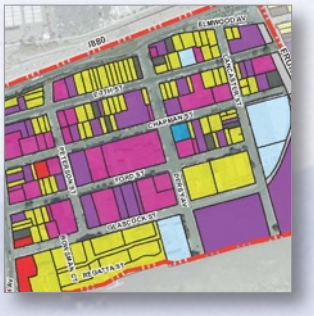
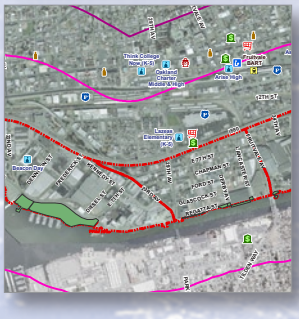




Existing Conditions Report
Draft 1

May 1, 2009

Prepared for:

City of Oakland

Community and Economic Development Agency

Community Design + Architecture, Inc.

with:

CirclePoint
Arup
Strategic Economics
Center for Community Innovation
Urban Explorer
Human Impact Partners

CENTRAL ESTUARY PLAN
A Vision for Oakland's Waterfront

Table of Contents

Table of Contents ***1***

I. Regional and City Context ***2***

II. Historical Context ***7***
- Early History 7
- Industrial Development 8
- Recent Investment and Change 9

III. Land Use and Urban Form ***11***
- West Planning Area 12
- Central-West Planning Area 18

IV. Streetscapes ***33***
- West Planning Area 33
- Central-West Planning Area 33
- Central-East Planning Area 33
- East Planning Area 34

V. Transportation ***35***

VI. Infrastructure and Public Facilities ***36***

VII. Summary of Environmental Issues ***37***

VIII. Economics and Demographics ***38***
- Resident Profile 38
- Business Profile 67
- Market Assessment 94

IX. Sustainability ***95***
- Energy 95
- Water 97
- Waste 97
- Climate Change 98
- Habitat Conservation 99
- Green Economy 99
- References 100

X. Public Health ***101***
- Introduction 101
- Summary of Findings 101
- Sustainable and Safe Transportation 111
- Access to Goods and Services 116
- Adequate and Healthy Housing 123
- Healthy Economy 127

APPENDIX A: Susceptibility to Displacement ***132***

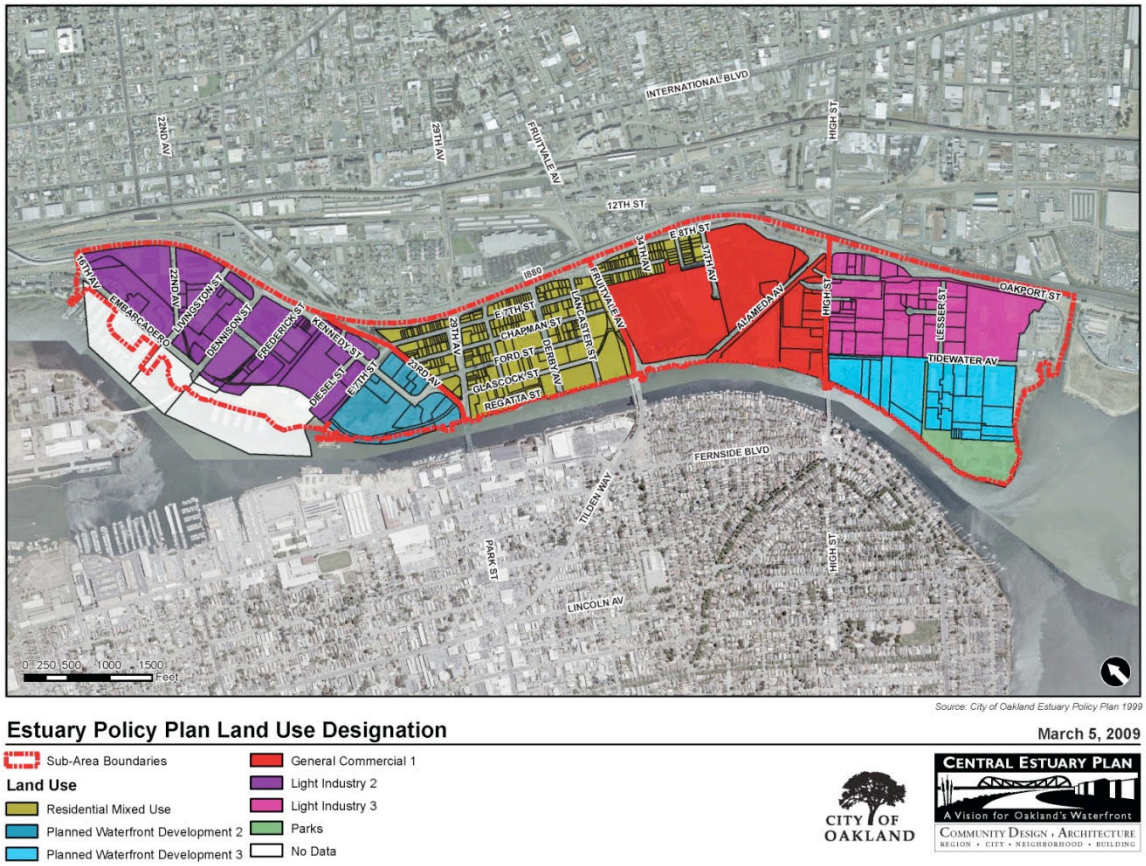
I. Regional and City Context

The Oakland Estuary waterfront is a significant citywide and regional resource that connects the city of Oakland and the surrounding region to the San Francisco Bay. The Central Estuary, the focus of this study, is an area generally encompassed by 19th Ave. to the north, 50th Ave. to the south, I-880 to the east and the Oakland Estuary to the west. The study area is roughly 416 acres, of which approximately 319 acres are made up of individual parcels and the remainder are public rights-of-way.

Conditions within the study area vary markedly between districts and neighborhoods. For the purposes of the Central Estuary Plan study, the area has been divided into 4 sub-areas, as delineated in the study area map below.

Existing Plans and Policies

Citywide policies, such as the City General Plan and Zoning Policy, as well as a number of plans and studies that have focused on the Estuary area, define the potential future for the area. *Envision Oakland*, the City of Oakland General Plan, outlines a long-range vision for the City of Oakland. Adopted in 1998, the plan defined a number of subsequent planning efforts that would be required to complete this process and further delineate the vision for certain areas. The Estuary Policy Plan (EPP), adopted in June 1999, is an element of the General Plan that sets forth policies and principles to guide development in the Estuary area that refine and supersede the policy guidance for this area contained in the City's General Plan Land Use and Transportation Element. The EPP recommended nineteen unique land use designations for the Estuary Waterfront, nine of which are found in the Central Estuary area. The EPP also included a recommendation to prepare an "implementation guide" to provide specific strategies and standards to guide the initiation and evaluation of waterfront-related projects. This Oakland Central Estuary Plan is intended to serve as that implementation guide.



Source: City of Oakland Estuary Policy Plan 1999

Estuary Policy Plan Land Use Designation

March 5, 2009

Sub-Area Boundaries

Land Use

- Residential Mixed Use
- Planned Waterfront Development 2
- Planned Waterfront Development 3
- General Commercial 1
- Light Industry 2
- Light Industry 3
- Parks
- No Data

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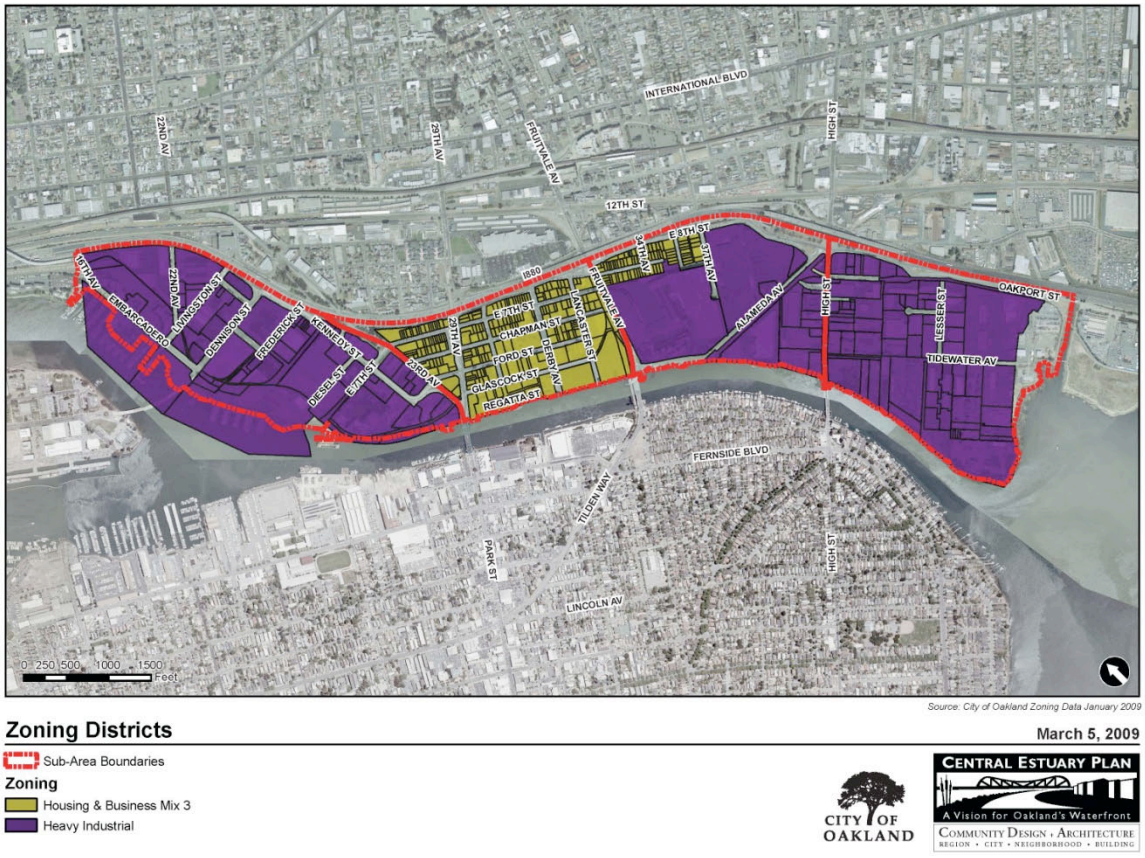
The City of Oakland Zoning Regulations, a Chapter of the Oakland Planning Code, is updated on a continual basis. However, much of the zoning for the area, largely put in place in the 1960's, was never updated to be in conformance with the EPP land use designations. The existing zoning for the area is primarily M-40, Heavy Industrial with an area of HBX-3, Housing and Business Mix in the residential area known as the Kennedy Tract. The existing EPP land use designations for the area consist of Light Industrial, Planned Waterfront Development, Residential Mixed Use, Heavy Industrial, and General Commercial.



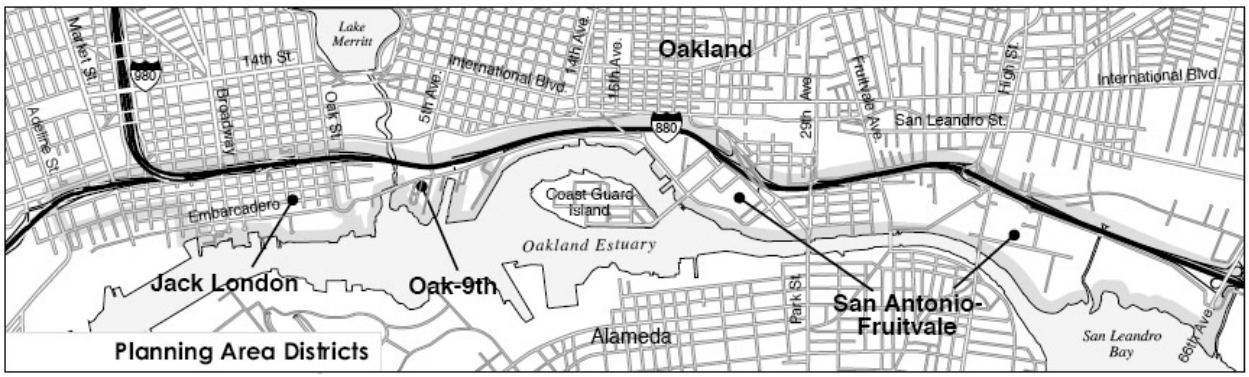
EPP policies and current zoning designations applicable to each subarea are further described in the Land Use and Urban Form section of this report.

Redevelopment Areas

The Central Estuary study area is part of the area of Oakland designated by the ABAG and MTC Joint Policy Committee as a Priority Development Area (PDA) and is targeted by the City of Oakland for renewed investment because of the area's central location and transit proximity. PDAs are locally-identified, infill development opportunity areas where there is local commitment to developing more housing, along with amenities and services to meet the day-to-day needs of residents, in a pedestrian-friendly environment. Additionally, PDAs should be served by existing or planned fixed transit or comparable bus service.

The Central Estuary Plan area falls within the boundaries of two separate Redevelopment Areas. The plan area is primarily located within the Coliseum Redevelopment Area (CRA). The goals of the CRA are to stimulate business opportunities for industrial, research and development and commercial activities by improving infrastructure; provide long-term job training and employment; and enhance residents' quality of life through public safety improvements, homeownership opportunities and neighborhood revitalization efforts. The CRA Plan contains proposed public improvements to help achieve these goals. A small portion of the Specific Plan study area is located in the Central City East Redevelopment Area (CCE). The goals of the CCE redevelopment project are to stimulate infill development, new housing and employment opportunities, and improved transportation, infrastructure, open space, parking, and other public facilities in the Project Area.

The Estuary has experienced significant development interest in recent years, although conflicting land use priorities and essential infrastructure deficiencies have highlighted the need for a formal and district-wide planning process. A significant challenge of the last decade has been the importance of preserving a healthy diversity of employment and industry in Oakland. Historically, many industries have depended on waterfront access for raw materials or distribution, and some of the industrial uses in the study area do to this day. As a result, the study area was predominantly zoned for industrial use, and a number of well-established industrial uses remain. In recent years residential development interests have focused on industrial areas throughout the City because of the relative affordability of large land parcels, and the Estuary waterfront has been particularly appealing because of its attractive views and central location.



Source: Estuary Policy Plan, 1998

Since the 1998 Estuary Policy Plan was adopted, the two other districts included in this planning effort, the Jack London District and Oak to Ninth, have undergone significant redevelopment and planning. The transformation of the Jack London district is well underway. The area is now home to a number of new residential, retail and mixed-use developments, enjoys improved waterfront access, and has become a significant regional destination. Extensive planning for the Oak to Ninth district, formerly a break bulk

shipping terminal, has resulted in formal development plan and supporting environmental documentation, which were approved by the Oakland City Council in January 2009. The 64-acre project is envisioned as a vital pedestrian-oriented mixed-use neighborhood comprising 3,100 residential units, 200,000 square feet of commercial uses, and 27 acres of public waterfront parks.

As numerous areas throughout the region and the City have converted from industrial to residential use, a relatively permanent conversion, industrial land and employment have become both increasingly scarce and increasingly important to maintaining the city's diversity. Maintaining a diversity of good jobs in Oakland is a priority for policymakers and residents, as it is key to maintaining the City's attractiveness to employers, social and economic diversity, and livability. As a result, in 2008 the City established a Citywide Industrial Land Use Policy, based on City Council direction, aimed at preserving certain industrial areas and establishing a more integrated and predictable approach to the management of industrial lands in Oakland. The Central Estuary is divided between subareas 4 and 11a in the recommendations in this plan.

Though the Industrial Land Use Policy followed and largely deferred to the Estuary Policy Plan, both provided flexible guidance on future land uses, which has resulted in conflicting opinions about how these policies might be interpreted. While the EPP suggested many industrial areas might eventually change from industrial to other uses, such as residential or office, it afforded the flexibility for existing industrial uses to stay and other industrial uses to replace them. The Industrial Land Use Policy respects the prescriptions of the EPP, but the policy is structured upon the need to preserve industrial lands, and makes a strong case for maintaining industrial uses, including in the Central Estuary area. As a result, recent decisions by City Council have been without clear guidance, and have resulted in controversial decisions. As a result, clarification of the land use priorities in the area is required to parse the intentions of the various plans into a single clear vision.

Waterfront Planning

The area also has a central role in a major on-going regional effort, the development of the San Francisco Bay Trail. The Bay Trail is intended to create not just a continuous transportation connection throughout the Bay Area, but also to provide better access to perhaps the Bay Area's greatest amenity, the San Francisco Bay waterfront. The *Oakland Waterfront Trail: Bay Trail Feasibility and Design Guidelines* (2003) includes a detailed feasibility study, site plans and design standards for development of a waterfront promenade and Bay Trail alignment along the Oakland Estuary shoreline. Significant resources were invested to develop and partially implement this plan. Construction of new parks and trail connections is on-going throughout Oakland, but is particularly pronounced within the study area, as the waterfront is rapidly being transformed by new projects, as detailed under Land Use and Urban Form. This Plan organizes and prioritizes the City's prior funding commitments to construct the Bay Trail, including Measure DD, a bond passed by voters in 2002 that is projected to provide $53 million in funding for activities related to the development of the Bay Trail. Additionally, the Plan will complement the East Bay Regional Park District's construction of a new waterfront park at the tip of the Tidewater area.

II. Historical Context

Early History

European explorers first encountered the San Francisco Bay in 1769, when a Spanish party led by Gaspar de Portola happened upon it while trying to reach the Monterey Bay. Subsequent Spanish expeditions over the next several years scouted what is now the Oakland Estuary waterfront, noting oak and redwood groves, small streams, and mud flats. Accounts of these 1776 and 1795 expeditions cite little evidence of human occupation, though Ohlone Indians were encountered in many other parts of the East Bay. Contrary to these observations, large shellmounds containing evidence of food collection and materials processing (the namesake of Emeryville's Shellmound Street) suggest a native presence in the Central Estuary vicinity if not in the study area itself.

In general, the Ohlone lived in small, approximately 250-person, groups scattered throughout central California. No evidence of agricultural activity exists; instead, they gathered acorns and used stone tools, first spears and later bows and arrows, to capture a wide variety of game. Fish and shellfish from the local bays and ocean were also major food sources. One of the Ohlone's most remembered practices is the use of the sweathouse, where men spent time daily in order to stay impeccably clean. The Spanish called the Ohlone sweathouse a *temescal* after the Aztec word for a similar institution in indigenous Mexico. Today, Oakland's Temescal neighborhood and Temescal Creek pay homage to the region's former inhabitants.

The Central Estuary today looks very different from its form 200 years ago, not simply because of the different peoples, industries and activities that now exist there, but because the shoreline as we now know it was quite different. The ecology and geography of pre-modern history might not even be recognizable to the modern area resident or worker, as the Estuary was at most a few feet deep and was lined with extensive tidal salt marshes; in some places, it was even above sea level. These marshes formed a continuous link between the Bay and Lake Meritt. Since the 1860s, dredging has gradually altered the area's waterways, creating Coast Guard Island (formerly Governor's Island) and the area currently occupied by the Embarcadero and Union Point Park, as well as filling in the stretch of wetland between the Bay and the Lake Merritt while opening a continuous channel between these western wetlands and San Leandro Bay to the east. The dredging also deepened parts of the waterfront, facilitating the entry of ships that would previously have run aground during low tide.

Historic Map of Oakland Estuary in 1887 (Courtesy, Oakland Public Library)

In 1820, Spanish Governor Pablo Vicente de Solá gave an expansive land grant that included what is today Oakland to the Peralta family, the East Bay's well-known historic landowners. To help oversee their extensive property holdings, the Peralta family hired Horace Carpentier as their attorney. In 1852, two years after California gained independence from Spain, Carpentier persuaded the new state legislature to incorporate Oakland as a town. Within weeks of the town's incorporation, Carpentier wrested control of the Oakland waterfront from the Peraltas by persuading the town's trustees to pass an ordinance giving exclusive control of the waterfront to Carpentier himself in exchange for five dollars, a school, and three wharves. Within two years, Carpentier was elected mayor. However, it was only a matter of years until Carpentier was ousted from the Mayor's office by an unhappy public, though he continued to own and oversee the Estuary waterfront until 1868.

Industrial Development

Since its first development, the Oakland waterfront has been an important regional industrial and transportation hub. The history of the Brooklyn Basin, the estuary's relatively deep inner harbor area, underscores the waterfront's role in the Bay Area's early population growth. The harbor was named for the ship that delivered 238 Mormons to the Bay Area in 1846. When the pilgrims, led by Sam Brannan, decided to settle across the Bay in San Francisco, that city doubled in population. Many would-be gold miners likely first set foot in California along the same stretch of coastline when the Gold Rush began several years later.

Much of the present-day landform was defined in the years of Carpentier's ownership and early industrial times, as early users of the Estuary quickly went to work dredging a usable channel, filling the salt marshes that previously defined the coastline, and reshaping the shoreline to improve industrial access and convenience. Carpentier sold his waterfront holdings to the Central Pacific Railroad in 1868, and from then on the industrial role of the Estuary waterfront in the region was solidified. The Central Pacific Railroad continued to steer the course of the development of the area in the ensuing 40 years, until the area again became part of the City of Oakland in 1909 during an expansion in which the City grew to nearly three times its previous area. By that point, infrastructure and industry had been fully established.

Early industry in the Oakland Estuary - 1918 (Courtesy, Oakland Public Library)

As the Estuary developed into an early port, its critical amenity was the easy linkage between water- and land-based transportation networks. As a result, the Central Estuary area became the location of many critical supporting industries and infrastructure for the port and for the region at large. Marine-related

industry and manufacturing on the Estuary waterfront have always been an integral part of the region's economy. In the Central Estuary in particular, agricultural processing has been a component of the area's industrial make-up since it was first developed. For over a century it has linked the inland growing and harvesting economy to broader distribution networks, providing processing facilities at the junction of land-side railroad networks and industrial piers.

To support these industries, working class neighborhoods grew around the waterfront as places where workers could live and easily get to work. The 1850's were a decade of significant growth in all regards for California, and not least in population growth. Many thousands of people originally moved to California seeking gold in the Sierras, but most found only disappointment in the mines and began seeking stable work in growing urban industries. At the time, the lumber industry on Oakland's waterfront and the need to transfer produce from rivers to the Bay employed many people in the mills and wharves. A small village of laborers developed around the working waterfront.

Working class neighborhood near the wharves in Oakland – 1885 (Courtesy, Oakland Public Library)

Many of these workers were of Portuguese descent and lived in the neighborhood that is now the Kennedy Tract and Jingletown. These immigrants hailed largely from the Azorean islands, an origin shared by a number of Alameda, Contra Costa, and San Mateo County residents beginning in the latter part of the nineteenth century. By the 1880s, the Oakland Portuguese had established a strong presence in Fruitvale, the neighborhood that encompasses Jingletown, with many community members working in the local mills and other factories. The name Jingletown is derived from these workers, who would walk the streets jingling the coins in their pockets to show off their newfound prosperity.

This industrial tradition is still reflected in the composition of the Central Estuary waterfront today, though change has steadily grown apparent in recent decades.

Recent Investment and Change

In 1993, The League of Women Voters published a study called "The Waterfront. It Touches the World; How Does it Touch Oakland?" that drew renewed interest in the Oakland waterfront, reminding citizens that Oakland is a waterfront city. This attention coincided with renewed growth and development interest in the City of Oakland and particularly on the waterfront and the on-going transformation of a number of the industrial areas of the City. Seizing on the coincidence of these factors, in 1995 the City of Oakland and Port of Oakland sponsored a visioning charrette for the waterfront. This effort led to the development of the Estuary Policy Plan, beginning in 1996, which was the first planning effort to study the past, present, and future of the Oakland Estuary Waterfront.

The development of Jack London Square and the planned development of the Oak to Ninth sections of the waterfront to the west of the Central Estuary Area reflect the exciting present and future of the Oakland waterfront. The long industrial history of the Central Estuary waterfront and established uses there, as well as the need to maintain high quality jobs and industry in Oakland, suggest a potentially different, though equally exciting, vision for the future of this section of the waterfront.

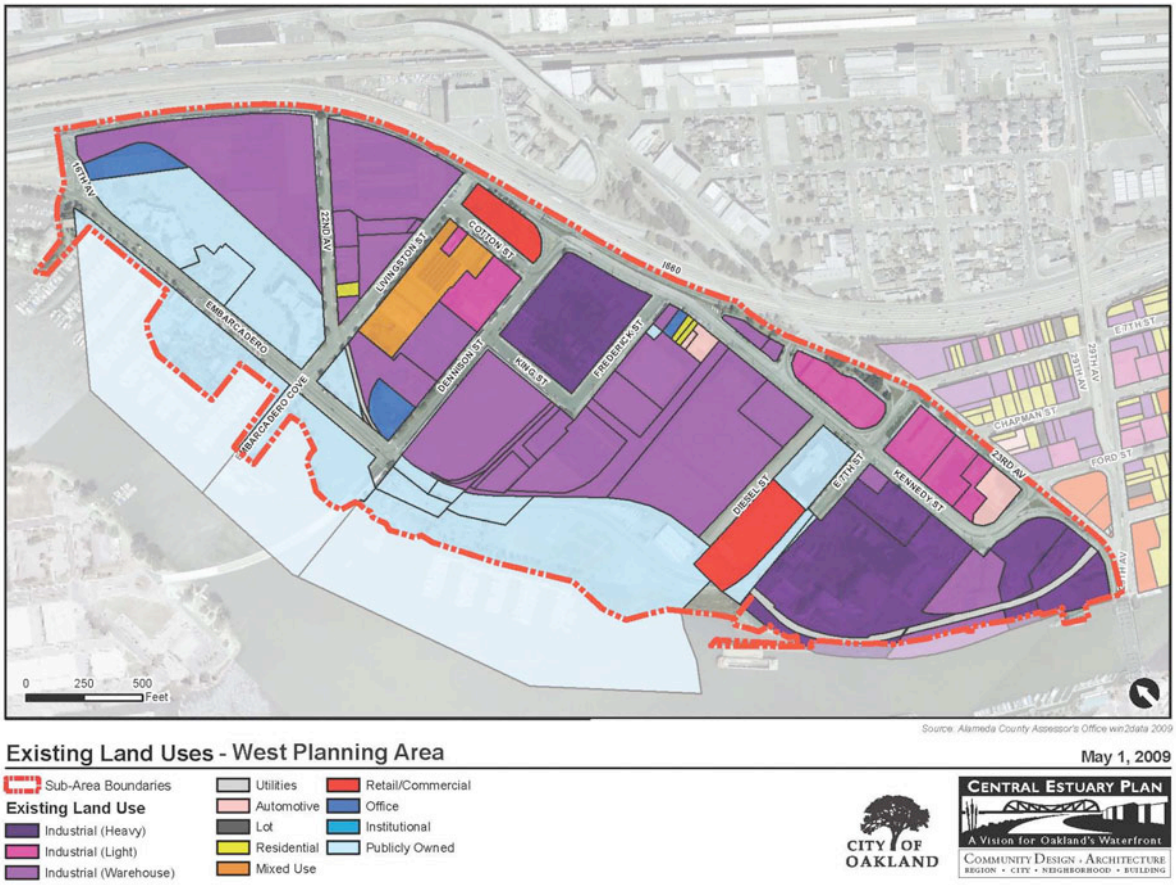
III. Land Use and Urban Form

Once a predominantly industrial waterfront, the Central Estuary area today has evolved into a more mixed-use group of unique districts. Although commercial and industrial uses comprise a significant amount of acreage in the Central Estuary area, residential neighborhoods continue to expand. Over the years, the development of work/live housing and artist studio space has been introduced into traditional commercial manufacturing and industrial areas, resulting in increasing diversity of uses, form, and character throughout the study area.

Detail on existing conditions in specific sub-areas is provided in the following sections.

West Planning Area

Existing Land Uses



Existing land uses in the portion of the Central Estuary Specific Plan area west of 23rd Avenue include a mix of well-established heavy industrial uses and warehouses, more recent commercial activities and a sizeable waterfront park.

Embarcadero Cove, at the western end of the study area, currently includes a number of commercial and recreational uses, predominantly oriented to the waterfront. Commercial office space, including offices of the Port of Oakland, and associated parking are the dominant use in this area. Commercial retail and services include LJ Quinn's Lighthouse, a historic lighthouse converted to a

Marine related retail in Embarcadero Cove

restaurant and bar that is a significant destination within the area, and a number of marine activity-related facilities.

Several heavy industrial activities occur in the area, including the 11-acre Con-Agra industrial flour milling facility and a number of other food- and beverage-related producers and distributors. These industrial facilities comprise the dominant use by land area within the West Planning Area.

A substantial new waterfront park, Union Point Park, is one of the main amenities of the entire Specific Plan area. Union Point Park is a 9-acre waterfront park that was completed in late 2005. It offers spectacular views of the marina and Estuary, waterfront access, park activities and open space. The park provides a major amenity to an area of the city with little access to park and open space.

Young people playing soccer at the new Union Point Park, with the Con-Agra heavy industrial facility in the background.

The Dennison Street Bridge connects the Plan area to Coast Guard Island in the City of Alameda. This 67-acre island is owned by the U.S. Coast Guard and supports a number of Coast Guard facilities managed by Integrated Support Command Alameda, a large command base. Facilities on the island include a training center for reserve and enlisted Coast Guard personnel, living quarters, four 378-foot high endurance cutters, a medical and dental clinic, and public works facilities to service the island. Two large waterfront parcels on either side of Denison Street at the foot of the Dennison Street Bridge are currently vacant, but planning and design are underway for the parcel on the east side of the bridge, and a skateboard park is proposed for the west side of the bridge, as described under *Planned Improvements in the Study Area*, below.

Existing Building Form

The majority of buildings in the West Planning Area are industrial warehouses and manufacturing facilities. The buildings are typically one to two stories of concrete block or metal siding with little to no articulation or pedestrian orientation. A few select facilities, such as Numi Teas, have a more inviting entry or other publicly oriented element, but street-facing facades are predominantly solid and spartan, reflective of their industrial use.

The Embarcadero Cove commercial center includes a core of relocated Victorian houses converted to offices, surrounded by two- to four-story office buildings that reflect a simple Modernist style typical of mid- to late-20th Century office construction, with façades of concrete and glass with little articulation. These buildings generally front onto the street and sidewalk but are surrounded by expansive parking. Between the Embarcadero and the waterfront, the one- to two-story marine industrial and service commercial buildings reflect an earlier 20th Century style, with smaller footprints, little provision for

parking, and a more informal organization. Fences and other barriers project an uninviting façade onto the Embarcadero street frontage.

The 11-acre ConAgra facility is composed of large concrete industrial structures, including low-slung warehouse and distribution facilities and some processing structures that are five or more stories tall. The majority of the entities in this area are relatively land-intensive, though some include substantial amounts of paved or un-landscaped open space and smaller storage or other support buildings.

General Plan Land Uses and Zoning Designations

The waterfront areas of the West Planning Area include the zoning designations Waterfront Commercial Recreation 2 and Parks. Areas between the waterfront and the freeway, with the exception of the triangular Con-Agra site, are designated Light Industry 2 in the Estuary Policy Plan. Light Industry 2 is intended to maintain light industrial, food processing and manufacturing uses, allowing a limited amount of office, residential institutional or commercial uses with FAR up to 2.0 per parcel or 30 units per gross acre. This area is predominantly zoned M-40 with a small area of M-30, both of which are heavy industrial designations.

The triangular ConAgra site is zoned Heavy Industrial and called out in the Estuary Policy Plan as Planned Waterfront Development 2. The intent of this designation is to provide for the continuation of existing industrial uses, allowing for their future transition to a higher density mix of urban uses if the existing uses prove to be no longer viable in this area. This designation allows for a FAR of up to 2.0 per parcel and up to 40 dwelling units per gross acre.

Estuary Policy Plan Guidance

The Estuary Policy Plan envisions a higher intensity area within the West Planning Area, with improved access and business orientation to the waterfront and continued and expanded industry where existing industrial uses are successful. The Plan encourages the development of water-oriented commercial uses within Embarcadero Cove, and the maintenance of light industry, especially food related industry, in the Brooklyn Basin, with the development of compatible office, support commercial, and institutional uses in the area. With regard to the Con-Agra plant and surrounding heavy industry, the Plan encourages existing industry to continue while it is still viable but, recognizing that market forces may make these sites functionally obsolete, it recommends that in the long term they should be transitioned to a new mix of waterfront-oriented uses. Additionally, it recommends that the mix of waterfront residential and commercial uses should be compatible with the existing surrounding areas both in terms of scale and character and in terms of connectivity to surrounding areas and orientation to the waterfront.

Public Space

Bay Trail

The Bay Trail through this area is largely complete, with the exception of missing connections across the Dennison Street Bridge and the Park Street Triangle. The Cryer site improvements and skateboard park discussed under Proposed Improvements (below) will complete the connection of the Bay Trail between Embarcadero Cove and Union Point Park. The Park Street Triangle improvements will complete a near-term connection for the Trail; however, implementing the longer-term alignment along the Estuary will require redevelopment of the ConAgra site to create a waterfront right-of-way for the trail.

Bay Trail through West Planning Area

Union Point Park

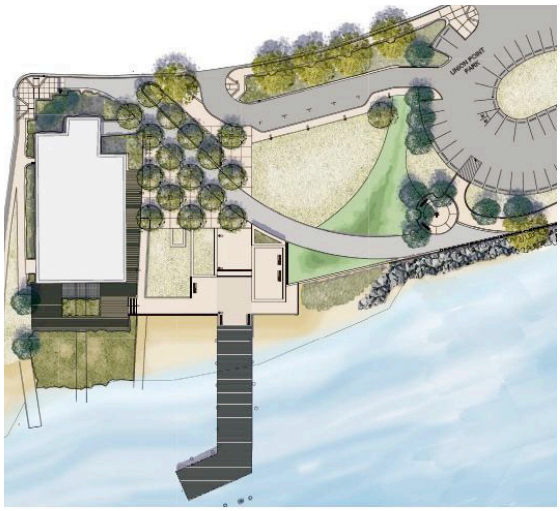
Union Point Park is a 9-acre waterfront park that was completed in late 2005. The park includes restroom facilities, parking, and other amenities for Bay Trail users, as well as extensive formal and informal play and picnic areas. The park is the most substantial new park in Oakland in many years and an exciting destination within the project study area.

Union Point Park

Planned Improvements in the Study Area

Cryer Site Waterfront Park

The former Cryer Boatworks site on the Estuary waterfront is located immediately to the south of the landing of the Dennison Street Bridge. The 2-acre park will be adjacent to and extend the existing Union Point Park. The planned improvements include a 450-foot segment of the Bay Trail, a park area, parking, beach restoration, pier replacement, and upgrading and converting the barn-like boatworks building for community use. Design work was completed in August 2008, and preparation of the final bid package is underway as of early 2009.



Designs for Cryer Site Waterfront Park

Waterfront Skateboard Park

The vacant site between the Livingston Street Pier and Dennison Street Bridge is an EPA Superfund site that has been capped with a concrete pad. A skateboard park has been proposed for the site, and the Tony Hawk Foundation has applied for grant funding to help with design of the park. The site will be sculpted with skateboard ramps, which will allow it to remain capped, preventing the need for environmental remediation. The Bay Trail will run along the water and be separated from the skateboard park by a landscaped slope. The anticipated schedule for these improvements is unknown.

Livingston Street Pier

The Livingston Street Pier is a property of the Port of Oakland that is leased through 2011 to Vortex Marine Construction, a full service marine contractor specializing in marine and heavy civil construction that owns and operates one of the largest fleets of floating construction equipment in the Western United States. As a long-term option, pending the relocation of Vortex Marine Construction or termination of its lease, the pier could be opened for public use and the existing building could potentially be used for recreational/retail uses that relate to the proposed skateboard park on the adjacent site. The trail would wrap around the perimeter of the pier.

Key Opportunities and Constraints

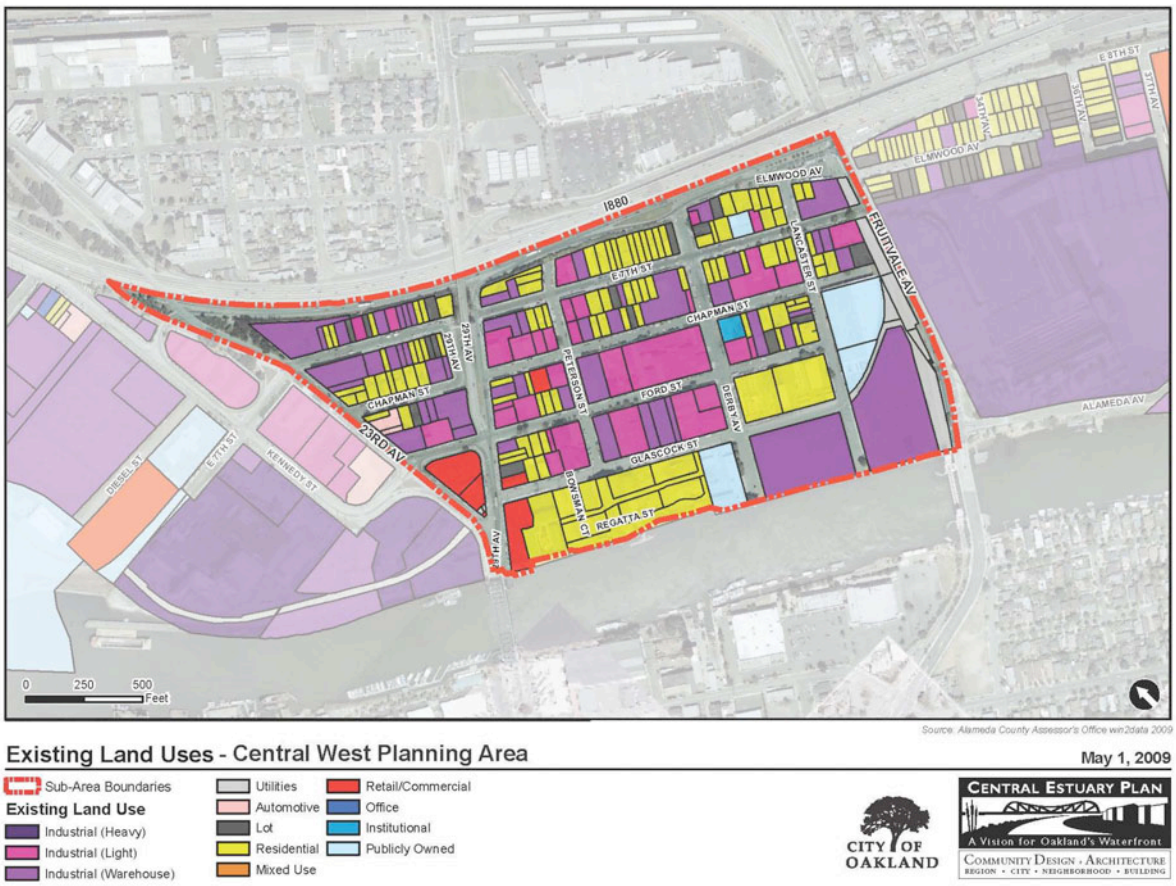
The high visibility of the West Planning Area and the Estuary waterfront from Interstate 880 (I-880) at this point gives it the potential to attract visitors for waterfront-related and commercial activities. The predominance of food- and beverage-related industry also creates opportunities for gastro-tourism, which has the potential to benefit the area by drawing in visitors to support these local industries. However, the nature of the work of many of these industries are not all amenable to hosting visitors, and in fact many users, such as industrial bakeries, have hours, truck circulation needs and other external impacts that might discourage the presence of pedestrians and visitors in the area. Balancing these factors will be a high priority in the West Planning Area.

With the continued development of the Bay Trail and waterfront parks throughout this area, it will become an even more valuable resource and attractive destination for Oakland residents and regional visitors. This draw could be capitalized on to support retail and service businesses or other commercial endeavors in this area.

Unusual rights-of-way throughout the west planning area create an occasionally confusing and often pedestrian-unfriendly circulation network. A remainder rail right-of-way slices through the northern corner of the site, a number of streets do not connect through, and the quality of the pedestrian environment on streets other than Embarcadero is low. Improving circulation within this area will be a high priority.

Central-West Planning Area

Existing Land Uses



The Central-West Planning Area, between 23rd and Fruitvale Avenues, is unique within the Study Area, as it includes a substantial amount of residential mixed in with lower-intensity industrial use. The area is home to an increasingly vibrant residential and artist population and is the site of significant new residential development and community reinvestment. The existing land use composition is dominated by work/live spaces, single-family bungalows and houses and recently developed apartments and condominiums. The existing industrial

A typical industrial live/work warehouse from the Central West Planning Area

spaces are typically large warehouses, many of which are used by artists and include residential components.

The waterfront itself is an evolving model of the kind of access and open space that is envisioned for the whole Estuary waterfront, with a well-developed and attractively landscaped stretch of the Bay Trail, and two small "pocket" parks soon to be under construction.

Other notable uses in the area include the Institute of Mosaic Art, an artists' and educational facility that also serves as community center for a portion of the residential population; the Oakland Museum Women's Board White Elephant Sale Warehouse, site of an annual fundraising rummage sale; and the University of California at Berkeley's T. Gary Rogers Rowing Center, which opened in 2004 and preserved and incorporated a portion of its predecessor, the historic Ky Ebright Boathouse.

New residential development and associated streetscape improvements.

The Institute of Mosaic Art

Existing Building Form

Existing buildings in this area are relatively low-intensity and space-intensive. With the exception of recent residential developments, which range from 3 to 5 stories, there is little over two stories in the area, and many one-story residences and tall single-story warehouse facilities.

There is no consistent style, size, or form within the area, and the eclectic mix of uses, styles, and level of upkeep is reflected on a property-by-property level across the majority of the subarea. This eclectic mix adds significant charm to the neighborhood, creating a character that is unique not just within the Study Area, but within the region as a whole. The artistic nature of many of the area's residents is expressed through creatively decorated facades ranging from brightly painted colors to unusual landscaping, and

from large-scale sculptural metalwork to finely detailed mosaic art. Coupled with low traffic volume, the result is a stimulating visual experience that contributes to a pleasant walking environment.

The new higher-density residential properties along the waterfront and parts of Glascock Street reflect loft and condo styles of the last two decades, and are generally attractive, well articulated, and well maintained, with attractive and formally landscaped street frontages. The more formal and modern style of this new construction is a notable departure from the existing character of the neighborhood.

General Plan Land Uses and Zoning Designations

The Central-West Planning Area is zoned HBX-3, Housing and Business Mix, which calls for residential mixed use. The HBX-3 designation has been variously interpreted by City staff and very broadly interpreted by property owners over the years to allow a notably diverse mix of uses. The Estuary Plan designates the entire subarea as Residential Mixed Use. The Residential Mixed Use district is intended to enhance and strengthen the viability and attractiveness of the Kennedy Tract as a mixed-use residential neighborhood of low to medium-density housing within a fine-grained fabric of commercial and light-industrial uses, and it allows for an FAR up to 1.0 and residential densities up to 40 units per acre.

Estuary Policy Plan Guidance

The Estuary Policy Plan recommends that the affordable residential neighborhood in the Kennedy tract be preserved and expanded. For the area at large, the Plan recommends that future development provide for a mixture of compatible uses with emphasis on a variety of affordable housing types, while maintaining the area's character of small buildings.

Public Space

Bay Trail

The segment of the Bay Trail from 29th Avenue to Derby Avenue is complete and runs though a broad and attractive waterfront landscaped open space that was developed as part of recent residential development there. The trail segment from Derby to Fruitvale Avenue is under construction. As discussed under Planned Improvements, the piers that will provide connection under the bridges are currently in the design and entitlements stages. Additionally, the new parking to be provided as part of the redesign of the Park Street Triangle will provide a new access point for people driving to the Bay Trail to begin a walk or cycling trip from this point.

New Residential development and Bay Trail along the waterfront.

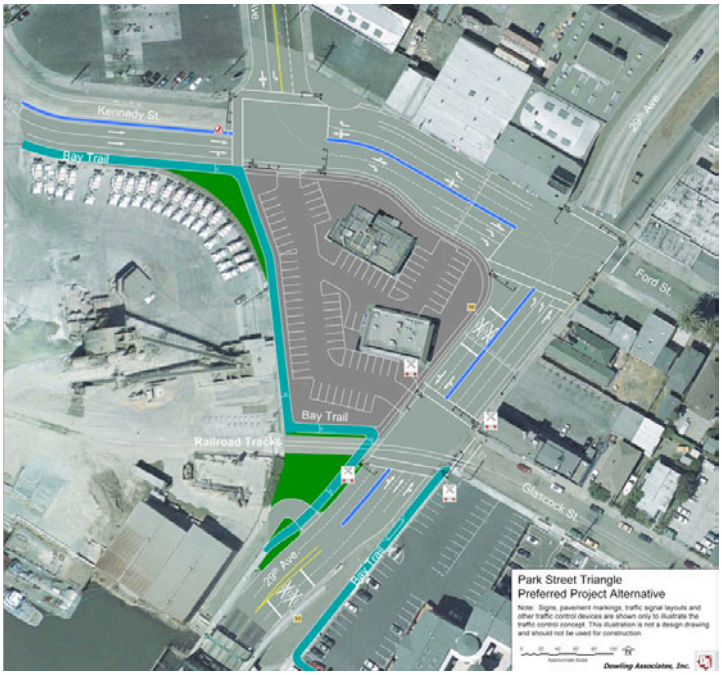
Derby Avenue and Lancaster Street Pocket Parks

These two parks are currently under construction, as detailed under Planned Improvements.

Planned Improvements in the Study Area

Park Street Triangle

The Park Street Triangle is a triangular block between 29th Avenue, 23rd Avenue and Kennedy Street that currently includes a 7-Eleven convenience store and Nikko's Family Restaurant. The site is a gateway to the waterfront for travelers along 23rd Avenue and the Park Street Bridge and a terminus for bicyclists along the Embarcadero. The site is located approximately midway between Jack London Square and the Martin Luther King, Jr. Regional Shoreline and is considered a potential starting point for a journey along the waterfront. To this end, a conceptual study of the area was developed using Measure DD funds to improve circulation and provide parking for and access to the waterfront. More detailed traffic studies for the Triangle are being undertaken by Alameda County in concert with the redesign of the 23rd and 29th Avenue overpasses on I-880, which will alter traffic patterns and volumes in the vicinity.



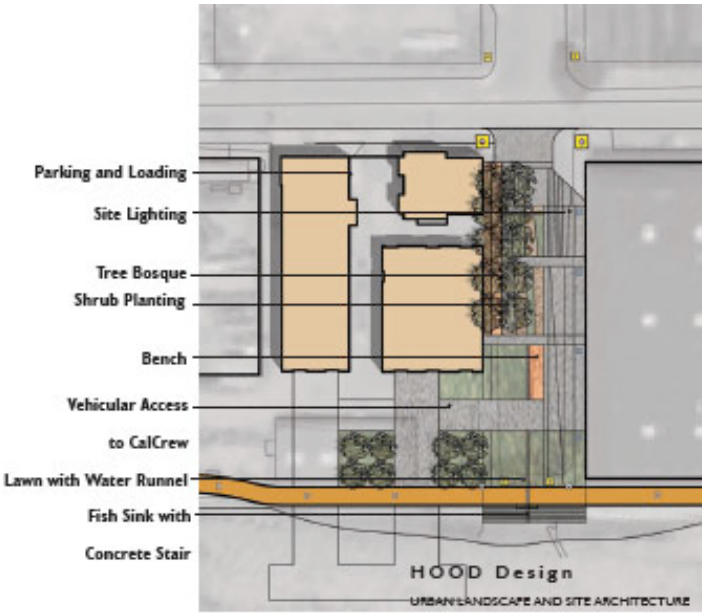
A conceptual redesign for Park Street Triangle includes a Bay Trail connection and user parking. (Source: Park Street Triangle Traffic Study)

Glascock Street Rail Reactivation and Related Street Improvements

Since 1949, the Union Pacific Railroad, formerly the Southern Pacific Railroad, has operated trains along Glascock Street through a revocable permit. In recent decades, trains have primarily accessed industrial facilities in the study area from the north, via the Hanlon Lead, and run on Glascock Street infrequently, until usage ceased around 2005. Proposed seismic retrofit improvements by Caltrans to the 5th Avenue/I-880 overpass north of the Study Area will soon render the Hanlon Lead inoperable, resulting in the need for Union Pacific to reactivate the Glascock spur to access Estuary area industrial facilities. Trains will run through the study area in the middle of the night, passing twice (arriving and departing) per night approximately three times per week. In order to reactivate the spur track, Caltrans has provided $1.2 million in funding for street improvements and the City of Oakland will be dedicating additional funding to these improvements, which will include sidewalks, curbs and streetscaping in addition to basic roadway improvements. As of early 2009, the improvement plans are in early stages of planning and design.

Derby and Livingston Street "Pocket" Parks and Bay Trail Connection

Two streets between the Park Street and Fruitvale bridges terminate at the waterfront - Derby and Lancaster Streets. These streets are ideal locations for pocket parks, providing observation areas along the waterfront. The segment of Bay Trail between them runs behind the Oakland Museum Women's Board warehouse, which required special approvals and design work to resolve due to the warehouse being built to the top edge of the embankment. Measure DD Series A and federal funds were secured for the Bay Trail connection project, and design work and public outreach are now complete. Construction of the Bay Trail connection began in late 2008. Design and construction of the pocket parks is planned for an undetermined future date.



Design concept for Derby Street Pocket Park (Source: Bay Trail Feasibility Study and Design Guidelines)

Park Street and Fruitvale Avenue Bridge Bay Trail Connections

Several alternatives were considered for building the Bay Trail around the bridges at Park St. and Fruitvale Ave., including a floating trail, a fixed pier design, an underpass, an overpass, and an inland street crossing. The fixed pier running under the bridge was selected as the preferred solution because it allows Bay Trail users to stay on the waterfront and avoid auto conflicts, and it also has acceptable construction and maintenance costs. Measure DD Series A appropriations have been designated for construction and preliminary designs were completed; however, entitlement issues have held up construction. Because the Estuary is a Federal waterway, the City is currently negotiating with the Army Corps of Engineers to be granted the easement to construct the improvements.

Key Opportunities and Constraints

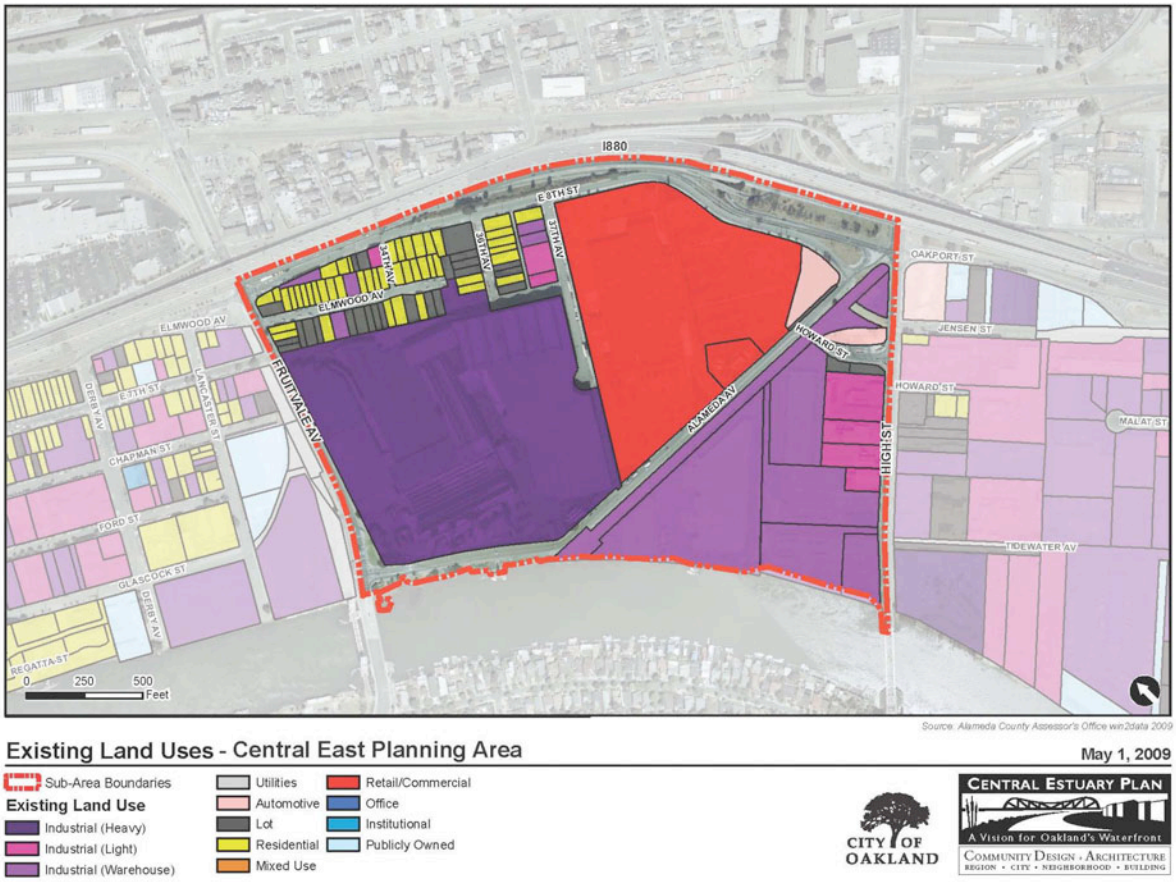
The residential presence in this subarea provides a distinctly different set of opportunities and constraints related to improving the livability of the area. In particular, the public realm provided by the streets offers the most potential for improving the neighborhood character. Ongoing improvements to Lancaster Street and Derby Avenue and proposed streetscape improvements to Glascock Street, as well as those already completed on a section of Derby Avenue, highlight the potential to create a safer and more attractive public realm. Coupled with the unique and attractive facades of many of the buildings in the area, improved sidewalks and landscaping would result in a very pleasant and interesting walking environment.

The more significant challenge in the Central West Planning Area is the need to improve connections at the edges of this area to better connect it to the rest of the study area and to the City and region as a whole. At the southern border, the Bay Trail will provide improved connectivity to adjacent areas and regional circulation once the connections at the two bridges are complete. Fruitvale Avenue to the east and 29th and 23rd Avenues to the west present significant barriers to connectivity in all other directions.

These streets are wide, have few crossing locations, and are oriented to high-speed automobile traffic, making them unappealing to cross. As well, 29th and Fruitvale Avenues provide connection to the north across I-880, connecting the neighborhood to other adjacent residential areas, commercial corridors, and the Fruitvale BART station, yet these streets and the crossings the provide are unattractive, uncomfortable, and in some cases unsafe. Improving all of these connections should be an important focus of improvements to this subarea.

Central-East Planning Area

Existing Land Uses



The Central-East Planning Area, between Fruitvale Avenue and High Street, has perhaps the most diverse mix of uses, including a small extension of the Kennedy Tract residential neighborhood; heavy industry centered on the large Owens-Brockway facility; a major commercial center, and a large area of light industrial uses and warehousing.

Owens Brockway Glass makes up a large portion of the Central East Planning Area. (Source: Microsoft Virtual Earth)

The northern corner of the Central-East subarea includes a few short blocks of one- and two-story single-family homes on Elmwood and 36th Avenues, as well as a number of vacant lots currently in use as informal parking lots. The largest single use in the area is the 28-acre Owens-Brockway glass recycling facility, which has seen decreasing productivity in the last decade and whose owners have considered selling the property.

Another large parcel in this subarea is the commercial center that includes a Home Depot and various other commercial uses, including a gymnasium and a sports club. This is a relatively successful regional commercial destination that capitalizes on its close proximity to the Freeway and High Street, capturing traffic from both the Estuary area and Alameda island. A commercial pad site adjacent to this center at the corner of Alameda Avenue and the I-880 off-ramp is currently vacant. The southern section of the Central East Planning Area, south of Alameda Avenue, is made up of warehousing and light industrial uses.

Existing Building Form

The residential properties in the northern corner of the subarea are predominantly one- and two-story bungalows, many in need of care and maintenance and interspersed with vacant lots. The Owens-Brockway facility is a sprawling 1-2 story warehouse style construction that covers the majority of its lot. The site also includes smokestacks and other industrial structures along the Alameda Avenue frontage. The commercial center is a typical auto-oriented big box center, with a large one-story decorated shed in the center of a field of parking. The warehouses and industrial facilities at the southern corner are all typical long one-story concrete and steel warehouse buildings.

Typical light industrial warehouses (Source: Microsoft Virtual Earth)

General Plan Land Uses and Zoning Designations

With the exception of the small parcels fronting onto 8th Street, the remainder of the site is zoned General Industrial. The Estuary Policy Plan divides this subarea into three districts. The northern area that currently includes residential properties and parking is zoned Residential Mixed Use. This designation, which is intended to enhance and strengthen the viability and attractiveness of the Kennedy Tract as a mixed-use residential neighborhood of low to medium-density housing within a fine-grained fabric of commercial and light industrial uses, allows FAR of up to 1.0 per parcel and residential densities of up to 40 units per acre. The Owens-Brockway site is designated Heavy Industrial, which is intended to retain the existing glass recycling and manufacturing functions within this area and promote an enhanced relationship with the adjoining Kennedy Tract neighborhood, Fruitvale Avenue, and the waterfront. The existing commercial center and warehousing and light industrial to the south of Alameda Avenue are designated General Commercial 1, which is intended to provide for the expansion of regional-serving retail and commercial uses that can benefit from freeway accessibility.

Estuary Policy Plan Guidance

The Estuary Policy Plan envisions this area as a local and regional-serving retail destination with the exception of the Owens-Brockway site, which it encourages to be retained and improved. The EPP recommends the reuse of existing warehouse properties south of Alameda Avenue and west of High Street for high-quality retail uses that complement adjacent commercial uses; a departure from the current warehousing and light industrial uses there. Additionally, at the time the EPP was written, the Owens-

Brockway plant was a more significant employer and more stable long-term presence, so the Plan recommended improving compatibility between industrial and residential uses, and enhancing the relationship of the plant with the waterfront.

Public Space

Bay Trail

The section of the Bay Trail connecting Fruitvale Bridge Park to the eastern side of the central-east planning subarea proved challenging, due to the limited easement adjacent to the Capture Technologies industrial facility at 3575 Alameda Avenue, since that building extends to the top of the Estuary bank. Design work began in late 2008 to create a partly pier-supported segment of the trail that will cross two private parcels. Once complete, the Bay Trail will be continuous across this subarea and will connect across Fruitvale Avenue and High Street via the proposed fixed piers running under the bridges.

Fruitvale Bridge Park

Fruitvale Bridge Park

Fruitvale Bridge Park is a one-third-acre park located at the foot of the Fruitvale Avenue bridge. The park provides an outlook over the Estuary from benches on the embankment and a small fishing pier.

Planned Improvements in the Study Area

High Street Bridge Bay Trail Connections

Several alternatives were considered for building the Bay Trail around the High Street Bridge, including a floating trail, a fixed pier design, an underpass, an overpass, and an inland street crossing. The fixed pier running under the bridge was selected as the preferred solution because it allows Bay Trail users to stay on the waterfront and avoid auto conflicts, and it also has acceptable construction and maintenance costs. Measure DD Series A appropriations have been designated for construction, and preliminary designs were completed. However, entitlements issues have held up construction. Because the Estuary is a federal waterway, the City is currently negotiating with the Army Corps of Engineers to be granted the easement to construct the improvements.

Key Opportunities and Constraints

The Owens-Brockway glass processing facility offers the largest potential opportunity site in the study area. While the current use should be encouraged to continue as long as it is economically viable and its

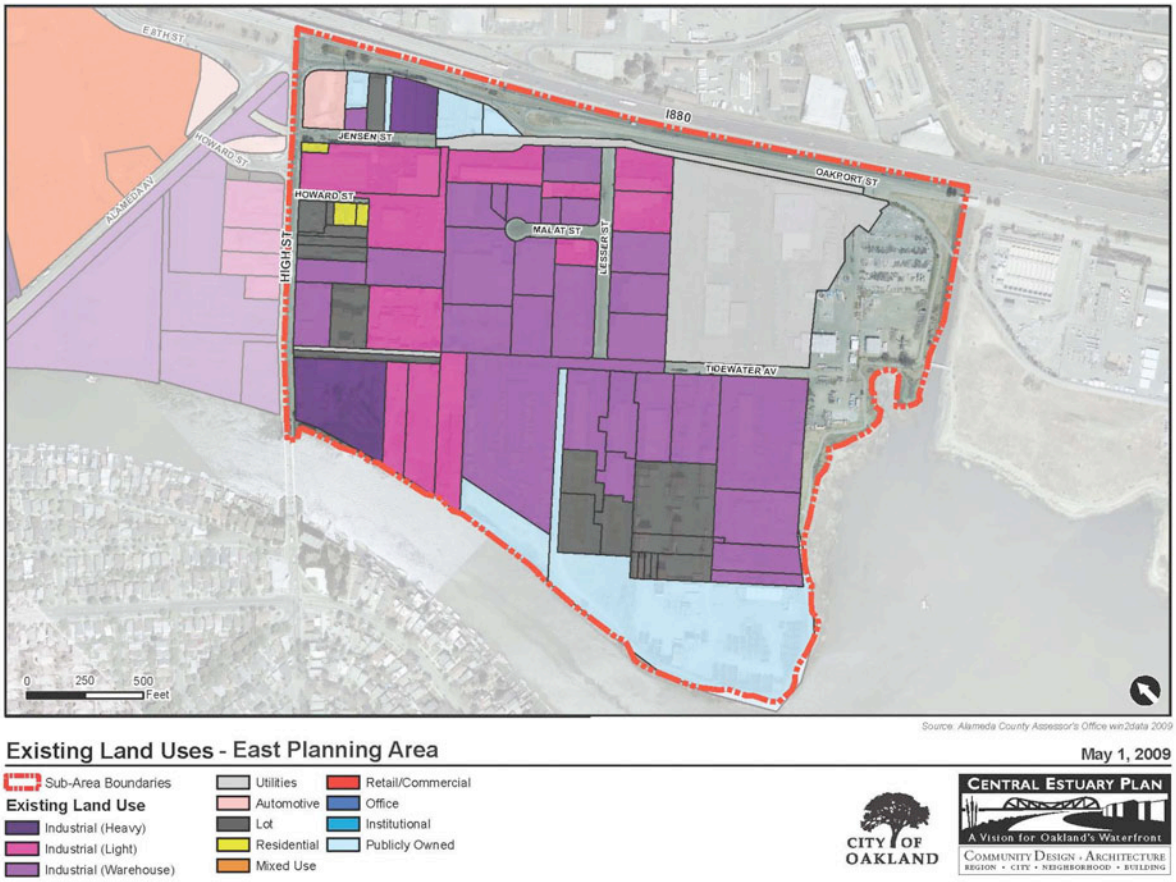
owners desire to remain, the facility may become vacant in the relatively near future. If this occurs, the size and location of this parcel afford a number of opportunities for its reuse as either an improved industrial use or otherwise.

The options for the small residential extension of the Kennedy Tract along Elmwood and 36th Avenues should be considered in light of the large number of vacant properties and the proximity of this area to the freeway. Existing residential buildings limit the ability to significantly alter the composition of the area. However, there is currently nearly as much vacant land as land occupied by homes, which may offer a tipping point opportunity for reconsidering the long-term future and character potential of this neighborhood.

Similar to the Central West Planning Area, connections at the edges of the study area to the adjacent subareas, as well as across I-880, present significant barriers to walkability and livability in the study area. Both High Street and Fruitvale Avenue are high-speed automotive corridors, heavily used by traffic coming and going from Alameda, that offer few crossing opportunities and little comfortable pedestrian accommodation. Further, Alameda Avenue, which crosses through the center of this subarea, is a wide street with no signals or crossings on its entire length, which results in an inability for people to safely cross between the commercial center at the heart of this sub area and either the Bay Trail or the industrial uses across Alameda Avenue. Improving connectivity within this subarea and to other subareas will help decrease the notable auto-dominance of this sub area. With more multimodal accommodations within this subarea, more businesses and industry might be better able to accommodate both regional markets, as they do now, and the local market.

East Planning Area

Existing Land Uses



The East Planning Area consists of the portion of the study area east of High Street, which contains a number of businesses in the manufacturing and construction sectors, including two sizable aggregate producers of fill materials for public roads, a hardwood lumber company, and mini-storage and trucking uses. These businesses benefit from close proximity to major transportation routes, including I-880 and the Bay for transporting raw materials by barge. The Malat/Lesser Street area has a significant supply of relatively new warehouses and some large cabinetmakers.

Aggregate producers are a major industry in the East Planning Area.

The East Bay Regional Park District is developing a waterfront park along the waterfront from Damon Slough around the

southern point. The inland portion of the land owned by the Park District is currently leased for outdoor trailer storage.

Pacific Gas & Electric owns a 13.6-acre site at the eastern edge of the subarea which is used as a local operations center, including a vehicle yard, dispatch, and customer service facilities.

Immediately east of the Plan area boundary, across from the PG&E facility, is the East Bay Municipal Utility District's 28-acre Oakport Wet Weather Treatment Facility, which is designed to prevent raw sewage from entering San Francisco Bay during large storms.

Industrial warehousing is the most common built form

Existing Building Form

The light industrial and warehouse facilities in this subarea are lower intensity than those of some of the other industrial areas within the study area. Typically, building footprints fill only a portion of each parcel and the remainder is used for loading, storage and parking. Buildings are typically standard concrete and steel long rectangular warehouses, frequently with loading docks.

General Plan Land Uses and Zoning Designations

The East subarea is zoned M-40, Heavy Industry. The Estuary Policy Plan divides the area into Light Industry 3, Planned Waterfront Development 3, and a park at the tip of the peninsula in the area currently owned by East Bay Regional Parks District. The northern half of this subarea, north of Tidewater Avenue, is designated Light Industry 3, which is intended to maintain light industrial, wholesale/retail, manufacturing, and public utility uses in this area while providing for enhancement of the waterfront environment. South of Tidewater, the EPP designates the area as Planned Waterfront Development 3, which is intended to provide for the continuation of existing industrial uses on properties south of Tidewater Avenue, allowing for their transition to light industrial, research and development, and office uses in a waterfront business park setting.

Estuary Policy Plan Guidance

The Estuary Policy Plan divides the area east of High Street into the areas north and south of Tidewater Avenue. For areas north of Tidewater Avenue, it recommends maintaining existing viable industrial and service-oriented uses, and encourages the intensification of underutilized and vacant properties. For areas south of Tidewater Avenue, it encourages continued industrial use, but also encourages new research and development and light industrial activities which are compatible with the adjacent EBMUD Oakport Facility and EBRPD's Martin Luther King Jr. Regional Shoreline Park. Additionally, it recommends that areas near the 66th Avenue interchange redevelop with new commercial uses that can benefit from proximity to freeway interchanges and serve both regional and local markets.

Public Space

Bay Trail

The majority of the trail through this subarea, the segment within Martin Luther King Jr. Regional Shoreline Park, is complete. The connection from the regional park to High Street and other areas to the west remains under feasibility study, as the industrial parcels in this area extend all the way to the shoreline, leaving no public right-of-way across which the trail may run. The segment of trail adjacent to the Gallagher & Burk asphalt plant is proposed to be a concrete pier supported walkway. Because the Hanson Aggregate facility uses water access for delivery of materials, the trail must be designed to allow materials to be transferred from barges to the site while allowing for shoreline trail access. The trail will incorporate associated amenities such as standardized lighting and signage. Moffatt & Nichol completed conceptual design work. The property owners have declined to grant an easement and the project is currently on hold. Once completed, this would provide continuous trail segment from High Street to the Damon Slough at the southern end of the Study Area.

Martin Luther King Jr. Regional Shoreline Park

The 741-acre Martin Luther King Jr. Regional Shoreline Park begins at the eastern end of the study area as it runs along the tip of the peninsula and wraps around the Damon Slough. The park continues east around the San Leandro Bay creating an extensive park that offers great conditions for walking, jogging, cycling, bird watching, picnicking, and other opportunities to take advantage of the preserved waterfront open space. This section of shoreline offers some of the last remaining preserved natural conditions of the Oakland Estuary shoreline, exemplifying the tidal marsh ecosystem that historically defined the entire Estuary and the San Leandro Bay.

The park is currently under development and is surrounded by, and in fact partially in use for, light industrial uses and storage.

A new boathouse and supporting facilities are planned within the Tidewater area of the park. The Tidewater Aquatic Center will be home to the Oakland Strokes high school rowing program, which serves students from high schools throughout the region, and will also provide community rowing programs, sea kayaking and canoeing, and classes in boating and water safety. The Center is committed to also provide outreach programs for local youth. This amenity will bring a significant amount of new activity to this area of the Estuary. The facility is a partnership between the East Bay Regional Parks District and Oakland Strokes. Fundraising, design, and lease agreements are complete, and as of winter 2009 construction is anticipated to begin in the near future.

Planned Improvements in the Study Area

Tidewater Aquatic Center

As part of the on-going development of the Martin Luther King Jr. Regional Shoreline, East Bay Regional Parks District is improving the waterfront area around Tidewater Avenue and planning to build the Tidewater Aquatic Center on the property currently owned by the Park District but leased for trailer storage. The Tidewater Aquatic Center boathouse will be built on this site and will offer programs in competitive rowing, sea kayaking and canoeing, classes in boating and water safety, and boat rentals. The Center will also host outreach programs for local youth.

As of spring 2009, early phases of the project are complete, including a continuous segment of Bay Trail through the area with some landscaping and furnishings as well as an access road and staging area with restrooms and picnic amenities. The next phase of the project will be to construct the Tidewater Aquatic Center building and dock.

Key Opportunities and Constraints

The extensive shoreline and low land use intensity of the existing uses provide opportunities for significant change in this area. Many of the existing uses are economically viable and may continue to prosper in coming years. These businesses benefit from easy access to I-880 and may have room to continue to grow on their current properties. Currently, some of the properties in the area, especially the PG&E property at the east end of the subarea, are significantly contaminated and will require substantial remediation before they may be improved.

The areas south of Tidewater Avenue include some vacant property, and per the current EPP land use designation may be redeveloped as a mixed-use industrial business district. This area is also notable in that its peninsular geography provides significant waterfront and open space access and views, which make it enticing to potential development interests.

IV. Streetscapes

West Planning Area

The Embarcadero is one of the most significant streets in the study area. The Estuary Policy Plan states, "Policy SAF-9: Provide a continuous Embarcadero parkway from Ninth Avenue to Damon Slough" and continues, "The Embarcadero Parkway should be developed as a recreational street, providing access to the diverse waterfront experiences that exist in the San Antonio-Fruitvale District." In the west subarea, this improvement has begun on sections of the Embarcadero that front onto Union Point Park. However, through Embarcadero Cove views and access to the waterfront are obscured by fences and buildings in some areas, and generally the street itself does not reflect a high quality of design attention. Future street design and redevelopment in this area should prioritize creating a more pedestrian oriented environment, with signage or other features to draw attention to the adjacent public space, restaurants, and other attractive features that highlight the presence of the waterfront and related amenities.

Livingston, Dennison and Kennedy Streets run perpendicular to the Embarcadero and connect the industrial areas between I-880 and the Embarcadero to the surrounding circulation network. These streets and the smaller streets that connect to them reflect auto, and in particular truck, orientation as a result of the industrial nature of the area. The industrial facades along these streets further reduce the appeal of walking, biking, or driving on them, as they provide little visual interest or comfort.

Central-West Planning Area

Streets in the Kennedy Tract area reflect the mixed industrial/residential nature of the neighborhood, as they are of equally mixed character. Generally in scale they are typical residential streets, but the lack of sidewalks on many, especially the more industrial blocks, the setbacks fronting on others, and the formalized planted streetscapes along the newer residential properties reflect a mix of treatments paralleled only by the mix of design and building styles of the adjacent properties. Landscaping is highly inconsistent, many sidewalks are entirely lacking or have cars parked on them, and there are few pedestrian amenities within the neighborhood. Recent improvements on some blocks of Derby Avenue and Ford Street set a good precedent for high quality neighborhood streets, and planned streetscape improvements on Glascock, as discussed under Planned Improvements, will hopefully reflect the same.

Central-East Planning Area

Fruitvale Avenue and High Street are each major auto corridors that connect Alameda Island to I-880 and their design reflects this purely functional orientation, with little aesthetic consideration. The streets have sparse landscaping or streetscape improvements and provide few signalized pedestrian crossings. Additionally, the existing sidewalk, highway and railway crossings provide minimal comfort or visual interest to roadway users of any kind, especially pedestrians. Because Fruitvale Avenue is an important connection to the Fruitvale BART station, a higher level of multimodal accommodation and visual emphasis should be anticipated, but there is no notable signage or design treatment to indicate the presence or importance of this connection.

Alameda Avenue is a major street that connects across the subarea between Fruitvale Avenue and High Street. Ample space and low traffic volumes provide the space to create a high quality multi-modal street with spacious accommodation of all travel modes in addition to landscaping and other aesthetic street improvements.

East Planning Area

Streetscapes

Streets in this subarea are reflective of their industrial use, and there is little to no design consideration of pedestrians or consideration of street aesthetics for any user. Most streets include no sidewalks or landscaping.

Tidewater Avenue provides access to a number of businesses and an increasingly significant regional park. However, Tidewater Avenue is not a public right-of-way and currently has limited right-of-way, little pedestrian accommodation, and includes no signage for the park or any indication to a driver, cyclist, or pedestrian that such a resource lies nearby. Tidewater Avenue is a series of privately-owned parcels with a non-exclusive 50-foot wide driveway easement that has been used as a street. The City will have to determine whether to acquire this easement to allow it to improve the street with sidewalks and streetscaping, allowing a potential Bay Trail connection as well as ensuring access to the EBRPD park facilities, or whether it will allow the private owners to maintain it and determine the amenities and character of the street. The Tidewater Industrial District Strategy Report by BKF Engineers proposed a series of potential cross sections and improvements for the street if the City decides to acquire the right-of-way. Included in these proposals is a gateway monument at the Tidewater and High Street intersection and aesthetic and infrastructure improvements such as sidewalks, landscaping, and lighting. If this area were to be redeveloped as proposed in the EPP, streetscape and right-of-way improvements would be highly desirable, and easement acquisition would likely be necessary.

V. Transportation

Existing transportation conditions are detailed in a separate study developed by Arup. Due to its comprehensive detail and resulting length, it is being submitted as a separate report. These reports will be consolidated in later drafts of the existing conditions report.

VI. Infrastructure and Public Facilities

Existing infrastructure conditions and public facilities provision are detailed in a separate study developed by Arup. Due to its comprehensive detail and resulting length, it is being submitted as a separate report. These reports will be consolidated in later drafts of the existing conditions report.

VII. Summary of Environmental Issues

The environmental baseline studies and summary of environmental issues are detailed in a separate study developed by CirclePoint. Due to its comprehensive detail and resulting length, it is being submitted as a separate report. These reports will be consolidated in later drafts of the existing conditions report.

VIII. Economics and Demographics

Resident Profile

Though bound by common physical barriers, such as the Nimitz Freeway and the Oakland Estuary, the residential character of Central Estuary Planning Area cannot be described as a unified entity. In fact, only the Central-West and a small segment of the Central-East subareas are residential neighborhoods in the traditional sense. Though neither is exclusively residential, these portions of the Planning Area have a dense street grid and housing that is a legacy of the period before it was disconnected from Fruitvale by the Nimitz Freeway. The Central-West planning area has also been the locus of new condominium construction in the past decade. The West and Central-East subareas have much smaller residential populations and, with the exception of a proposal for single-family housing at Estuary Cove, have not been the target of proposals for new residential construction. The East subarea has almost no residential population. The analyses below describe how the residential population of the Planning Area compares to that of the rest of Oakland, as well as how these subareas compare to each other. In addition, where possible, the analysis considers how places have changed over time.

Summary of Key Findings

This profile finds that while there are notable differences between residential composition of the Planning Area and that of the rest of Oakland. These include:

- A different racial composition, with a higher shares of Hispanics and non-Hispanic Whites and smaller share of non-Hispanic African-Americans in the Planning Area;
- Slightly lower incomes in the Planning Area
- A lower owner-occupancy rate in the Planning Area;
- A smaller share of families, as a percentage of households, in the Planning Area; and
- Lower levels of educational attainment in the Planning Area.

However, the differences *among the subareas are far greater than the differences between the Planning Area and the rest of Oakland.*

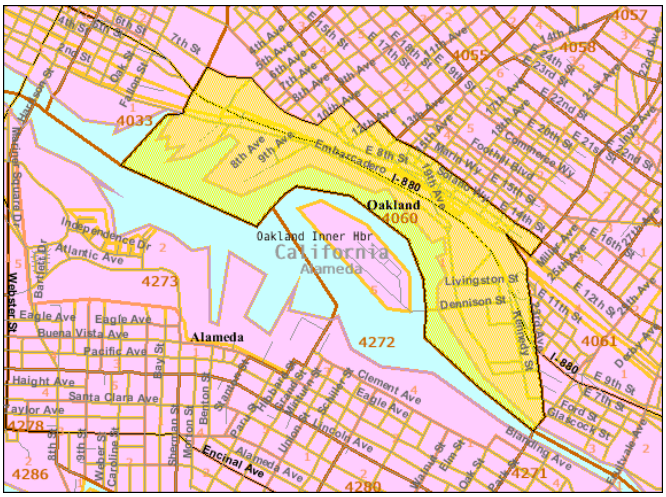
- The West subarea is majority non-Hispanic White, is largely composed of one and two-person, non-family households, and, though it has a lower median income than the rest of Oakland, has a large share of affluent residents who are highly educated and work in white collar occupations.
- The Central-West subarea, like the Fruitvale neighborhood on the other side of Interstate 880, is majority Hispanic and has much higher shares of families, children, and seniors than the West subarea. In comparison to the West subarea, Central-West subarea residents are also much more likely to work in blue-collar jobs.
- The Central-East subarea is fairly similar to the Central-West, though on most dimensions (including education, income, and unemployment rate) is more disadvantaged than either of the other subareas with a residential population.

Methodology and Data Limitations

There are two important caveats to bear in mind about the data sources used for the analyses below. First, whenever possible, data reported is 2000 Census "short form" data, which is reported at geographies as

small as "block." In these cases, the data shown are drawn from areas that exactly match those of the Planning Area and subarea, with the exception of the West subarea.[1] However, many Census statistics are not reported at geographies smaller than "block group." Similarly, Claritas, the service used to collect data for 2008, only reports information at geographies as small as "block group." This is significant because the Planning Area is small in land area and has a small population. Thus, all census geographies larger than "block" include portions of land area that do not fall within the boundaries of the Central Estuary Plan. Therefore, when reporting statistics not available at the block-level, and when reporting 2008 data, the geographies used are as shown in Figures 8.1 through 8.3.

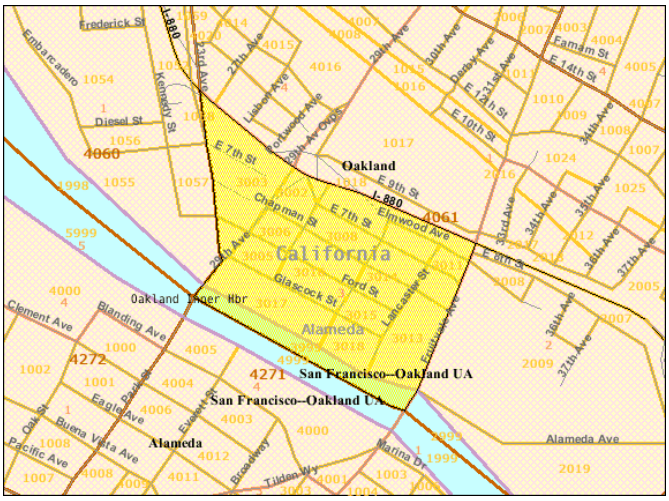
Figure 8.1: West Sub-Area (Tract 4060, block group 1)



Source: 2000 U.S. Census

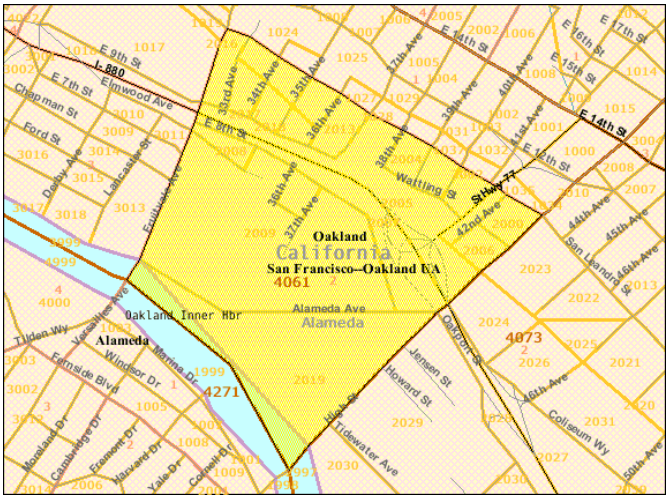
[1] For this purpose, the West excludes the area bounded by Denison St., Embarcadero, the Estuary, and the western edge of the planning area. However, this area does not include any residential land uses.

Figure 8.2: Central-West Sub-Area (Tract 4061, block group 3)



Source: 2000 U.S. Census

Figure 8.3: Central-East Sub-Area (Tract 4061, block group 2)



Source: 2000 U.S. Census

As will be explained below, the East subarea has no significant residential population and, thus, is not analyzed at this level. When "block group," rather than "block"-level data is used, there will be a note to this effect. This distinction is important because block and block group data will not be strictly comparable. Furthermore, to the extent that the areas outside of the Planning Area are dissimilar from those within the boundaries, these data may not provide an accurate reflection of the demographic characteristics of residents.

Second, 2008 data is derived from Claritas, a service that utilizes census data to estimate current demographic characteristics based on local and regional trends. While the Claritas data does seem to reflect the population growth associated with the new residents of the recently constructed condominiums in the Central-West subarea, it does not suggest that there has been any significant demographic change.

In 2005 and 2006, some units in these developments were selling for nearly $700,000, suggesting that these new residents have very different demographic characteristics than existing residents. However, in categories related to social class, such as income and education, Claritas does not show significant change from 2000 to 2008. Therefore, data from that year should be taken as a rough estimate, especially for the Central-West subarea (since it has experienced the most housing growth).

Total Population and Housing

According to the US Census, in 2000, there were 916 residents living within the boundaries of the Central Estuary Planning Area, with an overall population density of 2.20 persons per acre (Table 8.1). This is considerably less than that of Oakland as a whole, which has a density of 11.14 persons per acre. However, this population is not evenly dispersed throughout the Planning Area. Five hundred ninety-three (593) of these residents (65 percent) live in the Central-West planning subarea. The remaining population is primarily in the Central-East subarea (23 percent), with a smaller number in the West subarea (12 percent). Finally, there were an additional six residents recorded in the East subarea. However, this represents far too small of a population for any statistics to be meaningful, so for the purposes of this report, the East subarea will be considered non-residential, and will not be included in the resident profile.

Table 8.1: Population Density, 2000

	West	Central-West	Central-East	East	Planning Area	Oakland
Population	108	593	209	6	916	399,484
Area (Acres)	125.6	74.22	95.2	121.0	416.0	35,875.7
Density	0.9	8.0	2.2	0.0	2.2	11.1

Source: 2000 U.S. Census; Strategic Economics, 2009.

Table 8.2, below, shows that a similar pattern is reflected in the density of housing units in each of these areas.

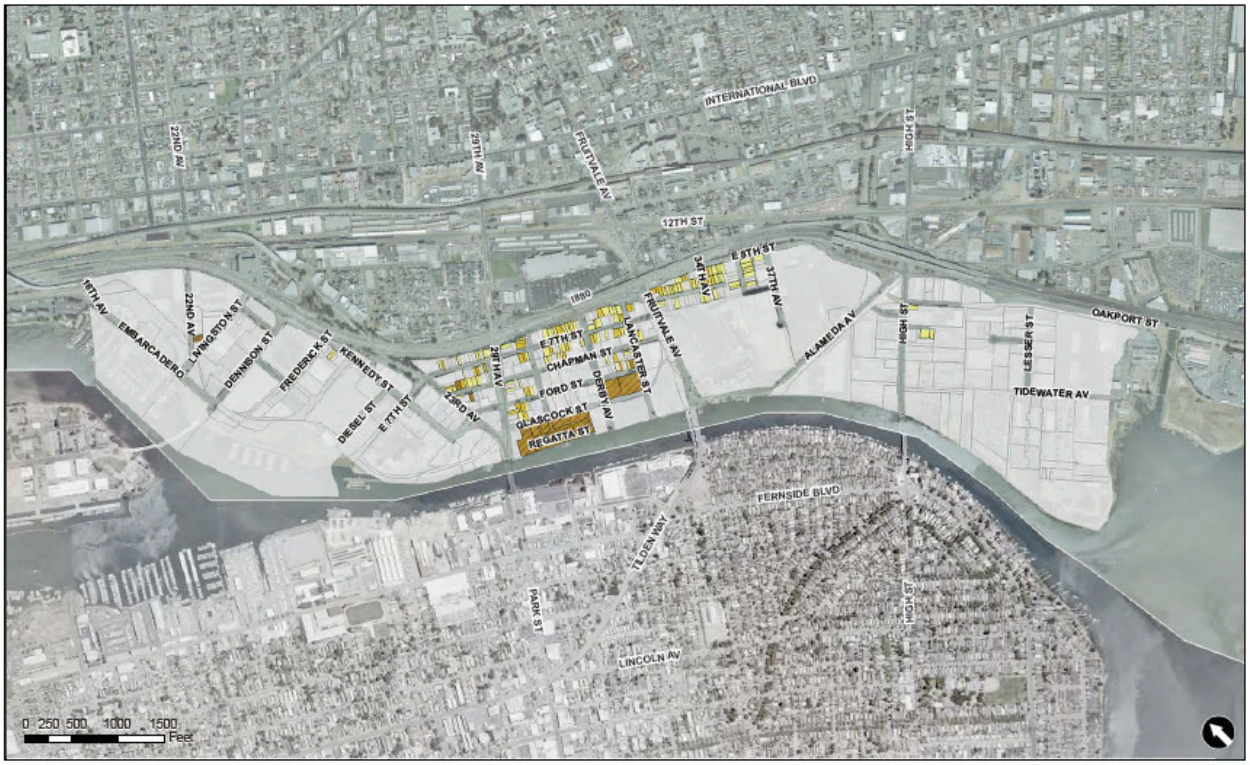
Table 8.2: Housing Unit Density, 2000

	West	Central-West	Central-East	East	Planning Area	Oakland
Housing Units	76	224	63	3	366	157,508
Area (Acres)	125.6	74.2	95.2	121.0	416.0	35,875.7
Density	0.6	3.0	0.7	0.0	0.9	4.4

Source: 2000 U.S. Census; Strategic Economics, 2009.

Since 2000, 208 new units of housing have been built in the Planning Area, all of which are in the Central-West subarea. As shown in Table 8.2, this nearly doubled the number of units in this subarea. An additional 71 new units of condo and live-work housing have been approved for this subarea, and a large development of 149 single-family homes has been proposed, but not approved, for the West subarea. However, there has been no recently constructed or approved housing in either the Central-East or East subareas.

Figure 1, below, illustrates this development pattern, with residential uses clustered in the Central-West and northern Central-East subareas. The single-family homes, which are interspersed with light industrial uses, are a legacy of the period before Interstate 880 and before some of the heavier industrial uses were in place. Consequently, they closely resemble the single family homes found on the other side of the highway. The new condominium complexes are closer to the Estuary, within the Central-West subarea. This map shows that in the entire West subarea there is only one formal residential use: a small condominium complex. Initially, this seems to conflict with the census, which shows 70 housing units. However, in the block group that includes, the West subarea, 51 out of 299 housing units were in the form of boats or RV's. Therefore, to the extent that the Census data is accurate, houseboats, along with work-live spaces, likely account for the majority of housing units in this subarea.



Source: Alameda County Assessor's Office win2data 2009

Existing Land Use: Residential

April 7, 2009

Sub-Area Boundaries

Existing Land Use

Residential Lot

Single Family Residential

2, 3 & 4-Plex Dwelling

Multi-Family Dwelling

Condominium

CITY OF OAKLAND

CENTRAL ESTUARY PLAN

A Vision for Oakland's Waterfront

COMMUNITY DESIGN + ARCHITECTURE

REGION • CITY • NEIGHBORHOOD • BUILDING

Tenure

As shown in Table 8.3, in 2000, the overall rate of homeownership within the Planning Area somewhat lower than the rest of Oakland, (slightly more than 1/3 of occupied housing units). However, this statistic was highly variable among the subareas. In 2000, only 16 percent of housing units were owner occupied in the West subarea, whereas 64 percent of housing units were owner occupied in the Central-East subarea.

Table 8.3: Tenure of Occupied Housing Units, 2000

	West		Central-West		Central-East		Planning Area		Oakland	
	#	%	#	%	#	%	#	%	#	%
Renter	59	84%	154	74%	21	36%	235	70%	88,301	59%
Owner	11	16%	53	26%	37	64%	103	30%	62,489	41%
Total	70	100%	207	100%	58	100%	338	100%	150,790	100%

Source: 2000 U.S. Census; Strategic Economics, 2009.

Since 2000, all new housing construction in the Planning Area has been in the form of condominiums. Thus, although a portion of these may be rented, it is likely that the owner-occupancy rate of the Central-West subarea has increased substantially.

Age of Housing

Table 8.4 illustrates how residential development has varied by subarea.[2] Overall, a much larger share of housing in the Planning Area has been constructed from 1999-2008 than in Oakland as a whole. However, the vast majority of housing that was not constructed recently was built prior to 1970, with more than 25% built before 1940. In the Central-East planning area, only 6 units have been built since 1969, reflecting a shift to a primarily industrial area. The other two subareas have transitioned toward residential uses, with a large spike in housing production from 1999-2008. The block group used for the Central-West subarea is coterminous with its actual boundaries, meaning these data reflect new housing within the Planning Area. However, in the West, much of this development is probably accounted for by the block group geography, which includes residential neighborhoods not within the Planning Area boundaries. Nonetheless, the increase in new housing in areas immediately adjacent to the West subarea suggests the potential for future interest in new housing construction within this area.

[2] This data reflects block groups and thus is not comparable to the block level data presented above.

Table 8.4: Year Housing Units Were Built, 2008

	West		Central-West		Central-East		Planning Area		Oakland	
	#	%	#	%	#	%	#	%	#	%
1999 to 2008	128	30%	125	37%	0	0%	253	25%	10,529	7%
1970 to 1998	52	12%	48	14%	6	2%	106	11%	30,497	19%
1940 to 1969	121	29%	86	25%	171	70%	378	38%	66,685	42%
1939 or Earlier	119	28%	79	23%	66	27%	264	26%	52,335	33%
Total Units	420	100%	338	100%	243	100%	1,001	100%	160,046	100%

Claritas; Strategic Economics, 2009.

Overcrowding

The Planning Area has a high degree of overcrowding in comparison to Oakland as a whole. Table 8.5 illustrates the proportion of households living in overcrowded conditions. Overcrowding, as defined by the U.S. Department of Housing and Urban Development (HUD), is greater than 1.01 people per habitable room. In 2000, 32 percent of households in the Planning Area lived in overcrowded conditions while only 16 percent of Oakland households lived in overcrowded conditions. The distribution of overcrowding was varied across the Planning Area. The Central-East subarea experienced the highest rate of overcrowding (48 percent) and the Central West subarea had the least degree of overcrowding (17 percent).

Table 8.5: Overcrowding, 2000

	West		Central-West		Central-East		Planning Area		Oakland	
	#	%	#	%	#	%	#	%	#	%
1 Person or Less/Room	205	**69%**	**180**	**83%**	**120**	**52%**	**505**	68%	126,384	84%
More than 1 Person/Room	94	31%	38	17%	110	48%	242	32%	24,403	16%

Source: 2000 U.S. Census; Strategic Economics, 2009.

Race

The Central Estuary Planning Area is racially and ethnically diverse. In 2000, the largest ethnic group was Hispanic, with 49 percent of the overall population; this is more than twice this group's share of the population in Oakland as a whole (Table 8.6). This reflects the demographic ties that the Planning Area

continues to have to the Fruitvale and Lower San Antonio neighborhoods to its northeast. Thirty (30) percent of the Planning Area's population was Non-Hispanic White, which is also a somewhat greater share than in Oakland. Non-Hispanic Blacks (12 percent) and Non-Hispanic Asians (seven percent) make up the remainder of the population that identifies with a single race; each of these represents a substantially smaller portion of the population of the Planning Area than of the city as a whole.

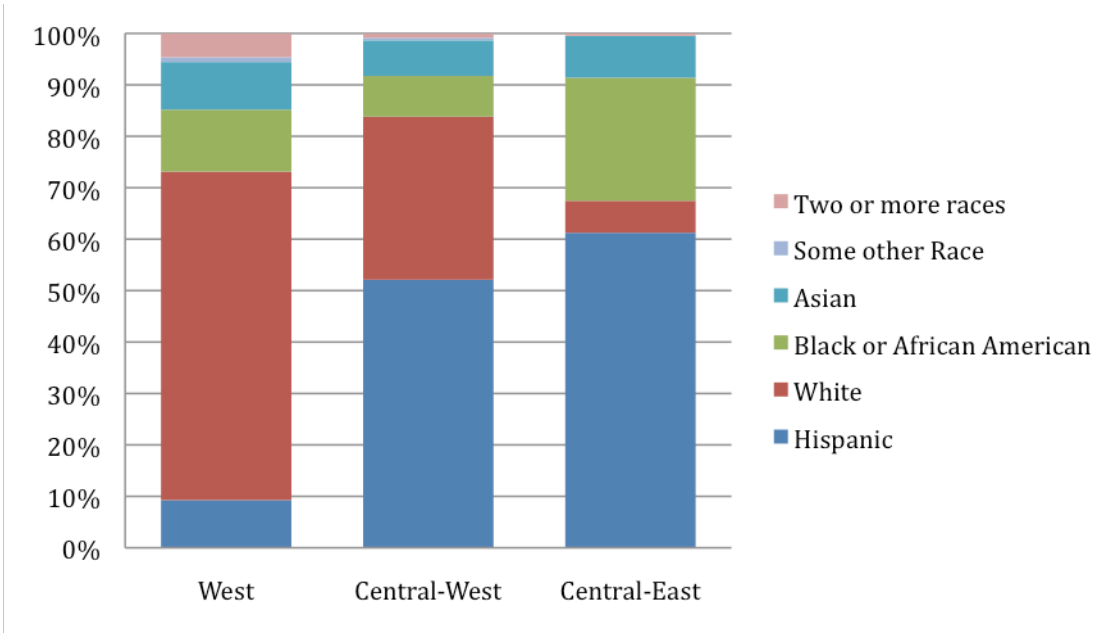
Table 8.6: Race/Ethnicity, 2000

	West		Central-West		Central-East		Planning Area		Oakland	
	#	%	#	%	#	%	#	%	#	%
Non Hispanic										
White	69	64%	188	32%	13	6%	*272*	30%	93,953	24%
African American	13	12%	*47*	8%	50	24%	*112*	12%	140,139	35%
Asian	10	9%	41	7%	17	8%	*68*	7%	60,393	15%
Other	1	1%	3	1%	0	0%	*4*	0%	4,566	1%
Two or more races	*5*	*5%*	*5*	1%	1	0%	*13*	1%	12,966	3%
Hispanic	10	9%	309	52%	128	61%	*447*	49%	87,467	22%
Total	108	100%	593	100%	209	100%	916	100%	399,484	100%

Source: 2000 U.S. Census; Strategic Economics, 2009.

Like population density, the distribution of race was highly uneven in the Planning Area. Relative to the other subareas, a much larger share of residents in the West subarea were Non-Hispanic White and much lower shares of residents were Hispanic or Non-Hispanic Black (Figure 8.4). This may reflect a greater physical isolation of the West subarea from the neighborhoods on the other side of the I-880, and may suggest a closer demographic relationship to the areas further northwest, along the waterfront. The racial compositions of the Central-West and Central-East subareas are more alike, with Hispanics and Non-Hispanic Asians composing similar shares of the population. However, a substantially larger percentage of residents are Non-Hispanic White, and a substantially smaller share is Non-Hispanic Black, in the Central-West subarea than in the Central-East subarea.

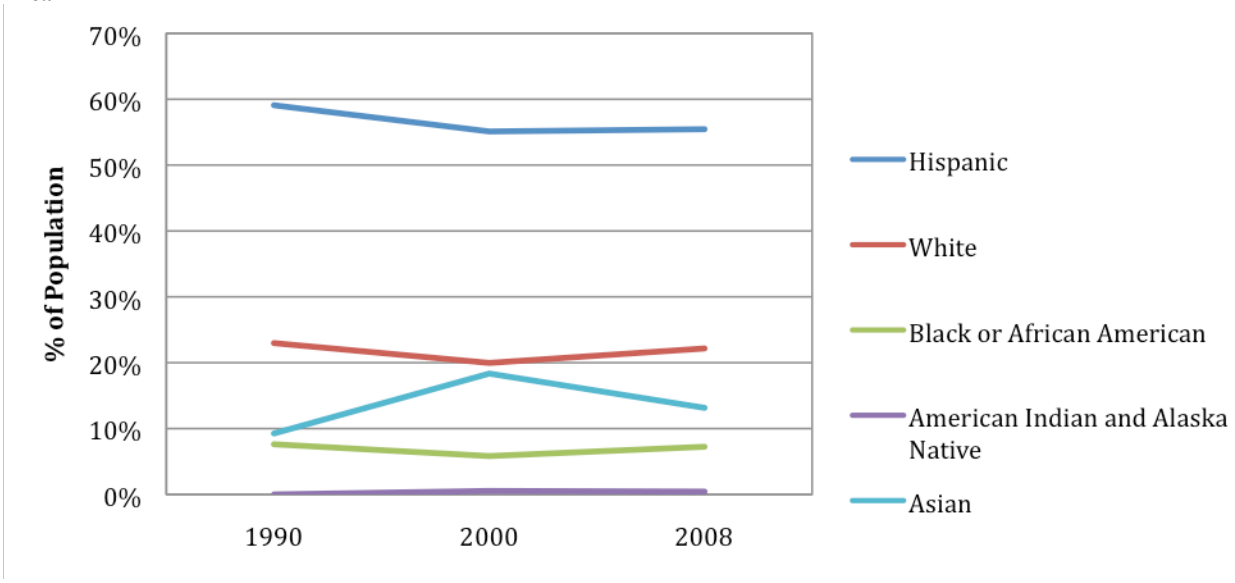
Figure 8.4: Race and Ethnicity, 2000



Source: 2000 U.S. Census; Strategic Economics, 2009.

From 1990-2008, the Census data and Claritas projections indicate that the racial and ethnic composition of the Planning Area was fairly stable, with only moderate fluctuations in share of Non-Hispanic Asians and Non-Hispanic Whites and a slight decline in the share of Hispanics[3] (Figure 8.5).

Figure 8.5: Race and Ethnicity in the Planning Area



[3] Neither 1990 nor 2008 data is available at the block level. Consequently, all time-series data uses block-group data, which includes several blocks that do not fall within the Planning Area. As a result, this data will not match that presented in the previous tables.

Source: 2000 U.S. Census; Strategic Economics, 2009.

Place of Birth and Language Spoken

With respect to place of birth, a far greater proportion of the Planning Area population was born outside the United States than in Oakland overall (Table 8.7). In 2000, 44 percent of the Planning Area population was foreign-born as compared to 27 percent in Oakland. The percentage of foreign-born was relatively constant across all the subareas with 40 percent of West subarea residents, 47 percent of Central-West subarea residents and 44 percent of Central-East subarea residents being foreign-born. Table 8.8 illustrates data of on language spoken among the resident population. While only 13 percent of Oakland residents do not speak English well or at all, the proportion of the Planning Area population that does not speak English well or at all is twice that at 26 percent. Central-East and Central-West subarea residents have higher proportions of the population not speaking English well or at all in comparison to Central subarea residents.

Table 8.7: Foreign and Native Born Population, 2000

	West		Central-West		Central-East		Planning Area		Oakland	
	#	%	#	%	#	%	#	%	#	%
Foreign-born	324	40%	313	47%	420	44%	1057	44%	106,116	27%
Native-born	478	60%	349	53%	535	56%	1362	56%	293,361	73%

Source: 2000 U.S. Census; Strategic Economics, 2009.

Table 8.8: Non-English Speaking Population, 2000

	West		Central-West		Central-East		Planning Area		Oakland	
	#	%	#	%	#	%	#	%	#	%
Speaks Only English, Speaks English Very Well or Well	609	79%	454	71%	571	71%	1634	74%	323,137	87%
Speaks English Not Well or Not at All	162	21%	183	29%	230	29%	575	26%	48,414	13%

Source: 2000 U.S. Census; Strategic Economics, 2009.

Age Distribution

In 2000, the share of the population composed of fewer children and seniors was considerably smaller in the Planning Area than in the city of Oakland as a whole (Table 8.9). Children and seniors were an especially small portion of the population of the West subarea, representing only six and two percent of residents, respectively. This suggests that the Central-West and Central-East subareas have historically been family-oriented neighborhoods, where children are raised and seniors age-in-place. In comparison, the West is home to more to singles and childless couples. This is reinforced by the household structure data below.

Table 8.9: Youth and Seniors, 2000

	West		Central-West		Central-East		Planning Area		Oakland	
	#	%	#	%	#	%	#	%	#	%
Less than 18 Years	6	6%	126	21%	55	26%	188	24%	99,759	25%
18-64 Years	100	93%	441	74%	138	66%	682	71%	257,937	65%
More than 64 Years	2	2%	26	4%	16	8%	46	5%	41,788	10%
Total	108	100%	593	100%	209	100%	916	100%	399,484	100%

Source: 2000 U.S. Census; Strategic Economics, 2009.

Household Structure

While household structure in the Planning Area approximated that of Oakland as a whole in 2000, this assessment masks a large disparity among the residential subareas. Of the 70 households living in the West subarea, only 14 (20 percent) were families and, of these, only 4 were living with their own children. In comparison, in the Central-East subarea, 48 out of 58 households (82 percent) were families, including 24 that were living with their own children. The Central-West subarea was between these two poles, with a nearly 50-50 split between families and non-families, and with 25 percent of households living with their own children (Table 8.10).

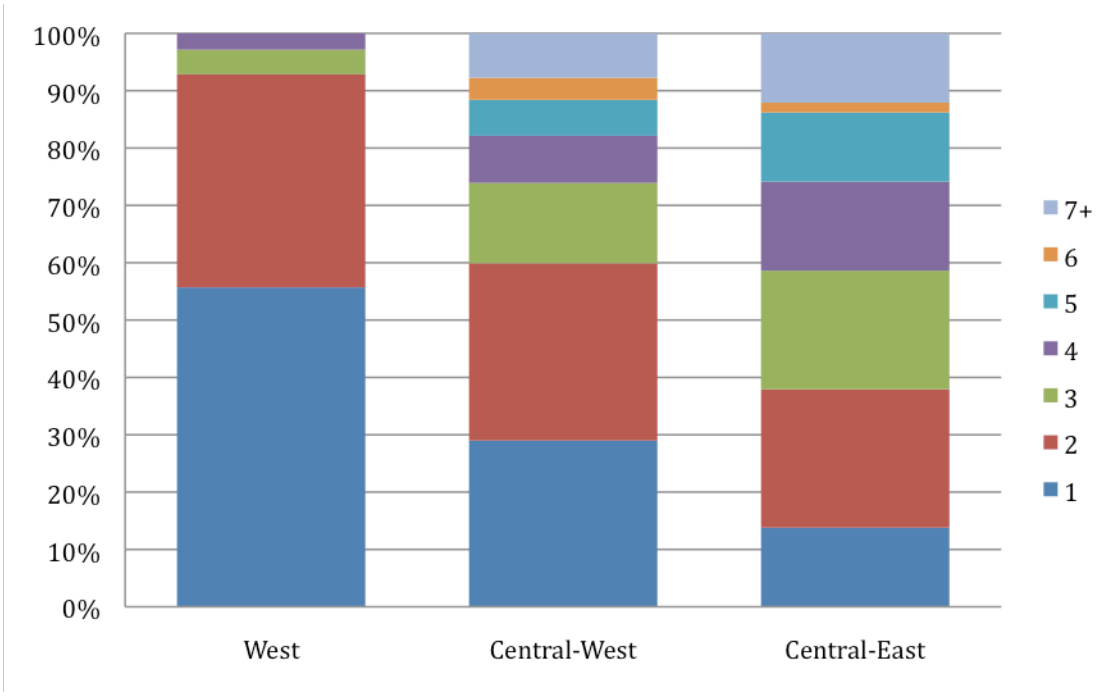
Table 8.10: Household Type, 2000

	West		Central-West		Central-East		Planning Area		Oakland	
	#	%	#	%	#	%	#	%	#	%
Non-Family	56	80%	107	52%	10	17%	173	51%	64,443	43%
Family with own children	4	6%	49	24%	24	41%	78	23%	43,152	29%
Family not with own children	10	14%	51	25%	24	41%	87	26%	43,195	29%
Total Households	70	100%	207	100%	58	100%	338	100%	150,790	100%

Source: 2000 U.S. Census; Strategic Economics, 2009.

A similar pattern emerges when looking at household size. A much greater share of households in the West are composed of a single person, compared to the other two subareas. Likewise, a much smaller share of households in this area are composed of more than two people, while there are no households with more than four people (Figure 8.6). These patterns are likely a reflection of the housing options that were available in 2000, with single family homes dominant in the Central-West and Central-East subareas, and houseboats and industrial spaces the norm in the West. It is highly likely that with the additional condominiums constructed in the Central-West since 2000, a higher percentage of these residents are in small households without children.

Figure 8.6: Household Size



Source: 2000 U.S. Census; Strategic Economics, 2009.

Income

According to Claritas estimates, the median household income for the Planning Area was slightly below that of the city of Oakland in 2008.[4] However, households in the Central-West subarea earned more, on average, than both other residential subareas and the city of Oakland (Table 8.11).

Table 8.11: Median Household Income, 2008

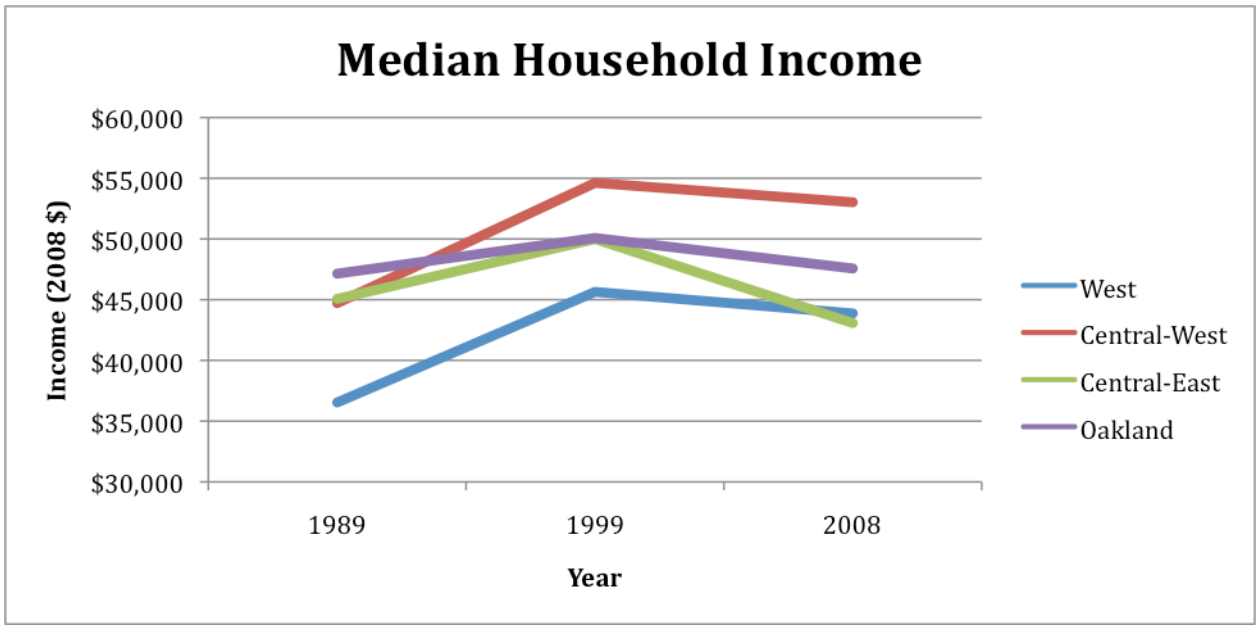
West	Central-West	Central-East	Planning Area	Oakland
$43,870	$53,024	$43,077	$45,550	$47,571

Source: 2008 U.S. Census; Strategic Economics, 2009.

[4] Income data is not available at the block level. Therefore, these data include several blocks that do not fall within the Planning Area.

Since 1990, incomes in the Planning Area have varied in roughly the same pattern as the rest of Oakland, with real incomes rising substantially from 1990 to 2000, then falling somewhat from 2000 to 2008 (Figure 8.7).

Figure 8.7: Median Household Income



Source: 2000 U.S. Census; Strategic Economics, 2009.

Table 8.12, below, shows the distribution of household incomes in the Planning Area and in Oakland in 2008. That year, 71 percent of households in the Planning Area would qualify as low income or below, earning less than 80 percent of the Alameda County Area Median Income (AMI) of $88,100 (less than $68,880). This is a slightly higher share than in the rest of Oakland, where 65 percent of households were low-income or below. Within the planning area, the low-income households includes the 46 percent that would qualify as very low-income or below (less than $43,050) and 21 percent that would qualify as extremely low income (less than $25,080).

Within the Planning Area, each subarea has a unique distribution of incomes. The West subarea has a large concentration of very low income households, and another concentration of households earning at least $150,000, but with very few households in the middle-income ranges. The Central-West subarea is much more diverse, with a wide, and fairly even spread of incomes. Both of these findings are consistent with areas that were primarily composed of lower income households prior to influxes of markedly higher-income residents. Many of these residents moved into newly constructed units, so they did not directly displace the existing, lower-income residents. However, these patterns are an early predictor of gentrification, as will be discussed later in this profile. In contrast, the Central-East is almost entirely composed of lower income households, with only 10% of households earning more than the Area Median Income. This, coupled with the disproportionate decrease in median income from 1999-2008, suggests that households in this area are under no such gentrification pressure.

Table 8.12: Household Income Distribution, 2008

	West		Central-West		Central-East		Planning Area		Oakland	
	#	%	#	%	#	%	#	%	#	%
Less than $25,000	69	19%	70	23%	37	16%	176	20%	41,244	27%
$25,000 - $49,999	151	42%	76	25%	93	41%	320	36%	37,799	25%
$50,000 - $74,999	56	16%	61	20%	61	27%	178	20%	25,303	17%
$75,000 - $99,999	23	6%	50	16%	26	12%	99	11%	16,135	11%
$100,000 - $149,999	14	4%	35	11%	8	4%	57	6%	17,269	11%
$150,000 - $249,999	38	11%	4	1%	0	0%	42	5%	9,201	6%
$250,000 and more	5	1%	10	3%	0	0%	15	2%	3,975	3%
Total Households	356	100%	306	100%	225	100%	887	100%	150,926	100%

Source: Claritas; Strategic Economics, 2009.

Poverty

The proportion of households living in poverty provides another measure of economic burden in the Planning Area (Table 8.13). Determined by the U.S. Census Bureau, poverty is measured by using forty-eight thresholds that vary by family size, number of children within the family and age of the householder. In 2000, a lower proportion of families in the Planning Area lived in poverty in comparison to Oakland (18 percent and 23 percent, respectively). Poverty by subarea varied little across the Planning Area with a range of 17 percent of households in poverty line in the West subarea, 18 percent in the Central-West subarea and 19% percent in the Central-East subarea. Given the significant debate regarding the poverty threshold and how it is measured, the income distribution data presented above present a far more nuanced and accurate representation of low income burden within the Planning Area.

Table 8.13: Poverty Status, 2000

	West		Central-West		Central-East		Planning Area		Oakland	
	#	**%**	**#**	**%**	**#**	%	#	%	#	%
Below the Poverty Line	127	**17%**	**114**	**18%**	**156**	**19%**	**397**	18%	88,272	23%
At or Above the Poverty Line	629	83%	526	82%	671	81%	1826	82%	289,950	77%

Source: 2000 U.S. Census; Strategic Economics, 2009.

Housing Cost Burden

The federal government defines households that spend more than 30 percent of their income on their homes as cost-burdened. The U.S. Census collects data on percentage of household income spent on gross rent, defined as the contract rent plus the estimated average monthly cost of utilities and fuels. Table 8.14 illustrates housing cost burden on renters living in the Planning Area. Overall, a lower percentage of renter households in the Planning Area are cost-burdened than in Oakland (39 percent and 42 percent respectively). However, the variation is more striking when disaggregated at the subarea. For example, renter households in the Central-West subarea experience the highest degree of housing cost burden with just over half of renters paying greater than 30 percent of their income on rent. The Central-East subarea has the lowest proportion of cost burden with only 27 percent of renter households paying greater than 30 percent of income on gross rent. Because this data is nearly a decade old, and because a majority of new ownership housing in the Planning Area has been built in the past several years, assessing cost burden on homeowner households yields less valid data.

Table 8.14: Housing Cost Burden, 1999

	West		Central-West		Central-East		Planning Area		Oakland	
	#	%	#	%	#	%	#	%	#	%
Renters spending greater than 30% of income on gross rent	80	38%	90	51%	44	27%	214	39%	37,268	42%

Source: 2000 U.S. Census; Strategic Economics, 2009.

Educational Attainment

In 2008, according to Claritas projections, shown in Table 8.15, residents in the Planning Area had much lower levels of educational attainment than the rest of Oakland.[5] Although the patterns among the subareas vary considerably, all three subareas have a higher percentage of residents who lack a high school diploma than Oakland as a whole. It is noteworthy, however, that while a greater share of residents in the West subarea lack a high school diploma than in the rest of the city, there is also a higher rate of attainment of advanced degrees. This is consistent with the polarization of incomes in this subarea, as discussed above.

[5] Educational attainment data is not available at the block level. Therefore, these data include several blocks that do not fall within the Planning Area.

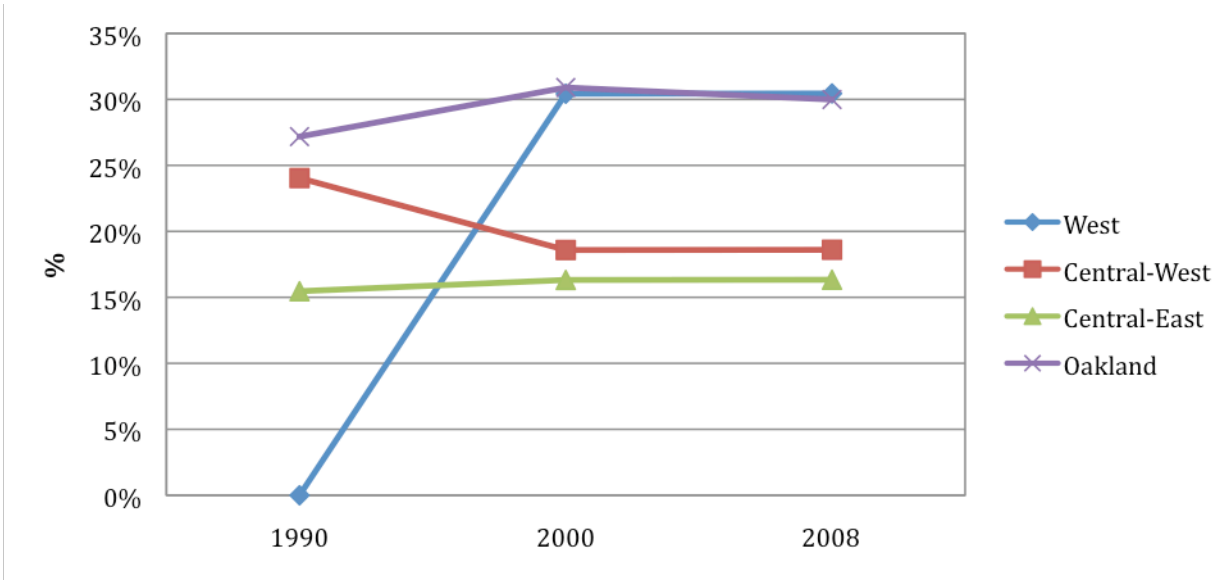
Table 8.15: Educational Attainment of Population Age 25+, 2008

	West		Central-West		Central-East		Planning Area		Oakland	
	#	%	#	%	#	%	#	%	#	%
No HS Diploma	208	30%	262	44%	282	56%	752	42%	72,157	27%
HS Diploma	98	14%	76	13%	56	11%	230	13%	48,132	18%
Some College	176	25%	152	25%	82	16%	410	23%	68,687	25%
Bachelors Degree	104	15%	63	10%	71	14%	238	13%	47,446	18%
Advanced Degree	107	15%	49	8%	11	2%	167	9%	33,503	12%
Total Pop. Age 25+	693	100%	602	100%	502	100%	1,797	100%	269,925	100%

Source: Claritas; Strategic Economics, 2009.

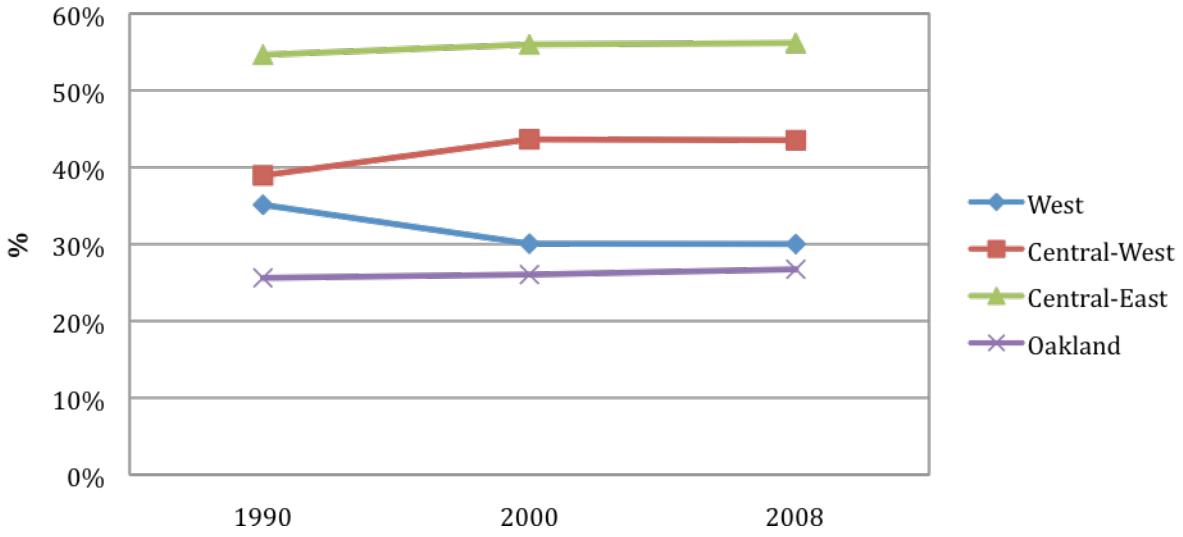
From 1990-2008, the most significant change in educational attainment within the planning area was the dramatic increase in the percent of West subarea residents who had a Bachelors degree or more (Figure 8.9). In 1990, no residents of this area had attained either an advanced degree or a BA; by 2000, more than 30 percent of residents had such a degree, bringing it up to the city average and well above the rates in either of the other two subareas. In the same period, the percentage of West subarea residents lacking a high school diploma fell moderately (Figure 8.10). This, in concert with the increase of median incomes during this period, suggests that there was notable shift in the demographic character of this subarea from 1990-2000. While these Claritas projections show no major change in educational attainment from 2000-2008 in any subareas, this may not accurately reflect the composition of the residents of the recently constructed condominiums in the Central-West subarea, who are likely to be more highly educated than other residents, based on their apparent higher incomes.

Figure 8.9: Population with a BA or More



Source: 1990 & 2000 U.S. Census; Claritas; Strategic Economics, 2009.

Figure 8.10: Population Lacking a High School Diploma



Source: 1990 & 2000 U.S. Census; Claritas; Strategic Economics, 2009.

Employment Status

Although the overall unemployment and labor force participation rates for the Planning Area were comparable to that of Oakland in 2008, this varies dramatically among the residential subareas.[6] Both the West and Central-West subareas had lower unemployment rates than that of Oakland. However, at 20 percent, the Central-East planning area had more than double the unemployment rate of the rest of the city. This, when coupled with a much lower labor force participation rate, means that only 38 percent of residents over the age of 16 in this subarea were employed, compared to 56 percent for Oakland as a whole (Table 8.16).

Table 8.16: Employment Status, 2008

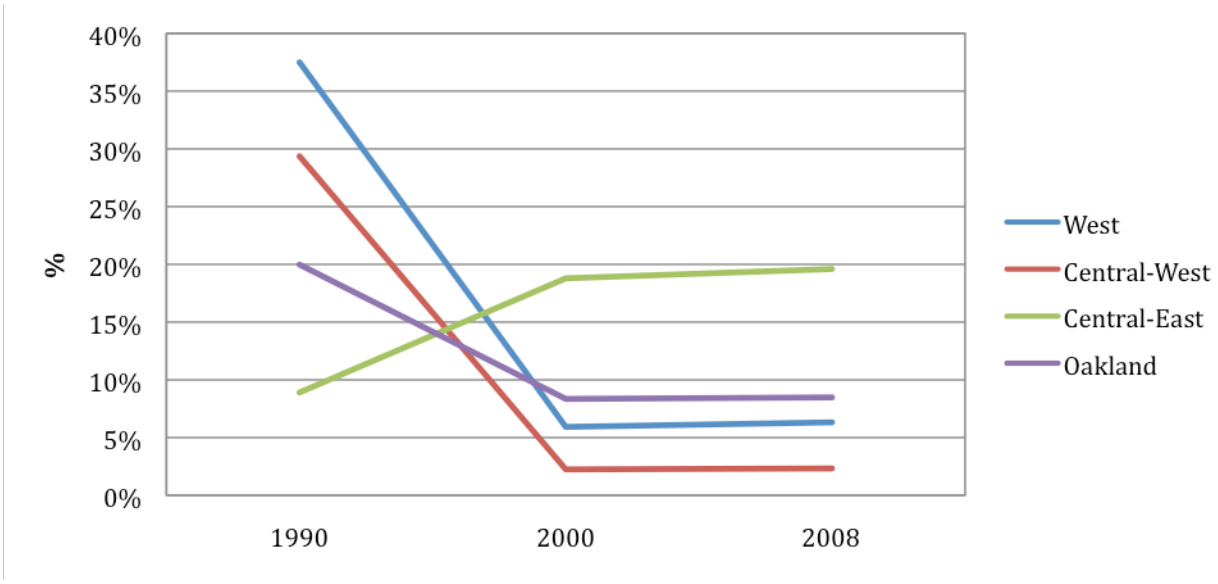
	West		Central-West		Central-East		*Planning Area*		Oakland	
	#	%	#	%	#	%	#	%	#	%
In Labor Force	422	67%	356	62%	314	48%	1,092	58%	192,970	61%
In Armed Forces	0	0%	0	0%	0	0%	0	0%	72	0%
Employed	397	94%	348	98%	252	80%	997	91%	176,535	91%
Unemployed	25	6%	8	2%	62	20%	95	9%	16,363	8%
Not in Labor Force	212	33%	220	38%	345	52%	777	42%	121,747	39%
Total Labor Force	1,056	100%	932	100%	973	100%	2,961	100%	507,687	100%

Source: Claritas; Strategic Economics, 2009.

[6] Employment data is not available at the block level. Therefore, these data include several blocks that do not fall within the Planning Area.

The unemployment rate in the Planning Area changed profoundly from 1990-2000. In 1990, unemployment rates in the West and Central-West were 38 percent and 29 percent, respectively; by 2000, however, both had fallen to fell to single-digits (Figure 8.11). While Oakland as a whole experienced a significant drop in unemployment during this period, these subareas started with much higher rates of unemployment and ended with much lower rates than the rest of the city. The Central-East subarea moved in the opposite direction, however, starting with a nine percent unemployment rate in 1990 and rising to 19 percent in 2000. From 2000 to 2008, Claritas estimates that none of these areas experienced significant change in employment status.

Figure 8.11: Unemployment Rate, 1990 to 2008



Source: 1990 & 2000 U.S. Census; Claritas; Strategic Economics, 2009.

Occupations

As with most of the previous factors, the occupations of residents in the Central Estuary Planning Area closely mirror those of Oakland as a whole.[7] Among subareas, there is also a high degree of variability, which closely matches the pattern displayed in the educational attainment data presented above. In 2008, the residents in the West subarea worked primarily in white-collar jobs, with 67 percent in either Management/Professional occupations or Sales and Office occupations. The share of residents in these occupations declined moving eastwardly, with 57 percent of Central-West subarea residents in these jobs and 40 percent of Central-East subarea residents. Similarly, the share of residents employed in blue-collar jobs (Construction, extraction, and maintenance and Production, transportation, and material moving) increased moving from west to east: 14 percent of West subarea residents, 30 percent of Central-West subarea residents, and 37 percent of Central-East subarea residents were employed in these jobs (Table 8.17).

[7] Occupation data is not available at the block level. Therefore, these data include several blocks that do not fall within the Planning Area.

Table 8.17: Occupations, 2008

	West		Central-West		Central-East		Planning Area		Oakland	
	#	%	#	%	#	%	#	%	#	%
Management, professional, and related occupations	194	38%	158	38%	69	29%	421	36%	68,007	39%
Management, business, and financial operations	84	17%	57	14%	15	6%	156	13%	24,718	14%
Professional and related occupations	110	22%	101	24%	54	22%	265	23%	43,289	25%
Service occupations	95	19%	47	11%	57	24%	199	17%	28,182	16%
Sales and office occupations	144	29%	80	19%	27	11%	251	22%	44,482	25%
Farming, fishing, and forestry occupations	0	0%	7	2%	0	0%	7	1%	361	0%
Construction, extraction, and maintenance	25	5%	35	8%	45	19%	105	9%	13,311	8%
Production, transportation, and material moving	46	9%	92	22%	44	18%	182	16%	22,192	13%
Total Workforce	504	100%	419	100%	242	100%	1,165	100%	176,535	100%

Source: 2000 U.S. Census; Strategic Economics, 2009.

Vehicle Ownership

Household vehicle availability and number of vehicles available per household are indicators of the expense invested in automobiles and indirect indicators of the use of automobiles for travel. Table 8.18 illustrates that a greater percentage of Planning Area households have access to at least one vehicle when compared to Oakland as a whole (88 percent and 80 percent, respectively). The rates vary significantly by subarea however; for example, virtually all Central-West households have at least one vehicle available (97 percent) while rates of ownership are actually below the city average in the West subarea (70 percent).

Table 8.18: Vehicle Ownership, 2000

	West		Central-West		Central-East		Planning Area		Oakland	
	#	%	#	%	#	%	#	%	#	%
Proportion of households with at least one vehicle available	227	76%	211	97%	208	90%	957	88%	121,203	80%

Source: 2000 U.S. Census; CirclePoint, 2009.

Journey To Work

Residents of the Central Estuary Planning Area, on average, had shorter commutes than other Oakland residents in 2008 (Table 8.19).[8] This is especially marked in the share of residents who travel less than fifteen minutes to their workplace: only 17 percent of Oakland workers had a commute of this length compared to 26 percent of the Planning Area workers. This difference was especially great for residents of the Central-East subarea, where 40 percent of residents spend less than 15 minutes on their commutes to work. In contrast, residents of the West subarea were far more likely to commute for at least 45 minutes than the other two subareas.

Table 8.19: Travel Time to Work, 2008

	West		Central-West		Central-East		Planning Area		Oakland	
	#	%	#	%	#	%	#	%	#	%
Less than 15 Min.	126	25%	72	18%	97	40%	295	26%	29,953	17%
15 - 29 Min.	171	34%	155	38%	44	18%	370	32%	57,377	33%
30 - 44 Min.	58	12%	93	23%	69	29%	220	19%	38,284	22%
45 - 59 Min.	61	12%	24	6%	6	2%	91	8%	17,925	10%
60 Min. or More	50	10%	34	8%	11	5%	95	8%	21,748	13%
Work from Home	33	7%	31	8%	15	6%	79	7%	6,901	4%
Total Workers	499	100%	409	100%	242	100%	1,150	100%	172,188	100%

Source: Claritas; Strategic Economics, 2009.

[8] Journey to work data is not available at the block level. Therefore, these data include several blocks that do not fall within the Planning Area.

Despite having shorter commutes, the mode split for residents of the Planning Area was very similar to the rest of Oakland (Table 8.20). Residents of the Central-West subarea, however, were far more likely to carpool or take public transit than residents of other areas.

Table 8.20: Means of Transportation to Work, 2008

	West		Central-West		Central-East		Planning Area		Oakland	
	#	%	#	%	#	%	#	%	#	%
Drove Alone	310	62%	155	38%	152	63%	617	54%	95,005	55%
Car Pool	76	15%	86	21%	6	2%	168	15%	28,962	17%
Public Transportation	58	12%	89	22%	31	13%	178	15%	30,108	17%
Bike/Ped	22	4%	35	9%	20	8%	77	7%	8,542	5%
Other	0	0%	13	3%	18	7%	31	3%	2,670	2%
Work from Home	33	7%	31	8%	15	6%	79	7%	6,901	4%
Total Workers	499	100%	409	100%	242	100%	1,150	100%	172,188	100%

Source: Claritas; Strategic Economics, 2009.

In 2006, through its Longitudinal Employer-Household Dynamics analysis, the U.S. Census Bureau identified the workplaces of 332 of the workers living within the Planning Area. As shown in Tables 8.21 and 8.22, Of these, 107 (32 percent) work in Oakland, while another 48 (14 percent) work in San Francisco, 16 (5 percent) work in San Leandro, and 11 (3 percent) work in Alameda. In all, 76 percent of Central Estuary residents work in Alameda (52 percent), San Francisco (14 percent), or Contra Costa (10 percent) Counties.

Table 8.21: Job Counts in Cities where Planning Area Residents are Employed, 2006

	Count	Share
Oakland, California	107	32.2%
San Francisco, California	48	14.5%
Berkeley, California	19	5.7%
San Leandro, California	16	4.8%
Alameda, California	11	3.3%
Sacramento, California	7	2.1%
Walnut Creek, California	6	1.8%
San Jose, California	6	1.8%
San Rafael, California	5	1.5%
Hayward, California	5	1.5%
All Other Locations	102	30.7%
Total	332	100.0%

Source: LEHD 2006; Strategic Economics, 2009.

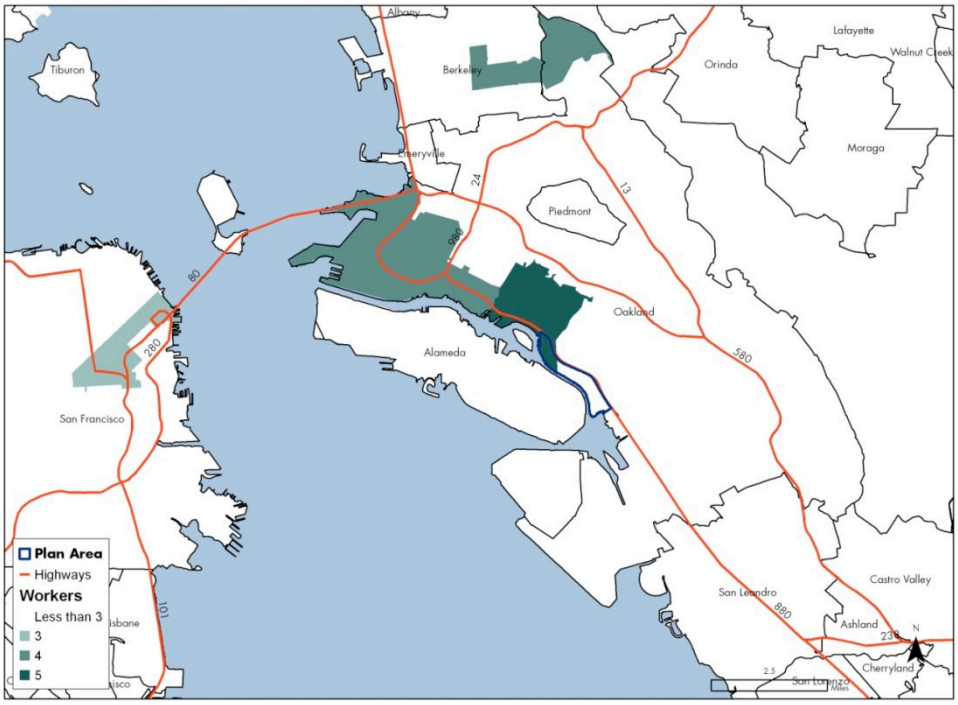
Table 8.22: Job Counts in Counties where Planning Area Residents are Employed, 2006

	Count	Share
Alameda Co., California	180	54.2%
San Francisco Co., California	48	14.5%
San Mateo Co., California	26	7.8%
Contra Costa Co., California	25	7.5%
Santa Clara Co., California	13	3.9%
Marin Co., California	10	3.0%
Sacramento Co., California	9	2.7%
San Joaquin Co., California	4	1.2%
Monterey Co., California	4	1.2%
Sonoma Co., California	2	0.6%
All Other Locations	11	3.3%
Total	332	100.0%

Source: LEHD 2006; Strategic Economics, 2009.

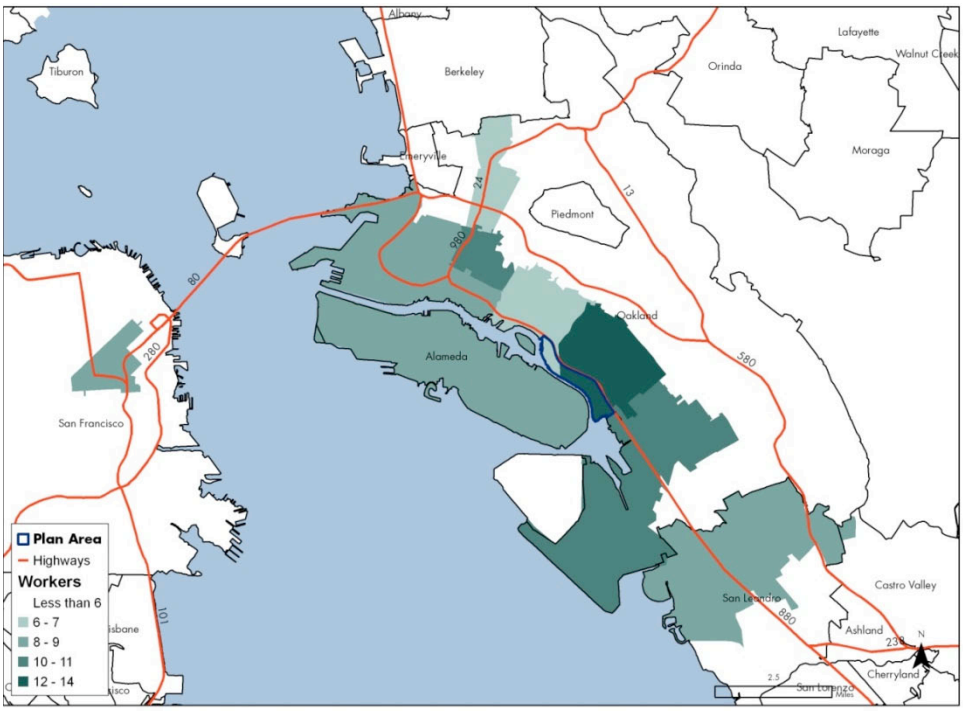
Figures 8.12 though 8.14 show the most common zipcodes for residents of each of the subareas to work. These maps show that the destinations of workers in the West subarea are significantly different than those of the Central-East and Central-West subareas. All three subareas have residents who work in the Western South of Market (SoMa) district of San Francisco and West Oakland/Jack London Square areas of Oakland. The West subarea also has concentrations of residents who work in Downtown San Francisco, the area immediately around the campus of the University of California, Berkeley, and within the subarea itself. These areas primarily offer white collar, professional jobs. In contrast, The vast majority of employment for residents of the Central-West and Central-East subareas is in zipcodes in San Leandro, Alameda, West Oakland, and East Oakland, especially the zipcode in which these subareas are located. These areas have much higher concentrations of blue collar, industrial-oriented jobs.

Figure 8.12: West Subarea- Where Residents Work



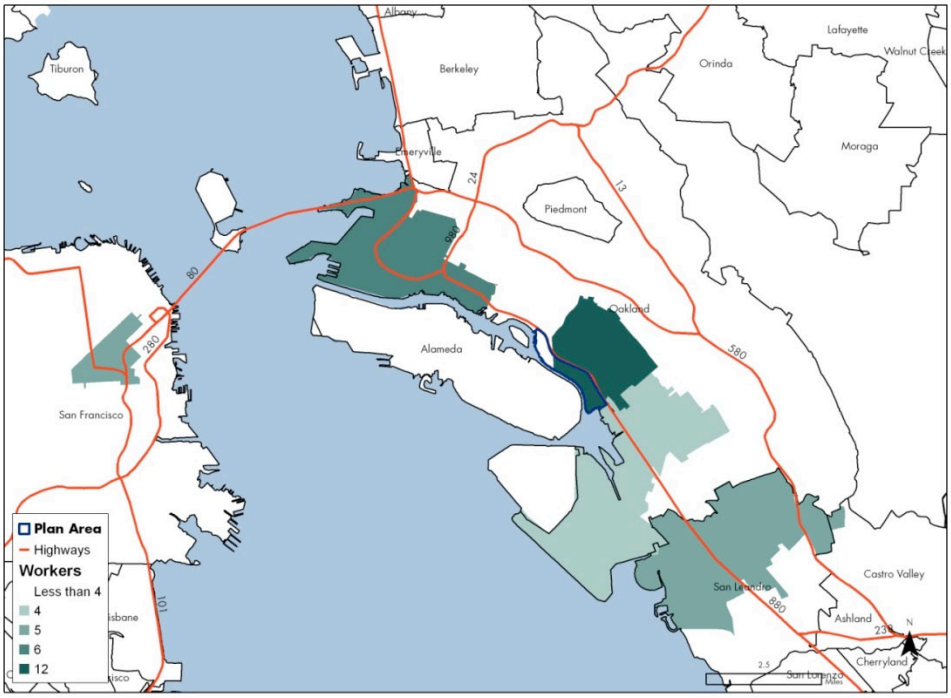
Source: LEHD 2006; ESRI; Strategic Economics, 2009.

Figure 8.13: Central-West Subarea- Where Residents Work



Source: LEHD 2006; ESRI; Strategic Economics, 2009.

Figure 8.14: Central-East Subarea- Where Residents Work

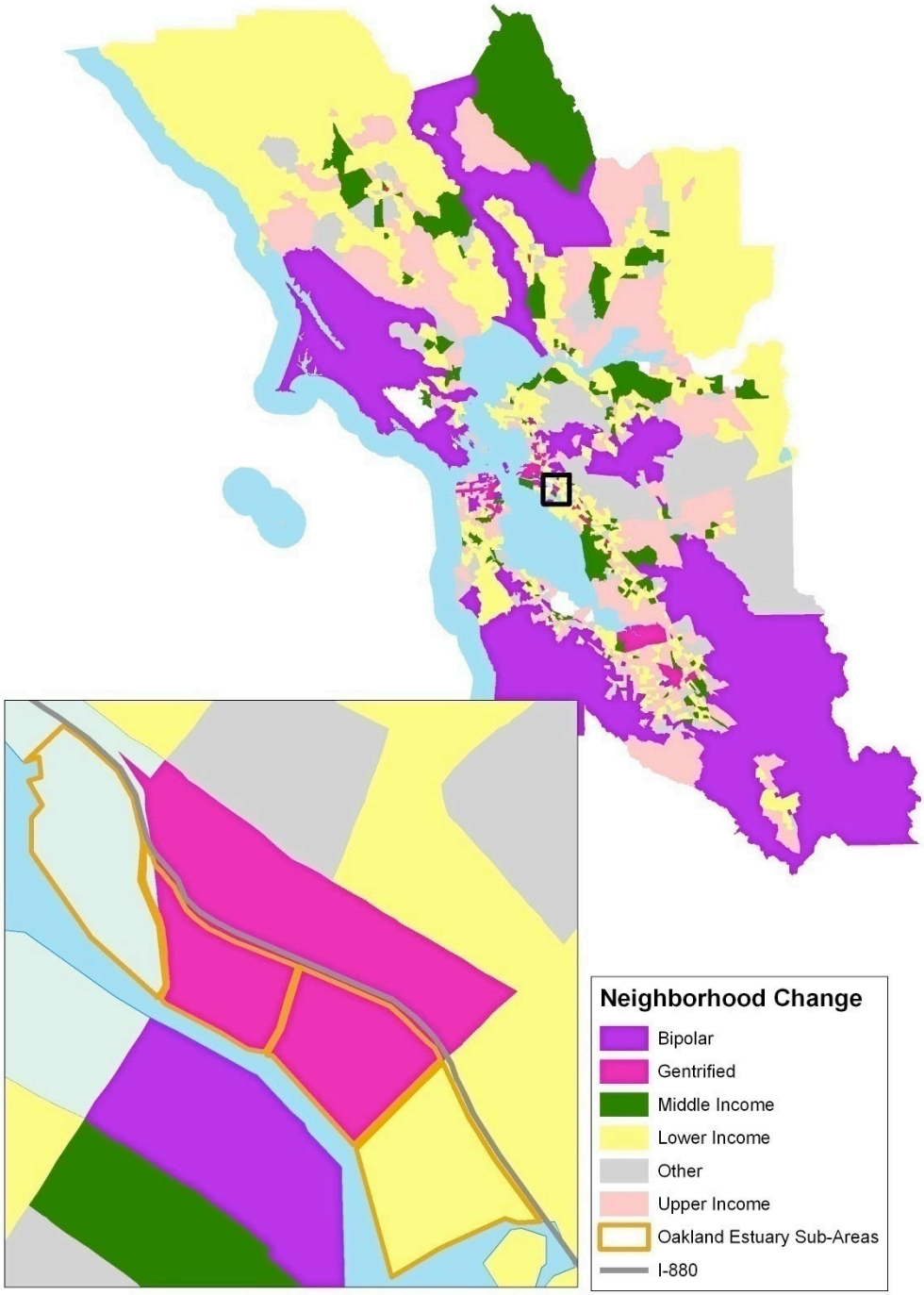


Source: LEHD 2006; ESRI; Strategic Economics, 2009.

Susceptibility to Displacement

Since it initially entered public discourse in the 1960s, the fear of gentrification has accompanied many planning efforts that seek to attract new investment to neighborhoods. In particular, there has been increasing concern over a particular form of gentrification, commonly referred to as "displacement." This is the process whereby a set of changes in neighborhood conditions compels existing residents to leave, usually to be replaced by new, more affluent residents. The causes of displacement are myriad, but often include the loss of subsidized housing units, rising housing costs, and loss of formal or informal social institutions. The Center for Community Innovation (CCI), in conjunction with the Association of Bay Area Governments, has developed a Displacement Early Warning Tool Kit that helps predict the likelihood that displacement will occur in a given area. This Tool Kit was constructed by examining which neighborhoods around the Bay Area gentrified, from 1990 to 2000. Figure 8.15, below, is a map of these areas. Next, CCI determined which demographic, economic, physical, and political factors that most directly predicted these patterns. Finally, 2000 Census data was assessed to determine which neighborhoods exhibited these characteristics, suggesting that they would be more susceptible to gentrification in the future.

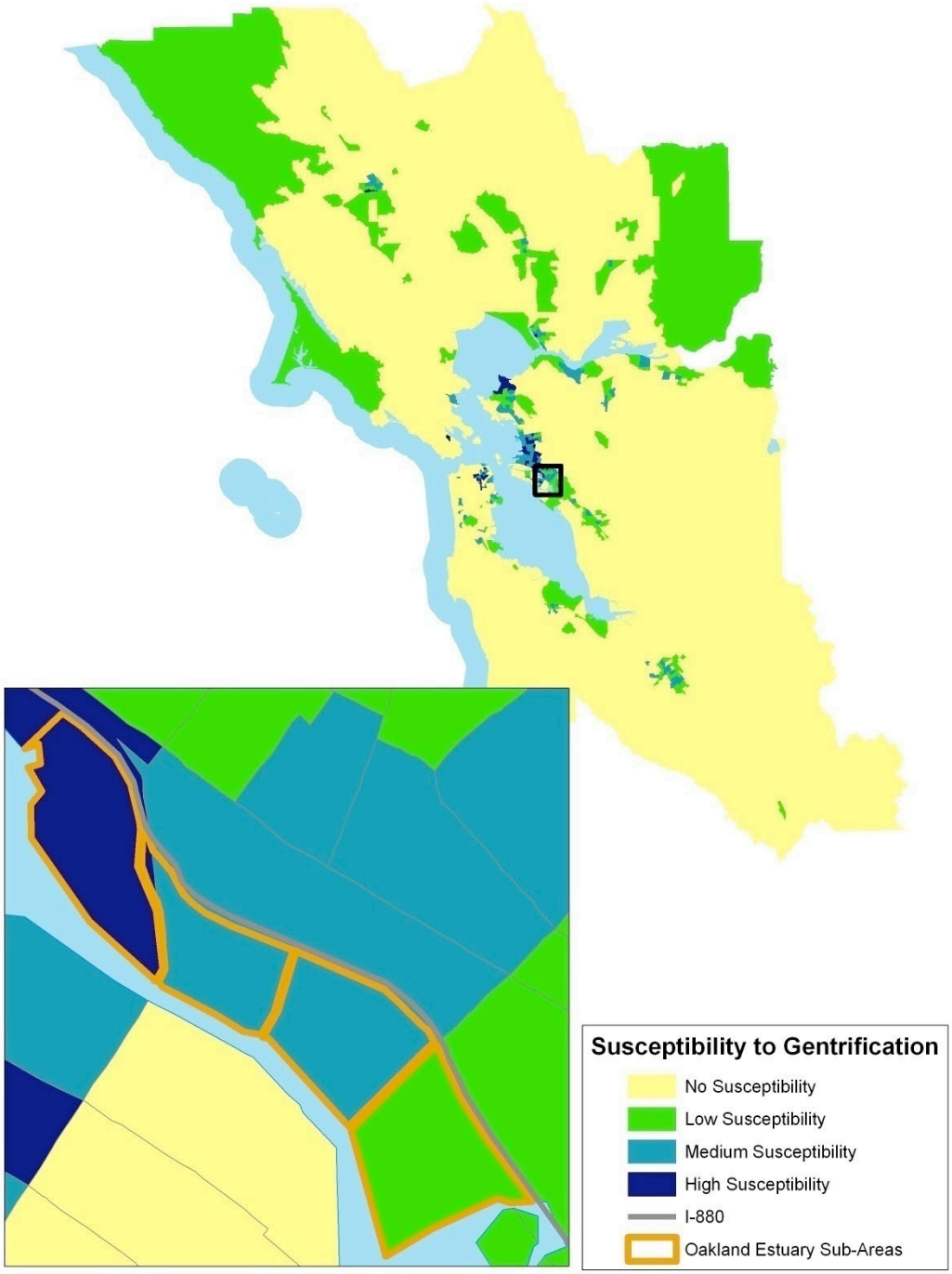
Figure 8.15: Neighborhood Change in the Bay Area, 1990-2000



Source: 2000 U.S. Census; ESRI; Center for Community Innovation, 2009.

Figure 8.16, below, is a map that depicts where susceptibility to gentrification is greatest in the Bay Area. It shows that, within the Planning Area, the West subarea is highly susceptible to this type of neighborhood change. In fact, employment and education data, presented above, suggest that this gentrification has already been taking place since before 2000. The map marks the Central-West and Central-East subareas as having "medium susceptibility." Indeed, while the residents of the new condominiums may not be displacing residents, their higher incomes and education levels could be implicit in a more benign form of gentrification. In the long-term, however, the changed character of the neighborhood may have an impact on the values of existing homes; given the low owner-occupancy rate in these areas, this may lead to displacement.

Figure 8.16: Susceptibility to Gentrification



Source: 2000 U.S. Census; ESRI; Center for Community Innovation, 2009.

A more thorough explanation of the methodology employed by this Tool Kit, along with a series of maps that display the data used to make the assessment of susceptibility to gentrification is contained in Appendix A.

Business Profile

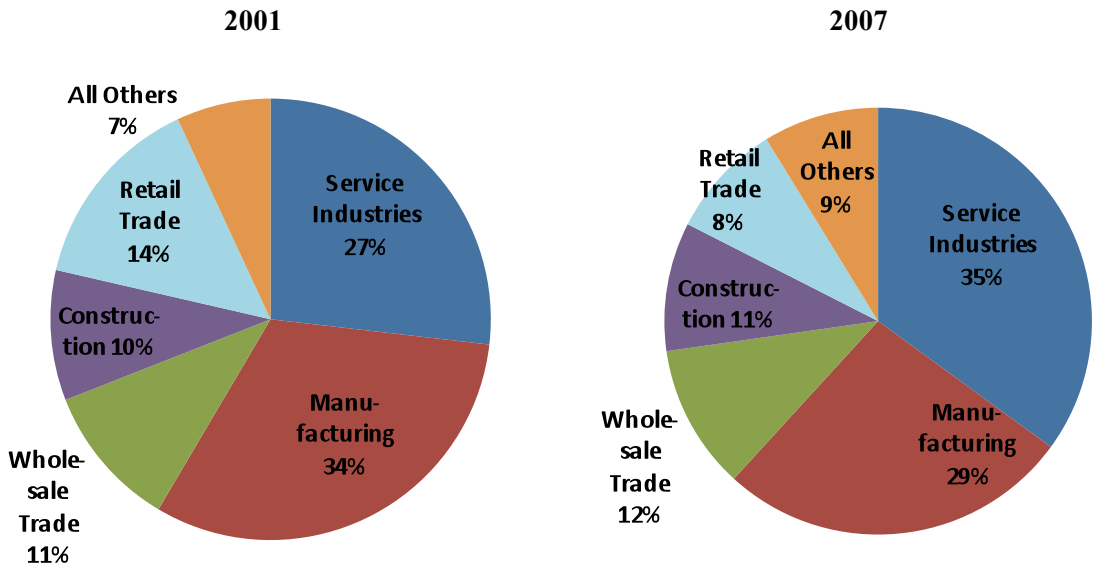
The following business profile is presented as preliminary findings in outline format. The complete business profile will be provided by Strategic Economics in mid May, per discussion with the City of Oakland.

The analysis presented here is primarily based on National Establishments Time Series (NETS) data from 1990-2007 and Dun & Bradstreet data from 2008. These data sources are somewhat imprecise, especially when applied to small geographies, such as the Planning Area and its subareas. Nevertheless, these are the best data sources available and, if taken as approximations, provide important insights into the dynamics and character of employment generating uses in the Planning Area. The conclusions drawn from these data will be checked against information gathered from interviews with businesses; it is likely that they will not only be augmented, but also modified based on this qualitative data.

Planning Area Employment Trends

In 2007, there were approximately 4,796 jobs and 388 firms located in the planning area. Over 60 percent of employment falls into Service Industries or Manufacturing (Figure 8.18). Other key groups are Wholesale Trade, Construction Industries and Retail Trade.

Figure 8.18: Composition of Employment in the Planning Area, 2001 and 2007



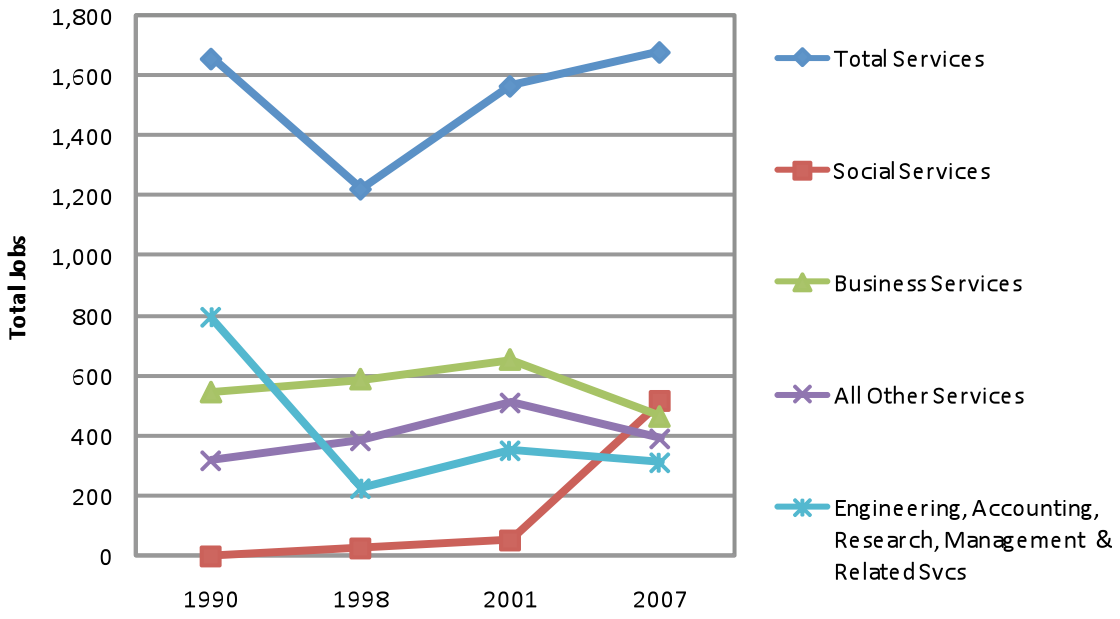
Source: NETS, Center for Community Innovation 2009, Strategic Economics 2009

In 2007, the Service Industries group employed more people than any other group in the Planning Area with approximately 35 percent of all jobs and 38 percent of all firms.

- Between 2001 and 2007, Service Industries became the top employment group, whereas previously Manufacturing has been the top employment group, (Figure 8.18).
- The top industries within the Service Industries group are Social Services with 11 percent of total employment, Business Services with 10 percent of total employment, and Engineering, Accounting & Research with 6 percent of total employment, (Figure 8.19).

- Employment in the Service Industries has increased 7 percent from 2001 to 2007, and employment gains in Social Services accounts for the nearly all of that increase. Other Service Industries like Business Services and Engineering, Accounting & Research, and Legal Services have experienced declining employment from 2001 to 2007.
- In 2002, Alameda County Behavioral Health Care Services moved 498 employees to an office building in the study area. This was the primary driver of an increase in Social Services from 2001 to 2007. In fact, without the growth attributable to this employer, there would be ***decrease*** of 385 jobs in the Service Industries group during this period.

Figure 8.19: Employment in Service Industries from 1990 to 2007



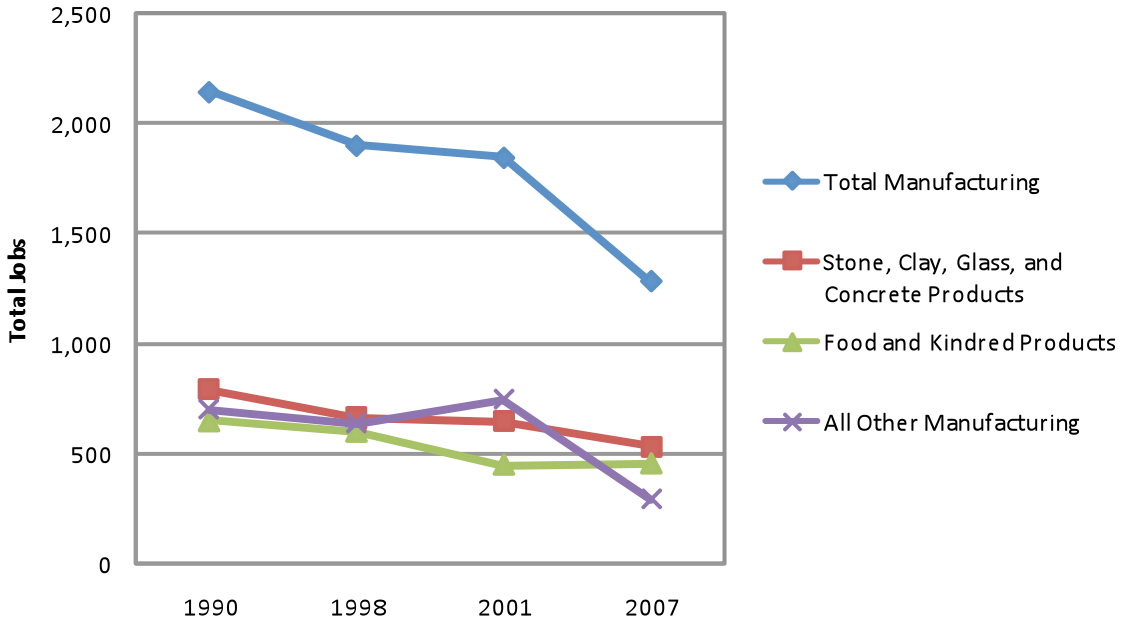
Source

: NETS, Center for Community Innovation 2009, Strategic Economics 2009

In 2007, the Manufacturing group employed the second highest number of people in the Planning Area with 27 percent of jobs and 13 percent of total firms, (Figure 8.20).

- The top key industries within Manufacturing are Stone, Clay, Glass and Concrete Products with 11 percent of total employment and Food and Kindred Products with 10 percent of total employment.
- Employment in Manufacturing has been declining steadily since 1990, but the decline accelerated from 2001 to 2007. Between those years, Manufacturing lost 31 percent of employment and 16 percent of firms. However, these losses are not chiefly attributable to either of the two largest manufacturing industries.
- Although Manufacturing is no longer the number one employment group in the Planning Area overall, it continues to have the highest employment in three out of the four subareas: Central-West, Central-East and East.
- Despite the steep employment losses from 2001 to 2007, the Food and Kindred Products industry remained steady with a one percent employment increase.

Figure 8.20: Employment in Manufacturing Industries from 1990 to 2007



Source: NETS, Center for Community Innovation 2009, Strategic Economics 2009

Planning Area 2007 Employment Profile

In 2007 Service Industries composed 35 percent of the Planning Area's employment base and 38 percent of its establishments, (Table 8.23).

In 2007, Manufacturing had the second largest amount of employment among the Major Industry groups. However, only 13 percent of establishments were in this Industry Group.

- This is because, on average, manufacturing firms have an average firm size twice that of all most other Major Industry Groups.

Table 8.23: Planning Area Employment Profile by Major Industry Group, 2007

Major Industry Group	Total Employment	Share of Total Employment	Total Firms	Share of Total Firms	Avg Firm Size
Service Industries	1,680	35%	149	38%	11.3
Manufacturing	1,283	27%	51	13%	25.2
Wholesale Trade	526	11%	53	14%	9.9
Construction Industries	468	10%	36	9%	13.0
Retail Trade	419	9%	43	11%	9.7
Finance, Insurance, and Real Estate	170	4%	31	8%	5.5
Transportation, Communication, and Utilities	120	3%	20	5%	6.0
Public Administration	87	2%	2	1%	43.5
Agriculture, forestry, and fisheries	43	1%	3	1%	14.3
Total Employment	**4,796**	**100%**	**388**	**100%**	**12.4**

Source: NETS, Center for Community Innovation 2009, Strategic Economics 2009

Although Social Services and Stone, Clay, Glass, and Concrete Products are responsible for 22 percent of employment in the Planning Area, these jobs are housed in only six establishments, (Table 8.24).

- In particular, Alameda County is the major employer in the Social Services Sector and Owens-Brockway Glass Container is major employer for Stone, Clay, Glass, and Concrete Products.

While employment in Business Services appears to be more diffuse, with an average of 10.4 employees in each of 45 establishments, ABC Security Services accounts for 300 of these 466 jobs.

This means the other 44 establishments are also much smaller than 10.4 employees.

Food and Kindred Services is less dominated by a single firm than the tree largest industries, with 456 jobs (10 percent of the total) provided by seven establishments.

- However, Earthgrains Baking Company is by far the largest of these, with 250 employees.

Table 8.24: Planning Area Employment Profile by Key Industry, 2007

Key Industry	Total Employment	Share of Total Employment	Total Firms	Share of Total Firms	Average Firm Size
Service Industries					
Social Services	515	11%	3	1%	171.7
Business Services	466	10%	45	12%	10.4
Engineering, Accounting, Research, Management & Related Svcs	309	6%	33	9%	9.4
Automotive Repair, Services and Parking	110	2%	13	3%	8.5
Legal Services	52	1%	15	4%	3.5
Manufacturing					
Stone, Clay, Glass, and Concrete Products	533	11%	3	1%	177.7
Food and Kindred Products	456	10%	7	2%	65.1
Industrial and Commercial Machinery and Computer Equipment	90	2%	8	2%	11.3
Furniture and Fixtures	75	2%	3	1%	25.0
Printing, Publishing and Allied Industries	16	0%	7	2%	2.3
Wholesale Trade					
Wholesale Trade - Durable Goods	283	6%	38	10%	7.4
Wholesale Trade - Nondurable Goods	243	5%	15	4%	16.2
Construction Industries					
Construction - Special Trade Contractors	328	7%	27	7%	12.1
Heavy Construction, Except Building Construction - Contractors	112	2%	3	1%	37.3
Retail Trade					
Building Matrials, Hrdwr, Garden Supply & Mobile Home Dealrs	158	3%	2	1%	79.0
Finance, Insurance, and Real Estate					
Insurance Agents, Brokers and Service	71	1%	3	1%	23.7
Transportation, Communication, and Utilities					
Motor Freight Transportation	76	2%	11	3%	6.9
All Other Industries	903	19%	152	39%	5.9
Total Employment	**4,796**	**70%**	**388**	**100%**	**12.4**

Source: NETS, Center for Community Innovation 2009, Strategic Economics 2009

Planning Area 2001 to 2007 Trends

From 2001 to 2007, employment in the Planning area decreased by 18 percent, but the total number of firms increased by 3 percent, (Table 8.25).

- New firms to the planning area are smaller than the firms that they are replacing: the average firm size was 15.5 employees in 2001 and decreased to 12.4 in 2007. These trends are particularly pronounced in Wholesale Trade; Retail Trade; Finance, Insurance, and Real Estate; and Transportation, Communication, and Utilities.
- Service Industries ran counter to this trend, with increasing employment, but a decreasing number of establishments. However, as noted, this is primarily due to the Alameda County Behavioral Health Services office.
- Finally, Manufacturing had decreases both in the number of jobs and the number of firms. Because employment is dropping faster than the number of firms, however, it seems that firms are *both* shrinking *and* relocating/closing.

Table 8.25: Planning Area Employment Trends by Major Industry Group, 2001 to 2007

	2001		2007		% Change '01 - '07	
Major Industry Group	**Total Employment**	**Total Firms**	**Total Employment**	**Total Firms**	**Total Employment**	**Total Firms**
Service Industries	1,567	151	1,680	149	7%	-1%
Manufacturing	1,847	61	1,283	51	-31%	-16%
Wholesale Trade	617	51	526	53	-15%	4%
Construction Industries	559	41	468	36	-16%	-12%
Retail Trade	846	35	419	43	-50%	23%
Finance, Insurance, and Real Estate	159	13	170	31	7%	138%
Transportation, Communication, and Utilities	157	19	120	20	-24%	5%
Public Administration	57	1	87	2	53%	100%
Agriculture, forestry, and fisheries	30	5	43	3	43%	-40%
Total Employment	**5,839**	**377**	**4,796**	**388**	**-18%**	**3%**

Source: NETS, Center for Community Innovation 2009, Strategic Economics 2009

From 2001 to 2007, only two of the Key Industries (Food and Kindred Products and Wholesale Trade-Nondurable Goods) had increases both in the number of jobs and the number of establishments, (Table 8.26).

- Over this period, Food and Kindred Products had a net gain of one firm in the Planning Area, while the number of employees grew by six.
- At the same time, Wholesale Trade- Nondurable Goods had a net gain of two firms and of eight jobs.
- Given the close relationship between these two industries, this may represent a particularly strong sector for the Planning Area.
- Over this period, Construction- Special Trade Contractors had no net gain of firms, but added 23 jobs.

From 2001 to 2007, all Key Industries in the Manufacturing Industrial Group, except for Food and Kindred Products, lost employment

- Printing, Publishing, and Allied Industries posted the most extreme loss, shedding 154 jobs, a 91 percent decrease.
- Furniture and Fixtures had a net loss of three firms (out of six) and 108 jobs (a 56 percent decrease).
- Both Stone, Glass, Clay, and Concrete Products and Industrial and Commercial Machinery and Computer Equipment also had net losses in establishments and employees, though by smaller margins than the other two.

Business Services exemplifies the overall pattern for the Planning Area, with an increasing number of establishments, but decreasing number of jobs.

- Although there was a net gain of 16 firms (55 percent increase), there was a net loss of 189 jobs (29 percent decrease).

Table 8.26: Planning Area Employment Trends by Key Industry, 2001 to 2007

	Planning Area					
	2001		2007		% Change '01 - '07	
Key Industry	**Total Employment**	**Total Firms**	**Total Employment**	**Total Firms**	**Employment**	**Firms**
Service Industries						
Social Services	53	6	515	3	872%	-50%
Business Services	655	29	466	45	-29%	55%
Engineering, Accounting, Research, Management & Related Svcs	348	37	309	33	-11%	-11%
Automotive Repair, Services and Parking	107	14	110	13	3%	-7%
Legal Services	151	23	52	15	-66%	-35%
Manufacturing						
Stone, Clay, Glass, and Concrete Products	648	4	533	3	-18%	-25%
Food and Kindred Products	450	6	456	7	1%	17%
Industrial and Commercial Machinery and Computer Equipment	148	9	90	8	-39%	-11%
Furniture and Fixtures	183	6	75	3	-59%	-50%
Printing, Publishing and Allied Industries	170	8	16	7	-91%	-13%
Wholesale Trade						
Wholesale Trade - Durable Goods	382	38	283	38	-26%	0%
Wholesale Trade - Nondurable Goods	235	13	243	15	3%	15%
Construction Industries						
Construction - Special Trade Contractors	305	27	328	27	8%	0%
Heavy Construction, Except Building Construction - Contractors	144	6	112	3	-22%	-50%
Retail Trade						
Building Matrials, Hrdwr, Garden Supply & Mobile Home Dealrs	63	2	158	2	151%	0%
Finance, Insurance, and Real Estate						
Insurance Agents, Brokers and Service	100	2	71	3	-29%	50%
Transportation, Communication, and Utilities						
Motor Freight Transportation	87	10	76	11	-13%	10%
All Other Industries	1,610	137	903	152	-44%	11%
Total Employment	**5,839**	**377**	**4,796**	**388**	**-18%**	**3%**

Source: NETS, Center for Community Innovation 2009, Strategic Economics 2009

Planning Area Births and Deaths

Overall, the Planning Area has highly dynamic economy.

- The 468 start-ups and 295 move-ins from 1990-2007 dramatically eclipsed the 220 firms that existed from before that period, (Table 8.27).
- In addition, while the number of closures during this period was only slightly less than the number of start-ups, the number of move-ins was nearly double the number of relocations. This accounts for the overall growth in the number of firms in the Planning Area from 1990-2007.

From 1990-2007, more than half of the net gain in establishments in the Planning Area came in the Service Industries, (Table 8.27).

- This was partly because 38 percent of new establishments (including both start-ups and move-ins), were in this Industry Group. In addition to having a somewhat higher start-up rate than other industry groups in the Planning Area, service industries also had a disproportionately high survival rate. Much of this is attributable to Business Services, which accounted for 12 percent of all start-ups in the Planning Area during this period and roughly 30 percent of the overall net gain in establishments.

Table 8.27: Births, Deaths, and Moves in Planning Area, 1990-2007

	Method of Entry				Method of Exit						
Industry Group	Startups	Share of Startups	Move-Ins	Share of Move-Ins	Closures	Share of Closures	Relo-cations	Share of Relocations	Start Up Rate	Overall Survival Rate	Net Gain/Loss
Service Industries	188	40%	100	34%	140	32%	57	36%	54%	44%	91
Business Services	*58*	*12%*	*28*	*9%*	*37*	*8%*	*16*	*10%*	*59%*	*46%*	*33*
Engineering, Accounting, Research, Management &	*35*	*7%*	*27*	*9%*	*29*	*7%*	*15*	*9%*	*45%*	*33%*	*18*
Wholesale Trade	55	12%	60	20%	75	17%	29	18%	35%	34%	11
Manufacturing	43	9%	39	13%	59	14%	20	13%	33%	39%	3
Retail Trade	64	14%	29	10%	61	14%	16	10%	53%	36%	16
Construction Industries	46	10%	25	8%	40	9%	15	9%	51%	40%	16
Finance, Insurance, and Real Estate	35	7%	20	7%	30	7%	7	4%	51%	46%	18
Transportation, Communication, and Utilities	35	7%	22	7%	32	7%	14	9%	53%	30%	11
Public Administration	2	0%	0	0%	0	0%	0	0%	100%	100%	2
Total	**468**	**100%**	**295**	**100%**	**437**	**100%**	**158**	**100%**	**279%**	**231%**	**168**

Source: NETS, Center for Community Innovation 2009, Strategic Economics 2009

- Nevertheless, while this represents a substantial growth in establishments in the Service Industries, it did not translate into growth in employment. In fact, if the 498 employees of Alameda County Behavioral Health Services are not included, there is an overall decline

in employment in Services Industry Group, from 1,658 jobs in 1990 to 1,182 jobs in 2007, (Figure 8.19). That is because these new firms are smaller and offer fewer jobs than the ones that closed or relocated.

Subarea Employment Trends

More than half of the Planning Area's employment in concentrated in the West Subarea (Table 8.28)

- This is largely attributable to the high concentration of Service Industries jobs- 82 percent of Planning Area's jobs in this Industry Group are in the West subarea. This Industry Group represents roughly half of the employment in this subarea.
- The West also has 82 percent of Finance, Insurance, and Real Estate (FIRE) jobs, 100 percent of Public Administration jobs in the Planning Area. These concentrations reflect the large presence of office space in the West area, a land use that is much less represented in the other subareas.
- Fifty-two percent of Wholesale Trade jobs in the Planning Area are located in the West subarea, pointing to the other dominant land use, warehousing.
- Agriculture, Forestry, and Fisheries is the only Industry Group with fewer than a third of its Planning Area jobs in the West subarea.

Only ten percent of the Planning Area's employment is located in the Central-West Subarea

- Those jobs that are located in the Central-West subarea are not clustered in any particular Industry Group.
- The only Industry Group in which the Central-West has more employees than any other subarea is Agriculture, Forestry, and Fisheries.
- This subarea is primarily residential, with small-scale commercial and industrial scattered throughout.

21 percent of the Planning Area's employment is located in the Central-East Subarea

- Nearly half of the employment in this subarea is in the Manufacturing Industry Group. These 511 jobs represent 40 percent the manufacturing employment base for the Planning Ara.
- There are also large concentrations of jobs in the Construction Industries and Retail Trade, with 35 percent and 45 percent of the Planning Area's jobs in these Industrial Groups in the Central-East.
- Other than the 135 Service Industries jobs, there are very few jobs outside of the above-mentioned Industrial Groups.

12 percent of the Planning Area's employment is located in the East Subarea

- In this subarea, there are large concentrations of jobs in Transportation, Communications, and Utilities and Wholesale Trade, with 53 percent and 35 percent of the Planning Area's jobs in these Industrial Groups.
- The largest number of jobs (201) in this subarea are in Manufacturing; however, this represents only 16 percent of the Planning Area's jobs in this Industrial Group.
- Generally white-collar Industry Groups, such as FIRE, Retail Trade, and Public Administration have virtually no jobs in this subarea. There are also fewer Service Industries jobs in this subarea than any other in the Planning Area.

Table 8.28: Distribution of Major Industry Groups Across Subareas, 2007 Employment

	West		Central West		Central East		East		Planning Area	
Major Industry Group	Jobs	Share of Industry Group	Jobs	Share of Industry Group	Jobs	Share of Industry Group	Jobs	Share of Industry Group	Jobs	Share of Industry Group
Service Industries	1,372	82%	107	6%	135	8%	66	4%	1,680	100%
Manufacturing	447	35%	124	10%	511	40%	201	16%	1,283	100%
Wholesale Trade	276	52%	37	7%	27	5%	186	35%	526	100%
Construction Industries	184	39%	78	17%	162	35%	44	9%	468	100%
Retail Trade	159	38%	60	14%	189	45%	11	3%	419	100%
Finance, Insurance, and Real Estate	140	82%	25	15%	5	3%	0	0%	170	100%
Transportation, Communication, and Utilities	51	43%	3	3%	2	2%	64	53%	120	100%
Public Administration	87	100%	0	0%	0	0%	0	0%	87	100%
Agriculture, forestry, and fisheries	10	23%	33	77%	0	0%	0	0%	43	100%
Total Employment	**2,726**	**57%**	**467**	**10%**	**1,031**	**21%**	**572**	**12%**	**4,796**	**100%**

Source: NETS, Center for Community Innovation 2009, Strategic Economics 2009

As with employment, more than half of the Planning Area's establishments are concentrated in the West Subarea (Table 8.29).

- This concentration is broad-based, as Construction is the only Industrial Group that has fewer than a third of its Planning Area establishments in the West.
- The Service Industries and FIRE establishments are especially concentrated in the West subarea, with 64 percent and 68 percent of their Planning Area establishments, respectively,
- Nearly half (95) of the establishments in the West subarea are Service Industries.

Although it only has ten percent of the Planning Area's employment, 26 percent of the Planning Area's establishments are located in the Central-West Subarea

- This suggests that the businesses in this area, while many in number, have small numbers of employees
- These establishments are diverse, spanning many dissimilar Industry Groups. Manufacturing, Retail Trade, and Construction all have large concentrations of establishments in this subarea

- After the West subarea, the Central-West has the highest concentrations of FIRE and Service Industry Establishments.

While 21 percent of the Planning Area's employment is located in the Central-East Subarea, only seven percent of establishments are in this subarea

- This suggests that, in stark contrast to the Central-West subarea, there are very few establishments in the Central-East, but those that are there have a large number of employees.
- Only two Industry Groups have more than ten percent of their Planning Area establishments in this subarea: Retail Trade and Construction.

16 percent of the Planning Area's establishments are located in the East Subarea

- Two Industry Groups are concentrated in the East: Wholesale Trade and Transportation, Communications, and Utilities, with 40 percent and 45 percent of their Planning Area establishments in the subarea, respectively.
- There are also smaller, but significant, concentrations of Manufacturing and Construction establishments.

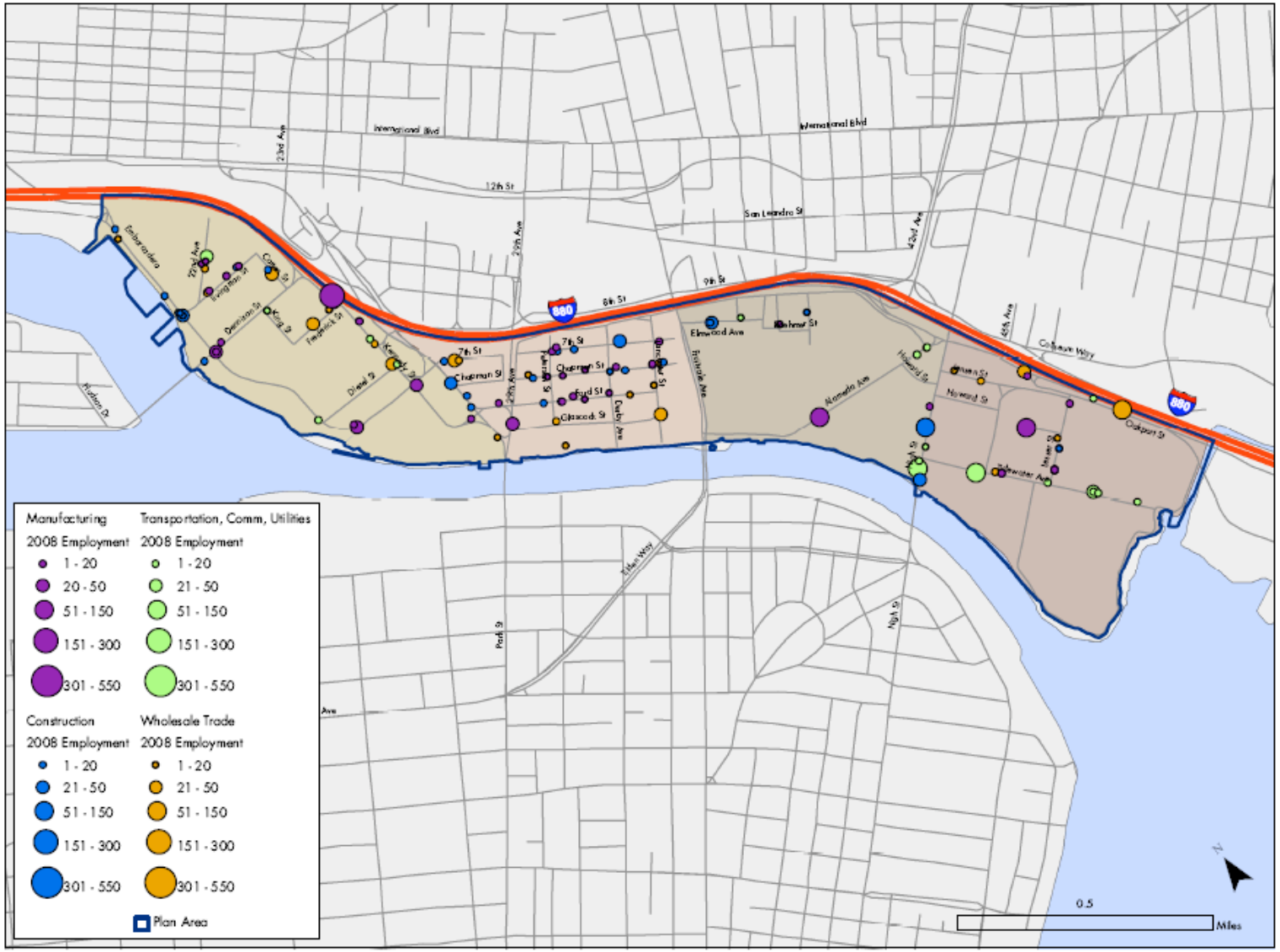
Table 8.29: Distribution of Major Industry Groups Across Subareas, 2007 Establishments

	West		Central West		Central East		East		Planning Area	
Major Industry Group	Firms	Share of Industry Group	Firms	Share of Industry Group	Firms	Share of Industry Group	Firms	Share of Industry Group	Firms	Share of Industry Group
Service Industries	95	64%	32	21%	9	6%	13	9%	149	100%
Wholesale Trade	25	47%	4	8%	3	6%	21	40%	53	100%
Manufacturing	19	37%	20	39%	4	8%	8	16%	51	100%
Retail Trade	18	42%	16	37%	5	12%	4	9%	43	100%
Construction Industries	10	28%	15	42%	4	11%	7	19%	36	100%
Finance, Insurance, and Real Estate	21	68%	8	26%	2	6%	0	0%	31	100%
Transportation, Communication, and Utilities	8	40%	2	10%	1	5%	9	45%	20	100%
Agriculture, forestry, and fisheries	1	33%	2	67%	0	0%	0	0%	3	100%
Public Administration	2	100%	0	0%	0	0%	0	0%	2	100%
Total Establishments	**199**	**51%**	**99**	**26%**	**28**	**7%**	**62**	**16%**	**388**	**100%**

Source: NETS, Center for Community Innovation 2009, Strategic Economics 2009

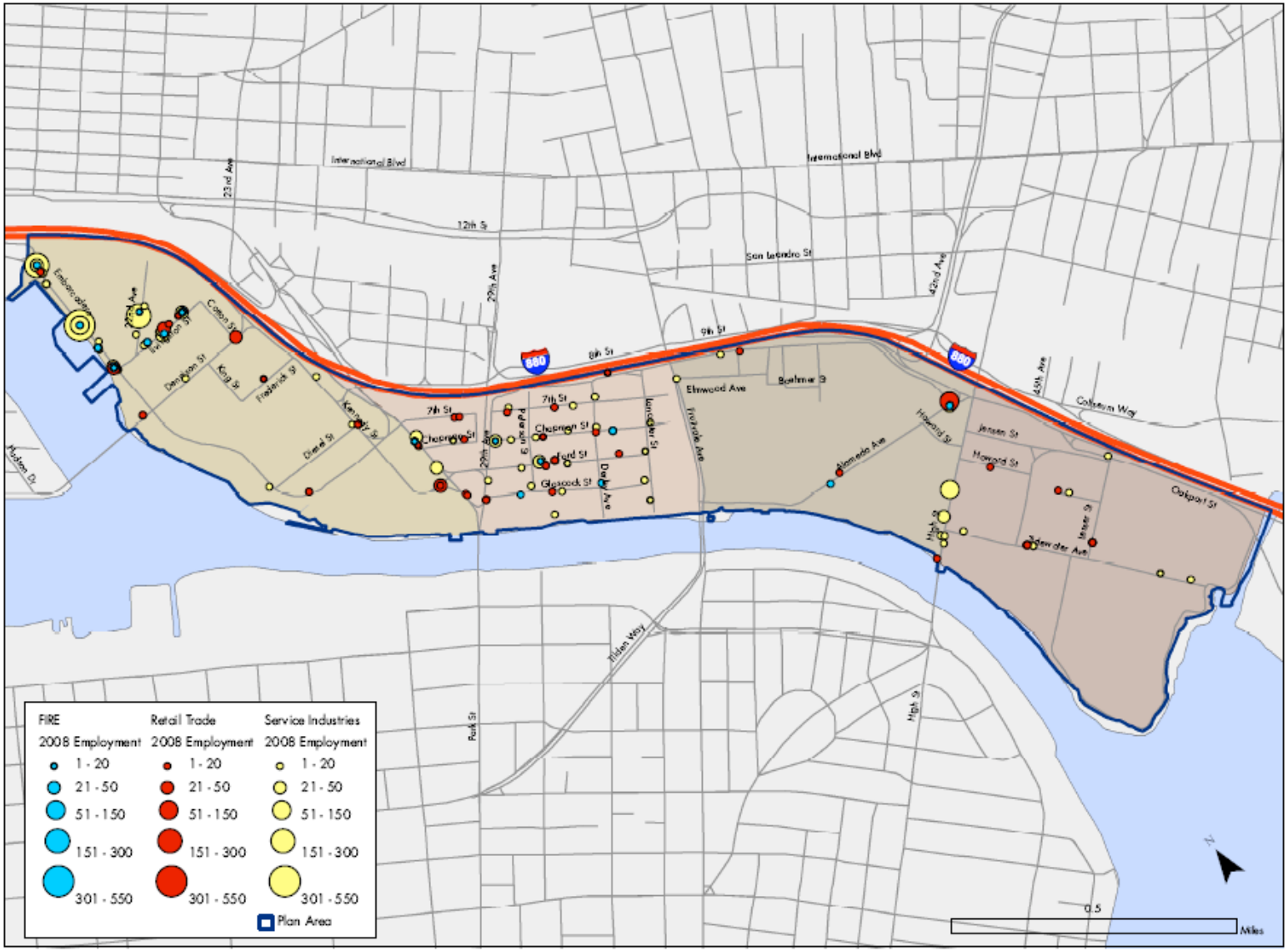
Figures 8.21 and 8.22, below, are maps illustrating the spatial distribution of jobs and establishments described in these tables. Especially apparent is the high concentration of small firms in the Central-West subarea and concentration of non-Industrial employment in the West.

Figure 8.21: Industrial Employment in the Planning Area, 2008



Source: Dun and Bradstreet, Urban Explorer 2009, Strategic Economics 2009

Figure 8.22: Non-Industrial Employment in the Planning Area, 2008



Source: Dun and Bradstreet, Urban Explorer 2009, Strategic Economics 2009

The four largest Key Industries are highly concentrated in particular subareas (Table 8.30).

- 94 percent of Stone, Glass, and Concrete Products jobs are located in the Central-East (the location of Owens-Brockway)
- 100 percent of Social Services jobs are located in the West (the location of the Alameda County offices)
- 88 percent of Business Services jobs are located in the West (the location of ABC Security)
- 75 percent of Food and Kindred Products jobs are located in the West (the location of Earthgrain Baking)

Both Key Industries with increases in employment and establishments from 2001-2007 (Food and Kindred Products and Wholesale Trade- Nondurable Goods) are highly concentrated in the West subarea.

- Both Food and Kindred Products and Wholesale Trade- Nondurable Goods have at least 75 percent of Planning Area jobs in this subarea. These related industries may form an important cluster.

No Key Industries have more than 20 percent of their Planning Area jobs in the Central-West subarea

- More than half of the jobs in this subarea are in industries other than these ten.

In addition to Stone, Glass, and Concrete Products, Building Materials, Hardware, and Garden Supply is highly concentrated in the Central-East subarea

- 99 percent of jobs in this industry are located in this subarea (the location of Home Depot).
- There is also a large concentration of Construction- Special Trade Contractor and Automotive Repair, Services, and Parking jobs in this subarea.

Wholesale Trade-Durable Goods is the only Key Industry with the majority of its planning area jobs in the East Subarea

- Roughly 30 percent of jobs in the East subarea are in this Industry
- There are also smaller, but significant, concentrations of Food and Kindred Products, Heavy Construction (Except Building Construction) establishments. and Automotive Repair, Services, and Parking jobs.

Table 8.30: Distribution of Key Industries Across Subareas, 2007 Employment

	West		Central West		Central East		East		Planning Area	
Industry	Jobs	Share of Key Industry	Jobs	Share of Key Industry	Jobs	Share of Key Industry	Jobs	Share of Key Industry	Jobs	Share of Key Industry
Stone, Clay, Glass, and Concrete Products	33	6%	0	0%	500	94%	0	0%	533	100%
Social Services	513	100%	0	0%	2	0%	0	0%	515	100%
Business Services	412	88%	18	4%	30	6%	6	1%	466	100%
Food and Kindred Products	344	75%	2	0%	0	0%	110	24%	456	100%
Construction - Special Trade Contractors	110	34%	47	14%	162	49%	9	3%	328	100%
Engineering, Accounting, Research Mgmt	237	77%	56	18%	2	1%	14	5%	309	100%
Wholesale Trade - Durable Goods	90	32%	4	1%	12	4%	177	63%	283	100%
Wholesale Trade - Nondurable Goods	186	77%	33	14%	15	6%	9	4%	243	100%
Building Matrials, Hrdwr, Garden Supply	1	1%	0	0%	157	99%	0	0%	158	100%
Heavy Construction, Except Building Construction	65	58%	22	20%	0	0%	25	22%	112	100%
Automotive Repair, Services and Parking	8	7%	10	9%	65	59%	27	25%	110	100%
Other Industries	727	57%	275	21%	86	7%	195	15%	1,283	100%
Total Employment	**2,726**	**57%**	**467**	**10%**	**1,031**	**21%**	**572**	**12%**	**4,796**	**100%**

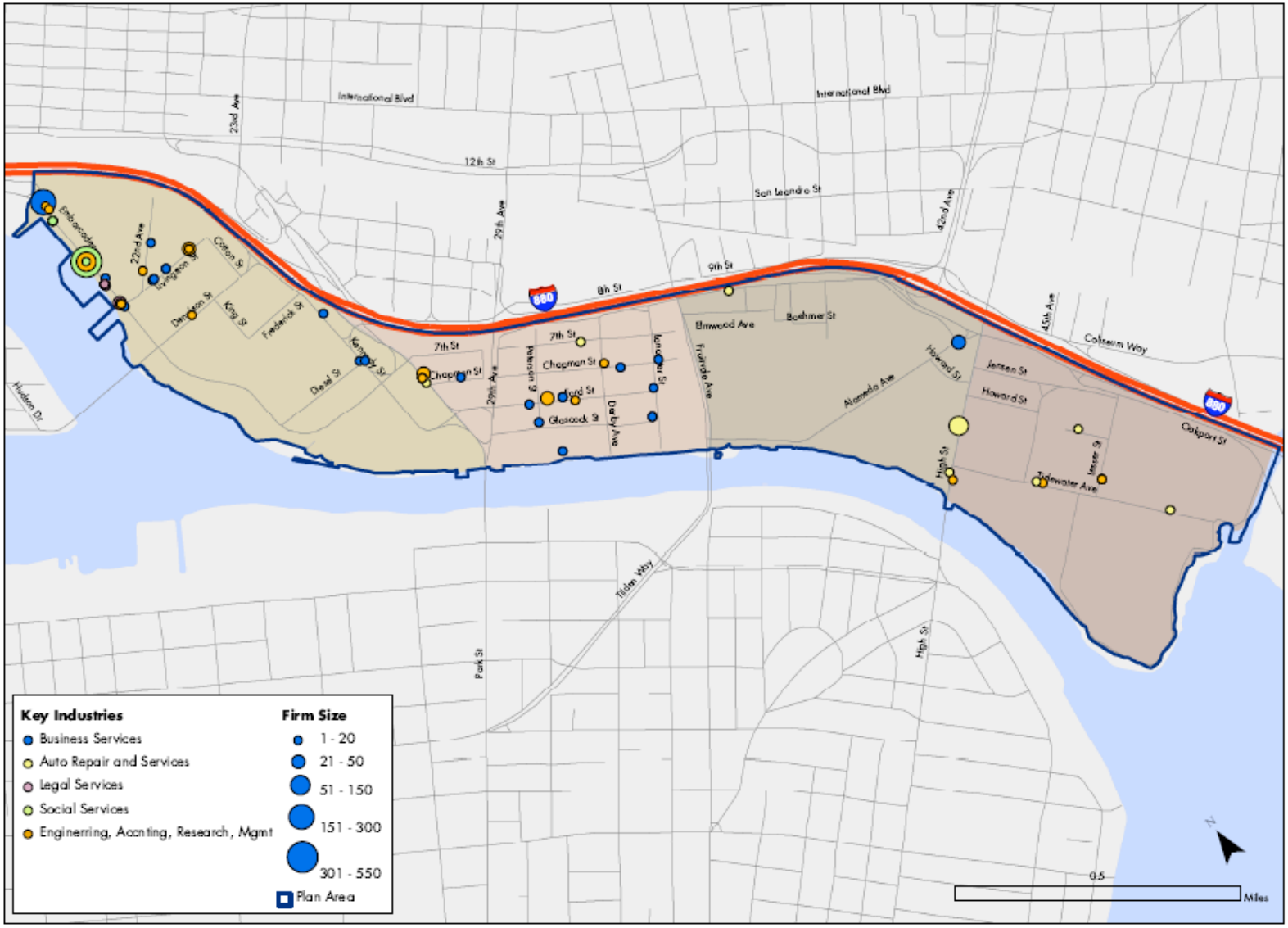
Note: these ten Key Industries represent 73 percent of employment in the Planning Area.

The following maps illustrated the spatial distribution of establishments in the Key Industries in the Service Industries and Manufacturing Industry Groups, (Figures 8.23 and 8.24).

Figure 8.23 Employment in Key Manufacturing Industries in the Planning Area, 2008

Source: Dun and Bradstreet, Urban Explorer 2009, Strategic Economics 2009

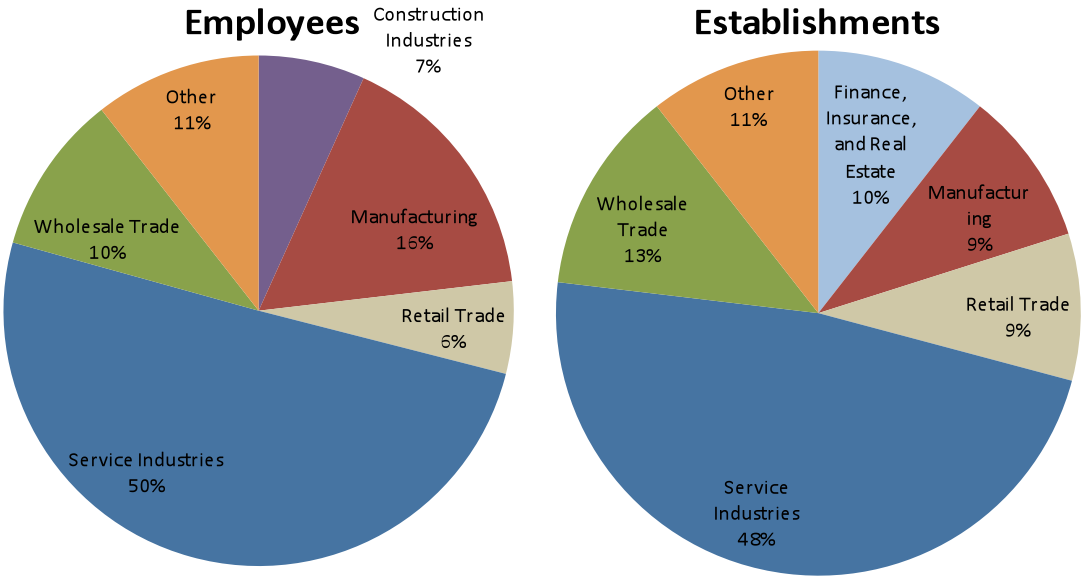
Figure 8.24: Employment in Key Service Industries in the Planning Area, 2008



Source: Dun and Bradstreet, Urban Explorer 2009, Strategic Economics 2009

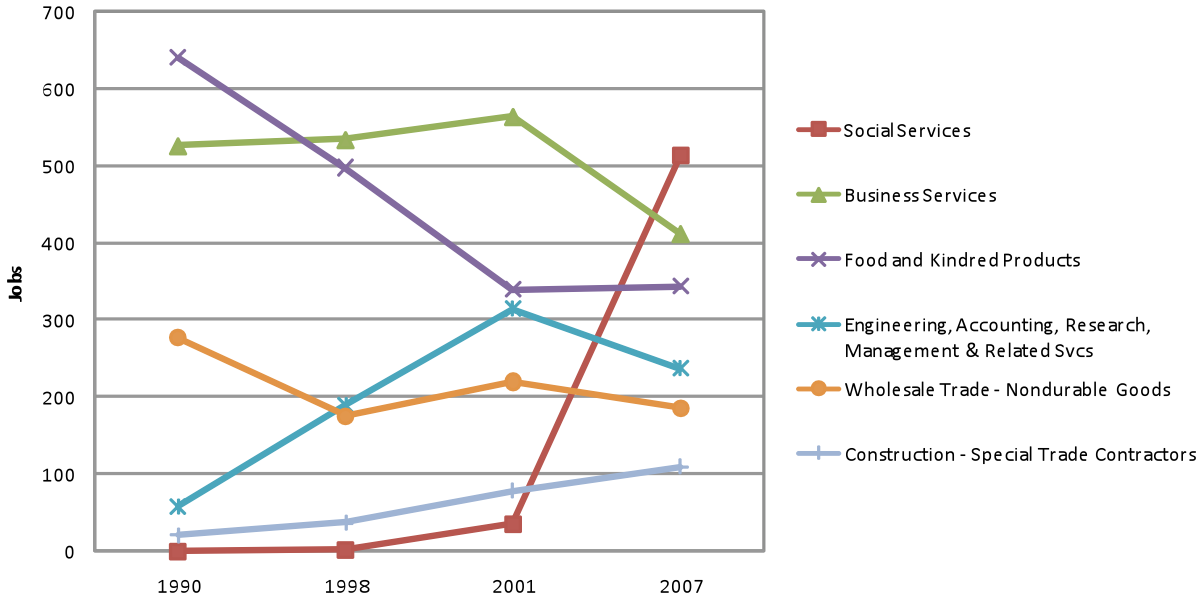
West Subarea

Figure 8.25: Employment and Establishments by Industry Group in West Subarea, 2007



Source: NETS, Center for Community Innovation 2009, Strategic Economics 2009

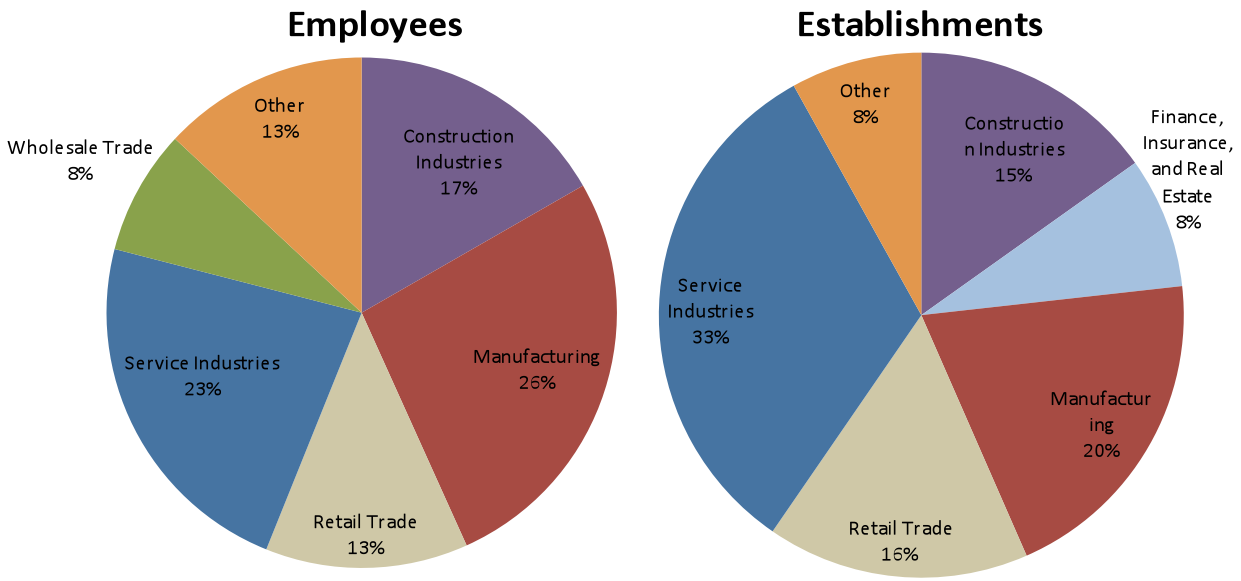
Figure 8.26: Employment by Key Industries in West Subarea, 1990-2007



Source: NETS, Center for Community Innovation 2009, Strategic Economics 2009

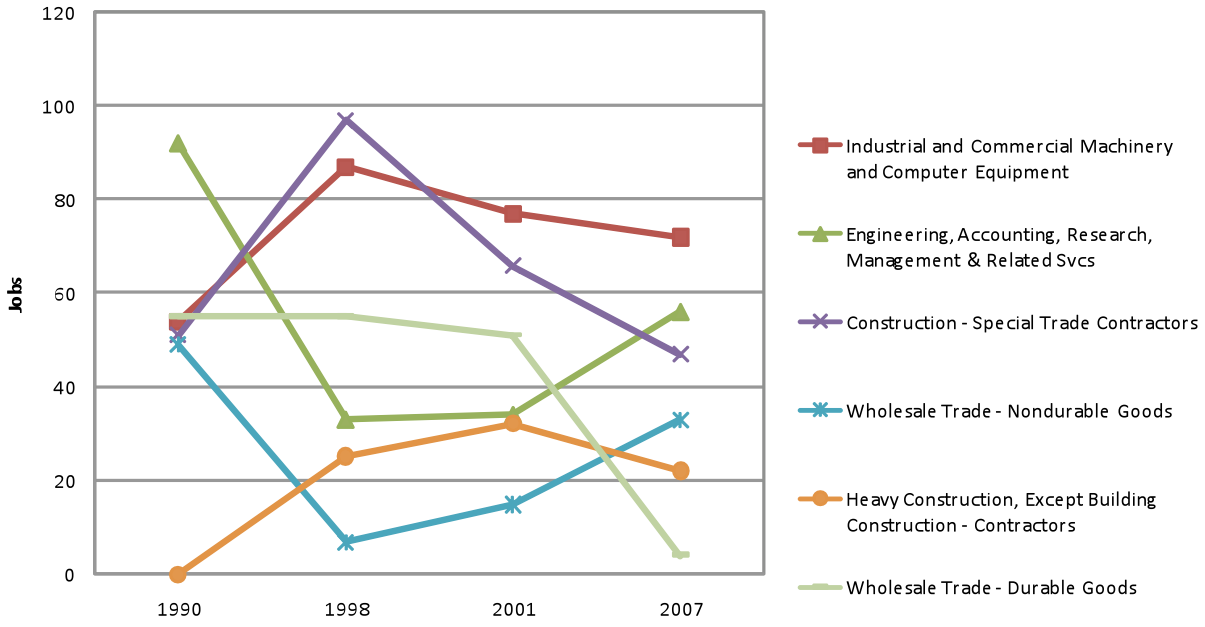
Central-West Subarea

Figure 8.27: Employment and Establishments by Industry Group in Central-West Subarea, 2007



Source: NETS, Center for Community Innovation 2009, Strategic Economics 2009

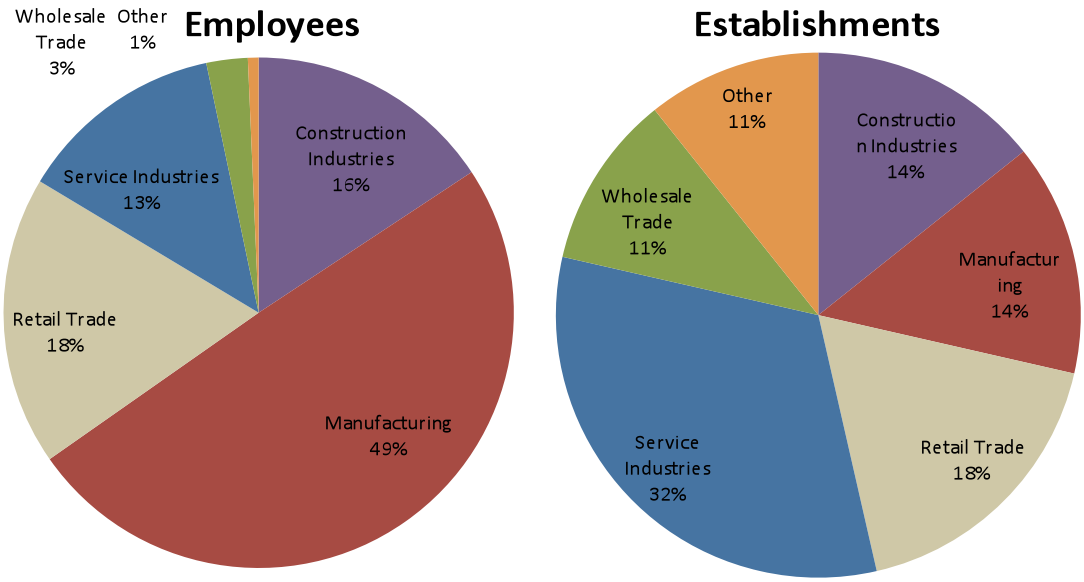
Figure 8.28: Employment by Key Industries in Central-West Subarea, 1990-2007



Source: NETS, Center for Community Innovation 2009, Strategic Economics 2009

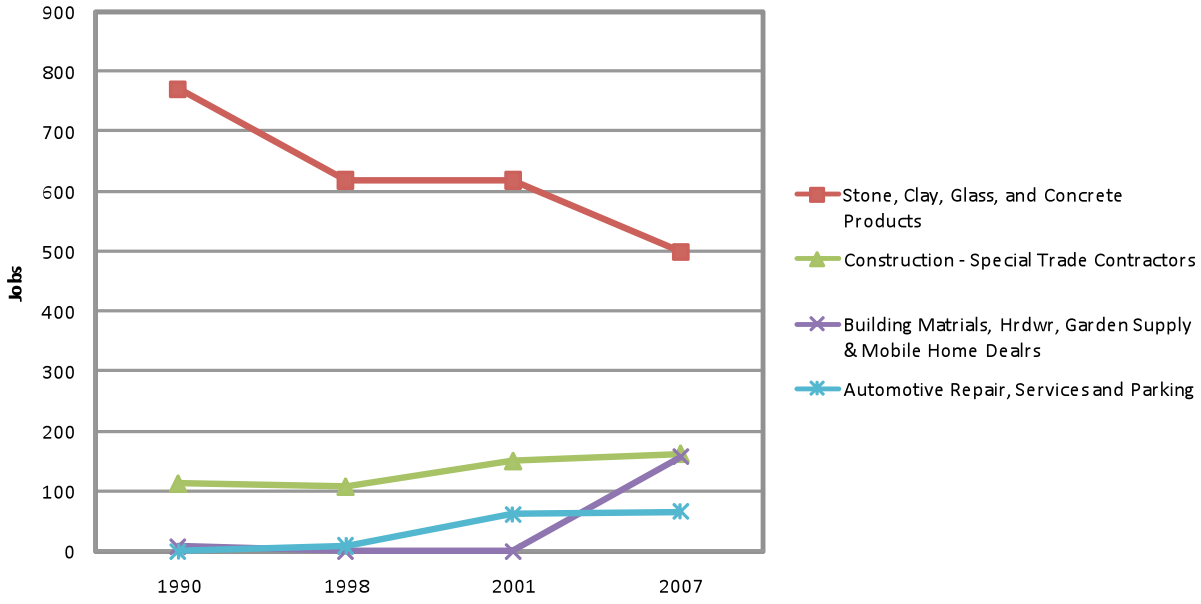
Central-East Subarea

Figure 8.29: Employment and Establishments by Industry Group in Central-East Subarea, 2007



Source: NETS, Center for Community Innovation 2009, Strategic Economics 2009

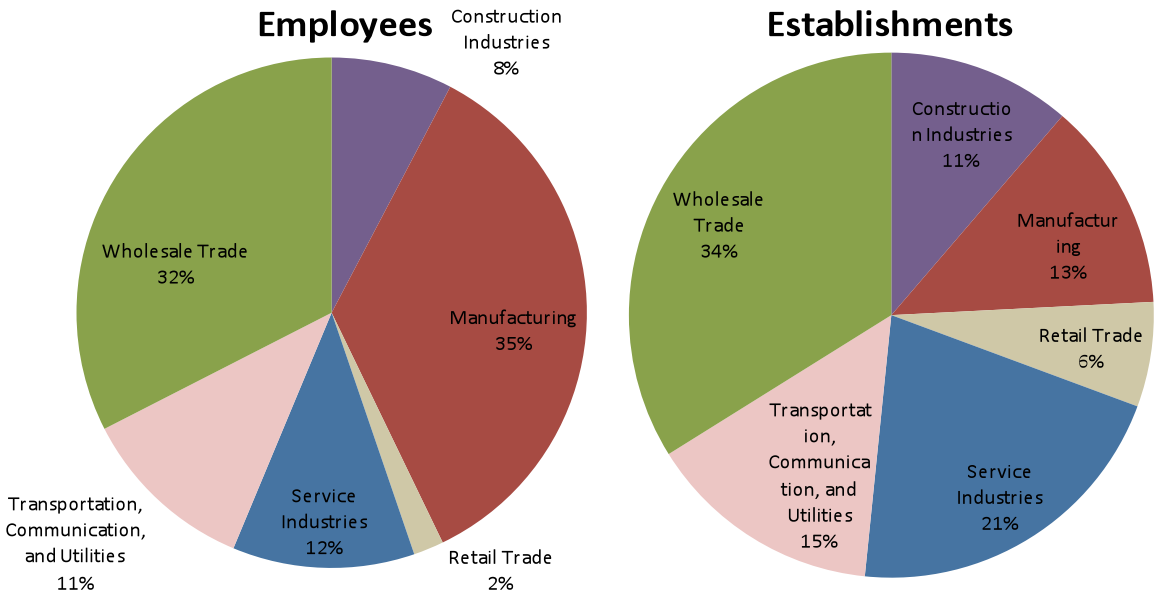
Figure 8.30: Employment by Key Industries in Central-East Subarea, 1990-2007



Source: NETS, Center for Community Innovation 2009, Strategic Economics 2009

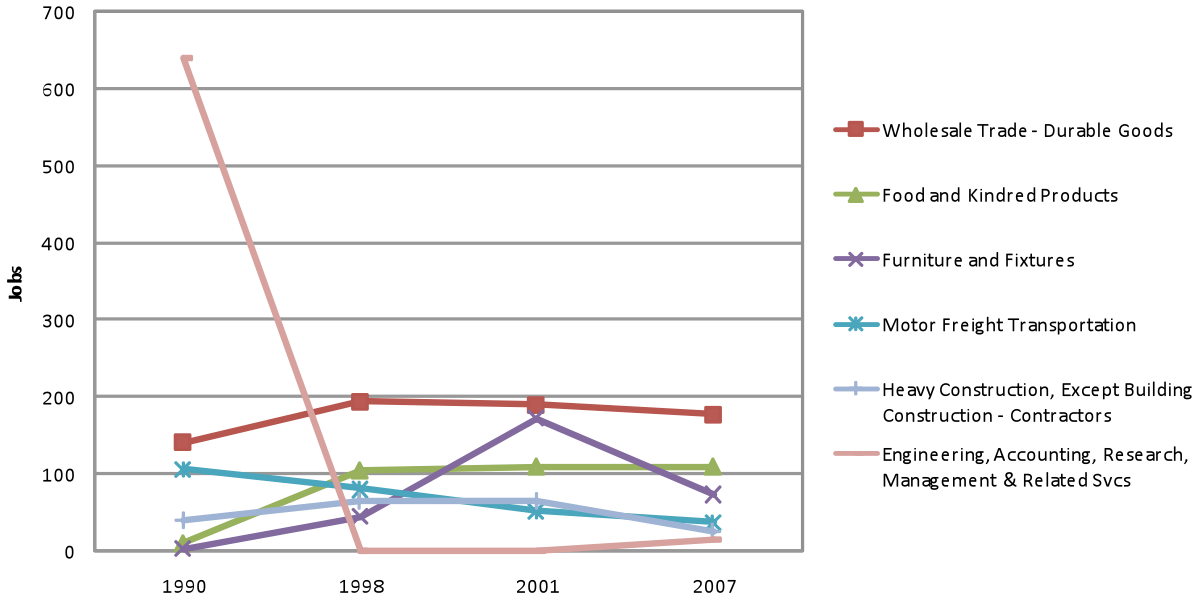
East Subarea

Figure 8.31: Employment and Establishments by Industry Group in East Subarea, 2007



Source: NETS, Center for Community Innovation 2009, Strategic Economics 2009

Figure 8.32: Employment by Key Industries in East Subarea, 1990-2007

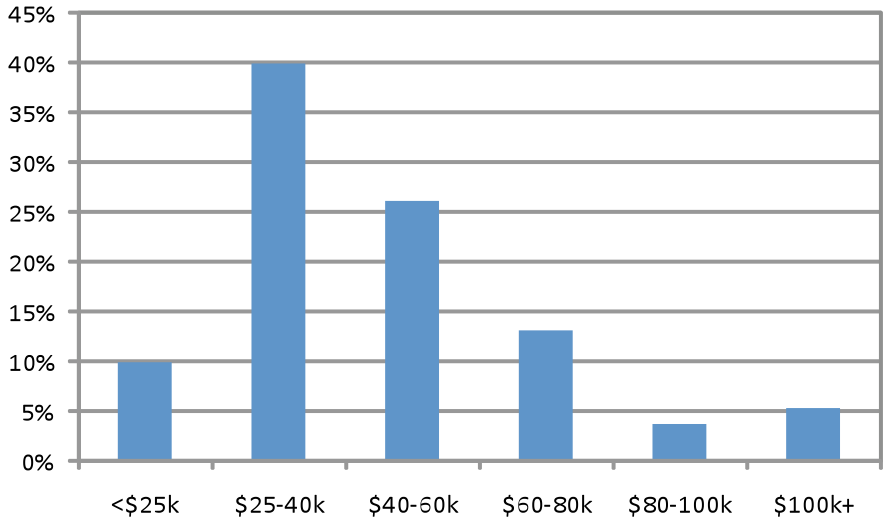


Source: NETS, Center for Community Innovation 2009, Strategic Economics 2009

Job Quality Analysis

In general, jobs in the Planning Area offer low to moderate wages, with 66 percent of these occupations paying between $25,000 and $60,000 a year (Figure 8.33). This reflects the low level of educational attainment required for the majority of jobs in the area.

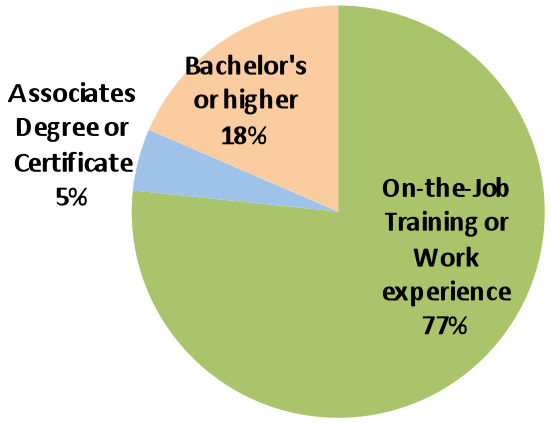
Figure 8.33: Share of Planning Area Employment by Wage Category, 2007



Source: NETS, Center for Community Innovation 2009, Strategic Economics 2009

The vast majority of jobs (77 percent) in the planning area require On-the-job training or work experience rather than a college degree, (Figure 8.34). This, coupled with income data, supports the characterization of most of the employment in the area as low-to-medium skilled and blue-collar in nature.

Figure 8.34: Share of Planning Area Employment by Level of Training Required, 2007



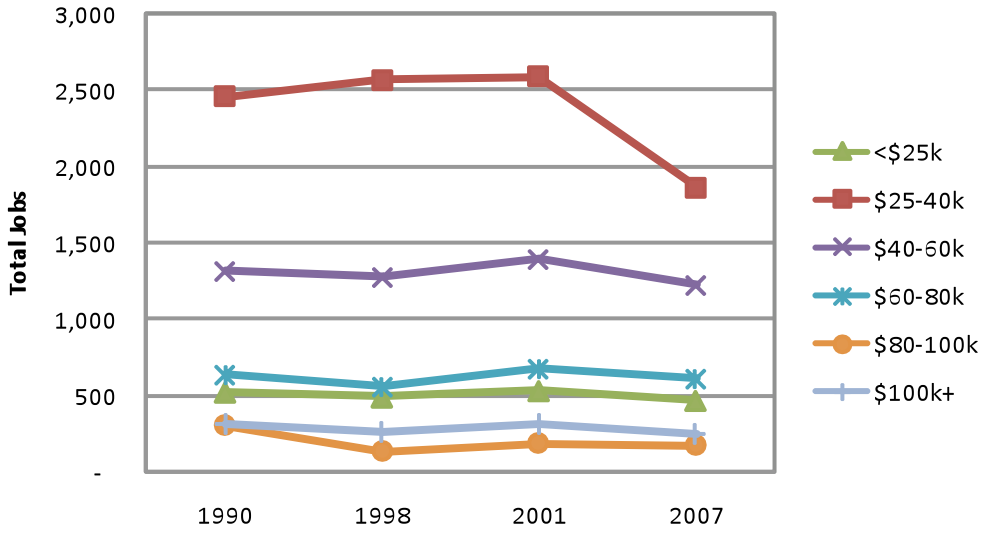
Source: NETS, Center for Community Innovation 2009, Strategic Economics 2009

Wages offered by, and education required of, jobs in the Planning Area was fairly stable from 1990-2001, (Figures 8.39 and 8.40).

However, from 2001-2007, the number of jobs that pay between $25,000 and $60,000 fell by 890, while the number of all other jobs fell by 206.

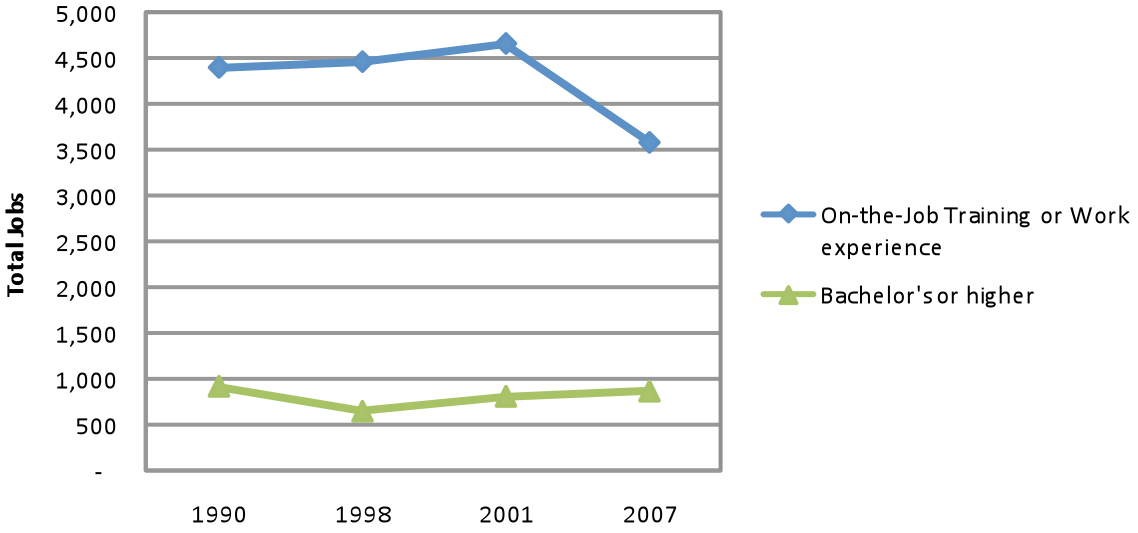
- Even more dramatic, the number of jobs that do not require an education beyond high school fell by 1,076 as the number of those that require a Bachelor's or higher rose by 55. These trends match the shrinking employment base of manufacturing establishments in the Planning Area.

Figure 8.39: Wages in Planning Area, 1990-2007



Source: NETS, Center for Community Innovation 2009, Strategic Economics 2009

Figure 8.40: Employment by Education Required, 1990-2007



Source: NETS, Center for Community Innovation 2009, Strategic Economics 2009

These general characterizations and trends are corroborated by the following table, which shows the largest occupations in the Planning Area, (Table 8.31). In 2007, only one occupation out of the top fifteen required a formal degree. However, that occupation, 'General and Operations Managers," had more than double the median hourly wage of the next highest paying job on this list. Blue-collar occupations still represent the majority of employment in the Planning Area, though these occupations have been declining rapidly since 2001.

Table 8.31: Largest Occupations in the Planning Area, 2007

	Employment, 2007		Median Hourly Wage, 2008	BLS Training Level
	#	%		
General and Operations Managers	98	2%	$53.61	Work Experience, Plus a Bachelor's or Higher
Sales Rep, Wholesale and Manuf, Except Technical and Scientific Products	102	2%	$26.59	Moderate-Term On-the-Job Training
Executive Secretaries and Administrative Assistants	67	1%	$21.98	Moderate-Term On-the-Job Training
Construction Laborers	83	2%	$20.94	Moderate-Term On-the-Job Training
Truck Drivers, Heavy and Tractor-Trailer	75	2%	$19.94	Moderate-Term On-the-Job Training
Bookkeeping, Accounting, and Auditing Clerks	74	2%	$18.86	Moderate-Term On-the-Job Training
Office Clerks, General	104	2%	$15.32	Short-Term On-the-Job Training
Packaging and Filling Machine Operators and Tenders	57	1%	$14.11	Short-Term On-the-Job Training
Bakers	61	1%	$13.18	Long-Term On-the-Job Training
Team Assemblers	73	2%	$12.28	Moderate-Term On-the-Job Training
Personal and Home Care Aides	95	2%	$11.73	Short-Term On-the-Job Training
Laborers and Freight, Stock, and Material Movers, Hand	118	3%	$11.70	Short-Term On-the-Job Training
Security Guards	266	6%	$11.41	Short-Term On-the-Job Training
Retail Salespersons	133	3%	$10.63	Short-Term On-the-Job Training
Packers and Packagers, Hand	63	1%	$8.99	Short-Term On-the-Job Training

Source: NETS, Center for Community Innovation 2009, Strategic Economics 2009

Market Assessment

The market assessment will be provided by Strategic Economics in mid May, per discussion with the City of Oakland.

IX. Sustainability

The City of Oakland has adopted a number of policies and accords aimed at improving its sustainability performance. The City has developed a Sustainable Community Development Initiative, adopted ambitious energy targets, and is a signatory of the United Nations Urban Environmental Accords. These stated goals, targets and goals form the policy framework that will guide the development of the Central Estuary Plan (CEP).

This section of the Existing Conditions report outlines many of the existing sustainability policies that will impact the CEP. This preliminary policy review will be further developed and expanded as the CEP alternatives take shape. In addition to further developing the sustainability policy framework, the sustainability strategies will include:

- Outcome from meetings with utility providers such as PG&E and EBMUD, and service providers including Waste Management Inc.
- Site-specific opportunities to further the sustainability performance of the Central Estuary.
- An evaluation of climate conditions, to assess the potential of the site for renewable energy generation, and passive building ventilation, heating, and cooling.
- Preliminary demand calculations for utilities.
- Overview of best practices in the areas of clean energy, water quality, sustainable waste management, climate change, and green-collar employment.

The focus areas for this section are Energy, Water, Waste, Climate Change, Habitat Conservation, and Green Economy.

Energy

As a signatory to the Urban Environmental Accords, the City of Oakland committed to obtaining at least 10% of the City's peak electric load from renewable sources. The City also committed to reducing its peak electric load by 10% through energy efficiency, shifting the timing of demands and other conservation measures.

Some of the current programs that will help the city meet these goals are:

Community Choice Aggregation

AB 117 Community Choice Aggregation (CCA) was passed in 2002. This legislation permits local jurisdictions to aggregate the electric loads of residents, businesses, and municipal facilities to facilitate the purchase and sale of renewable electricity. In this way, a CCA can encourage the development of new facilities to generate alternative and renewable energy.

Renewable Energy Targets

Currently, the California Renewable Portfolio Standard requires that all electricity generators procure at least 20% from renewable energy sources by 2017. On the Oakland Sustainability Program, the City committed to exceeding these State requirements by setting up the following targets:

- 50% of the City's entire electricity use from renewable sources by 2017
- 100% of the City's entire electricity use from renewable sources by 2030

Electrical and Energy Efficiency Program

This program of the Public Works Agency monitors, manages, and maintains electrical and alternative energy apparatus and programs throughout the city. This program is responsible for maintaining street lighting, traffic signals, and administering energy efficiency programs, and electrical-related capital improvements. The Public Works Agency aims to collaborate with other City agencies to encourage the acquisition of energy efficient equipment, retrofit public facilities, and expand energy efficient practices through education and technical support.

Savings by Design Lead Incentive Pilot Program

The Savings by Design Program is the result of a collaboration between Pacific Gas and Electric Company (PG&E), the Mayor's Office, and the Planning Department in the Community and Economic Development Agency. Through this program, projects owners that have been referred by Oakland's Planning Department receive design analysis and information to foster efficiency in their designs. As part of this program PG&E also offers cash incentives to both the City and facility owners for commitments to incorporate efficiency measures identified through the program.

California Local Energy Efficiency Program

As one of the six pilot cities to participate in the California Local Energy Efficiency Program (CA-LEEP), the City of Oakland has received technical and financial assistance from the State to develop the energy efficiency component of the city's Sustainability Plan.

Pacific Gas and Electric Company

Pacific Gas and Electric Company (PG&E) runs a series of programs aimed at improving user's energy efficiency. These programs include rebates, and incentives, energy analyses, demand response programs, and others. One of the initiatives that could benefit the Central Estuary is the Local Government Energy Watch Partnership which involves offering technical assistance to jurisdictions that are interested in improving their energy efficiency. Some of the services that are offered through the partnership include:

- Direct installation of selected residential energy efficiency measures (such as lighting) for a targeted area
- Direct installation of selected energy efficiency measures for small businesses (such as lighting and light emitting diode (LED) "open" signs) for a targeted area or business type
- Municipal building energy analysis and retrofits
- Design assistance for new municipal buildings
- Locally based energy efficiency seminars
- Local building codes and standards support
- Specialized marketing and outreach to each local community
- Locally based vendor and subcontractor training and education

Oakland Green Building Resolution

Resolution 79871, which was approved in 2006, encourages private residential and commercial developers in the City of Oakland to use green building and sustainable landscape design, construction, and operation whenever feasible. This resolution provides as reference the Alameda County Residential Green Building Guidelines and the U.S. Green Building Council's LEED rating system for new commercial construction, as well as bay-friendly landscape designs. This resolution does not require the implementation of these guidelines.

Water

Alameda Countywide Clean Water Program

The Stormwater Quality Management Plan 2001- 2008 from the Alameda Countywide Clean Water Program includes design practices aimed at controlling and reducing pollution in storm drains and creeks. This program requires new developments and redevelopment projects to implement measures to reduce the discharge of pollutants in stormwater, and to prohibit non-stormwater discharges into municipal storm drain systems and water courses.

These regulations require that projects that create or replace 10,000 square feet or more of impervious surface utilize stormwater pollution management measures during and after construction. These measures include:

- Stormwater treatment measures aimed at removing pollutants from stormwater runoff
- Stormwater design measures, which reduce the amount of impervious surface
- Source control measures, which reduce the potential of contamination at the source of pollution.

Finally, the Storm Water Quality Management Plan also requires new projects to use of best management practices (BMPs) that enable 85% of the volume of runoff typical of an average wet season to be treated.

Watershed Improvement Program

The Watershed Improvement Program is designed to protect the environmental quality of the creeks that run in the Oakland's Watershed. One of the components of the program is the 'Creek Protection, Stormwater and Discharge Control Ordinance", which describes the permitting guidelines for construction projects taking place on a creekside property.

Waste

StopWaste

StopWaste is a joint effort of the Alameda County Waste Management Authority and the Alameda County Source Reduction and Recycling Board. These agencies are responsible for the long term planning for waste management facilities, coordination among providers, and programs to reduce solid waste and promote recycling. StopWaste provides grants and loans to implement waste prevention, reuse, and recycling projects.

As a resource to local governments StopWaste.org offers sample ordinance on various sustainability areas.

- Model Civic Building Ordinance
- Model Green Building Resolution
- Environmentally Preferable Purchasing Model Policy

Zero Waste Plan

The City of Oakland adopted a 'Zero Waste Strategic Plan' that aims at becoming Zero Waste by 2020.

The five main strategies outlined in the Zero Waste Strategic Plan are:

- Expand and transform local and regional recycling and composting
- Develop and adopt new rules and incentives to reduce waste disposal
- Preserve land for sustainable development and green industry infrastructure
- Advocate for manufacturer responsibility for product waste and ban problem materials
- Educate, promote, and advocate a Zero Waste Sustainability Agenda.

Through voluntary participation in voluntary programs, the City has successfully achieved the 50% waste reduction target required by the California Integrated Waste Management Act (AB 939).

Construction and Demolition Debris Recycling Ordinance

This ordinance requires construction and demolition projects in the City of Oakland to submit a waste reduction and recycling plan that indicates how the project will attain at least 50% diversion of the total amount of debris. Following with the stipulations of this ordinance, the Central Estuary Plan could explore options for centralizing the collection and recycling of construction debris on site.

Climate Change

Oakland Energy and Climate Action Plan

The City of Oakland is currently in the process of developing an Energy and Climate Action Plan (ECAP). This plan, which is scheduled to be presented to the City Council in Fall 2009, will be the first comprehensive effort to develop a city-wide strategy to reduce energy consumption and minimize greenhouse gas emissions (GHG). ECAP focuses on targeting the three main sources of GHG in Oakland: Building energy use, transportation, and waste. The guidelines for energy efficiency and GHG minimization from ECAP will have a direct impact on the redevelopment of the Central Estuary, so it will become necessary to align the sustainability objectives and targets of the specific plan with those reflected in ECAP.

California Global Warming Solutions Act

The California Global Warming Solutions Act (AB 32), which was signed in 2006, establishes a program of regulatory mechanisms with the purpose of achieving reductions on emissions of greenhouse gases (GHG). The bill, which requires that by 2020 the state's emissions be reduced to 1990 levels, aims at

bringing California into near compliance with the provisions of the Kyoto Protocol. The California Air Resources Board (CARB) is in the process of developing guidelines for reporting GHG emissions that may result from project implementation. It is likely that the guidelines will be public by the time the environmental impact report for the Central Estuary Plan is developed.

SB 375

SB 375 requires metropolitan planning organizations to include sustainable community strategies for the purpose of reducing GHG emissions. The bill also intends to align planning for transportation and housing and creates incentives for the implementations of the strategies. Strategies such as mixed use zoning, higher residential densities, and transit oriented development, which are all being evaluated for the Central Estuary Plan (CEP), are consistent with the intent of SB 375. The project might be able to benefit from the incentives that have been proposed for these strategies.

Habitat Conservation

Estuary Policy Plan (EPP) – Open Space and Habitat Preservation

The CEP builds upon policies set forth in the Estuary Policy Plan (EPP) (City of Oakland, 1999). A main objective of the EPP is to guide the transformation of the Oakland waterfront into a regional amenity. In particular, the EPP calls for a "system of open spaces and shoreline access that provides recreational use opportunities, environmental enhancement, interpretive experiences, visual amenities, and significant gathering places". The EPP also recommends that the plans for the various districts in the area incorporate "a series of individual parks, open spaces and shoreline access points, connected by a continuous parkway with promenades, bikeways and shoreline trails". In addition to serving as a recreational amenity, the proposed parks and open spaces offer an opportunity for restoring the habitat for local threatened and endangered species.

Open Space, Conservation and Recreation Element (OSCAR)

The Open Space, Conservation, and Recreation Element of the City of Oakland's General Plan addresses the management of open land, natural resources, and parks in Oakland. The Conservation Chapter provides guidelines for the management of waster and biological resources.

Green Economy

Green-Collar Jobs

Green collar jobs have been defined as 'well paid, career track jobs that contribute to preserving or enhancing environmental quality . These jobs can range from low-skill entry-level positions in, to specialized technical positions. Green-collar jobs can be found in a wide range of industries such as construction, manufacture, provision of utilities, maintenance, and agriculture among others.

The national movement to promote green-collar jobs originated in Oakland, and the City is home to a number of pioneering organizations such as Green for All, and the Ella Baker Center, which runs the Oakland Green Jobs Corps. With the redevelopment of the Central Estuary, the City of Oakland has an opportunity to partner with these and other groups and advance the social and environmental goals of this sector.

Estuary Policy Plan – Research and Development Uses

The EPP identifies research and development and other high-technology uses as strategically beneficial for the site. The EPP specifies that the locations in the planning area that offer the strongest potential for this type of development include "those offering an attractive, high-amenity environment; good access and proximity to services; a quiet and somewhat contained site area; and a certain critical mass or minimum scale of development". In addition, preserving the waterfront setting and providing access to open space is considered to enhance the marketability of these research and development uses.

The area located South of Tidewater Avenue, on the eastern portion of the CEP is identified in the EPP as having the potential for research and development uses. Specifically, the intent of the land use classification 'Planned Water Front District' (East of High Street and South of Tidewater), suggests allowing for the transition of the existing industrial uses to light industrial, research and development, and office uses in a waterfront business park setting.

While the language in the EPP does not specify that the research and development uses be restricted to green industries, this proposed land use is compatible with needs in this sector.

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X. Public Health

Introduction

The Public Health Element of the Existing Conditions Report reviews a subset of community-level indicators from the Healthy Development Measurement Tool (HDMT; www.TheHDMT.org) that are known to influence individual and population-level health. The HDMT is a comprehensive evaluation metric to consider health needs in urban development plans and projects. The HDMT explicitly connects public health to urban development planning in efforts to achieve a higher quality social and physical environment that advances health.

Included in this analysis are indicators for six overarching domains: environmental stewardship, sustainable and safe transportation, access to goods and services, adequate and healthy housing, health economy and social cohesion. Many of the indicators reported in this section draw on data reported in other sections of the Existing Conditions Report. They are also discussed here to provide a composite picture of the health-related social and environmental conditions within the Planning Area. We also briefly review limited health data to provide information on health burdens in Oakland.

Summary of Findings

The Planning Area currently includes numerous and diverse industrial and commercial uses that provide good-quality employment for local and regional residents. Residential uses in the Area are in adequate proximity to neighborhood and public infrastructure supportive of community health, including higher quality parks/open space and local schools. As a whole however, to promote optimal health for residents and workers, the Planning Area requires significant improvements in the areas of environmental quality and transportation. The lack of safe pedestrian/bicycle networks and the presence of industrial and mobile sources of air pollution and noise reflect the most significant public health hazards in the area. Any residential growth in the Planning Area should be accompanied by high-quality community design strategies and environmental technologies that can mitigate these health hazards. There is also an overall lack of access to goods and services for the East and West subareas in particular.

Significant findings by domain are as follows:

Environmental Stewardship

- **Assets:** *Shoreline access and the amount of open space in the Planning Area is very high and of good quality.* Open space access can confer benefits to health by facilitating physical activity, restoring cognitive and mental health, and by encouraging social interaction.
- **Challenges:** *Current and future Planning Area residents and workers face environmental burdens particularly from traffic-related air pollution and noise stemming from the I-880 freeways, arterial streets, and freight traffic, as well as from proximity to stationary sources of air pollution and noise stemming from intense industrial uses in the Area.* Specifically, 81% of households in the Planning Area live within 1,000 feet or less of busy roadways; virtually all residents live within close proximity to some stationary source of air pollution; and, 100% of households in the Central-West and East subareas, and 94% of households in the Central-East live within 500 feet of a designated truck route. Air pollutants from

proximity to mobile sources impact lung growth in children, asthma hospitalizations, and premature death. Traffic noise can impact heart disease and hypertension. Feasible environmental mitigation technologies exist to assess and mitigate each of these concerns. These technologies should be used, to the extent feasible, to accommodate new residential growth in the Planning Area. Additionally, environmental contamination of soil and water throughout the Planning Area should be evaluated and mitigated.

Sustainable and Safe Transportation

- **Assets:** The Planning Area contains a network of streets to accommodate vehicular traffic, including freight traffic to support industrial businesses. The majority of households in the Central-East and Central-West subareas live in close proximity to a local transit stop, and Central-East residents are in close proximity to BART.
- **Challenges:** From the standpoint of health, the transit, pedestrian and bicycle networks in the Planning Area are currently inadequate. There is a general lack of safe pedestrian and bicycle routes between the Planning Area and surrounding Oakland neighborhoods where schools, community facilities, and transit stops are located. Only three local transit routes and one regional route directly serve the Planning area. The entire Planning Area only has five bus stops, and the bus stop amenities are lacking. Next to no households living in the East and West subareas live in close proximity to either local or regional transit. There is poor pedestrian connectivity to Fruitvale BART and International Blvd (a major transit corridor). The lack of adequate connections and long exposed walking distances from the Planning Area to the rest of Oakland reduces the area's overall walkability. Factors contributing to the poor pedestrian environment include missing sidewalks; large block sizes, which can increase walking distances; wide, difficult to cross roads designed to accommodate heavy vehicles and maximize traffic flow; few marked crosswalks and several prohibited pedestrian crossings at busy intersections; a lack of pedestrian destinations, particularly outside of employment hours; insufficient street trees and other amenities; and movement barriers created by I-880, Union Pacific / Capital Corridor railroad, BART and the Oakland Estuary. Freeway, on- and off-ramps and truck routes present particular safety hazards for pedestrians and bicyclists and may deter participation in physical activity among residents and workers. Finally, the existing bicycle environment is also poor within the Planning Area. The areas industrial character, traffic congestion, and the lack of adequate east-west connections all contribute to the overall poor pedestrian/bicycle environment within the study area. There are also inadequate crossings for bicycles on the three bridges spanning the Oakland Estuary, and major north-south arterial streets such as International Boulevard and E 12th Street lack designated bike lanes.

Access to Goods and Services

This aspect of the assessment looked at schools, child care, parks and recreational facilities, libraries, retail food, banks/credit unions and fire/police stations.

- **Assets:** Overall, the Planning Area has very good access to parks given its proximity to the shoreline and two large parks in the West and East subareas. The Central-West and Central-East subareas, where 88% of the Planning Area population resides, have very good-to-excellent proximity-based access to schools, retail food, libraries, banks/credit unions and police/fire stations. Both the West and East subareas have excellent police and good library access. With respect to child care, there are a number of facilities in the area but the capacity of these facilities to accommodate new children is unknown.

- **Challenges:** There are no recreational facilities in the Planning Area or within ¼ mile. The West and East subareas lack good access to schools and grocery stores. While far fewer residents live in these areas (especially the East subarea) currently, it is important to recognize that capacity to support future growth in these areas is more compromised. The closest schools, libraries and common retail services exist on the other side of the I-880 and in Alameda. Access to destinations via walking and bicycling may be limited by both street infrastructure and safety hazards as described above. Research illustrates that being within walking distance of neighborhood goods and services promotes physical activity, reduces vehicle trips and miles traveled, and increases neighborhood cohesion and safety. Assessment of current transportation behaviors and identification and mitigation of barriers to walking and bicycling to common destinations would support access to goods and services for area residents.

Adequate and Healthy Housing

- **Assets:** Planning Area households are generally not more cost-burdened in comparison to Oakland households, though this varies to some degree by subarea.
- **Challenges:** Given the current environmental quality, varied levels of access to goods and services and transportation network, the suitability of expanding residential uses in the Planning Area must be further assessed based on the improvements expected to accompany development. Planning Area households appear to be living in greater overcrowded conditions when compared to Oakland, with West and Central-East households the most overcrowded. There is also variation between subareas in terms of income segregation and the concentration of low-income households in the Planning Area, particularly in the Central-East subarea.

Healthy Economy

In this section, we only assess two indicators: income diversity and income self-sufficiency.

- **Assets:** *It is important to note that the Central Estuary industries provide a significant number of jobs for Oakland and other residents.* Given the importance of employment and income to health, the loss of these jobs would pose significant threats to individual health. A number of indicators could be considered to assess the safety of these jobs, including occupational injury rates. However, that assessment is not included in this report due to resource limitations. In general, the Planning Area has varying degrees of income diversity among residents across subareas.
- **Challenges:** The West and Central-West subareas appear to have a wider range of income diversity among residents, while *the Central-East subarea has the least amount of income diversity and is a low-income area.* Generally, the greater the degree of income diversity, the better it is for health. Concentrated poverty and income-related residential segregation are correlated with many poor health outcomes. Developing mixed-income housing provides one approach to alleviating the adverse health and social effects of income-related segregation. *With respect to the wages provided by jobs in the Planning Area, it is likely that the average wages provided by industries are not sufficient to support household self-sufficiency.* Income self sufficiency supports health by ensuring resources for food, shelter, clothing, transportation, childcare and other basic needs. For example, a review of average wages for Planning Area jobs against the "family economic self-sufficiency standard" developed by the Insight Center for Community Economic Development illustrates that jobs in the Planning Area do not consistently provide wages to support families in Oakland. Most jobs provided

in the Planning Area provide wages to support a single adult; however, wages are not necessarily high enough to support adults with children. If commercial and industrial uses are expected to increase in the Planning Area, assessing prevailing wages for those industries is one way to assess whether future growth will be supportive of health.

Social Cohesion – Awaiting data from ACDPH on these indicators

- **Assets**:
- **Challenges**:

Methodological Note: The household and population data provided by Strategic Economics provides more information than available in the County Assessor's parcel data; however, the household and population data are summarized by project sub-area. Because parcel-level household and population data are unavailable, the percent of households and population covered by various HDMT facilities has been calculated as a percentage of each sub-area that falls within 1/4, 1/2, and 1-mile distances from the various facilities studied.

Health Outcomes

Health status and health outcome data are currently unavailable at the Planning Area level. For health outcomes, including asthma, diabetes and obesity, the Alameda County Public Health Department is currently working to geocode all hospitalization data for Alameda County to be able to assess health at much smaller geographic units. It is expected that these data will become available by the late summer of 2009. Nonetheless, it is important to have an understanding of the "health" context in which this Existing Conditions analysis was undertaken. Oakland faces significant burdens with respect to heath outcomes, as well as large place-based disparities in health. Findings for life expectancy, mortality rates, self-reported health status, health insurance and various chronic disease indicators are described below.

For the census tracts[9] that contain the Planning Area, the life expectancy rate of residents was 77.1 years, while for Oakland it was slightly higher at 77.7 years. The age-adjusted death rate was 756 deaths per 100,000 population per year; for Oakland, the rate was slightly higher with 784 deaths per 100,000 population per year. With respect to health insurance and health status among Oakland residents, in 2003, 18% of residents age 18 and over lacked health insurance. This percentage was higher than the for Alameda county (14%). Furthermore, a higher percentage of persons in Oakland (5%) reported poor health status as compared to Alameda County (4%).

Ambulatory care sensitive (ACS) conditions (such as asthma, diabetes, and coronary heart disease) are conditions for which hospitalization can usually be prevented when conditions have been effectively managed in outpatient settings. High rates of ACS conditions indicate poor access to or use of outpatient health care. More and more, inter-disciplinary research indicates that the "built environment" (e.g., land use, transportation systems and community design) is associated with health outcomes such as these ACS conditions – in particular asthma, diabetes and obesity.

Table 10.1 presents data from the California Office of Statewide Health Planning and Development (OSHPD) for the Planning Areas residential zip codes. These include zip codes 94601 and 94606; zip code 94606 mostly includes the West subarea, while zip code 94601 mostly includes the Central-West, Central-East and East subareas. Overall, these Oakland zip codes have high rates of hospitalization for asthma, coronary heart disease, diabetes and obesity (see Figures 10.1 and 10.2).

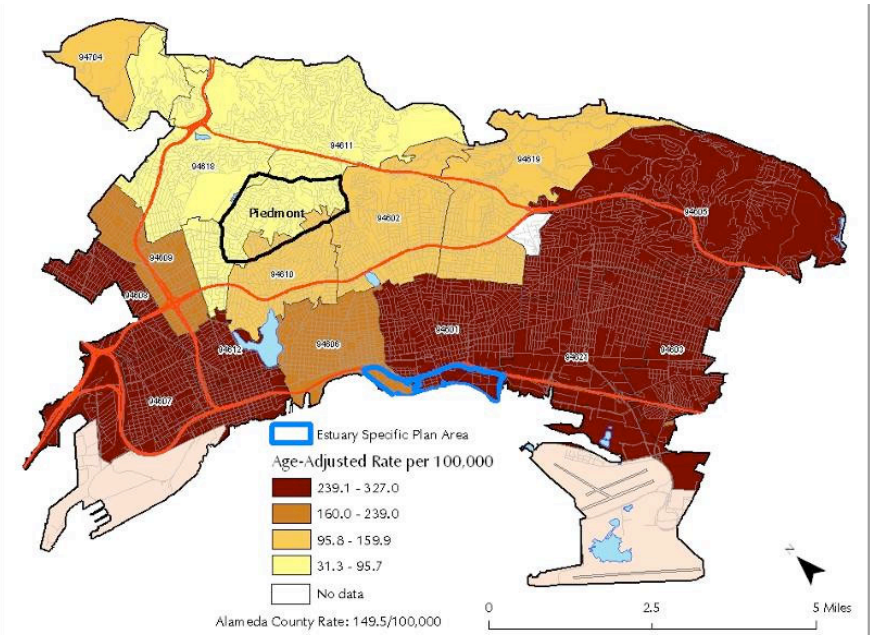
Table 10.1. Rate of Hospitalizations for Ambulatory Care Sensitive Conditions, 2005-2007, Age-Adjusted per 100,000

	Asthma	Coronary Heart Disease	Diabetes	Obesity
94601	251.9	366.3	1456.8	333.5
94606	179.0	315.7	937.9	182.5
Oakland	Pending	pending	pending	pending

Source: Office of Statewide Health Planning and Development, 2007 – 2007; Alameda County Public Health Department, 2009.

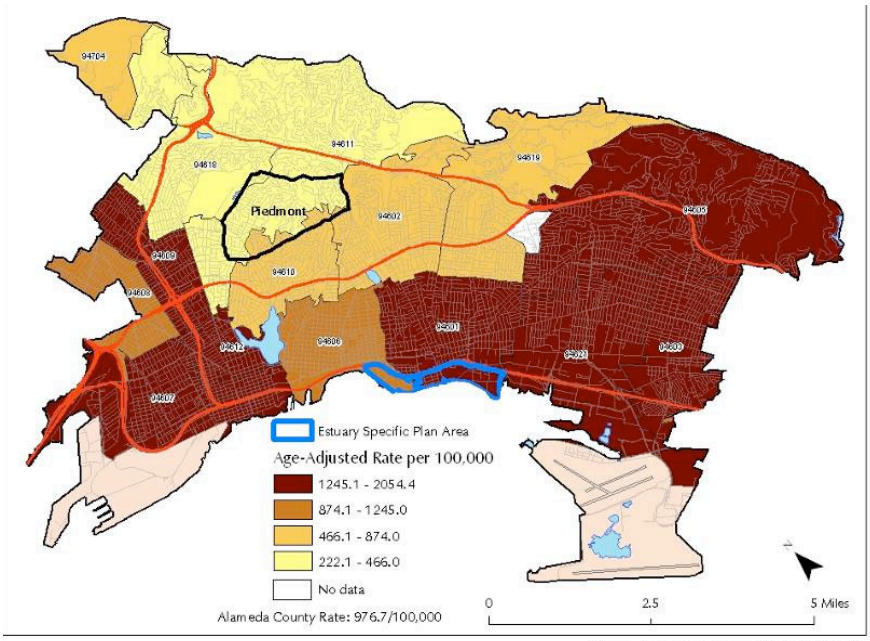
[9] Census tracts = 4060.00, 4061.00, 4073.00.

Figure 10.1: Oakland Asthma Hospitalization Rate



Source: CAPE, with data from OSHPD 2005-2007

Figure 10.2: Oakland Diabetes Hospitalization Rate



Source: CAPE, with data from OSHPD 2005-2007

Environmental Stewardship

The following indicators are reviewed to assess environmental stewardship within the Planning Area: 1) mobile sources of air pollution, 2) stationary sources of air pollution; 3) noise; 4) environmental contamination, and 5) shoreline access and open space. Some of these data are also described in the Summary of Environmental Issues and the Transportation section of the existing conditions analysis.

Mobile Sources of Air Pollution

Table 10.2 illustrates that the majority of households (81%) living in the Planning Area live within 1000 feet of roadways carrying 100,000-150,000 vehicles per day (Interstate 880). This varies by subarea with the West subarea least impacted by heavy traffic, and the Central-West and East the most heavily impacted. Fewer households are living in close proximity less heavily-trafficked streets, particularly smaller highways (50,000 – 100,000 vehicles per day) and local arterial streets (10,000 – 50,000 vehicles per day). Finally, 100% of households in the Central-West and East subareas, and 94% of households in the Central-East live within 500 feet of a designated truck route.

Table 10.2. Proportion households living in close proximity to a busy roadway

	1,000 feet of roadways carrying 100,000+ vehicles p/day	300 feet of roadways carrying 50,000 - 100,000 vehicles p/day	150 feet of roadways carrying 10,000 - 50,000 vehicles p/day
West	14%	0%	0%
Central-West	100%	0%	46%
Central-East	94%	0%	16%
East	100%	0%	33%
Planning Area	81%	0%	31%

Source: Arup, 2009.

The Planning Area contains known significant mobile sources of air pollution including freeways, freeway on- and off-ramps, main arterial streets, and truck routes. As a result, residents in the Planning Area likely face increased air pollution exposure and associated health hazards. Health effects from exposure to sources of pollution vary depending on the pollutant, distance from the sources, and how the emissions are released into the air and dispersed by the wind. Extensive research demonstrates that living in proximity to a busy roadway is linked to negative health outcomes. Adverse health outcomes associated with proximity include exacerbation of respiratory diseases, cardiovascular disease, sleep disruption and cognitive disturbance, and unintentional (traffic) injuries. Mediating these effects are motor vehicle emissions, including diesel engine emissions, road traffic noise, and pedestrian injury hazards. The research on proximity to roadways and health effects is particularly robust for the exacerbation of respiratory disease.

Epidemiologic studies have consistently found that proximity to high traffic density or flow results in reduced lung function and increased asthma hospitalizations, asthma symptoms, bronchitis symptoms, and medical visits.[10] Children appear to be most sensitive to adverse effects. California freeway studies show that exposure levels are strongest within 300 feet and that there is a 70% drop off in particulate

[10] Brauer M, Hoek G, Van Vliet P, et al. Air pollution from traffic and the development of respiratory infections and asthmatic and allergic symptoms in children. American Journal of Respiratory and Critical Care Medicine. 2002;166:1092-1098.

pollution levels after 500 feet.[11] Designated truck routes present a particular air pollution problem as trucks typically use diesel engines. Diesel particulate matter (PM) has been identified by California Air Resource Board (CARB) as a toxic air contaminant and represents 70% of the known potential cancer risk from air toxics in California.[12] Specific epidemiologic research findings include:

- Reduced lung function in children associated with traffic density, especially trucks, within 1,000 feet and the association was strongest within 300 feet.[13]
- Increased asthma hospitalizations associated with living within 650 feet of heavy traffic and heavy truck volume.[14]

Stationary sources of air pollution

Virtually all residents within the Planning Area live within close proximity to some stationary source of air pollution. Based on a review of the 2007 Bay Area Air Qualtiy Management District (BAAQMD) database, 29 stationary sources with toxic air contaminant (TAC) emissions within the project area region exceeded BAAQMD regulated emissions levels. Additionally, 33 stationary sources have criteria pollutant (i.e. carbon monoxide, nitrous oxide, sulfur dioxide, and particulate matter) emissions that exceed the BAAQMD standard thresholds. For more detailed information, see the Summary of Key Environmental Issues.

In the CARB "Air Quality and Land Use Handbook: A Community Health Perspective", a significant amount of evidence is cited describing the relationship between health and stationary sources of air pollution such as distribution centers, rail yards, ports, refineries, chrome platers, dry cleaners using perchloroethylene, and gasoline dispensing facilities. (http://www.arb.ca.gov/ch/landuse.htm)

Noise

Virtually all residential and other sensitive uses within the Planning Area exist in a high noise environment (65 Ldn to 75 Ldn in the Project Area, with the noise levels increasing with closer proximity to I-880). Sensitive receptors (populations who are particularly susceptible to an environmental hazard) within the project area include existing residential areas, including Jingletown, residences along I-880 south of Fruitvale Avenue, and residential lofts near the Beacon Day School. For more detailed information, see the Summary of Key Environmental Issues.

The health impacts of environmental noise depend on the intensity of noise, on the duration of exposure, and the context of exposure. The Environmental Protection Agency identifies a 24-hour exposure level of 70 decibels as the level of environmental noise which will prevent any measurable hearing loss over a lifetime. Long term exposure to moderate levels of environmental noise can adversely affect sleep,

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[11] California Air Resources Board. Air Quality and Land Use Handbook: A Community Health Perspective. 2005. Accessed at: http://www.arb.ca.gov/ch/landuse.htm

[12] California Air Resources Board. Air Quality and Land Use Handbook: A Community Health Perspective. 2005. Accessed at: http://www.arb.ca.gov/ch/landuse.htm

[13] B, Janssen NA, de Hartog J, Harssema H, Knape M, van Vliet P. Air pollution from truck traffic and lung function in children living near motorways. Epidemiology. 1997;8:298-303.

[14] Lin S, Munsie JP, Hwang SA, Fitzgerald E, Cayo MR. Childhood asthma hospitalization and residential exposure to state route traffic. Environ Res. 2002;88:73-81.

school and work performance, and cardiovascular disease.[15] Noise affects sleep both by waking people up and reducing the quality of sleep. According to the World Health Organization, reductions of noise by 6-14 dBA result in subjective and objective improvements in sleep. Chronic road noise can affect cognitive performance of children including difficulty keeping attention, concentrating and remembering, poorer reading ability, and poorer discrimination between sounds.[16] The combination of noise and poor quality housing can have additive effects. In one study, a combination of these factors was associated with higher stress and stress hormone levels.[17]

Environmental Contamination

As per the Phase I Hazardous Materials Assessment (HMA), there are 24 identified properties of high to moderate concern with regards to hazardous materials. The particular area of concern is within the southern portion of the project area, where two properties of concern and a historical lumber yard operations are located. It is anticipated that this area has been contaminated with hazardous materials, such as motor-oil, volatile organic compounds, and other solvents. For more detailed information, see the Summary of Key Environmental Issues.

Living near or on contaminated land can pose health threats, especially for vulnerable populations, if there are opportunities for human exposure. Promoting productive use of previously contaminated sites can improve neighborhood quality of life by removing health hazards from historic contamination. Adequate removal of contamination can increase perceptions of safety and foster healthier productive uses, including parks and industry.

Shoreline Access and Public Open Space

In contrast to other parts of Oakland, shoreline access in the Planning Area is excellent, with 79% of the shoreline in the Planning Area being accessible by the public (Table 10.3). The West subarea has the greatest proportion of the shoreline accessible to the public (93%) while a lesser extent of the Central-West subarea shoreline is accessible to the public (56%).

Table 10.3. Proportion of the shoreline accessible to the public

West	Central-West	Central-East	East	Planning Area
93%	56%	82%	70%	79%

Source: Community Design + Architecture, 2009.

Because so few residents live in the Planning Area generally, and there are over 32 acres of open space in the area (the vast majority in the East and West subareas), the open space acreage per resident is quite high. For example, there are 109 acres of open space per 1,000 people in the West subarea and 3,062 acres per 1,000 people in the East subarea (note there are only 6 residents and 18 acres of open space in the East subarea). The bulk of residents live in the Central-East and Central-West subareas where there is

[15] Dora C, Phillips M, eds. Transport, environment and health. WHO Regional Publications, European Series, No. 89. 1999. http://www.euro.who.int/document/e72015.pdf

[16] Noise and Health: Making the Link. London Health Commission, 2003. http://www.londonshealth.gov.uk/pdf/noise_links.pdf

[17] Evans G, Marcynyszyn LA. Environmental Justice, Cumulative Environmental Risk, and Health among Low- and Middle-Income Children in Upstate New York. Am J Pub Health. 2004;94:1942-1944.

less open space, but the close proximity of these large Planning Area parks provides excellent resources to residents of adjacent subareas. For more detailed information, see the Land Use and Urban Form Element.

Exposure to greenery and open space has significant benefits to health. Living in proximity to green space is associated with reduced self-reported health symptoms, better self-rated health, and higher scores on general health questionnaires.[18] Trees and green space also improve the physical environment by removing air pollution from the air and mitigating the urban heat island effect produced by concrete and glass.[19] Finally, studies also show that the presence of trees and other vegetation improves adult recovery from mental fatigue, leading to a reduction in socially unacceptable behavior and crime, as well as fewer behavior problems among children.[20, 21]

[18] Vries S, de Verheij RA, Groenewegen PP, Spreeuwenberg P. Natural environments - healthy environments? An exploratory analysis of the relationship between green space and health. *Environment and Planning A.* 2003;35(10):1717-1731.

[19] Parks for People: Why America Needs more City Parks and Open Space. San Francisco: The Trust for Public Land, 2003.

[20] Kuo FE, Sullivan WC. Environment and crime in the inner city: does vegetation reduce crime? *Environment and Behavior.* 2001;33(3):343-367.

[21] Taylor AF, Kuo FE, Sullivan WC. Coping With ADD: The Surprising Connection to Green Play Settings. *Environment and Behavior.* 2001;33(1):54-77.

Sustainable and Safe Transportation

Vehicle Availability

Household vehicle availability and number of vehicles available per household are indicators of the expense invested in automobiles and indirect indicators of the use of automobiles for travel. As reported in the Resident Profile, a greater percentage of Planning Area households have access to at least one vehicle when compared to Oakland as a whole (88% and 80%, respectively). The rates vary significantly by subarea however; for example, virtually all Central-West households have at least one vehicle available (97%) while rates of ownership are actually below the city average in the West subarea (70%).

Mode Split

As reported in the Resident Profile, the mode split for residents of the Planning Area was very similar to the rest of Oakland. In total, 54% of Planning Area residents drove to work alone as compared to 55% in Oakland. The rates were much higher among West and Central-East subarea residents with 62% and 63% driving to work alone; only 38% of those in the Central-West subarea drove to work alone. In contrast a higher proportion of Central-West subarea residents carpooled (21%), took public transportation to work (22%) and biked or walked to work (9%). Overall, a higher proportion of Planning Area residents biked/walked to work (7%) in comparison to Oakland (4%).

Transit Network:

As extensively described in the transportation section of the existing conditions analysis, "AC Transit operates numerous routes through the study area and along the International Boulevard corridor, just to the north of the CEP study area. These routes include local, Rapid, and Transbay Express routes. Only three local routes and one Transbay route directly serve the CEP study area." The entire study area only has five bus stops, and the bus stops lack amenities such as shelters. Also, there is no direct late-night route that serves the study area. Transit facilities are limited within and around the study area and include curbside bus stops and bus bays at the Fruitvale station. Most stops consist of flagpoles and possess limited covered protection from the elements and/or benches. Stops also lack real-time arrival information and schedules.

Table 10.4 highlights household proximity to transit; 78% of Planning Area residents live within ¼-mile of local transit (AC transit) and 40% of households live within ½ mile of regional transit (BART). Households living in the Central-West and Central-East subareas have the best access to local transit routes, and central-East residents have excellent proximity to regional transit.

Table 10.4. Proportion households living within 1/4 mile of local transit and 1/2 mile of regional transit

	AC Transit	BART
West	3%	0%
Central-West	100%	40%
Central-East	94%	94%
East	0%	0%
Planning Area	78%	40%

Source: Arup, 2009.

While proximity to transit is good for households in the Central-East and Central-West subareas, there are major inhibitors to accessing the regional transit in particular. As stated in the Transportation Element,

"With the International Boulevard being one of the primary transit corridors in Oakland and the presence of a major transit rail station at Fruitvale BART station, areas directly west of the study area have a high level of transit service and capacity. These routes operate outside of the limits of the CEP study area. The walk distance from the CEP study area to International Boulevard is approximately one-third to one-half of a mile. This distance and the poor pedestrian environment limit the effectiveness of these routes to serve the CEP study area's existing population." With respect to accessing BART, the Transportation Element highlights that there is "poor pedestrian connectivity that is the result of physical barrier formed by I-880 and the railroad tracks. The lack of crossings results in indirect and circuitous walking routes from the CEP study area to destinations such as the BART station and the International Boulevard transit corridor."

Pedestrian Network

As extensively described in the transportation section, "overall, the pedestrian environment across the CEP study area is generally quite poor. The CEP site's predominantly industrial character makes for an overall uncomfortable pedestrian experience. The lack of adequate connections and long exposed walking distances from the CEP study area to the rest of Oakland reduces the area's overall "walkability". The factors that have contributed to the poor pedestrian environment include:

- Missing sidewalks
- Large block sizes, which can increase walking distances
- Wide, difficult to cross roads designed to accommodate heavy vehicles and maximize traffic flow
- Few marked crosswalks and several prohibited pedestrian crossings at busy intersections
- A lack of activity generators, particularly outside of employment hours
- Insufficient street trees and other amenities
- Movement barriers created by I-880, Union Pacific / Capital Corridor railroad, BART and the Oakland Estuary

High Street in particular is described as having a poor quality pedestrian environment due to a large number of industrial uses, narrow sidewalks, a lack of bike lanes and shoulders, prohibited pedestrian crossings at some intersections, and a lack of pedestrian amenities such as street trees. Finally, in terms of accessing areas on the other side of the I-880, pedestrian undercrossings are severely restricted, with several closed due to safety issues, and overcrossings are described as lacking adequate sidewalks, having poor street-level access, and having abrupt grade changes. Specifically, the two bridge structures spanning I-880 at 23rd Avenue and the single bridge structure at 29th Avenue only have narrow sidewalks on one side. Pedestrian access from the street level to the bridge sidewalks occurs at the base of each bridge and via stairways which pose greater difficulties for pedestrians. Plans for reconstruction and reconfiguration of these bridges currently include a five-foot sidewalk on one side of each of the two bridges, as well as improved ADA access ramps.

Bicycle Network

As described in the Transportation Element of the Existing Conditions analysis, "The existing bicycle environment is quite poor within the CEP study area. The areas industrial character, traffic congestion, and the lack of adequate east-west connections all contribute to the overall poor pedestrian/bicycle environment within the study area. A lack of attractive pedestrian and bicycle connections from the CEP

area to the Fruitvale BART, E 12th Street, and International Boulevard east of I-880 and the freight rail tracks discourages traveling by these modes. The Bay Trail, which travels along some sections of the shoreline is currently incomplete, although a number of proposals exist to complete a contiguous routing along the water." Specifically, the analysis describes "inadequate crossings for bicycles on the three bridges spanning the Oakland Estuary. All three bridges crossing the Oakland Estuary (Park Street, Fruitvale Avenue, and High Street) lack bicycle lanes. Bicyclists currently use the mixed-flow travel lanes and the narrow pedestrian paths on the sides of the bridges to cross from Alameda to Oakland." In addition, "Major north-south arterial streets such as International Boulevard and E 12th Street lack designated bike lanes. This makes bike commuting to downtown Oakland from areas in the vicinity of the CEP study area difficult." Reconstruction of the 23rd and 29th Avenue bridge structures will provide adequate width for five-foot wide bicycle lanes in both directions on both bridges. Alameda County Congestion Management Agency (ACCMA) staff indicated that they were planning to provide unmarked five-foot shoulders in lieu of bicycle lanes, due the lack of existing bicycle routes at either end of the structures. However, ACCMA staff indicated that they would consider the City of Oakland's Bicycle and Pedestrian Coordinator's request to provide the marked bicycle lanes along these routes, which are designated bikeways in the City's Bicycle Master Plan.

Traffic-related Collisions

Between 2002-2007, there were 414 reported motor-vehicle collisions in the Planning Area, six bike collisions and one pedestrian collision (these figures exclude collisions on I-880) (Table 10.5). Vehicle on vehicle collisions are the most significant of these, though total collisions do not represent a very high proportion of collisions in Oakland (around 1%). The Transportation Analysis includes a report of vehicle collision "hot-spots" within the Planning Area, including: 1) High Street / International Boulevard (133 incidents over the last five years), 2) E 12th Street / 23rd Avenue (123 incidents over the last five years); and 3) within the Park Street Triangle, the 23rd Avenue / Ford Street / Kennedy Street intersection experienced 33 incidents and the 29th Avenue / Ford Street intersection experienced 21 incidents over the last five years. While these hot-spots are indeed important to consider in terms of targeted traffic improvements, the fact that accidents occur all over the Planning Area illustrate that there are more systemic transportation issues that could be addressed via neighborhood-level transportation and circulation improvements.

Interestingly, given how degraded the pedestrian and bike environments are, the pedestrian and bicycle collision numbers are not high. This may reflect the fact that residents and workers in the Planning Area are not actually walking and biking very much, but rather driving to meet their daily needs and to/from work.

Table 10.5. Number of traffic-related collisions in the Planning Area (2002-2007)

	West	Central-West	Central-East	East	Planning Area	Oakland
Car (Vehicle / Vehicle)	237	105	67	5	414	33,552
Bike (Vehicle / Bike)	0	4	2	0	6	773
Pedestrian (Vehicle / Ped)	0	1	0	0	1	1447

Source: Arup, 2009.

People's transportation behaviors – including how much and how far they drive, as well as whether they own a private vehicle – are shaped by numerous factors. Determining factors include whether there is a

mix of land uses providing access to jobs, goods, and services near residential development, the area's public transit service, walking or biking environment, driving conditions, and socio-demographic factors

including population age, income, or household size.

Nonetheless, car ownership is directly related to driving behaviors. Vehicle driving, in turn, is directly proportional to air pollution and greenhouse gas emissions. Air pollutants, including ozone and particulate matter are causal factors for cardiovascular mortality and respiratory disease and illness. Areas with high levels of motor vehicle driving also tend to have higher motor vehicle collision and injury rates, as well as reduced opportunities for physical activity and its physical and mental health benefits.[22] Motor vehicle collisions are one of the leading causes of preventable injury in the nation and the world, and the leading cause of death in the United States for people aged 1-24.[23] Changes in the roadway environment can address both real and perceived safety hazards for pedestrians and bicyclists - including complete streets and bicycle lanes, reducing vehicle speeds (traffic calming), and introducing additional traffic engineering measures at intersections (e.g., signs, turning restrictions) to reduce conflicts between pedestrians/bikes and cars.[24]

The number of people who walk in an area is affected by the quality of the pedestrian environment including: street and sidewalk design and connectivity, presence of street furniture, traffic volume (determined by vehicle trips and miles traveled), traffic calming features, pedestrian safety interventions (e.g. crosswalks, countdowns), and the aesthetics and safety of the surrounding environment. Mixed, dense residential and commercial development, as well as close (i.e. <½ mile) proximity of development to public transit, decreases the distance between people's residential, employment, and other (e.g. shopping, errands, social) activities and increases walking as a means of transportation. Walking is further impacted by socio-demographic factors, as many low-income people walk regardless of environmental quality because it is their primary means of transportation. The number of people biking in an area is largely impacted by factors including the presence and quality of bike lanes and bicycle network connectivity, proximity of development to public transit and other destinations, traffic volume and speed, and presence of bike storage, bike locks, and bike racks (including on public transit). Biking is further impacted by population socio-demographic factors, including ability to ride a bike and for what distance.

Walking and biking to work as well as using public transit to get to work helps people meet minimum requirements for physical activity. Twenty-nine percent of people using transit to get to work meet their daily requirements for physical activity from walking to work.[25] Health benefits of physical activity include a reduced risk of premature mortality and reduced risks of coronary heart disease, hypertension,

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[22] Ewing R, Frank L, Kreutzer R. Understanding the Relationship between Public Health and the Built Environment: A Report to the LEED-ND Core Committee, 2006.

[23] CDC. Motor vehicle safety: A 20th century public health achievement. MMWR 1999;48:369-374.

[24] Federal Highway Administration. Pedestrian and Bicycle Intersection Safety Indices. Publication No. FHWA-HRT-06-125. McLean, VA, 2006

[25] Besser LM, Dannenberg AL. Walking to public transit: steps to help meet physical activity recommendations. Am J Prev Med. 2005;29(4):273-80.

colon cancer, and diabetes mellitus.[26] Research has found that proximity to public transit helps to determine travel choice. For normal trips, only 10% of Americans will walk one-half mile. A recent study in King County, WA demonstrated that for every quarter mile increase in distance to transit, the likelihood of using transit fell 16%. One study found that 33% of residents living near BART stations used rail to get to work as compared to 5% of residents living in areas not served by BART.[27] Transit use promotes environmental health by reducing air pollution and greenhouse gas emissions from automobiles.

A high quality pedestrian environment can support walking both for utilitarian purposes and for pleasure. Recent studies in the United States have demonstrated that people walk on average 70 minutes longer per week in pedestrian-oriented communities.[28, 29] In turn, walking contributes to minimum requirements for physical activity, an established protective factor for cardiovascular diseases, diabetes, and some types of cancer.[30] As non-vehicle form of transport, pedestrian and bicycle trips do not contribute to noise or air pollution emissions. Finally, a vibrant pedestrian environment may contribute to both economic vitality and social interaction in a place, furthering the development of social capital.

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[26] Task Force on Community Preventive Services. Increasing Physical Activity: A Report on Recommendations of the Task Force on Community Preventive Services. Morbidity and Mortality Weekly Report. October 26, 2001.

[27] Ewing R, Frank L, Kreutzer R. Understanding the Relationship between Public Health and the Built Environment: A Report to the LEED-ND Core Committee. 2006.

[28] Frank LD, Schmid TL, Sallis JF, Chapman J, Saelens BE. Linking objectively measured physical activity with objectively measured urban form: findings from SMARTRAQ. Am J Prev Med. 2005;28(2 Suppl 2):117-25

[29] Saelens BE, Sallis JF, Black JB, Chen D. Neighborhood-based differences in physical activity: an environment scale evaluation. Am J Public Health. 2003;93(9):1552-8.

[30] Task Force on Community Preventive Services. Increasing Physical Activity: A Report on Recommendations of the Task Force on Community Preventive Services. Morbidity and Mortality Weekly Report. October 26, 2001.

Access to Goods and Services

Overall, being within walking distance of neighborhood goods and services promotes physical activity, reduces vehicle trips and miles traveled, and increases neighborhood cohesion and safety.[31] By reducing vehicle trips and miles traveled, dense neighborhoods with diverse and mixed land uses can also reduce air and noise pollution, which subsequently impacts associated respiratory and noise-related health conditions. According to the US Green Building Council, research has shown that "living in a mixed-use environment within walking distance of shops and services results in increased walking and biking, which improve human cardiovascular and respiratory health and reduce the risk of hypertension and obesity."[32] Below we describe Planning Area goods and services access for several indicators, including schools, child care, parks and recreational facilities, libraries, retail food, and banks/credit unions.

Methodological Note: The household and population data provided by Strategic Economics provides more information than is available in the County Assessor's parcel data; however, the household and population data are summarized by project sub-area. Because parcel-level household and population data are unavailable, the percent of households and population covered by various HDMT facilities has been calculated as a percentage of each sub-area that falls within 1/4, 1/2, and 1-mile distances from the various facilities studied.

Schools

There are currently no public schools within the Planning Area and five public schools within ½ mile buffer of the Planning Area. One private school (Beacon Day School) operates within the Planning Area. Overall, only one-half of Planning Area households live in close proximity to a public school and rates are more varied across subareas (Table 10.6). All Central-West subarea households live within ½ mile proximity to a public school, three-quarters of Central-East households and just under half of West subarea households live within a ½-mile of a public school. However, the East subarea currently has the worst access to a public school with very little of the subarea within a ½ mile proximity.

Given that the largest number of households currently resides in the Central-West subarea, the fact that there are schools close by adds to the residential suitability of the area. For households living in the West and Central-East subareas, school access is slightly less that desirable for new residential growth. In contrast, while there are only three households currently in the East subarea who are impacted by the lack of access, if future growth is intended for this area, larger and more concerning numbers of residents would be impacted.

Table 10.6. Proportion of households within 1/2 mile of public elementary, middle and high school

West		Central-West		Central-East		East		Planning Area	
N	%	N	%	N	%	N	%	N	%

[31] Moore Iacofano Gostsman, Inc. Richmond general plan update, issues & opportunities, paper #8: community health and wellness (draft). 2007. http://www.cityofrichmondgeneralplan.org/docManager/1000000640/Existing%20Condictions%20Report%20August%202007.pdf

[32] US Green Building Council. LEED rating systems, neighborhood development. http://www.usgbc.org/DisplayPage.aspx?CMSPageID=148

37	48%	224	100%	50	79%	0.1	3%	188	51%

Source: Community Design + Architecture, 2009.

Neighborhood schools have been found to serve as social and community hubs that promote interaction between neighbors and community members, and if planned as multi-use facilities, schools can benefit the local community in a number of ways during afterschool hours. A half-mile proximity was selected for this indicator to identify what proportion of households fall within a "walkable" distance of a public school. Research on travel mode choice also shows that when schools are located closer to home, more children walk and/or bicycle to school and vehicle pollution emissions fall.[33]

It is important to note that all public schools within a ½ mile of the Planning Area are on the other side of I-880, which poses a significant barrier to safely accessing these schools. According to the Centers for Disease Control and Prevention, long distances to school are a primary barrier to walking to school. Danger from traffic was the second most important barrier.[34] As described in the Transportation section above, walkability in the area is very poor, and there are numerous risks associated with crossing under and over the freeway. It is unclear to what extent residents of the Planning Area attend these schools, and how they travel there. However, changes in the physical environment, such as sidewalks, traffic calming measures, and well designed crosswalks, can make walking and biking to school more desirable and safer.[35]

Child Care

There are currently five child care providers in the Planning Area who collectively provide a capacity of at least 130 slots for care. These providers reflect both institutional child care centers as well as licensed family child care homes. Facilities are located on Livingston Street, 9th Street, Elmwood Avenue and 22nd Avenue.

Understanding child care availability and capacity in the area is useful when comparing future population growth scenarios. The accessibility of child care for families with children is dependent on capacity of child care providers to meet demand. It is important to note that not all child care centers and homes operate at maximum capacity. Substantial research demonstrates that accessible high quality child care positively affects childhood growth, physical development, and physical health, cognitive, behavioral and school outcomes.[36]

Parks and Recreational Facilities

Overall, proximity to parks in the Planning Area is excellent. Virtually all individuals living in the West, Central-West and East subarea are within a ¼ mile of a neighborhood or regional park (Table 10.7).

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[33] Ewing R, Forinash CV, Schroeer W. Neighborhood Schools and Sidewalk Connections. What are the impacts on travel mode choice and vehicle emissions. Transportation Research News. March-April 2005 pp 4-10.

[34] Dellinger A, Staybtib C. Barriers to Children Walking and Bicycling to School. *Morbidity and Mortality Weekly Report.* 2002;51:701-704.

[35] Ewing R, Schroeer W, Greene W. 2004. School location and student travel: Analysis of factors affecting mode choice. Transportation Research Record: Journal of the Transportation Research Board 1895:55-63.

[36] Karoly LA. Early Childhood Interventions: Proven Results, Future Promise. RAND Corporation, 2005; Schweinhart LJ. The High / Scope Perry Preschool Study Through Age 40. The High Scope Press, 2004.

Access is a bit lower in the East subarea (80%), though still quite good. Overall, the Planning Area performs significantly well in relation to this indicator. A ¼-mile proximity was selected for this indicator to identify what proportion of the population falls within a "walkable" distance of a park/recreational facility.

There are, however, no recreational facilities in the Planning Area or within a ¼ mile buffer. Recreational facilities are different than parks in that they provide more organized opportunities for athletic programming and well-maintained spaces for group physical activity.

Table 10.7. Proportion of population within 1/4 mile of neighborhood or regional park

West		Central-West		Central-East		East		Planning Area	
N	%	N	%	N	%	N	%	N	%
108	100%	586	99%	167	80%	6	97%	865	94%

Source: Community Design + Architecture, 2009.

It is important to note that proximity to a park does not guarantee access. Many factors affect access to parks including the presence of major roads, highways, buildings and gates, perceived and actual safety, hours of access, quality of park grounds and facilities, transportation, and cultural preferences. This indicator is just one element of many in assessing access to parks. For more detailed information, see the Land Use and Urban Form section.

Parks and natural open space areas promote physical activity and social interaction. One review of studies showed that access to places for physical activity combined with outreach and education can produce a 48% increase in the frequency of physical activity.[37] The number of neighborhood parks in proximity to one's residence and the types of amenities at the park has been associated with physical activity in children.[38] Living in proximity to green space is associated with reduced self-reported health symptoms, better self-rated health, and higher scores on general health questionnaires.[39] Trees and green space also improve the physical environment by removing air pollution from the air and mitigating the urban heat island effect produced by concrete and glass.[40] Finally, the presence of views and access to natural vegetation in the urban environment reduces socially unacceptable behavior and crime and increases concentration and fewer behavior problems among children.

Libraries

The Planning Area has very good proximity to public libraries, with 90% of residents living within 1 mile of a public library (Table 10.8). The closest libraries are located on the other side of the I-880 freeway in

[37] Kahn EB. The effectiveness of interventions to increase physical activity. *Am J Prev Med*. 2002;22(4):73-107.

[38] Cohen DA, Ashwood JS, Scott MM, Overton A, Evenson KR, Staten LK, Porter D, McKenzie TL, Catellier D. Public parks and physical activity among adolescent girls. *Pediatrics.* 2006;118(5):e1381-1389.

[39] Vries S, de Verheij RA, Groenewegen PP, Spreeuwenberg P. Natural environments - healthy environments? An exploratory analysis of the relationship between green space and health. *Environment and Planning A.* 2003;35(10):1717-1731.

[40] Parks for People: Why America Needs more City Parks and Open Space. San Francisco: The Trust for Public Land, 2003.

the Fruitvale neighborhood and in Alameda. As a result both the Central-West and Central-East areas have the best proximity. The West and East subareas, on the other hand, have somewhat less access. Again, capacity of the library is unknown and physical access to the library is compromised by the traffic hazards associated with crossing the I-880.

Table 10.8. Proportion of population within 1 mile of a public library

West		Central-West		Central-East		East		Planning Area	
N	%	N	%	N	%	N	%	N	%
96	89%	593	100%	209	100%	5	77%	823	90%

Source: Community Design + Architecture, 2009.

While ½ mile proximity is generally considered within walking distance, given the immense number of resources needed to build and maintain a public library, it is currently infeasible to have a library within ½ mile of all residents. For this reason, a one-mile proximity was chosen. Libraries serve as important public educational and cultural facilities that help to disseminate health information to health providers and the general public, promote general and health literacy, consolidate information on vulnerable populations, organize/filter and improve access to reliable internet resources, facilitate educational collaborations between agencies and communities, and promote art and cultural activities both on and off library property.

Retail Food Environment

There are no grocery stores within the Planning Area, but three grocery stores are located within a ½-mile buffer. The Central-West and Central-East subareas have the best access with 100% and 80% of the populations respectively living within ½-mile (Table 10.9). The East subarea has the worst access with only 12% of the population living within a ½-mile. These grocery stores reflect a mix of large-scale supermarkets (e.g., Albertsons) as well as smaller grocery and produce stores that sell a wider range of products including fresh produce. Though not shown on the map, there is also one farmers' market that operates year-round at Fruitvale Village (34th Ave. and East 12th St.) every Sunday; this market is within one mile of most of the Planning Area.

While there are no liquor stores in the Planning Area or within a ½-mile, there are, however, seven convenience stores that are known to provide unhealthy food retail as well as alcoholic beverages. There are 1.7 convenience stores per square mile of the Planning Area and its ½ mile buffer in comparison to only 0.99 grocery stores per square mile. This highlights a disparity in the availability of healthy food retail versus unhealthy food retail. In contrast to convenience stores, grocery stores are defined as selling more healthy food retail including fresh fruits and vegetables. There are also six restaurants in the Planning Area.

Table 10.9. Proportion of population within 1/2 mile of a grocery store

West		Central-West		Central-East		East		Planning Area	
N	%	N	%	N	%	N	%	N	%
39	36%	593	100%	168	80%	.7	12%	464	51%

Source: Community Design + Architecture, 2009.

Again, the ½-mile proximity is considered a "walkable" distance for neighborhood access. However, similar to the above indicators, geographic proximity does not equal access. Transportation features of the Planning Area including major highways and busy roadways roads likely inhibit pedestrian and bicycling access to grocery stores. Additionally, these data do not reveal qualitative differences between food retail, such as price mix, quality of foods, availability of fresh produce, and cultural preferences, that are additionally important factors for consideration of accessibility.

Nonetheless, local food environments influence the food retail options households and individuals have. Access to healthy food choices is directly correlated to obesity and diabetes rates, which occur in higher rates among people living in low-income communities with worse food environments.[41] Supermarkets may provide access to a greater variety of cheaper and healthier foods, including fresh fruits and vegetables. This access helps to facilitate healthier dietary choices. Research has found that the presence of a supermarket in a neighborhood predicts higher fruit and vegetable consumption and a reduced prevalence of overweight and obesity.[42, 43] Though there are no liquor stores in the Planning Area, it is important to note that the density of alcohol outlets is strongly associated with greater rates of physical assaults, violent crimes, and violence in general.[44]

Banks and Credit Unions

There are five credit unions/banks located in the Planning Area and within a ½-mile buffer. Again, Central-West and Central-East residents have the best access, with 100% of residents within ½-mile (Table 10.10).

[41] Regents of the University of California, PolicyLink, and the California Center for Public Health Advocacy. Designed for Disease: The Link Between Local Food Environments and Obesity and Diabetes. April 2008. http://www.policylink.org/documents/DesignedforDisease.pdf.

[42] Morland K, Diez Roux AV, Wing S. Supermarkets, other food stores, and obesity: the atherosclerosis risk in communities study. Am J Prev Med. 2006;30(4):333-9.

[43] Inagami S, Cohen DA, Finch BK, Asch SM. You are where you shop: grocery store locations, weight, and neighborhoods. Am J Prev Med. 2006;31(1):10-7.

[44] Lipton R, Gruenewald P. The spatial dynamics of violence and alcohol outlets. *Journal of Studies on Alcohol.* 2002 Mar; 63(2):187-95.

Table 10.10. Proportion of population within 1/2 mile of a bank/credit union

West		Central-West		Central-East		East		Planning Area	
N	%	N	%	N	%	N	%	N	%
39	36%	593	100%	209	100%	3	50%	606	66%

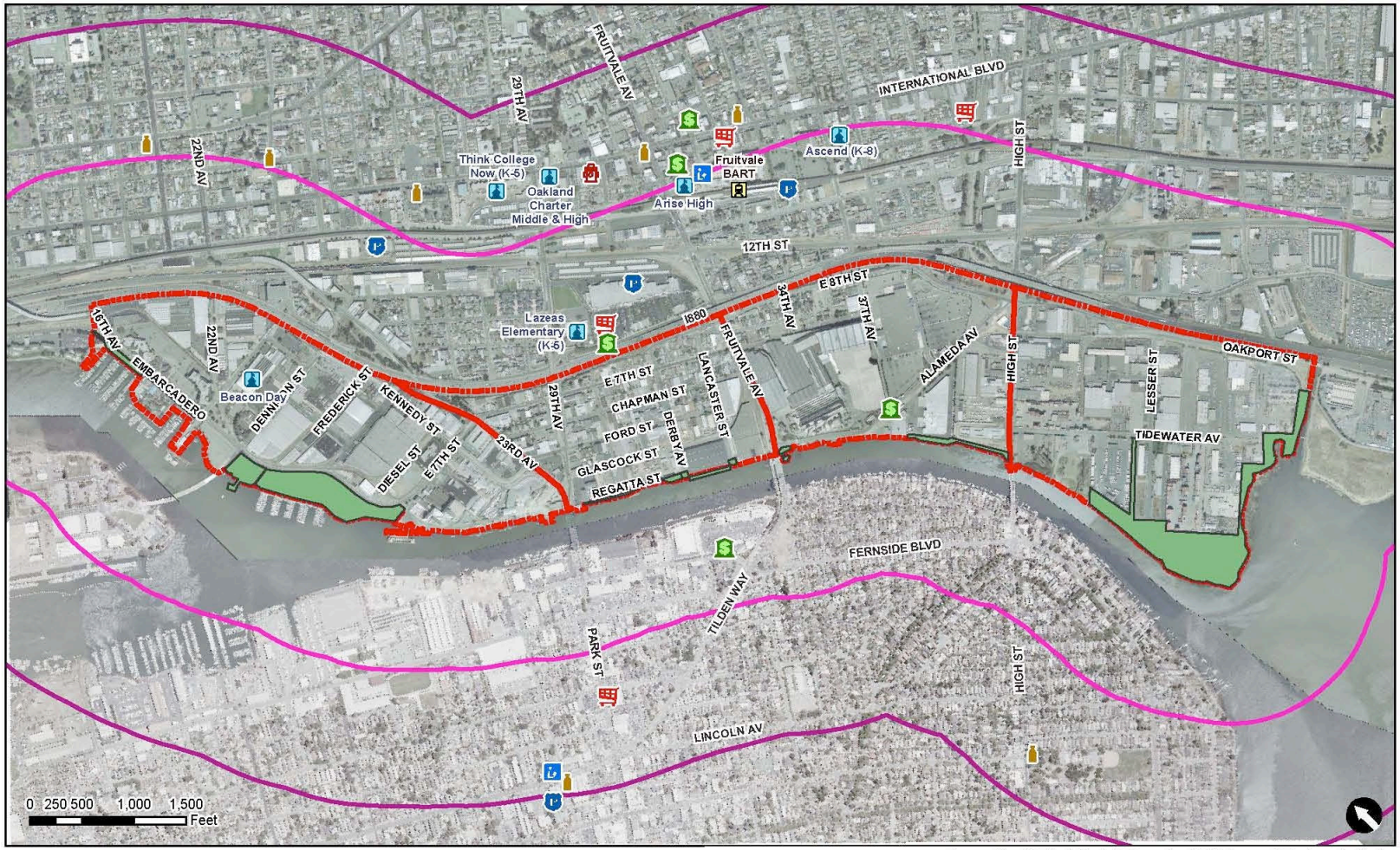
Source: Community Design + Architecture, 2009.

Studies show the lack of physical proximity to financial services is most frequent in low-income and minority populations. In addition, fringe financial services, such as check cashers, payday lenders, and pawn shops, are largely in low-income and minority neighborhoods. These lenders have high fees attached to their services and no savings account options, which puts additional financial burdens on these populations. Ensuring that banks and credit unions are more widely available helps provide opportunities for personal savings.

Police and Fire

There are two fire stations and four police stations within one mile of the Planning Area. As far as proximity for residents, 100% of West, Central-West and Central-East households are within one mile of both of these services. In addition, over 90% of East subarea households are within 1 mile of a police station, but only 24% of residents are within one mile of a fire station. For more detailed information, see the Infrastructure and Public Facilities section.

The presence of emergency services is essential for the protection of public safety. Adequate capacity at police and fire stations insures speedy response times to emergency events. And the presence of these facilities affects perceptions of public safety, and may serve to deter crime.



Source: City of Oakland, Strategic Economics, ARUP, Community Design + Architecture

Healthy Development Measurement Tool: Facilities

May 1, 2009

- Sub-Area Boundaries
- 1/4-Mile Buffer
- 1/2-Mile Buffer
- Parks - Existing and Under Construction

HDMT Facilities

- Police Facility
- Fire Department
- Bank/Credit Union
- Library
- School
- Grocery Store
- Convenience/Liquor Store

CITY OF OAKLAND

CENTRAL ESTUARY PLAN
A Vision for Oakland's Waterfront
COMMUNITY DESIGN + ARCHITECTURE
REGION • CITY • NEIGHBORHOOD • BUILDING

Adequate and Healthy Housing

The Resident Profile section of the existing conditions report contains a significant amount of information regarding resident housing conditions in the Planning Area. Because residential density and high quality and affordable housing are significant predictors of health, we highlight related data for these indicators in this section as well.

Housing Density

As indicated in the Resident Profile, the Planning Area has a far lower housing density than Oakland as a whole - 0.9 housing units per acre versus 4.4. There is also significant variation between the subareas, however; the Central-West subarea has 3 housing units per acre while the East subarea has virtually no housing. Since 2000, the vast majority of new housing built in the Planning Area was in the Central-West subarea. No housing has been built in the Central-East or East subareas since 2000. Overall the West, Central-East and East subareas can be characterized as having a very low residential density while the Central-West subarea has a higher level of density. People living in higher density neighborhoods with a mix of shops/businesses within easy walking distance have a 35% lower risk of obesity.[45] Increasing residential density also advances the concept of "eyes of the street", and can increase perceived safety among residents.

Housing Cost Burden

The federal government defines households that spend more than 30 percent of their income on their homes as cost-burdened. The U.S. Census collects data on percentage of household income spent on their gross rent defined as the contract rent plus the estimated average monthly cost of utilities and fuels. Table 10.11 illustrates housing cost burden on renters living in the Planning Area. Overall, a lower percentage of renter households in the Planning Area are cost-burdened than in Oakland (39 percent and 42 percent respectively). However, the variation is more striking when disaggregated at the subarea. For example, renter households in the Central-West subarea experience the highest degree of housing cost burden, with just over half of renters paying greater than 30 percent of their income on rent. The Central-East subarea has the lowest proportion of cost burden with only 27 percent of renter households paying greater than 30 percent of income on gross rent. However, this data is nearly a decade old, and a majority of new ownership housing in the Planning Area has been built in the past several years. A more current analysis of cost-burden would help inform the planning process.

[45] Larry Frank, et al. Linking objectively measured physical activity with objectively measured urban form: Findings from SMARTRAQ. Am J Prev Med. 2005;28(2):117-125.

Table 10.11. Housing Cost Burden, 1999

	West		Central-West		Central-East		Planning Area		Oakland	
	#	%	#	%	#	%	#	%	#	%
Renters spending greater than 30%of income on gross rent	80	38%	90	51%	44	27%	214	39%	37,268	42%

Source: 2000 U.S. Census; Strategic Economics, 2009.

High housing costs relative to the income of an individual or household result in one or more outcomes with adverse health consequences: spending a high proportion of income on housing, sharing housing with other individuals or families, accepting lower cost substandard housing, moving to where housing costs are lower, or becoming homeless. Spending a high proportion of income on rent or a mortgage means fewer resources for food, heating, transportation, health care, and child care. Sharing housing can mean crowded conditions, with risks for infectious disease, noise, and fires. Lower cost housing is often substandard with exposure to waste and sewage, physical hazards, mold spores, poorly maintained paint, cockroach antigens, old carpeting, inadequate heating and ventilation, exposed heating sources and wiring, and broken windows. Moving away can result in the loss of job, difficult school transitions, and the loss of health protective social networks.[46, 47, 48]

Overcrowding The Planning Area has a high degree of overcrowding in comparison to Oakland as a whole. Table 10.12 illustrates the proportion of households living in overcrowded conditions. Overcrowding, as defined by the U.S. Department of Housing and Urban Development (HUD), is greater than 1.01 people per habitable room. In 2000, 32% of households in the Planning Area lived in overcrowded conditions while only 16% of Oakland households lived in overcrowded conditions. The distribution of overcrowding was varied across the Planning Area. The Central-East subarea experienced the highest rate of overcrowding (48%) and the Central West subarea had the least degree of overcrowding (17%).

[46] San Francisco Department of Public Health, Program on Health, Equity, and Sustainability. The Case for Housing Impacts Assessment: The human health and social impacts of inadequate housing and their consideration in CEQA policy and practice. May, 2004. Available at: http://dphwww.sfdph.org/phes/publications/PHES_publications.htm

[47] Cohen R. The Positive Impacts of Affordable Housing on Health: A Research Summary. Enterprise Community Partners, Center for Housing Policy, 2007.

[48] Graham NM. The epidemiology of acute respiratory infections in children and adults: a global perspective. Epidemiol Rev. 1990;12:149-178.

Table 10.12. Overcrowding, 2000

	West		Central-West		Central-East		Planning Area		Oakland	
	#	%	#	%	#	%	#	%	#	%
More than 1 Person/Room	94	31%	38	17%	110	48%	242	32%	24,403	16%

Source: 2000 U.S. Census; Strategic Economics, 2009.

The impacts of overcrowding on health are both direct and indirect. Most immediately, crowding increases risks for respiratory infections such as tuberculosis and ear infection.[49] Overcrowded housing has also been associated with increased mortality rates (particularly for women), meningitis, and *Helicobacter pylori* bacteria, which can cause stomach ailments.[50] Crowded housing conditions also contribute to poor child development and school performance, in part because overcrowding limits the space and quiet necessary for children to do homework.[51, 52] Overcrowding may act cumulatively with other environmental health stressors. For example, one recent study found that crowding combined with noise significantly increases chronic stress hormones in low-income children.[53] Finally, overcrowding affects health indirectly by creating conditions conducive to poor sanitation, high environmental noise, and residential fires.

Tenure

As stated in the Resident Profile, the overall rate of homeownership within the Planning Area is somewhat lower than the rest of Oakland. However, this statistic was highly variable among the subareas. In 2000, only 16% of housing units were owner occupied in the West subarea, whereas 64% of housing units were owner occupied in the Central-East subarea. Since 2000, all new housing construction in the Planning Area has been in the form of condominiums. Thus, although a portion of these may be rented, it is likely that the owner-occupancy rate of the Central-West subarea has increased substantially.

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[49] Krieger J, Higgens DL. Housing and Health: Time again for Public Health Action. Am J Pub Health. 2002;92:758-768.

[50] Office of Deputy Prime Minister. 2004. The impacts of overcrowding on health and education: A review of the evidence and literature. London. Last accessed online August 30, 2007 from: http://www.communities.gov.uk/documents/housing/pdf/138631

[51] Ross DP, Roberts P. Income and child well being: A new perspective on the policy debate. Canadian Council for Social Development. Ottawa, 1999.

[52] Cooper, Merrill. Housing Affordability: A Children's Issue. Canadian Policy Research Networks Discussion Paper. Ottawa, 2001.

[53] Evans G, Marcynyszyn LA. Environmental Justice, Cumulative Environmental Risk, and Health among Low- and Middle-Income Children in Upstate New York. Am J Pub Health 2004;94: 1942-1944.

Although a mortgage can be a financial burden, home ownership does provide multiple benefits to its owners including increased tax benefits, collateral for financial emergencies, and opportunities for wealth creation. Home ownership is also associated with increased residential stability, and benefits homeowners by providing a setting for expression of identity and control. This catalyzes a personal investment in home maintenance, neighborhood improvement, and community cohesion.[54]

[54] San Francisco Department of Public Health, Program on Health, Equity, and Sustainability. The Case for Housing Impacts Assessment: The human health and social impacts of inadequate housing and their consideration in CEQA policy and practice. May, 2004. Available at: http://dphwww.sfdph.org/phes/publications/PHES_publications.htm

Healthy Economy

Because an extensive analysis of business and employment conditions in contained elsewhere in the Existing Conditions report, only two indicators are reviewed in this section: income diversity and income self-sufficiency.

Income Diversity

Income diversity measures how equally different income groups are represented in the Planning Area subarea. As indicated in the Resident Profile, the Planning Area has a varying degree of income diversity across subareas. The West and Central-West subareas appear to have a wider range of income diversity, while the Central-East subarea has the least amount of income diversity. When examining income distribution data for the subareas, it appears that the Central-East subarea is comprised almost entirely of low-income households.

Residents of high-poverty neighborhoods live about eight fewer years than non-poverty neighborhoods; they also suffer more preventable events like infant mortality, pedestrian injuries, and homicide. Research also demonstrates a relationship between residential segregation and teenage childbearing, tuberculosis, cardiovascular disease, availability of food establishments serving healthy foods, and exposure to toxic air pollutants.[55] One study found that reducing income-related residential segregation improved household safety, reduced exposure to crime, and decreased neighborhood social disorder.[56]

Occupation, Earnings and Income Sufficiency

Income is one of the strongest and most consistent predictors of health and disease in the public health research literature. Nationally, individuals with average family incomes of $15,000-$20,000 are three times more likely to die prematurely as those with family incomes greater than $70,000.57 It has also been shown that every additional $12,500 in household income buys one year of life expectancy (up to an income of $150,000). Low income is also a risk factor for low birth weight babies, for injuries or violence, for most cancers, and for most chronic conditions. The relationship between income and health is mediated though nutrition, employment conditions, parenting resources, leisure and recreation, housing adequacy, and neighborhood environmental quality, community violence and stress.[58, 59, 60, 61, 62]

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[55] Acevedo-Garcia D, Lochner KA, Osypuk TL, Subramanian SV. Future Directions in Residential Segregation and Health Research: A Multilevel Approach. Am J of Pub Health. 2003;93:215-221.

[56] Anderson LM, St Charles J, Fullilove MT. Scrimshaw SC, Fielding JE, Normand J. 2003. Providing affordable family housing and reducing residential segregation by income: A systematic review. Am J Prev Med. 24(3S):47-67.

[57] Sorlie PD, Backlund E, Keller JB. US mortality by economic, demographic, and social characteristics: the National Longitudinal Mortality Study. Am J Pub Health. 1995;85(7):949-56.

[58] Duncan GJ, Yeung WJ, Brooks-Gunn J, Smith JR. How much does childhood poverty affect the life chances of children? American Sociological Review. 1998; 63: 406-423.

[59] Morris JN, Donkin AJ, Wonderling D, Wilkinson P, Dowler EA. A minimum income for healthy living. J Epidemiol Community Health. 2000;54(12):885-9.

Finally, numerous studies have shown that income inequality, a measure of the distribution of income, is strongly and independently associated with decreased life expectancy and higher mortality, as well as reduced self-rated health status[63] and higher rates of violence.[64]

The family economic self-sufficiency standard is an alternative to the federal poverty line for measuring income adequacy. Unlike the federal poverty line, the self-sufficiency standard demonstrates how much income is needed for a family of a certain composition in a given place to adequately meet its minimal basic needs. In contrast, the federal poverty line is based on the cost of a single item: food. It does not vary by the local cost of living, and it relies on the outdated assumption that food represents one-third of a family's budget. For a family of four—whether in a high cost market like Oakland, CA or a more affordable market like Baton Rouge, LA—the poverty line is $20,650 in annual household earnings. In contrast, the self-sufficiency standard measures the actual cost of living on a county-by-county basis, including costs of transportation, taxes, childcare, housing, food, and health care.

According to the Insight Center for Community Economic Development, the 2003 the Self-Sufficiency Standard for Alameda County in 2008 was $24,630 per year for one adult, $43,974 per year for one adult with one preschooler and $58,008 for one adult with one infant and one school age child. For details on the creation, calculation and use of the self-sufficiency standard, please visit: http://www.insightcced.org.

Table 10.13 displays Central Estuary Planning Area occupations, numbers of Planning Area jobs provided by those occupations, and the average annual income for those occupations. The table includes all industries for which there were at least 10 employees in the Planning Area in 2007 and for which there was wage data available. In total, there were 4,447 jobs provided in the Planning Area at a wide range of annual wages. When comparing average annual wages to the self-sufficiency standard, 121 jobs (3 percent of total jobs provided in the Planning Area) did not provide wages that met self-sufficiency standards for a single adult and 2,086 jobs in the Planning Area did not provide wages that provided wages sufficient to support one adult with one preschooler (47 percent of jobs in the Planning Area). Finally, when looking at wages necessary to support one adult with two children (one infant and one school age child), 3,202 jobs did not provide sufficient wages to support this family type (72 percent of total jobs).

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[60] Alaimo K, Olson CM, Frongillo EA, Briefel RR. Food insufficiency, family income, and health in US preschool and school-aged children. Am J Pub Health. 2001;91(5): 781-786.

[61] Haan M, Kaplan GA, Camacho T. Poverty and health. Prospective evidence from the Alameda County Study. Am J Epidemiol. 1987;125(6):989-98.

[62] Chandola T, Brunner E, Marmot M. Related Chronic stress at work and the metabolic syndrome: prospective study. BMJ. 2006;332(7540):521-5. Epub 2006 Jan 20.

[63] Lynch J, Smith GD, Harper S, Hillemeier M, Ross N, Kaplan GA, Wolfson M. Is income inequality a determinant of population health? Part 1. A systematic review. Milbank Q. 2004;82(1):5-99.

[64] Lynch JW, Kaplan GA, Pamuk ER, Cohen RD, Heck KE, Balfour JL, Yen IH. Income inequality and mortality in metropolitan areas of the United States. Am J Public Health. 1998;88(7):1074-1080.

Table 10.13. Planning Area Occupations and Self-Sufficiency Standard	**Number of Planning Area Jobs, 2007**	**Average Annual Wage, 2007**
Limited-Service Eating Places	18	$14,350
Other Schools and Instruction	16	$17,000
Full-Service Restaurants	70	$17,300
Sporting Goods, Hobby, and Musical Instrument Stores	17	$18,300
Alameda County Self-Sufficiency Wage for one Adult	**n = 121**	**$24,630**
Services to Buildings and Dwellings	53	$27,550
Drycleaning and Laundry Services	24	$27,950
Investigation and Security Services	330	$28,400
Furniture Stores	16	$29,850
Automotive Repair and Maintenance	94	$33,300
Vending Machine Operators	21	$34,750
Bakeries and Tortilla Manufacturing	252	$35,050
Lessors of Real Estate	28	$35,200
Individual and Family Services	515	$36,650
Building Material and Supplies Dealers*	158	$37,400
Grain and Oilseed Milling	90	$37,900
Miscellaneous Nondurable Goods Merchant Wholesalers	24	$38,600
Other Motor Vehicle Dealers	39	$38,750
Elementary and Secondary Schools	54	$39,150
Coating, Engraving, Heat Treating, and Allied Activities	21	$39,250
Home Health Care Services	27	$39,800
Automotive Equipment Rental and Leasing	14	$39,850
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	28	$40,100
Household and Institutional Furniture and Kitchen Cabinet Manufacturing	78	$42,300
Warehousing and Storage	32	$43,250
Other Support Services	36	$43,500
Specialized Freight Trucking	31	$43,850
Alameda County Self-Sufficiency Wage for one Adult and one Preschooler	**n = 2086**	**$43,974**
Electronics and Appliance Stores	28	$44,750
Printing and Related Support Activities	14	$44,850
Independent Artists, Writers, and Performers	11	$44,900
Foundation, Structure, and Building Exterior Contractors	96	$46,000
Building Finishing Contractors	22	$46,150
Lumber and Other Construction Materials Merchant Wholesalers	57	$46,400
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	16	$49,400
Grocery Stores	10	$49,400
Boiler, Tank, and Shipping Container Manufacturing	14	$49,550

Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	52	$50,300
Specialized Design Services	24	$51,300
Beverage Manufacturing	94	$52,100
Business, Professional, Labor, Political, and Similar Organizations	13	$52,500
Outpatient Care Centers	10	$53,500
Grocery and Related Product Wholesalers	65	$54,450
Glass and Glass Product Manufacturing	500	$55,350
Automobile Dealers	14	$55,750
Other Heavy and Civil Engineering Construction	65	$56,750
Architectural and Structural Metals Manufacturing	11	$57,900
Alameda County Self-Sufficiency Wage for Two Adults, one Infant and one School Age Child	**n = 3202**	**$58,008**
Building Equipment Contractors	141	$60,950
Paper and Paper Product Merchant Wholesalers	66	$61,700
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	30	$63,650
Other Specialty Trade Contractors	69	$65,250
Agencies, Brokerages, and Other Insurance Related Activities	71	$65,650
Highway, Street, and Bridge Construction	47	$67,000
Cement and Concrete Product Manufacturing	30	$67,350
Advertising and Related Services	38	$67,450
Legal Services	52	$67,850
Residential Building Construction	20	$67,900
Waste Treatment and Disposal	12	$67,950
Machinery, Equipment, and Supplies Merchant Wholesalers	93	$68,700
Commercial and Service Industry Machinery Manufacturing	25	$71,500
Nondepository Credit Intermediation	10	$71,650
Professional and Commercial Equipment and Supplies Merchant Wholesalers	26	$76,400
Electrical and Electronic Goods Merchant Wholesalers	33	$79,150
Management, Scientific, and Technical Consulting Services	57	$83,050
Architectural, Engineering, and Related Services	150	$85,450
Semiconductor and Other Electronic Component Manufacturing	13	$88,800
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	20	$91,050
Drugs and Druggists' Sundries Merchant Wholesalers	84	$95,900
Computer Systems Design and Related Services	26	$111,050
Land Subdivision	27	$111,650
Scientific Research and Development Services	105	$116,050
Total jobs	**4447**	

Social Cohesion

Awaiting data from ACDPH on:

- Violent crimes

- Property crimes

APPENDIX A: Susceptibility to Displacement

Background And Methodology

For its Early Warning Tool Kit, the Center for Community Innovation (CCI) defines gentrification as a process of neighborhood change that encompasses economic change in the form of both real estate investment and increases in household income, as well as demographic change in the form of increases in educational attainment. Although some change could be coming from within, as existing residents improve their economic circumstances, most is driven by exogenous forces, as evidenced by home price appreciation. Thus, CCI differentiates gentrification from revitalization more generally, which consists simply of improvements in neighborhood income (due either to newcomers or changes for existing residents). Specifically, the Tool Kit uses the definition of gentrification put forth by Freeman (2005), modified slightly for the Bay Area: a central city neighborhood with housing price appreciation above the regional average, increase in educational attainment above the regional average, and household income at the 40th percentile of regional household income (roughly 80% of median income) in the starting year (as the process begins). What types of neighborhoods are most susceptible to gentrification? To answer this question, CCI looked at the 102 tracts that gentrified from 1990 to 2000 and examined what they were like in 1990. Using multivariate regression, CCI identified different types of factors that make a neighborhood more likely to gentrify. These included demographic factors, such as types of families in the neighborhood; income factors, such as the extent to which local households are experiencing high rent burdens; transportation factors, such as reliance on transit for the commute; housing factors, such as a large share of rental housing; locational factors, such as where the neighborhood lies in the region; and amenities, including parks and community facilities.

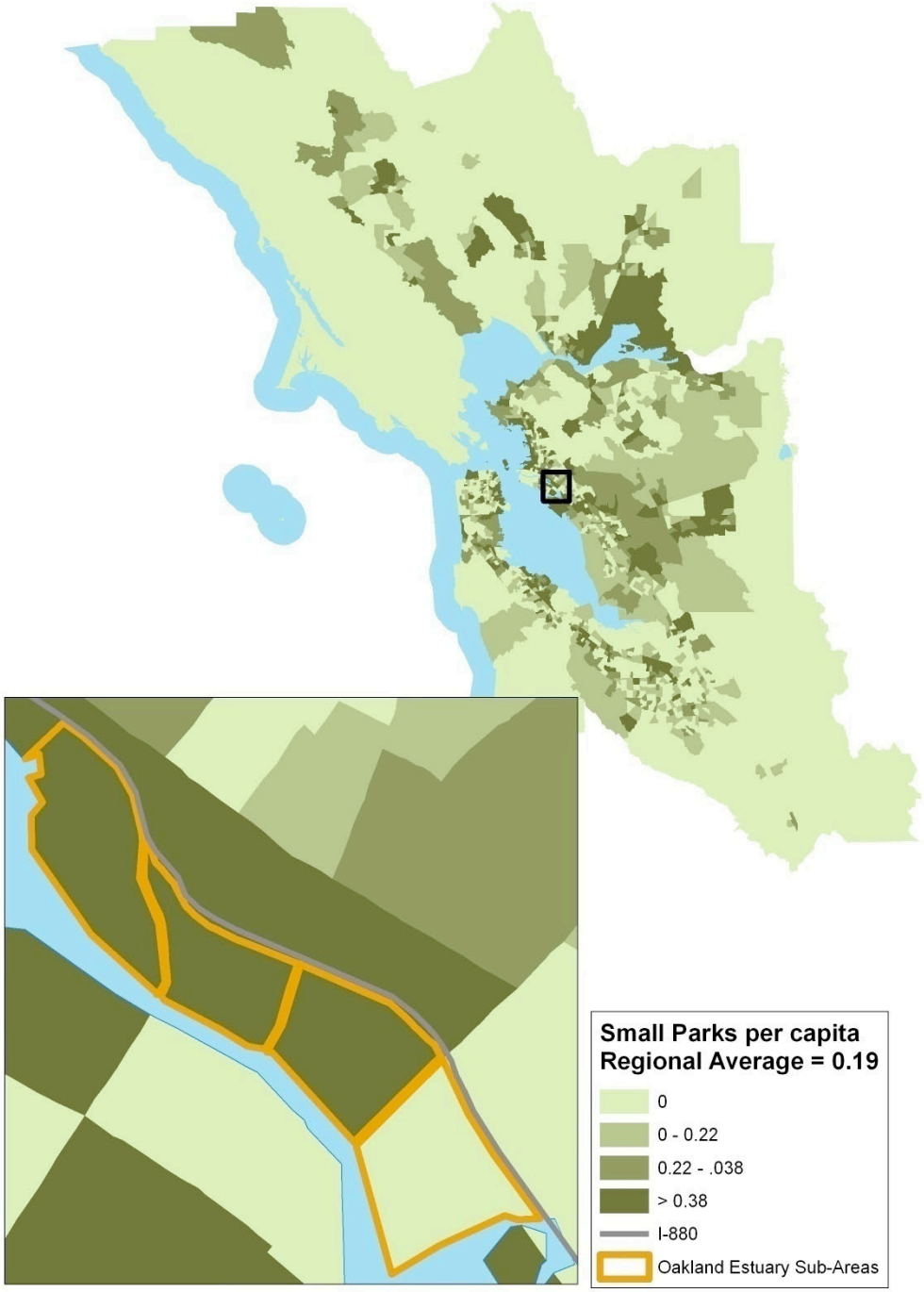
Table A.1 lists the nineteen factors that lay behind gentrification in the 1990s, showing whether they had a positive influence, causing more gentrification, or negative influence, causing less. The table ranks the variables' significance and shows the most important ones in bold; since these factors are many times more important than the others, it is worth examining them in more detail.

Table A.1. Factors behind gentrification in the 1990s.

Variable Type	Variable	Direction	Rank
Transportation	**% of workers taking transit**	**Positive**	4
Amenities	**Youth facilities per 1,000**	**Positive**	3
	Public space per 1,000	**Positive**	5
	Small parks per 1,000	Positive	17
Demographic	**% non-family households**	**Positive**	8
Housing	**% of dwelling units in buildings with 5+ units**	**Positive**	7
	% of dwelling units in buildings with 3-4 units	**Positive**	10
	% renter-occupied	**Positive**	13
	Public housing units	Positive	19
Income	**Income diversity**	**Positive**	6
	% of renters paying > 35% of income	**Positive**	11
Location	Distance to San Jose	Positive	14
Transportation	**% of dwelling units with 3+ cars available**	**Negative**	2
Amenities	**Recreational facilities per 1,000**	**Negative**	1
Demographic	**% married couples w/ children**	**Negative**	9
	% non-Hispanic white	**Negative**	12
Housing	Median gross rent	Negative	18
Income	% of owners paying > 35% of income	Negative	15
Location	Distance to San Francisco	Negative	16

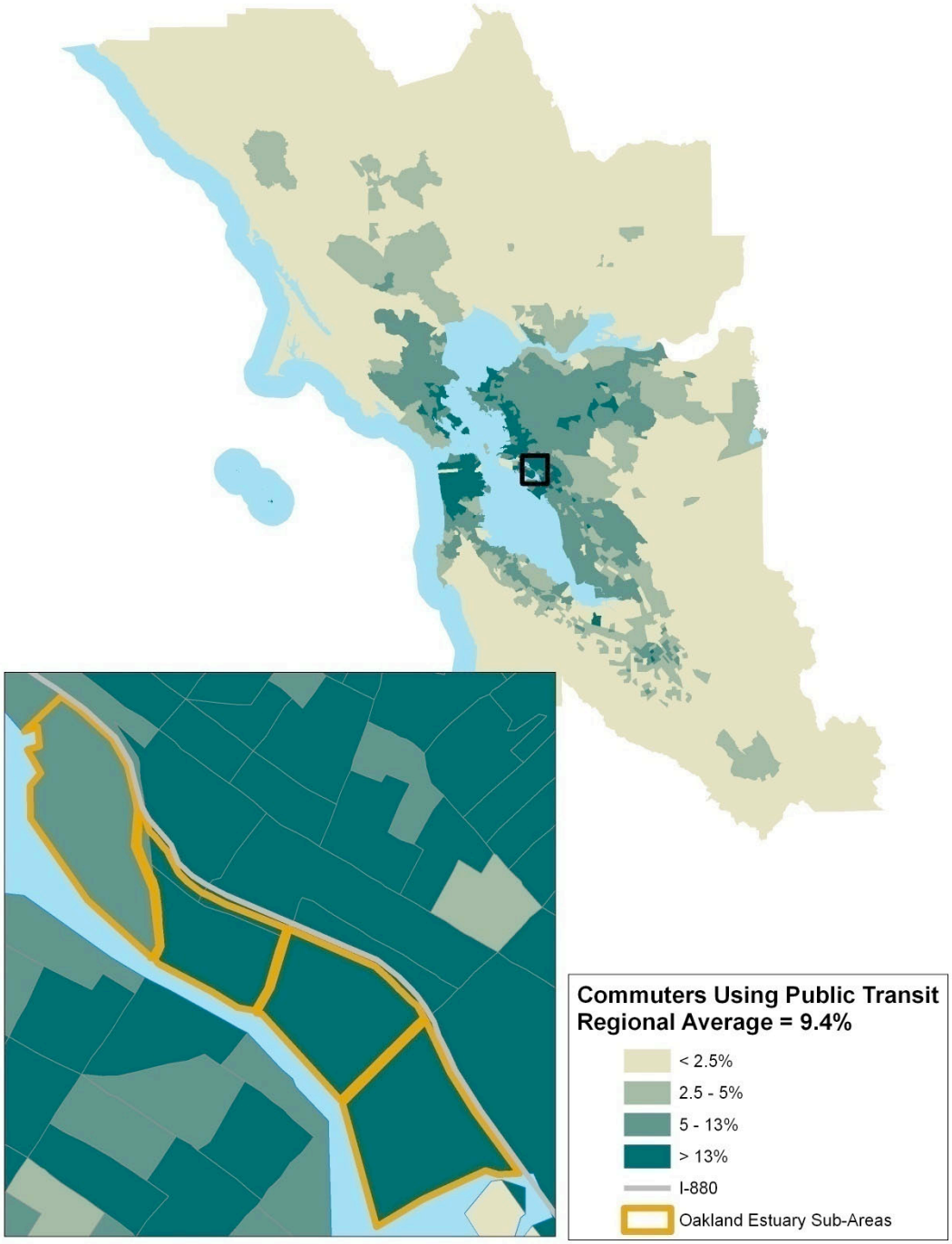
Availability of amenities and **public transportation** top the list of factors (see Figures A.1 through A.3). More than who lived in the neighborhood in 1990, or where it was located within the region, or even the characteristics of the neighborhood, what was most important in attracting change to the area was the proximity of amenities such as youth facilities and public space (and to a lesser extent, small parks), as well as the convenient location of transit (as evidenced by a high share of transit commuters). Interestingly, two of these variables were more likely to cause neighborhoods not to gentrify (i.e., were negative in influence): the presence of public/nonprofit recreational facilities and a concentration of homes with more than three cars. The latter variable simply reflects auto-oriented outer suburban areas that are not likely to gentrify anyway because they are not central locations. Though more research is needed to understand why recreational facilities deter gentrification, it may be because they draw heavy traffic from more disadvantaged groups.

Figure A.1: Small Parks per Capita in the Bay Area and Central Estuary, 2000



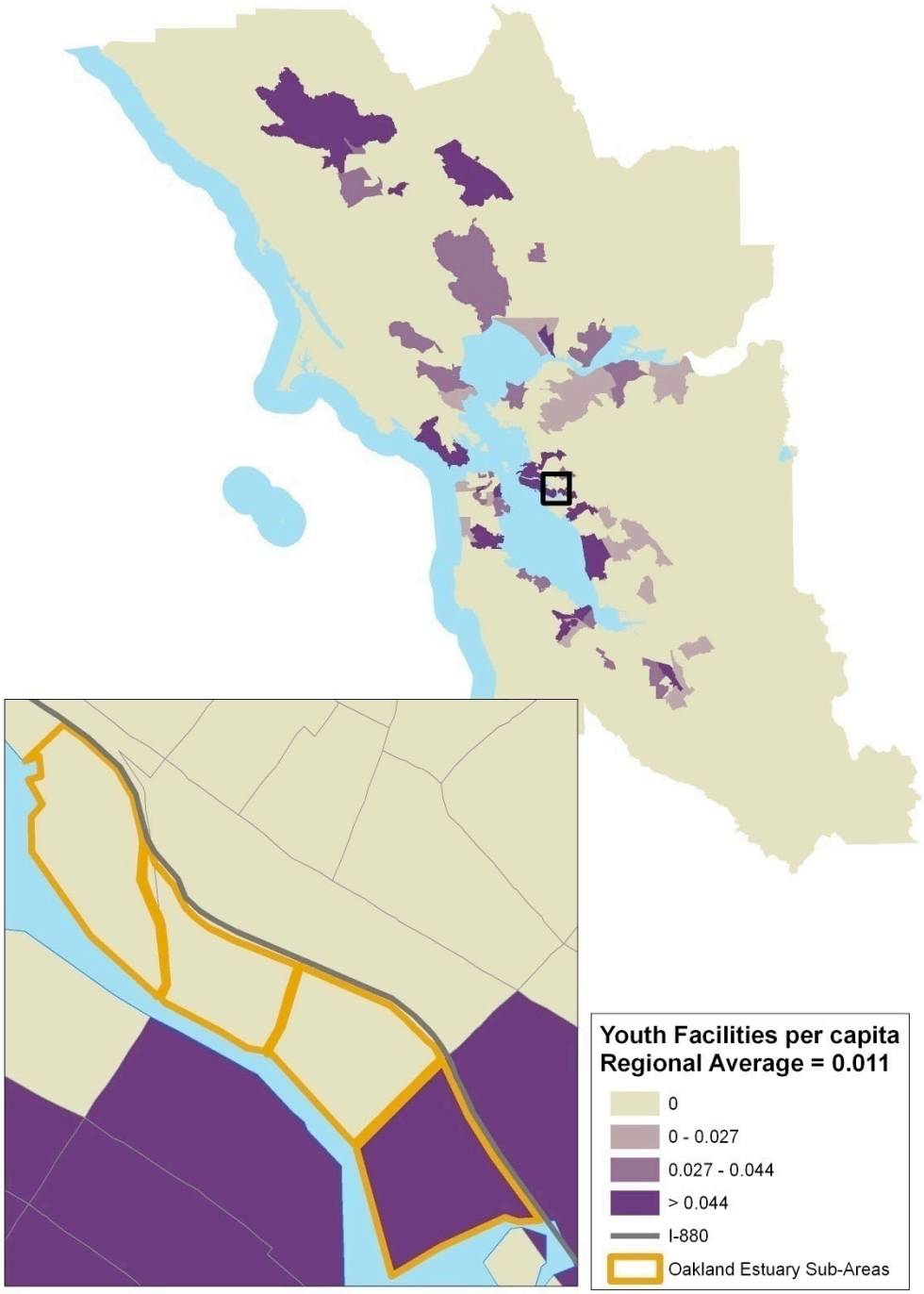
Source:ESRI; Center for Community Innovation, 2009

Figure A.2: Public Transit Use in the Bay Area and Central Estuary, 2000



Source: 2000 U.S. Census; ESRI; Center for Community Innovation, 2009

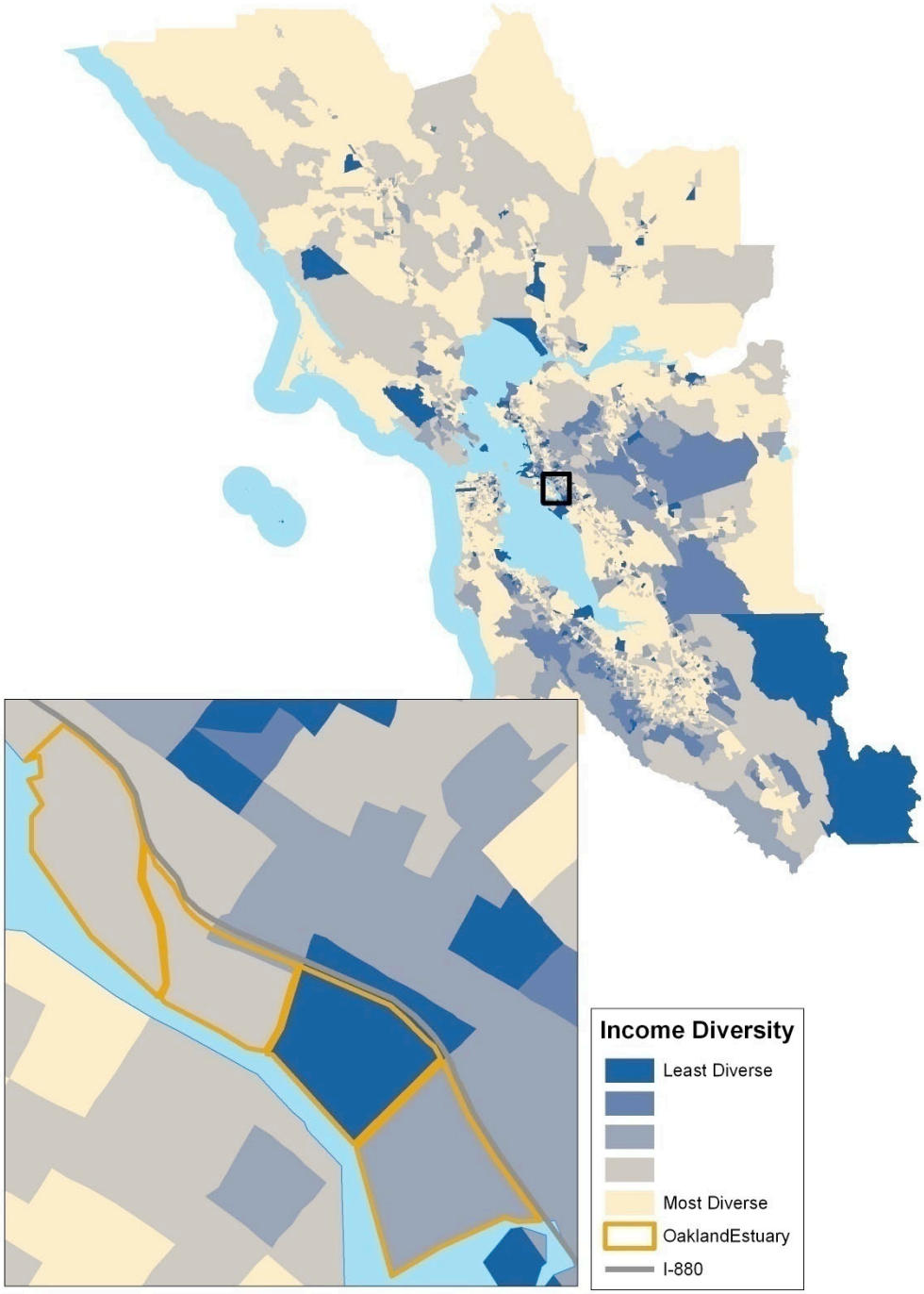
Figure A.3: Youth Facilities per Capita in the Bay Area and Central Estuary, 2000



Source: National Center for Charitable Statistics; ESRI; Center for Community Innovation, 2009

Three **income** variables, (including income diversity, see Figure A.4) make a significant difference in whether a neighborhood will gentrify. Income diversity is a very important indicator: if an area is more diverse, i.e., has relatively equal representation across the six income groups, then it is more likely to attract this form of neighborhood change.

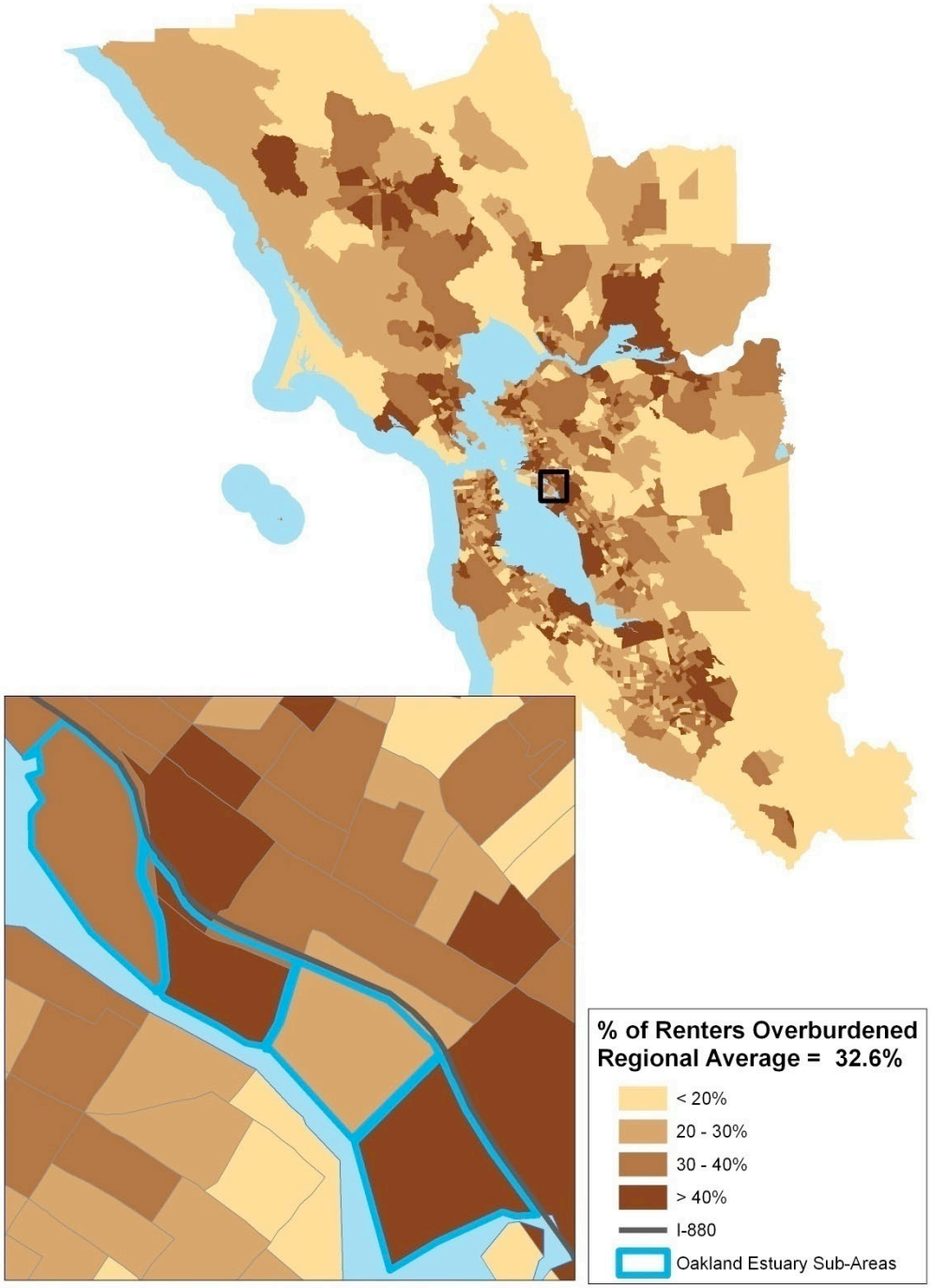
Figure A.4: Income Diversity in the Bay Area and Central Estuary, 2000



Source: 2000 U.S. Census; ESRI; Center for Community Innovation, 2009

Likewise, if there is a high share of renters who pay over 35% of their income for rent, then the neighborhood is more susceptible (see Figure A.5). It is easy to envision what occurs in this case: as an influx of newcomers increases area rents, these overburdened renters find themselves unable to pay an even higher share of their income for rent, so they depart, leaving more vacancies for new gentrifiers. In contrast, neighborhoods with concentrations of overburdened owners are less likely to gentrify, perhaps because the neighborhoods with high concentrations of home ownership tend to be more affluent.

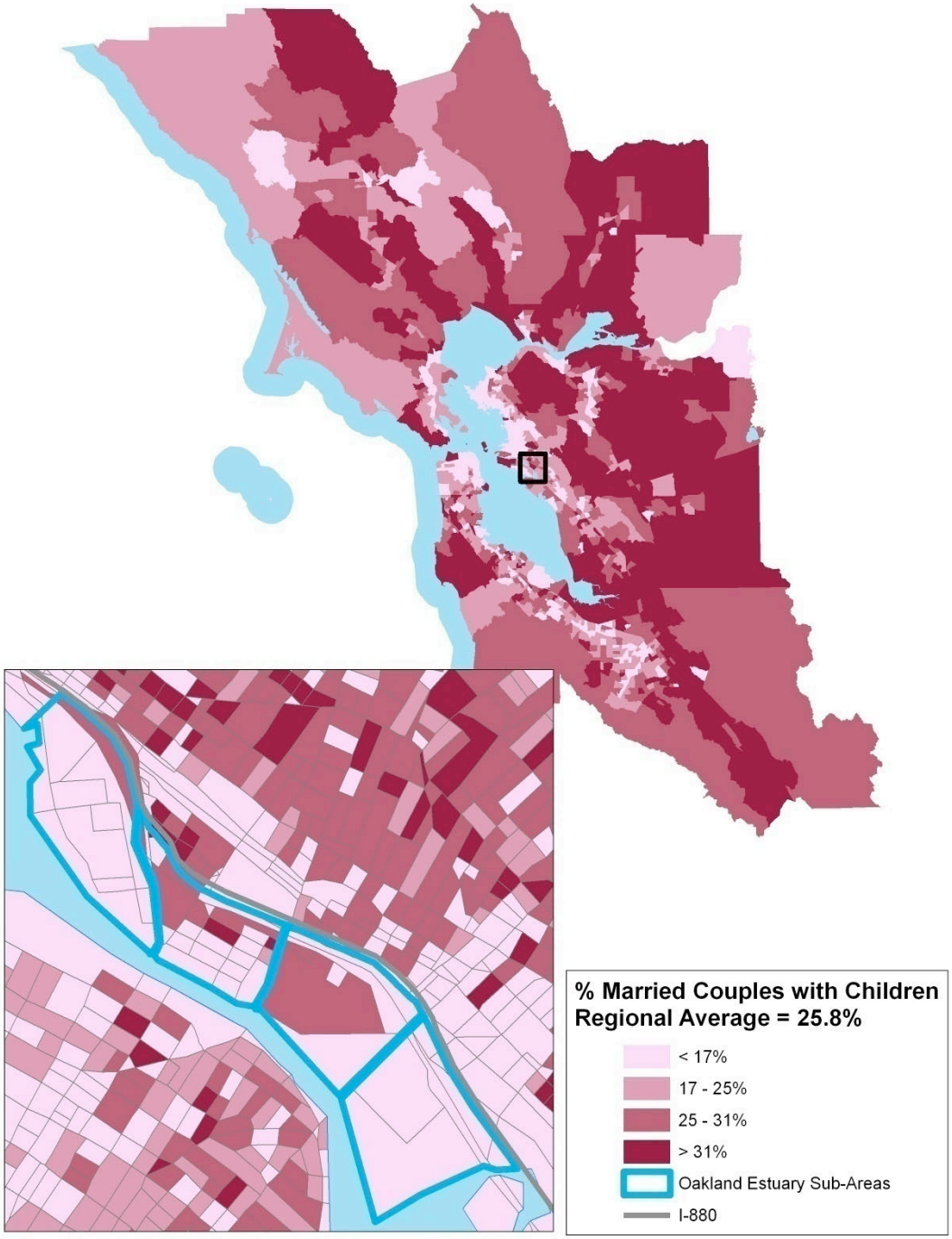
Figure A.5: Rent Burden in the Bay Area and Central Estuary, 2000



Source: 2000 U.S. Census; ESRI; Center for Community Innovation, 2009

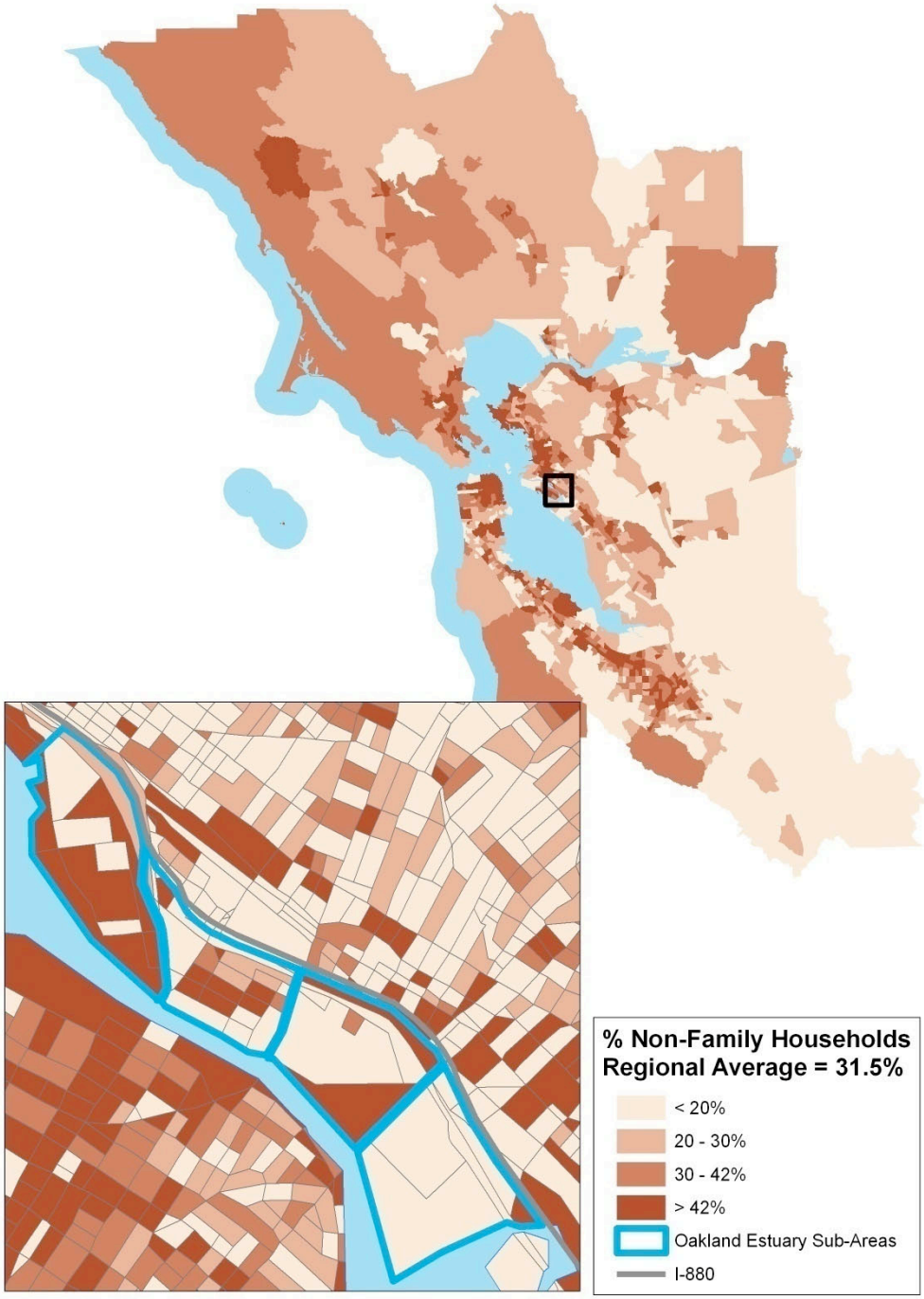
One predictable, but important, **demographic** variable that leads to gentrification is a larger share of nonfamily households. In contrast, the more non-Hispanic whites are in the area, the less likely it is to gentrify: the most susceptible areas are majority minority. Likewise, the more married couples with children, the less likely the area is to gentrify (though there are some exceptions in areas with concentrations of Latino families, e.g. San Jose) (Figures A.6 and A.7)

Figure A.6: Household Types in the Bay Area and Central Estuary, 2000



Source: 2000 U.S. Census; ESRI; Center for Community Innovation, 2009

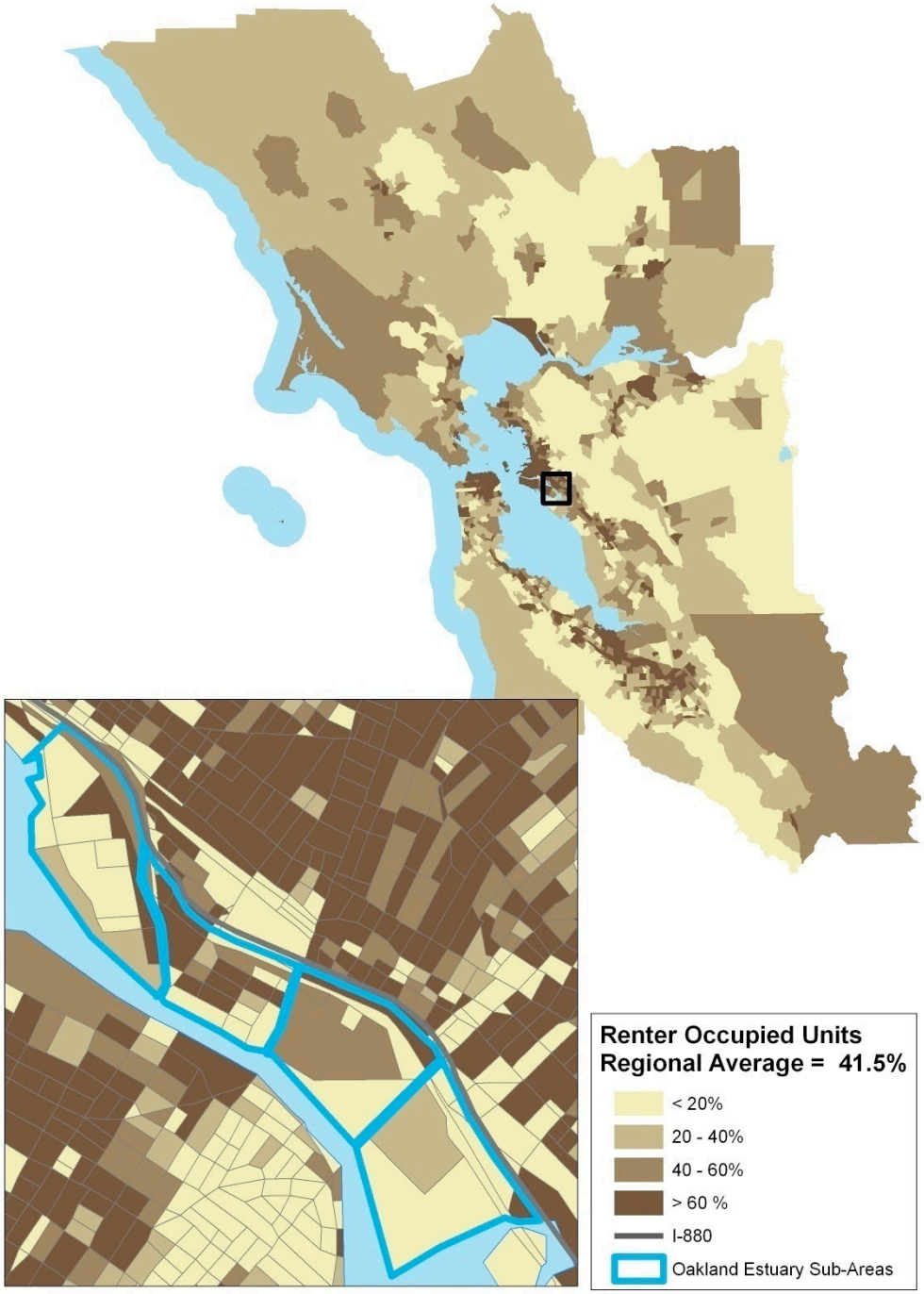
Figure A.7: Non-Family Households in the Bay Area and Central Estuary, 2000



Source: 2000 U.S. Census; ESRI; Center for Community Innovation, 2009

Finally, four types of **housing** variables, closely related to each other, matter significantly. In particular, the higher the share of multi-unit buildings (with three or more units) and the higher the share of renter-occupied housing (Figure A.8), the more likely the area is to gentrify, perhaps because change can occur more rapidly through turnover of rental units.[21] Not surprisingly, the higher the median gross rent, the less likely the area is to gentrify (since it may be affluent already). Finally, the higher the number of public housing units, the more likely the area is to gentrify, perhaps because there is often a lot of mobility in neighborhoods adjacent to public housing.

Figure A.8: Renter Occupancy in the Bay Area and Central Estuary, 2000



Source: 2000 U.S. Census; ESRI; Center for Community Innovation, 2009

If these factors caused gentrification in the past, then they are likely to make neighborhoods more susceptible to gentrification in the future. We can look at how each tract scores on each of these factors to determine whether it is likely to gentrify by 2010 or shortly thereafter.

For each tract, CCI looked at whether it is above or below average on each of the nineteen factors in 2000. For instance, the East Northside neighborhood of San Jose has a below average share of non-Hispanic whites (13% compared to 50% in the region) but an above average share of overburdened renters (35% compared to 30% in the region). Since tracts with a below average share of non-Hispanic whites are more likely to gentrify, this neighborhood scores 1 on this factor; likewise, since tracts with above average rent-burdened households are more likely to gentrify, this neighborhood also scores 1 on the rent burden factor. CCI added the scores across all nineteen factors to come up with the susceptibility index. To qualify as highly susceptible, a tract has to score 1 on 16 or more factors, have a median income below the regional median, and be within one-half mile of a rail or ferry transit station. The most susceptible tracts are concentrated in or near downtown Oakland and San Francisco. Tracts that are moderately susceptible to gentrification have a score of 13, 14, or 15 on the index. There are 90 of these tracts within one-half mile of transit, 61 of which have not gentrified already. Though most are near the major downtowns, they also appear in older suburbs and in urban low-income neighborhoods such as in East Oakland, Bayview, and the Iron Triangle.

Implications

Each of these factors has a direct implication for planning. This research has shown that accessibility to transit (and inconvenience for multiple-car households) makes a neighborhood much more likely to gentrify. This suggests that whenever planners make transit improvements, they should also examine how to preserve and create more permanently affordable housing, whether through joint development, coordination with the housing element, partnerships with nonprofits, or other means. Most amenities, from small parks to public space to youth facilities, seem to be strongly associated with gentrification. Again, this makes an argument for linking planning for open space and other design improvements to various processes for planning and building affordable housing. Some amenities may actually deter gentrification – for instance, this research found that the presence of recreational facilities was negatively associated with gentrification. This finding warrants further research, but does suggest the importance of developing amenities that explicitly support the existing population, rather than some potential future residents.

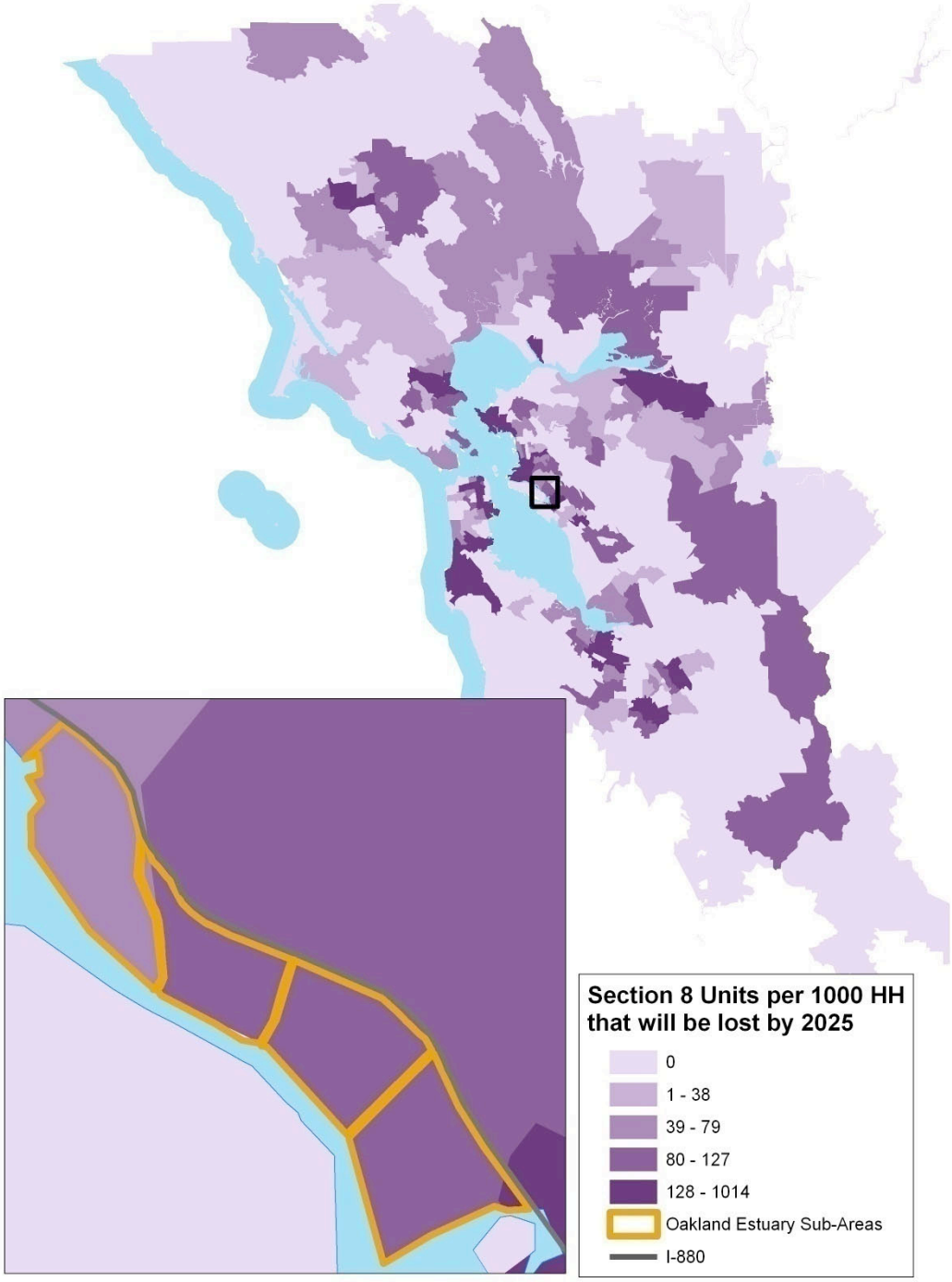
A number of factors lead to direct implications for affordable housing planning. The association of non-family households with gentrifying areas suggests that planners might slow this type of neighborhood change by requiring buildings with larger units (e.g. three or more bedrooms) and amenities that cater to children or the elderly. Most susceptible to gentrification are neighborhoods with multi-unit, renter-occupied buildings. Cities with rent and eviction controls should make sure that these buildings remain protected; if they are project-based Section 8 or some other type of subsidized housing with expiring affordability provisions, cities should intervene pro-actively to ensure that they remain affordable. Finally, in areas where renters pay a disproportionately high share of income for rent, planners should identify households with high rent burdens and connect them to rental assistance programs. Pro-active action may be able to preserve housing affordability for tenants as neighborhood rents rise.

Though we are not able to measure how much displacement is taking place in neighborhoods due to gentrification, there are a variety of factors that make it more likely that displacement will occur in a certain neighborhood. Of the factors presented above, renter occupancy and high rent burdens are likely the most strongly associated with displacement, since renters may not have the choice to stay in their unit

as rents increase. In addition, housing policy can prevent or accelerate displacement processes directly: two factors that drive the extent of displacement are rent control and availability of subsidized housing.

The Bay Area has almost 90,000 units of public housing built under the 1937 and 1949 Housing Acts that will for the most part remain permanently affordable (especially if cities do one-for-one replacement as they renovate the projects into mixed-income developments). But nearly half of its subsidized housing stock now consists of units built since the 1970s, in the form of project-based Section 8 (approximately 20,000 units), Low Income Housing Tax Credit projects (almost 60,000 units), or other programs. Many of these programs have expiring affordability clauses; in other words, the government helped to fund the projects based on a commitment to keep the units affordable to low-income families for a period of years (from 15 to 30). Projects that are in gentrifying areas and are not managed by nonprofits often convert the units to market-rate once the affordability clause expires. Figure A.9 illustrates the potential loss of subsidized housing because of expirations in the project-based Section 8 program; if a project is not managed by a nonprofit, it is deemed more likely to be lost to the market when the project expires. Figure 23 show that by 2025, just under 4,000 remain in the Bay Area. It is possible that more units will be retained, as intermediaries such as LISC work actively to transfer this stock to nonprofit management. But much depends on the amount of market pressure in years to come.

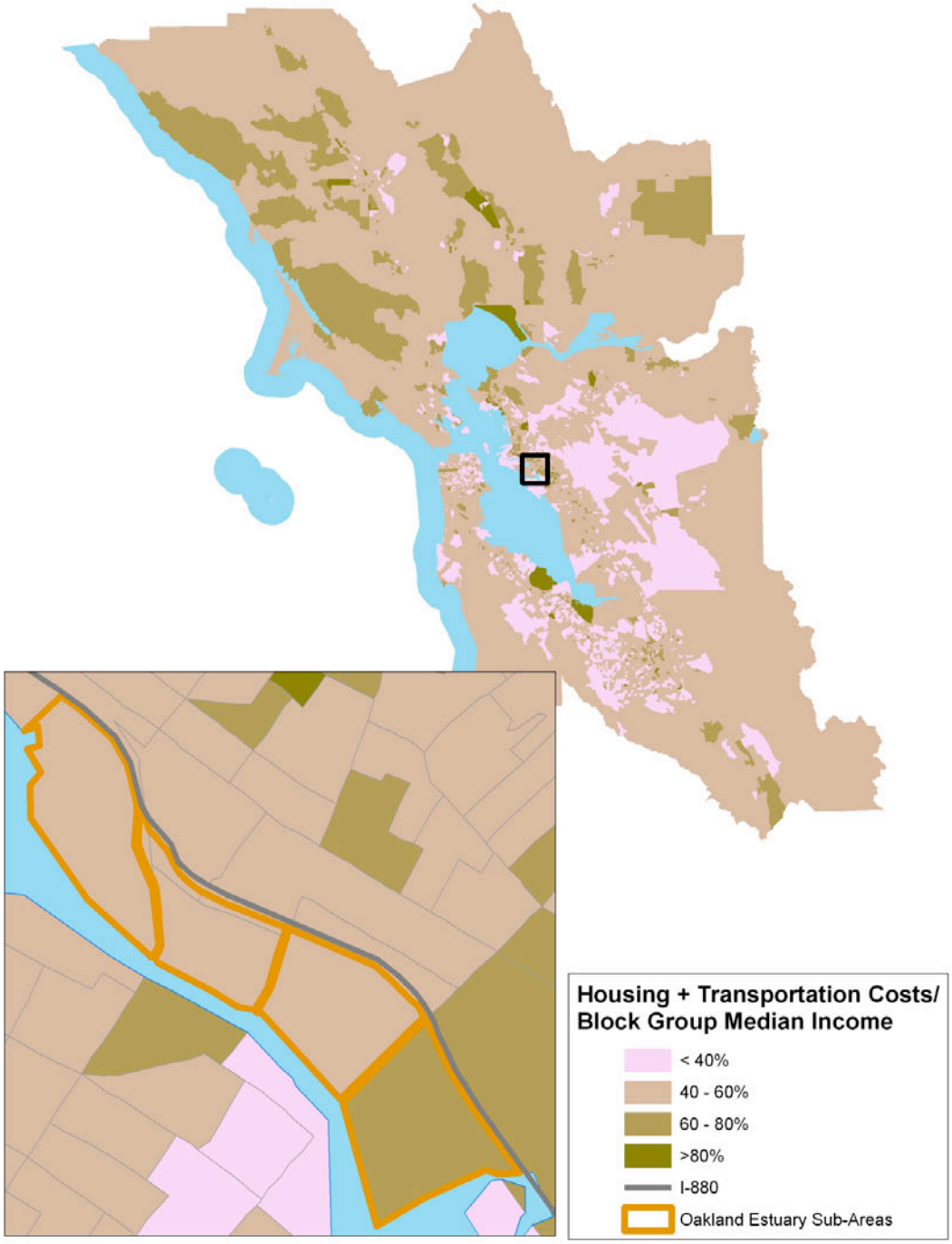
Figure A.9: Potential Loss of Section 8 Units in the Bay Area and Central Estuary, 2000



Source: U.S. Department of Housing and Urban Development; ESRI; Center for Community Innovation, 2009

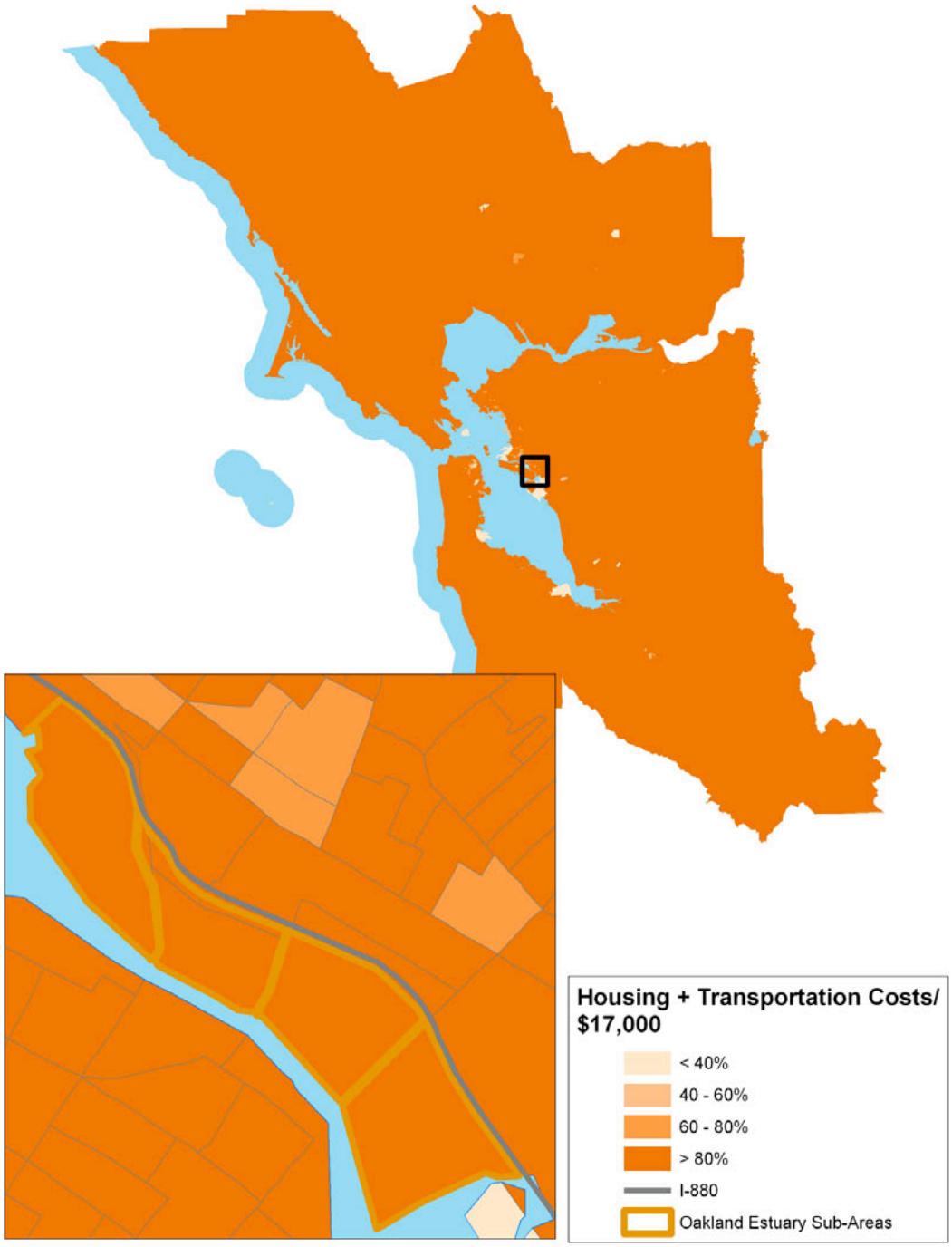
Housing policies drive the supply of affordable housing, but household incomes indicate the demand. Two income indicators suggest potential for displacement because of pressures on the family budget: the compound burden of housing and transportation costs, and the burden of unaffordable mortgages resulting in foreclosure. The Center for Neighborhood Technology (in collaboration with the Center for Transit-Oriented Development) has devised a methodology to estimate how much households of different income levels pay for both housing and transportation (H+T). Overall, in the Bay Area, households pay 48% of their income for housing and transportation costs combined. However, low-income households pay a much greater share of their income for H+T: in fact, were it not for public subsidies that help pay for H+T, some low-income households would find that the two combined exceed their entire income (see Figures A.10 through A.12). Figure A.12 maps H+T for families at the 25th percentile of household income or below ($35,000) for block groups in the Bay Area. Low-income households living in the core areas and/or near transit tend to have a much lower H+T (less than 65%) than households living in outer areas. In neighborhoods highly susceptible to gentrification, an H+T that is disproportionately high indicates that residents are unlikely to be able to stay in the absence of supportive housing policies.

Figure A.10: H+T Burden, Median Income in the Bay Area and Central Estuary, 2000



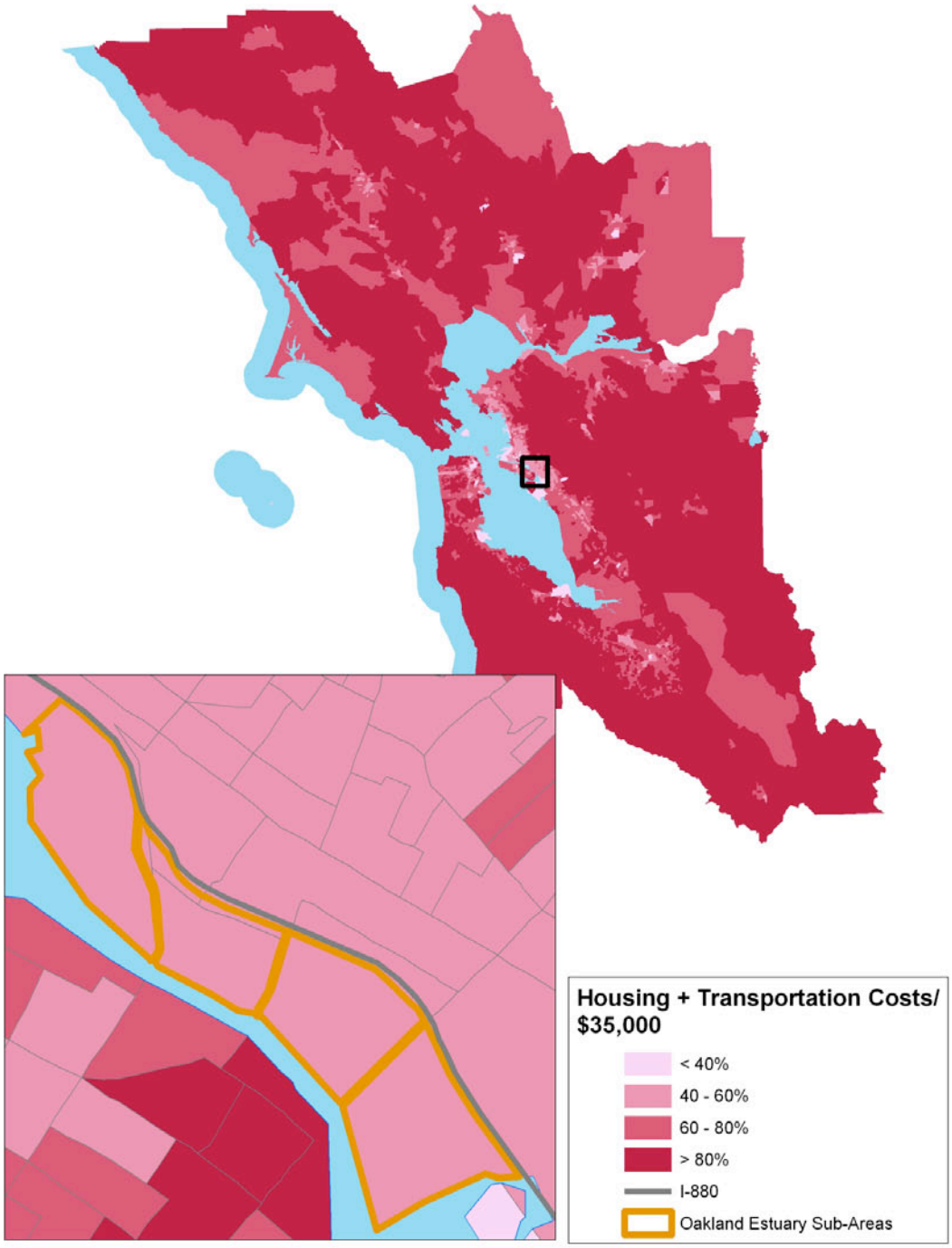
Source: Center for Neighborhood Technology; Center for Community Innovation, 2009

Figure A.11: H+T Burden, Very Low Income Households in the Bay Area and Central Estuary, 2000



Source: Center for Neighborhood Technology; Center for Community Innovation, 2009

Figure A.12: H+T Burden, Low Income Households in the Bay Area and Central Estuary, 2000



Source: Center for Neighborhood Technology; Center for Community Innovation, 2009