

CARGO WAY

CONCEPTUAL STREETScape PLAN

**Existing Conditions,
Opportunities and Constraints**

San Francisco Redevelopment Agency

Phase II: Report (DRAFT
0.6.0)

October 2007

Robin Chiang & Company

Table of Contents

Sections	Page	
1.0	INTRODUCTION	5
1.1	Context	5
1.2	Community Process	7
1.3	Project Goals	7
2.0	EXISTING CONDITIONS, CONSTRAINTS AND POSSIBILITIES	11
2.1	Overview	11
2.2	Constraints and Opportunities	12
2.3	Surrounding Area	13
2.3.1	Open Space and Recreation at Heron's Head Park and Islais Creek	13
2.3.2	The Backlands & The Green Synergy	14
2.3.3	India Basin Industrial Park	15
2.3.4	Third Street and The "Gateway"	15
2.4	Transportation	16
2.4.1	Third Street Light Rail	16
2.4.2	Illinois Street Bridge	17
2.4.3	Bicycles and Pedestrians: The Bay Trail & The Blue Greenway	17
2.5	Better Streets Plan	19
2.6	Geotechnical Characteristics	20
2.7	Storm-water Management	21
2.8	A Sustainable Industrial Mixed-Use Streetscape Model	23

Section 1

Cargo Way Streetscape Project

Introduction

1.0 INTRODUCTION

In March 2006, recognizing the potential for Cargo Way in the India Basin Industrial Park Redevelopment Project Area, the San Francisco Redevelopment Agency ("SFRA" or the "Agency") coordinating with Port of San Francisco ("Port") staff applied for and received a \$75,000 grant to **study potential improvements to this industrial boulevard that would provide safe routes for pedestrians and cyclists, introduce enhanced landscape and signage to the streetscape and create easier access to the waterfront and "green" open spaces.**

The grant is part of the Association of Bay Area Government's ("ABAG") Bay Trail Project, which designates Cargo Way as the access route to the Bay in this area, connecting Heron's Head Park with adjacent open spaces that are accessible to the Bay.

In December 2006, a panel consisting of staff from the SFRA's Planning Division and Contract Compliance Division, the Port, ABAG, the City's Planning Department, as well as a community representative that sits on both the Bayview

Hunters Point Project Area Committee (PAC) and the Port's Southern Waterfront Advisory Committee (SWAC) conducted interviews of qualified consulting teams and selected the team headed by Robin Chiang & Company (RCCo) to fulfill the scope of services requested in the RFQ.

The consultant team consists of firms with expertise in landscape architecture (Merrill Morris), civil engineering (KCA), transportation planning (CHS) and urban planning (Livable City & RCCo). An intern from the community has been hired to help RCCo with the project.

Since Cargo Way is located within the Port's jurisdiction and serves its operations, the Port will coordinate closely with SFRA staff on the planning process. The proposed community planning process includes a number of public workshops, as well as ongoing oversight by the PAC. The process will also include ongoing input from the Port's existing Advisory Groups, SWAC and the Maritime Commerce Advisory Committee (MCAC), and the Hunters Point Shipyard Citizens Advisory Committee (HPSCAL).



1.1 Context

In 1995, the Board of Supervisors defined a Bayview Hunters Point Redevelopment Survey Area encompassing roughly 2,500 acres of land bounded by Cesar Chavez Street on the north, U.S. Highway 101 on the west, the shoreline of San Francisco Bay on the west, and the San Francisco County boundary on the south. The Survey Area excluded land in the Hunters Point, Bayview Industrial Triangle, India Basin Industrial Park, and the Shipyard Redevelopment Areas. In January 1997, the Bayview Hunters Point community elected PAC members to work with and advise the Agency on redevelopment planning for the Bayview Hunters Point.

Agency staff began work with the Bayview Hunters Point Project Area Committee (PAC) on developing a Concept Plan in 1997, using the 1995 edition of the Area Plan as a starting point. The PAC approved the *Revitalization Concept Plan* in November 2000, which the Agency published in booklet format in March 2002. The *Concept Plan* serves as the community's vision statement that guides the redevelopment planning process, and contains the community's goals and objectives for the revitalization of the Bayview Hunters Point area. The 2006 edition of the Area Plan reflects the primary themes and goals presented in the *Concept Plan*.¹

Subsequent to the completion of the Concept Plan, Agency staff and the PAC identified possible redevelopment programs and activities that would lead to the implementation of the goals and objectives of the Concept Plan.

Part of the Concept Plan includes the desire by the Bayview Hunters Point community to establish a network of public open spaces and recreational areas, restoration of ecological health to the environment, and reclamation of the heritage of its waterfront as a significant part

of larger community revitalization efforts. The ultimate goal is an open space and waterfront system that sets the stage for a full-scale cultural and economic renaissance in Bayview Hunters Point. Ecologically healthy, safe, and beautiful open spaces and facilities will enhance the area's attractiveness as a place to live, work and play.²

The "green" theme was echoed in The Gateway Project in 1999, when the PAC received a grant to create an exploratory document called "Bayview Hunters Point Open Space and Gateway Proposal." Five "community gateways" locations were identified with design concepts and options for a large-scale park. They also studied issues related to the creation of a comprehensive open space network. One of the five gateways defined is the Northern Gateway, referred to as the "Art Center Gateway," located at Third Street adjacent to Islais Creek and India Basin Industrial Park. It is the western terminus of Cargo Way.

Dovetailing nicely into the environmental and waterfront objectives in The Concept Plan and The Gateway Project is the Bay Trail Project, which designates Cargo Way as an access route to the Bay, connecting Heron's Head Park with adjacent open spaces that are accessible to the Bay. The Bay Trail, sponsored by ABAG (Association of Bay Area Governments) is a 500-mile ring of waterfront walking and bicycling paths circling the nine counties of San Francisco Bay.

Additionally, the Blue Greenway, sponsored by Mayor Gavin Newsom, mobilizes attention and focus on San Francisco's part of the Bay Trail, envisioning it further into a 13-mile continuous greenway. Now, the Blue Greenway is the unifying force that aligns and integrates previous initiatives.

All these initiatives provides the context for development of Cargo Way into a "green" and sustainable streetscape that welcome pedestrians and bicycles as well as cars and

¹ San Francisco Planning Department. (1995-2006). Area Plan: Bayview Hunters Point. Retrieved September 18, 2007 from http://www.sfgov.org/site/planning_index.asp?id=41398

² San Francisco Redevelopment Agency & PAC. (2002, March) Bayview Hunters Point Community Redevelopment Concept Plan: Chapter 4.

trucks; connect to and be part of the expanding open space planning in San Francisco and specifically the Bayview Hunters Point district.

1.2 Community Process

Working in conjunction with the Agency, the Port and the Community, the Consulting team will carry out a planning process to develop concepts for pedestrian and bicycle access to open space and the waterfront; and landscape improvements to Cargo Way including improved signage, potential gateway markers, or other unifying design elements without impacting the Port's maritime cargo and the India Basin Industrial Park access and circulation needs.

A five-phase work program was developed for preparing a conceptual plan for Cargo Way and includes:

- Phase I: Project Initiation
- Phase I: Existing Conditions, Constraints & Opportunities
- Phase I: Alternative Design Concepts
- Phase I: Preferred Design Concept(s)
- Phase I: Final Design Concept(s), Funding, Cost Estimates

This proposed work program would entail a high degree of local input and community participation. The work program is designed so that at each of the significant phase of the process, public workshops and meetings with local advisory and stakeholder groups such as the PAC and SWAC are held where background information is shared, alternative design options are presented and refined, consensus is developed and final plans are presented. This process is designed to insure that community input and consensus shape the results throughout the planning process.

PAC, HPSCAL, SWAC, MCAC are community organizations participating and helping to shape design possibilities based on the interest of the community. These organizations were created with the responsibility of providing advice, recommendation, and direction to the San Francisco Redevelopment Agency and the Port of San Francisco during the development and revitalization process in the Bayview Hunters Point.³

1.3 Project Goals

The final product of the planning effort will be a Cargo Way Streetscape Plan that contains conceptual plans for travel lanes, sidewalks, a separated multi-use path if feasible, landscaping, paving materials and planting to manage storm water run-off and other elements, achieved through community consensus.

Once the planning is complete, the Redevelopment Agency working with the Port and other City agencies will begin to identify and secure capital funds for design and construction of the recommended improvements. Funding sources may include, Transportation for Livable Communities Capital Grants, San Francisco Bay Trail grants and other local, state and/or federal funding sources.

³ Bayview Hunters Point Project Area Committee (PAC): Our Mission. Retrieved September 14, 2007 from <http://www.bvhp-pac.org/about.htm>

Section 2

Cargo Way Streetscape

Existing Conditions, Constraints & Opportunities



2.0 EXISTING CONDITIONS, CONSTRAINTS & OPPORTUNITIES

Cargo Way is three-quarter mile long industrial boulevard that runs between Third Street and Jennings Street, terminating at Heron's Head Park. Cargo Way is located in San Francisco's southeast community, in the Bayview Hunters Point neighborhood.

2.1 Overview

Cargo Way was constructed by the City's Department of Public Works as a component of the India Basin Industrial Park Redevelopment Area in the early 1970's.

Currently, Cargo Way functions as a vital industrial arterial for trucks and commercial vehicles serving the cargo and maritime needs of the adjacent Port lands (Backlands) and India Basin Industrial Park. The Port and other industrial users in southeast San Francisco rely on Cargo Way as a fundamental component to the success of their ongoing operations.

The existing right-of-way (ROW) profile of Cargo Way includes two wide traffic lanes in either direction (4 lanes total) with a narrow,

approximately 13' landscaped median. This industrial boulevard, however, has discontinuous, narrow sidewalks making it uninviting and unsafe for pedestrians and bicycles, limiting access to the Bay and associated open spaces.

The landscaping along Cargo Way is old, overgrown, sporadic and difficult to maintain and lack cohesiveness. The current street configuration allows no parking and the wide lanes and long straight distances between intersections allow and even encourage vehicles to significantly exceed the current speed limit.

An initial analysis by the City's Department of Parking and Traffic (now MTA) identified that there is excessive ROW with possible space for improvements for pedestrians and bicycles.

While SFRA and Port staff recognize the opportunity for pedestrian, cyclist and landscape improvements to Cargo Way, the planning process must recognize the needs of the existing Port tenants and future Port growth in the area. The challenge of the planning process will be to develop a concept that meets the needs of the various users in a safe and sustainable way.

2.2 Constraints and Opportunities

Even though Cargo Way is primarily used by heavy and frequent industrial traffic including large trucks, it must also include amenities for pedestrians and bicycles. Ultimately, any new design concept that may develop from the planning process must be one that insures safe access to open space and the waterfront for pedestrians and cyclists, while maintaining necessary access for Port operations.

Listed here are the main constraints and opportunities for the development of Cargo Way. In subsequent parts of Section 2 in this report, we will give additional information related to these issues:

Constraints:

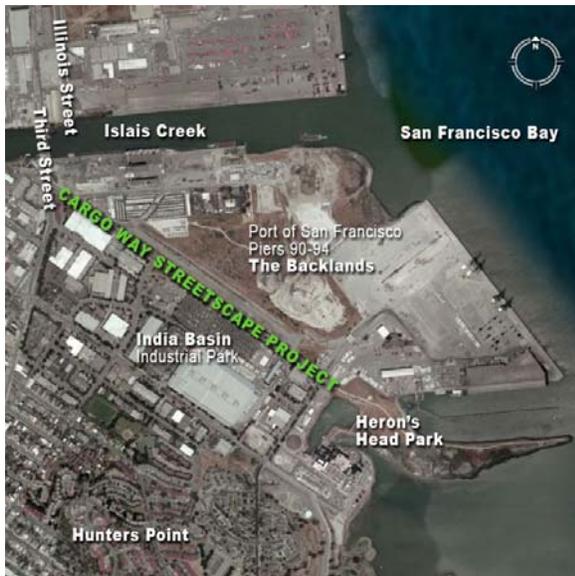
- Cargo Way is surrounded by industrial facilities with very little consideration for pedestrian and bicycle access so the area presently does not attract many visitors.
- The proposed positioning of the Bay Trail within or beside the right-of-way of Cargo Way may have an impact on the existing sewer system. It may be desirable to create separate storm and sanitary collection systems.
- The site is made of landfill, with of unstable soil conditions as a result of improper filling of this formerly marshy area. Any development is potentially costlier.
- The site is situated in a Required Soil Testing Zone with possible hazardous materials as defined by the SF Planning Department and SFPUC standards.
- Site is located in an area of Potential Major Liquefaction defined in the BVHP General Plan. A geotechnical study focus on settlement conditions of "Bay Mud" may be necessary.
- Jurisdiction Issues – Presently Cargo Way is under the jurisdiction of the Port of San Francisco. For a successful Cargo Way Project there has to be an integrated stewardship from city agencies, community organizations and private owners in the area. They need to collectively encourage the

maintenance, use and preservation of parks, open space and the waterfront.

Opportunities:

- Wide ROW provides enough space to develop a safe mixed-use industrial greenway for the safe circulation from the range of industrial trucks and cars to pedestrians and bicycles.
- Complete a three-quarter mile strip of the regional Bay Trail and San Francisco's Blue Greenway.
- Provide better access to existing open space at Heron's Head Park and Islais Creek.
- Provide a continuous greenway from to Islais Creek to Heron's Head Park
- Act as catalyst and spine for The Green Synergy in the Backlands.
- Announce the entrance to Heron's Head Park
- Announce the entrance into Bayview Hunters Point, India Basin Industrial Park and the Backlands at Cargo Way and Third Street.
- Apply concepts for basic improvements (such as street trees, curb ramps, etc.) described in the new Better Streets Plan (BSP) for San Francisco.
- Create a Sustainable Mixed-Use Industrial Streetscape Model that may be a guide for subsequent parts of the Bay Trail and Blue Greenway.
- Landscaping features could be designed to provide filtering and treatment of storm flows using Sustainable Stormwater Guidelines and Best Management Practices (BMP) established by the SFPUC.

2.3 Surrounding Cargo Way



Cargo Way (in green) and its surrounding area

2.3.1 Open Space and Recreation at Heron's Head Park and Islais Creek

In the mid-1990s, the Port of San Francisco's planning and environmental staff collaborated to establish green guidelines for land use and development of the Port's maritime facilities from Piers 80 to 98. One of the Port's early moves was to turn Pier 98—bay fill that became a brownfields site—into Heron's Head Park, a dedicated wetlands habitat. Owned and maintained by the Port, it provides a sanctuary for 78 different species of birds—and an ideal place to study the shoreline ecology of the south waterfront and how its flora and fauna have been impacted by industrial pollution.

Continuing this trend, the Port and SFRA wants to develop Cargo Way into a sustainable streetscape to provide better access and connect the open space and recreation areas at Heron's Head Park to the east and Islais Creek to the west.

The west end of Islais Creek (west of Third Street Bridge) is a burgeoning public access area. The Port has no commercial cargo activities in this area, therefore, public access

amenities along the perimeter shoreline would not impede maritime uses. The existing facilities include the Native Plant Park and small boat gangway and dock on the south shore. An outrigger canoe club stores and launches their vessels from the Native Plant Park. Along the north shore there is a box sewer promenade that has become a popular skateboard park. Muni's future Bus Coach Facility at the north-west end of the creek will include additional shoreline, wetlands and park improvements.⁴

In addition, this project also provides the opportunity to develop a concept for an improved entrance to Heron's Head Park. At its East end, Cargo Way terminates at Jennings Street, which also happens to be the entrance to Heron's Head Park.

Presently, Heron's Head Park, a 22+ acre park with access to the Bay, lacks a significant entrance that would give people a sense of arrival or place. There is minimal signage and the Park's entry is an asphalt parking lot with no vegetation. Terminating Cargo Way with a more inviting entrance to Heron's Head Park with park amenities and a clearly defined entrance would make the park more inviting for visitors and would draw people to surrounding parks.⁵



Heron's Head Park with the Port of San Francisco, Pier 80-84 (the Backlands) in back.

In the 1960's landfill was used to create a landmass intended as the terminus of the

⁴ [islascreek.org](http://www.islascreek.org). (2001, September 4). Illinois Street Intermodal Bridge Project. Retrieved Sep. 18, 2007, <http://www.islascreek.org/illinoisbridgeallstuff/illbrdgcommunityrespon.htm>

⁵ San Francisco Redevelopment Agency, Cargo Way Streetscape Plan RFQ. Retrieved Sep. 18, 2007 from http://www.sfgov.org/site/uploadedfiles/sfra/RFQCA_RGOWAY.pdf

Southern Crossing Bridge to route traffic across the Bay. The bridge remained unrealized after a group of citizens protested the proposed flattening of San Bruno Mountain for the creation of the bridge.

Not long ago the site was an abandoned patch of urban wasteland known as Pier 98 – named for a pier that was also never realized.



The tidal marsh at Heron's Head Park

In the early 1990's environmentalists observed that the tidal marsh attracted a large number of migratory birds and advocated the site's designation as a protected wildlife sanctuary. In 1998, 5,000 tons of concrete, asphalt and debris were cleared away from the area to make way for picnic benches, fishing piers and pathways.

Each year, more than 1,200 student volunteers serve as primary caretakers of the park. They help to plant native plant species, weed non-natives, and clean and maintain the wild areas of the park. Heron's Head Park supports over 78 species of birds annually, and is an important rest stop for migratory birds along the Pacific Flyway.

2.3.2 The Backlands & The Green Synergy

To the North, and the heart of the area surrounding Cargo Way is the Backlands, which takes in Piers 90 and 94. The majority of its 47 acres was undeveloped—as bay fill, it required foundations that were too costly for most

industrial buildings. The development of Mission Bay forced the concrete and gravel suppliers located there to move to the Backlands. Norcal's recycling plant was already in operation at Pier 96, close to barge and rail service. Bode's and Hanson's new concrete and gravel plants were required by the Port to be green by design and operation. Both plants also take advantage of service from barges and ships. Their open hard surface lots are paved in permeable concrete. Stormwater runoff is addressed by surrounding open areas and parking lots with bio-swales planted with reintroduced native plants.

Bode and Hanson have both made green part of their brands, installing large public displays of their sustainable building products. They jointly sponsored an ornamental garden on Third Street that helps form a green gateway to the Bayview. They also helped defray the cost of cleaning up a former dumping area at the end of Pier 94 to create another wetlands. New soil has encouraged native grasses and shrubs to grow, creating a home for local and migrating birds—a nature preserve in the making. Discarded tires and appliances, long buried by other debris, are removed as they continue to surface.

The Port's latest master plan for the Backlands' 47 acres identifies potential tenants with both the means to build and operations that suit the green program. They are a bio-diesel processing plant and San Francisco Public Utility Commission's wastewater treatment digesters. The oldest tenant in the Backlands is a tallow company. Due to clean air restrictions, it's no longer allowed to process the grease it collects from local restaurants, so it's been shipping the waste to Port of Stockton and from there across the Pacific to China. By locating a bio-diesel plant next door to the tallow company, the grease can be processed locally in a sealed system and then converted to bio-diesel fuel.

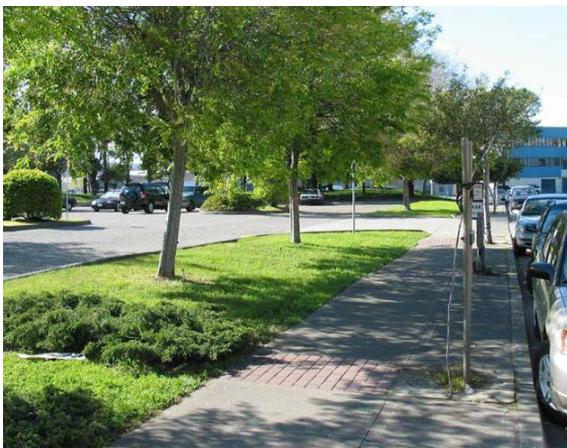


Port of San Francisco: Backlands (Piers 90-94)

Greater synergy will also be realized by relocating the wastewater treatment digesters to the Backlands from their current site in a residential neighborhood half a mile away. The new treatment plant will be able to separate the organics and process them appropriately, either cooked directly into fertilizer or sent to the bio-diesel plant to be turned into fuel. The latter process will use the high concentrations of methane that are a byproduct of water treatment as fuel—another example of the Backland’s “virtuous cycle.”

What’s next for the Backlands? Logically enough, the Port hopes to attract sustainable industries, locating them adjacent to an improved Cargo Way, creating a “green cluster” along the south waterfront, and realizing plans and initiatives that call for much better access to open space and the waterfront.

2.3.3 India Basin Industrial Park



India Basin Industrial Park

To its south, Cargo Way is adjacent to India Basin Industrial Park. Prior to redevelopment, the area now known as India Basin Industrial Park was the remnants of “Old Butchertown’s”

meat packing businesses operating in dilapidated and obsolete buildings. Unstable soil conditions, as a result of improper filling of this formerly marshy area, were a significant cause of the underdevelopment of much of the area. Under the redevelopment program, substantial amounts of fill was imported and compacted to consolidate the soil and improve its load bearing capacity.

India Basin was redeveloped to create sites for light industrial businesses and many chose to locate there because it offered an opportunity to remain in the City in a building suitable for their needs. Construction of the India Basin Industrial Park is nearly complete with 87.9 of the 91 build-able acres improved under the redevelopment program.

A total of 33 new industrial buildings were constructed in the India Basin Redevelopment Project Area as a result of redevelopment. Before redevelopment, the area produced approximately 1,500 jobs. The project area now has generated 9,000 jobs with an annual payroll of \$300,000,000. The India Basin Redevelopment Plan was adopted in 1969 and will expire in 2009.

2.3.4 Third Street and The “Gateway”

At its west end, Cargo Way terminates at Third Street, near Islais Creek. The Third Street light rail is accessible here.

In 1999, PAC identified in The Gateway Project, the Third Street and Cargo Way intersection as one of five “community gateways” to mark a significant transition into the Bayview Hunters Point district. It is also referred to as the “Art Center Gateway” and is described with a design that is nature-focused, reflective, and emphasizes connections to the ecological habitat of the waterfront.⁶

Since then, however, only minimal improvements have been made to truly identify the area as a

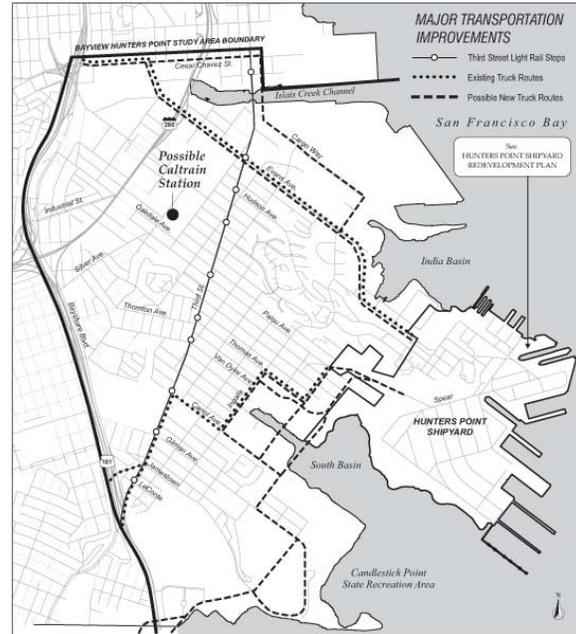
⁶ San Francisco Redevelopment Agency & PAC. (2002, March) Bayview Hunters Point: Community Redevelopment Concept Plan: Chapter 4.

“gateway”. Furthermore, the lack of appropriate directional signage alerting people to the Bay Trail preclude many pedestrians and bicyclists from being aware of Cargo Way as a link to the Bay and the adjacent shoreline parks.

Similar to the entrance of Heron’s Head Park, the Cargo Way project has the opportunity to introduce a more clearly defined and inviting entrance as well as a sense of arrival or place specific to this Port area and the Bayview Hunters Point district in general.

2.4 Transportation

The Cargo Way site enjoys some of the best industrial, multi-modal transportation access in San Francisco, thanks in a significant part to Cargo Way. It also enjoys easy truck access via the soon-to-be completed Illinois Street Bridge to Cesar Chavez Street and U.S. 101/I-80 and I-280. Cargo Way is adjacent to the Intermodal Cargo Transfer Facility and will enjoy direct freight rail access to the Caltrain Joint Powers Board/Union Pacific line. Water access is available via the adjacent Piers 90-96 Cargo Terminal.⁷ Employees and customers can access the site along the Third Street Light Rail. However, the area lacks any amenities for pedestrians and bicycles.



Major Transportation Improvement Map for the Bayview Hunters Point ⁸

⁷ The Port of San Francisco. (2003-2206). The Piers 90-94 Backlands: Leasing and Development Orientation.

⁸ San Francisco Planning Department (1995-2006). Area Plan: Bayview Hunters Point: Figure 12. http://www.sfgov.org/site/uploadedfiles/planning/Codes/General_Plan/images/Bayview_Map_12.pdf

2.4.1 Third Street Light Rail

After years of study and community dialogue, the Planning Commission and the Federal Transit Administration gave final approval to the Environmental Impact Statement for the Third Street Light Rail Project in 1999. Phase I of the project became operational in 2006. This project is an overall plan by the San Francisco to develop the necessary improvements in public transit to move people efficiently and comfortably between different neighborhoods of Bayview Hunters Point, to and from Candlestick Park, and to and from Downtown and other parts of the city.⁹



The light rail on Third Street at the intersection of Cargo Way

A light rail system linking Bayview Hunters Point to Downtown and other parts of San Francisco will be instrumental in achieving the overall transportation, land use, and energy conservation objectives of the Area Plan for BVHP. It will help to produce direct transportation benefits, such as encouraging more people to use public transit, as well as indirect benefits, such as a more healthful physical environment and social/economic revitalization. In addition, it will help to eliminate the geographical isolation of Bayview Hunters

⁹ San Francisco Planning Department. (1995-2006). Area Plan: Bayview Hunters Point: Transportation: Objective 4. Retrieved September 20, 2007, from http://www.sfgov.org/site/planning_index.asp?id=41398

Point from the rest of the city.¹⁰

Significantly for this project, one of the stations on the Third Street Light Rail route is at Third Street and Cargo Way, which provides public access to the project area. From this station, however, there are presently no efficient, interesting or safe way for pedestrians and bicycles to get to the open space at Heron's Head Park.

2.4.2 Illinois Street Bridge

The Port of San Francisco will soon complete the Illinois Street Multi-modal Bridge over Islais Creek, which will provide on-dock rail to the Port's cargo terminal at Pier 80 as well as an alternative route for trucks leaving the cargo terminals in the Southern part of the city. Once completed, the bridge will also provide access for pedestrians and bicycles and will connect directly to the Cargo Way segment of the Bay Trail.



The Illinois Street Bridge is under construction

The bridge will improve rail and truck access for cargo transport between the Port's northern and southern terminals and reduce industrial traffic from Port activities on Third Street, particularly truck trips that otherwise are projected to congest the intersection of Third Street and Cargo Way.

The completion of Muni's light rail transit on Third

¹⁰ San Francisco Planning Department. (1995-2006). Area Plan: Bayview Hunters Point: Policy 4.3. Retrieved September 14, 2007, from http://www.sfgov.org/site/planning_index.asp?id=41398

Street eliminated one traffic lane in each direction, which reduces vehicle capacity along Third Street. Construction of the bridge will create a second crossing of Islais Creek that will help relieve industrial transportation demand that otherwise would continue on Third Street.¹¹

The rail bridge to Pier 80 will open the door for additional cargos that do not stay in the Bay Area. Steel and other cargos destined for inland construction projects will be able to discharge their cargo in San Francisco and deliver them directly by rail to their final destinations. Freight rail is an important transportation mode for delivering goods, one freight rail car of goods can eliminate up to 8 trucks on the Bay Area roadways.

2.4.3 Bicycles and Pedestrians: The Bay Trail & The Blue Greenway

Bayview Hunters Point is included as a part of the bicycle and pedestrian circulation system of the Transportation Element of the General Plan. Part of the Streetscape project is to refine and realize this plan to give specific attention to the pedestrian and bicycle circulation needs for Cargo Way and the Bayview in general.¹²

More significantly, the Bay Trail Project designates Cargo Way as the access route to the Bay in this area, connecting Heron's Head Park with adjacent open spaces that are accessible to the Bay.

The Bay Trail, sponsored by ABAG (Association of Bay Area Governments) is one of the most ambitious and grandly green projects in the country — a 500-mile ribbon of waterfront walking and bicycling paths circling the nine counties of San Francisco Bay.

¹¹ Port of San Francisco. (2005, August 25) Press Release. Retrieved September 14, 2007, from http://www.sfgov.org/site/port_page.asp?id=37354

¹² San Francisco Planning Department. (1995-2006). Area Plan: Bayview Hunters Point: Policy 4.5. Retrieved September 14, 2007, from http://www.sfgov.org/site/planning_index.asp?id=41398

Senate Bill 100, authored by then-state Senator Bill Lockyer and passed into law in 1987, directed the Association of Bay Area Governments (ABAG) to develop a plan for this "ring around the Bay," including a specific alignment for the Bay Trail. The Bay Trail Plan, adopted by ABAG in July 1989, includes a proposed alignment; a set of policies to guide the future selection, design and implementation of routes; and strategies for implementation and financing. Since its inception, the Bay Trail Plan has enjoyed widespread support in the Bay Area.

The Bay Trail provides easily accessible recreational opportunities for outdoor enthusiasts, including hikers, joggers, bicyclists and skaters. It also offers a setting for wildlife viewing and environmental education, and it increases public respect and appreciation for the Bay. It also has important transportation benefits, providing a commute alternative for cyclists, and connecting to numerous public transportation facilities (including ferry terminals, light-rail lines, bus stops and Caltrain, Amtrak, and BART stations); also, the Bay Trail will eventually cross all the major toll bridges in the Bay Area.¹³



The Bay Trail offers access to commercial, industrial and residential neighborhoods; points of historic, natural and cultural interest; recreational areas like beaches, marinas, fishing piers, boat launches, and over 130 parks and wildlife preserves totaling 57,000 acres of open space. It passes through highly urbanized areas

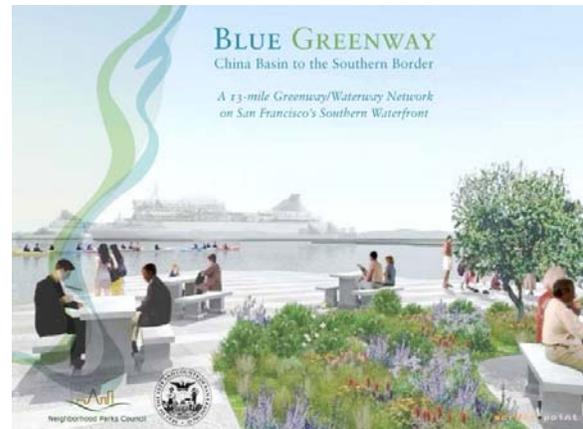
¹³ The Bay Trail Project. Overview. Retrieved September 18, 2007, from <http://www.baytrail.com/overview.html>

like downtown San Francisco as well as remote natural areas like the San Francisco Bay National Wildlife Refuge. (The Bay Trail's policies specifically seek to protect sensitive natural habitats.) Depending on the location of its segments, the Bay Trail consists of paved multi-use paths, dirt trails, bike lanes, sidewalks or city streets signed as bike routes. The Bay Trail also connects to trails that lead inland, and with the Ridge Trail, another regional trail network (which travels inland, mostly along the ridges of the Bay Area's hills).

In 1990, the San Francisco Bay Trail Project was created as a nonprofit organization dedicated to planning, promoting and advocating implementation of the Bay Trail. To carry out its mission, the Bay Trail Project makes available grant funds for trail construction and maintenance; participates in planning efforts and encourages consistency with the adopted Bay Trail Plan; educates the public and decision-makers about the merits and benefits of the Bay Trail; produces maps and other materials to publicize the existence of the Bay Trail; and disseminates information about progress on its development. (However, the Bay Trail Project does not own land or construct trail segments; instead segments are built, owned, managed and maintained by cities, counties, park districts and other agencies with land-management responsibilities, often in partnership with local nonprofit organizations, citizens' groups or businesses.)

The Blue Greenway is San Francisco's water-bordered emerald link to the Bay Trail. In May 2003, NPC, SPUR (San Francisco Urban Research Association) and San Francisco State University hosted a meeting on waterfront planning from which the Blue Greenway Initiative emerged. Over the next three years, planning facilitated by NPC and the steering committee of key organizations and individuals has resulted in a common goal, endorsed by Mayor Gavin Newsom: To make San Francisco the first Bay Area county to complete its portion of the Bay Trail. Both the Trail and the Greenway are works

in sturdy progress.¹⁴



Blue Greenway: A 13-mile Greenway/Waterway Network on San Francisco's Southern Waterfront

It is the Blue Greenway that calls for a green streetscape, a greenway for Cargo Way because of its designation in the Bay Trail. The Blue Greenway is envisioned as a unifying identity for the 13-mile green corridor along San Francisco's southeastern waterfront. The Blue Greenway project will link established open spaces; create new recreational opportunities and green infrastructure; provide public access through the implementation of the San Francisco Bay Trail, the San Francisco Bay Area Water Trail, and green corridors to surrounding neighborhoods. It will install public art and interpretive elements, support stewardship, and advocate for waterfront access as an element of all planning and development processes over time.

2.5 Better Streets Plan

The City of San Francisco is in the process of finalizing The Better Streets Plan (BSP) which will be a citywide policy master plan document that will provide for the first time a unified set of standards and guidelines that govern the design of all city streets.

¹⁴ Alexander, J. A Bird's Eye View of the Blue Greenway. Retrieved September 18, 2007, from http://www.bluegreenway.org/alexander_birdseye.html

The City intends to fundamentally rethink how it designs, builds and maintains the public right-of-way based on a balanced perspective, emphasizing transit, cycling and walking. In addition to recognizing the increasing importance of sustainable modes of transport, the BSP will reflect the understanding that public spaces are about much more than just transportation – that streets serve a multitude of social, recreational and ecological needs that must be considered when deciding on the most appropriate design. The BSP offers the City the opportunity to integrate all these considerations into a single framework.¹⁵



The Better Streets Plan, if fully implemented, will result in an enhanced pedestrian realm, which will help to realize a number of essential benefits for San Francisco and its residents. It will:¹⁶

- Help retain families in San Francisco: Streets that are safe from fast-moving traffic, are clean and well-maintained, and have spaces for neighbors to gather or children to play will help to retain families in San Francisco, much as affordable housing or good public schools will do the same.
- Support MUNI and a transit-first city: Every transit trip begins and ends with a walking trip. Well-designed streets that are safe for pedestrians, have amenities that people need, and connect to important transit lines will encourage greater use of the MUNI system.

¹⁵ San Francisco County Transportation Authority. Better Streets Plan. Retrieved September 14, 2007, <http://www.sfcta.org/content/view/279/99/>

¹⁶ Better Streets San Francisco. Retrieved September 14, 2007, from http://www.sfgov.org/site/uploadedfiles/planning/Citywide/Better_Streets/about.htm

- Help promote public safety: Streets that are active and have 'eyes on the street' will enhance residents' sense of safety.
- Help to minimize impact on global climate change and local air pollution:
- Help to minimize sewer/ stormwater overflows into the Bay.
- Decrease the likelihood of pedestrian injuries and fatalities.
- Increase accessibility for all street users.
- Provide open space in areas that are lacking.
- Support neighborliness, civic interaction, and identity.
- Enhance the everyday quality of life for San Francisco's residents.

In the Better Streets Plan, there are conceptual proposals for how to improve San Francisco's pedestrian environment. Because different streets play different roles—and should therefore be designed differently—the DRAFT Concepts are divided by street type. For each street type, illustrations show a typical existing condition, a set of basic improvements (such as street trees, curb ramps, and pedestrian lighting), and a set of additional options that could be applied given the circumstances of a particular street. Four of the twelve street types fit for Cargo Way and suggest different alternatives for "greener" improvement for the industrial boulevard. Follow the hyperlinks below to see the concept illustrations for the four street types.

- Industrial: http://www.sfgov.org/site/uploadedfiles/planning/Citywide/Better_Streets/0613-Industrial-01gp.pdf
- Industrial Mixed-Use: http://www.sfgov.org/site/uploadedfiles/planning/Citywide/Better_Streets/0613-IndustrialMU-01gp.pdf
- Multi-way Boulevard: http://www.sfgov.org/site/uploadedfiles/planning/Citywide/Better_Streets/0613-Blvd-01gp.pdf
- Parkway: http://www.sfgov.org/site/uploadedfiles/planning/Citywide/Better_Streets/0613-Parkway-01gp.pdf

2.6 Geotechnical Characteristics

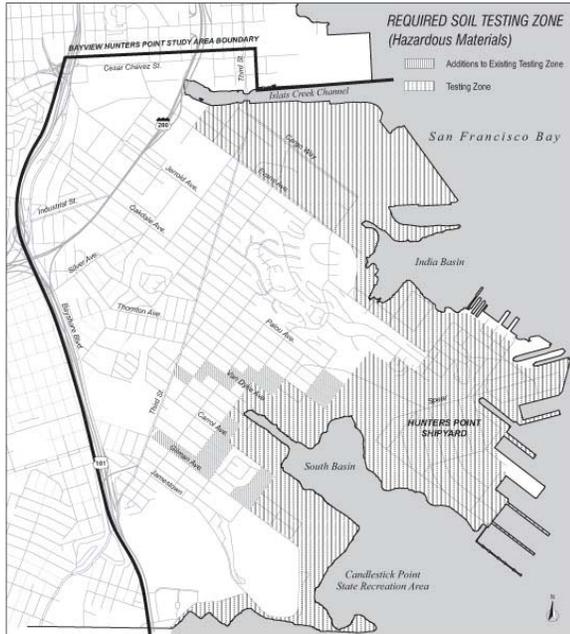
The entire Cargo Way area is landfill made of earthquake debris and other demolition materials to fill the lowest of this low lying area and extend the shoreline. The flat section continues inland rising to the three hills in the area with an incline that varies from moderate to steep.

The Backlands site contains a variety of debris extending to as much as 30 feet below the present ground surface. Soft bay mud and sand deposits then underlie the landfill. The bay fill condition of the Backlands requires that a number of geotechnical issues be considered in assessing the feasibility of project alternatives, including most notably the total and differential settlement due to consolidation, settlement of landfill debris, and liquefaction.¹⁷

The Area Plan for BVHP by the San Francisco Planning Department puts the entire Cargo Way strip in an area of Major Potential Liquefaction Hazard. The same Plan also places the Cargo Way project area within the Required Soil Testing Zone (Hazardous Materials).

In line with those designations, Cargo Way and its environs would also be subject to Article 20 of the San Francisco Public Works Code, "Analyzing the Soil for Hazardous Wastes." This so-called "Maher Ordinance" mandates testing of Bayside soils, in areas as designated on a map included with the ordinance. Any project that anticipates moving 50 cubic yards of earth or more will need to comply with the testing procedures outlined in the ordinance. Even minor grading activities or utility work would bring the project into Maher jurisdiction.

¹⁷ The Port of San Francisco. (2003-2206). The Piers 90-94 Backlands: Leasing and Development Orientation.



*Required Soil Test Zone (Hazardous Materials) for the Bayview Hunters Point*¹⁸

2.7 Stormwater Management

Before development, San Francisco was composed of sand dunes, grassy hills and wetlands that absorbed rainwater and infiltrated most runoff into the soil to replenish groundwater and streams. Today, impervious surfaces such as buildings, streets, and parking lots have covered most of these areas and prevent rainfall infiltration. Runoff picks up pollutants like oil and debris that washes them into the sewer system or other receiving water bodies like the San Francisco Bay, Pacific Ocean, and lakes and creeks. Under heavy rain events, this runoff can even contribute to localized flooding and combined sewer discharges.¹⁹

¹⁸ San Francisco Planning Department. (1995-2006). Area Plan: Bayview Hunters Point; Figure 6. http://www.sfgov.org/site/uploadedfiles/planning/Codes/General_Plan/images/Bayview_Map_6.pdf

¹⁹ SFPUC. Low Impact Design. Retrieved September 18, 2007, from http://sfwater.org/mta_main.cfm/MC_ID/14/MSC_ID/361/MTO_ID/541

The proposed positioning of the Bay Trail within or beside the right-of-way of Cargo Way may have an impact on the existing sewer system. It may be desirable to create separate storm and sanitary collection systems. Landscaping features along the future Bay Trail could then be designed to provide filtering and treatment of storm flows. In this case, the sewer system may need to be completely redesigned.

Unlike many cities, most of San Francisco sends its wastewater and storm runoff through the same treatment process. Although the combined system is beneficial for treating stormwater in light rains, during large storms, the high volume of water overloads the capacity of the combined sewer system, causing overflows that pose significant environmental and public health problems. Urban stormwater runoff also poses a significant risk of localized flooding.²⁰

It is cost-prohibitive to build, operate and maintain infrastructure to handle the maximum capacity demanded by occasional large storm events from San Francisco's highly variable rainfall. The sensible alternative to building more capital-intensive capacity is to prevent water from entering the system in the first place. This would reduce the chance of overburdening the system during peak rain events, thereby reducing the likelihood of flooding and overflows while redirecting the water toward beneficial uses. There are a number of proven techniques to better manage stormwater that do not involve conventional piping and storage.

Cities around the world are taking advantage of sustainable stormwater management technologies often called Best Management Practices (BMPs) and Low Impact Development (LID) approaches that can help mitigate the effects of urbanization on stormwater.

The SFPUC has a LID demonstration project at the Sunset Circle Parking Lot at Lake Merced (at the intersection of Sunset Boulevard and Lake Merced). This project takes advantage of the unique opportunity to test new landscape-based

²⁰ SPUR. (2006, November 12). San Francisco's Stormwater – An Ecological Vision: A SPUR Report.

storm water management techniques in San Francisco.



“Sunset Swales,” SFPUC demonstration project, during construction

As a demonstration project, it tests best practices for Low Impact Design (LID) that will assist the SFPUC in the development of future projects in other locations. Using vegetated swales and infiltration basins, these features are intended to delay, capture, and purify water that otherwise would flow directly into Lake Merced, demonstrating how storm water can recharge groundwater reserves at the same time.²¹

These technologies and designs mimic natural watershed processes by replicating pre-existing hydrologic site conditions. Strategic placement of these vegetated systems help mitigate the impacts of impervious surfaces and in some cases increase the level of service provided by the traditional sewer pipes.²²

Because of its location and geotechnical conditions, sustainable stormwater management strategies are especially applicable for Cargo Way. Landscaping features could be designed to

²¹ SFPUC. (2007, May 10). Sunset Swales Parking Lot Stormwater Retrofit; Project Summary. Retrieved September 12, 2007, from <http://sfwater.org/Files/Reports/SunsetSwalesProjectSummary5-10-07.pdf>

²² SFPUC. (2006, September 12). Low Impact Development – Greening Stormwater Management in San Francisco.

provide BMPs and LID approaches encouraged by SFPUC:



Permeable pavement

- Street trees: Increasing the quantity of street trees adjacent to Cargo Way to maximize canopy coverage and to create opportunities for canopy overlap to shade impervious surfaces and provide increased interception area. Tree canopies will retain a significant amount of rainwater to reduce peak flows into the stormwater system. Street trees additionally provide shade to adjacent paving that will reduce the heat island affect of those pavements.
- Characteristics of trees for maximizing stormwater management benefits include: broad and dense canopy, persistent foliage, fast growing, long life expectancy, drought tolerant in summer, saturated soil tolerant in winter, and tolerant of poor soil.
- Permeable pavements can be used within parking zones and the adjacent street tree zone between back of curb and sidewalk to reduce stormwater runoff.
- Bioretention filter strips and swales can be introduced in the medians and planting strips adjacent to the street. In conjunction with the slotted curb the grassy vegetation reduces runoff and removes sediment from the stormwater.
- Curbs. Alternative curbs strategies can be employed in locations where planting zones are created in the median or in the street tree zone where parking is not provided. Curbs can be slotted periodically with openings every 4

feet to allow surface runoff into a planted swale adjacent to the curb.



Slotted curbs allow surface runoff into swales



Bio-retention filter strip and swale

The key element of an integrated storm water infrastructure is more public green spaces that can serve as community areas and as valuable urban wildlife habitat.

The Port of San Francisco is presently conducting Hydrologic Analysis in the Port's "Backlands" area. Cargo Way issues will likely be focused on treatment of storm flows, not necessarily flow volumes. It may be desirable to link Cargo Way hydrologic design with the plans that will be implemented in the Backlands.

2.8 A Sustainable Industrial Mixed-Use Streetscape Model

The "green" alignment from the Concept Plan, The Gateway Project, The Better Streets Plan, and Stormwater Management strategies to the Bay Trail, and The Blue Greenway, sets the stage for the development of Cargo Way into a sustainable industrial mixed-use streetscape, a greenway that provides safe and efficient routes for pedestrians and bicycles as well as trucks and cars, access to open space and the waterfront, announce entrances at Heron's Head Park and Third Street at Islais Creek with a sense of arrival and place.

Dovetailing these "green" initiatives with plans for the Backlands, the Port hopes to attract sustainable industries, locating them adjacent to Cargo Way, creating a "green cluster" along the south waterfront.

A well-designed and developed Cargo Way could become an accessible, efficient and interesting linear greenway, promoting the City's Better Streets Policy and serving as a model of sustainable design for other sections of the regional Bay Trail and San Francisco's Blue Greenway in a city that seeks a much greener future. By reconnecting the city to the Bay in a way that signals a new attitude toward its ecological integrity, the Port's and SFRA's efforts are as full of promise in their own way as the removal of the Embarcadero Freeway.