

Appendix B

Draft India Basin Design Standards and Guidelines

INDIA BASIN

Design Standards and Guidelines
Draft, 14 August 2017



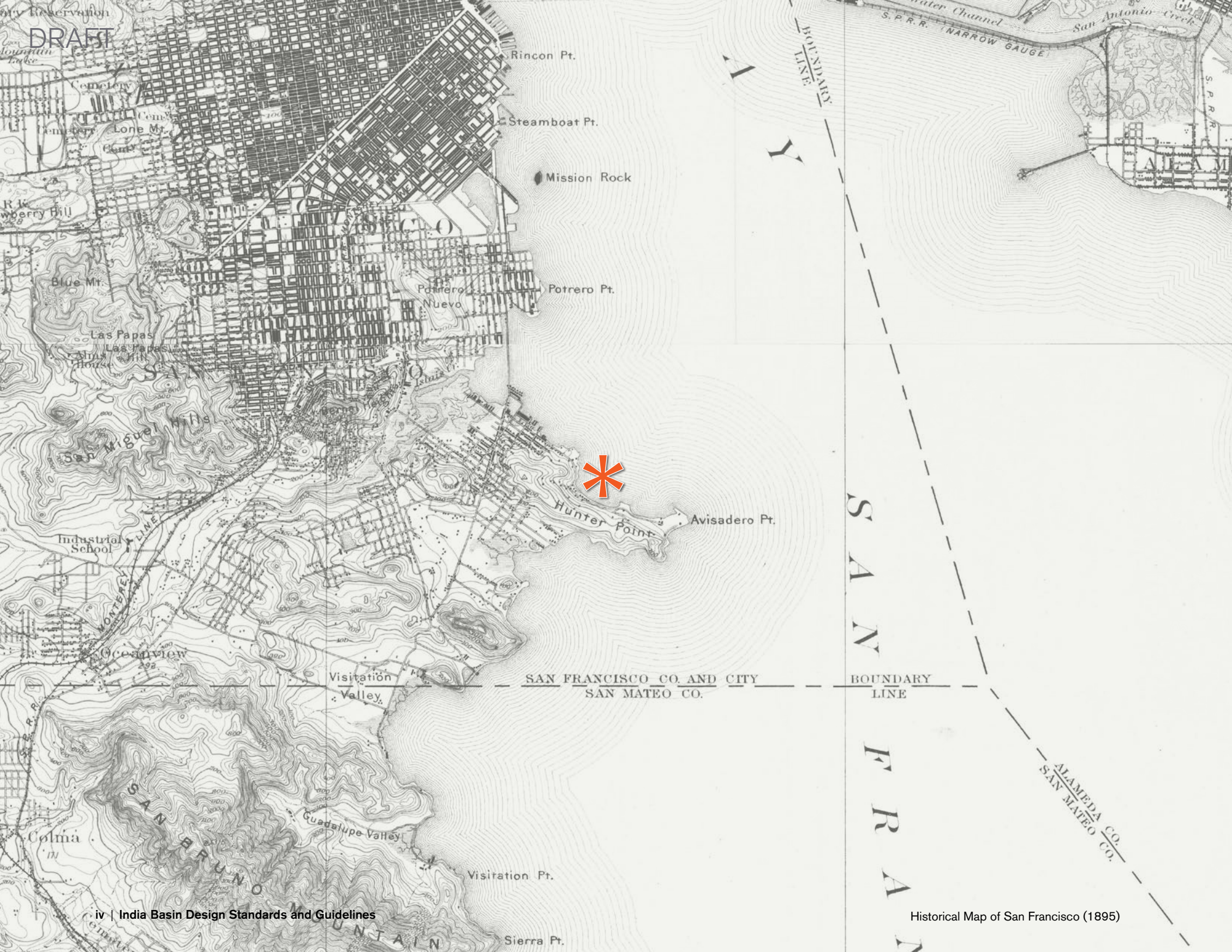
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View of Downtown from Site

INDIA BASIN

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Preface

The India Basin Design Standards and Guidelines (DSG) provides a comprehensive framework for the transformation of the project site into a human-scaled, socially vibrant, amenity-rich, active and distinctive San Francisco neighborhood. The document represents the distillation of the project sponsors' and community's collective values and aspirations – as manifested through urban development – into explicit, actionable, site-specific improvements that will leverage public and private investments to advance local objectives. 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 public realm, district sustainability, land use, urban form, architecture, wayfinding and signage. The DSG also summarizes a process for project implementation. 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 Are 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.

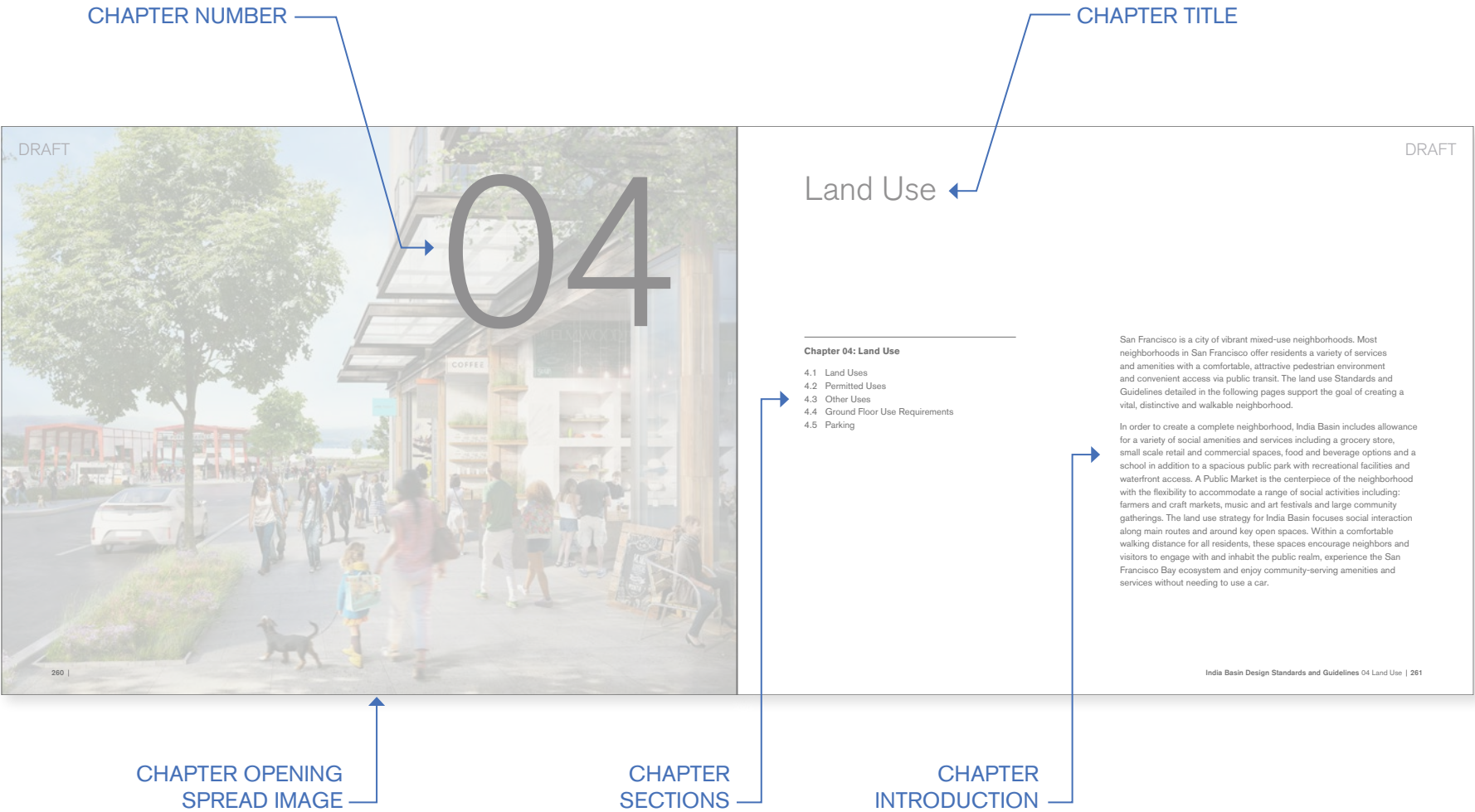
Goals Specifications or components of the project that the sponsors will pursue if financially feasible. Goals are ultimately non-binding and are aspirational.

- **Infrastructure Plan** – the 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.

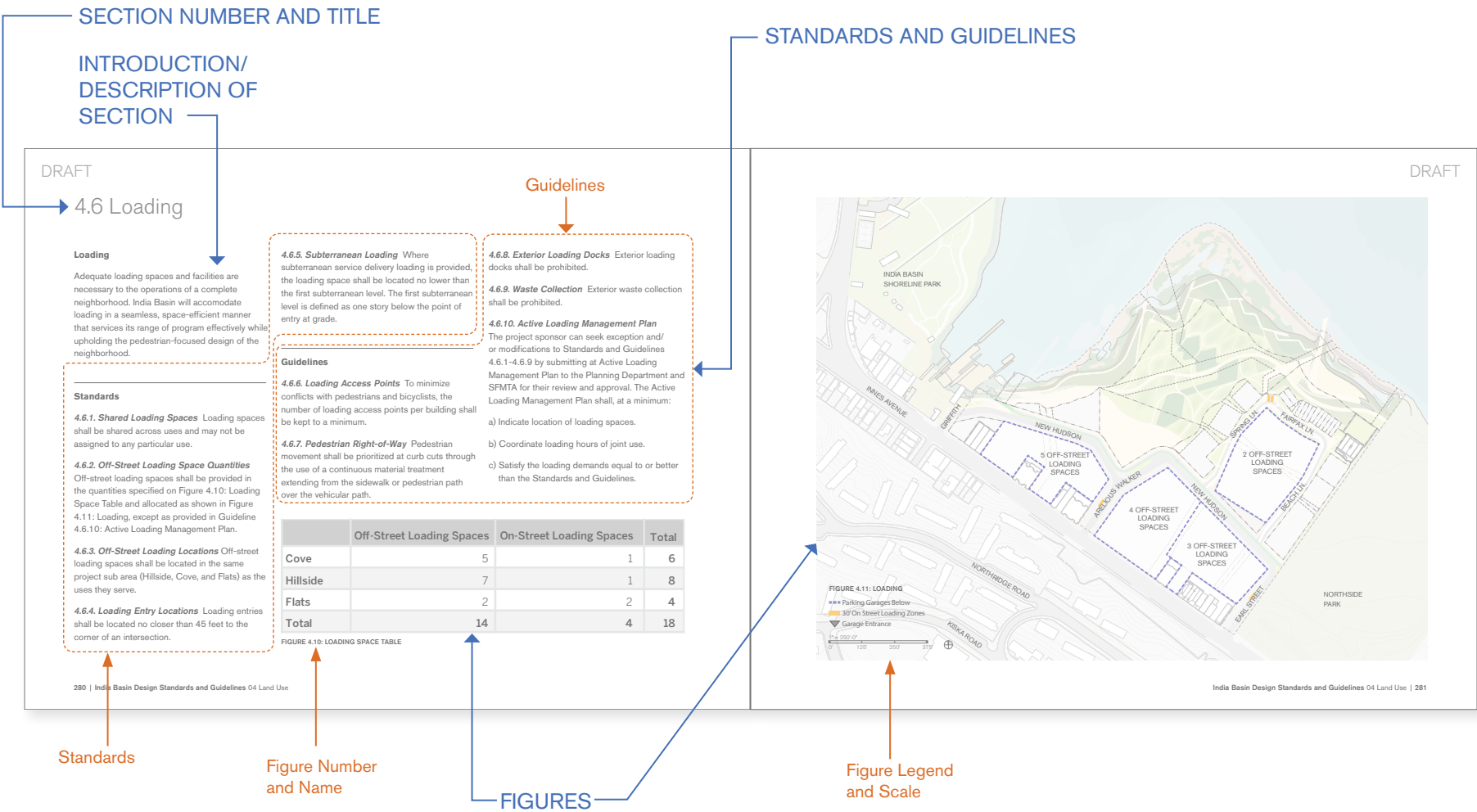
The vision for India Basin has been developed through a collaborative process, with input from community members, local agencies and departments, public advocacy organizations and design and engineering experts. The Design Standards and Guidelines are a mechanism to realize this vision, building on substantial 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

TITLE SPREAD LAYOUT



TYPICAL SPREAD





Project Vision

The India Basin project reimagines urbanity as integral with ecology to create a connected, complete and human-scale, urban village that contributes to the surrounding community.

In a once-isolated corner of San Francisco—on reclaimed tidal flats where the City meets the Bay—lies a discreet outcrop; overgrown, tranquil, sublime. Set against a backdrop of sweeping views, traces of human intervention and enduring super-natural process allude to both an abundant ecological inheritance and a robust industrial legacy. Forgotten remoteness, lingering decay and remnants of pioneering improvisation juxtaposed with profound possibility—teetering right at the edge of next. This is India Basin. Wild. Eclectic. Extra-ordinary. A window into both the city's remarkable past and its auspicious future.

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-scaled neighborhood where amenities are accessible with a short walk. It reimagines urbanity as integral with ecology to create a connected, complete and human-scale, urban village that contributes to the surrounding community. Beyond 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



Active Ground Floor

Complete the Neighborhood

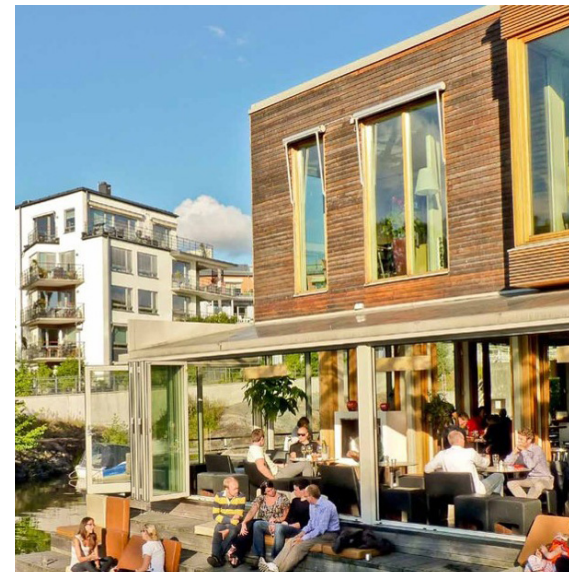
At present, the India Basin community at large is in need of many of the basic amenities commonly found in San Francisco's walkable neighborhoods. The project connects into and augments the neighborhood by adding a wide range of amenities, public services and recreation options so that the surrounding community can meet basic needs within a 10–15 minute walk. Housing, transportation options and access to open space are expanded as well.



Public Space

Shape Public Space for Public Life

India Basin's focus on public life compels integration of development with a dynamic open space system; interweaving parks, plazas and gathering places with an extensive pedestrian and bicycle network. Scale and configuration of space are modulated to purpose—from the intimate Town Triangle to the flexible Public Market and expansive waterfront terraces and boardwalks edging the shoreline. Direct and intuitive access to the Big Green and Shoreline enables these signature places to reinforce the regional network of public waterfront parklands.



Human Scale Development

Craft a Human-Scale Village

Contemporary development often lacks the attention to detail, articulations, subtle nuance and material quality that condition the richness of experience manifest in pre-modern urbanism. The India Basin project emphasizes the calibration of form, size, texture, proportion and articulation of physical elements to the characteristics of human perception. Flexibility is preserved to enable and encourage a variety of architectural responses.



Urban Stormwater Management

Cultivate a Robust Urban Ecology

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



Sense of Place

Foster an Authentic Sense of Place

Embodying a commitment to authenticity, the project embraces the storied history and unique physical characteristics of the site—harnessing its idiosyncratic qualities to create a distinctive 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 a sense of urban wildness; of the omnipresence of natural processes; of unpolished, ad hoc improvisation; a sense of both temporality and of timelessness.



Stewardship

Grow a Legacy of Stewardship

The India Basin sponsors have made an unparalleled commitment to progressing environmental stewardship and community resilience. Holistic thinking permeates district-wide strategies for water, energy, waste, ecology, habitat creation and shoreline adaptation. Beyond physical development, the project is pioneering an innovative approach for long term community management by creating a new non-profit entity—the India Basin Trust—with responsibility for operations, maintenance, programming, social capacity-building and community resilience.





Completing 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 predicts 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, thereby reducing vehicle trips and miles traveled and as a result, reducing 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 so that the surrounding community can meet basic needs within a 10–15 minute walk. Housing, Transportation, Recreation options and access to open space are expanded as well.

“In a Society becoming steadily more privatized... the public component of our lives is disappearing. It is more and more important to make the cities inviting, so we can meet our fellow citizens face to face and experience directly through our senses. Public life in good quality public spaces is an important part of a democratic life and a full life.”

- Jan Gehl

Public Space for Public Life

The City of San Francisco benefits from an abundance of high-quality public spaces, enjoyable year-round thanks to a famously temperate climate. In contrast, the Southeast Waterfront historically served heavy industrial purposes and therefore lacked many of the public space offerings and recreational facilities that are essential to livable communities. A vital part of completing the India Basin neighborhood is the provision of great public spaces—places for the community to gather, find amusement, relax, learn, and express itself.

Indeed, the project's focus on supporting public life compels integration of development with a vibrant, 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 plays a central role in establishing the character of this new pedestrian-priority neighborhood, providing a wide range of active and passive uses and experiences—from the expansive wilds of the shoreline to the small-scale neighborhood plazas to be discovered between buildings. Public spaces are envisioned to adapt to and support the communities they serve; evolving over time, responding to, and sustaining the dynamism of urban life, while providing the place-based infrastructure for community capacity-building and social resilience.





A Human-Scale Village

As a pedestrian-priority community, India Basin is intended to be experienced at a walkable pace. Whereas contemporary development often lacks the qualities that condition the richness of experience manifest in pre-modern urbanism, the India Basin project is designed to foster a more welcoming and comfortable experience of place. 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, rights of way, lower-floors of development and to the threshold interface between public and private.

Composition of buildings and spaces emphasizes diversity with complementarity. Flexibility is preserved to enable and encourage a variety of architectural responses.



A Regional Waterfront Destination

The project is located centrally within a larger network of seven interconnected park sites, which together form a regional-scale waterfront destination. Programming and design of the project's major open space areas – the Big Green and Shoreline – have been carefully coordinated to align with and compliment the India Basin waterfront parks and trails network

as a whole. Together, the Big Green and the Shoreline combine a wide range of healthy active and passive recreational uses, including: play areas, facilities and access for human-powered boating, educational and interpretive resources, public art, hiking and wildlife viewing trails, food and beverage concessions, a Public Market, and a flexible space for events.

01



View of Site from Hillside

Master Plan Framework

Chapter 01: Master Plan Framework

- 1.1 Context
- 1.2 Physical Framework
- 1.3 Placemaking

The India Basin Design Standards and Guidelines (DSG) provides a comprehensive framework for the transformation of the project site into a human-scaled, socially vibrant, amenity-rich, active and distinctive San Francisco neighborhood. The document represents the distillation of the project sponsors' and community's collective values and aspirations—as manifested through urban development—into explicit, actionable, site-specific improvements that will leverage private and public investments to advance local objectives.

This chapter presents the Project Context, Background, Development Concept and overall Structure of proposed improvements. Subsequent chapters detail specific design guidelines and development controls for the Public Realm, District Sustainability, Land Use, Urban Form, Architecture, and Wayfinding and Signage. The document also summarizes the process and regulatory mechanisms for project Implementation.

1.1 Context

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, this latest economic boom has not been without challenges. Housing supply has failed to keep pace with increased demand. Rents are climbing at a rapid clip. Rising costs of living are contributing to displacement, and a feeling of unease that the city is becoming less diverse and inclusive.

Nevertheless, years of thoughtful planning are leading to positive change in a number of the City's underserved areas. In the midst of this complex milieu, 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 that 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 that follow, presents an unparalleled vision of the future—a paradigm shift, reimagining urbanity as integral with ecology to create a connected, complete and resilient village that contributes to the surrounding Bayview Hunters Point community.



View of Downtown from Site

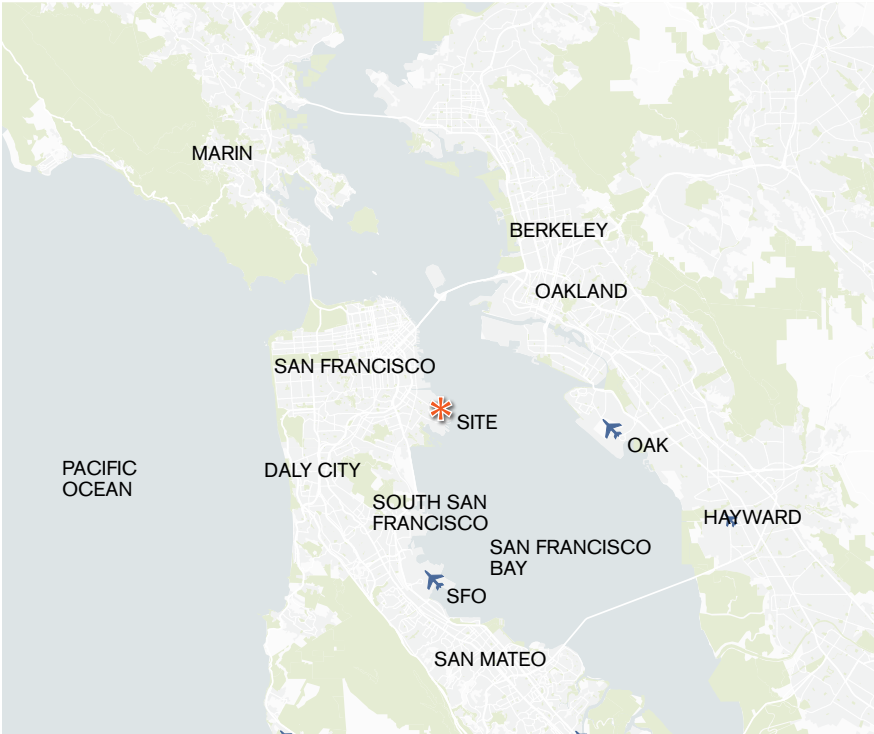


FIGURE 1.01: REGIONAL CONTEXT

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 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.

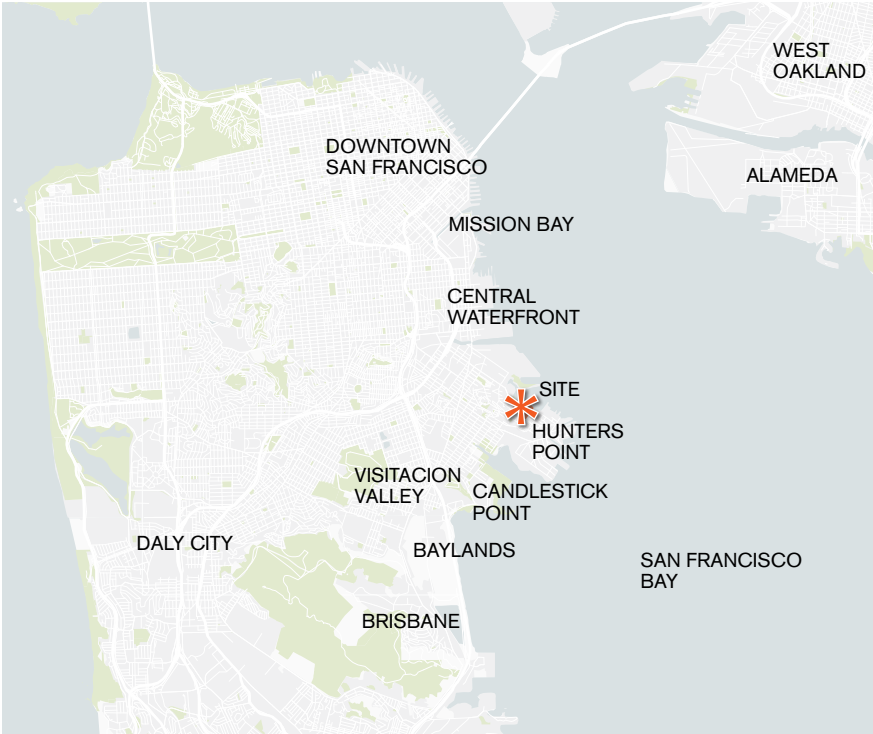
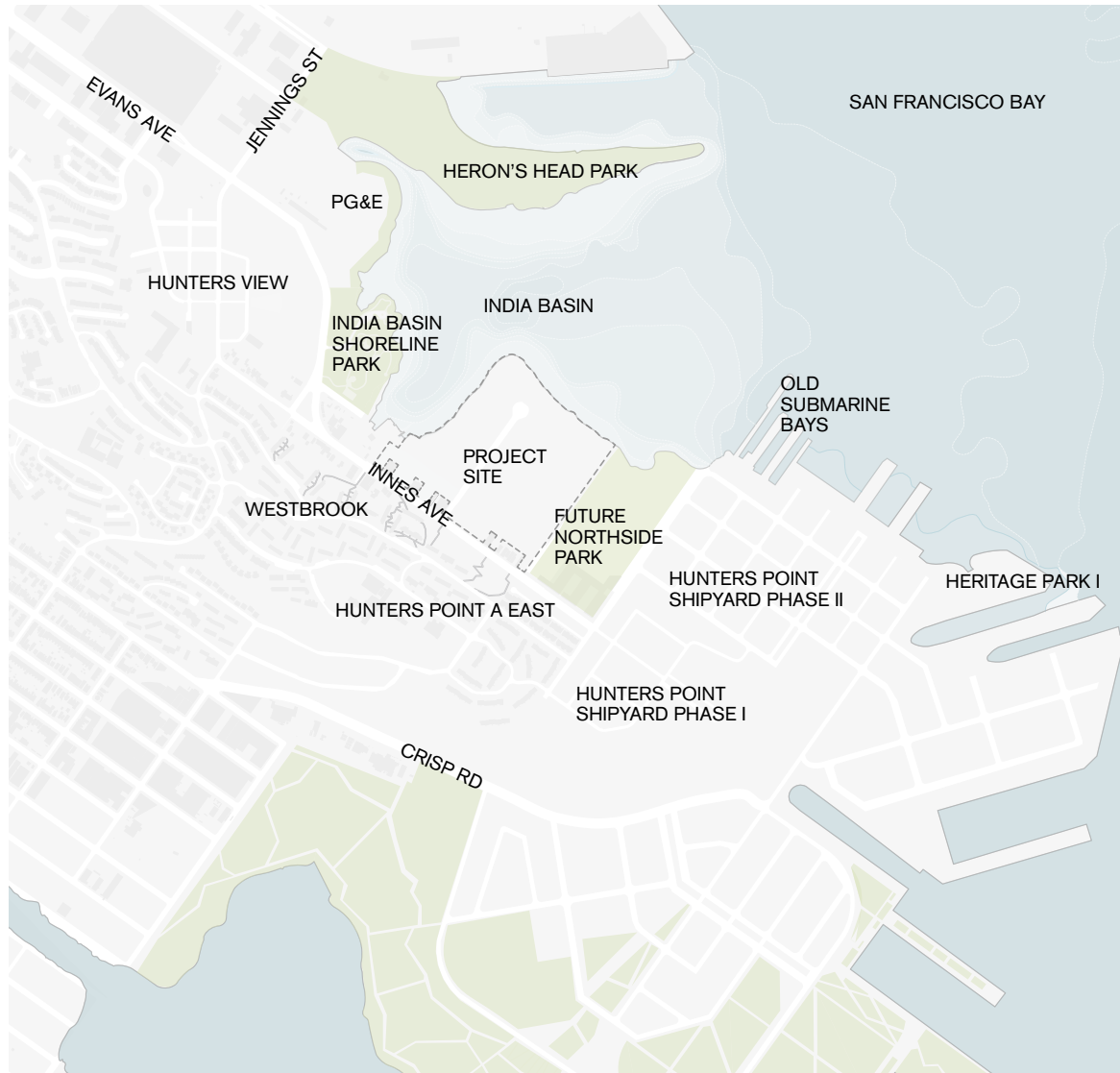


FIGURE 1.02: PROJECT LOCATION

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 underserved areas.

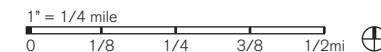


Neighborhood Context

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 storied history and burgeoning creative scene that complement 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 uses 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 1.03: NEIGHBORHOOD CONTEXT



India Basin Transportation Action Plan

India Basin and the surrounding neighborhoods are undergoing significant transformation from a once outlying portion of San Francisco into an active, dense, and accessible new district. Expansion of the City's existing transit systems are proposed to connect the 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 and strategically located at major entries to the site along Innes Avenue such that all parts of the development, parks, and shoreline are accessible in less than a five-minute walk. A combination of Class I and Class II bikeways through the site promote cycling as a dominant mode of transportation, and offer safe and continuous routes for all ages. Trails are expanded into a diverse and comprehensive network of pathways to promote a pedestrian-oriented district.



FIGURE 1.04: CITYWIDE TRANSIT ACCESS TO SITE

- | | |
|-----------------|---------------------|
| — BART System | — New Bus 44 Route |
| — Muni Metro | — New Bus 48 Route |
| — CalTrain | - - - New HPX Route |
| ○ Transit Stops | ••• Bay Area Ferry |



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.

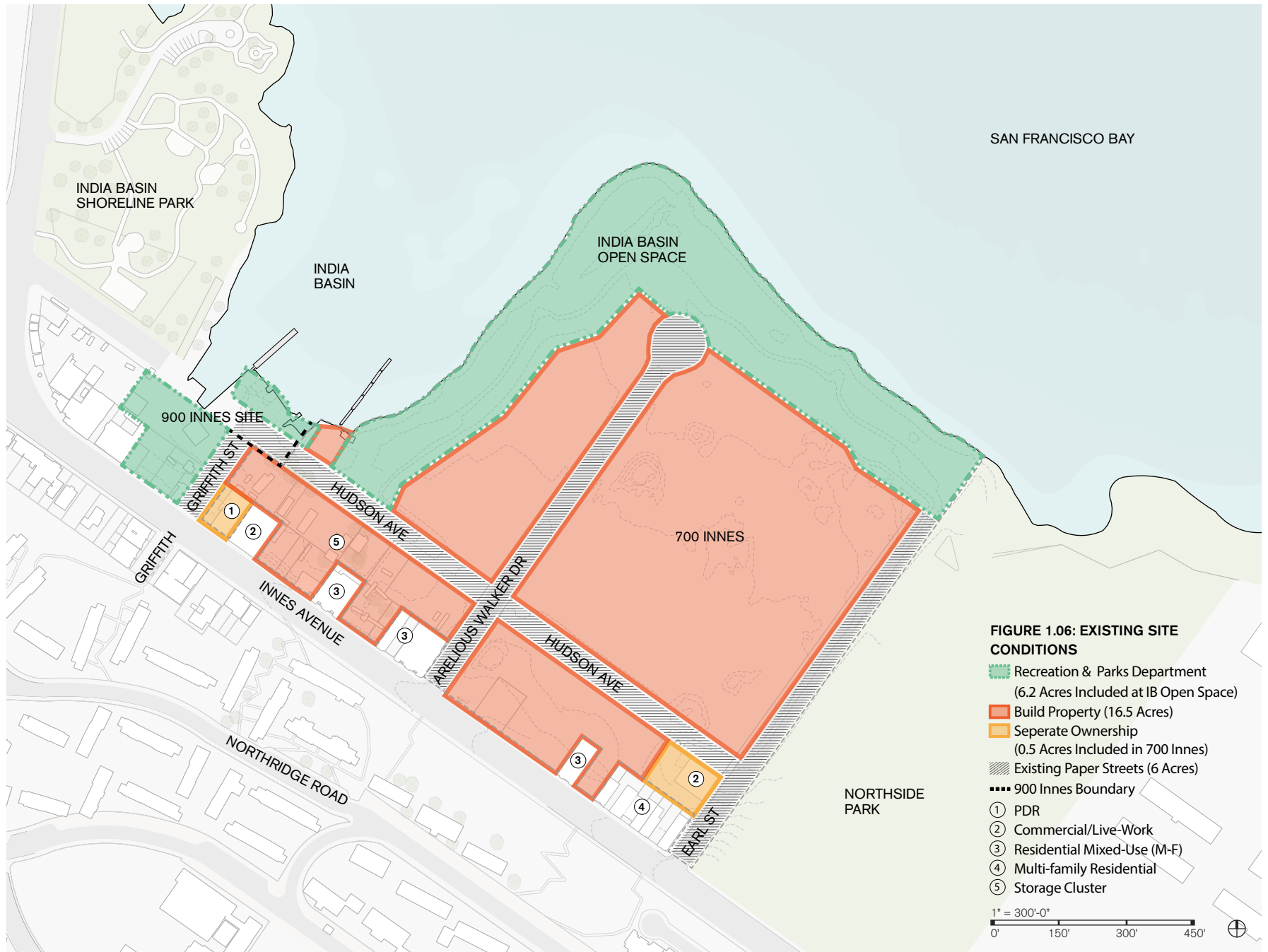
Figure 1.06 shows the project site and the general property ownership boundaries. The parcels that are collectively referred to as 700 Innes total approximately 17 acres and are owned or will be acquired by BUILD. The 6.2 acre India Basin Open Space parcel is owned by RPD. Portions of accepted and unaccepted 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.

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 that borders 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 Arellous Walker Drive and it generally is bounded by Earl Street, Griffith Street, and Innes Avenue. An undeveloped portion of Hudson Street runs through the project site, starting at Hunters Point Boulevard and terminating at Earl Street. Griffith Street, Hudson Street, 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.

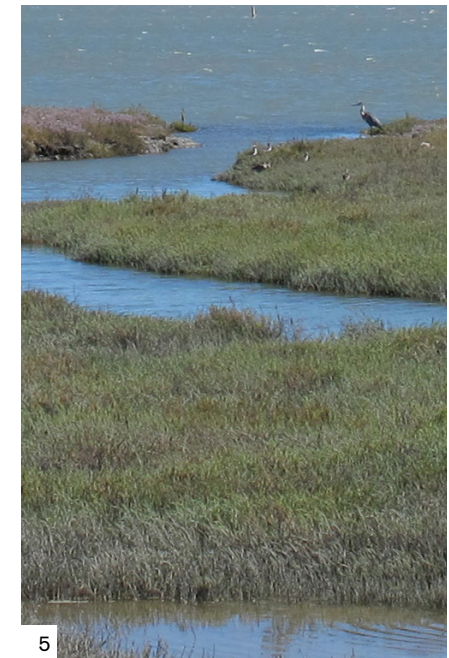




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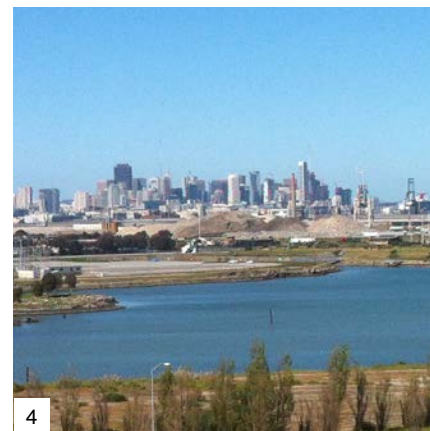


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1. Site as seen from India Basin Shoreline Park
2. Stairway along Innes Avenue at Arellious Walker intersection
3. 900 Innes site
4. View of Downtown
5. India Basin Shoreline Park



3



4



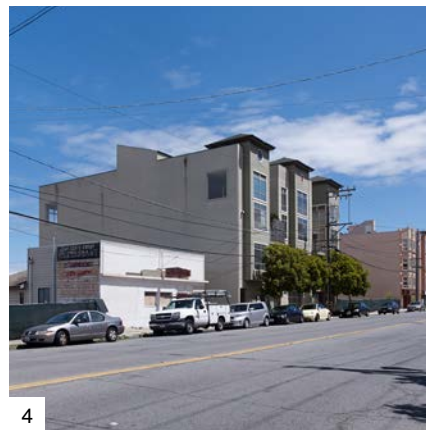
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2



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



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



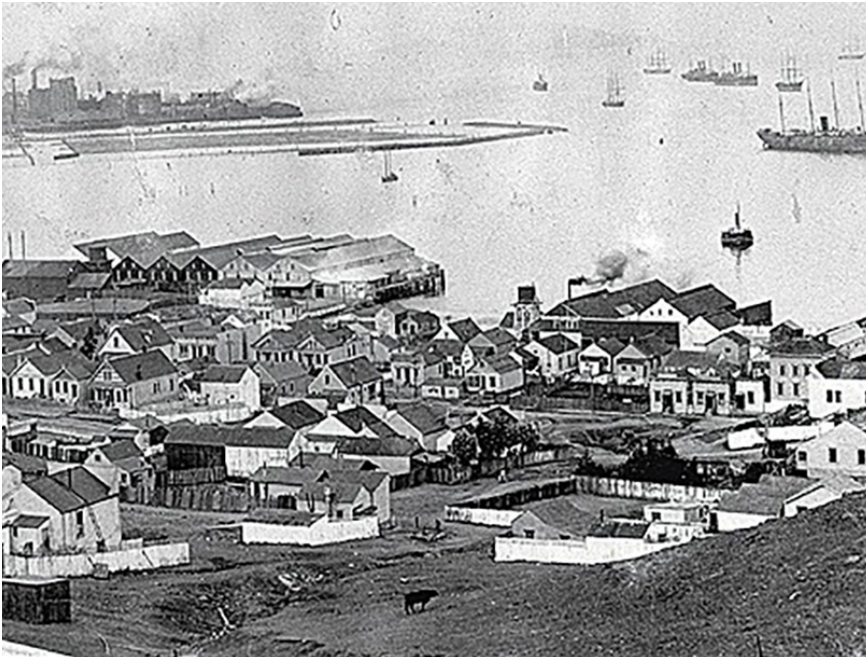
India Basin, c.1900

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 simple vernacular dwellings, 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 with 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 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



India Basin, 1920s

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” 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 industries that remained tended to be heavily polluting, contributing to the increasingly distressed reputation of the district. Continued ethnic tensions led to white flight from the area,



India Basin, 1969

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 dramatically. The surviving boatyards remained 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



Historic Shipwright's Cottage, 900 Innes

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 Shipwrights Cottage and revitalization of the boatyard cultural landscape on this site.

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.

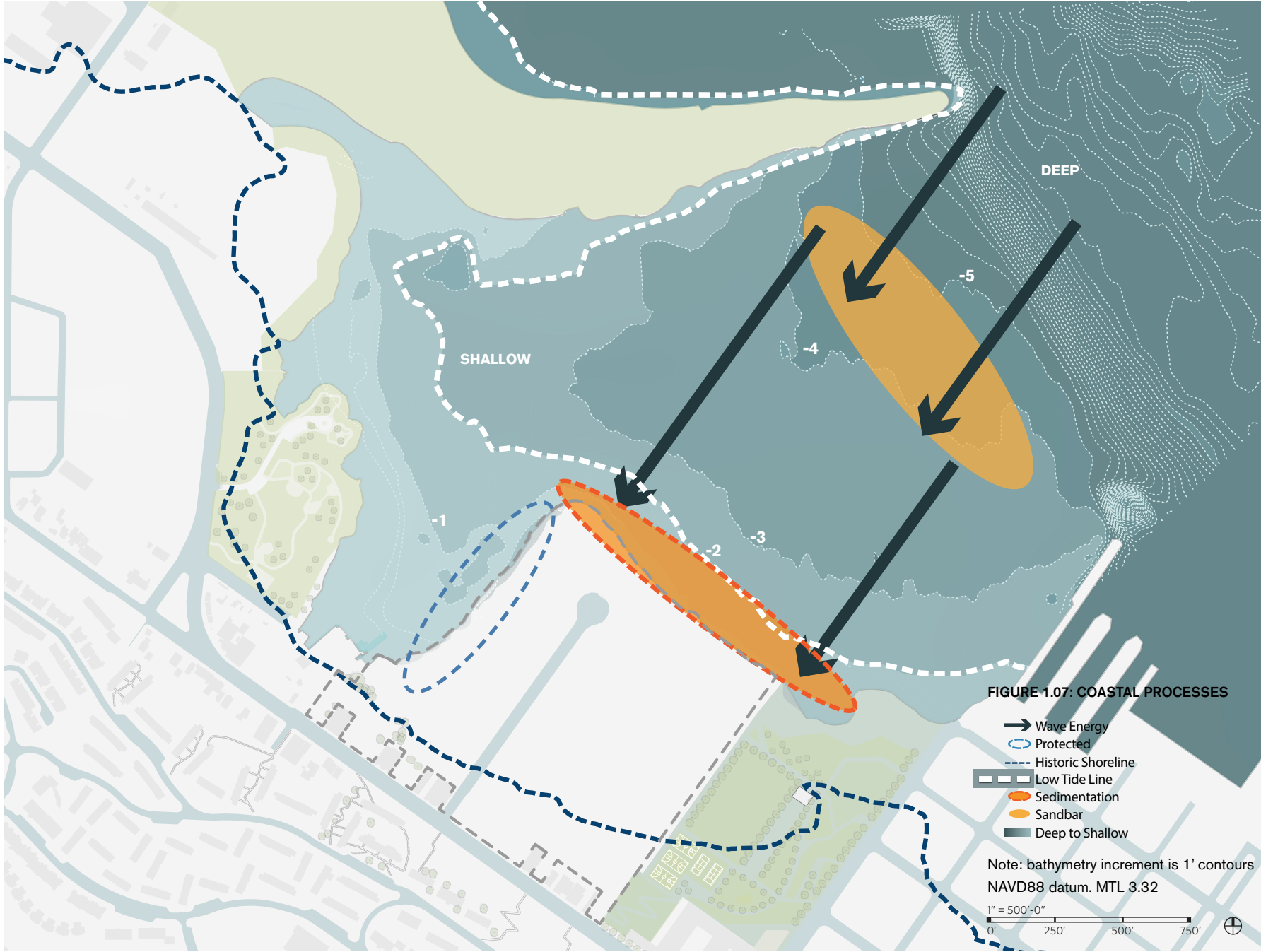
Existing Conditions: The current shoreline extends beyond the historic shoreline as a result of bay fill that occurred by 1965.

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.



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.

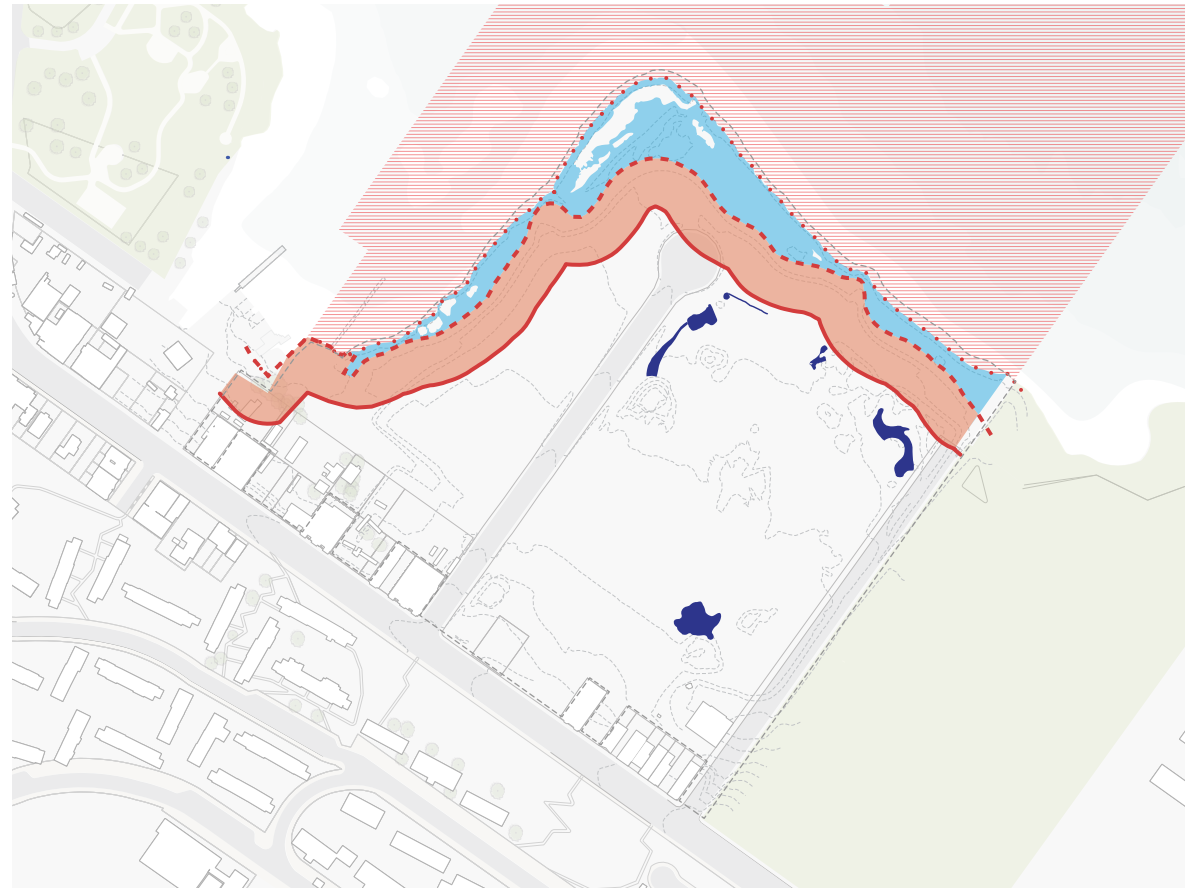


FIGURE 1.08: REGULATORY JURISDICTION

- Current Mean High Water (MHW)
- Current High Tide Line
- 100' BCDC Shoreline Band
- USACE/RWQCB Jurisdiction
- BCDC Jurisdiction
- USACE/RWQCB Jurisdiction over wetlands
- BCDC Bay Jurisdiction

1" = 400'-0"
0' 200' 400' 600' ⊕



FIGURE 1.09: EXISTING MITIGATION WETLANDS

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

1" = 400'-0"
0' 200' 400' 600'

Existing Wetlands

The shoreline located in India Basin Open Space includes 2.5 acres of mitigation wetlands that were created in 2002.* According to the 10 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 that 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 that 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

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 1.10: EXISTING HABITATS AND WETLANDS



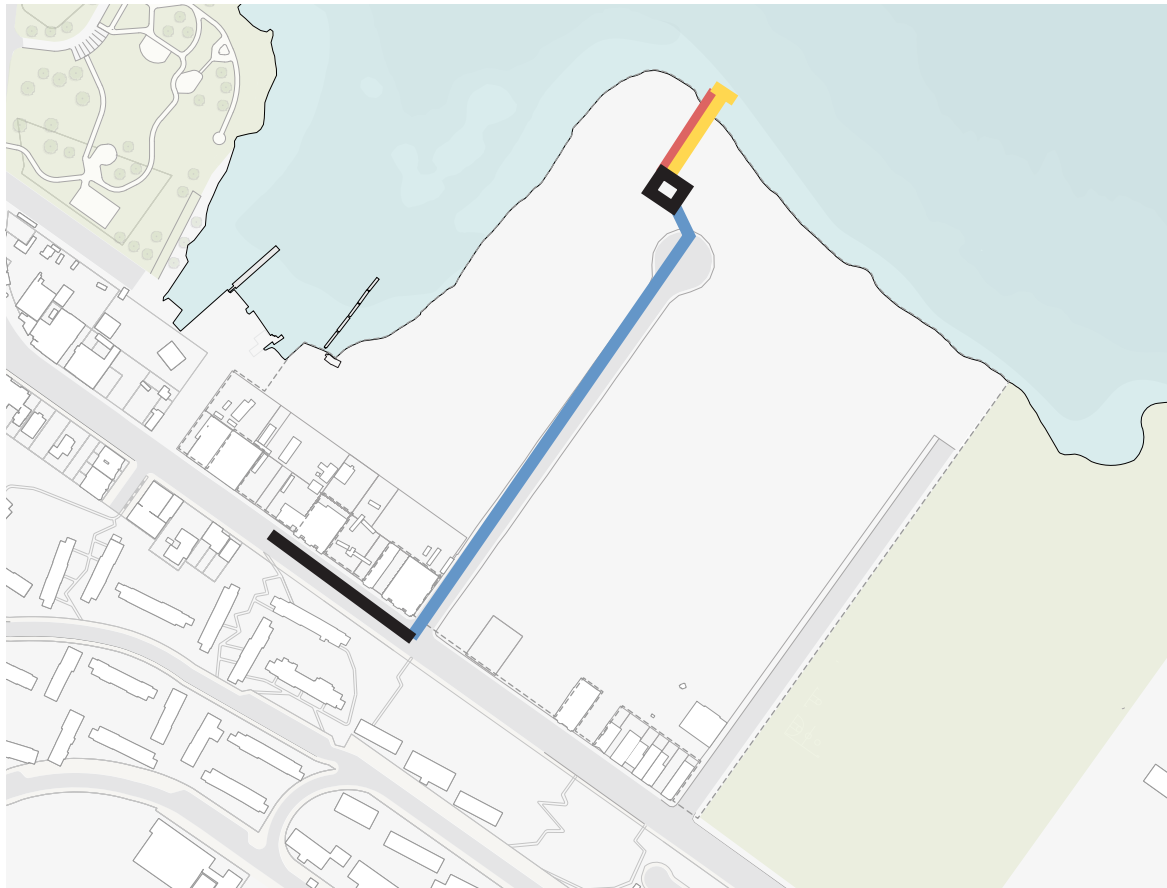


FIGURE 1.11: EXISTING HYDROLOGY SYSTEM

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

Existing Hydrology

A combined storm and sewer overflow line current 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 that these existing utilities will be removed and replaced with new utility lines and outfalls in a different configuration suitable to the proposed design.

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 that 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.

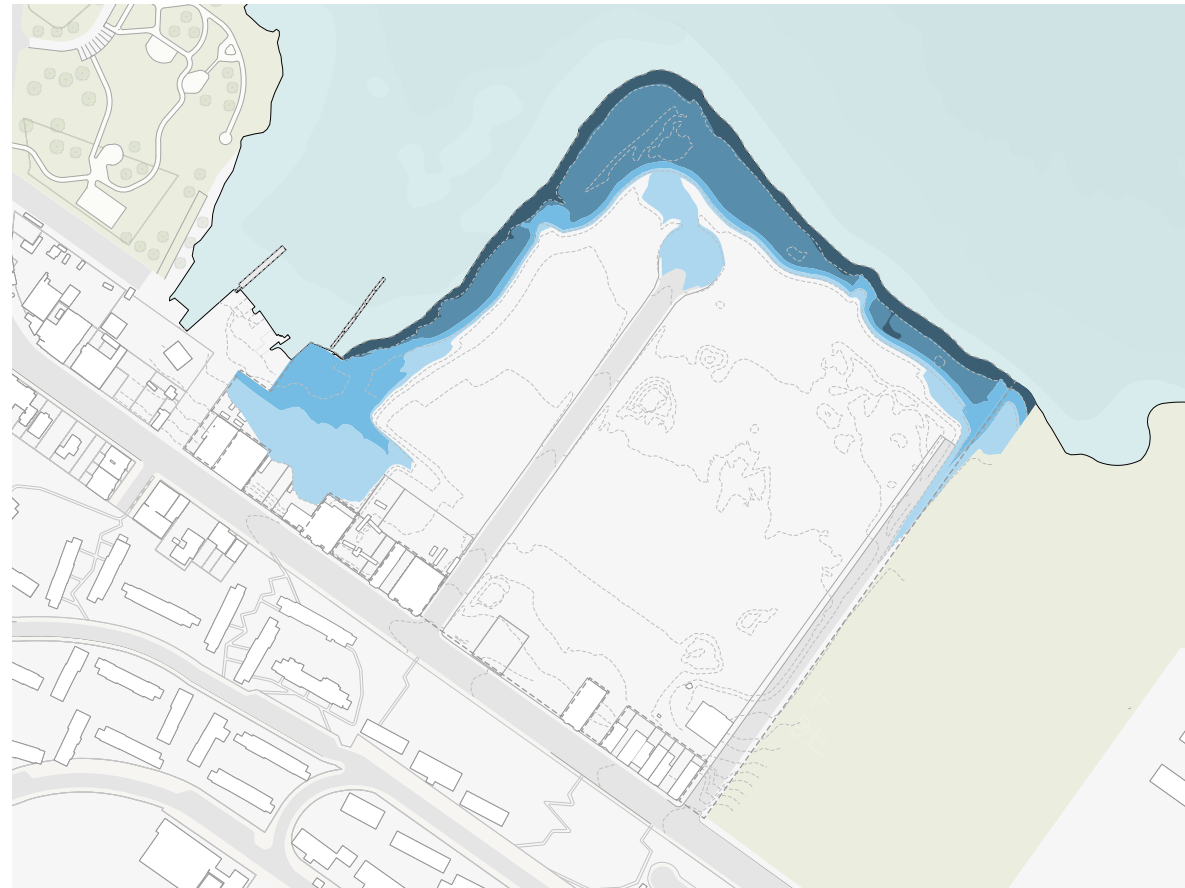
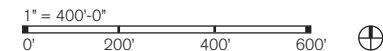


FIGURE 1.12: SEA LEVEL RISE (EXISTING CONDITIONS FOR MHHW)

- 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



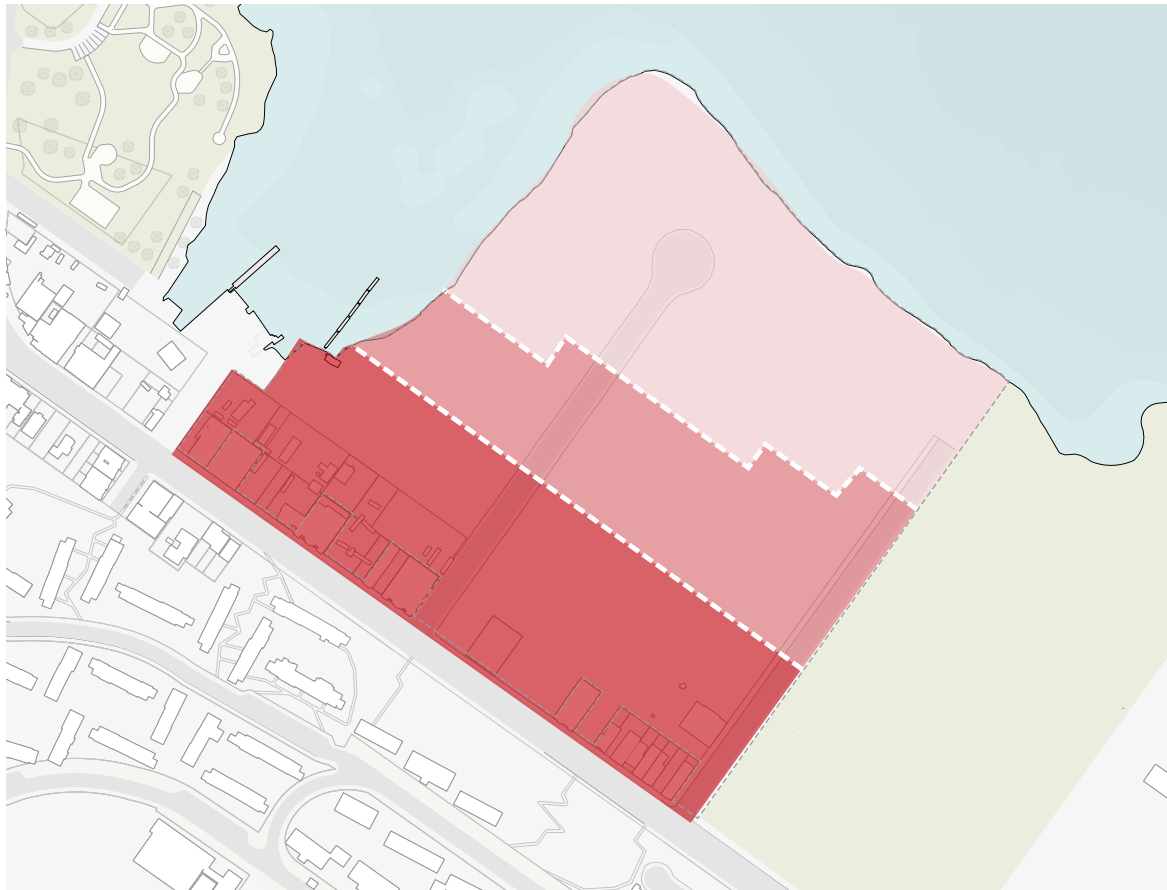
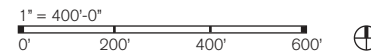


FIGURE 1.13: SETTLEMENT ZONES



- Zone 3: most settlement with placed fill
- Zone 2
- Zone 1: least settlement with placed fill

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.

Geotechnical Constraints

Preliminary geotechnical evaluation has identified portions of the project site where existing soils are more suitable for development. Other areas (blue-shaded) are less suitable. If loaded with significant weight, these areas have greater potential for lateral spreading during a seismic event and would require construction of underground lateral buttresses.

The numbered dashed lines in Figure 1.14 indicate the top of the load-bearing layer. To reduce unnecessary expenditures on costly lateral buttresses, development is only proposed inboard of the zone susceptible to lateral spread. Open space, plazas, rights-of-way and lightweight temporary structures can be located in this area without costly underground buttressing.

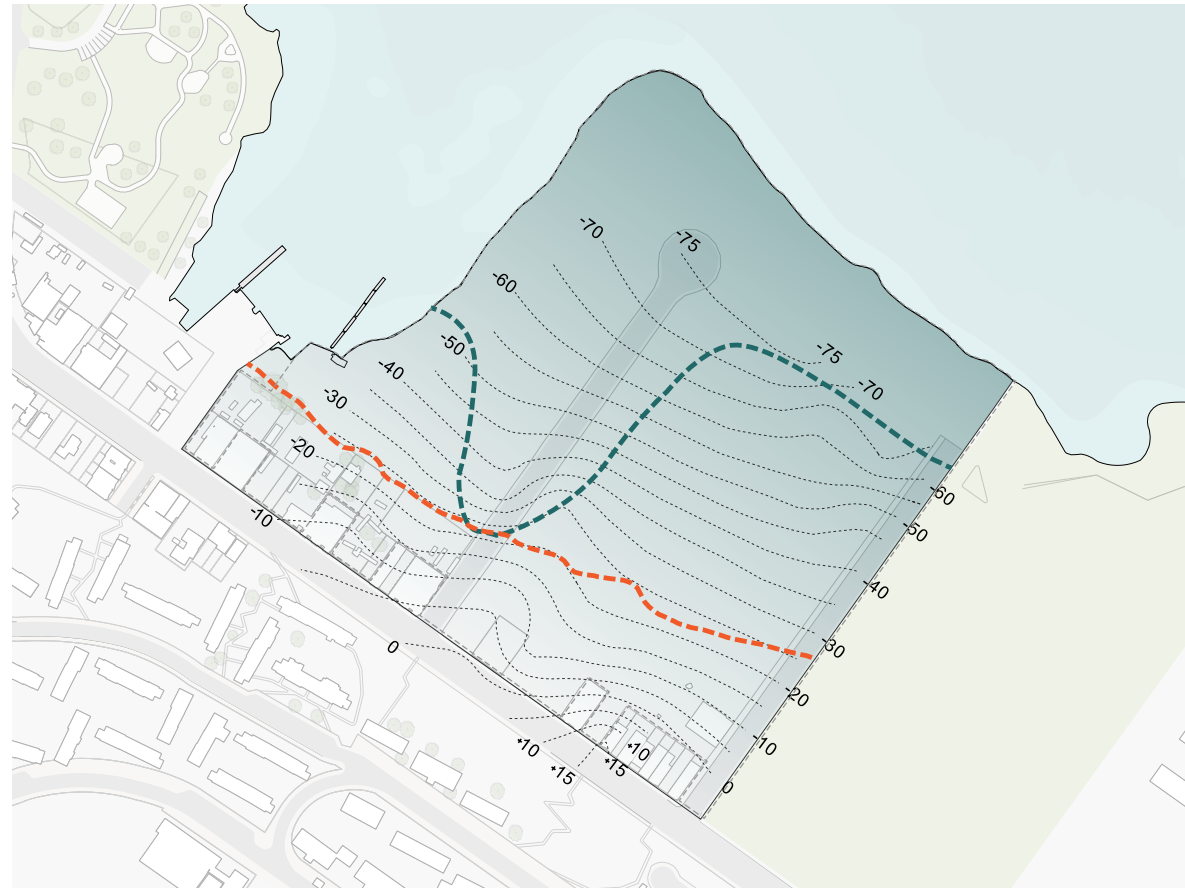


FIGURE 1.14: GEOTECHNICAL CONSTRAINTS

- Top of Bearing Layer
- - - Lateral Spread Demarcation
- - - Bedrock / Bay Fill Demarcation
- Bearing Layer Depth



Existing Site

1.2 Physical 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 elaborates the fundamental organizing concepts for movement, place-making, 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 nodes and moments for interaction or quiet repose. Ecology is integrated across public and private territory, creating a built environment that nurtures habitat, residents and visitors alike.

The Physical Framework derives from the project Vision and Guiding Principles, supporting the legibility and imagability of a contextually-responsive, connected, complete and resilient village that contributes to the surrounding community—a distinctive district where urbanity is integral with ecology.

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



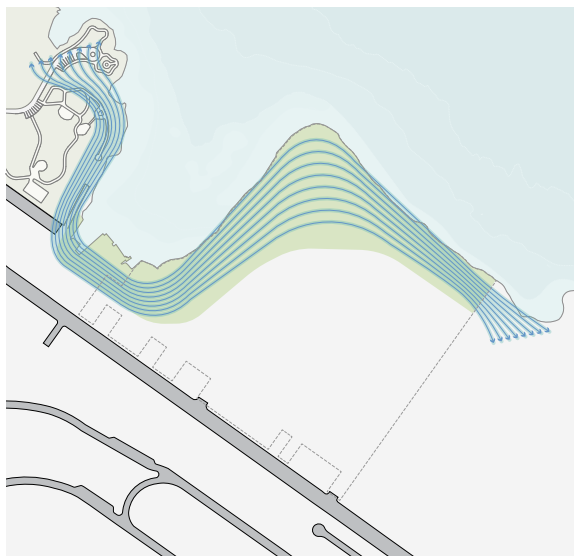


FIGURE 1.16: BLUE GREEN COASTAL ZONE

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 that 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.



FIGURE 1.17: ECO-BANDS (TERRACING)

Eco-Bands (Terracing)

The transition from the hillside, through the project site and toward the waterfront is reinforced in landscape. The terracing of land connects elevation and distance from the water to the types of habitat supported, and consequently, to the design of landscape, planting and surfacing, public realm programming, and to the range of uses and activities in each stratum.



FIGURE 1.18: PUBLIC VIEWS

Public Views

Views from the Ridgeline to the Bay are enhanced in urban form with fine grain of pedestrian focused routes from the hillside and uplands down towards 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.



FIGURE 1.19: ECO-CORRIDORS - HILLSIDE TO BAY

Eco-Corridors - Hillside to Bay

Eco-corridors recall and 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, elevating quality of life in the neighborhood.



FIGURE 1.20: UNBRAIDED CORD - PARALLEL TO SHORELINE

Unbraided Cord - Parallel to Shoreline

Lateral movement through the site is interpreted as an unbraided cord. A hierarchy of paths of varying character and experience 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.



FIGURE 1.21: NODES/ PLACES

Nodes/Places

The intersection between lateral and longitudinal movement, and ecological systems forms 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.



FIGURE 1.22: TYPICAL GRID

City Grid Extension

The mapped extension of the city grid through the site consists of large 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.

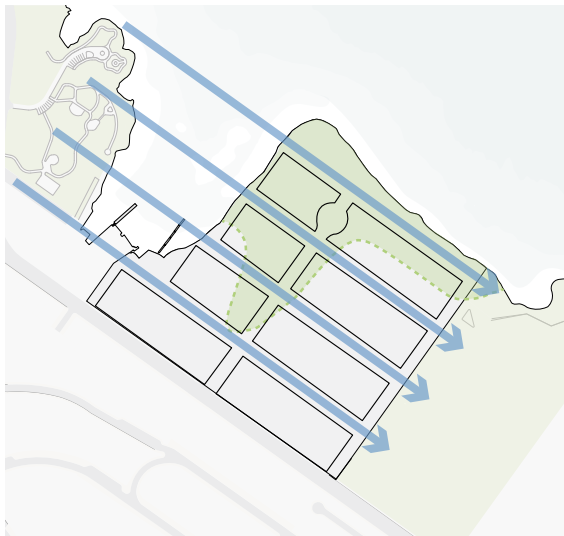


FIGURE 1.23: ADJUSTED GRID TO MITIGATE WIND

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 through the site. To avoid wind tunnels, and create a more comfortable street level experience, the India Basin project grid is shifted so that both landscape and building mass help decelerate and block wind.



FIGURE 1.24: BROKEN GRID CREATES DIVERSE SPACES

Broken Grid

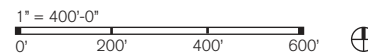
The shifted grid is further staggered and offset to create intimate pockets of open space within the site for parklets and courtyards. Primary and secondary access ways are preserved. The scale of massing is broken down to accommodate variety of uses and programs. The shifted massing, broken grid and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



Block Structure

The combination of increased waterfront access, wind mitigation via the shifted offset grid, and restriction of development to areas outside the zone of lateral spread drives the design of the India Basin project. As a result, larger blocks along the hillside transition to smaller blocks towards the waterfront. Varying the scale of parcels and massing facilitates the ability of different housing typologies to coexist within a site, and allows for a varied street level experience. Each block is strategically configured to reduce wind downwash from buildings and improve pedestrian comfort.

FIGURE 1.25: PROPOSED BLOCK STRUCTURE



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 the sustainability approach. 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 and Adaptability are integral to the district-wide sustainability approach at India Basin.

'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 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 that will allow habitat to migrate upland as sea levels rise. An adaptive management ethos allows the landscape to be dynamic and iterative, rather than rigid and vulnerable to disruption.

Social resilience and adaptation is also addressed at India Basin via strategies associated with public realm, activation, 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.

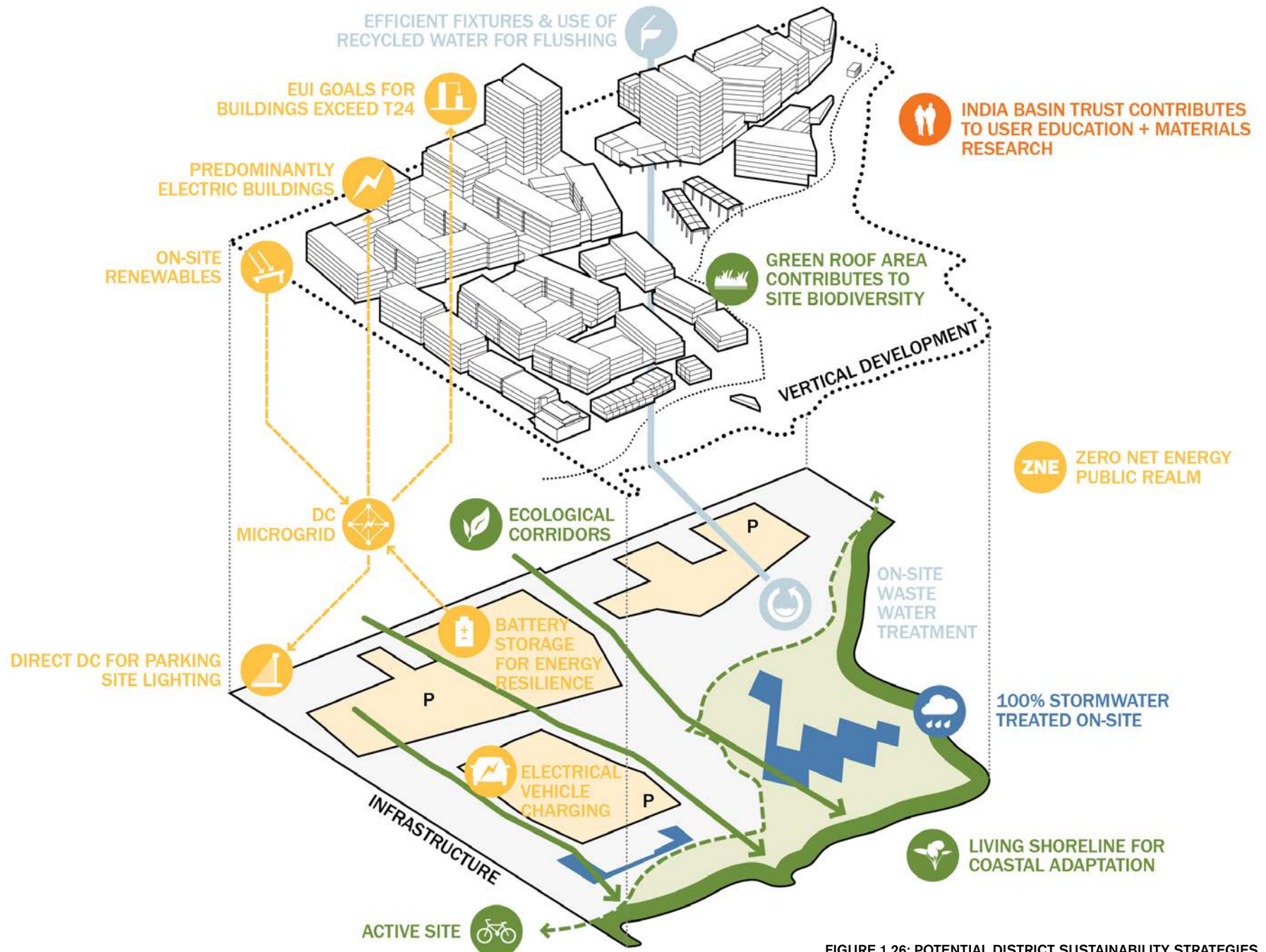


FIGURE 1.26: POTENTIAL DISTRICT SUSTAINABILITY STRATEGIES

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. Local residents like the site's wild and "feral" feel. A range of habitats currently exist on site. And the shoreline is a dynamic coastal landscape.

In line with the project's guiding principles, the project strives to preserve existing habitats, create new habitats, promote the unique wild character of the site, and also introduce a range of active programs by locating program across the site in a gradient from active to wild.

Active programs that have light, sound and access requirements are located closer to the development and vehicular access. Programs and habitats that are passive, quiet, and serene in nature are located closer to the shoreline and existing habitats. The Bay Trail serves as a dividing line in this transect.

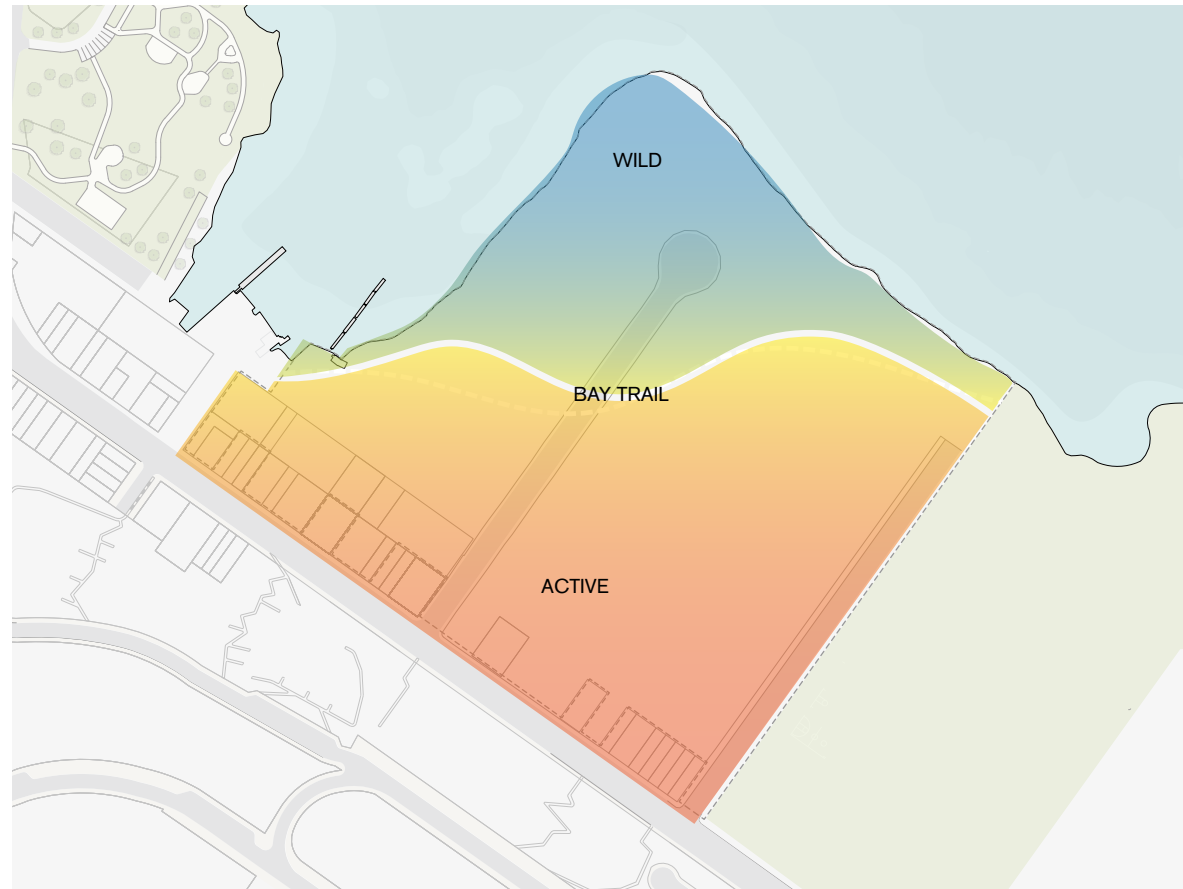
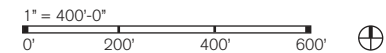


FIGURE 1.27 WILD TO ACTIVE GRADIENT



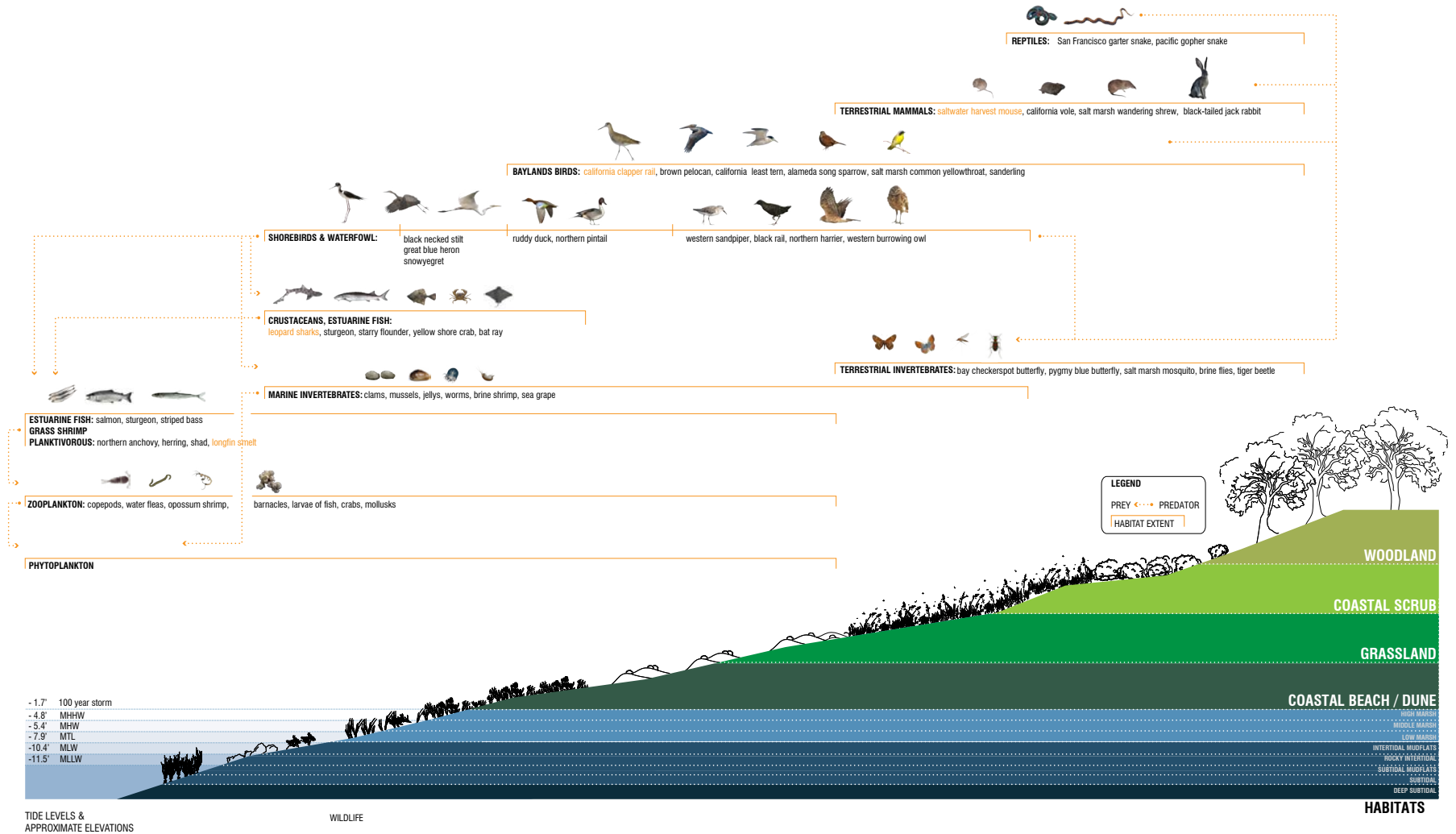


FIGURE 1.28 BIODIVERSITY CROSS-SECTION & VERTICAL CONNECTIVITY

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 protected vistas preserve and maintain scenic views from the public realm, with considerable bearing on our understanding of the City. India Basin protects view corridors through the site to the waterfront through 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.

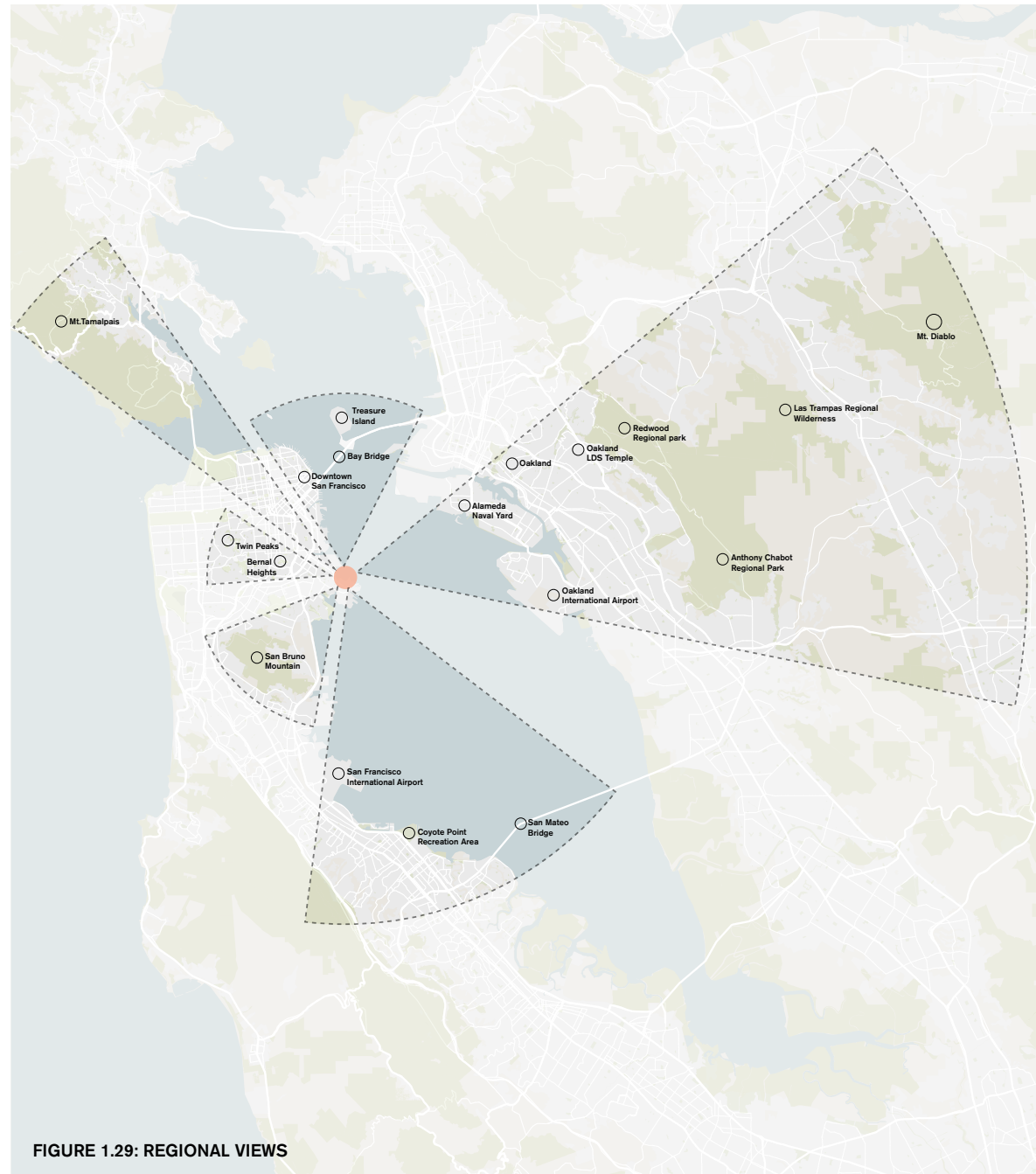
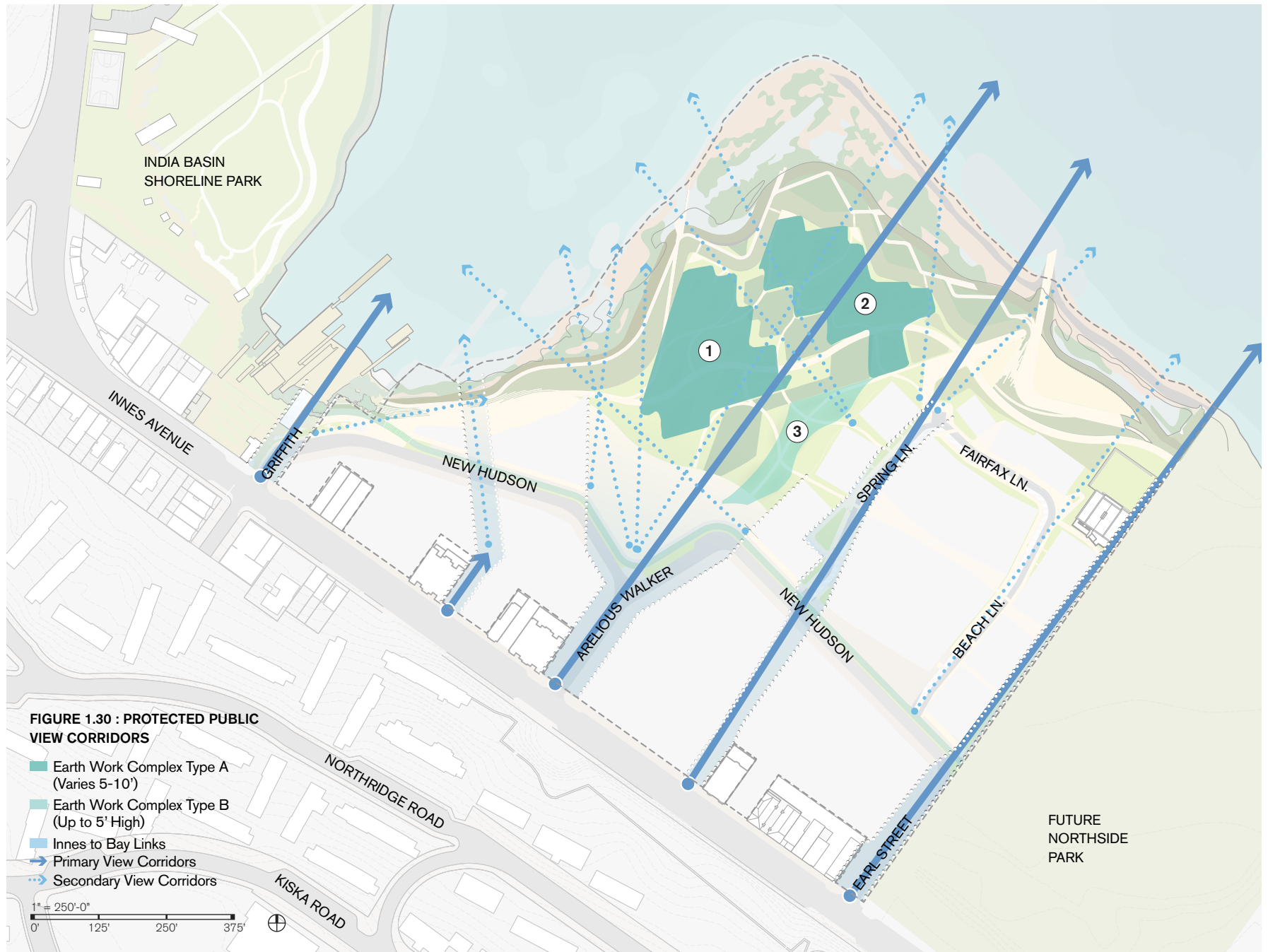


FIGURE 1.29: REGIONAL VIEWS



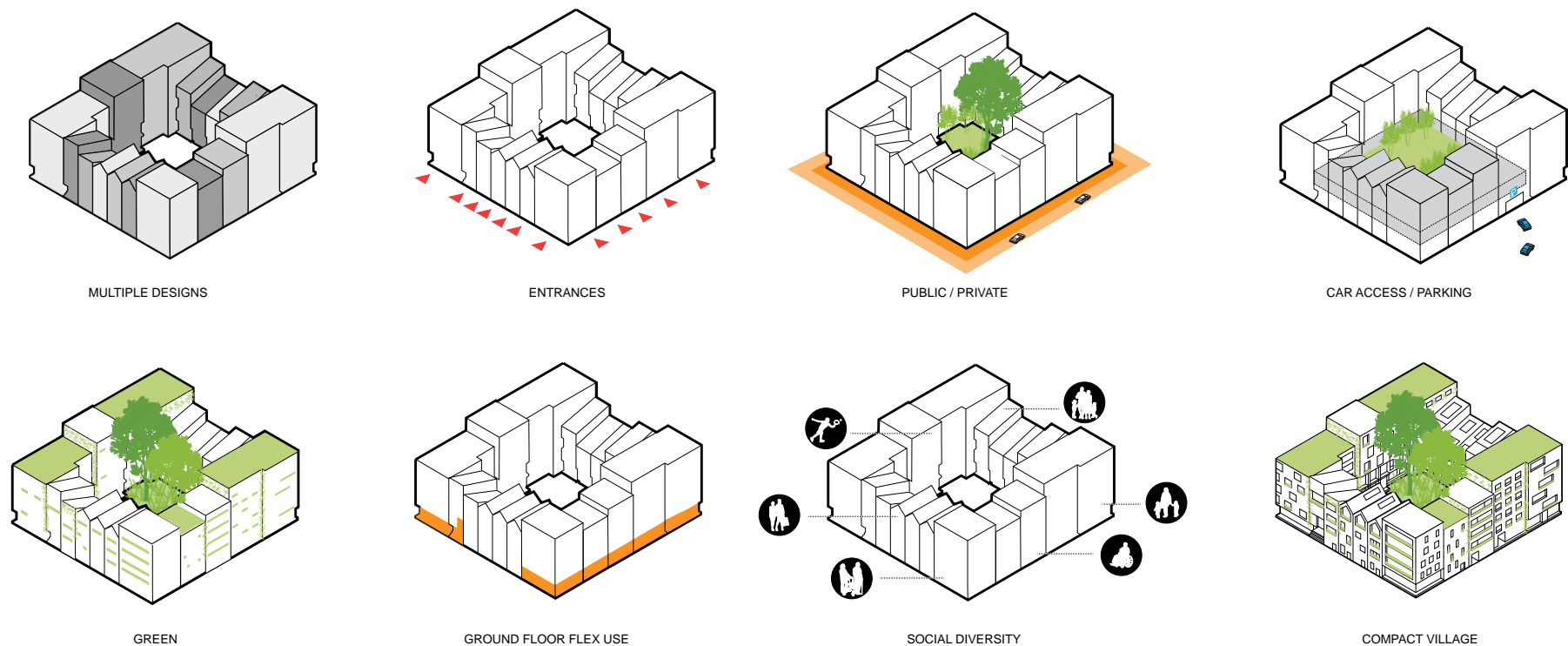


FIGURE 1.31: COMPACT VILLAGE

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 steps down from Innes Avenue towards the waterfront, accentuating the city's topography, and intuitively guiding people to the Bay.

Composition of buildings and spaces emphasize diversity with complementarity. Flexibility is preserved to enable and encourage a variety of architectural responses.



FIGURE 1.32: URBAN FORM



FIGURE 1.33: URBAN FORM

Public Realm & Public Life

The project 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.

Intensity 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 permanent retail lining Arelious Walker and New Hudson streets 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 court-yards within the blocks provide intimate, sheltered open space for local residents and families.

The Big Green and Shoreline are the signature open space. 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 1.34: PUBLIC REALM "HEAT MAP"

■ Most Activity
■ Moderate Activity
■ Least Activity

1" = 500'-0"
 0' 250' 500' 750'



1.3 Placemaking

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, and Earl, New Hudson and Arelious Walker Streets. The Hillside is mixed-use, urban and dense. Making use of the site's existing topography, a podium extends from below grade along Innes to ground-floor level along New Hudson, with parking concealed by active use frontage. The Streetwall of this sub-area features both a high degree of public realm definition and variation on all sides. Larger parcels in the Hillside offer more flexibility for development, while pedestrian laneways, intimate courtyards and public stairs maintain the human scale and permeability of blocks.

The Cove is delineated by Innes Avenue and Arelious Walker Street, and by substantial frontage directly onto the Big Green and Shoreline. Immediacy to the Bay is the defining feature of this area. The direct adjacency of the Cove to the Shoreline creates a uniquely urban waterfront, with striking views to Downtown. 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. Between New

Hudson and the Shoreline, dual-aspect ground floor community-serving uses spill out into and activate the Cove Terrace and the Public Market.

The Flats are edged by New Hudson Street, and front onto 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.

The Big Green is a performative landscape, supporting active recreation alongside habitat, stormwater management and other ecological functions, and resulting in a rich open space where urban meets wild. Trails meander through the earthworks and public art, engaging with a range of program offerings and educational moments for a sense of discovery.

The Shoreline is a dynamic land-waterscape. Existing tidal marshes and natural forming sand dunes are retained and expanded to increase habitat potential. A perched sand area and deck terrace serve as a regional attraction for sunbathing, beach sports and kayaking. Natural and constructed adaptation measures are designed into the shoreline landscape for long-term resilience.





FIGURE 1.37: THE SHORELINE AND BIG GREEN



The Shoreline and Big Green

The Shoreline and Big Green are the major public spaces for India Basin. Part of a larger regional-scale open space network, these two areas together provide the signature attractions for the project. The Big Green is an active waterfront destination with forms, spaces and programs that have a “wild” character, reflecting the unique qualities of the existing site.

The Shoreline provides water access in the form of boardwalks, trails, viewing platforms, human powered boat launches and a recreational beach. Existing tidal salt marsh wetlands are improved with sand dunes, bird islands, a bioengineered breakwater, brackish lagoons, scrub upland planting, wind-mitigating tree stands and new wetlands.



FIGURE 1.38: THE COVE

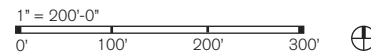


The Cove

The Cove opens onto the India Basin shoreline landscape with sweeping views to downtown San Francisco. The main attraction of this part of the site is the Cove Terrace, providing active ground floor retail and restaurant uses that face the waterfront and connect through to the Public Market Plaza. The Cove also features intimate courtyards, a pedestrian laneway, and a public stair which together maintain the human scale and permeability of block.



FIGURE 1.39: THE HILLSIDE



The Hillside

The Hillside is a high density, mixed-use, urban district defined by the generous treatment of its pedestrian-priority sidewalks and an active, engaging streetwall. The Transit Plaza, at the corner of Innes Avenue and Arelious Walker, serves as a welcoming gateway to the neighborhood. Within the block, intimate courtyards, pedestrian laneways and a public stairs maintain human scale and permeability. The Hillside Steps mediate the site's topography connecting Innes Avenue to the lower level along New Hudson Street but also serving as a special, intimate public space.



FIGURE 1.40: THE FLATS



The Flats

The Flats contain several intimate pocket plazas where paths toward the Bay and paths parallel to the Shore intersect. These gathering nodes are linked along a shared public way that advances the highest ideals of the San Francisco Better Streets Plan by creating a low-speed space for pedestrians, ecology and vehicles to co-exist. The materials and vegetation selected for the shared public way are performative – designed to treat stormwater while producing a distinctively soft, verdant sense of place. The Town Triangle, and two additional private courtyards complete the place-making amenities for this sub-area.



FIGURE 1.41: THE MARKET PLAZA

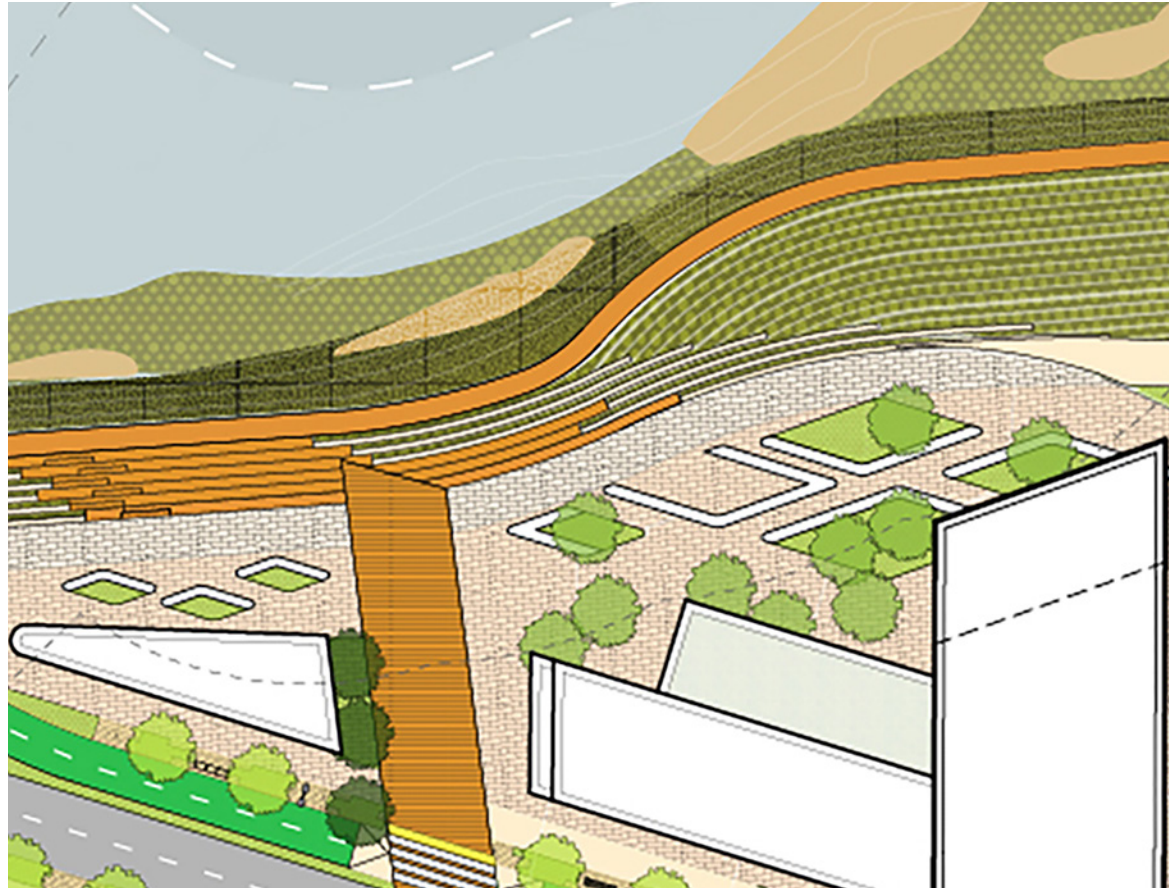


The Public Market

Located at the heart of the village and the foot of the Big Green, the Public Market and plaza 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.



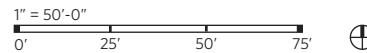
Public Market



The Cove Terrace

The Cove Terrace is a prominent public and private plaza, lined with active ground floor restaurant and cafes, located at the top of a terraced bank with panoramic views to downtown San Francisco. At a critical entry to the site, the plaza is a signature space. 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.

FIGURE 1.42: THE COVE TERRACE





Cove Terrace



FIGURE 1.43: THE HILLSIDE STEPS



The Hillside Steps

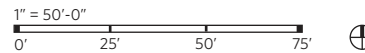
The Hillside steps provide an important functional pedestrian connection from Innes Avenue down to New Hudson, the retail heart of the neighborhood. The steps are designed to feel welcoming, generous and comfortable to the larger existing India Basin community. Planting, art and water can be incorporated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



Hillside Steps



FIGURE 1.44: THE TOWN TRIANGLE



The 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.



Town Triangle

02



Public Realm

Chapter 02: Public Realm

- 2.1 Open Space Network
- 2.2 Transit Access and Bicycle Network
- 2.3 Streets and Lanes
- 2.4 Places
- 2.5 Public Realm Elements
- 2.6 Ecology and Biodiversity

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

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 convey 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.

2.1 Open Space Network

Public Realm Framework

The emphasis of the India Basin project on supporting civic life obliges integration of development with a vibrant, 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 plays a central role in establishing the character of this new pedestrian-priority neighborhood, providing a wide range of active and passive uses and experiences—from the dynamic energy of the Public Market, to the small-scale neighborhood plazas, to the expansive wilds of the shoreline.

Intensity of active use is focused around the Public Market, which functions as the social heart of the project. Retail and Food & Beverage programs around the market, along Arelious Walker and New Hudson streets concentrate and amplify this energy to create a vibrant atmosphere. Secondary gathering places are public nodes at the intersections of project sub-areas, at the Cove Terrace, the Town Triangle, and the Beach. Small-scale courtyards within the blocks provide intimate, more-sheltered open space for local residents and families.



FIGURE 2.01: PUBLIC REALM "HEAT MAP"

Most Activity
Moderate Activity
Least Activity

1" = 400'-0"
0' 200' 400' 600'



2.2 Transit Access and Bicycle Network

Transit Access

Essential to the development of India Basin are access and mobility improvements that expand transportation options and promote 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.

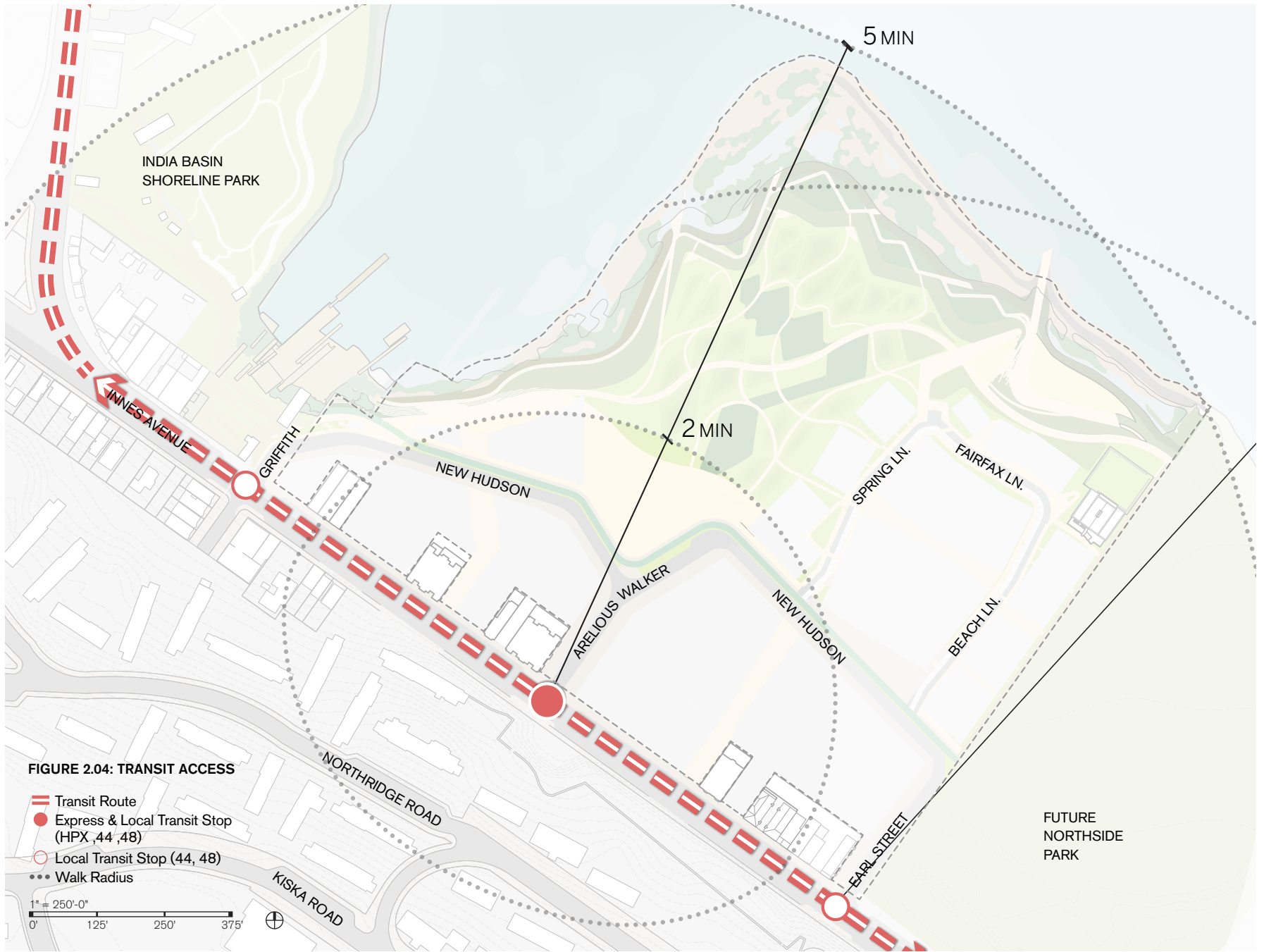
The use of public transportation by a significant proportion of residents, employees and visitors is critical to meeting sustainability commitments, providing economic opportunity, and achieving a high quality of life at India Basin. The project provides a convenient and attractive transit plaza at the intersection of Innes Avenue and Aurelius Walker—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.

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 2.03: EXISTING AND PROPOSED TRANSIT ACCESS

- | | |
|-----------------------|--|
| ① Class I Cycle Track | — Planned Local Route |
| ② Class II Bike Lane | - - - Existing Local Route |
| ③ Shared Lane | ● Express and Local Stop (HPX, 48, 44) |
| ④ Bay Trail | ● Planned Transit Stop |
| ... Downtown Express | ○ Existing Transit Stop |





Class I Cycle Track



Multi-Use Shared Path



Class III "Sharrow"

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 that provides 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 that

connects from India Basin Shoreline Park through the 900 Innes Site, along New Hudson Street and into Northside Park. This facility 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 "sharrows" along Earl Street connect Innes to "Earl's Path"—a shared multi-use trail at the edge of

Northside Park that provides 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.



“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

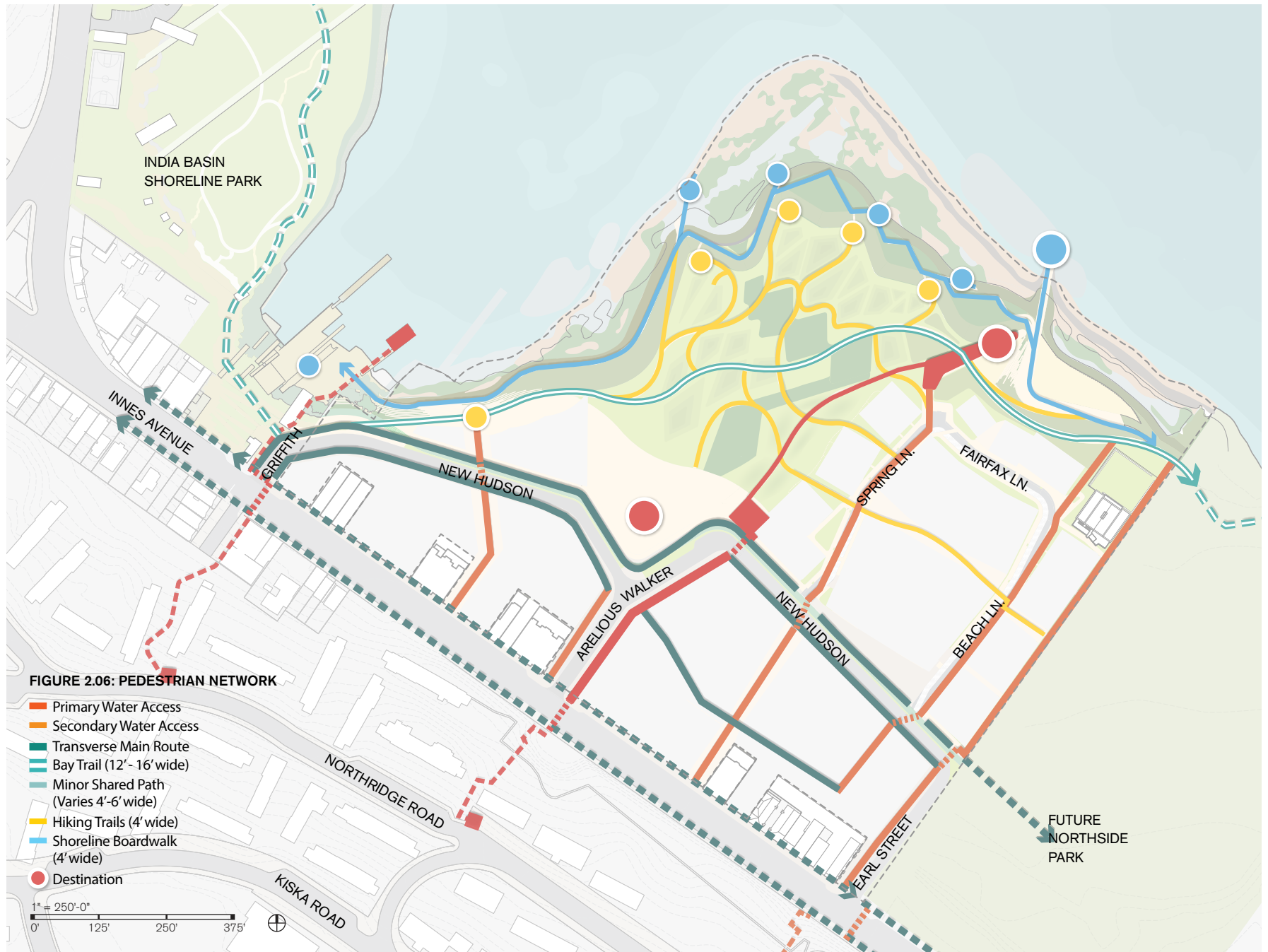
Pedestrian Network

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 that provide 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 that provide corridors of movement while at the same time reach 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.



2.3 Streets and Lanes



Existing Throughway - Innes Avenue



Neighborhood Commercial



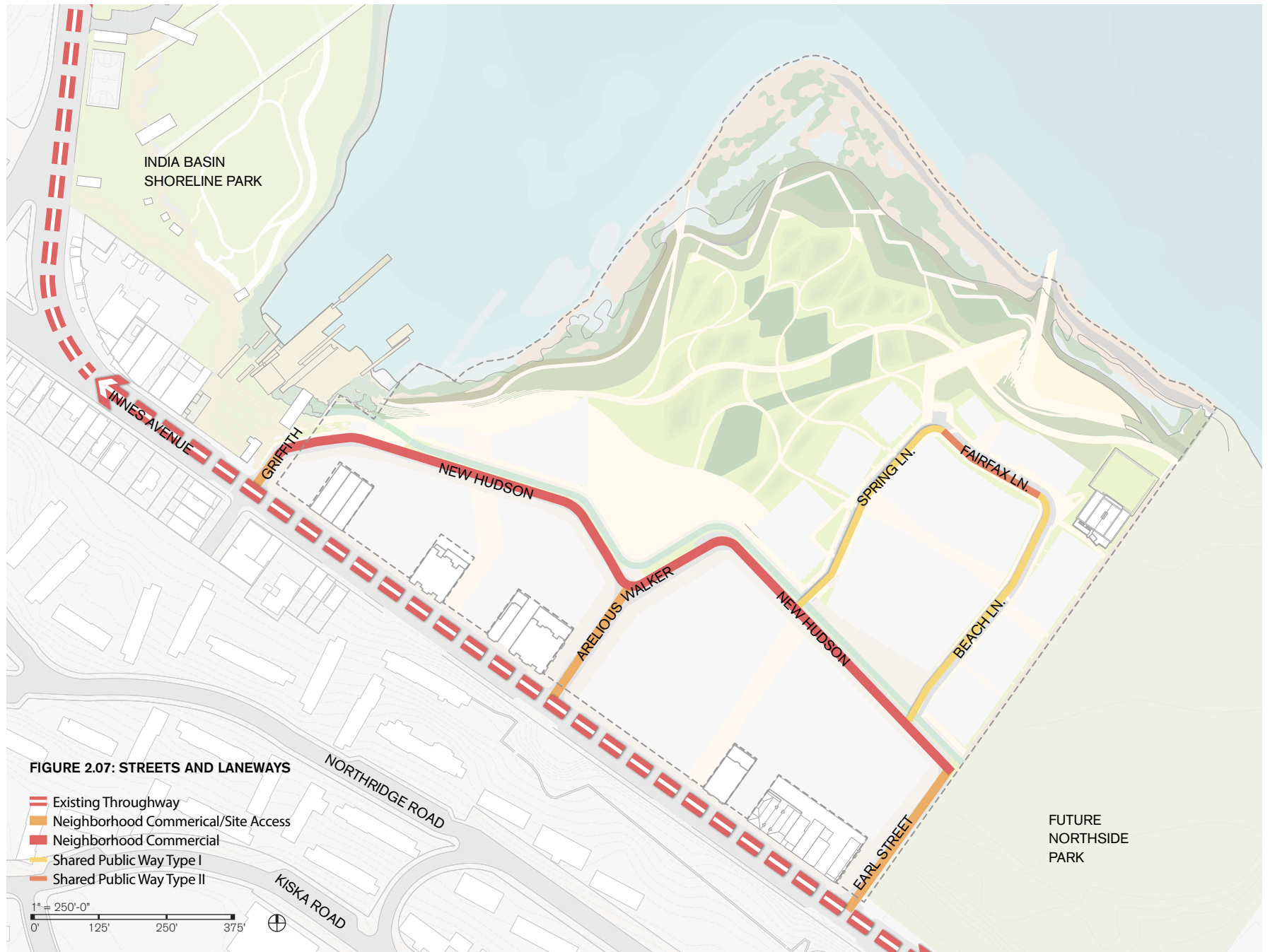
Shared Public Way

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 that is safe, comfortable, inviting and visually legible as a way-finding system. Through thoughtful consideration of the full right-of-way cross-

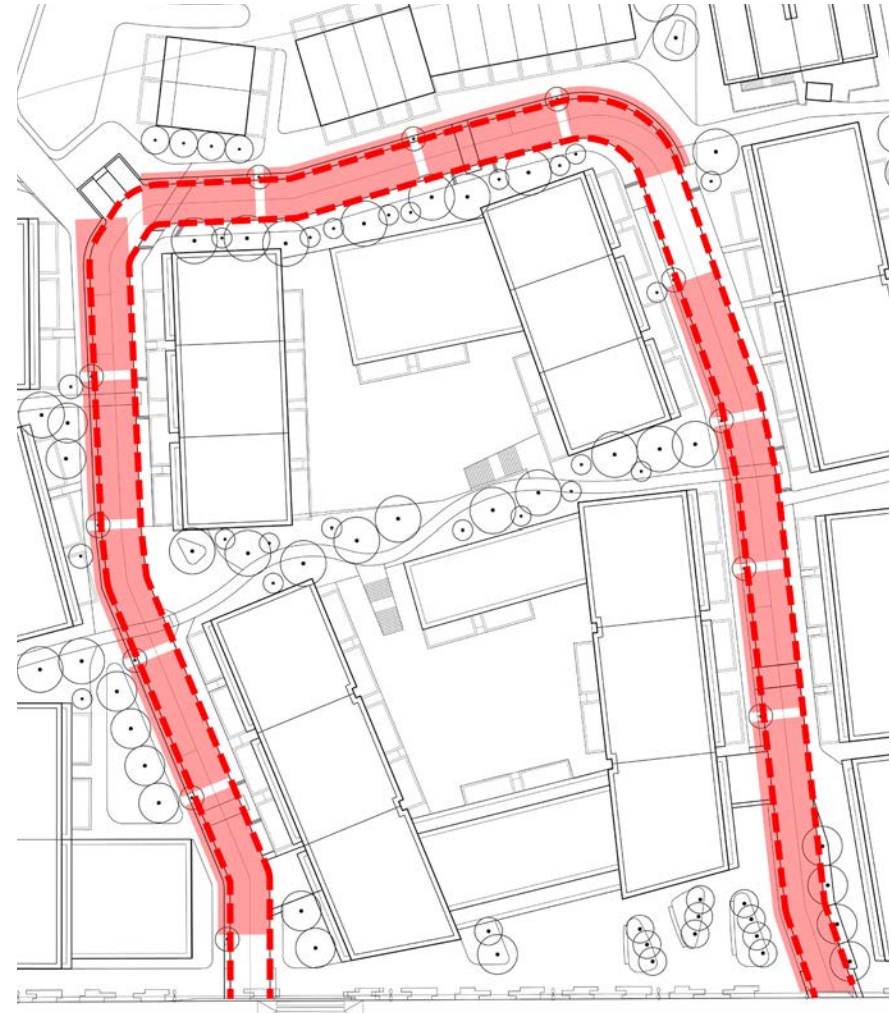
section, Complete Streets provide ample space for walking, sitting and gathering to encourage social interaction among residents and visitors. Bicycle and pedestrian pathways connect India Basin to surrounding sites, as well as the city-wide network of bicycle and pedestrian routes. In conjunction with 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 cross sections and enlarged partial plans on pages 76-109 illustrate typical conditions for each street type. Detailed roadway configurations are subject to the Tentative Map.



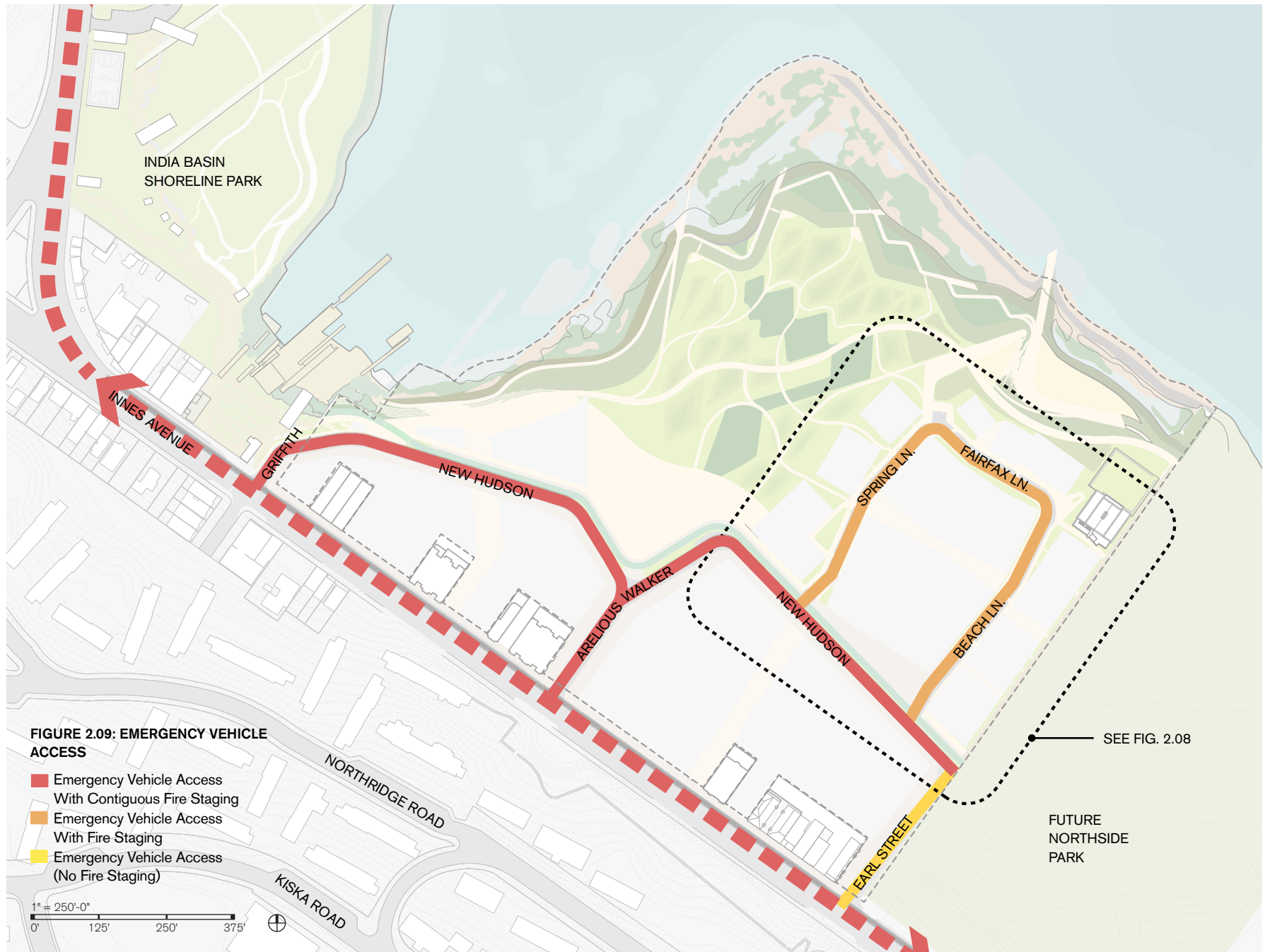
Emergency Vehicle Access

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.



**FIGURE 2.08: SHARED PUBLIC WAY
EMERGENCY VEHICLE ACCESS**

--- 20' Clear Emergency Vehicle Access
■ 26' Clear Emergency Vehicle Staging



San Francisco is a walker's city – a dense mix of uses, short blocks, and small streets combine to make a convenient and desirable walking environment.

– SF Better Streets Plan, 2010

Access Design Objectives

The project advances the vision of San Francisco's Better Streets Plan for multi-functional networks that provide corridors of movement while enhancing 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.

This is achieved through thoughtful consideration of the full right-of-way cross-section. Automobile Travel zones are optimized to remain narrow. Interstitial areas buffer the Pedestrian zone with Parking, Loading, Bike Lanes or Curb Extensions. Ample space is allotted for Planting and Street Furnishing so that comfortable, clear Pedestrian through-access can be maintained. Setbacks provide additional opportunity for indoor-outdoor engagement with seating and tables in commercial areas, or stoops and outdoor planting in more residential areas.

Streetscape Zones

Streetscape Zones define the use of the area within the street right of way including the curb line and the building face.

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.

Interstitial Zone The Interstitial Zone refers to a variable area between the Travel Zone and the sidewalk. It provides a buffer between vehicles and pedestrians, and may include on-street parking, bicycle facilities, or curb extensions and bulbouts. It may also accommodate landscaping and furnishings.

Planing/Furnishing Zone The planing/furnishing zone provides a buffer between the pedestrian walking zone and the roadway. This zone can accommodate a range of furnishing elements, as well as street trees and planting. The furnishing zone should be differentiated from the through-way zone through material or paving scoring change.

Pedestrian 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.

Setback Zone The setback zone provides transition from public streets to buildings. Activation of the public realm can be achieved by providing outdoor use areas within the setback zone. Along commercial facilities the setback zone may include outdoor display, signage and/or movable seating. Planting between the edge of the public right of way and the building face can create an effective buffer and help soften the street with vegetation. See Chapter 5 for setback requirements.

“There is magic to great streets. We are attracted to the best of them not because we have to go there but because we want to be there. The best are as joyful as they are utilitarian. They are as entertaining as they are open to all. They permit anonymity at the same time as individual recognition. They are symbols of a community and of its history; they represent a public memory. They are places for escape and for romance, places to act and to dream. On a great street we are allowed to dream; to remember things that may never have happened and to look forward to things that, maybe, never will.”

- Allan Jacobs



FIGURE 2.10: STREETSCAPE ZONES

Street Standards and Guidelines

India Basin streets will be oriented toward pedestrians and bicycles and support a robust public realm. 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

- 2.3.1. Tree Size** Street trees shall be minimum 24-inch box at installation.
- 2.3.2. Tree Pit** Street trees shall have a minimum of 1000 cubic feet of soil to maximize habitat potential. This may include use of a structural cell system (see Section 2.5 for Tree Pit Tpyes) to maximize soil volume.

Guidelines

- 2.3.3. Throughway Zone** Surfacing in 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.
- 2.3.4. 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.
- 2.3.5. 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.
- 2.3.6. 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.



NOT USED

NOT USED

NOT USED

NOT USED

New Hudson Street

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, with 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 2.11: NEW HUDSON STREET VIEW

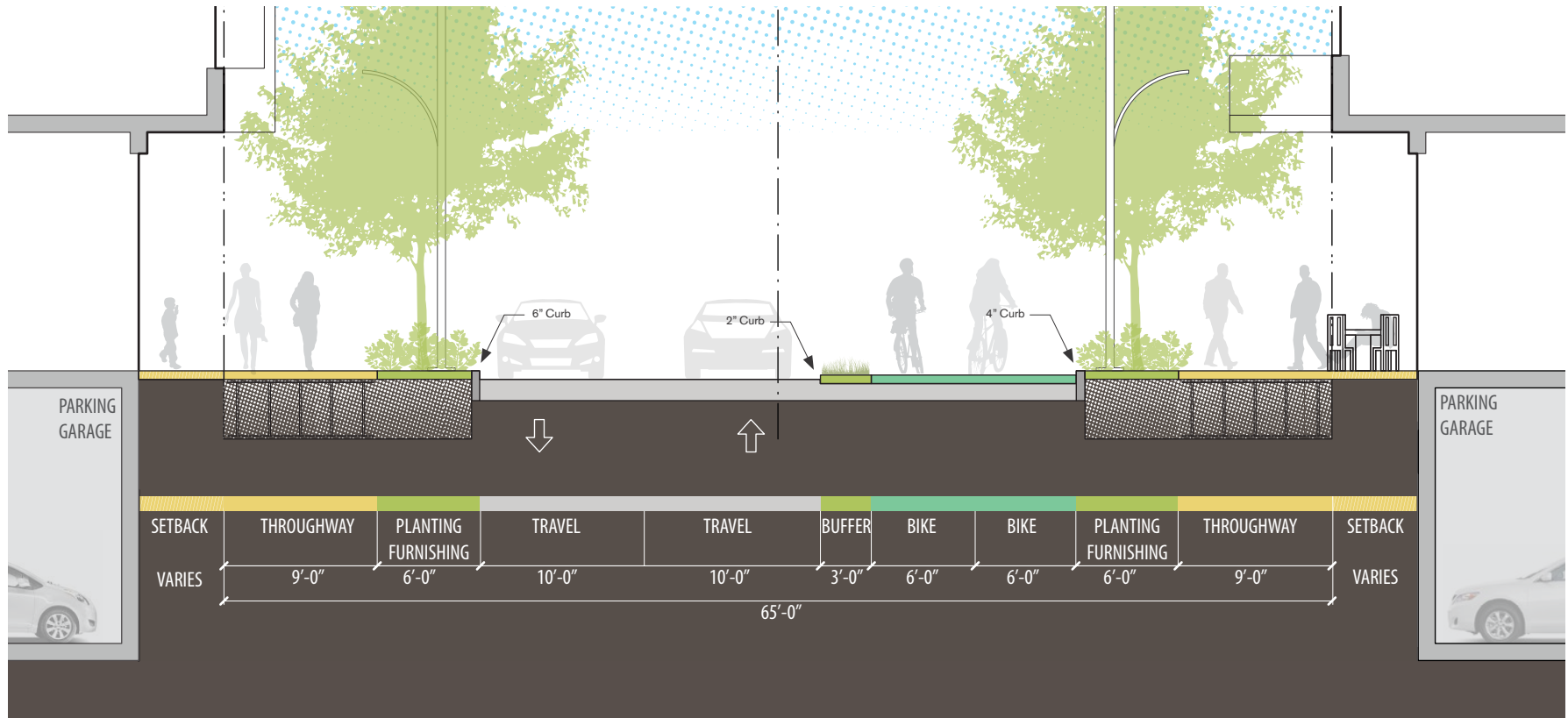


FIGURE 2.12: NEW HUDSON STREET SECTION - TYPICAL

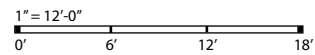


Table 2. New Hudson Specifications

R.O.W. WIDTH: 65'-0"
BIKE FACILITIES: CLASS I BIKE LANE

SURFACING		
P1	RAISED CROSSWALK ZONE	TYPE H, I, J, K
P2	FURNISHING ZONE	TYPE I, J, K
P3	TRAVEL ZONE	TYPE G, H
P4	THROUGHWAY ZONE	TYPE H, I, J
P5	CLASS I BIKE LANE	TYPE L
CURBS		
C1	CURB AND GUTTER	DPW STANDARD
PLANTING		
L1	TREE	COMMERCIAL CORRIDOR
L2	STREETSCAPE PLANTING	UNDERSTORY TYPE C
LIGHTING		
LT1	STREET LIGHT	TYPE 1
FURNISHING		
F1	BIKE RACK	
F2	SEATING	TYPE 1, 2

Standards

2.3.13. Street Zone Dimensions Right-of-way cross-section dimensions shall be as shown in Figure 2.16.

2.3.14. Elements Elements per Figure 2.17. All elements shown shall be included. Dimensions vary.

2.3.15. Specifications Specifications shall conform to Table 2. New Hudson Specifications. See Section 2.5 for public realm elements.

2.3.16. Throughway Zone Maintain a minimum 6-foot wide unobstructed throughway zone on both sides of the street.

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

Guidelines

2.3.18. Street Trees Street trees shall be Commercial Corridor tree type. See Section 2.6 for species.

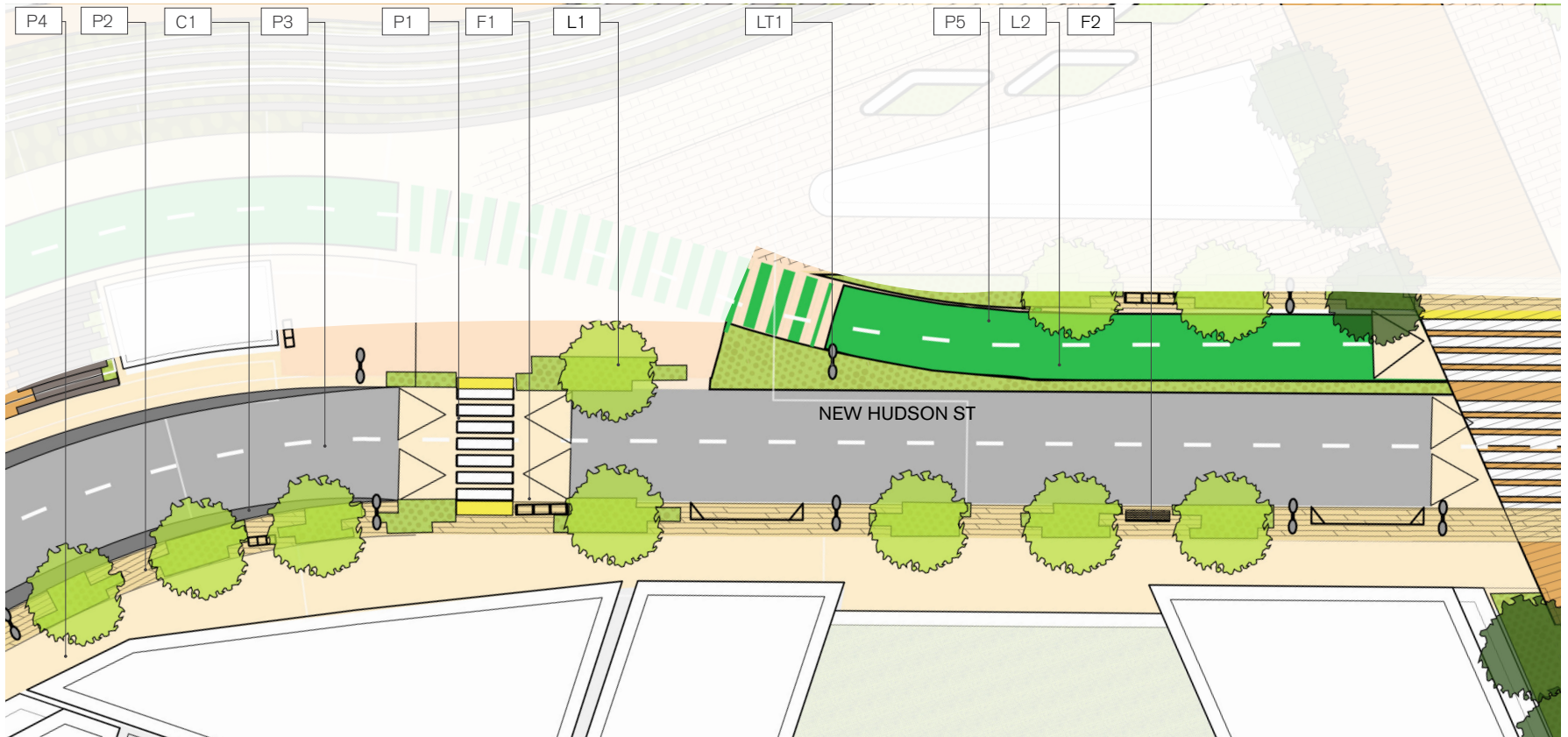
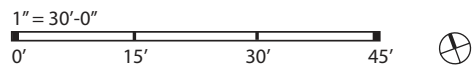


FIGURE 2.13: NEW HUDSON ENLARGED PLAN



KEY PLAN

Arelious Walker Street

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 and bike sharing node welcome those arriving by bus. The pedestrian zone is widened on the south. This includes a major bus stop with a transit plaza on Innes Avenue and a bike-sharing node and sidewalk with extended pedestrian zone located on the south side of the street for circulation; and street parking is located on the north side of the street.



FIGURE 2.14: ARELIOUS WALKER STREET VIEW

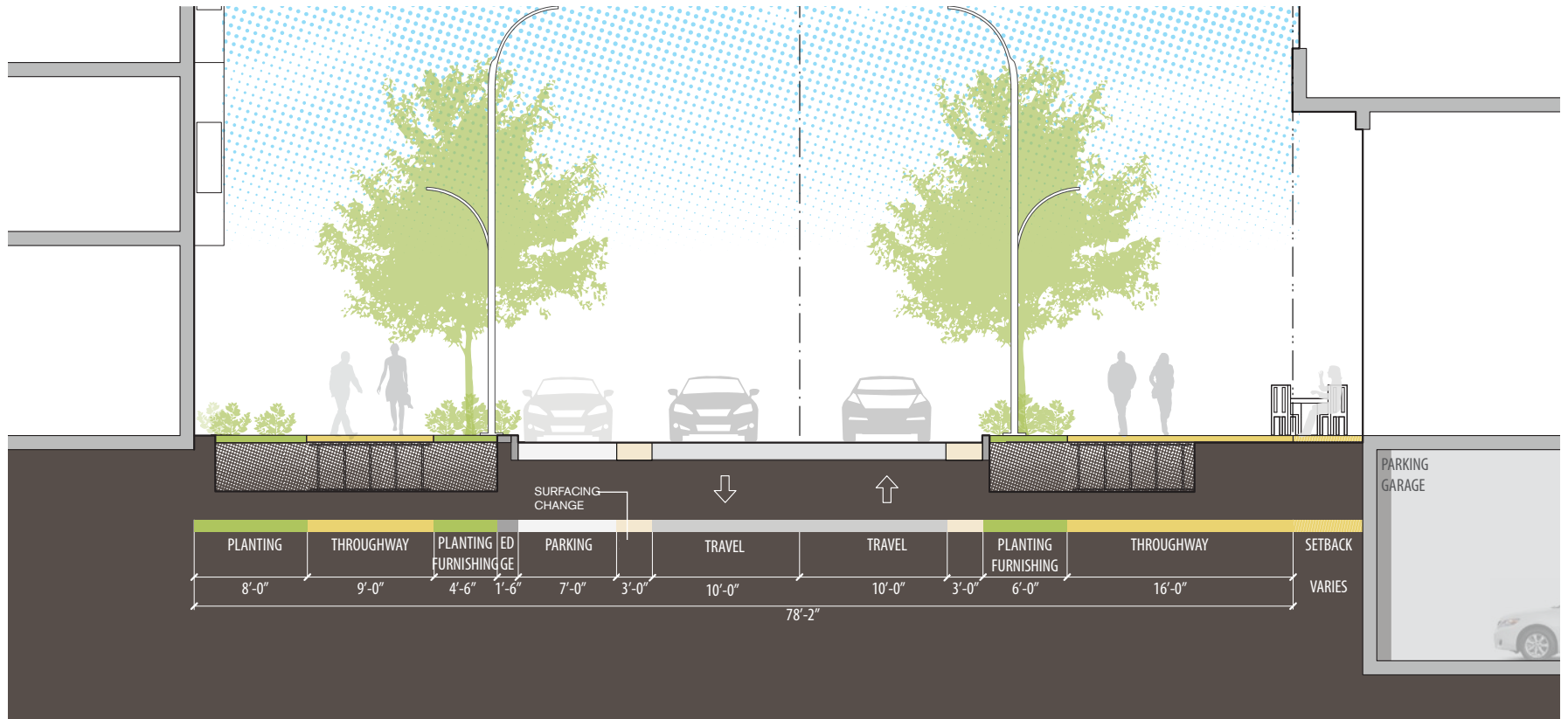


FIGURE 2.15: ARELIOS WALKER STREET SECTION - TYPICAL

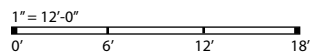


Table 3. Arelious Walker Specifications

R.O.W. WIDTH: 86 FEET
BIKE FACILITIES: BIKE SHARE

SURFACING

P1	RAISED CROSSWALK	TYPE H, I, J, K
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

C1	CURB RAMP	DPW STANDARD
C2	CURB EXTENSION	TYPE H, I, J, K
C3	CURB AND GUTTER	DPW STANDARD

PLANTING

L1	TREE	ENTRY STREET
L2	STREETSCAPE PLANTING	UNDERSTORY TYPE C

LIGHTING

LT1	STREET LIGHT	TYPE 1
-----	--------------	--------

FURNISHING

F1	BIKE SHARE NODE	
F2	BIKE RACK	
F3	SEATING	TYPE 1, 2

PARKING & LOADING

PA1	STREET PARKING	DPW STANDARD
-----	----------------	--------------

TRANSIT

T1	TRANSIT PLAZA	
----	---------------	--

Standards

2.3.19. Street Zone Dimensions Right-of-way cross-section dimensions shall be as shown in Figure 2.19.

2.3.20. Elements Elements per figure 2.20. All elements shown shall be included. Dimensions vary.

2.3.21. Specifications Specifications shall conform to Table 3. Arelious Walker Specifications. See Section 2.5 for public realm elements.

2.3.22. Throughway Zone Maintain a minimum six-foot wide unobstructed throughway zone on both sides of the street.

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

2.3.24. Daylighting Street parking shall be inset in interstitial area, setback at least 10' from closest base of crosswalk table top.

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

Guidelines

2.3.26. Street Trees Street trees shall be Entry Street tree type. See page 212 for species.



FIGURE 2.16: ARELIUS WALKER STREET ENLARGED PLAN

