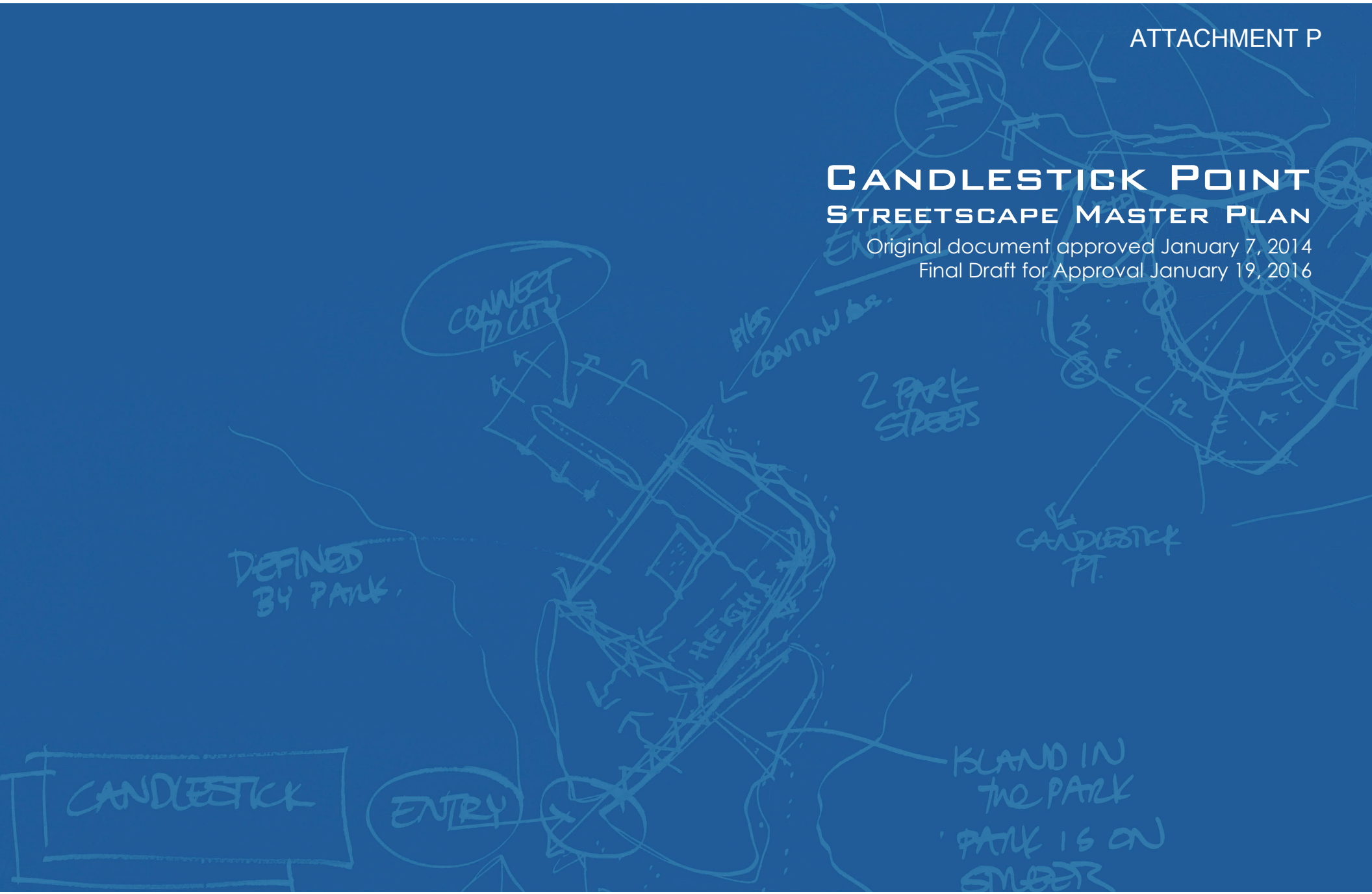
ATTACHMENT P

Candlestick Point
Streetscape Master Plan

Original document approved January 7, 2014
Final Draft for Approval January 19, 2016





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1. INTRODUCTION

1. INTRODUCTION

Purpose of this Document

This Streetscape Master Plan presents an overall vision for the streetscape and public realm in Candlestick Point within the Bayview Hunters Point Redevelopment Plan area. A complementary Streetscape Master Plan for Hunters Point Shipyard will be prepared and submitted to the City at the same time that the first Major Phase application for the Phase 2 development at Hunters Point Shipyard is submitted to the City for approval.

The Streetscape Master Plan furthers place-making and identity building for the project master plan, the surrounding community, and the City as a whole. The plan also positions the streetscape as an integral component of an innovative, performing landscape, and welcoming public realm by establishing guidelines for furnishings, paving, landscaping, stormwater management, sidewalk bulb-outs and other streetscape elements. Where applicable, guidelines from the Better Streets Plan and City standards have been incorporated into this document.

The Candlestick Point Streetscape Master Plan was originally approved by the OCII Commission on January 7, 2014. Since then, several project refinements have occurred that required an update to the approved Streetscape Master Plan. The refinements are generally related to:

- An interdepartmental process to reconfigure street cross sections for emergency vehicle access
- Paving options- Street tree selection
- The configuration of the Spine
- Stormwater treatment updates

A complete summary of these revisions is set forth in a staff report to the OCII Commission prepared in support of this Streetscape Master Plan.

Project Background

In June 2010, the former Redevelopment Commission took a series of actions to approve the Candlestick Point/Hunters Point Shipyard Phase 2 development (CPHPS2 or, the Project) including the approval of the Phase 2 Disposition and Development Agreement (DDA) with CP Development Co., LP (the Developer). The DDA includes Design Review and Approval Procedures ("DRDAP"). Requirements of the DRDAP include the preparation of Streetscape and Signage Plans to guide design of the public realm and the submission of Major and Sub-Phase Applications for approval that detail project design for specific geographic areas at each step of the development's progress.

The Project includes: the Candlestick Point State Recreation Area; the former site of the San Francisco 49ers NFL stadium; the Alice Griffith public housing development; and a decommissioned Naval Shipyard with dilapidated structures for ship repair, piers and drydocks, and storage and administrative spaces. A number of former Navy buildings are currently being used as artist studios and by light industrial tenants.

Bayview residents have been long at work in establishing the overall vision and goals for revitalization for the Bayview Hunters Point area, which includes both of these sites, beginning with the 1969 Hunters Point Redevelopment Plan, the 1969 India Basin Industrial Park Redevelopment Plan, the 1995 South Bayshore Area Plan, the 1997 Hunters Point Shipyard Redevelopment Plan, and the 2006 Bayview Hunters Point Redevelopment Plan. In 2007, the San Francisco Board of Supervisors endorsed a Conceptual Framework that set forth goals and principles to govern the redevelopment of the Candlestick Point - Hunters Point Shipyard areas. Implementation of the Project would include amendments to the Bayview Hunters Point and Hunters Point Shipyard Redevelopment Plans, the San Francisco General Plan and the San Francisco Planning Code. City staff prepared an Environmental Impact Report (EIR) on the proposed Project that was certified by the Planning and former Redevelopment Commissions on June 3, 2010. Both Commissions also approved Design for Development (D4D) documents to serve as the Project zoning code. The D4D includes specific standards and guidelines, including site coverage, building height, bulk and setbacks.

On August 3, 2010, The Board of Supervisors adopted Redevelopment Plan Amendments, General Plan Amendments, amendments to the Planning Code and Zoning Map, and other plans necessary for Project implementation.

Site Location and Context

The Candlestick Point and Hunters Point Shipyard areas are located approximately five miles south of downtown San Francisco in the southeastern part of the city. As indicated to the right, both sites have extensive shoreline frontage along the San Francisco Bay to the east and south, the South Basin and Yosemite Slough watershed which separates them, and India Basin to the north of the Shipyard. Hunters Point Hill and the Bayview / Hunters Point neighborhood sits to the west of the Shipyard site, whereas the same neighborhood and Bayview Hill Park are adjacent to the north and west sides of the Candlestick Point site.

Bayview Hill Park creates a natural geographic limit to development and a buffer to Highway 101 to the west of the Candlestick Point site. This City Park has trails which overlook the entire Candlestick Point site and provide panoramic views of the Bay.

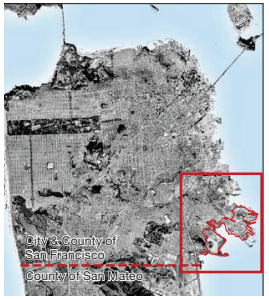
Candlestick Point is the former location of Candlestick Park (the home stadium of the San Francisco 49ers NFL team), and the current location of the Candlestick Park State Recreation Area (CPSRA) and the Alice Griffith public housing development. The Shipyard is a former U.S. Naval Shipyard, which was operational between World War II and 1974, and is currently accommodating some artist studios and light industrial uses on a portion of the site.

The Hunters Point Shipyard provided the major source of employment for the Bayview / Hunters Point neighborhood while it was operational. Subsequent to its closure, economic opportunity has declined in this part of the city as the site has remained largely unused since. Both the Candlestick

Figure 1.1 – Site Context



Figure 1.2 – Site Location



Legend

1. Bayshore Caltrain Station
2. Bayview Hill Park
3. Hunters Point Shipyard Phase I – Hilltop and Hillside
4. Bayview Neighborhood
5. Bayview Industrial Lands
6. India Basin
7. Candlestick Park Stadium
8. Re-gunning Crane
9. South Basin
10. Yosemite Slough Watershed
11. San Francisco Bay

1. INTRODUCTION

Point and Hunters Point Shipyard projects will bring improved street and transit connections to the area, along with new employment uses that will substantially increase the community's economic activity.

To take advantage of this waterfront location, which provides the potential for some of the most significant open space area in the City, a major shoreline park will be created. New public connections to the waterfront will be provided. Further, a plan to restore the Yosemite Slough watershed, which feeds into the South Basin, will allow for an integrated park area to be created which extends from the CPSRA and includes the South Basin, Yosemite Slough and the southern shoreline of the Shipyard.

Project Overview

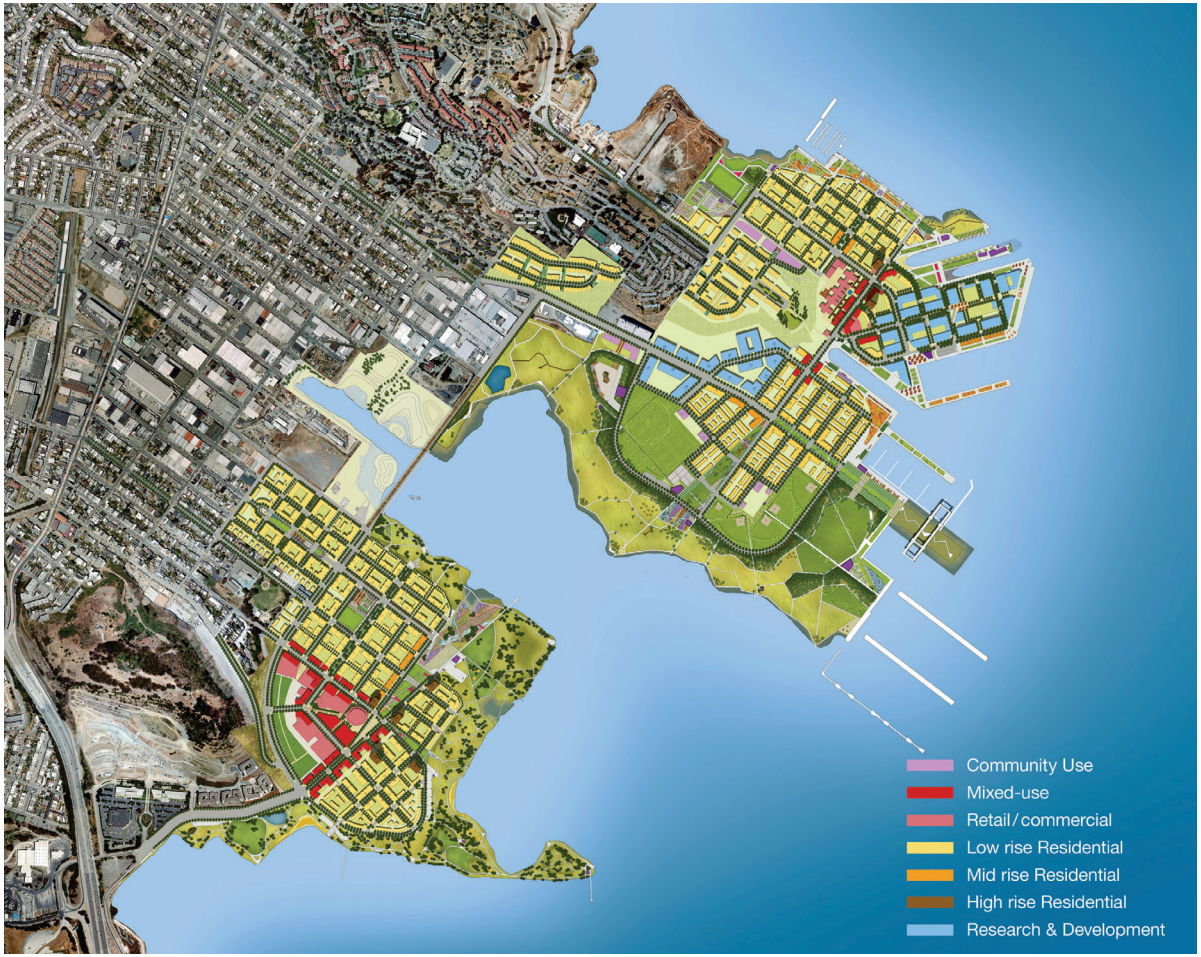
The Hunters Point Shipyard and Candlestick Point areas will rejuvenate and integrate with the existing Bayview / Hunters Point neighborhood to create a vibrant mixed-use district that provides a major focal point to the shoreline area of southeast San Francisco.

Development will be compact, provide a mix of land uses and be oriented to the transit stops along the new bus rapid transit (BRT) line which will serve the area with frequent transit service. There will be market-rate and affordable homes, community services, regional and neighborhood commercial retail, research and development space (R&D), a hotel, a performance arena, and an expansive waterfront park system that extends along the entire shoreline of Candlestick and the Shipyard.

Identifiable neighborhood districts will be created that will each have distinctive characteristics. These neighborhoods will be woven together to Bayview / Hunters Point by an open space network, pedestrian pathways and landscaped streets that connect to the existing Bayview / Hunters Point street grid. Thus, convenient access will be provided between the new neighborhoods, Bayview / Hunters Point and the waterfront park system. All development will be based on the principles of sustainable building.

The illustrative site plan and overall development program that emerges from this vision are shown to the right. The program for the two sites includes 10,500 residential homes, 250,000 sq ft of neighborhood retail, 635,000 sq ft of regional retail, 3.15 million sq ft of office and R&D space, a hotel, arena, artists' studios, community facilities, and a 328 acre open space network.

Figure 1.3 – Illustrative Plan




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THE GROVE
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2. CONCEPTUAL FRAMEWORK

2. CONCEPTUAL FRAMEWORK

2.1 SITE INFLUENCES

Site Influences

Every site in the city is affected by an arrangement of influences that evoke memories, give character, and define possibilities. Such influences might be subtle or overt, physical or symbolic, specific or subtle, but together they tell a story of place that can inspire design that is truly rooted in place, responsive to history, and open to future.

Candlestick Point is rich in history and culture, ecology, and physical influences, offering touchstones for creating a unique streetscape design.

Combining these site influences with the development master plan for Candlestick Point creates a distinctive conceptual framework for the public streets on the site. This framework underlies a unique story of place and identity that is expressed with identifiable neighborhoods, opportunities for special moments, and integrated infrastructure systems.



2. CONCEPTUAL FRAMEWORK

2.2 NEIGHBORHOOD CHARACTER

Neighborhood Character

Defining neighborhoods and creating a legible urban environment that creates a sense of place is a particular challenge in large redevelopments. Given its scale, it is critical that Candlestick Point be perceived as a cluster of neighborhoods, each with its own character yet part of a cohesive whole.

There are four distinct neighborhoods within the Candlestick site: Alice Griffith, Candlestick North, Candlestick Center and Candlestick South. A unique physical character is envisioned for each neighborhood, which will be defined through building scale and massing, architectural design, parks and public space, including the streets.

Alice Griffith

Alice Griffith will be a predominantly residential neighborhood serving mixed-income households with a diverse range of housing types. Buildings will generally be four to five stories along streets, and two and three story townhomes along mid-block breaks. Building façades will be articulated in order to maintain a fine-grained scale.

The focus of the community is the centrally located community park that stretches almost the length of the neighborhood. The existing grid of streets will be extended through the site, thereby connecting the Candlestick Point community back into the larger Bayview fabric and linking the Bayview community to the water. The streetscape in Alice Griffith will reinforce the connections between the new and existing communities, and introduce natural elements to build connections to the expansive bayside open spaces.

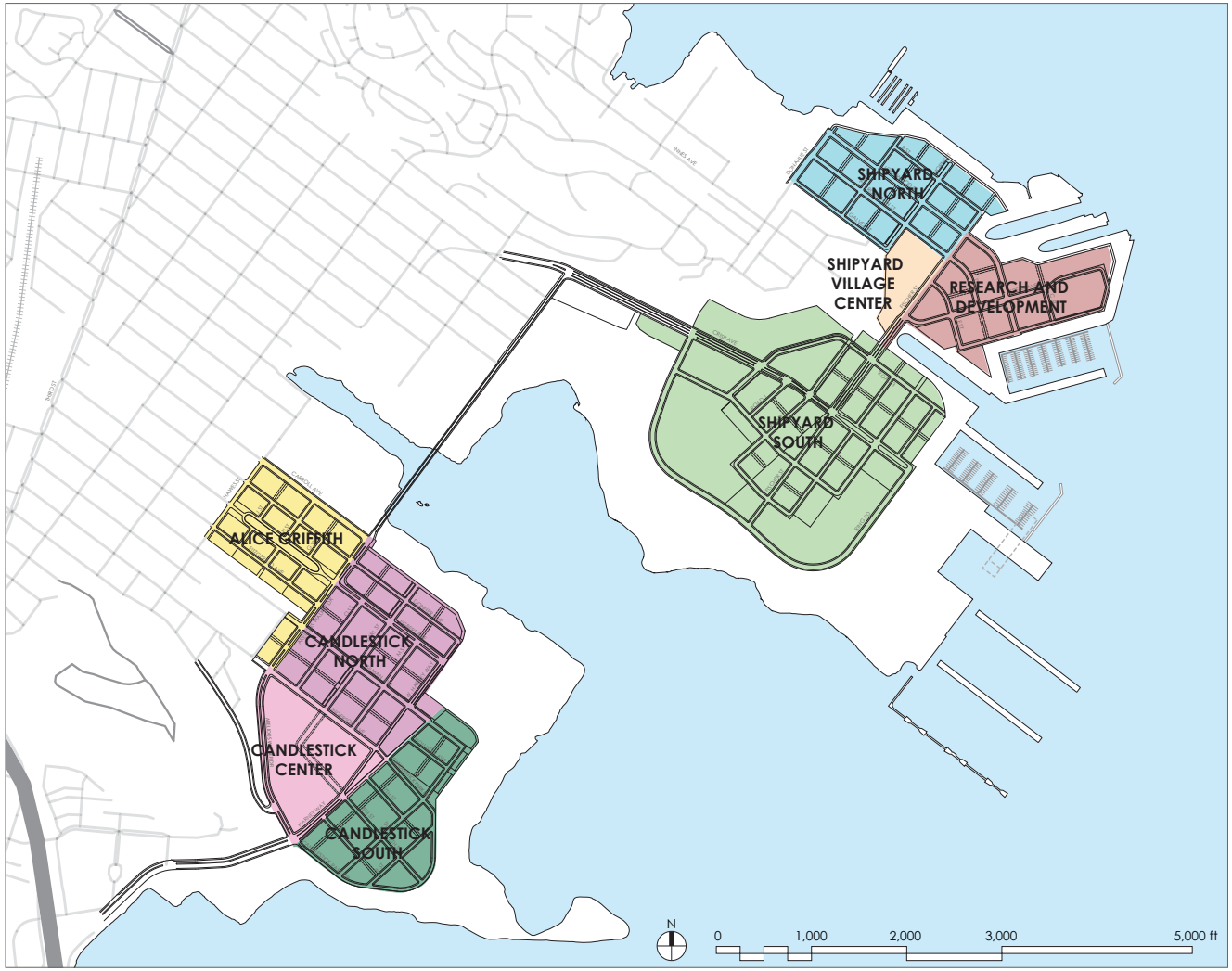
Candlestick North

Candlestick North is a compact mixed-use community with the greatest number of homes in Candlestick, animated neighborhood streets, engaging parks, and a main street filled with shops and services.

The neighborhood contains a mix of low-rise, mid-rise and high-rise mixed-use and residential buildings that frame and focus civic life on the parks and streets. Mixed-use buildings along the main street (Ingerson Avenue) create an animated retail atmosphere. Eight to ten story residential buildings frame the Bayview Gardens Wedge Park, while shorter residential buildings line both park streets (Egbert Avenue and Earl Street) and the central Candlestick Community Park.

A tower at the corner of Ingerson and Harney is strategically located to overlook the Candlestick Community and Wedge Parks, and to emphasize key intersections within the plan. Low-rise residential buildings make up the majority of remaining buildings, including two and three story townhomes along mid-block breaks that establish a more intimate pedestrian scale. Additional retail opportunities are located in the bases of buildings at the BRT stops on both ends of the community and along the Wedge Park.

Figure 2.1 – Neighborhood Boundaries



2. CONCEPTUAL FRAMEWORK

2.2 NEIGHBORHOOD CHARACTER

Parks and open spaces are plentiful in Candlestick North; almost all blocks are adjacent to open space. The Bayview Gardens Wedge Park and State Recreation Area surround the bay sides of the neighborhood and a three-acre Candlestick Community Park will be located near its center. Two 'Park Streets', Egbert Avenue and Earl Street, run perpendicular through the neighborhood. The park streets provide breathing room within the plan, while serving as sustainable elements. The parks meet the needs of residents and visitors, and offer a distinctly urban character compared to the more naturalized character of the State Recreation Area.

Candlestick North streets vary considerably in character. The dynamic main street (Ingerson Avenue) has on-street parking and broad sidewalks with plaza zones. Ingerson is designed to accommodate high pedestrian and bicycle traffic, in addition to automobile uses. The Egbert Avenue and Earl Street parkways run through the center of the neighborhood, linking the adjacent communities of Alice Griffith and Candlestick Center and providing views to the Bay. Arelious Walker Drive is the main truck and auto route through the development. It has large sidewalks, medians, bike lanes, and parallel parking to buffer residential uses. A BRT street runs on Harney Way along the edge of the north edge of the Wedge Park then northward on Egbert Avenue to Arelious Walker Drive, linking Candlestick to the Shipyard and the Bayshore Caltrain Station.

Local streets have bulb-outs, ample pedestrian crossings, and other traffic calming measures. Generous, tree-lined sidewalks and building setbacks provide a stoop or terrace transition between homes and the street. Share public ways at mid-block create additional linkages to the Bay. The streetscape in Candlestick North will provide havens for pedestrians and extend the park to every door.

Candlestick Center

Candlestick Center is the heart and focus of activity for Candlestick. It is a mixed-use neighborhood with regional shops and services, offices, hotel, public uses and residential low-rises.

Candlestick Center is comprised of 635,000 sq ft of mixed-use regional retail in a variety of forms ranging from small commercial retail units (CRU's) along the two main streets – Ingerson Avenue and Harney Way – with secondary uses above, to larger format stores accessed by internal streets and pedestrian mews. The scale of the large format stores will be reduced through wrapping with other uses and / or fenestration. Above retail, uses may include residential, office space, a hotel or additional commercial space.

A performance arena is envisioned to anchor the neighborhood, sitting at the corner of Ingerson Avenue and Harney Way. This important corner will have a public plaza reinforced by surrounding buildings with distinguishing architectural features and/or scale.

The public realm will have a very urban flavor. Comprised of pedestrian oriented sidewalks and mews, plazas and courts, these spaces will offer a range of scales and characters. Those along the main streets and at key intersections will be larger and livelier, while others at the interior of the site and along pedestrian mews will have a more intimate scale and character. A BRT plaza is included as an extension of the Bayview Gardens Wedge Park into the neighborhood. The plaza may have kiosks and small vendors, as well as ample seating, public art, and landscaping. All plazas will be fully accessible to the public, as are streets.

Two mixed-use main streets, Ingerson Avenue and Harney Way, wrap the edge of the site. On the eastern edge, Ingerson Avenue has 2 travel lanes and 2 lanes of parking. On the southern edge, Harney Way is a boulevard with 2 vehicle travel lanes and parking on the south side and 2 BRT travel lanes on the north side. Most service access points are located on these streets. Arelious Walker Drive, an arterial street, lines the western edge of the neighborhood and is anchored primarily by a multi-level parking structure, which will be screened and made visually interesting

Both a local and regional destination, Candlestick Center will be an active place, defined by authentic urban streets, not contrived "lifestyle" environments. Streetscapes will reinforce the streets as the core of the public realm and settings for both lively programs and unexpected encounters.

Candlestick South

Candlestick South derives its character primarily from the surrounding Candlestick Point State Recreation Area (CPSRA). A mix of low-rise and high-rise buildings are complemented by a fine grained streets and lanes system that links residents to the Mini-wedge Community Park, Bayview Gardens Wedge Destination Park, and the surrounding CPSRA.

Mixed-use buildings define the southern half of Harney Way creating a vibrant retail street. The bulk of the neighborhood is comprised of low-rise flats and townhomes. Both wedge parks are framed with strong street walls to help define the spaces, while townhomes or flats border the CPSRA. Up to five high-rise towers punctuate the neighborhood with extraordinary views to the Bay, while serving as visual landmarks.

The Mini-wedge Community Park forms the heart of the community and complements the larger Bayview Gardens Wedge Park within Candlestick North. The Mini-wedge is oriented to focus views to the CPSRA beach and the point of land that gives Candlestick its name. The community's eastern and southern edges are wrapped by the CPSRA, creating views to the bay and easy access to recreation.

A defining element of this community is its mixed-use main street, Harney Way. This primary commercial street for this community will be a retail boulevard with dedicated bus rapid transit (BRT) lanes in each direction and a vehicle travel lane in each direction. Other streets in the community are local serving, and at mid-block there are mid-block breaks offering greater connectivity to the parks and water's edge.

Surrounded by green on three sides, Candlestick South will be a neighborhood set within the shoreline park. It is imagined as place defined by its green setting; one in which non-traditional streets promote ecological balance and prioritize community over cars.

2. CONCEPTUAL FRAMEWORK

2.3 HISTORY AND CULTURE: SPECIAL MOMENTS

Each neighborhood will have a special place (e.g. neighborhood park) and an important street (or streets) which lead to the water. The interconnected network of public spaces is a connective tissue and a tool to develop the character for each neighborhood.

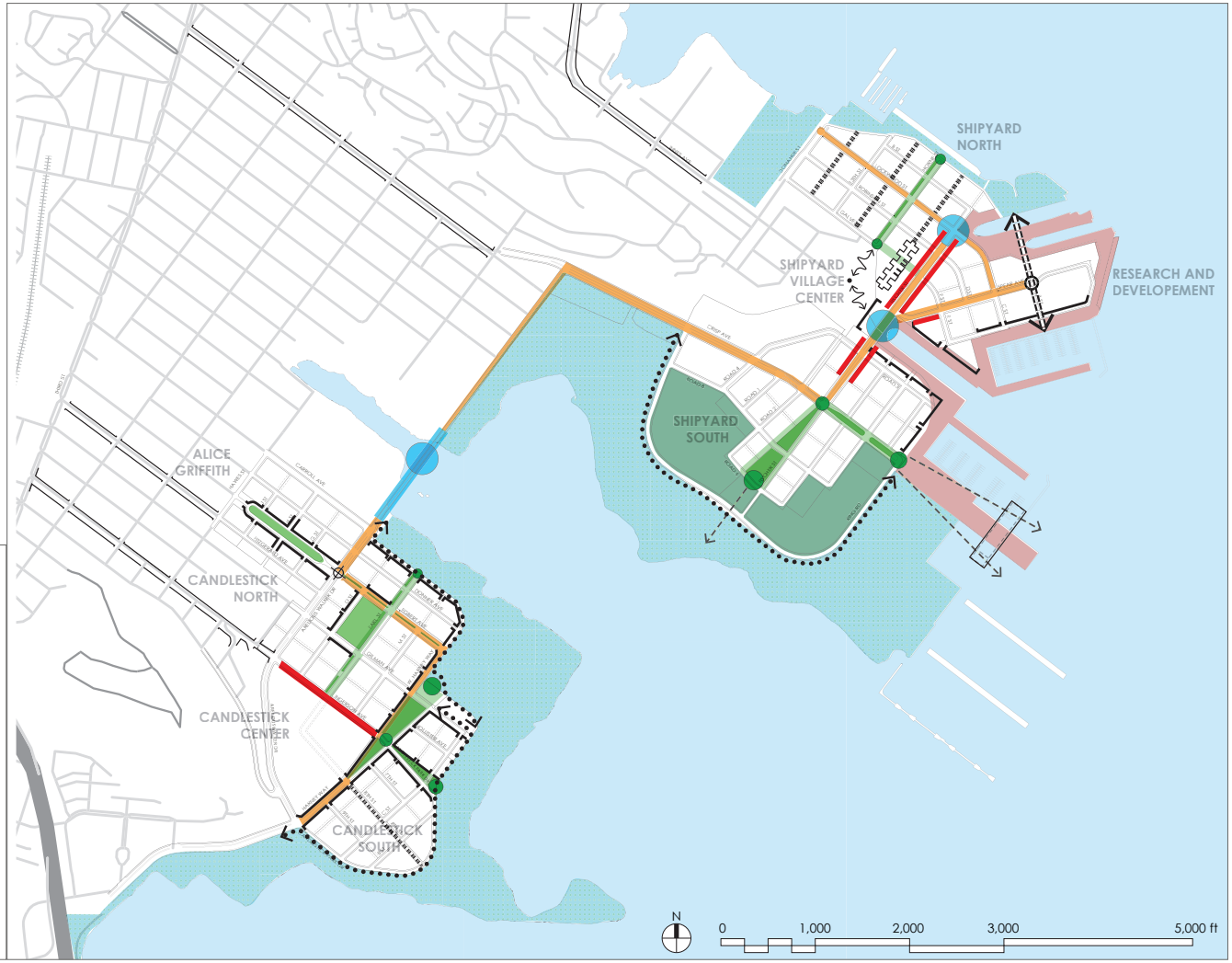
Each place becomes the opportunity to develop narratives (historic, cultural, etc.) through wayfinding or artwork installations.

Special places, neighborhood parks, important streets, such as The Spine and retail streets, view corridors and points of contact with the waterfront become potential locations and opportunities for art installations to be embedded in the overall streetscape plan. These special moments will further be designed in Sub-Phase submittals.

Expressions of special moments may include:

- Sculpture
- Narratives (historical, cultural, etc.)
- Wayfinding devices
- Site artifacts and "found objects"
- Landscape installations and environment
- Lighting
- Public pedestrian infrastructure
- Bridge opportunities

Figure 2.2 – Special Moments




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3. STREET TYPOLOGIES

3. STREET TYPOLOGIES

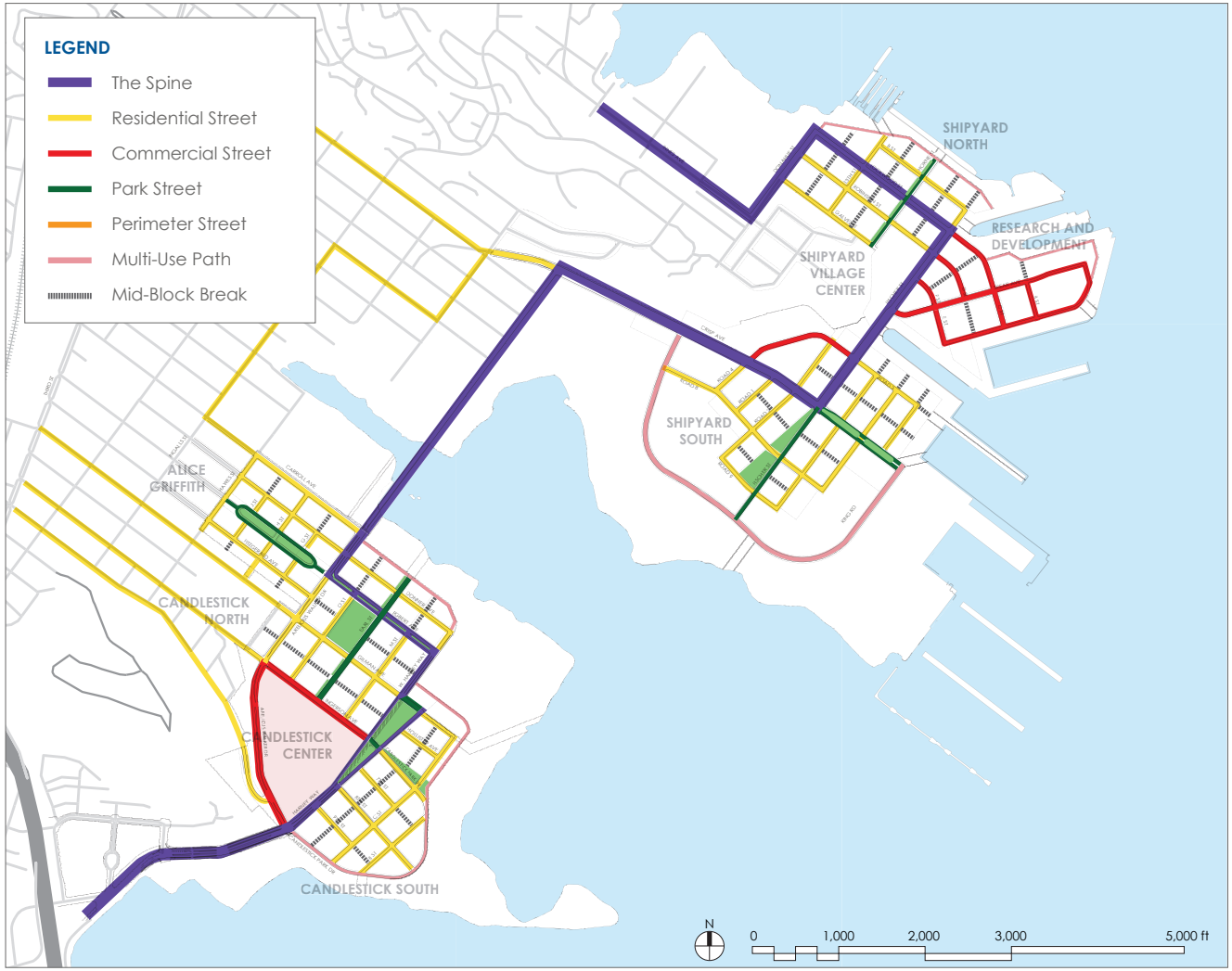
3.1 STREET TYPOLOGIES

A framework of streetscape typologies establishes order and hierarchy in Candlestick Point's streetscape by relating streets of similar character and function together.

In many cases, the CPHPS2 streetscape typologies directly overlap with typologies in the Better Streets Plan, but in cases such as The Spine, multiple Better Streets Plan categories will exist in the single street typology, as it is the role of The Spine to have a singular and consistent character through Candlestick Point and Hunters Point Shipyard. Specific references to Better Streets categories are made on the following Streetscape Matrix.

As outlined on the next page, Street typology design narratives inform how streetscape elements are selected, arranged, and detailed. Each streetscape typology has unique characteristics that relate to the overall neighborhood vision and are rooted in unique site influences.

Figure 3.1 – Street Typologies



3. STREET TYPOLOGIES

3.1 STREET TYPOLOGIES

THE SPINE

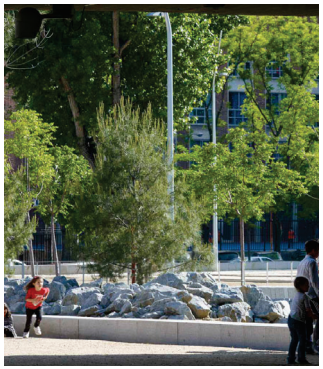
Iconic and Civic Scaled

The Spine is comprised of several typologies (Residential, Commercial, Park), which are unified as a main thoroughfare by a distinctive design. The Spine is a place "to see and be seen" and provides a special identity for Candlestick Point and Hunters Point Shipyard

Better Streets Plan Typology Analogs:

- Civic (Ceremonial)

- Boulevard



RESIDENTIAL STREET

Consistent and Calm

Residential streets are calm streets to set neighborhood life and engagement. Each neighborhood will have unique landscaping, paving details, and other streetscape elements that will create distinctive neighborhood streetscapes.

Better Streets Plan Typology Analogs:

- Residential Throughway

- Neighborhood Residential



COMMERCIAL

Energetic, Colorful, and Engaging

Embedded with the rich sports history of Candlestick Park, a collection of flexible spaces, programmed for a multitude of activities, commercial streets and open spaces can provide spaces for concerts, outdoor films, and other community events.

Better Streets Plan Typology Analogs:

- Commercial Throughway

- Neighborhood Commercial



PARK STREETS

Diverse, Expressive, and Active

Park Streets are special landscape corridors to connect parks and lead the public to the waterfront. Wide swaths of landscaping along Park Streets provide opportunities for recreation and stormwater management.

Better Streets Plan Typology Analogs:

- Parkway

- Park Edge



PERIMETER STREETS

Visually Porous and Pedestrian

Evening walks, a jog or a bike ride, the place to relax and "watch the water". Perimeter Streets are another design opportunity: to blend the built and natural environments.

Better Streets Plan Typology Analogs:

- Neighborhood Residential

- Park Edge



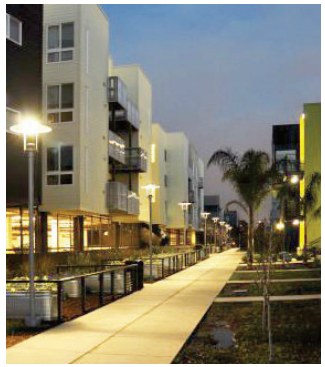
MID-BLOCK BREAKS

Intimate, Privately Designed

Privately developed, with a public easement, mid-block breaks may have flower stands, small cafes, and other amenities. Predominately a pedestrian only street, mid-block breaks also provide vehicular access when built as a mid-block laneway.

Better Streets Plan Typology Analogs:

- Shared Public Way



3. STREET TYPOLOGIES

3.2 THE SPINE CHARACTER

The Spine is the civic backbone of the new neighborhoods, a city scale street that connects to the surrounding community and provides a unifying link between Hunters Point Shipyard and Candlestick Point. Akin to Market Street and Van Ness Avenue in the center of the City, The Spine visually creates consistency and makes connections with iconic and bold design elements. Using streetscape elements that are engaging, dynamic and exclusive to The Spine, the street becomes an instantly recognizable and organizing element in the public realm.

Functionally, the Spine links the major open spaces and special places, and defines the northern and southern gateways, making it the most travelled street in Candlestick Point. The Spine is also the most multi-modal street in Candlestick Point with BRT, cars, bus, bike and pedestrian networks all uniquely designed to help way-finding between the multiple neighborhoods and special places.

Streetscape elements on The Spine reflect the civic importance of the street. The lighting, landscaping, paving, and furniture are bold and instantly recognizable as unique in the overall public realm.

Visually distinct, various types of Gingko will unify and provide orientation to reinforce the Spine Streets' character as the main iconic and civic-scaled boulevards. Each Ginkgo cultivar is selected to correlate the appropriate size and growth habit to each distinct spine typology. Together, they make The Spine immediately visible in the landscape of the community.

Complementing this verticality is a potential special materials treatment for The Spine, a patterned paving with a special graphic. The graphic, which will be continuous along the entire length of the Spine, is inspired by two historical influences at the site. At Candlestick Point, the strong roots of the African American community are reflected in a pattern inspired by African art. The paving pattern at Hunter's Point Shipyard is based on the Dazzle camouflage schemes painted on pre-radar era navy ships.

Streetscape elements such as landscape planters, furniture and biofiltration basins along The Spine could also take on the contours of the Dazzle pattern thereby reinforcing the street's unique visual identity. Elements of The Spine will also be incorporated in the future Slough bridge design, further supporting the connection between Candlestick Point and Hunters Point Shipyard.

Spine Intensities

The Spine has varying degrees of intensity. "Spine Full" applies to segments of The Spine within denser, more active areas of the development, such as commercial corridors. "Spine Light" applies to the project entry roads and less-developed areas between Candlestick Point and Hunters Point Shipyard. "Spine Light" may have different and/or fewer streetscape elements than "Spine Full". Lights, trees and other design elements may remain unchanged between typologies to provide consistent and uniform character along the length of The Spine.



Various types of Gingko will contribute to the monumentality of the Spine



Special furnishing zone paving precedent: Miami, Florida



The Spine Lighting: RoadStar Luminaire



African tribal patterns paving precedents



SS Independence with Dazzle paint



Conceptual Dazzle pattern for Spine furnishing zone in Candlestick Point and Hunter's Point Shipyard, or similar

3. STREET TYPOLOGIES

3.2 THE SPINE CHARACTER

Figure 3.2 – Spine Intensities



3. STREET TYPOLOGIES

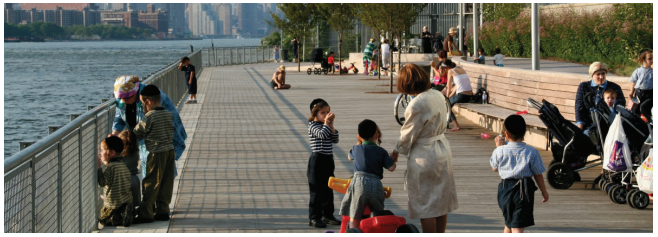
3.3 MULTI-USE PATH CHARACTER

The areas on the border between development and parks will be multi-use path(pedestrians, bicycles) closed to vehicle traffic, except emergency vehicles as determined in the interdepartmental review of cross sections for emergency vehicle access. Ownership of these areas has yet to be determined and will be addressed at the time of development.

Lighting on the Multi-Use Path could be building mounted and set in paving as needed. Paver pattern will be related to adjacent sidewalks, or adjacent waterfront park spaces. Other streetscape elements will be consistent with the neighborhood elements defined in the Streetscape Master Plan.



Hafencity, Hamburg, Germany

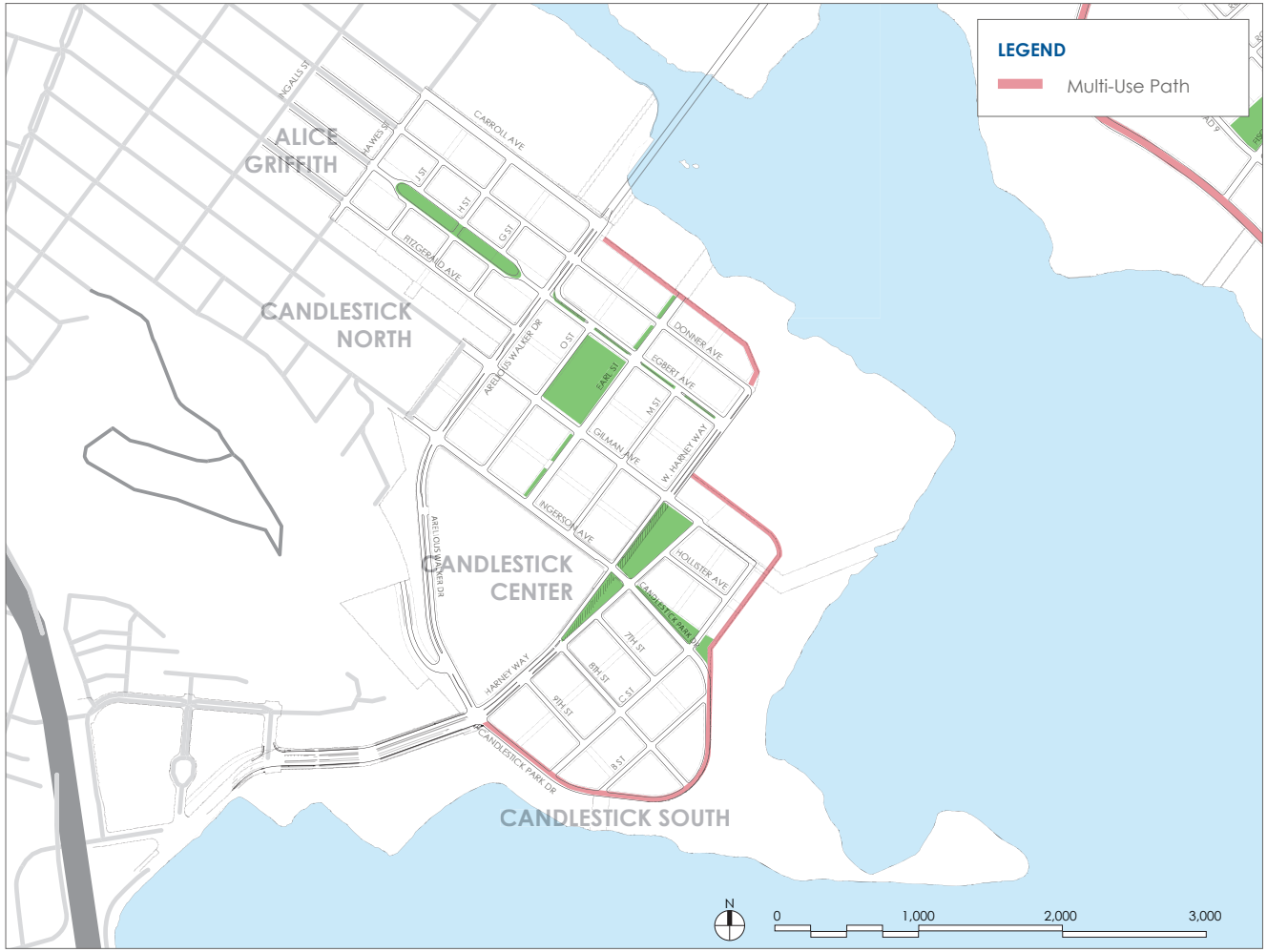


Schaefer Landing, Brooklyn



Battery Park City, NYC

Figure 3.3 – Multi-Use Path Intensities




5
Parkside Drive
6
THE GROVE
7
THE VILLAG
SLOUGH
SLOUG
CRANE
BAY
1
3
4
5
6
8



4. STREETSCAPE ZONES

4. STREETSCAPE ZONES

4.1 SIDEWALK ZONES

Sidewalk Zones

The sidewalk consists of 3 primary zones: Throughway Zone, Furnishing Zone, Edge Zone. Each zone has a distinct functional role and set of design considerations.

1. Throughway Zone: The portion of the sidewalk for pedestrian travel along the street. The sidewalk throughway's zone shall be at minimum, 6'. At the time a Sub-Phase Application is submitted, OCII may request that the developer grant a public easement up to a maximum of 2 feet within the 10' residential setback to create an 8' throughway. Widths vary between 6' and 12'.

2. Furnishing Zone: The portion of the sidewalk used for street trees, landscaping, biofiltration, transit stops, street lights, and street furniture. Widths are at minimum 4' wide and more typically 5" to 7" wide.

3. Edge Zone: The Edge Zone is used by people getting in and out of vehicles parked at the curbside. The Edge Zone may have streetscape elements, provided that a 4' pathway from the curb to the throughway is maintained.

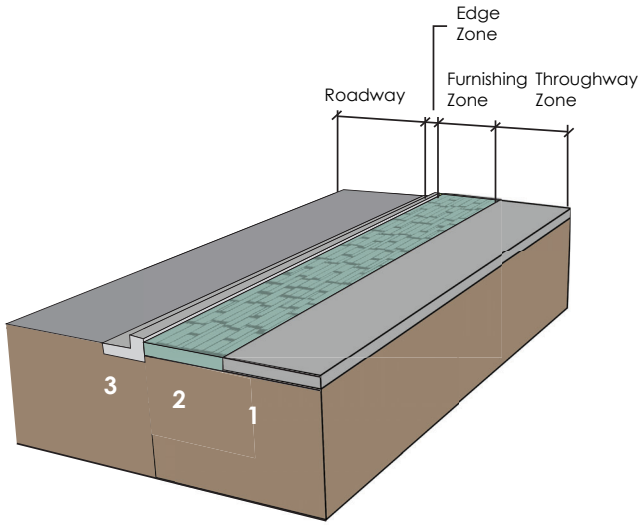


Figure 4.1 – Sidewalk Zones

Bulb-outs

Streets in neighborhoods are both connections between places and the setting for community. Bulb-outs create more sidewalk space at selected locations and provide an opportunity to enhance the street as an important public space in the neighborhood, while also creating a safer pedestrian environment.

Furnished bulb-outs in Candlestick Point are organized in typologies that response to their streets or relationship to the Bay. Bulb-outs on paths to the water may incorporate elements that reinforce connection to the water, without necessarily using water. Bulb-out design should create special moments in the streetscape and provide visitors with memorable walks to the Bay.

Unfurnished bulb-outs in commercial areas should be developed by adjacent retailers to enhance surrounding food and beverage provisions, and provide places for enjoying the City's street life.





4. STREETSCAPE ZONES

4.1 SIDEWALK ZONES

Bulb-Out Location and Sizing

Conceptual bulb-out sizes and locations are shown to the right. Standard bulb-outs are the length of 1 parking space, while extended bulb-outs are the length of 2 spaces.

Corner bulb-outs are recommended for pedestrian safety at key intersections and along three pedestrian routes to the waterfront where they function as an extension of the waterfront park into the neighborhood.

Specific location and sizing of bulb-outs will be determined at Sub-Phase submittal phases.

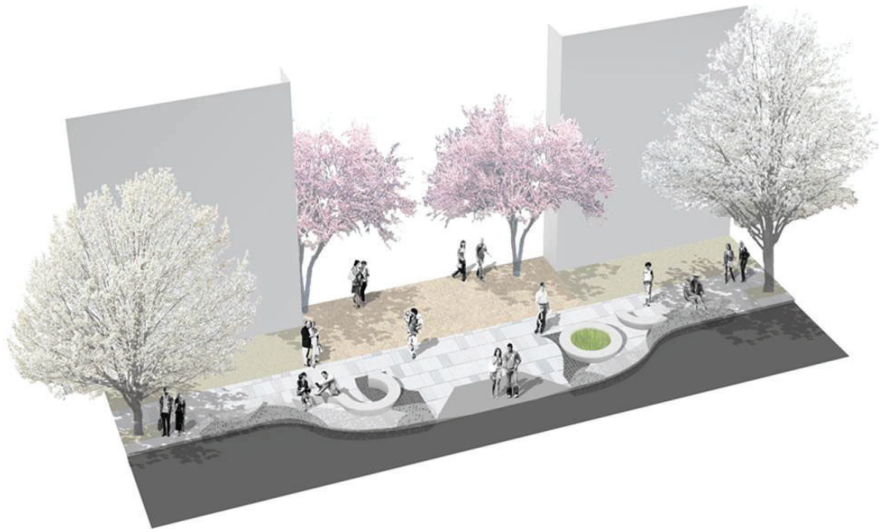
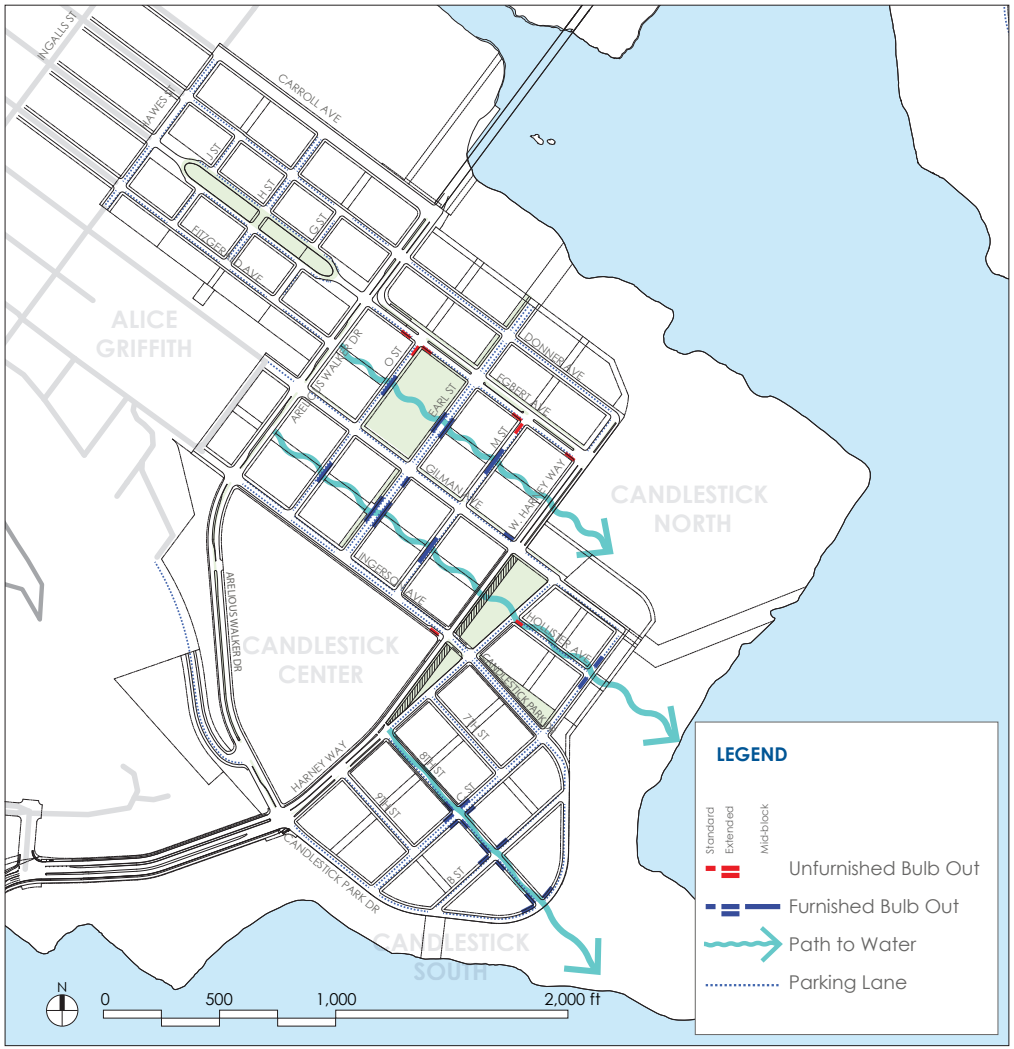


Figure 4.2 – Example of Furnished Bulb-out

Figure 4.3 – Bulb-out Map



4. STREETSCAPE ZONES

4.2 STREET ZONES

BRT Lanes & Cycle Track

The BRT and cycle track will have distinctive colors, with painting or colored concrete, to increase pedestrian safety and for ease of navigation.

- BRT lane materials
  BRT lane materials subject to discussion with City agencies
- Cycle track materials
  - Typical: Asphalt with green paint striping near intersections and other areas where denoting the cycle track is necessary. Different materials may be used in areas where the design team has coordinated with City agencies to identify a special treatment.
  - In wedge plaza: Cycle track will be pavers.
  - Non-reflective treatment material - Streetbond. Reflective treatment material for intersections/driveways - Reflective Thermoplastic.

Exact color and application method to be determined at Sub-Phase submittal phases.



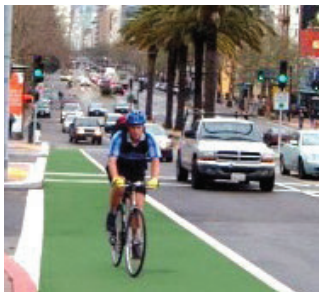
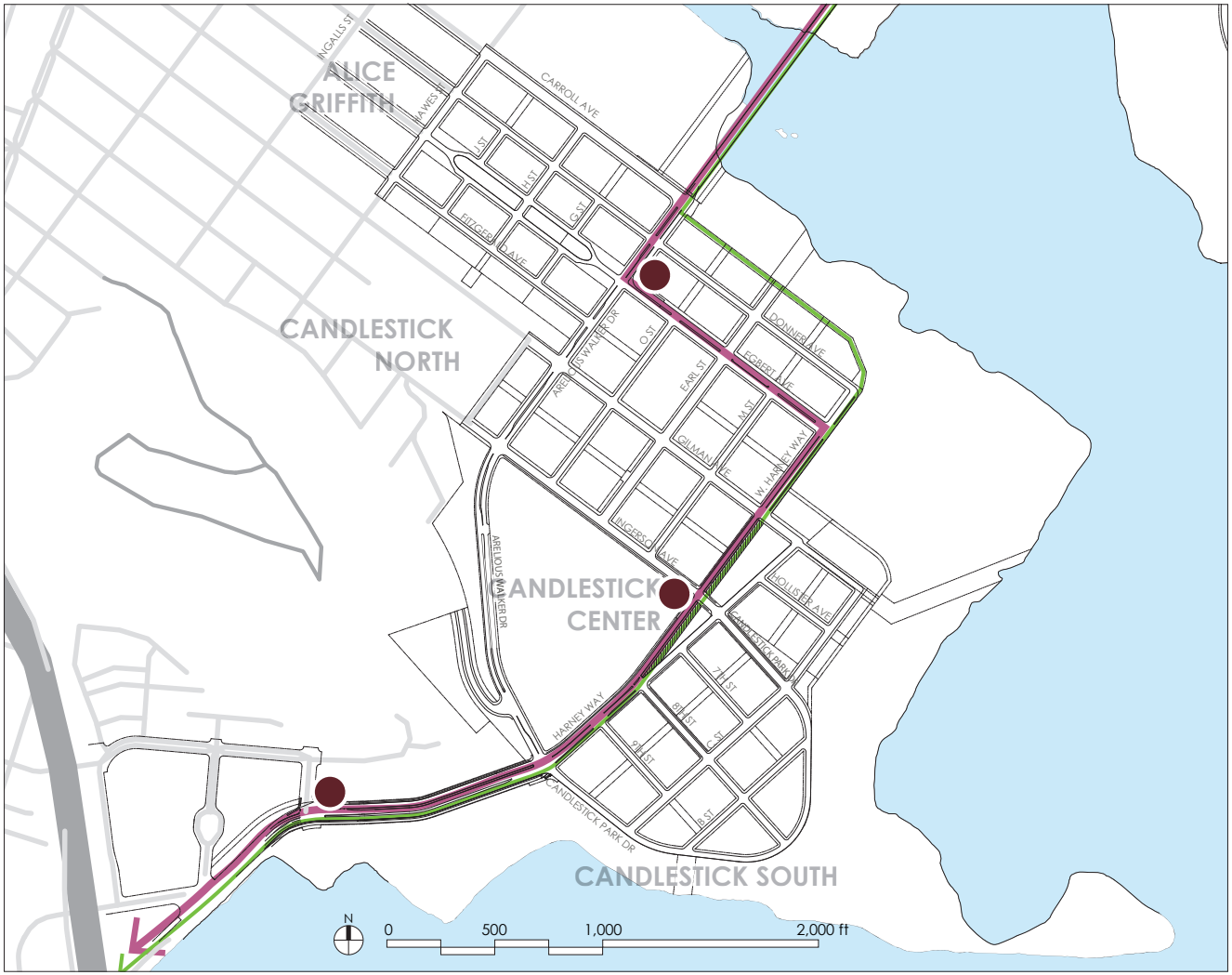


Figure 4.4 – BRT and Cycle Track Networks




5
Parkside Drive
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THE VILLAG
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CRANE
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5. STREETSCAPE ELEMENTS

5. STREETSCAPE ELEMENTS

Streetscape elements create comfortable, interesting, and usable spaces in the public realm, and the unique design at Candlestick Point supports the creation of distinct neighborhood identity and streetscape typologies.

Included in sidewalk elements are the following:

- Paving materials
- Street trees
- Stormwater treatment
- Landscape planting
- Benches
- Bike racks
- Newsracks
- Trash / recycling receptacles
- Street lights
- Utility covers

The plans and guidelines provided in this section are based on concept level design. Streetscape designs will be further developed and submitted for review for each Sub-Phase.



5. STREETSCAPE ELEMENTS

5.1 PAVING MATERIALS

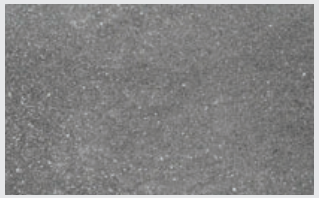
Throughway Zone Material

A zone for pedestrian travel along the street, the throughway zones will provide a consistent and uniform path of travel in the sidewalk.

Special paving may occur on Candlestick Center commercial frontages, and along parts of The Spine, to reinforce neighborhood character and enhance special moments.

The design of all pavers will address accessibility, maintenance, and comfort considerations. Concrete finishes should be saw-cut and smooth finish concrete. Curb ramps will be paved with contrasting color concrete to enhance visibility.

THROUGHWAY ZONE MATERIALS

	BASE CASE	POTENTIAL SPECIAL MATERIAL
THE SPINE	 Charcoal colored concrete paving with sparkle treatment	 12X24 Graphite Concrete unit pavers, or similar
RESIDENTIAL PARK PERIMETER	 Standard concrete	 Concrete paving with sparkle treatment, or similar
COMMERCIAL	 Concrete paving with sparkle treatment, or similar	 12X24 Graphite Concrete unit pavers, or similar

5. STREETSCAPE ELEMENTS

5.1 PAVING MATERIALS

Furnishing Zone Material

Furnishing zones have materials and patterning that will help define neighborhood identity and special streets across Candlestick Point. The specific color and pattern of the furnishing zones will be determined at the time of development.

In the base case, each neighborhood will have a unique pattern and / or color scheme in the paver design that supports the notion of neighborhood differentiation; Residential, Park, Perimeter, the Spine, and Commercial streets

THE SPINE

Iconic and Civic-Scale

A repetitive, and slightly random, pattern of large pavers and bold colors to reinforce the role of the Spine as an iconic civic and ceremonial street.

COMMERCIAL

Animated and Engaging

Paver patterns with integration of contrasting colors or potential integration of solar pavers or ground lighting create a lively commercial sidewalk zone.

MID-BLOCK BREAK

Consistent and Domestic

Paver patterns that relate to adjacent sidewalks, yet have smaller scale or more residential patterning.

FURNISHING ZONE MATERIALS

BASE CASE

General Note

Except for standard concrete sidewalks, all paving materials will be field-tested to ensure accessibility compliance. Pavers in the Furnishing Zone and Edge Zone may be soft set in landscape areas to facilitate drainage as outlined in the San Francisco DPW Sidewalk Landscape Standards. Other areas will be installed with a concrete or similar sub-base to ensure consistent and smooth joints (1/4" max).

THE SPINE





Concrete unit paver as shown, or similar

RESIDENTIAL

PARK

PERIMETER

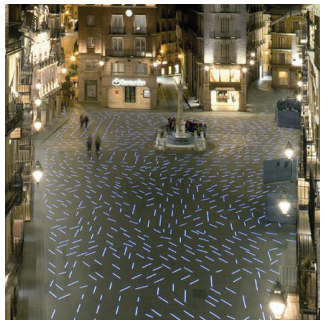
COMMERCIAL





Concrete unit paver as shown, or similar





* Images provide illustrative examples of special paving approaches

Wide Crosswalks

Per Better Streets Plan Chapter 5.1, Wide Crosswalks connecting parks and commercial streets may use 'Special Intersection Paving' and 'Raised Crosswalks and Intersections'



5. STREETSCAPE ELEMENTS

5.1 PAVING MATERIALS

RESIDENTIAL

Textural and Patterned

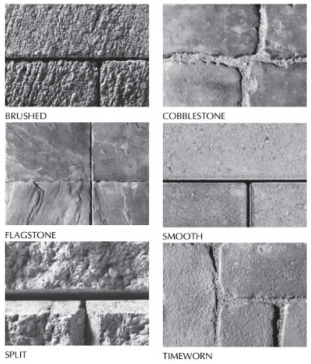
Changes in paver patterns and textures create subtle, yet distinct, differences between each residential neighborhood. Slight changes in paver color may also be used to distinguish paver design between neighborhoods.

PERIMETER **PARK**

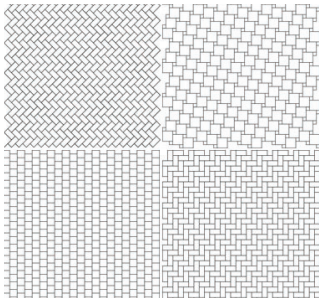
Placemaking

Entries to parks and other special moments along Perimeter and Park Streets are marked by variations in paver pattern, scale, texture, or color.

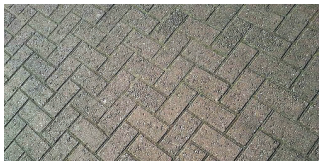
Potential Paving Textures



Potential Paving Patterns



Alice Griffith



4X8 Agave concrete unit paver with Del Sol aggregate in a herringbone pattern

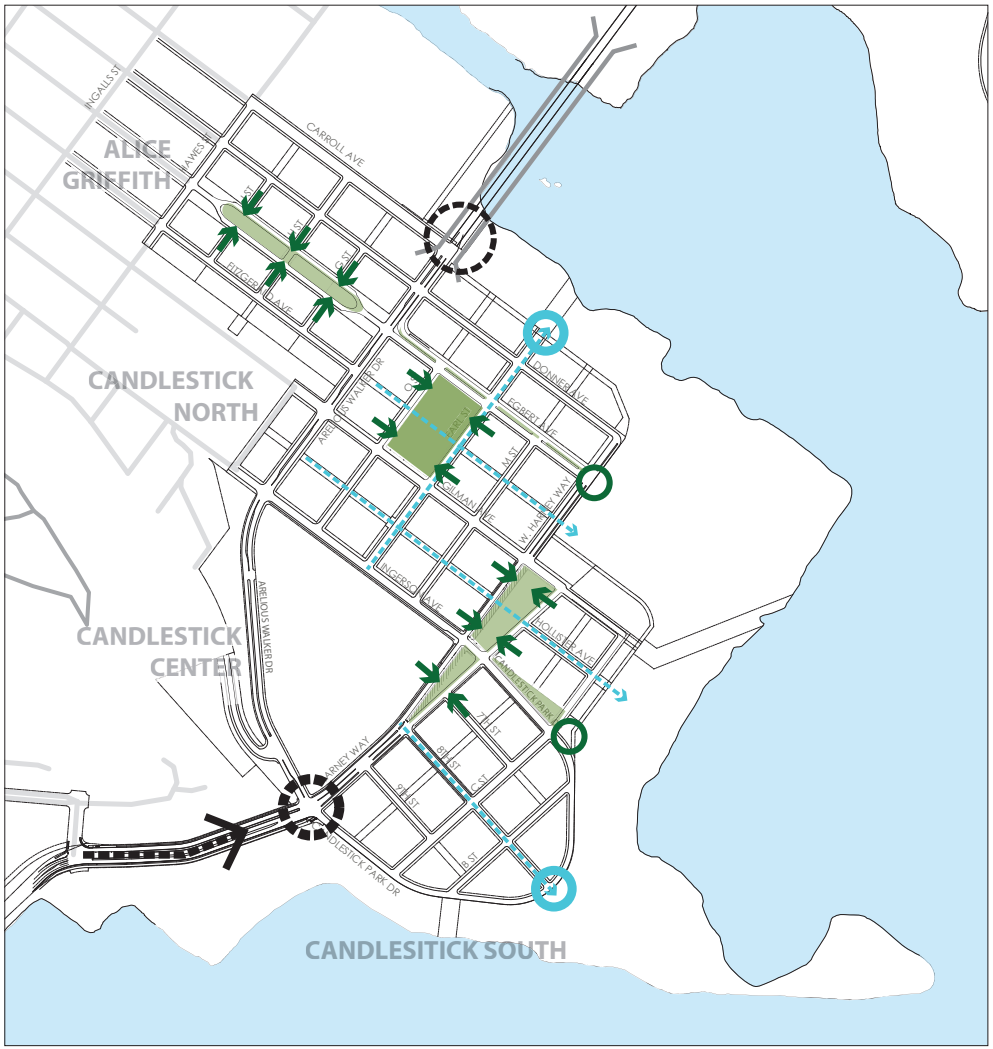




LEGEND

- Potential Open Space Entries
- Gateways
- Special Open Space Moments
- Special Waterfront Moments

Figure 5.1 – Open Space Entries and Other Special Moments for Potential Special Paving



5. STREETSCAPE ELEMENTS

5.2 STREET TREES

Street trees are the most memorable and visible elements in the streetscape. As such, their differentiation is critical to creating unique character among Candlestick Point's various street typologies and neighborhoods.

The use of street trees will be maximized in the project where possible.

STREET TREES

BASE CASE

In coordination with the San Francisco Department of Urban Forestry and HortScience, an expert local arborist, a collection of street trees have been identified for their character and potential to thrive in the unique Candlestick Point climate.

Additional tree selections that maintain character, scale, and site suitability may be considered at Sub-Phases submittals. A full list of recommendations and planting details can be found in chapter 7.

Street tree pits will have Blue Path Fines DG, or similar material.



Blue Path Fines DG

RESIDENTIAL **Neighborhood specific with unique features**



As the most prevalent street type in Candlestick Point, residential street trees will reinforce the diversity of neighborhoods by allowing a variety of species, similar in size and function. Generally, residential street trees have been selected based on the following criteria:

- Bark, foliage or flower interest
- Medium to large size
- Multiple species
- Mix of broadleaf evergreen & deciduous species

5. STREETSCAPE ELEMENTS

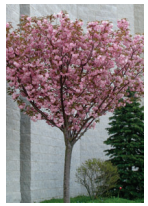
5.2 STREET TREES

Alice Griffith *Large shade trees to provide full canopies*


Brisbane Box


'Samuel Sommer' Southern Magnolia*


New Zealand Christmas Tree


'Kwanzan' Flowering Cherry


'Elegant' Water Gum


'Emer II' Allee Chinese Elm


Victorian Box


Allee Chinese Elm


White Ironbark


Chinese Scholar Tree

Candlestick South *Distinctive trunks and bark support eco-village character*


Cajeput Tree


Chinese Evergreen Elm


Brisbane Box


Marina Strawberry Tree

Candlestick North *Deciduous, great fall color*


Chinese Pistache


Fruitless Sweetgum


Golden Rain Tree*

**Only recommended for sites protected from the wind*

5. STREETSCAPE ELEMENTS

5.2 STREET TREES

THE SPINE **Monumental, tall and columnar**



Visually distinct, various types of Ginkgo will unify and provide orientation to reinforce the Spine Streets' character as the main iconic and civic-scaled boulevards. Each Ginkgo cultivar is selected to correlate the appropriate size and growth habit to each distinct spine typology.

- Deciduous tree
- Columnar form will be varied by Ginkgo cultivar
- Height will be varied from 25-50'
- Multiple types of cultivar,

A. Park Edge



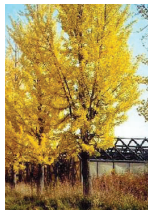
Ginkgo biloba
'Autumn Gold'

B. Residential/Pedestrian



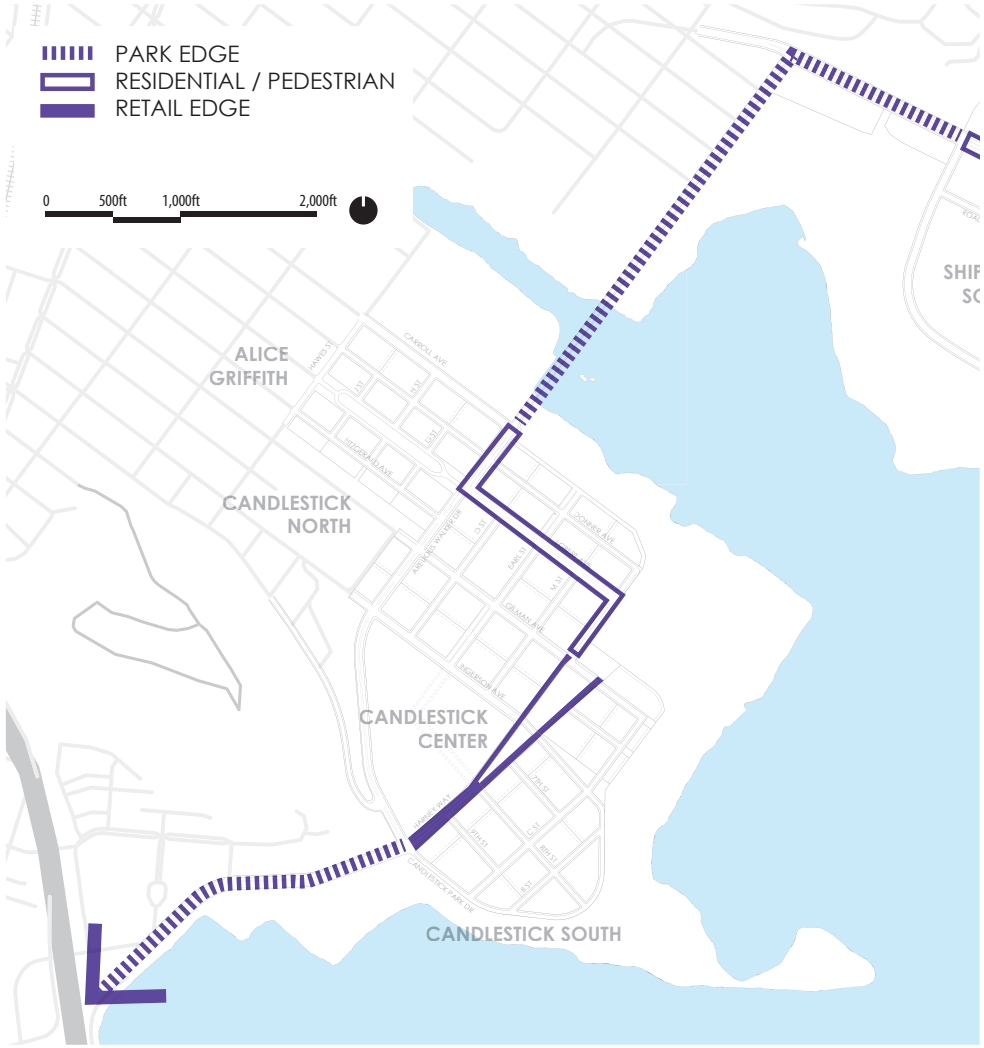
Ginkgo biloba
'Saratoga'

C. Retail Edge



Ginkgo biloba
'Princeton Sentry'

Figure 5.2 – The Spine variation



5. STREETSCAPE ELEMENTS

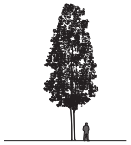
5.2 STREET TREES

PARK **Expressive and active blooms**



Formal and uniform, suitable for planting in double-row allees. Species will reinforce the character of these park edge boulevard streets, intended to provide additional open space and to frame views out to the Bay waterfront.

- Mix of broad canopy trees with smaller ornamental accent trees
- Seasonal interest in flowers & leaves
- Multiple species
- Broadleaf evergreen or deciduous
- Multiple species, similar in look & form



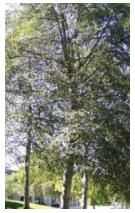
Potential Broad Canopy Species



'Kwanzan' Flowering Cherry



New Zealand Christmas Tree



White Alder



Red Flowering Gum

Potential Ornamental Accent Species



Olive Tree 'Swan Hill'

PERIMETER **Showing and breezy**



Typically located at park edge perimeters near the waterfront, Perimeter street trees will be visually open and porous, with weeping foliage, 'breezy' in appearance, and wind tolerant.

- Foliage that moves in the wind
- Broadleaf evergreen species
- Single species or alternate species
- Wind tolerant



Holly Oak



Native Willow



Primose Tree



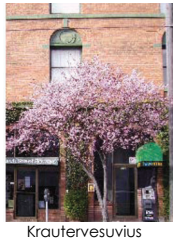
Willowleaf Peppermint

MID-BLOCK BREAK **Smaller, ornamental and offer seasonal changes**



A variety of compact ornamental flowering trees offering seasonal interest and pedestrian scale. To help define neighborhoods, the tree species used should be neighborhood specific.

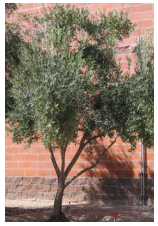
- Seasonal color in flowers & leaves
- Narrow compact canopy
- Small to medium size
- Multiple species, similar in look & form



Krautervesuvius Plum



Weeping Bottlebrush



Olive Tree

COMMERCIAL **Light, hardy and high canopies**



Taller, high canopy street trees suitable for retail and commercial frontages.

- High, narrow or open canopy
- Taller than 40' high at maturity
- Evergreen or deciduous
- Multiple species



Catalina Ironwood



Golden Rain Tree*



Victorian Box



Brisbane Box



Bronze Loquat



Ginkgo biloba 'Princeton Sentry'

5. STREETSCAPE ELEMENTS

5.3 STORMWATER TREATMENT

Stormwater biofiltration is a landscaping tool used to sustainably treat stormwater runoff and to create distinctive streetscape character.

The biofiltration features are designed to filter stormwater through landscaped planters in the streetscape, cleansing the water of pollutants and reducing harmful runoff into downstream water sources. The types of stormwater treatment facilities include flow-through planters, semi-structured bioretention within medians, rain gardens and bioswales.

The biofiltration system's flow-through planters and vegetated areas will reinforce special neighborhood character and street typologies by aligning plant selection and enclosure design with neighborhood and street typology design narratives. Monochromatic plantings, wooden boardwalks, built-in seating and special materials are some of the features that may be employed to create this variation in design. Lin Creek Pebble Stone Mulch, or similar material, may also be incorporated in the flow-through planters and vegetated areas.

Approximate percentage of frontage required for these biofiltration facilities is shown on the following page. Final percentages will be determined with the final design of streets for each Sub-Phase.



Lin Creek Pebble Stone Mulch



Roadside biofiltration



Vegetated swale



Infiltrated boardwalk



Water conveyance

BIOFILTRATION FACILITIES

BASE CASE

THE SPINE | RESIDENTIAL | PARK | PERIMETER

Flow-Through Planters

The majority of the storm water runoff in Candlestick Point will be treated using flow-through planters within the City sidewalks. The flow-through planters will typically be designed with concrete sidewalls, bioretention planting within amended soils to provide water quality treatment, and either open bottoms to allow for infiltration, or closed bottoms with underdrains depending on the location and the quality of the underlying native soils. The flow-through planters will have slightly different design elements depending on adjacent parking or travel lane conditions.

COMMERCIAL

Extensive biofiltration facilities are not desirable along Commercial Streets because of their high volumes of pedestrian traffic and role as active gathering places. If necessary, flow-through planters may be included on Commercial Streets.

Treatment along Ingerson and Harney/West Harney is proposed in soil cells.

POTENTIAL SPECIAL

PARK

In addition to flow-through planters, Park Streets may also feature other approved types of biofiltration within their wide medians and park-like landscaped areas.

Rain Gardens

Rain gardens are shallow landscape areas that can collect, slow, filter, and absorb large volumes of water, delaying discharge into the watershed system and providing water quality treatment. They are similar to flow-through planters but with soil, not concrete, sidewalls. This technique is generally less expensive, but can only be used in areas which are set-back a sufficient distance from the roadway and building foundations. Linear parks within the street right-of-way or larger medians may have good opportunities for this style of bioretention.

Bioswales

Bioswales are shallow landscaped areas designed to capture, convey, and potentially infiltrate storm water runoff as it moves downstream. They are primarily used to convey stormwater runoff on the land's surface while also providing water quality treatment. As water flows through a vegetated swale, it is slowed by the interaction with plants and soil, allowing sediments and associated pollutants to settle out. Some water soaks into the soil and is taken up by plants, and some may infiltrate further if native soils are well drained. The remaining water that continues to flow downstream travels more slowly than it would through pipes in a traditional stormwater conveyance system. Bioswales can be employed within medians and linear parks.

Median Bioretention

Within the medians, similar bioretention facilities can be created. These areas will have linear concrete sidewalls to maintain necessary separation between the bioretention areas and the roadway subgrade. However, these areas will not need to have concrete sidewalls on all four edges, allowing for a less expensive and more flexible design. These can also be used to differentiate character between neighborhoods and allow for more pedestrian space within the sidewalk and building frontage zones.

5. STREETSCAPE ELEMENTS

5.3 STORMWATER TREATMENT

Typical Biofiltration Plant Palettes

Biofiltration Plant Palette A


Baumea rubiginosa / striped Rush (1-3 ft.)


Chondropetalum tectorum/ Dwarf Cape Rush (2–3 ft)


Juncus patens/ California Gray Rush (2 ft)


Carex comosa Bristly Sedge

Biofiltration Plant Palette B


Carex tumulicola Berkeley Sedge (1/2 ft.)


Fragaria chiloensis Beach Strawberry


Sesleria autumnalis/ Autumn Moor Grass (8–18 in.)


Mimulus aurantiacus Sticky Monkey-flower (1- 4 ft.)

Biofiltration Plant Palette C

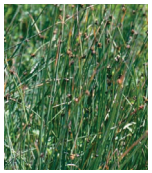

Carex tumulicola Berkeley Sedge (1/2 ft.)


Sisyrinchium Bellum Grass/ Blue- Eyed Grass (4 in. - 2 ft.)

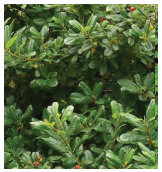

Sisyrinchium californicum/ Yellow-Eyed Grass (6 in. - 2 ft)


Juncus effusua Pacific Rush

Biofiltration Plant Palette D

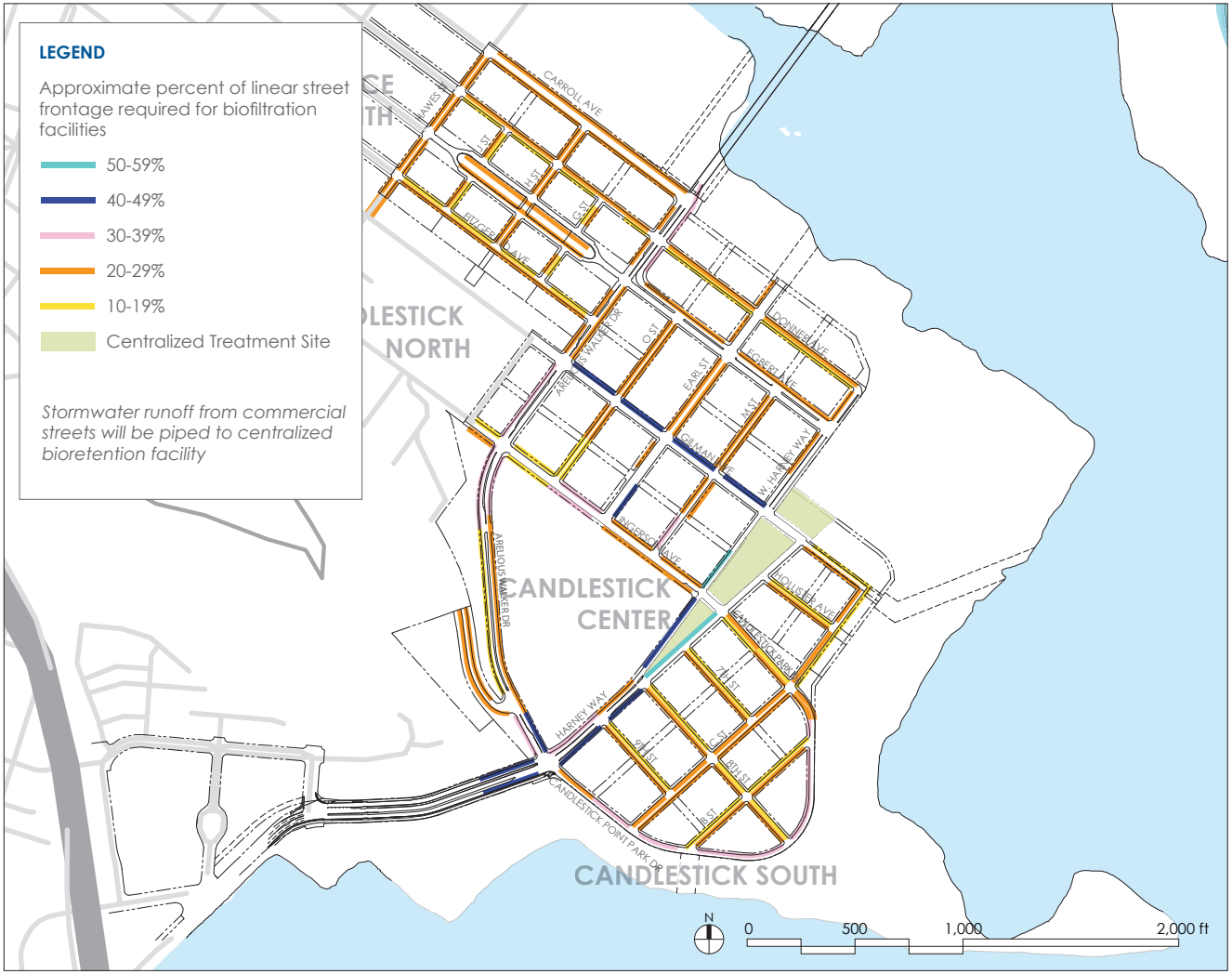

Juncus Leseurii/ Common rush


Fragaria chiloensis Beach Strawberry


Rhamnus californica 'Seaview' Dwarf Coffeeberry (3-4 ft.)


Polystichum munitum/ Western Sword Fern (2–4 ft)

Figure 5.3 – Approximate Percent of Linear Street Frontage Required for Biofiltration Facilities



5. STREETSCAPE ELEMENTS

5.4 SOIL CELLS

Soil Cells – Integrated Tree Planting Soil and Stormwater Treatment System

Soil Cells are a modular system that provides structural support for suspended paving. This system is used to provide urban trees with healthy, un-compacted planting soil beneath paving that can support H20 vehicular loading. This un-compacted soil results in optimal root growth that supports large trees. A void space within the cells holds water and air, reducing the risk of buckled pavement caused by roots seeking moisture and air at the surface. As a result, tree and sidewalk maintenance are minimized and trees live longer. The soil in Soil Cells also has the capacity to treat stormwater.

Given the many constraints and demand for space on streets in the Candlestick Point development, Soil Cells will be used to create an integrated system for tree planting soil and stormwater treatment with the benefit of:

- Providing more street trees (in some cases more than twice the trees)
- Growing healthier trees and treating stormwater
- Creating space for sidewalk dining and other uses, especially on retail streets
- Providing greater flexibility in street design

With regards to stormwater management, stormwater from the curb is directed into a catch basin or forebay, and then distributed through perforated distribution pipes at the top of the planting soil. Similar to flow through planters, the water is cleansed as it passes through the soil, soil microbes, and tree roots. The treated water is then collected in a sub-drain and returned to the storm drain main. Because the site is on existing fill of the Bay, the soil cell trenches will be lined to prohibit infiltration. The treatment soil will be above the hydraulic grade line of the storm drain main. In a large storm event, a separate bypass catch basin system along the curb will take excess water directly to the storm drain main.

Utility clear zones are planned in coordination with the tree and Soil Cell system such that no utility laterals will cross through the Soil Cells. The only infrastructure within the Soil Cell zone will be that which is directly a part of the Soil Cell system – stormwater inlet and outlet drain pipes, clean outs, and the irrigation system. In addition to utility clear zones for planned laterals, extra clear zones will be provided on each block face to allow for potential future utility lateral connections.

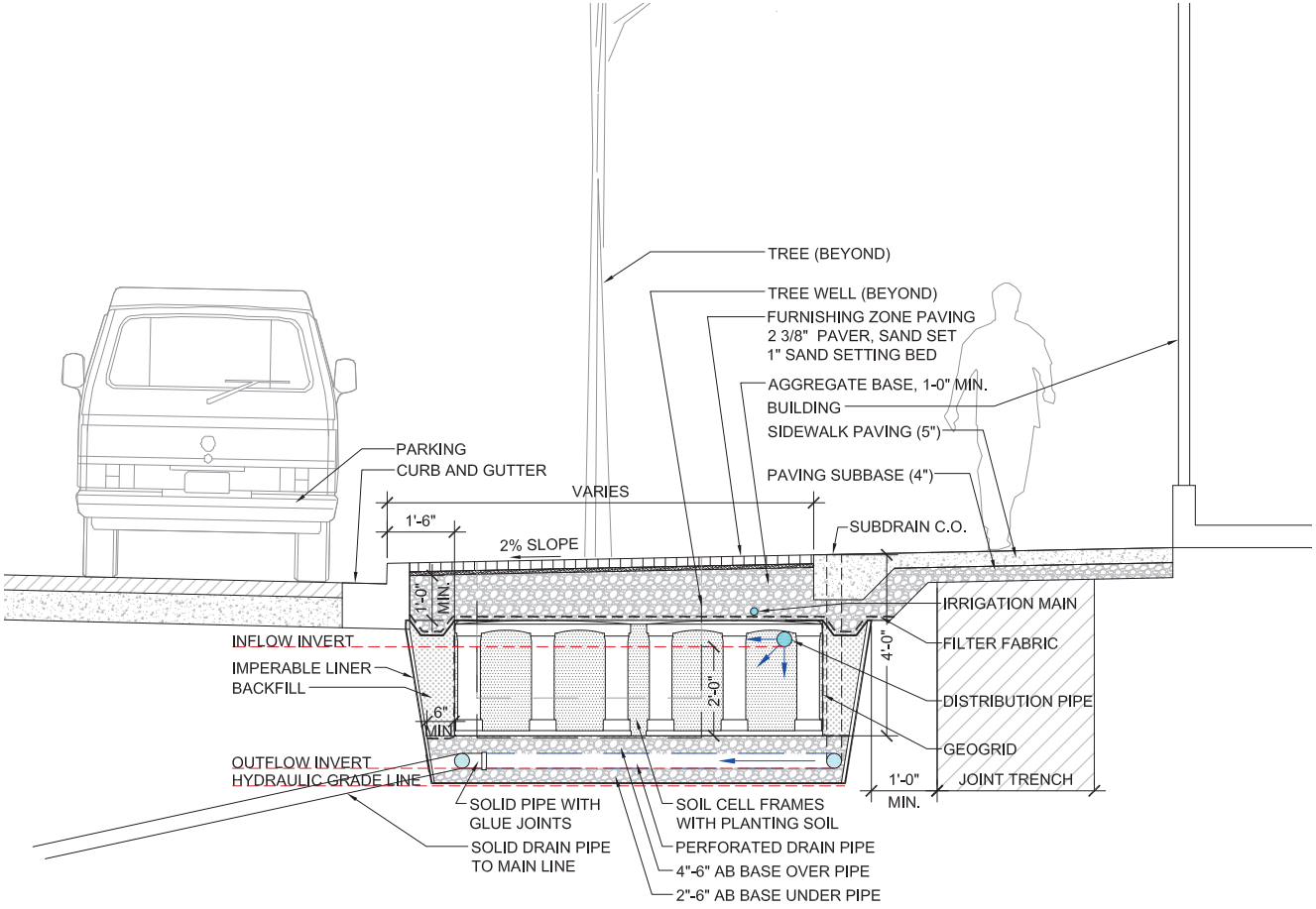
As a first of its kind installation in San Francisco, the Soil Cells are considered a pilot project and the maintenance of both the street trees as well as the integrated stormwater treatment system will be maintained by the Candlestick HOA or until such time that the City may choose to take on maintenance responsibility.



Soil cells illustrative section

5. STREETSCAPE ELEMENTS

5.4 SOIL CELLS



Soil cells cross section



Soil cells illustrative view

5. STREETSCAPE ELEMENTS

5.5 LANDSCAPE PLANTING

Landscaping in sidewalks and stormwater facilities will support unique neighborhood character and add variety and softness to the Candlestick Point streetscape. Each neighborhood will vary planting colors, forms, and textures to reinforce it's special character. In addition to neighborhood specific palettes, 2 street typologies will have unique planting palettes across multiple neighborhoods: The Spine and Mid-Block Breaks. The Spine will have bold and monochromatic plantings, supporting its role as Candlestick Point's iconic and civic street. Mid-Block Break planting will be more community oriented, and could include small-scale flower and vegetable gardens.

Sidewalk plant palettes have been developed to include a mix of locally-adapted Mediterranean plants, succulents from various arid climates and native California plants noted for their interesting form, flowers, and/or foliage. These plants are well-adapted to local San Francisco microclimates and most are also recommended for sidewalk landscaping by the SFDPW's Urban Forestry division.

Bioretention plant palettes (including shrub, ground cover & perennial) consider wetter circumstances and seasonal inundation conditions associated with bio-filtration and storm water management areas. Most are also recommended for low impact design (L.I.D.) by the San Francisco Public Utility Commission's (SFPUC's) San Francisco Stormwater Design Guidelines.

LANDSCAPE PLANTING

BASE CASE

THE SPINE *Bold, distinctive and colorful plant forms*



Ceanothus griseus horizontalis
'Yankee Point'/ Yankee Point
Ceanothus (2–3 ft.)



Nepeta x faassenii /
Ornamental Catmint (1 ft.)



Dietes 'bicolor'
Fortnight Lily (2-3 ft.)



Salvia gregii
Autumn Sage (3 ft.)



Limonium pereziim
Sea Lavender (18 in.)



Eschscholzia californica
California Poppy



Anigozanthos hybrids
Kangaroo Paw



Echium fastuosum
Pride of Madiera

MID-BLOCK BREAK *Community gardens*





RESIDENTIAL Typical sidewalk planting selections, palettes calibrated by neighborhood

Alice Griffith *Ornamental grasses and flowering perennials*


Correa 'Dusky Bells' / Australian Fuschia (2 to 2 1/2 ft.)


Phormium 'Tiny Tiger'


Lavendula intermedia 'Provence'


Dieties iridioides / African Iris


Miscanthus sinesus 'Morning Light' Silver Grass

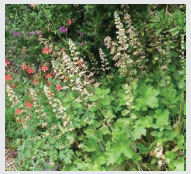

Stipa tenuissima Mexican Feather Grass


Tulbaghia violacea 'Silver Lace' Variegated Society Garlic


Salvia sonomensis Creeping Sage

Candlestick North *Flowering shrubs, perennials and ground covers, with year-round seasonal interest*


Fragaria chiloensis Beach Strawberry


Heuchera maxima Island Alum Root


Polystichum munitum/ Western Sword Fern (2–4 ft)


Heuchera micrantha Coral Bells (8 in. - 2 ft.)


Helleborus foetidus Bear's Foot

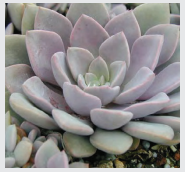

Helleborus orientalis Lenten Rose


Loropetalum Chinese Chinese Fringe Flower (6-10ft.)


Hemerocalis var, Daylily varieties

Candlestick South *Sun-loving and drought-tolerant plants with visually striking forms, flowers and foliage*


Erigeron glaucus Beach Aster


Graptoveria 'Debbi' Graptoveria


Aeonium arboreum varieties Tree Aeonium


Anigozanthos hybrids Kangaroo Paw


Phormium tenax hybrids 'Jack Spratt' New Zealand Flax (dwarf varieties) 1ft.


Agave attenuata 'Nova Foxtail Agave


Erigeron karvinskianus Santa Barbara Daisey


Senicio serpens Blue Chalksticks

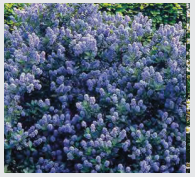
Candlestick Center *Colorful flowering shrubs, ground covers and perennials that enliven the streetscape*


Loropetalum Chinese Chinese Fringe Flower (6-10ft.)


Nandina domestica 'Fire Power' Nandina (1-2 ft.)


Nandina domestica 'Harbor Dwarf'


Mahonia repens dwarf Creeping Oregon Grape Dwarf


Ceanothus griseus horizontalis 'Yankee


Erigeron karvinskianus Santa Barbara Daisy


Fragaria chiloensis Beach Strawberry


Hemerocalis var, Daylily varieties

5. STREETSCAPE ELEMENTS

5.6 STREET FURNITURE

Inspired by the site's maritime history, unique physical setting, and distinct ecology, Candlestick Point's street furniture will support neighborhood identity through variation, respond to specific site influences, and create a consistent design palette.

Variation in street furniture will include form, materially and scale, and be designed to retain the notion that all the elements belong to the same streetscape family.

Manufactured and custom designed street furniture options continue to be explored in concert with City staff, with specific consideration being made for accessibility, durability, and maintenance issues. Specific selections will be made for Sub-Phase submittals.

The following pages illustrate base case and special alternate options for a broad range of street furniture elements:

- Bench
- Bike rack
- Newsrack
- Trash / recycling receptacle

BENCHES

BASE CASE (AS SHOWN, OR SIMILAR)

ALL STREETS **Manufactured Bench Options**



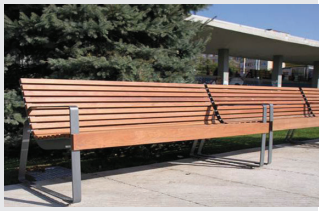
Woody by MM Cite



Neoliviano by Landscapeforms



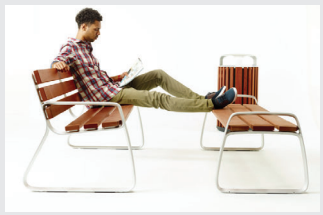
Portiqoa by MM Cite, or similar



Preva Urbana by MM Cite, or similar

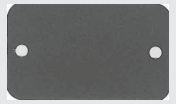


MultipliCITY by Landscapeforms

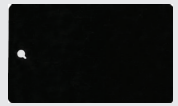


FGP by Landscapeforms

ALL STREETS
Powder Coat - Grey, RAL 840 M



THE SPINE
Powder Coat- Black RAL 9005



POTENTIAL SPECIAL BENCHES

ALL STREETS **Manufactured Bench Options**



Rough & Ready by Streetlife



CorTen Seat Strips by Streetlife



Delicias by Escofet

THE SPINE

Social and Civic-Scaled

Large scale benches shaped for social interaction, made of primarily of concrete and other monolithic materials.

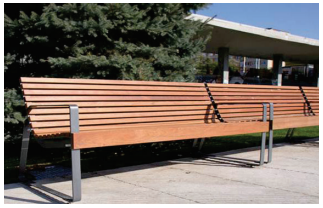
May include the following selections, or similar



Woody by MM Cite



Socrates by Escofet



Preva Urbana by MM Cite, or similar

COMMERCIAL

Flexible and Durable

Places to sit, lean on, eat over, and engage with the public realm in a multitude of ways. A wide range of materials and finishes support the flexible nature of these benches.



Neoliviano by Landscapeforms

PERIMETER PARK

Clustered and Comfortable

Grouped around main entries to parks and special moments in the streetscape, these primarily wooden benches will have backs, arm rests, and other comfort features to accommodate extended sitting time.



Portiqoa by MM Cite, or similar

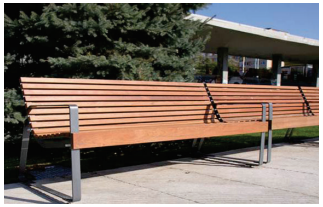
RESIDENTIAL

Neighborhood Specific

Made primarily of wood, these benches relate to other street furniture by subtly incorporating metal, concrete and other materials.

Alice Griffith

Welcoming and more domestic in form and style than other neighborhoods



Preva Urbana by MM Cite, or similar

Candlestick South

Softer material with more flexible forms that relate to the adjacent State park

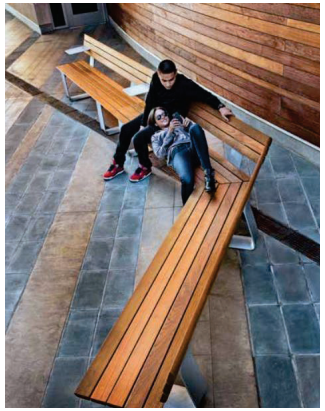


FGP by Landscapeforms

Bench by Lab 23, or similar

Candlestick North

Clean lines, slightly larger and more communal in configuration than other neighborhoods, these benches respond to the higher residential densities and adjacent commercial uses.





MultipliCITY by Landscapeforms

MID-BLOCK BREAK

Informal and private

Lightweight and moveable chairs, benches, and stools make these more informal spaces private garden streets for local residents.



Park chair by Neuland IndustrieDesign, or similar

5. STREETSCAPE ELEMENTS

5.6 STREET FURNITURE

Bike racks, news racks, and other street furniture should have a consistent palette and visual relationship to minimize visual clutter in the streetscape.

To the right are examples of potential street furniture.

OTHER STREET FURNITURE

BASE CASE

ALL STREETS **Standard Furniture and Bike Racks**

Installations larger than 3 racks shall be placed "Bike Corrals" in the parking zone of the street.



No Scratch - Tofino by Sportworks, or similar

ALL STREETS

THE SPINE

Galvanized Steel

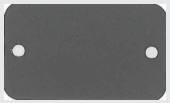




Chase Park by Landscape Forms, or similar

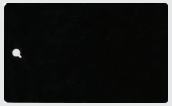
ALL STREETS

Powder Coat - Grey, RAL 840 M



THE SPINE

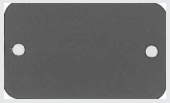
Powder Coat- Black RAL 9005



POTENTIAL SPECIAL

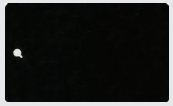
ALL STREETS

Powder Coat - Grey, RAL 840 M



THE SPINE

Powder Coat- Black RAL 9005



5. STREETSCAPE ELEMENTS

5.6 STREET FURNITURE

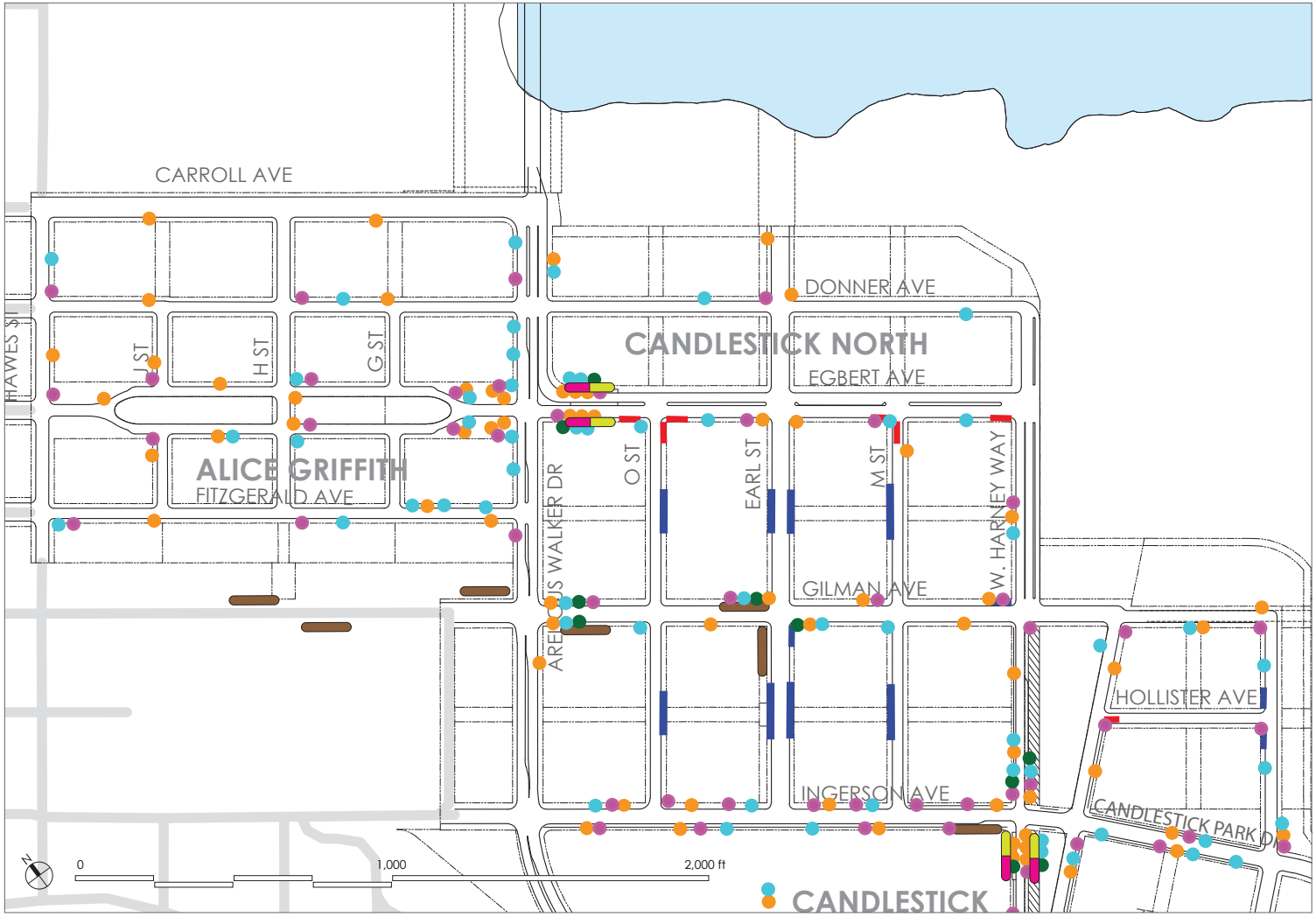
Furniture Locations

Street furniture locations respond to specific street typologies, adjacent land uses and transit stops. General locations are shown to the right. Specific locations will be determined on a block-by block basis at Sub-Phase submittal phases of design and all sidewalk furniture should be installed as per the dimensional and clearance requirements and accessibility guidelines established by the City of San Francisco in the Better Streets Plan, SFDPW Sidewalk Landscape Guidelines, and applicable DPW orders, unless otherwise noted.

Benches: All seating areas will include accessible elements including a minimum of 36" level surface area adjacent to each bench to allow for companion seating. Smaller benches may be oriented perpendicular to the path of travel to allow for companion seating space. Accessible seating locations are to be identified with a permanent sign. Seating must be set back at minimum 2 feet and tables set back at minimum 2.5 feet from the throughway zone.

Bike racks: Bike rack installations up to 3 racks may be located in the Furnishing Zone outside of the Corner Clear Zone. Installations near corners should be designed as an "alcove" with diverting elements such as a trashcan, tree, or planter (min. 42" in height) between the racks and corner. Installations larger than 3 racks shall be placed in "Bike Corrals" in the parking zone of the street.

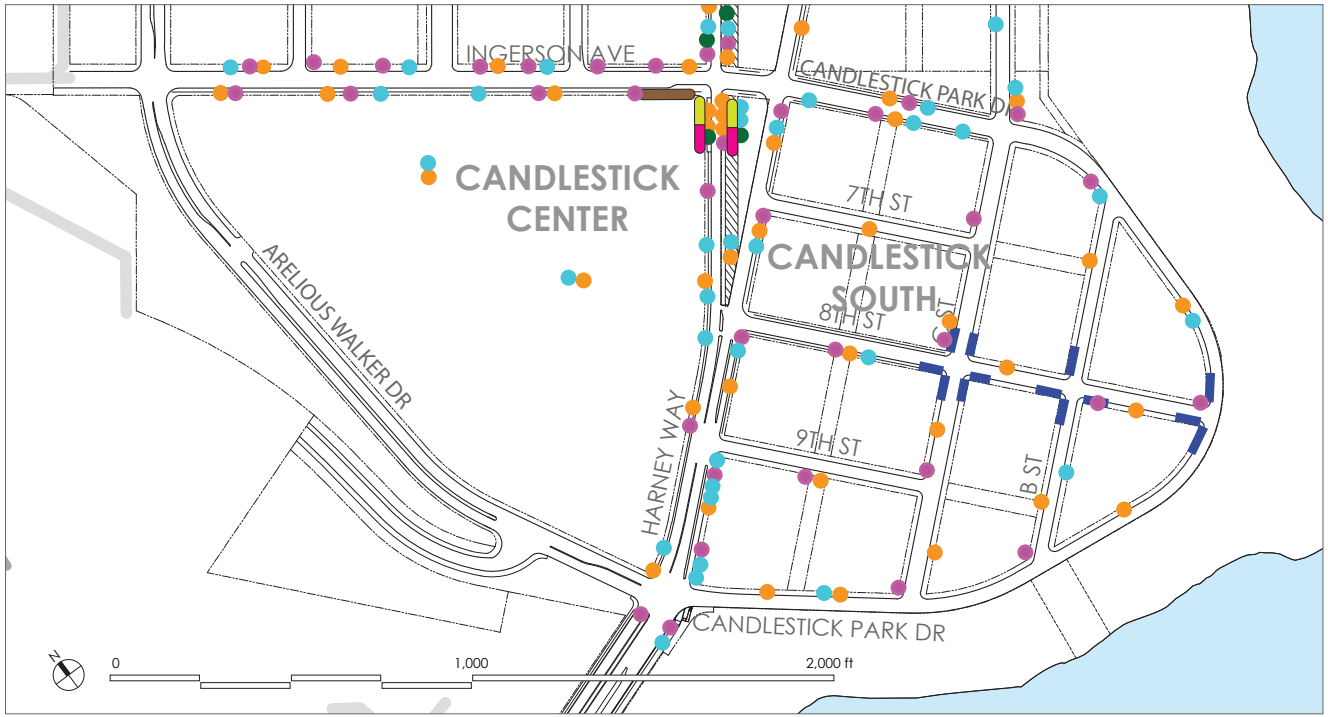
Figure 5.4 – Street Furniture in Alice Griffith and Candlestick North



5. STREETSCAPE ELEMENTS

5.6 STREET FURNITURE

Figure 5.5 – Street Furniture in Candlestick Center and Candlestick South



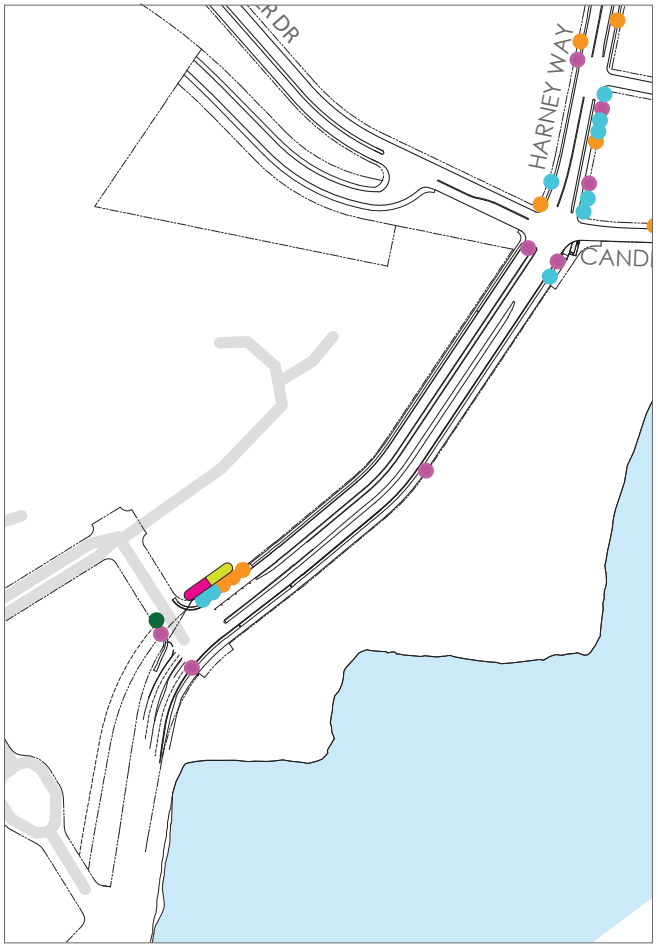
LEGEND

STANDARD
EXTENDED
MID-BLOCK

- UNFURNISHED Bulb-Out
- Furnished Bulb-Out (PATH to WATER)
- BRT/CPX Stop
- 29 Sunset Stop
- Trash / Recycling receptacle*
- 3 Newsracks
- 3 Bike Racks
- Bench

* Not shown: Trash / recycling receptacles at primary entrances to parks.

Figure 5.6 – Street Furniture on Harney Way



5. STREETSCAPE ELEMENTS

5.7 STREET LIGHTS

Street lights are one common element uniting many different typologies and neighborhoods in Candlestick Point. The Spine is the only typology that receives a special lighting condition. Street lights have bee selected from the catalogue of standards provided in SFPUC's "A Guide to San Francisco Street Lights".

Street lights along The Spine support its role as a singular and unifying element by use of the tallest roadway and pedestrian lights in Candlestick Point. The mid-block breaks and internal streets at Candlestick Center may have the smallest lighting, including bollards and building mounted fixtures.

Conceptual spacing and optic assumptions are outlined in this section. LED optics will be utilized on all street lights, per City standards. Spacing to be refined at Sub-Phase submittal phase. All street lighting will be designed to ensure that the overall light levels conform to SF DPW standards. Higher foot-candle standards should be developed for bus stops and other areas of significant pedestrian activity. Streetlights should typically be located away from the curb and the area between two parking spaces (typically within a 4' area generally defined as the last 2' of two adjacent spaces).

STREET LIGHTS

BASE CASE

THE SPINE

SFPUC's "A Guide to San Francisco Street Lights" Type: LS102

Fixture: Philips Roadstar GPLM

Pole: Valmont 28.5' height

See SFPUC's "A Guide to San Francisco Street Lights" for pole and fixture details

Galvanized pole, Powder Coat-Black RAL 9005, textured

Aluminum light fixture, Powder Coat-Black RAL 9005, textured

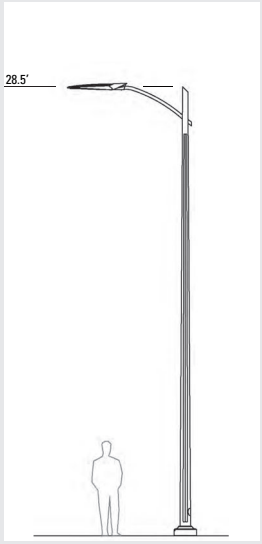




Figure 5.7 – LS102

RESIDENTIAL **PERIMETER** **PARK** **COMMERCIAL**

SFPUC's "A Guide to San Francisco Street Lights" Type: LS102 / LS100

Fixture: Philips Roadstar

Pole: Valmont 28.5' and 22' height

See SFPUC's "A Guide to San Francisco Street Lights" for pole and fixture details

Galvanized pole, Powder Coat-Grey RAL, textured

Aluminum light fixture, Powder Coat-Grey RAL 840-M textured

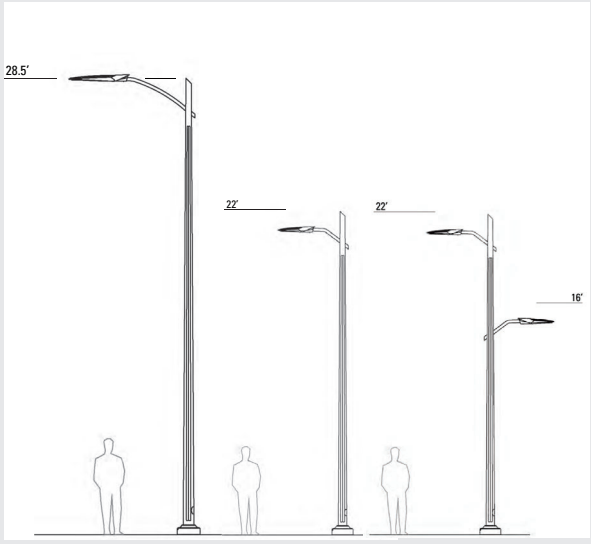


Figure 5.8 – LS102 Figure 5.9 – LS100 Figure 5.10 – LS100 with pedestrian light

PARK AND PLAZA LIGHTS

Manufacturer/Model: Louis Poulsen/LP-170
Size:12' Height Pole

Materials/ Finish: Cast aluminum SFPUC Approved Light



BASE CASE

Graphite grey pole and fixture

POTENTIAL SPECIAL

Powdercoat RAL 840-M, Pole and fixture

PEDESTRIAN STREET LIGHTS

For most streets, adequate pedestrian lighting will be provided by street lights. Pedestrian lights may be used along sidewalks in cases where streetlights do not provide sufficient illumination for pedestrians.

BASE CASE

SFPUC's "A Guide to San Francisco Street Lights" Type: LS101

Fixture: Philips Roadstar

Pole: Valmont 16' height

See SFPUC's "A Guide to San Francisco Street Lights" for pole and fixture details

THE SPINE

Galvanized pole, Powder Coat-Black RAL 9005, textured

RESIDENTIAL **PERIMETER** **PARK** **COMMERCIAL**

Galvanized pole, Powder Coat-Grey RAL 840-M, textured

Aluminum light fixture, Powder Coat-Grey RAL 840-M textured

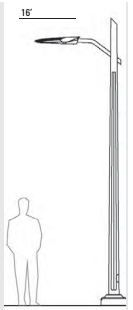


Figure 5.11 – LS101

5. STREETSCAPE ELEMENTS

5.7 STREET LIGHTS

PEDESTRIAN STREET LIGHTS

POTENTIAL SPECIAL

ALL STREETS

Other pedestrian lights may be used to complement the design of certain special moments in the streetscape, such as along the park-like landscapes of the Park Streets. Whenever possible, pedestrian lights will be selected from A Guide to San Francisco Street Lights. Custom light selections may also be made in consultation with SFPUC and DPW. All light selections will be submitted for review as part of the Sub-Phase Application and Improvement Plan submittals.

Custom Street Light

Custom street lights may be designed and used in lieu of City standards. Custom street lights used in San Francisco, pictured below, provide a unique and unifying element to the streetscape that instantly contributes to the sense of place. Designs will be in concert with the street furniture materials and forms. Initial custom pole concepts include simple tapered profiles with corten steel, wood, and powder coated finishes. Attached light fixtures will be positioned and calibrated to achieve maximum efficiency with a minimum of elements.

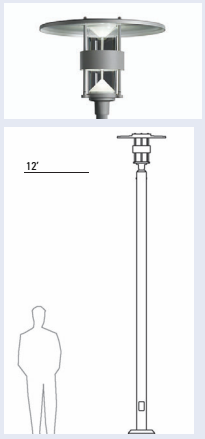
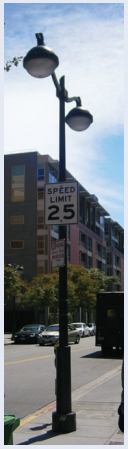
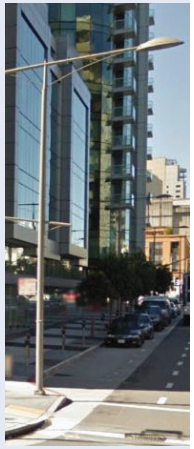


Figure 5.13 – LS170

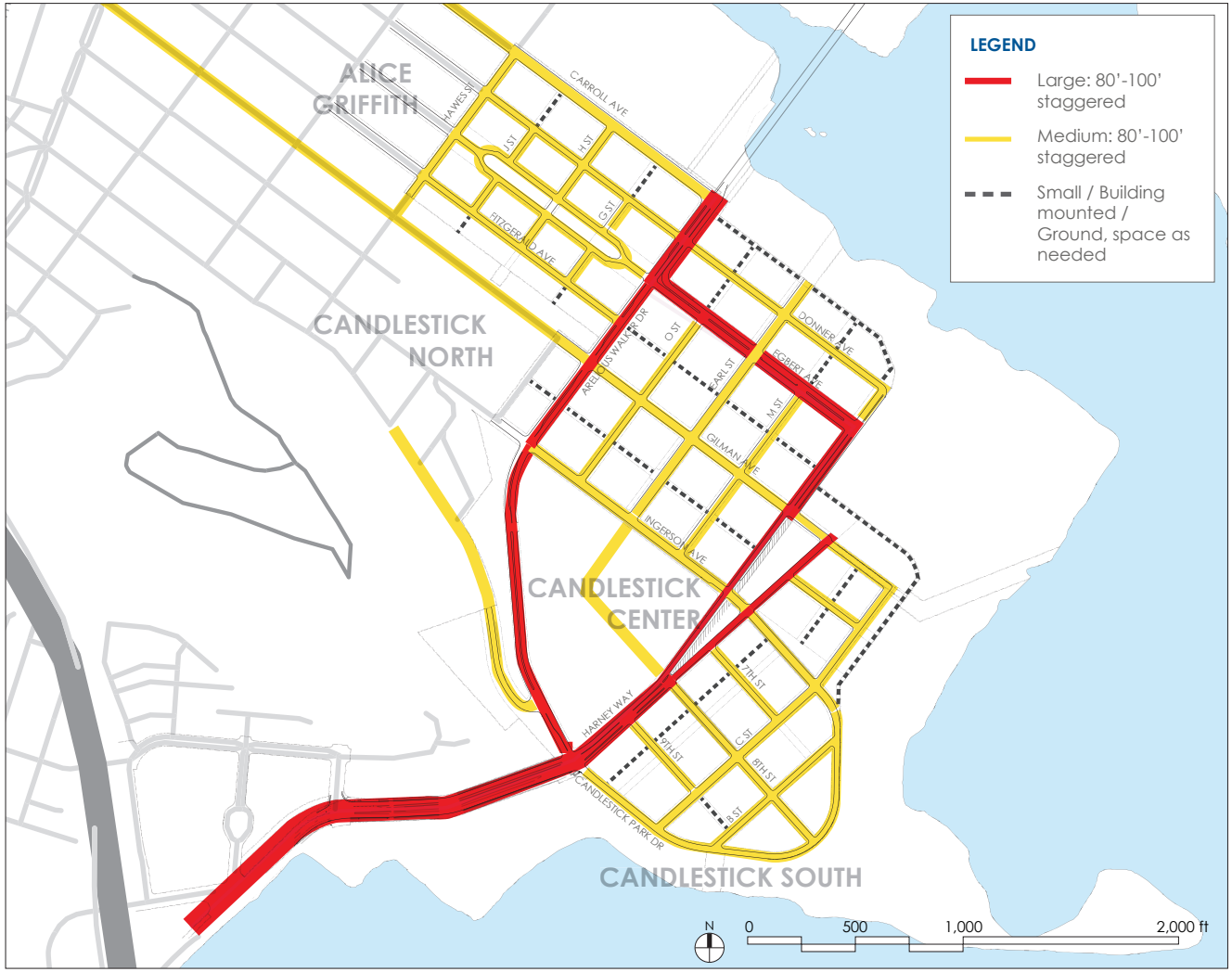


Mission Bay



Rincon Hill

Figure 5.12 – Base Case Street Light Spacing Assumptions



5. STREETSCAPE ELEMENTS

5.8 UTILITY COVERS

Using uniform utility vault materials across Candlestick Point will minimize the variety of materials and ground plane textures in the streetscape. Custom utility covers may be used in special areas

All utility covers will have a smooth slip-resistant surface treatment.

Traffic signal boxes, utility boxes, and backflow preventers will be painted a uniform color.

The sidewalk at the curb returns should not contain any pull boxes or utility vaults and should be free of vertical elements.

UTILITY COVERS

BASE CASE

ALL STREETS



SF standard utility box, or similar



Typical backflow preventer covers, or similar

UTILITY VAULT

POTENTIAL SPECIAL COVER

ALL STREETS



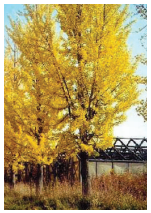
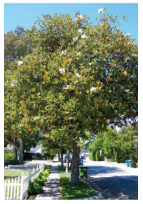
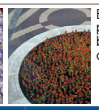
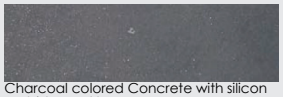
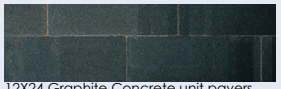
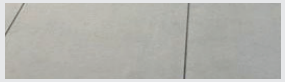
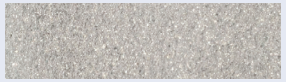
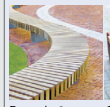
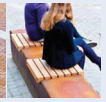
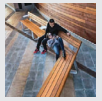
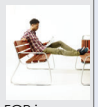
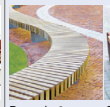
SF standard utility box with cover artwork



Mission Bay custom utility vault

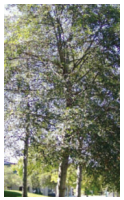
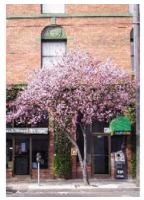
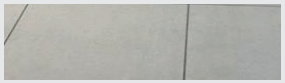
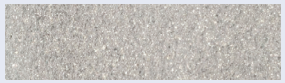
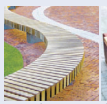
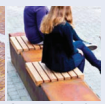
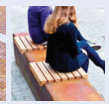
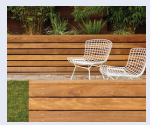
5. STREETSCAPE ELEMENTS

5.9 STREETSCAPE ELEMENTS MATRIX

	THE SPINE Iconic and Civic Scaled		RESIDENTIAL STREETS Consistent and Calm		COMMERCIAL Energetic, Colorful, and Engaging	
POTENTIAL STREET TREES	**A. Park Edge**  Ginkgo biloba 'Autumn Gold' **B. Residential/Pedestrian**  Ginkgo biloba 'Saratoga' **C. Retail Edge**  Ginkgo biloba 'Princeton Sentry'		**Neighborhood specific with unique features**  Alice Griffith Southern Magnolia  Candlestick North Chinese Pistache  Candlestick South Cajeput Tree		**Light, hardy and high canopies**  Catalina Ironwood  Golden Rain Tree*  Victorian Box  Brisbane Box  Bronze Loquat  Ginkgo biloba 'Princeton Sentry'
LANDSCAPE PLANTING	  Bold monochromatic planting palette potentially designed to be integrated into the overall design of The Spine		   Neighborhood specific palettes		   Neighborhood specific palettes	
	Base	Potential Special Material / Furniture	Base	Potential Special Material / Furniture	Base	Potential Special Material / Furniture
CURB AND EDGE ZONE	Concrete with silicon carbide sparkle		Standard concrete	Concrete with silicon carbide sparkle	Concrete with silicon carbide sparkle	
SIDEWALK THROUGHWAY ZONE	 Charcoal colored Concrete with silicon carbide sparkle	 12X24 Graphite Concrete unit pavers, or similar	 Standard concrete	 Concrete with silicon carbide sparkle	 Concrete with silicon carbide sparkle	 12X24 Graphite Concrete unit pavers, or similar
SIDEWALK FURNISHING ZONE	 Concrete unit pavers		 Concrete unit pavers		 Concrete unit pavers	
STREET FURNITURE	 Woody by MM Cite  Preva Urbana by MM Cite	 Rough & Ready by Streetlife  CorTen Seat Strips by Streetlife  Delicias by Escofet	 Preva Urbana in Alice Griffith  MultipliCITY in Candlestick North  FGP in Candlestick South	 Rough & Ready by Streetlife  CorTen Seat Strips by Streetlife  Delicias by Escofet	 Neoliviano by Landscapeforms	 Rough & Ready by Streetlife CorTen Seat Strips by Streetlife Delicias by Escofet
STREET LIGHTS	 San Francisco Street Light Plan type: LS102 Galvanized pole, Powder Coat-Black RAL 9005, textured Aluminum light fixture, Powder Coat-Black RAL 9005, textured		 San Francisco Street Light Plan type: LS102 / LS100 Galvanized pole, Powder Coat-Grey RAL 840-M, textured Aluminum light fixture, Powder Coat-Grey RAL 840-M textured		 San Francisco Street Light Plan type: LS102 / LS100 Galvanized pole, Powder Coat-Grey RAL 840-M, textured Aluminum light fixture, Powder Coat-Grey RAL 840-M textured	

5. STREETSCAPE ELEMENTS

5.9 STREETSCAPE ELEMENTS MATRIX

PARK STREETS Diverse, Expressive, and Active		PERIMETER STREETS Visually Porous and Pedestrian		MID-BLOCK BREAK Intimate, Privately Designed	
Expressive and active blooms Potential Broad Canopy Species  Ginkgo 'Autumn Gold'  White Alder  Red Flowering Gum Potential Ornamental Accent Species  Olive Tree 'Swan Hill'  Kwanzan Cherry		**Showing and breezy**  Holly Oak  Native Willow  Primose Tree  Willowleaf Peppermint		**Smaller, ornamental and offer seasonal changes**  Krautervesuvius Plum  Weeping Bottlebrush  Olive Tree	
   Neighborhood specific palettes		   Neighborhood specific palettes		  Community Gardens	
Base	**Potential Special Material / Furniture**	**Base**	**Potential Special Material / Furniture**	**Base**	**Potential Special Material / Furniture**
Standard concrete	Concrete with silicon carbide sparkle	Standard concrete	Concrete with silicon carbide sparkle		
 Standard concrete	 Concrete with silicon carbide sparkle	 Standard concrete	 Concrete with silicon carbide sparkle		 Cobble pavers
 Concrete unit pavers		 Concrete unit pavers			 Concrete unit pavers
 Portiqoa by MM Cite, or similar	 Rough & Ready by Streetlife  CorTen Seat Strips by Streetlife  Delicias by Escofet	 Portiqoa by MM Cite, or similar	 Rough & Ready by Streetlife  CorTen Seat Strips by Streetlife  Delicias by Escofet		 Potential special furniture
 San Francisco Street Light Plan type: LS102 / LS100  Galvanized pole, Powder Coat-Grey RAL 840-M, textured Aluminum light fixture, Powder Coat-Grey RAL 840-M textured		 San Francisco Street Light Plan type: LS102 / LS100 Galvanized pole, Powder Coat-Grey RAL 840-M, textured Aluminum light fixture, Powder Coat-Grey RAL 840-M textured			Pedestrian, building mounted, ground lighting


5
Parkside Drive
6
THE GROVE
7
THE VILLAG
SLOUGH
SLOUG
CRANE
BAY
1
3
4
5
6
8



6. TYPICAL STREET LAYOUTS

The street cross-sections shown in Chapter 6 of this document represent are substantially in conformance with the cross-sections represented in the Vesting Tentative Subdivision Map (VTSM). There is always some consideration for minor street section revisions as the design progresses from the Infrastructure Plan to the VTSM to 100% public improvement plans. The final cross sections may change slightly in response to detailed design considerations and input from the DPW Task Force and other City affected Departments. One such cross-section that deviates from the VTSM is Arelious Walker Drive south of Ingerson Avenue, which now includes a pedestrian sidewalk on the western side of the street.

6. TYPICAL STREET LAYOUTS

6.1 STREETSCAPE ELEMENT PLACEMENT MATRIX

Table 6.1 – Placement Guidelines Summary Chart

STREETSCAPE ELEMENT	THE SPINE	RESIDENTIAL STREET	PARK STREET	COMMERCIAL	PERIMETER STREET	MID-BLOCK BREAK
Benches	In furnishing zone, at mid-blocks or corners, set back from throughway zone to maintain clear passage	In furnishing zone or bulb-outs, at mid-blocks and corners, set back from throughway zone to maintain clear passage	In furnishing zone, at mid-blocks or corners, set back from throughway zone to maintain clear passage	In furnishing zone, at mid-blocks, set back from throughway zone to maintain clear passage	In furnishing zone, at mid-blocks or corners, set back from throughway zone to maintain clear passage	Permitted
Bike Racks	In furnishing zone, at transit stops, entries to open spaces, and near building entrances	In furnishing zone or bulb-outs, clustered near intersections and building entrances	In furnishing zone or bulb-outs, clustered near intersections, near building entrances, and at primary entries to parks	In furnishing zone or bulb-outs, clustered near intersections, and near building entrances	In furnishing zone or bulb-outs, clustered near intersections, building entrances and access to open spaces	Permitted
Newsracks	In furnishing zone, at transit stops and high-traffic pedestrian areas	At transit stops in furnishing zone	Discouraged	In furnishing zones, at transit stops and high-traffic pedestrian areas	Discouraged	Discouraged
Trash / Recycling Receptacles	In furnishing zone, at transit stops, at entries to open spaces and high-traffic pedestrian areas. Per Better Streets Plan, every 200' of commercial frontage	In furnishing zone near intersections	In furnishing zone, at primary entries to parks and near intersections	In furnishing zone or bulb-outs, clustered near intersection and every 200' as outlined in Better Streets Plan	In furnishing zones, at primary entries to parks and near intersections	Permitted
Utility Vaults	Permitted in all sidewalk zones, preferred location is edge zone, followed by throughway	Permitted in all sidewalk zones, preferred location is edge zone, followed by throughway	Permitted in all sidewalk zones, preferred location is edge zone, followed by throughway	Permitted in all sidewalk zones, preferred location is edge zone, followed by throughway	Permitted in all sidewalk zones, preferred location is edge zone, followed by throughway	Discouraged
Utility Boxes	In furnishing zone, preferably away from high-traffic areas	In furnishing zone, preferably away from high-traffic areas	In furnishing zone, preferably away from high-traffic areas	In furnishing zone, preferably away from high-traffic areas	In furnishing zone, preferably away from high-traffic areas	Discouraged
Street Lights	In furnishing zone and medians, at standard spacing	In furnishing zone, at standard spacing	In furnishing zone and medians, at standard spacing	In furnishing zone and medians, at standard spacing, potentially in ground plane, bollards and building mounted in retail areas	In furnishing zone, at standard spacing	Small scale, bollards and building mounted
Street Trees	In furnishing zone and medians, at standard spacing	In furnishing zone, at standard spacing	In furnishing zone and medians, at standard spacing	In furnishing zone, at standard spacing	In furnishing zone, at standard spacing	Permitted
Landscape Planting	Permitted in sidewalk furnishing zone, curb extensions and medians	Permitted in sidewalk furnishing zone, curb extensions and medians	Permitted in sidewalk furnishing zone, curb extensions and medians	Permitted in sidewalk furnishing zone, curb extensions and medians	Discouraged	Permitted
Stormwater Treatment	Flow-through planters in furnishing zone or soil cells with SFPUC approval	Flow-through planters in furnishing zone or soil cells with SFPUC approval	Flow-through planters in furnishing zone or soil cells with SFPUC approval	Soil cells with SFPUC approval	Flow-through planters in furnishing zone or soil cells with SFPUC approval	N/A

6. TYPICAL STREET LAYOUTS

6.2 TYPICAL STREET CORNER LAYOUT

Typical street corners are the preferred location for clustering some utilities, furnishings, and other streetscape elements.

No sidewalk furnishings shall be within the Corner Clear Zone, except as required for pedestrian or vehicular safety. The first sidewalk furnishing element adjacent to the Corner Clear Zone shall be a minimum of 42" in height to divert pedestrian traffic to the sidewalk throughway Zone.

The conceptual layout to the right shows the placement of typical furnishings, biofiltration, lighting, and signage. Exact location of these elements to be determined as each sub-phase of the project is designed.

A representative sample of typical street layouts and sections are shown on the following pages. Cross-sections for all streets can be found in the CPHPS2 Infrastructure Plan.

Figure 6.1 – Typical Street Corner Layout

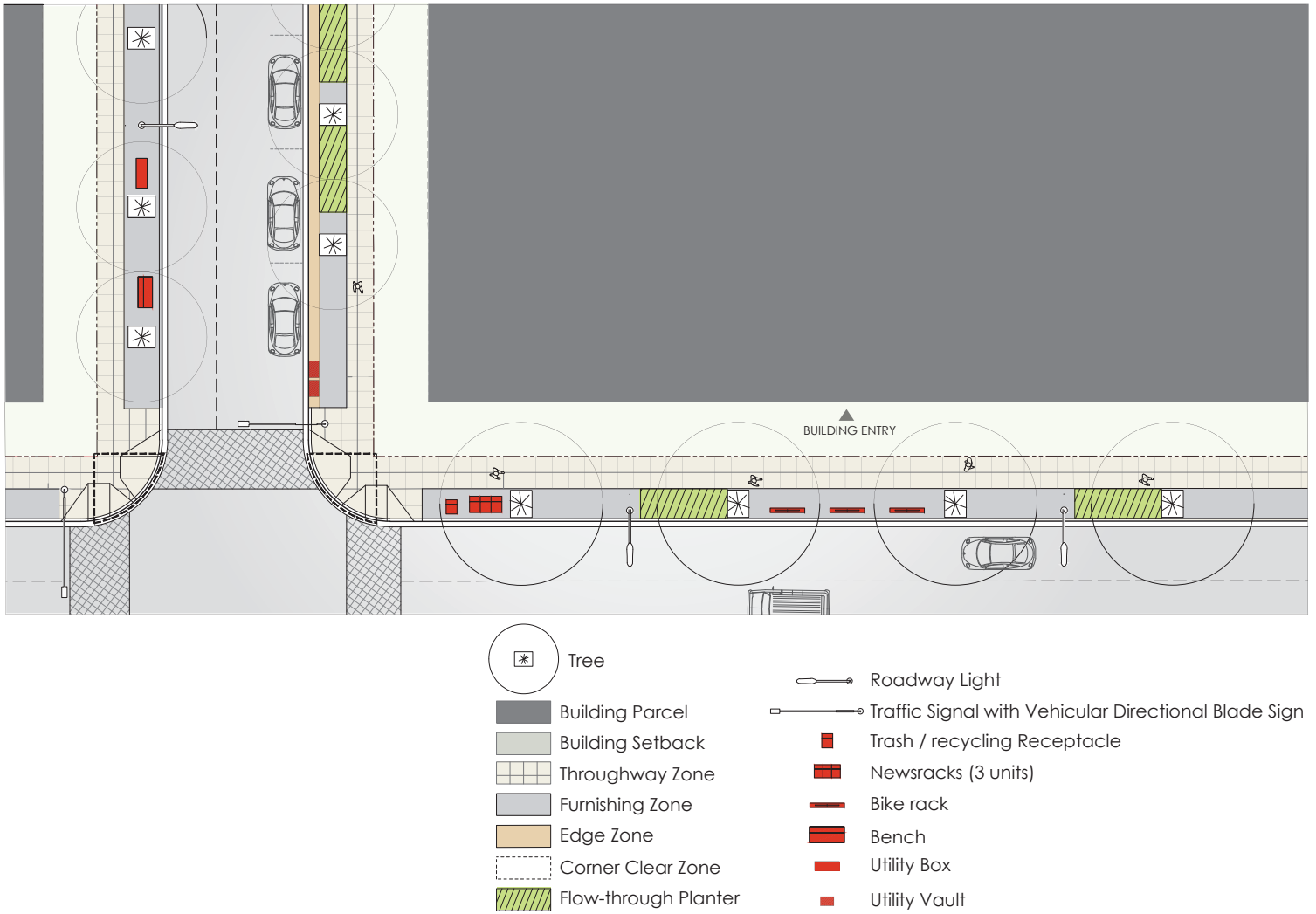
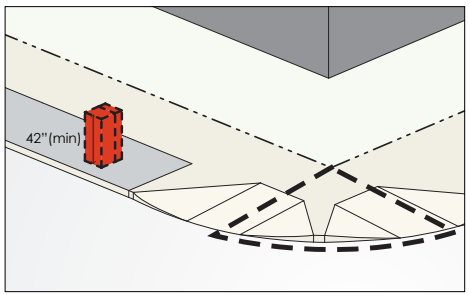


Figure 6.2 – Sidewalk Furnishing Element outside the corner clear zone

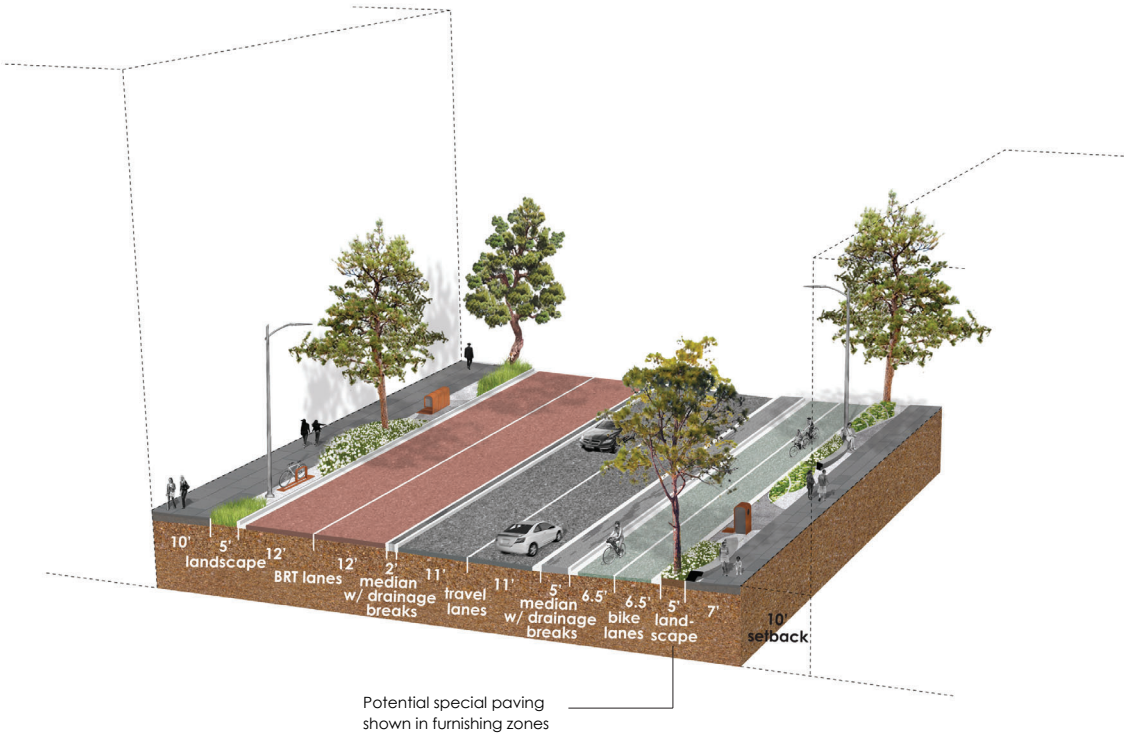


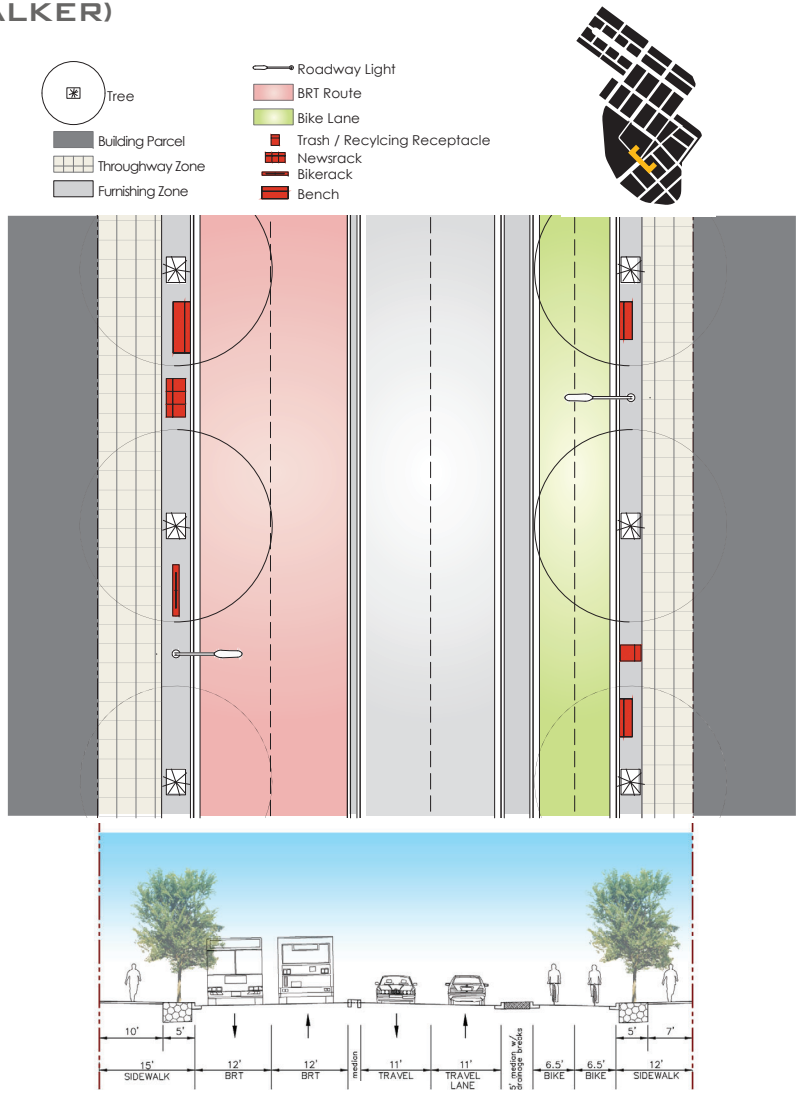
6. TYPICAL STREET LAYOUTS

6.3 THE SPINE (FULL) : HARNEY WAY (NORTH OF ARELIOUS WALKER)

Neighborhood specific streetscape elements:

- Sparkle concrete in furnishing zone
- Potential special material : Custom pattern in furnishing zone (as shown)
- Furniture and landscape areas shaped to contours of custom pattern.



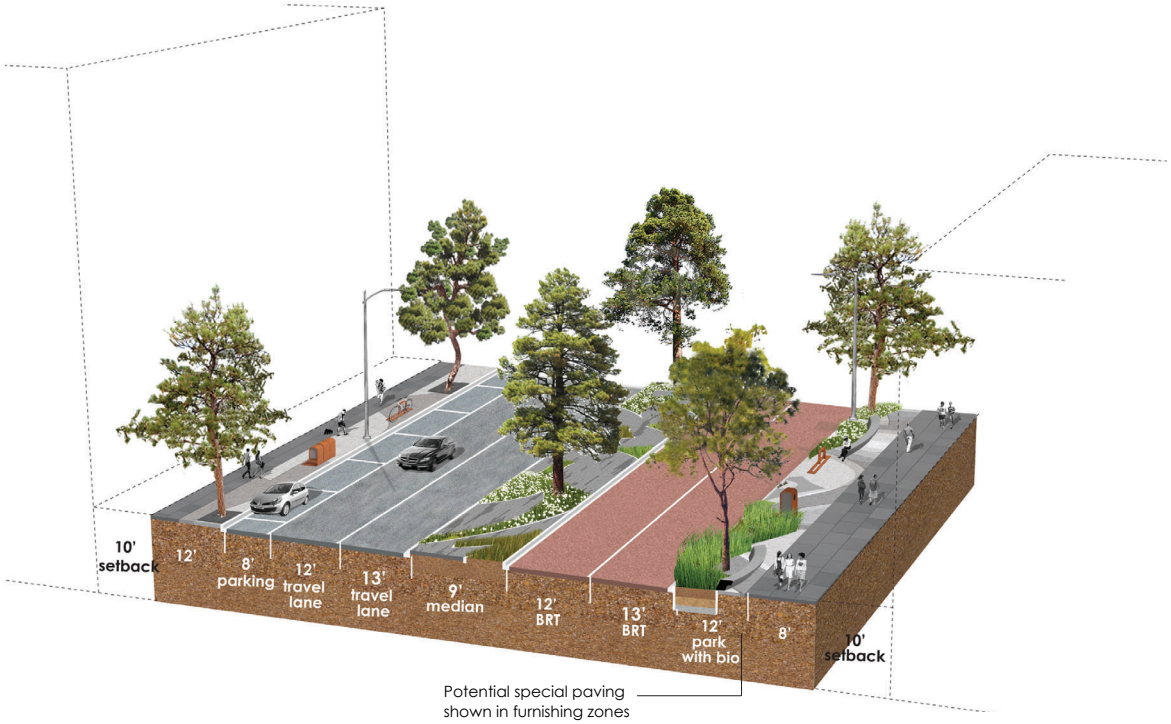


6. TYPICAL STREET LAYOUTS

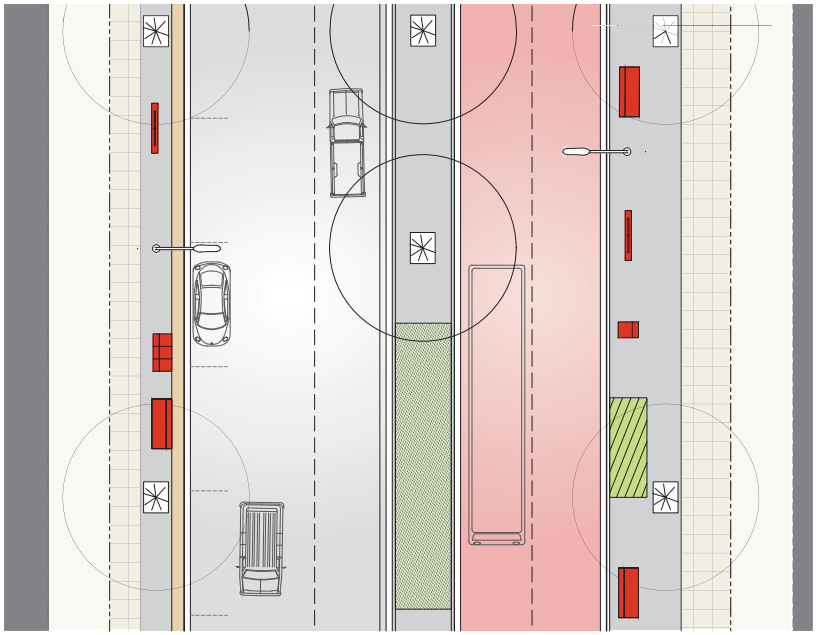
6.4 THE SPINE (FULL) : EGBERT AVENUE

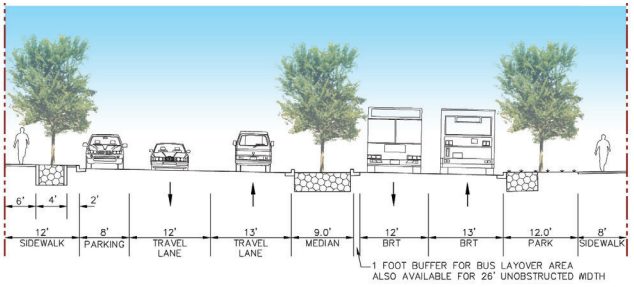
Neighborhood specific streetscape elements:

- Sparkle concrete in furnishing zone
- Furniture detailing/materials
- Landscape (trees and biofiltration)
- Potential special material : Custom pattern in furnishing zone (as shown)
- Furniture and landscape areas shaped to contours of custom pattern. (as shown)







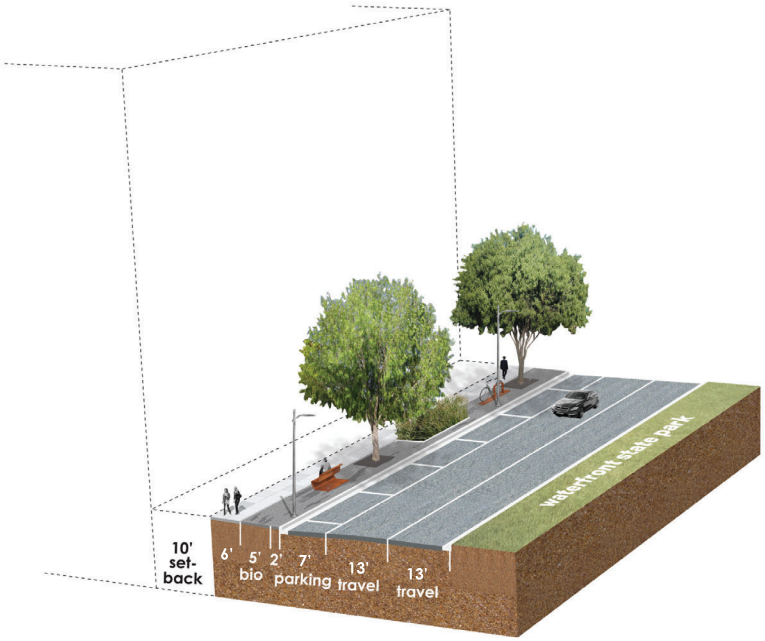


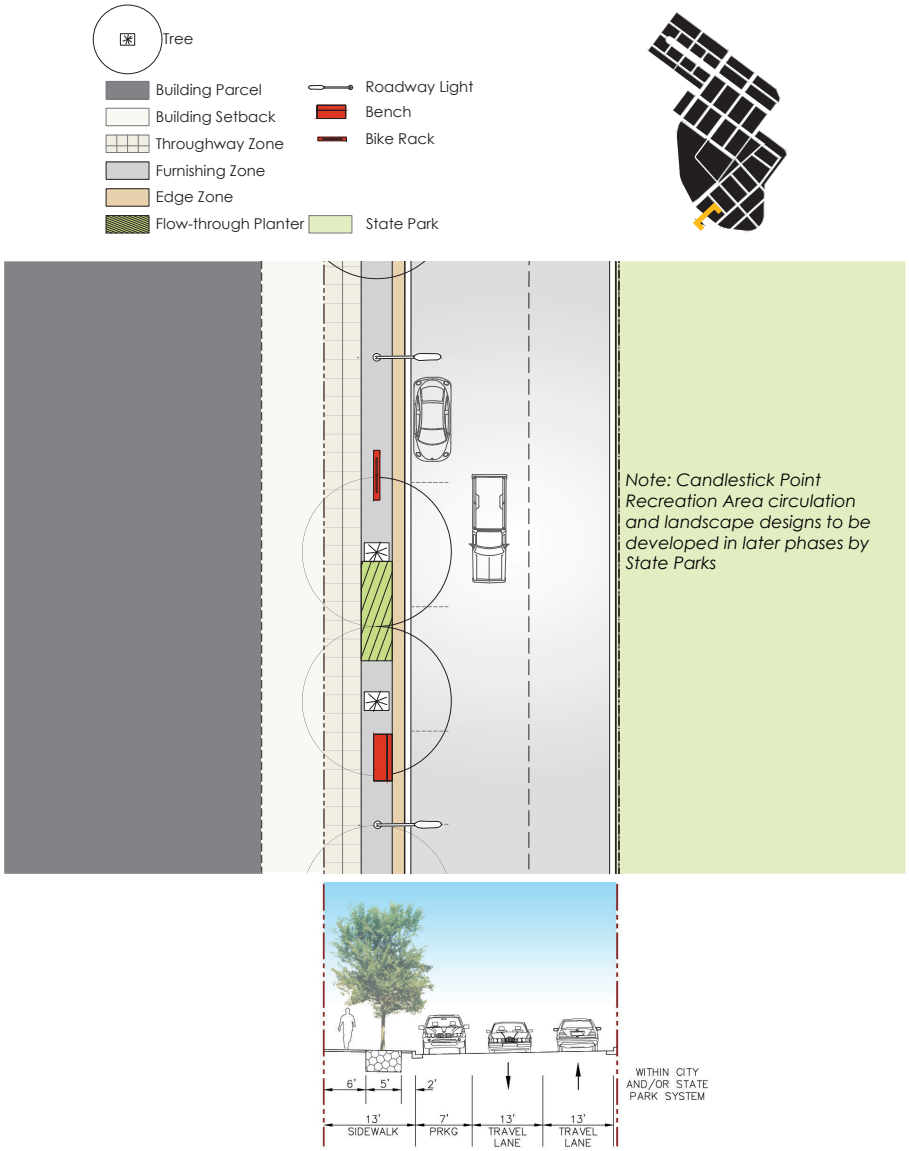
6. TYPICAL STREET LAYOUTS

6.5 PERIMETER STREET: CANDLESTICK PARK DRIVE

Neighborhood specific streetscape elements:

- Paving pattern in furnishing zone
- Furniture detailing/materials
- Landscape (trees and biofiltration)
- Sidewalk will be provided on the south side of the street through the State Park planning process



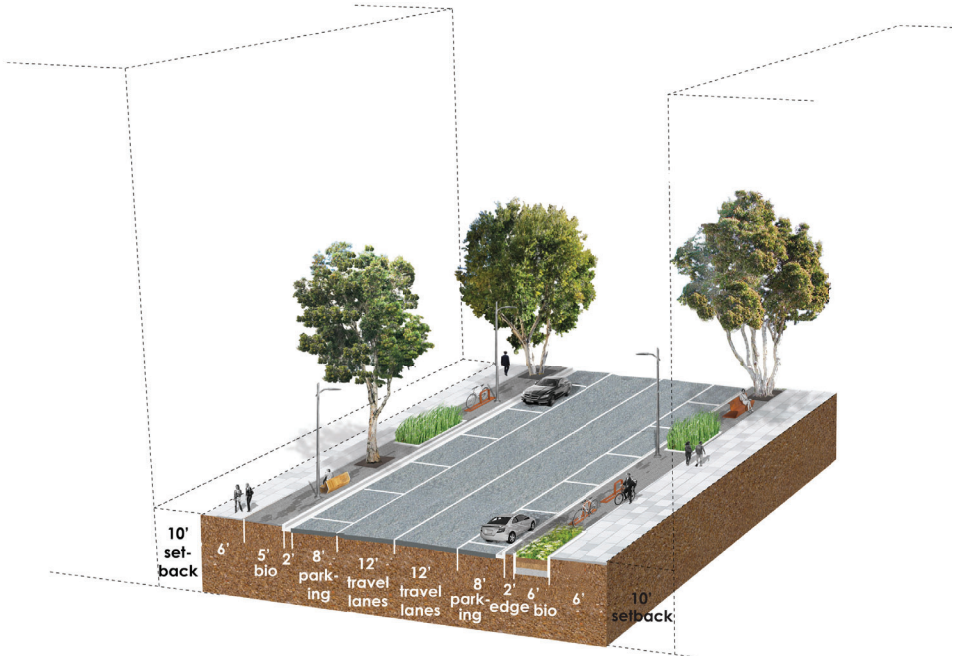


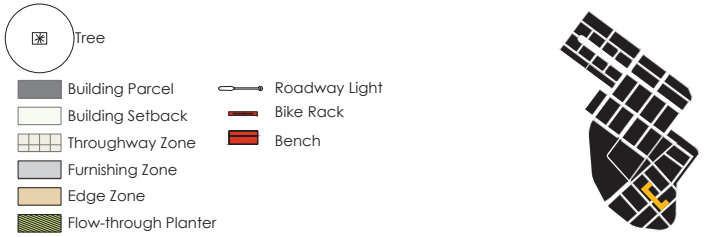
6. TYPICAL STREET LAYOUTS

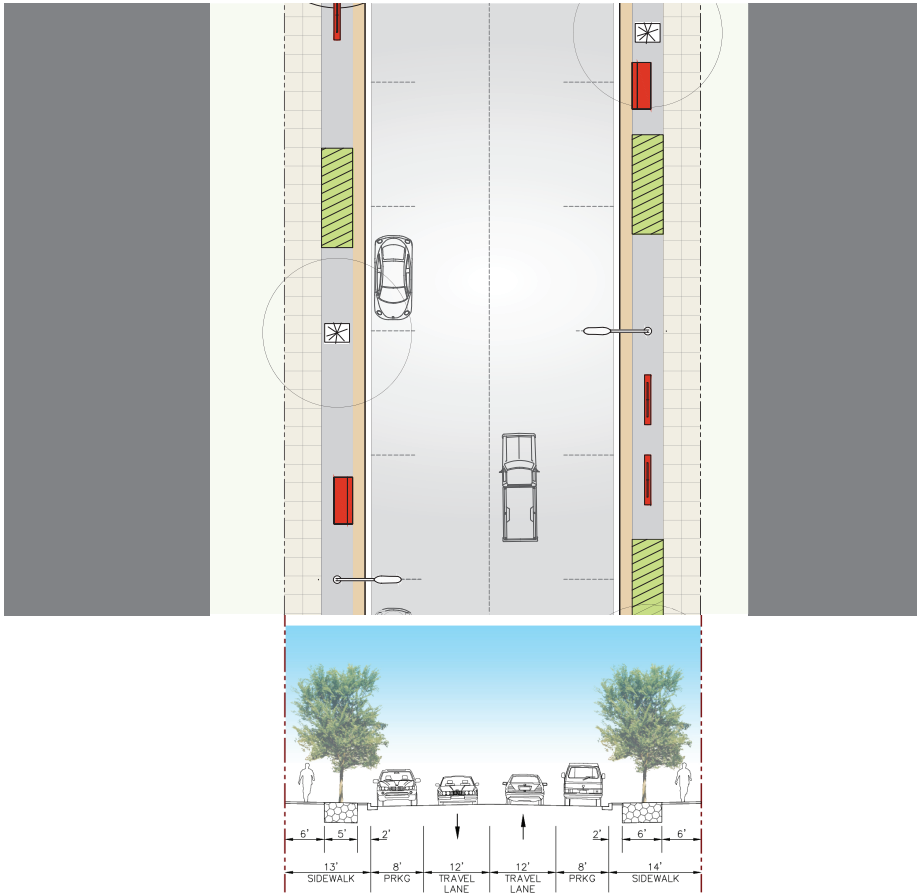
6.6 RESIDENTIAL STREET: TYPICAL

Neighborhood specific streetscape elements:

- Paving pattern in furnishing zone
- Furniture detailing/materials
- Landscape (trees and biofiltration)





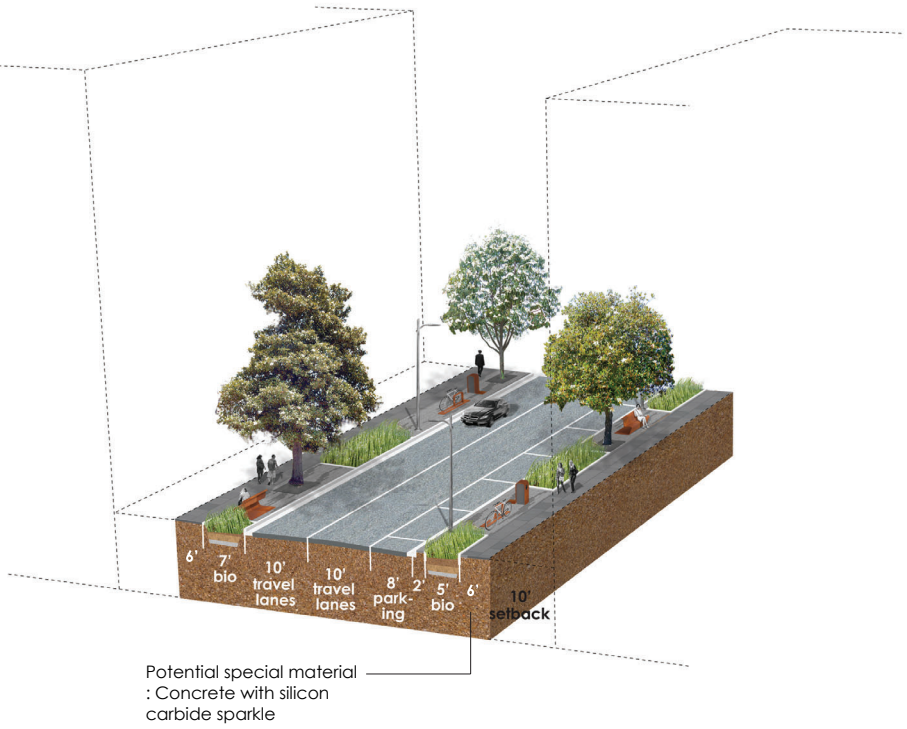


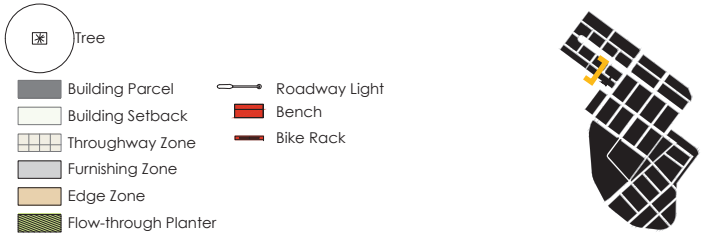
6. TYPICAL STREET LAYOUTS

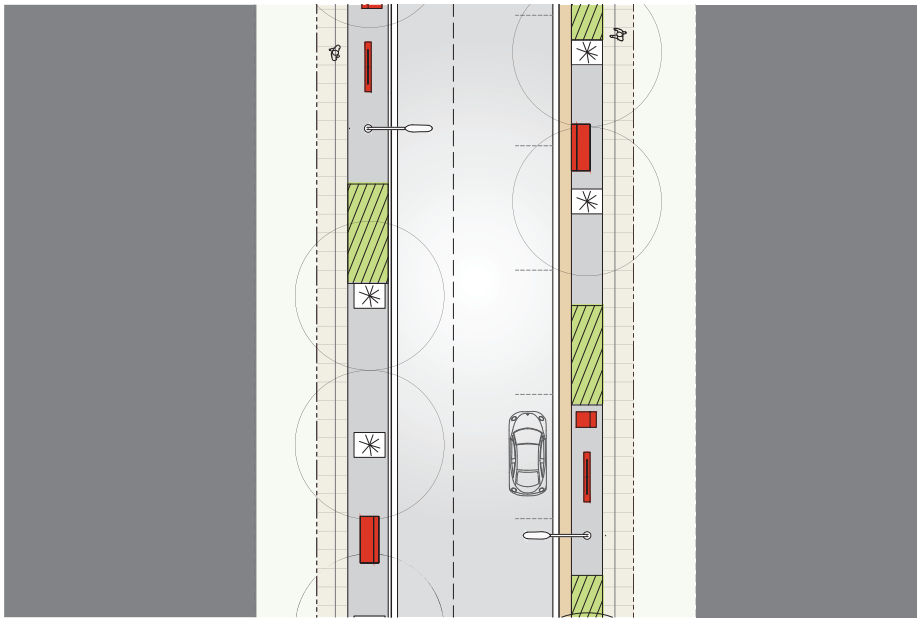
6.7 RESIDENTIAL STREET: FITZGERALD AVENUE

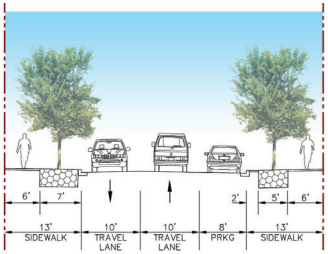
Neighborhood specific streetscape elements:

- Paving pattern in furnishing zone
- Potential special material : Concrete with silicon carbide sparkle in throughway (as shown)
- Furniture detailing/materials
- Landscape (trees and biofiltration)







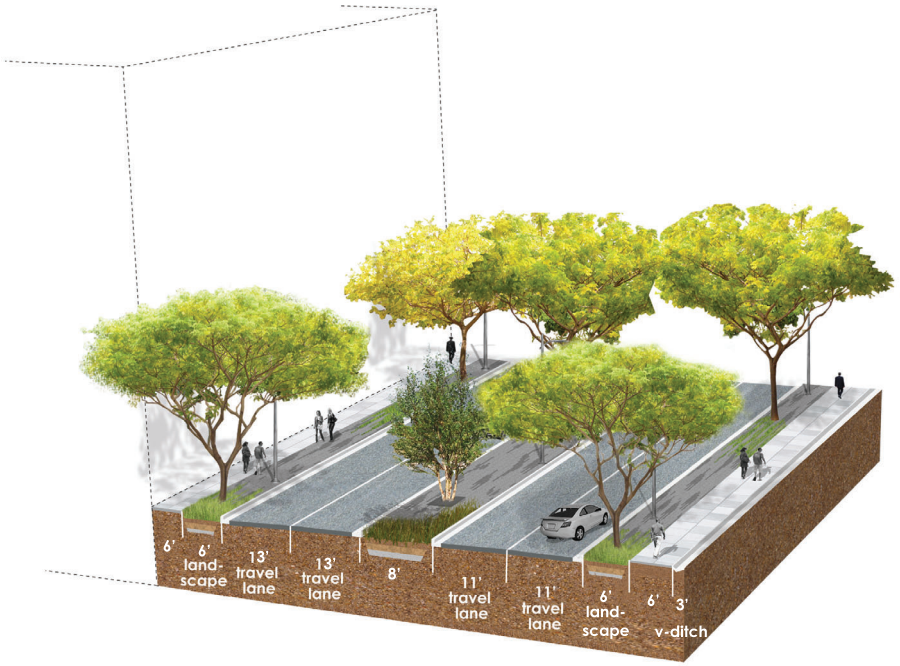


6. TYPICAL STREET LAYOUTS

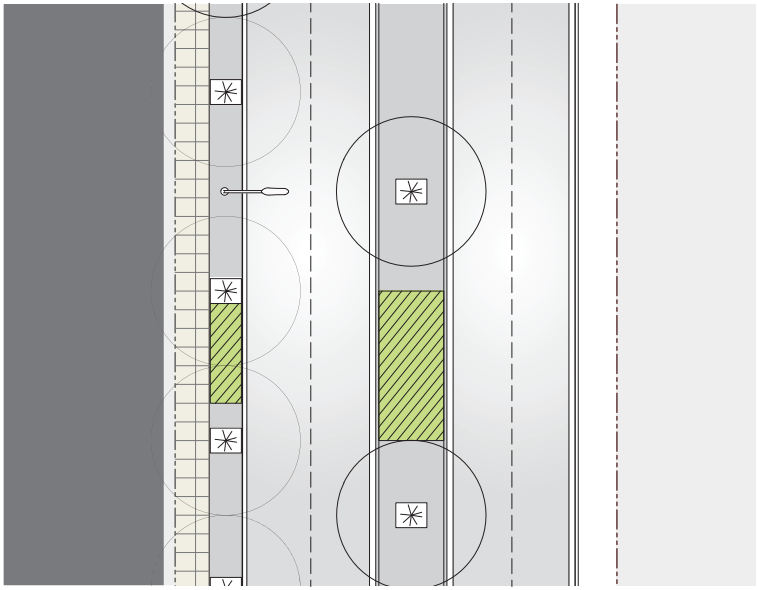
6.8 COMMERCIAL: ARELIOUS WALKER (SOUTH OF INGERSON AV)

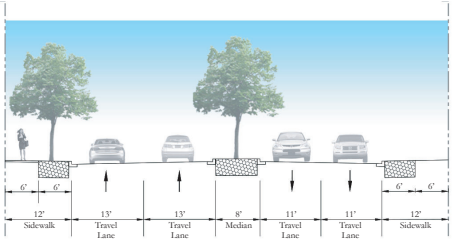
Neighborhood specific streetscape elements:

- Paving pattern in furnishing zone
- Furniture detailing/materials
- Landscape (trees and biofiltration)







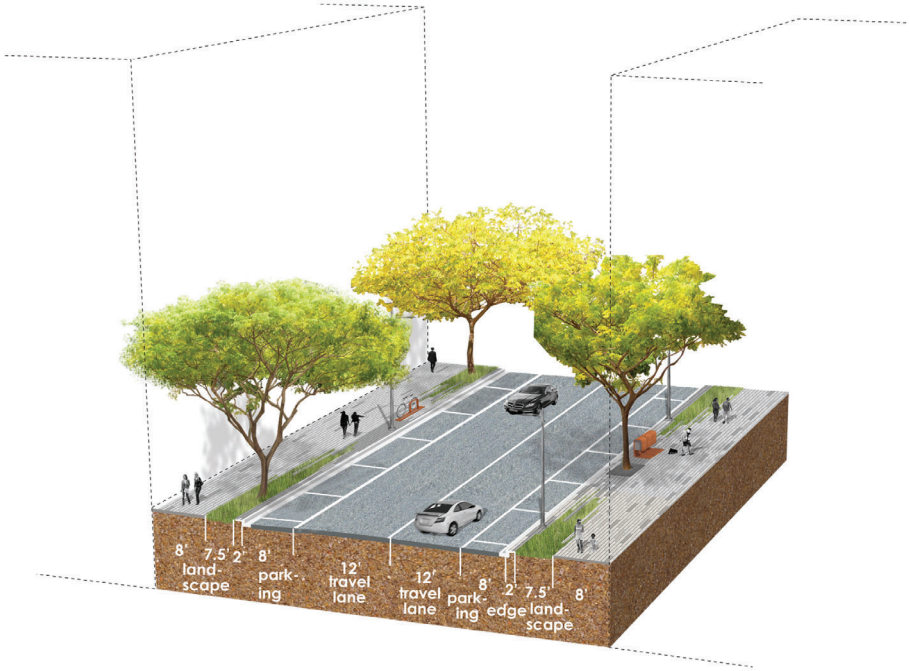


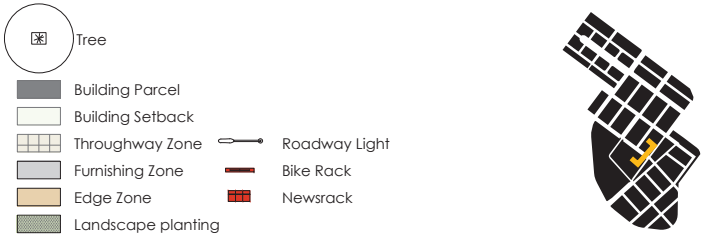
6. TYPICAL STREET LAYOUTS

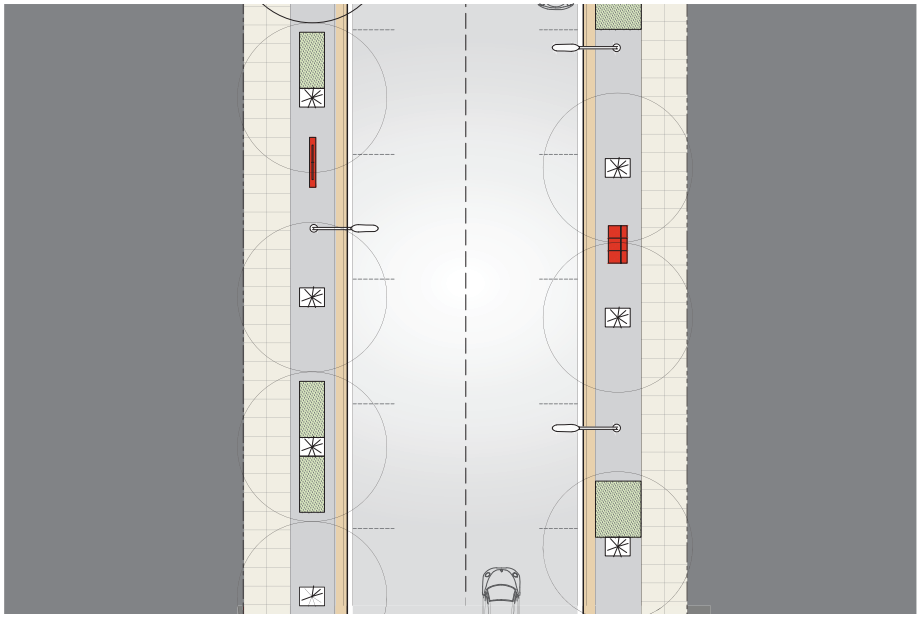
6.9 COMMERCIAL STREET: INGERSON AVENUE (WEST OF HARNEY WAY)

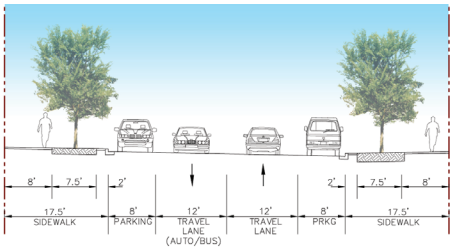
Neighborhood specific streetscape elements:

- Paving pattern in furnishing zone
- Furniture detailing/materials
- Landscape (trees and biofiltration)







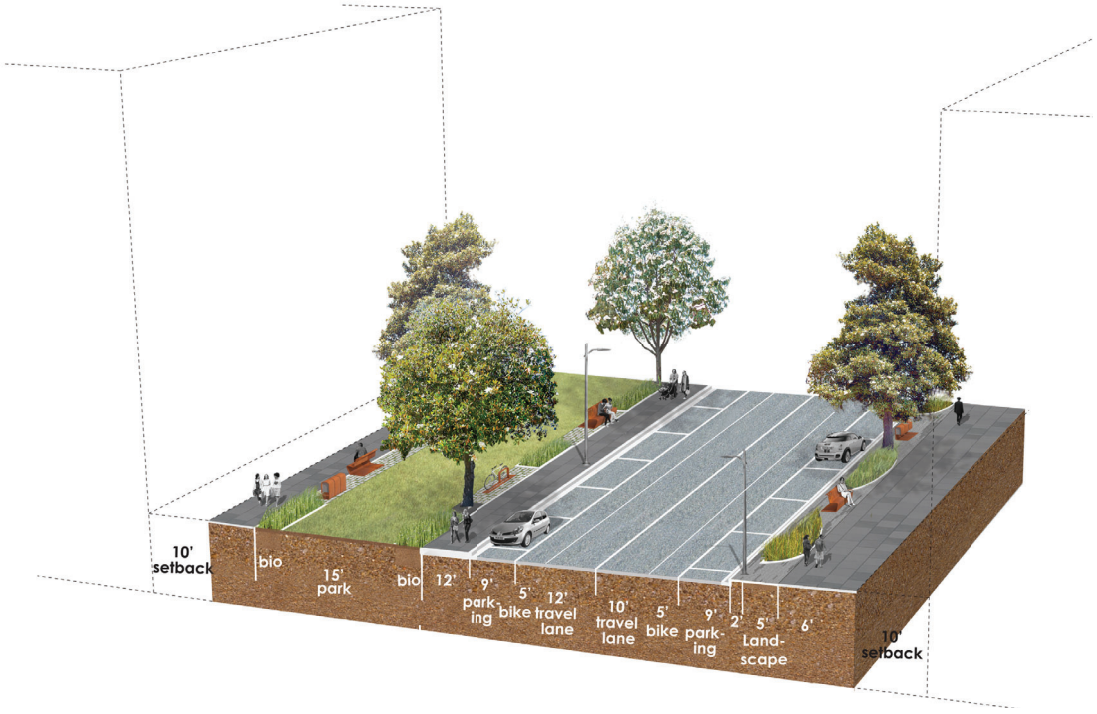


6. TYPICAL STREET LAYOUTS

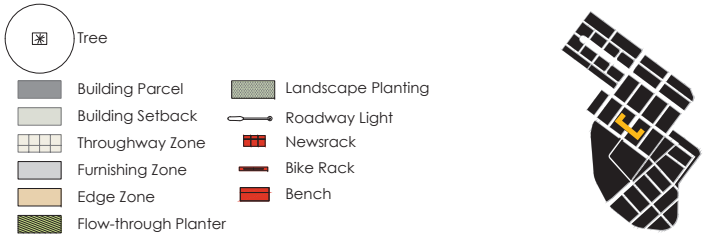
6.10 PARK STREET: EARL STREET (SOUTH OF GILMAN)

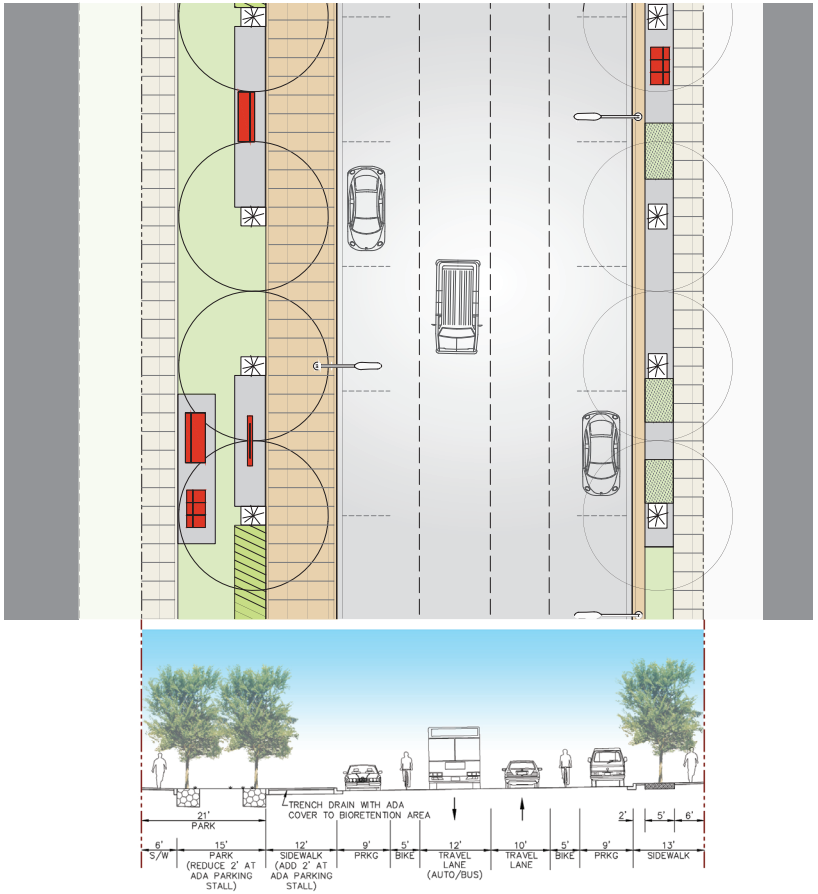
Neighborhood specific streetscape elements:

- Paving pattern in furnishing zone
- Potential special material : Concrete with silicon carbide sparkle in throughway (as shown)
- Furniture detailing/materials
- Landscape (trees and biofiltration)



Potential special sparkle concrete shown in throughway zones



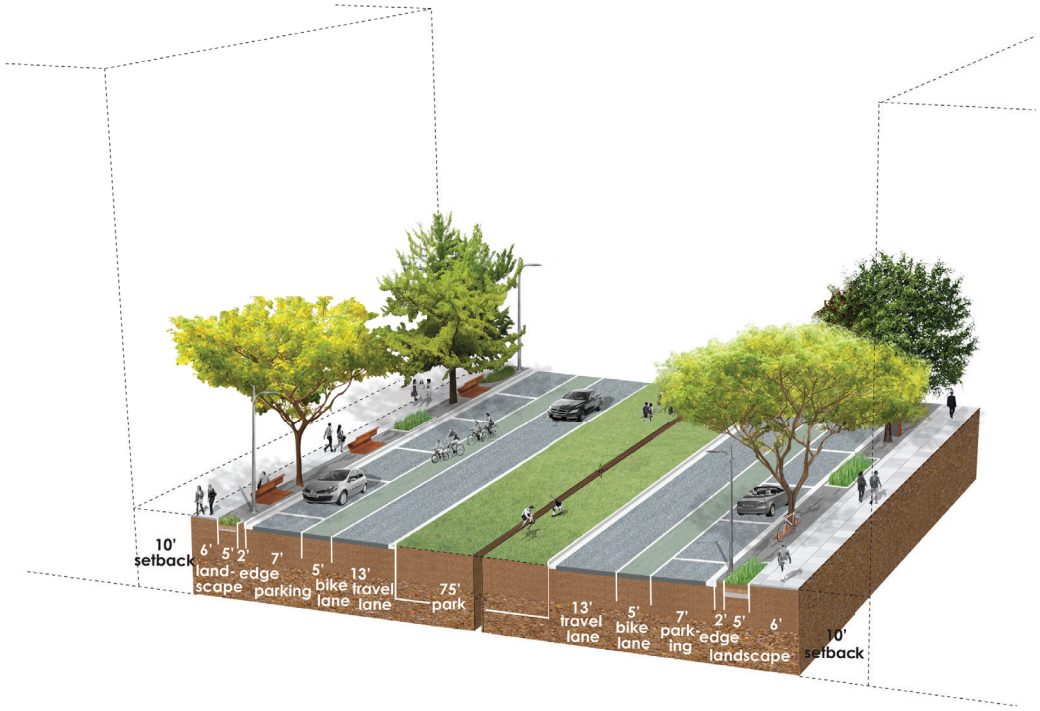


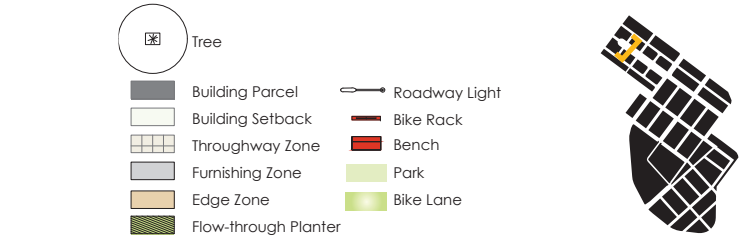
6. TYPICAL STREET LAYOUTS

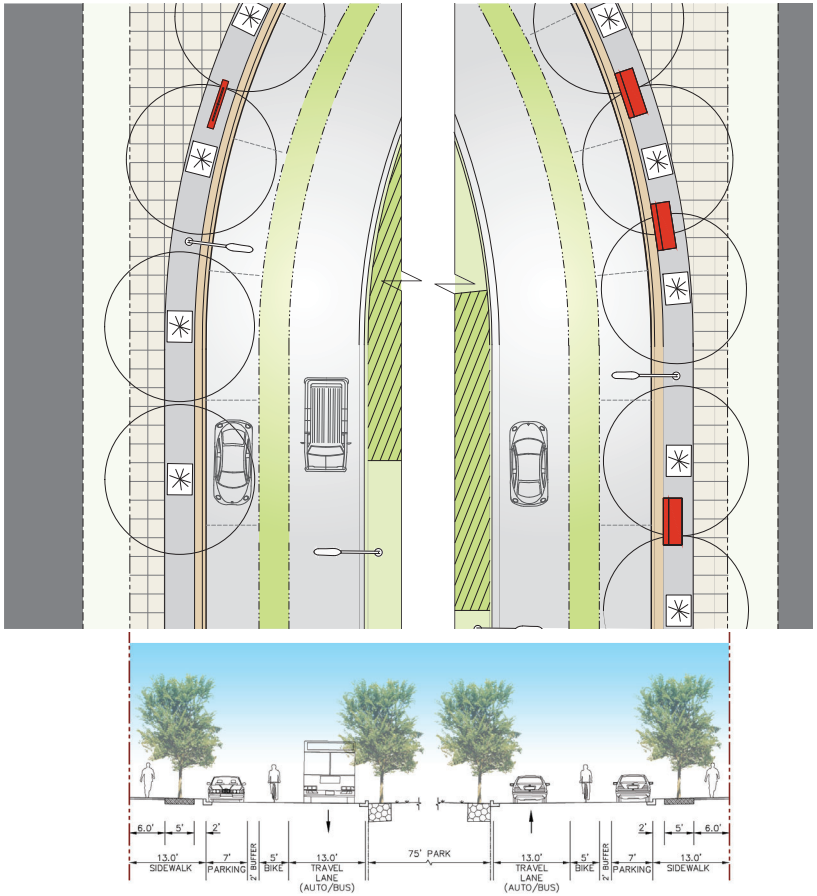
6.11 PARK STREET: EGBERT AVENUE (WEST OF ARELIOUS WALKER)

Neighborhood specific streetscape elements:

- Paving pattern in furnishing zone
- Furniture detailing/materials
- Landscape (trees and biofiltration)





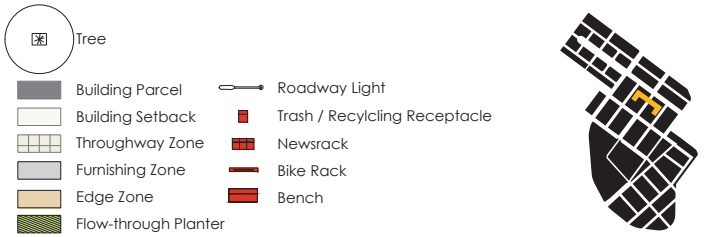


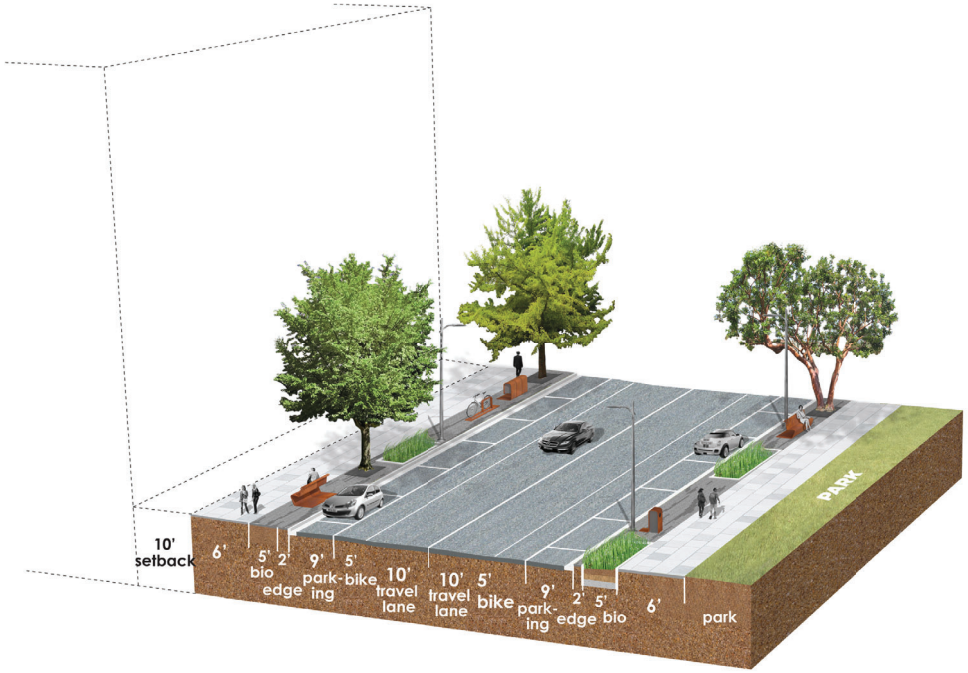
6. TYPICAL STREET LAYOUTS

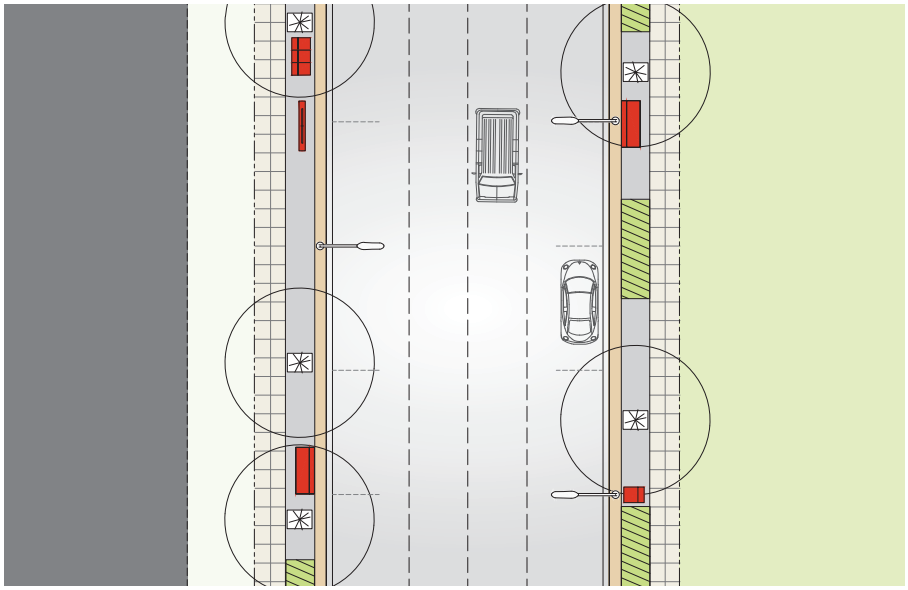
6.12 PARK STREET: EARL STREET (NORTH OF GILMAN AV.)

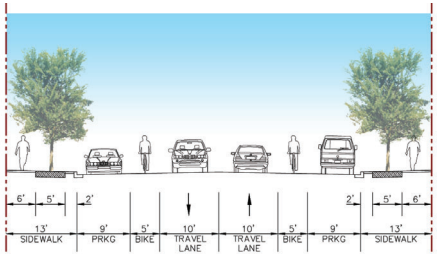
Neighborhood specific streetscape elements:

- Paving pattern in furnishing zone
- Furniture detailing/materials
- Landscape (trees and biofiltration)










5
Parkside Drive
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THE GROVE
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THE VILLAG
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7. GUIDELINES AND DETAILS

7. GUIDELINES AND DETAILS

7.1 STREET TREE PLANTING GUIDELINES & DETAILS

General Guidelines

A list of preferred street trees for each street type has been assembled with the help of an expert team of horticulturists, including HortScience, renowned and well respected California based consulting arborists. Review by the SFDPW's Division of Urban Forestry was also part of the selection process. Recommended tree species were selected using the following criteria:

- Character
- Scale
- Micro-climate, especially the frequent periodic cold and salt-laden wind and fog
- Native and acclimated species that are water-conserving
- Moisture tolerance
- Density
- Urban performance
- Soils
- Management and maintenance
- Visibility guidelines

Street Tree Planting

Tree Spacing:

Tree spacing shall be consistent and appropriate for the scale of the selected tree species. Typical street tree spacing will meet San Francisco Planning Code guidelines by providing 1 tree of minimum 36" box size for each 20' of street frontage. Medium and large trees may be spaced every 20-35', per Better Streets Plan spacing guidelines. Typically, street trees shall be planted on both sides of the street and in medians 5 feet or greater in width. Tree size, height and canopy form shall be regular and consistent in each street type unless otherwise noted. Approximately 2,500 street trees are estimated to be planted in Candlestick Point.

Visibility at Intersections:

At intersections, trees shall be planted in accordance with the Department of Public Works Director's Order No. 169,946; or a minimum of 25 feet on the approach side, and 5 feet from the crosswalk on the far side of any intersection. Trees and plantings located in the sidewalk area shall not obscure traffic signals, signs or street lights.

Tree Size:

Typical tree size at planting shall be 36" box size minimum, unless otherwise noted.

Tree Wells:

Tree wells should be 4 feet wide by 4 feet long, minimum. A larger typical tree well size of 5 feet wide by 5 feet long is recommended. The minimum tree well size should also be determined based on the sidewalk width. This is in accordance with the DPW Director's Order 169,946.

Planting & Installation:

Planting and installation techniques shall be in accordance with the highest level of horticultural practice and are to meet City standards. This includes conformance with the urban greening requirements and guidelines of the SF Better Streets Plan. All planting pits are to include underdrainage and horticulturally excellent planting medium. All new trees shall be irrigated and robustly staked to support the trees against the strong prevailing winds. A high level of attention to horticultural best practices will promote the long term viability and sustainability of the street trees.

Preferred and Alternative Tree Species:

The Plan encourages street tree species to be selected from the proposed preferred list for each respective street type. Street tree species not included in the proposed list are permissible as substitutions, if they meet the listed formal, character, and horticultural criteria and, if selected by a certified arborist and approved by the SFDPW Department of Urban Forestry. The selection of alternative tree species shall comply with the requirements of this Master Streetscape Plan and must follow the street tree characteristics listed for street trees in Section 5, 'Streetscape Elements' for each particular street type.

It is intended that a single tree species (or species mix) be planted the entire length of a named street. Once a specific species (or species mix) has been planted on a portion of a street, the same species must be installed on the remainder of the blocks in order to provide a consistent horticultural theme. For streets that, by virtue of their length, significantly change character, street width or typology along their length (For example: Arelious Walker Drive, Harney Way, Egbert Avenue, Crisp Avenue and Fischer Street), the street typology shall govern the tree species selection.

7. GUIDELINES AND DETAILS

7.1 STREET TREE PLANTING GUIDELINES & DETAILS

Soil volume & Tree growth

A street tree's ability to grow and stay healthy is largely dependent on the amount of rooting space provided. Larger soil volumes will generally yield larger trees. Provide sufficient soil volumes for tree species planted. For use as a general guideline, a minimum soil volume of 8 cubic yards per tree is recommended with at least 3 feet 6 inches of soil depth. However, it will be advantageous to exceed this minimum to ensure the long term health and viability of newly planted street trees. Illustrations to this point are on the following pages.

Several design methods can be used to achieve adequate soil volumes:

• Continuous Planting Trench:

Wherever possible, trees should be installed in a continuous planting trench with at least 3 feet 6 inches of soil depth. Where there is no sidewalk paving, such as in open landscape and median areas, this is easily achieved. In paved areas, alternate methods must be used to support the sidewalk areas between the tree wells. (This method is compatible with Planting Condition 1: Open Planters/Parkway Strips described on the following pages).

• Open Soil Areas:

Open soil areas are unpaved areas surrounding a tree, typically open planting areas or ornamental gravel mulch areas. (This method is compatible with Planting Condition 1: Open Planters/Parkway Strips).

• Structural Soils:

Use of structural soils is only recommended when other alternatives are not available. They support sidewalk pavements while also preventing excess compaction and allowing adequate void spaces for needed oxygen exchange, water drainage and root growth. By allowing the penetration of the roots into the structural soil level, rather than above the surface, pavement heaving will also be inhibited. Structural soils have the additional benefit of being highly permeable and free-draining. (This method is compatible with Planting Condition 2: Tree Wells).

• Tree Cells:

'Soil Cell' type tree cells support sidewalk pavements via a modular cellular frame and deck structure while also preventing compaction and allowing adequate porosity in a manner similar to structural soils, but using conventional planting soil as backfill. (This method is compatible with Planting Condition 2: Tree Wells).

• Root Paths:

Root paths are constructed paths that use aeration or drainage strips to give roots a way to grow under paving and connect to adjacent green spaces or open planting areas. (This method is compatible with Planting Condition 2: Tree Wells).

Street Tree Planting Guidelines & Details

Planting and installation techniques for street trees are to be in accordance with the highest level of good horticultural practice. This includes, in addition to providing adequate volumes of high-quality planting soil medium, providing: 1) continuous underdrains (typically 4-inch diameter perforated pipe in a 12-inch by 12-inch bed of drain rock wrapped in filter fabric); 2) heavy-duty tree staking or guying to deal with the Candlestick Point's strong prevailing winds; and 3) high-efficiency tree bubblers

• Storm Water Management:

Many of the streetscape plantings at Candlestick Point will perform a vital role in capturing, treating and retaining storm water runoff from adjacent streets and sidewalks. To achieve this, many streets will incorporate bioswales, flow-through biofiltration tree well planters and bioretention areas. The prevalence of these features will require the use of sandy loam soil mixes with high percolation rates, structural soils and underdrains to ensure soil permeability and adequate infiltration rates. It will also require the use of trees, shrubs and ground covers that can tolerate seasonal inundation and saturated soil conditions.

Figure 7.1 – Soil Volume & Tree Growth



Soil Volume=± 4 Cubic Yards



Soil Volume=± 12 Cubic Yards



Soil Volume=± 20 Cubic Yards

7. GUIDELINES AND DETAILS

7.1 STREET TREE PLANTING GUIDELINES & DETAILS

General planting guidelines and details for three typical street tree planting scenarios are presented on the following pages:

- Condition 1: Open Planters/Parkway Strips
- Condition 2: Tree Wells

Planting Condition 1 - Street Trees in Open Planting Areas / Parkway strips

On residential and non-commercial streets where the curbside sidewalk landscape zone (also referred to as the 'parkway strip' or 'furnishing zone') is not being used for flow-through biofiltration, street trees may be planted in open planting areas. These parkway strips will typically feature shrub, perennial and ground cover plantings to add visual interest and richness to the streetscape.

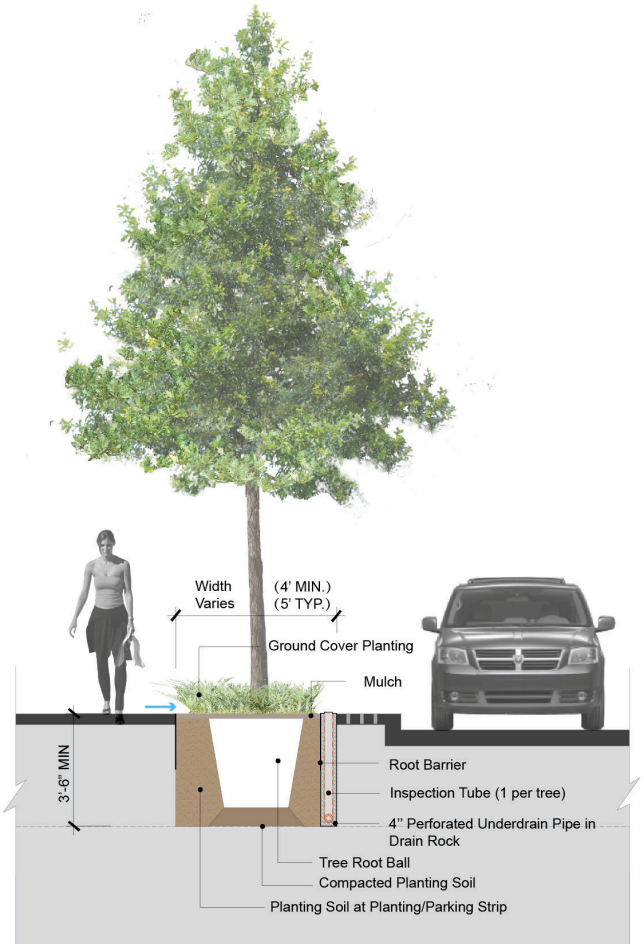
The length and width of the parkway strips will vary, but a width of 4 to 5 feet is typical. The planted areas will generally be extended to include the end block and mid block bulb-outs. On streets where there is parallel parking, a 2 foot curbside stepout will be provided and the parkway strip will need to be interrupted with walkway passages. Providing one walkway passage per parallel parking stall is recommended. On streets where there is no curbside parking, the stepout can be omitted and the parkway strips can be longer, without interruption.

Tree planting soil volumes should be maximized by providing continuous planting trenches a minimum of 3'-6" deep and underdrainage should be provided. (Figure 7.2, Section B-B).

Median Plantings: On streets with medians, a general guideline is to provide street trees in open planted areas on any median that is 5 feet or greater in width. On narrower medians, it is generally recommended to provide a paved surface and omit trees and other landscape plantings. Site visibility at uncontrolled intersections should be analyzed to determine the maximum height of the shrubs.

Compatibility with Stormwater Treatment & Bioswales: This planting condition is generally compatible with streets where a percentage of the frontage will be required for stormwater management flow-through biofiltration facilities. When bioswales or other open storm water management features are incorporated into parkway strips or medians, trees and understory plants that can tolerate seasonal inundation should be specified.

Figure 7.2 – Street Tree Planting Condition 1: Street Trees in Open Planting Areas

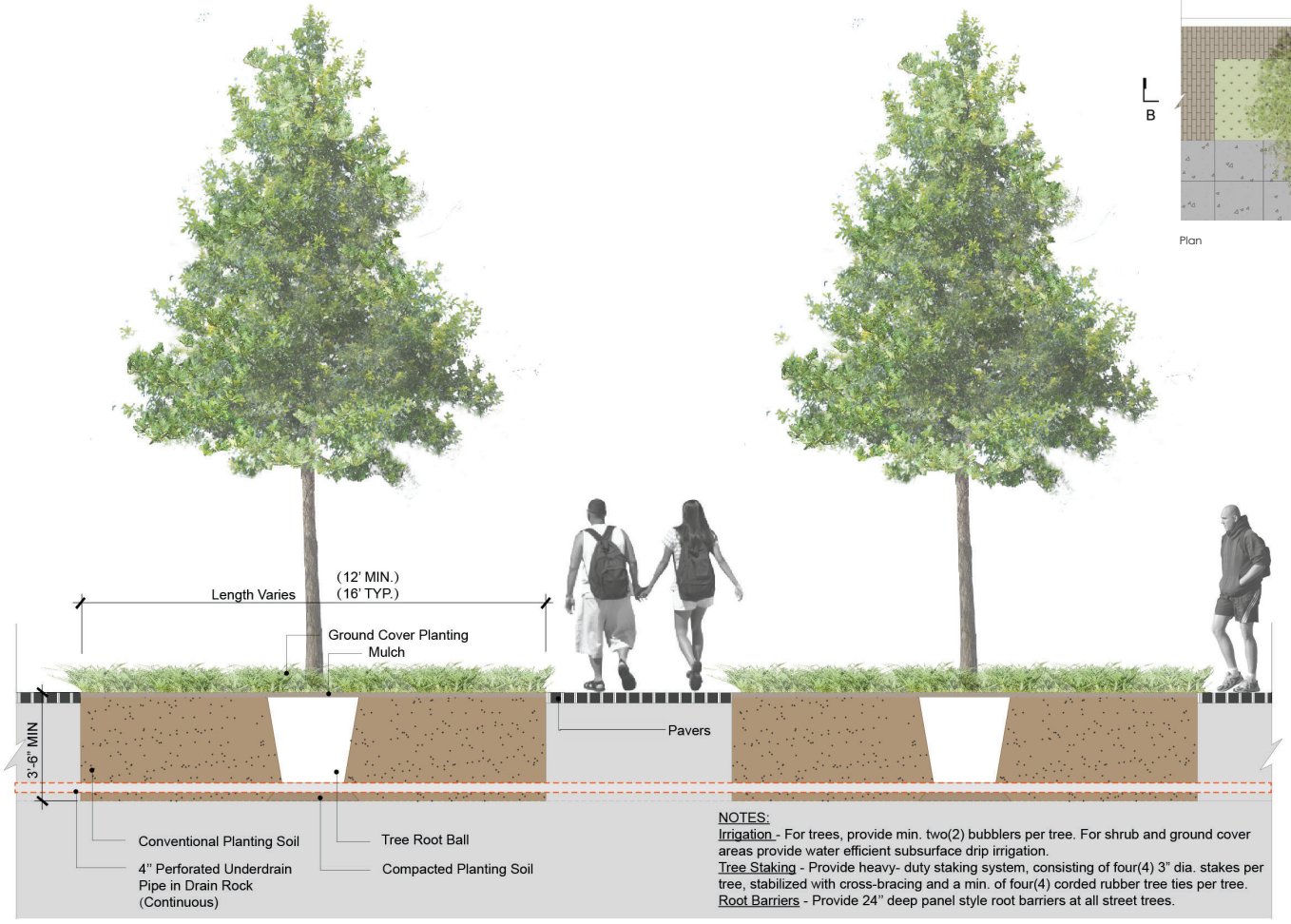


Section A-A

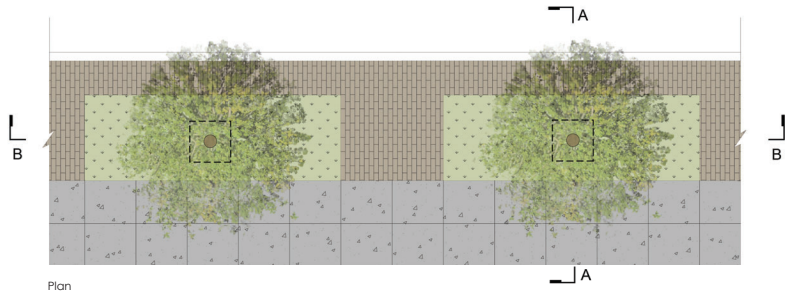
*Maintenance of underdrain - SFPUC will not maintain the underdrains

7. GUIDELINES AND DETAILS

7.1 STREET TREE PLANTING GUIDELINES & DETAILS



Section B-B



Plan

*Maintenance of underdrain - SFPUC will not maintain the underdrains

7. GUIDELINES AND DETAILS

7.1 STREET TREE PLANTING GUIDELINES & DETAILS

Planting condition 2 -Street Trees in Tree Wells

On commercial and retail streets, accommodating higher volumes of pedestrian traffic moving to and from curbside parking will often require that the curbside sidewalk landscape zone is minimized Street tree plantings in these areas will typically be in tree wells. The understory of the wells can be treated in a variety of ways: either planted, paved with ornamental gravel or unit pavers.

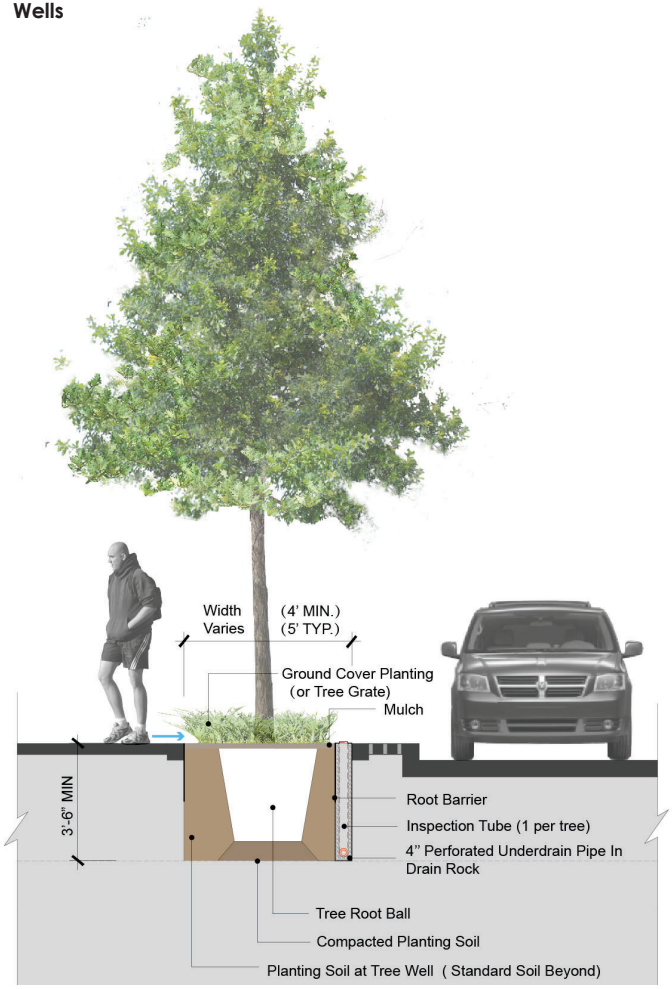
The size of tree wells can vary, however, a minimum size of 4 feet by 4 feet is required. In order to optimize the health of the street trees, the use of larger, 5 feet by 5 feet tree wells is recommended.

As elsewhere, tree planting soil volumes should be maximized. In tree well planting situations, the recommended approach is to provide extended trenches of structural soil, a minimum of 5 feet wide by 5 feet long and 3'-6" deep, under the adjacent pavement areas on either side of the open tree well.

Understory Plantings: Understory plantings in tree wells should generally be limited to lower-growing species, no more than 3 feet in height.

Stormwater management is mostly proposed in soil cells on retail streets. A small portion is proposed to be centralized in the Wedge Park.

Figure 7.3 – Street Tree Planting Condition 2: Street Trees in Tree Wells

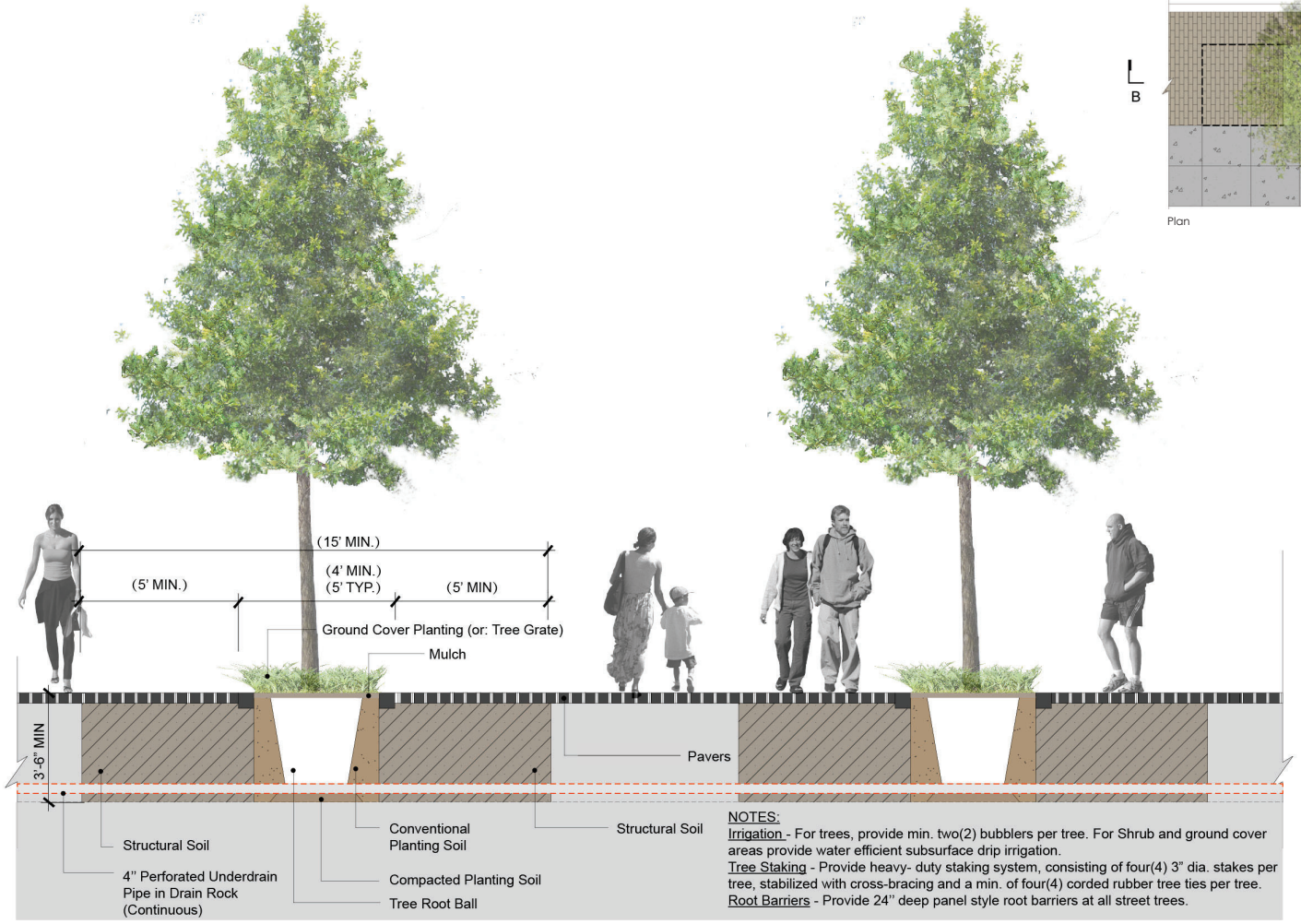


Section A-A

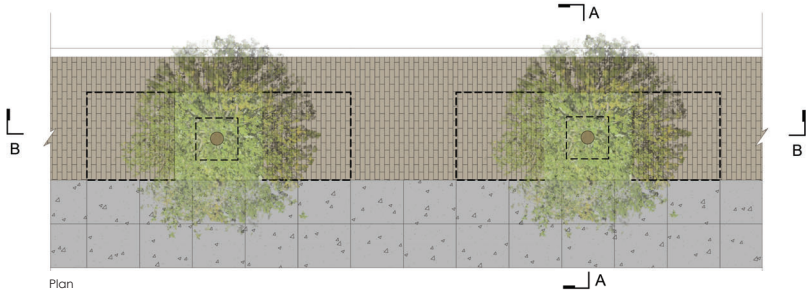
*Maintenance of underdrain - SFPUC will not maintain the underdrains

7. GUIDELINES AND DETAILS

7.1 STREET TREE PLANTING GUIDELINES & DETAILS



Section B-B



Plan

*Maintenance of underdrain - SFPUC will not maintain the underdrains

7. GUIDELINES AND DETAILS

7.2 PLANT MATERIALS PALETTE

Street Trees

The following trees are adapted to tough urban conditions, and are tolerant of wind and fog, poor soils and bayfront/ coastal conditions. Most are also recommended for San Francisco's streets by the SFDPW and the Friends of the Urban Forest.

SCIENTIFIC NAME	COMMON NAME	HEIGHT	WIDTH	SIZE*
Aesculus x carnea	Ruby Red Horsechestnut	40	30	Medium
Arbutus x 'Marina'	Marina Strawberry Tree**#	30	30	Medium
Arbutus unedo	Strawberry Tree	30	30	Medium
Betula jacquemontii	Himalayan Birch	60	30	Medium
Callistemon viminalis	Weeping Bottlebrush**	30	15	Small
Cupaniopsis anacardioides	Carrotwood	40	30	Medium
Cupressus macrocarpa	Monterey Cypress**#	40	40	Large
Eriobotrya deflexa	Bronze Loquat	30	30	Medium
Eucalyptus cinerea	Silver Dollar Tree#	55	45	Large
Eucalyptus citriodora	Lemon-Scented Gum#	80	45	Large
Eucalyptus ficifolia	Red Gum**#	45	60	Large
Eucalyptus leucoxylon	White Ironbark#	80	45	Large
Eucalyptus maculata	Spotted Gum**#	120	60	Large
Eucalyptus microtheca	Coolibah Gum#	60	50	Large
Eucalyptus nicholii	Willow-Leafed Peppermint**#	48	35	Medium
Eucalyptus polyanthemos	Silver Dollar Gum#	75	45	Large
Eucalyptus rudis	Swamp Gum#	60	40	Large
Fraxinus americana	White Ash#	80	50	Large
Fraxinus latifolia	Oregon Ash#	60	40	Large
Geijira parviflora	Australian Willow**	30	30	Medium
Ginkgo biloba 'Autumn Gold'	Maidenhair Tree**	40	30	Medium
Ginkgo biloba 'Princeton Sentry'	Maidenhair Tree **	50	20	Medium
Ginkgo biloba 'Saratoga'	Maidenhair tree	30	30	Medium
Koelreuteria paniculata	Golden Rain Tree**^	35	40	Medium
Laurus nobilus 'Saratoga'	Bay Laurel	30	30	Medium
Lagunaria patersonia	Primrose Tree	50	40	Large
Liquidambar styraciflua 'Festival'	American Sweetgum**#	60	25	Medium
Liquidambar styra. 'Rotundiloba'	Friutless Sweetgum **#	60	25	Medium
Lophostemon confertus	Brisbane Box**	45	25	Medium
Lyonothamnus floribundus asplenifolius	Catalina Ironwood**	35	15	Small
Magnolia grandiflora 'Samuel Sommers'	Southern Magnolia**^	40	30	Medium
Magnolia grandiflora 'Little Gem'	Dwarf Southern Magnolia ^	25	15	Small
Melaleuca linariifolia	Flaxleaf Paperbark	30	25	Medium
Melaleuca quinquenervia	Cajeput Tree**	40	25	Medium
Metrosideros excelsus	New Zealand Christmas Tree**	30	30	Medium
Olea europea 'Swan Hill'	Fruitless European Olive**	30	30	Medium
Pinus canariensis	Canary Island Pine**	80	35	Medium
Pinus contorta	Shore Pine	35	35	Medium
Pinus pinea	Italian Stone Pine**#	80	60	Large
Pinus torreyana	Torrey Pine	60	50	Large
Pistacia chinensis	Chinese Pistache**	50	50	Large
Pittosporum undulatum	Victorian Box**	40	40	Large
Platanus acerifolia 'Bloodgood'	Bloodgood London Plane Tree	80	40	Large
Platanus acerifolia 'Columbia'	Columbia London Plane Tree	80	40	Large
Podocarpus gracilior	Fern Pine**	60	20	Medium
Prunus cerasifera 'Krauter Vesuvius'	Purpleleaf Plum**	20	20	Medium
Prunus serrulata 'Kwanzan'	Kwanzan Flowering Cherry	30	20	Medium
Quercus ilex	Holly Oak	60	60	Large
Quercus virginiana	Southern Live Oak	60	90	Large
Rhus lancea	African Sumac	30	35	Medium
Sequoia sempervirens var.	Coast Redwood**#	100	30	Medium
Sophora japonica	Chinese Scholar Tree	70	70	Large
Tristania laurina 'Elegant'	Little Leaf Tristania	45	30	Medium
Ulmus x 'Frontier'	Frontier Elm	40	30	Medium
Ulmus parvifolia 'Emer II'	Allee Chinese Elm**	70	60	Large
Ulmus parvifolia 'Drake'	Chinese Evergreen Elm**	60	60	Large

* = Per San Francisco Better Streets Plan Guidelines: Small (< 20' crown), Medium (20-35 ' crown), Large (>35' crown)
** = First tier street tree recommendation
^ = Only recommended for sites protected from the wind
= Only recommended for larger areas and medians where there is sufficient set back from curb or pedestrian throughway to accommodate branching structure and trunk/root growth.

7. GUIDELINES AND DETAILS

7.2 PLANT MATERIALS PALETTE

Trees For Park Areas

The following trees are larger in scale, are coniferous evergreens, have unique form or foliage, are adapted to the project's site conditions and are suitable for use in park sites and other larger open space areas.

SCIENTIFIC NAME	COMMON NAME	HEIGHT	WIDTH	SIZE*
Aesculus x carnea	Ruby Red Horsechestnut	40	30	Medium
Casuarina stricta	Drooping She-Oak	35	35	Medium
Cedrus deodara	Deodar Cedar	80	40	Large
Cupressus macrocarpa	Monterey Cypress	40	40	Large
Eucalyptus citriodora	Lemon-Scented Gum	80	45	Large
Eucalyptus ficifolia	Red Gum	45	60	Large
Eucalyptus leucoxylon	White Ironbark	80	45	Large
Eucalyptus maculata	Spotted Gum	120	60	Large
Eucalyptus microtheca	Coolibah Gum	60	50	Large
Eucalyptus nicholii	Willow-Leafed Peppermint	48	35	Medium
Eucalyptus polyanthemos	Silver Dollar Gum	75	45	Large
Eucalyptus rudis	Swamp Gum	60	40	Large
Eucalyptus saligna	Sydney Blue Gum	100	40	Large
Phoenix canariensis	Canary Island Date Palm	60	50	Large
Pinus canariensis	Canary Island Pine	80	35	Medium
Pinus contorta	Shore Pine	35	35	Medium
Pinus pinea	Italian Stone Pine	80	60	Large
Pinus torreyana	Torrey Pine	60	50	Large
Platanus acerifolia 'Bloodgood'	Bloodgood London Plane Tree	80	40	Large
Platanus acerifolia 'Columbia'	Columbia London Plane Tree	80	40	Large
Platanus racemosa	California Sycamore	80	50	Large
Populus fremontii 'Nevada Male'	Fremont Cottonwood	60	30	Medium
Populus nigra 'Afghanica'	Theves Poplar	60	15	Small
Quercus agrifolia	Coast Live Oak	60	80	Large
Quercus ilex	Holly Oak	60	60	Large
Schinus molle	California Pepper	40	40	Large
Sequoia sempervirens var.	Coast Redwood	100	30	Medium
Washingtonia robusta	Mexican Fan Palm	100	10	Small

* = Per San Francisco Better Streets Plan Guidelines: Small (< 20' crown), Medium (20- 35 ' crown), Large (>35' crown)

Understory Plantings

The following plant palette represents a mix of locally-adapted, Mediterranean plants, succulents from various arid climates and native California plants noted for their interesting form, flower, and/or foliage. These plants are well-adapted to local San Francisco microclimates and most are also recommended for sidewalk landscaping by the SFDPW's Division of Urban Forestry.

SCIENTIFIC NAME	COMMON NAME
Acanthus mollis	Bear's Breeches
Achillea filipendulina	Fernleaf Yellow
Achillea millefolium var.	Common Yarrow
Aeonium arboretum var.	Tree Aeonium
Aeonium decorum 'Sunburst'	Sunburst Aeonium
Agave attenuata'Nova'	Foxtail Agave
Agapanthus dwarf hybrids	Dwarf Lily-of-the-Nile
Agave attenuata 'Nova'	Dwarf Foxtail Agave
Anigozanthos hybrids	Kangaroo Paw
Anemone x hybrida	Japanese Anemone
Arctostaphylos 'Emerald Carpet'	Groundcover Manzanita
Arctostaphylos uva ursi	Radiant Bearberry
Armeria maritima	Sea Thrift / Sea Pink
Artemisia 'Powis Castle'	Silver Sage
Baccharis pilularis'Twin Peaks'	Dwarf Coyote Brush
Calamagrotis nutkaenis	Pacific Reed Grass
Ceanothus gloriosus	Point Reyes Ceanothus
Ceanothus griseus horizontalis	Carmel Creeper
Ceanothus g.h. 'Yankee Point'	Yankee Point Ceanothus
Ceanothus thyrsiflorus repens	Low Blue Blossom
Chondropetalum tectorum	Dwarf Cape Rush
Cistus salvifolius 'Prostratus'	Sageleaf Rockrose
Clivia miniata hybrids	Clivia- Yellow Hybrids
Coleonema pulchrum	Pink Breath of Heaven
Correa 'Dusky Bells'	Pink Australian Fuschia
Correa 'Ivory Bells'	White Australian Fuschia
Cycas revoluta	Sago Palm
Dicksonia antartica	Tasmanian Tree Fern
Delosperma cooperi	Hardy Iceplant
Dietes bicolor	Fortnight Lily
Dietes iridioides	African Iris
Dodonea viscosa 'Pupurea'	Purple Hopseed Bush
Echeveria agavoides	Hens and Chicks
Echium fastuosum	Pride of Madiera

7. GUIDELINES AND DETAILS

7.2 PLANT MATERIALS PALETTE

Understory Plantings (cont.)

SCIENTIFIC NAME	COMMON NAME
Elymus magellanicus	Blue Wheatgrass, Magellan Wheatgrass
Erigeron glaucus	Beach Aster
Erigeron karvinskianus	Santa Barbara Daisy
Eriogonum fasciculatum	California Buckwheat
Escallonia 'Newport Dwarf'	Dwarf Ecallonia
Eschscholzia californica	California Poppy
Equisetum hyemale	Horsetail
Erigeron karvinskianus	Santa Barbara Daisy
Euphorbia characias wulfenii	Euphorbia var.
Festuca californica	California Fescue
Festuca glauca 'Siskiyou Blue'	Blue Fescue var.
Festuca glauca	Common Blue Fescue
Ficus pumila	Creeping Fig
Fragaria chiloensis	Sand Strawberry
Graptoveria 'Debbie'	Graptoveria
Helleborus foetidus	Bear's Foot Hellebore
Helleborus orientalis	Lenten Rose
Hemerocallis var.	Daylily varieties
Heuchera maxima var.	Island Alum Root
Heuchera micrantha	Coral Bells
Iris douglasii var.	Pacific Coast Hybrid Iris
Jasminum polyanthum	Pink Jasmine
Kniphofia uvaria 'Dwarf Yellow'	Yellow Poker
Knifphofia galpini	Orange Flame
Lavandula stoechas 'Otto Quast'	Spanish Lavender
Lavandula dentata 'Candicans'	French Lavender
Lavandula x intermedia 'Grosso'	Fat Bud French Lavender
Limonium perezii	Sea Lavender
Loropetalum chinensis	Chinese Fringe Flower
Mahonia repens	Creeping Oregon Grape
Miscanthus 'Morning Light'	Morning Light Silver Grass
Muhlenbergia rigens	Deergrass
Myrtus communis 'Compacta'	Dwarf Myrtle
Nandina domestica 'Fire Power'	Dwarf Heavenly Bamboo
Nandina domestica 'Harbor Dwarf'	Dwarf Heavenly Bamboo
Nassella pulchra	Purple Needlegrass
Nepeta x faassenii	Ornamental Catmint
Olea europea 'Montra'	Little Ollie Dwarf Olive
Ophiopogon japonicus	Mondo Grass
Osteospermum fruticosum	Trailing African Daisy
Pennisetum 'Eaton Canyon'	Dwarf Red Fountain Grass
Penstemon heterophyllus var.	Penstemon varieties
Phormium tenax hybrids	New Zealand Flax (dwarf varieties)
Pittosporum crassifolium	Karo
Pittosporum tobira 'Variegata'	Variegated Tobira
Pittosporum tobira 'Wheelers Dwarf'	Wheelers Dwarf Tobira
Polystichum munitum	Western Sword Fern
Rhamnus californica 'Seaview'	Dwarf Coffeeberry
Rosmarinus officianalis var.	Rosemary var.
Rubus pentalobus	Creeping Bramble
Salvia clevelandii	Cleveland Sage
Salvia gregii	Autumn Sage
Salvia leucantha	Mexican Sage
Salvia sonomensis	Creeping Sage
Santonlina chamaecyparissus	Lavender Cotton
Senecio cineraria	Dusty Miller
Senecio serpens	Blue Chalksticks
Seslaria autumnalis	Autumn Moor Grass
Sollya heterophylla	Australian Bluebell Creeper
Stipa tenuissima	Mexican Feather Grass
Symphoricarpus albus	Common Snowberry
Tibouchina urvilleana	Princess Flower
Teucrium chamaedrys	Wall Germander
Teucrium fruticans 'Compactum'	Bush Germander
Tulbaghia violacea 'Silver Lace'	Variegated Society Garlic

7. GUIDELINES AND DETAILS

7.2 PLANT MATERIALS PALETTE

Biofiltration / L.I.D. Understory Plantings

The following understory (shrub, ground cover & perennial) plantings are adapted to wetter circumstances and seasonal inundation conditions associated with biofiltration and storm water management areas. Most are also recommended for low impact design (L.I.D.) by the San Francisco Public Utility Commission's (SFPUC's) San Francisco Stormwater Design Guidelines.

SCIENTIFIC NAME	COMMON NAME
Baumea rubiginosa	Striped Rush
Bouteloua dactyloides	Buffalo Grass
Calamagrostis nutkaensis	Pacific Reedgrass
Carex comosa	Bristly Sedge; Longhair Sedge
Carex densa	Dense Sedge
Carex tumulicola	Berkeley Sedge
Chondropetalum tectorum	Dwarf Cape Rush
Distichlis spicata	Salt Grass
Elymus glaucus	Blue Wild Rye
Epilobium canum spp. Canum	California Fuchsia
Equisetum hyemale	Scourgrush Horsetail
Erigeron glaucus	Seaside Daisy
Festuca idahoensis	Idaho Fescue
Festuca rubra	Red Fescue
Fragaria chiloensis	Sand Strawberry
Fragaria vesca	Mountain Strawberry
Juncus effusus	Pacific Rush
Juncus leseurii	Common Rush
Juncus patens	California Grey Rush
Juncus xiphiodes	Irisleaf Rush
Mimulus aurantiacus	Sticky Monkeyflower
Mimulus guttatus	Creek Monkeyflower
Miscanthus sinensis 'Morning Light'	Morning Light Silver Grass
Muhlenbergia rigens	Deergrass
Nassella pulchra	Purple Needlegrass
Polystichum munitum	Western Sword Fern
Rhamnus californica 'Seaview'	Dwarf Coffeeberry
Seslaria autumnalis	Autumn Moor Grass
Sisyrinchium bellum	Blue-Eyed Grass
Sisyrinchium californicum	Yellow-Eyed Grass
Symphoricarpos albus	Common Snowberry

The following plant palette represents a mix of native plants recommended by the 'SF Green Connections Route Ecology Guides' intended to maximize habitat value for local wildlife and to encourage park and open space and street designs that enhance ecology within the City's urban neighborhoods. Many are water's edge plants or halophytes that are characteristic of the bayfront's beaches and tidal salt water marshes.

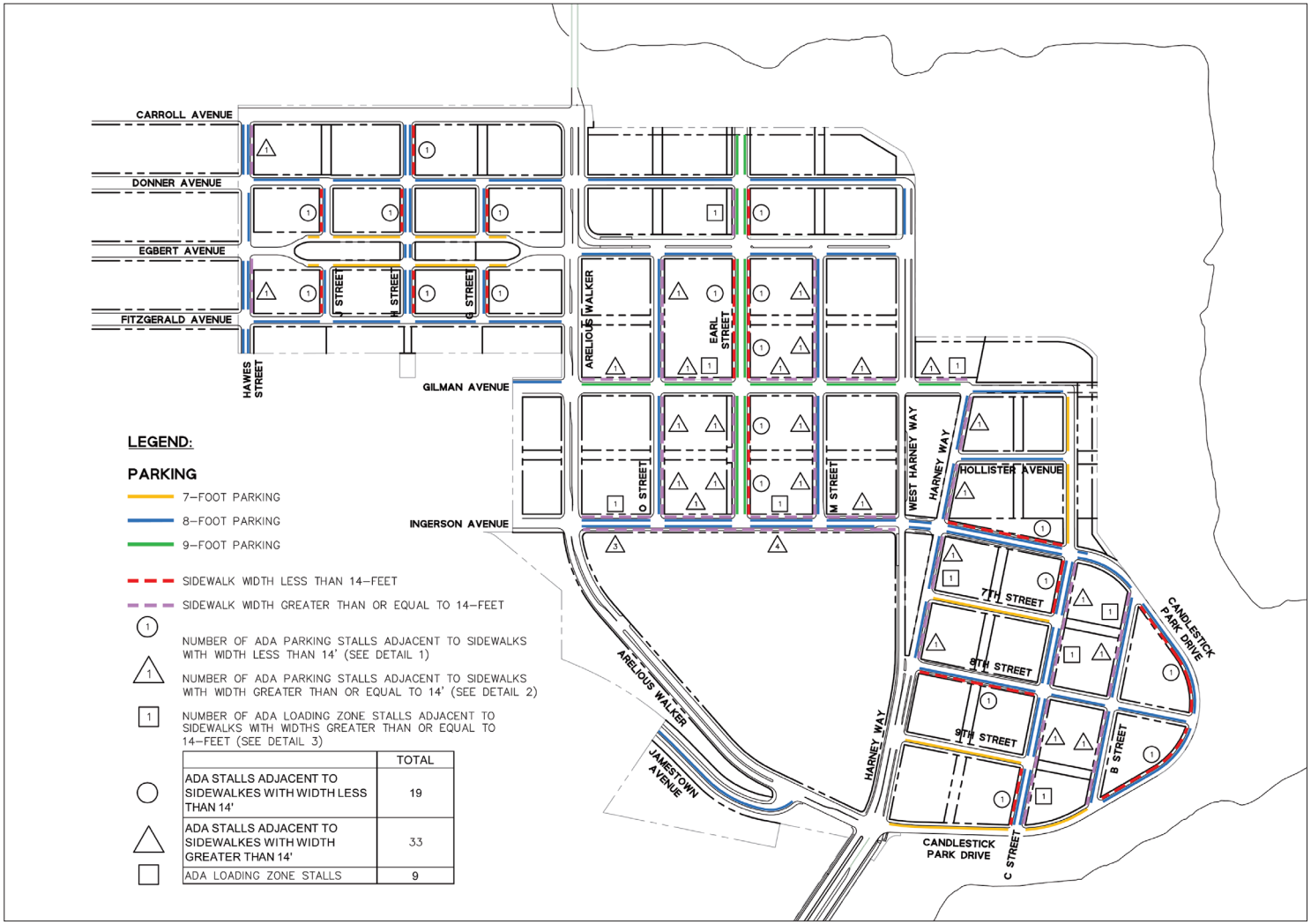
SCIENTIFIC NAME	COMMON NAME
Abronia umbellata	Pink Sand Verbena
Acmispon glaber	Deer Weed
Baccharis pilularis 'Twin Peaks'	Dwarf Coyote Brush
Camissonia cheiranthifolia	Beach Evening Primrose
Danthonia californica	California Oatgrass
Distichlis spicata	Saltgrass
Festuca californica	California Fescue
Fragaria chiloensis	Sand Strawberry
Frankenia salina	Alkali Heath
Sarcocornia pacifica (Salicornia virginica)	Pickleweed

7. GUIDELINES AND DETAILS

7.3 DISABLED PARKING AND LOADING DETAILS

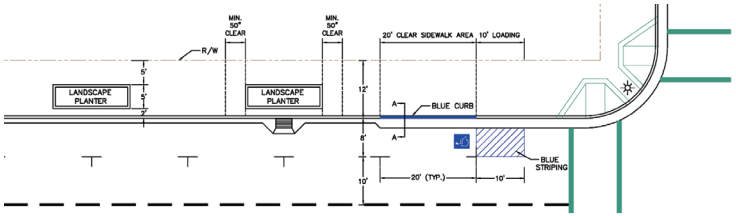
Disabled parking stalls and Passenger Loading Zones will be located on the public streets throughout the project. The number of disabled stalls and passenger loading zones within the blocks designated to include these spaces are shown to the right. The typical layout details for the disabled parking and passenger loading zones are shown on the opposite page.

Figure 7.4 – Number of ADA loading zone stalls adjacent to sidewalks

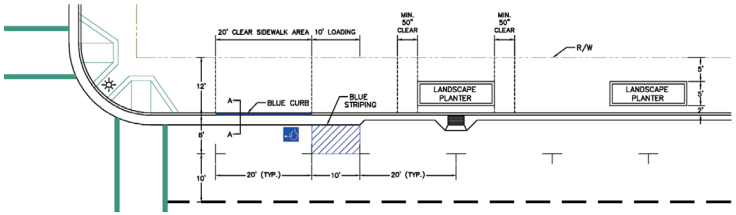


7. GUIDELINES AND DETAILS

7.3 DISABLED PARKING AND LOADING DETAILS

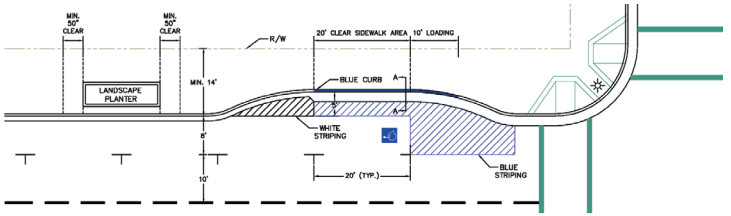


ADA PARKING ADJACENT TO INTERSECTION (BEGINNING OF BLOCK)

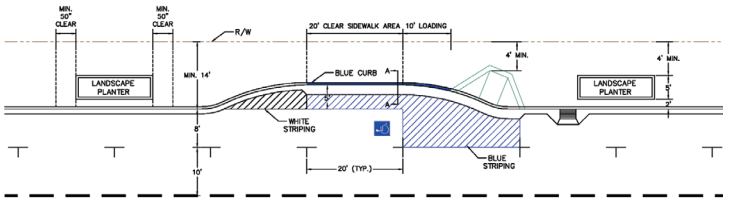


ADA PARKING ADJACENT TO INTERSECTION (END OF BLOCK)

1 ADA PARKING STALL ON BLOCK ADJACENT TO SIDEWALK WIDTH LESS THAN 14'
NTS



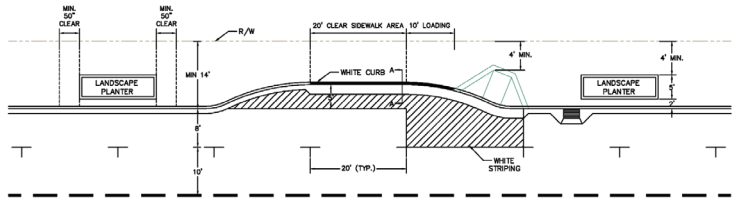
ADA PARKING ADJACENT TO INTERSECTION



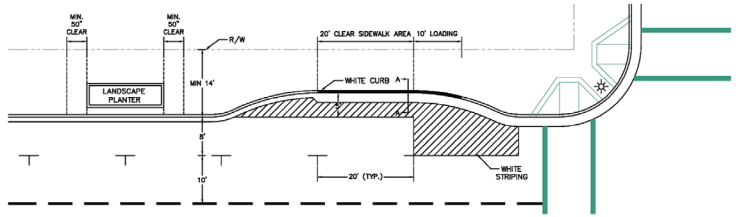
(ALTERNATE) MID-BLOCK ADA PARKING

NOTE: ADA PARKING STALLS AND LOADING ZONES ARE PREFERRED AT END OF BLOCK, BUT IF THEY CONFLICT WITH OTHER IMPROVEMENTS, THEN THEY WILL OCCUR MID-BLOCK WHERE ADJACENT SIDEWALK IS 14' MIN.

2 ADA PARKING STALL ON BLOCK ADJACENT TO SIDEWALK WIDTH GREATER THAN 14'
NTS

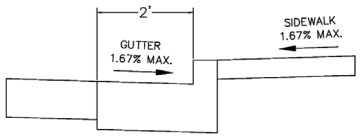


MID-BLOCK LOADING ZONE



LOADING ZONE ADJACENT TO INTERSECTION

3 LOADING ZONE
NTS



SECTION A-A
NTS

7. GUIDELINES AND DETAILS

7.4 STREETSCAPE ELEMENT DETAILS

SW Treatment Type 1

Treatment in sidewalks adjacent to parking should be estimated using 4 ft by 16ft. long treatment boxes on average.

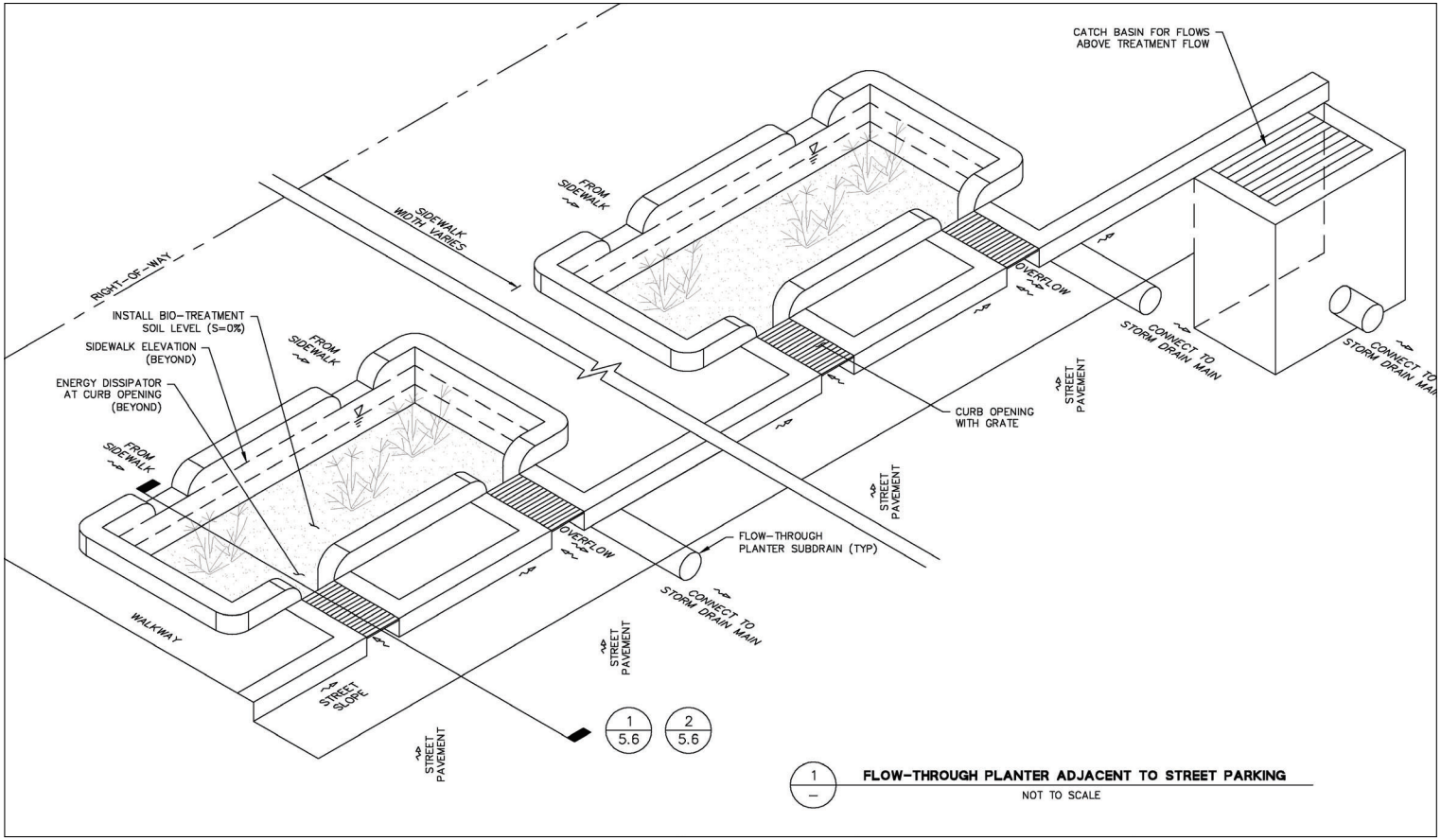


Figure 7.5 – SW Treatment Type 1: Flow-through planter w/ hard edge, adjacent to street parking 4ft. X 16ft, nts.

7. GUIDELINES AND DETAILS

7.4 STREETSCAPE ELEMENT DETAILS

SW Treatment Type 2

Treatment in sidewalks where parking is not planned can have wider boxes. These are 6 ft. wide by 16 ft. long on average (i.e. 6 ft. of planted width).

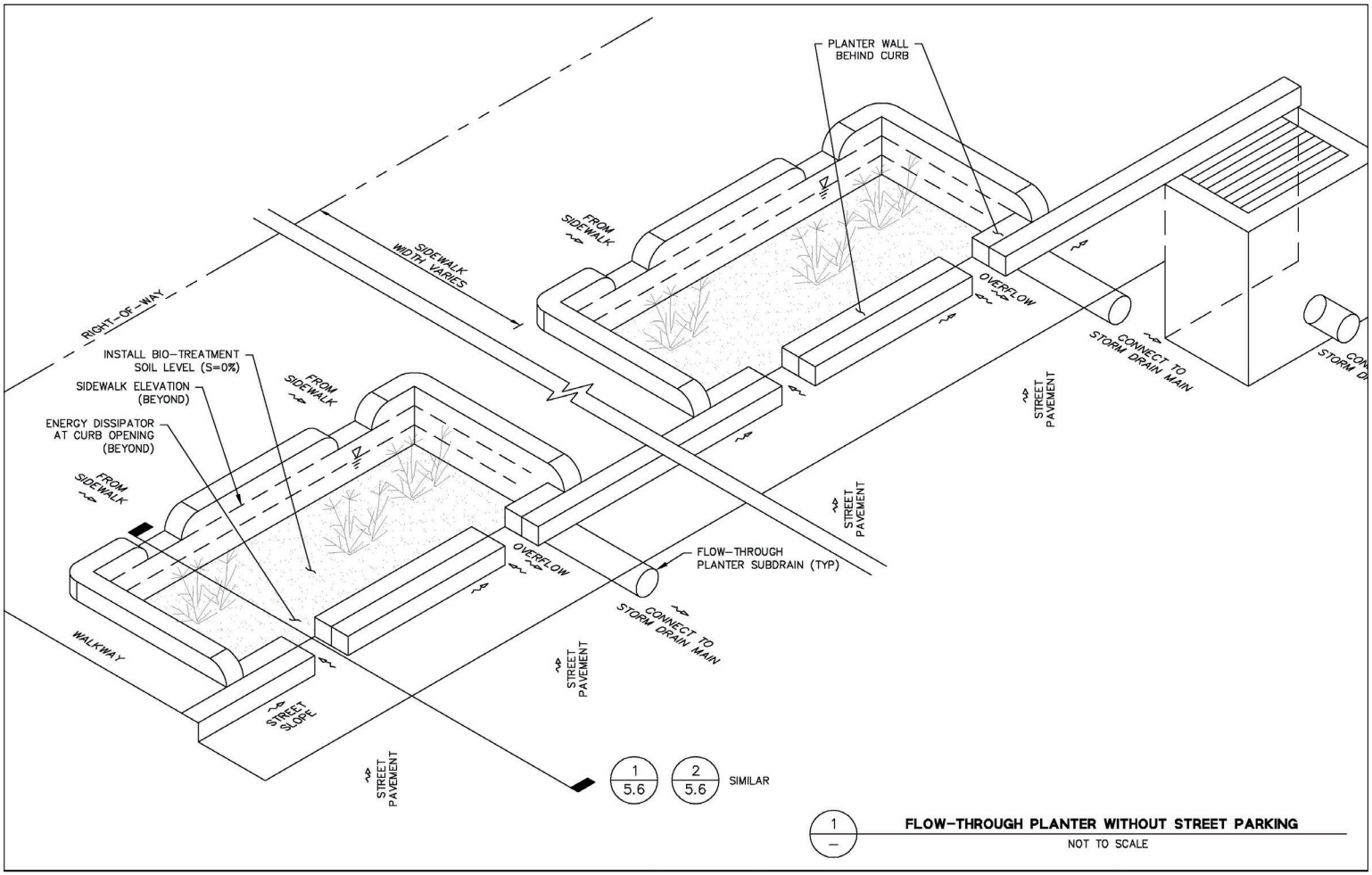


Figure 7.6 – SW Treatment Type 2: Flow-through planter w/ hard edge, with no street parking 6 ft. X 16 ft, nts.

7. GUIDELINES AND DETAILS

7.4 STREETSCAPE ELEMENT DETAILS

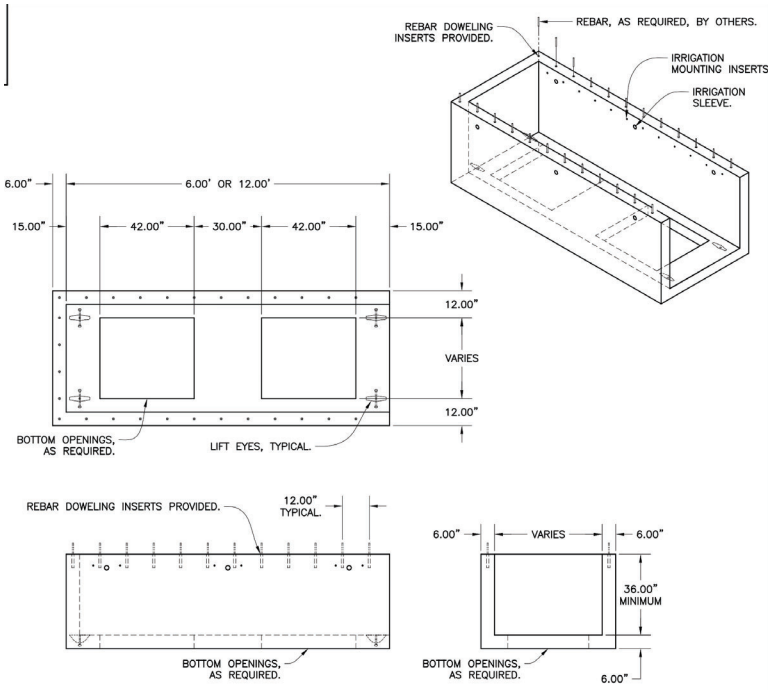


Figure 7.7 – Typical infiltrating flow-through planter, nts

Note: Dimensions shown are examples only. Final dimensions and sizes to be reviewed and approved with the Improvement Plans and Stormwater Control Plans.

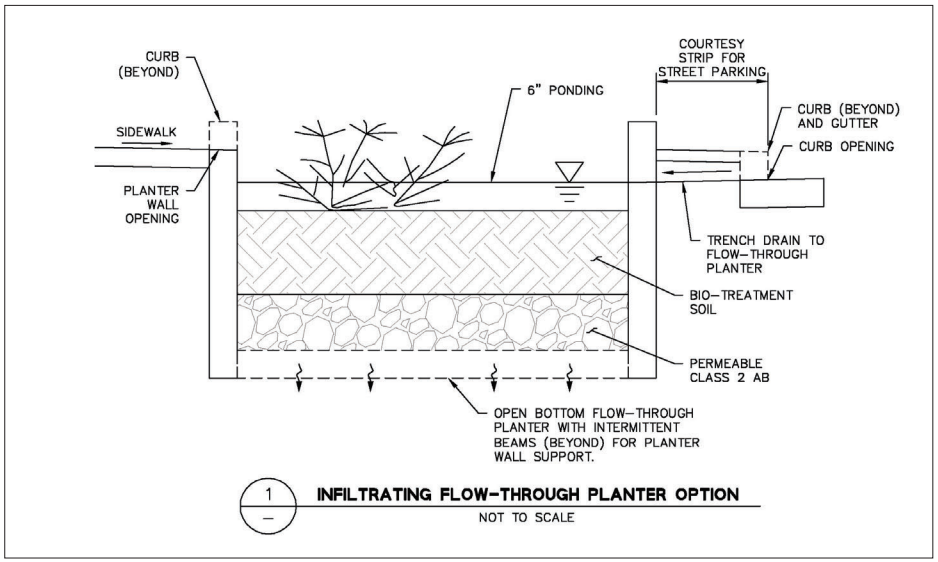


Figure 7.8 – Infiltrating Flow-through planter option for treatment type 1 and 2, nts

7. GUIDELINES AND DETAILS

7.5 STREETSCAPE MAINTENANCE

The streetscape improvements shown in this document will be implemented over time incrementally, through both private and pubic mechanisms and funding sources. Potential maintenance responsibilities for streetscape elements are shown on the table to the right.

Some minor variations in streetscape elements may be necessary or desirable due to unique or unforeseen circumstances, as well as to accommodate piecemeal and gradual build out of the streetscapes over time. All streetscape improvement designs submitted in Major Phase and Sub-Phase Applications are subject to a finding of consistency and approval by OCII.

The Department of Public Works is the permitting agency for improvements within the public right-of-way. All technical specifications not described in this document must meet pertinent Better Streets Plan guidelines and other applicable City standards and are subject to detailed design review and approval by DPW and other relevant agencies. Maintenance of any streetscape elements by City department is subject to City approval and acceptance.

The Streetscape Routine Maintenance Responsibility Matrix represents the framework for a Memorandum of Understanding for the Maintenance of Candlestick Point Streetscape Elements between the Developer, the San Francisco Public Utilities Commission, the San Francisco Department of Public Works, the San Francisco Municipal Transit Authority, the Office of Community Investment and Infrastructure, Recology, Pacific Gas and Electric, other parties as necessary (MOU). This MOU will further define maintenance responsibilities for streetscape elements at Candlestick Point.

Streetscape Routine Maintenance Responsibility Matrix

Streetscape Element	Master HOA/ Fronting Property Owner	SFPUC	Utility Provider (e.g. PG&E, Recology)	DPW	SFMTA	Park Owner/ CFD/BID	Clear Channel
Sidewalks	X						
Street Trees	X						
Landscape Planting	X						
Benches	X						
Bike Racks					X		
Bulb-outs				X			
Trash/Recycling Recepticles				X			
Storm Water Treatment Facilities in Public Right-of-Way		X					
Medians				X			
Utility Vaults/Utility Boxes		X	X				
Bus Stop Shelters							X
Pedestrian, Bicycle, and Vehicular Signage and Striping in the public Right-of-Way					X		
Interpretive Signage						X	
Street Lights		X					
All Elements in Parks (e.g. Stormwater Treatment Facilities, Furnishings, Signage)						X	
CP-02-03-04 Soil Cell Pilot Project	X						

7. GUIDELINES AND DETAILS

7.5 STREETSCAPE MAINTENANCE

Funding Sources for Private Streetscape Maintenance

The maintenance of streetscape improvements located in the public right-of-way may be managed and funded through various assessments that will likely be sourced from community facilities districts (CFDs), master homeowner associations (MHAs), and, possibly, business improvement districts (BIDs).

Community Facility Districts

The Developer and the OCII (Successor to the Redevelopment Agency) have agreed to propose specifications for a Maintenance Community Finance District (CFD) to finance ongoing park maintenance within the Project Site. The CFD will be supported by Maintenance Special Taxes for Taxable Residential Units will be equal to one tenth of one percent (0.1%) of the projected sales price of those Taxable Residential Units. The OCII and Developer will determine the amount of Maintenance Special Taxes to be levied on Taxable Parcels that are not Taxable Residential Units based on Developer's development plans and the market for CFD-encumbered non-residential property. Developer and the Agency anticipate that the proceeds of Maintenance Special Taxes levied in a Maintenance CFD will pay all costs of ongoing Park Maintenance.

Master Homeowner Associations for Residential Use

One or more master homeowner (or property) associations will be established as a private master community association. Membership in the master associations will be mandated for only those residences currently within the established boundaries of the master association and will include a monthly assessment to offset the operating, reserve and administrative costs associated with the areas owned and maintained by the master association.

The Master Association will own and maintain common area property, and can also be responsible for providing oversight and funding for the association websites, monumentation, monumentation lights, concrete within the association, public art, irrigation controllers, bio filtration planters, tree grates, tree replacement, and landscaping, and any other property deemed to be under the maintenance obligations of the association(s).

The Master Association will also be responsible to implement overall community rules and design guidelines and all legal operating documents.

a. Sub-Associations

In addition to the Master Associations, certain streetscape improvements may fall under the purview of building specific homeowner associations, or sub-associations. Established boundaries whereby these sub-associations may be obligated to fund and manage streetscape maintenance can include the sidewalks and planting strips fronting the buildings, or other adjacent privately-owned but publicly accessible right of ways, including parks or private streets. Membership in these Sub-Associations will include a monthly assessment to offset the operating, reserve and administrative costs associated with the areas owned and/or maintained by the Sub-Association (examples may include building structures, gates, security, community recreation facilities, etc.)

Business Improvement Districts for Commercial and Office Use

A business improvement district (BID) is a defined area within which businesses pay an additional tax (or levy) in order to fund projects within the district's boundaries. The BID is often funded primarily through the levy but can also draw on other public and private funding streams. BIDs provide services, such as cleaning streets, providing security, making capital improvements, construction of pedestrian and streetscape enhancements, and marketing the area. The services provided by BIDs are supplemental to those already provided by the municipality. BIDs would be most appropriately located in the commercial areas of the project.