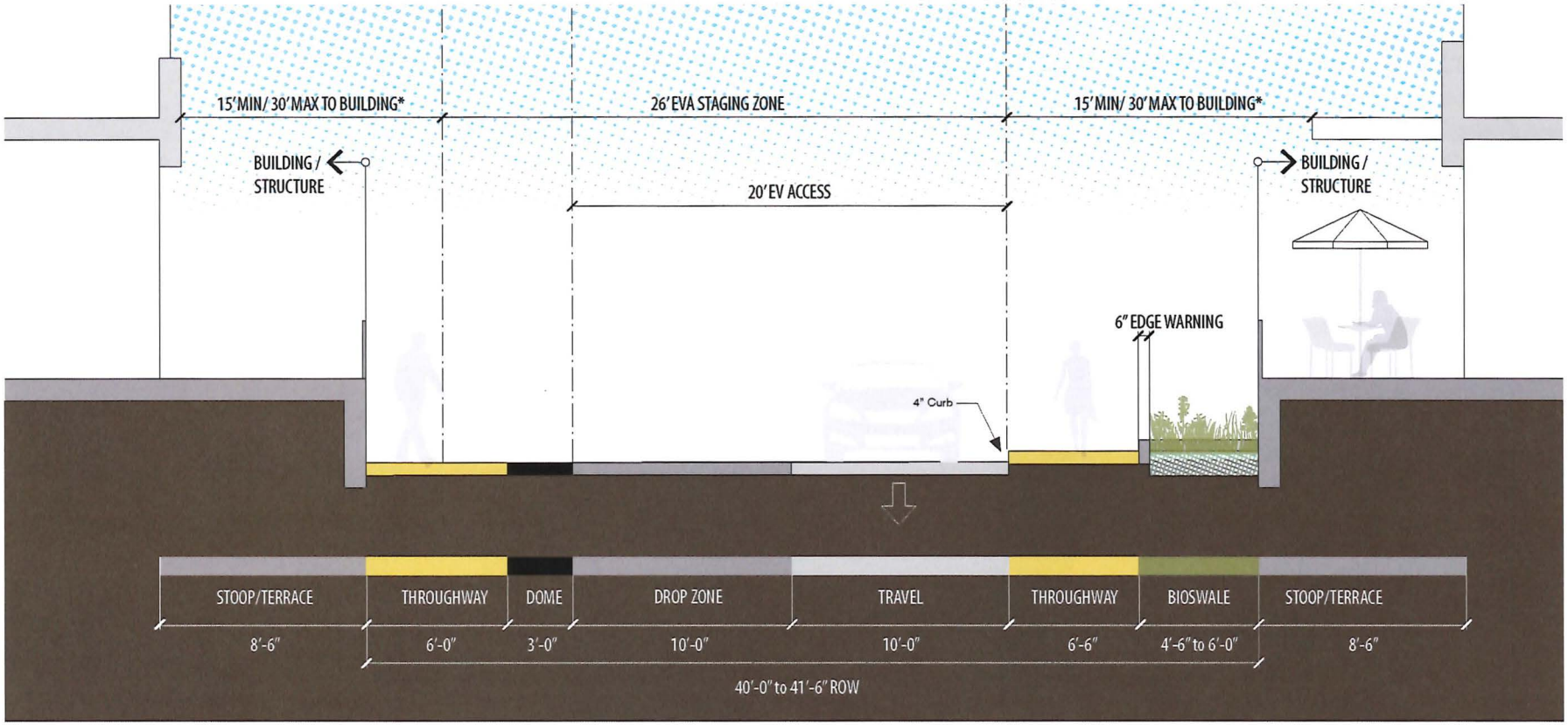


Figure 2-22: Shared Public Way Section

1" = 12'-0"
0' 6' 12' 18'

*Dimensions vary. Final dimensions to be confirmed by SFFD.

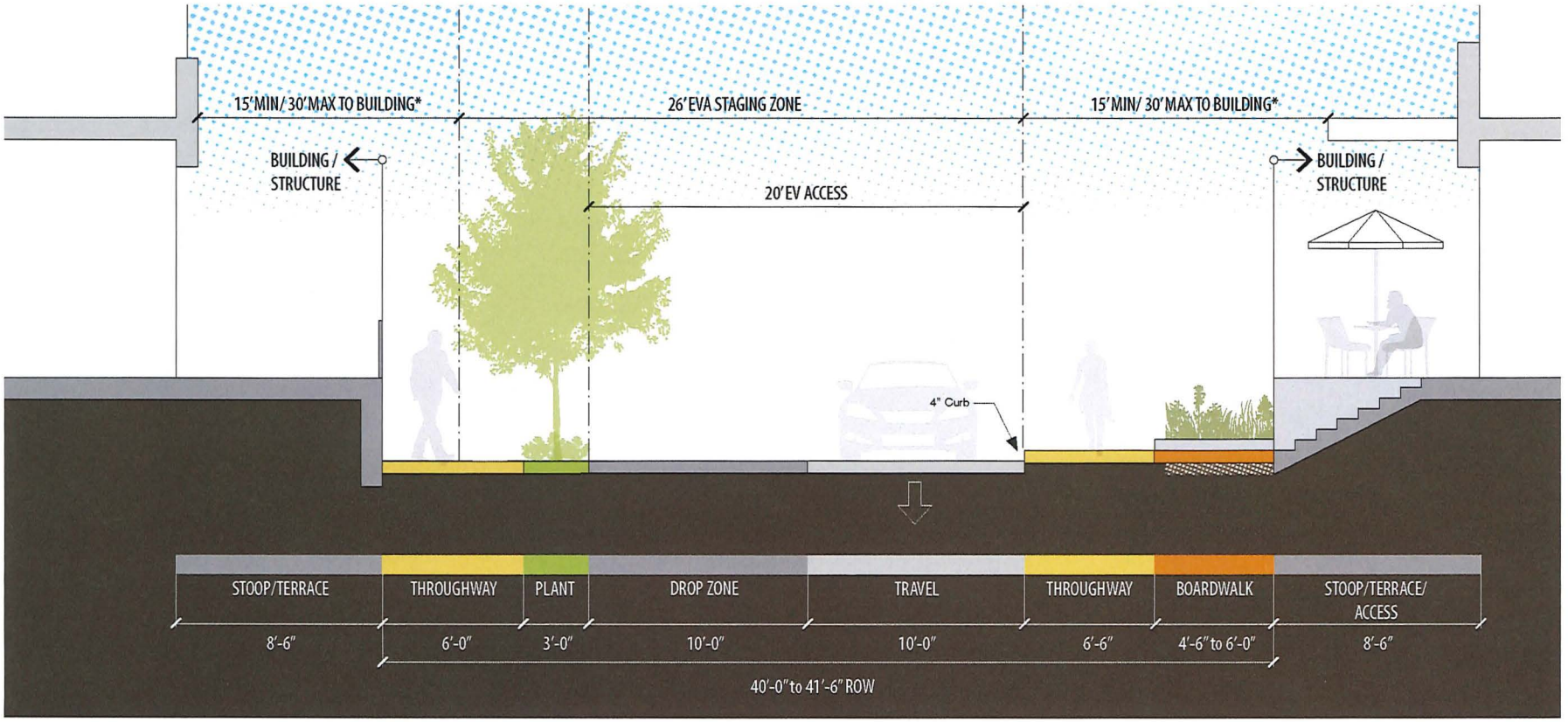


Figure 2-23: Typical Shared Public Way Section at tree

1" = 12'-0"

0' 6' 12' 18'

*Dimensions vary. Final dimensions to be confirmed by SFFD.

Standards

2.1.1.37 Street Zone Dimensions Right-of-way cross-section dimensions shall be as shown in Figure 2-22 and Figure 2-23.

2.1.1.38 Elements Elements per Figure 2-24 through Figure 2-28. All elements shown shall be included. Dimensions vary.

2.1.1.39 Specifications Specifications shall conform to Figure 2-24. Shared Public Way Specifications. See Section 2.3 for Public Realm and Open Space Elements.

2.1.1.40 Edge Warning Provide minimum 6 inch high edge warning at edge of stormwater treatment area where vertical grade change exceeds 4 inch. Use wood or pipe rail material.

2.1.1.41 Pocket Plazas Pocket Plazas shall be provided as shown in Figure 2-49 and Figure 2-55. These are vehicle-free zones which shall feature special paving and site-specific furnishings. See Section 2.3.3 and 2.3.4 for non-exhaustive examples.

Guidelines

2.1.1.42 Visual/Tactile Cues Provide visual/tactile cues to alert people with visual impairments to the shared nature of the space, including tactile warnings and paving texture changes.

2.1.1.43 Vehicular Travel Zone Paving pattern and texture change shall be used to distinguish the vehicular travel zone from shared zone.

2.1.1.44 Boardwalks Elevated boardwalks shall span over stormwater treatment facilities to provide pedestrian acces from sidewalk to ground floor units.

2.1.1.45 Groundplane Planting Groundplane planting shall maximize habitat potential. See Section 2.4.

2.1.1.46 Stormwater Management Stormwater generated within the right-of-way shall be treated within the right-of-way in decentralized linear bioretention treatment areas adjacent to the sidewalk with 6" high curb.

Table 5. Shared Public Way Specifications

(See Section 2.3 for Public Realm and Open Space Elements)

R.O.W. WIDTH: VARIES
BIKE FACILITIES: CLASS III

SURFACING		(See 2.3.3)
P1	PEDESTRIAN THROUGHWAY	TYPE H, I, J, K
P2	BOARDWALK	TYPE U
P3	DETECTABLE WARNING	TYPE R
P4	DETECTABLE WARNING AT PED CROSSING	TYPE R
P5	TRAVEL ZONE	TYPE H, I, J, K
P6	PED PATHWAY	TYPE I, J, K
P7	GARAGE ENTRY	See Section 4.6 and 4.7
P8	SHARED ZONE	TYPE H, I, J, K
CURBS		(See 2.3.7)
C1	CURB RAMP	DPW STANDARD
C2	CURB AND GUTTER	DPW STANDARD
PLANTING		(See 2.4.2)
L1	TREE	OPEN SPACE
L2	BIORETENTION	UNDERSTORY TYPE F
L3	TREE	LANE/LANEWAY
L4	STREETSCAPE PLANTING	UNDERSTORY TYPE C
LIGHTING		(See 2.3.5)
LT1	PEDESTRIAN LIGHT	TYPE B, F
PARKING/LOADING/DROP-OFF		(See Section 4.6 and 4.7)
PA1	DROP-OFF	
PA2	LOADING	

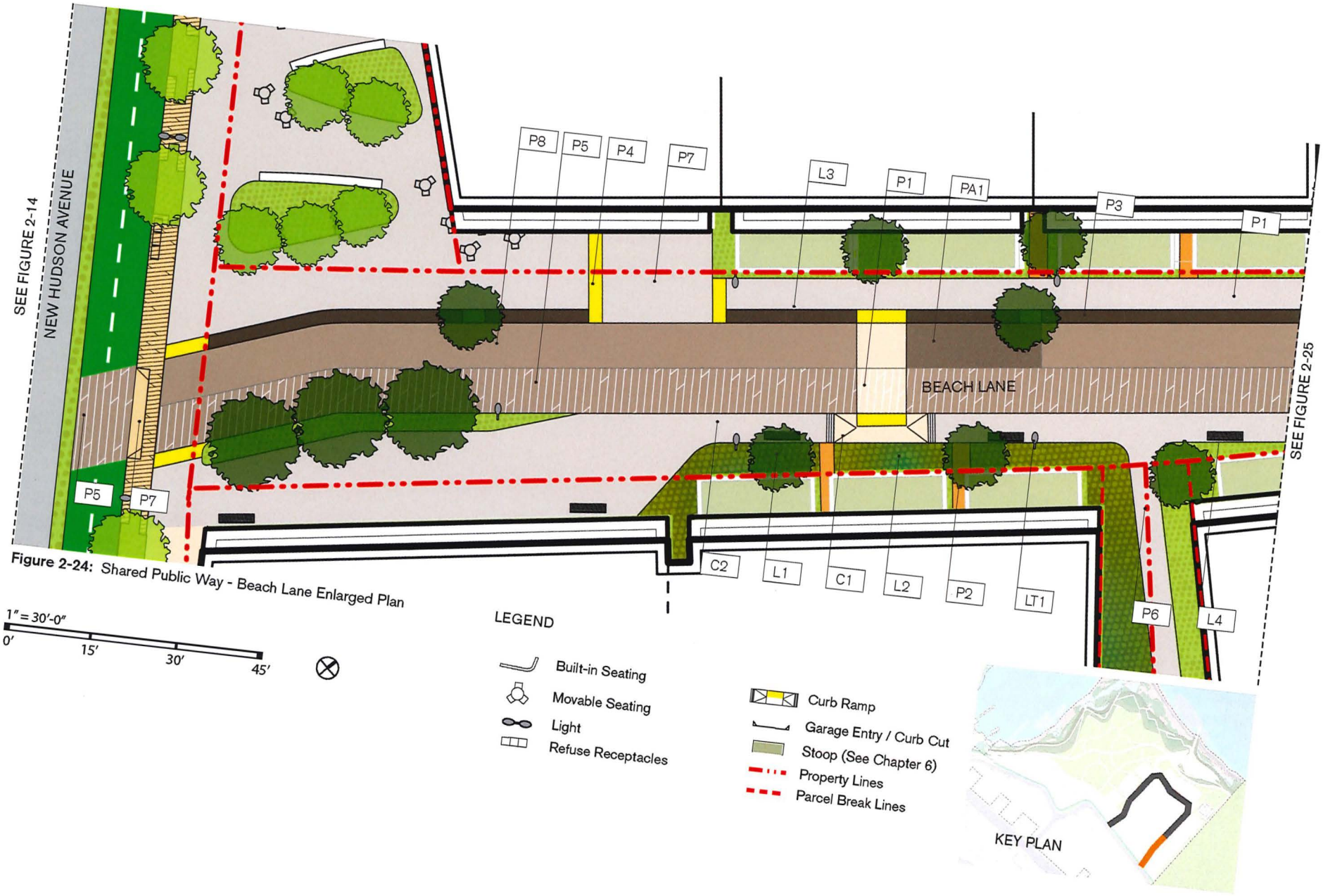


Figure 2-24: Shared Public Way - Beach Lane Enlarged Plan

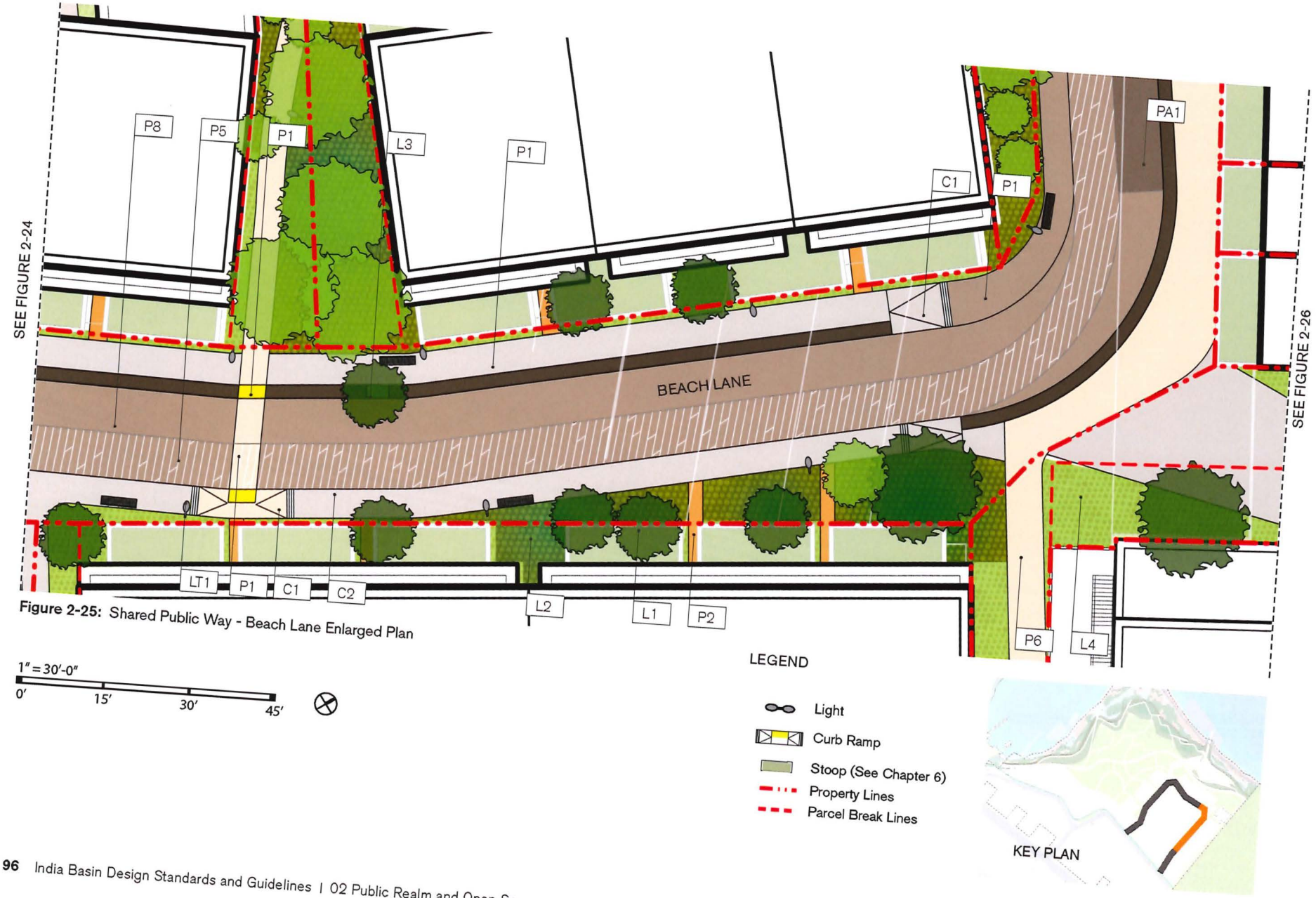


Figure 2-25: Shared Public Way - Beach Lane Enlarged Plan

Figure 2-26: Shared Public Way - Fairfax Lane Enlarged Plan

1" = 30'-0"

0' 15' 30' 45'

LEGEND

- Light
- Curb Ramp
- Stoop (See Chapter 6)
- Property Lines
- Parcel Break Lines

Figure 2-27: Shared Public Way - Spring Lane Enlarged Plan

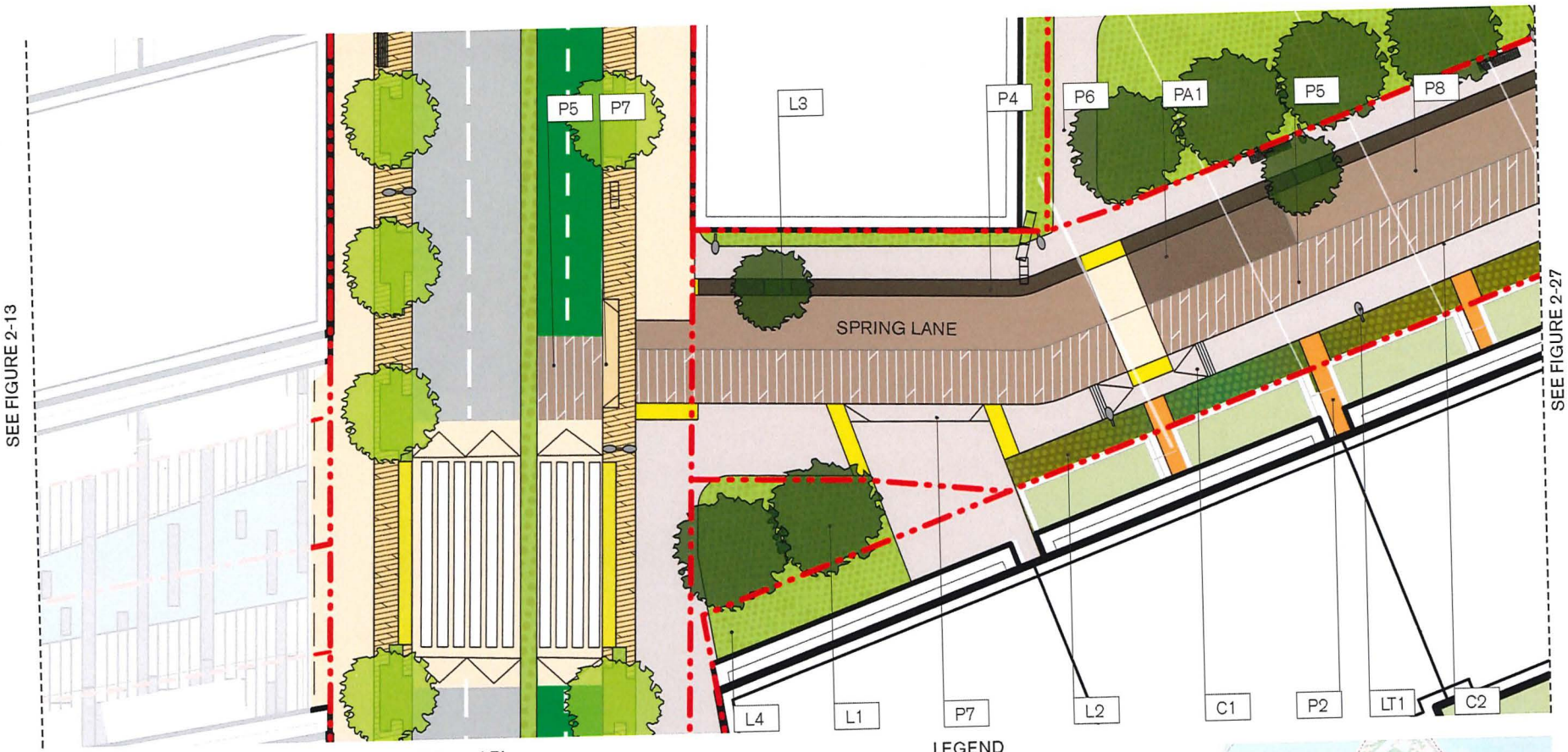


Figure 2-28: Shared Public Way - Spring Lane Enlarged Plan

1" = 30'-0"
0' 15' 30' 45'

LEGEND

- Light
- Curb Ramp
- Garage Entry / Curb Cut
- Raised Crosswalk
- Stoop (See Chapter 6)
- Property Lines
- Parcel Break Lines

Laneways

Laneway Design Objectives

The laneways break down the scale of large blocks, providing permeability, pedestrian access, views to the bay and enhanced connectivity. They serve as urban trails for continuity and connectivity to and through the development.

The laneways are intended to be active and vibrant public space with a garden like character.

Material choices, including wood decking, distinguish this space from a typical pedestrian sidewalk. Materials and planters are integrated into the subgrade parking structure.

Planting areas may be used for stormwater management if required by the hydraulics of the phase.

Figure 2-29: Cove Laneway Axon

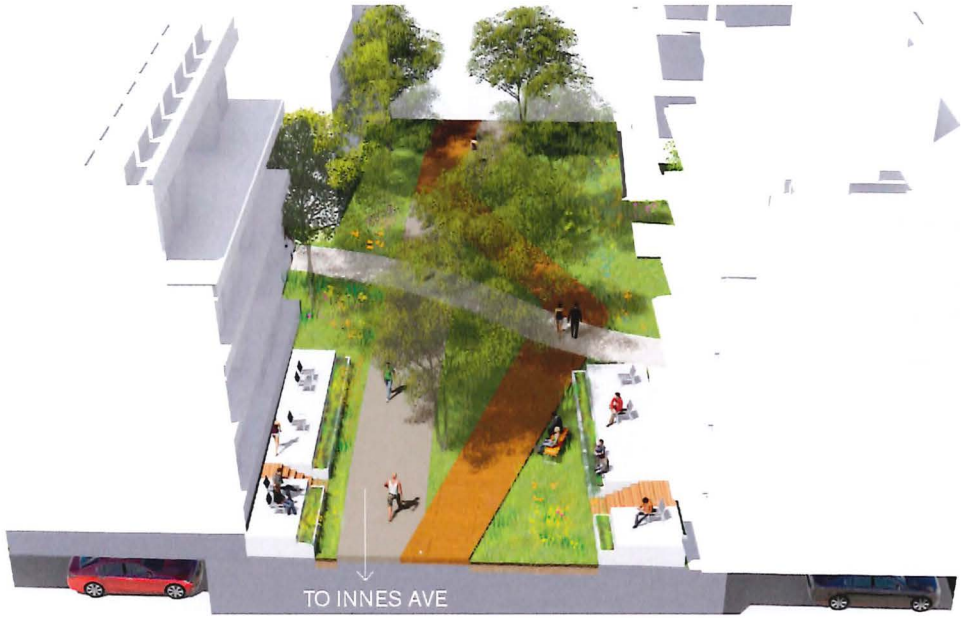


Figure 2-30: Hillside Laneway Axon

Figure 2-31: Laneway Index Plan

Cove Laneway

The Cove Laneway provides a direct mid-block passage for pedestrians from Innes to New Hudson and the Cove Terrace.

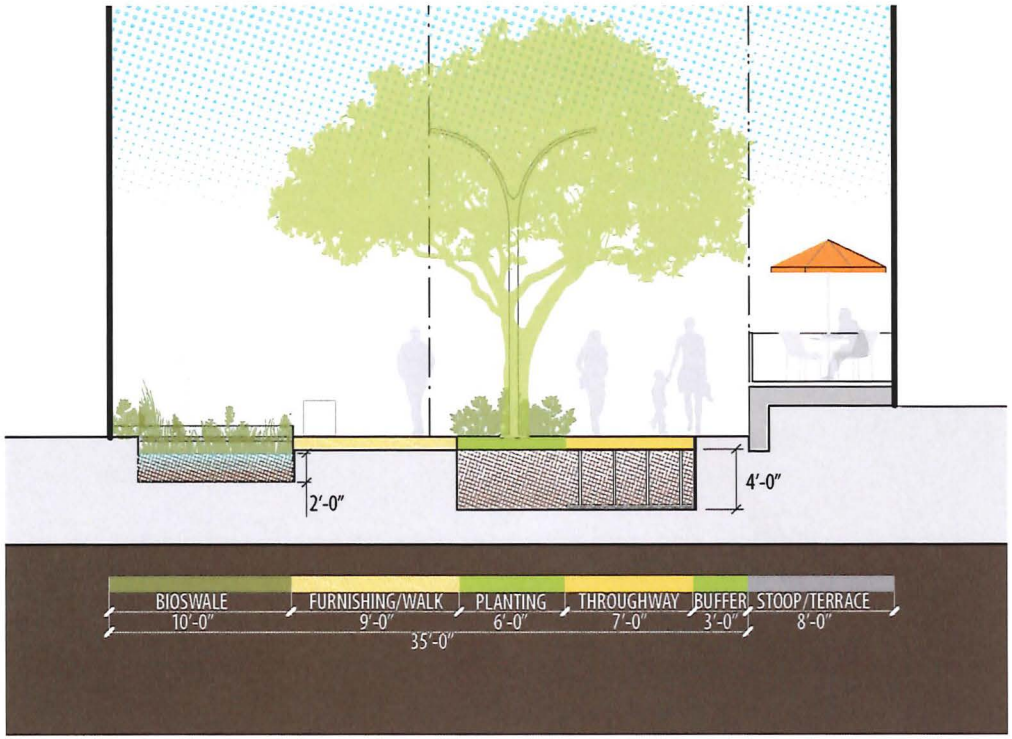


Figure 2-32: Cove Laneway Section - Typical

1"=12'-0"
0' 6' 12' 18'

Table 6. Cove Laneway Specifications
(See Section 2.3 for Public Realm and Open Space Elements)

SURFACING		(See 2.3.3)
P1	THROUGHWAY ZONE	TYPE I, J
P2	WOOD DECK	TYPE U
PLANTING		(See 2.4.2)
L1	FLOW-THROUGH PLANTER	UNDERSTORY TYPE G, F
L2	TREE	LANE/LANEWAY
L3	PLANTING	UNDERSTORY TYPE B, D
LIGHTING		(See 2.3.5)
LT1	PEDESTRIAN LIGHT	TYPE B
FURNISHING		(See 2.3.4)
F1	SEATING	TYPE A, B, D, E, F
F2	GATE	TYPE D, E

Figure 2-33: Cove Laneway Enlarged Plan

Standards

2.1.2.1 Laneway Dimensions Laneway cross-section dimensions shall be as shown in Figure 2-32.

2.1.2.2 Elements Elements per Figure 2-32 and Figure 2-33. All elements shown shall be included. Dimensions vary.

2.1.2.3 Specifications Specifications shall conform to Table 6. Cove Laneway Specifications. See Section 2.3 for Public Realm and Open Space Elements.

2.1.2.4 Tree Size Minimum tree size is 24-inch box. Top of rootball shall not exceed 2' above finished grade. Accommodate soil in podia.

2.1.2.5 Raised Planters Raised planters shall be no greater then 18" in height to allow for incorporation of seating elements except where required for stormwater treatment or tree planting.

Guidelines

2.1.2.6 Trees Trees shall be planted in linear rows to frame views to the bay.

Hillside Laneway

The hillside laneway provides a direction connection from Innes to New Hudson at the intersection with Spring Lane. The Hillside Laneway provides an important pedestrian connection to the Flats, the Big Green, and the Beach.

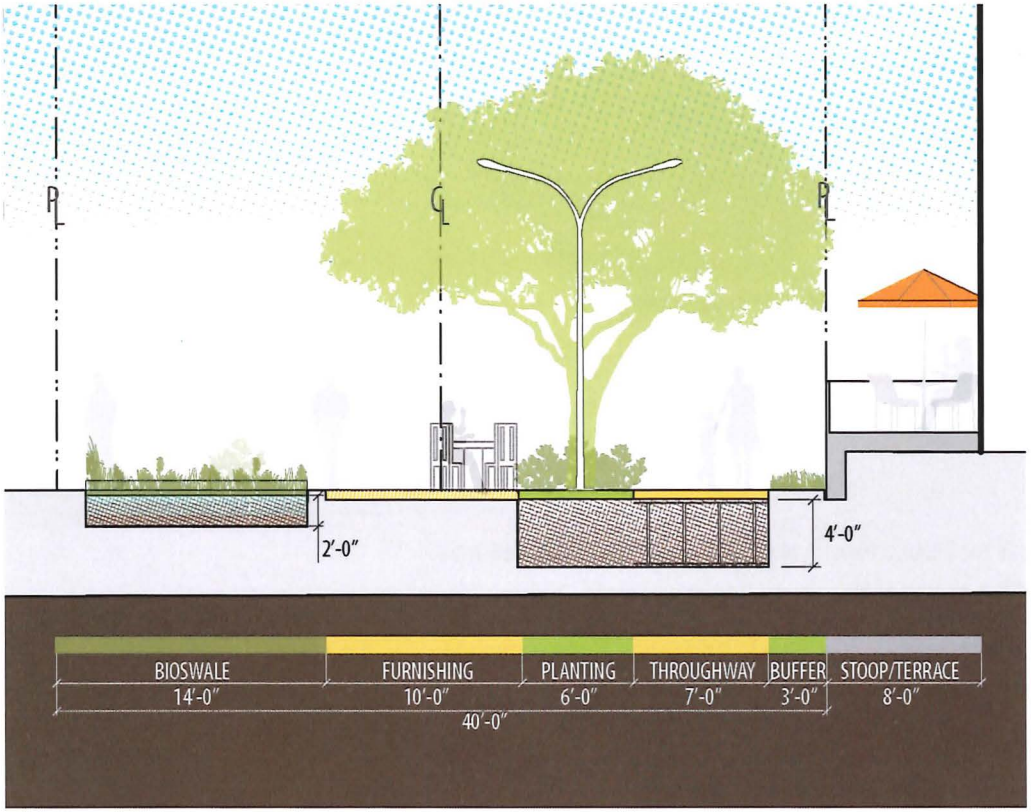


Figure 2-34: Hillside Laneway Section-Typical

1" = 12'-0"
0' 6' 12' 18'

Table 7. Hillside Laneway Specifications
(See Section 2.3 for Public Realm and Open Space Elements)

SURFACING		(See 2.3.3)
P1	THROUGHWAY ZONE	TYPE I, J
P2	WOOD DECK	TYPE U
P3	INFILTRATION BOARDWALK	TYPE U
PLANTING		(See 2.4.2)
L1	TREE	LANE/LANEWAY
L2	FLOW-THROUGH PLANTER	UNDERSTORY TYPE G, F
L3	PLANTING	UNDERSTORY TYPE B, D
LIGHTING		(See 2.3.5)
LT1	PEDESTRIAN LIGHT	TYPE B
FURNISHING		(See 2.3.4)
F1	SEATING	TYPE A, B, D, E, F
F2	WATER FEATURE	
F3	GATE	TYPE D, E

Standards

2.1.2.7 Laneway Dimensions Laneway cross-section dimensions shall be as shown in Figure 2-34.

2.1.2.8 Elements Elements per Figure 2-34 and Figure 2-35. All elements shown shall be included. Dimensions vary.

2.1.2.9 Specifications Specifications shall conform to Table 7. Hillside Laneway Specifications. See Section 2.3 for Public Realm and Open Space Elements.

2.1.2.10 Tree Size Minimum tree size is 24-inch box. Top of rootball shall not exceed 2' above finished grade. Accommodate soil in podia.

2.1.2.11 Raised Planters Raised planters shall be no greater then 18" in height to allow for incorporation of seating elements except where required for stormwater treatment or tree planting.

Guidelines

2.1.2.12 Trees Trees shall be planted in linear rows to frame views to the bay.

2.1.2.13 Stormwater Collection and Treatment Stormwater collection and treatment shall be incorporated into the laneway right of way if phase required.

2.1.2.14 Water If a water feature is included, non-potable water shall be used.

Figure 2-35: Hillside Laneway Enlarged Plan

1" = 50'-0"

0' 25' 50' 75'

LEGEND

- Light
- Seating
- Stoop (See Chapter 6)
- Property Lines
- Parcel Break Lines

Flats Laneway

The Flats Laneway provides a midblock pedestrian connection between Spring Lane and Beach Lane. Program zones adjacent to the Flats Laneways will serve residents of the adjacent neighborhood.

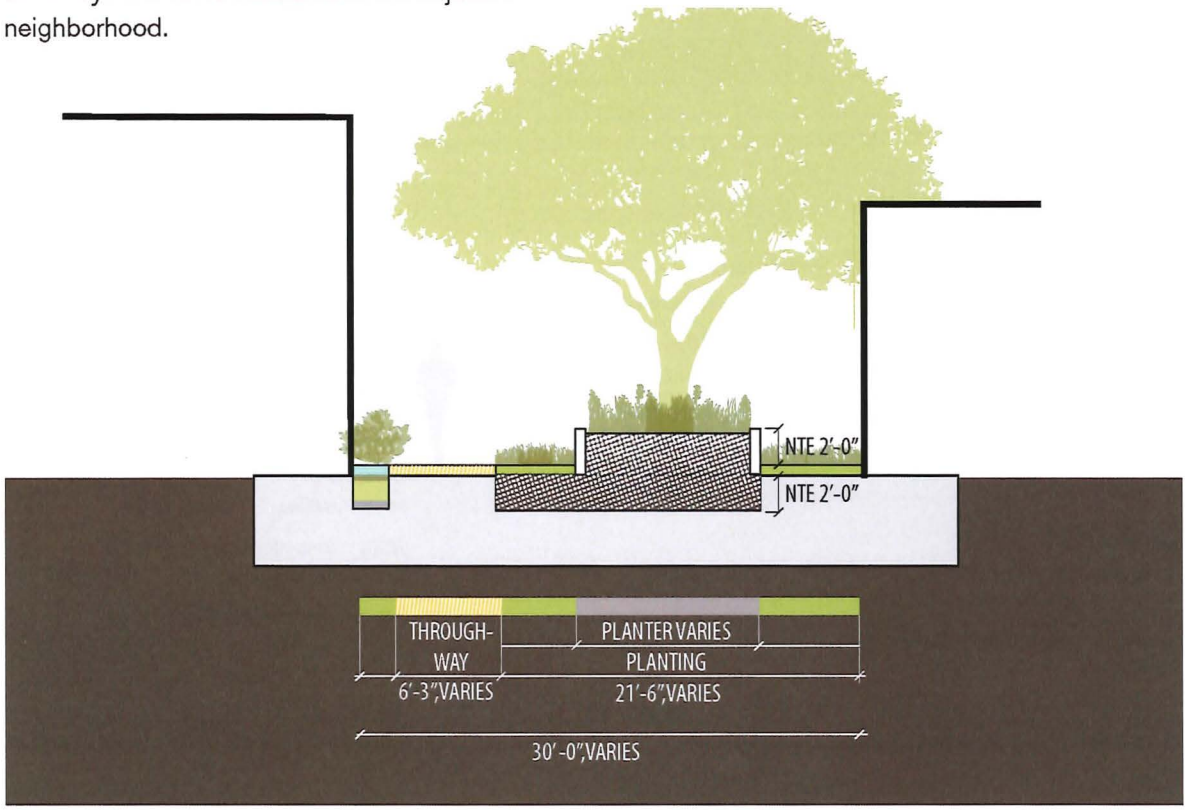


Figure 2-36: Flats Laneway Section - Typical

1" = 12'-0"
0' 6' 12' 18'

Table 8. Flats Laneway Specifications
(See Section 2.3 for Public Realm and Open Space Elements)

SURFACING		(See 2.3.3)
P1	THROUGHWAY ZONE	TYPE I, J
PLANTING		(See 2.4.2)
L1	TREE	LANE/LANEWAY
L2	FLOW-THROUGH PLANTER	UNDERSTORY TYPE F, G
L3	PLANTING	UNDERSTORY TYPE B, D
LIGHTING		(See 2.3.5)
LT1	PEDESTRIAN LIGHT	TYPE B
FURNISHING		(See 2.3.4)
F1	SEATING	TYPE A, B, D, E, F
F2	POCKET PLAZA	SEE SECTION 2.2.6
F3	GATE	TYPE D, E

KEY PLAN

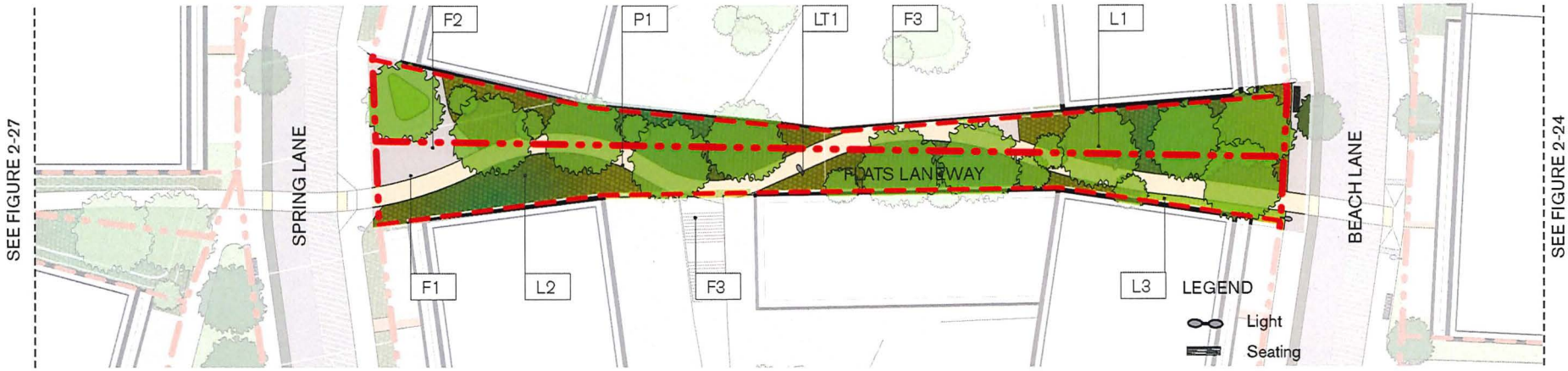


Figure 2-37: Flats Laneway Enlarged Plan

Standards

2.1.2.15 Laneway Dimensions Laneway cross-section dimensions shall be as shown in Figure 2-36.

2.1.2.16 Elements Elements per Figure 2-36 and Figure 2-37. All elements shown shall be included. Dimensions vary.

2.1.2.17 Specifications Specifications shall conform to Table 8 Flats Laneway Specifications. See Section 2.3 for Public Realm and Open Space Elements.

2.1.2.18 Tree Size Minimum tree size is 24-inch box. Top of rootball shall not exceed 2' above finished grade. Accommodate soil in podia.

2.1.2.19 Raised Planters Raised planters shall be no greater then 24" in height from finished grade to allow for incorporation of seating elements except where required for stormwater treatment or tree planting.

Guidelines

2.1.2.20 Trees Trees shall be planted in linear rows to frame views to the bay.

2.1.2.21 Stormwater Collection and Treatment Stormwater collection and treatment shall be incorporated into the laneway right of way.

2.1.2.22 Access Pathway shall connect to gate entrances to provide access to adjacent properties.

Trails

Trail Design Objectives

The trail network provides a range of experiences for pedestrians and bicyclists accessing the site where no two trails will look and feel exactly the same. Dimensions are designed for a future intensity of use and to create variety, choice, and character. Trails vary from urban and hard to soft and intimate. Trails widen at furnishing zones and specific moments to incorporate amenities, furnishings, and varied conditions. Trails should also be aligned to accent views, create intimate gathering spaces, and call attention to unique landscapes, sculptures, or habitat conditions.

Trail Network

Part of a regional-scale network of trails, the India Basin project fills a missing link in the Bay Area system with a robust web of interwoven and diverse trails. Connections are intended to be seamless with urban portions of the site and adjacent sites to reinforce both the waterfront and regional trail network. This section details the design intent, standards, and guidelines for different trail types.

Maintenance Access Routes

The Big Green is composed of diverse habitats, amenities, and water infrastructure that require on-going maintenance and servicing. The maintenance and access regime prioritizes the pedestrian and habitats, and preserves the sense of place and natural character of the site as wild and rugged. Vehicular access routes should be consolidated through the park to the primary multi-use trail to reserve park space for public amenities. Dimensions for maintenance access routes are designed to be scale-appropriate to the small, intimate feel of the site. Access to the trail is provided through the market plaza and shared way. Off-shoot access routes to maintain the stormwater facilities are designed to align with the facilities and blend into the landscape.

Figure 2-38: Maintenance Access Routes

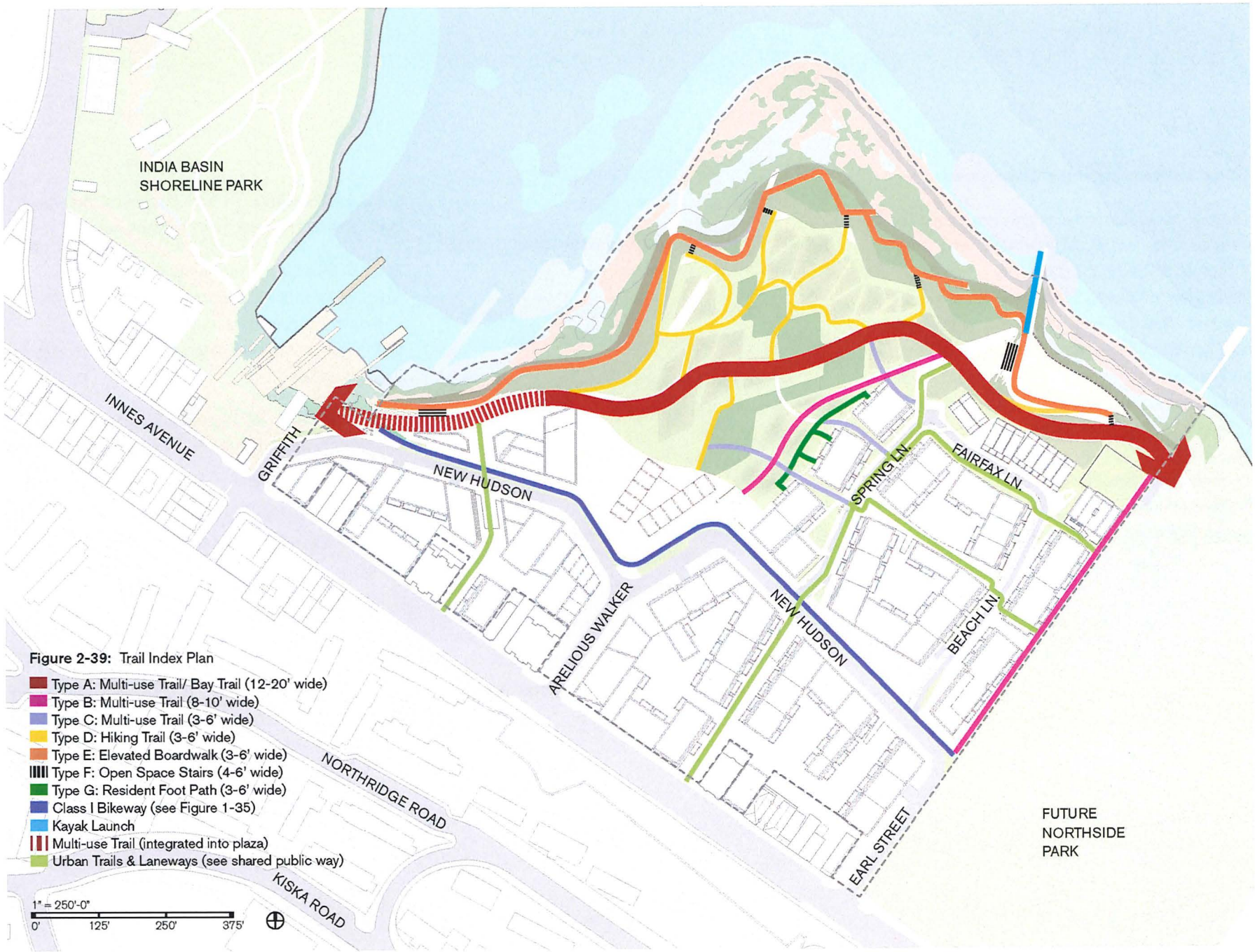


Figure 2-39: Trail Index Plan

General Standards and Guidelines

The trail general standards and guidelines provide a range of trail experiences and access routes that are durable and lasting. See Figure 2-39 Trail Index Plan for location of types. Primary multi-use and class 1 bikeway trails are designed for direct and intuitive passages through the site and to main gathering spaces and destinations. Secondary hiking trails and boardwalks meander through the open spaces for a sense of discovery and intimacy. Informal foot paths are anticipated to evolve over time. Trails should accommodate a range of users at any given time and be accessible to all ages and abilities.

Standards

2.1.3.1 Trail Dimensions Trail dimensions shall be as shown in Figure 2-39.

2.1.3.2 Elements All trails shown in Figure 2-39 through 2-43 are required. Locations may vary.

2.1.3.3 Multi-Use Trail The multi-use / Bay Trail shall be a maximum of 20 feet wide, including 3' shoulders on both sides and interior planting strips. The multi-use / Bay Trail shall be a minimum of 12 feet wide.

2.1.3.4 Turnouts Where the width of an accessible trail is less than 5 feet, provide turnouts at least 5 feet wide every 200 feet or in conformance with current US Outdoor Recreation Access Route standards for trail passing spaces, whichever distance is shorter. Shall conform to surrounding conditions. Shall be integral to path configuration and materiality.

2.1.3.5 Clearance Vertical clearance shall be at least 10 feet high from trail finished surface.

2.1.3.6 Borders Provide either a change in elevation or a physical barrier at the edge of trails to define the edge that may include planting, a plant barrier, or a low fence. Fence shall be at least 90% transparent.

2.1.3.7 Access All trails shall accommodate a range of users and shall meet current Trail ADA guidelines.

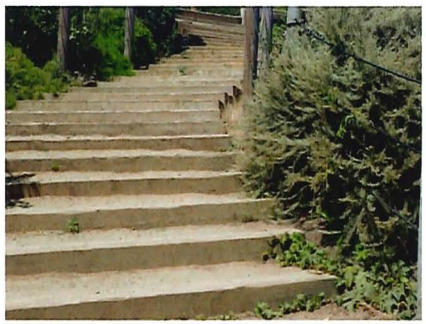
2.1.3.8 Furnishing Area Locate all furnishings in the furnishing area outside of the main path of travel.

Type A & B: Multi-Use Trail
Durable and smooth, resin pavement trail. Provides access for pedestrians and bicycles.

Type C: Multi-Use Trail
Combination of resin pavement pedestrian shoulders and smooth, durable, paved 2-way main throughway.

Type D: Hiking Trail
Durable, smooth materials where occurs in tidally influenced areas, can withstand tidal conditions and occasional submersion.

Type E: Elevated Boardwalk
Durable, wooden boardwalk elevated above adjacent grade.
6" wood curb for edge detection.
No guardrail. Adjacent grade not to exceed 30" below finish surface. Dogs prohibited.



Type F: Stair In Slope
Wood and resin stair set into slope providing access from upland to shoreline trail.

Type G: Resident Foot Path
Cobble foot path provides access through semi-private shared backyard to residential units.
Ensure durable fill between cobbles for stable surface.

Type H: Foot Path
Informal dirt trail that meander throughout park. Compact and maintain where footpaths evolve.

Trail Types: Sections

The sections here detail dimensions for each trail type. See Figure 2-39Figure 2-39 Trail Index Plan for location of each trail type.

Standards

2.1.3.9 Dimensions Dimensions per Figure 2-40 through Figure 2-43.

Guidelines

2.1.3.10 Multi-Use Trail The multi-use trail shall serve as a primary spine through the Big Green and connect to adjacent sites. It shall provide direct yet meandering access for pedestrians and bicycles through the Cove Terrace, Big Green, and Beach Overlook.

2.1.3.11 Shoreline Boardwalk The shoreline boardwalk shall serve as the primary trail through the shoreline and shall be situated for direct access to the tidal zone. It shall be open to pedestrians only. Locate the trail at an elevation midway between current tidal marsh and top of bank for a unique experience in a perched habitat zone above midcentury sea level rise. See Section 3.8 for adaptation strategies.

2.1.3.12 Hiking Trails Hiking trails shall meander through the Big Green providing a sense of discovery, finding, and wildness. Trails are intended to be narrow and for pedestrians and dogs.

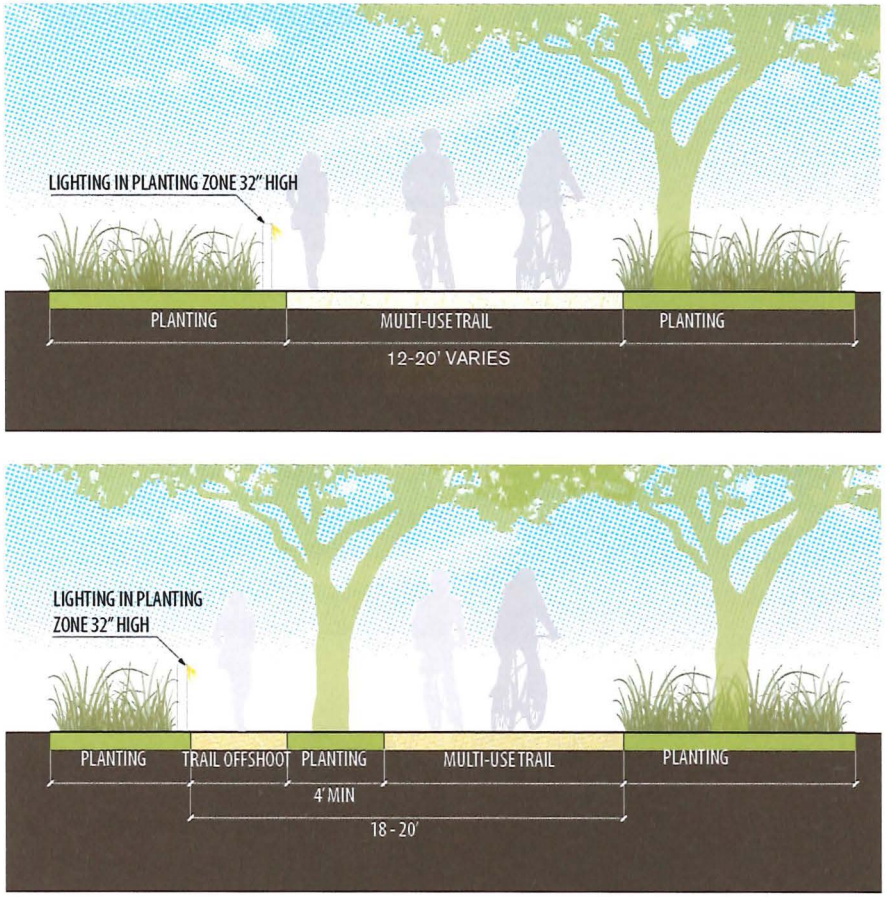
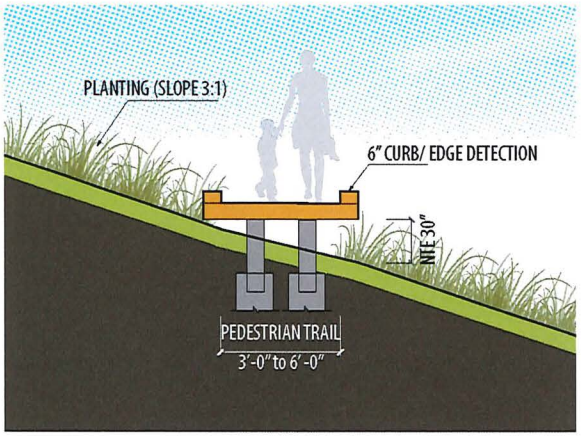
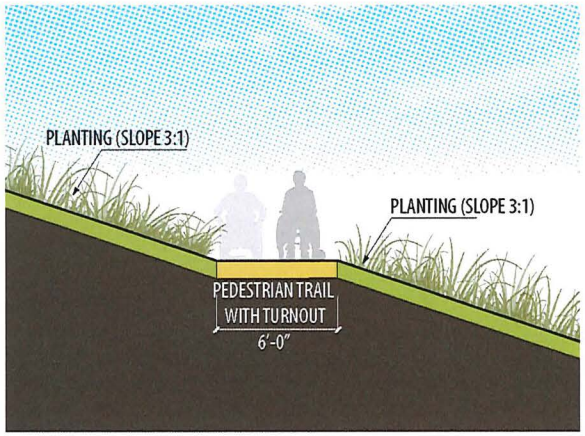
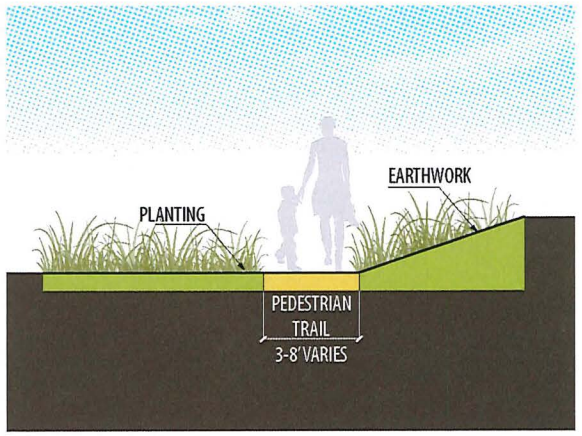


Figure 2-40: Trail Sections - Type A & B: Multi-Use Trail







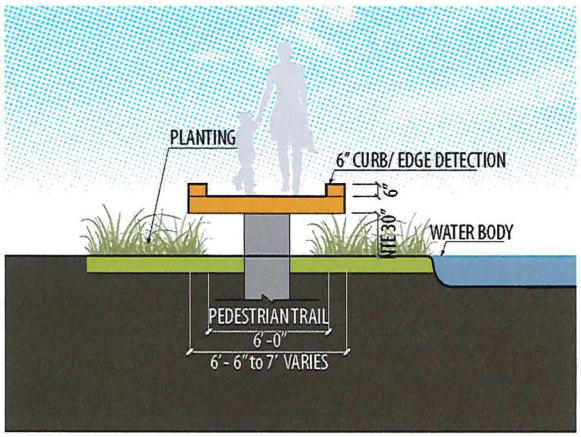


Figure 2-41: Trail Sections - Type E: Elevated Boardwalk

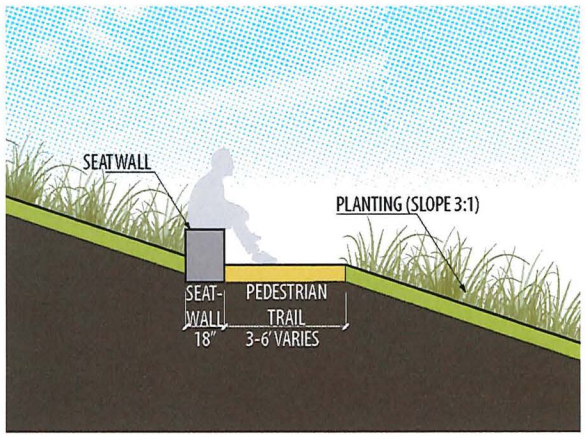


Figure 2-42: Trail Sections - Type A-D, I: Trail in Slope

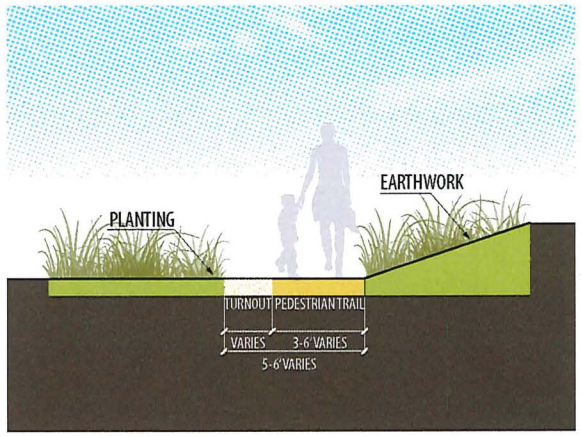


Figure 2-43: Trail Sections - Type D & H: Hiking Trail

Furnishing Areas

Located adjacent to trails, furnishing areas are located throughout the Big Green and Shoreline to accommodate furnishings and a range of elements that enhance usership and experience of the park. These include furnishings, signage, refuse receptacles, viewing areas, drinking fountains, turnouts, and picnic areas. Dimensions of the furnishing areas are designed for intensity of use and to create intimate spaces for reflection, while preserving through access on adjacent trails. The furnishing area should reflect the wild character of the Big Green. See Chapter 3 for trail adaptation for sea level rise.

Standards

2.1.3.13 Furnishing Furnishing areas on the Multi-Use Trail shall be no more than 300 feet apart. Built-in or affixed furnishings shall be located in furnishing areas only and outside of the primary path dimensions. Locate for views and comfort. Conform to surrounding conditions. Shall be integral to path configuration and materiality.

Guidelines

2.1.3.14 Location Furnishing area shall be integral to pathways in design, materiality, and alignment. Locate furnishing areas to maximize comfort including but not limited to wind protection and solar aspect. Place furnishing areas for views of the shoreline and for viewing sculptures.

2.1.3.15 Amenities The following amenities shall be provided at furnishing areas: seating, refuse receptacles, signage, bicycle racks. See Section 2.3 for Public Realm and Open Space Elements.

Bay Trail Rendering

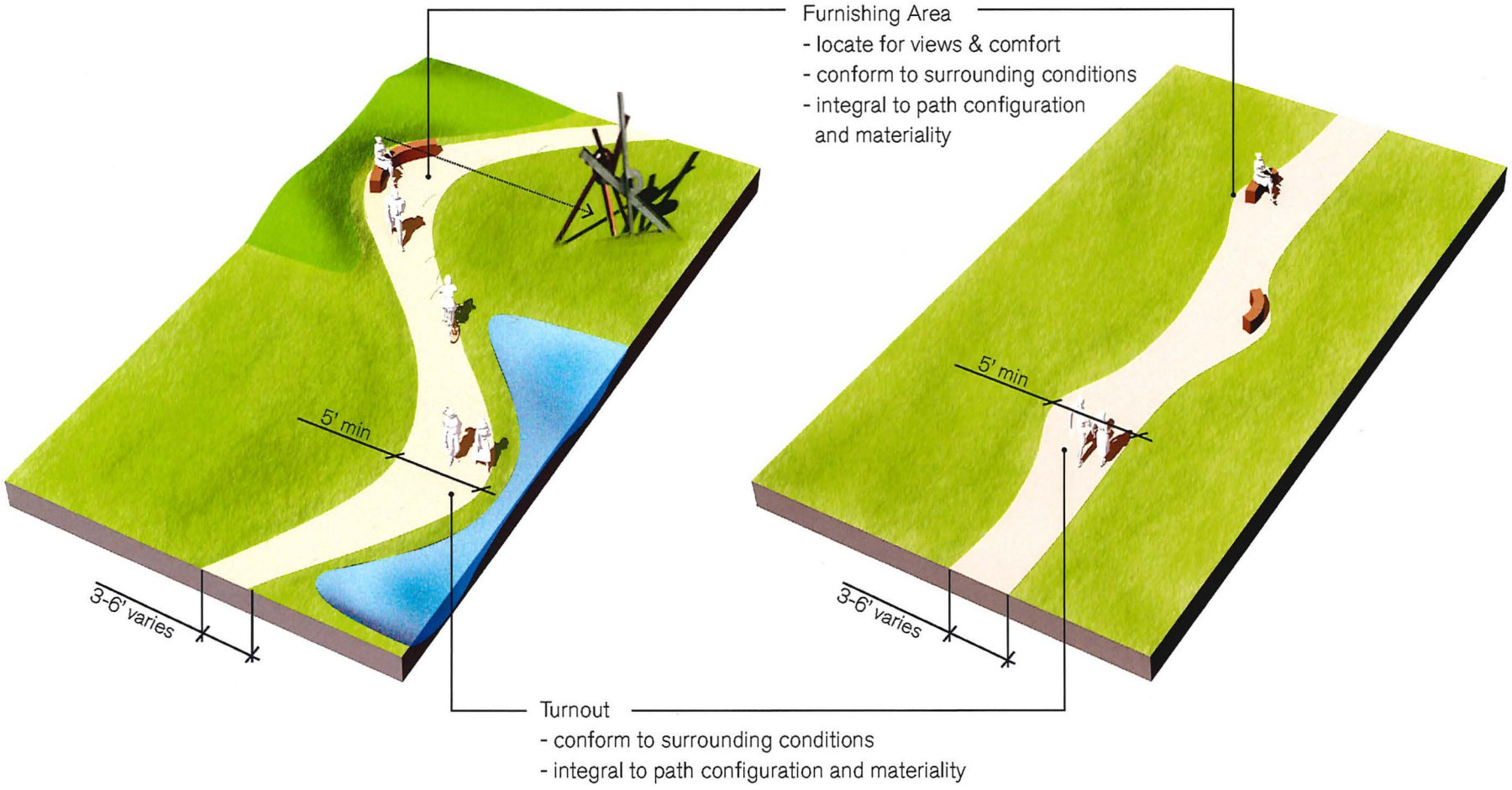


Figure 2-44: (Left) Furnishing Areas at Curve (Right) Furnishing Areas at Straight Alignments

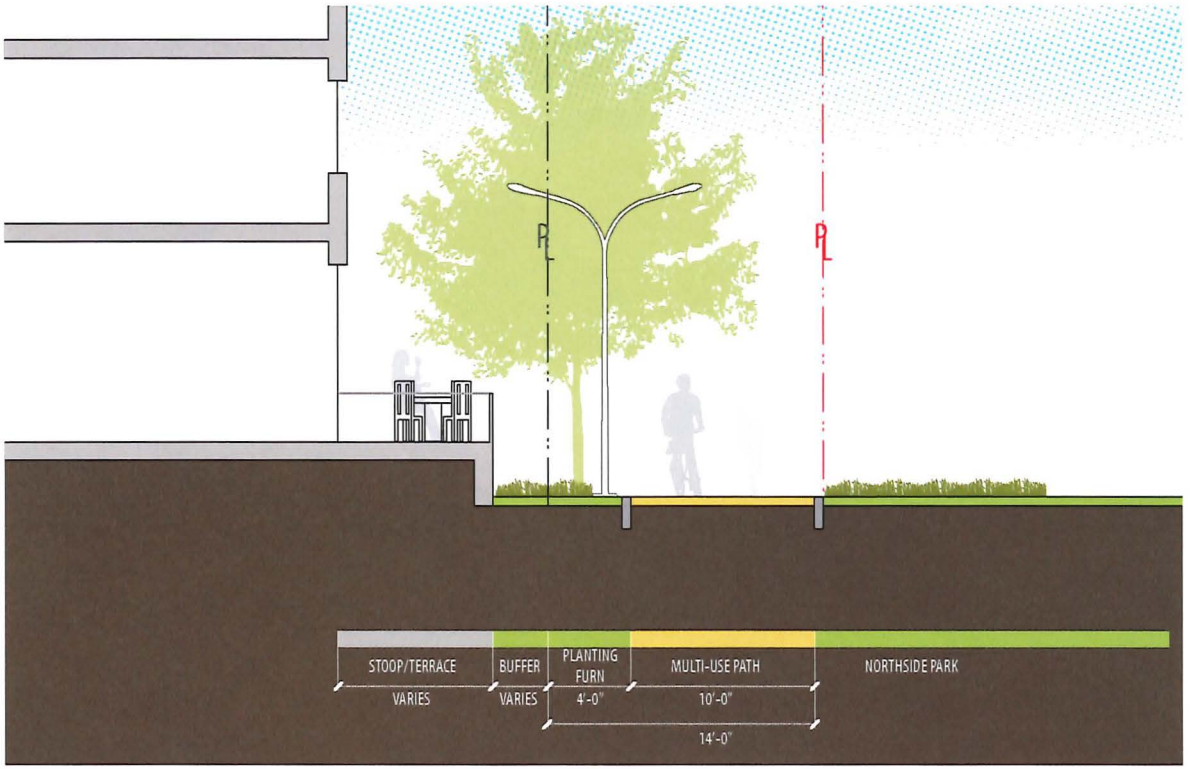


Figure 2-45: Earl Path Section

Table 9. Earl Path Specifications

(See Section 2.3 for Public Realm and Open Space Elements)

TRAIL WIDTH: 10 FEET
BIKE FACILITIES: MULTI-USE TRAIL

SURFACING		(See 2.3.3)
P1	MULTI-USE PATH	TYPE I, M
P2	BOARDWALK	TYPE U
PLANTING		(See 2.4.2)
L1	TREE	ENTRY STREET
L2	PLANTING	UNDERSTORY TYPE C
LIGHTING		(See 2.3.5)
LT1	PEDESTRIAN LIGHT	TYPE B
FURNISHING		(See 2.3.4)
F1	SEATING	TYPE A, B, D, E

KEY PLAN

Figure 2-46: Earl Path Enlarged Plan

1″ = 30′-0″
0′ 15′ 30′ 45′

LEGEND
Light
Seating
Stoop (See Chapter 6)
Raised Crosswalk
Property Lines
Parcel Break Lines

Standards

2.1.3.16 Trail Dimensions Trail dimensions shall be as shown in Figure 2-45.

2.1.3.17 Elements Elements per Figure 2-45 and Figure 2-46. All elements shown shall be included. Dimensions vary.

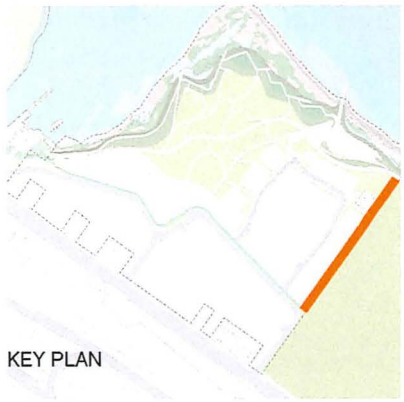
2.1.3.18 Specifications Specifications shall conform to Table 9. Earl Path Specifications. See Section 2.3 for Public Realm and Open Space Elements.

2.1.3.19 Tree Size Minimum tree size is 24-inch box.

Guidelines

2.1.3.20 Seating Seating shall be oriented toward the adjacent property, not toward residences.

2.1.3.21 Pedestrian Surfacing Surfaces shall be firm, stable and slip resistant.



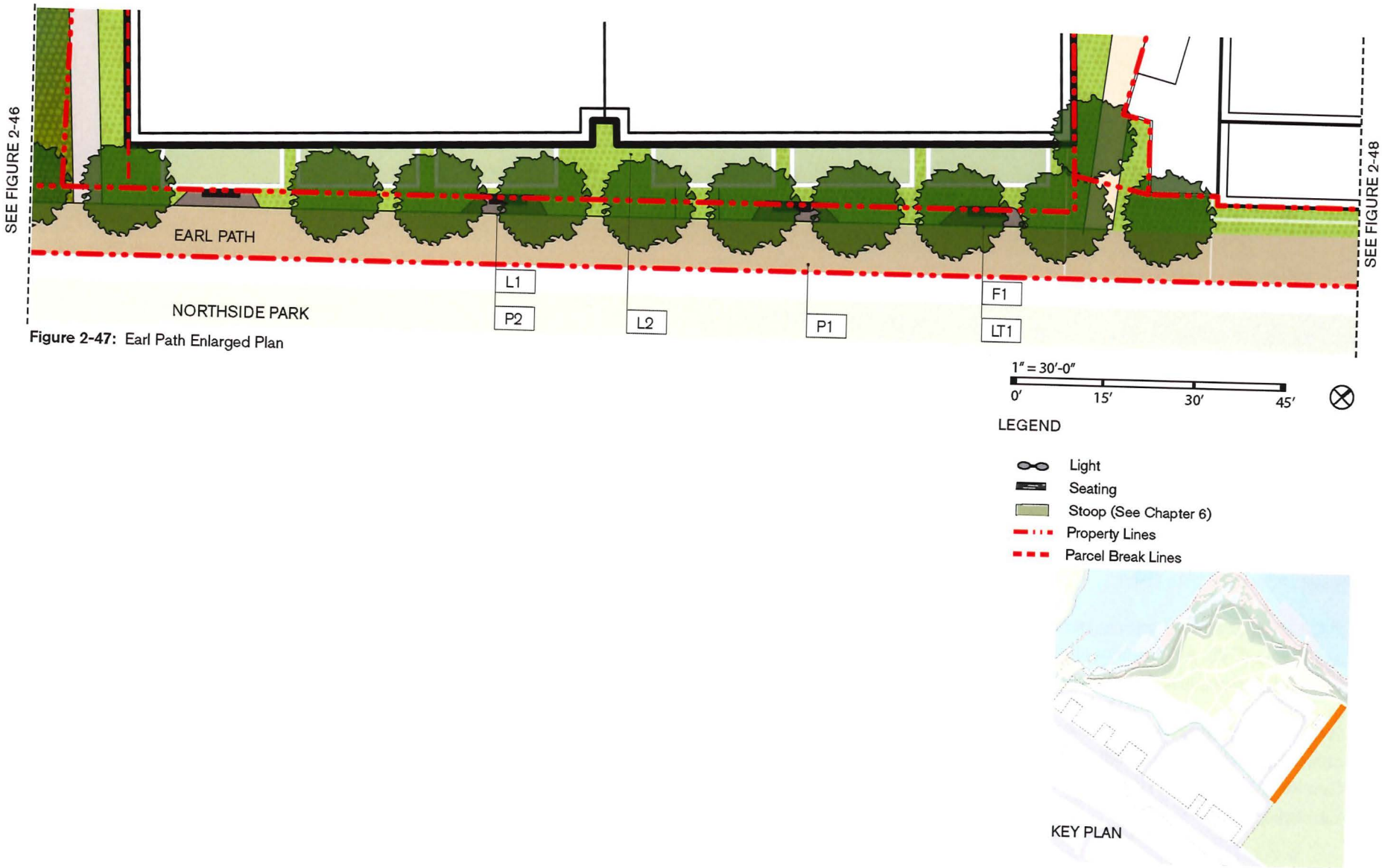


Figure 2-47: Earl Path Enlarged Plan

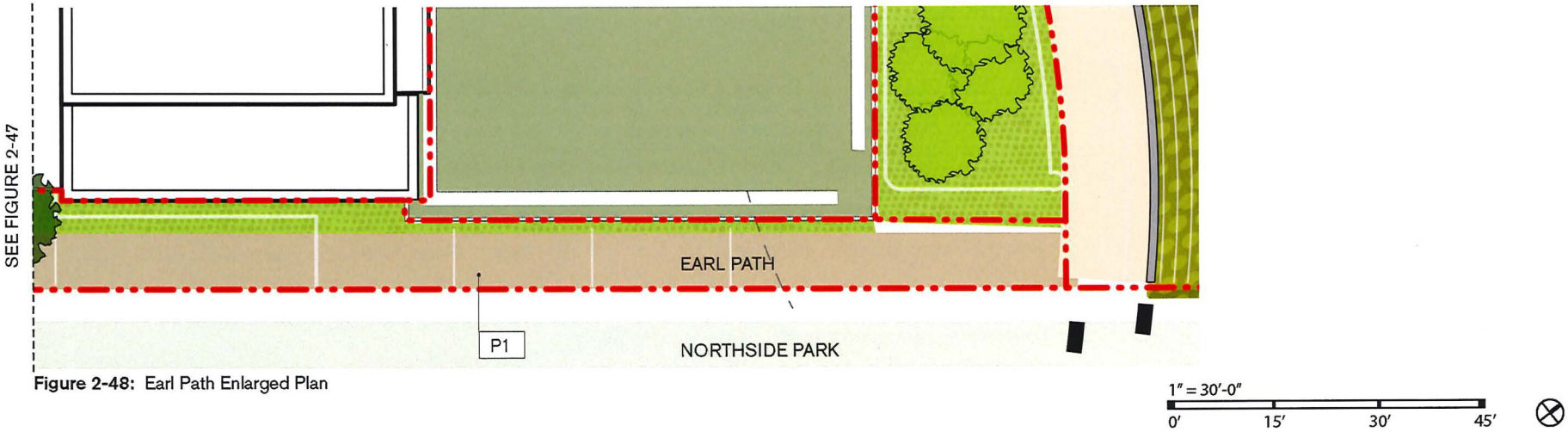
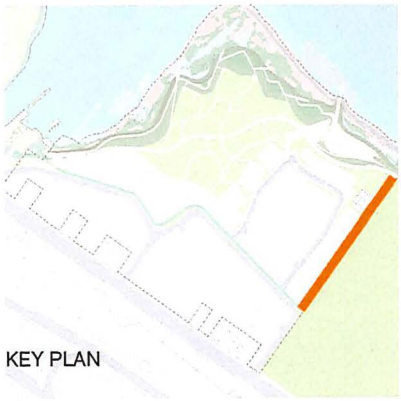


Figure 2-48: Earl Path Enlarged Plan



2.2 Open Spaces

2.2.1

General Guidelines and Index

At India Basin, unique open spaces provide a richness of public realm offerings from wild and serene shorelines, to active and programmed recreation areas, to urban plazas and courtyards. Open spaces are designed to be nuanced and instill an authentic sense of place. The project modulates the scale and configuration of spaces to purpose. Their scale and configuration are designed for the specific purpose of each open space. This section details the design intent, standards, and guidelines of each open space. The standards and guidelines included here apply to all open spaces shown in Figure 2-40, Open Space Index Plan. See Section 2.3 for Public Realm and Open Space Elements.

Standards

2.2.1.1 Lighting Lighting fixtures shall adhere to lighting standards and guidelines list in Section 2.3.5.

2.2.1.2 Materials All signature places shall conform with the material palette in Section 2.3.

2.2.1.3 Bank The bank between the tidal zone (Shoreline) and upland areas (Big Green) shall be reshaped and graded to increase total length as compared to existing bank length. Where slopes are steeper than 3:1, use slope stabilization materials and planting. All slopes shall be at least 80% planted. See Figure 2-59 Earthwork Typologies.

2.2.1.4 Shoreline Protection Upgrade and replace existing shoreline protection located at the toe of slope with stabilization materials and planting. Shoreline protection to be at least 80% planted.

Guidelines

2.2.1.5 Elements Public Realm and Open Space Elements shall be provided throughout the Big Green and Shoreline. See Section 2.3.

2.2.1.6 Maintenance Standalone maintenance storage facilities shall not be located within the Big Green, Shoreline, or Shared Front Yard.

2.2.1.7 Signage Interpretive signage shall be incorporated throughout the Big Green and Shoreline to describe the unique phenomena and infrastructure of the site that may include sea level rise, resiliency, pilot projects, stormwater and blackwater management, habitats, land morphology, soil, sculpture, history, and the tidal marsh. See Chapter 7 Wayfinding and Signage.

2.2.1.8 Trees Place trees to emphasize views to the shoreline, create micro-climates, and provide diverse habitats, shade, and wind mitigation.

2.2.1.9 Plants Select a diverse plant palette appropriate to the coastal environment to maximize ecologies and habitat types. See Section 2.4 Ecology and Biodiversity.

2.2.1.10 Guardrails Trails and boardwalks shall be designed to use guardrails sparingly, and only at overlooks and bridges.

Figure 2-49: Open Space Index Plan

Transit Plaza

Transit Plaza Rendering

The Transit Plaza is a primary entry into the site located on Innes Avenue at the corner of Innes Avenue and Arelious Walker. It will welcome people arriving by public transit, and should be inviting and comfortable. The plaza shall be robust in nature for durability on a primary transit corridor. (Pending final approval)

Table 10. Transit Plaza
(See Section 2.3 for Public Realm and Open Space Elements)

BIKE FACILITIES: RACKS & BIKE SHARE		
SURFACING		(See 2.3.3)
P1	THROUGHWAY ZONE	TYPE H, I, J
P2	FURNISHING ZONE	TYPE I, J, K
PLANTING		(See 2.4.2)
L1	TREE	COMMERCIAL CORRIDOR
LIGHTING		(See 2.3.5)
LT1	PLAZA LIGHT	TYPE F
CURBS		(See 2.3.7)
C1	CURB RAMP	DPW STANDARD
FURNISHING		(See 2.3.4)
F1	SEATING	TYPE A, B, C, D, E, F, G
F2	SIGNAGE & WAYFINDING	SEE CHAPTER 7
F3	BIKE SHARE	
STRUCTURES		
S1	OVERHANG	See Section 5.1, 5.1.3 Transit Plaza Parcel Break, 5.1.4 Encroachments, and Section 5.4 Setbacks

Standards

2.2.2.1 Elements All elements shown in Figure 2-50 are required. Dimensions may vary.

2.2.2.2 Specifications Specifications shall conform to Table 10 Transit Plaza Specifications. See Chapter 5 for further details on dimensional requirements.

2.2.2.3 Percentage Hardscape The plaza shall be at least 90% hardscape.

Guidelines

2.2.2.4 Lighting Plaza lighting shall be incorporated into building and hardscape, and/or planters.

2.2.2.5 Shade See Section 5.1, 5.1.3 Transit Plaza Parcel Break, 5.1.4 Encroachments, and Section 5.4 Setbacks for building overhang.

2.2.2.6 Amenities The following amenities shall be provided within the plaza: movable and built-in seating, lighting, signage, and refuse receptacles.

2.2.2.7 Paving Paving shall be distinct from DPW standard sidewalk, including enhanced cast in place concrete or concrete unit pavers.

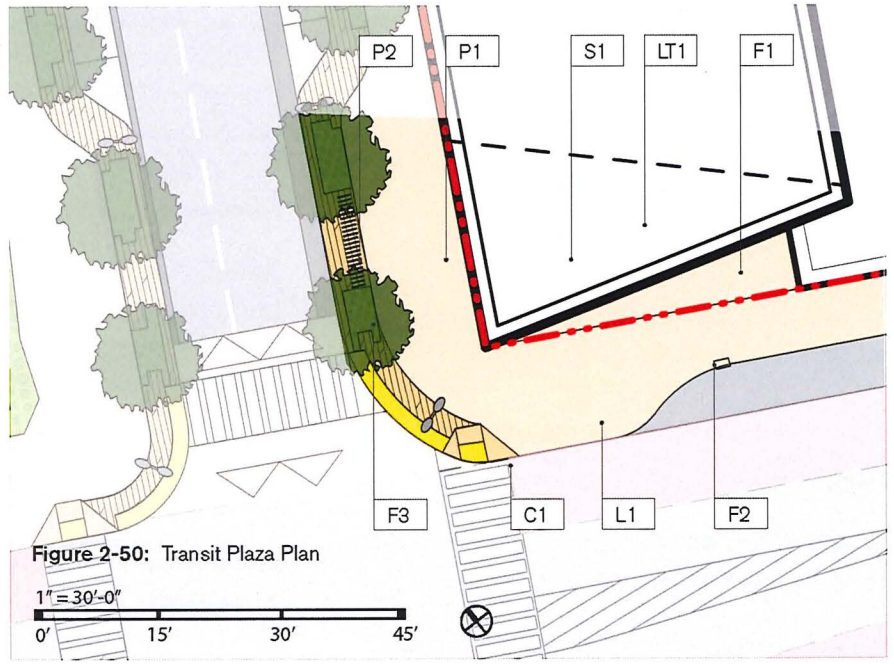


Figure 2-50: Transit Plaza Plan

LEGEND

- Light
- Seating
- Raised Crosswalk
- Curb Ramp
- Property Lines
- Parcel Break Lines

KEY PLAN

Public Market

The Public Market is a flexible plaza space capable of hosting large events as well as everyday market functions. It serves as the threshold from the developed Hillside into the Big Green. The edge between plaza and Big Green should be integrated. The configuration allows for the plaza to evolve over time to suit the needs of the community, starting as a site activation location during early construction phases and becoming an active space for daily functions, gatherings, play, and events.

Standards

2.2.3.1 Elements All elements shown in Figure 2-51 are required. Dimensions may vary.

2.2.3.2 Specifications Specifications shall conform to Table 11. Public Market Plaza Specifications.

2.2.3.3 Public Market Locate 2 lightweight structures in the plaza to function as a public market. Total footprint of both structures combined not to exceed 10,000 sq ft. Construct the structures to allow for some enclosable spaces for community facilities, and to maximize bay views. Single story (30' Max), light-weight structure, high level of openness/transparency and access to surrounding public market area.

2.2.3.4 Public Market Restrooms Accommodate at least 6 restroom stalls in the public market pavilion or within 100 feet of the public market pavilion within an adjacent building. See Figure 2-74 and Standard 2.3.6.3 for additional information on Restrooms in the open space.

2.2.3.5 Amenities The following amenities shall be provided within the plaza: movable and built-in seating, lighting, bicycle racks, signage, drinking fountains, and refuse receptacles.

2.2.3.6 Percentage Hardscape The plaza shall be at least 75% hardscape.

Guidelines

2.2.3.7 Shade Provide a lightweight canopy for cover and shade adjacent or attached to the public market structures.

2.2.3.8 Trees Locate trees in plaza to create a grove adjacent to New Hudson Avenue and allees to enhance view corridors.

2.2.3.9 Vehicular Access The plaza shall be designed to accommodate vehicular access.

2.2.3.10 Program Temporary programs and activities shall be allowed within the Plaza.

Table 11. Public Market Plaza Specifications
(See Section 2.3 for Public Realm and Open Space Elements)

BIKE FACILITIES: RACKS		
SURFACING		(See 2.3.3)
P1	PLAZA	TYPE C, D, I, J
PLANTING		(See 2.4.2)
L1	TREE	COMMERCIAL CORRIDOR
L2	TREE	OPEN SPACE
L3	TREE	OAK
LIGHTING		(See 2.3.5)
LT1	PLAZA LIGHT	TYPE B, C, F
FURNISHING		(See 2.3.4)
F1	SEATING	TYPE A, C, D, E, F, G
STRUCTURES		
S1	PUBLIC MARKET	See Chapter 4

Figure 2-51: Public Market Plaza Enlargement Plan

KEY PLAN

Flexible Plaza Space (The Plaza, Cambridge)

Canopy Typology (Flora Grubb, San Francisco)

Town Triangle

The town triangle is a signature plaza for the community designed to accommodate small to medium size gatherings, neighborhood events, and retail seating areas. The plaza should enable a range of activities and allow the ground floor retail outdoor space for seating and occassional events. Accordingly, the plaza is designed for flexibility with a large paved area, as well as more intimate gathering spaces. Located adjacent to the Class-I bikeway, the plaza also provides bicycle infrastructure and places for bicyclists to stop for a break.

Standards

2.2.4.1 Elements All elements shown in Figure 2-52 are required. Dimensions may vary.

2.2.4.2 Specifications Specifications shall conform to Table 12 Town Triangle Specifications.

2.2.4.3 Raised Planters Raised planters shall be maximum 18" above adjacent finish surface except where required for stormwater treatment or tree planting. Raised planters edges shall incorporate seating/play elements where possible.

Guidelines

2.2.4.4 Gathering Spaces Provide gathering spaces at a variety of scales to accommodate a range of programmatic activities, from larger scale formal performances and events to small scale informal gatherings.

2.2.4.5 Furnishings A range of fixed and movable furnishings shall be provided to accommodate programmatic activities.

2.2.4.6 Infrastructure Power, water and internet shall be provided to accommodate users and a range of outdoor programs and events.

2.2.4.7 Paving Paving shall be distinct from DPW standard sidewalk. Variation may include jointing pattern, paving type, texture and color.

2.2.4.8 Building Activation Open spaces and gathering spaces shall be oriented to activate building and retail frontages.

2.2.4.9 Bike Infrastructure Bicycle racks and water bottle filling stations shall be located within the Town Triangle adjacent to the Class I Bikeway. See Figure 1-35, Standard 2.3.4.6 and Guidelines 2.3.4.35 through 2.3.4.36 in Section 2.3 for more information.

Table 12. Town Triangle Specifications
(See Section 2.3 for Public Realm and Open Space Elements)

BIKE FACILITIES: RACKS, WATER FILLING STATIONS

SURFACING		(See 2.3.3)
P1	TOWN TRIANGLE PAVING	TYPE I, J
PLANTING		(See 2.4.2)
L1	TREE	COMMERCIAL CORRIDOR
L2	TREE	OPEN SPACE
L3	COURTYARD/PLAZA PLANTING	UNDERSTORY TYPE B, C
LIGHTING		(See 2.3.5)
LT1	PEDESTRIAN LIGHT	TYPE B, C, F
FURNISHING		(See 2.3.4)
F1	SEATING	A, C, D, E, F, G

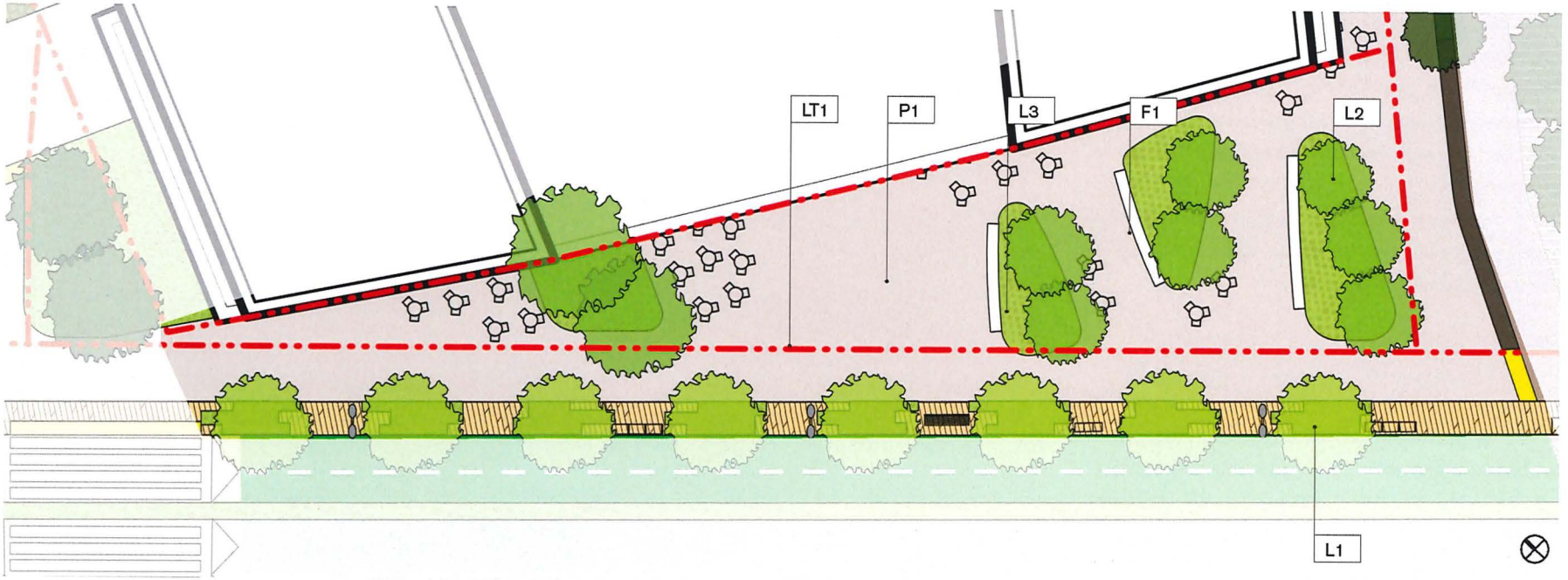


Figure 2-52: Town Triangle Enlargement Plan

LEGEND

- Built-in Seating
- Seating
- Movable Seating
- Light
- Raised Crosswalk
- Property Lines
- Parcel Break Lines

KEY PLAN

2.2.5

Courtyards & Stairs

The courtyards and stairs provide important functional spaces for India Basin. The courtyards function in the urban design framework is to provide residents with gathering and program spaces near their home. These spaces serve as extension of living spaces where residents can carry out community life. Programmatic activation and a sense of community ownership are key for the success of these spaces.

The stairs provide transition from streets to the elevated podium level, which includes the laneways and courtyards. These are intended to feel welcoming, generous and comfortable and should not act or feel like a barrier. Planting, art and water are incorporated into the stairs to increase comfort and animate these spaces.

Figure 2-53: Courtyards & Stairs

Laneway Grand Stair

Standards

2.2.5.1 Access Control Access control shall conform to Figure 2-54. Public access to key based access areas through designated access control locations is permitted. Access control gate / screen shall not exceed 96 inches in height. Material of access control shall be at least 85% transparent.

2.2.5.2 Specifications Specifications shall conform to Table 13 Courtyard and Stair Specifications.

2.2.5.3 Soil Depth Trees on structure shall be provided minimum 4' soil depth. 5' is recommended. Accommodate soil in podia.

2.2.5.4 Storage Courtyards shall provide storage space for residents to store items such as garden tools, toys and furnishings.

2.2.5.5 Bicycle Channel A bicycle channel or rail in surfacing shall be incorporated into stairs to facilitate ease of bicycle transport.

2.2.5.6 Raised Planters Raised planters shall be maximum 18" above adjacent finish surface except where required for stormwater treatment or tree planting. Edges of raised planters shall incorporate seating/play elements where possible.

Guidelines

2.2.5.7 Overhead Cover Courtyards shall provide common space with overhead cover that may include shade sails, canopies, and trellises.

2.2.5.8 Sightlines Stoops and entrances shall have sightlines to common spaces.

2.2.5.9 Amenities and Programming Courtyards shall include common amenities for residents that may include community gardens, fire pits, play areas, BBQ facilities and community common resource sharing facilities (e.g. tool lending library).

2.2.5.10 Thermal Comfort Thermal comfort shall be considered when locating courtyard planting and program zones. Gathering spaces shall be provided with a variety of sun/shade conditions.

2.2.5.11 Planting Areas Planting areas shall be placed with consideration given to solar exposure. Plants shall be located where they will receive adequate sun.

2.2.5.12 Paving Surfacing of courtyards and stairs shall match laneway surfacing.

Table 13. Courtyard & Stairs Specifications
(See Section 2.3 for Public Realm and Open Space Elements)

SURFACING		(See 2.3.3)
P1	THROUGHWAY ZONE	TYPE I, J
P2	STAIRS	TYPE I, J, T
PLANTING		(See 2.4.2)
L1	TREE	ON STRUCTURE
L2	PLANTING	UNDERSTORY TYPE A, B, C
LIGHTING		(See 2.3.5)
LT1	PEDESTRIAN LIGHT	TYPE B
FURNISHING		(See 2.3.4)
F1	SEATING	ALL TYPES
F2	FENCE/GATE	TYPE D OR E

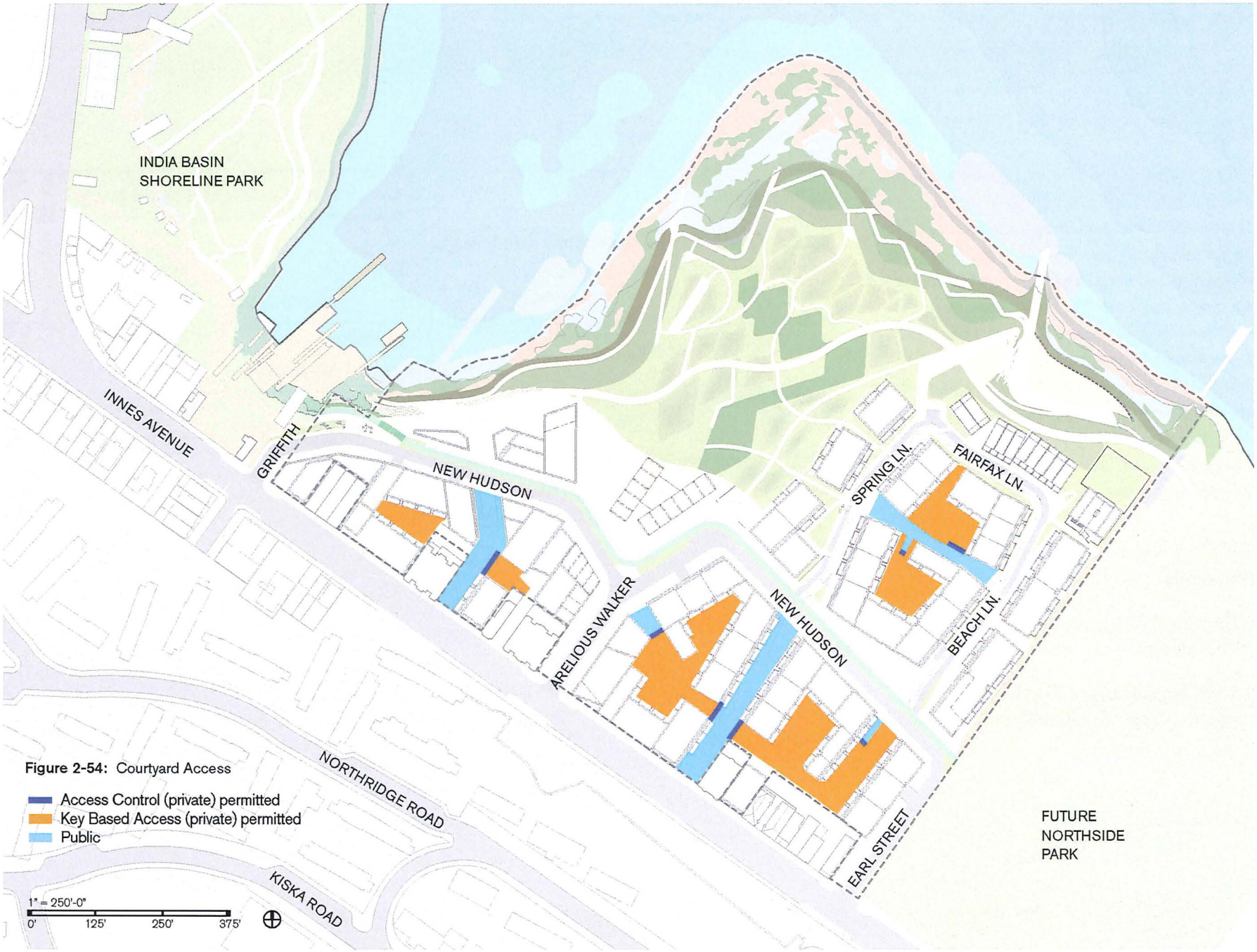


Figure 2-54: Courtyard Access

Pocket Plazas

Pocket Plazas are nestled into the flats. They are community gathering and program spaces located at strategic nodes within the neighborhood. The pocket plazas are reserved as locations for site specific installations, and a range of interventions should be considered for these locations to mark them as distinct signature places within the public realm. These could include site specific furnishings, inlay/pressed paving and art installations. Reuse found objects to retain the character of the place. Consider engaging a local artist or artisan for creation of site specific interventions in the pocket plazas.

Standards

2.2.6.1 Location Location shall conform to Figure 2-55. Dimensions may vary.

2.2.6.2 Specifications Specifications shall conform to Table 14 Pocket Plaza Specifications.

Guidelines

2.2.6.3 Site Specific Interventions Site specific interventions shall be incorporated into the pocket plazas. These may include site specific custom furnishings, inlay/pressed paving and art installations incorporating found objects.

2.2.6.4 Seating A range of seating types shall be provided.

2.2.6.5 Paving Paving at pocket plazas shall be distinct from adjacent surfacing. Variation may include jointing pattern, paving type, texture and color.

Table 14. Pocket Plazas Specifications
(See Section 2.3 for Public Realm and Open Space Elements)

SURFACING		(See 2.3.3)
P1	POCKET PLAZA	TYPE I, J, K, P, O, S
LIGHTING		(See 2.3.5)
LT1	PED LIGHT	TYPE B, C, F
FURNISHING		(See 2.3.4)
F1	SEATING	A, C, D, E, F, G

Figure 2-55: Pocket Plazas

Cove Terrace

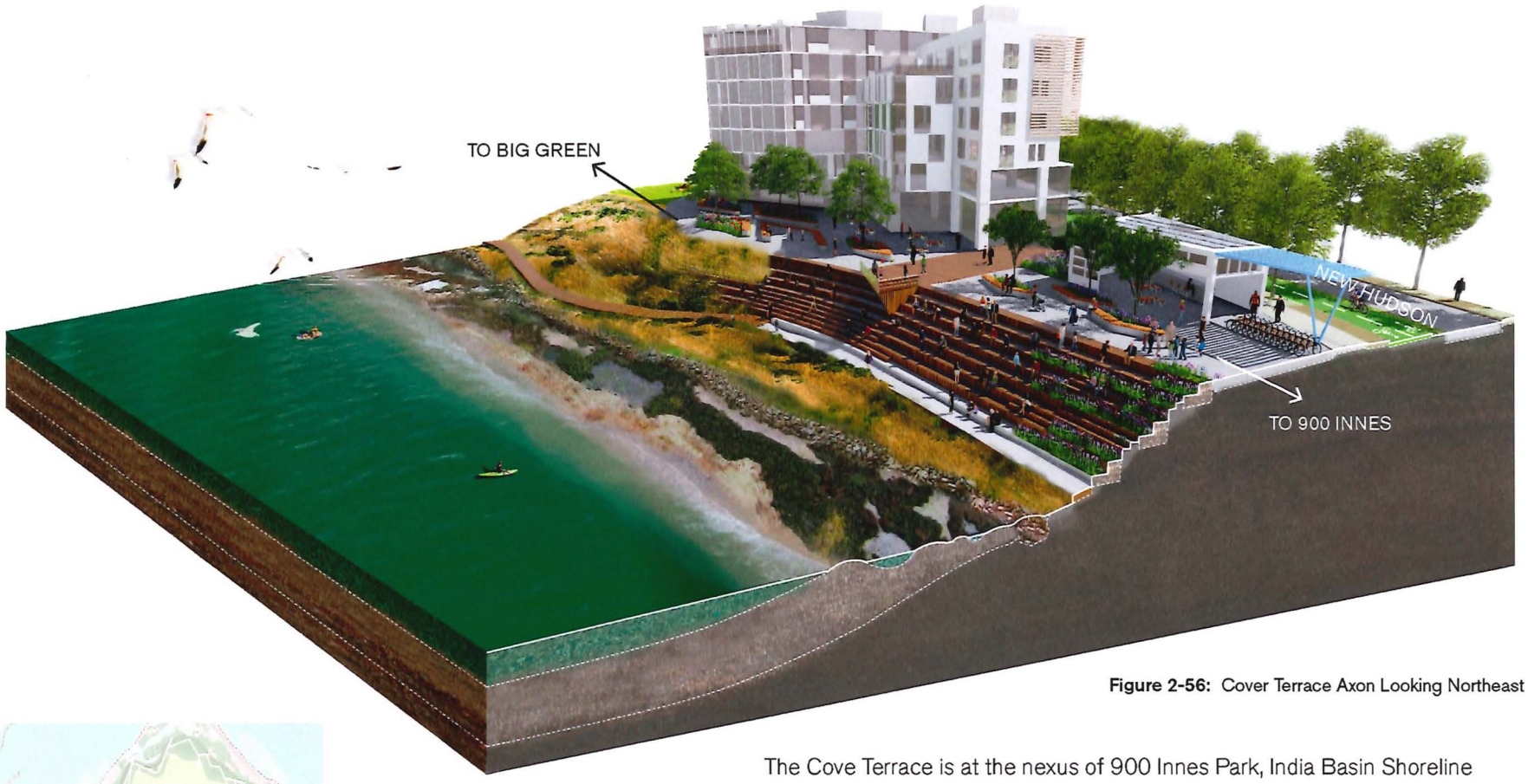


Figure 2-56: Cover Terrace Axon Looking Northeast

The Cove Terrace is at the nexus of 900 Innes Park, India Basin Shoreline Park, the Public Market Plaza, the New Hudson retail corridor, and the East Shoreline. This area offers the most urban waterfront experience at the edge of the Bay, with a cantilevered platform and structured gabion terraces stepping down to the water's edge. Commercial and retail frontages spill onto an active plaza that provides seating, continuous access for pedestrians and bicycles, and views of the Cove.

Cove Terrace Looking Northeast

Standards

2.2.7.1 Elements All elements shown in Figure 2-57 are required. Dimensions may vary.

2.2.7.2 Specifications Specifications shall conform to Table 15. Cove Terrace Specifications.

2.2.7.3 Furnishings Accommodate at least one built-in fire pit in the plaza to increase year round use.

2.2.7.4 Surfacing A 12' wide zone shall be demarcated through the plaza at top of bank to signify the Bay Trail alignment by a change in surfacing texture, color, and/or paving pattern that complements the Cove Terrace plaza paving. A distinct line between these two zones is not permitted.

2.2.7.5 Planters Locate planters on the plaza with perimeter seatwalls that vary in height not to exceed 24" high measured from adjacent finished surface.

2.2.7.6 Percentage Softscape At least 15% of the cove terrace plaza and bank shall be softscape.

2.2.7.7 Trails A universally accessible minimum 8' wide pathway and minimum 12' wide Class-1 bikeway shall connect to the adjacent site to the northwest at top of bank.

2.2.7.8 Cove Pavilion Locate 1 single-story structure (20' max height), lightweight structure with high level of openness/transparency and access to surrounding cove terrace in the Cove Terrace per Figure 2-57. Total footprint not to exceed 1,500 sq ft. Structure edge must hold laneway parcel break line alignment per Figure 2-57 At no point shall the western face encroach into the Protected Public View Corridor. See Appendix A.1 Figure A-4 for dimensions and Figure 1-30.

2.2.7.9 Parcel Break/Protected View Zone Parcel Break/protected view zone shall remain clear of all vertical physical and visual obstructions. Trees less than 15 feet tall at maturity within parcel break shall be permitted. See Figure 1-30 and Appendix A.1 Figure A-4.

Guidelines

2.2.7.10 Access Access from the shoreline boardwalk to cove terrace at top of bank shall be provided in the form of stairs and/or terraces.

2.2.7.11 Terraces Locate stadium terraces and/or low, planted retaining walls, or sloped bank to accommodate the grade change between Griffith Street/New Hudson Street and Class-I bikeway as it transitions to adjacent property.

2.2.7.12 Overlook A protruding overlook shall be located to align with the parcel break and shall be oriented to the downtown San Francisco view. Surfacing used for the overlook shall extend across New Hudson to toe of stair at parcel break and cove laneway for continuity.

2.2.7.13 Shared Zone Where Class-1 Bikeway passes through plaza, demarcate by a change in surfacing texture, color and/or paving pattern. Change in surfacing shall be prioritized over appliqué.

Table 15. Cove Terrace Specifications

(See Section 2.3 for Public Realm and Open Space Elements)

BANK SLOPES: NTE 2:1
BIKE FACILITIES: MULTI-USE TRAIL, RACKS

SURFACING		(See 2.3.3)
P1	MULTI-USE TRAIL	TYPE H, I, M
P2	CLASS I BIKEWAY	TYPE L
P3	PLAZA	TYPE H, I, J
P4	SHARED ZONE	TYPE J, N
P5	PLAZA	TYPE H, I, J
P6	DECKING	TYPE U
P7	TERRACES	TYPE H, I, U
P8	OVERLOOK	TYPE T, U
PLANTING		(See 2.4.2)
L1	TERRACE PLANTING	UNDERSTORY TYPE C
L2	PLAZA PLANTING	UNDERSTORY TYPE B
L3	TREE	LANE/LANEWAY
L4	TREE	OPEN SPACE
L5	BANK PLANTING	UNDERSTORY TYPE G
LIGHTING		(See 2.3.5)
LT1	PLAZA LIGHTING	TYPE B, C, F
FURNISHING		(See 2.3.4)
F1	CAFE SEATING	TYPE F
F2	PLAZA SEATING	TYPE D, E, G
STRUCTURES		(See Chapter 4 and A.1)
S1	COVE PAVILION	SINGLE STORY STRUCTURE
S2	CONCESSIONS/RETAIL	

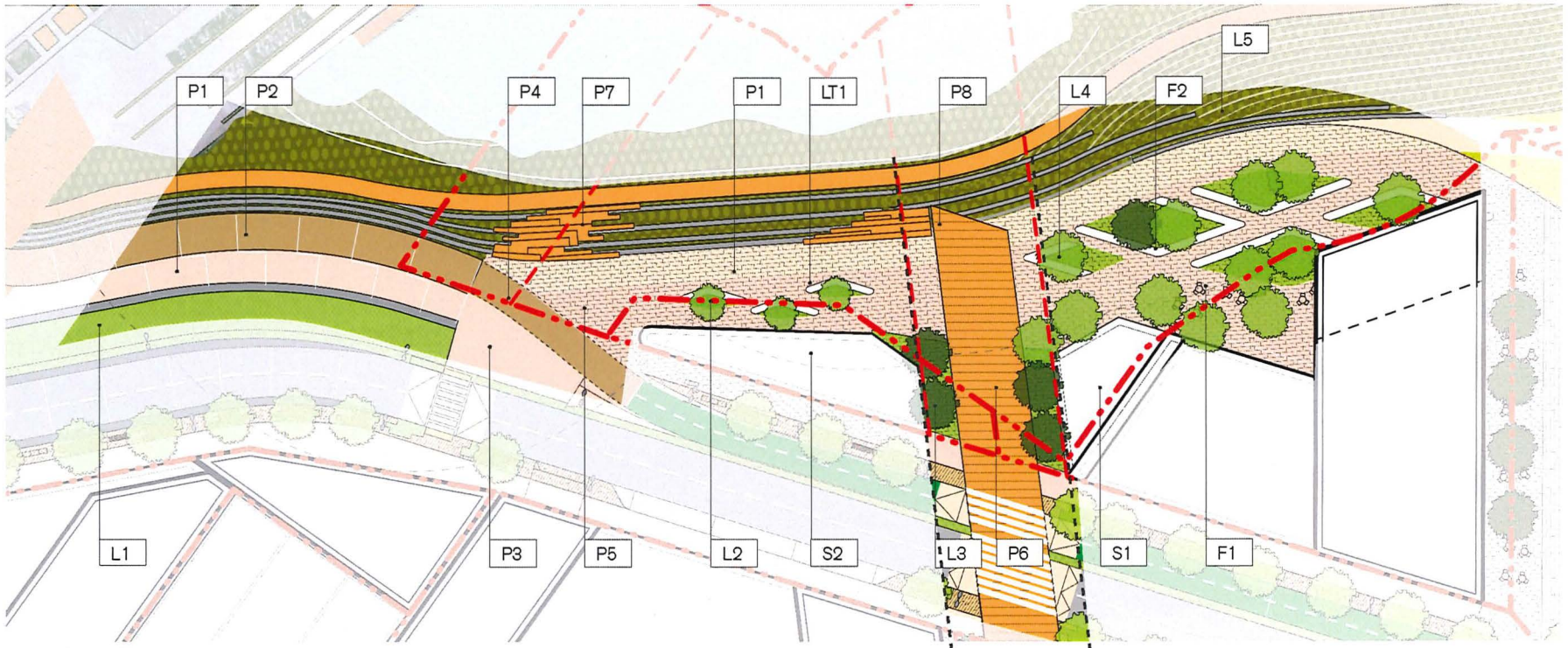


Figure 2-57: Cove Terrace Enlargement Plan

1″ = 60′-0″

0′ 30′ 60′ 90′

LEGEND

- Built-in Seating
- Protected View Zone
- Movable Seating
- Light
- Property Lines
- Parcel Break Lines

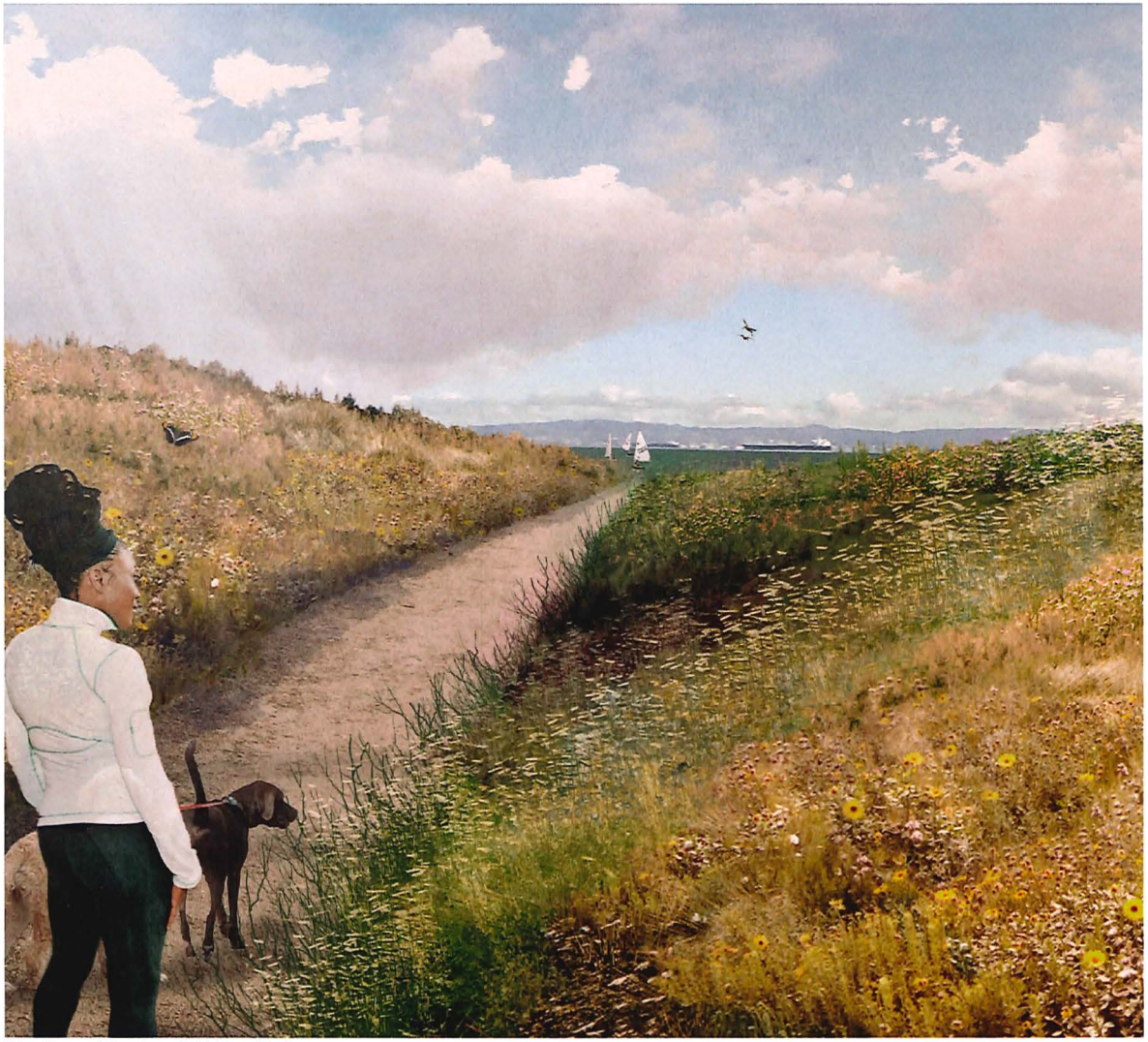
KEY PLAN

2.2.8

Big Green

Big Green & Stormwater Pond

The Big Green is the heart of the open space system and functions as a performative landscape with diverse ecologies and programs. It balances a range of active, passive, and water related recreation with habitats, stormwater treatment, and earthworks, resulting in a diverse open space where urban meets the wilds. Trails meander through topography and engage with a range of program offerings and educational moments for a sense of discovery and engagement. Design emphasis shall be placed on preserving the character of the Big Green as natural, rugged, feral, and wild. Where feasible, the Big Green will also treat blackwater and reuse recycled water to create habitats.



Big Green Meadow & Hiking Trail

Earthwork, Science Lab

Earthwork, Storm King

Standards

2.2.8.1 Elements All elements shown in Figure 2-58 are required. Dimensions may vary.

2.2.8.2 Specifications Specifications shall conform to Table 16. Big Green Specifications.

2.2.8.3 Overlooks Locate at least 3 distinct viewing areas at the top of bank. Location, size, and form shall maximize views and fit with surrounding landforms.

2.2.8.4 Activity Area Locate a lawn, recreational area, and flower cutting garden adjacent to the Public Market Plaza. Lawn slope shall not exceed 5%. Cutting flower garden shall be irrigated.

2.2.8.5 Percentage Softscape At least 85% of the Big Green shall be softscape.

2.2.8.6 Emergency Call Box SOS emergency call boxes shall be incorporated into other structures throughout the Big Green. 1 per every 2,000 square feet.

2.2.8.7 Gathering Areas At least 3 areas for picnicking and small gatherings shall be located throughout the Big Green in protected areas in addition to overlooks at top of bank. Surfacing shall be the same as adjacent trails or softscape that can accommodate light foot traffic.

2.2.8.8 Dog Area An off-leash dog area shall be accommodated in the Big Green. Locate between earthworks to decrease impact to surrounding habitats. A perimeter fence no taller than 5' high measured from adjacent finished grade shall line the perimeter of the off-leash dog area. Fence shall be at least 85% transparent.

2.2.8.9 Pavilions and Art Installations Locate pavilions and art installations in the Big Green per Section 2.3.6 and Figure 2-74.

Guidelines

2.2.8.10 Stormwater A centralized stormwater feature shall be located in the Big Green to treat stormwater from the development. See 2.3.8 Stormwater Standards and Guidelines, Table 18, Figure 2-61, and Section 3.2.

2.2.8.11 Earthworks Earthworks shall be incorporated throughout the Big Green. See Section 2.4 Earthworks, Table 17, Figure 2-59 and 2-60.

Table 16. Big Green Specifications

(See Section 2.3 for Public Realm and Open Space Elements)

BANK SLOPES: NTE 2:1

SURFACING		(See 2.3.3)
P1	ELEVATED BOARDWALK	TYPE U
P2	HIKING TRAIL	TYPE N
P3	MULTI-USE TRAIL	TYPE G, M, O, P
P4	MULTI-USE TRAIL	TYPE M
P5	OVERLOOK	TYPE I, M
PLANTING		(See 2.4.2)
L1	LAWN PLANTING	TYPE E
L2	PLANTING	TYPE C, D, E
L3	TREE	OAKS
L4	PLANTING	TYPE B, C, D
L5	PLANTING - STORMWATER WETLAND	TYPE G
L6	PLANTING - GARDEN	TYPE B, C
L7	PLANTING - WETLAND	TYPE G
L8	TREE	OPEN SPACE
LIGHTING		(See 2.3.5)
LT1	PARK LIGHT	TYPE C, D
FURNISHING		(See 2.3.4)
F1	DOG RUN FENCING	TYPE A, C
F2	FIRE PITS & HAMMOCKS	
F3	RECREATION AMENITIES	
F4	FURNISHING AREA	TYPE A, B, C, D, E, G
STRUCTURES		(See 2.3.6)
S1	SCULPTURE / INSTALLATION	
S2	LIGHTWEIGHT PAVILION	

KEY PLAN

LEGEND

- Sculpture / Art Installation
- Fire Pit
- Hammock
- Property Lines
- Parcel Break Lines

Figure 2-58: Big Green Enlargement Plan

1" = 100'-0"

0' 50' 100' 150'

Standards

2.2.8.12 Complexes Earthwork complexes shown in Figure 2-60 are required. Dimensions may vary.

2.2.8.13 Specifications Specifications shall conform to Table 17 Earthworks Specifications.

2.2.8.14 Views Earthworks shall conform with view corridors. (See Figure 1-30.)

2.2.8.15 Slopes Side slopes shall not exceed 2:1 ratios. Use slope stabilization system to prevent erosion and reduce overall maintenance for slopes greater than 3:1.

2.2.8.16 Soils Earthworks that contain soils with poor quality shall include 24" of topsoil cover for plant success. Conduct soil profiling of fill material to determine appropriate placement within earthwork given soil contents.

2.2.8.17 Erosion Control Slopes shall be planted with 90% plant cover after first growing cycle to prevent erosion and create a range of micro-climates and habitat conditions.

Guidelines

2.2.8.18 High Points High points of individual mounds within larger earthwork complex shall alternate for variation and a layered effect.

2.2.8.19 Height Where earthworks need increased height to accommodate more fill or achieve design effect, earthworks shall incorporate a low wall at the toe of slope. A drain shall be included behind wall for drainage to limit maintenance and erosion.

2.2.8.20 Trails Trails shall be designed to traverse large earthwork complexes and pass through low points between individual mounds.

Table 17. Earthworks Specifications
(See Section 2.3 for Public Realm and Open Space Elements)

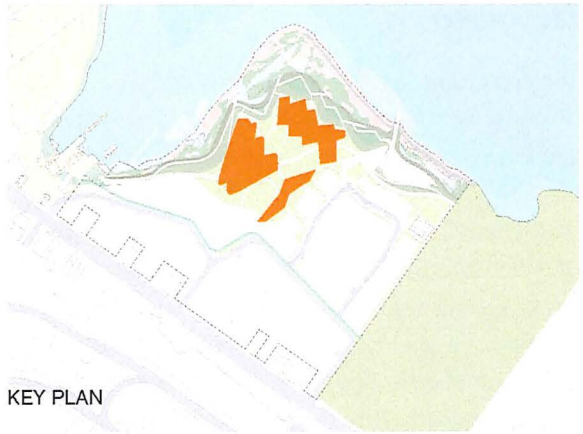
COMPLEX		
A1 & A2	COMPLEX A	6-15' HIGH, DIVERSE ECOLOGIES
B2	COMPLEX B	< 6' HIGH, IRRIGATED WILDFLOWER MEADOW

The 2 primary earthwork goals are:

1. Achieve a net zero off-haul;
2. Improve accessibility from Innes Avenue.

Site grading is designed in 2 layers to retain cut soils on-site. The base layer raises the upland areas for a smoother and accessible transition from Innes into the site. The top layer consists of earthwork complexes and mounds that contain additional cut soils. (See Section 3.5 and Figure 3-10.)

Figure 2-60: Earthwork Enlargement Plan



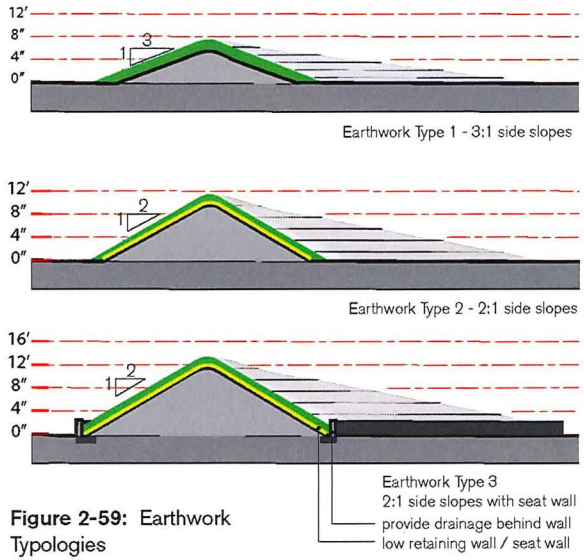


Figure 2-59: Earthwork Typologies

2 Foot minimum Soil Cover
Slope Stabilization Material
Top layer (Encapsulated Soils)
Base layer (Encapsulated Soils)

Stormwater

The Big Green is a performative landscape designed to treat all stormwater from the Hillside and Cove areas to the highest water quality before discharging to the Bay. (Stormwater generated in the Flats will be treated in the Shared Public Way.) See Sections 2.1.1 and 3.2. Trails and overlooks are designed to provide viewpoints. The grading and planting should focus on habitat creation to the greatest extent possible. Where feasible, a wet pond using recycled water should be incorporated to keep low areas wet year round. The feature should be managed to promote habitat growth and long-term sustainability.

Standards

2.2.8.21 Elements All elements shown in Figure 2-61 are required. Dimensions may vary.

2.2.8.22 Specifications Specifications shall conform to Table 18. Earthworks Specifications.

2.2.8.23 Size The stormwater feature shall be sized to accommodate treatment of 100% of the hillside and cove's stormwater at full build out. See Section 3.2.

2.2.8.24 Access Limit public access to a maximum of 6 crossings over stormwater pond.

2.2.8.25 Sculpture Integrate at least 1 installation and/or sculpture into the stormwater feature as an attraction.

Guidelines

2.2.8.26 Amenities Locate bird blinds adjacent to the stormwater feature and adjacent to trails.

2.2.8.27 Water Portions of the stormwater feature shall remain full with stormwater or recycled water year-round.

2.2.8.28 Erosion Control The stormwater system shall include retention and low control measures to regulate flows and ensure slope stability and erosion control.

2.2.8.29 Materials The system shall be lined and constructed with inert durable materials that do not have any long term environmental effects on habitats.

2.2.8.30 Outfall Stormwater feature shall drain to outfall in West Shoreline. See Figure 2-61 and Figure 2-64. Outfall shall be incorporated into raised shoreline boardwalk as feature.

Table 18. Stormwater Specifications
(See Section 2.3 for Public Realm and Open Space Elements)

SURFACING		(See 2.3.3)
P1	SPAN	TYPE U
PLANTING		(See 2.4.2)
L1	STORMWATER WETLAND	TYPE G
L2	COASTAL GRASSLAND	TYPE D, F, H
STRUCTURES		(See 2.3.6)
S1	BIRD BLIND	
S2	SCULPTURE/ INSTALLATION	
S3	OUTFALL	SEE SHORELINE PERMITS AND INFRASTRUCTURE PLAN

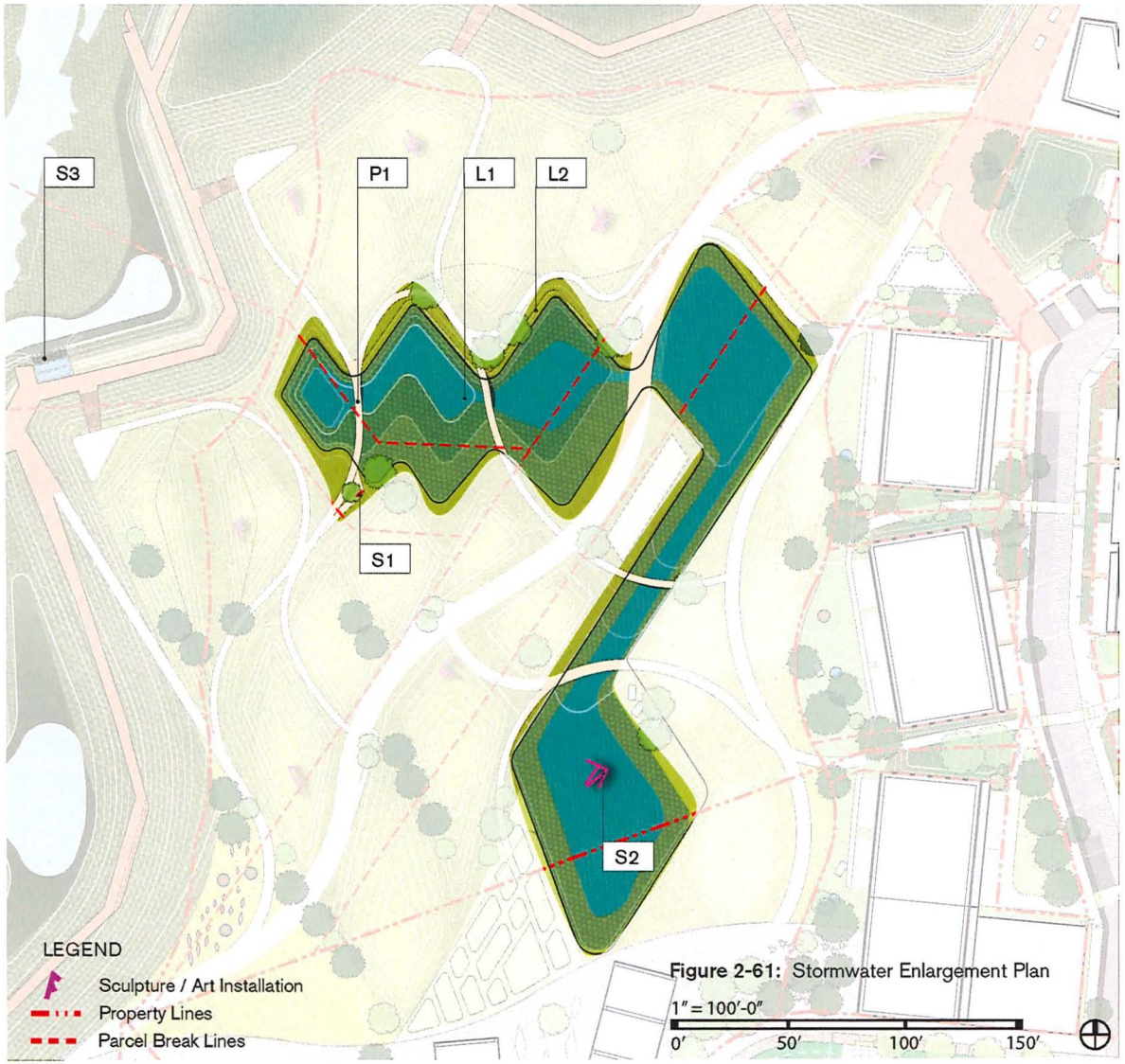
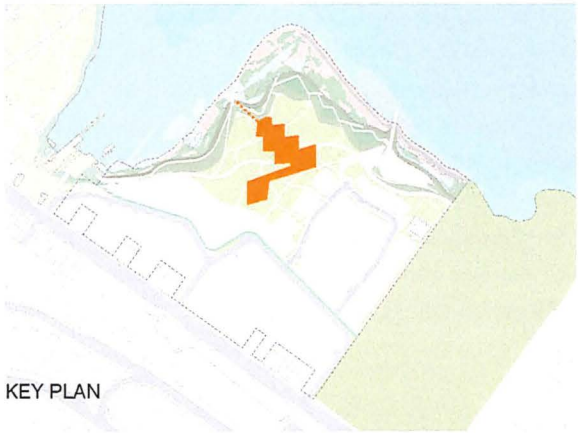


Figure 2-61: Stormwater Enlargement Plan



KEY PLAN

Stormwater pond character

Boardwalk traversing stormwater pond

Shared Front Yard

The shared front yard is a buffer between the Big Green and the Flats. It acts as a visual transition between public open space and private homes, and provides residents with a shared semi-private open space for activities such as play, barbecue, small gatherings, and leisure time. Stoops overlook the shared yard, which fronts the Big Green. Stormwater generated in the Flats is treated between buildings.

Standards

2.2.9.1 Elements All elements shown in Figure 2-62 are required. Dimensions may vary.

2.2.9.2 Specifications Specifications shall conform to Table 19 Shared Front Yard Specifications.

2.2.9.3 Fence A low fence no taller than 50 inches measured from adjacent finished grade with at least 85% transparency is permitted at the perimeter of each shared yard.

2.2.9.4 Percentage Softscape At least 80% of the shared yard shall be softscape.

Guidelines

2.2.9.5 Furnishings Placement of permanent and temporary furnishings in the shared front yard shall be permitted and maintained by the building HOA.

Activated edge and public realm engagement

Table 19. Shared Front Yard Specifications

(See Section 2.3 for Public Realm and Open Space Elements)

SURFACING		(See 2.3.3)
P1	FOOT PATH	TYPE M, F
P2	MULTI-USE TRAIL	TYPE M, F
PLANTING		(See 2.4.2)
L1	TREE	OPEN SPACE
L2	TREE	OAKS
L3	PLANTING	TYPE B, C, D, E
LIGHTING		(See 2.3.5)
LT1	PARK LIGHT	TYPE C, D
FURNISHING		(See 2.3.4)
F1	FENCING	TYPE A, C
F2	FIRE PIT	
F3	BIRD BATH	(See 2.4.3)

Shared yard for residences

Figure 2-62: Shared Front Yard Enlargement Plan

LEGEND

- Bird Bath
- Fire Pit
- Fence
- Property Lines
- Parcel Break Lines

2.2.10

West Shoreline

West Shoreline

The West Shoreline faces the India Basin cove. Relatively protected from wave energy, this area is conducive to tidal marsh habitat. Cuts into the existing bank are created to expand Bay edge and create wetlands where feasible. Visitors can experience this serene and tranquil landscape from top of bank, terraced boardwalk, and overlooks. A stormwater outfall is located to discharge high quality treated stormwater into the Bay. Brackish marsh habitats are anticipated at the edge of existing tidal wetlands.

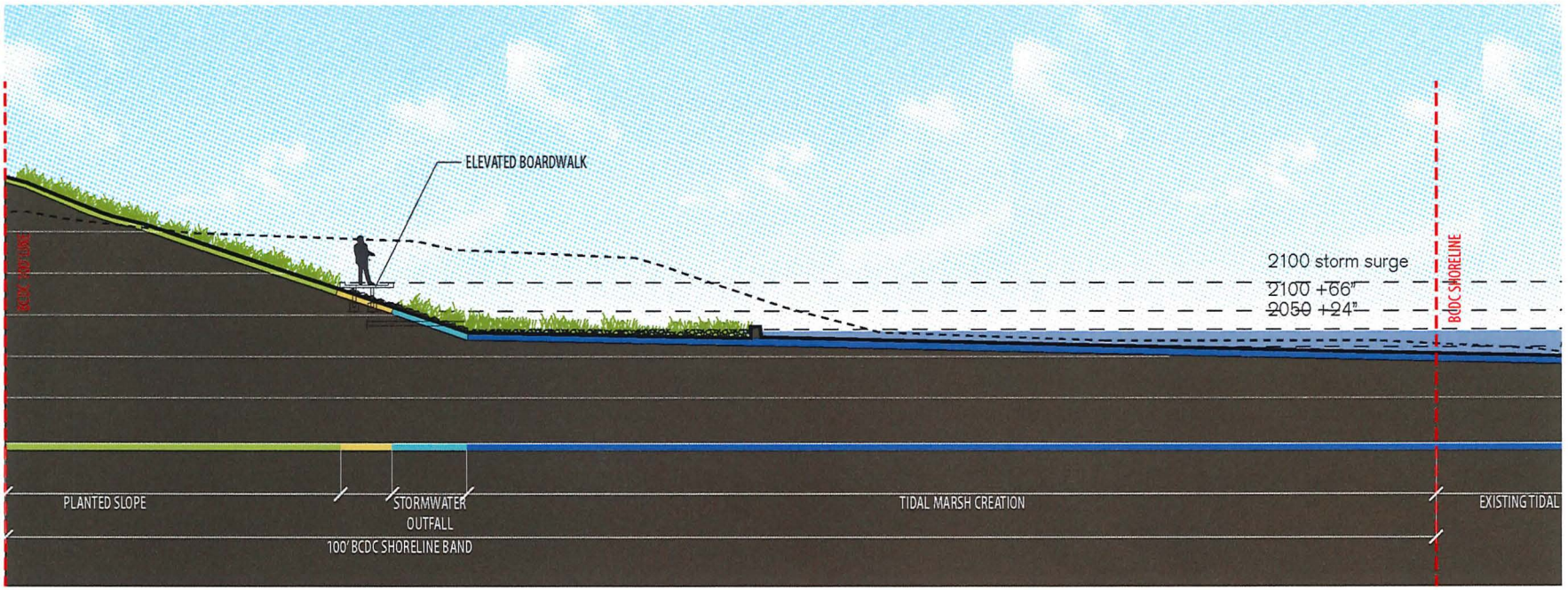


Figure 2-63: West Shoreline Section

1" = 20'-0"

0' 10' 20' 30'

Standards

2.2.10.1 Elements All elements shown in Figure 2-63 and Figure 2-64 are required. Dimensions may vary.

2.2.10.2 Specifications Specifications shall conform to Figure 2-20 West Shoreline Specifications.

2.2.10.3 Overlooks At least 3 overlooks shall be incorporated into the boardwalk as viewing platforms. Material shall be consistent with boardwalk. Extent and footings shall not be constructed beyond the MHW line. (See Shoreline Permits)

2.2.10.4 Boardwalk Boardwalk shall be elevated. Finished surface shall not exceed 30" drop from adjacent grade.

2.2.10.5 Percentage Softscape At least 90% of the west shoreline shall be softscape.

2.2.10.6 Lighting Lighting shall conform to lighting standards and guidelines per Section 2.3.5. See Figure 2-73.

Guidelines

2.2.10.7 Tidal Marsh Existing tidal marsh and dunes shall be retained in situ. See Shoreline Permits for tidal marsh creation areas.

2.2.10.8 Outfall A stormwater outfall shall be located in the bank and incorporated into the boardwalk structure. See Shoreline Permits and Infrastructure Plan for sizing and location.

Table 20. West Shoreline Specifications
(See Section 2.3 for Public Realm and Open Space Elements)

Bank Slopes: NTE 2:1

SURFACING		(See 2.3.3)
P1	ELEVATED TRAIL	TYPE U
P2	TRAIL IN SLOPE	TYPE N
P3	STAIRS	TYPE D, N, U
P4	OVERLOOKS	TYPE U
PLANTING		(See 2.4.2)
L1	TIDAL ZONE	TYPE J
L2	BANK	TYPE H, F
L3	TIDAL ZONE	TYPE J
FURNISHING		(See 2.3.4)
F1	SEATING	TYPE B, D, G
F2	REFUSE RECEPTACLES	
F3	SIGNAGE	See Chapter 7
STRUCTURES		
S1	STORMWATER OUTFALL	SEE SHORELINE PERMITS

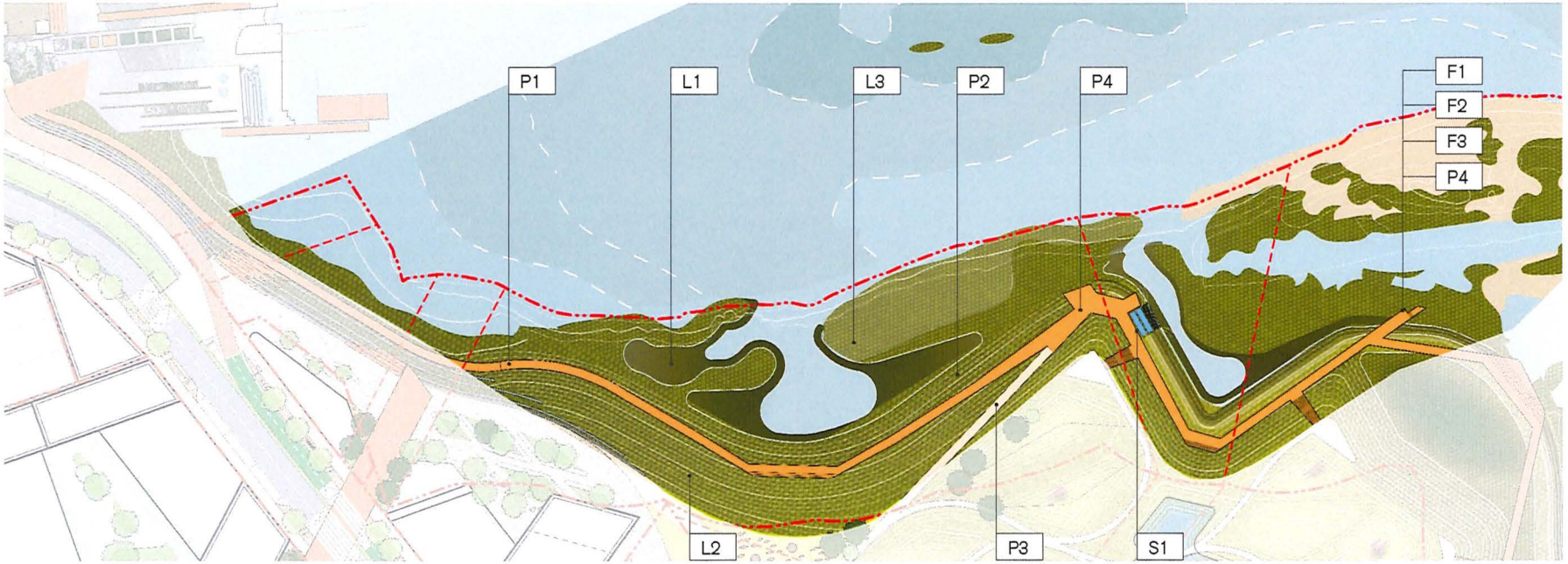


Figure 2-64: West Shoreline Enlargement Plan

1" = 120'-0"

0' 60' 120' 180'

LEGEND

Outfall (Shoreline Permits)

Property Lines

Parcel Break Lines

KEY PLAN

East Shoreline

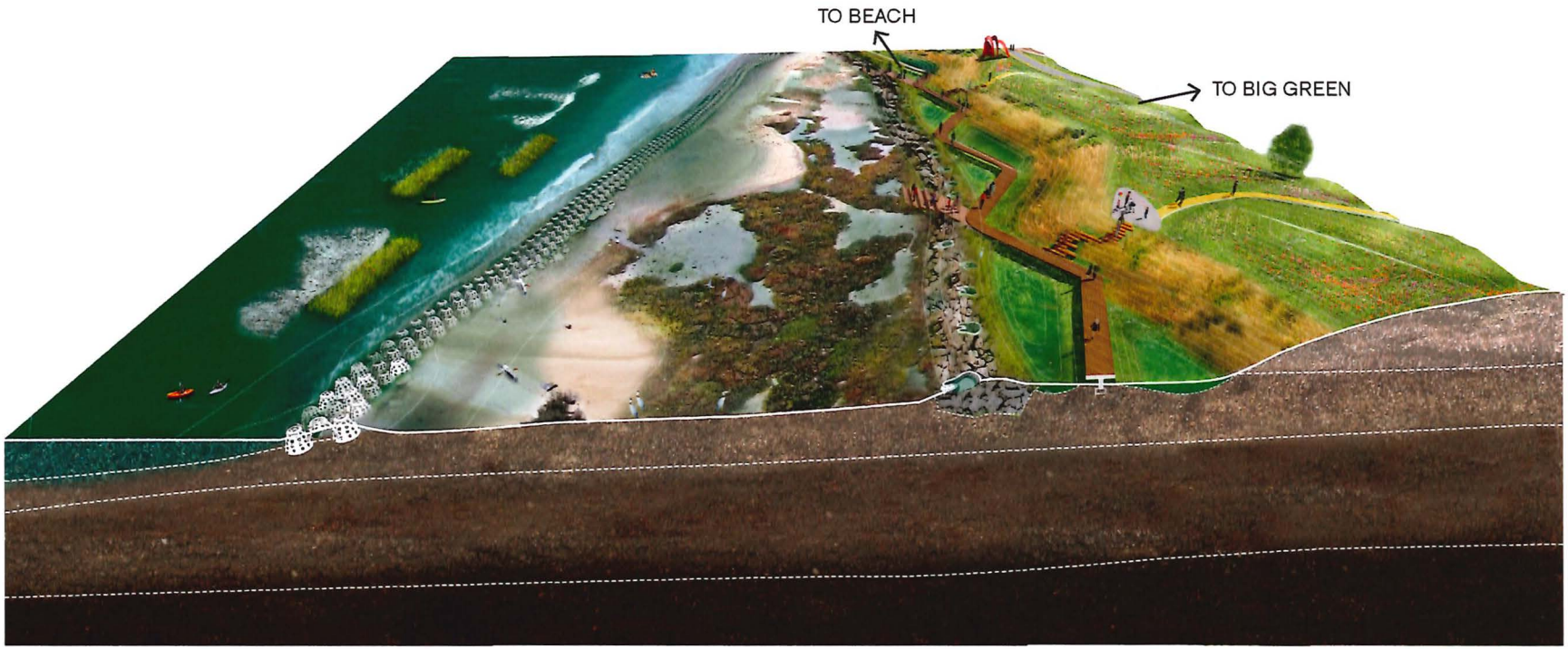


Figure 2-65: East Shoreline Axon, Looking East

The East Shoreline faces the San Francisco Bay. Continual wave energy periodically inundates the existing tidal marsh and requires erosion control measures to protect the shoreline. Design emphasis is focused on creating habitat, diverse ecologies, and access to the shoreline. A terrace in the bank is designed to provide space for habitat adaptation and also create a unique space between the tidal marsh and top of bank for a secluded encounter with the Bay. Seasonal wetlands are terraced into the bank as immediate mitigation and space for future adaptation of upland habitat migration. Living shoreline strategies provide enhanced habitat. Visitors can experience this dynamic landscape from top of bank, terraced boardwalk, and overlooks.

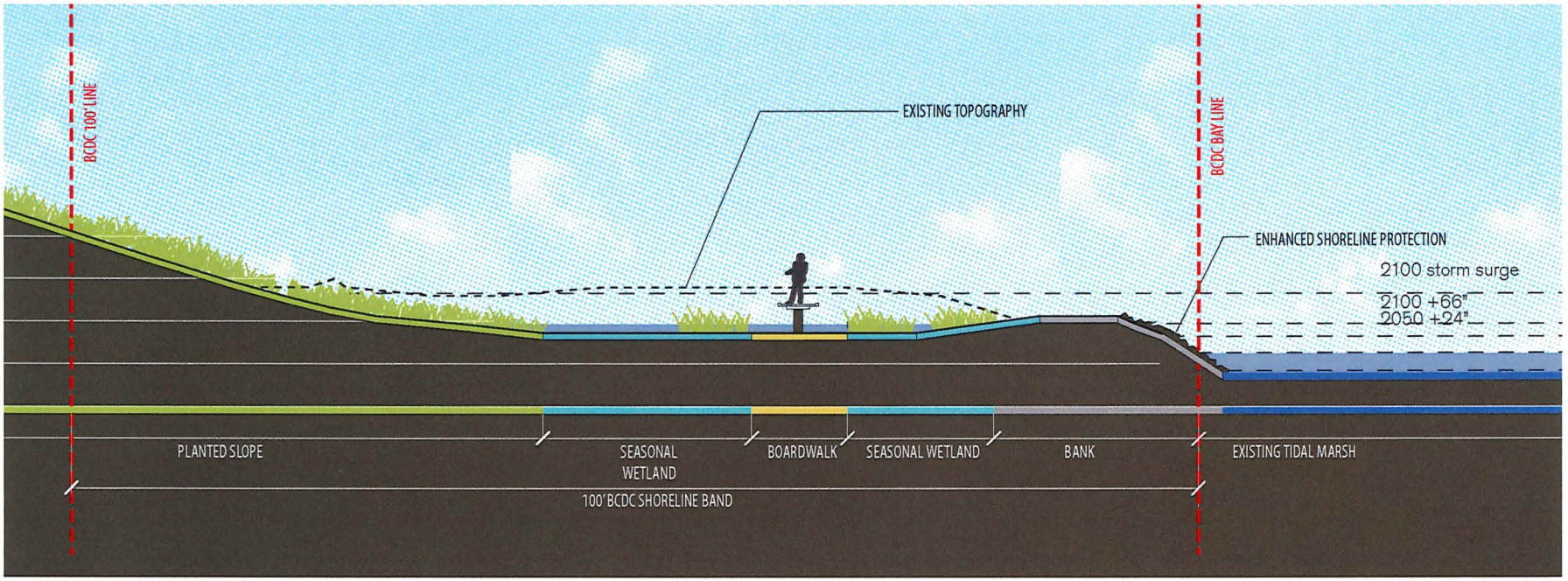


Figure 2-66: East Shoreline Section

1" = 20'-0"

0' 10' 20' 30'

KEY PLAN

Standards

2.2.11.1 Elements All elements shown inFigure 2-67, Figure 2-66 and Figure 2-67 are required. Dimensions may vary.

2.2.11.2 Specifications Specifications shall conform to Table 21. East Shoreline Specifications.

2.2.11.3 Terraced At least 0.31 acres of wetlands and a boardwalk shall be located in a terrace in the bank at an elevation midway between existing tidal marsh and top of new bank, no lower than elevation +10 NAVD88. (See Section 3.8)

2.2.11.4 Overlooks At least 3 overlooks shall be incorporated into the boardwalk as viewing platforms. Material shall be consistent with boardwalk. Extent and footings shall not be constructed beyond the MHW line. (See Shoreline Permits)

2.2.11.5 Boardwalk Boardwalk shall be elevated. Finished surface shall not exceed 30" drop from adjacent grade.

2.2.11.6 Percentage Softscape At least 90% of the east shoreline shall be softscape.

2.2.11.7 Lighting Lighting shall conform to lighting standards and guidelines per Section 2.3.5. See Figure 2-73.

2.2.11.8 Pavilions and Art Installations Locate at least 1 art installations in the East Shoreline that conveys and/or relates to the natural phenomenon of the shoreline. See Section 2.3.6 and Figure 2-74.

Guidelines

2.2.11.9 Tidal Marsh Existing tidal marsh and dunes shall be retained in situ.

2.2.11.10 Watershed Earthwork along the bank and Big Green shall be oriented to maximize the watershed that drains to the terraced wetlands.

Table 21. East Shoreline Specifications

(See Section 2.3 for Public Realm and Open Space Elements)

BANK SLOPES: NTE 2:1

SURFACING		(See 2.3.3)
P1	ELEVATED BOARDWALK	TYPE U
P2	OVERLOOKS	TYPE U
P3	STAIRS	TRAIL TYPE G
PLANTING		(See 2.4.2)
L1	TIDAL ZONE	TYPE I
L2	BANK	TYPE H
L3	TIDAL ZONE	TYPE I, J
L4	TIDAL ZONE	TYPE J
L5	TIDAL ZONE	TYPE J, K
L6	EEL GRASS	TYPE K
FURNISHING		(See 2.3.4)
F1	SEATING	TYPE B, D, G
F2	REFUSE RECEPTACLES	
F3	SIGNAGE	
STRUCTURES		(See 2.3.6)
S1	SCULPTURE / INSTALLATION	

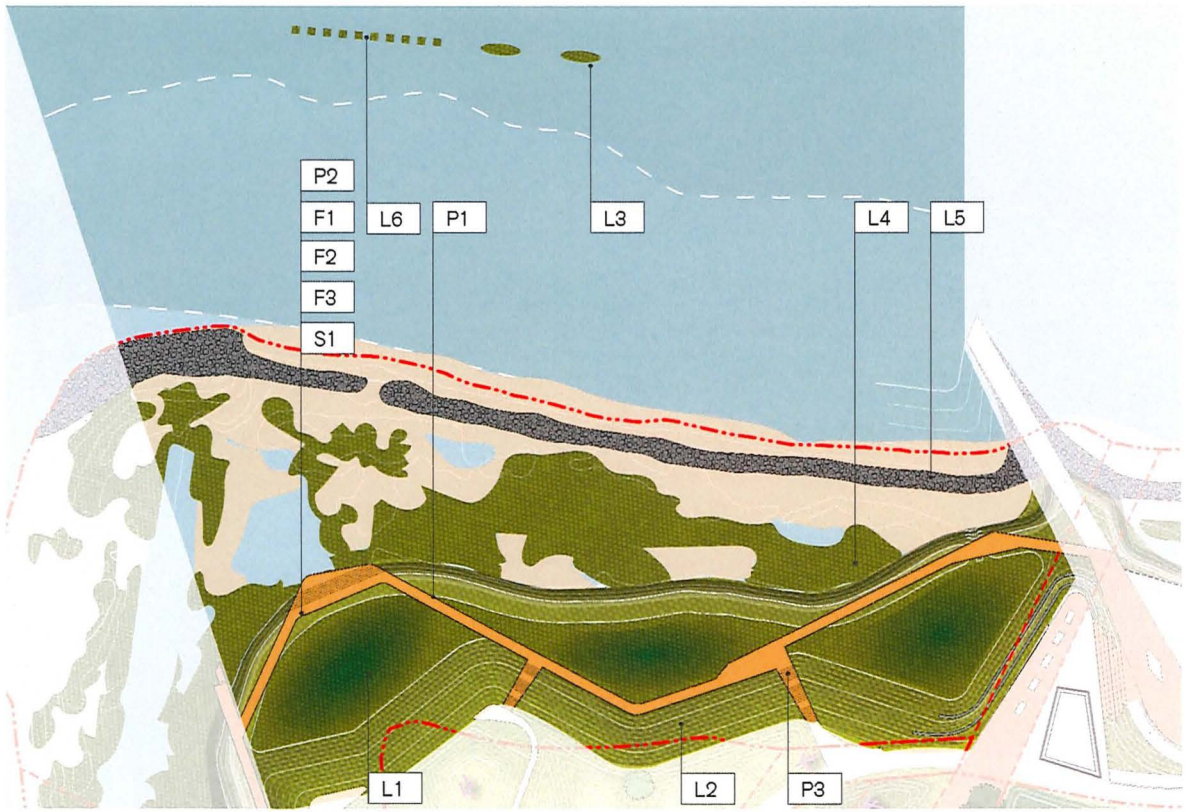


Figure 2-67: East Shoreline Enlargement Plan

1″ = 120′-0″

0′ 60′ 120′ 180′

2.2.12

Perched Beach, Boat Launch & Overlook

Located on the east shoreline, this signature place provides a unique experience with the Bay on three terraces. The lowest consists of existing tidal marsh that will be retained in place. Living shoreline strategies provide enhanced habitat. A boat launch provides water access for human powered boats. A perched sand area (the "Perched Beach") midway up the bank provides recreational amenities at the Bay's edge, and is designed to adapt into a tidally influenced beach with rising sea levels. At the top of bank, an upper terrace provides wind protection for the beach below, as well as concessions, rentals, and amenities to enjoy the panoramic views. Boat and bike storage is provided adjacent to the shared way public drop-off and parking. Stormwater cells treat storm water generated in the flats before outfalling the Bay.

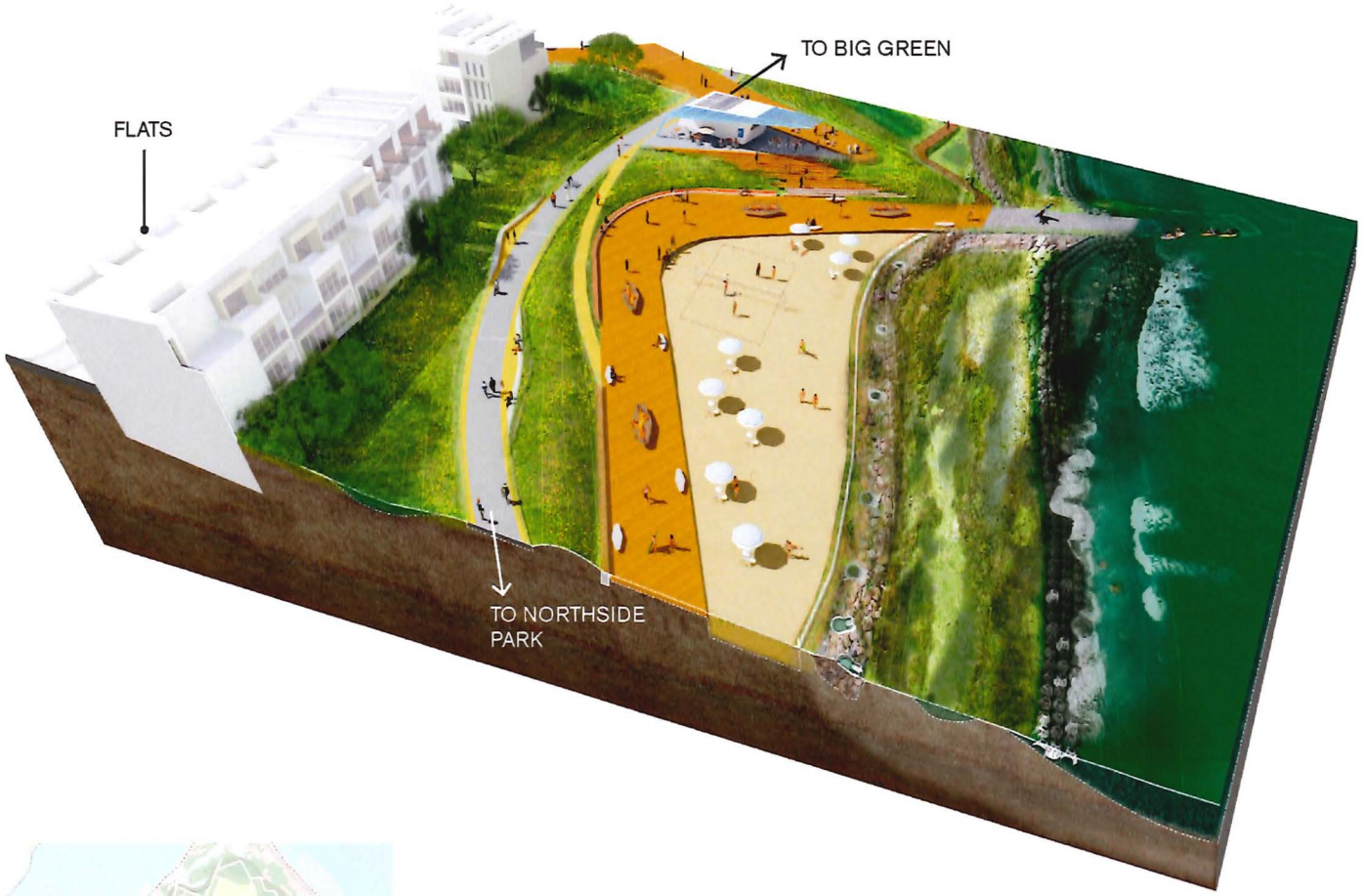


Figure 2-68: Beach, Boat Launch & Overlook Axon, Looking West

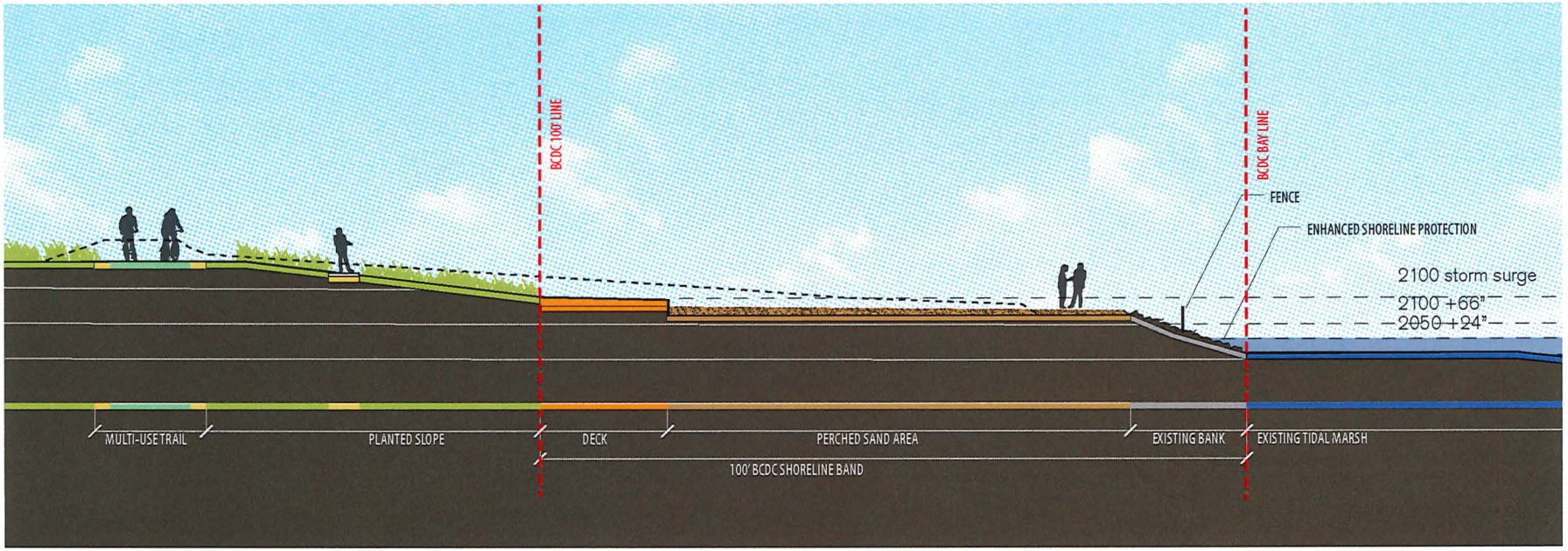


Figure 2-69: Perched Beach Section

1" = 20'-0"
0' 10' 20' 30'

Standards

2.2.12.1 Elements All elements shown in Figure 2-70 are required. Dimensions may vary.

2.2.12.2 Specifications Specifications shall conform to Table 22 Beach Specifications.

2.2.12.3 Screening Plants ranging in height from 36"–48" shall line the perimeter of the private yard.

2.2.12.4 Percentage Softscape The beach area shall be at least 60% softscape.

2.2.12.5 Restroom The concession stand shall include at least 2 unisex restroom stalls.

2.2.12.6 Fence For protection of the existing tidal marsh, locate a fence mid-slope between the sand area / kayak launch and tidal marsh. No more than 12" of the top of the fence shall extend above the finished grade of the sand area for an unobstructed Bay view.

2.2.12.7 Sand Area The perched sand area shall be located at an elevation no lower than +13 NAVD88.

Guidelines

2.2.12.8 Stormwater Locate at-grade stormwater treatment areas between the Bay Trail and Flats to treat stormwater generated in the flats to eliminate the need for any on-structure treatment areas. A stepped feature is recommended but not required. See Section 3.2.

2.2.12.9 Tidal Marsh Existing tidal marsh and dunes shall be retained in situ.

2.2.12.10 Trails A continuous, universally accessible shoreline trail shall connect the east shoreline with the lower beach deck.

2.2.12.11 Seawall A low seat wall at the landward edge of the deck shall be constructed for occasional inundation in sea level rise conditions. See Chapter 3.8.

2.2.12.12 Outfall A stormwater outfall shall be located in the bank and incorporated into the slope terraces. See Shoreline Permits and Infrastructure Plan for sizing and location.

Perched Beach

Table 22. Perched Beach, Boat Launch & Overlook Specifications

(See Section 2.3 for Public Realm and Open Space Elements)

Bank Slopes: NTE 2:1

SURFACING		(See 2.3.3)
P1	TRAIL IN SLOPE	TYPE M, I
P2	SAND AREA	TYPE V
P3	KAYAK LAUNCH	TYPE Q
P4	ELEVATED BOARDWALK	TYPE U
P5	DECK	TYPE T, U
P6	DECK	TYPE T, U
P7	MULTI-USE TRAIL	TYPE I, M
P8	MULTI-USE TRAIL	TYPE I, M
P9	PLAZA TERRACE	TYPE I, J
P10	TERRACES	TYPE I, T, U
PLANTING		(See 2.4.2)
L1	BANK	UNDERSTORY TYPE G
L2	STORMWATER TREATMENT	UNDERSTORY TYPE F
L3	TREE	OPEN SPACE
L4	TIDAL MARSH	TYPE J
L5	TIDAL ZONE	TYPE J, K
L6	EELGRASS	TYPE J, K
LIGHTING		(See 2.3.5)
LT1	PARK LIGHT	TYPE B, C
FURNISHING		(See 2.3.4)
F1	SEATING	TYPE D, E, F
F2	SEATING	TYPE A, C, E, F
F3	FENCING	TYPE A OR B
F4	BOAT RACK	
STRUCTURES		(See 2.3.6)
S1	BOAT STORAGE SHED	
S2	CONCESSION STAND	

Figure 2-70: Beach & Boat Launch Enlargement Plan

1″ = 80′-0″

0′ 40′ 80′ 120′

LEGEND

- Fire Pit
- Built-in Seating
- Outfall (Shoreline Permits)

KEY PLAN

Kayak Launch

Perched Beach & Deck

2.3 Public Realm and Open Space Elements

A comprehensive mix of elements and India Basin-specific materials are proposed to create public spaces for active public life that cherish and embrace the nuances of India Basin.

An active and vibrant public realm is reliant on places with a diverse and appropriate mix of elements and amenities that extend the use of a space to all times and conditions of the year. To achieve the guiding principals, a comprehensive palette of elements and India Basin-specific materials are proposed to create public spaces for active public life that cherish and embrace the nuances of the existing place. The following palettes, precedents, and design standards and guidelines included in this section should be closely adhered to for authenticity and a site that is true India Basin.

Included Elements:

- Surfacing
- Furnishing
- Bike Racks & Corrals
- News racks
- Parking Meters
- Boardwalks & Spans
- Bollards
- Fire Pits
- Drinking Fountains
- Refuse Receptacles
- Recreation Elements
- Fences & Gates
- Lighting
- Structures
- Streetscape Systems
- Stormwater Treatment
- Signage (see Chapter 7)
- Ecology (see Section 2.4)

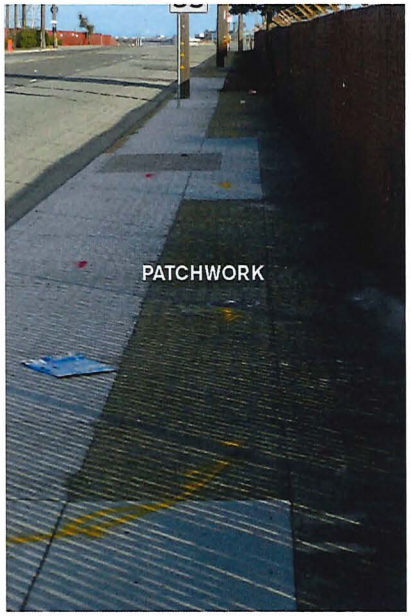
2.3.1

Existing Basin-Wide Elements

EXISTING	FUTURE
FOUND	INTENTIONAL
RANDOM	DURABLE AND LASTING
INDUSTRIAL	ARTFUL AND COMPOSED
VARIETY	VARIETY AND CHANGE

Shaped by forces of economy, industry, and improvisation, India Basin exists today as a site of variety, remnants, artifacts, patterns, and materials. Leftover pieces, oddities, and a patchwork of materials result in found objects. Constant interaction with the Bay creates dynamic experiences, views, and unique habitats. The resulting site character is feral, rugged, industrial, and wild. India Basin's industrial and storied past has been integral to envisioning the future of this place, and the proposed design for India Basin reflects the community's desires to preserve the wild and post-industrial character of the Basin and promote the legibility of such formative eras in the landscape.

The materials and colors throughout the Basin and the surrounding sites inspire an India Basin unique materials and color palettes that are durable, site specific, and in this condition, mundane. All elements will conform to the materials, textures, and colors of this overarching project palette to achieve a public realm that is authentic India Basin.


PATCHWORK


HISTORIC

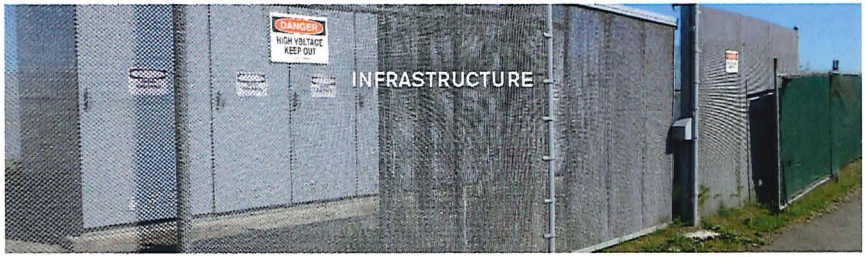

CONNECTIONS


ARTIFACTS


UTILITIES


COMMUNITY

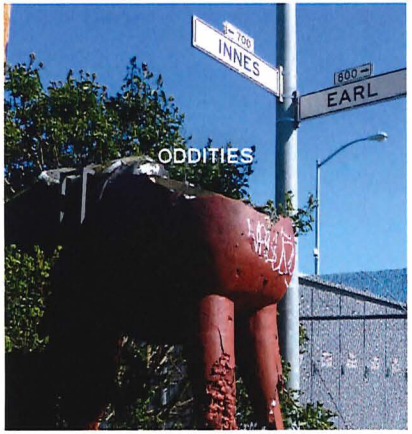

VIEWS


DANGER
HIGH VOLTAGE
KEEP OUT
INFRASTRUCTURE


WETLANDS


LEFTOVERS

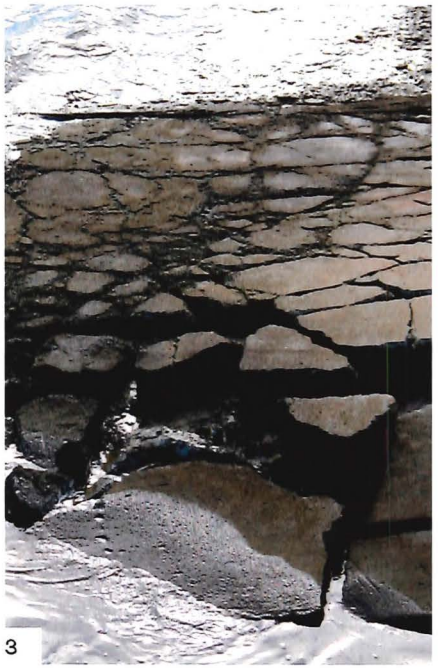

WILD


INNES
EARL
ODDITIES


INDUSTRIAL

1

2



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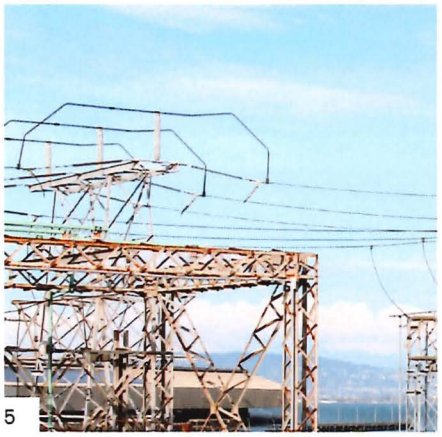

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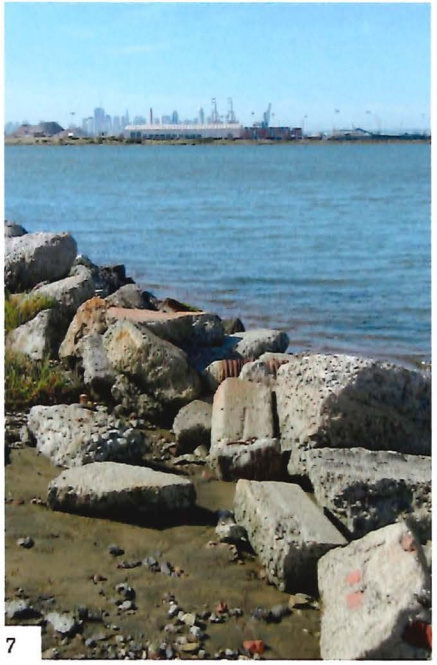
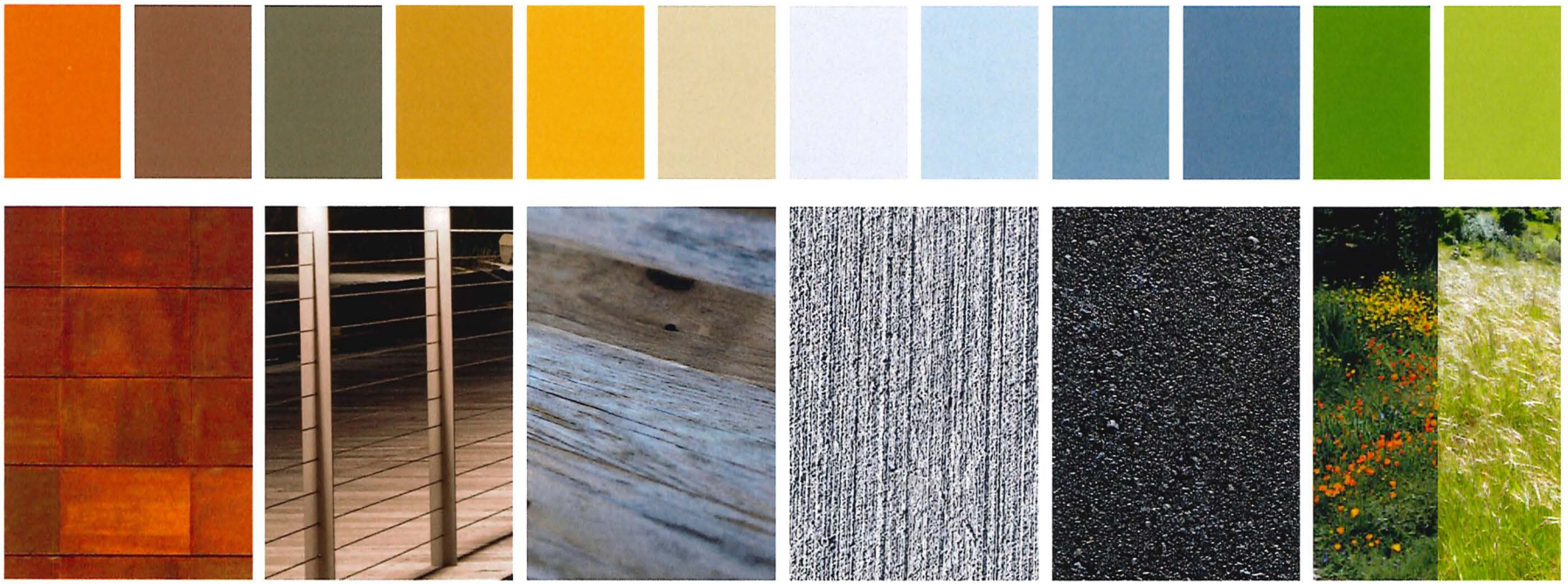


7

1. Wildflower Meadow
2. Concrete Rubble and Oystercatchers
3. Cracked Asphalt Paving
4. Existing Coastal Scrub and Upland Gasslands
5. Power Sub-station, Galvanized Metal
6. Steel
7. Rip Rap Breakwater

2.3.2

Color & Materials Palette



Corten Steel | Galvanized Metal | Hardwood | Raw Concrete | Asphalt | Native & Adaptive Vegetation

Wildness, variation in light, seasonal dynamics, and the affects of time on materials in India Basin inspire a palette of material and colors that will blend into the existing setting and will preserve the unique character, look, and feel of India Basin. The color palette shall be used as a basis to guide color selection of Public Realm and Open Space Elements. The materials and textures in this palette shall serve as guiding principles for selection of public realm and open space materials. The India Basin Trust should be engage to manage and coordinate all Public Realm and Open Space Elements.

Standards

2.3.2.1 Materials All materials and furnishings shall conform to the color and materials palette included here.

Guidelines

2.3.2. Durability All materials and furnishings shall be durable, resilient, suitable for use in an urban coastal environment, and require minimal maintenance.

2.3.3. Life-cycle Materials and furnishings shall be selected to conform with sustainability goals. See Section 3.4.

Surfacing

The India Basin public realm surfacing palette is composed of durable materials appropriate for an urban environment. Materials should require minimal maintenance. At the time of this publication, it is anticipated that permeable surfacing may only be applicable if an underdrain is provided. Permeable materials are provided herein pending future geotechnical investigations.

Standards

2.3.3.1 Vehicular Surfacing Surfacing in vehicular zones shall be designed with appropriate profiles to accomodate vehicular traffic. Concrete unit pavers in vehicular zones shall not exceed 4" x 12" module size.

Guidelines

2.3.3.2 Surfacing Provide visual and textural contrast between pedestrian and vehicular surface.

2.3.3.3 Joints Cast in place concrete joints shall be saw cut.

2.3.3.4 Edge Restraint Non rigid paving shall have an edging composed of either a stainless steel or aluminum edging or cast in place concrete.

Surfacing Types

Type A: Permeable Asphalt

Standard hot mix asphalt with reduced fines.

Type B: Permeable Concrete

Custom concrete mixture contains little or no sand which results in high void content.

Type C: Grass Pave

Pervious, planted load bearing surface composed flexible grid system. Provides high permeability suitable for vehicular loading

Type D: Turf Block

Modular paving system with large voids to allow for planting and passage of water.

Type E: Permeable Unit Pavers

Modular cast concrete paving system. Paving joints allow for passage of water.

Type F: Reinforced Planting

Modular cut stone pavers set into turf or crushed stone surrounds.

Type G: Asphalt

Smooth, durable road surface.

Type H: CIP Concrete

DPW standard CIP concrete..

Type I: Enhanced Cast In Place Concrete

Cast in place concrete with integral color. May include embossing or patterns.

Type J: Concrete Unit Pavers

Modular cast concrete system. In vehicular areas, size of modules shall accommodate vehicular loading. May be sand set on an aggregate base or mortar set on a concrete slab. Install per geotechnical recommendations.

Type K: Cobblestone

Modular cut stone paving.

Type L: Thermoplastic

Marking to delineate Class I bike lane.

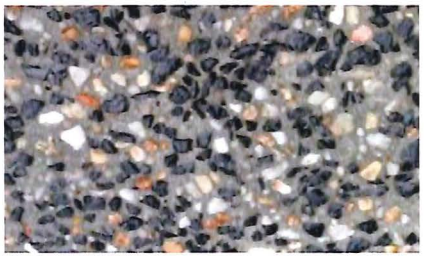
Type M: Decomposed Granite

Flexible non porous paving system.

Type N: Demarcation Multi-use Paving/Pavers

Flexible non-porous paving system

Surfacing Types



Type O: Exposed Aggregate

Select materials inlaid into concrete and/or asphalt for a distinct pattern. Finish surface shall be smooth and durable with no sharp protruding objects. Inlay materials may include shells, found objects, large aggregate.

Type P: Stenciled Concrete

Pressed use found object as stencil in CIP concrete or asphalt.

Type Q: Stabilized Crushed Stone

3/8" or 1/4" minus aggregate with integrated non-toxic stabilizer.

Type R: Truncated Domes

Detectable warning surface to delineate edge between pedestrian and vehicular zones. Refer to DPW standards for material, color and installation specifications.

Type S: Inlay Pressed Paving

Select materials inlaid into concrete and/or asphalt for a distinct pattern. Finish surface shall be smooth and durable with no sharp protruding objects. Inlay materials may include shells, found objects, large aggregate.

Type T: Wood Plank

Smooth, linear wooden planks. Suitable for vehicular loading.

Type U: Wood Boardwalk

Hardwood planking for porous surfacing and elevated trails. Allows for access through stormwater facilities without interrupting hydraulic flow.

Type V: Sand

Fine grain, clean sand for perched sand areas.

Furnishings

Seating with Back Support

Long, linear seating

High-quality detailing

Benches and Seating

Furnishings are an important component of the public realm. The furnishings at India Basin are sturdy and resilient while at the same time fulfilling aesthetic aspirations. To this end, furnishings at India Basin are constructed of simple, robust materials that can withstand the urban environment and coastal exposure. The use of industrial materials with integral finishes is encouraged. They should be inviting, comfortable and accessible.

To establish a unique and site-specific identity, a family of furnishings are envisioned for the site. Sizes, dimensions, layout, configuration, and type vary within the family. Materials should conform to the public realm palette, and be durable and appropriate for an urban waterfront setting.

Standards

2.3.4.1 Location & Type Furnishing type shall conform to Figure 2-71. See Section 2.2.

2.3.4.2 Backing Backed and backless varieties shall be provided, functional areas shall include at least one seating option with back and armrest.

Guidelines

2.3.4.3 Location Furnishings shall be located outside main path of travel within furnishing zones and allow for sufficient space for comfortable seating. Furnishings shall be located in areas where they are likely to be used. Furnishings shall be visible and located in a manner that allows them to be easily accessed.

2.3.4.4 Intervals Seating shall be located at regular intervals.

2.3.4.5 Experience Furnishings shall be located to define unique places and enhance unique experiences, such as views, sculpture, and activities.

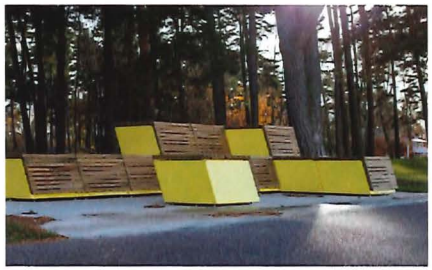
Type A: Small Scale Seating
Small scale seating that can be configured to provide seating for individuals and small groups. Can be used in small scale spaces.

Type B: Standard Bench
The standard India Basin streetscape bench will be medium scale and be robust and built to withstand urban conditions. Primary materials to include galvanized or stainless steel and durable hardwood.

Type C: Large Bench
Substantial bench element for large scale gathering and plaza spaces. Can accommodate large groups of people

Type D: CIP Concrete Seating
Built in seating elements constructed of cast in place concrete.

Furnishing family durable materials



Type E: Modular Furnishing System
Modular furnishing systems allows for various configurations which enables adaptability to varied public realm conditions.

Type F: Movable Furnishings
Standard India Basin furnishing that is respositionable by users. Should be easy to store, durable, and offer a variety of seating positions including straight back chair, reclined back chair, foot rest, and table.

Type G: Site-Specific / Custom Furnishings
To define a unique experience or view at gathering places and/or unique places, a site-specific, built-in furnishing and/or art piece should be commissioned to define the public realm.

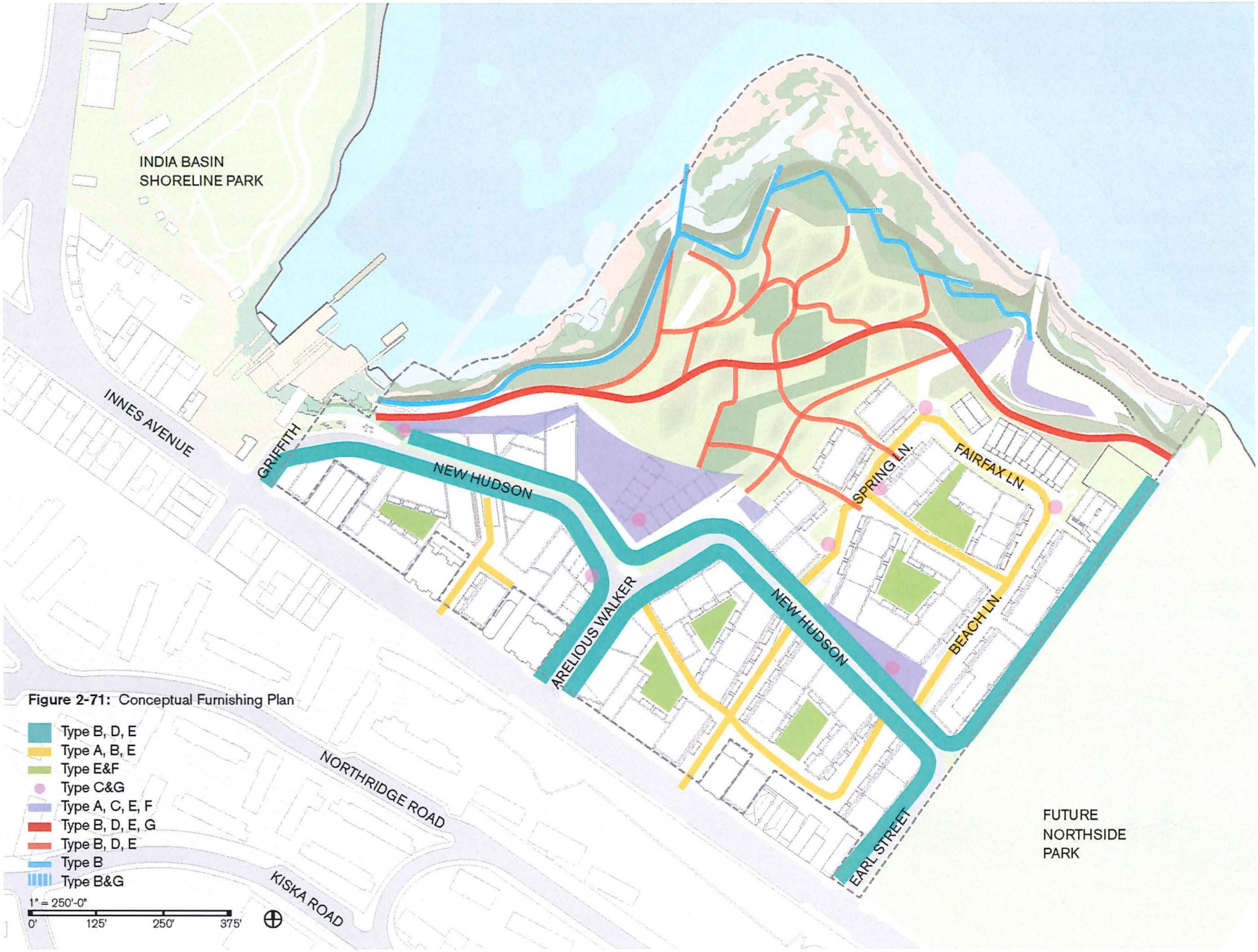


Figure 2-71: Conceptual Furnishing Plan

Bike Racks

Bike racks should be a simple, robust design. Bike racks constructed of galvanized or stainless steel without powder coating are easier to maintain and are encouraged. Refer to Ch. 1 for bike network and bike corral locations.

Standards

2.3.4.6 Location Bike racks shall be located no further than 50 feet from program areas such as building entries, small and large gathering areas and signature places. Bike racks shall be provided near major destinations and locations with high pedestrian traffic. Shall be located adjacent to Class-I Bikeway.

Durable, corten steel bike rack

2.3.4.7 Design Bike racks shall conatin at least 2 points of contact and multiple locking options for a range of bikes. All elements of a bike rack shall have a minimum 2 inch diameter or 2 inch square tube.

Guidelines

2.3.4.8 Material Bike racks shall be galvanized or stainless steel to facilitate ease of maintenance. Bike racks shall not be powder coated.

2.3.4.9 Visibility Bike racks shall be visible to cyclists and pedestrians.

2.3.4.10 Location Bike racks shall be located where ample space is available and pedestrian flow will not be compromised. Bike racks shall be located to avoid conflict with access to underground utilities.

Fire Pits

Fire pits are proposed for public areas to provide comfort that should increase the use of the public realm spaces to all times of day and year.

Guidelines

2.3.4.11 Construction Fire pits shall be constructed as integral, built-in elements to the place.

2.3.4.12 Design Provide built-in utility lines to supply fire pits.

Built-in fire pit for year round use

Recreation Elements

The Big Green is envisioned to create a healthy, fun, and engaging environment for people of all ages and abilities. A range of recreation and adventure elements are intended for the Big Green.

Standards

2.3.4.13 Design Shall be designed for all ages and abilities.

2.3.4.14 Fencing Shall be designed without the need for fencing and controlled access.

Guidelines

2.3.4.15 Activities Shall provide space for a range of experience and activities

2.3.4.16 Drinking Fountains Drinking fountains shall be provided at all active recreation areas.

2.3.4.17 Lighting Lighting shall be provided in active and adventure areas for evening use.

Boat Rack

The Beach provides access to a human-powered boat launch. A boat rack for temporary portage shall be located adjacent to the launch.

Standards

2.3.4.18 Location Locate 1 boat rack for temporary human-powered boat storage adjacent ot the boat launch. Shall accommodate at least 6 boats. Shall be integrated into the landscape and shall not be a standalone element.

Guidelines

2.3.4.19 Materials Shall be galvanized or stainless steel to facilitate ease of maintenance.

Boat rack for human powered boats

Spaces for outdoor fitness

Recreation amenities for all ages and abilities

Integrate play features into the landscape. Variety & adventure.

Boardwalks & Spans

Standards

2.3.4.20 Material Boardwalks shall be made of wood materials.

2.3.4.21 Guardrail Guardrail shall be at least 80% transparent.

2.3.4.22 Roll Guard Where drop from boardwalk exceeds 4", provide a 6" high roll guard for edge detection. Roll guard material shall be integral to boardwalk material.

Guidelines

2.3.4.23 Guardrails Trails and boardwalks shall be designed to use guardrails sparingly, and only at overlooks and bridges. (See Sections 2.2.7 - 2.2.12)

Elevated boardwalk

News racks

Standards

2.3.4.24 Location Only 1 six-unit pedmount news rack shall be placed behind the curb of any loading (white) zone.

2.3.4.25 Clear Width Where news racks are located in the furnishing zone or furnishing area, placement shall meet the minimum clear width with the news rack door open.

2.3.4.26 Location News racks shall be located next to red curbs that are not marked for a bus stop.

2.3.4.27 Bus Zone No news rack shall be placed within 6 feet of the curb for the length of any bus zone.

2.3.4.28 Location A maximum of five free-standing news racks may be placed in a continuous row. No more than two pedmount news racks shall be placed within 5 feet of each other except if the sidewalk is 25 feet wide or greater, in which case the maximum is 3 pedmounts.

Guidelines

2.3.4.29 Location News racks shall be placed in building setbacks, instead of the furnishings zone, with the property owner's approval.

2.3.4.30 Design News racks shall be consolidated into a single integral cabinet. The cabinet shall have a simple design that complements the design and color of other street furniture. News racks shall be permanently affixed to the sidewalk.

News racks combined as one feature

Parking Meters

Standards

2.3.4.31 EV Charging Provide EV charging at on-street parking meters for electrical vehicles and bikes. EV charging stations shall be provided for at least 50% of street level parking spaces within the public realm.

2.3.4.32 Location Multi-space meters shall be placed every 8 to 10 parking spaces, 150 to 200 feet apart.

2.3.4.33 Multi-Space Meters Signage shall clearly direct patrons to the multi-space parking meter. Signage directing patrons to multi-space meters shall be placed every 100 feet (4 to 5 parking spaces).

Guidelines

2.3.4.34 Striping & Numbering Some payment mechanisms require striping, and in some cases numbering, of individual spaces on the roadway while others allow cars to freely fill in the entire block. Where roadway striping and/or numbering is required it shall be minimal and not visually distracting or unnecessarily large.

Parking meter stations

Drinking Fountains & Bottle Filling Stations

Guidelines

2.3.4.35 Location Provide at least 1 drinking fountain and bottle filling station near recreation areas, signature spaces, and recreation areas.

2.3.4.36 Location Locate bottle filling stations adjacent to bicycle facilities, including the Class-I bikeway, and the primary multi-use trail.

Drinking Fountains
Water filling stations as bicycle infrastructure

Fences

Fences are included for minimal use to provide privacy, for habitat protection, and for relevant program. Fences should be used sparingly.

Standards

2.3.4.37 Elements Fence elements per Figure 2-72. Dimensions and location may vary.

2.3.4.38 Location See Section 2.2 for fence locations and use by area.

2.3.4.39 Gates and Screens Gates and screens shall meet or exceed City of San Francisco residential guidelines and standards for transparency and access requirements.

Guidelines

2.3.4.40 Use Fences shall be used sparingly and only where necessary for privacy and/or select programs. See Section 2.2 for locations and use by area.

2.3.4.41 Materials Select durable materials with integral finish appropriate for a marine environment.

Type A: Wire Mesh A
Lightweight, low-profile fence to create a clear yet transparent divide between spaces. 36-42" high. 50-72" high in select places. May receive occasional flooding.

Type B: Cable
Rustic wood and cable and/or rope materials designed to fit into the wild and feral landscape. 36-42" high. May receive occasional flooding.

Type C: Wood Slats
Lightweight, low-profile fence to create a clear and opaque divide between spaces. 36" high. Up to 50" in select places. Industrial aesthetic.

Type D: Gate
At entries to private courtyards, a gate is provided for secure resident entry. 48-96" high in select places.

Type E: Screen
Structure to provide screening from adjacent spaces. 48-96" high in select places.

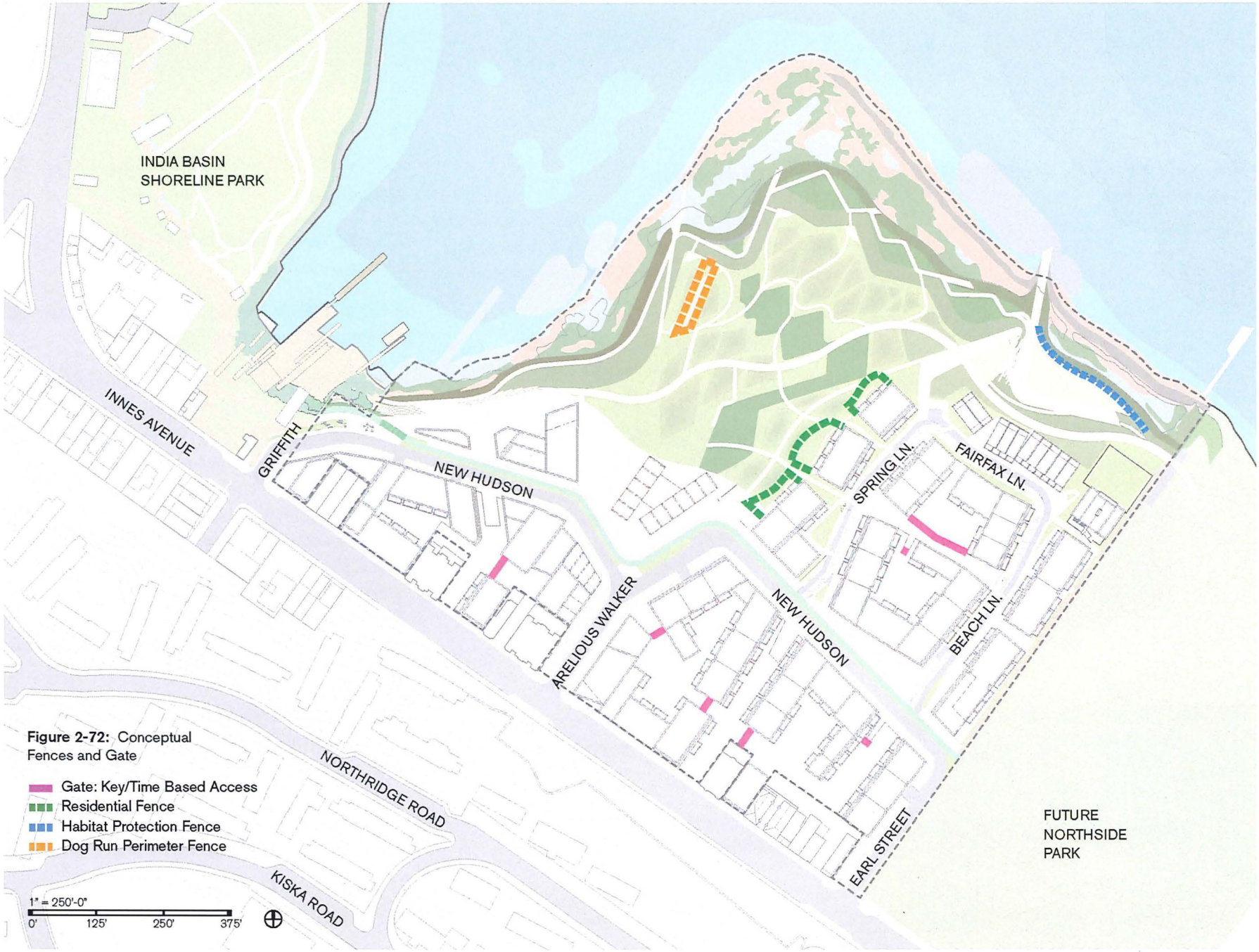


Figure 2-72: Conceptual Fences and Gate

Identity

Multi-Stream & Capacity

User Behavior

Refuse Receptacles

Refuse receptacles will be located throughout the public realm to support the City's ambitious zero waste goal (see Section 3.5) and are intended to serve 3 functions.

1. Identity - Custom designed refuse receptacles unique to India Basin palette for wayfinding and identity.
2. Multi-Stream and Capacity - Modular system to collect different refuse streams. High capacity in busiest areas to minimize collection frequency and overflow.
3. User Behavior - Furnishings for refuse collection for all users and refuse streams.

Standards

2.3.4.42 Capacity Refuse receptacles shall be high capacity (36 gallon or greater) to minimize collection frequency.

2.3.4.43 Construction Use below grade footing unless infeasible.

Guidelines

2.3.4.44 Maintenance Refuse receptacles shall be easily cleaned.

2.3.4.45 Design Refuse receptacles shall be side opening and covered for rain protection.

2.3.4.46 Location Refuse receptacles shall be located in the furnishing zone outside of pedestrian circulation path. Refuse receptacles shall be located where ample space is available and pedestrian flow will not be compromised. Refuse receptacles shall be placed in a location visible to pedestrians and adjacent to high activity zones. Refuse receptacles shall be located to avoid conflict with access to underground utilities. Refuse receptacles shall be located as near to corners as practicable but out of the corner clear zone.

2.3.4.47 Design Refuse receptacles shall contain a closed flap to limit wildlife exposure and access.

Lighting

Lighting

Lighting is designed for safe roadways, pedestrian and open spaces to foster an active urban environment and provide an important component of India Basin's identity. India basin lighting fixtures provide flexibility and allow for multiple configurations while providing the ability to integrate with security and data components. Fixture materials will build on India basin's industrial heritage. The India Basin lighting design balances lighting requirements with minimization of light pollution to protect habitats and dark skies.

Standards

2.3.5.1 Light Levels Pedestrian light levels per Figure 2-73.

2.3.5.2 Height Street Lighting Street lighting fixtures shall be mounted 20-30' high.

2.3.5.3 Height Pedestrian-scale Lighting Pedestrian-scale lighting fixtures shall be mounted 12-15' high, min 15' high in vehicular travel zones.

2.3.5.4 Sky Glow Sky glow shall be mitigated by selecting dark-sky friendly lighting fixtures that direct most of the light downward, by eliminating excessive light level, and turning lights off when not needed. Light fixtures shall achieve a semi-cutoff light (5% or less concentration of light above a 90 degree angle from the fixture than the light output of the fixture), with a target of full-cutoff (zero light loss above the fixture or shield level).

2.3.5.5 Location Light poles and fixtures in the Big Green shall not exceed 36" high. Locate light fixtures in the shoreline only at the beach upper and lower decks. Only footlighting with motion sensor activation or no lighting will be permitted on the shoreline boardwalk. Shall be located to minimize impact on habitat.

2.3.5.6 Efficiency Select lighting to maximize energy efficiency to meet or exceed the minimum energy performance requirements of Title 24 at the time of construction. See Section 3.3 for energy efficiency.

2.3.5.7 Maintenance & Cost Light fixtures shall be chosen to minimize maintenance and operating costs, and should have a minimum lifespan of 50,000 hours.

Guidelines

2.3.5.8 Location Street lighting poles shall be located on the sidewalk close to the curb on the curb side edge, or centered within, the furnishing zone.

2.3.5.9 Pedestrian Lighting Pedestrian lighting shall be added to street light poles where feasible unless spacing between street light poles does not support adequate pedestrian lighting, in which case pedestrian lighting may need to be located between street light poles.

2.3.5.10 Light Distribution Light fixtures shall be selected to efficiently direct light to the desired area of the roadway and sidewalk. Light fixtures should enable a variety of light distributions to adapt to different street and sidewalk configurations while maintaining the same fixture appearance. The distribution type shall be selected based on street and sidewalk width. Glare shall be mitigated by selecting the proper lamp wattage and mounting fixtures at the appropriate height.

2.3.5.11 Light Trespass Lighting fixtures shall not be located close to windows to avoid light trespass or glare and disturb the adjacent building's occupants. House-side shields may be used on fixtures to minimize light trespass into residences or other areas.

2.3.5.12 Lighting Lighting will meet current PUC standards and street lights will be drawn from the SFPUC street light catalogue or will be an approved alternate fixture.

Lighting Types

Type A: Street Light

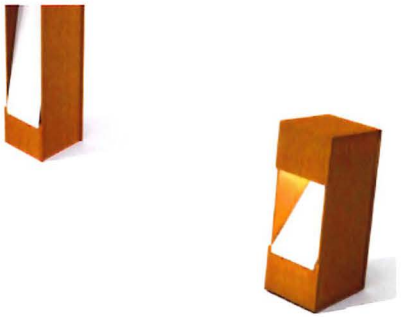
20–30' high. Industrial aesthetic. Simple durable materials with integral finish. Can incorporate pedestrian light (12–15' high). Configurability. Able to integrate security, data gathering, cameras.

Type B: Pedestrian Light

12–15' high (min 15' in vehicular travel zones). Industrial aesthetic. Simple durable materials with integral finish.

Type C: Bollard Light

36–42" high. Industrial aesthetic. Simple and durable materials with integral finish that is designed to fit into the surrounding landscape. Shall be placed outside of primary foot traffic. Limit light pollution to limit impact to habitat and preserve dark skies.



Type D: Foot Light

6–12" high. For low level foot traffic pathways in Big Green and residential areas. Industrial aesthetic. Simple, durable materials with integral finish.

Type E: Solar Powered Light

Consider light features that incorporate PV to generate on-site renewable energy to achieve the ambitious sustainability goals. See Section 3.3.

Type F: In-Grade / Inset Light

Flush in-grade or inset in furnishing/ structure. Industrial aesthetic. Simple and durable materials with integral finish that is designed to fit into the surrounding landscape. Shall not create a tripping hazard. Limit light pollution to limit impact to habitat and preserve dark skies.

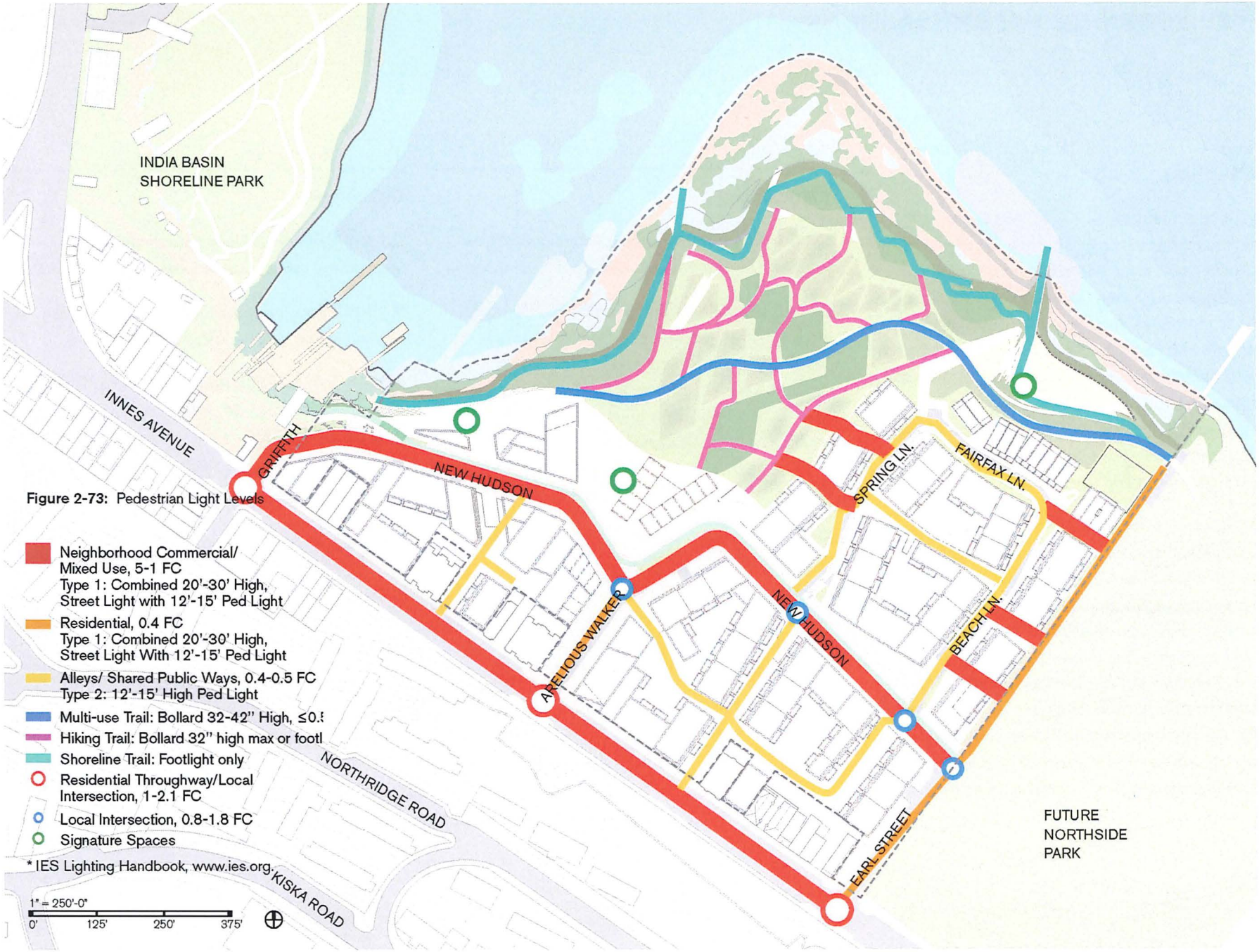


Figure 2-73: Pedestrian Light Levels

Pavilions and Art Installations

Structures

A range of structures - small and large - will be incorporated throughout the Big Green to provide amenities, services, and experiences for visitors. The form, dimension, and materiality of all structures should be designed as site-specific and purpose-specific constructions that reference the surrounding landscape, industrial heritage, waterfront setting, and environment. As a field house to augment the Heron's Head EcoCenter, a lightweight pavilion should be provided in the Big Green.

The unique waterfront setting and landscape lends itself to a robust sculpture park program. A collection of large, environmental scale pieces that are site-specific, interactive, and/ or interpretive are envisioned to be dispersed throughout the Big Green as a local amenity and destination. Consider contracting site-specific pieces by local artists, and contracting local artists / artisans for fabrication of pavilions and structures. Installations should be interactive and engaging to the greatest extent possible.

Standards

2.3.6.1 Elements Structures shall conform to Figure 2-74. Dimensions and locations may vary.

2.3.6.2 Size Maximum allowable footprint per structure in Big Green and Beach Terrace is 1,500 square feet, excluding public market pavilion. Only sculptures, art installations, and shade canopies built-into overlooks or the bank shall be permitted below top of bank.

2.3.6.3 Restooms Locate a minimum of 2 accessible public restroom facilities. Locations per Figure 2-74. The 2 facilities cannot be combined in the same location. Restrooms shall be incorporated into other structures where feasible. Number of restroom stalls may vary by facility. See Standard 2.2.3.4 Public Market Restrooms for required number of stalls in Public Market.

Guidelines

2.3.6.4 Collection Both permanent and temporary / rotating sculptures shall be permitted.

2.3.6.5 Experience Locate pieces to create views, unique experiences and encounters.

2.3.6.6 Varied Designers & Artist Pavilions and structures shall be designed by different designers / artists.

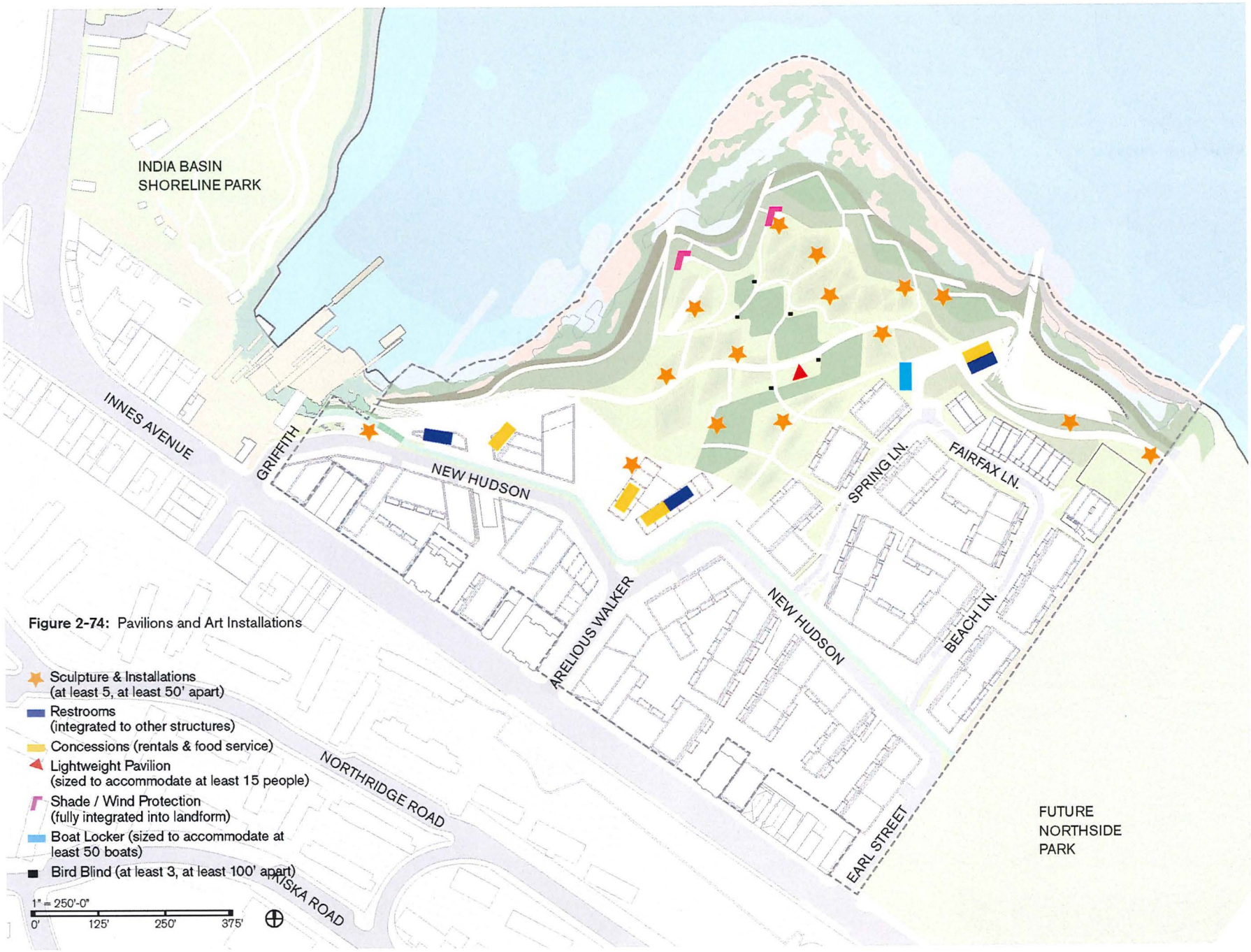


Figure 2-74: Pavilions and Art Installations

Structure Types

Concessions Stand

Pavilions providing small-scale retail, food service, rentals, and souvenirs. Canopy should allow for indoor and outdoor seating.

Restrooms

Should be located in multiple locations as indicated on Figure 2-74. Should be incorporated into other structures where feasible.

Boat Storage Shed

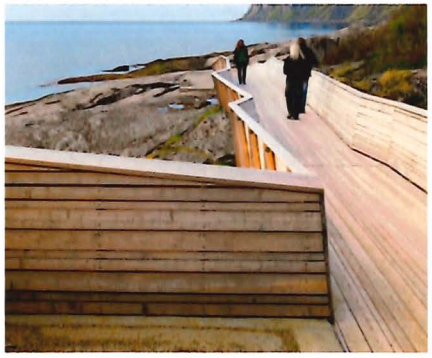
Single structure capable of securely storing up to 50 human-powered boats. Pavilion design should reflect scale of boats and surrounding landscape.

Shade / Wind Protection / Bird Blind

Located in the Big Green and Shoreline areas to provide increased comfort to promote year-round use, and to provide habitat protection in viewing areas.

Field Center

Lightweight pavilion for on-site environmental education, stewardship, and engagement activities. Should support outdoor classroom activities.



Framed Views & Overlooks

The site is surrounded by views of downtown, east bay, the bay bridge, and existing parks and wetlands. Site-specific installations should be incorporated to frame views and orient users to unique site elements.

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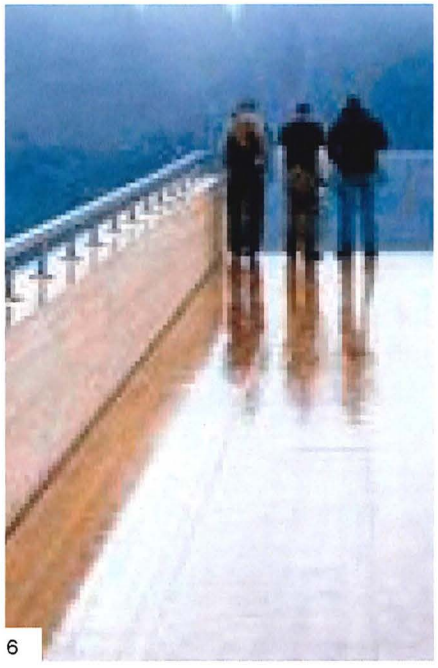


6

Sculpture & Installation Examples

1. Mark Di Suvero, Governors Island.
2. Whatami.
3. "Bamboo Circle", Los Angeles.
4. Olympic Sculpture Park.
5. Clothespin Sculpture, Chaudfontaine Park, Belgium.
6. The Platform, Saunders Architecture, Fjord.

Streetscape Systems

Streetscape Systems

This section includes standards and guidelines for constructed elements of the streetscape.

These include elements that address the interface between pedestrian zones and the vehicular zone, including curb ramps, raised crossings and curb extensions. Ensuring that these elements are well coordinated and meet accessibility standards is essential to the development of well functioning, complete streets.

In addition, this section addresses the configuration of tree planting within the streetscape. Trees are an essential component of the streetscape, bringing habitat, climatic comfort and aesthetic benefits. Tree pits should be constructed in a manner that will foster healthy trees with long lifespans in order to maximize these benefits.

Curb Ramps

Curb ramps provide access between the sidewalk and roadway, particularly for people with mobility issues. Because of this, curb ramps are integral to safe and accessible streets.

Standards

2.3.7.1 DPW Standards Curb ramps shall be constructed per City of San Francisco DPW standard plans for curb ramps and DPW Director's Order #175,387 (Guidelines for Constructing or Reconstructing Curb Ramps).

Guidelines

2.3.7.2 Location Curb ramps shall be installed parallel to the direct path of travel across an intersection.

2.3.7.3 Clearance Curb ramps and crosswalks shall remain clear of obstacles. No new poles, utilities or other impediments shall be placed in the curb ramp return areas.

2.3.7.4 Planting Area Planting areas shall be permitted at corners on either side of curb ramps.

Curb Extensions

Curb extensions or bulb-outs enlarge the sidewalk to incorporate the parking lane, which increases the pedestrian zone at strategic locations, This can be implemented at corners and mid block. Curb extensions enhance safety by increasing pedestrian visibility while providing additional space for pedestrians and streetscape amenities.

Standards

2.3.7.5 DPW Standards Curb extensions shall conform to San Francisco DPW Standard Plan for Curb Bulb.

2.3.7.6 Bulb-Outs Bulb-outs shall continue at least to the inside edge of the crosswalk and preferably extend at least 5 feet beyond an extension of the corner property line.

Guidelines

2.3.7.7 Curb Radius Curb extensions shall not include curb radius that interferes with emergency vehicle access.

2.3.7.8 Design Curb extensions shall be designed to maximize pedestrian space and minimize crossing distance.

2.3.7.9 Location Curb extensions shall not encroach on bicycle or vehicle travel lanes.

2.3.7.10 Paving Curb extensions shall use special paving to distinguish them from pedestrian throughway travel zone.

2.3.7.11 Buffers Curb extensions shall include bollards, planting or other buffers between pedestrians and vehicles. These elements shall not impede drivers' view of pedestrians.

2.3.7.12 Furnishing Furnishings shall be located on curb extensions where space allows.

Raised Crosswalks

Raised crosswalks provide a pedestrian crossing of the roadway at the level of the sidewalk. In addition to providing a level surface for pedestrian access across the roadway, this provides traffic calming benefits as vehicles are forced to reduce speeds before passing over the crosswalk.

Standards

2.3.7.13 Dimensions Raised crosswalks shall be flush with the sidewalk height and at least the width of the crossing or intersection.

2.3.7.14 Length Raised crosswalk shall be long enough in the direction of travel to allow both front and rear wheels of a passenger vehicle to be on top of the table at the same time—typically 10 feet. Specific lengths should be determined by using the ITE/FHWA document Traffic Calming: State of the Practice. Vertical transition shall be designed to not cause excessive jarring or discomfort to vehicle passengers.

Guidelines

2.3.7.15 Detectable Warning Detectable warnings shall be provided where pedestrians will cross into the vehicle area.

2.3.7.16 Paving Raised crosswalk shall be marked by use of a distinct paving treatment or match the paving of the pedestrian throughway.

2.3.7.17 Grading & Drainage Grading and drainage design should take into account impact of raised crosswalks on drainage and provide adequate stormwater collection infrastructure.

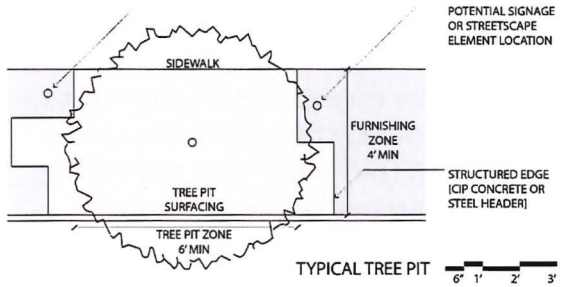
Accessible crossings meet code

Truncated domes at edge of vehicular zone

Bulb-outs create safe crossings

Tree Pits

The India Basin tree pit configuration allows for variation in tree pit layouts that will contribute to the unique streetscape character while creating space for placement of signage and other streetscape elements. Figure 2-75 shows examples of design variation.



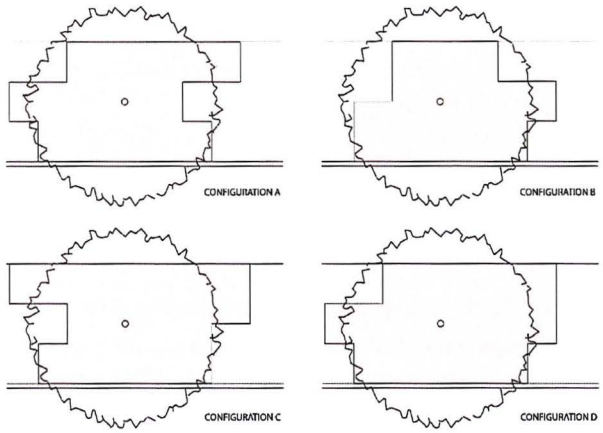


Figure 2-75: Tree Pit Configuration

Standards

2.3.7.18 Configuration Streets shall employ multiple tree pit configurations and no two adjacent tree pits shall utilize the same configuration.

2.3.7.19 Subsurface The standard tree pit subsurface detail shall only be used where structural cell system is not possible.

2.3.7.20 Tree Pit Street trees shall have a minimum of 1000 cubic feet of soil per tree to maximize habitat potential. This may include use of a structural cell system to maximize soil volume.

Guidelines

2.3.7.21 Irrigation Include irrigation and tree sub-drainage where required.

Type A:
Decomposed Granite

Type B:
Planting

Type C:
Stone

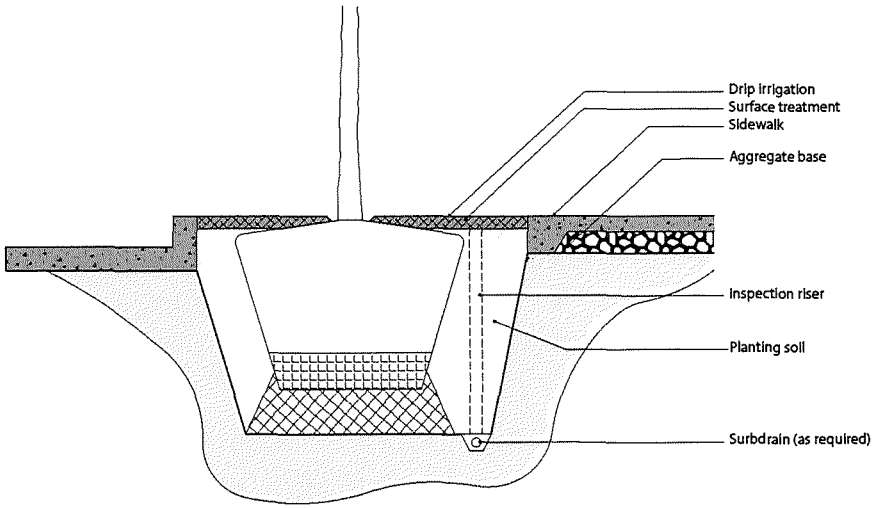


Figure 2-76: Standard Tree Pit

Type A: Standard

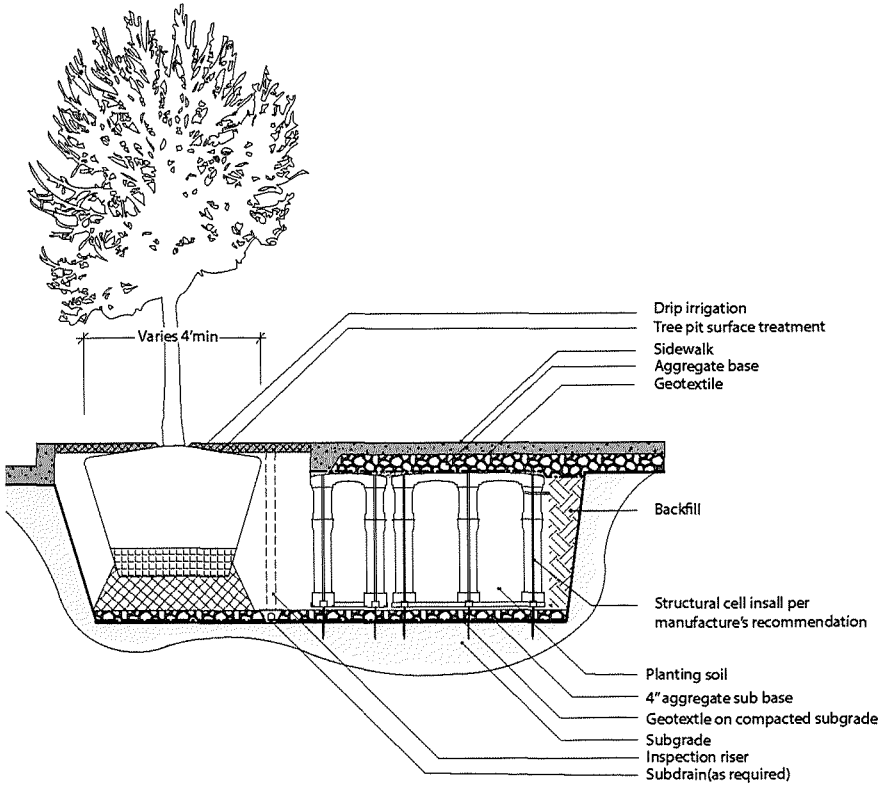


Figure 2-77: Modular Structural Cell

Type B: Structural Cell

Modular structural cell support system allows for paving above planting soil, increasing volume of planting soil that can be provided for trees, which is extremely beneficial for long term tree health and viability.

Stormwater Management Tools

Bioretention Areas

Bioretention areas are included throughout the Flats to treat all stormwater generated in the Flats and limit and/or eliminate the need for on-podium stormwater treatment. Within Bioretention areas, rooted water tolerant plantings are encouraged to improve filtration and nutrient control benefits. See Section 2.2.8 for stormwater treatment in Big Green and Section 3.2 for Stormwater Management Framework.

Standards

2.3.8.1 Dimensions Minimum planter width shall be 2 to 3 feet to accommodate under drain systems, allow for planting room and allow for constructability.

2.3.8.2 Drainage Bioretention facilities shall be designed to drain stormwater within 48 hours after a rain event to avoid concerns about mosquitos. Ponding depths shall be limited to 6 inches or less. An overflow riser with a domed grate shall be included for larger storm events.

2.3.8.3 Underdrain System An underdrain system shall be included where subsoil infiltration rates are less than .5 inches/hour.

Guidelines

2.3.8.4 Roadway Runoff Roadway runoff shall be directed into bioretention features by installing flush ribbon curbs on the street edge or small evenly spaced curb cuts.

2.3.8.5 Location Planters shall be structurally separate from the adjacent sidewalk to allow for future maintenance without disturbing the sidewalk. An expansion joint satisfies this requirement.

2.3.8.6 Soil Horizons Bioretention areas shall contain a surface layer of organic mulch, underdrain by an amended soil plant bed supporting appropriate grasses, shrubs and trees.

Swales

Standards

2.3.8.7 Width The preferred width for swales is 5 to 11 feet but swales may be as narrow as 3 feet.

2.3.8.8 Check Dams For swale slopes over 6% check dams shall be provided. Check dams shall be constructed of durable, non-toxic materials such as rock, brick, concrete, or soil by integrating them into the grading of the swale.

2.3.8.9 Filtration Deep rooted grasses and forbs shall be planted to improve filtration benefits of swales. Side slopes shall be minimized and shall not exceed 3:1.

Guidelines

2.3.8.10 Side Slopes Swales shall have shallow side slopes and depth to avoid safety risks and prevent erosion. This may include use of a vertical edge.

2.3.8.11 Flush Ribbon Curbs Flush ribbon curbs on the street edge of a swale or evenly spaced small curb cuts into the existing raised curb shall be used to allow roadway runoff to enter swales.

2.3.8.12 Topsoil Amended topsoil shall be installed to increase filtration and to improve infiltration and retention of runoff. In locations where there is low soil permability, an underdrain should be considered.

2.3.8.13 Plant Species Vegetation shall be selected to improve infiltration functions, protect the swale from rain and wind erosion and enhance overall aesthetics. Selected species shall not require irrigation after establishment.

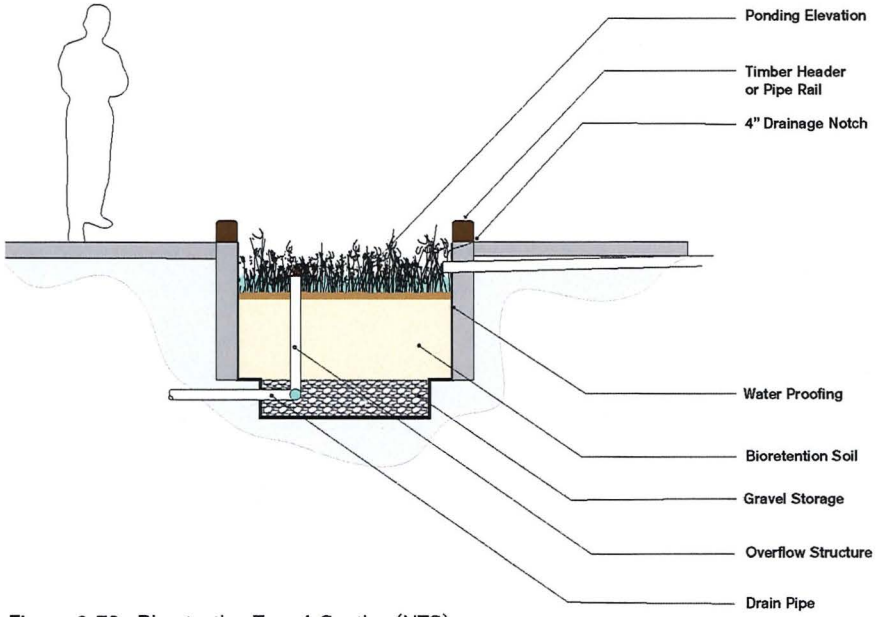


Figure 2-78: Bioretention Type A Section (NTS)

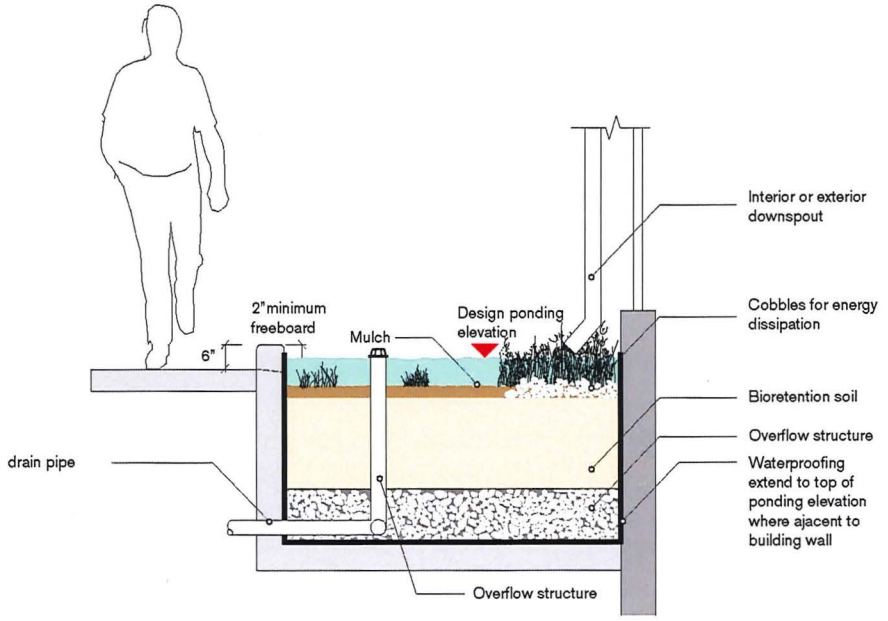


Figure 2-80: Roof Bioretention Section (NTS)

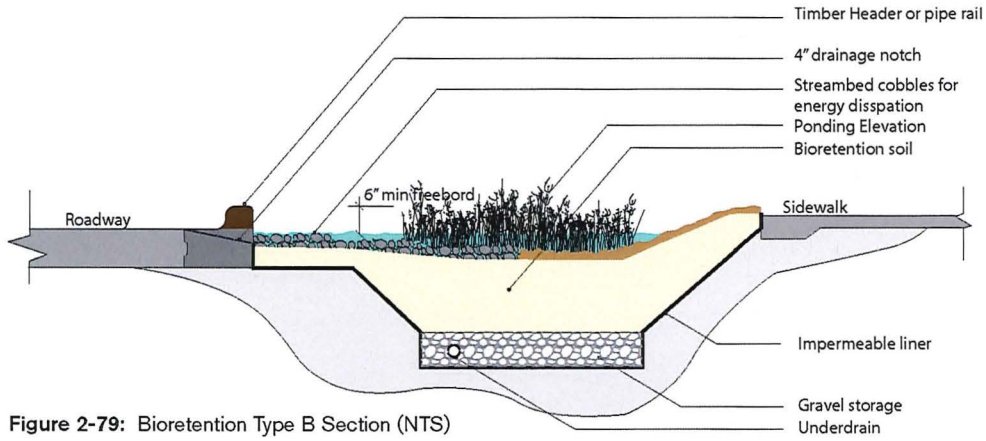


Figure 2-79: Bioretention Type B Section (NTS)

2.4 Ecology & Biodiversity

2.4.1

Ecology and Biodiversity Objectives

India Basin is composed of 7 adjacent waterfront sites proposed to become a continuous waterfront open space. The physical continuity of India Basin is its greatest asset for promoting diverse ecologies. While each site varies in its topography, materials, and relationship to the Bay, all can contribute to a larger ambition for diverse ecologies at a Basin-wide scale.

This site represents a unique ecological opportunity within the basin. The existing site assets, including a vegetated tidal marsh shoreline and extensive upland make it well positioned to support a broad array of flora and fauna. Planting is organized into 3 categories: urban, upland, and tidal. Species should be selected to optimize habitat potential and create habitat niches across the site.

The intent is to keep the plant palette and character of the site wild and feral. This section outlines the recommended plant palette, standards and guidelines for creating the most optimal horticultural conditions to create a wild, ephemeral, adaptive, and sustainable landscape with diverse ecologies. The ambitions serve as a replicable model for habitat creation across all sites in India Basin.

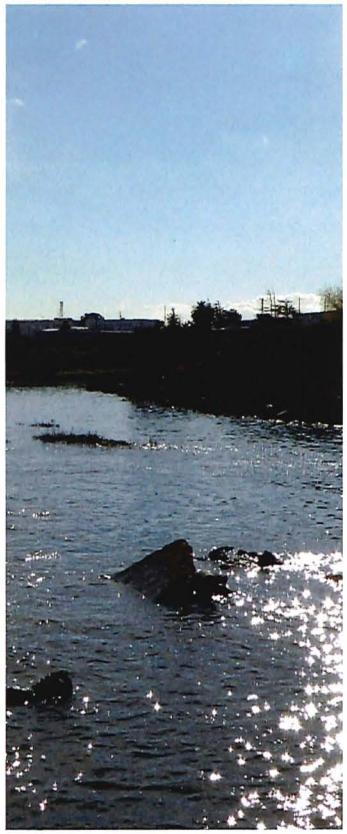
Figure 2-81: Habitat Continuity Throughout India Basin

Seasonal

Feral

Native

Adaptive



Dynamic

Planting

Tree Planting

Trees provide a wide variety of benefits, including providing urban habitat, microclimatic moderation (wind break and shading), reduction of urban heat island, and reduction of stormwater runoff. Trees will be an integral part of India Basin and will be incorporated into streetscapes and open spaces.

Growing conditions are vital to the health and longevity of trees and the India Basin standards and guidelines will ensure that best practices will be employed for the viability of trees over time. Tree plantings must take into account local conditions. At India Basin, microclimatic factors such as wind and coastal exposure will be important considerations in species selection and tree layout.

Figure 2-82: Conceptual Tree Plan

These spacing requirements should be considered general targets that may be adjusted to local street conditions such as setbacks from corners, utilities, driveways, bus stops and building entries. To the greatest extent feasible, trees shall be aligned to minimize interference with building entries, driveways, and utilities. Where site constraints prevent maintaining an exact spacing, it is favorable to place a tree slightly off the desired rhythm than to leave a gap in the planting pattern.

Standards

2.4.2.1 Trunk Size Caliper (trunk diameter) of trees to be planted shall be a minimum of 2" to 8' of height. Exceptions shall be considered for desired species that may not attain this caliper size, such as a 24-inch box specimen.

2.4.2.2 Box size Minimum tree size at installation shall be a 24 inch box. 15 gallon container may be allowed for volunteer efforts and property owner initiated replacement.

2.4.2.3 Path of travel Tree branches that extend into the path of travel shall maintain 80 inches of vertical clearance.

2.4.2.4 Distance from paving Trees shall be planted at minimum 5' from pavements, walls, and structures, except in furnishing zones.

2.4.2.5 Conflicts Where a conflict arises with tree placement and other streetscape elements such as curb cuts and vaults, a gap of no more than 1 tree shall be permitted.

2.4.2.6 Soil volume and depth A minimum of 1000 cubic feet of soil per tree and adequate planting depth shall be provided for all trees to ensure the soil's ability to store moisture and allow room for roots to grow. A minimum of 700 cubic feet of soil allowable where trees are located in same trench to maximize habitat potential.

Guidelines

2.4.2.7 Spacing Where regular spacing of trees is not possible due to curb cuts, subgrade utilities or other obstacles, regular spacing shall be maintained for as much of the street as possible. A gap of no more than one tree shall be permitted. Where loading zones or garage entries occur, a street tree shall be planted on both sides of loading zone / garage entry to bookend loading zone / garage entry and minimize gaps in street tree placement. Street tree spacing shall be determined by the expected mature size of the tree. Generally, trees should be planted with the following spacing:

- ***Small Trees*** (<20 feet crown diameter at maturity) shall be planted 15 to 20 feet on center.
- ***Medium Sized Trees*** (20-35 feet crown diameter of maturity) shall be planted 20 to 30 feet on center.
- ***Large Trees*** (>35 feet crown diameter at maturity) shall be planted 30 to 35 feet on center.

2.4.2.8 Water quality Irrigation water quality shall not preclude selection of species to meet habitat requirements. Consider improving water quality to expand potential plant palette range.

2.4.2.9 Tree staking Trees at India Basin shall be staked or guyed with rigid adjustable system such as Greensleeves Tree Staking System at installation.

Tree Type Palette

Entry Street

Character: Large and broad canopy, at least 30' at maturity, single or alternating species similar in form, should not produce fruit/litter.

- ZELKOVA SERRATA*
- PLATANUS X ACERIFOLIA 'LIBERTY'
- JACARANDA
- LYONOTHAMNUS FLORIBUNDUS

Lane / Laneway

Character: Small to medium size, seasonal interest in leaves or flowers, mix of multiple species, including those suitable for bioretention areas.

- ARBUTUS 'MARINA' *
- PRUNUS ILICIFOLIA SSP. LYONII
- ALNUS RUBRA

Commercial Corridor

Character: Large and broad canopy, seasonal interest in leaves or flowers, should not produce fruit/litter.

- GLEDITSIA TRIACANTHOS 'SUNBURST'*
- LAGUNARIA PATERSONII

* EXAMPLES OF RECOMMENDED SPECIES

On Structure

Character: Compact canopy, fine leaf texture to allow light through, small to medium size, specimen tree.

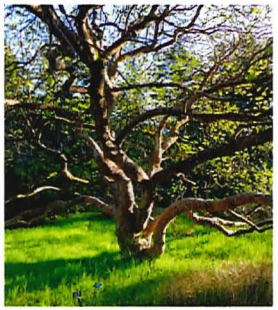
- OLEA EUROPAEA 'SWAN HILL' *
- ACER PALMATUM 'SANGO-KAKU'
- LAGERSTROEMIA 'TUSCARORA'/ 'NATCHEZ'
- ULMUS PARVIFOLIA 'DRAKE'



Open Space

Character: Variable, seasonal interest in leaves or flowers, mix of multiple species.

- AESCULUS CALIFORNICA*
- GEIJERA PARVIFOLIA
- MELALEUCA QUINQUENERVIA
- PITTOSPORUM CRASSIFOLIUM
- LYONOTHAMNUS FLORIBUNDUS ASPLENIFOLIUS

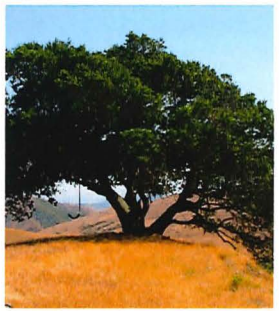


Oak

Character: Dense canopy capable of acting as windbreak, should provide nesting habitat and food for wildlife.

- QUERCUS AGRIFOLIA*
- QUERCUS LOBATA
- QUERCUS VIRGINIANA

* EXAMPLES OF RECOMMENDED SPECIES



Understory Planting

Understory planting is an important aesthetic and ecological component of the India Basin public realm. Understory planting provides a range of benefits, including reduction of impervious surface, habitat and ecological function, buffering pedestrian areas from vehicular zones, and helping define the character and identify of India Basin.

The urban zone is the uppermost, developed portion of the site. The habitat types here range from woodland to coast scrub. Where building refuse streams generate greywater and excess heat, priority shall be given to reuse on-site to create habitat See Chapter 6 for green roofs and walls.

The upland zone makes up the core of India Basin's open space, including all of the Big Green. The site's wide, continuous upland zone is a unique asset within the basin and has the potential to enhance and expand existing habitat to support a healthy and highly diverse ecosystem.

As the site's main active recreation zone, upland plantings play a significant role in balancing its function as a beautiful and inviting experience for human visitors while providing refuge to wildlife. The habitat type ranges from woodland to coastal beach/dune.

Figure 2-83: Conceptual Understory Planting Plan

The tidal zone is lowest portion of the site and includes all of the shoreline that sits at or below the high tide line. The habitat types in this zone range from high marsh to deep subtidal.

A complete marsh should be created that includes all zones, including a high marsh and transitional wetland-upland habitat along the upland fringe.

Understory Planting

Standards

2.4.2.10 Distance from paving Place the center of all shrubs away from edges 1/2 diameter of the typical spacing plus 12 inches. Place the center of all perennials 1/2 diameter of the typical spacing plus 6 inches to prevent overhang of plants on trail.

2.4.2.11 Diversity Green roofs shall use initial plant palettes that include at least 20 species to maximize biodiversity and plant survival. See Section 5.2 Building Heights, Section 6.4 Roof and there is a small mention about greenroofs in Chapter 3 in 3.2.2 Stormwater Management and 3.2.3 Habitat Support.

2.4.2.12 Soil Volume For trees in paving, provide at least 1000 cubic feet of soil per tree. Where multiple trees share a trench, provide at least 700 cubic feet of soil per tree.

2.4.2.13 2.6.15. Oak Spacing Locate oak trees no more that 150 feet apart. This distance is based on the optimal distance that key bird species will fly across open grassland between cover vegetation.

Guidelines

2.4.2.14 Water Quality Irrigation water quality shall not preclude selection of species to meet habitat requirements. Consider improving water quality to expand potential plant palette range.

2.4.2.15 Grading Earthwork shall be graded to promote the evolution of a complex tidal drainage system, particularly to support invertebrates, fish and birds.

2.4.2.16 High tide refuge Provide areas for high tide refugia with abundant cover.

2.4.2.17 Marsh plain isolation Isolate the marsh plain from predators such as red fox, raccoons, and domestic and feral cats. Separation may include grade change, planted buffer, fencing. (See Section 2.3.4 for fence standards.)

2.4.2.18 Human disturbance Limit public access in sensitive areas with a grade change, planted buffer, plant barrier, or low fence.

2.4.2.19 Habitat function criteria Green roofs and walls shall be located to maximize habitat value and support the biodiversity of the site, and away from highly glazed facades for bird safety. For green wall and roof applications, select species with a habitat function, that may include: A. Pollinator species, B. Species for nesting, C. Species as food source. These may include plants producing melliferous flowers, fruits or seeds appreciated by birds and insects.

2.4.2.20 Resilience criteria For streetscape application, select durable, low maintenance species that are compatibile with street trees, provide seasonal interest, and habitat value.

2.4.2.21 Better Streets Streetscape planting in the urban zone shall meet or exceed the City of San Francisco Better Streets guidelines.

2.4.2.22 PV panels Green roofs shall be located on roofs housing PV panels where feasible, in order to provide areas of shade and wind protection to plants and wildlife.

2.4.2.23 Noxious Species Do not plant species known to cause human irritation or harm adjacent to paths or trails.

2.4.2.24 Specialty Habitats Specialty habitat patches shall be located where horticultural conditions allow, prioritizing those that are endangered and/or endemic to the San Francisco Bay Bioregion.

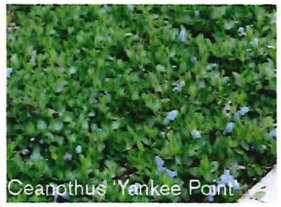
Understory Palette

Type A
Green roof/wall

Character: Varies. These should have a sturdy base of compact plants that can thrive in exposed conditions with low soil volume, but should take advantage of meadow- or forest-like qualities where climatic conditions permit.


Sedum rupestre 'Angelina'


Layia platyglossa


Ceanothus 'Yankee Point'

Type B
Native/ adaptive garden

Character: May be somewhat finer and more manicured than other spaces. Plants may be in more formal arrangements and may be more showy than elsewhere on the site. Seasonal interest and or specimen plants are appropriate here.


Polystichum munitum


Heuchera maxima


Salvia spathacea

Type C
Perennial/ annual mix

Character: The most variable from annual grasses and flowers to various herbaceous perennials and succulents. This spans from streetscape to informal shared yards. This category has the flexibility to respond to adjacent architecture while advancing habitat goals.


Lupinus chamissonis


Sesleria autumnalis


Erigeron glaucus 'Bountiful'

Type D
Annual grassland

Character: Emphasis on wildflowers here, mixed into a base of annual grasses. Plantings should have an informal meadow arrangement.


Leymus triticoides


Juncus balticus


Distichlis spicata

Type E
Native lawn

Character: The only lawn space area, this should be soft and comfortable for picnics and recreation, but resilient to foot traffic and events.


Elymus glaucus


Stipa pulchra

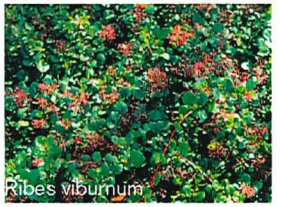

Danthonia californica

Type F
Coastal prairie

Character: Dominated by California perennial grasses with other herbaceous and woody perennials present. The scale of these plants is important to properly emphasize the earthworks of the Big Green.


Salvia mellifera


Eschscholzia californica


Ribes viburnum

Type G
Freshwater marsh/ stormwater

Character: Dominated by California perennial grasses with other herbaceous and woody perennials present. The scale of these plants is important to properly emphasize the earthworks of the Big Green.


Bolboschoenus maritimus


Juncus xiphioides


Carex pansa

Type H
Coastal scrub

Character: Emphasis on wildflowers here, mixed into a base of annual grasses. Plantings should have an informal meadow arrangement.


Limonium californicum


Artemisia californica


Eriogonum fasciculatum

Type I
Seasonal wetland/ low marsh

Character: Dominated by California perennial grasses with other herbaceous and woody perennials present. The scale of these plants is important to properly emphasize the earthworks of the Big Green.


Schoenoplectus acutus


Triglochin maritima


Frankenia salina

Type J
Tidal Zone/ Coastal Dune

Character: Emphasis on native tidal marsh and dune species compatible with frequent and persistent inundation.


Suaeda californica


Sarcocornia pacifica


Spartina foliosa

Type K
Subtidal

Character: Emphasis on mudflat and rocky intertidal species that thrive in inundated, turbulent waters.


Zostera marina


Fucus gardneri

Speciality Landscapes & Niche Habitats

India Basin is a prime location to establish rare and/or experimental habitats. The size of the available open space lends the site flexibility to go beyond meeting ecological imperatives while still ensuring that enough space is allotted to preserve and enhance existing habitat. Its location on the Bay positions it to receive strong wave energy and rising tides, which in turn call for innovative solutions.

In addition, the dual identity of India basin as a soft-edged urban waterfront makes it well-suited to support and test hybrid ecologies. Some of these would reintroduce niche habitats endemic to the region that have all but disappeared in the wake of urbanization and invasive species.

Living shoreline strategies have the potential to create and improve habitat in the tidal zone while providing erosion control and wave attenuation at the water's edge. These projects may include tidal marsh and brackish marsh, floating wetlands, eel grass beds, oyster reefs, engineered dunes, and artificial reef/tide pools.

See Section 3.8 for living shoreline habitats.

Reference www.SFPlantfinder.org as a tool to select habitat supportive and climate appropriate plant species.

Bird Baths

Bird baths are recommended as a niche habitat for local and rare species. Water from building system can be reused for habitat creation and treatment.

Standards

2.4.2.25 Site Location See Section 2.2 for locations.

2.4.2.26 Height Choose designs that have the bird bath basins at or near ground level, up to a maximum of 3 feet above the ground.

Guidelines

2.4.2.27 Form Bird bath basins shall have shallow, gently sloped saucer-shaped form, not vertical sidewalls.

2.4.2.28 Water Source Bird baths shall use non-potable water sources, such as building condensate water, and/or recycled water.

2.4.2.29 Substrate Sand, stones, or some other object/form that emerges above the water level shall be used in order to allow birds to drink without getting wet.

2.4.2.30 Material Non-concrete materials shall be used if possible, for ease of cleaning.

2.4.2.31 Proximity to Vegetation Bird baths shall be located in the shade, near trees or shrubs if possible to provide nearby vegetation for refuge.

Bird Baths

Bird baths are an excellent way to provide urban habitat, add character to the public realm, and reuse building refuse streams. Bird baths should be located on stairs, shared back yard, town triangle, and at the field center where feasible.

Floating Wetlands

Floating wetlands are proposed off-shore to create habitat, provide wave energy attenuation, and shoreline protection. As a pilot project, floating wetlands in this location will test their viability.

Serpentine Grasslands

It is anticipated that serpentinite soils will be found in existing site soils. Excavated serpentinite should be retained onsite to create a niche habitat for serpentine grassland species. Some of the species are San Francisco endemic species and they are endangered.

Eelgrass Beds

Eelgrass beds serve as nurseries for fish and crustaceans, provide food for waterbirds, and protect shorelines against erosion.

Constructed Tide Pools

Precast concrete tide pools fill up with water during high tide should be used to provide habitat to shallow water marine organisms while also acting as breakwater structures.

Seasonal Wetlands

Seasonal wetlands are ephemeral niche habitats that occur during the wet winter months. They promote micro-organisms and flora species on an annual cycle.

03

District Sustainability and Resilience

Chapter 03: District Sustainability and Resilience

Chapter 3 summarizes India Basin's aspirations and approach to district-wide sustainability and resilience. The project has established goals for water reuse, electricity distribution and storage and on-site renewable production. The following chapter also outlines India Basin's approach to conserving material resources, creating healthy environments and adapting to changing coastal conditions.

Chapters 3 and 6 have 'Goals' in addition to 'Standards' and 'Guidelines'. Goals are aspects of the project which the developer will diligently pursue and seek to finance, but they are ultimately non-binding. Many of the sustainability goals outlined in Chapter 3 and 6 are dependent upon the integration of rapidly evolving technologies which will likely change over the course of the project's relatively long timeline.

District-wide sustainability goals are closely linked to building-scale performance goals. Please refer directly to Chapter 6, Section 6.5 for building-scale performance requirements and goals.

The project goals reflect the project's pursuit of a high level of environmental performance while allowing flexibility to adapt to changing conditions and evolving technologies.

3.1 Water Conservation and Reuse

3.1.1

Net Positive Water Objectives

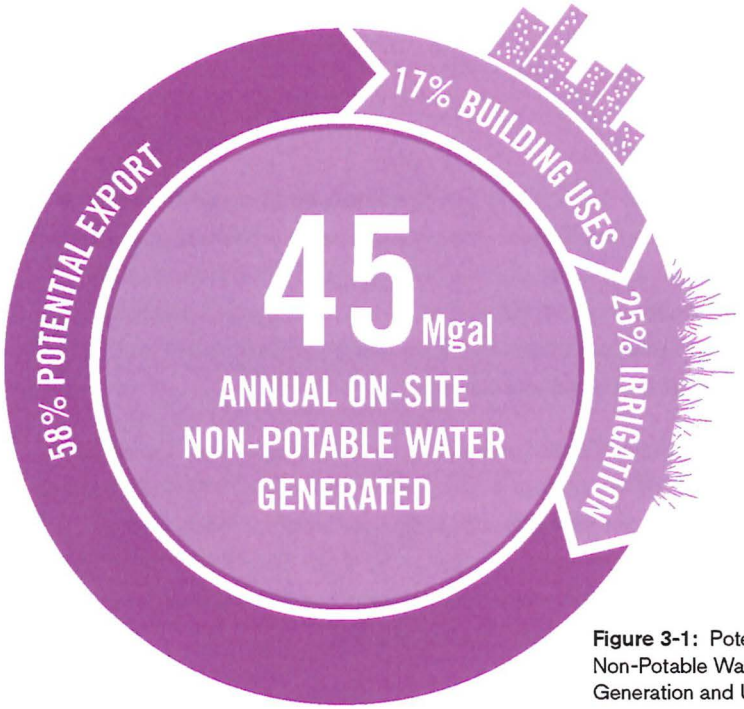


Figure 3-1: Potential Non-Potable Water Generation and Uses

India Basin aspires to manage stormwater and wastewater resources on-site and produce non-potable water for the project's use. India Basin's district-wide water balance was studied to quantify the overall water consumption and potential for on-site production of recycled water at full project build-out. The analysis suggests that India Basin can produce more non-potable water than will be used on-site for toilet flushing, irrigation and cooling demands. As such, the project has an opportunity to be a net exporter of recycled water at a district scale, and can potentially offset potable water consumption in neighboring developments.

3.1.2

Water Conservation and Reuse Framework

The project intent is to reduce reliance on municipally provided freshwater to the maximum extent feasible by promoting conservation and leveraging on-site water resources. This holistic water management approach will allow the project to be more resilient to regional and global climate change and support the preservation of freshwater in times of drought.

Water Conservation

Conservation measures and efficient water systems are the first priority at India Basin. All buildings will be required to utilize state-of-the art and water efficient fixtures, as further described in Chapter 6 (High Performance Buildings). Planting palettes described in Chapter 2 will be climate appropriate and efficient irrigation systems will be utilized throughout the development.

On-site Water Supply

The City of San Francisco recently implemented a Non-Potable Water Ordinance that requires developments of this size to collect and treat available supplies from on-site rainwater, greywater and foundation drainage sources to meet the site's non-potable demands (toilet flushing and irrigation). Alternatively, projects can utilize treated wastewater or stormwater to meet non-potable water demands. This progressive policy sets a high bar for water systems.

The project intends to go above and beyond the requirements of the Ordinance by promoting district-scale wastewater treatment and reuse to enhance on-site water supplies and reduce reliance on municipal infrastructure. Localizing wastewater treatment and water supply indirectly benefits the site's carbon and energy balance as well.

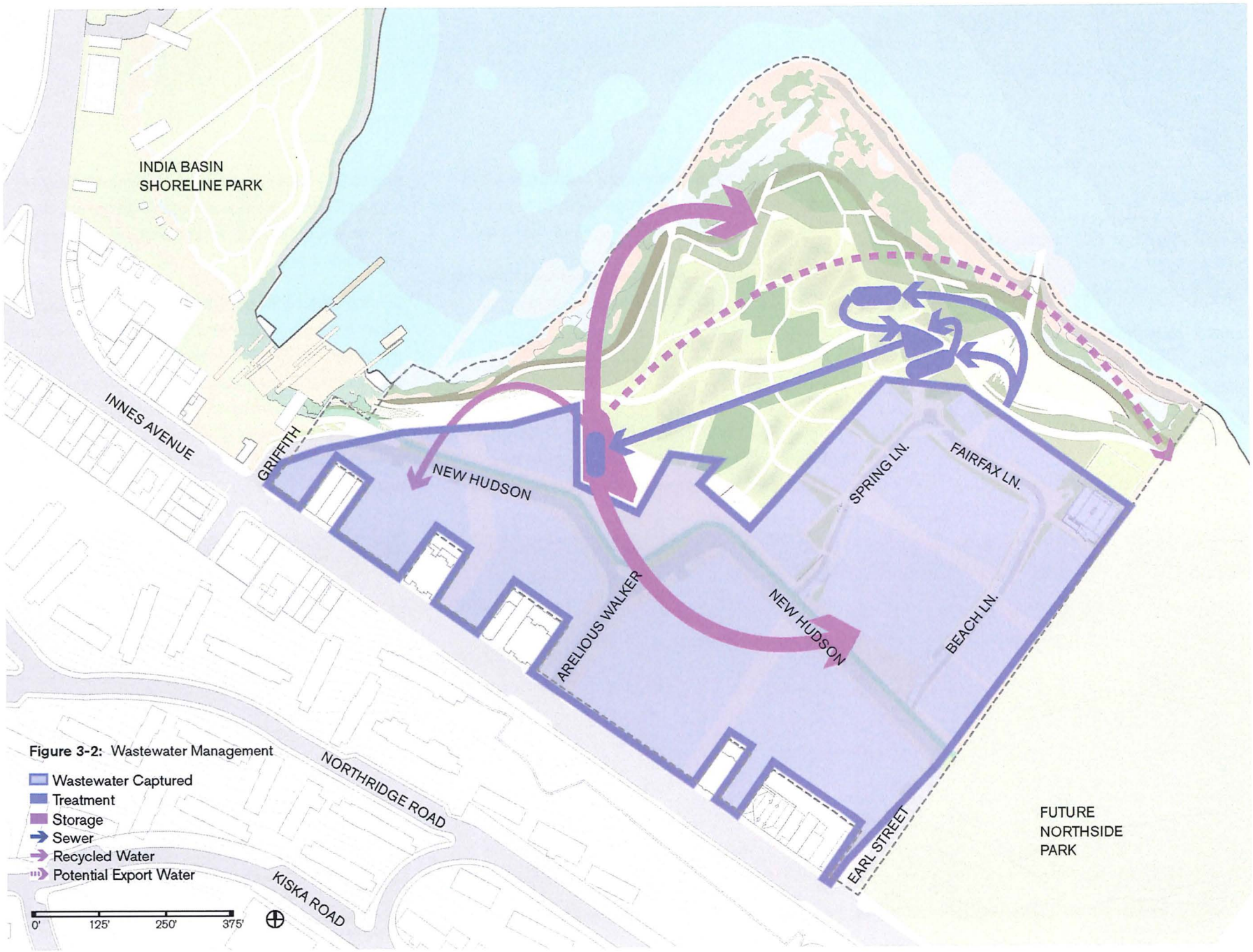


Figure 3-2: Wastewater Management

On-Site Water Recycling

Standards

3.1.3.1 Signage All recycled water systems shall be signed in conformance with San Francisco Department of Public Health (SFDPH) Article 12.

3.1.3.2 Non Potable Water All water used for toilets, urinals, irrigation and cooling systems shall be supplied with non-potable water in accordance with the Non-potable Water Ordinance.

3.1.3.3 Storage The project will build on-site water storage to reduce the impacts to municipal infrastructure and enhance system resilience.

On-site recycled water storage shall be sized for at least one peak day demand volume.

Guidelines

3.1.3.4 Diversification of Water Supply The project will consider all water supplies on-site including stormwater, recycled water and foundation water to offset the municipal potable supply. The available non-potable water supplies on site will be treated and distributed in alignment with its end use.

3.1.3.5 Future Ready The expansion of district water treatment systems and non-potable water distribution will be incremental and appropriately sized for each development phase and will consider compatibility of available technologies to optimize treatment efficiency and maximize performance during the full build-out of the project.

Non-Potable Distribution

Signage

Recycled Water

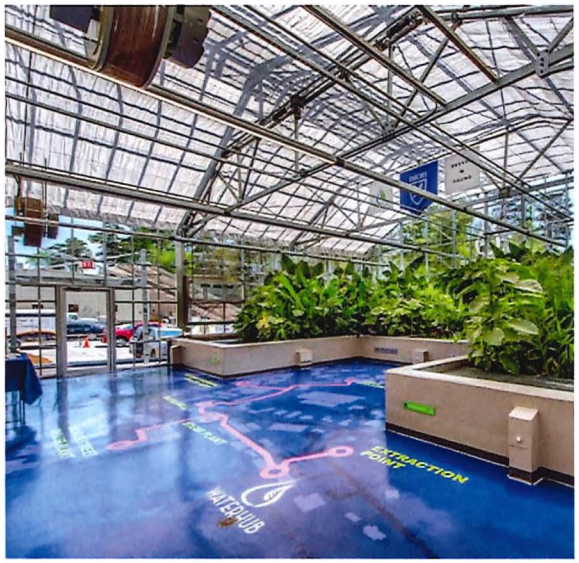
3.2.6 Public Engagement The project shall provide educational materials and signage visible to the public to display the potable water offset over time.

Goals

3.2.7 Decentralized Wastewater Treatment and Reuse All wastewater generated from toilets, sinks, showers and other fixtures from private development parcels will be treated at a decentralized water recycling facility within the vicinity of India Basin. This facility will include a series of treatment processes to comply with the San Francisco Department of Public Health (DPH) Article 12 requirements and treat wastewater to Title 22 Standards to supply the India Basin non-potable water distribution system. The India Basin project has ambitions to pursue distribution of non-potable water to adjacent parcels and will coordinate with the SFPUC to enhance the recycled water network within this region.

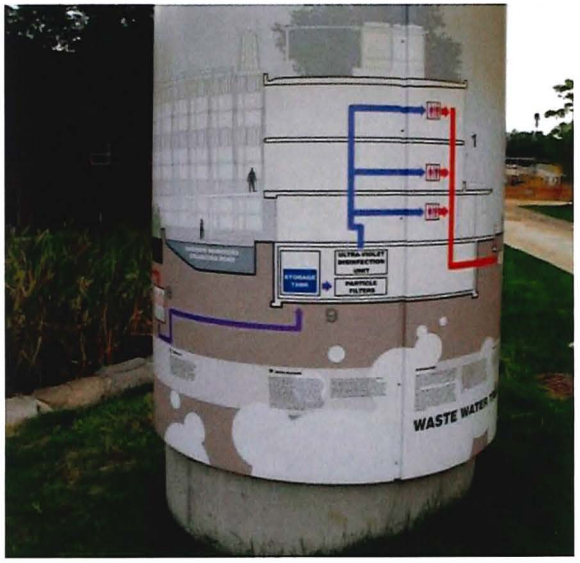
The location, ownership and operation of such a facility is dependent on future unknowns and will be evaluated further at the time of development. Potential arrangements include, but are not limited to:

- Third-party entity as a private owner-operator
- Ownership by Project
- Partnership with City



Water Hub


Blackwater Treatment



Infographic

3.2 Stormwater

3.2.1

Stormwater Management Framework

The India Basin project site is located within its own watershed, of which the majority is designated within the San Francisco Separate Sewer area. The project will collect and manage its stormwater entirely on-site, with new outfalls to the San Francisco Bay and, as such, will avoid burdening the City and County of San Francisco's aging combined sewer system.

The project's intent is to employ natural stormwater management strategies to manage the runoff quantity and rate and improve water quality by removing metals, sediment, and other pollutants of concern through landscaped-based stormwater treatment features (biotreatment).

In addition, the Project will intelligently leverage stormwater resources to support a resilient landscape that mitigates and is adaptable to the impacts of future changes in climate, including less frequent, but larger and more intense storm events and sea level rise.

The natural topography and development approach divides the site into two primary watersheds. The project will employ a combination of centralized and decentralized stormwater biotreatment facilities designed in accordance with the requirements of the San Francisco Public Utilities Commission (SFPUC) Stormwater Management Requirements and Design Guidelines (SMR). Private development parcels and public streets within the Cove and Uplands (Figure 3-3) will rely primarily on centralized stormwater treatment facilities within the Big Green. Within the Flats, decentralized stormwater management features will be integrated alongside roadways, pedestrian pathways and between buildings to meet stormwater quality requirements. Both centralized and decentralized stormwater facilities will prioritize the use of biotreatment methods, including but not limited to, bioretention areas, flow through planters and treatment wetlands.

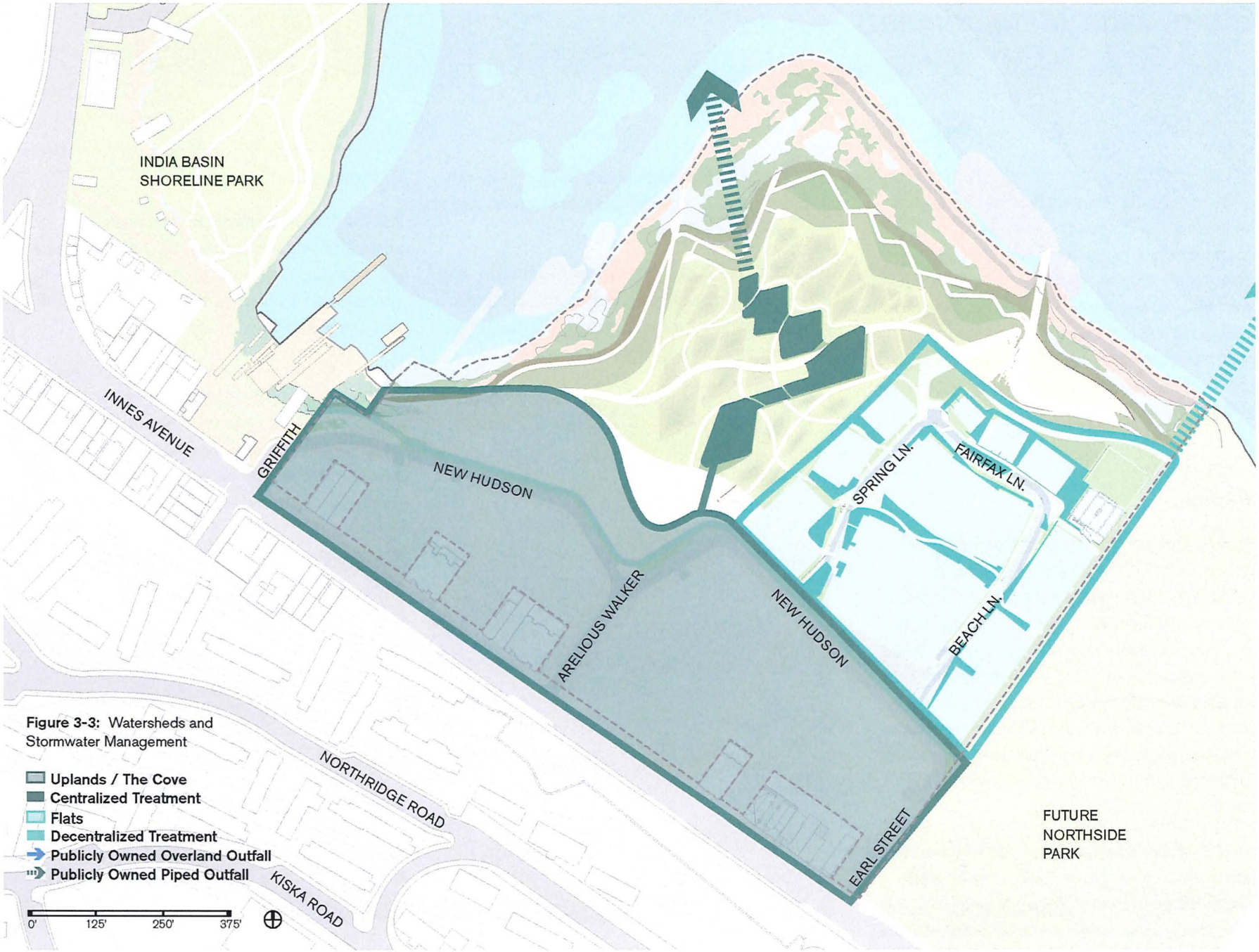


Figure 3-3: Watersheds and Stormwater Management

Stormwater Management

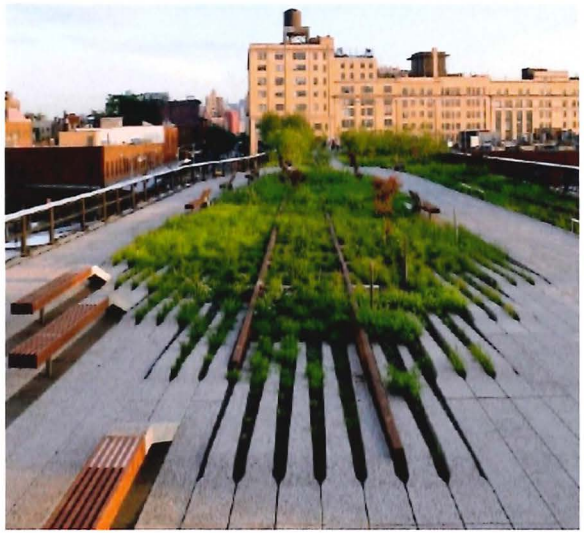
The project's stormwater management approach will mimic pre-development drainage patterns and hydrologic processes, thereby limiting the need for pumping and increasing retention, detention, infiltration, and treatment of stormwater at its source. It should be noted that the site's underlying soil conditions highly restrict the potential for infiltration and therefore infiltration is not pursued as a primary strategy for stormwater management.

Standards

3.2.2.1 On-site Stormwater Management Designate the entire project site within the City's MS4 Separated Sewer Area and manage 100% of stormwater on-site with no discharge to City and County of San Francisco combined sewer system at full build-out. Treatment will be centralized in the Big Green to support public streets and private development. Stormwater management in The Flats shall be decentralized within the right-of-way for streets and within parcels for private treatment.

3.2.2.2 Water Quality Treat 100% of the water quality storm event, in accordance with SMR requirements (currently the 90th percentile, 24-hour storm). Stormwater treatment features shall prioritize biotreatment methods and comply with all ordinances and design guidelines applicable at the time of construction.

3.2.2.3 Ongoing Maintenance Stormwater and drainage facilities shall be maintained to remove debris before storm events to prevent clogging and potential ponding of surface water.



Intersperce Permeability

Guidelines

3.2.2.4 Runoff Reduction Intersperse permeable areas, such as pavers, planters and green roofs, within large areas of hardscape to increase stormwater ret ention and reduce runoff rate and volume.

3.2.2.5 Phasing In areas where stormwater management features are centralized to support multiple phases of development, storm water infrastructure shall be constructed to meet the management requirements of each new phase, while minimizing impact to previously built features.

Bioretention

Habitat Support

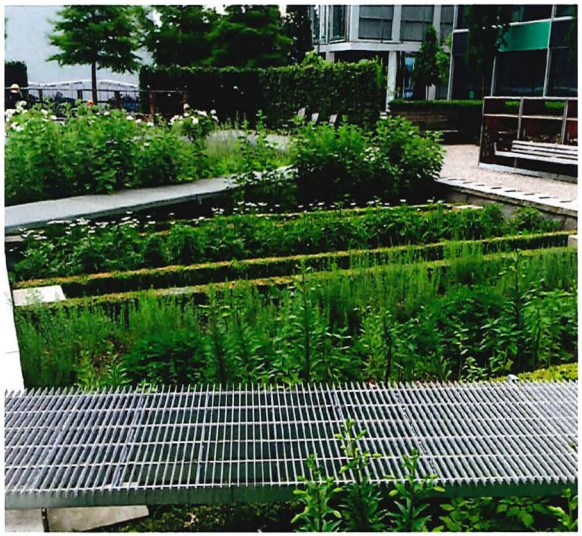
Promote natural patterns of stormwater flow and capture stormwater on-site to support biodiversity through a diverse planting palette that supports a variety of habitats.

Guidelines

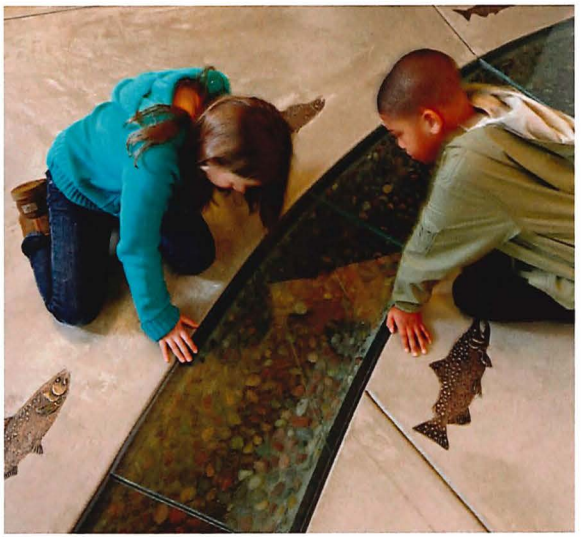
3.2.2.6 Ephemeral Landscape Establish planting types supported by both freshwater and recycled water that are able to adapt to changes in seasonal and local climate.

3.2.2.7 Visible Connections Create visible connections between building rooftops, architecture, streetscapes, and public spaces to emphasize the patterns of water flow within the India Basin public realm.

Biodiversity



Diverse Planting



Visible Infrastructure

3.3 Energy and Greenhouse Gas Emissions

3.3.1

Energy and Greenhouse Gas Emissions Objectives

India Basin aspires to minimize greenhouse gas (GHG) emissions from building operations and to produce electricity on-site to increase community resilience in the event of a disaster.

India Basin's district-wide energy approach was informed by a district-scale energy analysis. As a result of this study (details of which can be found in Section A.4 of the appendix), the project prioritized investment in electricity infrastructure and building efficiency rather than a centralized thermal energy plant.

This analysis concluded that heating and cooling make up only a small portion of the site-wide energy consumption. This percentage will only decrease with increasingly stringent energy codes. A decentralized approach to energy efficiency encourages higher quality buildings and enables future flexibility by allowing buildings to adapt to future technological innovations without tying them to a district plant relying on today's technology.

One of the energy goals for India Basin is to implement a microgrid that includes direct current (DC) electricity distribution to provide increased control over distributed renewable resources, minimize conversion losses and increase community energy resilience.

A microgrid is a semi-independent electric grid that can distribute alternating current (AC) and potentially direct current (DC) electricity within the site.

The microgrid may be split into two parts: a DC portion which will distribute energy generated on-site directly to DC loads, and an AC portion which will increase flexibility with regard to on-site energy distribution. The DC portion of the microgrid eliminates conversion from AC to DC losses at any DC loads like motors, fans, LED lighting, and vehicle charging stations. Batteries can also be included on the grid. Batteries will increase the resilience of the grid and will provide cost savings by shifting electrical loads from peak demand times. See Figure 3-4 and Figure 3-5 depicting a potential microgrid configuration.

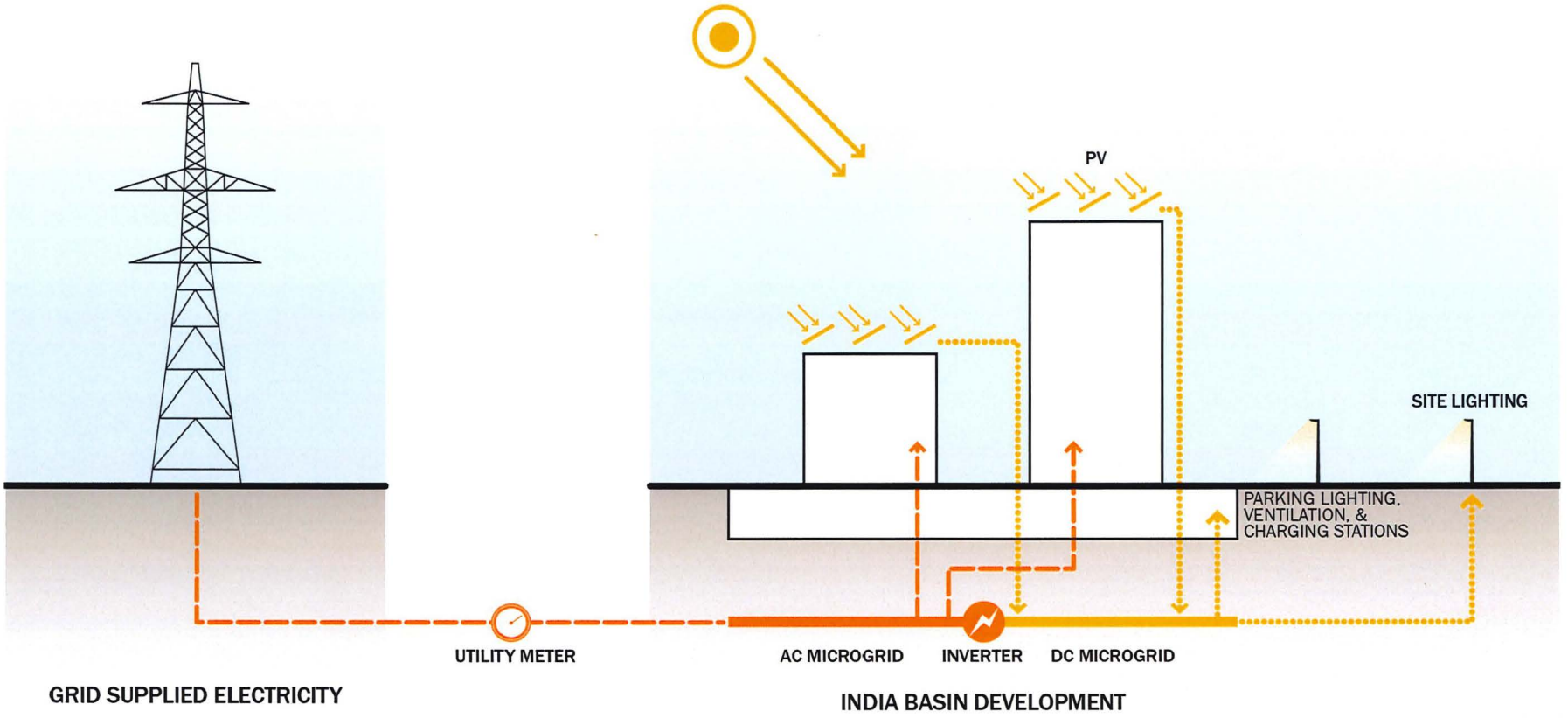


Figure 3-4: Potential Microgrid Configuration

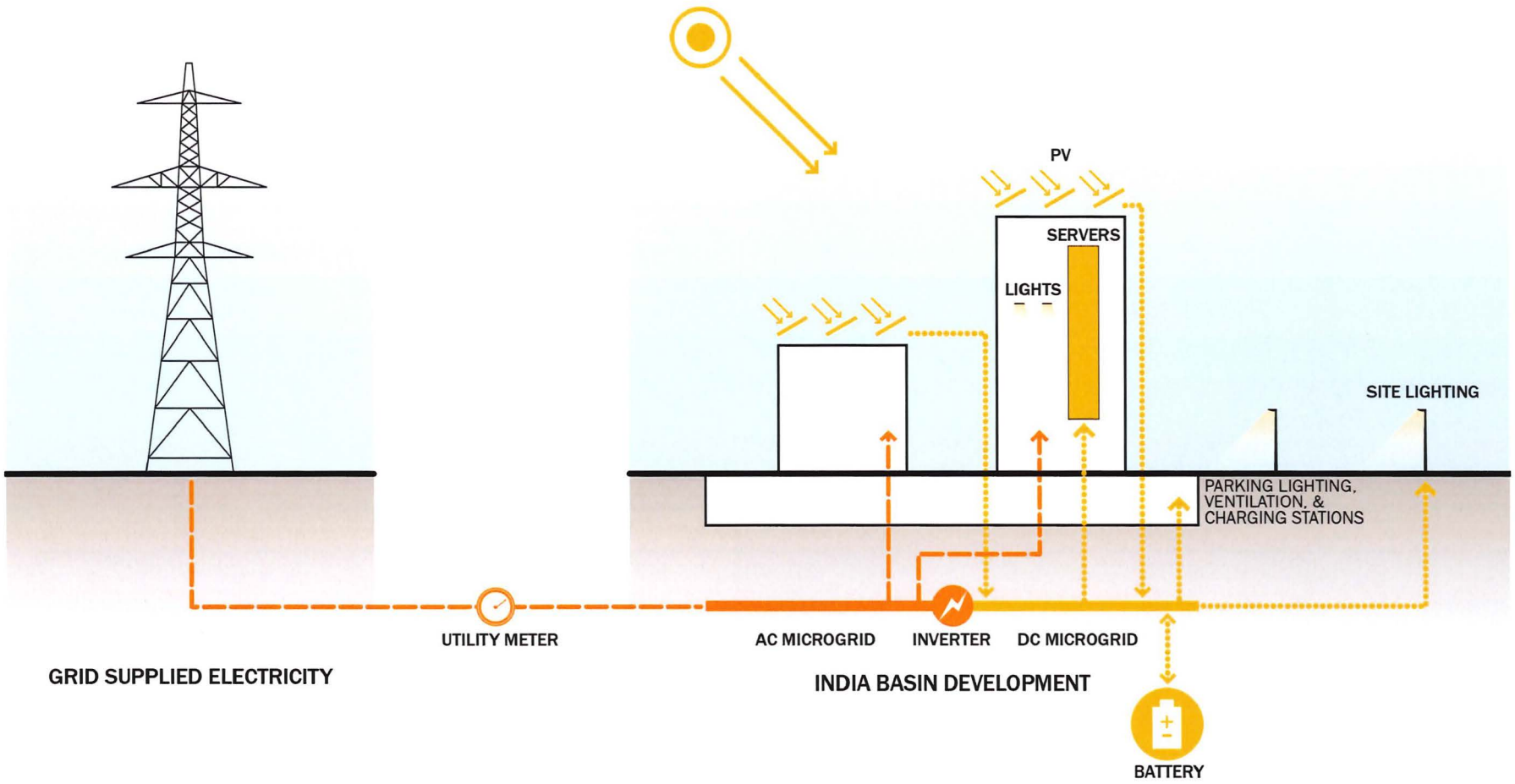
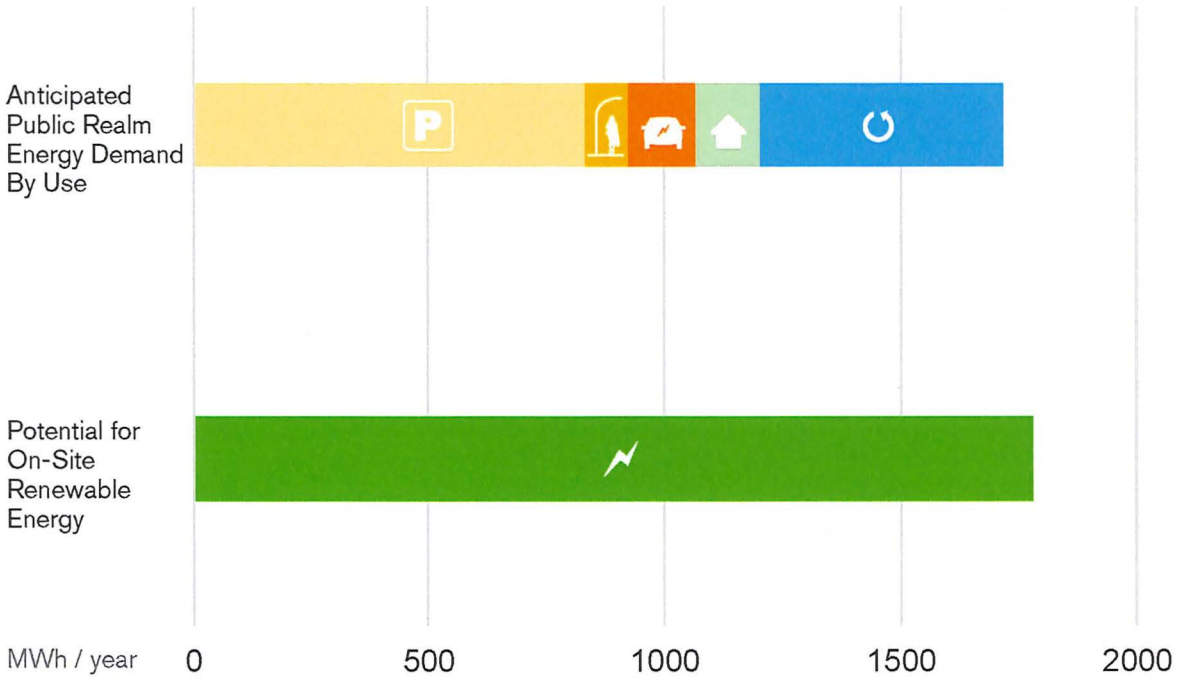


Figure 3-5: Potential Microgrid Configuration With Battery Storage



NOTE: *The values in Figure 3-3 are based on estimated electricity demands and should be referenced to understand the relative order of magnitude electricity for each end use. The values should not, however, be used for sizing or design purposes.*

Figure 3-6: Potential for Public Realm Energy Balance

Another goal for India Basin is to use renewable electricity produced on-site to achieve a zero net energy public realm. An energy balance was prepared to determine the feasibility of achieving this goal. The calculation included a rough estimate of the total energy available from on-site renewable electricity generation and compared it to the anticipated energy demand in the public realm, including parking structure lighting and ventilation, site lighting, electric fleet charging, public realm structures and wastewater treatment. The total anticipated energy generation and demand are shown in Figure 3-3. Based on the comparison of on-site renewable energy potential and demands, it should be possible to offset the public realm energy demand with on-site solar electricity generation.

The project's district-wide emphasis on electricity production and distribution is complimented by a goal at the building scale (see Chapter 6) to minimize on-site combustion and to limit the use of natural gas for cooking needs only. This movement towards a predominantly electric site allows the project to take advantage of future GHG reductions through a cleaner grid and potential investment in on-site and off-site renewable electricity generation.

Site-Wide Greenhouse Gas Emissions

The India Basin development is focused on reducing the environmental impact of energy consumed on site. To achieve this, the project has a goal of zero net energy public realm by producing enough on-site renewable energy to power the public realm structures, central wastewater treatment, charging for an all-electric maintenance and refuse management fleet, parking garage energy demands and site lighting.

Additionally, the project is focused on operating without producing GHG in the future by minimizing on-site combustion, exploring the feasibility of an all-electric site, setting energy performance targets for each building type, and providing a portion of the project's energy through GHG-free technology.

The project has a goal to eliminate GHG emissions associated with building operations. High performance buildings, predominantly electric buildings and investment in renewable energy production all contribute to this goal. Refer to Section 6.5 for Goals, Standards and Guidelines related to building performance.

Standards

3.3.2.1 Public Realm Energy Efficiency The following public realm components shall exceed the minimum energy performance requirements of Title 24 at the time of construction: site lighting fixtures, parking garage lighting, parking garage ventilation equipment and on-site amenity buildings.

3.3.2.2 Maintenance Vehicles Maintenance vehicles shall be all-electric and appropriately scaled to the site, such as electric carts. Vehicles shall meet the needs of the operations and maintenance team.

3.3.2.3 Electric Vehicle Charging Stations EV charging stations shall be provided for at least 50% of street level parking spaces within the public realm.

Guidelines

3.3.2.4 Maintenance Vehicle Charging Stations Stations for charging and storing maintenance vehicles shall be provided in parking garages. Maintenance vehicles and storage shall not be stored in the park.

Goals

3.3.2.5 Net zero energy public realm Provide on-site renewable energy production sufficient to offset energy consumption of site lighting, parking structures, amenity buildings, wastewater treatment and fleet vehicle charging.

3.3.2.6 Microgrid Provide a microgrid with AC and DC distribution on-site to serve the public realm and all buildings.

3.3.2.7 Public Realm Direct DC Power Select equipment capable of being powered directly by a DC grid. This equipment may include, but is not limited to: site lighting, parking garage lighting and parking garage mechanical ventilation systems.

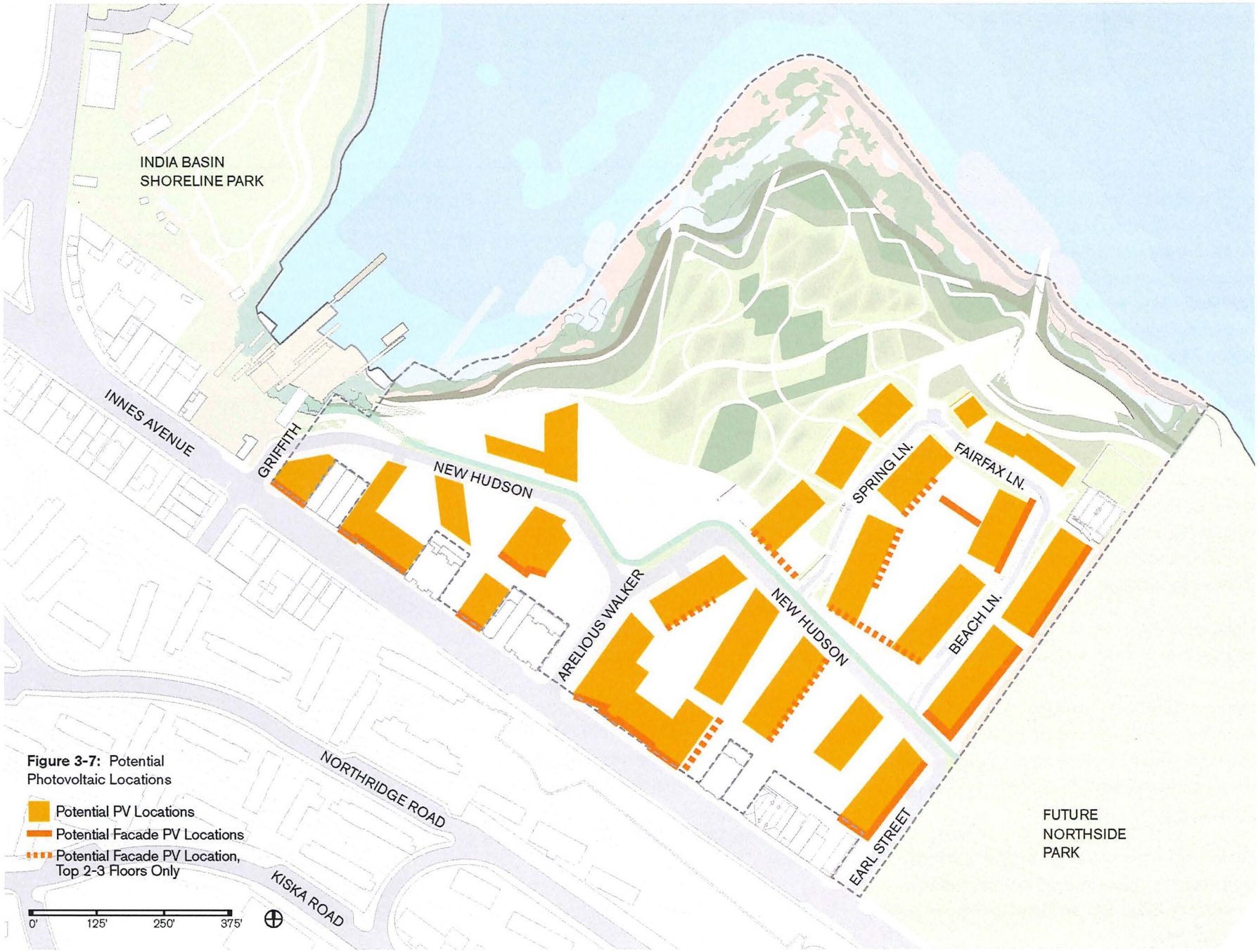


Figure 3-7: Potential Photovoltaic Locations

Energy Resilience

India Basin strives to be a leader in energy and community resilience and the development has the potential to be a national example of a resilient community. In order to achieve this goal, the project has established Goals, Standards and Guidelines that will enable the community to leverage on-site energy production to provide community support in a disaster event.

The large area of public open space on the India Basin site will be a natural gathering place in the event of an emergency. Providing resilience resources, including power, lighting and supplies will allow India Basin to serve more effectively in an emergency. Storing emergency supplies nearby would also allow a swifter response following a disaster.

Combining the site-wide microgrid with battery storage could allow electricity to remain available to site occupants and the surrounding community during a disaster. In the event of regional electricity service disruption, the on-site microgrid could be disconnected from the regional grid, allowing the microgrid to continue to provide electricity to the community.

Estimates for the potential number of people supported in a disaster and a table of critical emergency loads can be found in Section A.4 of the appendix.

Standards

Battery Storage Area Allocate space for battery storage sufficient to store peak electricity produced by on-site photovoltaics to provide a constant source of electricity for consecutive 24 hour periods.

Guidelines

3.3.3.1 Battery Storage Capacity Provide battery storage to power critical electric loads in the event of an emergency. Critical electrical loads may include, but are not limited to: water treatment system, refrigeration, emergency lighting and medical equipment, charging for electric communication devices, message boards, way finding and refuse management services.

3.3.3.2 Emergency Supply Storage Area Allocate space for on-site storage of critical emergency supplies. Coordinate with San Francisco Department of Public Health (SFDPH) and/or San Francisco Department of Emergency Management (SFDEM) to identify emergency supplies.

Goal

3.3.3.3 Leader In Energy Resilience Power critical emergency services on-site and act as a resiliency asset to the immediate and surrounding community. Coordinate with SFDPH and/or SFDEM and pursue grant funding as a Community Disaster Response Hub.

Solar Panels

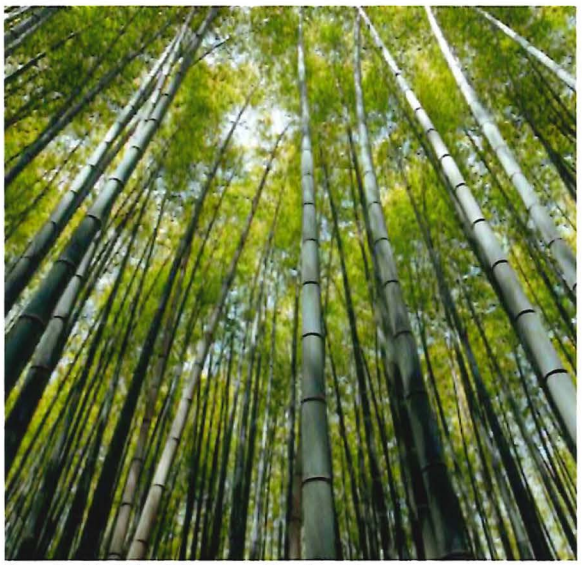
Clean Energy Vehicle

PS41 Solar Roof Garden

3.4 Materials

The industry-wide approach to healthy building materials is anticipated to evolve significantly during the India Basin project timeline. India Basin strives to use less and select sustainable materials to reduce the need for extraction of virgin materials, reduce the project's overall carbon footprint, support the local economy, prevent environmental contamination and limit GHG emissions. This involves evaluating material content and selecting materials with reduced toxic chemicals, that limit the impact of emissions in the environment, that are low maintenance, durable, sustainably produced and sourced, that are appropriate for the unique site conditions and exposures, and have a reduced embodied energy.

Understanding the health impacts of various materials and using these attributes to prioritize material selection requires extensive research and a detailed knowledge of chemical contents and their health implications. The India Basin Trust will complete this research to identify alternatives for common products in residential and commercial construction.



Sustainable Wood Source - Bamboo Forest

Certified Sustainable Wood Used for Construction

Goals

3.4.1 Zero to Low VOCs Material with VOC content shall meet the current San Francisco Green Building Code requirements. Paints and coatings shall comply with South Coast Air Quality Management District Rule (SCAQMD) #1113. Caulks, adhesives, and sealants shall comply with SCAQMD #1168.

3.4.2 Rapidly Renewable Materials Use products manufactured from materials that can be harvested within 10 years. These include bamboo, wool, cotton insulation, agrifiber, linoleum wheatboard, strawboards and cork.

	Arsenic	Asbestos	Bisphenol-A	Cadmium	CFCs	Creosote	Formaldehyde	Halogenated flame retardants	HCFCs	Lead	Mercury	Pentachlorophenol	Phthalates	PVC	VOCs
Division 03 - Concrete													x	x	
Division 04 - Masonry													x	x	
Division 06 - Wood and Plastics	x					x	x					x			x
Division 07 - Thermal and Moisture Protection			x	x			x			x			x	x	x
Division 08 - Doors and Windows			x										x	x	
Division 09 - Finishes			x	x			x	x					x	x	x
Division 10 - Specialties			x										x	x	
Division 11 - Equipment													x	x	
Division 12 - Furnishings								x					x	x	
Division 13 - Special Construction			x										x	x	

Existing Materials Transformed for Reuse On-Site

1. Reuse steel beams in installations and furnishings.
2. Convert concrete debris and shoreline rubble to paving, aggregate, and/or gabion wall fill material.
3. Transform cracked paving into fill material and/or aggregate, or crushed stone surfacing.

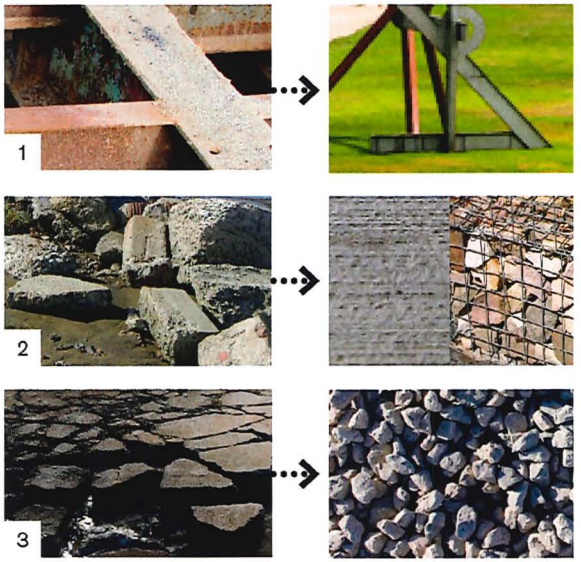


Figure 3-8: Product Selection

3.4.3 India Basin Healthy Materials Research Initiative Leverage the India Basin Trust to complete materials research and provide vertical developers with purchasing guidelines or a preferred vendor list. Partner with relevant City agencies in this effort, such as the San Francisco Department of the Environment.

3.4.4 Reuse Reuse all on-site demolition and salvaged materials unless deemed unsafe for human contact.

3.4.5 Regional Materials Select materials that are manufactured in the Bayview, or within the greater Bay Area.

3.4.6 Certified Wood Use only wood that is certified in accordance with the Forest Stewardship Council (FSC) to support responsible forest management.

3.4.7 Laminated Wood Use only laminated wood for mass timber construction.

3.4.8 CO2e Capture in Concrete Utilize concrete materials that are produced through the process of CO2e capture.

3.4.9 Recycled Content 80% of all construction materials as applicable shall contain recycled content. This may include post- and pre-consumer materials for use in paving and utilities.

3.5 Refuse

San Francisco has an ambitious, city-wide goal to achieve Zero Waste by 2020. The project strives to minimize refuse streams leaving the site by valuing refuse as a resource for reuse on-site, and through responsible material selection and disposal at all project phases. At the time of this draft document, CALGreen 2016 requires a minimum of 65% Construction & Demolition (C&D) refuse diversion. Requiring early phases of India Basin to divert 75% C&D refuse, and increasing refuse diversion over time, will limit refuse sent to landfill and benefit each vertical developer's path to LEED certification.

Similarly, at the time of this document, San Francisco has achieved an 80% diversion rate. The SF Department of the Environment estimates that the city's diversion rate could increase to 90% if all refuse was sent to the correct collection bins. The India Basin Trust will provide educational programs for occupants and visitors to support correct sorting for on-site refuse. In addition, the Trust will look for other ways to reduce refuse, such as a 'fee-bate' system.

Standards

3.5.1 Increased Construction Refuse Diversion The project shall exceed CALGreen required construction refuse diversion rate by at least 10%.

Guidelines

3.5.2 Soil Management Plan The project sponsor shall prepare a comprehensive plan to manage the soil capacity, construction phasing, staging and sequencing of soil placement. Coordinate this plan with the erosion and sedimentation control plan (See Section 3.6).

3.5.3 Responsible Purchaser Policy India Basin Trust shall secure funding to complete materials research with the goal of drafting an India Basin Purchaser Responsibility Policy and provide regular education for occupants and residents.

Goals

3.5.4 Zero Off Haul Reuse all cut soils either on-site or within the India Basin district for a net-zero off-haul within the Basin.

3.5.5 Salvage & Recycle Salvage and recycle all construction refuse on-site.

3.5.6 Soil Compaction Place and compact soils in early phases for long-term stability.

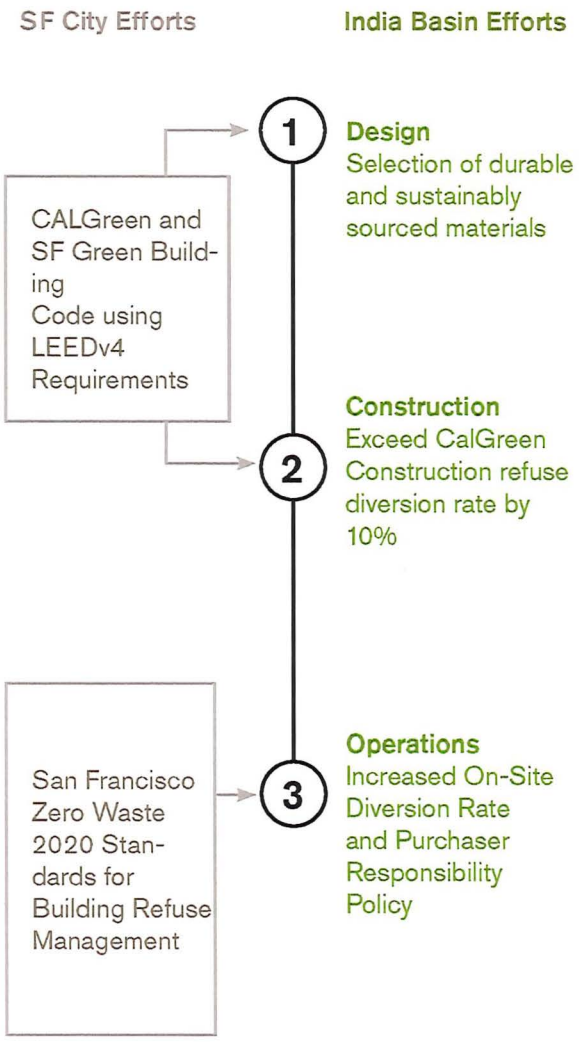
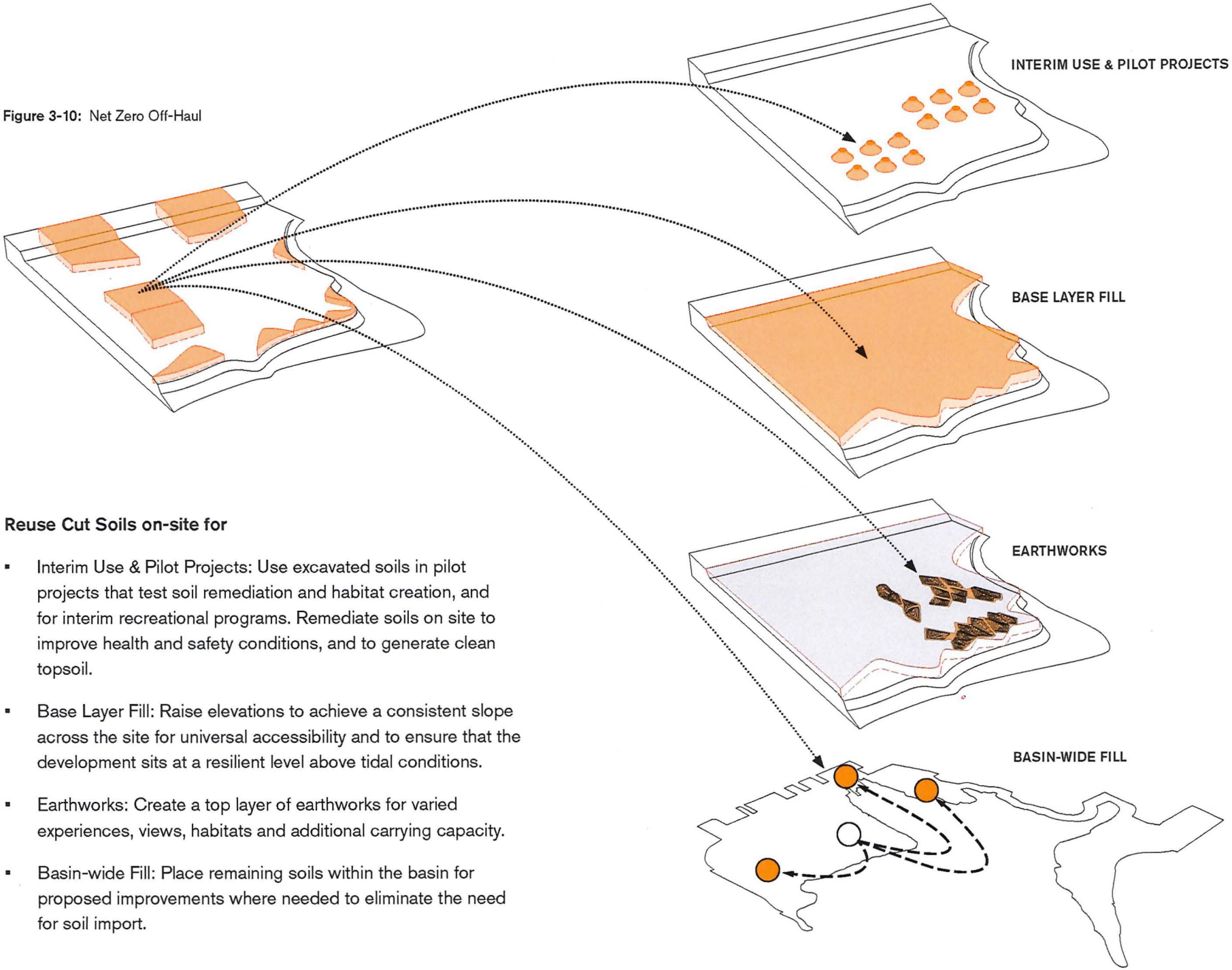


Figure 3-9: San Francisco City and India Basin Efforts

Figure 3-10: Net Zero Off-Haul



Reuse Cut Soils on-site for

- Interim Use & Pilot Projects: Use excavated soils in pilot projects that test soil remediation and habitat creation, and for interim recreational programs. Remediate soils on site to improve health and safety conditions, and to generate clean topsoil.
- Base Layer Fill: Raise elevations to achieve a consistent slope across the site for universal accessibility and to ensure that the development sits at a resilient level above tidal conditions.
- Earthworks: Create a top layer of earthworks for varied experiences, views, habitats and additional carrying capacity.
- Basin-wide Fill: Place remaining soils within the basin for proposed improvements where needed to eliminate the need for soil import.

3.6 Healthy Environment & Lifestyles

San Francisco is at the forefront of building healthy environments for a robust city, and India Basin strives to be an exemplary model for the city through 3 primary means:

1. Responsible construction management and soil remediation techniques to reduce overall energy consumption, reduce noise and pollution, limit greenhouse gas emissions, limit overall impacts on the environment and ensure the wellbeing of existing and future habitats, residents, and workers.

2. Building healthy soil biology to ensure public safety, improve soil stamina for healthy plant growth, sequester carbon and reduce off-haul costs.

3. Creation of the India Basin Trust that will be responsible for operations, programming, social capacity-building and community resilience to encourage healthy and active lifestyles, volunteerism, stewardship, adaptive management, and post-occupancy evaluation.

Standards

3.6.1 Pile Driving All piles shall be driven during non-nesting seasons to limit impact to habitats and species patterns.

3.6.2 Construction Noise Construction shall occur during defined hours and within controlled areas only.

3.6.3 Serpentinite All serpentine soils found on-site shall be reused on-site to establish rare, endemic, and endangered habitat, or encapsulated.

3.6.4 Fertilizer Use only organic fertilizers.

3.6.5 Mulching Mulch all leaves and grass clippings in situ to promote nutirent uptake and reduce irrigation and fertilizer demand.

3.6.6 Public Safety Augment San Francisco Police Department by providing 24 hour site patrols for public safety.

Guidelines

3.6.7 Erosion & Sedimentation Control Plan Prepare a plan to limit construction related pollution, dust generated from soil excavation and stockpiling and sedimentation into the Bay. Utilize soil stabilization techniques that may include seeding, mulching, filter socks, stabilized site entrances, and the preservation of existing vegetation. Plan shall comply with the Maher ordinance and dust control ordinance.

3.6.8 Remediation Employ phytoremediation techniques using sunflowers, alfalfa, and other known accumulators to remove and reduce metal content making soil safe for human contact and exposure, and to manufacture a healthy growing medium for plants.

3.6.9 Integrated Pest Management (IPM) Employ IPM techniques to limit the use of pesticides to an economically justified level and reduce or minimize risks to human health and the environment. Reference SFE Pest Prevention design guidelines at https://sfenvironment.org/sites/default/files/fliers/files/final_ppbd_guidelines_12-5-12.pdf.

3.6.10 Prioritize Mobility & Activity (See Ch. 2)

3.6.11 Adaptive Management Plan Implement an adaptive management plan.

3.6.12 Education Offer a range of educational programs for people of all ages and abilities to learn about the historical, cultural, environmental and innovative proponents of the project. Topics may include the unique habitats, water systems, living shorelines, sea level rise, site morphology, energy, refuse reduction, product use, health and wellness and history and culture.

3.6.13 Stewardship Offer a range of opportunities for stewards to volunteer and engage in the maintenance and management of the site.

3.6.14 Maintenance Perform on-going maintenance of all public spaces. (See Ch. 2)

3.6.15 Post-Occupancy Evaluate each phase of construction through post-occupancy surveys to inform future phases of development.

Goals

3.6.16 Fungi All soil mixes will include mychorrizal fungi to increase nutrients and micro-organisims that improve plant health and growth.

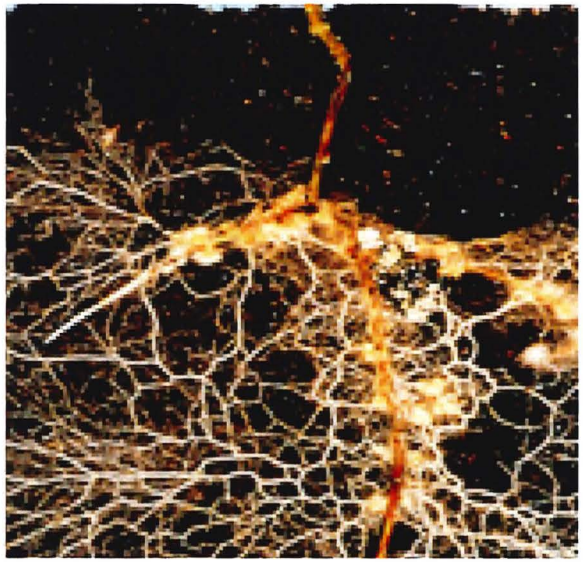
3.6.17 School Meals All school meals will be made with local and organic produce.

3.6.18 Food Sell affordable organic, non-GMO and locally produced and sourced foods at farmers markets and supermarkets.

3.6.19 Compost Conduct on-site compost generation for reuse in the landscape. (See Section 2.8)

3.6.20 Gardens Provide space for community gardens.

Pile Driving during Appropriate Times of the Year



Soil Health for Long-Term Biodiversity

Education, Stewardship, and On-going Maintenance

3.7 Interim Activation & Pilot Projects

The time and physical space dimensions of the site are its greatest assets enabling the project to engage users early and start now. The site is deep, wide, and relatively flat. It is primarily un-occupied and development will occur over time. The site lends itself to a range of interim activation projects ranging from storage for future improvements, to experimental projects testing the feasibility of landscape strategies to inform long-term resilience. Recreation, attractions and educational programs will also bring users to the site and promote early stewardship, volunteerism and educational opportunities. Pilot projects may include:

Soil Remediation: Improve soil quality to ensure public safety, enable plant growth and reduce off-haul costs. (See Section 3.6)

Test Plots: Test the success rate of recycled water with plant palette, phytoremediation, proposed plant species, use of mycorrhizal fungi, and metals removal in experimental landscapes as small as 100 sq ft.

Dirt Bike Course: Excavated soils not used for site grading can be used to create recreational amenities in the interim.

Art & Concessions: Sculpture pieces can be temporarily located and stored on-site as an interim attraction in advance of permanent installation. This may include reuse of Bay Bridge Steel.

Living Shorelines: Incorporate the following types of living shorelines to test the viability and success rate of these materials to create habitat: reef balls, constructed tide pools, floating wetlands, engineered reefs, eel grass, and enhanced shoreline protection materials. Grants may be available for these pilot projects. (See Section 3.8)

Temporary School: Provide facilities for a temporary school using existing streets and utilities in early phases.

Nursery: Plant and nurture trees on-site in early phases to grow a resource of mature trees that are conditioned to the coastal environment for future planting success. Trees could also be sold to adjacent properties as a revenue source.

Storage: If there is a cost savings in acquiring large quantities of materials in early phases of the project, store materials on-site for future phases of construction and to reduce total number of truck trips.

Education & Stewardship: Initiate the "Trust" in early phases to lead on-site park related programing, education, maintenance, volunteerism and stewardship for long-term commitment.

Guidelines

3.7.1 Placement Coordinate placement of interim projects with phasing to limit relocation of programs and interference with construction.

3.7.2 Phasing Implement activation and pilot projects in the early phases of the project to provide recreational and educational programs and to test landscape strategies for future implementation.

3.7.3 Temporary Access Provide temporary pedestrian, bicycle, and vehicular access to the site for users to engage with interim projects.

3.7.4 Range Early implementation projects shall be designed for all ages and abilities.

3.7.5 Signage Provide signage with pilot projects for education and wayfinding (See Chapter 7).

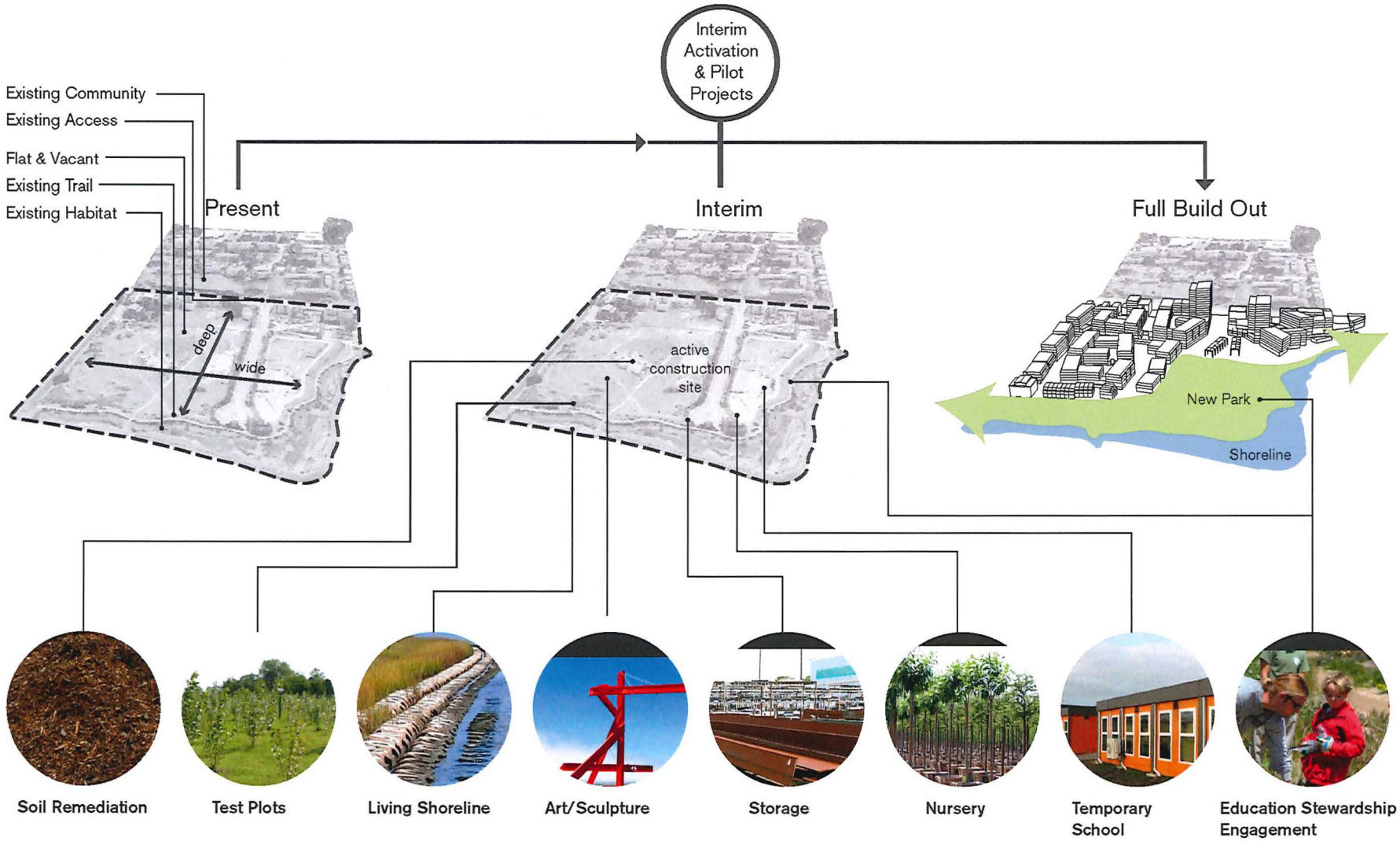


Figure 3-11: Site Assets & Interim Activation

3.8 Coastal Adaptation

"Sea level rise may be a slow moving threat to our city but it demands our action now... Proactive and thoughtful adaptation planning will continue the innovation, creativity, and inclusivity that have always inspired growth, development, and jobs in San Francisco... It demands our attention now."

– Mayor Edwin M. Lee, San Francisco Sea Level Rise Action Plan

Located at the edge of the San Francisco Bay, the site is constantly responding to changing coastal conditions and rising tides. Existing low lying areas and habitats are regularly submerged at high tide, and increasingly inundated at king tides and with sea level rise. Over the next century, sea level rise will likely transform the site's shoreline, causing habitat loss and greater potential for erosion and shoreline damage.

The shoreline design proposes a suite of living shoreline devices from pilot projects to long-term solutions, to test new technologies and methods for habitat creation, upland habitat migration, and shoreline protection, and to serve as a precedent for Bay Area resilient development.

This section includes standards, guidelines, and goals for coastal adaptation to create habitats and protect the development in the near and long-term and to adapt as conditions evolve.

See Section 2.8 for standards and guidelines to promote diverse ecologies.

See Section 3.7 for the India Basin Trust that will support the long-term success of proposed ecological interventions through adaptive management, monitoring, research, data collection, education and stewardship.

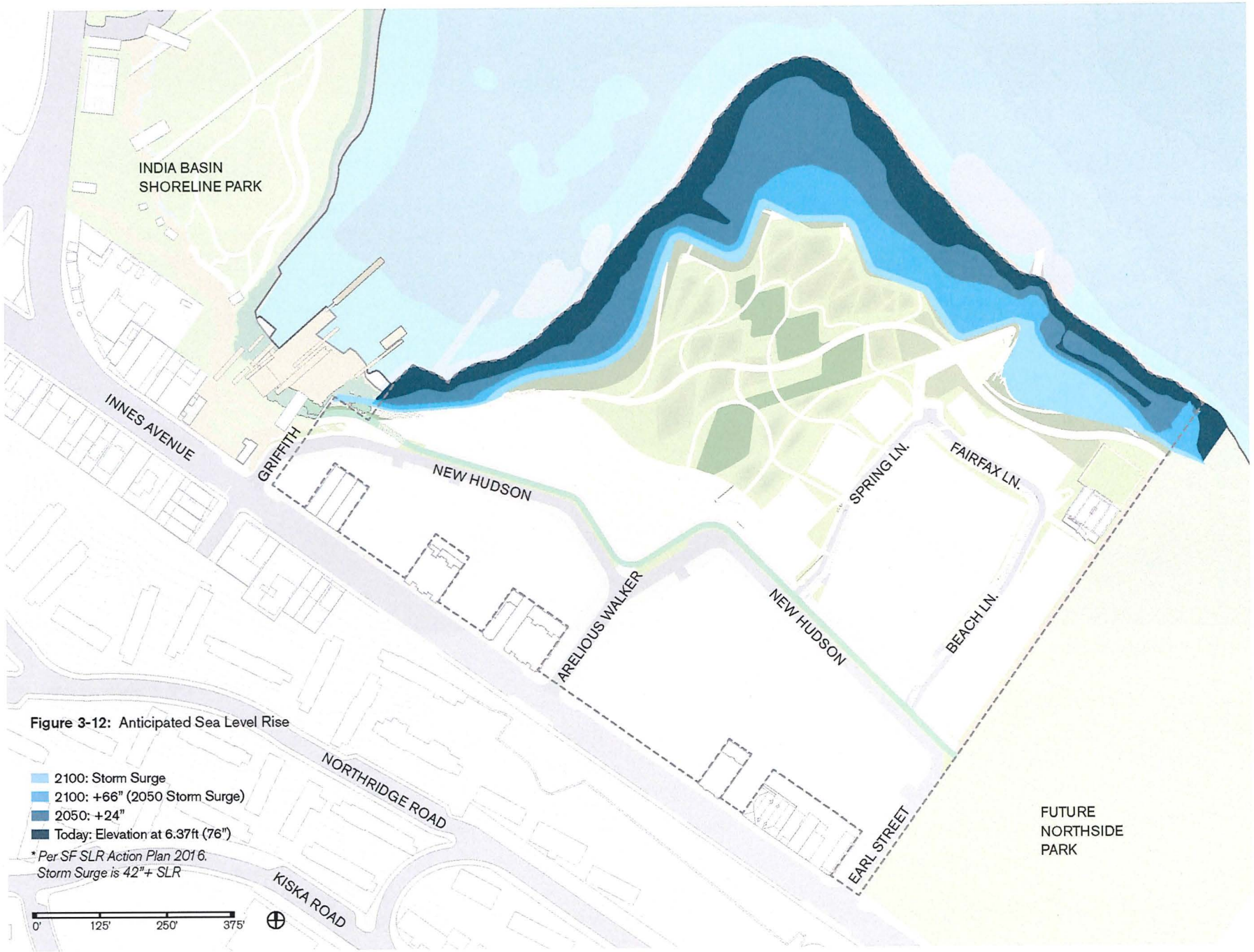
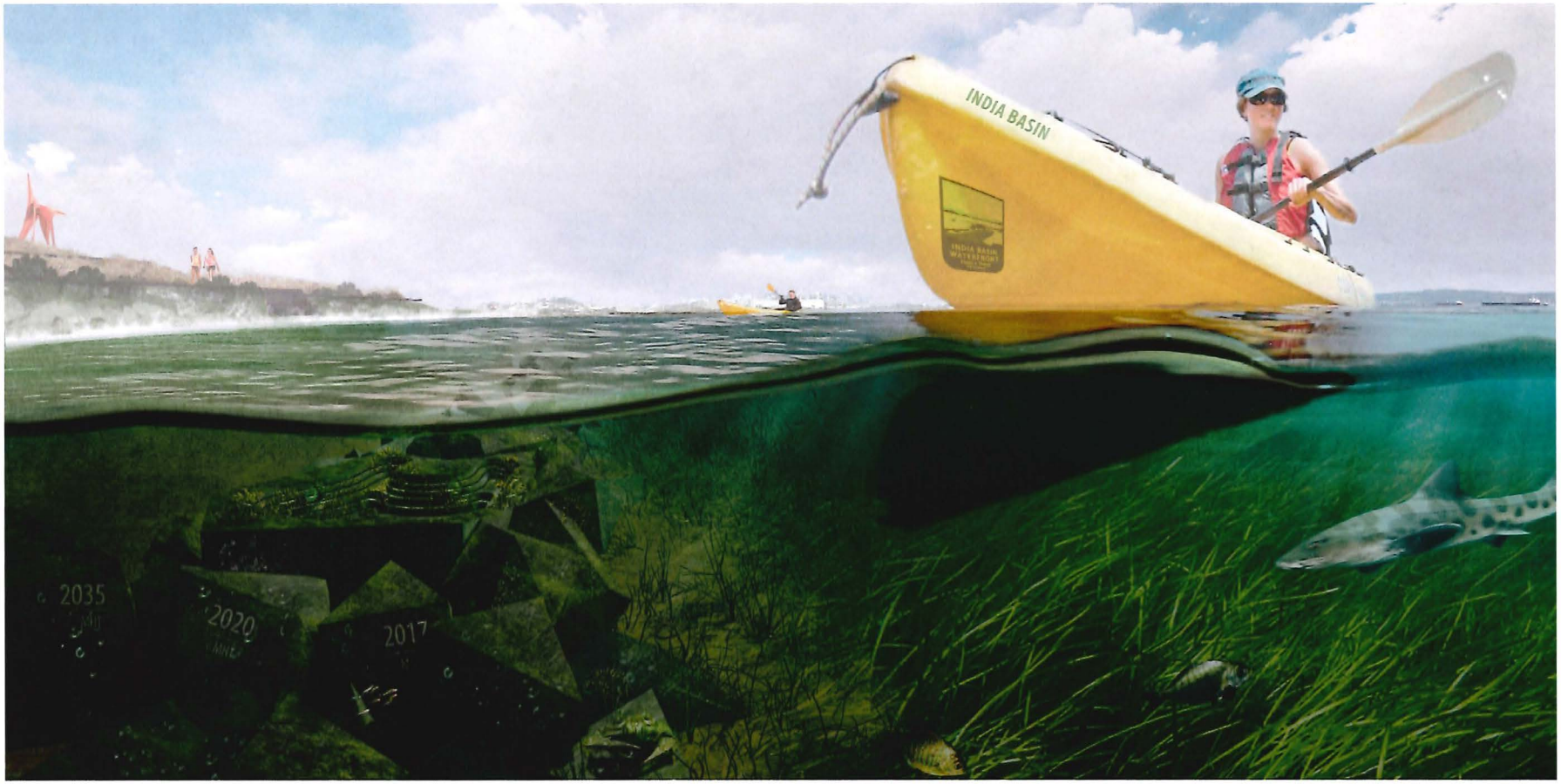


Figure 3-12: Anticipated Sea Level Rise



Shoreline Adaptation Strategies

These renderings illustrate anticipated future conditions given current sea level rise projections. As available science and data improves, these conditions may vary. The standards, guidelines and goals in this section are intended to promote habitat creation and adaptation, respect necessary areas of retreat and provide continued public access within shoreline areas. See Section 3.6 for the India Basin Trust for monitoring and adaptation planning.

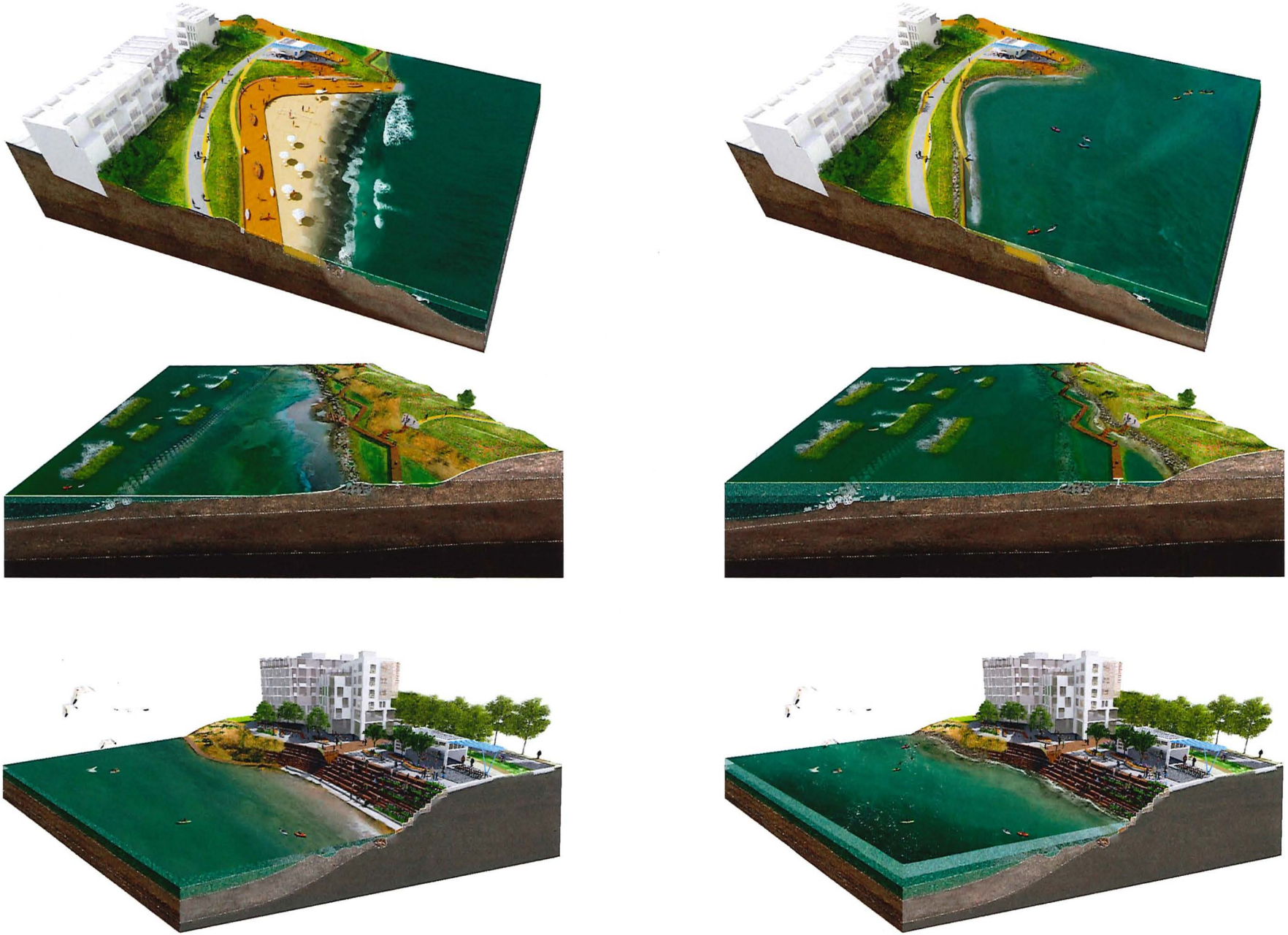


Figure 3-13: Proposed Shoreline Adaptation (See Ch. 2 for proposed condition)

To accommodate changing coastal conditions and rising tides, the shoreline area will protect the development and major infrastructure from inundation by situating these improvements at upland elevations. It will also create habitats in both the short-term and long-term through material selection for enhanced sea life, pilot projects, and upland habitat migration (Figure 3-14). Reference Shoreline Permits for more detailed description and requirements for the Shoreline areas.

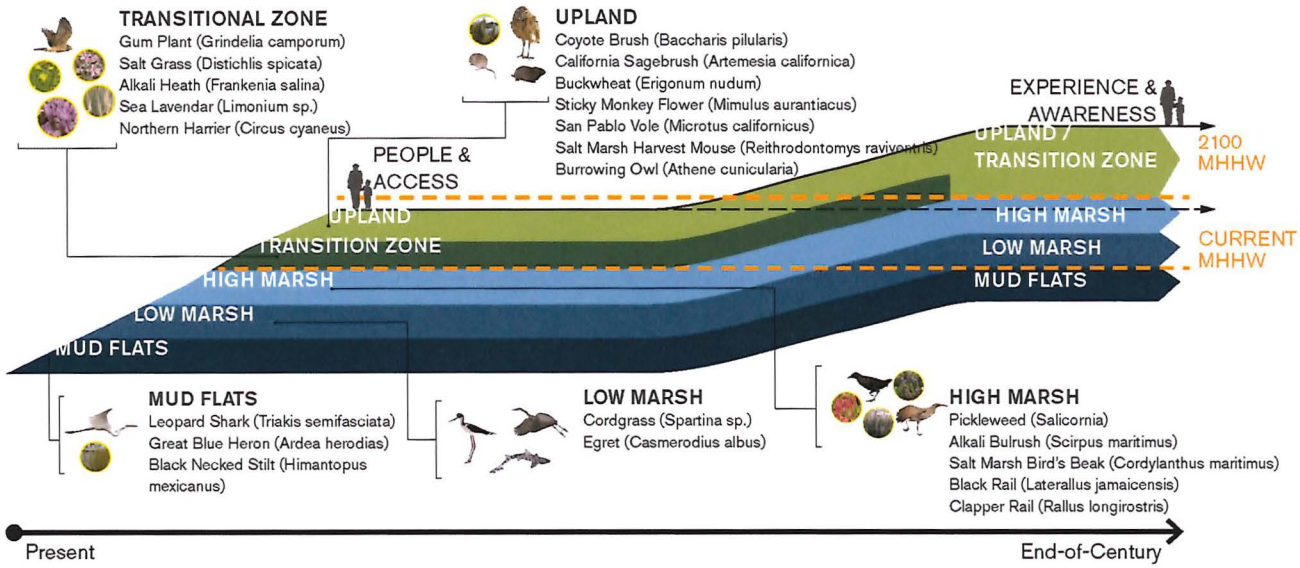


Figure 3-14: Upland Habitat Migration

Standards

3.8.1 Major Infrastructure All major infrastructure shall be located above worst case predictions for end of century, including a buffer area of at least 20 horizontal feet from top of bank for additional increases in tide levels levels.

3.8.2 Terraced Wetlands Terraced wetlands shall be located at an elevation in the northeast shoreline such that occassional inundation will occur no later than the year 2050, and frequent inundation will occur no later than the year 2075. (See Section 2.4)

3.8.3 Eel Grass Restoration The project sponsor shall pursue grant funding to install at least 3 test plots on the northwest shoreline. If pilot eel grass plots survive 2-year monitoring period, pursue grant funding for large-scale eel grass restoration bed.

3.8.4 Floating Wetlands The project sponsor shall pursue grant funding to install at least 2 floating wetlands on west shoreline as pilot project to test habitat creation and wave energy dissipation. If wetland species survive 2-year monitoring period, pursue grant funding to install as permanent habitats.

3.8.5 Shoreline Protection The project sponsor shall install shoreline protection at toe of slope to prevent erosion. The shoreline protection installation shall be at least 80% softscape.

3.8.6 Adaptation Plan The India Basin Trust will conduct frequent monitoring, and prepare an adaptation plan every 5 years including replanting, relocation of elements to higher elevations and maintenance as relevant for the shoreline to evolve and adapt over time.

Guidelines

3.8.7 Watershed Convey treated stormwater from the site to the terraced wetlands to provide a consitent flow of water during wet seasons.

3.8.8 Habitat Select a diverse range of tidal species and habitats to increase biodiversity. (See Section 2.8)

3.8.9 Tidal Marsh Existing tidal marsh and dunes shall be retained in situ.

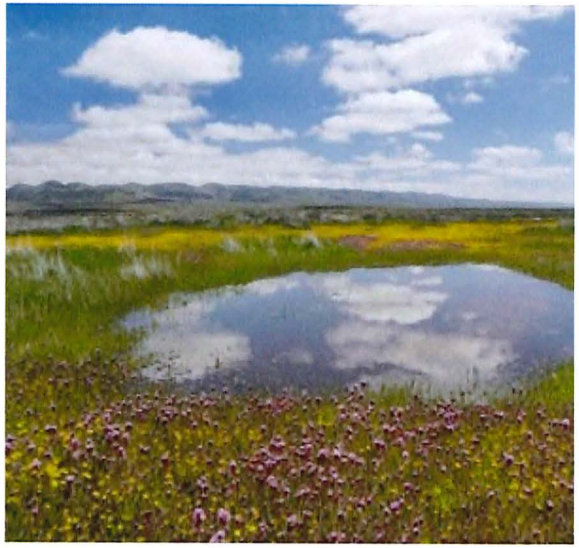
3.8.10 Structures All low-lying structures will be constructed using durable and resilient materials that can be frequently inundated for temporary periods of time.

3.8.11 Aggregate All structures in the shoreline shall include an aggregate that supports enhanced marine life to increase habitat potential in a range of conditions. (See Ch. 2 for structures and elements.)

3.8.12 Supplemental Water Supply If ground water supply is available, convey to terraced wetlands for an increased year-round water supply.

Goals

3.8.13 Substrates Use substrates and base aggregates in soil profiles throughout shoreline areas that can support tidal marsh and dune habitats in future inundated conditions.



Wetlands

Reef Balls

Sealwalls


04
COFFEE
Soup

Land Use

Chapter 04: Land Use

San Francisco is a city of vibrant mixed-use neighborhoods. Most neighborhoods in San Francisco offer residents a variety of services and amenities with a comfortable, attractive pedestrian environment and convenient access via public transit. The land use standards and guidelines detailed in the following pages support the goal of creating a vital, distinctive, and walkable neighborhood.

In order to create a complete neighborhood, India Basin includes allowance for a variety of social amenities and services including a grocery store, small scale retail and commercial spaces, and food and beverage options, in addition to a spacious public park with recreational facilities and waterfront access. A public market is the centerpiece of the neighborhood with the flexibility to accommodate a range of social activities including: farmers and craft markets, music and art festivals and large community gatherings. The land use strategy for India Basin focuses social interaction along main routes and around key open spaces. Within a comfortable walking distance for all residents, these spaces encourage neighbors and visitors to engage with and inhabit the public realm, experience the San Francisco Bay ecosystem, and enjoy community-serving amenities and services without needing to use a car.

4.1 Land Use Planning Objectives

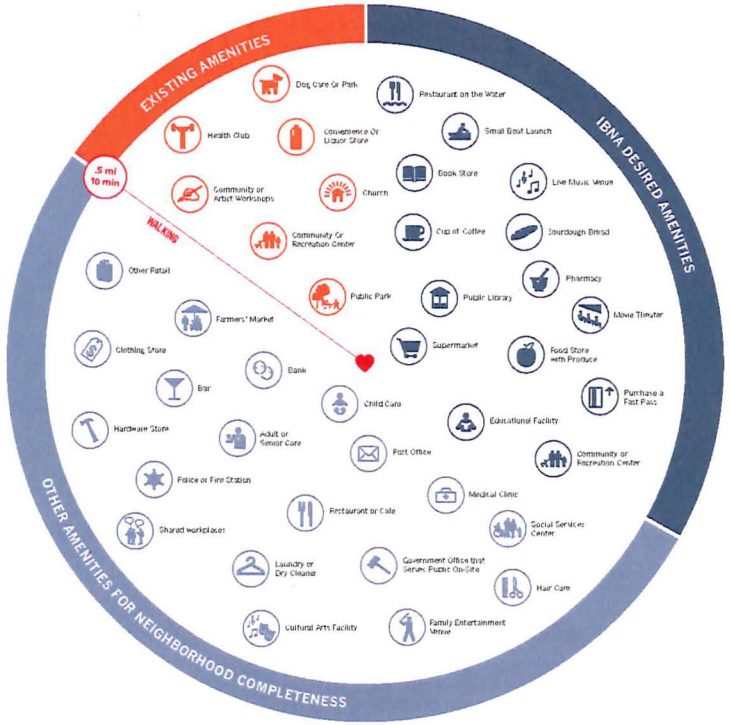


Figure 4-1: Strategy for expanding neighborhood amenities.

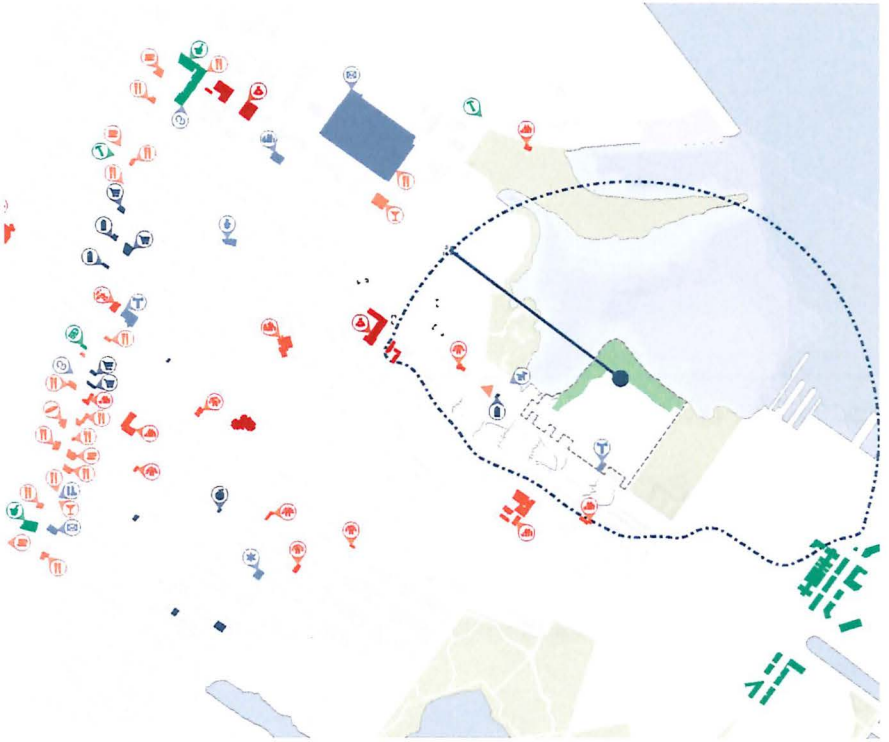


Figure 4-2: Existing Neighborhood Amenities.

4.1.1 Complete the Neighborhood

The term Neighborhood Completeness refers to the proximity of residents to daily goods, public services, and other basic amenities within a walkable distance. A growing body of evidence suggests that proximity to a critical mass of public and retail services increases the likelihood that residents and workers will walk or bike to access those services—boosting physical activity, enhancing social interactions and even improving public health. For example, research has found the presence of a supermarket in a neighborhood correlates with higher fruit and vegetable consumption and a reduced prevalence of obesity. In addition, neighborhoods with diverse and mixed uses create closer proximity between residences, employment, and goods and services. The result is reduced vehicular trips and miles traveled which, in turn, reduces air and noise pollution.

The Hunter's Point neighborhood (of which the site is a part) currently lacks many of the basic amenities commonly found in San Francisco's walkable communities. The project connects into and completes the neighborhood by adding a wide range of key public and retail services and open space assets so that the surrounding community can meet basic needs within a 10–15 minute walk. Housing, Transportation, and Recreation options are expanded as well.

4.1.2 Amenities and Open Space Programming

Open Space and amenity programming at India Basin incorporates a Basin-wide approach. To this end, the India Basin Waterfront Parks and Trails study was undertaken in 2014 to envision the future of the seven linked sites that surround the Basin: Heron's Head Park, the Hunter's Point Shoreline, India Basin Shoreline Park, 900 Innes, India Basin Open Space, 700 Innes, "Big Green," and Northside Park. All property owners were engaged in the study process.

The objective of the "India Basin Waterfront Parks and Trails Study" was to provide a comprehensive blueprint for the future of the park system and adjacent development and to ensure a complimentary mix of recreational, educational, ecological, and public services across all seven properties. The study also recommends the design of a "shared palette" for all sites so that signage/wayfinding, furnishings, lighting, and pathway design are coordinated for a seamless user experience. Other coordination benefits include building a landscape that is adaptive and resilient in the face of anticipated sea level rise, expanding public access to the Bay, and accelerating the development of the Blue Greenway.

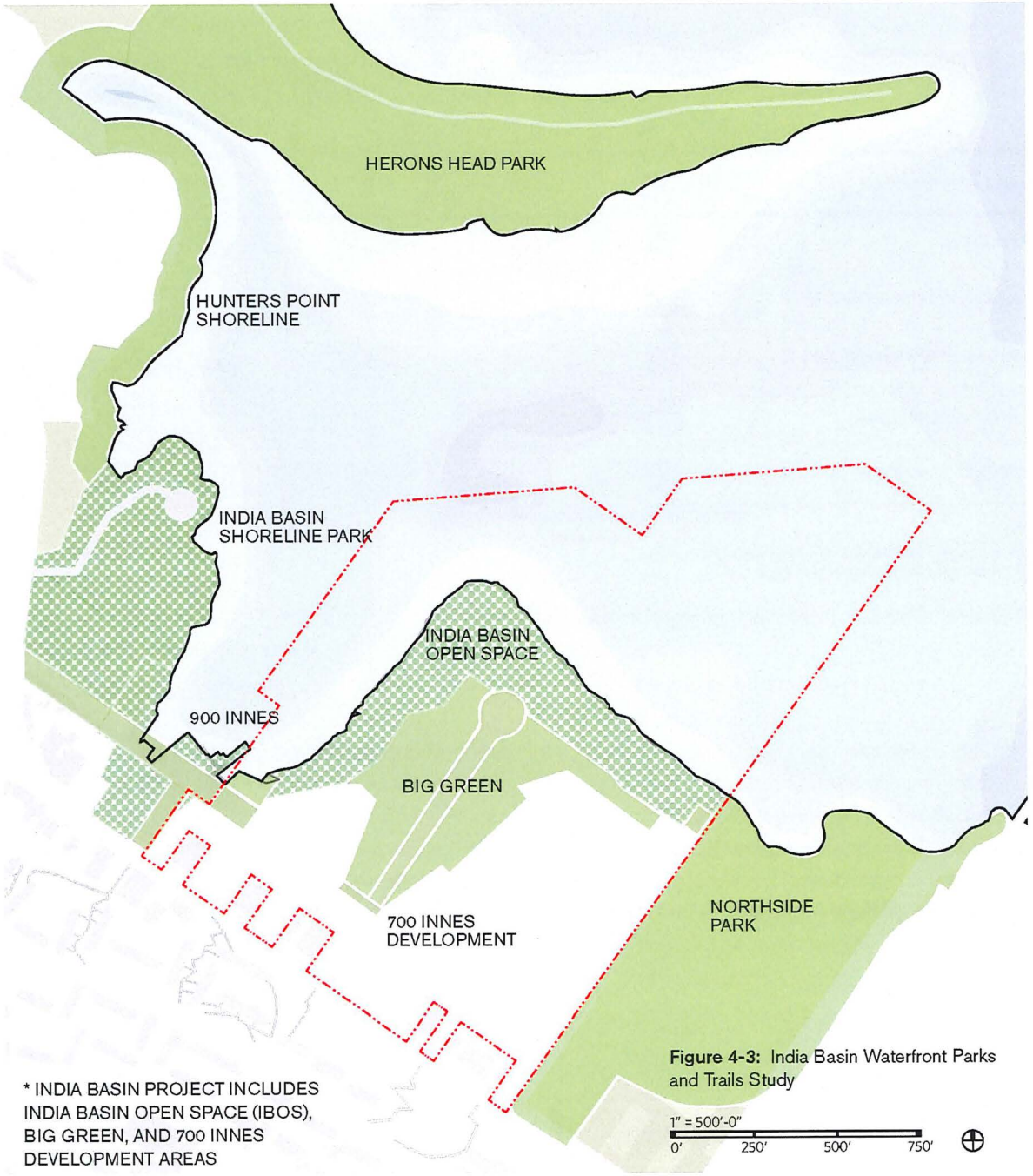


Figure 4-3: India Basin Waterfront Parks and Trails Study

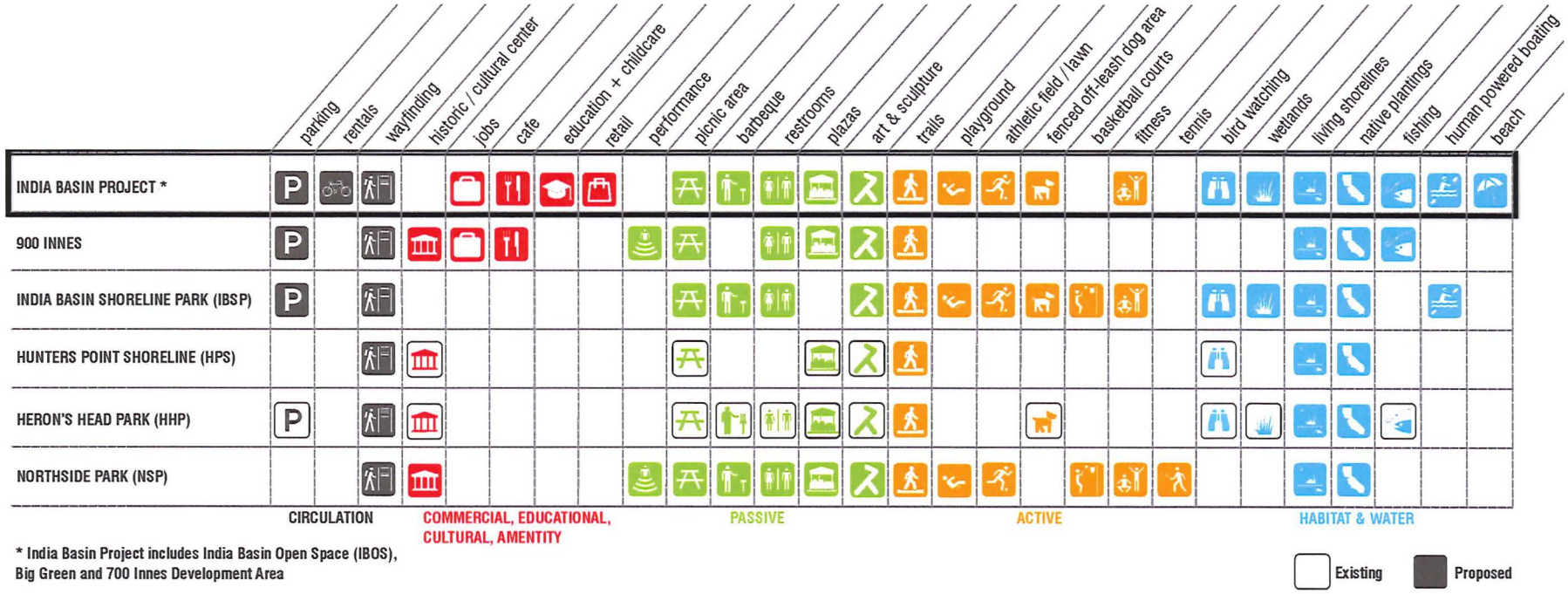


Figure 4-4: Existing and Proposed Community Services and Amenities

The recommended open space, public service, and neighborhood amenities programming for each of the seven India Basin Waterfront Parks and Trails sites is shown in Figure 4-4 above. Recommended open space, public service, and neighborhood amenities for the India Basin Project – which includes the India Basin Open Space (IBOS), Big Green, and 700 Innes Development Areas – are mapped in Figure 4-5 shown to the left. These active uses are encouraged and have been incorporated into the Land Use Standards and Guidelines on the following pages.

In addition, temporary, as well as activating and construction related uses, are permitted per Section 4.3 Permitted Uses.

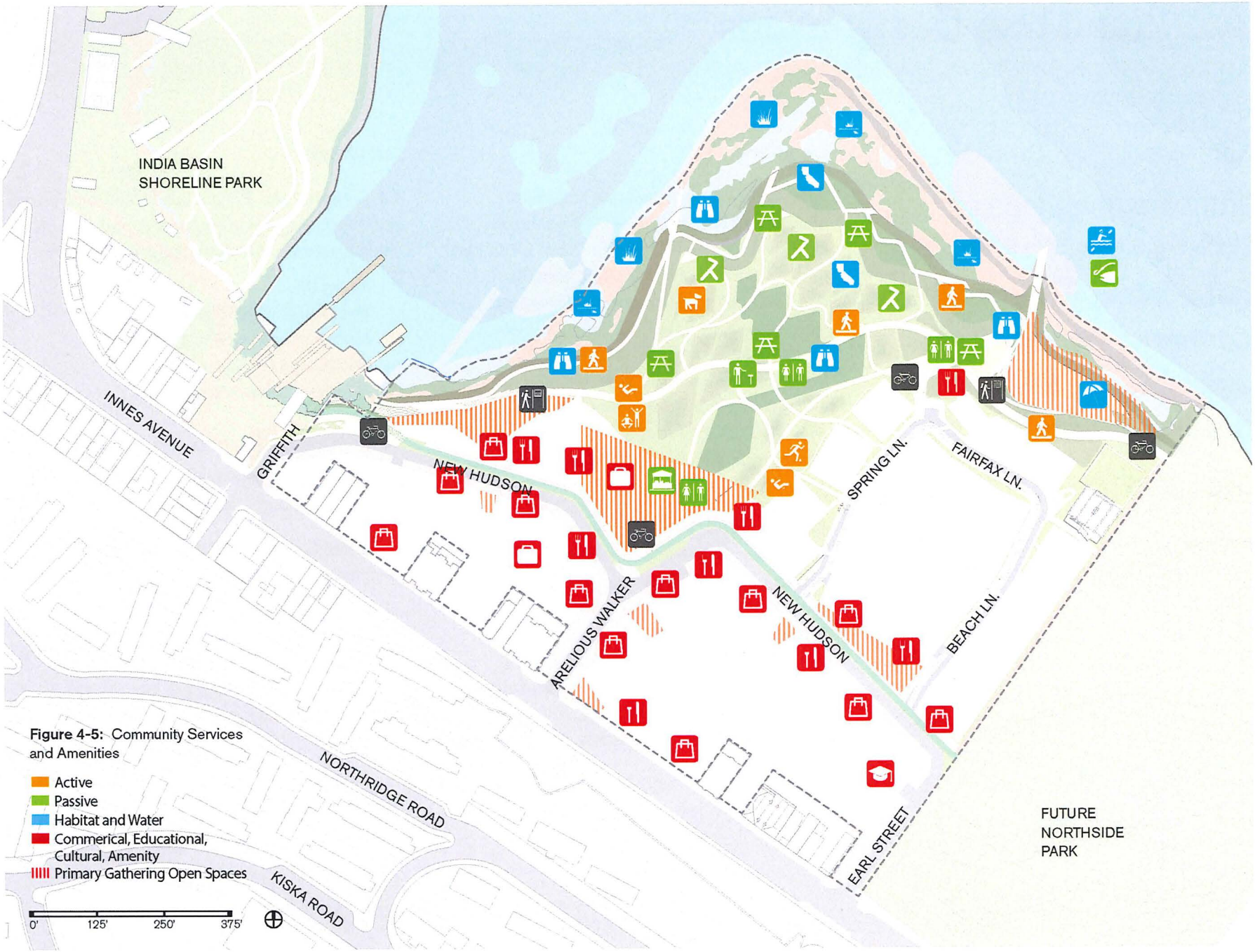


Figure 4-5: Community Services and Amenities

4.2 Land Use Designations

"Intricate minglings of different uses in cities are not a form of chaos. On the contrary, they represent a complex and highly developed form of order."

–Jane Jacobs

Land Use

The land use designations for India Basin advance a 21st Century model for a healthy, vibrant and complete neighborhood. A complete neighborhood is one that offers services and amenities to residents and visitors that are convenient and pedestrian-accessible. Employment, recreation options, and access to open space are expanded as well. It is envisioned that the development of India Basin will include a significant quantity of new, multi-family residential units in a mixed-use setting.

The allowable development program for the site was studied through the Environmental Impact Report (EIR) as a proposed project and proposed maximum commercial variant. The allowable development program, that was studied as a component under the proposed project and the project variant, includes residential space, commercial space, institutional/educational space, publicly accessible recreation/open space, and parking.

Standards

4.2.1 Land Uses Project Land Use Designations shall be as mapped in Figure 4-6, and as further described in the following pages of this section:

- Mixed Use
- Residential Mixed Use
- Multi-Family Residential
- Public Market / Town Triangle
- Privately Owned Open Space
- Public Open Space / Shoreline*

Permitted Uses within each category are described in Section 4.3.

Additional Ground Floor Use Requirements are described in Section 4.5.

* For areas within State Lands and BCDC Jurisdiction, see Standard 4.4.4 in this chapter.

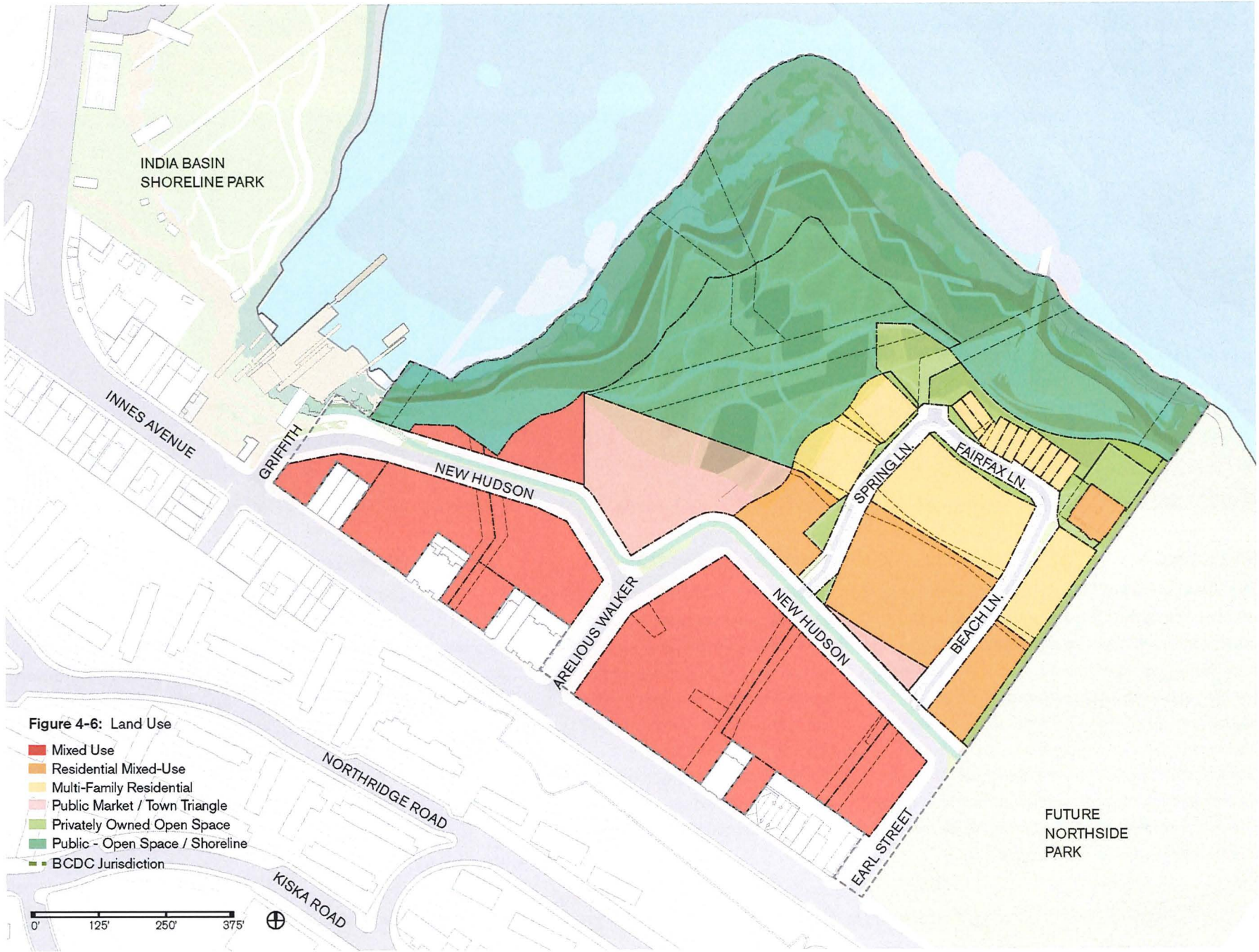
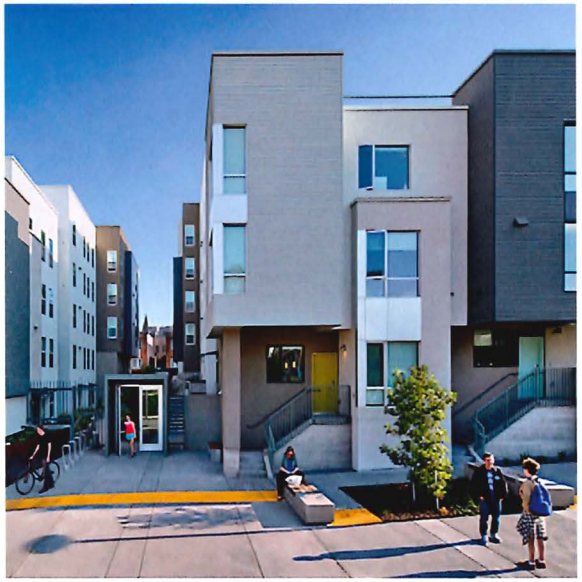


Figure 4-6: Land Use



Mixed Use

The Mixed Use designation allows a wide range of retail, restaurant, food & beverage, grocery, commercial, institutional, entertainment, and multi-family residential uses. Home and business service, arts activities, professional office space, and large-floor-plate office space are also permitted. Accessory Uses, as defined in Standard 4.3.3, include, but are not limited to, dwellings with integrated work and/or arts space and are permitted per Standard 4.3.6 Permitted and Conditional Use Table (Table 23).

Residential Mixed Use

The Residential Mixed Use designation encourages a combination of mixed-density and multi-family residential dwelling, with compatible commercial uses on the ground floor, to provide a vibrant active neighborhood with a mixed-use character. Accessory Uses, as defined in Standard 4.3.3, include, but are not limited to, dwellings with integrated work and/or arts space and are permitted per Standard 4.3.6 Permitted and Conditional Use Table (Table 23).

Multi-Family Residential

The Multi-Family Use designation is intended primarily for mixed-density, multi-family and single-family attached (townhouse) residential dwellings as outlined in Standard 4.3.6 Permitted and Conditional Use Table (Table 23). Accessory Uses, as defined in Standard 4.3.3 are also permitted.

Public Market / Town Triangle

The Public Market and the Town Triangle are privately-owned and managed, but are publicly-accessible areas at the center of the project and adjacent to new Hudson Street. The Public Market and Town Triangle provide the social heart of the neighborhood with the flexibility to accommodate a range of activities. Emphasis for these land use designations is on retail, food and beverage uses, and civic and cultural events to activate the adjacent open space. Design of and programming for the Public Market and the Town Triangle are further detailed in Chapter 2: Public Realm and Open Space. Accessory Uses and Permitted and Conditional Uses shall be per 4.3.3 and 4.3.6 (Table 23).

Privately Owned Open Space

Privately Owned Open Spaces are small open space parcels located in the Flats which are associated with adjacent residential or residential mixed use parcels. These Privately Owned Open Space parcels shall provide space for bioretention, surface water treatment, as well as pocket plazas and parklets intended for activating the shared streets and providing incidental gathering spaces for the residents of India Basin. The Privately Owned Open Spaces are further detailed in Chapter 2: Public Realm and Open Space. Accessory Uses and Permitted and Conditional Uses shall be per 4.3.3 and 4.3.6 (Table 23).

Public - Open Space / Shoreline

The Public Open Space and Shoreline area will be owned by the City and provide public open space use per Section 4.3 Permitted Uses. The Public Open Space shall emphasize active recreation, sports and fitness uses, community gathering, and environmental functions. The Shoreline will have a focus on passive recreation and waterfront access. Areas within the Shoreline that fall under BCDC Jurisdiction shall comply with BCDC standards and shall include a range of accessible water-oriented recreational activities and facilities. Design of and programming for these two areas is further detailed in Chapter 2: Public Realm and Open Space.

4.3 Permitted Uses

Standards

4.3.1 Uses, Defined All use definitions shall be per Section 102 of the San Francisco Planning Code and shall follow the Principal, Conditional, and Accessory Use designations as outlined in the Planning Code in Section 202 and further defined in these standards and guidelines (4.3.2 through 4.3.5).

4.3.2 Permitted and Conditional Uses Permitted and Conditionally permitted uses in India Basin shall be governed by the Permitted and Conditional Use Table on the following pages (Standard 4.3.6 and Table 23) and in the India Basin SUD. Where there are conflicts between the DSG and the SUD, the SUD shall prevail. Procedures, criteria, and other provisions pertaining to Conditional Uses are detailed in the City of San Francisco Planning Code Section 303.

4.3.3 Accessory Uses An Accessory Use is a related minor use, located on the same lot, that is either necessary to the operation or enjoyment of a lawful principal use or conditional use, or appropriate, incidental, and subordinate to such use. Accessory uses shall comply with the provisions of the San Francisco Planning Code Sections 204.0-204.2. and Section 204.4. The San Francisco Planning Department shall interpret requests for potential Accessory Uses that have not been listed in the Permitted and Conditional Use Table or are not included in any Planning Code Interpretations.

4.3.4 Temporary Uses Temporary Uses may be authorized without a public hearing by the General Manager or the Planning Director (as applicable per the SUD) for a period not to exceed 90 days and shall comply with any other provisions of the India Basin SUD. Temporary Uses include but are not limited to booths for charitable, patriotic, or welfare purposes; markets; exhibitions, festivals, circuses, musical and theatrical performances and other forms of live entertainment including setup/load-in and demobilization/load-out; athletic events; open-air sales of agriculturally-produced seasonal decorations such as Christmas trees and Halloween pumpkins; meeting rooms and event staging; mobile food on private property and temporary retail establishments.
A Temporary Use may be extended for another 90 days, pursuant to the requirements in the SUD. Additionally, recurring Temporary Uses (such as a farmers market) may be approved under a single authorization. Temporary Use Authorizations for items not listed here may be granted upon determination that the proposed use is necessary or desirable to the neighborhood, has no negative impact and adheres to the San Francisco General Plan and the intent of this Design Standards and Guidelines.

4.3.5 Interim and Construction Related Uses Interim and Construction Related Uses shall be uses integral to the development which may be authorized for any parcel without a public hearing for a period not to exceed five years pursuant to the requirements outlined in the SUD. Uses in this category shall include but are not limited to:

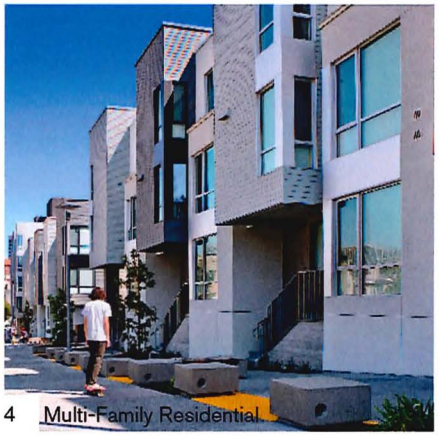
- Retail activities which may include the on-site assembly, production or sale of food, beverages and goods, the operation of restaurants or other retail food service in temporary structures, outdoor seating, food trucks, and food carts.
- Temporary art installation, exhibits, and sales.
- Recreational facilities and uses (such as play and climbing structures and outdoor fitness classes).
- Motor vehicle and bicycle parking
- On-site assembly and production of goods in enclosed or unenclosed temporary structures.
- Education activities, including but not limited to, after-school day camp and activities; outdoor educational activities.
- Site management service, administrative functions and customer amenities and associated loading.

- Rental or sales offices incidental to new development;
- Entertainment uses, both unenclosed and enclosed, which may include temporary structures to accommodate stages, seating, and support facilities for patrons and operations.
- Trailers, recreational vehicles, or other temporary housing for construction workers, seasonal labor, or other workforce employment needs.

1 Residential Mixed-Use

2 Mixed-Use


3 Public Use - Plaza


4 Multi-Family Residential


5 Public Market

4.3.6 Permitted and Conditional Use Table The table below shall govern permitted and conditional uses at India Basin. The land use sub-zone in each table column header shall refer to a land use designation as defined in Section 4.2 and located on Figure 4-6 Land Use. Each use listed under the "use" column shall represent a use category described in Section 102 and as conditioned in 202.2 of the San Francisco Planning Code; unless otherwise noted, include all subsidiary definitions thereof. In general, these uses shall be either principally permitted (P) or not permitted (NP). All notes and exceptions are listed on the far-right column and shall account for any conditional use permits or departures from standard San Francisco Planning Code language.

Use	Mixed Use	Residential Mixed Use	Multi-Family Residential	Public Market / Town Triangle	Privately Owned Open Space	Public		Notes and Exceptions
						Open Space	Shoreline	
Agriculture Use	P[1,2]	P[1,2]	P[1,2]	P[1]	P[1]	P[1]	P[1]	1 Use permitted with the exception of Large Scale Urban Agriculture and Industrial Agriculture. 2 Use permitted with the exception of Greenhouses.
Automotive Use	NP[3]	NP[3]	NP[3]	NP	NP	NP	NP	3 Use not permitted with the exception of Public and Private Parking facilities.
Entertainment, Arts & Recreation Use	P[4,5]	P[4,5]	P[5,6]	P[5,6]	NP	P[5,6,7]	P[5,6,7]	4 Use permitted with a maximum limit of three screens for any Movie Theater use. 5 Use permitted with the exception of Livery Stables and Sports Stadiums. 6 Use permitted with the exception of Movie Theater and Nighttime Entertainment. 7 Use permitted with the exception of Open Recreation and Outdoor Entertainment which are only permitted as temporary uses, see Standard 4.3.4: Temporary Uses.
Industrial Use	NP[8]	NP[8,9]	NP[3]	NP	NP	NP	NP	8 Use not permitted with the exception of Cat Boarding, Kennel, Light Manufacturing, Metal Working, Parcel Trade Office, Trade Shop, Animal Processing 1, and Food Fiber and Beverage Processing 1. 9 Use not permitted except on Ground Floor.

Table 23. Permitted and Conditional Use Table

KEY:
(P) PRINCIPALLY PERMITTED
(NP) NOT PERMITTED
ALL SUPERCRIPT NUMBERS NEXT TO EACH P OR NP ARE DEFINED UNDER THE "NOTES AND EXCEPTIONS" COLUMN.

Use	Mixed Use	Residential Mixed Use	Multi-Family Residential	Public Market / Town Triangle	Privately Owned Open Space	Public		Notes and Exceptions
						Open Space	Shoreline	
Institutional Use	P[10]	P[11]	P[11,12]	NP[13]	NP	NP[13]	NP[13]	10 Cannabis Dispensary permitted with Conditional Use Permit. 11 Use permitted with the exception of Cannabis Dispensary and Hospital. 12 Use Permitted with the exception of Job Training, Trade School, and Post-Secondary Educational Institution. 13 Use not permitted with the exception of Public Facilities.
Residential Use	P	P	P	NP	NP	NP	NP	
Sales and Services, Non-Retail Use	P[14]	P[14]	NP	NP	NP	NP	NP	14 Use permitted with the exception of Laboratory, Life Sciences, Commercial Storage, Wholesale Sales, and Wholesale Storage.
Sales and Services, Retail Use	P[15]	P[15,16]	NP	NP[17]	NP	NP[17]	NP[17]	15 Use permitted with the exception of Adult Business, Mortuary, Limited Financial Service, Self-Storage and Tobacco Paraphernalia Store. 16 Use permitted with the exception of Animal Hospital, Fringe Financial Services. 17 Use not permitted with the exception of Grocery, Food and Beverage uses.
Utility and Infrastructure Use	NP[18, 19]	NP[18, 19]	NP[18, 19]	NP[19]	NP[19]	NP[18, 19]	NP[19]	18 Use not permitted with the exception of Internet Service Exchange, Wireless Telecommunication Services (WTS) Facility which shall be permitted with a Conditional Use permit . 19 Use not permitted with the exception of Utility Installation which shall be permitted.

KEY:

(P) PRINCIPALLY PERMITTED
(NP) NOT PERMITTED
ALL SUPERCRIPT NUMBERS NEXT TO EACH P OR NP ARE DEFINED UNDER THE "NOTES AND EXCEPTIONS" COLUMN.

4.4 Other Uses

Guidelines

4.4.1 Site for Potential School To encourage families with young children to live at India Basin, a site has been identified for the potential creation of a child care facility, pre-school or K-8 school. Proximate public open space may be considered for meeting open space requirements.

4.4.2 Other Uses If a use is not specifically identified in Table 23: Permitted and Conditional Use Table and is not listed as an excluded use, the San Francisco Planning Department shall have the authority to determine whether such use is compatible with the intent of the district and consistent with the approach to land use. The determination shall be based upon the use characteristics and compatibility of that use with the intent of these design standards and guidelines. The Planning Department shall interpret the meaning and appropriateness of uses.

4.4.3 Neighborhood Compatibility Non-residential uses must not pose a nuisance to surrounding residential users with regard to incompatible hours of operation, noise, light pollution, odor, reduction of air quality, or construction related activities or else they are prohibited. With the exception of temporary construction related to building permits which shall be subject to MMRP and other existing City and State Codes, no use shall be permitted which by reason of its nature or manner of operation creates conditions that are hazardous, noxious or offensive through emission of odor, fumes, smoke, cinders, dust, gas, vibration, glare, refuse, water-carried waste, or excessive noise.

4.4.4 State Lands and BCDC Jurisdiction Lands designated as State Lands – held in trust by the State for the benefit of the people of California – shall comply with State Lands regulations. Lands within BCDC jurisdiction shall comply with BCDC standards for use and shall include a range of accessible water-oriented recreational facilities.

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1. Special Event
2. The Yard at Mission Rock
3. Food Trucks
4. Temporary Event Space
5. Temporary Retail

4.5 Ground Floor Use Requirements

Ground Floor Use Requirements

The character of a neighborhood is most visible in the activity of the street. India Basin features streets of varying types and levels of activity, differentiated by function within the circulation network, as well as by configuration and adjacent uses. The purpose of this section is to promote clearly-defined, active, pedestrian-oriented street frontages. The character of India Basin is reinforced by the ground floor use, which affects the degree of activity and the range of likely users.

Standards

4.5.1 Active Ground Floor Uses, Defined An Active Ground Floor Use shall mean a principal, conditional, or accessory use as outlined by Table 23: Permitted and Conditional Use Table and Standard 4.3.6, that by its nature does not require non-transparent walls facing a public way or involve the storage of goods or vehicles. Active Ground Floor Uses at India Basin are specified as follows:

Type A: Type A includes permitted principal, conditional, and accessory uses within the Entertainment, Arts and Recreation Use and the Sales and Services, Retail Use categories.

Type B: Type B includes permitted principal, conditional and accessory uses within the Sales and Services, Non-Retail Use and the Institutional Use categories. Ground Floor building lobbies are active uses, so long as they do not exceed 40 feet or 25 percent of building frontage in width, whichever is smaller.

Type C: Type C includes the Residential Use category if and only if the ground level features private terraces, stoops, or walk-up dwelling units with direct, individual pedestrian access to a public sidewalk, and frontage design consistent with the controls in Chapter 5 Urban Form and Chapter 6 Architecture of these Design Standards and Guidelines as well as the Ground Floor Residential Design Guidelines, as adopted and periodically amended by the Planning Commission. Ground Floor space accessory to residential uses (such as fitness or community rooms) are active uses if they meet the intent of this section and have access directly to the public sidewalk or street. Ground Floor building lobbies are active uses, so long as they do not exceed 40 feet or 25 percent of building frontage in width, whichever is smaller.

4.5.2 Where Required Active Ground Floor Uses focus street activity along major routes and in key public spaces. All parcels at India Basin shall comply with Active Ground Floor Use requirements where illustrated in Figure 4-7 and follow the corresponding use types as defined in standard 4.5.1 of these Design Standards and Guidelines. The 85% Frontage called for in Figure 4-7 shall be calculated using the streetwall lengths identified in Figure 5-23, as dimensioned in the Parcel Control Plan (Section A.1).

4.5.3 Active Ground Floor Use Depth Where required by Figure 4-7, Active Ground Floor Uses, shall be provided in the first 25 feet of building depth from any façade fronting directly onto a street, right-of-way, or publicly accessible open spaces.

4.5.4 Ground Floor Height Where required by Figure 4-7, Active Ground Floor Uses, Type A and Type B shall have a minimum floor-to-floor height of 15 feet.

4.5.5 Street-facing Access Requirement Street-facing ground-level space housing non-residential active uses in hotels, office buildings, shopping centers, and other large buildings shall open directly onto the street. Such required street-facing entrances shall remain open to the public during business hours.

Guidelines

4.5.6 Street-Facing Ground Level Space The floor level of street-fronting, non-residential Active Ground Floor Uses and lobbies shall be as close as possible to the level of the adjacent sidewalk at the principal entrance to these spaces.

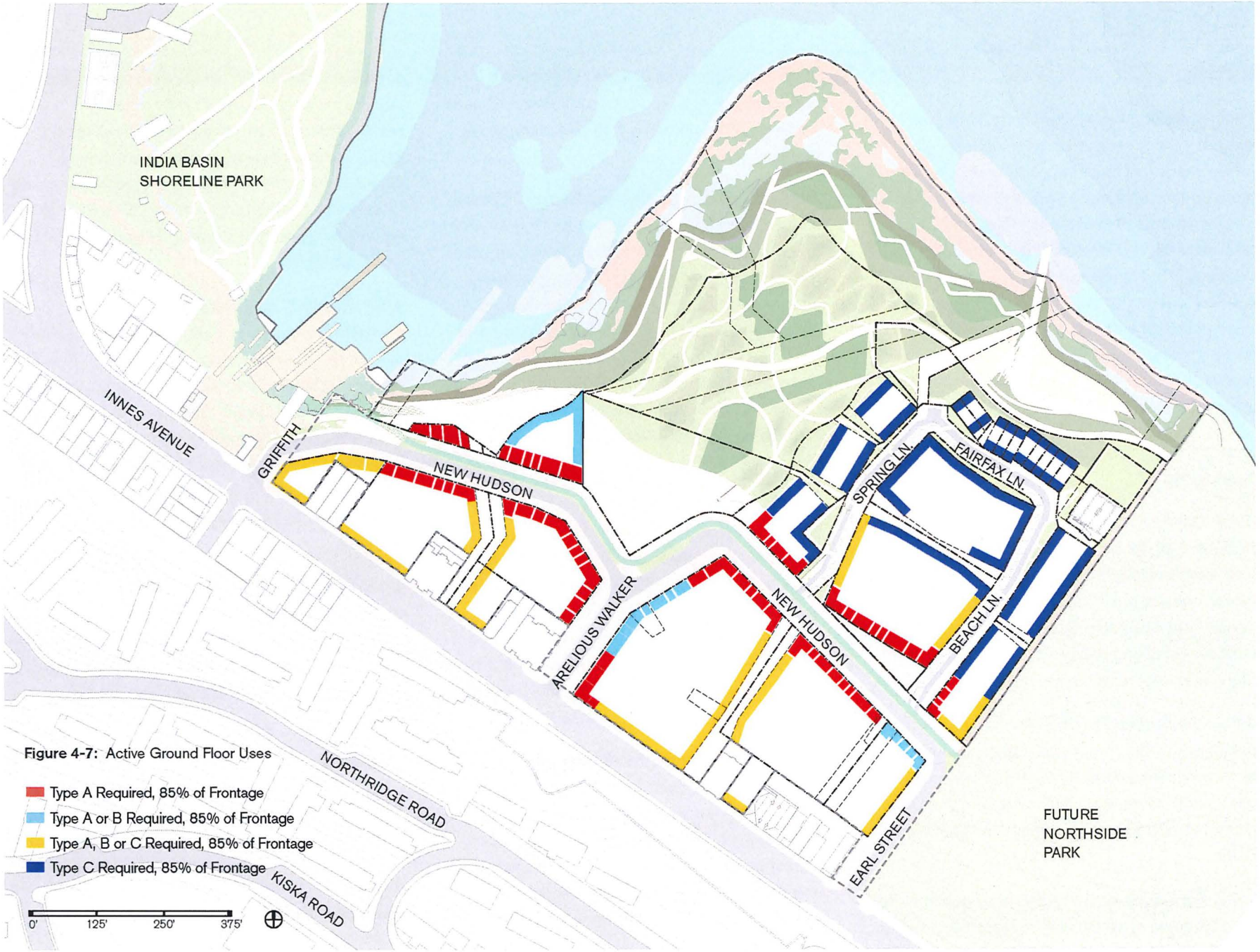

Figure 4-7: Active Ground Floor Uses

4.6 Parking

Parking

Parking supports urban functions. However, reducing the presence of automobiles in the public realm makes streets and open spaces more comfortable, attractive, and welcoming for pedestrians. Adequate parking, loading, and servicing is provided to accommodate demand, but in a manner that minimizes the visible presence of cars. Figure 4-8 describes the location of garages, perimeter treatment and entrance/egress strategies used to conceal parking from view, while providing comfortable, intuitive access to garage structures.

Standards

4.6.1 Off-Street Parking Quantity Off-street parking shall not be required for any use. Parking shall be provided at a rate of 1 space for every 1 residential unit and 1 space for every 250 gross square feet of commercial area. In no event shall structured parking exceed 1,800 stalls. Parking ratios and requirements are outlined in the SUD.

4.6.2 Unbundled Parking Any off-street public parking provided for non-residential use shall be unassigned and shall be shared among such uses within the project. Off-street parking space maximum ratios shall be outlined in the project's SUD.

4.6.3 Parking Location Off-street parking shall be located where indicated in Figure 4-8 and shall be below grade, except for the portions permitted to be above grade indicated in Figure 4-8, concealed by required ground floor active uses, and exceeding no more than one story above grade.

4.6.4 Above-Grade Parking Setback Where shown in Figure 4-8, off-street parking at street grade shall be set back at least 25 feet on the ground floor from any facade facing a street, public open space or parcel break. Parking above the ground level shall be screened from public rights-of-way and parcel breaks in a manner that accentuates ground floor uses, minimizes mechanical features and is in keeping with the architectural vocabulary of the building.

4.6.5 Vehicular Entry/Exits, Placement and Spacing Vehicular entrance and exits to/from parking and loading facilities shall be located no closer than 45 feet to any street corner and/or any intersection, whichever applies, as measured from the nearest vehicular lane edge at the corresponding corner or intersection. No more than one-third of the width or 24 feet, whichever is less, of any given parcel face shall be devoted to parking and loading ingress or egress.

4.6.6 Vehicular Entry/Exits, Dimensions and Design Vehicular entrances and exits to/from parking facilities shall have a maximum linear width of 10'-0" parallel to the street if accommodating one-way travel, and maximum linear width of 20'-0" parallel to the street if accommodating two-way travel. Entrances and/or exits that are shared with loading and service access may be 12'-0" wide when accommodating one-way travel and 24'-0" wide when accommodating two-way travel. Street-facing garage structures and garage doors may not extend closer to the street than a primary building façade and shall comply with all urban form and architecture controls in these Design Standards and Guidelines.

4.6.7 Ground Level Parking So as not to preclude the conversion of parking space to other uses in the future, parking at the ground-level shall not be sloped, the floor shall be aligned as closely as possible to sidewalk level along the principal pedestrian frontage and/or to those of the street-fronting commercial spaces. Ground Level parking structures shall have a minimum clear ceiling height equal to that of street-fronting commercial spaces.

4.6.8 Egress to Public Realm A minimum of one separate, dedicated pedestrian entrance, visible and accessible from a public right-of-way, parcel break, or public open space shall be provided for the users of each off-street parking facility.

Guidelines

4.6.9 Vehicular Entry/Exits, Shared Vehicular entry and exits for parking and loading shall be shared wherever possible to reduce interference with street-fronting active uses as well as with the movement of pedestrians, cyclists, transit, and autos.

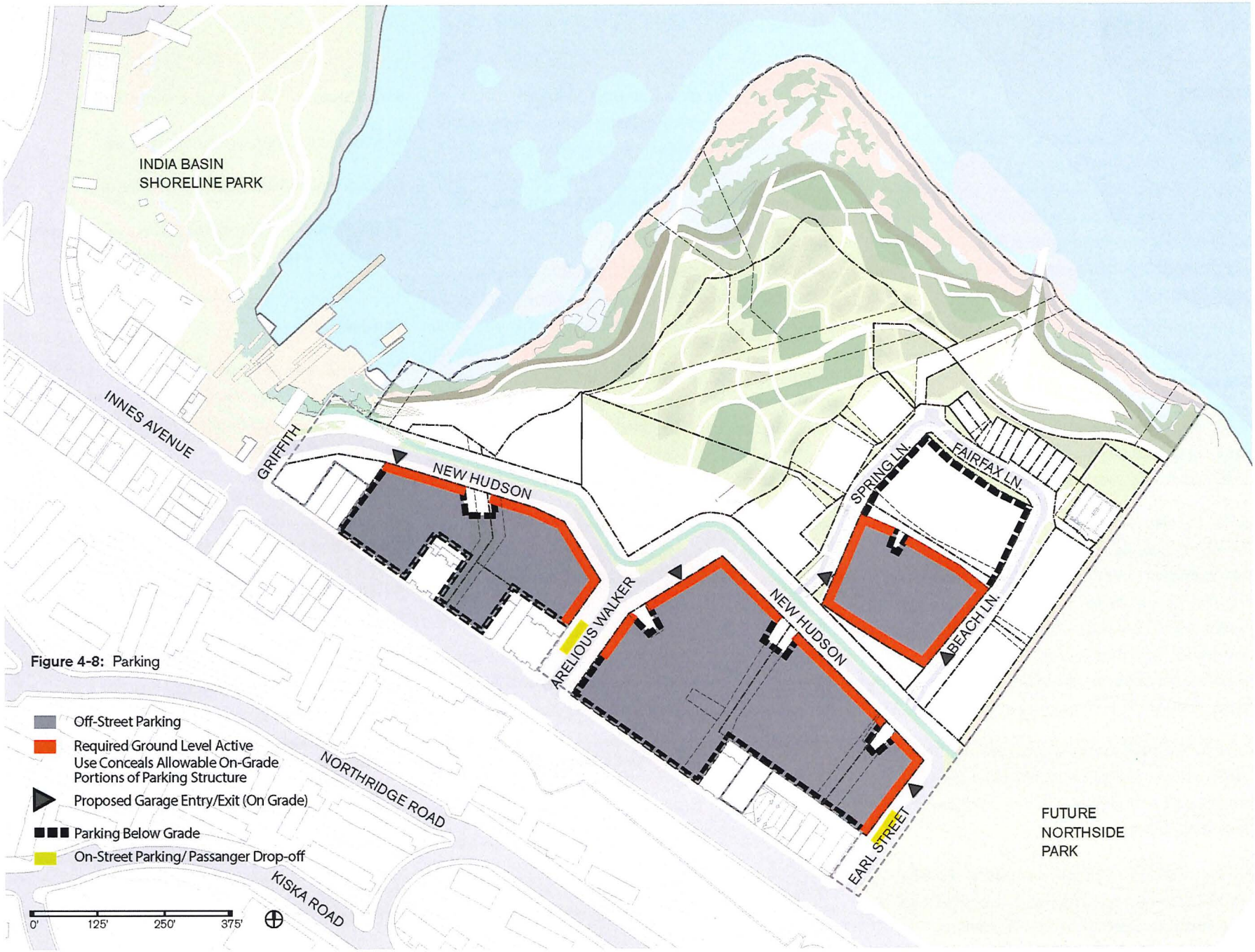

Figure 4-8: Parking

4.7 Loading

Loading

Adequate loading spaces and facilities are necessary to the operation of a complete neighborhood. India Basin will accommodate loading in a seamless, space-efficient manner that services its range of programs effectively while upholding the pedestrian-focused design of the neighborhood.

Standards

4.7.1 Shared Loading Spaces Loading spaces shall be shared across uses and may not be assigned to any particular use or tenant.

4.7.2 Off-Street Loading Space Quantities Off-street loading spaces shall be provided in the quantities specified on "Table 24. Required Loading Space Table" and allocated as shown in Figure 4-9. These quanities are required amounts and providing either less or more than the specified amounts shall require an Active Loading Management Plan as outlined in Standard 4.7.7.

4.7.3 Off-Street Loading Locations Off-street loading spaces shall be located in the same project sub area (Hillside, Cove, and Flats) as the uses they serve.

4.7.4 Loading Entry/Exit Locations Loading entries shall comply with 4.6.5, 4.6.6, and 4.6.9 of these Design Standards and Guidelines.

4.7.5 Subterranean Loading Where subterranean service delivery loading is provided, the loading space shall be located no lower than the first subterranean level. The first subterranean level is defined as one story below the point of entry at grade.

4.7.6 Public Market Vehicular Access and Loading There shall be a vehicular loading access route to the Public Market where shown on Figure 4-9 at the raised table top intersection of Arelious Walker and New Hudson. Public Market loading shall be limited to loading related to the permitted and conditional Public Market uses as outlined on Table 23 and Chapter 4 of these Design Standards and Guidelines.

4.7.7 Active Loading Management Plan Exceptions to the specified loading space quantities shown on Table 24 and or modifications to Standards and Guidelines 4.7.1-4.7.116 and 4.7.8-4.7.11 shall require the submittal of an Active Loading Management Plan by the project sponsor to the Planning Department and SFMTA for their review and approval. The Active Loading Management Plan shall, at a minimum:

a) Indicate location of loading spaces.

b) Coordinate loading hours of joint use.

c) Satisfy the loading demands equal to or better than the Standards and Guidelines.

Guidelines

4.7.8 Loading Access Points To minimize conflicts with pedestrians and bicyclists, the number of loading access points per building shall be kept to a minimum.

4.7.9 Pedestrian Right-of-Way Pedestrian movement shall be prioritized at curb cuts through the use of a continuous material treatment.

4.7.10 Exterior Loading Docks Exterior loading docks shall be prohibited.

4.7.11 Waste Collection Exterior waste collection shall be prohibited.

	Off-Street Loading Spaces	On-Street Loading Spaces	Total
Cove	5	9	14
Hillside	7	9	16
Flats	2	2	4
Total	14	20	34

Table 24. Required Loading Space Table

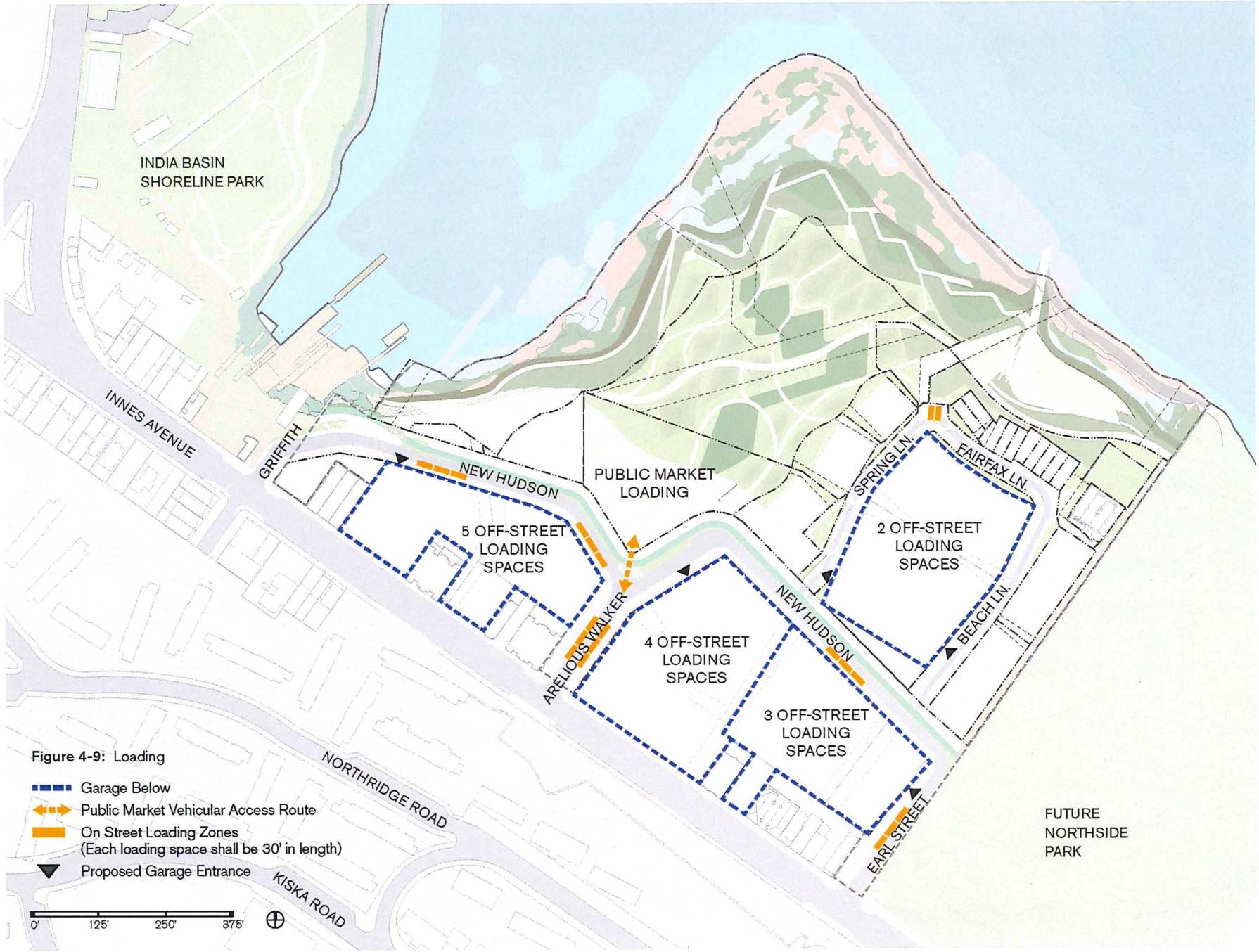

Figure 4-9: Loading

05

"We are continuously engaged in the attempt to organize our surroundings, to structure and identify them. Various environments are more or less amenable to such treatment. When reshaping cities it should be possible to give them a form which facilitates these organizing efforts rather than frustrates them."

– Kevin Lynch, *The Image of the City*

Urban Form

Chapter 05: Urban Form

This chapter delineates the Standards and Guidelines for Urban Form, including parcels and parcel breaks, protected view corridors, height limits, massing and bulk controls, streetwall requirements, setbacks, and stepbacks.

As a pedestrian-priority community, India Basin is intended to be experienced at a walkable pace. This requires the calibration of Form, Proportion, Articulation, Variation, Modulation, Depth, Materiality, Texture, and Color of physical elements to the speed, range and capabilities of human sensory perception. Detail has been focused on the zone of experience in the public realm – to the open space edges, rights-of-way, lower-floors of buildings and to the threshold interface between public and private.

Collectively, the Urban Form requirements focus density near transit and amenities, create places that are appropriately scaled, shield public spaces from prevailing winds to promote comfort, and form a varied and visually appealing skyline. Massing and scale of development steps down gradually from Innes Avenue towards the waterfront, accentuating India Basin's topography, intuitively guiding people to the San Francisco Bay.

5.1 Parcels and Parcel Breaks

Parcels and Parcel Breaks

Development Parcels and Parcel Breaks at India Basin are configured to connect parcels with public rights-of-way, open spaces, and to create an intuitive and highly-permeable circulation network, featuring a variety of engaging routes. To achieve a diversity of uses, typologies, and scales within the development, the site is subdivided into parcels that vary in size and shape.

Micro-parcels along the northern edge of the flats complete the transition in scale from Innes Avenue down to the waterfront. These micro-parcels provide an opportunity to express variety and design creativity by way of individually-articulated residential units.

Standards

5.1.1 Parcels Parcels delineating the limits of properties are shown in Figure 5-1and organized by project subareas: Cove (C), Hillside (H), Flats (F) and Open Space (OS). Percise configurations and dimensions shall be as shown in the Parcel Control Plan in Section A.1 of the appendix. All dimensions in the Parcel Control Plan shall govern unless further amended by the Subdivision Map.

5.1.2 Parcel Breaks Parcel Breaks shall exist where two or more parcels meet or along the sides of a single parcel to provide dedicated, unobstructed access areas and throughways as shown in Figure 5-1. Parcel Breaks shall be the property of the parcel(s) over which they appear and shall belong to that/those parcel(s) to the extents defined by the parcel break lines and property lines as shown in Figure 5-1and as dimensioned in the Parcel Control Plan. Buildings are prohibited within parcel breaks with the exception of the below-grade (or partially below-grade) garage structures, allowable encroachments, and public realm and open space elements, all as defined in these Design Standards and Guidelines. Parcel breaks shall fall into four major categories:

- Public Access Parcel Breaks
- Courtyard Access Parcel Breaks
- Transit Plaza Parcel Break (See 5.1.3)
- Maintenance Access Easement

5.1.3 Transit Plaza Parcel Break The Public Transit Parcel Break shall be located at the base of the tower in parcel H1 at the corner of Innes Avenue and Arelious Walker. It shall hold a clear height for at least the first 20'-0" from grade and have a minimum occupiable area of 1,500 square feet. This parcel break shall have a maximum depth of 35' measured perpendicularly from the parcel line on Innes Ave.

5.1.4 Encroachments in Parcel Breaks All parcel breaks shall be open to the sky with the exception of permitted overhangs, canopies, allowable building projections for setbacks and streetwalls, and other provisions outlined in these Standards and Guidelines. Upper level bridges across parcel breaks are not permitted. Buildings shall, however, be permitted to cantilever over the Transit Plaza Parcel Break provided the required 20' minimum clear height from grade is maintained (see 5.4.5 for further details).

Guidelines

5.1.5 Access Parcel Breaks serve as dedicated throughways and shall provide an unobstructed way at all times.

5.1.6 Limited Vehicular Access Parcel Breaks are intended for pedestrian access, however, limited vehicular use for maintenance and inspection purposes is permitted. Temporary use for loading is not permitted.

Amsterdam Borneo Sporenburg

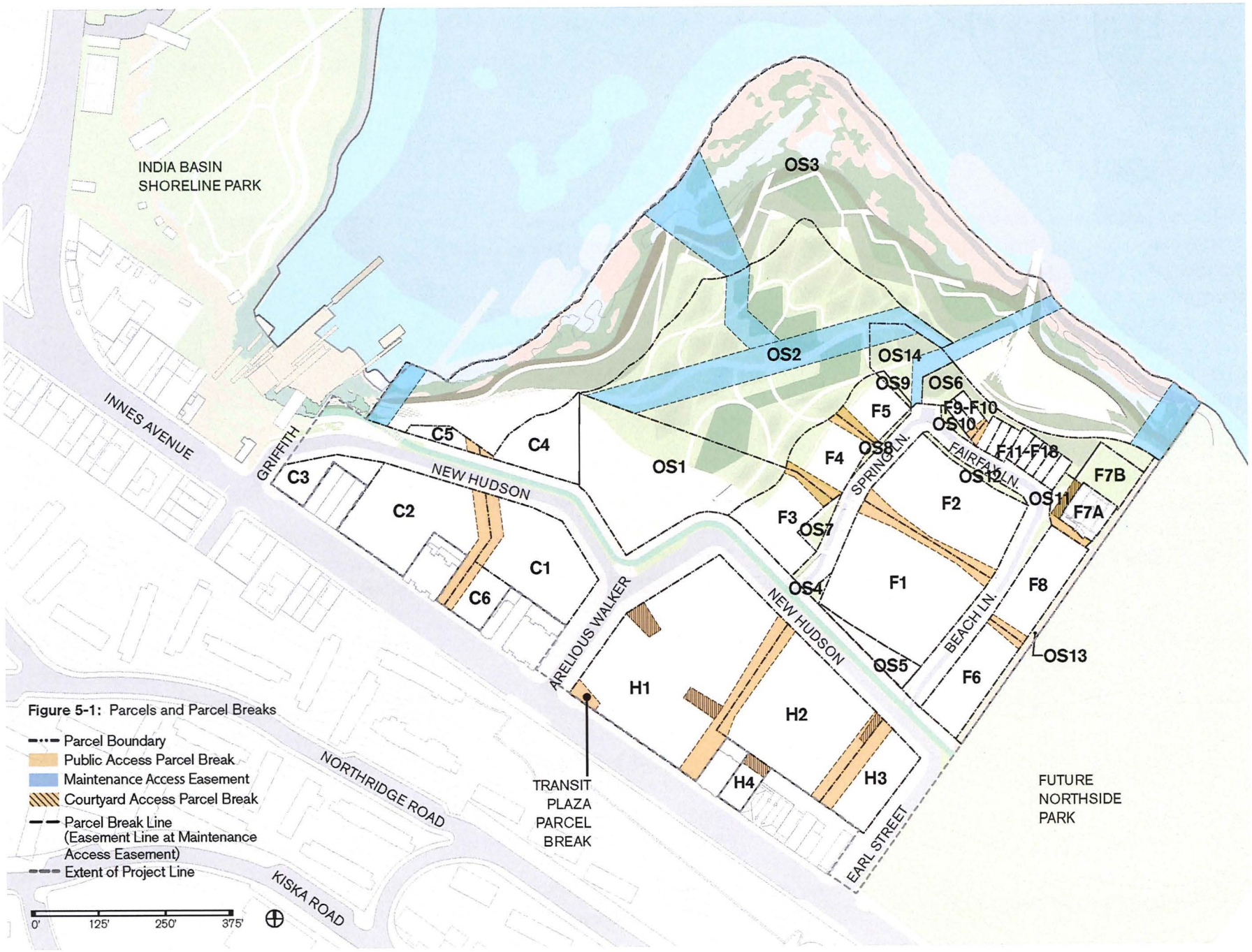

Figure 5-1: Parcels and Parcel Breaks

- Parcel Boundary
- Public Access Parcel Break
- Maintenance Access Easement
- Courtyard Access Parcel Break
- Parcel Break Line (Easement Line at Maintenance Access Easement)
- Extent of Project Line

5.2 Building Height

Building Height

Maximum height zones at India Basin focus the tallest buildings near transit, provide a comfortable and engaging pedestrian environment, and protect views for abutting and uphill neighbors (Figure 5-4). The maximum height zones in Figure 5-3 show the extents of a given maximum height within a parcel but are not meant to define the specific location, footprint, or number of buildings within each parcel. The buildable envelope for each parcel is provided in the parcel control plans in Section A1. Exact dimensions and configurations are shown in the Parcel Control Plan or as further amended by the Subdivision Map.

Standards

5.2.1 Maximum Height The height of structures shall not exceed the maximum height as shown for each location in Figure 5-3.

5.2.2 Heights, Measured The height of a building shall be defined as the upper limit of the roof structure (excluding parapets). For sloped or pitched roofs, the height shall be measured at the mid-point between the eave and ridge line of the roof.

Building heights shall be measured as illustrated in Figure 5-2 from a predetermined top-of-grade indicated by the arrows in Figure 5-5. Each predetermined top-of-grade shall govern its adjacent parcel for the extent of the corresponding color-coded area as defined in Figure 5-5.

To maintain height consistency with the existing urban form along Innes Ave, all parcels bordering Innes Ave shall be measured from Innes Ave for the first 100' of the parcel depth as shown in Figure 5-5. Not withstanding this 100' depth limit, the full depth of the tower in parcel H1 shall have its height measured from Innes Ave. See Standard 5.2.3 and Section 5.3 for more details regarding the towers.

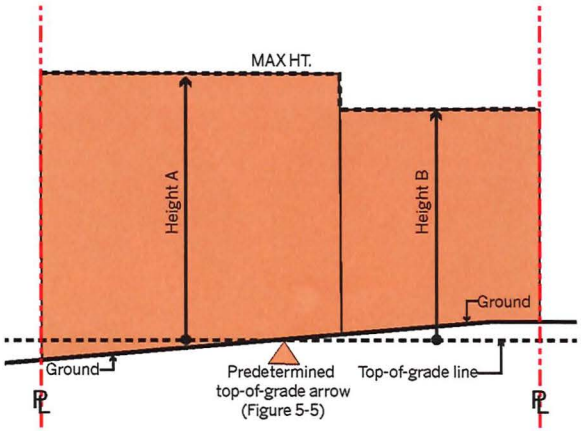

Figure 5-2: Building Height Measurement

5.2.3 Tower Heights Buildings within a tower location indicated on Figure 5-3 shall have a minimum height of 85' above grade but shall not exceed a maximum height of 160' above grade per Figure 5-3. See Section 5.3, Tower Controls, for additional tower bulk and massing controls.

5.2.4 Parapets Parapets may project above the applicable maximum height limit up to 5'-0" above the roof of the last habitable floor.

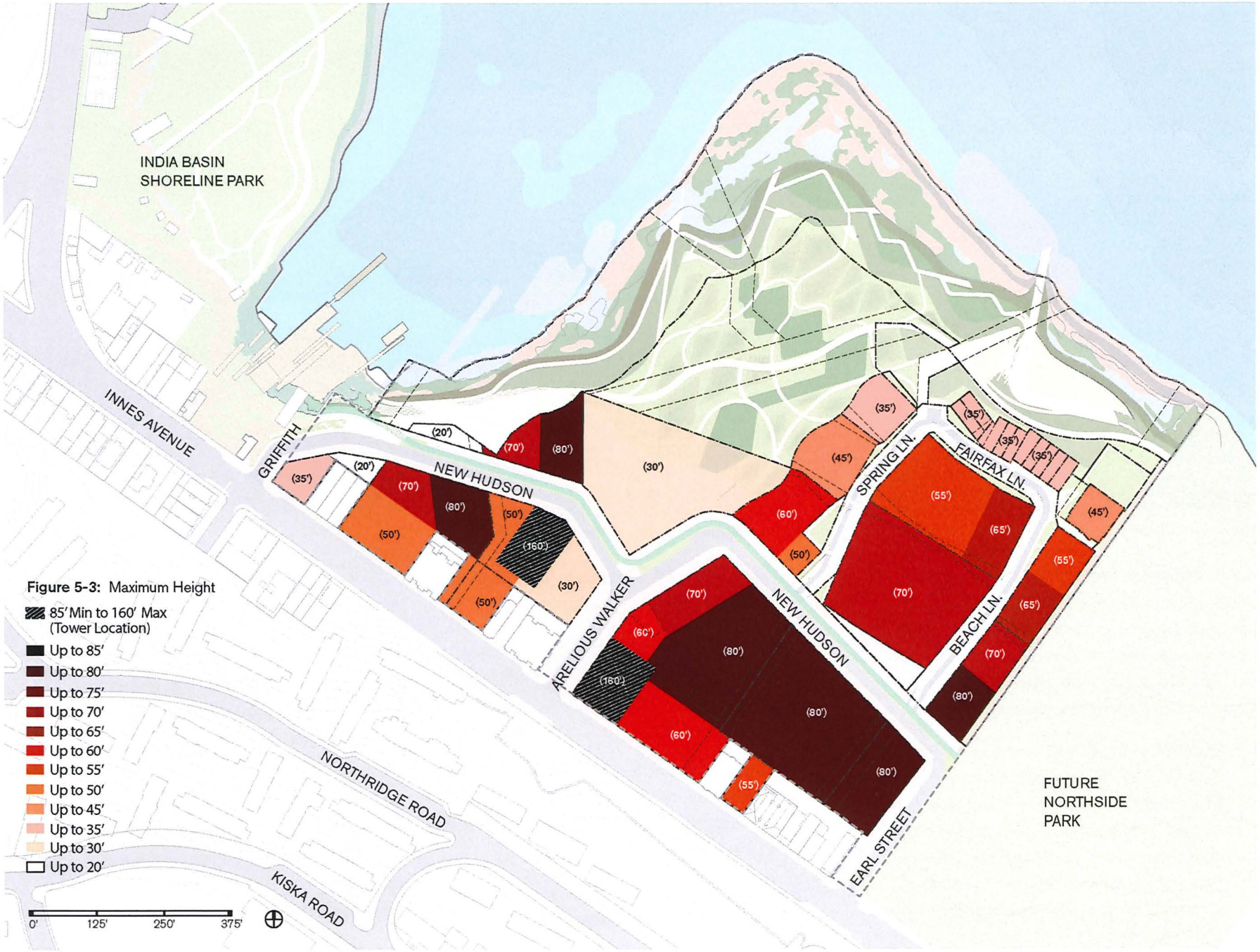
INDIA BASIN
SHORELINE PARK
INNES AVENUE
GRIFFITH
NEW HUDSON
ARELIOUS WALKER
SPRING LN.
FAIRFAX LN.
BEACH LN.
NEW HUDSON
EARL STREET
NORTHRIDGE ROAD
KISKA ROAD
FUTURE
NORTHSIDE
PARK
(20')
(70')
(80')
(30')
(35')
(45')
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Figure 5-3: Maximum Height
85' Min to 160' Max
(Tower Location)
Up to 85'
Up to 80'
Up to 75'
Up to 70'
Up to 65'
Up to 60'
Up to 55'
Up to 50'
Up to 45'
Up to 35'
Up to 30'
Up to 20'
0'
125'
250'
375'

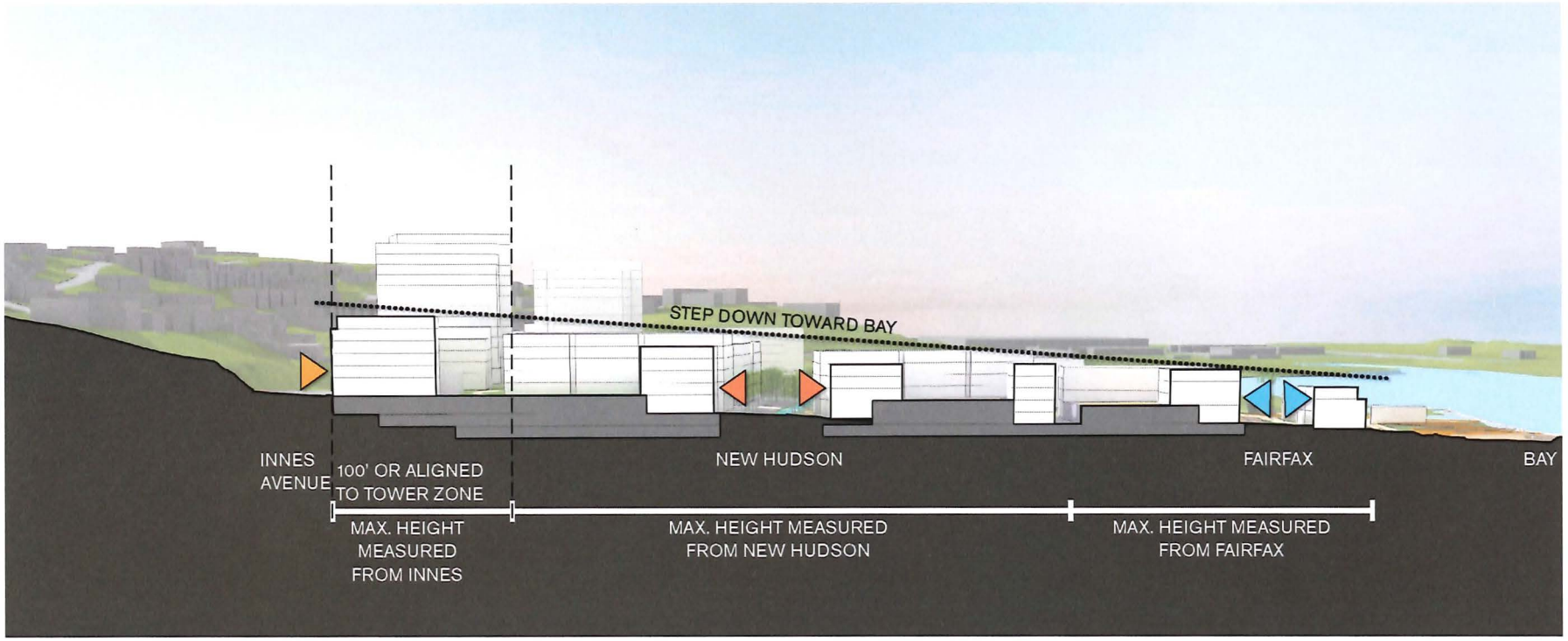


Figure 5-4: Building Height Measurement Concept - Streets From Which the Measurement of Height is to be Taken.

5.2.5 Allowable Projections The following additional features may project above the applicable maximum height limit or the roof of the last habitable floor, whichever is less, provided the sum of the areas of such features is less than or equal to 20% of the total roof area:

- Mechanical equipment and appurtenances necessary to the operation or maintenance of the building or structure itself, including chimneys, ventilators, plumbing vent stacks, cooling towers, water tanks, and window-washing equipment, together with visual screening for any such features. Projection above the roof of the last habitable floor shall not exceed 20'-0". Refer to 6.4.2 for details on screening of rooftop features.
- Elevator, stair and mechanical penthouses, skylights and dormer windows. Projection above the roof of the last habitable floor shall not exceed 20'-0".
- Habitable enclosed space (such as a community room) that supports the use of communal rooftop outdoor space (such as a roof terrace or deck).

5.2.6 Energy Collection Devices Panels or devices for the collection of solar or wind energy shall not exceed 5'-0" above the roof of the last habitable floor. Such devices shall be permitted to project up to 20'-0" above the roof of the last habitable floor if and only if the device has a projected floor area equal to or less than 25 square feet and occupies less than 20% of the total roof area.

5.2.7 Windscreens Windscreens with a maximum height of 8' shall be permitted on building roofs at a minimum distance of 8' from the building roof's edge. Windscreens shall have a minimum transparency of 80% and shall not be subject to Standard 5.2.5.

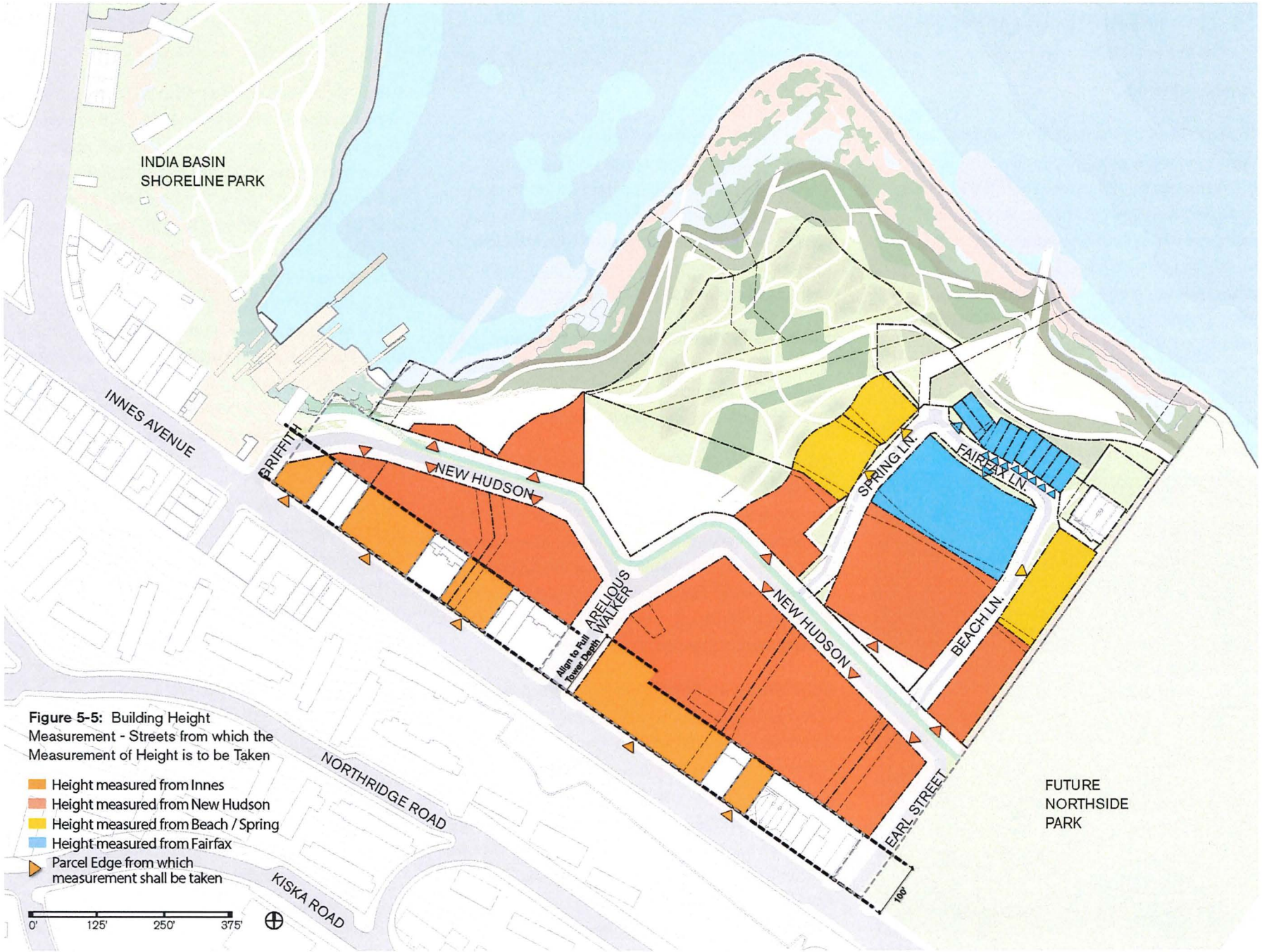
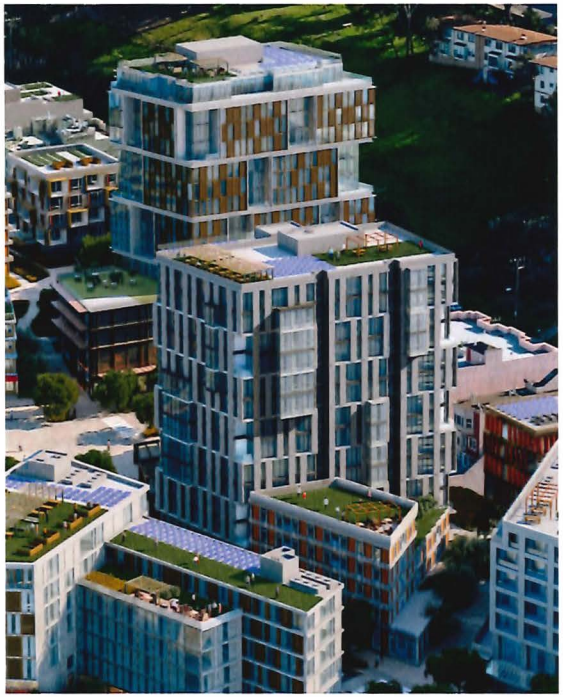


Figure 5-5: Building Height Measurement - Streets from which the Measurement of Height is to be Taken

5.3 Tower Controls

Tower Controls

Special design consideration is appropriate for buildings that appreciably exceed the height of the predominant neighborhood fabric. When designed well, towers elevate architectural expression – celebrating human ingenuity, creativity, and optimism. Towers reinforce legibility, often becoming highly-regarded landmarks synonymous with neighborhood identity. Towers have been located to mark the gateway at Arelious Walker and to anchor the Public Market. Consistent with the guiding principle to "Craft a Human-Scale Village" Towers shall comply with the following Standards and Guidelines.



Standards

5.3.1 Tower Locations Towers are located in parcels H1 and C1 as shown in Figure 5-3. Within these locations, buildings taller than the surrounding height limit are permitted. Precise position and dimensions for the tower locations are shown in the Parcel Control Plan or as further amended by the Subdivision Map.

5.3.2 Height Requirements Tower heights shall be per standard 5.2.3, and shall be subject to other height controls outlined in Section 5.2 of these Design Standards and Guidelines.

5.3.3 Maximum Floor Area Tower floor plates located at 60' above grade and higher shall not exceed a maximum area of 12,000 gsf and shall not extend beyond the limits of the Tower Location boundaries with the exception of allowable projections and balconies as outlined in Standard 5.4.6 (see parcel control plan in the Appendix for Tower Location boundary dimensions).

5.3.4 Major and Minor Face For purposes of controlling bulk and massing, towers at India Basin shall consist of two Major Faces and two Minor Faces each. The Major Faces and Minor faces of each tower shall correspond with the longer and shorter edges of the Tower Location boundaries, respectively, as illustrated in Figures 5-6, 5-7, and as identified in the Parcel Control Plan in the Appendix (Figures A-1 and A-5). Articulation requirement at the Major and Minor Faces of the tower are outlined in Standard 5.3.5 Massing Requirements.

5.3.5 Massing Requirements To reduce the overall apparent bulk and massing of the towers, the major and minor faces of floors 60' above grade and higher shall be subdivided into two or more apparent faces. Each apparent face shall be distiguished from an adjacent apparent face by a notch no less than 5' deep by 5' wide or a change-in-plane no less than 10' deep. Regardless of the method by which they are distiguished, apparent faces along the Major and Minor Faces shall have lengths no shorter and no longer than the corresponding dimension ranges shown in Figure 5-7 (10'minimum to 90' maximum at a Major Face and 10' minimum to 60' maximum at a Minor Face).

5.3.6 Transit Plaza at Parcel H1 Tower Ground Floor See Sections 5.1 and 5.4 for additional massing requirements related to the Transit Plaza at the ground level of the Tower in Parcel H1. Also, see Chapter 2, Section 2.2 for Transit Plaza public realm and open space specifications.

Guidelines

5.3.5. Tower Form The form of the tower shall incorporate suitable means to complement the scale and proportion of neighboring buildings. This may include, but shall not be limited to:

- Stepped, tapered or sculpted tower forms encouraging slender buildings and emphasizing smaller volumes that reinforce the distinctive identity of India Basin.

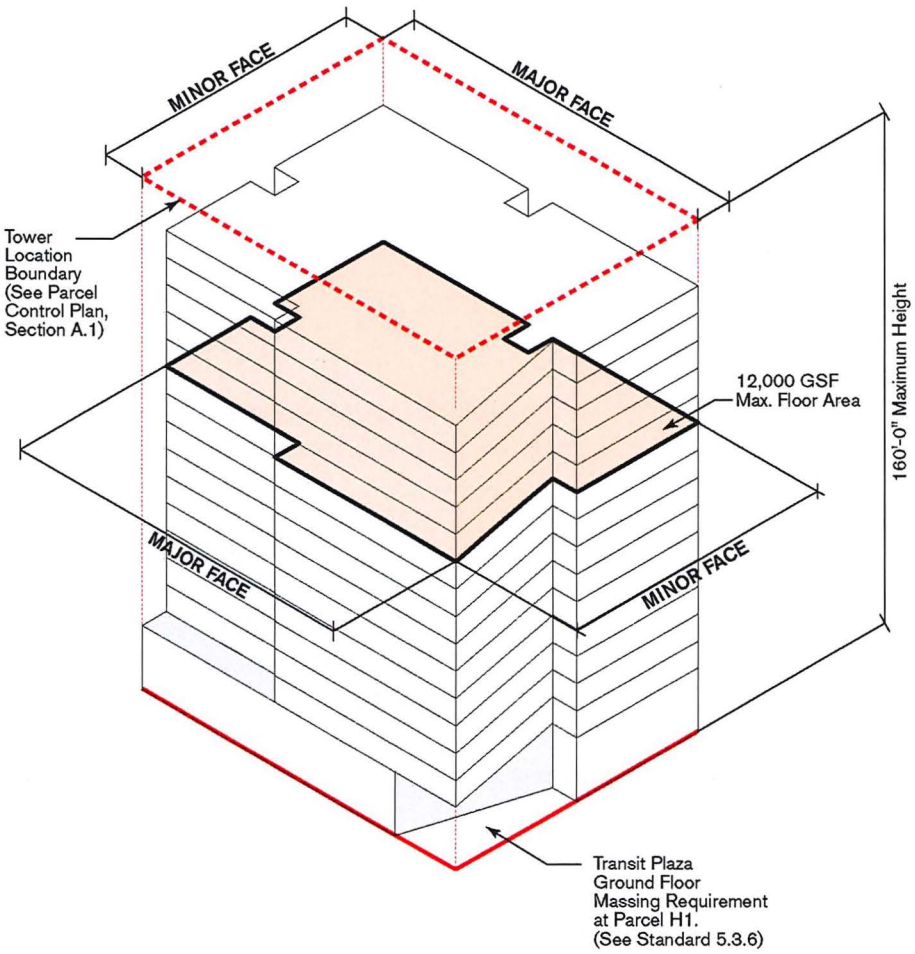


Figure 5-6: Tower Controls - Axon

Figure 5-7: Tower Controls - Plan

5.4 Setbacks

"Buildings provide an active and transparent interface between their interior uses and the street support well-being and safety through natural surveillance. Ground floors with residential stoops, setbacks, retail, lobby entrances, and upper levels with balconies create an engaging, human-scale street level experience."

–San Francisco Urban Design Guidelines, March 2018 Draft

Setbacks

Setbacks provide a transition zone between the public and private realms and offer comfortable occupiable space that encourages the simple act of dwelling "in public." Thoughtfully-designed setbacks provide a physical infrastructure for the social functioning of the community. They are the space in which ground floors engage the street with pedestrian-oriented and welcoming frontages that enhance the vitality of the public realm. Setbacks are located strategically to provide space for elements which activate the private edge of the public realm such as retail stands, outdoor seating, and dining areas. Larger setbacks along residential frontages allow for stairs, stoops, private gardens, patios, and planted buffers that support comfort and foster social interaction among neighbors.

Standards

5.4.1 Setbacks, Location The development shall have setbacks where indicated in Figure 5-8 and shall comply with the following standards and guidelines.

5.4.2 Measurement Where required, the setback line shall be set at a uniform, horizontal distance, measured perpendicularly from the property line (or parcel break line, where present), at a distance equal to that shown in Figure 5-8. All building facades shall be built at the required setback line with the exception of areas where setbacks are required to be a 9' minimum. In these areas, the building facade shall be allowed to be further back from the required 9' minimum setback dimension. For all areas, setbacks shall allow for required ground floor recesses, required stepbacks, and permitted variations, projections and recesses as outlined in this section and section 5.6, Streetwall. For requirements in areas called out as unique setbacks, see 5.4.4 - 5.4.5 and Figure 5-9 and Figure 5-10.

5.4.3 Setbacks and Land Use Setbacks shall be coordinated with ground floor land use provisions per the standards and guidelines in Chapter 4 and shall follow the residential and non-residential setback controls in this section accordingly.

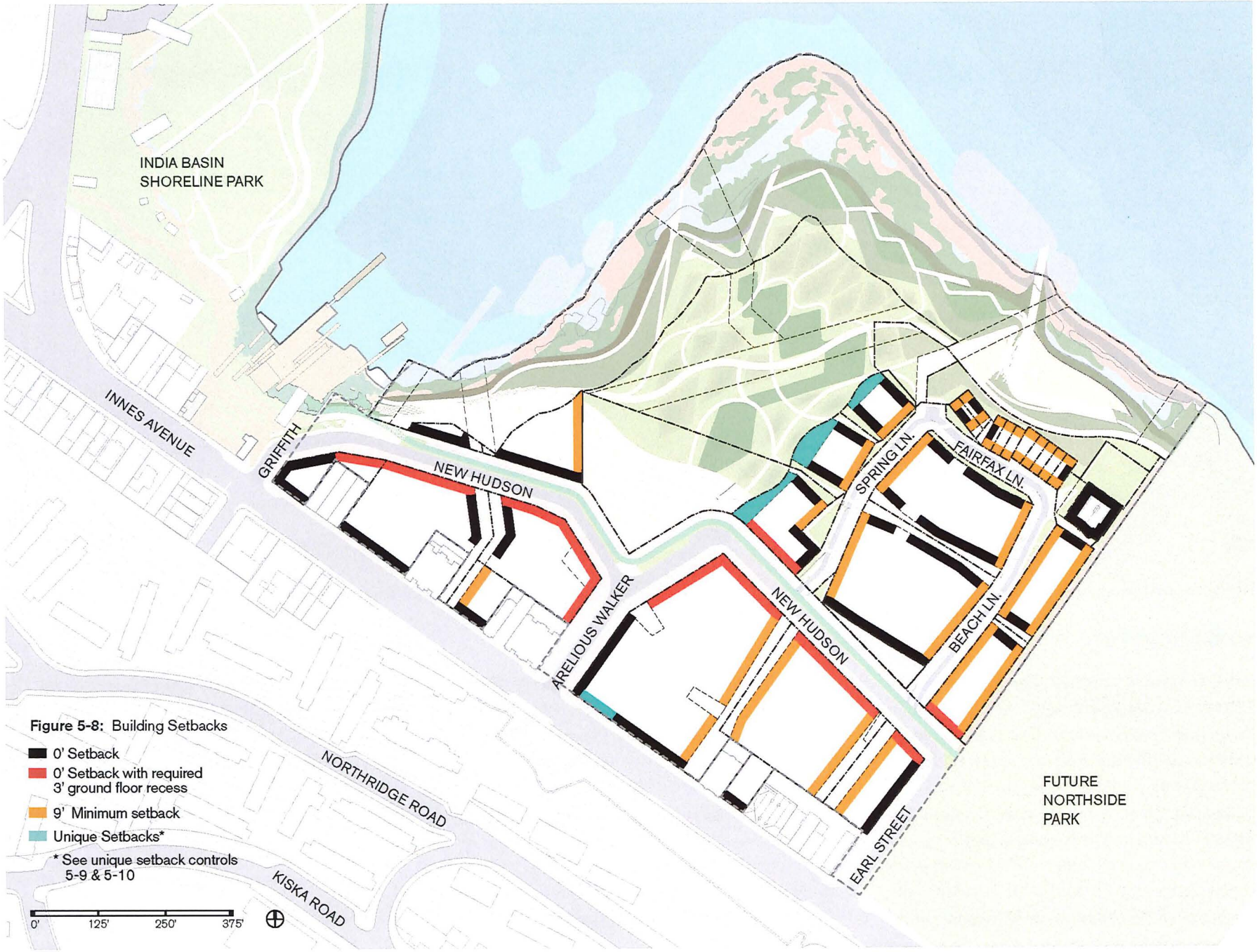


Figure 5-8: Building Setbacks

- 0' Setback
- 0' Setback with required 3' ground floor recess
- 9' Minimum setback
- Unique Setbacks*

* See unique setback controls 5-9 & 5-10

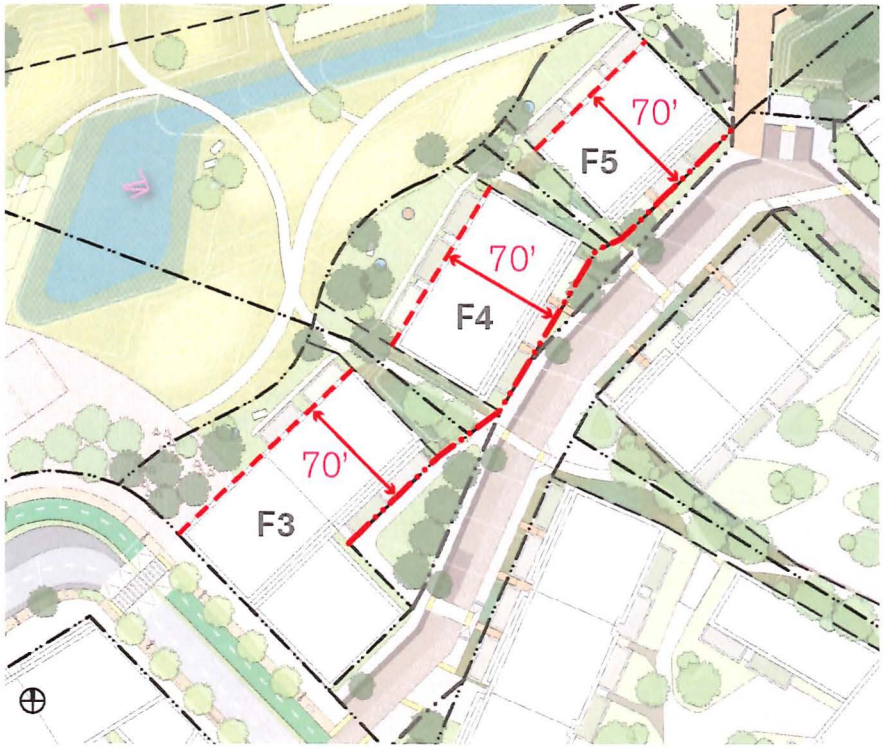


Figure 5-9: Unique Setbacks at Open Space Edge - Plan

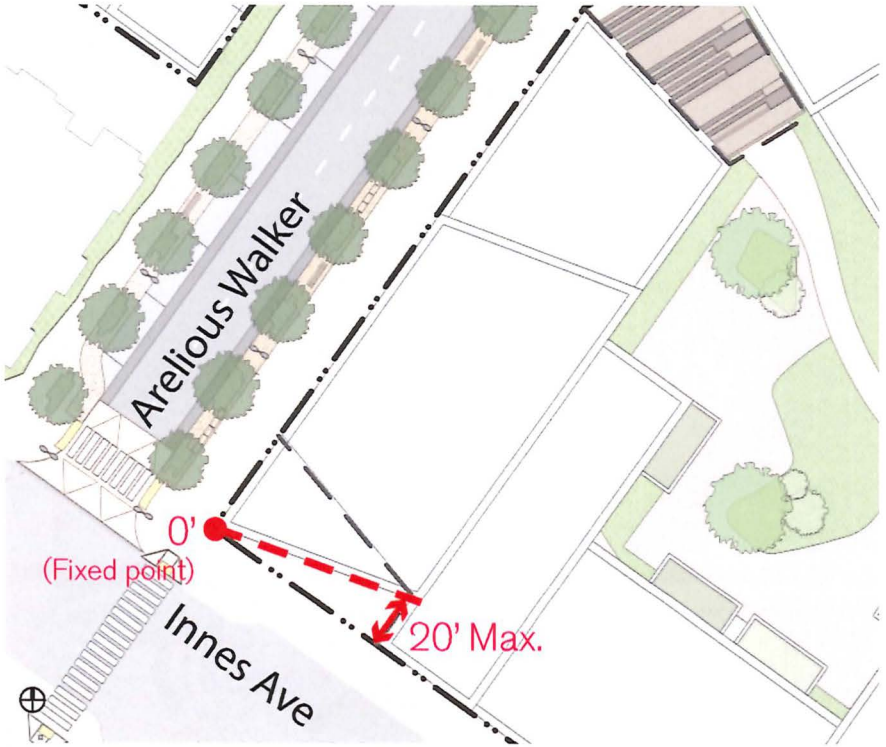


Figure 5-10: Unique Setback at Transit Plaza Tower - Plan

Unique Setbacks

5.4.4 Unique Setback at Open Space Edge

The unique setback lines identified in Figure 5-8 for parcels F-3, F-4, and F-5 shall be set at a distance of 70' from their respective Southeastern parcel line as illustrated in Figure 5-9 and further dimensioned in the Parcel Control Plan. Stoops, terraces, spill-out areas, and other non-enclosed occupiable areas are permitted in the setback zone. See Figure 5-18 for additional requirements regarding stoops, terraces, and other encroachments into the Open Space Edge setback zone.

5.4.5 Unique Setback at Transit Plaza Tower

The unique setback on parcel H1, identified in Figure 5-8 and illustrated in Figure 5-10, applies to the tower location in parcel H1 for all floors above the required 20' clear height established by the Transit Plaza Parcel Break (Standard 5.1.3). These floors shall have a setback defined by a fixed point at the parcel corner of Innes Ave and Arelious Walker (see 0' setback fixed point in Figure 5-10) and a maximum setback distance of 20' from the parcel line along the rest of the unique setback facing Innes Ave. The setback line need not be uniform. The area within the Transit Plaza Parcel Break and the building surfaces which define it shall be exempt from this unique setback requirement.

Allowable Projections and Recesses

5.4.6 Projections and Recesses above Ground Level Projections and recesses shall be permitted along the façade above ground level. Such projections shall extend no more than 3' forward and 3' back from the setback line. For projections above ground level over a setback greater than 1', projections shall extend no more than 4' forward of the required setback line (Figure 5-11). All projections shall extend no lower than the underside of structure of the second floor or 12' from grade, whichever is greater, so as not to obstruct the pedestrian realm physically or visually. At no point shall allowable projections greater than 1' constitute more than 50% of any given streetwall requirement as defined in Section 5.6 of these Design Standards and Guidelines. For floors above 60' at the tower locations identified in Sections 5.2 and 5.3, the Tower Location boundaries (as dimensioned in the Parcel Control Plan in the Appendix) shall function as the setback lines relative to the allowable projection and recess dimensions outlined in this standard.

5.4.7 Projections and Recesses at Ground Level Non-occupiable projections at ground level (such as expressed structural bays or shading fins) shall be permitted but may extend no more than 18" forward of a parcel line, parcel break line where present, setback line where present or into the required ground floor recess where present. The sum of the surface areas of such projections shall be no more than 20% of the total surface area of the ground floor façade. At no point shall such projections reduce the clear travel width for pedestrians to less that 7'-6." Recesses at grade shall be no greater than 6' from the required setback line (where a 3' ground floor recess is required, the 3' required recess shall count against the total allowable 6' recess). A 9' maximum recess shall be permitted at grade for residential entries along facades with a 0' required setback.

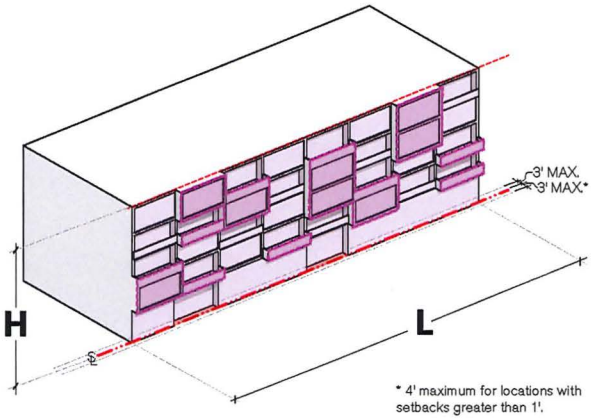


Figure 5-11: Allowable Projections and Recesses

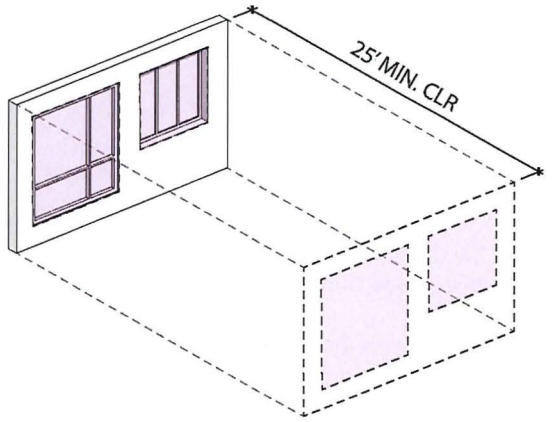


Figure 5-12: Minimum Dwelling Unit Exposure

Dwelling Unit Exposure

5.4.8 Minimum Dwelling Unit Exposure All required dwelling unit windows and openings as defined by Section 504: Light and Ventilation of the San Francisco Housing Code shall face directly on an open area such as a public street, laneway, parcel break, trail, or unobstructed open space, each as defined in Chapter 2 of these design standards and guidelines. All exterior windows and openings required for light and air shall be unobstructed for a minimum horizontal clear distance of 25'-0" measured perpendicularly from the required window or opening face (see Figure 5-12). All such required exterior windows and openings shall be open to the sky with the exception of permitted overhangs and projections as defined in Chapter 5 of these Design Standards and Guidelines. Increases in horizontal dimensions on subsequent higher floors, otherwise required by the Planning Code, are not required here.

Non-Residential Setbacks

Non-Residential Setbacks are designed to incorporate retail stands, outdoor seating, and other elements that allow occupation and activation of the public realm.

Refer to Section 4.4 Ground Floor Use Requirements for additional guidance on Active Ground Floor treatment.

Standards

5.4.9 Controls Non-Residential Setbacks shall comply with the controls illustrated in the Non-Residential Setback Controls, Figure 5-13 through 5-15.

Non-Residential Setback

Non-Residential Setback Key

A ENCLOSED BUILDING AREA OR BALCONY, 12' MINIMUM ABOVE GRADE

B FACADE PROJECTIONS INCLUDING SIGNAGE, CANOPY, AWNING, SHADING DEVICE, LIGHTING, 10' MINIMUM ABOVE GRADE

PL PROPERTY LINE

SL SETBACK LINE

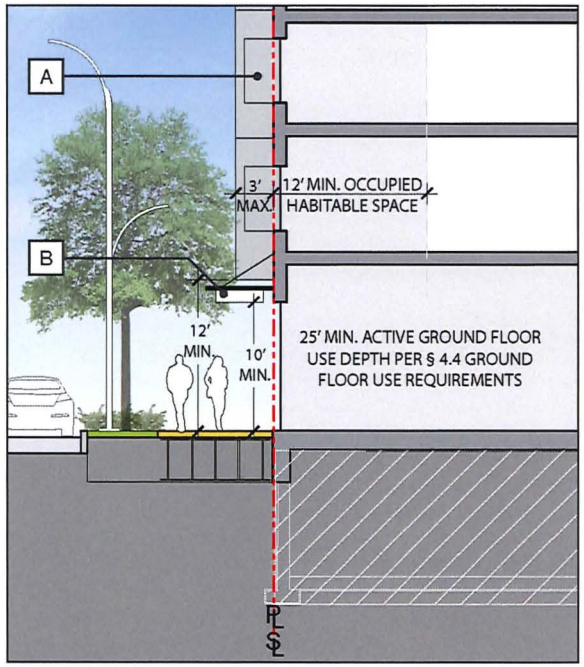


Figure 5-13: 0' Setback - Non-Residential GF

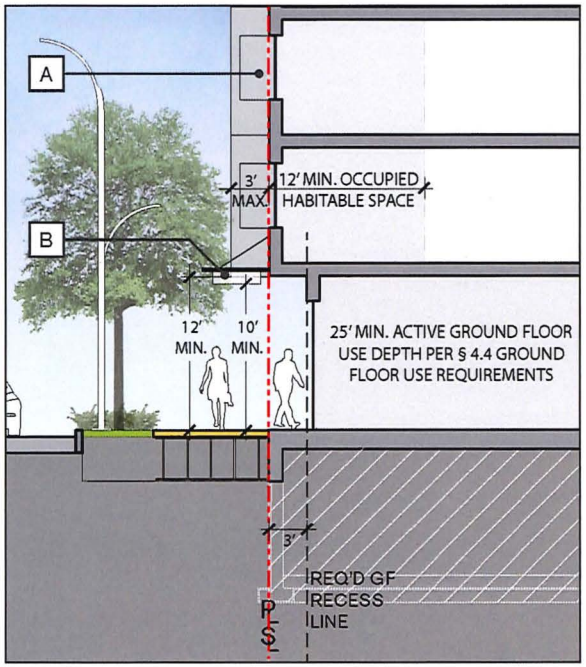


Figure 5-14: 0' Setback w 3' Req'd GF Recess

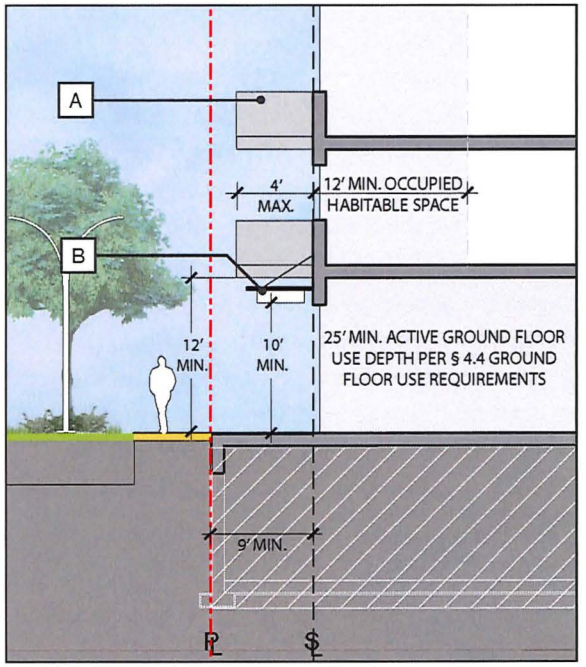


Figure 5-15: 9' Min. Setback - Non-Residential GF

0' Setback - Non-Residential GF

The 0'-0" setback provides the strongest definition of streetwall, with direct adjacency of public and private realms. This condition is used to promote a vibrant urban character with active ground floor uses providing neighborhood-serving amenities.

0' Setback w 3' Req'd Ground Floor Recess

The 0' setback above ground level provides a strong definition of streetwall, while the 3' recess below allows for weather-protected entries, terraces, spill-out spaces and outdoor seating to promote interaction between the public and private realms. This condition is used to promote a vibrant urban character with active ground floor uses providing neighborhood-serving amenities and food and beverage facilities.

9' Minimum Setback - Non-Residential GF

The 9' minimum setback is a special condition, where non-residential use faces onto a public plaza or other open space. It allows for a generous zone of privately-owned space to feel like part of the public realm. This setback encourages weather-protected entries and terraces, spill-out spaces and outdoor seating to promote interaction between the public and private realms.

Residential Setbacks

Residential setbacks include stairs, stoops, private gardens, patios, and planted buffers that provide supplementary usable private open space for residents in a way that facilitates social interaction among neighbors. Units built immediately up to a sidewalk edge with no transition or buffer space reduce the habitability of ground floor residential spaces, and consequentially diminishes the pedestrian experience. Adequate transition space from a public sidewalk or open space to the ground floor of a residential unit is needed to maintain a level of privacy, promote passive surveillance, and enhance the pedestrian experience.

Residential Setback

Residential Setback Key

- A ENCLOSED BUILDING AREA OR BALCONY, 12' MINIMUM ABOVE GRADE
- B FACADE PROJECTIONS INCLUDING SIGNAGE, CANOPY, AWNING, SHADING DEVICE, LIGHTING, 10' MINIMUM ABOVE GRADE
- C STOOPS, TERRACES, STAIRS, PATIOS, YARDS, FENCES, GUARDRAILS, FREE-STANDING SIGNAGE AND LIGHTING
- D WHERE BELOW-GRADE BUILDING AREA (SUCH AS GARAGE OR BASEMENT) ENCROACHES INTO SETBACK ZONE, MINIMUM OF 3' SOIL DEPTH FROM GRADE TO TOP OF STRUCTURE
- E VEGETATED BUFFER OR RAISED PLANTER, MINIMUM OF 18" WIDTH FOR 50% OF REQUIRED LINEAR PARALLEL FRONTAGE
- PL PROPERTY LINE
- SL SETBACK LINE

Standards

5.4.10 Controls Residential Setbacks shall comply with the controls illustrated in the Residential Setback Controls, Figure 5-16 through 5-18.

5.4.11 Planting Depth Basement levels of buildings are permitted to project into the setback; however, projections must be a minimum of three feet below grade to allow for adequate planting depth.

Guidelines

5.4.12 Applicability Residential Setbacks shall comply with these Guidelines and Standards, and shall demonstrate consistency with the City of San Francisco "Guidelines for Ground Floor Residential Design," as adopted and periodically amended by the Planning Commission. Where discrepancies exist between the two, these Guidelines and Standards shall take precedence.

5.4.13 Common and Private Areas Residential Setbacks are divided into common and private setback areas (Figure 5-16 through 5-18). Private setback areas are for use by adjacent residential dwelling units. Common setback areas provide a landscape buffer that shall be implemented and maintained by the building owner or owner association (OA). Stairs and stoops are excluded from the common area requirement and may extend into the common area. Materials, surface treatments, planting, and other elements within the common area of Residential Setbacks shall coordinate with those specified for the Public Realm in Section 2.3, Public Realm and Open Space Elements.

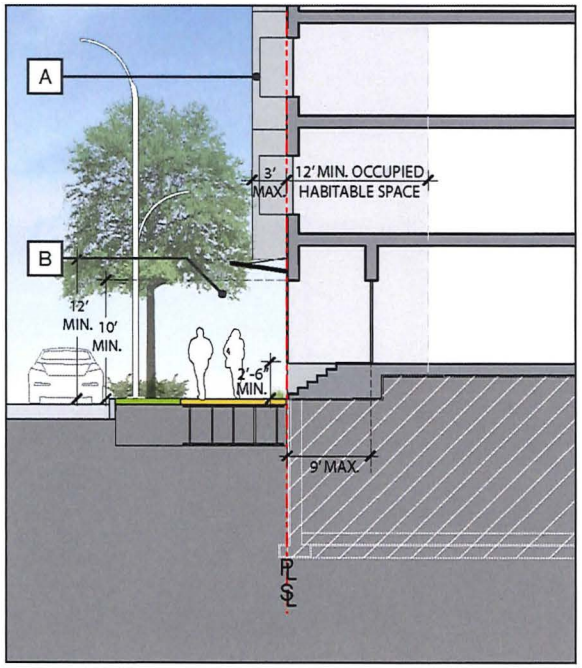


Figure 5-16: 0' Setback w Recessed GF Resid. Entry

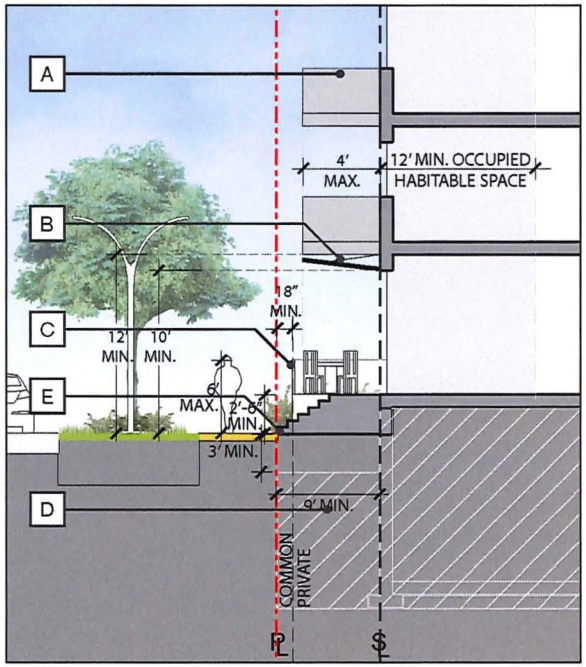


Figure 5-17: 9' Minimum Setback - Residential GF

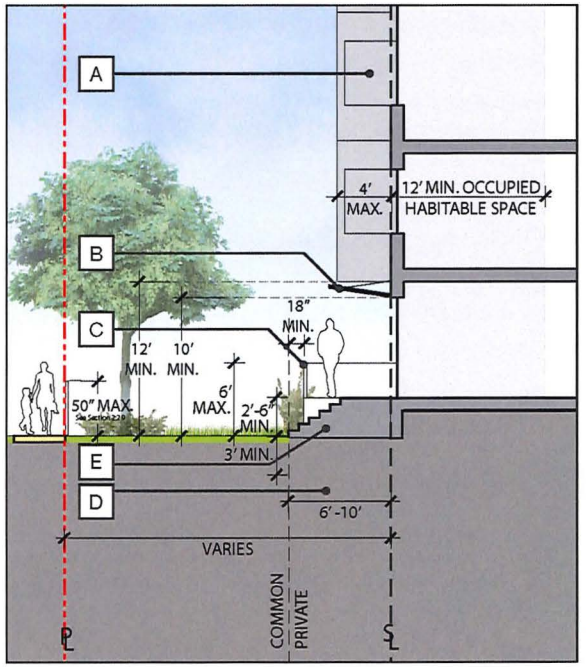


Figure 5-18: Open Space Edge Setback – Varies

0' Setback w Recessed GF Resid. Entry

The 0' Setback with recessed ground floor entry is a special condition that provides for maximum streetwall definition but permits for residences to incorporate elements like stoops leading into slightly elevated ground levels (for privacy). This condition would appear along areas like Innes Ave where the streetwall must largely be held at the parcel line but active ground floor uses allow for both residential and non-residential ground floors.

9' Min. Setback - Residential GF

The 9' Minimum Residential Setback provides a physical and psychological comfort buffer between sidewalk activity and residential uses at lower levels. This condition allows ample space for entry steps, stoops, porches, patios, or terraces that afford supplementary usable private open space for residents in a way that also enhances community social interaction and passive surveillance.

Open Space Edge Setback - Varies

The variable Open Space Edge Setback occurs where the Flats meet the Big Green. Here, the alignment of pathways, in concert with topography and other landscape elements, provides clear separation between the public and private realms. This transition space serves as a buffer that allows direct connection of residences to nature while also maintaining a degree of privacy from the public activity of the Big Green. See 5.4.4 for other details.

5.5 Stepbacks

Stepbacks

Stepbacks are defined as a horizontal setback from the vertical building face of the top floor(s), generally one to two floors, as illustrated in Figure 5-19. Required Stepbacks are shown in Figure 5-20.

The India Basin project employs Stepbacks to decrease the perceived height of building and allow more light into the public realm to improve pedestrian comfort.

Standards

5.5.1 Stepback, Where Required Where indicated in Figure 5-20 provide a stepback at the top floor, regardless of height [i.e. this is a requirement regardless of whether a building is built to its maximum height], of no less than 6'-0." Stepbacks may extend for more than one floor but not exceed more than three floors.

5.5.2 Stepback H2-North For stepback labeled H2-North in Figure 5-20, a stepback of no less than 9'-0" shall be provided for the top floor and a stepback of no less than 6'-0" for the floor immediately below the top floor (See Figure 5-19).

5.5.3 Guardrails Guardrails no taller than 50" with a minimum transparency of 80% shall be permitted at the perimeter of these required stepbacks.

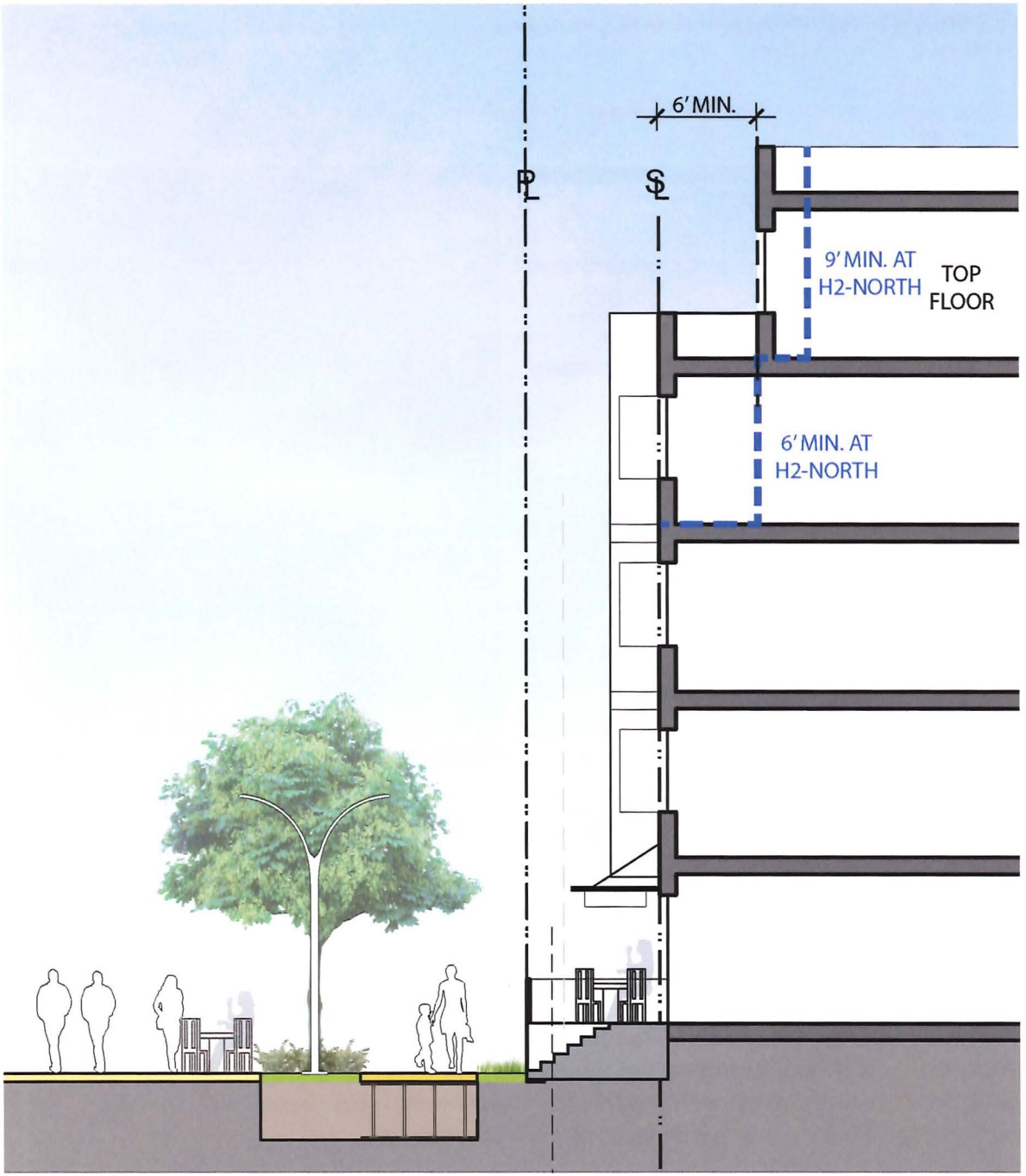


Figure 5-19: Building Stepback - Section

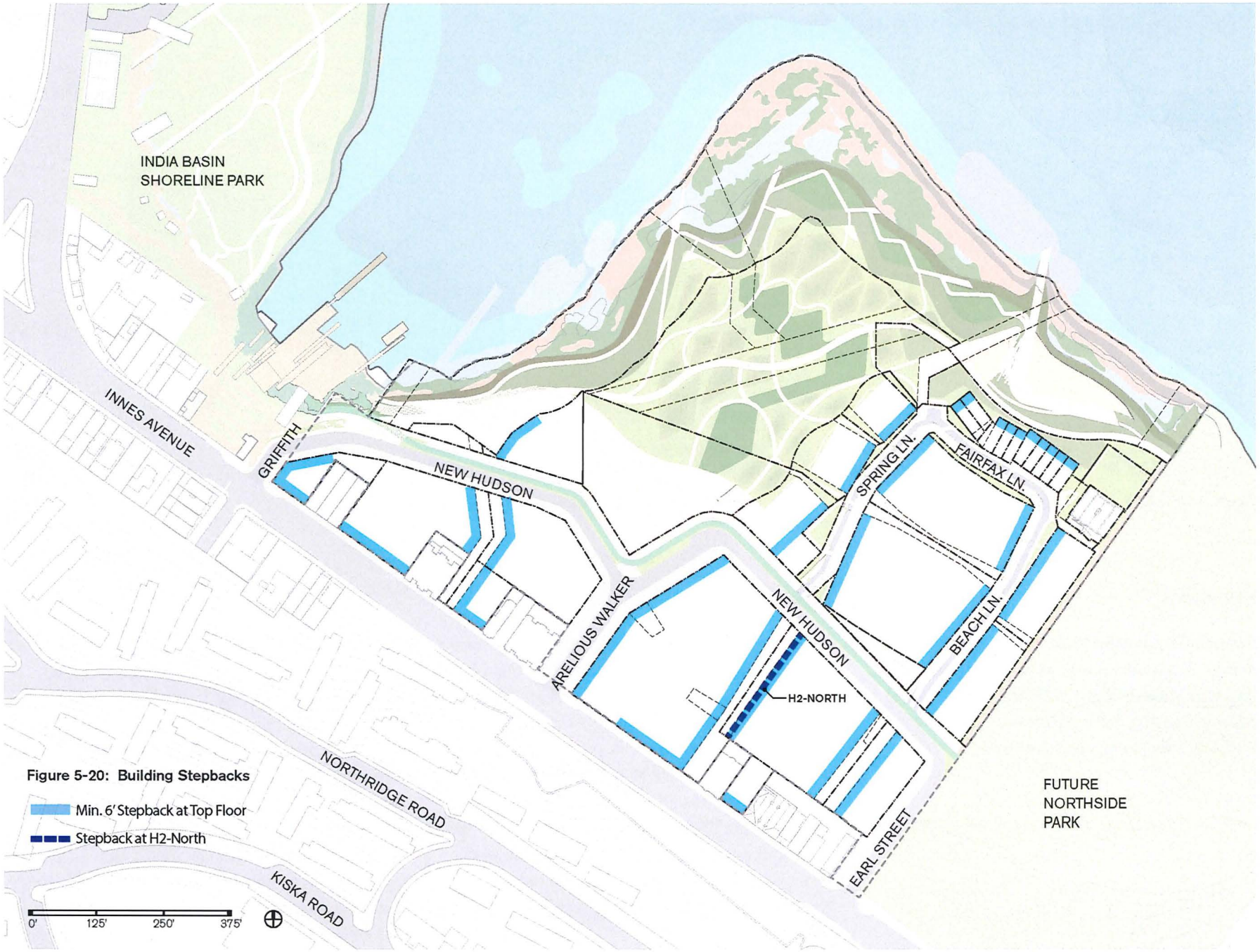


Figure 5-20: Building Stepbacks

5.6 Streetwall Requirements

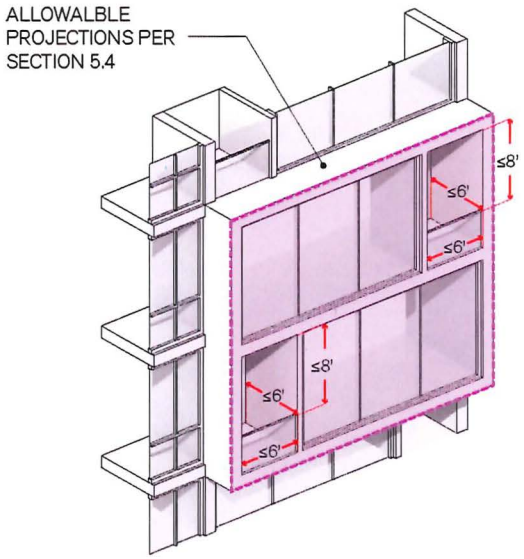
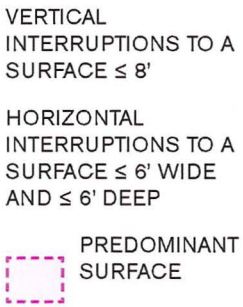


Figure 5-21: **Predominant Surface, Defined**



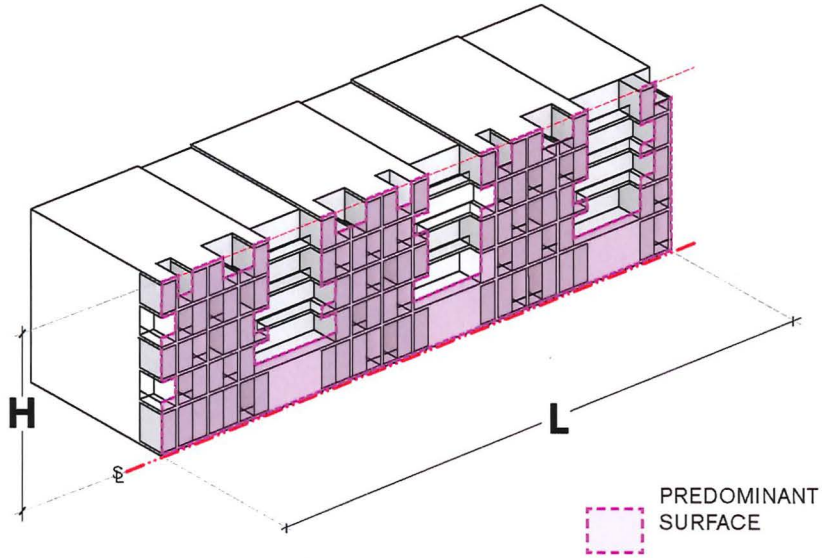


Figure 5-22: **Predominant Surface Area**

Streetwall

Streetwalls are used to define the public realm and to engage the street. A well-designed street wall establishes strong definition while shaping a human-scaled environment with sufficient variation, modulation, and character.

Standards

5.6.1 Streetwall, Where Required A streetwall shall be required along all parcel lines, parcel break lines, or setback lines as indicated in Figure 5-23. Where a required setback exists, the streetwall shall be set at the setback line. At no point shall a streetwall exceed 225' in length. Exact dimensions and locations of streetwall segments are shown on the Parcel Control Plan or as further amended by the Subdivision Map. All streetwalls shall comply with the following Streetwall Standards and Guidelines.

5.6.2 Predominant Surface, Defined In order to allow for facades with rich articulation and modulation, a streetwall, in this project, shall be defined in terms of a Predominant Surface Area and not a traditional surface area. A Predominant Surface Area shall be a coplanar facade area whose openings do not exceed any of the following: 8' maximum height, 6' maximum width, and a 6' maximum recessed depth as measured from the coplanar sides (See Figure 5-21 and Figure 5-22). A Predominant Surface and its interruptions may be contained within an allowable projection or recess (per Section 5.4) as illustrated in Figure 5-21.

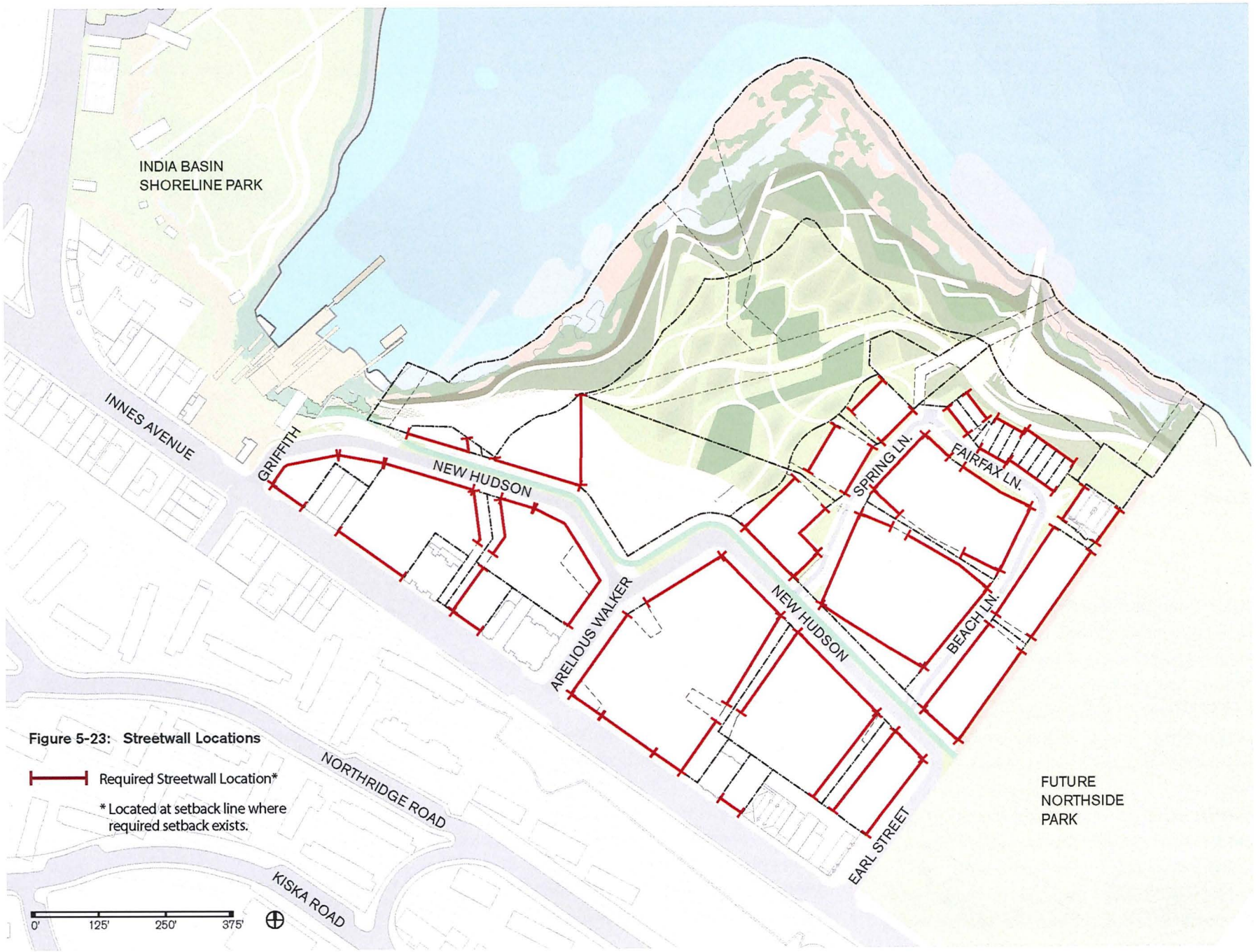


Figure 5-23: Streetwall Locations

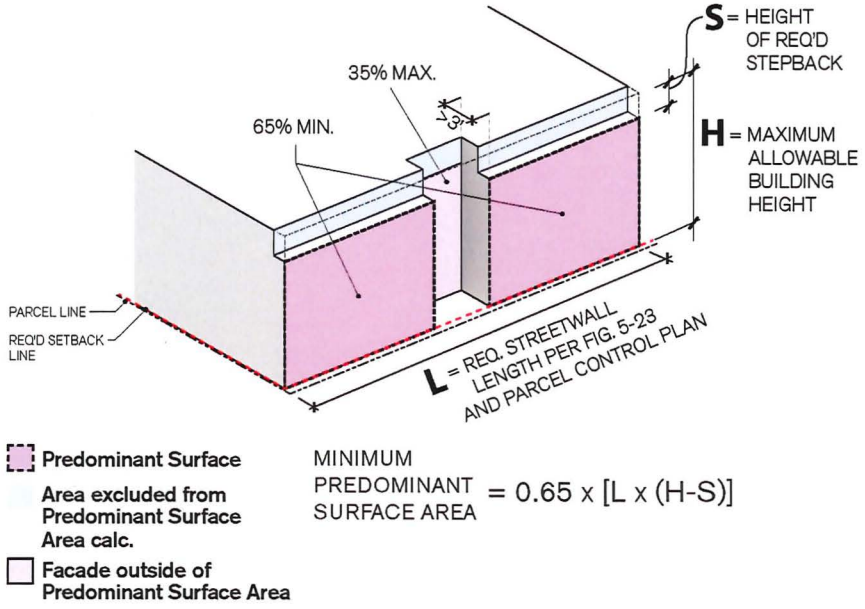


Figure 5-24: Minimum Predominant Surface Area

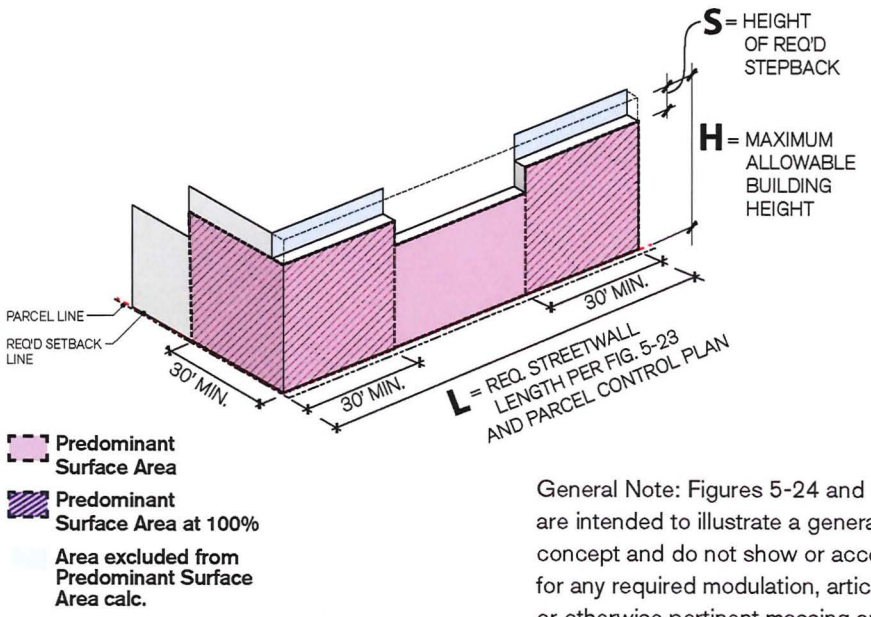


Figure 5-25: Streetwall Parcel Corners

General Note: Figures 5-24 and 5-25 are intended to illustrate a general concept and do not show or account for any required modulation, articulation, or otherwise pertinent massing and architectural design controls.

5.6.3 Streetwall and Predominant Surface Area, Measured At the required streetwall locations indicated on Figure 5-23, the streetwall shall be built to satisfy a minimum Predominant Surface Area of 65% calculated as the full length of the corresponding line segment shown in Figure 5-23 multiplied by the maximum allowable height per Figure 5-3. Any area within a required stepback shall be omitted from the minimum predominant surface calculation (See Figure 5-24). Where required by Figure 5-23, the predominant surface area shall be measured at the parcel line, parcel break line where present, or required setback line where present. Allowable projections and recesses as defined in section 5.4 shall count toward the minimum Predominant Surface Area requirement.

5.6.4 Streetwall, Parcel Corners Where a streetwall is required, buildings shall maintain a Predominant Surface Area of 100% (excluding any required stepbacks) at the parcel line, parcel break line where present, or required setback line where present, for the first 30'-0" of each corner facing Arelious Walker Dr, New Hudson Ave, or Innes Ave, whichever applies. See Figure 5-25.

Guidelines

5.6.5 Definition, Modulation and Variation Streetwalls at India Basin shall achieve a high degree of public realm definition, facade variation and human scaled modulation. Modulation and variation may be achieved using a range of architectural strategies, including but not limited to the strategies outlined in Chapter 6, Architecture, Section 6.2 and 6.3.

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1. Change in Plane
2. Change in Plane
3. Recessed Setback
4. Vertical Recess, Window Protrusion
5. Change in Plane

06

Architecture

Chapter 06: Architecture

This chapter elaborates the Architectural Standards and Guidelines for India Basin, or the architectural vocabulary and controls for the development. The Standards and Guidelines are organized according to building elements: Base, Façade, Roof, and Systems Performance.

The following chapter elaborates on what should be part of the urban framework of the area, and gives specific guidelines for achieving the overall intent and nature of the neighborhood.

With specific instructions for form and massing of each type of building, a large development can have a unity of purpose, while maintaining a unique visual language everyone can enjoy and appreciate. Giving clarity to various physical elements can enhance the human perceptive experience, and keep the neighborhood Human Scale. By highlighting multiple design strategies to achieve the overarching visual language of India Basin, this chapter seeks to create a comprehensive guide, while allowing a large degree of creative freedom in the design of each building.

6.1 Architectural Intent

"Urban form that considers the quality and functionality of the building fabric, streets and open spaces contributes to the livability of San Francisco... Buildings that enhance the connection between the inner life of buildings and the outer public realm also help engage people to the larger sense of activity and spirit of the place in which they live."

– *San Francisco Urban Design Guidelines, August 2016 Draft*

The architectural intent for India Basin draws inspiration from the Project Vision to integrate ecology and urbanity in the form of a human-scale village. This entails the calibration of building Form, Proportion, Variation, Modulation, Rhythm, Articulation, Depth, Threshold, Materiality, Texture and Color of physical elements to the speed, range, capabilities and delights of human sensory perception. An architecture for the Human Scale compels:

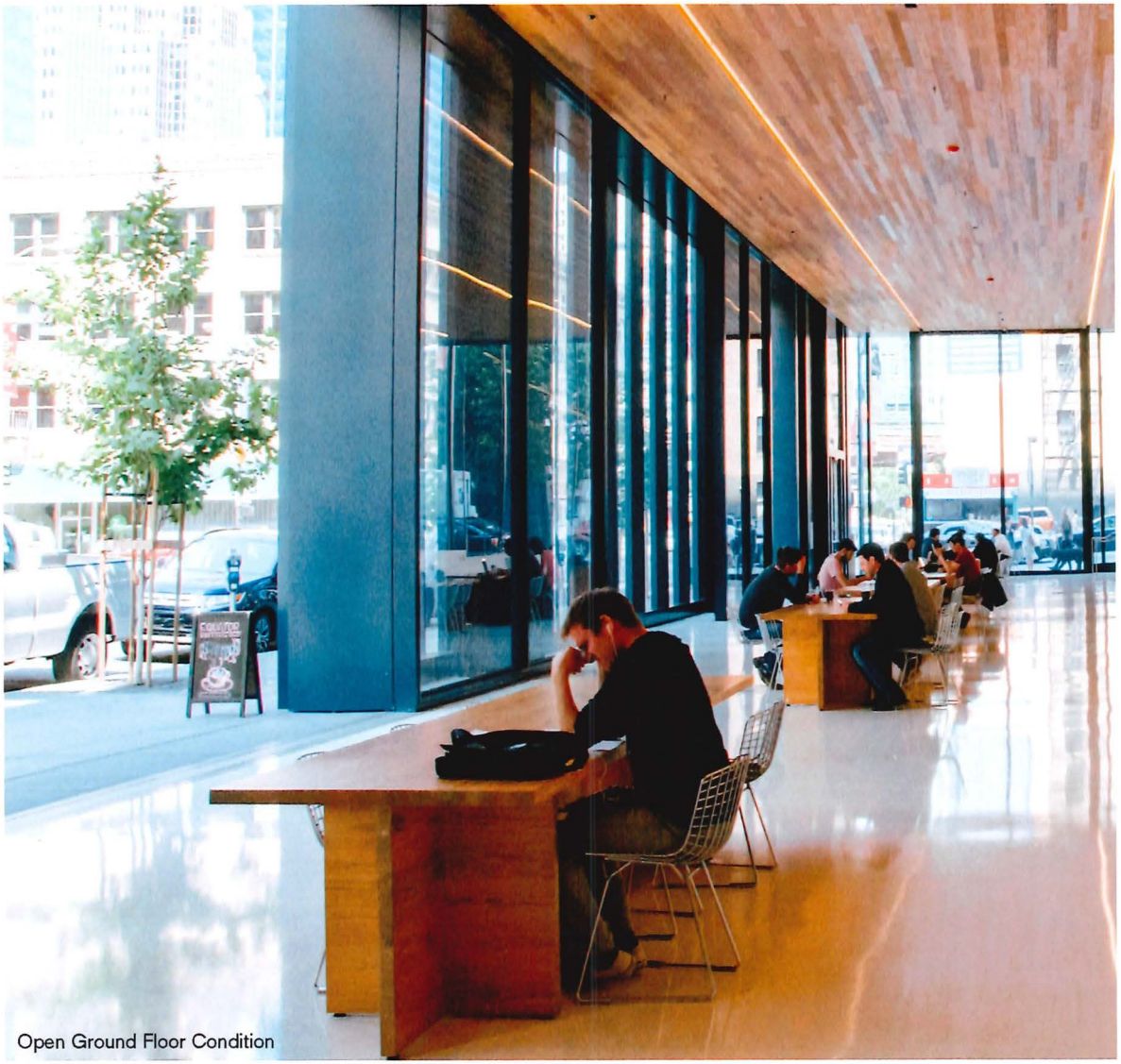
Variety: Variety in this architectural context is a condition of difference of forms, features or other characteristics manifest amongst a group of proximate buildings. Variety is essential to the richness of experience necessary for a welcoming, attractive and vibrant pedestrian environment.

Tectonics: Tectonics is the science and art of construction as it relates to both use and appearance. It refers not just to the activity of making the materially requisite construction that answers certain needs, but also to the activity that raises this construction to an art form. It is the expression of material depth and tactility through the means and methods of craft — the evident effect of materiality on the experience of space.

Resonance: With buildings, as with people, good neighbors make great neighborhoods. As each new structure is added to India Basin, the built context is enriched. Subsequent additions to the neighborhood are obliged to respond with appropriate sensitivity and contextual resonance.

An Architecture for the Human Scale.

6.2 Base



Open Ground Floor Condition

The Base refers to the first few floors of a building from grade, specifically the ground floor, where it faces the public realm or open space. This section focuses on the architectural quality of a building's base with the intent of encouraging designs that naturally enhance the experience of pedestrians at the ground level and their engagement with the buildings around them. Design controls key to this goal such as ground level orientation, modulation, transparency, and threshold treatment are addressed in this section.

6.2.1

Street Orientation

Engagement between the public and private realms is foundational to urbanity. This engagement is reflected in the orientation of a building to the public right-of-way. Generous, transparent, open and otherwise inviting façade treatments express the interrelatedness of public and private and the participation of private space in the public life of the community.

Standards

6.2.1.1 Entry from the Street To create engagement and foot traffic between the ground floor of the buildings and the public realm, the primary entry for each building shall be from a public right-of-way or parcel break. Primary building entries are not permitted to be located on park facing frontages.

Each retail use shall provide a minimum of one entry along a street or open space.

Building facades that face onto a public right-of-way or parcel break shall provide entries no further than 70'-0" apart for 75% of their frontage length. Qualifying entries shall include building access, individual unit entries, or access to ground floor commercial, residential, or retail tenant spaces. Parking entries, storage, exit stairs and building service access are excluded.

Guidelines

6.2.1.2. Public Realm Orientation Non-Residential Storefront façades shall open up to the pedestrian public realm and shall make visible social or common uses. Large movable openings such as pivot, sliding or roll-up windows and doors are encouraged, but not required.

Commercial Ground Floor Use with Outdoor Seating

Recessed Setback for Ground-Floor Retail Facade

Non-Residential Storefront Open to Public Realm

6.2.2

Ground Floor Modulation

Small-Scale Neighborhood Retail With Primary Entry Accessible From Public Right-of-Way

The ground floor of the building most-directly participates in the pedestrian experience. Modulation of the ground floor on 4 to 5-second intervals, but no more than 8 to 10-second intervals, at an average walking speed, provides a frequency of new activities and sights that helps to stimulate the feel of a vibrant environment.

Standards

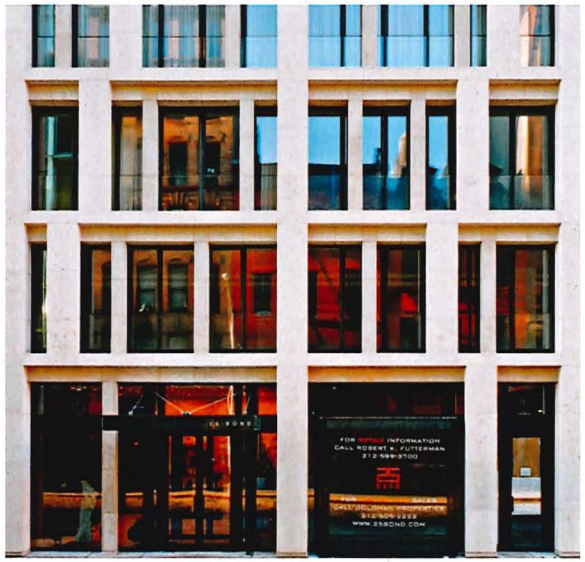
6.2.2.1 Ground Floor Façade Modulation Buildings shall modulate ground floor façades with vertical articulation at intervals no greater than 30'-0" on-center. Intervals need not be equal but shall not exceed the 30'-0" on-center maximum distance. Modulation and articulation strategies shall comply with Section 6.3.2 Modulation and 6.3.3 Articulation as well as setback and streetwall requirements outlined in Chapter 5 of these design standards and guidelines.

6.2.2.2 Retail Storefront Diversity Individual retail sales and service establishments along a ground floor active use frontage zone outlined in Figure 4-7 shall occupy no more than 75'-0" of any ground floor frontage length.

Guidelines

6.2.2.3 Exterior Modulation Exterior Façade Modulation shall reflect the delineation of structural bays and/or spatial uses on the interior of the Building. Modulation shall reinforce the architectural concept and vocabulary of the building as a holistic composition.

Narrow Retail Frontage


Expressed Structural Bays

Facade Modulation

Transparency

Recessed Facade With Transparency Revealing Active Ground Floor Use

Transparency promotes active interface between exterior and interior uses, provides fluidity between public and private realms and fosters a sense of well-being and security through natural surveillance. Transparency expresses an invitation to participate that evokes a sense of community.

Standards

6.2.3.1 Transparency, Non-Residential Use

The ground floor façade of all non-residential uses shall have a minimum of 65% transparency, excluding portions of an elevation frontage dedicated to parking and loading access, building egress, and mechanical and core systems or other non-occupiable service areas. Transparent areas shall have a sill height no more than 42" from sidewalk grade.

In order to comply, the majority of glazed areas shall be unobstructed by solid window coverings or other features that impede visibility from the public realm into the interior of the ground floor of the building. Darkly-tinted or highly-mirrored glass is prohibited on the ground floor.

6.2.3.2 Non-Retail Commercial Frontage Interior The interior area within four feet from the surface of the window glass shall be at least 75% open to perpendicular view from the street. No partitions parallel to the facade and above 42" shall be located within four feet of the window.

6.2.3.3 Transparency, Residential Use Ground floor residential lobbies and amenities shall have a minimum of 65% transparency in order to enliven the visual interface with the public right-of-way. Transparent areas shall have a sill height of no more than 42" from sidewalk grade. Ground floor residential units shall have a minimum of 40% transparency while allowing for window coverings and elements to maintain privacy for units.

Guideline

6.2.3.4 Transparency and Active Ground Floor Uses The architectural design and design elements of non-residential, non-retail commercial, and residential uses along the ground floor shall be coordinated with the active ground floor use controls outlined in Section 4.5 and the Setback controls in Section 5.4 of these Design Standards and Guidelines.

Low Sill Height at Ground floor Commercial Use

Recessed, Transparent Primary Entry

Transparency at Active Ground Floor Corner Condition

Threshold Treatment

Residential Ground Floor Stoops Facing Public Right-of-Way

Buildings that provide an active and transparent threshold create an engaging interface between exterior and interior uses. Well-designed thresholds provide fluidity between public and private realms and foster a sense of well-being and security through natural surveillance. Gracious thresholds activated with residential stoops, furnishing, interior/exterior public uses and upper levels with balconies create an engaging street level experience and instill a sense of community.

Standards

6.2.4.1 Non-Residential Entry Design Non-residential entry design shall incorporate two or more of the following methods:

- Change in wall/window plane in relation to the primary building façade
- Use of accentuating light and color
- Provide a projecting element above
- Include a change in material or detailing
- Recessed doors or cased openings

6.2.4.2 Residential Entry Design Where individual ground floor entries exist, unit shall have a weather-protected entry directly into the unit. Changes in material, awnings, recessed entries and stoops are encouraged to express the module of the residential unit.

6.2.4.3 Lobby Design Lobby entrances shall occupy a maximum of 30'-0" of façade length within the first interior 25'-0" of the façade. Lobby façade treatment shall maximize transparency to interior common spaces or interior open spaces.

Guidelines

6.2.4.4 Ground Level Entry Design Ground level entry designs and design elements shall be coordinated with the active ground floor use controls outlined in Section 4.5 and the Setback controls in Section 5.4 of these Design Standards and Guidelines.

Non-Residential Primary Entry Threshold

Raised Commercial Ground Floor Terrace With Awning

Weather-Protected Residential Entry

6.3 Facade

Varied Residential Facades Articulated at narrow Intervals

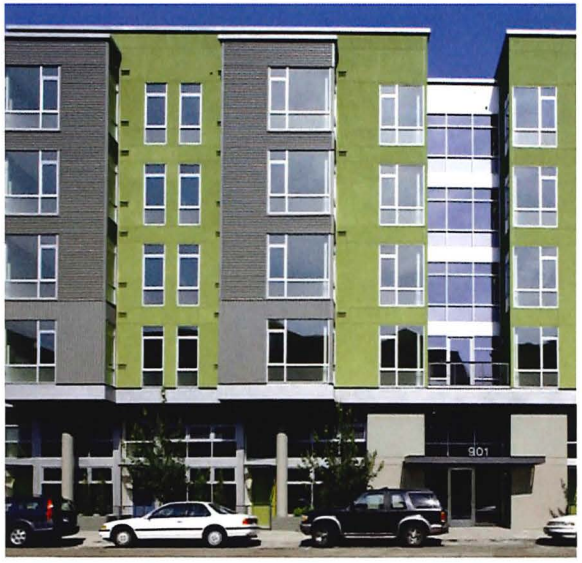
6.3.1

Variation

Variation is a change or difference in form, proportion, position, condition, quantity, level or other compositional characteristic – typically within certain parameters. In design, variation describes adjacent elements comprising both similar and different attributes such that they are recognizable as related.

Standard

6.3.1.1 Façade Variation Individual buildings shall vary from immediately adjacent building(s) in at least three of the following seven ways: building massing, materials, glazing pattern and proportion, integral material color (paint color differences alone do not qualify), architectural detail, articulation, or roofline modulation. All facade variation strategies shall be coordinated with the controls in Section 5.4 Setbacks of these Design Standards and Guidelines.



Facade Modulation by Vertical Protrusions and Recesses

Change in Color and Building Massing Setbacks

Facade Variation

Modulation

Rhythmic Facade Modulation and Active Ground Floor Thresholds

Modulation strategies are occupiable façade elements that are generally less than five feet in depth. Modulation strategies involve creating volumetric shifts that result in proportional parts—or "modules"— in an architectural façade. These strategies may be rhythmic or asymmetric.

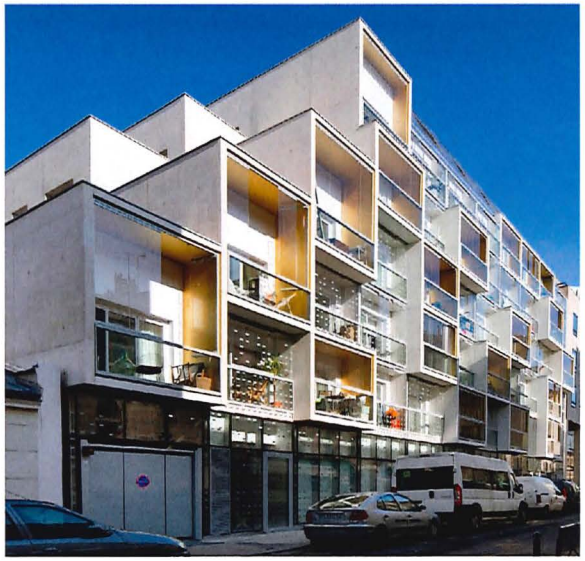
Standard

6.3.2.1 Façade Modulation Façade Design shall incorporate either one or both of the following methods: multiple facade systems and/or volumetric facade modulation, as outlined in 6.3.2.2 and 6.3.2.3 and cataloged in the following four pages under Facade Modulation Strategies. All facade modulation strategies shall be coordinated with the controls in Section 5.4 Setbacks of these Design Standards and Guidelines.

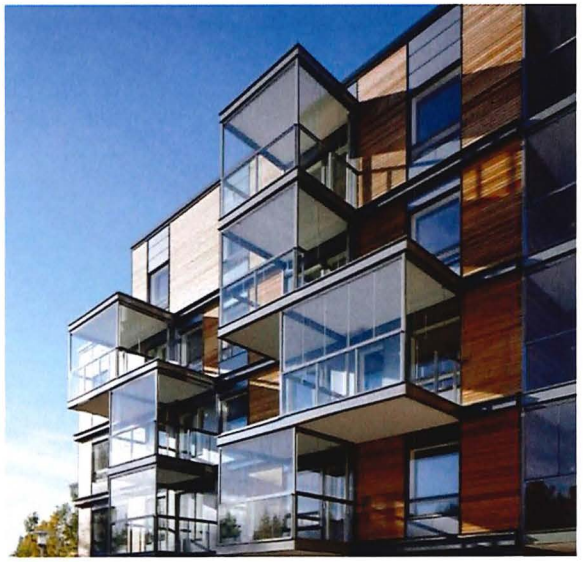
6.3.2.2 Multiple Façade Systems Multiple Façade Systems shall be a method of breaking up a single facade length (as defined by Figure 5-23 and the Parcel Control Plan) into distinctly expressed increments no greater than 70' in length. The multiple facade systems method may include but shall not be limited to changes in the façade plane through reveals, facets, recesses, protrusions, or other formal shifts no smaller than 18" wide by 18" deep. Contrasting materials, articulation, or a fenestration pattern aligned with a volumetric shift are encouraged. Paint or coatings do not qualify as contributing to multiple façade systems. A non-exhaustive selection of Multiple Facade Systems is included in the list of Facade Modulation Strategies in the next four pages.

6.3.2.3 Volumetric Façade Modulation Volumetric Façade Modulation shall be a method of breaking up a single facade (as defined by Figure 5-23 and the Parcel Control Plan) through variations in the façade plane and modulation of the building envelope or occupiable space of no less than 2' deep by 4' wide by 1 floor in height applied across at least 30% of the predominant surface area (as defined in Section 5.6). The application of volumetric façade articulation includes, but is not limited to, the following: vertical or horizontal recesses or protrusions, structural expression, shifted modules, bay or sawtooth windows, and balconies. A non-exhaustive selection of Volumetric Facade Modulation examples are included in the list of Facade Modulation Strategies in the next four pages.

Changes in Material, Color, and Depth Along Facade

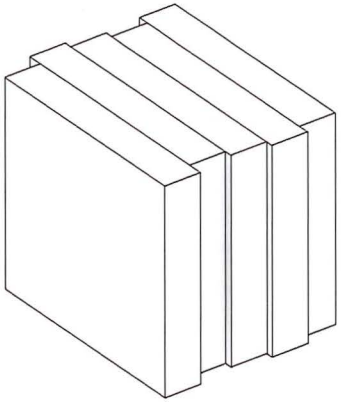


Facade Depth Through Recessed Balconies and Projections



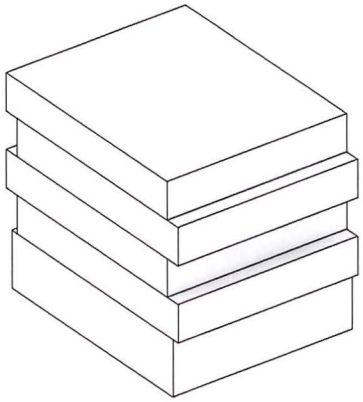
Staggered Protected Balconies

FACADE MODULATION STRATEGIES



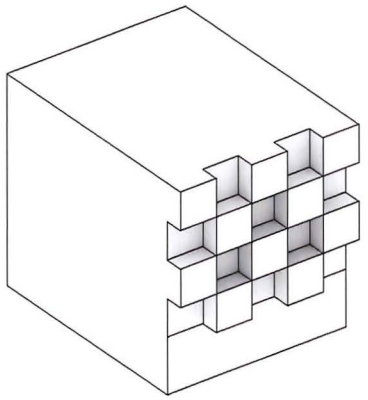
Vertical Shift
Multiple Facade Systems

The façade is subdivided into "bays" that protrude or recess from a predetermined datum. These bays may be expressive of a programmatic or structural characteristic of the building.



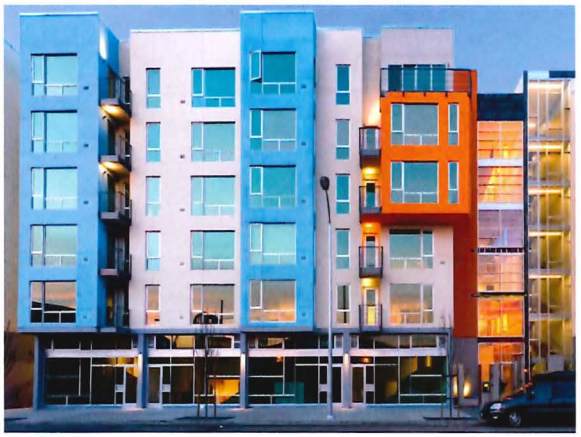
Horizontal Shift
Volumetric Facade Modulation

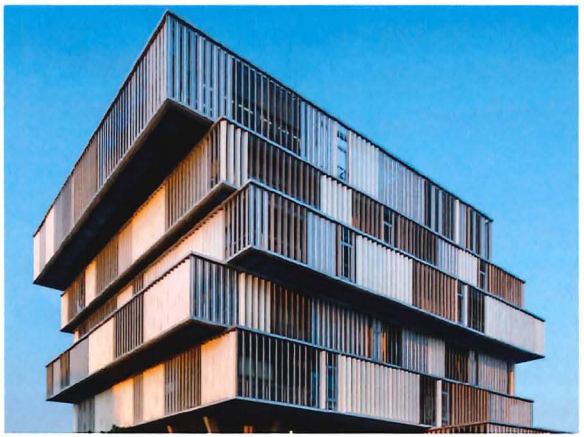
The façade is defined by horizontal subdivisions which project forward or push back from each other. The horizontal subdivisions may, but need not be, determined by the location of the building's floorslabs.

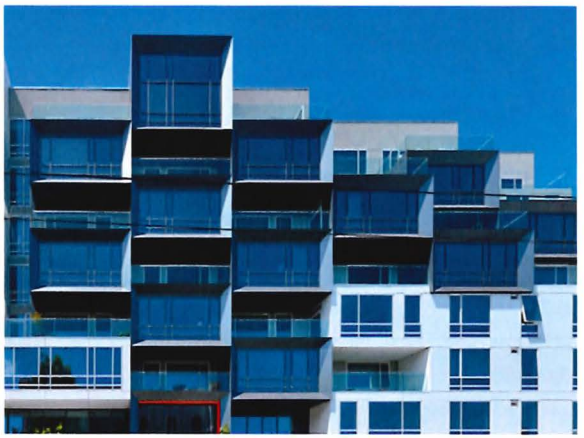


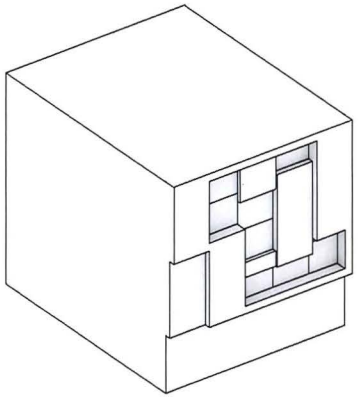
Pixelation
Volumetric Facade Modulation

The façade is subdivided into "pixels" (or relatively small and regularly occurring modules), which are expressed as identifiable, individual pieces of a whole system or pattern along the façade. Pixilation techniques may include, but are not limited to, changes in depth, material or surface treatment.



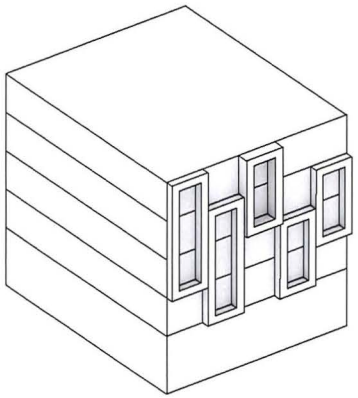






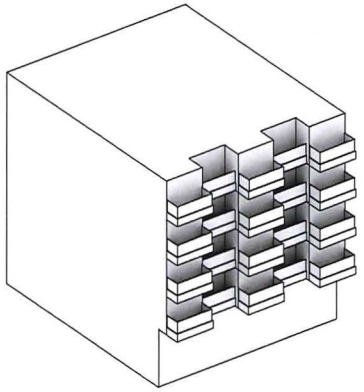
Low-Relief / Carving
Multiple Facade Systems

A single apparent volume contains subtle changes in plane—typically combined with changes in material [systems]—to create the illusion of a carved and layered façade.



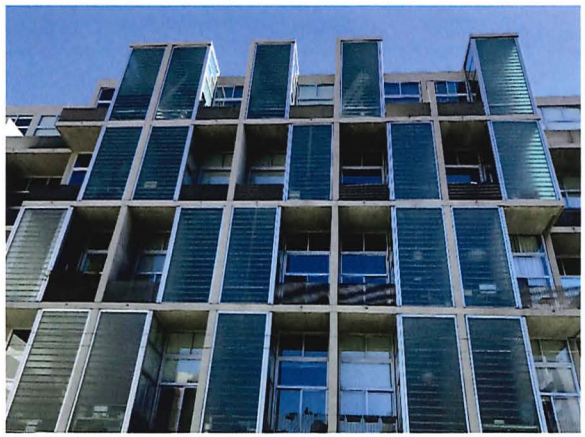
Floor Grouping
Multiple Facade Systems

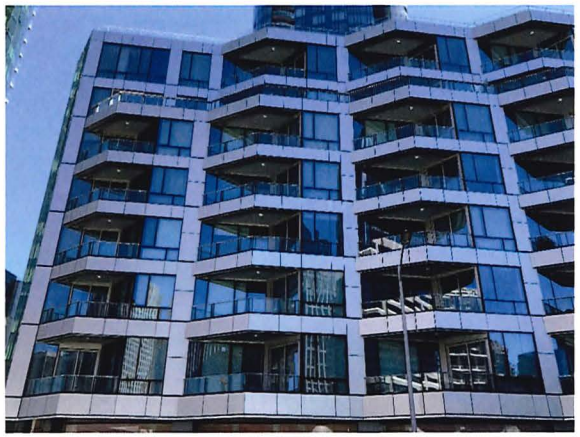
Two or more adjacent floors are grouped for a portion of their span by a single element along the façade such as a frame, protrusion, subtraction, structural element, etc.



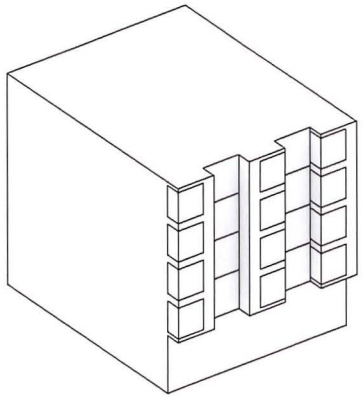
Balconies
Volumetric Facade Modulation

Balconies can be used as a modular element to break up a facade into smaller-scaled portions. Balconies can be open, partially enclosed, projections or recesses from the main façade.



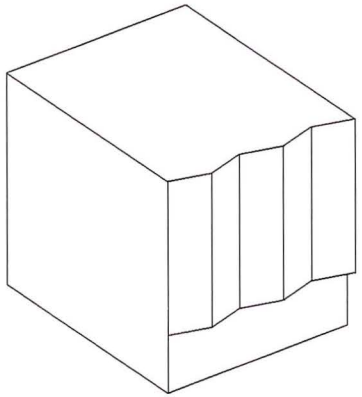


FACADE MODULATION STRATEGIES



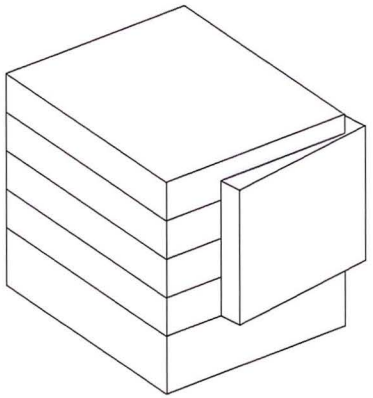
Bay Windows
Volumetric Facade Modulation

Bay Windows are occupiable, enclosed projections off of the main façade. A bay window need not extend the full height of the building.



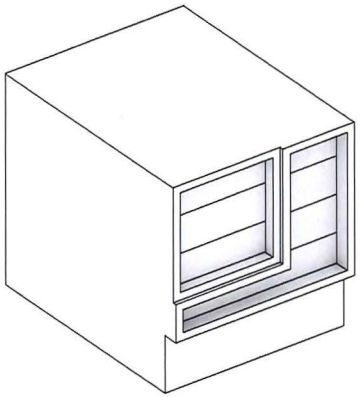
Push-Pull
Multiple Facade Systems

This is defined by a series of sloped or faceted surfaces along the façade which occur at the scale of the façade.



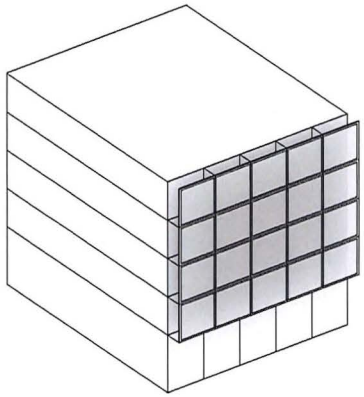
Intersecting Volumes
Volumetric Facade Modulation

This strategy modulates a building's façade by creating the illusion of two or more distinct volumes intersecting each other. The apparent volumes are typically emphasized as discrete using contrasting materials, colors, textures or offset angles.



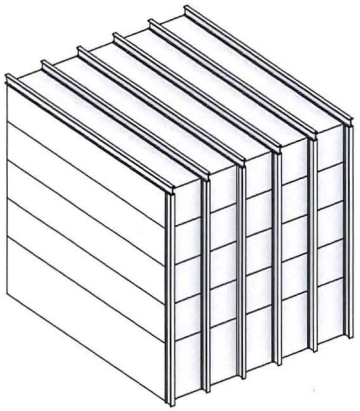
Framing
Multiple Facade Systems

Elements of a façade can be identified as modules through the use of a frame or framing element. A frame can be a continuous protrusion which follows some perimeter at the façade scale.



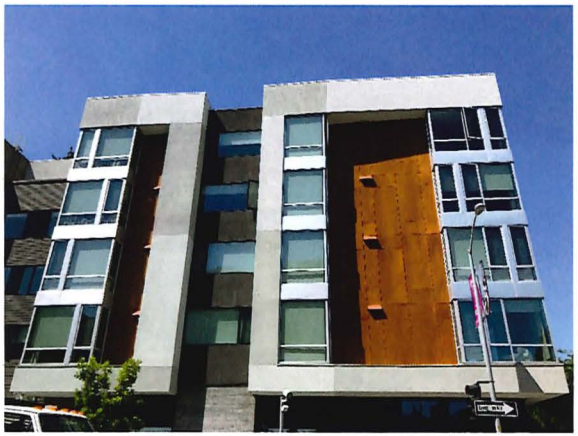
Double Skin
Multiple Facade Systems

A double skin is a façade system created by a second enclosure, typically lighter and slightly translucent or perforated, outboard of the main exterior building envelope. A double skin may have operable components and is meant to add depth and intricacy by adding light and shadows along the façade.



Structural Expression
Multiple Facade Systems

Structural elements such as beams, columns, cross-bracing, or fastenings can naturally break up a building's facade if made visible along a building's exterior.



Articulation

Modulation and Articulation on Residential Building Facade

Articulation strategies are non-occupiable expressions of material properties, craft, treatment, pattern, and assembly, which comprise the depth of the façade. Articulation and material application shall reinforce building massing and modulation strategies to create a cohesive façade system. A non-exhaustive selection of Articulation examples are shown on the following pages.

Standards

6.3.3.1 Glazing Glazing shall be of low reflectance. Darkly tinted or highly-reflective glazing shall be prohibited.

6.3.3.2 Bird-Safe Glazing Treatment Façades shall comply with City of San Francisco Standards for Bird-Safe Buildings.

6.3.3.3 Façade Depth Façades shall incorporate at least two architectural detail or material finishes across each facade which create visible shadows and texture across the building façade. Examples include but shall not be limited to shading devices, shutters, screens, window reveals, spandrels and mullions, standing seams, and perforated, textured or otherwise highly tactile materials. A non-exhaustive list of potential strategies is included in the following pages under Façade Articulation Strategies.

Guidelines

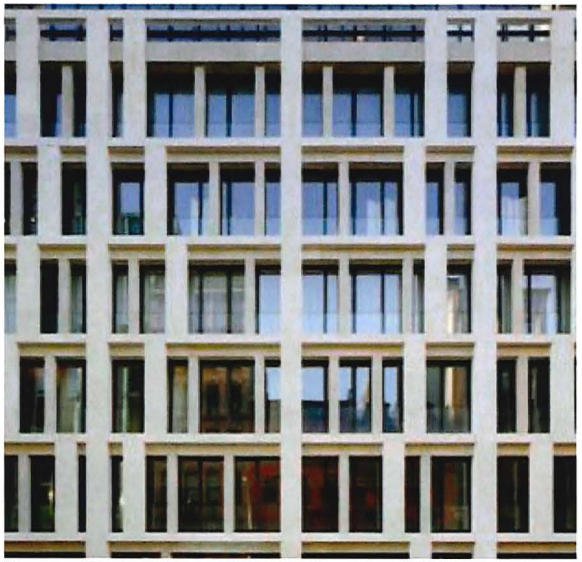
6.3.3.4 Material Treatment Façade Design shall incorporate material treatments that express the integral qualities of the material, exhibit craft and resonate with the industrial history of the area. This includes the use of treated metal, concrete, stone, glass, composites and wood materials in order to achieve a visible level of texture, formwork, color and/or relief. A minimum of 65% of exterior facade shall either incorporate integral material finishes or shall be white in color.

6.3.3.5 Metals Painted metal colors shall be limited to shades of gray, silver or white.

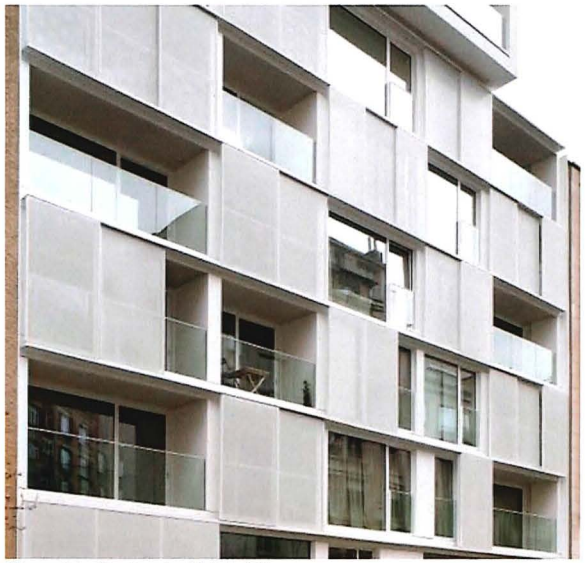
6.3.3.6 Material Quality Façade Design shall incorporate durable materials that age well, express production and assembly and have integral tactility. Materials which evoke the rugged industrial maritime character of the area and which compliment those used in the adjacent public realm are preferred. See Chapter 2 Public Realm for material palette. Cement Plaster may be used only in combination with other permitted building materials.

6.3.3.7 Color Palette Exterior wall color shall reinforce the architectural concept and employ a limited color palette.

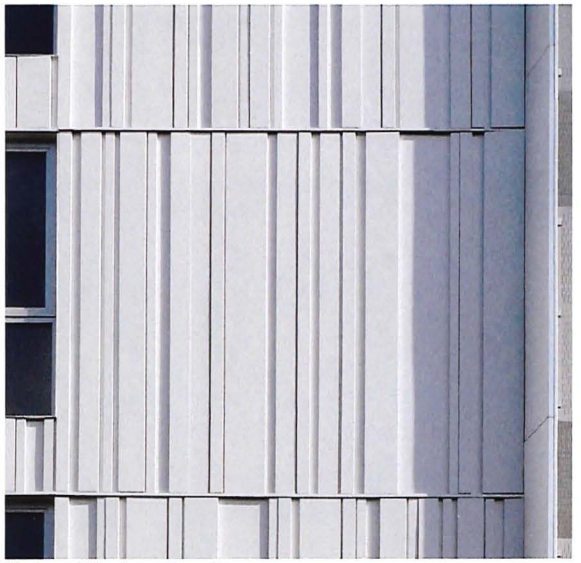
6.3.3.8 Artwork Architecturally integrated artwork, including but not limited to murals, bas reliefs, mosaics, textured tiles, lighting, and other interactive instillations, shall be encouraged.



Facade Depth Achieved Through Staggered Columns

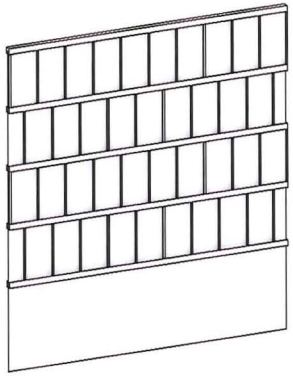


Operable Perforated Metal Screens



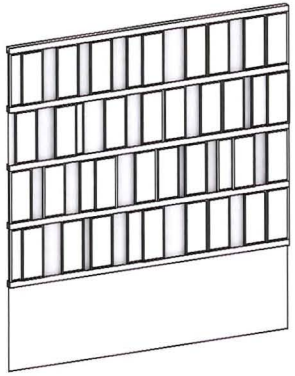
Textured Surface Panels

FACADE ARTICULATION STRATEGIES



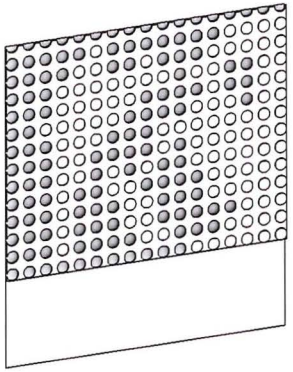
Mullions

Window mullions can be arranged or designed to create elegant patterns along a buildings facade.



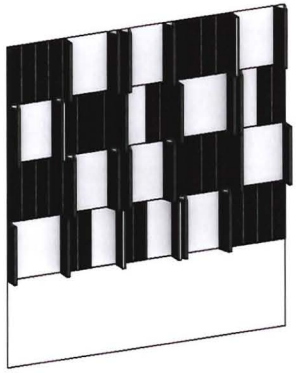
Panelling

This kind of articulation may consist of fixed or operable panel systems.



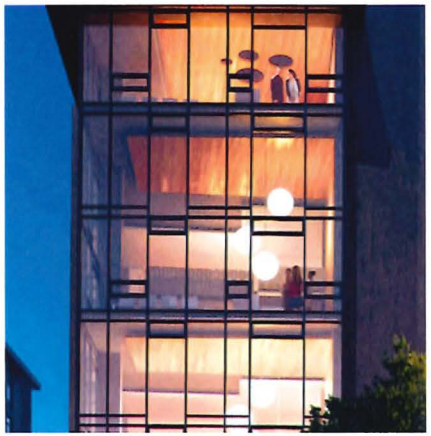
Perforations / Patterning

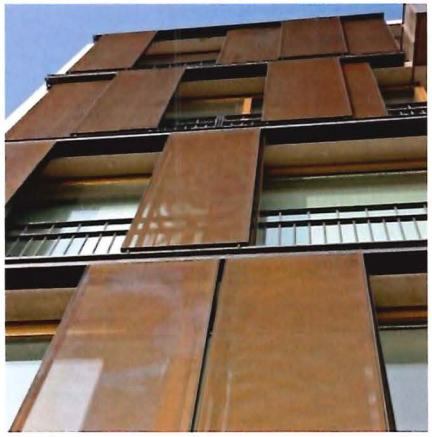
Perforations and patterning on a facade can be achieved through the detailed arrangement of much smaller elements (such as brick) or through different fabrication techniques or treatments of surfaces along the building's exterior (such as perforated metal).

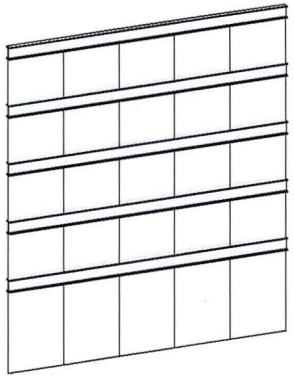


Shutters

Shutter systems add textural richness by virtue of their changing configurations. The breadth of shutter styles and materials (pleated, sliding, horizontal, pivot, opaque, translucent, etc) provides a wealth of façade design options as well.

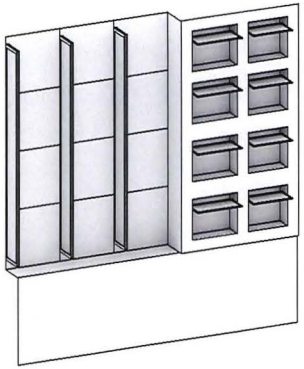






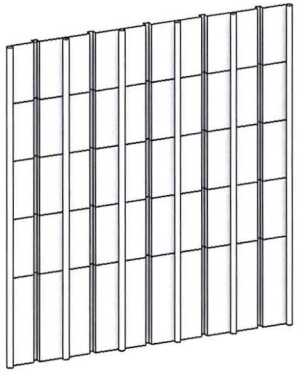
Spandrels

With enough contrast from other elements on the façade, spandrels can serve to articulate a building's structure and layout.



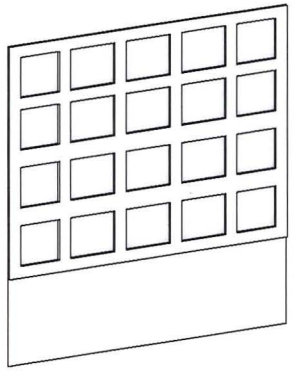
Fins / Shading Devices

Fins and shading devices can be arranged strategically to serve their function as well as create intricate patterns on a buildings façade.



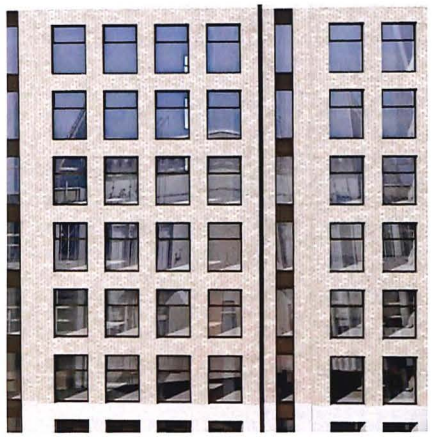
Protrusions / Recesses

Subtle protrusions and recesses articulated on a building's façade give it depth by catching light and shadows at different angles throughout the day.



Windows / Openings

The inherent elements of windows and openings (sills, frames, etc.) can generate textural richness along a building's façade.



6.4 Roof

Integrated Green Roof and Rooftop Amenities

Roof design is integral to building character, adding another opportunity for visible activation and complementing the array of exterior building elements – as viewed both from the street and from above. Thoughtfully designed roofs can provide amenity through the strategic placement of rooftop gardens or community rooms. Roofs can support habitat in an environmentally sustainable fashion. They can be irrigated with high quality, non-potable water, and supply green energy, in turn improving the thermal envelope of a building and reducing storm-water runoff.

Refer to District Sustainability standards in Chapter 3, and the Better Roof Requirements in San Francisco Environmental Code for additional guidance.

Standards

6.4.1 Greenroofs and Greenwalls Where constructed, green roofs and green walls shall use regionally-appropriate, native and/or adaptive species from the San Francisco Better Roofs Living Roof Manual to minimize water consumption. The Living Roof Manual recommends the following guidelines for all living roofs: living roof should be structurally engineered for building, employ highly efficient irrigation using non-potable water, select appropriate waterproofing and root barriers to prevent building damage, maximize water retention and proper drainage, use native species with shallow root systems for high habitat value and niches, implement sustainable and best construction practices, design and plan for ongoing maintenance, employ organic pest control methods, and select lightweight growing media appropriate for the building structure and species.

6.4.2 Screening of Rooftop Features Rooftop mechanical equipment and appurtenances to be used in the operation or maintenance of a building shall be arranged so as not to be visible from any point at or below the roof level of the subject building. These features shall be either enclosed by outer building walls or parapets, or grouped and screened in a suitable manner – with screening exceeding by at least 1'-0" in height the elements thereby screened – or designed in themselves so that they are integrated with respect to the design of the building.

Guidelines

6.4.3 Location Green Walls shall be located away from highly glazed facades for bird safety.

6.4.4 Rooftop Solar Portions of the roof area shall be designed to permit installations of South oriented solar panels.

6.4.5 Solar Where green roofs are installed, incorporate shade tolerant species on green roofs beneath PV structures. (See Section 3.3: Energy and Greenhouse Gas Emissions).

6.4.6 Species Green Roof Species shall be selected with an emphasis on habitat creation. Habitat types include: Pollinator species, Species for nesting and Species as food source. See Section 3.8 for Habitat Types.


Rooftop Amenity


Sustainable Roof


Green Roof Integrated Photovoltaic System

6.5 High Performance Building Design

Building Energy Performance

India Basin aspires to be a leader in building energy efficiency by going above and beyond the minimum energy performance requirements established by state and local codes.

Title 24, the California code that regulates building energy consumption, is targeting net zero energy operation for low-rise residential buildings by 2020 with a 2030 target date for non-residential and high rise residential buildings. The San Francisco Green Building Code has energy efficiency requirements in addition to those mandated by state code.

The State of California's path to net zero is currently undefined, so a linear extrapolation of the path from current code to net zero in 2030 has been used to guide building energy performance targets for India Basin.

The energy performance projections for each building type have been included in Figure 6-1 through Figure 6-4. The charts use the metric of Energy Use Intensity (EUI) in kBtu per square foot per year. Energy Use Intensity reflects the amount of energy used per square foot of building area. The graphs show the projected code minimum (solid, top line) and the India Basin EUI goals (dashed, bottom line).

To assess which energy efficiency strategies will have the largest impact on energy consumption, the predicted energy end use of each building type was calculated. Figures 6-1 through 6-4 also show the energy end use breakdown of the predominant building types on the site. These breakdowns can be used to inform the most effective energy efficiency strategies.

Detailed descriptions on building energy end uses can be found in the Appendix.

Building Water Efficiency

The City of San Francisco's local ordinances include aggressive water efficiency standards designed to achieve San Francisco's conservation goals and address long-term threats to water resources posed by climate change. The San Francisco Plumbing Code has recently been updated to meet new minimum state water conservation standards, which are among the most stringent conservation standards in the Nation. India Basin will meet or exceed these water efficiency standards, as defined by State and Local codes at the time of construction. As noted in Chapter 3, at a district scale, the project will strive to maximize production of recycled water to serve on-site non-potable demands and for export to neighboring developments to further reduce potable water-use demand.

Goals

6.5.1 High Performance Buildings High performance buildings potentially meet or exceed energy use intensity (EUI) targets in Figures 6-1 through 6-3 through a combination of energy efficiency measures and/or renewable energy production.

6.5.2 Possible Off Site Renewable Power Purchase Agreement Engage in a renewable energy power purchase agreement for all energy consumed in the buildings.

Guidelines

6.5.3 Limit On-site Combustion Limit on-site use of natural gas to residential and commercial kitchen processes. When feasible, evaluate viability to eliminate all on-site combustion to align with the non-combustion requirements of the Living Futures Living Building Challenge (LBC).

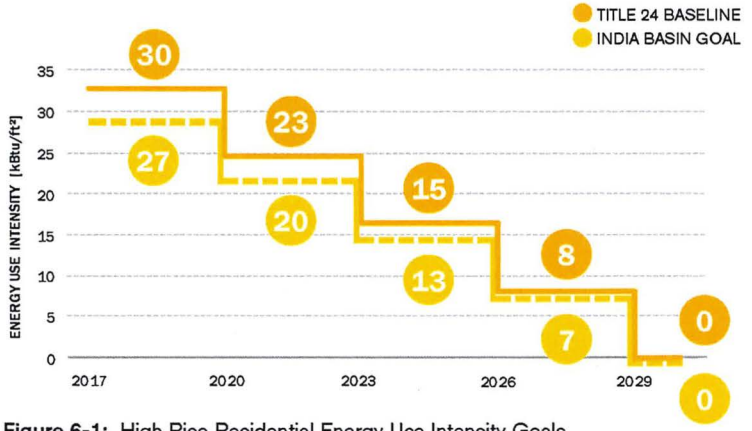


Figure 6-1: High Rise Residential Energy Use Intensity Goals

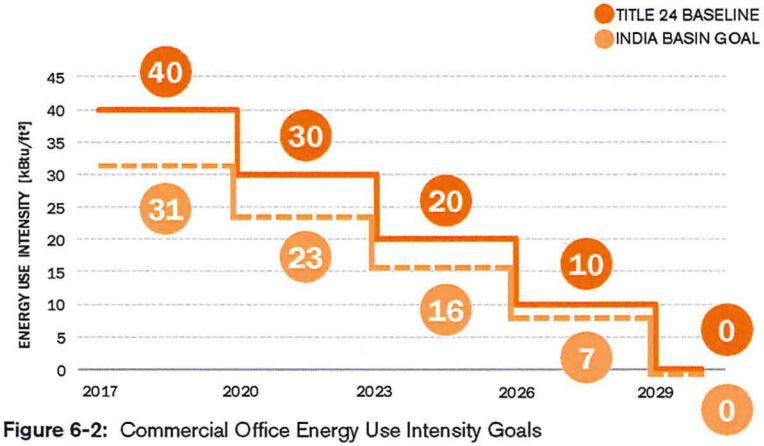


Figure 6-2: Commercial Office Energy Use Intensity Goals

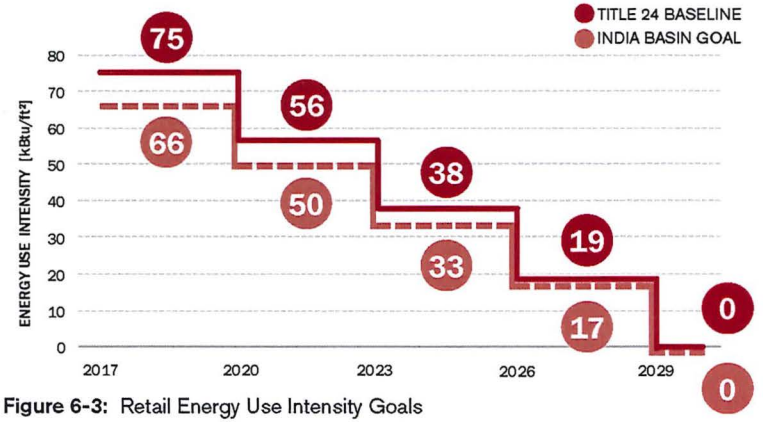
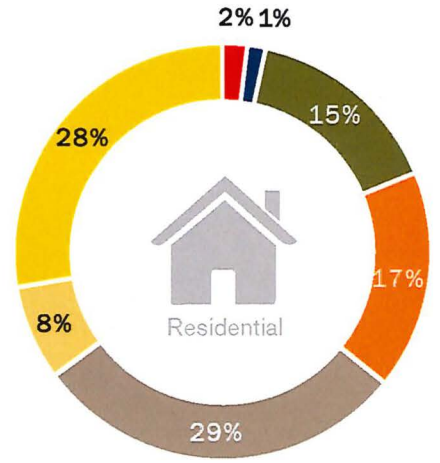
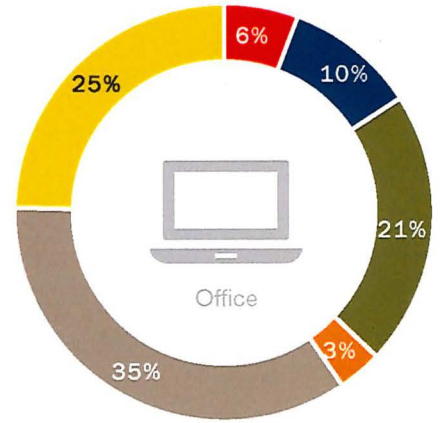


Figure 6-3: Retail Energy Use Intensity Goals





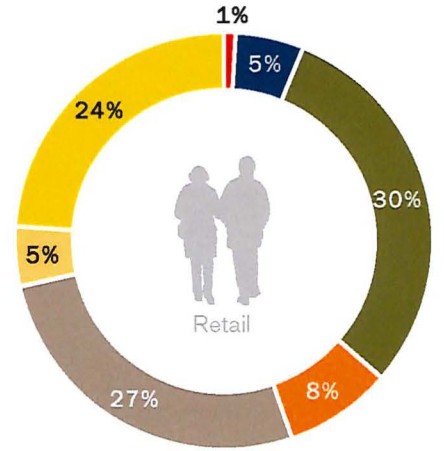


Figure 6-4: Energy Use By Program

- SPACE HEATING
- SPACE COOLING
- VENTILATION + PUMPING
- DOMESTIC HW
- MISC EQUIPMENT
- PROCESS GAS
- LIGHTING


07
777

Signage and Wayfinding

Chapter 7: Signage and Wayfinding

The India Basin Signage Standards and Guidelines are intended to outline and illustrate the 2016 amendments to San Francisco's Mixed-Use District Code (Section 607.2). The guidelines attempt to clarify the effectiveness of sign advertising for individual concerns and in the interest of fostering sense of place. They regulate the size, placement and certain aspects of design, and are intended to reduce sign clutter and enhance site character.

The guidelines describe the qualitative considerations of designing signs in conformance with the India Basin Special Use District. It should be noted that San Francisco Building Code contains certain standards regarding structure, clearance and safety pertaining to signs. These standards and guidelines should be considered supplemental to the San Francisco Signage Guidelines and Better Streets Plan.

This document outlines and illustrates signage guidelines in order to assist in preparing applications for signage design review. Moreover, the guidelines are intended to provide dimensional and aesthetic guidance prior to formal application to streamline the design review requirement of signage by the India Basin Trust (India Basin Owners Association) and the San Francisco Planning Department (SF Planning). Conformance with the guidelines does not replace the review process and does not guarantee approval. At the discretion of SF Planning, complete proposals describing signage proposals that comply with these guidelines will be eligible for administrative review. Applicants must comply with other agencies and review processes.

7.1 Public Signage

7.1.1

Public Signage General Guidelines

Though India Basin's Signage Guidelines have been tailored to preserve and communicate the site's character, the city's carefully considered general streetscape guidelines are its foundation.

San Francisco's Better Streets Initiative has established the following as the core tenets of the city's signage guidelines. The following tenets apply to all forms of public realm signage:

Guidelines

7.1.1.1 Placement All signage shall be placed strategically, always with the goal of minimizing the overall number of signs and signage systems necessary. Overuse and careless placement simultaneously dilutes signage effectiveness and clutters the streetscape.

7.1.1.2 Catch the attention of passers-by but complement the overall streetscape design.

7.1.1.3 Align with existing site furnishings or be otherwise located out of the path of travel.

7.1.1.4 Include braille and be multi-lingual as necessary and appropriate to the specific location.

7.1.1.5 Use a consistent graphic look and feel; signs that highlight local district or neighborhood character should be encouraged and should be of a similar look and feel throughout that district to enhance the area's sense of place.

7.1.1.6 Incorporate neighborhood-specific or artistic elements; flexibility shall be granted to artisans and craftspeople to create unique signage.

WalkNYC Wayfinding

Street Markers, Transit Signage and Public Safety

Street Markers

Transit Signage

Advisory Message

Street Marker Guidelines

7.1.2.1 Street Markers Street markers shall be implemented as specified by San Francisco street signage standards, including private streets/corridors on the site.

7.1.2.2 Streetpoles Streetpoles shall align with fixture and placement standards/guidelines in Chapter 2: Public Realm and Open Space.

Transit Signage Guidelines

7.1.2.3 Transit Signage In the interest of weaving India Basin into San Francisco, all transit signage shall follow city transit signage standards.

7.1.2.4 Streetpoles Streetpoles shall align with fixture and placement standards and guidelines in Chapter 2: Public Realm and Open Space.

Public Safety Signage Guidelines

7.1.2.5 Public Safety Safety is paramount—executing the city's existing program improves recognition and comprehension. All signage shall follow San Francisco's public safety signage standards.

7.1.2.6 Non-critical Messages To avoid sign clutter, non-critical messages shall, where practicable, be directly applied to existing surfaces.

7.1.3

Wayfinding

"Design must be functional, and functionality must be translated into visual aesthetics without any reliance on gimmicks that have to be explained."

– Ferdinand Porsche

On most streets, typical street signage is all that is needed to orient pedestrians to major destinations. However, on streets and public spaces with heavy pedestrian volumes, additional directional signage is often helpful.

Directional signs are typically much simpler than a neighborhood orientation sign, featuring only place names and wayfinding information. They should have a distinct and coordinated design consistent with the character of the surrounding neighborhood. Well-designed directional signs can help give the area a distinct identity.

India Basin's history of maritime, bay-fill and industrial activities evolved piecemeal over time and remnants of the site's past are evident. The site is feral, rugged, industrial and wild—characteristics embraced by the community. With this in mind, site wayfinding should direct and inform visitors while communicating the site's wild and industrial character.

The properties of India Basin have designed a site-specific wayfinding and interpretive signage family, developed in accordance with the standards and guidelines listed here.

Standards

7.1.3.1 All signs shall follow the minimum Americans with Disabilities Act (ADA) requirements for cap heights.

7.1.3.2 In open areas, freestanding signs shall be located within a clearance radius of 3' to 5' to allow for up close reading of small text. The placement of such signs shall not impede pedestrian flow.

Guidelines

7.1.3.3 Sign Location Wayfinding signage must be in locations with high pedestrian traffic and be attractive—complementing the style of other streetscape elements—and easily usable to residents and visitors.

7.1.3.4 Maintaining Sightlines Wayfinding shall not obstruct key sightlines. This may be achieved by applying wayfinding to existing surfaces (Images 2 and 5 on page 341) or material porosity (Image 3 on page 341). Signage must be located in the furnishings zone and as near to intersection corners as is practicable (without infringing on the corner zone).

Signs, signs, everywhere a sign. Breaking up the scenery. Breaking my mind.

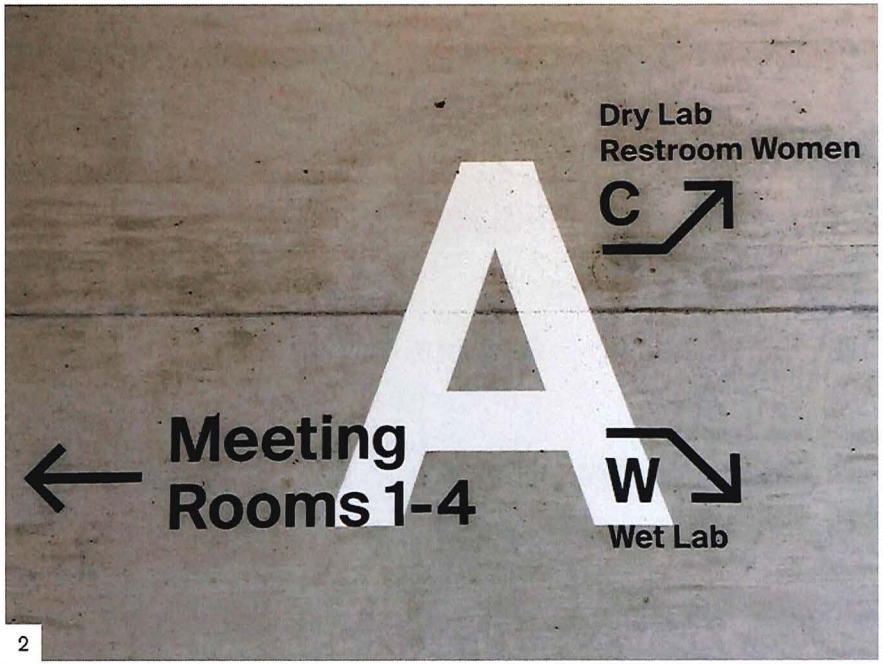
– Five Man Electrical Band

7.1.3.5 Typography An appropriate typeface must be legible and clear, feature a selection of weights and styles and complement and coexist with existing identities and environments.

7.1.3.6 Symbols and Pictograms As symbols and pictograms are an efficient way of communicating without multi-lingual content, site wayfinding must use pictograms and symbols when practicable (Image 1). Include destination icons, place names and directional markers – e.g. arrows – for local destinations on blades or integral to the body of the sign. A map indicating current location and the best routes to nearby destinations should also be considered.

7.1.3.7 Materials and Construction Materials and applications chosen must align with the hardscape palette outlined in Ch. 2: Public Realm and Open Space, and be well-fabricated, assembled and installed.

1



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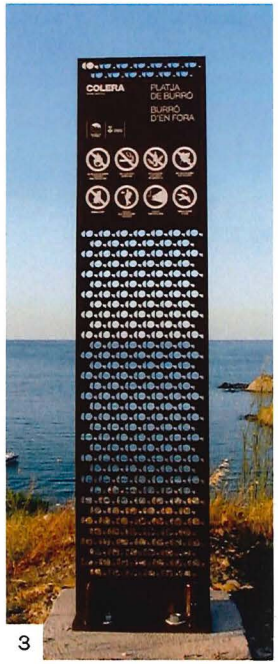

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1. Whakarewarewa Valley Wayfinding, Rotorua, New Zealand

2. Universitatsklinik Balgrist Hospital, Zurich, Switzerland

3. Outdoor Wayfinding System, Costa Brava, Catalonia, Spain

4. Wayfinding Signage, The High Line, New York City, NY

5. Museum Zeughaus Wayfinding Design, Vienna, Austria

Interpretive Signage

"Everywhere has something interesting; it's just about being curious enough to find it and scratch where you have to scratch and stay longer and walk further."

– Diego Luna

The properties of India Basin have designed a site-specific wayfinding and interpretive signage family, developed in accordance with the standards and guidelines listed here. For access to the wayfinding and interpretive package, visit: http://www._____.org.

Standards

7.1.4.1 All signs shall follow the minimum Americans with Disabilities Act (ADA) legibility requirements.

7.1.4.2 In open areas, freestanding signs shall be located within a clearance radius of 3' to 5' to allow for up close reading of small text. The placement of such signs shall not impede pedestrian flow.

7.1.4.3 India Basin interpretive signage shall be developed in tandem with wayfinding, in regards to both design and voice. While content and scale for wayfinding differs from wayfinding, the two must share a material vocabulary.

7.1.4.4 Sign Content Main body text shall be no more than two paragraphs of three or four short sentences. Text must be kept to no more than 150 words (up to 250 if using captions and smaller fonts for secondary text or captions).

Guidelines

7.1.4.5 Signs must avoid content overlap—signs that are repetitious in content, format and/or layout will quickly lose visitor attention, and therefore, will be unsuccessful in communicating the message.

7.1.4.6 Text must be active—using "we" and "you"—and positive without prescriptive adjectives. Text must answer the question, "So what?"

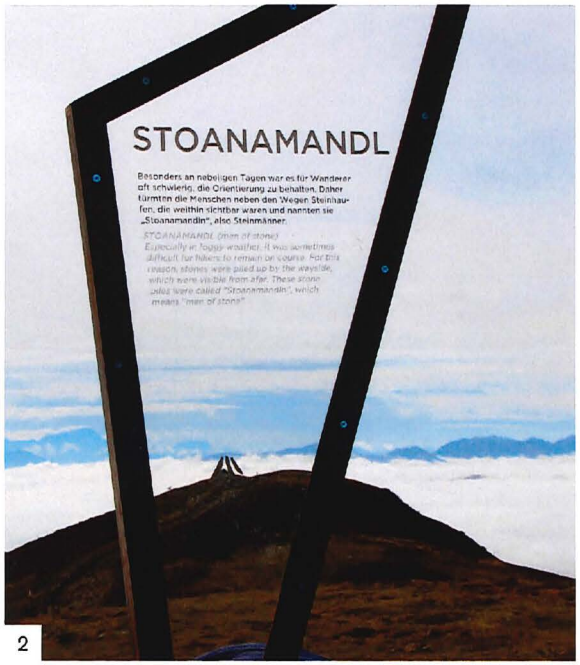
7.1.4.7 Secondary and tertiary interpretive signs must both be placed at a height suitable for all ages and abilities, and be low enough to preserve visibility beyond. Alternatively, signage design may use transparency such that the design itself serves as a frame for the subject matter or view (Image 2,3 on page 341).

7.1.4.8 Sign Location All interpretive signage must be coordinated with the rhythm and placement of wayfinding elements. To avoid competition and sign clutter between primary interpretive and wayfinding elements, consider combining the two.

7.1.4.9 Sign positioning must align the intended direction of the visitors' attention with the subject matter. Signage must be located in the furnishings zone and as near to intersection corners as is practicable—without infringing on the corner zone (Images 1 on page 379).

7.1.4.10 Typography Typography shall be coordinated with the wayfinding system, either matching or complementing the approach.

1



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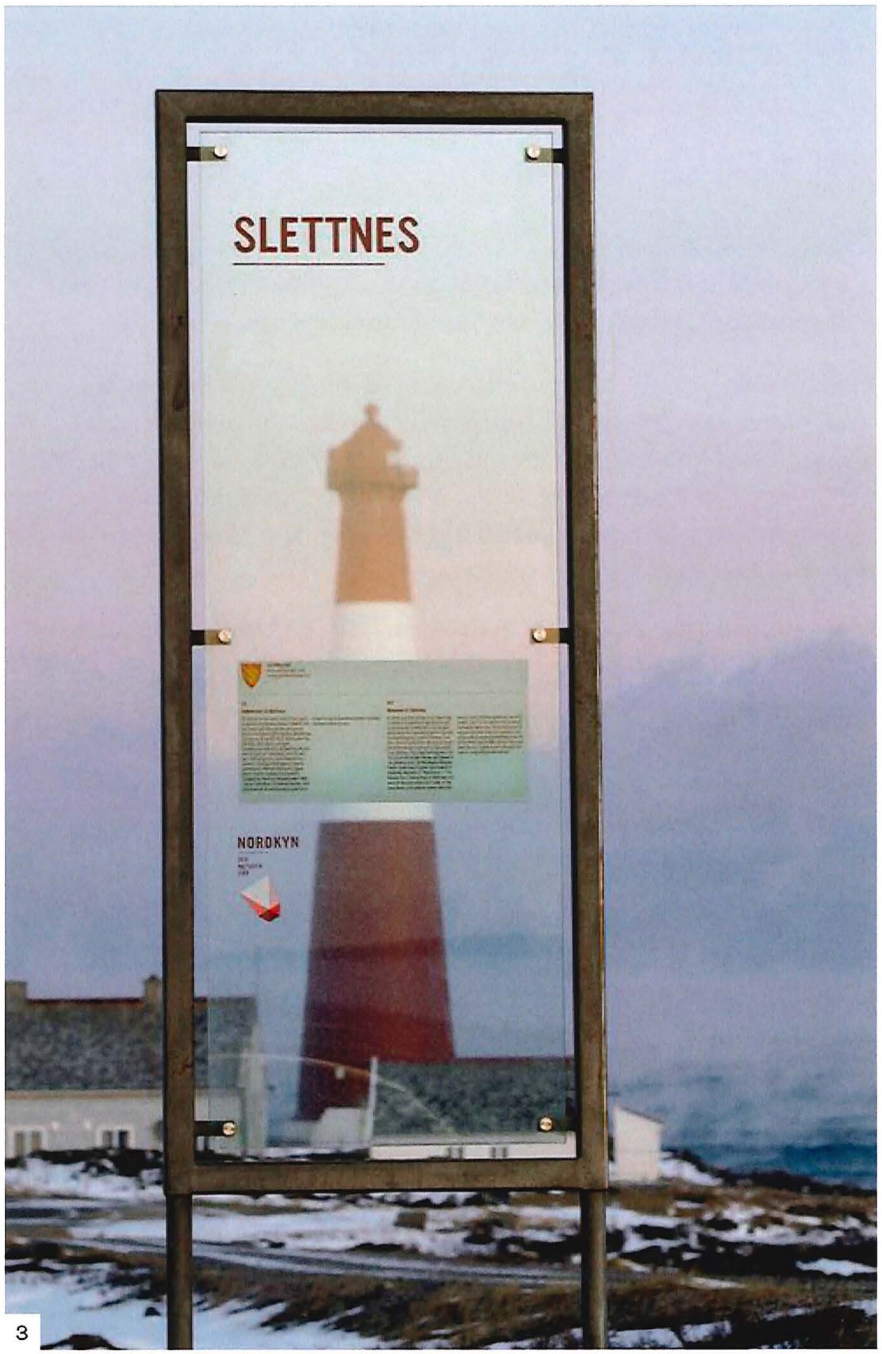

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1 Klehm Arboretum Wayfinding, Rockford, IL

2 Interpretive Trail Signage, Alpe Adria Trail, Austria

3 Nordkyn Signage, Nordkyn Finnmark, Norway

7.2 Private Signage

As Mixed Use Districts change, they need to maintain their attractiveness to customers and potential new businesses alike. Physical amenities and a pleasant appearance will benefit both existing and new enterprises.

The character of signs and other features projecting from buildings is a fundamental part of the visual appeal of a street and the general quality and economic stability of the area. Opportunities exist to relate these signs and projections more effectively to street design and building design. These regulations establish a framework that will contribute toward a coherent appearance of Mixed Use Districts.

Mixed Use Districts are typically areas with commercial uses at grade (or lower stories) and residential uses above commercial uses (or in upper stories). Mixed Use districts may also have residential, commercial and retail uses interspersed. Although signs and other advertising devices are essential to a vital commercial district, they should not be allowed to interfere with or diminish the livability of residential units within a Mixed Use District or in adjacent residential districts.

The scale of most Mixed Use Districts, as characterized by building height, bulk, and appearance, as well as the width of streets and sidewalks, differs from that of other commercial districts. Sign sizes should relate and be compatible with the surrounding district scale.

7.2.1

Residential Signage

Standards

7.2.1.1 Prohibited Sign Types Residential signage shall not take the following forms:

- *Box sign* A sign that is self-enclosed in a typically square or rectangular structure with or without internal lighting.
- *Programmable digital sign* A variable message sign that utilizes a computer or other electronic controlled means to change and control the message displayed. May use incandescent lamp LCD, LED or other display technologies.
- *Sandwich board* A moveable sign not secured or attached to the ground or surface upon which it is located, but supported by its own frame and most often forming the cross-sectional shape of an A—also known as sidewalk sign.
- *Freestanding sign* A sign that is not attached to a building, has its own support structure and is typically secured to a foundation.

7.2.1.2 Placement Signage shall be located so as not to block windows, doors or other means of ingress and egress.

7.2.1.3 Lighting Exposed conduit and tubing shall be prohibited. Exposed transformers and other equipment shall be prohibited.

Guidelines

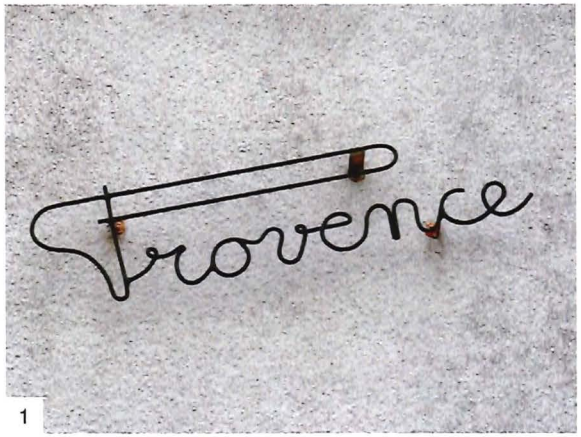
7.2.1.4 Surface Area Residential signage/name plates shall only identify the building name or address and shall not exceed four square feet. It is acknowledged that compelling and sensitive signage approaches may lie outside of the given parameters. In light of this, the India Basin Trust will consider nameplates/ residential signage falling outside of the aforementioned parameters—but not beyond 10 square feet—provided the sign is an asset to the community, contributing to the site's sense of place. Examples provided on the following pages are neither inclusive nor exclusive of other approaches.

7.2.1.5 Contextual Sensitivity Signage must respect architectural features, placed in accordance with façade rhythm, scale and proportion, including windows, storefronts and entries. Proportions should relate and be compatible with the surrounding scale. All signs should be integrated with the design of the project's architecture and landscaping. As a family of elements, signs should be related in their design approach and convey a clear hierarchy of information. Examples of architecturally-sensitive signage solutions are included on pages 346-347.

7.2.1.6 Residential signage should reinforce the building identity and be visible from the most common approach.

7.2.1.7 The size of signs and sign letters should be proportional to the space they are located in, with characters approximately 6" to 12" high.

7.2.1.8 Sign lighting shall not be detrimental to adjacent residential property. Property directly across a public right of way shall be considered adjacent property.



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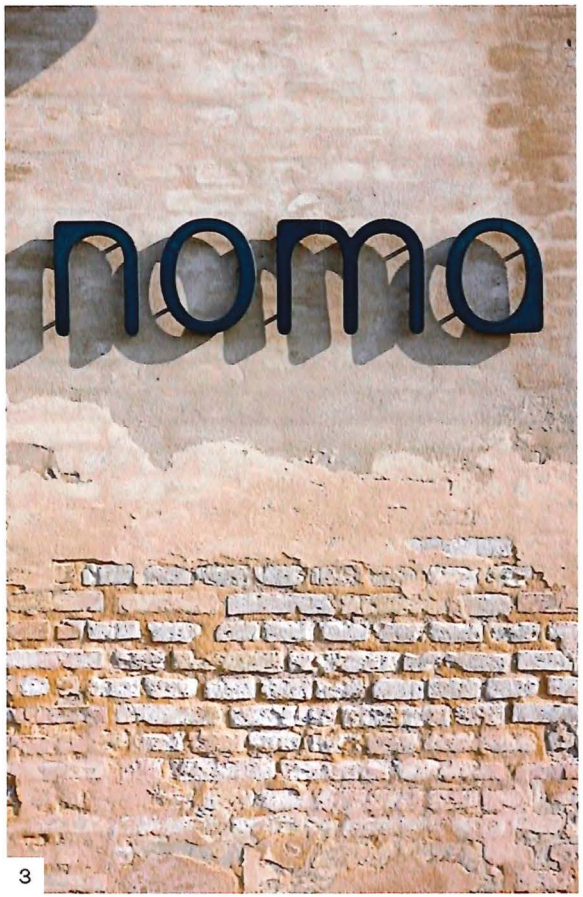

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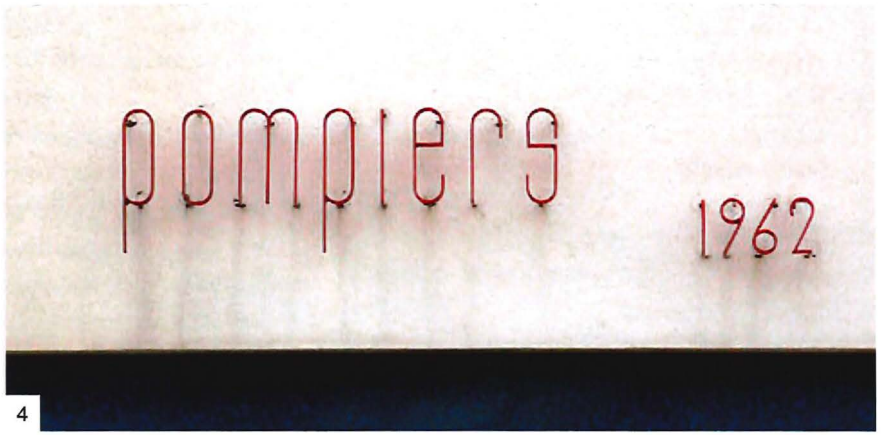
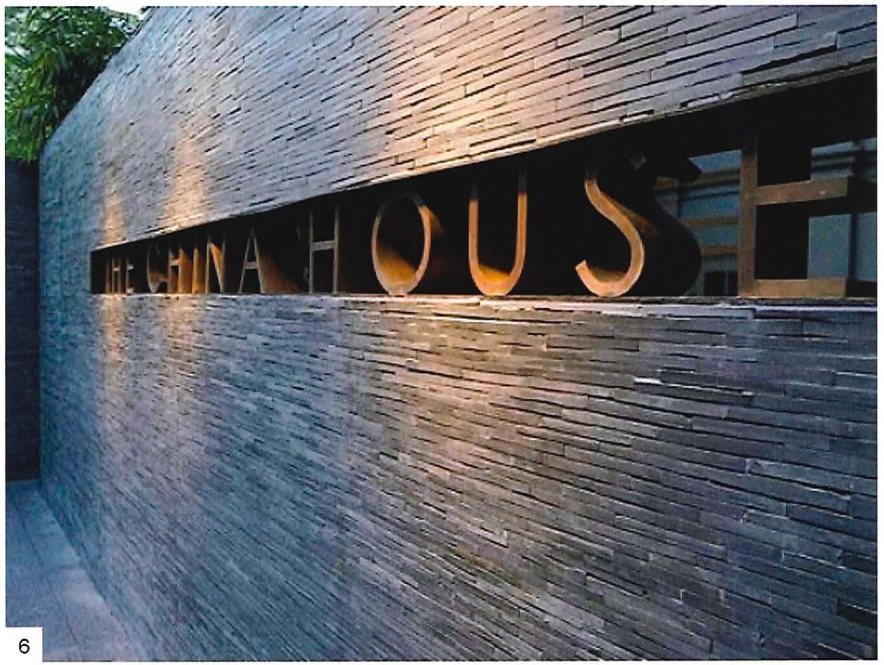


4

1. Villa Catherine Mamet, Montpellier, France
2. Luce Loft, San Diego, CA
3. Noma Restaurant, Copenhagen
4. Pompiers, Tremblay-en-France, France

5



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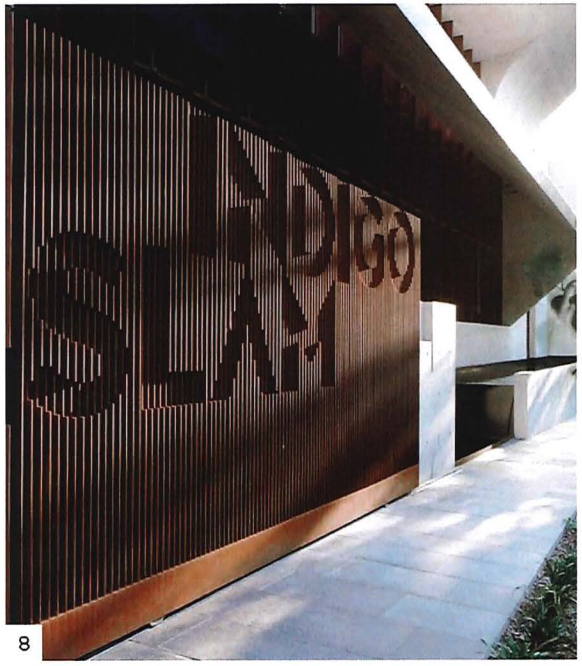


8

5 Small House
Big Door
Seoul, Korea

6 The China House,
Bangkok, Thailand

7 Co-op, Italy

8 Indigo Slam, Sydney,
Australia

Business/Retail Signage

Retail/business signage is defined by the San Francisco Planning Code, Section 602(c), as "a sign which directs attention to the primary business, commodity, service, industry or other activity which is sold, offered or conducted on the premises upon which such sign is located or to which it is affixed. Where a number of businesses, services, industries or other activities are conducted on the premises, or a number of commodities, services or other activities with different brand names or symbols are sold on the premises, up to one-third of the area of a business sign, or 25 square feet of sign area, whichever is the lesser, may be devoted to the advertising of one or more of those businesses, commodities, services, industries or other activities by brand name or symbol as an accessory function of the business sign, provided that such advertising is integrated with the remainder of the business sign, and provided also that any limits which may be imposed by this code on the area of individual signs and the area of all signs on the property are not exceeded. The primary business, commodity, service, industry, or other activity on the premises shall mean the use which occupies the greatest area on the premises upon which the business sign is located, or to which it is affixed."

Standards

7.2.2.1 Prohibited Signs Retail signage shall not take the following forms: billboard, off-premise advertising, box sign, programmable electronic sign, sandwich board, waterfall awning, or freestanding.

7.2.2.2 Movement All retail signage shall be stationary (i.e. no moving parts or lighting). Spinning, windblown or inflated devices including pennants, propeller discs, flags are forbidden.

7.2.2.3 Lighting Illuminated signs shall not use exposed fluorescent lights. Electrical raceways and all wiring shall be hidden from view.

7.2.2.4 Dimensional Letters Dimensional letters shall be no deeper than 0'-6".

7.2.2.5 Horizontal Blade Signs Horizontal blades shall project no more than half of sidewalk width and be oriented perpendicular to the building face.

7.2.2.6 Vertical Blade Signs Vertical blades shall project no more than half of sidewalk width and be oriented perpendicular to the building face.

7.2.2.7 Trademark The registered trademark of a specific commodity shall occupy no more than ten percent of the total sign area.

Guidelines

7.2.2.8 Surface Area Retail signage shall be less than 30 square feet in area and shall be mounted no higher than 30'-0". However, it is acknowledged that compelling and sensitive signage approaches may lie outside of these parameters. Figure 7-2 shows a painted retail sign that falls outside of the size parameters. However—because of both the character of the sign and its transparency—the design is a positive community addition. Hand-painted lettering is less obtrusive than other comparably-sized approaches and ages gracefully with minimal upkeep. Proposed exceptions shall be reviewed on a case-by-case basis by the India Basin Trust. All proposed exceptions shall be less that 125 square feet in area.

Pike Place Market, Seattle, WA

Figure 7-1: Incorporate Branded Retail Signage

Figure 7-2: Scale and Transparency

Figure 7-3: Facade-Mounted Dimensional Letters - Recommended

Figure 7-4: Box Sign - Prohibited

7.2.2.9 Exposed Neon Signage Exposed neon is discouraged, but proposed exceptions shall be reviewed on a case-by-case basis by the India Basin Trust.

7.2.2.10 Non-Identity Graphic Elements Signage incorporating creative logos or graphic elements along with the business identity are encouraged, but are subject to review by the India Basin Trust.

7.2.2.11 Contextual Sensitivity Wall signs must appear balanced and in scale within the context of the sign space and the building as a whole. A sign that respects the architecture augments the perceived quality of the retail tenant. Figure 7-1 uses modestly-scaled dimensional letters with returns colored to match the branded canopy. In Figure 7-3, signage is sympathetic to the building facade. The message is set in a weight informed by the slatted wood facade and right-aligned to the window's edge. Further examples of architecturally-sensitive signage solutions are included on the following spread (Images 1–8).

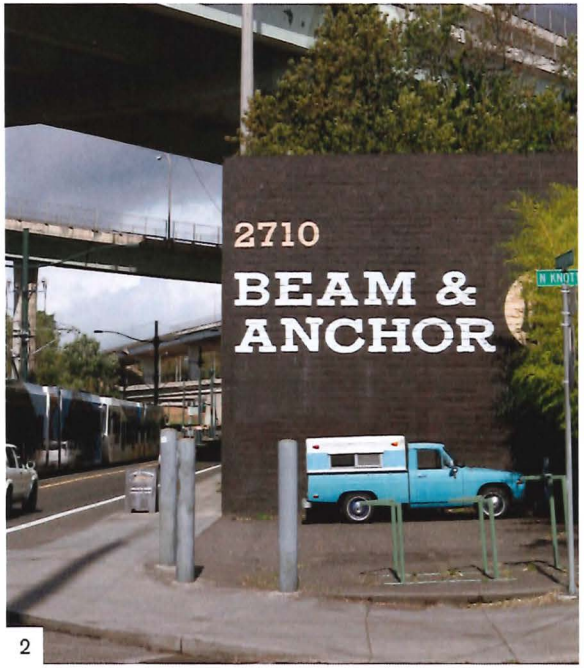
7.2.2.12 Signage Mounting Signage with lettering mounted directly to the building (without a frame) is strongly encouraged (Fig. 7-3). Retail messages shall not mount to a plate or backing surface (Fig. 7-4) that contrasts with the building facade in color or material.

7.2.2.13 Typography and Color Thickness, height, and color of sign lettering shall be visually balanced and in proportion to other signs on the building, responding to a building module/datum. Maximum letter height must fall at or below 0'-24".

7.2.2.14 Vertical Blade Signage Vertical blade signs are encouraged to be iconic in character.

7.2.2.15 Window Signage Retail signage mounted to windows must be porous (i.e. not mounted on a solid rectangular form).

1



2

3

4

1. Urban Outfitters
   Emeryville, CA

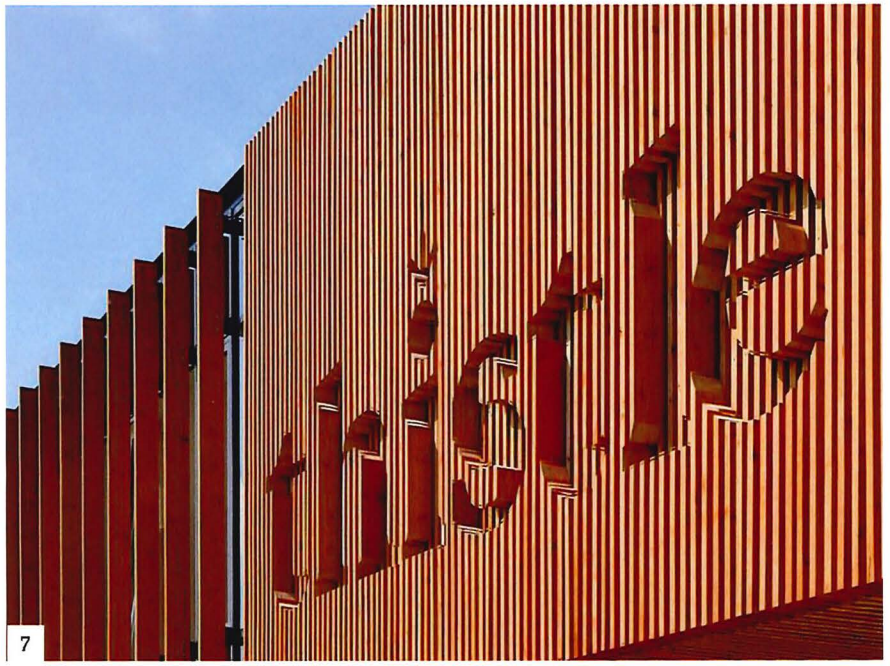
2. Beam and Anchor
   Vintage Store, Portland,
   OR

3. Shed Exterior Signage,
   Healdsburg, CA

4. Pike Place Market,
   Seattle, WA

5

6



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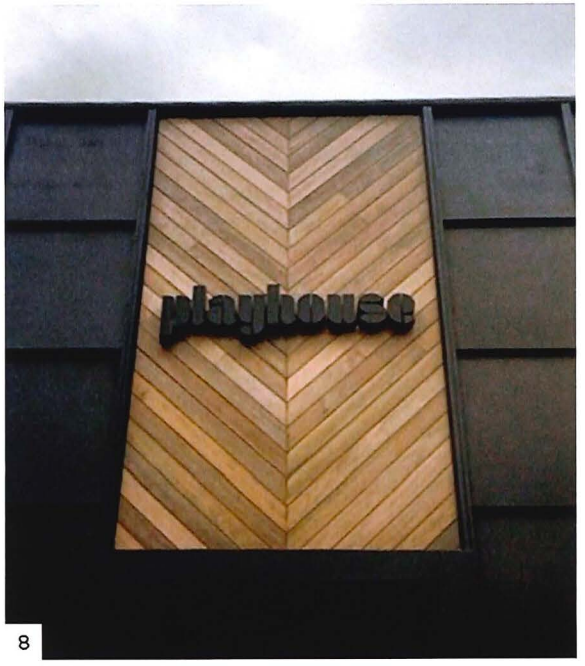


8

5. March Store, San Francisco, CA

6. Peter Nappi Leather Goods, Nashville, TN

7. Thistle Centre, Edinburgh, Scotland

8. Playhouse Serviced Apartments, Melbourne, Australia

7.3 Approvals Process

"Design is neither an intellectual nor a material affair, but simply an integral part of the stuff of life, necessary for everyone in a civilized society."

—Walter Gropius

The following information must be submitted when applying for a permit to erect, re-erect, paint, post, apply, alter or structurally repair signs:

Building Permit Application Required if your sign includes any kind of structure, and/or if it is affixed to a wall, or erected as a free standing sign).

Sign Permit Application Required only if your sign does not require a Building Permit. Sign Permit forms are green and are sometimes referred to as "Form 6." This form is available at the Planning Information Center (PIC).

Scaled Sign Drawings Include the location of the sign on the building, structure or lot. If the sign projects over the sidewalk, your scaled drawing needs to show the projection and the sidewalk width beneath the sign.

Sign Content A designation of the copy (i.e. text on the sign) as is needed to determine that the location, area and other provisions of the India Basin Design Standards and Guidelines are met.

It is recommended applicants visit or call PIC early in the planning of their project. PIC is at 1660 Mission Street, 1st floor and may also be reached by phone at (415) 558-6377 or via email at pic@sfgov.org.

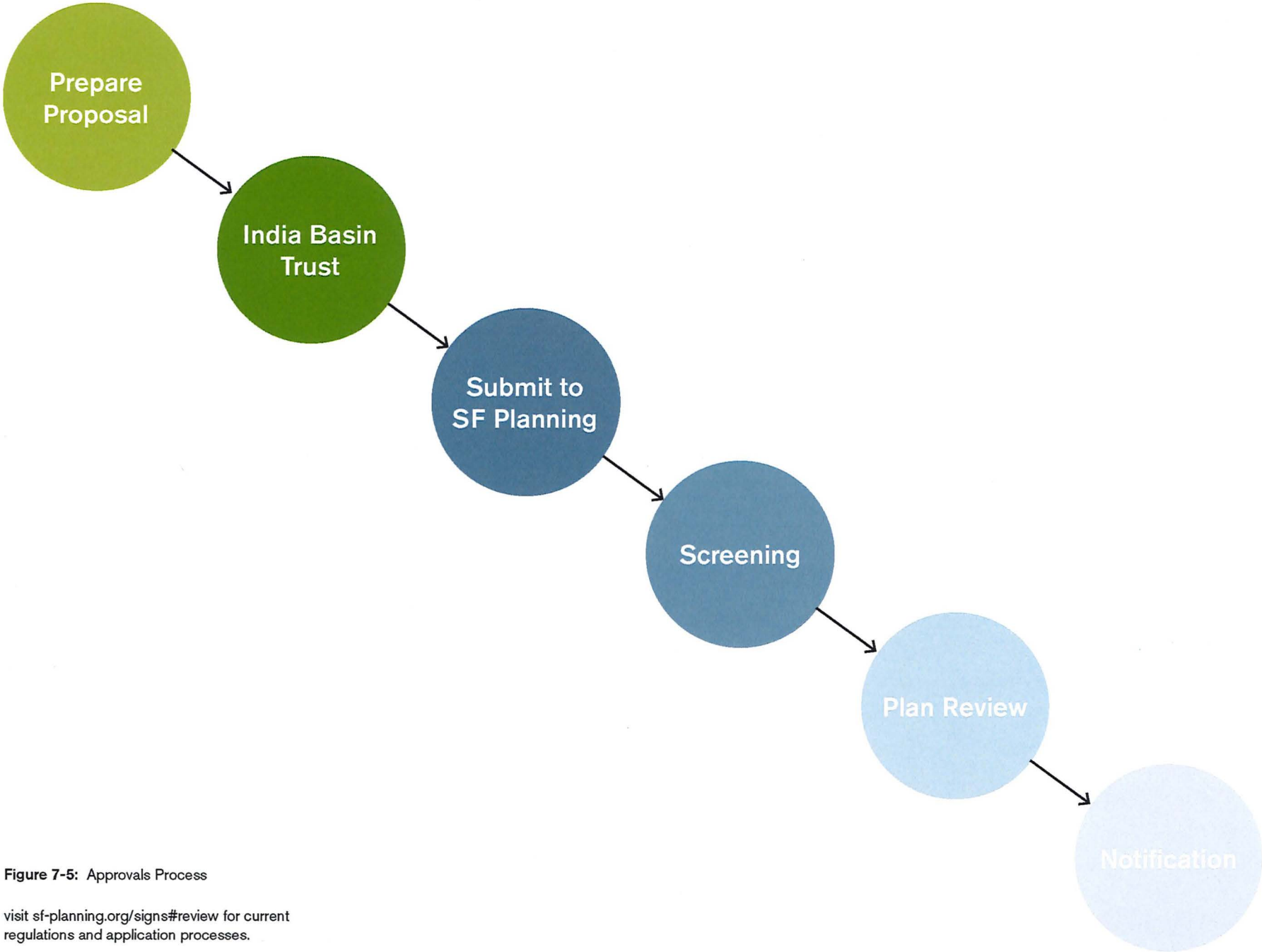


Figure 7-5: Approvals Process

visit sf-planning.org/signs#review for current regulations and application processes.

A

Appendix

Appendix

A.1 Parcel Control Plan

To illustrate how the Urban Form Guidelines and Standards apply in combination, specific parcel-by-parcel diagrams follow in this Section. These parcel control diagrams are designed to facilitate the application of the Design Guidelines and Standards in support of the vision for India Basin.

C1 & C6

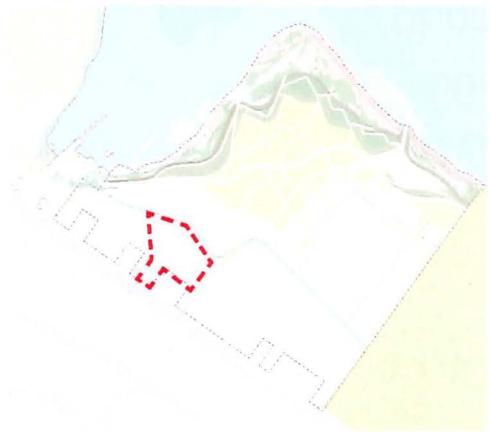
New Hudson Street Tower	
Primary Land Use	Mixed-Use
C1 Special Use	Grocery Store
C6 Special Use	None

- Parcel Line
- Public Access Parcel Break
- 0' Setback*
- 0' Setback with 3' Ground Floor Recess*
- 9' Setback*
- Unique Setbacks (See Sec. 5.4)*
- 6' Min. Stepback
- Height District
- Height District Extent (All Shades)
- ←#'→ Approximate Parcel Dimensions (+/- 5')**

* Indicates Extent of Required Streetwall

** Parcel Dimensions shown may be further amended by the Final Subdivision Map.

℄ Location of Top-Of-Grade (See Sec. 5.2)



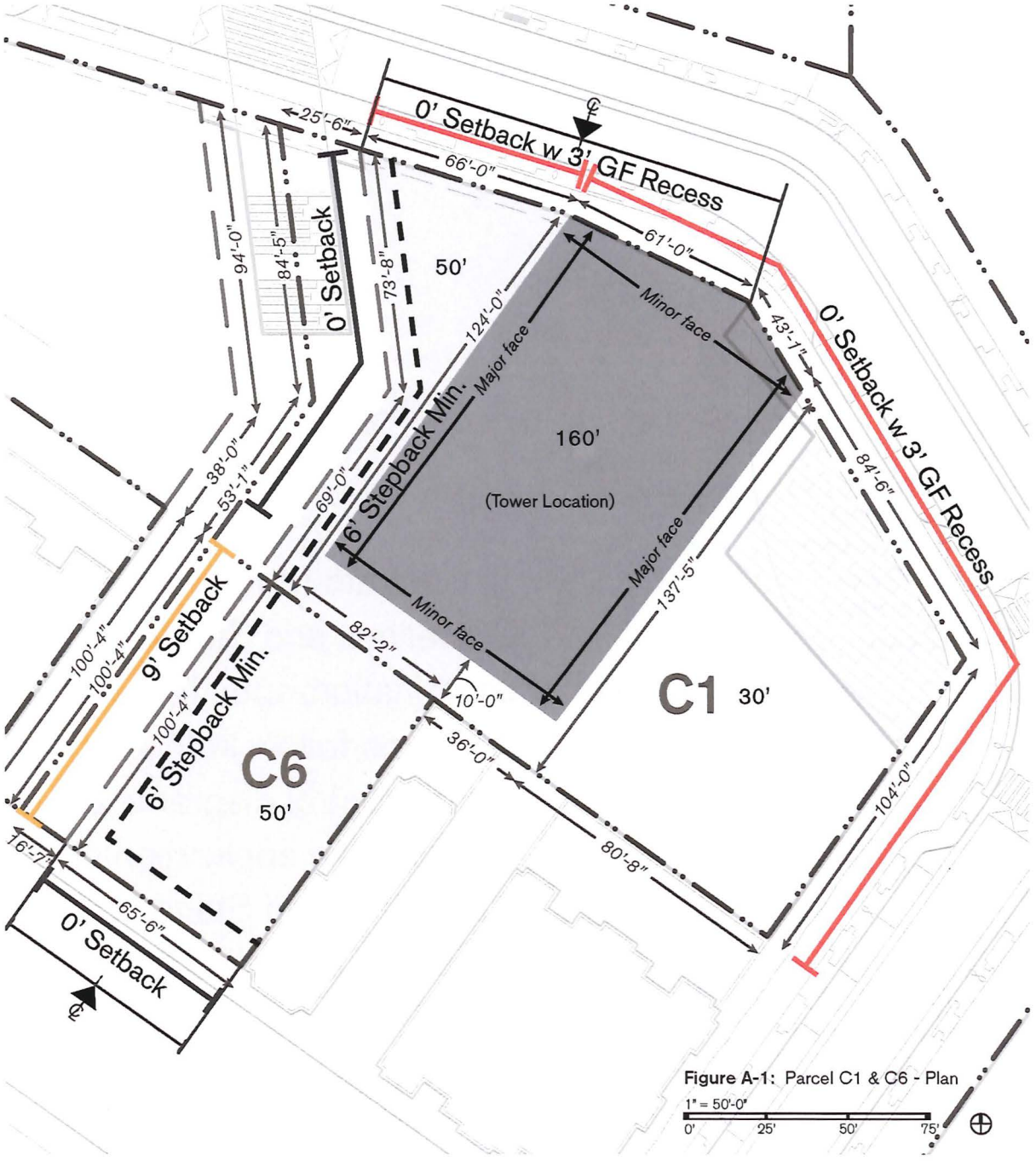


Figure A-1: Parcel C1 & C6 - Plan

1" = 50'-0"

0' 25' 50' 75'

C2

New Hudson Street Building

Primary Land Use	Mixed-Use
Special Use	None

- Parcel Line
- Public Access Parcel Break
- 0' Setback*
- 0' Setback with 3' Ground Floor Recess*
- 9' Setback*
- Unique Setbacks (See Sec. 5.4)*
- 6' Min. Stepback
- Height District
- Height District Extent (All Shades)
- ←#'→ Approximate Parcel Dimensions (+/- 5')**

* Indicates Extent of Required Streetwall

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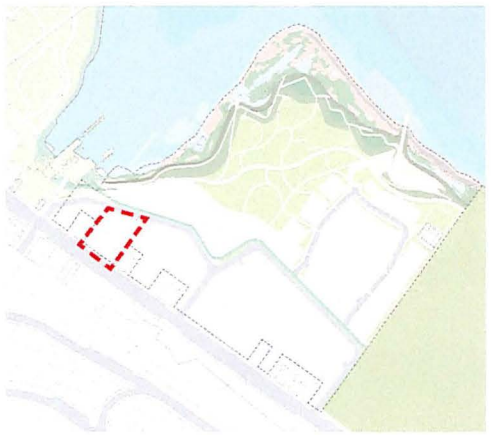
℄ Location of Top-Of-Grade (See Sec. 5.2)



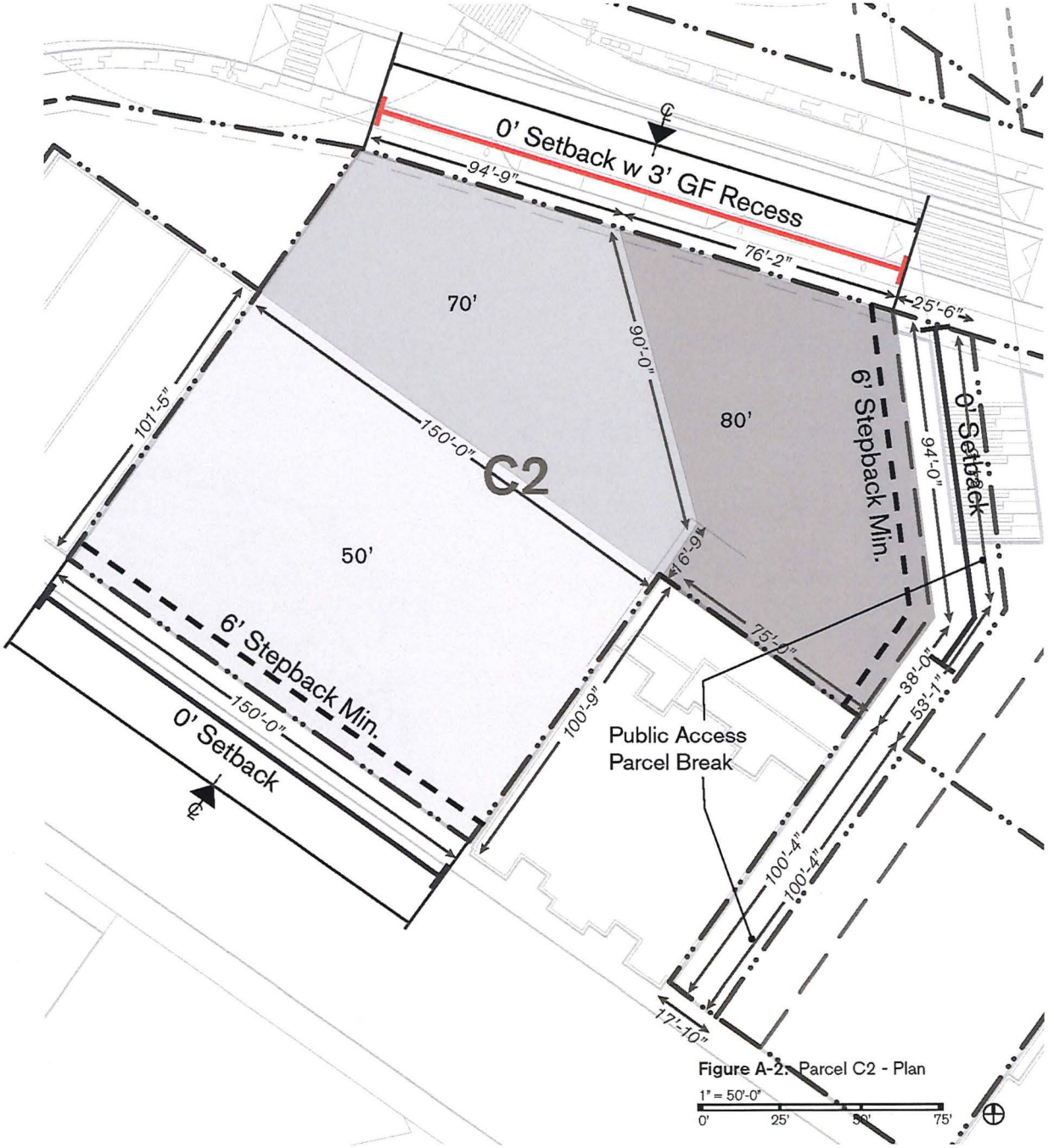


Figure A-2: Parcel C2 - Plan

C3

Griffith Street Building

Primary Land Use	Mixed-Use
Special Use	None

- Parcel Line
- Public Access Parcel Break
- 0' Setback*
- 0' Setback with 3' Ground Floor Recess*
- 9' Setback*
- Unique Setbacks (See Sec. 5.4)*
- 6' Min. Stepback
- Height District
- Height District Extent (All Shades)
- ←#'→ Approximate Parcel Dimensions (+/- 5')**

* Indicates Extent of Required Streetwall

** Parcel Dimensions shown may be further amended by the Final Subdivision Map.

℄ Location of Top-Of-Grade (See Sec. 5.2)

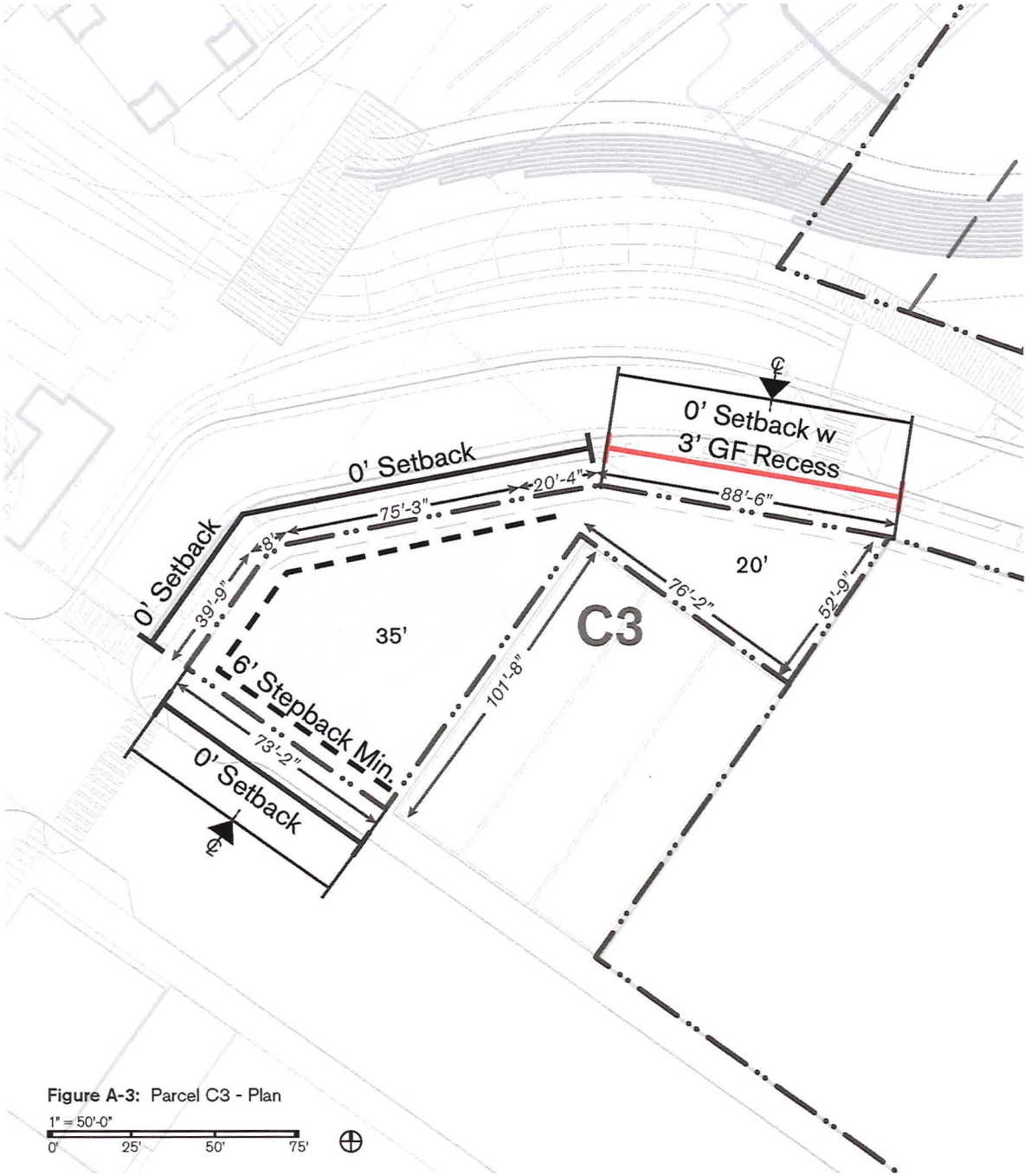


Figure A-3: Parcel C3 - Plan

C4 & C5

Cove Building

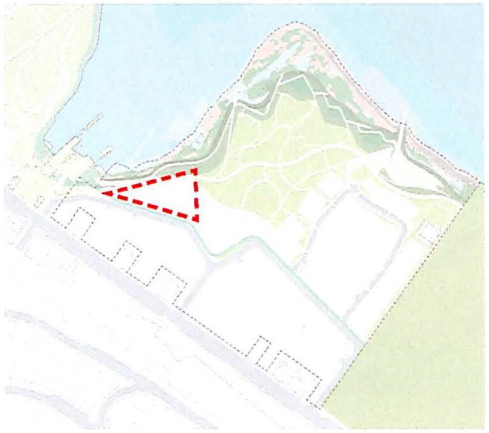
Primary Land Use	Mixed-Use
C4 Special Use	Through Retail
C5 Special use	Pavilion

- Parcel Line
- Public Access Parcel Break
- 0' Setback*
- 0' Setback with 3' Ground Floor Recess*
- 9' Setback*
- Unique Setbacks (See Sec. 5.4)*
- 6' Min. Stepback
- Height District
- Height District Extent (All Shades)
- ←#'→ Approximate Parcel Dimensions (+/- 5')**

* Indicates Extent of Required Streetwall

** Parcel Dimensions shown may be further amended by the Final Subdivision Map.

℄ Location of Top-Of-Grade (See Sec. 5.2)



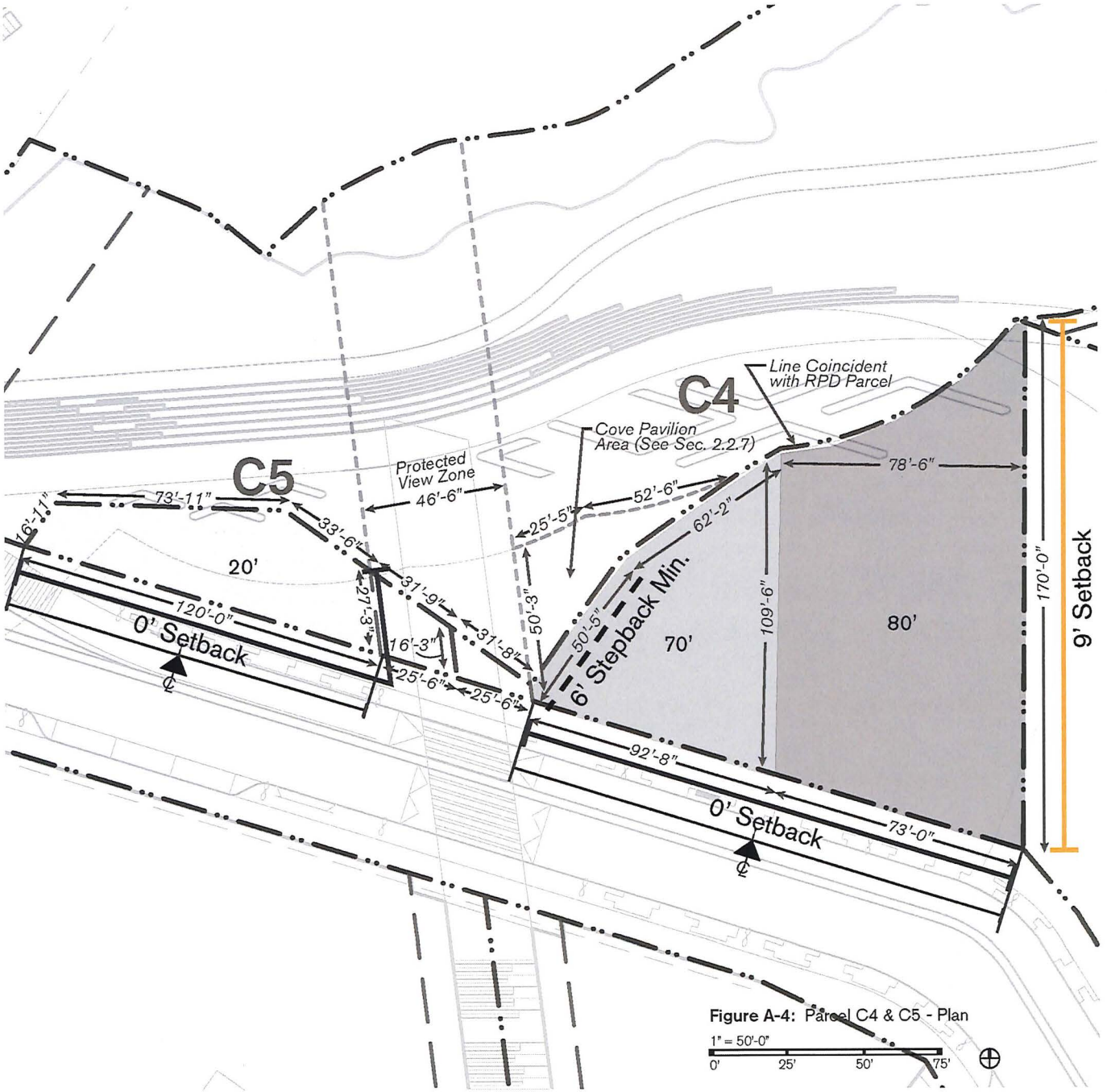


Figure A-4: Parcel C4 & C5 - Plan

H1

Intersection of Innes Ave and Arelious Walker Dr

Primary Land Use	Mixed-Use
Special Use	None

- Parcel Line
- Public Access Parcel Break
- 0' Setback*
- 0' Setback with 3' Ground Floor Recess*
- 9' Setback*
- Unique Setbacks (See Sec. 5.4)*
- 6' Min. Stepback
- Height District
- Height District Extent (All Shades)
- ←#'→ Approximate Parcel Dimensions (+/- 5')**

* Indicates Extent of Required Streetwall

** Parcel Dimensions shown may be further amended by the Final Subdivision Map.

℄ Location of Top-Of-Grade (See Sec. 5.2)

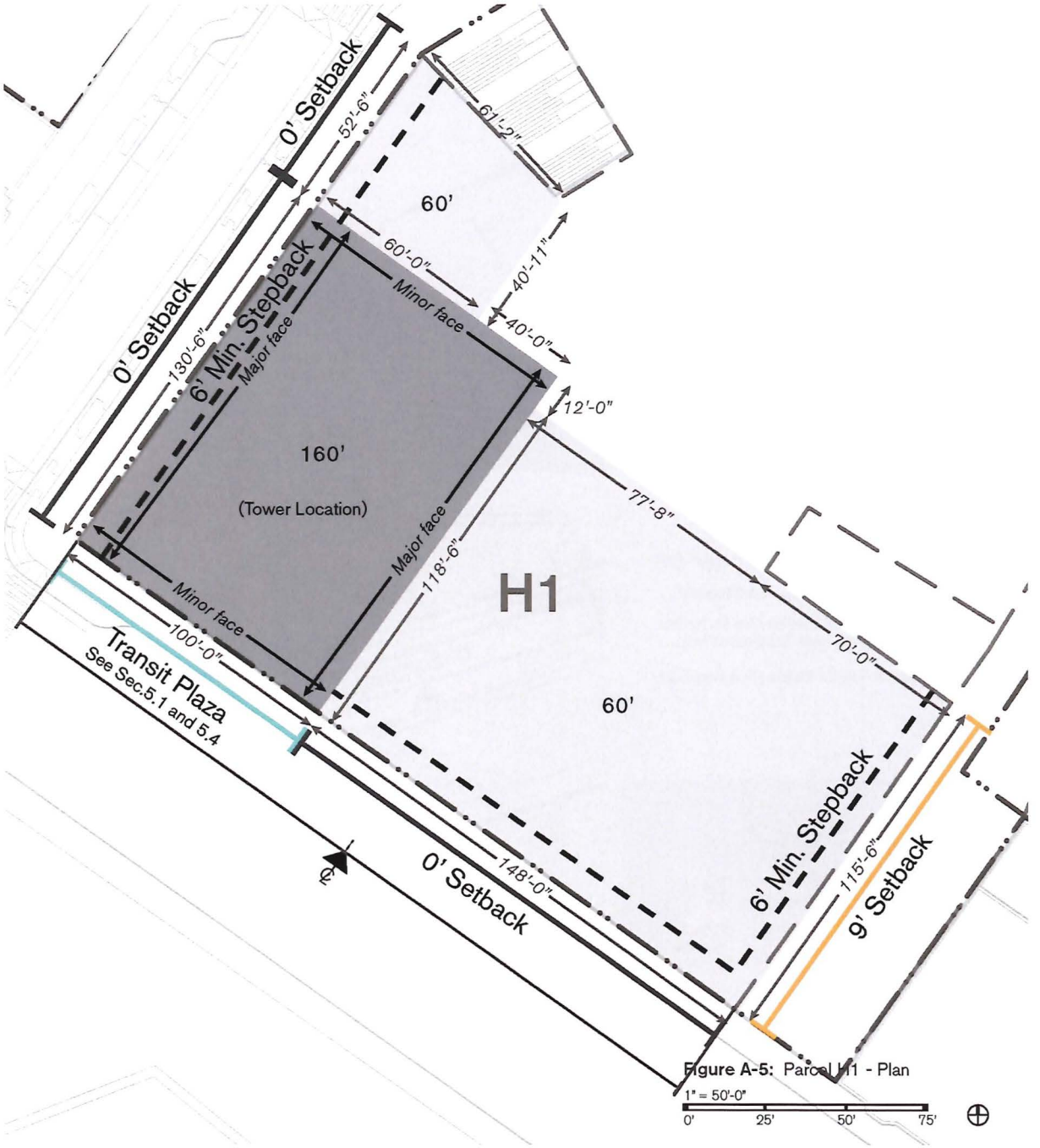


Figure A-5: Parcel H1 - Plan

H1

New Hudson Corner at Hillside

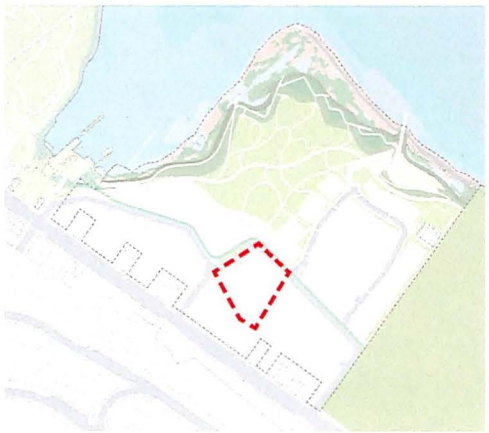
Primary Land Use	Mixed-Use
Special Use	None

- Parcel Line
- Public Access Parcel Break
- 0' Setback*
- 0' Setback with 3' Ground Floor Recess*
- 9' Setback*
- Unique Setbacks (See Sec. 5.4)*
- 6' Min. Stepback
- Height District
- Height District Extent (All Shades)
- ←#'→ Approximate Parcel Dimensions (+/- 5')**

* Indicates Extent of Required Streetwall

** Parcel Dimensions shown may be further amended by the Final Subdivision Map.

℄ Location of Top-Of-Grade (See Sec. 5.2)



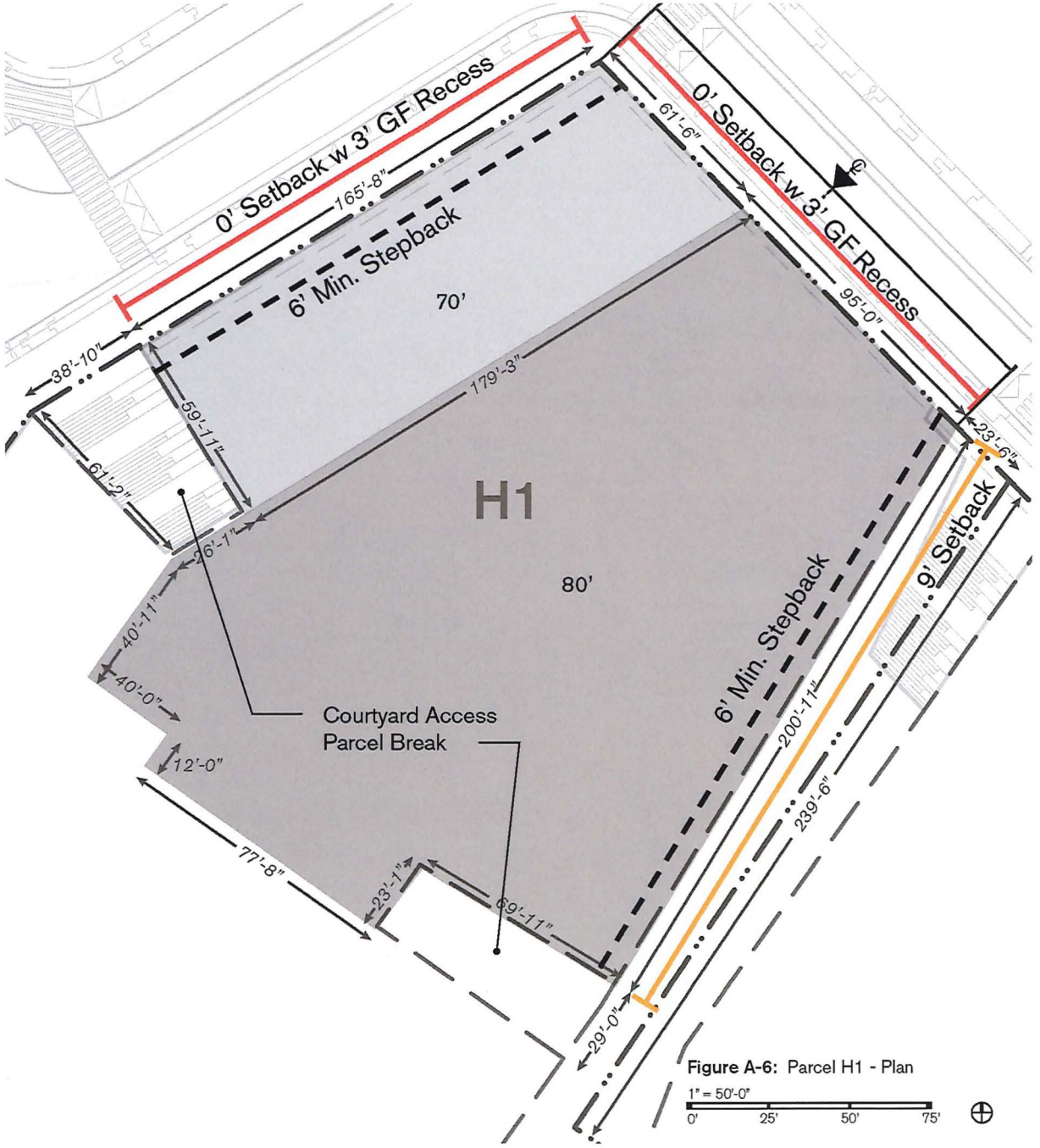


Figure A-6: Parcel H1 - Plan

H2

New Hudson Street Building

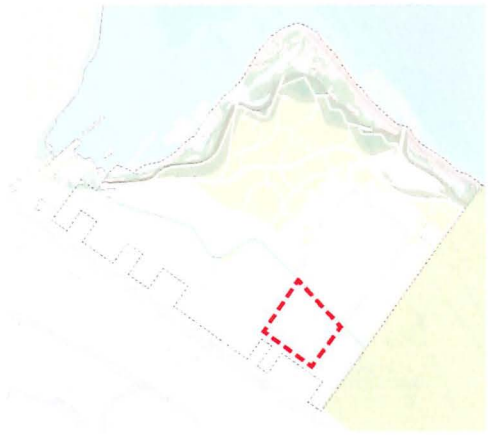
Primary Land Use	Mixed-Use
Special Use	None

- Parcel Line
- Public Access Parcel Break
- 0' Setback*
- 0' Setback with 3' Ground Floor Recess*
- 9' Setback*
- Unique Setbacks (See Sec. 5.4)*
- 6' Min. Stepback
- Height District
- Height District Extent (All Shades)
- ←#'→ Approximate Parcel Dimensions (+/- 5')**

* Indicates Extent of Required Streetwall

** Parcel Dimensions shown may be further amended by the Final Subdivision Map.

℄ Location of Top-Of-Grade (See Sec. 5.2)



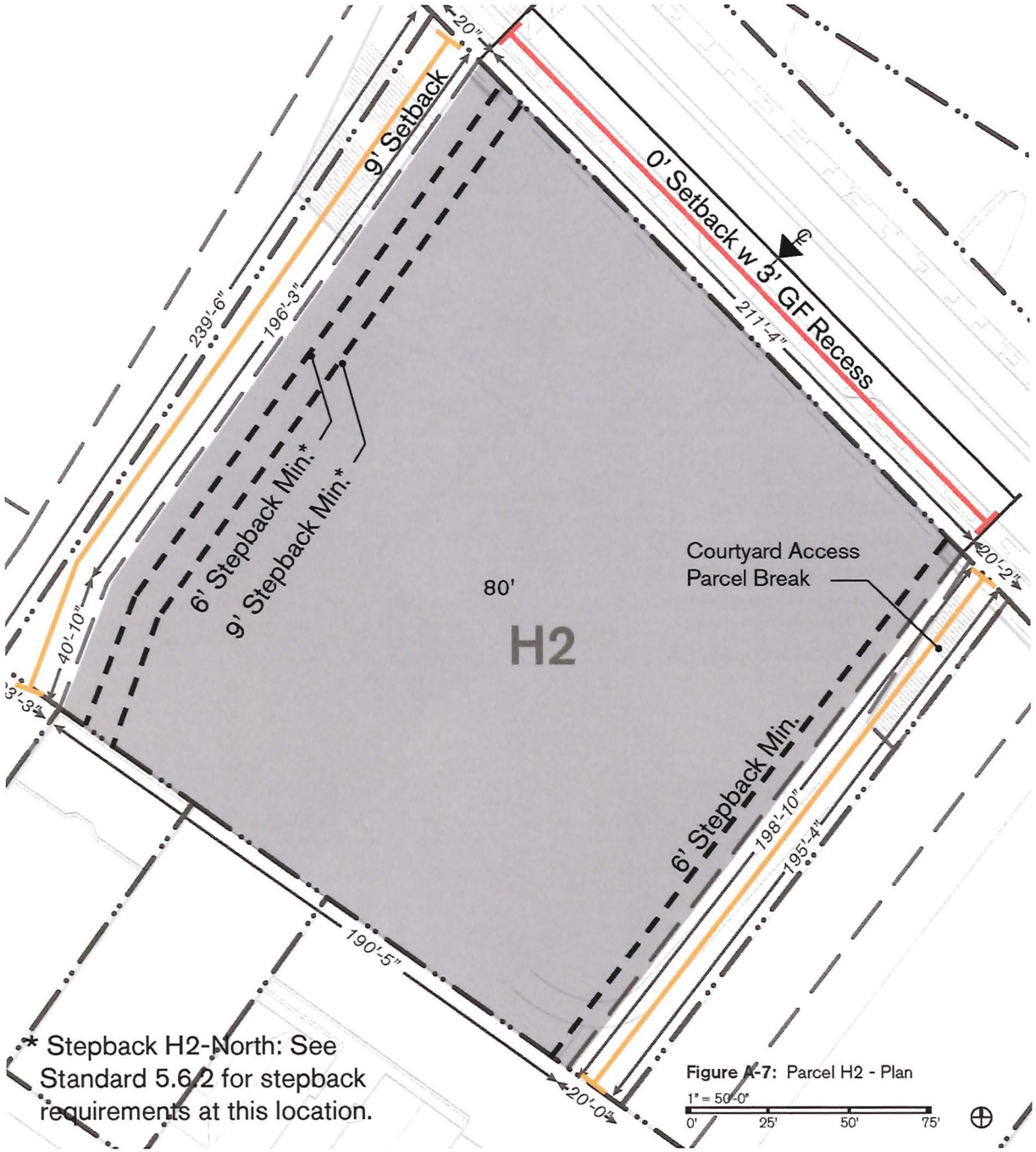


Figure A-7: Parcel H2 - Plan

H3

Earl Street Building

Primary Land Use	Mixed-Use
Special Use	School

- Parcel Line
- Public Access Parcel Break
- 0' Setback*
- 0' Setback with 3' Ground Floor Recess*
- 9' Setback*
- Unique Setbacks (See Sec. 5.4)*
- 6' Min. Stepback
- Height District
- Height District Extent (All Shades)
- ←#'→ Approximate Parcel Dimensions (+/- 5')**

* Indicates Extent of Required Streetwall

** Parcel Dimensions shown may be further amended by the Final Subdivision Map.

℄ Location of Top-Of-Grade (See Sec. 5.2)

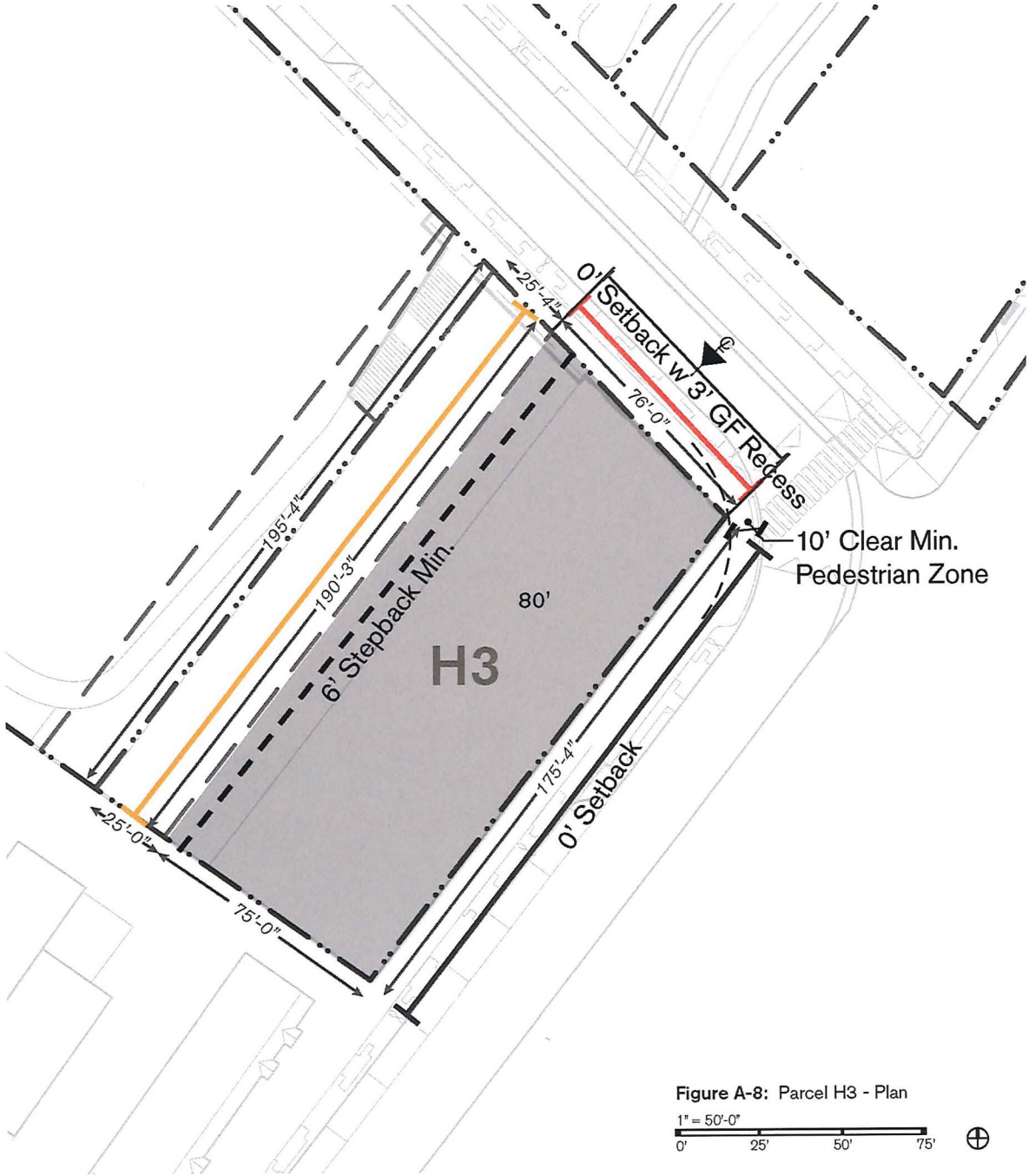


Figure A-8: Parcel H3 - Plan

1" = 50'-0"

0' 25' 50' 75'

H4

Innes Building

Primary Land Use	Mixed-Use
Special Use	None

- Parcel Line
- Public Access Parcel Break
- 0' Setback*
- 0' Setback with 3' Ground Floor Recess*
- 9' Setback*
- Unique Setbacks (See Sec. 5.4)*
- 6' Min. Stepback
- Height District
- Height District Extent (All Shades)
- ←#'→ Approximate Parcel Dimensions (+/- 5')**

* Indicates Extent of Required Streetwall

** Parcel Dimensions shown may be further amended by the Final Subdivision Map.

℄ Location of Top-Of-Grade (See Sec. 5.2)

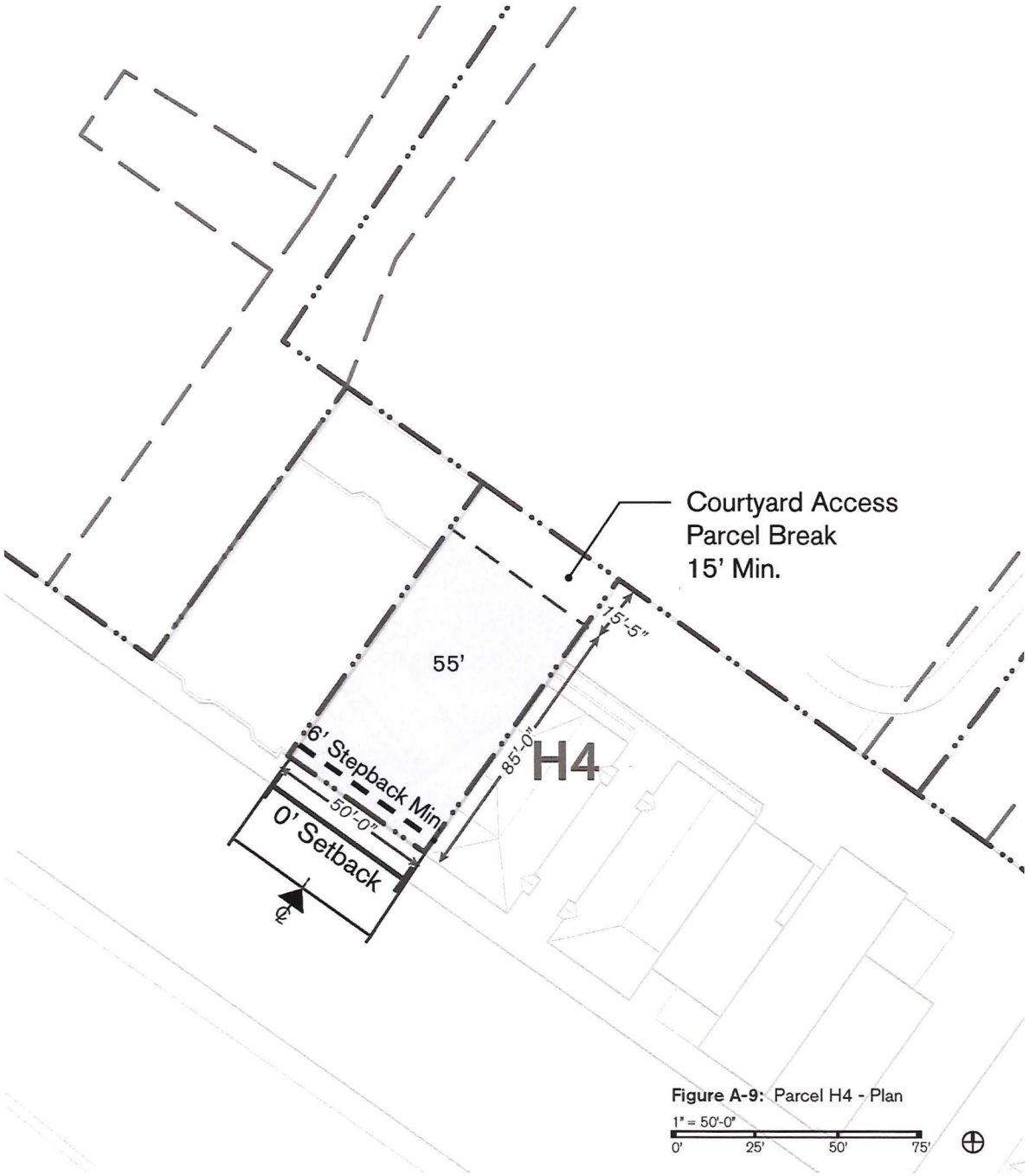


Figure A-9: Parcel H4 - Plan

F1

New Hudson Building

Primary Land Use	Mixed-Use
Special Use	Live-Work

- Parcel Line
- Public Access Parcel Break
- 0' Setback*
- 0' Setback with 3' Ground Floor Recess*
- 9' Setback*
- Unique Setbacks (See Sec. 5.4)*
- 6' Min. Stepback
- Height District
- Height District Extent (All Shades)
- ←#'→ Approximate Parcel Dimensions (+/- 5')**

* Indicates Extent of Required Streetwall

** Parcel Dimensions shown may be further amended by the Final Subdivision Map.

℄ Location of Top-Of-Grade (See Sec. 5.2)

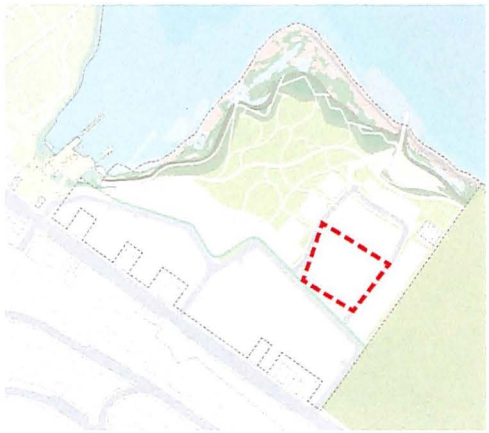


Figure A-10: Parcel F1 - Plan

F2

Fairfax Building

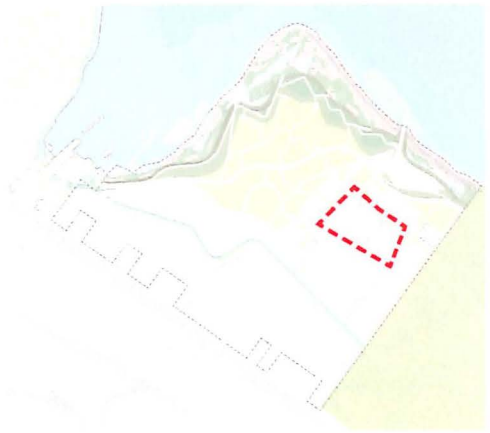
Primary Land Use	Residential
Special Use	Live-Work

- Parcel Line
- Public Access Parcel Break
- 0' Setback*
- 0' Setback with 3' Ground Floor Recess*
- 9' Setback*
- Unique Setbacks (See Sec. 5.4)*
- 6' Min. Stepback
- Height District
- Height District Extent (All Shades)
- ←#'→ Approximate Parcel Dimensions (+/- 5')**

* Indicates Extent of Required Streetwall

** Parcel Dimensions shown may be further amended by the Final Subdivision Map.

℄ Location of Top-Of-Grade (See Sec. 5.2)



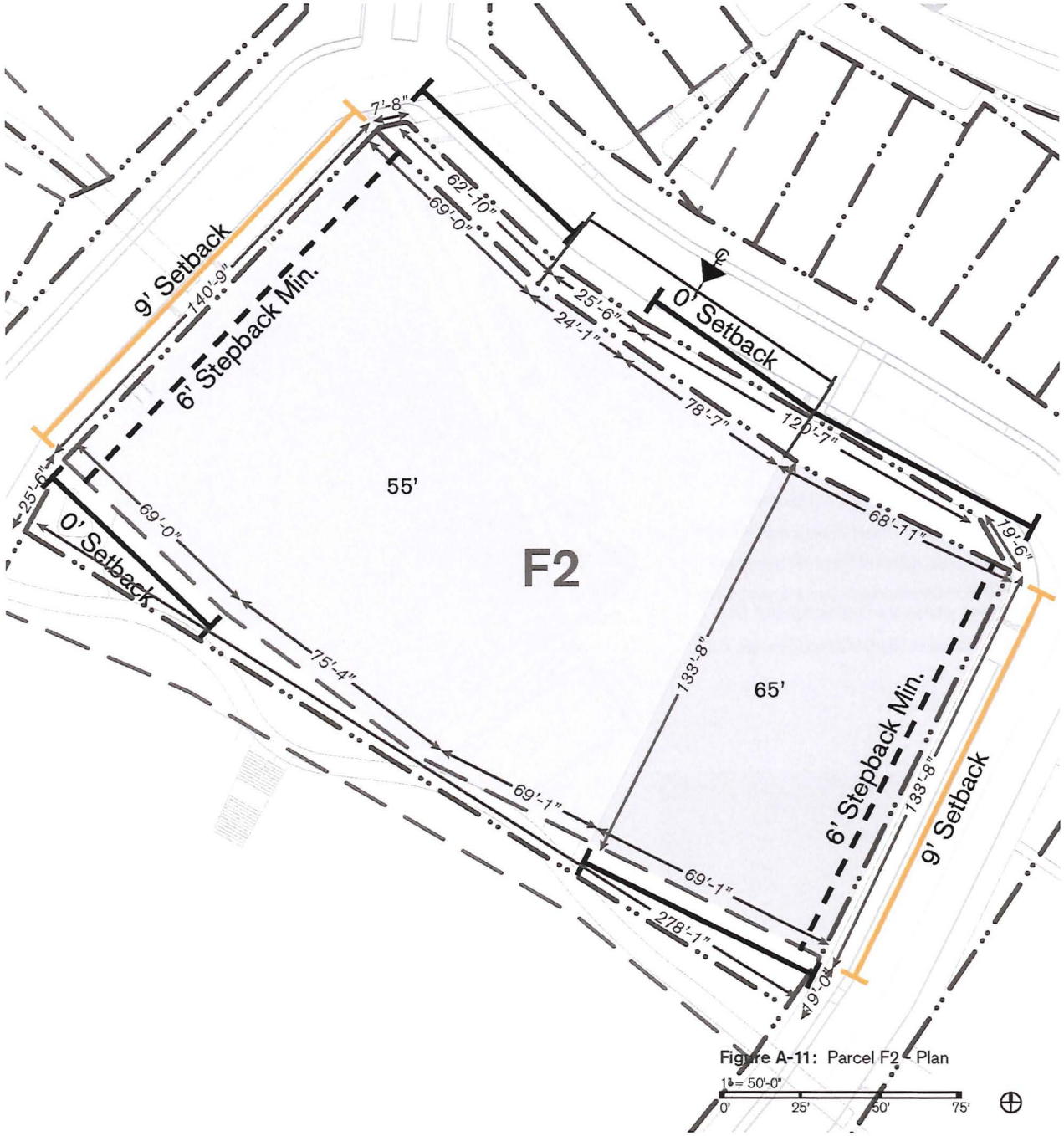


Figure A-11: Parcel F2 - Plan

F3

Spring Corner Building

Primary Land Use	Mixed-Use
Special Use	None

- Parcel Line
- Public Access Parcel Break
- 0' Setback*
- 0' Setback with 3' Ground Floor Recess*
- 9' Setback*
- Unique Setbacks (See Sec. 5.4)*
- 6' Min. Stepback
- Height District
- Height District Extent (All Shades)
- ←#'→ Approximate Parcel Dimensions (+/- 5')**

* Indicates Extent of Required Streetwall

** Parcel Dimensions shown may be further amended by the Final Subdivision Map.

℄ Location of Top-Of-Grade (See Sec. 5.2)

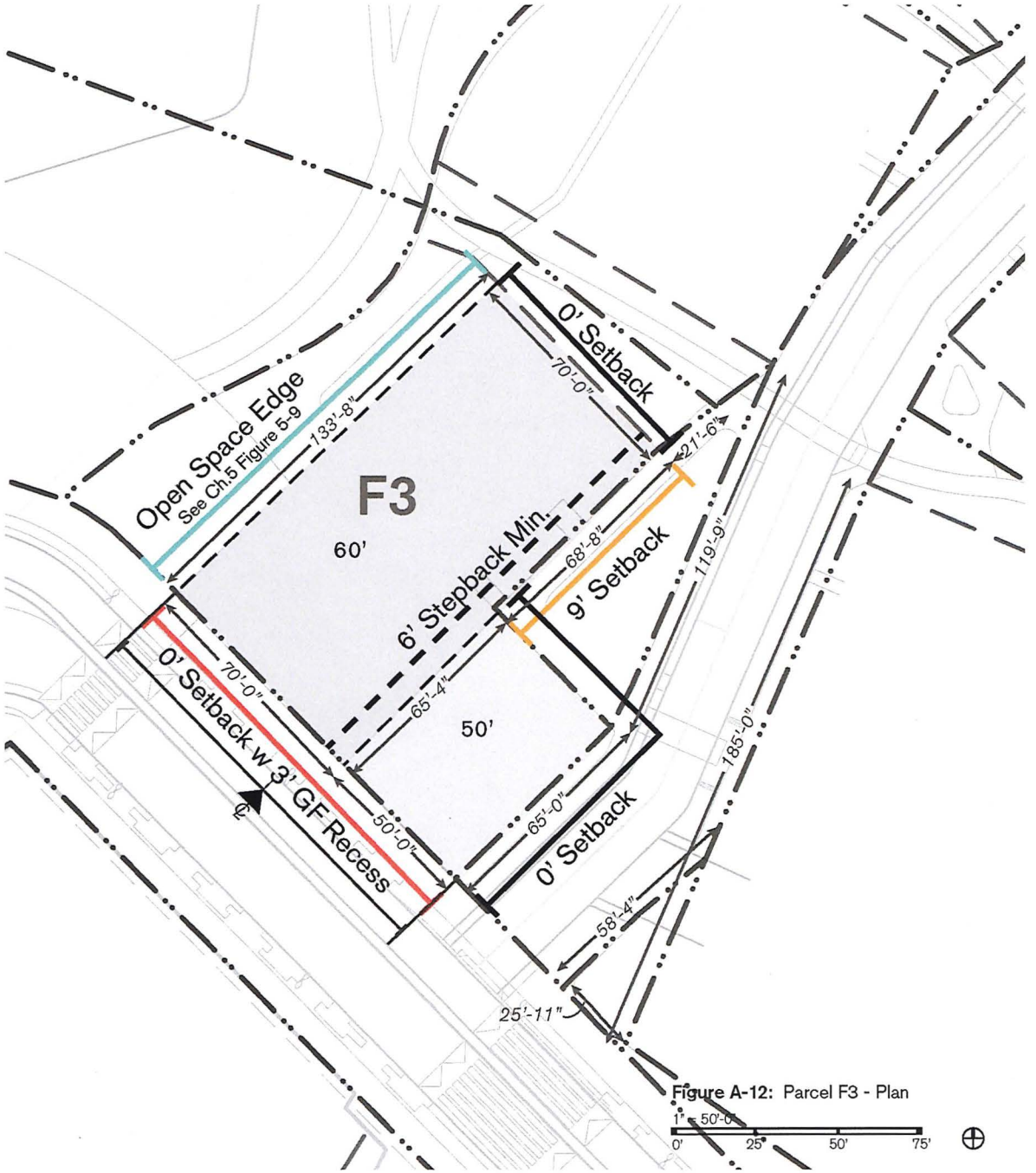


Figure A-12: Parcel F3 - Plan

F4 & F5

Spring Building

Primary Land Use	Residential
Special Use	None

- Parcel Line
- Public Access Parcel Break
- 0' Setback*
- 0' Setback with 3' Ground Floor Recess*
- 9' Setback*
- Unique Setbacks (See Sec. 5.4)*
- 6' Min. Stepback
- Height District
- Height District Extent (All Shades)
- ←#'→ Approximate Parcel Dimensions (+/- 5')**

* Indicates Extent of Required Streetwall

** Parcel Dimensions shown may be further amended by the Final Subdivision Map.

℄ Location of Top-Of-Grade (See Sec. 5.2)

Figure A-13: Parcel F4 & F5 - Plan

F6

Beach Corner Building

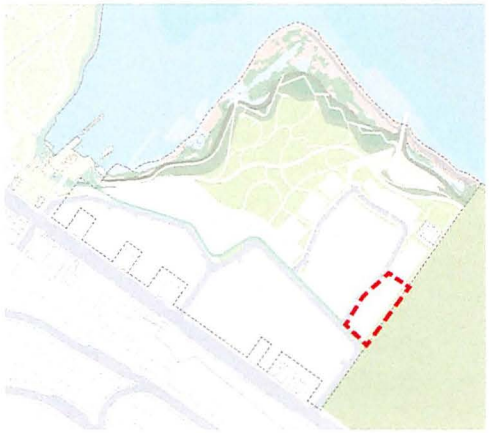
Primary Land Use	Mixed-Use
Special Use	Live-Work

- Parcel Line
- Public Access Parcel Break
- 0' Setback*
- 0' Setback with 3' Ground Floor Recess*
- 9' Setback*
- Unique Setbacks (See Sec. 5.4)*
- 6' Min. Stepback
- Height District
- Height District Extent (All Shades)
- ←#'→ Approximate Parcel Dimensions (+/- 5')**

* Indicates Extent of Required Streetwall

** Parcel Dimensions shown may be further amended by the Final Subdivision Map.

℄ Location of Top-Of-Grade (See Sec. 5.2)



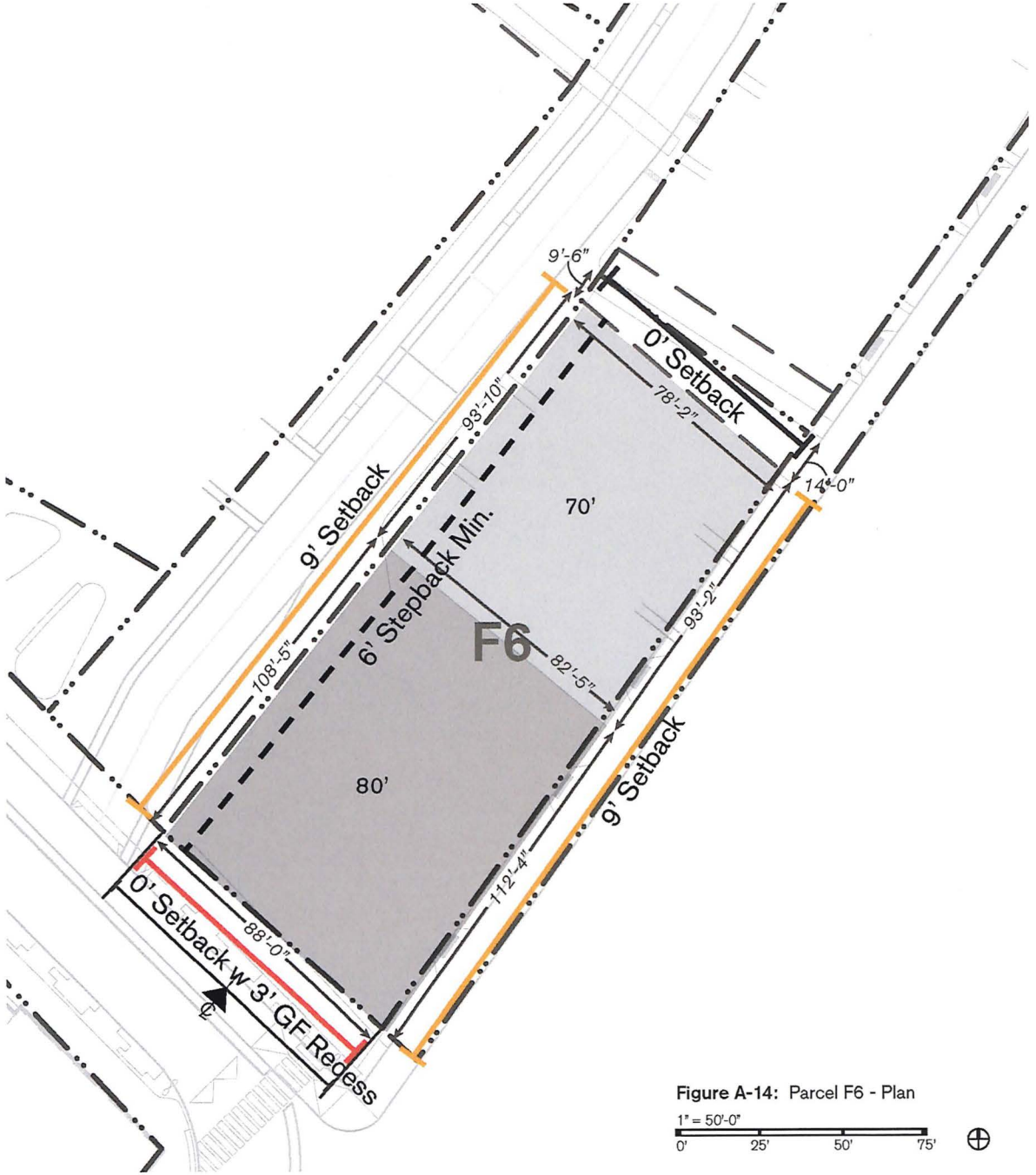


Figure A-14: Parcel F6 - Plan

1" = 50'-0"

0' 25' 50' 75'

F7A & F8

Beach Buildings

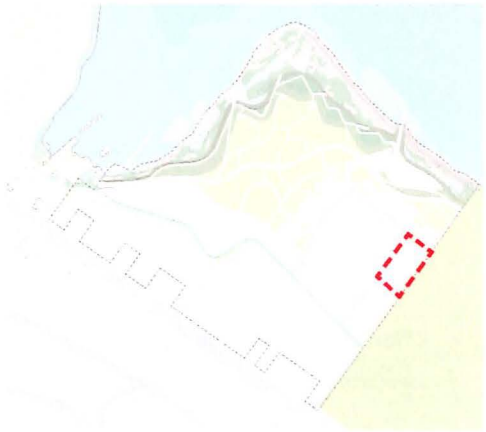
Primary Land Use	Residential
Special Use	None

- Parcel Line
- Public Access Parcel Break
- 0' Setback*
- 0' Setback with 3' Ground Floor Recess*
- 9' Setback*
- Unique Setbacks (See Sec. 5.4)*
- 6' Min. Stepback
- Height District
- Height District Extent (All Shades)
- ←#'→ Approximate Parcel Dimensions (+/- 5')**

* Indicates Extent of Required Streetwall

** Parcel Dimensions shown may be further amended by the Final Subdivision Map.

℄ Location of Top-Of-Grade (See Sec. 5.2)



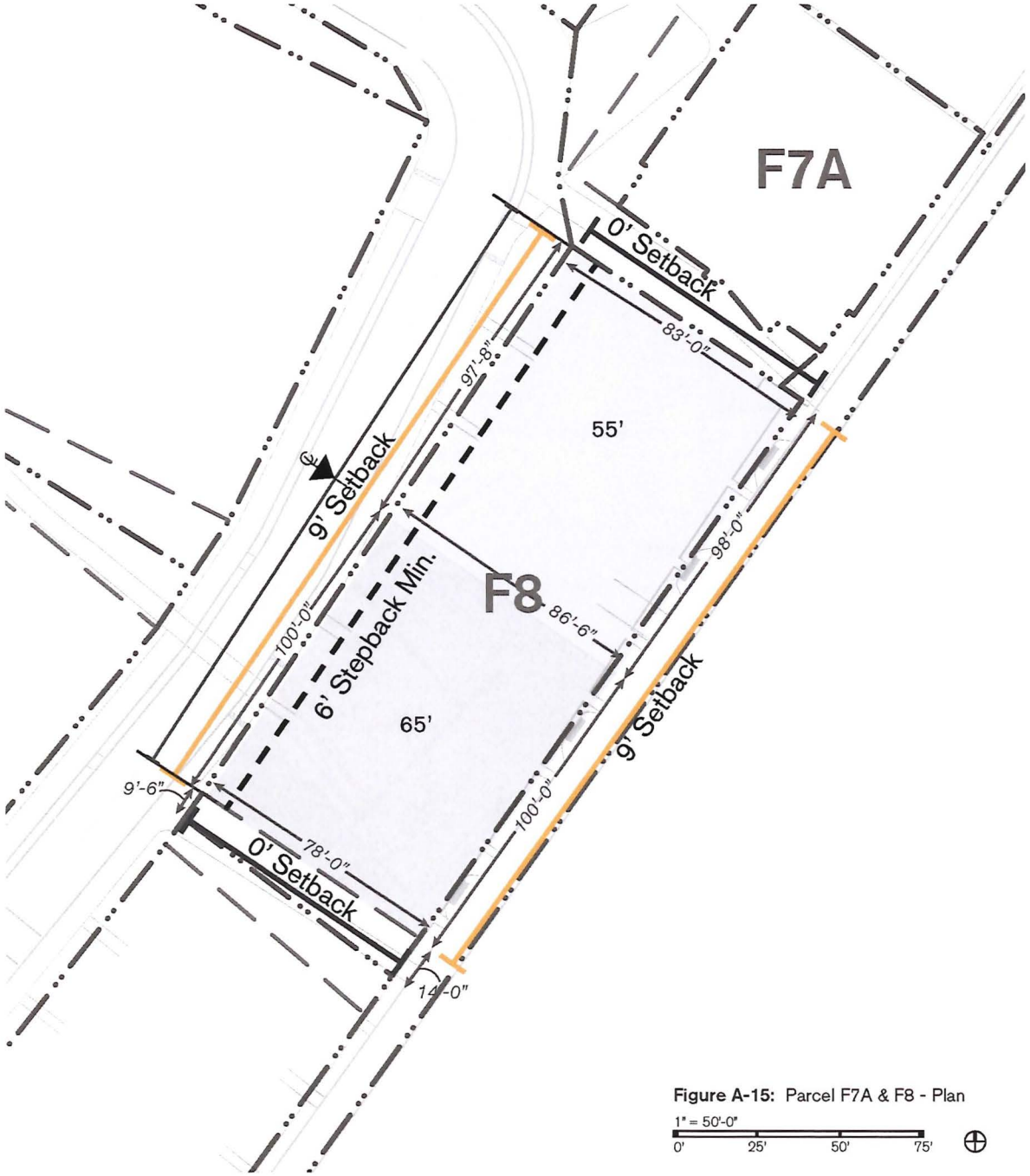


Figure A-15: Parcel F7A & F8 - Plan

1" = 50'-0"

0' 25' 50' 75'

F9 to F18

Beach Townhouses

Primary Land Use	Residential
Special Use	Townhomes

- Parcel Line
- Public Access Parcel Break
- 0' Setback*
- 0' Setback with 3' Ground Floor Recess*
- 9' Setback*
- Unique Setbacks (See Sec. 5.4)*
- 6' Min. Stepback
- Height District
- Height District Extent (All Shades)
- ←#'→ Approximate Parcel Dimensions (+/- 5')**

* Indicates Extent of Required Streetwall

** Parcel Dimensions shown may be further amended by the Final Subdivision Map.

- Location of Top-Of-Grade (See Sec. 5.2)

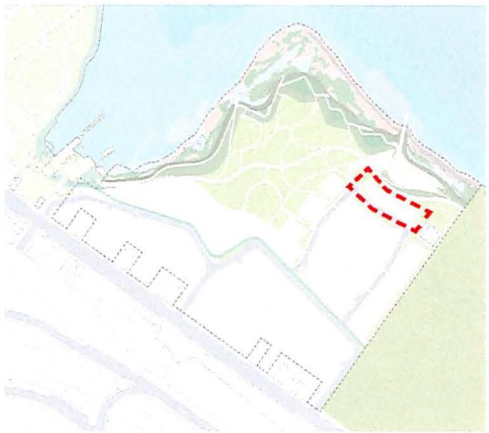


Figure A-16: Parcel F9 to F18 - Plan

A.2 Energy Analysis

Energy Performance

India Basin's district-wide energy performance was studied to quantify the overall energy consumption of the project at full build-out. Starting with Title 24-2016 compliant baseline buildings, a series of centralized and decentralized efficiency strategies were tested. The results of this analysis are summarized in Figure A-17.

Various programmatic mixes were evaluated to confirm whether the results were sensitive to changes in the proposed program. All cases yielded the following findings:

- A centralized thermal approach has benefits, but investing in building efficiency results in highest energy reductions, better building performance, and future flexibility.
- District energy emphasis should be on electricity rather than thermal energy.
- A predominantly electric site allows project to take advantage of future GHG reductions through a cleaner grid and future renewable investment.
- Using photovoltaics instead of solar thermal to meet domestic hot water demand increases benefit of renewable installations by allowing energy captured from the sun to be used beyond domestic hot water and space heating loads.

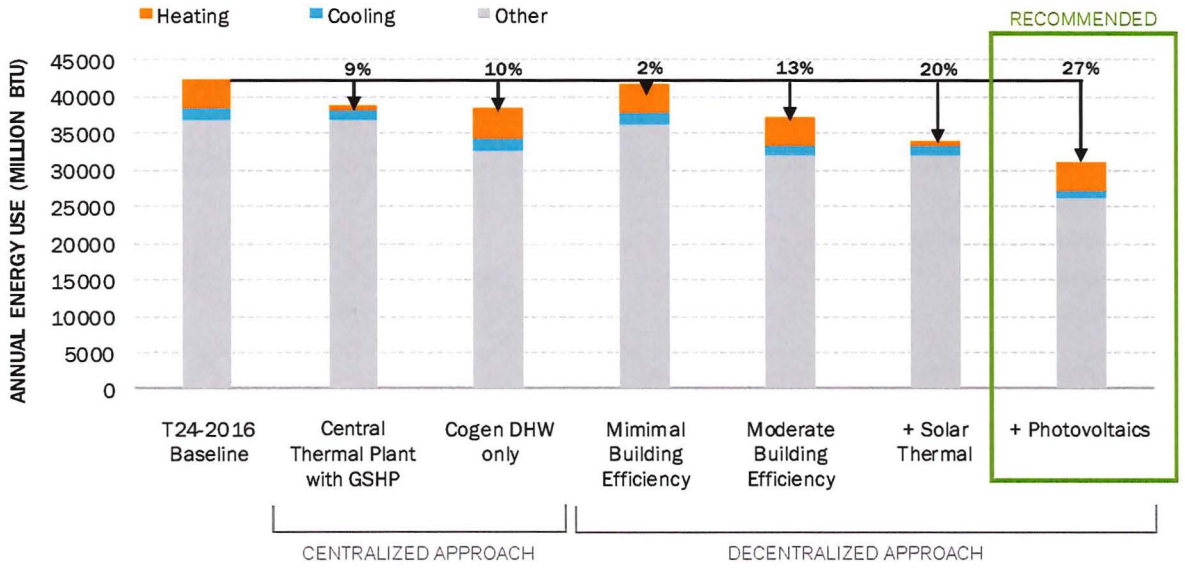


Figure A-17: Centralized and Decentralized Efficiency Strategies

These conclusions were reached by looking at building energy consumption on-site and different efficiency strategies.

Heating and cooling make up a small percentage of the overall site-wide energy consumption. A centralized thermal energy plant can therefore only save up to 10% of site energy use. Centralized thermal energy approaches such as a centralized ground source heat pump system or a cogeneration system have a beneficial impact on overall energy consumption (9% and 10% respectively), but both strategies carry a significant infrastructure investment and embodied carbon without necessarily improving the overall quality of the individual buildings. Initial studies demonstrated that the project could achieve a greater level of energy savings (13%) by implementing moderate efficiency measures at the building scale. These measures can target electrical energy use, in addition to heating and cooling, thus having a greater impact. As Title 24 gets stricter, heating and cooling will only decrease as an overall percentage of building energy consumption. A decentralized approach to efficiency also encourages higher quality buildings and enables more future flexibility by allowing buildings to adopt future innovations in efficiency without tying them to a comparatively inflexible district central plant.

Based on these observations, the project will explore implementing a microgrid, which is semi-independent electric grid that can distribute alternating current (AC) and potentially direct current (DC) electricity within the site. The project will focus on implementing a micro grid that includes DC electrical distribution to specific loads to minimize losses and improve resiliency. This site is also targeting an all-electric site to minimize on-site combustion, and integrating on-site renewable electricity generation to power the public realm and provide backup power in the event of an emergency.

Net Zero Public Realm

The energy balance for the site prepared to determine the feasibility of achieving a net zero public realm compared a rough estimate of the total energy available from onsite renewable electricity generation with anticipated energy demand of the public realm.

The anticipated energy demand on site from parking structure lighting and ventilation, site lighting, electric fleet charging, public realm structures, and wastewater treatment was calculated based on energy analysis and project precedent.

Efficiency is always the first priority as it reduces the overall electricity demand and requires less on-site renewable energy generation to meet the net zero public realm goal. Efficient will be achieved with high performance site lighting, garage lighting, and garage ventilation.

To achieve a net zero public realm, on-site photovoltaic panels can be installed on rooftops and building facades. The total capacity of the installed solar panels will need to exceed the anticipated demand to achieve a net zero public realm. Based on the comparison of on-site renewable energy potential and demands, it should be possible to offset the entire public realm energy demand with on-site solar electricity generation.

Building Energy Performance

India Basin aims to remain a leader in energy efficiency by going above and beyond code minimum energy performance. Energy use intensity (EUI) targets for each building type have been proposed in Section 6.5 High Performance Buildings.

While it may be possible to achieve the building EUI targets of the near future through efficiency alone, renewable energy will be required to achieve the more aggressive EUI targets in the future. Depending on the code trajectory, they EUI targets may need to be revisited throught the India Basin development timeline.

The predicted energy end use of each building type was calculated to assess which energy efficiency strategies will have the largest impact on energy consumption. The following pages summarize potential efficiency strategies for each building type and their order of magnitude impact on annual energy use intensity (EUI) when compared to a T24-2016 baseline building. These charts are suggestions to demonstrate a path to the goal EUIs for each building type, but the energy efficiency measures indicated are not required. Predicted EUI for each building type will have to be confirmed based on whole building energy analysis which reflects the actual design for each building.

High-Rise Residential

For residential buildings, lighting and equipment makeup more than half of the total energy use. Therefore, efficient ENERGY STAR equipment and high efficiency lighting with advanced controls will have a significant effect on energy consumption. Domestic hot water makes up another 17% of the total energy, and ventilation and pumping make up another 15%. Space cooling and heating combined makeup less than 5% of the energy use in the building. Based on this energy use distribution, recommended energy efficiency strategies are summarized in Figure A-18.

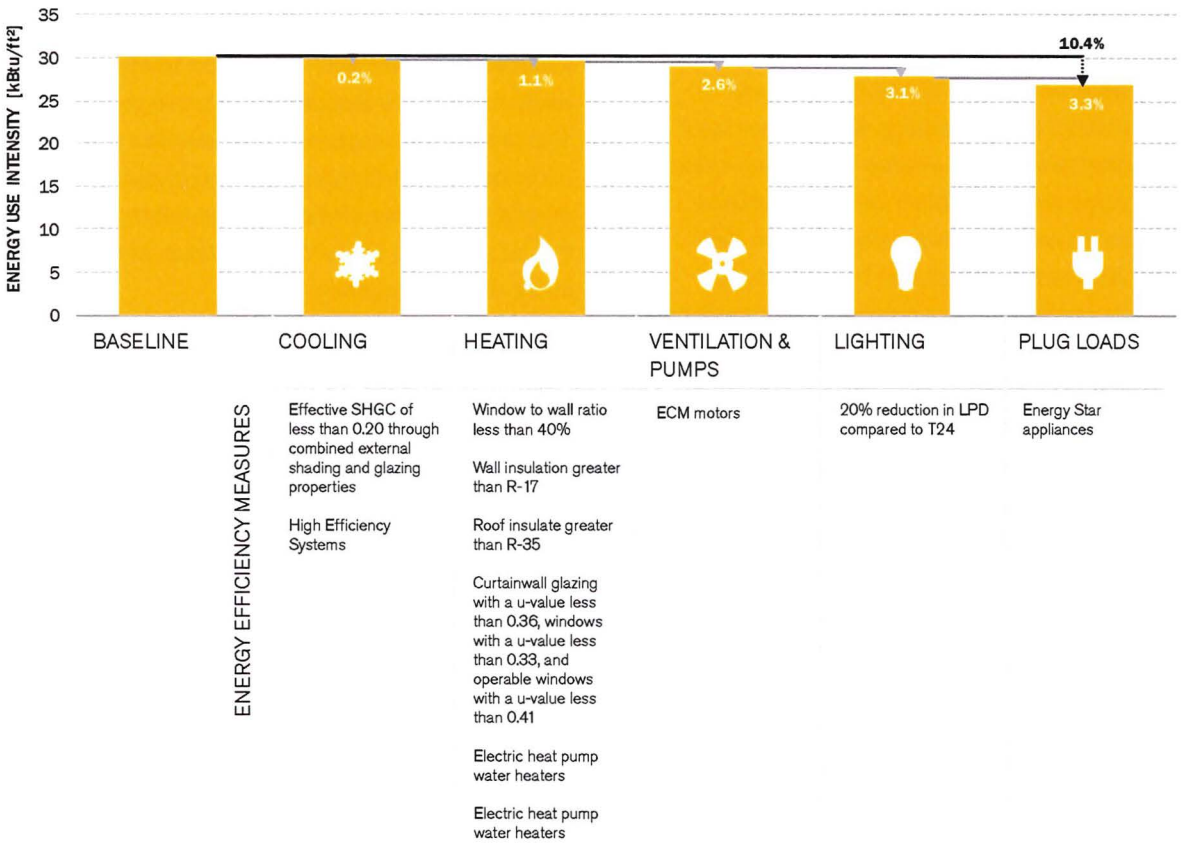


Figure A-18: High Rise Residential Energy Effiency Strategies

Commercial Office

In commercial office buildings, miscellaneous equipment makes up more than a third of the total energy end use, but is hard to address at the building scale because it is typically driven by occupant choices. Lighting makes up a quarter of the total energy end use, making it a priority for efficiency. While heating and cooling make up just over 15% of the energy consumption in the building, pumping and ventilation uses 21% of the total energy. Based on this energy use distribution, recommended energy efficiency strategies are summarized in Figure A-19 below.

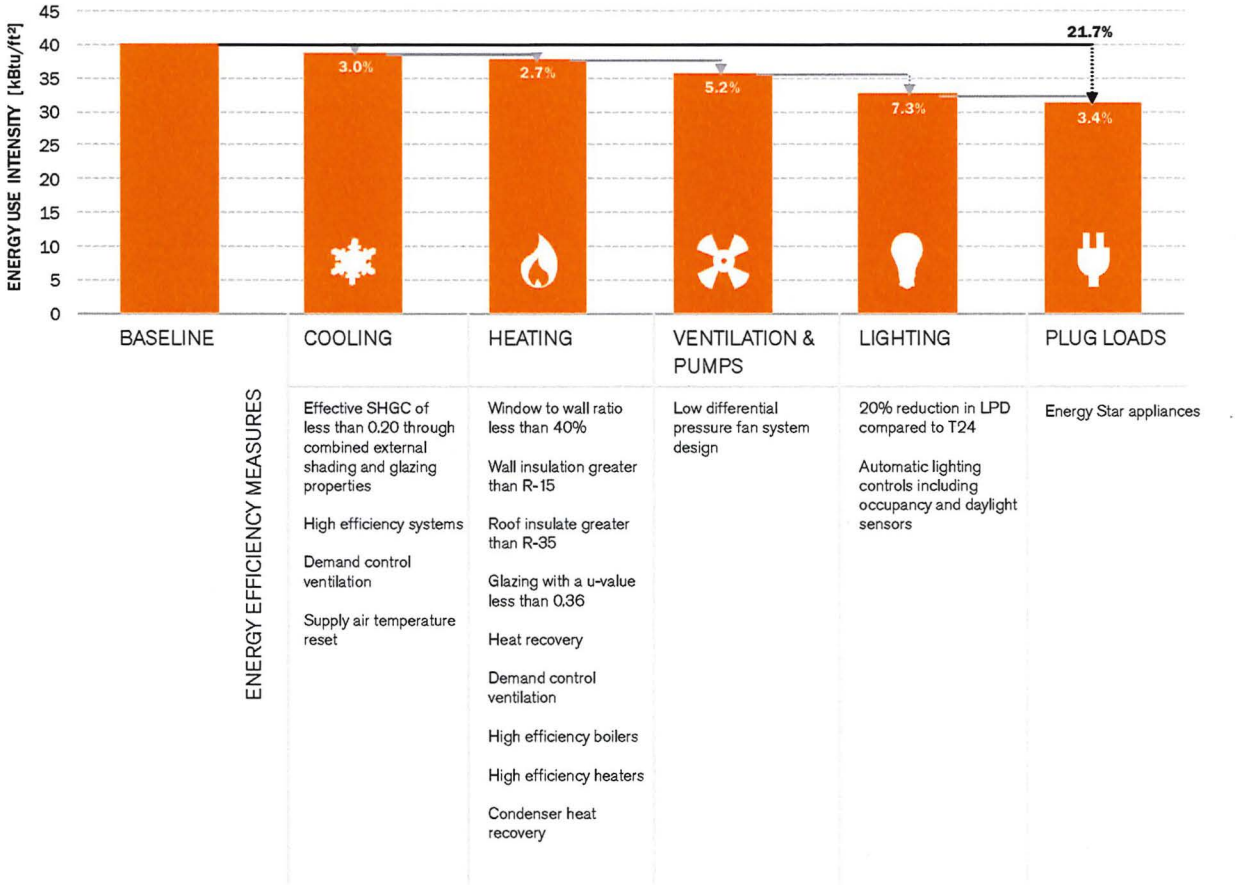


Figure A-19: Commercial Office Energy Effiency Strategies

Retail

For retail buildings, lighting, equipment, ventilation & pumping makeup the majority of the total energy use. Energy efficient lighting and ventilation design will have the most significant impact on reducing energy demand. The full summary of potential energy efficiency strategies are summarized in Figure A-20 below.

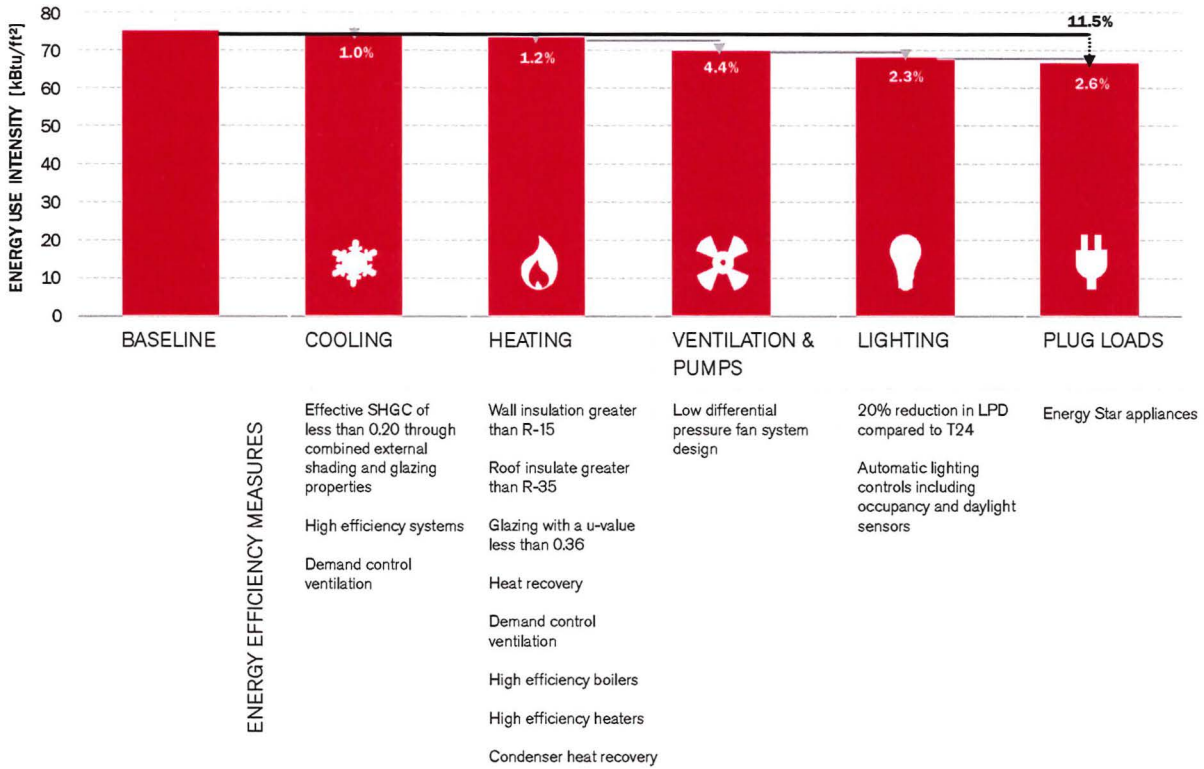


Figure A-20: Retail Energy Effiency Strategies

Energy Resilience

There are two approaches to energy resilience that could be implemented on site: "shelter in place" or "centralized place of refuge".

The "shelter in place" strategy allows people to stay in their residences in an emergency with a minimum level of service including refrigeration, basic lighting, critical electronics, and water pumping. A budget of 5 kWh/day/occupant must be provided assuming minimal energy consumption for these end uses. If 500 kWh of battery storage is installed on the microgrid, 180 occupants will be able to shelter in place with minimal service. More or fewer occupants may be served depending on the capacity of the battery and sun conditions. This approach to resilience would require that the microgrid have dedicated critical service panels in each building to ensure that only critical loads were served in an emergency.

In the "centralized place of refuge", lighting, refrigeration, and critical services would be centralized. Camps and other gathering areas could be provided in site open spaces. Assuming these critical services, each occupant would have an energy need of 1.5 kWh/day. The microgrid, when coupled with the site storage of 900 kWh, could provide critical energy services for up to 750 people.

Figure A-21 illustrates the ability for batteries to even out the intermittent electricity provided by photovoltaics, Figure A-22 summarizes the critical services and electric loads which may be considered as components of India Basin's energy resilience planning efforts.

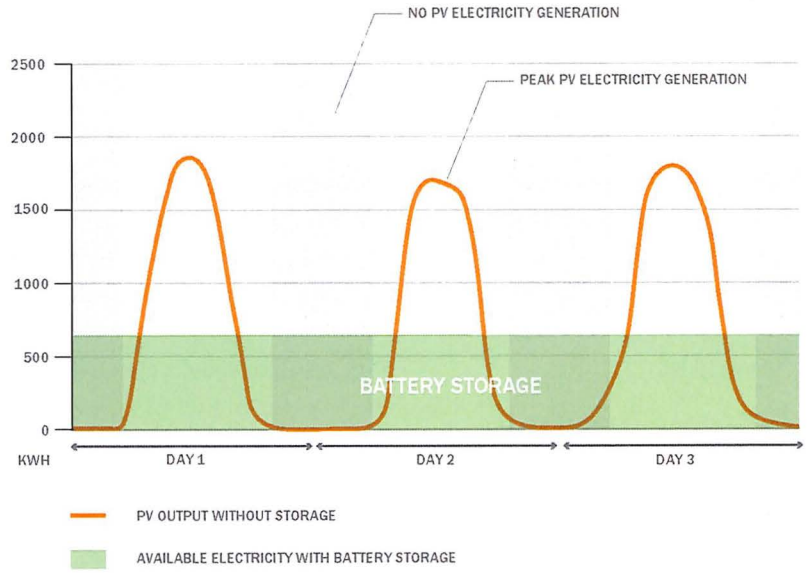


Figure A-21: On-site Generation and Battery Storage 72 hour Timeline

	CRITICAL SERVICES	APPLICABLE IB BUILDING TYPOLOGY / SERVICE	CRITICAL ELECTRIC LOADS
HEALTH	▪ Food and Water Distribution ▪ Emergency First Aid ▪ Waste Management	▪ Wastewater Treatment Facility ▪ Grocery Store or Food Supply ▪ Waste Management Services	▪ Purification System and pumps ▪ Water Supply Stations ▪ Critical Refrigeration ▪ Emergency lighting and critical medical equipment
HUMAN SERVICES	▪ Disaster Welfare Information ▪ Facilitate Reunification ▪ Support unaffiliated volunteers and unsolicited donations ▪ Voluntary Agency Coordination ▪ Disaster Housing Assistance	▪ Commercial building: info hub ▪ Community Center: Designated Emergency Operation Center	▪ WiFi ▪ Communication repeaters and variable message boards ▪ Charging for electric communication devices
SHELTER & TRANSPORTATION	▪ Sheltering: General, Specialized, Medical ▪ Shelter in Place Senior Housing ▪ Transportation Access ▪ Household Pets and Service Animals	▪ Big Green ▪ Senior Housing (shelter in place) ▪ Public Transit Facilities	▪ Emergency shelters ▪ Critical way finding, systems, waste management for senior housing ▪ Critical lighting and message boards for transport

Figure A-22: Critical Services to be Considered for India Basin Resiliency Strategy

A.3 Definition of Terms

ACCESSORY USES A related minor use that is either: necessary to the operation or enjoyment of a lawful principal use or conditional use; or appropriate, incidental, and subordinate to any such use shall be permitted as an accessory use when located on the same lot.

ACCLIMATED SPECIES Plants that are not native but are adapted to the Northern California coastal climate and soil conditions and do not require irrigation two years after their initial installation.

ACTIVE USES Uses that include locally serving retail and services, community rooms and kitchens, and recreational and arts facilities. See SF Public Works Department of Plant Lists and Palettes as well as the SF Plant Finder website (http://sfplantfinder.org/) for City-endorsed species lists.

ARTICULATION Minor variations in the massing, setback, height, fenestration, or entrances to a building, which express a change across the elevation or facades of a building. Articulation may be expressed, as bay windows, porches, building modules, entrances, or eaves, vertical recesses, changes in wall plane, changes in material and colors, projections or changes in window forms and patterns among other similarly scaled elements.

AWNING A light roof-like structure, supported entirely by the exterior wall of a building, consisting of a movable frame covered with approved cloth, plastic or metal, extending over doors and windows, with the purpose of providing protection from sun and rain and embellishment of the facade; as further regulated in Section 3105 of the Building Code.

BACK-OF-WALK The edge of a sidewalk that abuts the development parcel/area. Commonly used to demarcate the boundary between a public right-of-way and private development parcel.

BIO-CORRIDOR A strip of habitat connecting wildlife populations that have been separated by human activities.

BIO-FILTRATION A process to remove and biologically degrade pollutants from stormwater runoff by filtering the water through a planted medium.

BIO-INFILTRATION A process to remove and biologically degrade pollutants from stormwater runoff by slowly absorbing and infiltrating in shallow, planted depressions. This process also reduces the volume of runoff while cleaning up pollutants. Stormwater flows into the bioinfiltration area, ponds on the surface, and gradually infiltrates into the soil bed. Filtered runoff is infiltrated into the surrounding soils via an absorption basin or trench. Excess water can be collected by an underdrain system and discharged to the storm sewer system or directly into receiving waters.

BLANK WALL Any streetwall area that is not transparent, including solid doors and mechanical area wall(s).

BLOCK An area of land bounded by public rights-of-way as designated numerically on the Project Boundary, Block, and Street Grid maps.

BUILDING Any structure having a roof supported by columns or walls and intended for supporting or sheltering any use or permanent occupancy.

BUILDING ENTRY The point of a building associated with accessibility of the user, not including service or loading access.

BUILDING ENVELOPE The exterior dimensions—dictating the maximum dimensions of width, depth, height and bulk—within which a building may exist on a given site.

BUILDING FACE The major or primary plane of the exterior wall of the building. The term is often used in context with its relationship to an adjacent street or public area.

BUILDING HEIGHT The vertical distance by which a building or structure rises above a certain point of measurement. See Section 5.2 of this Code for how height is measured.

BUILDING PROJECTION Any portion of the building projecting from the building face beyond the property line, setback line, or parcel break line, as applicable at at grade, or from any point above the ground floor.

BULK The maximum physical dimensions of built volume.

CANOPY A light roof-like structure, supported by the exterior of a building consisting of a fixed or frame covered with approved cloth, plastic or metal, with the purpose of providing protection from sun and rain and embellishment of the façade.

CORNER The first fifty feet of a block measured from the intersection of two or more streets.

CURB CUT A break in the street curb to provide vehicular access from the street surface to private or public property across a continuous sidewalk.

CYCLE TRACK A separated, two-way right-of-way adjacent to or within the street right-of-way for the exclusive use of bicycles with crossflow by motorists and pedestrians minimized.

DAYLIGHTING The practice of providing a specific length of red curb at the corners of intersections where parallel street parking is not inset into the sidewalk area to ensure that pedestrians, bicycles and other vehicles are fully visable to drivers positioned for a right or left turn. Where parallel street parking is inset into the sidewalk, a red curb is not required.

DESIGN GUIDELINES Describe the alignment of specific features or provisions to the project intent, vision, principles, design drivers and physical framework, including recommendations for project elements. Guidelines are binding; proposed development must demonstrate compliance with guideline intent. Guidelines differ from Standards in that they may be subjective or otherwise require interpretation, and variation from them does not require formal modification. Compliance may be evaluated, and conditions amended or waived ministerially.

DESIGN STANDARDS Mandatory, objective and quantifiable specifications or other requirements applicable to the components, features or provisions within a Project. Amendments to Standards require formal approval by the Authority Having Jurisdiction (AHJ).

DWELLING UNIT A Residential Use defined as a room or suite of two or more rooms that is designed for, or is occupied by, one family doing its own cooking therein and having only one kitchen.

EASEMENTS Easements establish a right to cross or otherwise use land owned by others for a specified purpose.

EXCEPTION A relaxation of certain development controls when a set of specific design guidelines are met.

FAÇADE An entire exterior wall assembly including, but not limited to, all finishes and siding, fenestration, doors, recesses, openings, bays, parapets, sheathing, and framing.

FENESTRATION The arrangement of windows and doors on the elevation of a building. Fenestration is often examined as a pattern.

FIN SIGN A sign projecting from the building wall over the sidewalk, visible from the street, also known as blade sign that directs attention to a business, service or retail activity.

FREESTANDING SIGN A sign in no part supported by a building.

FRONTAGE ZONES This is a zone located along retail buildings reserved for outdoor display, signage and movable cafe seating with appropriate permits.

GOALS Aspects of the project that the sponsors will diligently pursue and seek to finance. Goals are ultimately non-binding and are intended to be achieved at full build-out.

GROCERY A Retail Sales and Services Use that:

- (a) Offers a diverse variety of unrelated, non-complementary food and non-food commodities, such as beverages, dairy, dry goods, fresh produce and other perishable items, frozen foods, household products, and paper goods;
- (b) May provide beer, wine, and/or liquor sales for consumption off the premises with a California Alcoholic Beverage Control Board License type 20 (off-sale beer and wine) or type 21 (off-sale general) within the accessory use limits;
- (c) Prepares minor amounts or no food on site for immediate consumption; and
- (d) Markets the majority of its merchandise at retail prices;
- (e) May have a Limited Restaurant use within the accessory use limits;

GROSS FLOOR AREA Shall have the meaning established in the City of San Francisco Planning Code §102. DEFINITIONS, for "Floor Area, Gross."

HARDSCAPE The coverage of ground surfaces with constructed materials such as paving, walls, steps, decks, or furnishings.

HEDGEROW A row of bushes, shrubs and/or trees that help define a place, act as shelterbelts from prevailing winds, and add to biodiversity.

HISTORIC RESOURCES Buildings or structures listed on the National Register of Historic Places, either individually or as contributors to a National Register-listed Historic District.

HORIZONTAL DEVELOPMENT Horizontal improvements, including infrastructure, streetscape and open space improvements that the master horizontal developer is required to construct under the terms of a Development Agreement (DA) with the master developer.

IMPERVIOUS SURFACES An impermeable material, which prevents moisture percolation into the ground, and therefore sheds rainwater and residues onto streets and into stormwater sewers.

INDUSTRIAL AESTHETIC Elements with an industrial aesthetic shall give dominance to the predominant structure of the element and expose said element to reflect age, such as weathered wood, exposed elements, industrial light fixtures and substrate.

LANDING The area associated with a stairway or ramp that provides reprieve from the ascent or descent of the vertical change; typically flat, and sometimes wider than said stairway or ramp.

LINER RETAIL Small retail spaces located along the perimeter of large retail areas.

LIVE/WORK UNIT A hybrid Residential and PDR Use that is defined as a structure or portion of a structure combining a residential living space for a group of persons including not more than four adults in the same unit with an integrated work space principally used by one or more of the residents of that unit.

LOCAL-SERVING RETAIL Retail uses providing goods and services to the population within the immediate neighborhood.

LOT FRONTAGE The dimension of a lot along a primary street.

MAJOR FACE(S) The longer linear, horizontal sides of a building's facade.

MAJOR PHASE OF DEVELOPMENT Each major phase of development identified in the phasing plan.

MASSING Form used to describe the three-dimensional volume or shape of a building or part of a building or the act of creating it.

MAXIMUM APPARENT FACE The maximum allowable length of any given side of a building's facade or portion thereof.

MAXIMUM PLAN DIMENSION The maximum linear horizontal dimension of a building or structure at a given level, between the outside surfaces of its exterior walls. The maximum plan dimension of a building or structure is the greatest plan dimension parallel to the long axis of the building.

MICRO-PARCELS Small scale property parcels of no more than 2,500 gsf, intended for development of between 1 and 3 dwelling units.

MINOR FACE(S) The shorter linear, horizonal sides of a building's facade.

MODULATION A Major variation in the massing, height, or setback of a building, as a means of breaking up a structure's perceived bulk.

NATIVE SPECIES Plants that have evolved over geologic time in response to physical and biotic processes characteristic of a region: the climate, soils, timing of rainfall, drought and interactions with the other species inhabiting the local community. They are uniquely adapted to local conditions, providing a practical and ecologically valuable alternative for landscaping, conservation and restoration projects, and as wildlife food source.

OFFICE USE A space within a structure intended or primarily suitable for occupancy by persons or entities which perform for their own benefit or provide to others at that location, administrative services, design services, business and professional services, financial services, medical services, multimedia, software development, web design and information technology.

OPEN-AIR SALES A retail use involving open-air sale of new and/or used merchandise, except vehicles, but including agricultural products, crafts, and art work.

OPEN RECREATION AREA A Non-Commercial Entertainment, Arts and Recreation Use that is not publicly owned which is not screened from public view, has no structures other than those necessary and incidental to the open land use, is not operated as a gainful business, and is devoted to outdoor recreation such as golf, tennis, or cycling.

OPEN USE Any use of a lot that is not conducted within a Building.

OUTDOOR ACTIVITY AREA An area, not including primary circulation space or any public street, located outside of a building or in a courtyard and provided for the use or convenience of patrons of a commercial establishment including, but not limited to, sitting, eating, drinking, dancing, and food-service activities.

OWNERS ASSOCIATION (OA) An organization in a subdivision, planned community or condominium that makes and enforces rules for the properties within its jurisdiction.

PARCEL Parcels delineate the limits of public and private property.

PARCEL BREAKS A dedicated, unobstructed access areas and throughways within parcels. Buildings are prohibited within parcel breaks with the exception of the below-grade (or partially below-grade) garage structures, allowable encroachments, and public realm and open space elements. Parcel breaks shall fall into four major categories:

- Public Access Parcel Breaks
- Courtyard Access Parcel Breaks
- Transit Plaza Parcel Break (See Sec. 5.1)
- Maintenance Access Easements

PARKING A parking facility serving uses located on either parcels or blocks occupied by said facility or on other parcels or blocks.

PASSIVE OUTDOOR RECREATION A Non-Commercial Entertainment, Arts and Recreation Use defined as an open space used for passive recreational purposes that is not publicly owned and is not screened from public view, has no structures other than those necessary and incidental to the open land use, is not served by vehicles other than normal maintenance equipment, and has no retail or wholesale sales on the premises. Such open space may include, but not necessarily be limited to, a park, playground, or rest area.

PERMEABLE SURFACES Permeable surfaces are those that allow stormwater to infiltrate the underlying soils. Permeable surfaces shall include, but not be limited to, vegetative planting beds, porous asphalt, porous concrete, single-sized aggregate, open-jointed blocks, stone, pavers, or brick that are loose-set and without mortar. Permeable surfaces are required to be contained so neither sediment nor the permeable surface discharges off the site.

PERMITTED USES Uses principally permitted persuant to the Permitted and Conditional Table. See Chapter 4.

PERVIOUS SURFACE Landscaping materials that allow a percentage of rainwater to percolate into the ground rather than run off into the stormwater system.

PLANNING COMMISSION The governing body of the Planning Department of the City and County of San Francisco.

POCKET PLAZAS Community gathering and program spaces located at strategic nodes within the neighborhood.

PROHIBITED USES Excluded uses, as listed below, are uses that might have fit within a broad category listed in the Permitted or Conditionally Permitted Use table but are expressly prohibited:

Drive-through facilities

Adult entertainment

General Advertising

RESIDENTIAL USE A Use Category consisting of uses that provide housing for San Francisco residents, rather than visitors, including Dwelling Units, Group Housing, Residential Hotels, and Senior Housing, and any residential components of Institutional Uses. Single Room Occupancy and Student Housing designations are considered characteristics of certain Residential Uses.

RESTAURANT A full-service or self-service retail facility primarily for eating use; which provides ready-to-eat food to customers for consumption on or off the premises; which may or may not provide seating; and which may include a Bar. Food may be cooked or otherwise prepared on the premises.

RETAIL SALES AND SERVICES A commercial use which provides goods and/or services directly to the customer, including Outdoor Activity Areas and Open Air Sales Areas. It may provide goods and/or services to the business community, provided that it also serves the general public.

RETAIL USE A Commercial Use that includes uses that involve the sale of goods, typically in small quantities, or services directly to the ultimate consumer or end user including, but not limited to, Retail Sales and Service Uses, Commercial Entertainment, Arts and Recreation Uses, and Retail Automotive Uses.

ROOF SIGN A sign, or portion thereof, erected or painted on or over the roof of a building.

SEMI-PRIVATE COURTYARD OR OPEN SPACE Open space that is available and accessible to residents or tenants of the adjacent buildings but is not necessarily required to be publicly accessible.

SERPENTINE SOILS Serpentine soils are typically present in areas near active geologic faults, where the mineral Serpentinite emerges from the earth's mantle through cracks in surrounding bedrock. The San Andreas and Hayward faults are responsible for the serpentine outcrops that occur across the Bay Area.

These soils are characterized by a thin, rocky texture, and a mineral content high in magnesium, nickel, and chromium and low in calcium and nitrogen. The result is an environment that is outright toxic to many plants, and simply challenging for other to survive. However, certain plants have evolved over time to thrive in these conditions, including many of the plants that are endemic to the Bay Area and the larger ecosystems that revolve around them.

SETBACK Open space provided between the property line and the primary built structure creating an expanded area along the sidewalk providing a transition between the street and private uses on the property. Setbacks may be required to be dedicated for public use or remain as private space between the public right-of-way and the building mass. The term may refer to:

- The required or actual horizontal distance between the property line and the nearest face of the building.
- The area defined by such dimension.

SHARED PUBLIC WAY Dedicated rights-of-way primarily designed for pedestrian use, which also permit vehicles and bicycles to share the open space.

SHARED YARD The shared yard is a buffer between the Big Green and the Flats. It acts as a visual transition between public open space and private homes, and provides residents with a shared semi-private open space for activities such as play, barbecue, small gatherings, and leisure time. Stoops overlook the shared yard, which fronts the Big Green. Stormwater is treated between buildings.

SOFTSCAPE Landscaped areas dedicated to planted materials such as ground cover, annuals, perennials, shrubs and trees.

STEPBACK

- A. The required or actual distance between the vertical edges of a building above a specified height, or between the vertical edge of a building and the property line above a specific height.
- B. The area defined by such dimension

STOOP An outdoor entryway into residential units raised above the sidewalk level. Stoops may include steps leading to a small porch or landing at the level of the first floor of the unit.

STORAGE A use which stores goods and materials used by households or businesses at other locations, but which does not include junk, waste, salvaged materials, automobiles, inflammable or highly combustible materials. A storage building for household or business goods may be operated on a self-serve basis.

STOREFRONT The facade of a retail space between the street grade and the ceiling of the first floor.

STREET A Right-of-Way permanently dedicated to common and general use by the public, as described in the Parcels+Easement Plan.

STREETWALL The aggregate effect of the façades of buildings along a property line adjacent to a public street or open space. The typical context for this term is in defining the public realm and framing or engaging the street.

STRUCTURAL SOIL Designed growing medium made up of crushed stone, clay loam, and a hydrogel stabilizing agent, which can meet or exceed pavement sub-base design and compaction requirements while remaining root penetrable and supportive of tree growth. The small voids in structural soil provide space for healthy root growth at deeper levels and serve to prevent surface heaving of pavement much more effectively than root barriers.

STRUCTURE Anything constructed or erected which requires fixed location on the ground or attachment to something having fixed location on the ground.

TERRACE A raised, flat platform associated with and providing egress from a [usually residential] building.

TIDAL ZONE The tidal portion of the site exists from the high tide line down to low tide line (open water). The project site contains the largest area available for this habitat in India Basin and one the largest in the southeastern waterfront of San Francisco.

TIDELANDS TRUST The public trust for commerce, navigation and fisheries, whereby title to tidelands and lands under navigable waters are held in trust for the benefit of the people of California.

TRANSPARENCY A characteristic of clear facade materials, such as glass, that provide an unhindered visual connection between the sidewalk and internal areas of the building.

TOWER EXTENSION The portion of a tower above the roof of the highest occupied floor used to screen rooftop elements and to enhance the tower design.

UNBUNDLED PARKING Non-residential, unassigned shared parking.

UNDERSTORY PLANTING Vegetation which is moderate to low in height and provides a range of ecological and public realm benefits. Understory planting may include native lawns, costal scrub, annual and perennial grasses, and wildflowers

VERTICAL DEVELOPMENT Individual buildings or structures developed pursuant to a Vertical Development Agreement.

VISION ZERO "a multi-national road traffic safety project that aims to achieve a highway system with no fatalities or serious injuries in road traffic. It started in Sweden and was approved by their parliament in October 1997.[1] A core principle of the vision is that 'Life and health can never be exchanged for other benefits within the society' rather than the more conventional comparison between costs and benefits, where a monetary value is placed on life and health, and then that value is used to decide how much money to spend on a road network towards the benefit of decreasing how much risk." https://en.wikipedia.org/wiki/Vision_Zero "In 2014, the SFMTA joined the San Francisco Board of Supervisors in adopting "Vision Zero": a policy to eliminate all traffic deaths in San Francisco by 2024.' https://www.sfmta.com/projects-planning/projects/vision-zero

WALK-UP FACILITY A structure designed for provision of pedestrian-oriented services, located on an exterior building wall, including window service, self-service operations, and automated bank teller machines ("ATMs").

WALL SIGN A sign painted directly on the wall or fixed flat against a facade of a building, parallel to the building wall and not projecting out from the facade more than the thickness of the sign cabinet.

WILDLIFE FRIENDLY HABITAT A habitat that provides food, water, shelter and nesting areas in order to support, protect and restore native plants and animals.

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The Avenue by Sasaki
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p.244 Residential Mixed Use
300 Ivy by David Baker
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p.244 Multi-Family Residential
Photo by Pyatok
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p.245 Public Market / Town Triangle
Photo by Aleksander Dekanski
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p.245 Privately Owned Open Space
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Minghu Wetland Park by Turenscape
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h2hotel by David Baker
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p.247 2. Mixed-Use
8th and Howard by David Baker
Photo by David Baker Architects
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p.247 3. Public Use - Plaza
Mint Plaza by CMG Architects
Photo by BUILD:
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Bell Street Park
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300 Ivy by David Baker
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p.274 Residential Setback
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p.281 3. Recessed Setback
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p.281 4. Vertical Recess, Window Protrusion
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p.287 Recessed Setback for Ground-Floor Retail Facade
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p.287 Non-Residential Storefront Open to Public Realm
h2 Hotel, David Baker Architects
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p.288 Small-Scale Neighborhood Retail with Primary Entry Accessible from Public Right-of-Way
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p.289 Narrow Retail Frontages
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p.289 Expressed Structural Bays
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p.289 Facade Modulation
SOMA Studios, David Baker Architects
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p.290 Recessed Facade with Transparency Revealing Active Ground Floor Use
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p.291 Low Sill Height at Ground Floor Commerical Use
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p.291 Recessed, Transparent Primary Entry
Don Fisher Clubhouse, TEF Design
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p.293 Non-Residential Primary Entry Threshold
300 Ivy, David Baker Architects
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p.294 Varied Residential Facades Articulated at narrow intervals
Sluseholmen by Arkitema Architects + Sjoerd Soeters
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p.295 Facade Modulation by Vertical Protrusions and Recesses
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p.295 Facade Variation
Richardson Apartments
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p.296 Rhythmic Facade Modulation and Active Ground Floor Thresholds
Spring District Phase 2, Mithun
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p.297 Changed in Material, Color and Depth Along Facade
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p.297 Facade Depth Through Recessed Balcnies and Projection
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p.297 Staggered Protected Balconies
Ruotutorppa Social Housing, Arkkitehdit Hannunkari & Mäkipaja Architects
Photo by Mikael Linden
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p.298 Horizontal Shift
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p.299 Floor Grouping
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p.300 Bay Windows
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p.300 Intersection Volume
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p.300 Framing
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p.301 Double Skin
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p.301 Structural Expression
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p.302 Modulation and Articulation on Residnetial Building Facade
Hunters View Housing, Paulett Taggart Architects
Photo by Bruce Damonte
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p.303 Facade Depth Achieved through Staggered Columns
25 Bond Street, BKSK Architects,
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p.303 Operable Perforated Metal Screens
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p.304 Paneling
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Jackson Clements Burrows Architects: Harold Street Residence
Photo by John Gollings
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p.304 Shutters
Lofts @ Cherokee Studios , Pugh + Scarpa
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p.305 Spandrels
Hancock Mixed Use Apartments
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p.305 Fins/ Shading Device
1180 Fourth Street, Mithun-Solomon + Kennerly
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p.306 Protrusions/ Recesses
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p.306 Windows/ Openings
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p.306 Intergrated Green roof and Rootop Amenities
Zibi
Photo by Bruce Damonte
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p.307 Rooftop Amenitiy
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p.307 Sustainable Roof
Fourth Street Apartments, NBBJ
Photo by High Rise Photo
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Photo by Urban Strong
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p.313 WalkNYC Wayfinding
by WalkNYC
Photo by PentaCityGroup
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p.314 Transit Signage
Photo by David Dieter - Studio DWD Communication Design
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p.314 Advisory Message
Storm Drain Stenciling
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p.317 1. Whakarewarewa Valley Wayfinding
Photo by Joanne Duff Design
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p.317 2. Causeway Coastal Route Wayfinding
Photo by Tandem Design
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p.317 3. Outdoor Wayfinding System
Photo by Porcuatro Design
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p.317 4. Signage System for The High Line
Photo by Pentagram
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p.317 5. Museum Zeughaus Wayfinding Design
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p.319 1. Klehm Arboretum Wayfinding
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p.319 2. Interpretive Trail Signage
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p.319 3. Nordkyn Signage
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p.322 1. Villa Catherine Mamet
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Photo by Jack Usine, SMeltery
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p.322 2. Luce Loft
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p.322 3. Noma Restaurant
Photo by Kontrapunkt Design, Denmark
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p.322 4. Pompiers
Photo by Jack Usine, SMeltery
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p.323 5. Small House Big Door
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p.323 6. The China House
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p.323 7. Co-Op, Italy
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p.325 Pike Place Market
Photo by Creative Commons

p.328 1. Urban Outfitters

p.328 2. Beam & Anchor Vintage Store
Photo by Beam & Anchor
beamandanchor.com

p.328 3. Shed Exterior Signage
SHED by Jensen Architects
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p.328 4. Pike Place Market
Photo by Creative Commons

p.329 5. March Cooking Store
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p.329 6. Peter Nappi Leather Goods
Peter Nappi
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p.329 7. Thistle Centre
Photo by Cadzow-Pelosi
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