

# Alameda Point Station Area Plan

## Transit-Oriented Development Alternatives

Funding Provided by the Metropolitan Transportation Commission (MTC), Alameda County Transportation Improvement Agency (ACTIA) and the City of Alameda.

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## A. Executive Summary

This transit oriented development alternatives analysis for Alameda Point examines the relationships between land use and transportation by comparing three different conceptual development plans. The analysis focuses on land use and urban design strategies that can increase and support transit use at Alameda Point and decrease automobile dependence, automobile trips, and congestion resulting from redevelopment of Alameda Point. The analysis is not intended to identify a preferred development alternative for Alameda Point. The analysis is intended to inform the community's discussion about land use, density, and transportation at Alameda Point and provide concepts and measures that can be used to evaluate future development plans proposed by developers of Alameda Point.

The three conceptual alternatives evaluated in this study are:

### **Alternative 1, Preliminary Development Concept:**

The 2005 Preliminary Development Concept (PDC). This conceptual plan includes approximately 1,800 new housing units and approximately 9,000 new jobs. The residential component of the plan is constrained to single-family homes and two-family homes (duplexes or duets) and a maximum residential density of 21 units per acre. The plan includes 450 affordable housing units (25% of 1800). One hundred fifty seven (157) of the affordable units are located in multifamily rental units. To

make room for the residential units, a number of buildings that contribute to the character of the NAS Historic District must be demolished. All residents and businesses pay annually into a transit district which funds additional transit services to supplement AC Transit bus service and ferry service to Alameda Point. The funds are used to fund shuttle services to BART, car share facilities, transit facilities, and other transit improvements.

### **Alternative 2, Transit Enhanced PDC:**

The Transit Enhanced PDC conceptual plan also includes 1,800 housing units, 450 affordable housing units, and 9,000 jobs. In this alternative, the 1,800 units are distributed among a much more diverse range of housing types ranging from large-lot single-family homes to four and five-story multi-family residential structures with ground floor retail to lofts and studios in rehabilitated historic structures. The maximum residential density is approximately 32 units per acre. All residents and businesses pay into the transit district, similar to the PDC.

### **Alternative 3, Transit Plus:**

This conceptual plan includes approximately 4,000 housing units, 1,000 affordable units (25%), and 9,000 jobs. The units are distributed among the full range of housing types that are available in the Transit Enhanced PDC and also limited to four to five stories, but within the transit station area, a maximum

residential density of 48 units per acre is allowed. All residents and businesses pay into the transit district, similar to the PDC and the Transit Enhanced PDC.

The major findings of the analysis are:

### **Alternative 1: Preliminary Development Concept (PDC):**

- By limiting the range of housing types to single family and duplex housing units with a maximum density of one unit for every 2,000 square feet of land (21 units per acre), the PDC effectively limits the total number of housing units possible at Alameda Point, thereby limiting the number of automobile trips that may be expected to occur.
- The physical form and household characteristics of Alameda Point under the PDC will be similar to Harbor Bay development with over 90% of the housing being single-family or two-family homes. The limited range in housing types will attract a limited range of household types and incomes.
- The transportation characteristics of the households in the PDC will also be similar to Harbor Bay with approximately 16% using the ferry, AC Transit, or BART to commute to work. (The major difference between the PDC and Harbor Bay is that all PDC households and businesses will be paying into a transit district. This may encourage a larger percentage of households to use the transit provided

than at Harbor Bay. At Harbor Bay, only the businesses pay for shuttle services to BART.)

- Prohibiting residential adaptive reuse of the historic buildings and limiting residential development to land intensive single-family homes increases the economic incentive to remove historic structures in the PDC.
- The narrow range of housing types provided weakens the economic viability of the PDC.

### **Alternative 2: Transit-Enhanced PDC:**

- The Transit Enhanced PDC includes a greater variety of housing types, which will attract to a wider range of household types and incomes.
- Allowing multifamily housing enables the Transit Enhanced PDC to locate more households within walking distance of the transit station.
- The Transit Enhanced PDC generates more transit trips and fewer automobile trips than the PDC. A typical household in a multi-family building generates fewer auto trips and more transit trips than a typical household in a single-family unit. A typical moderate-income or low-income household generates fewer automobile trips and more transit trips than a typical household that can afford to buy a market rate single-family home.

- The physical form and household characteristics of the Transit Enhanced PDC, with approximately 50% of the units in multi-family structures, will be more similar to the form and household characteristics found on the main island of Alameda.
- Allowing residential adaptive reuse of the historic buildings and concentrating some of the housing in multifamily structures reduces the economic incentive to remove historic structures in the Transit Enhanced PDC relative to the PDC.
- The wider range of housing types provided improves the market absorption of the Transit Enhanced PDC relative to the PDC. However, the replacement of single-family homes with the same number of multi-family units also reduces the overall value and economic viability of the development plan, reducing its ability to attract private investments and capital.

### Alternative 3: Transit-Plus Scenario

- The additional housing units in the Transit Plus alternative generate more transit riders and more automobile trips than both the PDC and the Transit Enhanced PDC.
- The additional units also generate significantly more funding for transportation improvements such as bus rapid transit improvements from Alameda Point to the 12th Street

BART station and the Fruitvale BART station. If these improvements attract 1 % of current Alameda commuters to switch from their cars to transit, this reduction in commute trips would offset the additional cars generated by the Transit Plus alternative.

- The physical form and household characteristics of the Transit Enhanced PDC will be more similar to the form and household characteristics found on the main island of Alameda.
- Allowing residential adaptive reuse of the historic buildings and concentrating some of the housing in multifamily structures reduces the economic incentive to remove historic structures in the Transit Enhanced PDC relative to the PDC.
- The increase in the number of units also makes the Transit Plus alternative the most financially feasible of the three alternatives.

### Conclusions:

In evaluating any future development plan for Alameda Point, (whether it is Measure A compliant or not) the citizens of Alameda should evaluate and determine whether the Plan adequately addresses the following principles for a transportation sensitive plan for Alameda Point:

- **Diversity:** The greatest feasible range of housing types should be provided to ensure that the plan reflects Alameda

character and form, to ensure that the plan can attract a variety of household types and incomes, and to support transit and minimize automobile use and congestion.

- **Proximity and Density:** People living and/or working within easy walking distance of a transit station are more likely to use transit; therefore, the plan should maximize to the extent feasible the number of residents and jobs within ¼ mile or ½ mile of the primary transit facilities.
- **Funding for Transportation:** To maximize transit services and minimize automobile congestion, every household and business at Alameda Point should provide annual funding for supplemental transit services. This will attract households and business that are interested in using transit and provide a stable annual funding source for supplemental transit services and facilities.
- **Transportation available to all Alamedans:** To the extent feasible, an Alameda Point transportation program should improve transit services for all Alamedans, not just the residents and businesses at Alameda Point.

## I. Introduction

a. Purpose of Study | b. Approach to Analysis

## a. Purpose of Study

This Alternatives report is part of the Station Area planning process for Alameda Point that has been funded under a grant from the Metropolitan Transportation Commission (MTC) and the Alameda County Transportation Improvement Agency (ACTIA) as part of their Smart Growth / Transportation for Livable Communities initiative. The intent of the grant program is to assist local communities in preparing local land use plans and policies that support greater transit use. The purpose of the Alameda Point Station Area Plan is to help inform the Alameda community about the relationship between land use and transportation at Alameda Point and to identify the range of transit-supportive features that could be incorporated into future redevelopment plans to support high levels of transit ridership.

This station area planning process takes place in the context of previous planning work undertaken for Alameda Point by the City of Alameda. On February 1, 2006, the Alameda Reuse and Redevelopment Authority staff and the ROMA Design Group completed work on the Alameda Point Preliminary Development Concept (PDC). The PDC is a planning study for the redevelopment of a 700-acre portion of the former Alameda Naval Air Station (Alameda Point). The PDC represents the first effort to create a detailed land use program and plan for the reuse and redevelopment of the former Air Station that reconciles the community's visions and goals for the former facility with the site's significant transportation, environmental,



Site Context

governmental, and fiscal constraints. This important work raised a series of major questions about the future of Alameda Point that require further study and community consideration, including:

**Traffic and Transportation:** Are there redevelopment strategies that would more effectively address the transportation constraints facing Alameda Point and the city as a whole?

**Community Character:** Are there redevelopment strategies that would create new neighborhoods that more closely reflect the variety and character of neighborhoods and communities in Alameda?

**Historic Preservation:** Are there redevelopment strategies that would preserve more buildings within the Historic District without jeopardizing the financial feasibility of redevelopment?

**Financial Feasibility:** Are there redevelopment strategies that would result in more financially feasible development that would be less reliant on City resources and/or could enhance public services, amenities and facilities?

The Alameda Point Station Area Plan process, and this Alternatives report in particular, are intended to assist the Alameda community in answering these critical questions for the future development of Alameda Point.



Big Whites



Sea Plane Hangars



BEQ



## b. Approach to Analysis

The Station Area Plan Alternatives Analysis examines three alternative land use scenarios to better understand the relationship between land use, community character, and transportation at Alameda Point. The three alternatives include the PDC and two variations on the PDC. The purpose of the analysis is to assist in the formulation of the best possible final development plan for Alameda Point. None of the three alternatives examined is intended, nor designed, to serve as the final development plan for Alameda Point. They are designed as hypothetical case studies that highlight the implications of different policy choices on factors such as circulation and transit, community character, and financial feasibility. The goal of the analysis is to inform the community's discussion about which policies and strategies would most successfully support high quality, transit-oriented development at Alameda Point that complements and enhances the quality of life in Alameda.

To allow for quantitative, as well as qualitative, comparison of the alternatives, each alternative includes a land use program that specifies the maximum amount of development that would be allowed at Alameda Point, and a transportation plan that specifies the minimum level of transportation service that would be provided. The Alameda Point collaborative's existing 200 low-income households are not included in the development program, but all of the concepts assume that the collaborative would remain.

To ensure that the minimum level of transit service assumed for each alternative is realistic, the analysis limits the assumed transportation strategies to those that could be implemented without the need for discretionary approvals or funding from outside agencies for the construction of major new transportation infrastructure.

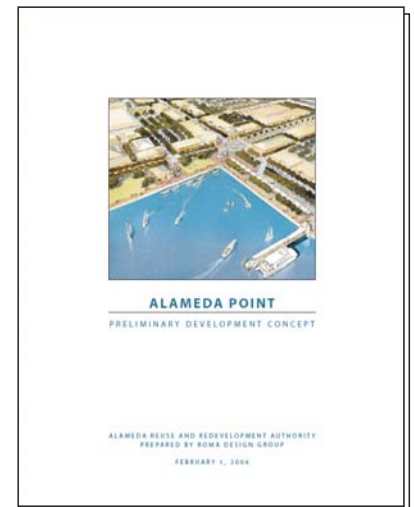
Therefore, the transportation plan for each alternative assumes that public transit service and facilities would be provided by a combination of Alameda-Contra Costa Transit (AC Transit), Water Emergency Transit Authority (WETA), and supplemental services provided and paid for by the development at Alameda Point.

All three alternatives are shaped by, and designed to implement, the City of Alameda General Plan development objectives for Alameda Point, which are to:

- **Integrate Alameda Point seamlessly with the rest of the City:** Encourage development that is community-oriented and in keeping with Alameda's traditional character and scale.
- **Foster a vibrant new neighborhood:** Support creation of new, active neighborhoods that encompass a variety of uses, but do not unduly impact established neighborhoods.
- **Maximize waterfront accessibility:** Create a publicly accessible waterfront

that includes a perimeter shoreline trail along the San Francisco Bay and Oakland Estuary.

- **De-emphasize the automobile and make new development compatible with transportation capacity:** Promote the use of alternative modes of transportation—such as bicycles, shuttles and water taxis—to reduce present and potential future congestion.
- **Ensure economic development:** Support long-term reuse of Alameda Point that will replace jobs lost due to cessation of Naval operations, and will foster economic growth and development that benefits the community at large.
- **Create a mixed-use environment:** Promote a variety of uses at Alameda Point and a mixed-use development approach that creates walkable, transit-supportive neighborhoods that maintain the desired small town feeling.
- **Establish neighborhood centers:** Create centers in each neighborhood that serve as a focal point for community activity and social interaction; allow for commercial, civic, community support services, cultural and recreational uses within walking distance to all residents; and incorporate access to local transit.



*Preliminary Development Concept (PDC), February 1, 2006*

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## II. Principles and Challenges at Alameda Point

a. Transit Supportive Principles | b. Challenges: Transportation | c. Challenges : Landuse Constraint - Measure A

## a. Transit-Supportive Principles

### Principles of Transit-Supportive Development

The crafting of the two alternatives to the PDC was informed by a series of planning and urban design principles that research has shown contribute to making communities more transit-supportive. These principles can be divided into three general categories: Land Use factors, Physical factors, and Transportation service factors.

#### A. Land Use Factors

##### 1. Mix of Uses :

Creating a complementary mix of uses near transit has been shown to increase transit use and reduce vehicle trips. For example, integrating retail uses with employment and residential uses near transit allows residents and workers to take transit and conveniently meet many of their daily needs without needing an automobile.

Locating retail and commercial services near transit and within walking distance of residential and employment areas has the dual effect of reducing automobile trips and enhancing transit use. It allows commuters to meet many of their daily retail and service needs in the course of their regular movements to and from transit, thus reducing the need for additional side trips. By locating retail within walking distance of homes and jobs, it also allows commuters to walk to these services, and eliminates the need for an automobile.

People living within a 5-minute walk of shops and services are more likely to walk, bike, or use transit to access shops and services than people living more than a 5-minute walk from shops and services. People living within a 10-minute walk of shops and services are more likely to walk, bike or use transit to access shops and services than people living more than 10 minutes from shops and services.

Mixed use development that integrates higher density residential development (e.g., 2-5 stories) over commercial retail within walking distance of transit and shops and services generates fewer automobile trips and more transit trips than the same number of residential units in a single family residential plan.

Locating retail near transit will also enhance the viability of local-serving retail by creating a built-in customer base. Research shows that retail, office, and employment development near transit stations generally out-performs competitive markets and also enjoys land-value premiums.

Given the local-serving character that is likely for most Alameda Point retail, due to its relative isolation, increasing the number of people living, working, and commuting near retail will be important to enhancing its viability and vitality.



*Mixed Use development along Transit, Fruitvale Village*



*Low-Rise Mixed Use Development, Center Street, Berkeley*

## 2. Types of Uses:

Not all uses are equally supportive of transit. Uses that have numerous employees and/or attract numerous customers, such as office, retail, and service uses, are much more transit supportive than lower intensity employment uses such as industrial and warehousing activities that typically do not have enough employees to support regular transit service. Similarly, retail activities that sell in bulk or sell large products such as furniture are less likely to support transit because their products are difficult for buyers to transport via transit.

## 3. Housing Choice and Community Character:

The character of a community and the types of people who live there can determine the community's travel habits. A suburban-style community will make a larger share of its trips in automobiles; a more urban mixed-use community will make a larger share of its trips via transit, walking, and bicycling.

National studies have shown that well-designed, mixed use development around transit stations can boost transit patronage as much as five to six times higher than comparable development away from transit. Self-selection plays an important role in these statistics, because residents who prefer to ride transit are drawn to live in transit-oriented developments (TODs).

A diversity of housing types can reduce traffic and increase transit use because different types of households have different travel habits. Studies show that as housing

diversity increases, per household transit trips increase and per household car trips decreases.

Generally, single-family homes attract larger households which in turn own the greatest number of cars and generate the greatest number of automobile trips and least amount of transit use. In contrast, smaller and more compact housing types (e.g., apartments, flats, lofts, townhouses, etc.) attract smaller and more diverse households who own fewer cars and generate fewer vehicle trips and more transit use.

Research shows that 200 single-family homes in a suburban environment generates the same amount of peak hour vehicle trips as 388 multi-family homes in more urban mixed use environment.

Household income is also a factor that influences the use of transit. Market rate single family homes generate the highest rate of daily car trips and the fewest number of transit/bicycle/walking trips. Market rate multi-family housing units own fewer cars, generate fewer daily car trips and more transit use than market rate single family homes. Finally, affordable housing units generate fewer vehicle trips, more transit use, and own fewer cars than market-rate multi-family housing units as shown in the adjoining chart.

Thus, the diversity and intensity of housing and land uses at Alameda Point will determine both the types of households and businesses that locate at Alameda Point and the degree to which it supports transit and minimizes new vehicle trips.



Community Character: Mixed Use Building, Rockridge.



Fourplex Courtyard Housing, Fremont (Courtesy: Van Meter Williams Pollack)

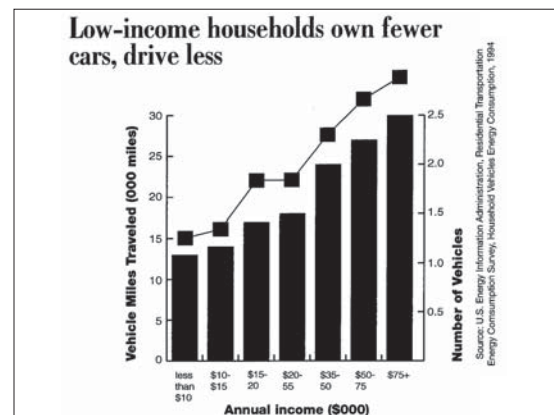


Chart showing relationship between vehicle trips and household types

## B. Physical Factors

### 1. Proximity:

Convenience and physical proximity are critical factors in creating a transit-supportive environment. Studies show that locating housing and employment in close proximity to transit significantly improves transit use and also reduces automobile trips. More specifically, being close enough to walk to and from transit is the critical factor.

People living within a ½ mile, or approximately a 10-minute walk, of a transit station are significantly more likely to use transit than those living farther away, and transit ridership is greatest for those who live within a 5-minute walk (approximately 1/4 mile) of a transit station. A 1/2 is about the limit that the average person is willing to walk to take transit.

Compared to the regional average, Bay Area residents who live within a ½ mile of a transit station are:

- Twice as likely to take transit to work;
- More than three times as likely to bicycle or walk to work, and
- Drive nearly half as much.

In the Bay Area, nearly one third of those people who both live and work within a ½ mile of a transit station (Ferry and Bus terminal interchange) use transit.

Residents who live 0.5 to 1.0 mile from a transit station also tend to drive less and ride transit more, compared to more distant locations, but considerably less than those

that live within a ½ mile of a station. Bay Area studies show that in the 0.5 to 1.0 mile radius, that the commute mode share for transit is nearly half that of the area within a 0.5 mile of the transit station.

### 2. Density:

Transit efficiency and effectiveness generally increases with population density, including both residential and employment densities. The more people located near transit, the more who are likely to use it. The more people who use transit, the better and more frequent the transit service will be. Generally, residential densities of at least 12 dwelling units/acre are needed to support minimal regular transit service. The frequency of service is much more effective and economically sustainable when densities are 25 dwelling units/acre or greater.

### 3. Access:

Safe and convenient pedestrian access to transit is also an important factor in transit use. Pedestrian access to transit needs to be convenient, safe, and attractive to support active transit use. Enhanced pedestrian street crossings, pedestrian-only streets, mid-block alleys, and wide sidewalks are all features that can enhance pedestrian access to transit. Even if uses are located within a 5-minute walk of transit, if pedestrian access is considered difficult and/or unsafe it will negatively impact ridership.



#### Physical Factors:

- Proximity
- Density
- Access

## C. Transportation Service Factors

### 1. Frequency:

The more frequently transit runs, the more likely it is that people will consider it a convenient and viable alternative to the automobile. Frequency of transit service is primarily a function of the number of transit riders. Thus, locating homes, jobs, retail, services, and entertainment near transit will tend to increase the ridership, which in turn will increase the frequency of service, which in turn will increase ridership.

### 2. Trip Duration:

The length of time transit takes to reach its destination is an important factor in people's choice to use transit. If transit takes about the same or less time than driving, it becomes a particularly attractive alternative. While community design cannot directly affect the duration of trips, if densities support high enough ridership, it does begin to make possible transit strategies that can reduce travel times, such as express routes, bus rapid transit, and light rail.

### 3. Mode Transfer:

The more times a transit user has to change modes of travel (e.g., car, bus, train, ferry) to get to their destination, the less likely they are to use transit. For example, a person who needs to drive and park to catch a bus/ferry and then transfer to a bus/subway to get to work, is much less

likely to use transit than a person who can walk to catch the bus/ferry that drops them within walking distance of their work at the other end. Thus, it is critically important to locate jobs and housing within walking distance of transit in order to eliminate at least the first travel mode (i.e., driving). Similarly, it is important where transfers do occur to make them as convenient as possible, so there is as little physical or temporal gap between travel modes.



Image : Phil Douglas

#### Transportation service Factors:

- Frequency
- Trip Duration
- Mode Transfer

## i. Challenges : Transportation Constraints

### The Current Challenges:

As an island, access to and from Alameda is limited. Vehicular and bus access to Oakland and the larger region are limited to the Webster and Posey Tubes on the west end of the island and the Park Street, Fruitvale, High Street, and Otis Street Bridges on the east end. Water access to San Francisco is provided by the Alameda/Oakland Ferry from Alameda Point and from Harbor Bay Business Park at the east end of the island.

Alameda Point's location on an island with limited access represents a significant transportation constraint on the community's ability to redevelop the former Naval Air Station. The Webster and Posey Tubes in particular represent traffic bottle-necks that require careful planning and creative solutions. Capacity in the tubes and on the streets accessing them is a key constraint to redevelopment at Alameda Point since the tubes are likely to be the primary points of ingress and egress due to their proximity. This constraint, however, is primarily a commute, peak hour constraint.

Construction of an additional bridge or tube for automobiles to relieve this bottle neck is not financially or politically feasible. The City of Alameda does not have the funds or the necessary influence over Caltrans, the City of Oakland, and/or other regional agencies whose approvals would be necessary to construct a new automobile crossing from Alameda through Oakland's neighborhoods to Interstate 880.

Any plan for redevelopment of Alameda Point must include a transportation strategy that addresses the island's access constraints by providing alternative modes of transportation for Alameda Point residents and businesses and minimizes effects of additional traffic generated by redevelopment.

### Transportation Strategies:

Successful development of Alameda Point will require a transportation strategy that addresses the transportation needs of the community and minimizes congestion at the existing automobile crossings of the Oakland/Alameda estuary.

Given the infeasibility of building a new automobile crossing, the transportation strategy for Alameda Point must focus on land use strategies that reduce automobile use, maximize transit use and alternative modes of transportation, and attract residents and businesses that are looking for neighborhoods and commercial districts that are well served by transit.

Given transit's financial and operational requirements, a successful transportation strategy will require land use densities and intensities that are great enough to generate both the financial support and ridership necessary to sustain effective service. This creates the rather paradoxical condition, in which the transportation solution for Alameda Point

Posey and Webster tubes



The Posey and Webster tubes severely limit the access to the west end of the Island



Webster and Posey Tubes



The tubes currently have limited capacity for additional single occupancy peak hour trips



probably requires more development rather than less.

Given the limited capacity of the tubes, the transportation strategy must be multi-faceted and not dependent on any one mode or solution. The transportation strategy will need to:

- Optimize service on all transit systems, including bus, BART, and ferry, through operational and facility enhancements;
- Improve transit services for all Alameda residents and employees to encourage existing auto commuters to shift to Transit;
- Utilize new transit strategies such as bus rapid transit (BRT), water taxis, shuttle service, etc. to complement existing services;
- Promote intra-island transit that builds on Alameda’s tradition of transit and transit-oriented neighborhood centers;
- Provide incentives that reduce car ownership and vehicle trips such as transit passes, car share programs, reduced parking requirements, parking pricing, etc: and
- Allow for partnering opportunities with AC Transit, Alameda Landing Transportation Management Agency (TMA), Oak-to-Ninth Project TDM services, and/or Water Emergency

Transit Authority.  
**Funding for Transportation**

All developments in the West End should contribute financially to support transportation options and transportation demand management (TDM) strategies that will help mitigate associated traffic congestion. With each development and the additional funding, the transit options, frequency, and convenience should improve and expand. Shuttles should transition to buses. Buses should transition to Bus Rapid Transit. Bus Rapid Transit should transition to light rail.

Increasing the number of residents and employees at Alameda Point will support the increase in transit services, but federal, state, and local transportation funds are not adequate to support the service needed to serve the new businesses and homes at Alameda Point and minimize traffic impacts.

The development at Alameda Point must pay for transportation improvements and annual operating costs to support the required service levels. All households and employers will be required to contribute annually to support annual operating costs for transportation to fund supplemental transit service, such as additional AC Transit service, additional ferry services, water shuttle services, supplemental shuttle services to BART.

The recently approved Alameda Landing TDM Plan represents an important first step toward addressing

the significant transportation challenges for the redevelopment of the entire west end of Alameda, including Alameda Point. Alameda Landing tenants and homeowners provide \$425,000 in annual operating funds for TDM operations and management at the following rates to increase annually to account for inflation:

- \$300 per household per year
- \$0.60 per square foot of office
- \$0.36 per square foot of commercial

Alameda Landing will establish a Transportation Management Agency (TMA) to oversee the operation and management of the transportation services. Tenants and homeowners will have representation on the TMA Board, and the City Council will have a seat on the Board to represent the community’s interest. The TMA should be designed to grow as other west end developments are approved. Future West End developments, such as Alameda Point, may be conditioned by the City to contribute funds to the TMA, which would allow the TMA to expand its transportation services to serve the new development sites. Major contributors would be added to the TMA Board.

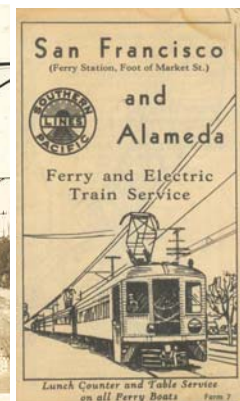
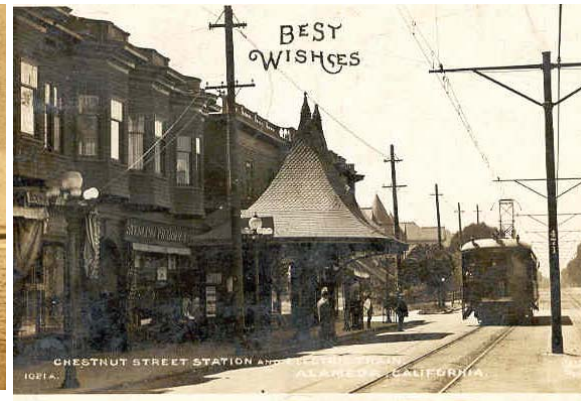
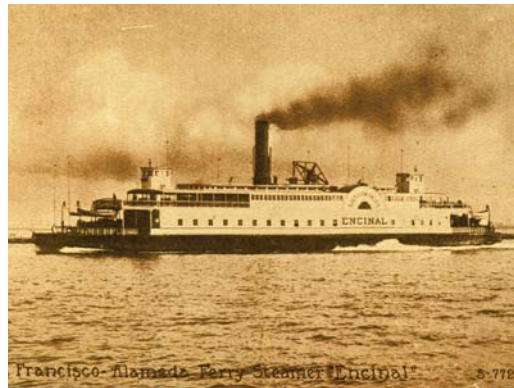
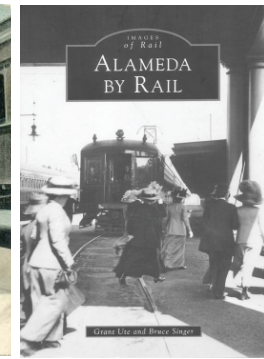
The TDM program is designed so that it can be transferred to AC Transit at such time that the funds available are sufficient to allow AC Transit to increase transit service to the site and provide “eco-passes” to all tenants and residents.

Emeryville is currently working with AC Transit to transfer the successful Emeryville shuttle service to AC Transit .

## History of Transit in Alameda

Although the transportation constraints in Alameda are challenging, solutions and strategies can be found by considering Alameda's past. Alameda developed historically around its transit systems. The earliest settlements in the late 19th century grew up along street-car lines that extended the length of the Alameda peninsula, leading from downtown Oakland and Fruitvale to the ferries to San Francisco. Southern Pacific operated the rail services which ran along the broad streets such as Santa Clara and Lincoln Avenues.

The streetcar network established the orientation of the major streets across the island as well as the pattern of residential development. Neighborhood retail centers developed around the stations, many of which can still be seen today.



Historic Images showing Transit In Alameda



Circa 1878: Map showing Transit in Alameda

### Looking forward to a Transportation Plan for the Alameda Point:

As described in the 2005 Alameda Point transportation Plan, a transportation strategy for Alameda Point incorporates elements from some of the best, most progressive programs in the Bay Area and the country to create a unique transportation environment. The strategy, delivered in phases, should:

- Make transit use convenient and reliable for residents and tenants from the first day that homes are occupied through to full buildout of the area;
- Make walking and bicycling attractive and convenient through land use policies and provision of generous non-motorized transportation facilities; and
- Minimize vehicular trips through land use, transportation, and parking strategies.

The strategy should achieve three key goals:

#### 1. To have the best transit ridership in the City:

According to the 2000 Census, 15.7 percent of current Alameda residents commute to work via transit. This includes AC Transit's transbay bus lines, regular AC Transit service, the Alameda/Oakland Ferry, and BART. The goal of the transportation strategy is to meet and exceed this percentage for residents

and employees of Alameda Point. The first step in achieving this is to create an environment attractive to people likely to use transit by providing good transit connections to employment centers and regional transit. This "Day One" component has several parts. First, as a condition of occupancy, all residents and employers will pay fees to fund new, faster transit connections to Downtown Oakland, BART, and regional transit. Every month, residents and employees will receive an "Eco Pass," funded through the fees, which will allow them unlimited use of AC Transit and/or shuttle, the Ferry, or BART. There will be enhanced ferry service to and from Alameda Point, meaning more frequent ferries.

The project will contribute towards the construction of queue-jumping lanes for buses, which will allow buses to bypass congestion approaching and exiting the Webster and Posey tubes. There will be strong pedestrian and bicycle connections to transit, with a focus on a major transit hub at the Seaplane Lagoon and smaller neighborhood transit nodes throughout the development.

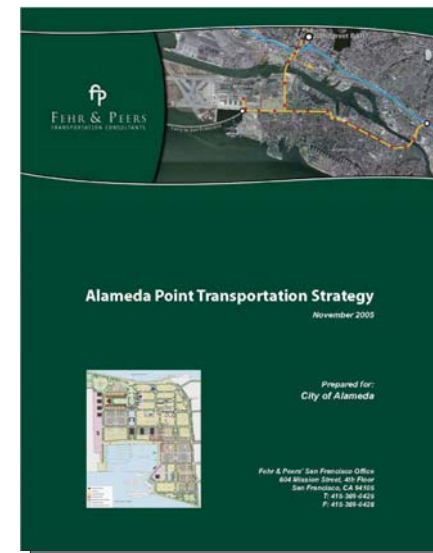
#### 2. To reduce vehicle trips:

The goal of the City's West End Transportation Demand Management (TDM) Program is to reduce commercial trips by 30 percent and residential trips by 10 percent. The project at Alameda Point should exceed these goals. The mandatory pay-in program described above will make riding transit seamless.

Other elements include parking strategies to make the cost of parking readily-apparent to homeowners and to minimize the amount of non-residential parking provided by allowing uses with different peak parking demand (i.e., office and retail) to share common parking areas (this is frequently called shared parking); carsharing pods located throughout neighborhoods to make it easier for residents to own a single car; a Guaranteed Ride Home program making employees more comfortable with using transit to Alameda Point; and a Transportation Coordinator in charge of marketing the non-automobile travel options, organizing carpools, administering certain programs, and expanding and improving transportation strategies described in this report.

#### 3. To work towards long-term transit solutions with island-wide benefits:

Because congestion at all the Estuary and regional freeways will continue to worsen, whether or not Alameda Point is fully developed, the City will continue to examine long-term transit solutions, including Bus Rapid Transit (BRT), Light Rail Transit (LRT), and Group Rapid Transit (GRT), Personal Rapid Transit (PRT), which connect to Downtown Oakland and cross-island to the Fruitvale BART Station. These corridors connect to major employment centers in San Francisco and Downtown Oakland, which are easily served by transit. Improvements to these corridors will provide island-wide benefits.



2005 Alameda Transportation Plan by Fehr & Peers

Routes which are continuous (rather than point-to-point) and expandable gained the most public acceptance during the PDC planning process.

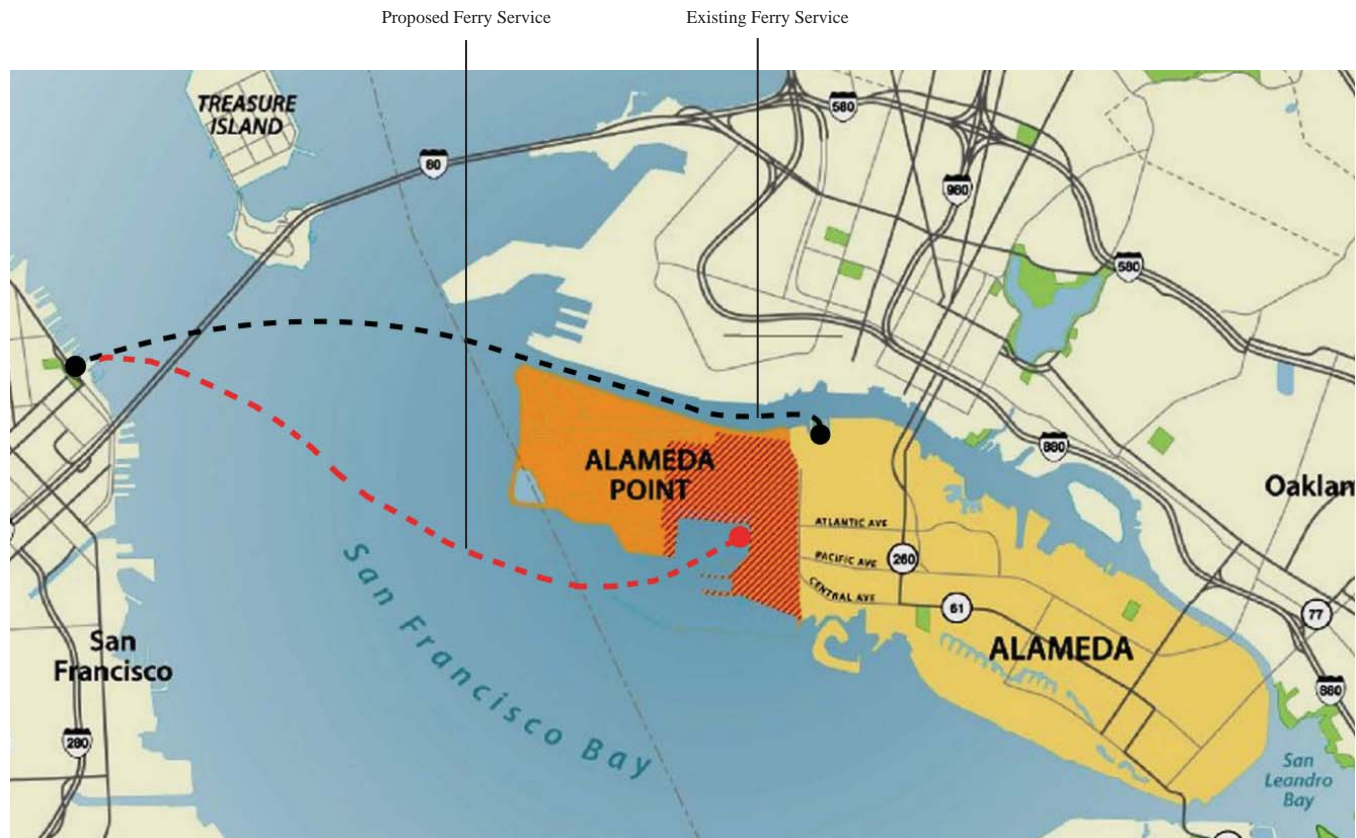
Strategies such as the aerial tramway and the BART extension were not considered desirable. While these strategies work in the corridor from the west end of Alameda to Downtown Oakland, they fail to create island-wide benefits or to serve a wide variety of destinations along the island itself because they are not expandable.

**Relocating ferry terminal:**

The relocation of the ferry terminal to Seaplane Lagoon and the development of new Bus Rapid Transit (BRT) line linking the Ferry Terminal at Seaplane Lagoon and serving both Downtown Oakland through the Tubes and the Fruitvale BART via the Fruitvale Bridge would serve all of Alameda.

A new BRT line across Alameda can also provide improved connections with the existing neighborhoods and their retail centers, bringing back to life the original patterns of movement and transit that were first established in the Streetcar era.

A Rapid Bus Service such as the AC Transit 71R San Pablo line offers a faster and more frequent service than a regular bus line and is an attractive alternative to driving. Combined with an Eco Pass it is a great way to support transit and encourage people to forego driving.



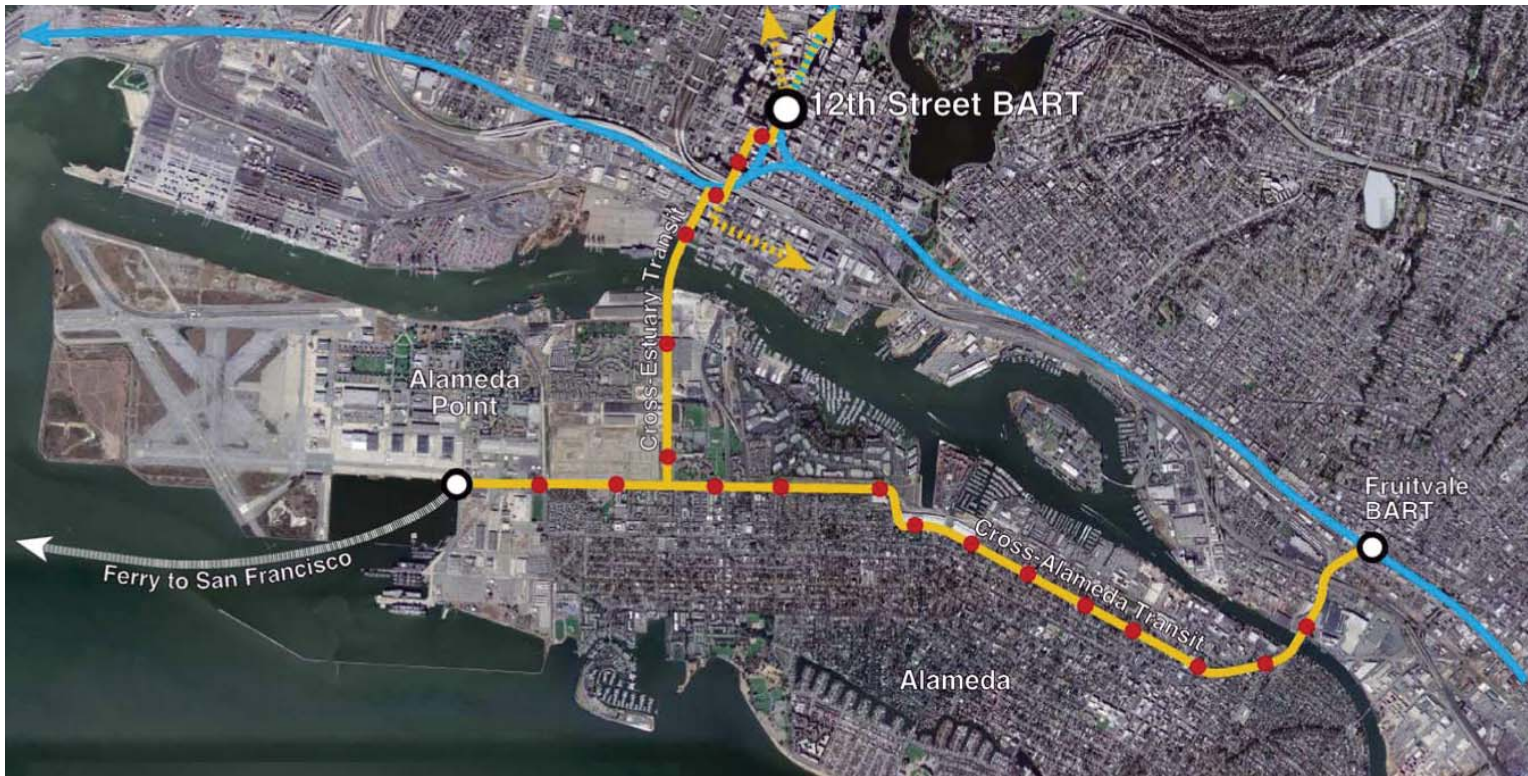
*Proposed and Existing Ferry Service to Alameda*



*Ferry Service to Alameda*



*AC Transit to Oakland*



*Proposed Transit Links to 12th Street BART and Fruitvale BART from the relocated Ferry Terminal*



*Pedestrian friendly environment for walking and biking*



*Car Share Program*

## ii. Land Use Constraints : Measure A

Alameda’s City Charter restricts residential development to one or two units per building and a minimum of 2,000 square feet of land per unit or 21.8 units per acre. The Charter provision, which was established by citizen initiative and can only be changed with voter approval, prohibits:

- Residential buildings with more than two units, such as multi-family apartment buildings or multi-family condominium buildings;
- Attached row housing or townhomes with more than two attached units;
- Mixed use buildings with more than two residential units located over ground floor retail space or parking;
- Residential adaptive reuse of existing non-residential buildings, such as conversion of the former Naval barracks into apartments, condominiums or live/work lofts.

Measure A prohibits a number of building types that support transit by:

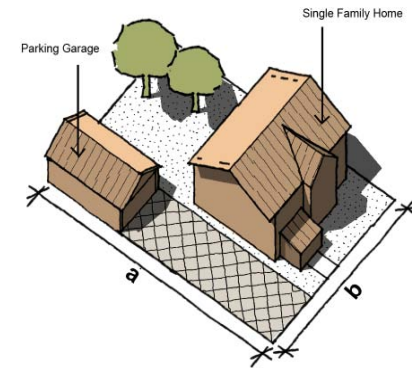
- Limiting residential development to single family homes, duplexes, secondary units and a limited number of Housing Authority owned low-and very-low income multi-family units;
- Prohibiting market rate apartment buildings, condominiums, townhomes, or residential units over retail similar to those on Park Street in Alameda ;

- Limiting multi-family rental opportunities to 325 Housing Authority units for qualified very-low and low income households and a limited number of small secondary units;
- Prohibiting conversion of historic buildings for multi-family residential uses.

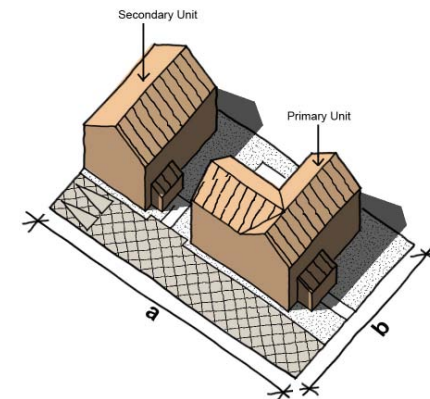
During the community meetings on the PDC, the effects of Measure A on the redevelopment of Alameda Point were hotly debated. The major questions and issues raised by the community included:

- *Does the prohibition on development of mixed use-multifamily housing, including residential over ground floor retail, significantly limit Alameda’s ability to create transit-oriented development as envisioned in the Alameda General Plan?*
- *Do limits on multi-family housing and mixed use development make the transportation problem worse?*
- *Do the limits on multifamily housing limit the types of households that will be able to afford to live at Alameda Point?*
- *Does the requirement that all new residential buildings be single family homes or duplexes reflect the character of Alameda’s neighborhoods?*

- *Does prohibiting the reuse of historic buildings for residential lofts or multi-family housing similar to what has been done at Hamilton Air Force Base or the Presidio lessen the financial feasibility of the project as a whole, and more specifically make the productive adaptive reuse of certain historic buildings financially infeasible?*



**Summary of Measure A**  
Min Lot Size: a x b = 2000 Sq.Ft



**Summary of Measure A**  
Min Lot Size: a x b = 4000 Sq.Ft  
Max Units- 2 per Lot

**Measure A Summary:**  
City Charter, Article XXVI:  
Sec. 26-1:  
*There shall be no multiple dwelling units built in the City of Alameda.*

Sec. 26-3:  
*The maximum density for any residential development within the City of Alameda shall be one housing unit per 2,000 square feet of land.*

## History of Transit Oriented Development in Alameda

Although the passage of Measure A in 1973 effectively prevented the development of any new multifamily, transit oriented residential development in Alameda, Alameda does have a history of transit oriented development. When Alameda residents and businesses relied on the rail systems to provide access across the island and before the automobile replaced walking as the preferred means of accessing goods and services, Alameda residents and businesses built transit oriented multi-family homes and mixed use developments along the transit corridors and within walking distance of services and transit.

These photographs show a sampling of existing transit oriented residential and mixed use developments that pre-date Measure A, that contribute the character and charm of Alameda today, but that could not be built today because of Measure A.



Stone Leigh on Santa Clara - 12 du/ac Courtyard Housing



Stacked Flats on 2021 Clinton - 7 du @ 40.7 du/ac



Stacked Flats on 1438 Lafayette - 8 du @ 41 du/ac



Stacked Flats on 2301 San Antonio - 7 du @ 67.8 du/ac



Mixed Use: Residential over ground floor Retail



Stacked Flats on 2045 Clinton - 15 du @ 87.1 du/ac

## ii. Land Use Constraints : Soil and Ground Water Contamination

Alameda Point has a long history of industrial use dating back to the early 1800's. Industrial activities have included a former municipal airfield, an army air base, an oil refinery, various manufacturing facilities, and most recently, the Naval Air Station.

As a result of the industrial operations and the historical land filling activity, the soil and groundwater at Alameda Point are contaminated with various organic and inorganic chemical constituents. The presence of these chemical constituents poses a potential threat to human health and the environment at some locations within the proposed development area.

The most extensive areas of soil and groundwater contamination occur in two major industrial areas:

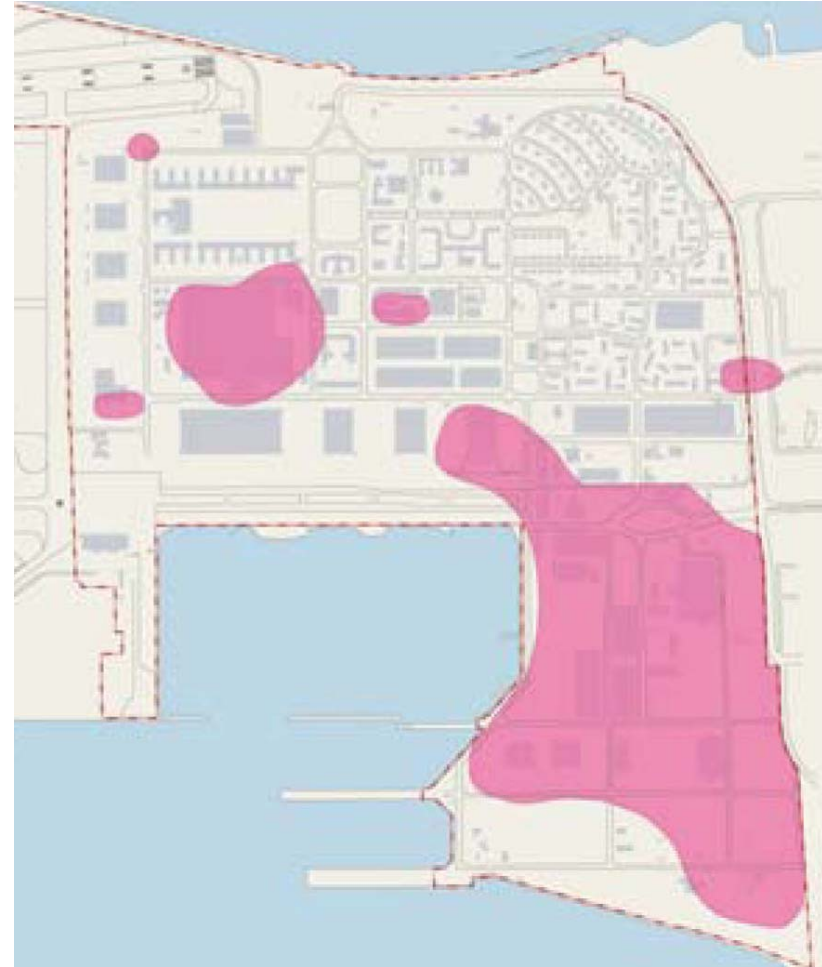
1. In the area directly east of the Seaplane Lagoon and ;
2. At and around Building 5, one block north of the Seaplane Lagoon

In most cases, the chemical constituents in the soil and groundwater can be cleaned up with reasonable effort. Often chemical constituents in the soil are shallow enough to excavate and haul away. In some areas where dredged sediment was used to fill the marshy areas, chemical constituents occur at unpredictable locations and at depths too deep to feasibly remove completely by excavation. At these locations, land use controls can be incorporated into the development plan to mitigate

potential threats to human health and the environment.

In some cases, cleanup of chemical constituents in the groundwater can take an extended period of time to complete. In areas of extensive groundwater contamination, chemicals from fuels and solvents can volatilize out of the groundwater and accumulate in the air space of buildings at levels that could pose a potential threat to human health. In these areas, engineering controls can be incorporated into buildings to mitigate potential threats to human health and the environment. Cleanup efforts will continue concurrently with development activities under the oversight of federal and state environmental regulatory agencies. Cleanup technologies will include a combination of active, in-situ processes, passive processes, various land use controls, and design of various engineering controls. Once cleanup efforts are completed, residual human health risks will be within acceptable levels for the specific land use in a given area.

The alternatives acknowledge these environmental constraints by placing residential land uses in areas with minimal contamination or in areas where the existing soil and/or groundwater contamination can be quickly remediated. Commercial, retail and mixed uses with residential above commercial, are located where existing soil and/or groundwater contamination are more extensive or will require more time to remediate or where single family residential use is not advisable.



Map showing areas with soil and ground contamination



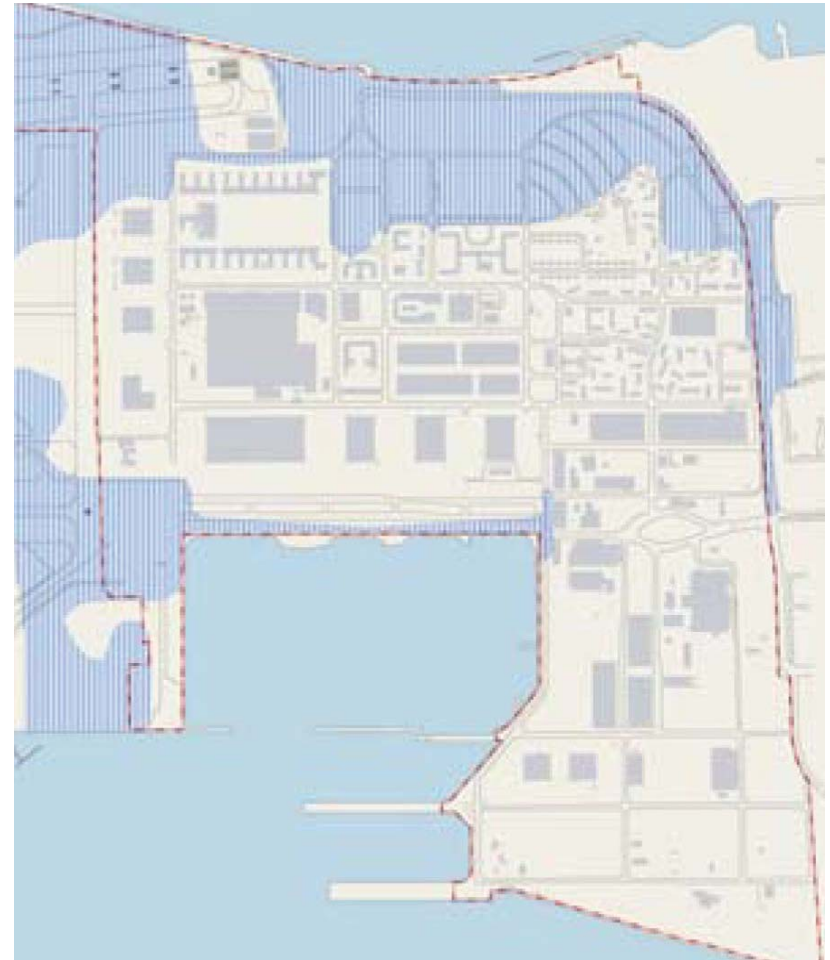
## ii. Land Use Constraints: 100-Year Flood Hazards

As a federal facility, the Naval Air Station was never included in the Federal Emergency Management Agency (FEMA) program evaluating flood hazards. Once the property is conveyed from the Navy to the Alameda Reuse and Redevelopment Authority (ARRA) and subsequently to private ownership, the property will be mapped by FEMA and land determined to be within a tidal flood area will be subject to flood insurance requirements.

As a part of the development of Alameda Point, the final storm drain analysis and grading plan will need to be submitted to FEMA for its review and approval of the project.

As part of the redevelopment process and design of the project and the shoreline improvements, the City of Alameda, Bay Conservation and Development Commission (BCDC), the Army Corp of Engineers and others will need to determine the appropriate mitigations to address anticipated sea rise that may result from global warming.

BCDC has recently established 18 inches as an appropriate elevation above existing flood levels to mitigate sea level rise over the next 50 years.



*Map Showing 100-Year Flood Zone*

## ii. Land Use Constraints: Young Bay Mud

The redevelopment of Alameda Point must also address several complex geotechnical challenges including: consolidation and settlement of the Young Bay Mud layer, liquefaction and seismic hazards, groundwater control and corrosivity, structural stability of shoreline treatments, installation and design of subsurface utilities, and requirements for a deep foundation system for heavily loaded structures.

Of these, consolidation and settlement of the Young Bay Mud layer has the most significant implications for the development of Alameda Point. As shown in the adjoining figure, large areas of Alameda Point are underlain by highly compressible Young Bay Mud material up to 120-feet deep. The deepest portions run east-west between Redline Avenue and Essex Drive, coincident with the main flood area.

The Young Bay Mud deposits are considered highly susceptible to compression from loads imposed by fill and structures. Because the Bay Mud thickness varies (in some cases it exceeds 100 feet), the settlement will be differential in nature. To mitigate long-term total and differential settlement, a number of measures may be considered appropriate depending on the nature of the site improvements and the site conditions.

Redevelopment of Alameda Point will require that the areas that are most susceptible to settlement through pre-

consolidation of the compressible Bay Mud layer prior to development to reduce future long-term settlements. Pre-consolidation of compressible soils can be achieved by the use of a surcharge fill-loading program involving the placement of temporary fills for a period of time until the desired degree of consolidation in these areas has occurred. When the pre-consolidation is complete, a portion of the fill will be removed, leaving the ground elevation above the 100-year flood elevation.



Map showing areas underlain with Young Bay Mud

## ii. Land Use Constraints: Wildlife Refuge and Tidelands Trust

### Wildlife Refuge Buffer

In March 1999, the U.S. Fish and Wildlife Service issued a biological opinion that restricts new construction in a buffer area between the proposed wildlife refuge on the west and Monarch Street and the Seaplane Lagoon on the east in order to protect two endangered species, the California least tern and the California brown pelican. Although the restrictions vary, they generally prohibit construction of any new buildings or additions to existing buildings. Existing buildings may be replaced with a new building if the new building is the same size and in the same location as the old building.

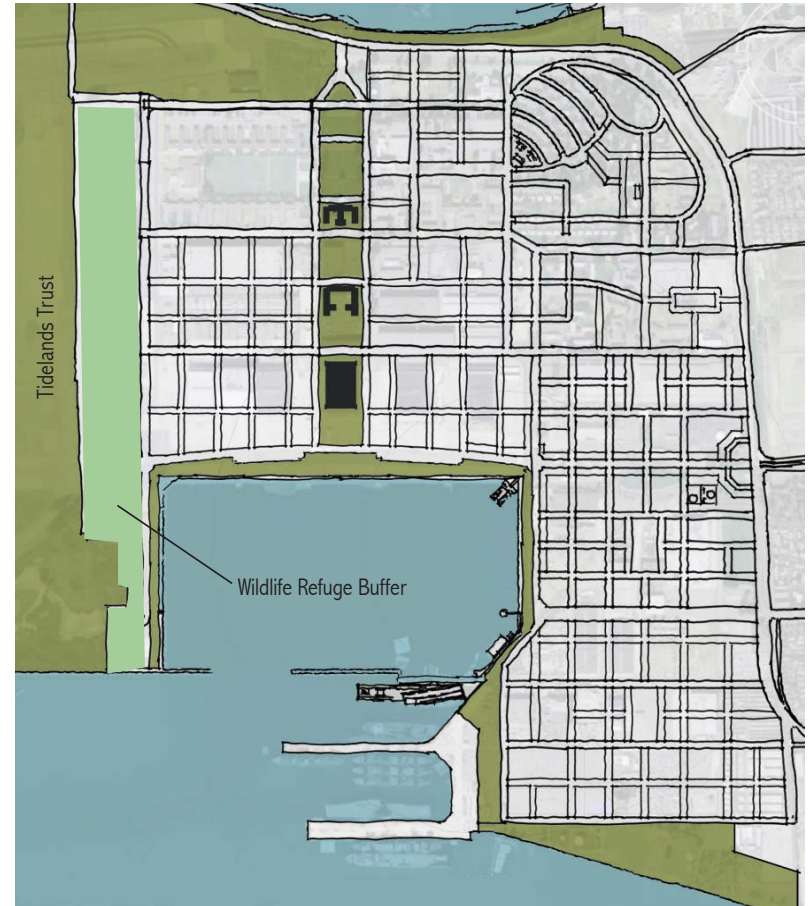
### Tidelands Trust

The Tidelands Trust is another critical constraint on the use of land at Alameda Point.

The purpose of the Public Trust is to assure that land adjoining the State's waterways or land covered by those waters remains committed to water-oriented use benefiting the greatest number of people. Public Trust lands may not be used for general-purpose industrial, retail and commercial, office, or residential uses.

- There are approximately 1,139 acres of public trust land at Alameda Point, including the proposed wildlife refuge, golf course and conference hotel

- The NAS Alameda Public Trust Exchange Act authorized the reconfiguration of the tidelands to give the more valuable waterfront locations to the State, including approximately 955 acres of public trust lands, mostly along the Estuary and Bay waterfronts
- Uses within the tidelands will be limited to harbor-related uses, such as marinas and shipyards, maritime related industry, warehouses, and water-oriented commerce; hospitality uses, such as hotels, restaurants, and other visitor-serving facilities; and ecologically related uses, such as wetlands, wildlife preserves, fishing areas, habitat and open space preservation, parks, greenways, and water-related recreation.



Map showing the Tidelands Trust Boundary and Wildlife Refuge Buffer



Future Wildlife Refuge/Wetlands along Tidelands Trust

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## III. Alternative's Analysis

a. Summary of Findings | b. Description of Alternatives | c. Findings

## a. Summary of Findings

The following analysis evaluates the transportation and land use characteristics of three conceptual development programs for Alameda Point:

### **Alternative 1, Preliminary Development Concept:**

The 2005 Preliminary Development Concept (PDC). This conceptual plan includes approximately 1,800 new housing units and approximately 9,000 new jobs. The residential component of the plan is constrained to single family homes and two family homes (duplexes or duets) and a maximum residential density of 21 units per acre. The plan includes 450 affordable housing units (25% of 1800). One hundred fifty seven (157) of the affordable units are located in multi-family rental units. To make room for the residential units, a number of buildings that contribute to the character of the NAS Historic District must be demolished. All residents and businesses pay annually into a transit district which funds additional transit services to supplement AC Transit bus service and ferry service to Alameda Point. The funds are used to fund shuttle services to BART, car share facilities, transit facilities, and other transit improvements.

### **Alternative 2, Transit Enhanced PDC:**

The Transit Enhanced PDC conceptual plan also includes 1,800 housing units, 450 affordable housing units, and 9,000 jobs. In this alternative, the 1,800 units are distributed among a much more diverse range of housing types ranging from large-lot single family homes

to four-and five-story multi-family residential structures with ground floor retail to lofts and studios in rehabilitated historic structures. The maximum residential density is approximately 32 units per acre. All residents and businesses pay into the transit district, similar to the PDC.

### **Alternative 3, Transit Plus:**

This conceptual plan includes approximately 4,000 housing units, 1,000 affordable units (25%), and 9,000 jobs. The units are distributed among the full range of housing types that are available in the Transit Enhanced PDC and also limited to four to five stories, but the within the transit station area, a maximum residential density of 48 units per acre is allowed. All residents and businesses pay into the transit district, similar to the PDC and the Transit Enhanced PDC.

The major findings of the analysis are:

### **Alternative 1, Preliminary Development Concept (PDC)**

- By limiting the range of housing types to single family and duplex housing units with a maximum density of one unit for every 2,000 square feet of land (21 units per acre), the PDC effectively limits the total number of housing units possible at Alameda Point, thereby limiting the number of automobile trips that may be expected to occur.
- The physical form and household

characteristics of Alameda Point under the PDC will be similar to Harbor Bay development with over 90% of the housing being single-family or two-family homes. The limited range in housing types will attract a limited range of household types and incomes.

- The transportation characteristics of the households in the PDC will also be similar to Harbor Bay with approximately 16% using the ferry, AC Transit, or BART to commute to work. (The major difference between the PDC and Harbor Bay is that all PDC households and businesses will be paying into a transit district. This may encourage a larger percentage of households to use the transit provided than at Harbor Bay. At Harbor Bay, only the businesses pay for shuttle services to BART).
- Prohibiting residential adaptive reuse of the historic buildings and limiting residential development to land intensive single-family homes increases the economic incentive to remove historic structures in the PDC.
- The narrow range of housing types provided weakens the economic viability of the PDC.

### **Alternative 2, Transit Enhanced PDC**

- The Transit Enhanced PDC includes a greater variety of housing types, which will attract to a wider range of household types and incomes.

- Allowing multifamily housing enables the Transit Enhanced PDC to locate more households within walking distance of the transit station.
- The Transit Enhanced PDC generates more transit trips and fewer automobile trips than the PDC. A typical household in a multifamily building generates fewer auto trips and more transit trips than a typical household in a single-family unit. A typical moderate-income or low-income household generates fewer automobile trips and more transit trips than a typical household that can afford to buy a market rate single-family home.
- The physical form and household characteristics of the Transit Enhanced PDC, with approximately 50% of the units in multi-family structures, will be more similar to the form and household characteristics found on the main island of Alameda.
- Allowing residential adaptive reuse of the historic buildings and concentrating some of the housing in multi-family structures reduces the economic incentive to remove historic structures in the Transit Enhanced PDC relative to the PDC.
- The wider range of housing types provided improves the market absorption of the Transit Enhanced PDC relative to the PDC. However, the replacement of single-family homes with the same number of multi-family units also reduces the overall value and economic feasibility of the

development plan, reducing its ability to attract private investments and capital.

three alternatives.

interested in using transit and provide a stable annual funding source for supplemental transit services and facilities.

### Alternative 3, Transit Plus:

- The additional housing units in the Transit Plus alternative generate more transit riders and more automobile trips than both the PDC and the Transit Enhanced PDC.
- The additional units also generate significantly more funding for transportation improvements such as bus rapid transit improvements from Alameda Point to the 12th Street BART station and the Fruitvale BART station. If these improvements attract a 1 % of current Alameda commuters to switch from their cars to transit, this reduction in commute trips would offset the additional cars generated by the Transit Plus alternative.
- The physical form and household characteristics of the Transit Enhanced PDC will be more similar to the form and household characteristics found on the main island of Alameda.
- Allowing residential adaptive reuse of the historic buildings and concentrating some of the housing in multifamily structures reduces the economic incentive to remove historic structures in the Transit Enhanced PDC relative to the PDC.
- The increase in the number of units also makes the Transit Plus alternative the most financially feasible of the




### Conclusions:

In evaluating any future development plan for Alameda Point, (whether it is Measure A compliant or not) the citizens of Alameda should evaluate and determine whether the Plan adequately addresses the following principles for a transportation sensitive plan for Alameda Point:

- **Diversity:** The greatest feasible range of housing types should be provided to ensure that the plan reflects Alameda character and form, to ensure that the plan can attract a variety of household types and incomes, and to support transit and minimize automobile use and congestion.
- **Proximity and Density:** People living and/or working within easy walking distance of a transit station and retail services are more likely to use transit; therefore, the plan should maximize to the extent feasible the number of residents, jobs, and retail services within ¼ mile or ½ mile of the primary transit facilities.
- **Funding for Transportation:** To maximize transit services and minimize automobile congestion, every household and business at Alameda Point should provide annual funding for supplemental transit services. This will attract households and business that are

- **Transportation available to all Alamedians:** To the extent feasible, an Alameda Point transportation program should improve transit services for all Alamedians, not just the residents and businesses at Alameda Point.
- **Parking Policies:** Appropriate parking policies, parking supply, and parking pricing are essential to creating a transit oriented development that encourages and supports transit use and that does not subsidize the use of the private automobile over transit.

a. Summary of Findings

	 <p><b>Preliminary Development Concept</b></p>	 <p><b>Transit-Enhanced PDC</b></p>	 <p><b>Transit-Plus Scenario</b></p>
<b>Proximity to Transit</b> # Dwellings within 5 min. walk # Dwellings within 5-10 min. walk # Dwellings beyond 10 min. walk	200 DU at 18-20 DU/Acre 700 DU at 10-12 DU/Acre 900 DU at 4-6 DU/Acre	900 DU at 28-30 DU/Acre 700 DU at 10-12 DU/Acre 200 DU at 6-8 DU/Acre	1,500 DU at 46-48 DU/Acre 1,800 DU at 26-28 DU/Acre 750 DU at 14-16 DU/Acre
<b>Housing Units and Density</b>	1,800 DU / 14 DU/Acre	1,800 DU / 12-14 DU/Acre	4,050 DU / 28-30 DU/Acre
<b>Transit Ridership</b> Potential # transit riders (AM peak)	290 AC Transit 430 Ferry riders	400 AC Transit 600 Ferry riders	850 AC Transit 1,270 Ferry riders
<b>Parking standards proposed</b>	1.5 cars/DU	0.75 car/DU within 0-5 min. walk 1.0 car/DU within 5-10 min. walk 2.0 car/DU beyond 5-10 min. walk	0.75 car/DU within 0-5 min. walk 1.0 car/DU within 5-10 min. walk 2.0 car/DU beyond 5-10 min. walk
<b>AM Peak-hour Commute Traffic</b>	1,600 cars	1,480 Cars	1,700 Cars
<b>Employment</b>	3.5 Million Sq.Ft. 9,000 Jobs	3.5 Million Sq.Ft. 9,000 Jobs	3.5 Million Sq.Ft. 9,000 Jobs



## Comparison of Alameda Point Alternatives with Local Communities

**KEY CHARACTERISTICS OF ALAMEDA POINT ALTERNATIVES COMPARED TO SELECTED BAY AREA NEIGHBORHOODS**

	<i>Census Data</i>					<i>Estimates for Alameda Point Alternatives</i>		
	<b>Alameda Citywide</b>	<b>Bay Farm Island</b>	<b>Rockridge</b>	<b>Emeryville</b>	<b>Sausalito</b>	<b>PDC</b>	<b>Transit-Enhanced PDC</b>	<b>Transit-Plus Alternative</b>
<b>Housing &amp; Household Characteristics</b>								
% Single Family or Townhouse Units	53%	96%	57%	12%	47%	91%	90% <sup>1</sup>	48% <sup>1</sup>
Average Household Size	2.3	2.7	2.0	1.7	1.7	2.7	2.3	2.1
Average Car Ownership per Household	1.5	1.7	1.4	1.2	1.2	1.7	1.4	1.2
<b>Housing Tenure</b>								
Owners	48%	86%	45%	37%	50%	90%	47%	47%
Renters	52%	14%	55%	63%	50%	10%	53%	53%
<b>Commute Mode</b>								
Bus, Ferry or BART	17%	16%	21%	19%	16%	16%	17%	21%
Automobile	75%	77%	65%	66%	65%	77%	73%	69%
Walk, Bike, Other	8%	7%	14%	15%	19%	7%	10%	12%

<sup>1</sup>The Transit-Enhanced PDC and Transit-Plus Scenario, include a higher percentage of townhouses and courtyard homes than the PDC, and less single-family homes. For more information about the comparison neighborhoods, please see *Market and Financial Analysis for Alameda Point TOD Study*, Strategic Economics. Estimates for alternatives are ballpark estimates prepared by Strategic Economics and the City of Alameda.

## c. Description of Alternatives: Preliminary Development Concept Plan

### Alternative #1: Preliminary development Concept:

Alternative #1 is the 2006 Preliminary Development Concept (PDC). The PDC is designed to reflect the City of Alameda General Plan goals for Alameda Point to the maximum extent possible, respond to the significant environmental, institutional, and physical constraints of the site, and create a transit-oriented, mixed use plan to the extent possible within requirements and limits of Alameda City Charter Section 26 (Measure A).

### PDC Development Program

#### Total Development

- Residential: 1,800 new dwelling units
- Retail: 100,000 - 130,000 square feet
- Office/Employment: 3,500,000 SF
- Affordable Units: 450

#### Residential Mix/ Housing Types

- Small-Lot Single-Family detached homes (1,310 units)
- Duplex/Duet Units (250 units)
- Carriage “In-law” units (50 units)
- Duplex Shop Houses above retail (30 units)
- Multi-family Rental Apartments (157 units)

#### Residential Density

- Maximum Residential Density: 20 dwelling units per net acre.
- Minimum Residential Density: 8 dwelling units per net acre.

### Population Estimates

- Household Size: 2.7 persons/ household
- Estimated Residential Population: 4,860 people
- Estimated jobs: 9,000

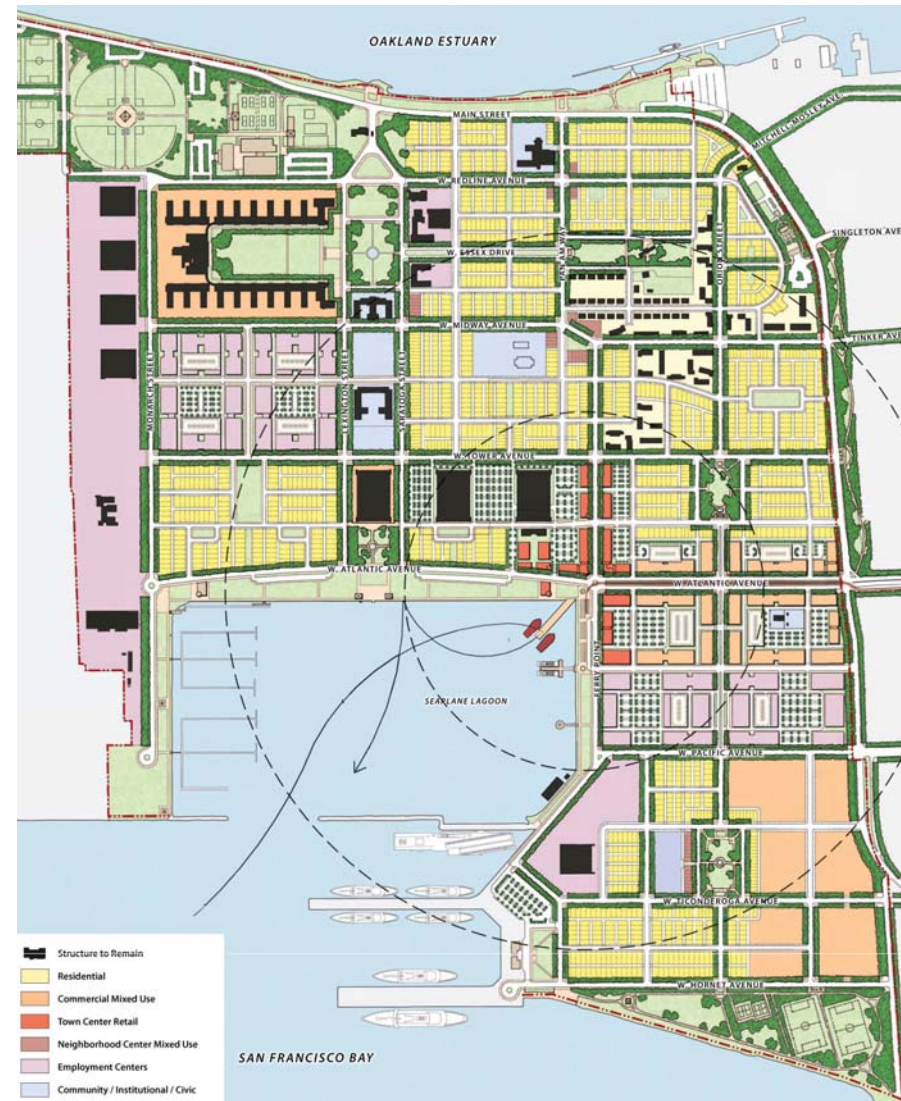
### Maximum New Residential Building Height: 3 stories/35-40 feet

### Maximum Existing Building Height: 65’ (Hangers)

### School: None

### Transportation Program

- Transit Service Frequency to Oakland BART: 15 minutes (4 buses/ hour)
- Ferry Service Frequency to San Francisco: 30 minutes
- Shuttle connections to San Francisco Express Bus and Downtown BART
- Transit Station at Seaplane lagoon
- Car Share Program



Preliminary Development Concept Plan (PDC)

## c. Description of Alternatives: Transit-Enhanced PDC

### Alternative #2: Transit-Enhanced PDC

Alternative #2 is designed to examine the constraints created by City Charter Section 26 (Measure A) on the City of Alameda’s ability to implement a transit-oriented development plan for Alameda Point. Alternative #2 responds to the same constraints and General Plan goals for the area, but is not constrained by Measure A’s restrictions on density and building types. To isolate the effects of Measure A, the amount of housing and employment space in Alternative #2 is the same as the PDC. Because it is not constrained by Measure A, the Alternative #2 development program could be adjusted to incorporate:

- Higher density multi-family buildings and townhouses in close proximity to the transit center to provide housing opportunities for segments of the population that are more likely to use transit.
- Adaptive reuse of existing historic structures to create market rate and affordable multi-family residential units, lofts, or live-work units as has been done at other former military bases with historic structures, such as the Presidio in San Francisco.
- Multi-family units above ground-floor retail in the proposed town center and neighborhood centers to reduce vehicle trips, increase transit use, and support retail businesses.

Alternative #2 would support 12-minute headways for bus service and 30-minute headways for ferry service at buildout.

### Alternative # 2 Development Program

#### Total Development

- Residential: 1,800 d.u.’s
- Retail: 130,000 -200,000 square feet
- Office/Employment: 3,500,000 square feet
- Affordable Units: 450 d.u.’s

#### Residential Mix/ Housing Types

- Large-Lot Single Family detached homes
- Small-Lot Single Family detached homes
- Townhouses
- Stacked Flats (above retail)
- Historic Building Lofts

#### Residential Density

- Maximum Residential Density: 34 d.u.’s per net acre.
- Minimum Residential Density: 4 d.u.’s per net acre.

#### Population Estimates

- Household Size: 2.3 Persons/Household
- Estimated Residential Population: 4,140 people

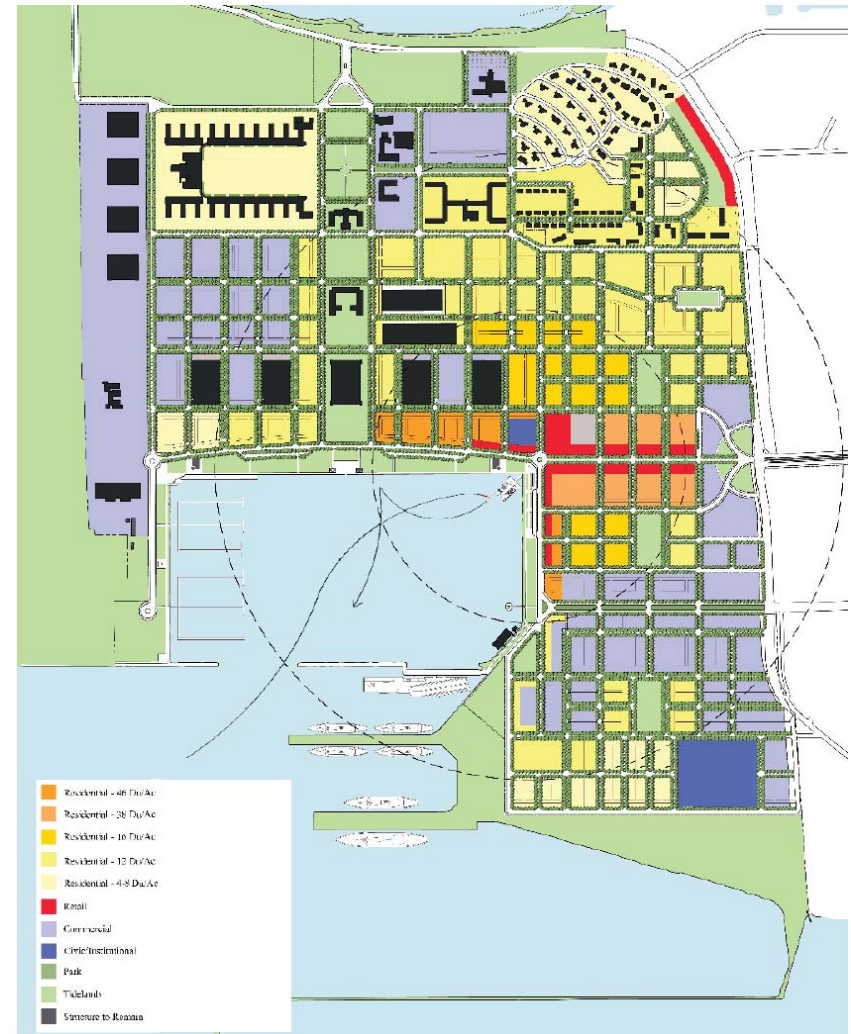
**Maximum Building Height:** 4 stories/50 feet

**Maximum Existing Building Height:** 65’ Hangers

**School:** Yes

#### Transportation Program

- Transit Service Frequency to Oakland BART: 12 minutes (5 buses/ hour)
- Ferry Service Frequency to San Francisco: 30 minutes
- Shuttle connections to San Francisco Express Bus and Downtown BART
- Transit Station at Seaplane lagoon
- Car Share Program



Alternative # 2: Transit Enhanced PDC

## c. Description of Alternatives: Transit-Plus Scenario

### Alternative #3: Transit Plus

Similar to Alternative #2, Alternative #3 is not constrained by Measure A. However, rather than restricting residential development to the level assumed by the other two alternatives, the Transit Plus alternative increases the number of residential units to demonstrate the implications of increased density for transit, traffic, community character, and financial viability. The intent is to:

- Provide a population density and development intensity that can implement and sustain an enhanced and expanded transportation program, while maintaining a development scale and character that is consistent with the rest of Alameda; and
- Provide the best possible transportation program that is technically and financially feasible without being dependent on significant Federal, State, or outside funding and that can be imposed as a condition of development.

### Transit Plus Development Program

#### Total Development

- Residential: 4,050 d.u.'s
- Retail: 300,000 - 400,000 square feet
- Office/Employment: 3,500,000 s.f.
- Affordable Housing Units (25% of total): 1,013 d.u.'s

#### Residential Mix/ Housing Types

- Large-Lot Single-Family detached

- homes
- Small-Lot Single-Family detached homes
- Townhouses
- Fourplex / Courtyard Units
- Stacked Flats (above retail)
- Multi-family Units (apartments)
- Historic Building Lofts

#### Residential Density

- Maximum Residential Density: 48 d.u.'s per net acre.
- Minimum Residential Density: 4 d.u.'s per net acre.
- Average Residential Density: 32-34 d.u.'s per net acre.

#### Population Estimates

- Household Size: 2.3 Persons/ Household
- Estimated Residential Population: 9,315 people

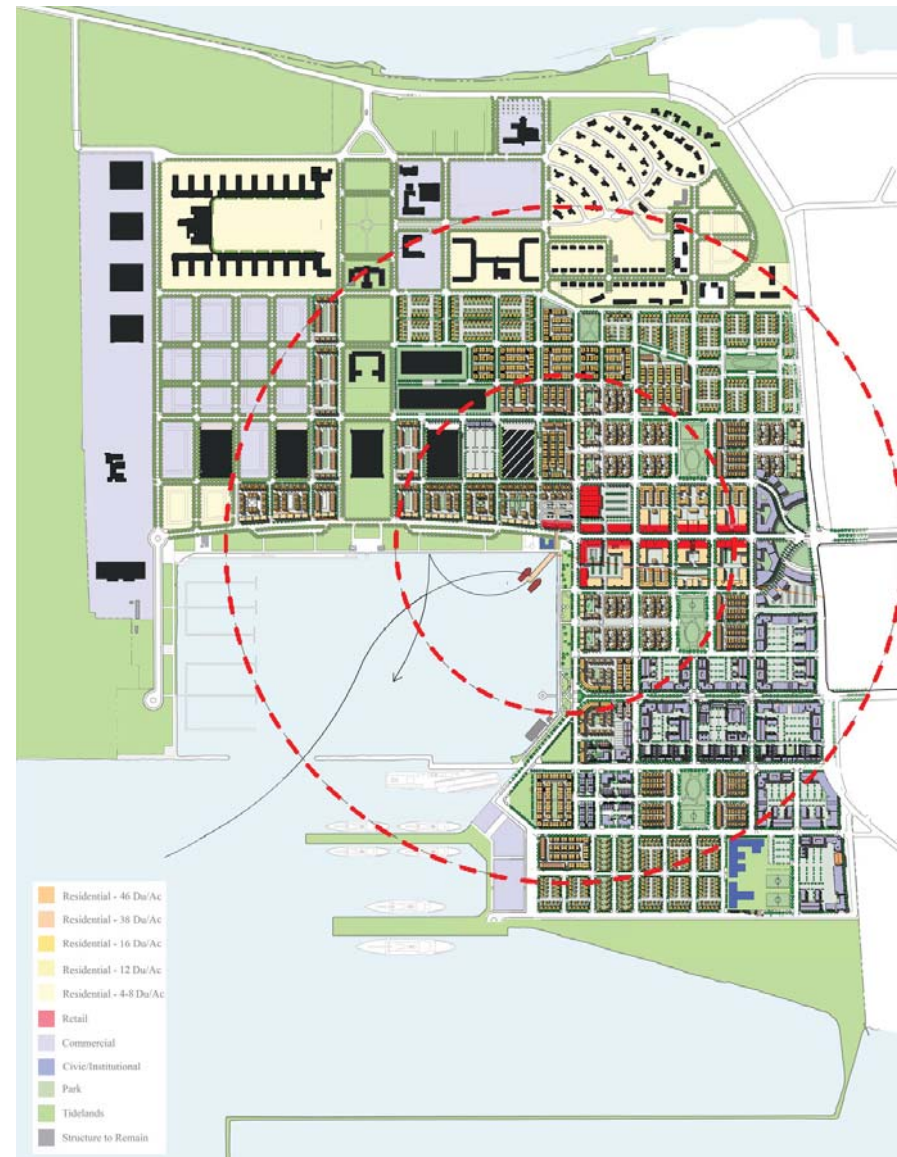
**Maximum Building Height:** 4 stories/50 feet

**Maximum Existing Building Height:** 65' Hangers

**School:** Yes

#### Transportation Program

- Bus Rapid Transit Service Frequency to Oakland BART: 5 minutes ( 12 buses/ hour)
- Ferry Service Frequency to San Francisco: 20 minutes
- Shuttle connections to San Francisco Express Bus and Downtown BART
- Transit Station at Seaplane lagoon
- Car Share Program



Alternative # 3: Transit Plus Scenario

### III. Alternatives Analysis : Findings

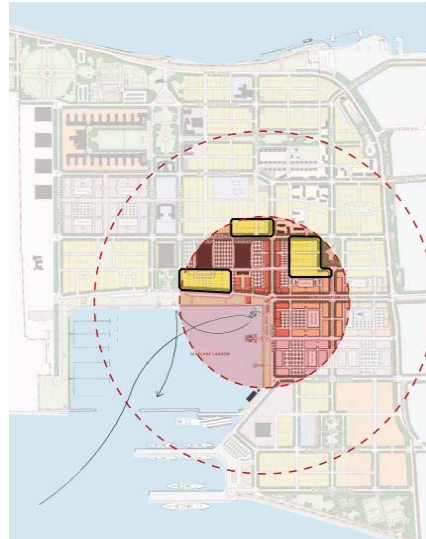
i. Proximity to Transit | ii. Circulation, Transit and Parking | iii. Community Character | iv. Historic preservation

## Preliminary Development Concept: Proximity

### Key Characteristics:

- The PDC locates approximately 62% of all its housing (1,100 units) within comfortable walking distance (1/2 mile) of the Transit Center
- Only 12% (200 units) of the housing is located within the prime 5-minute walking distance (1/4 mile)
- Approximately 50% (900 units) of the housing is located between 1/4 and 1/2 mile (a 5- to 10-minute walk) of the Transit Center
- Approximately 38% (700 units) of the housing is located more than 1/2 mile from the Transit Center and residents.

**0-5 minute walk**



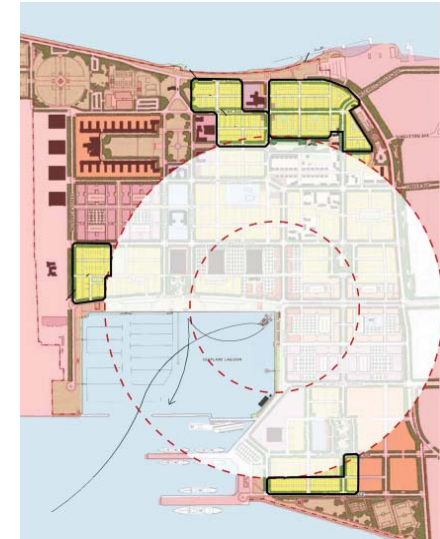
**200 Dwelling Units (12%)**  
Avg. Density 14-20 DU/Acre

**5-10 minute walk**



**900 Dwelling Units (50%)**  
Avg. Density 10-14 DU/Acre

**Beyond 10 minutes**



**700 Dwelling Units (38%)**  
Avg. Density 10-12 DU/Acre

## Transit-Enhanced PDC : Proximity

### Key Characteristics:

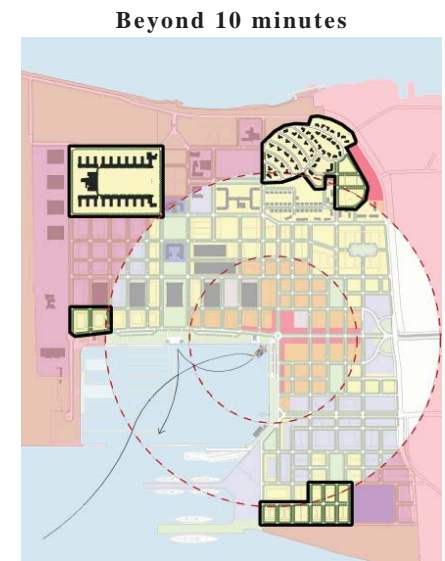
- Alternative #2 locates approximately 90% of all its housing (1,600 units) within comfortable walking distance (1/2 mile) of the Transit Center
- Approximately 50% (900 units) of the housing is located within the prime 5-minute walking distance (1/4 mile), which is 3.5 times as many units (700 du's) as under Alternative #1
- Approximately 40% of the housing (700 units) is located between 1/4 and 1/2 mile (a 5- to 10-minute walk) of the Transit Center
- Only 10% (200 units) are located more than 1/2 mile from the Transit Center.



**900 Dwelling Units (50%)  
Residential Density: 30-32 DU/Acre**



**700 Dwelling Units (40%)  
Avg. Density 10-12 DU/Acre**



**200 Dwelling Units (10%)  
Avg. Density 10-12 DU/Acre**

*\*For a description of Building Types see Appendix A*

## Transit-Plus Scenario : Proximity

### Key Characteristics:

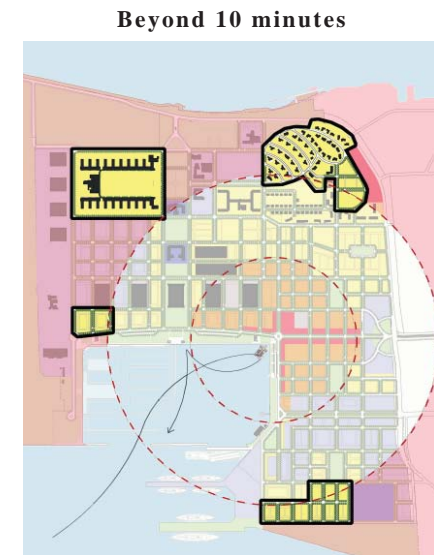
- Alternative #3 locates approximately 86% of all its housing (3,500 units) within comfortable walking distance (1/2 mile) of the Transit Center
- Approximately 36% (1,500 units) of the housing is located within the prime 5-minute walking distance (1/4 mile), which is 7.5 times as many units as under the PDC and nearly twice as many as under Alternative #2
- Approximately 50% of the housing (2,000 units) is located between 1/4 and 1/2 mile (a 5- to 10-minute walk) of the Transit Center
- Approximately 14% (550 units) are located more than 1/2 mile from the Transit Center, which are fewer units than under the PDC but substantially more than under Alternative #2.



**1,500 Dwelling Units (36%)**  
**Residential Density: 46-48 DU/Acre**



**2,000 Dwelling Units (50%)**  
**Residential Density: 24-26 DU/Acre**



**550 Dwelling Units (14%)**  
**Residential Density: 10-12\*\* DU/Acre**

*\*For a description of Building Types see Appendix A*

*\*\* Average Residential Density is for new dwelling units only. BEQ or BOQ are excluded from the " Residential Density" Calculations*

*Note: 50% of the units in Alt # 3 are in the form of Single Family homes, townhouses, or courtyard homes*



## Preliminary Development Concept : Diversity/Community Character

The PDC includes practically no mixed use development (33 shop houses over retail) and only about 200 dwelling units (du's) within a 5-minute walk of the Transit Center and shops and services, so achieves little of the positive economic or transit benefit associated with the integraton of uses.

The PDC land use program shows 336,000 square feet of retail. However, given the primarily local-serving character of projected retail and the number of proposed housing units, the PDC is only expected to support around 130,000 square feet of retail.

Due to Measure A limits on density and housing types, the PDC would offer the least amount of housing diversity.

The housing mix consists of primarily small lot single family detached homes, including 1,512 single family units, 288 Shop House/Duet units, and 157 below market rate rental apartment units.

The PDC includes a relatively narrow range of housing densities, with a minimum density of 8 dwelling units per acre (du/ac) and a maximum density of 21 du/ac. With an average residential density of 14 du/ac, the intensity and character of residential neighborhoods would be most similar to development in Harbor Bay Isle and Bayport.

The predominance of single family housing in the PDC will limit diversity in household composition and income.



1,512 Single Family Homes/ Duplexes



288 Shop Homes



157 Multi Family Homes

### Proposed Housing Types

## Transit-Enhanced PDC : Diversity/Community Character

Alternative #2 focuses on concentrating residential and retail, the primary generators of transit trips, nearest to transit, and generally distributes employment uses outside the 5-minute walking radius of the Transit Center.

Alternative #2 includes mixed use development with 3 stories of residential use over retail (approximately 350 du's) along both sides of Atlantic Avenue and the streets fronting the Transit Center. In addition, 900 du's are located within a 5-minute walk of the Transit Center and shops and services.

Given the primarily local-serving character of projected retail and the number of proposed housing units, Alternative #2 is only expected to support between 130,000 and 200,000 square feet of retail.

Without the Measure A constraints on density and housing type, Alternative #2 offers considerably more housing diversity than the PDC within the 1,800 unit total. The housing mix consists of

primarily (88%) lower density attached units (1,600 du's) such as townhouses and courtyard housing. The remaining 11% of the housing consists of a combination of small-lot single-family detached homes (170 units) and large-lot single-family detached homes (30 units).

Alternative #2 expands the range of housing densities to include large lot single-family homes with a minimum density of 4 dwelling units per acre, and townhouses with a maximum density of 28 du/ac.

The diversity of housing will support much greater diversity in household composition and incomes than would occur with the PDC, and will enhance housing affordability.

The distribution of housing types in Alternative #2 is much more responsive to the location of transit with the higher density housing located primarily within the ¼ mile/5-minute walking distance of the Transit Center.



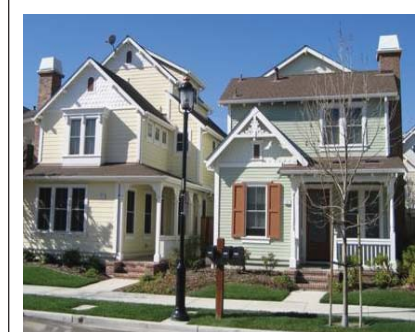
700 Single Family Houses  
@ 14-16 Dwelling Units/Acre



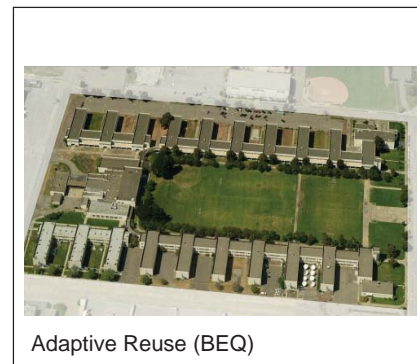
30 Large Lot Single Family Homes  
@ 4-6 Dwelling Units/Acre



900 Town Houses  
@ 30-34 Dwelling Units/Acre



170 Small Lot SF Detached Units  
@ 14-16 Dwelling Units/Acre



Adaptive Reuse (BEQ)

### Proposed Housing Types

## Transit-Plus Scenario : Diversity/Community Character

Alternative #3 focuses on concentrating residential and retail, the primary generators of transit trips, nearest to transit, and generally distributes employment uses outside the 5-minute walking radius of the Transit Center.

Alternative #3 includes mixed use development with 3 stories of residential use over retail (approximately 350 du's) along both sides of Atlantic Avenue and the streets fronting the Transit Center. In addition, 1,490 du's are located within a 5-minute walk of the Transit Center and shops and services.

Given the primarily local-serving character of projected retail and the number of proposed housing units, Alternative #3 is expected to support between 300,000 and 400,000 square feet of retail.

With substantially more housing units (4,050 du's) and without the Measure A constraints, Alternative #3 offers the most housing diversity. The housing mix consists of primarily (95%) attached units

(3,900 du's) such as townhouses (1,500 du's), courtyard housing (300 du's), stacked flats (1,500 du's), and adaptive re-use units in historic buildings (600 du's). The remaining 5% (200 du's) of the housing consists of a combination of small-lot single-family detached homes (120 units) and large-lot single-family detached homes (30 units).

Alternative #3 expands the range of housing densities to include large-lot single-family homes with a minimum density of 4 dwelling units per acre at the low end to stacked flats with a maximum density of 48 du/ac at the high end.

Alternative #3 would provide 1,012 affordable housing units (i.e., 25% of total), more than double the number in Alternatives 1 or 2.

The distribution of housing types in Alternative #3 specifically responds to the location of transit by locating the highest density housing (44-46 du/ac) within the ¼ mile/5-minute walking distance of the Transit Center.



300 Courtyard Houses  
@20-24 Dwelling Units/Acre



120 Small Lot Single Family Detached Units  
@14-16 Dwelling Units/Acre



1,500 Town Houses  
@30-34 Dwelling Units/Acre



1,500 Stacked Flats  
@44-46 Dwelling Units/Acre



30 Large Lot Single Family Homes  
@4-6 Dwelling Units/Acre



Adaptive Reuse (BEQ)

### Proposed Housing Types

Note: 50% of the units in Alt # 3 are in the form of Single Family homes, townhouses, or courtyard homes

## Findings : Circulation, Transit and Traffic

### Citywide Transit and Automobile Impacts

Alternative # 3 (Transit Plus Alternative) includes many of the same assumptions as Alternatives #1 and # 2; an aggressive Transportation Demand Management program; reduced parking requirements (particularly adjacent to transit); a walkable, bikeable land use pattern; and a strong, frequent transit connection to the 12th Street BART station. In addition, Alternative # 3 includes a transit connection to the Fruitvale BART station, which has the potential to attract riders from the heart of the island and to further reduce auto trips to the tubes meaning that Alternative # 3 can provide the greatest transit benefit the rest of Alameda.

The transit benefits to the rest of Alameda would offset some or all of the additional traffic generated by Alternative # 3 as compared to 1 and 2.

### Traffic- Comparison of the 10 Year buildout of the Alternatives:

Given the long 30+ year projection for full buildout of the non-residential component of the plan and the potential for significant changes in transportation technology over that period, traffic generation for the three alternatives have been projected at 10 years and full buildout.

Within 10 years, the Transit Plus Alternative would generate approximately as much traffic as the PDC would generate at full buildout during the peak commute

periods. This assumes that 4,050 residences (including one school), 336,000 square feet of retail, and one million square feet of office would be constructed, based on an economic analysis of residential and commercial absorption rates.

At full buildout, the Transit Plus Alternative would exceed the traffic generated by the PDC during the peak commute period. To reduce traffic to PDC levels would require an island-wide shift of one percent from drive-alone to transit trips during the commute. This finding indicates that transit alternatives which benefit the west end, as well as the rest of the island, play a critical role in the success of the Transit Plus Alternative.

### Funding for Transit

The PDC and Alternative # 2 would generate approximately the same transit funding given the similarity in their development programs. Alternative # 3 would generate 21% more transit funding than the other two alternatives due to its larger residential component. This would support a larger and more robust transportation program than either the PDC or Alternative # 2.

Both the PDC and Alternative # 2 would receive nearly 80% of their funding from non-residential development. Given the weak market demand and slow projected absorption for office/R&D development, funding under the PDC and Alternative # 2 is likely to be very slow to material-

Table Showing Auto and Transit trip Generation for the three Alternatives

Alameda Point Auto Trip Generation								
Auto Trips	Alt. # 1		Alt. # 2		Alt. # 3		Alt. # 3, 10-Year	
AM Trips Generated (ITE)	4,630		4,413		5,205		3,776	
AM Internalization Reduction (Trips)	0	0%	0	0%	166	3%	166	4%
AM Transit Reduction (Trips)	144	3%	208	5%	328	6%	328	9%
AM TDM Trip Reduction (Trips)	1,031	22%	997	23%	1,058	20%	629	17%
Net AM Peak Trips	3,455		3,207		3,653		2,653	
Net AM Peak Trips in Tube	1,596		1,477		1,699		1,215	
PM Trips Generated (ITE)	5,618		5,275		6,172		4,853	
PM Internalization Reduction (Trips)	779	14%	728	14%	1,004	16%	833	17%
PM Transit Reduction (Trips)	163	3%	226	4%	345	6%	345	7%
PM TDM Trip Reduction (Trips)	890	16%	847	16%	908	15%	563	12%
Net PM Peak Trips	3,786		3,473		3,916		3,112	
Net PM Peak Trips in Tube	1,650		1,484		1,721		1,342	
Alameda Point Transit Trip Generation								
Transit Trips	Alt. # 1		Alt. # 2		Alt. # 3		Alt. # 3, 10-Year	
AM Transit Ridership	720		1,000		2,120		2,120	
AM Bus Ridership (40%)	288		400		848		848	
AM Ferry Ridership (60%)	432		600		1,272		1,272	
Bus Headways (minutes)	15		12		6		6	
Ferry Headways (minutes)	30		30		20		20	

ize. So, support for transit in the near term may be quite weak. Alternative # 3 is likely to provide more funding sooner given the stronger market for housing and the faster absorption resulting from the plan's diverse housing program.

Assuming rates similar to the rates imposed on the Alameda Landing Project:

- Alternative # 1 would generate \$2,398,860 in transit funding at build-out, with 78% coming from non-residential development and 22% from residential.
- Alternative # 2 would generate \$2,372,220 in transit funding at build-out, with 78% coming from non-residential development and 22% from residential.
- Alternative # 3 would generate \$3,053,820 in transit funding at build-out, with 61% coming from non-residential development and 39% from residential.

### **Transit Commute Trips**

Because of the higher development density, proximity to transit and retail, mixed use character, larger population, and greater transit frequency, Alternative 3 would generate significantly more transit riders than the PDC or Alternative 2. Because of the higher development density and greater transit frequency, Alternative 2 would generate more transit riders than the PDC. The PDC would result in the

lowest transit ridership of the three alternatives.

- Alternative # 1 would generate 720 transit commute riders.
- Alternative # 2 would generate 1,000 transit commute riders.
- Alternative # 3 would generate 2,120 transit commute riders.

### **Service Frequency**

With the smallest population and lowest projected transit ridership, the PDC would have the least frequent transit service. (4 buses/hour and 2 ferries/ hour). While generating more ridership than the PDC, Alternative 2 would make limited difference in the frequency of transit (5 buses/ hour and 2 ferries / hour). By comparison, the large population and high projected ridership in Alternative 3 would support more frequent service for bus and ferry (12 buses / hour and 3 ferries/ hour).

### **Walking and Bicycle Trips**

Combined with the larger population, higher densities, and transit and retail proximity, Alternative 3 would generate significantly more walking and bicycle trips than either the PDC or Alternative 2. The PDC would result in the lowest number of bicycle and walking trips of the three alternatives.

Physical design enhancements, such as smaller blocks, the proposed one-way

couplet and 2-lane configuration of Atlantic Avenue, fewer driveways, and the elimination of street-facing surface parking lots would make any alternative more pedestrian and bicycle friendly.

### **Automobile Commute Trips**

Alternative 2 would generate fewer peak hour commute car trips than the PDC due to its more transit-supportive distribution and mix of housing types. Alternative 3 would generate more peak hour trips than the PDC or Alternative 2 because of its substantially larger population, but significantly fewer peak hour trips per capita than either the PDC or Alternative 2.

- Alternative # 1 would generate 3,246 daily automobile commute trips in the tubes (1,596 in the AM and 1,650 in the PM)
- Alternative # 2 would generate 2,961 daily automobile commute trips in the tubes (1,477 in the AM and 1,484 in the PM).
- Alternative # 3 would generate 3,420 daily automobile commute trips in the tubes (1,699 in the AM and 1,721 in the PM).

## Transit Ridership and Headways

### Methodology

These projections were developed in consultation with AC Transit and the Water Transit Authority (WTA).

Bus ridership and headway projections include the following assumptions:

Bus service is express to BART (enabling 2 round trips per hour) with stops only at Seaplane Lagoon and Webster/Atlantic

- Oakland to Alameda Point buses are empty;
- 50 passengers per revenue hour is a target capacity (yielding a target bus occupancy of 25 with return buses empty).

A 1/2 mile walkshed produces high transit ridership. This results in a 40% transit mode share because:

- walkable environment (high connectivity and pedestrian facilities);
- pedestrian-oriented retail enables trip linking at the transit hub;
- secure bike parking encourages bike connections to transit;
- self selection of transit riders living in the area;
- parking restrictions support transit;
- other TDM measures (car-sharing, etc.).
- 1.5 workers per dwelling unit

Ferry ridership and headway projections include the following assumptions:

Ridership: 60% of transit trips, as noted above

Headways: 20-30 minutes in all cases per WTA

Based on conversations with AC Transit and the WTA we also note that:

Employment sites in Alameda Point could offset the need for high density residential by providing bus riders in the reverse commute

The target residential market would determine transit mode share and then split of transit mode between bus/BART and ferry

Accommodating pedestrians and cyclists and providing pedestrian scale retail is critical for the above assumptions to hold

### Transit Ridership and Headway Projections

Based on the above assumptions, the adjoining table shows the headways for the three scenarios.

Calculation	Scenario		
	PDC	Alt # 2	Alt # 3
Dwelling units within 10 minutes (1/2 mile)	1,100	1,600	3,510
Workers (1.5/DU)	1,650	2,400	5,265
Workers (rounded)	1,800	2,500	5,300
% taking transit to work	40	40	40
Transit Riders	720	1,000	2,120
% Transit riders taking the bus	40	40	40
Bus Riders (6 to 9 AM)	288	400	848
<b>AM Bus Riders (rounding up)</b>	<b>300</b>	<b>400</b>	<b>850</b>
Target bus occupancy	25	25	25
Bus trips with 25 passengers	12	16	34
Bus Headways (3 hour peak)	15	11.3	5.3
<b>Bus Headways (rounding up)</b>	<b>15 minutes</b>	<b>12 minutes</b>	<b>5 minutes</b>
<b>Bus Frequencies</b>	<b>4 buses/hr</b>	<b>5 buses/hr</b>	<b>12 buses/hr</b>

Source: Fehr & Peers and AC Transit, February 2007

*Bus Ridership and Headway Projections*

Calculation	Scenario		
	PDC	Alt # 2	Alt # 3
Dwelling Units within 10 minutes	1,100	1,600	3,510
Workers (1.5/DU)	1,650	2,400	5,265
Workers (rounded)	1,800	2,500	5,300
% taking transit to work	40	40	40
Transit Riders	720	1,000	2,120
% Transit riders taking the ferry	60	60	60
Ferry Riders (6 to 9 AM)	432	600	1,272
<b>AM Ferry Riders (rounding up)</b>	<b>450</b>	<b>600</b>	<b>1200</b>
<b>Ferry Headways (per WTA)</b>	<b>30 minutes</b>	<b>30 minutes</b>	<b>20 minutes</b>

Source: Fehr & Peers and WTA, February 2008

*Ferry Ridership and Headway Projections*

## Parking Policies: Best Practices

### Introduction

Parking policies are one of the cornerstones of a successful Transit Oriented Development (TOD). Traveler behavior, urban design, and financial feasibility of the development can be directly affected, both positively and negatively, by the placement, price, and supply of parking. The approach to parking provisions within the project offers an opportunity to create a disincentive to drive to the site. Providing parking has a real cost to the project and a real value to users. Asking those users to bear the burden of that benefit is not only equitable, but enables higher a multimodal system.

The following discussion presents best practices for parking policies in TODs based on lessons learned across the United States. It also identifies the parking ratios many of these TODs have utilized to manage parking supply. Finally, it concludes with the recommendations for parking policies relevant for the Alameda Point Station Area Plan.

### Best Practices

This section summarizes the best practices for parking supply and demand management in TODs. Many of these practices are adapted from MTC’s “Reforming Parking Policies to Support Smart Growth Toolbox/Handbook”.

### Parking Supply

1. Reduce off-street parking requirements:
  - Adopt a district-based approach to assessing parking demand and allow or require shared parking among several land uses;
  - Establish demand-based parking requirements linked with transit, walking, and parking pricing;
  - Use parking maximums instead of parking minimums (see specific recommendations at the end of this section);
  - Allow developers to pay in-lieu fees to reduce parking provisions where appropriate. Take credit for on-street parking created along a project’s frontage (this not only reduces the amount of land used for off-street parking, but incents smaller blocks because they result in more street-frontage parking).
2. Develop a parking management strategy:
  - Designate areas for short- and long-term parking;
  - Employ innovative payment, information and monitoring technologies;
    - Offer “parking debit cards” or cell phone payment options at metered parking;
    - Coordinate off- and on-street parking availability via real-time message boards.

3. Where feasible, construct parking garages instead of parking lots.
  - Avoid surrounding the transit station with surface parking;
  - Give developers flexibility to create space-efficient parking through the use of tandem, valet, and stacked mechanical parking;
  - Include ground floor retail as “liner” uses for parking structures to integrate parking structures into the neighborhood design and pedestrian realm;
  - Locate Park-n-Ride lots away from the transit station or provide no distinct Park-n-Ride lots, only public shared parking.
4. Market the parking supply strategy. Methods to accomplish this include providing a brochure with parking locations and information on alternative transportation options or providing information via the web.
5. Provide ample on-street parking (Note: this is often a product of reduced block sizes and enhanced pedestrian connections). Consider back-in or regular angled parking where feasible to maximize on-street parking opportunities.

### Parking Demand

1. Charge for parking based on real-time demand:
  - Charge for all on-street parking within 1/2-mile of the ferry terminal;
  - Coordinate off- and on-street parking

- prices;
  - Set a variable market price for parking with the objective of 15% vacancy at all times, thereby reducing cruising for parking and air pollution, and encouraging visitors to local businesses. This includes varying parking by time of day and proximity to destination.
- 2. Unbundle parking from office and housing rents to create more affordable live and work spaces, encourage developers to build less parking, and make the price of parking more transparent.
- 3. When charging for parking, employ these complementary measures:
  - Provide visible and consistent parking enforcement for all on-street (metered) parking;
  - Create residential parking permit zones on residential streets to prevent parking spillover into residential neighborhoods;
  - Return the parking revenue to the district by establishing Parking Benefit Districts;
  - Enforce parking cash-out programs if employers offer subsidized parking to employees.

4. Incentivize transit alternatives:
  - Provide car sharing opportunities (such as City Car Share, ZipCar, or FlexCar);
  - Provide transit passes (“EcoPass”) for residents and employees within the TOD.

### **Sample Parking Pricing In TOD's:**

Several cities in California, including Redwood City and Walnut Creek in the San Francisco Bay Area, have recently revised their Downtown parking policies based on several of the best practices presented in this memo. Bay Area Rapid Transit (BART) has also recently implemented parking fees or fee increases at parking lots throughout the BART system.

#### **Redwood City**

On February 1, 2006, the City Council of the City of Redwood City passed an ordinance that allows for the periodic adjustment of downtown meter zone off-street and on-street meter rates. The ordinance sets a target occupancy rate of 85%, as recommended by UCLA Professor Donald Shoup in his landmark book on this topic, *The High Cost of Free Parking*. To achieve this occupancy rate, the City's Parking Manager is empowered to adjust meter rates up and down in 25 cent increments at least annually and not more than quarterly based on parking area occupancy survey results.

The ordinance specifies that the hourly meter rate may not exceed \$1.50. Another critical element of the program, especially for public acceptance, was that all parking time restrictions were removed upon implementation of this pricing system. Additionally, revenues generated in the Downtown Meter Zone

boundaries are accounted for separately from other City funds to ensure they are only used for specific purposes in the direct benefit of the Downtown Core.

#### **Walnut Creek**

On June 19, 2007, the Walnut Creek City Council approved an ordinance to raise rates on 600 meters in a "Downtown Parking Meter Zone." Meter rates would increase from 50 cents to \$1 an hour based on a recent Downtown Traffic and Parking Study, which recommended a rate increase to maintain an occupancy rate of 85%. The hourly cost in parking garages would stay the same to encourage off-street parking.

In companion with the on-street rate increases, the City is initiating a pilot parking technology program, with "park and pay boxes" to allow for parking payment by coin, cash, credit card, and cell phone. The City would use the additional parking revenue to pay for a new underground parking garage. Based on the parking demand after this rate increase, the City may consider additional increases as well as expanded metering hours on Friday and Saturday nights and Sundays.

#### **BART**

A 1993 BART study found that BART parking lot and structure operating costs totaled \$7-8 million a year, or nearly \$1

per parking space per day. In the midst of a budget crisis, in 2006 BART began charging for parking at ten East Bay stations which had previously offered free parking. Most lots charge \$1 day, a price that covers the cost of the space while removing the "driver subsidy," which had been an inherent component of free station parking. The parking rate was selected as a minimal fee that would not have a noticeable impact on BART ridership (the lots still fill to capacity) but would enable BART to raise between \$10 and \$25 million per year in additional revenue, thus avoiding fare increases, service cuts and layoffs.



**Recommendations**

Many of the parking demand and supply management best practices presented in this section, are applicable for the Alameda Point Station Area. Based on the unique needs and characteristics of Alameda Point, we recommend these specific parking policies:

1. Use variable pricing of on- and off-street parking to achieve an average occupancy of 85% in commercial areas (or a maximum per hour rate in the range of \$1.50 to \$2.00/hour, to be defined by City Ordinance)
2. Implement companion parking technologies (pay by cell phone etc) and parking informational brochure, website, and wayfinding signs
  - Create residential parking permit zones on residential streets within 1/2-mile of the ferry terminal to prevent parking spillover into residential neighborhoods. Charge for non-residential parking in these zones via pay and display or pay and retain meter kiosks
3. Return the parking revenue to the district by establishing Parking Benefit Districts
4. Implement a phased parking pricing scheme at the Seaplane Lagoon transit center:
  - Provide free parking until transit

ridership reaches an acceptable threshold or lots fill to capacity

- Institute minimal parking fees thereafter in the range of \$1 to \$3/day in line with BART station parking fees
5. Set off-street parking maximums as:
    - 0.75 to 1.0 spaces per residential unit and 1.5 to 2.0 spaces per 1,000 square feet of commercial space within a ¼ mile “walkshed” of the new ferry terminal and BRT station,
    - 1.0 to 1.5 spaces per residential unit and 2.0 to 3.0 spaces per 1,000 square feet of commercial space in a ¼ to ½ mile walkshed, and
    - 1.5 to 2.0 spaces per residential unit and 3.0 to 4.0 spaces per 1,000 square feet of commercial outside the ½ mile walkshed
  6. Allow parking requirements to be further reduced where significant opportunities for shared parking exist (to be reviewed on a case-by-case basis)
  7. Allow on-street parking to satisfy off-street parking requirements and provide small block sizes to maximize on-street parking

Successful implementation of these policies would require the support of more general parking strategies that

focus on incentivizing transit and non-motorized modes through transportation demand management. The 2005 Transportation Strategy Report for Alameda Point recommended many of these complementary strategies, which have been key elements of the Station Area Plan from the early stages. These strategies include:

**Parking Supply**

Reduce the supply of parking to discourage driving

Take advantage of shared-parking opportunities generated by mixed use development

**Parking Demand**

Unbundle parking: Make the cost of residential and commercial parking visible to households and commercial tenants, such as separating the cost of parking in lease agreements with tenants

Enforce cash-out parking law if subsidies are provided (for employers of 50 or more)

Encourage Alternative Modes (Transportation Demand Management or TDM):

Provide a \$75/month transit subsidy (“commuter check” or “EcoPass”) to all residents and employees

Recruit and make provisions for Car-

Share programs and neighborhood electric vehicle programs to reduce the need to have a car on site for occasional use

Hire an on-site TDM Coordinator to manage and promote TDM programs and oversee monitoring to determine program effectiveness

Integrate bicycle parking and support facilities, primarily to reduce trips within the island of Alameda

Provide a guaranteed ride home program

Create incentives to tenants who use less than their share of the parking supply, work on-site, and for carpool and vanpool users

Develop marketing and information programs to encourage alternative transportation modes

**SAMPLE PARKING RATIOS IN TODs**

PARKING RATIOS IN TODs ACROSS THE UNITED STATES		
LOCATION	RESIDENTIAL <sup>1</sup>	COMMERCIAL <sup>2</sup>
<b>Suburban Areas:</b>		
Arlington, VA	<ul style="list-style-type: none"> <li>• Within TOD:                             <ul style="list-style-type: none"> <li>- 1.0 (high rise)</li> <li>- 2.0 (townhouse)</li> </ul> </li> <li>• Outside TOD: 1.1 (high rise)</li> </ul>	<ul style="list-style-type: none"> <li>• Within TOD: 1.7</li> <li>• Outside TOD: 2.9 – 4.0</li> </ul>
Atlanta (Lindbergh), GA	<ul style="list-style-type: none"> <li>• Within TOD: 1.0 – 1.9</li> <li>• Outside TOD: 1 per bedroom</li> </ul>	<ul style="list-style-type: none"> <li>• Within TOD:                             <ul style="list-style-type: none"> <li>- 3.7 (retail)</li> <li>- 2.7 (office)</li> </ul> </li> <li>• Outside TOD:                             <ul style="list-style-type: none"> <li>- 5.0 (retail)</li> <li>- 3.3 (office)</li> </ul> </li> </ul>
Dallas (Mockingbird), TX	<ul style="list-style-type: none"> <li>• Within TOD: 1.2</li> </ul>	<ul style="list-style-type: none"> <li>• Within TOD:                             <ul style="list-style-type: none"> <li>- 4.0 (retail)</li> <li>- 3.0 (office)</li> </ul> </li> </ul>
Miami (Dadeland South), FL	<ul style="list-style-type: none"> <li>• Within TOD: 1.0</li> <li>• Outside TOD:                             <ul style="list-style-type: none"> <li>- 1.5 (1 bedroom)</li> <li>- 1.8 (2 bedrooms)</li> <li>- 2.0 (3 bedrooms)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Within TOD: 2.5</li> <li>• Outside TOD: 4</li> </ul>
Montgomery County, MD	<ul style="list-style-type: none"> <li>• Within TOD: Parking requirements reduced by 20%</li> </ul>	<ul style="list-style-type: none"> <li>• Within TOD: Parking requirements reduced by 20%</li> </ul>
Pleasant Hill, CA	<ul style="list-style-type: none"> <li>• Within TOD: 1.35</li> <li>• Outside TOD: 1.75</li> </ul>	<ul style="list-style-type: none"> <li>• Within TOD:                             <ul style="list-style-type: none"> <li>- 4.0 (retail)</li> <li>- 3.3 (office)</li> </ul> </li> <li>• Outside TOD:                             <ul style="list-style-type: none"> <li>- 5.0 (retail and office)</li> </ul> </li> </ul>
<i>Suburban Areas – AVERAGE</i>	<ul style="list-style-type: none"> <li>• <i>Within TOD: 1.3</i></li> <li>• <i>Outside TOD: 1.5</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Within TOD: 3.1</i></li> <li>• <i>Outside TOD: 4.0</i></li> </ul>

LOCATION	RESIDENTIAL <sup>1</sup>	COMMERCIAL <sup>2</sup>
<b>ITE Parking Generation Rates<sup>4</sup></b>	<ul style="list-style-type: none"> <li>• 1.3 – 2.2 (single family)</li> <li>• 0.7 – 1.9 (low/ mid-rise)</li> <li>• 1.2 – 1.5 (high rise)</li> </ul>	<ul style="list-style-type: none"> <li>• 1.4 – 7.7 (retail)</li> <li>• 0.9 – 5.6 (office)</li> </ul>

<sup>1</sup> Rates given as per unit unless otherwise specified  
<sup>2</sup> Rates given as per 1000 square feet unless otherwise specified  
<sup>3</sup> Range given is minimum – maximum  
<sup>4</sup> ITE Parking Generation, 3<sup>rd</sup> Edition, Widest ranges for Land Uses: 210 (Single family detached), 221 (Low/ mid-rise apartment), 222 (High-rise apartment), 701 (Office building), 820 (Shopping center)  
 Source: Fehr & Peers, July 2007; see References section for studies or ordinances consulted

**SAMPLE PARKING RATIOS IN TODs**

PARKING RATIOS IN TODs ACROSS THE UNITED STATES		
LOCATION	RESIDENTIAL <sup>1</sup>	COMMERCIAL <sup>2</sup>
<b>Urban Areas:</b>		
Chapel Hill, NC (recommended) <sup>3</sup>	<ul style="list-style-type: none"> <li>• Within TOD:                             <ul style="list-style-type: none"> <li>- 0.7 – 1.7 (multi-family)</li> <li>- 1.0 – 2.0 (single family)</li> </ul> </li> <li>• Outside TOD                             <ul style="list-style-type: none"> <li>- 1.0 – 2.5 (multi-family)</li> <li>- 2.0 – 3.0 (single family)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Within TOD:                             <ul style="list-style-type: none"> <li>- 2.2 – 3.3 (retail)</li> <li>- 2.0 – 2.7 (office)</li> </ul> </li> <li>• Outside TOD:                             <ul style="list-style-type: none"> <li>- 3.3 – 5.0 (retail)</li> <li>- 2.9 – 4.0 (office)</li> </ul> </li> </ul>
Oakland (Fruitvale), CA	<ul style="list-style-type: none"> <li>• Within TOD: 0.5</li> <li>• Outside TOD: 1.0 – 2.0</li> </ul>	<ul style="list-style-type: none"> <li>• Within TOD: No space required for retail</li> <li>• Outside TOD: 1.1 – 5.0 (retail)</li> </ul>
Long Beach (Pacific Court), CA	<ul style="list-style-type: none"> <li>• Within TOD                             <ul style="list-style-type: none"> <li>- 1.0 (studio)</li> <li>- 2.0 (1+ bedrooms)</li> </ul> </li> <li>• Outside TOD                             <ul style="list-style-type: none"> <li>- 1.3 (studio)</li> <li>- 2.3 (1+ bedrooms)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Within TOD: 2.0</li> <li>• Outside TOD: 5.0</li> </ul>
Milwaukee, WI	No minimum except for high density residential at 2 spaces per 3 units (0.7)	<ul style="list-style-type: none"> <li>• Within TOD:                             <ul style="list-style-type: none"> <li>- 2 spaces (retail); at least 50% of ground floor parking structures must be used for retail</li> <li>- 4 spaces for first 2,000 sq ft then 1.0 (office)</li> </ul> </li> </ul> <p>Further reductions of up to 15% allowed near transit, for adjacent on-street spaces (1:1 credit), for shared parking (0.75 credit), and for leased parking within 750 feet</p>
Portland, OR	No minimum in TOD; transferable parking entitlements allowed	<ul style="list-style-type: none"> <li>• Within TOD:                             <ul style="list-style-type: none"> <li>- No minimum; transferable</li> <li>- 1.0 (retail)</li> <li>- 0.7 (office)</li> </ul> </li> <li>• Outside TOD:                             <ul style="list-style-type: none"> <li>- 2.5</li> </ul> </li> </ul>
<i>Urban Areas – AVERAGE</i>	<ul style="list-style-type: none"> <li>• <i>Within TOD: 1.0</i></li> <li>• <i>Outside TOD: 1.9</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Within TOD: 1.5</i></li> <li>• <i>Outside TOD: 3.6</i></li> </ul>
<b>City of Alameda</b>	<ul style="list-style-type: none"> <li>• 2.0 (units with 3,000 square feet of conditioned space or less)</li> <li>• 3.0 (units with over 3,000 square feet of conditioned space)</li> <li>• 0.75 (senior housing)</li> </ul>	<ul style="list-style-type: none"> <li>• 5.0 (general retail)</li> <li>• 4.0 (general office)</li> </ul>

## NAS Alameda Historic District : Historic Preservation

The NAS Alameda Historic District, a City of Alameda monument and a National Register-eligible Historic District, is historically significant as a World War II military installation designed in the Streamline Moderne style that follows “Total Base Design”. Defined as the careful integration of site planning, architectural program and landscape architecture, the Total Base Design precept embodies City Beautiful planning and design principles, particularly cross-axial patterns of circulation, large landscaped malls terminating at important visual monuments, and symmetrical disposition of buildings. There are 86 existing contributing structures

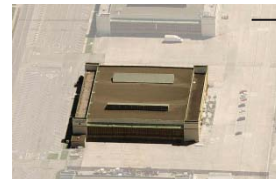
The district’s character defining features include: site plan, axes, view corridors, sub-areas, Streamline Moderne architecture, landscape, and contributing buildings. A detailed description and evaluation of the Historic District is provided in *Appendix B to the Preliminary Development Concept: NAS Historic District Assessment and Historic Preservation Strategy, Page & Turnbull, Inc.*



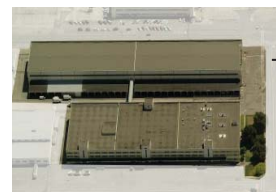
Officers Club



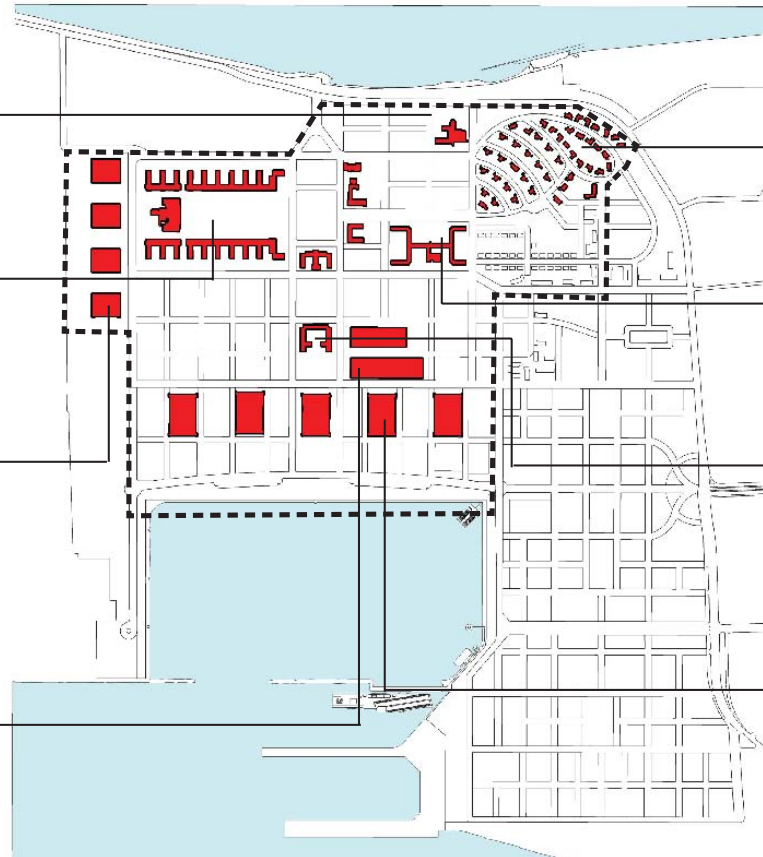
BEQ



Land Based Hangars



Multipurpose Admin/ Storage



Map Showing outline of the historic district and some key of historic buildings on Alameda NAS



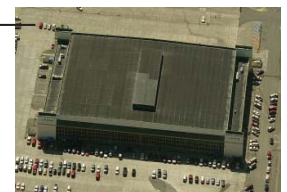
Big Whites



BOQ



City Hall West / Medical Clinic



Sea Plane Hangars

## Preliminary Development Concept : Historic Preservation

The PDC attempted to create a financially feasible, mixed use development program designed to preserve, to the extent feasible, the character-defining elements of the original plan of NAS Alameda. The PDC Site Plan:

- Maintains the historic Main Gate as an entrance to the district and original view corridors;
- Preserves the North-South axis and reinforces the East-West axis with the landscape;
- Preserves the relationship between the two major open spaces and the surrounding Administrative Core buildings
- Maintains the northeast portion of the district for residential uses.
- Retains 52 contributing buildings
- Removes 28 contributing buildings

The proposed historic preservation program within the PDC generated significant concern within the preservation community. The major issues and concerns included:

- Demolition of the Big Whites Neighborhood;
- Demolition of the Bachelors Office Quarters (BOQ) ;
- Removal of all the shop area buildings; and
- Extent of new infill single family residential development within the boundaries of the Historic District, particularly in and around the major Seaplane Hangers

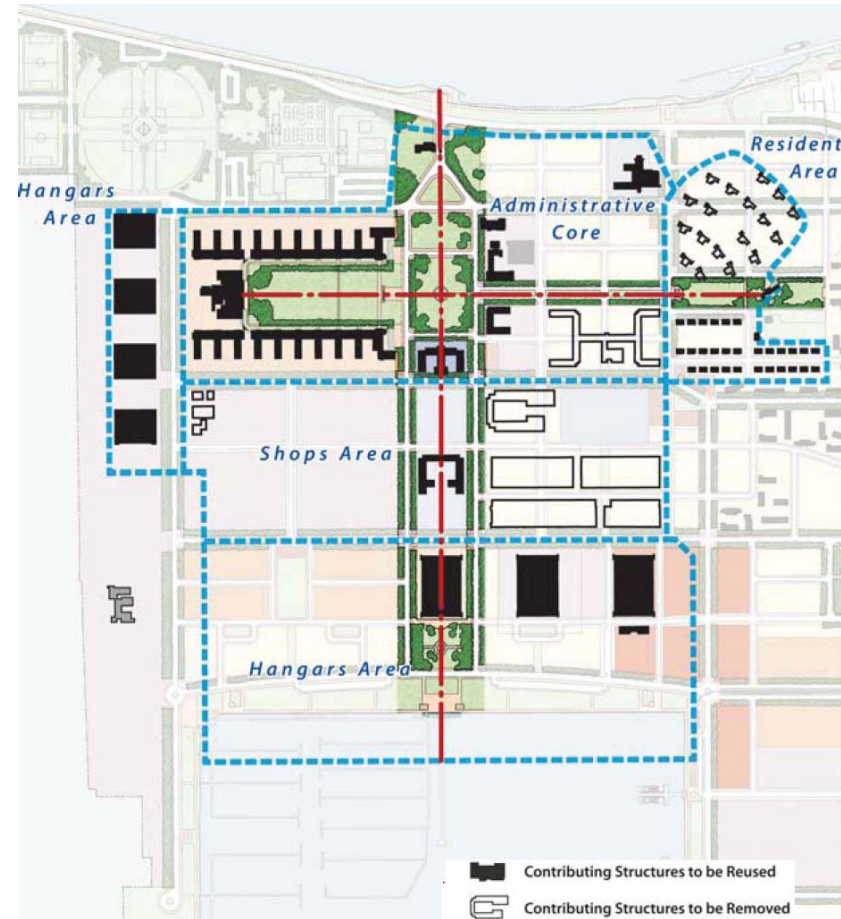
### Findings

Due to its restrictions on multi-family housing, Measure A effectively prohibits the adaptive reuse of historic structures at Alameda Point for residential uses. This, in turn, significantly reduces the financial feasibility of preserving key contributing structures such as the BEQ and BOQ.

In addition, Measure A's prohibition on multi-family housing requires that larger amounts of land are needed to accommodate a residential land use program that consists primarily of single family detached homes. This demand for residential land results in market pressures to remove buildings like the BEQ, BOQ and Big Whites.

This situation is further exacerbated by the relatively limited market demand for non-residential uses that are able to afford the cost of rehabilitation. Low intensity employment uses such as warehousing and light manufacturing are generally unable to invest the necessary capital to reuse many of the base's structures.

Allowing multi-family mixed use development at Alameda Point would increase the potential viability of reusing more of the buildings within the district. It would also allow for a larger portion of the new housing and new construction to be located outside the boundaries of the NAS Historic District, where it would have less impact on the historic character of the district.



Plan showing the historic preservation proposed in PDC



## Historic Preservation in Alternatives

### Buildings preserved in the PDC:

The PDC plan calls for the preservation of several historic structures built for the Navy within Alameda Point. These include the following:

- Seven of the original hangars, three facing the Seaplane Lagoon, the other four facing the future Wildlife Refuge
- The main Administrative Buildings at the center of the base
- The Officers Club overlooking the Estuary
- The campus-like Bachelor Enlisted Quarters (BEQ)

Many of the other historic structures are proposed to be demolished under the PDC option. This is the result of the need to create as much new residential development as possible under the limitations of Measure A.

All of the preserved buildings are intended to be adapted and reused. However, Measure A, precludes them from being used as residential and consequently buildings, such as the BEQ, will be difficult to reuse given the limited demand for similar non-residential space and the high cost of upgrading the building to current codes.

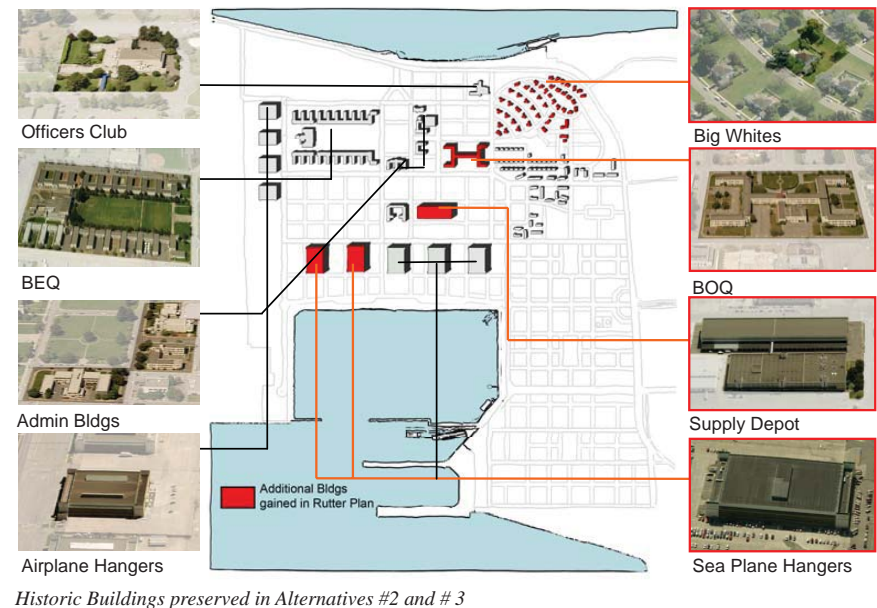
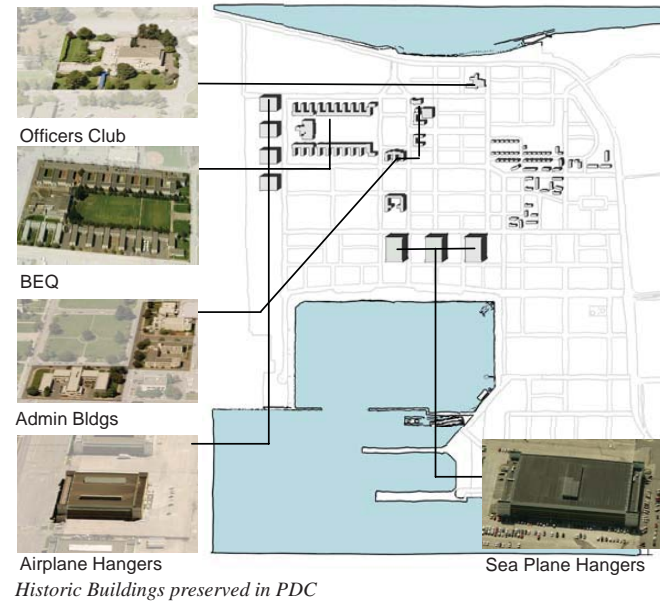
### Buildings to be preserved under the Transit Enhanced PDC and Transit Plus Option:

Because these alternatives are exempt from Measure A, they are able to preserve many more of the historic buildings on the site.

In addition to preserving the buildings and features protected under the PDC, Alternatives #2 and #3 would preserve the Big Whites neighborhood, the Bachelor Officers Quarters (BOQ), Hangars #11 and #12, and the Multi-purpose Administration and Storage buildings in the Shops Area.

Rather than designating the Bachelor Enlisted Quarters (BEQ) buildings for non-residential use as done in the PDC, Alternatives #2 and #3 propose them for residential or mixed use, which is expected to enhance the financial viability of its rehabilitation and reuse.

These additional buildings all contribute to the history and character of the base and could house a variety of residential uses if exemptions were granted under Measure A.



## Adaptive Reuse : Historic Preservation

### **Finding: Appropriate reuse for the existing hangars and former dormitory buildings**

The existing hangars facing Seaplane Lagoon are an important part of Alameda Point's architectural heritage, and provide a memory of the naval air station's history. Finding an appropriate use for such large spaces is a challenging task since the existing buildings will need to be repaired and seismically upgraded before they can be occupied. There are a limited number of tenants that require large volume space.

Consideration should be given to converting the buildings into other uses. The example of Swan's Market in Old Oakland is a valuable precedent for the transformation of a former industrial building into mixed retail/residential use. The structural frame of the old market building was retained, while new residential construction was inserted, creating a memorable palimpsest of the evolution of the building. These drawings illustrate how a similar approach might be applied to historic buildings like the hangars.

Reuse of the former dormitory buildings for office or commercial will be difficult given the limited demand for commercial space and the high cost of rehabilitation of the buildings. However residential reuse would significantly improve the financial viability of rehabilitating the buildings. The completed floor plans shown on the following page, illustrate how the BEQ/BOQ could be adaptively reused for residential use.



*Bladium/ Sea Plane Hangar*



*Reuse/ Conversion of hangar to Live/Work Lofts*

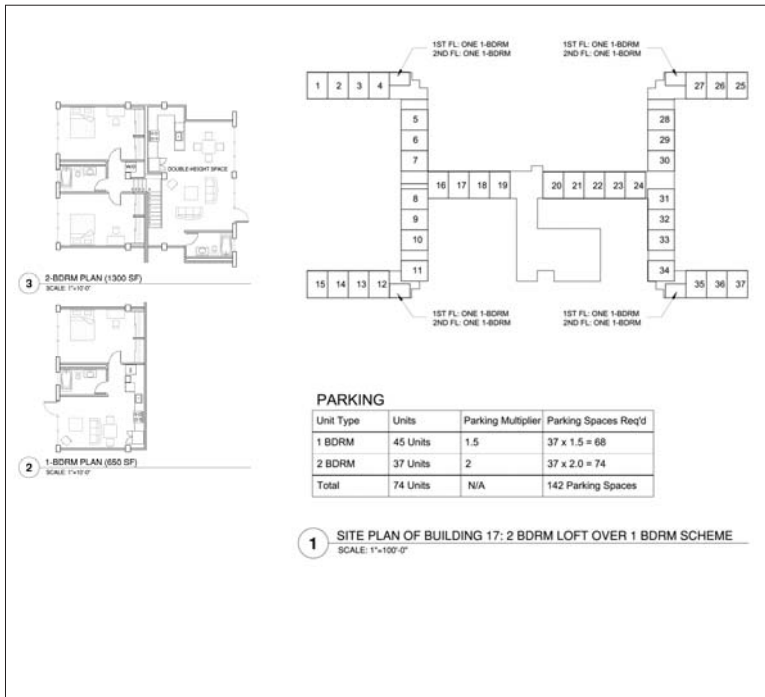


*Swans Market, Oakland*

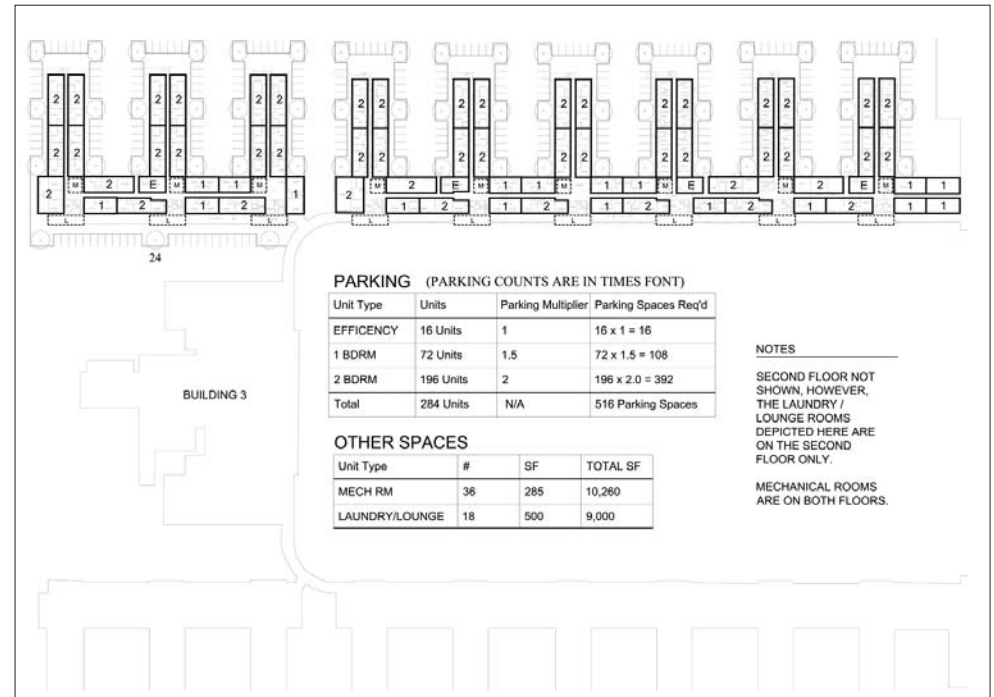


*Bladium / Sea Plane Hangar, Alameda, CA*

## Adaptive Reuse Studies for BEQ and BOQ



Drawings showing studies for conversion of BOQ from Page Turnbull Inc Plans



Drawings showing studies for conversion of BEQ from Page Turnbull Inc Plans



Precedent: Before and After Photos of Reconversion of Hangars at Hamilton Air Force Base, Novato, CA ( Photo by Tim Tyler, Source: [http://www.airfields-freeman.com/CA/Airfields\\_CA\\_SanRafael.htm](http://www.airfields-freeman.com/CA/Airfields_CA_SanRafael.htm))

## a. Market Conditions

Market conditions, in concert with the area's physical and regulatory constraints, will determine the type and mix of uses possible at Alameda Point. Demand for various types of housing is likely to be very strong at Alameda Point. On the other hand, due to its island location, demand for retail and employment uses at Alameda Point generally will be limited.

### **Residential Demand:**

A number of factors, including its proximity to major employment centers in San Francisco and Oakland, its waterfront location, the proximity to regional transit, and a continuing regional need for housing, will continue to generate strong demand for housing at Alameda Point. While we are currently experiencing a downturn in the housing market, Alameda Point is well-positioned to capture a significant amount of demand for a variety of housing types as the project is built out over the longer term.

In order for Alameda Point to be truly transit-oriented, it must be easy for residents to access jobs via public transit. Currently, the top three places where Alameda residents work are San Francisco's Financial District, Downtown Oakland, and Alameda. These job centers all enjoy frequent transit service, and projected job growth in these three cities is expected to be a major driver for demand for transit-oriented development at Alameda Point. Together these three areas are projected to add approximately more than 37,000 new jobs that will generate demand for

housing for approximately 32,000 new households by 2015. As one of the last major development opportunities in the inner core of the Bay Area, it is reasonable to assume that Alameda Point could capture at least 10% of that demand, which would translate to nearly 3,200 homes by 2015. This is higher than the amount projected by the Association of Bay Area Governments (ABAG). ABAG projections, which estimate Alameda's housing stock to grow by over 2,000 new housing units between the years 2007-2012. It is also reasonable to conclude that there will be additional demand for housing beyond 2015 as projections show these regional employment centers continuing to grow.

Demographic changes are also expected to support demand for housing units at Alameda Point. Between 2005 and 2030, the number of persons in Alameda County aged over 65 is expected to more than double. Studies show that many seniors have a strong preference for living in a compact community within walking distance of amenities like shopping, dining and transit. Development at Alameda Point could also be very attractive to this growing market segment.

Despite the recent slowdown in the market, over the longer run demand for housing at Alameda Point will continue to be strong. However changes in the nation's and region's demographics are also changing the type of housing units people choose to live in. Generally, households are becoming older, smaller,

and more diverse. Single-parent and multi-generational households are more accepted and common. In 1950, only 37% of all households were comprised of one or two persons, by 2000 that number had increased to 58%. Where married couples made up the vast majority of households just a few decades ago, they soon will comprise less than half of all households. Similarly, housing demand by age group is changing. While children once made up the largest share of the population, now the population is more evenly balanced across all age groups. Today, less than one quarter of all households have children present. These shifts in household composition have important implications for housing markets around the country and in Alameda. National market studies for transit- and pedestrian-oriented development indicate that many of these smaller households are more likely to prefer living in locations convenient to urban amenities, services and transit than other household types. Furthermore, these smaller households are less likely to require a single-family home.

Demand projections prepared for MTC (Strategic Economics, 2005) indicate that there will be significant demand for housing near transit in a range of housing types by 2015. The TOD demand projections for Northern Alameda County show that more than one third (36 percent) of projected demand for housing near transit will come from people living alone. Another 31 percent will come from married couples, followed by other family households (20 percent) and non-



family households (13 percent). Housing demand will also come from a range of age groups. While most demand (46 percent) will come from households aged 35 to 64, a significant percentage (27 percent) will be 65 and older. Another 27 percent will be under age 35.

Together, these trends suggest that a significant proportion of the residential demand will come from not only more traditional family households with children, but also non-family households, younger, households, and older households, which in turn translates into demand for a variety of housing types, sizes, and costs. However, because of density limitations under Measure A, most of the housing planned at Alameda Point under the PDC consists of small lot, single-family detached units, instead of diverse higher and lower density housing types, that capture all the segments of the projected market for housing. This is likely to slow the absorption of the homes and affect the financial feasibility of the project.

### **Office and Employment Demand:**

There is currently a substantial amount of existing vacant and proposed office and employment-generating development in the East Bay. Alameda is a secondary sub-market of the larger East Bay office market and is likely to start absorbing office space only when the primary markets in downtown Oakland and Emeryville reach certain occupancy levels. Given the large supply of currently available office space in the

East Bay and Alameda's less competitive location relative to other East Bay cities, demand for significant new office, industrial and other employment-generating uses of Alameda Point is expected to be limited.

The demand for new office and employment uses at Alameda Point will be limited by:

- Competition from existing available office space and existing office buildings in Alameda, such as Harbor Bay Business Park in Oakland and other East Bay cities; and
- Less direct freeway and regional transit access to and from Alameda Point than other East Bay locations.

On the other hand, it may attract some office users drawn by the site's following attributes:

- Unique San Francisco and Bay views
- Direct and convenient Ferry access to San Francisco
- Unique hangar or campus style buildings that may attract uses with unique needs such as a campus user, a manufacturer (such as Hangar 1 Distillery), or the Bladium Sports Center.

Historically, the City of Alameda has absorbed approximately 100,000 square feet of new employment uses per year on average. Demand for new office and

employment space at Alameda Point will probably not exceed 100,000 to 150,000 square feet per year unless large scale office or institutional users are attracted to the site.

### **Retail Demand:**

Support for new retail development at Alameda Point will rely on demand from both existing and new Alameda households. It is unlikely that new retail space at Alameda Point will be supported by households or visitors from outside the city. Alameda's island location and its limited visibility and automobile access (i.e., freeways), limit its potential for regional-serving retail. Similarly, its location at the far west end of the island may also limit its potential as a citywide retail destination.

Demand projections and a previous retail study show that the west end of Alameda has capacity to support approximately 500,000 square feet of additional retail development including locations along Webster Street, at Alameda Landing, and at Alameda Point, assuming development of approximately 1,800 new homes at Alameda Point.

Alameda Landing is entitled to develop up to 300,000 square feet of retail development. If this entire amount is developed, it is not clear that sufficient demand would remain to warrant development of the entire 336,000 square feet of retail planned at Alameda Point (assuming 1,800 new residential units). Increasing the numbers of residential units enhances the likelihood that the full amount of retail could be successful.

## b. Financial Feasibility

Any development concept for Alameda Point must be financially feasible to attract private investment. Revenue sources from the project must exceed the costs of development. The primary sources of revenue include:

- Sale of land for new development;
- Leasing of existing buildings;
- Sale of existing buildings;
- Project-based public financing; and
- Private financing .

The costs associated with the development of Alameda Point will be significant. They include:

- Complete replacement of major infrastructure systems, including but not limited to sewer, storm drain, water distribution, electrical, and most roadways, streets and sidewalks;
- Demolition of obsolete and hazardous structures and systems;
- Renovation and rehabilitation of existing buildings, including historic resources programmed for adaptive reuse;
- Traffic mitigation measures and integrated, multi-modal transit improvements;
- New or improved public facilities,

such as a transit center and ferry terminal, regional sports complex, and city facilities;

- Fiscal mitigation of any adverse impacts to the City's General Fund associated with development of Alameda Point;
- Subsidies for the provision of below market rate affordable housing units;
- The provision of local parks and public open space; and
- Developer return on equity investment.

In 2006 a comparison of revenues and costs generated by the PDC Plan showed that the proposed development at Alameda Point would not generate sufficient revenues to cover project costs without public financing such as redevelopment property tax increment financing and project-based financing, such as Mello-Roos bonds, to attract private capital to the redevelopment effort and make the project financially feasible. Given the site constraints, it is likely that any redevelopment project at Alameda Point will require some level of public financing to achieve financial feasibility.

### **Market and Financial Analysis for Alameda Point TOD Study**

October 5, 2007

Prepared for:  
City of Alameda



*Appendix: Market and Financial Analysis Report*

## c. Fiscal Neutrality

### Fiscal Neutrality Policy

The Alameda City Council and Alameda Point Reuse and Redevelopment Authority have adopted the policy that Alameda Point must generate enough revenues to the City General Fund ( i.e through sales taxes, property taxes and other sources) to offset the ongoing costs to provide services such as police, fire and other community services. Simply stated, the annual revenues generated by the development must exceed the costs of providing City services such as police and fire protection, public works activities, and recreation programming and park maintenance. Revenues generated by redevelopment are expected to include property taxes, property transfer taxes, sales taxes, utility user’s tax, and a range of other fees and levies.

A fiscal impact analysis of the PDC indicated that the cost to provide municipal services to the site would be greater than the public revenues generated by the development. To ensure that the future costs of services do not exceed the revenues received, it is anticipated that any redevelopment plan for Alameda Point will require a fiscal mitigation plan that demonstrates how annual shortfalls to the General Fund will be eliminated.

The mitigation plan is likely to consist of the establishment of a Municipal Service District (MSD) could be established for Alameda Point. Under this structure an annual assessment would be levied against the property at Alameda Point

and the proceeds from the assessment would be used to offset any adverse impacts on the General Fund associated with providing municipal services to the site. An analysis would be necessary to determine the appropriate level of assessment and to determine if the levy of such an assessment would have a negative impact on the underlying value of the property.

The adjoining table is a summary of factors that influence the City’s major sources of revenues and major General Fund expenditure categories.

#### Revenues:

##### **Property Taxes**

*General Fund property tax revenues are limited due to the fact that Alameda Point is located in a redevelopment project area, however the General Fund does receive a share of the property taxes generated. The main factors influencing property values, and thus property tax revenues, are size and number of units.*

##### **Property Transfer Tax**

*Property Transfer Taxes are also impacted by factors listed above (size and number of units), however some studies have shown that condominium units have higher turnover rates than singlefamily homes. To the extent that more property sales were to occur, this would also increase the tax revenue to the City.*

##### **Sales Tax**

*Direct sales taxes are a function of the amount of square footage of retail within the development. Indirect sales tax from household spending would be expected to increase with more units.*

##### **Utility Users Tax**

*Utility Users Taxes are based on a percentage of household utility costs. It is expected that smaller households with smaller housing units would have lower utility costs. However, a higher number of units is expected to generate higher tax receipts.*

##### **Other Fees and Levies**

*These fees are typically calculated on a*

*per capita basis and would increase or decrease proportionally to the assumed population.*

#### Service Costs:

##### **Police**

*Police expenditures are expected to increase or decrease along with population.*

##### **Fire**

*Fire expenditures are also expected to increase or decrease along with population; however there can be cost savings with the reduced number of structures anticipated in these higher density scenarios. Additionally, fire safety precautions required for multi-family buildings can ultimately reduce the need for fire services.*

##### **Public Works**

*The public works costs are typically a function of the size of public infrastructure that will require maintenance. This is generally measured on a linear foot basis for streets and storm drainage.*

##### **Recreation**

*Recreational programs are also typically measured on a per-capita basis.*

##### **Other City Services**

*These costs are typically calculated on a per capita basis and would increase or decrease proportionally to the assumed population.*

Table showing the factors influencing the Fiscal Impact

## d. Principles and Findings

A mixed-use development, consisting of retail, office/R&D, light industrial, and a broad range of housing types, including higher-density transit-oriented development will generate numerous benefits for the Alameda Point project, including the potential for greater financial feasibility. These benefits are described below.

### 1. Market responsiveness

Offering a broad range of housing types, including some higher density housing, will allow the project to respond to changes in the market and attract buyers from multiple market segments. For example, one land use or housing type could be phased in before another, depending on the market. This has a direct impact on the project's bottom-line and its financial feasibility and can be a key factor in whether a project moves forward. A project of predominantly single-family homes, on the other hand, is unlikely to be financially feasible without public subsidy and is more vulnerable to changes in the marketplace because it is reliant on demand for only one housing type that attracts a limited segment of the market.

### 2. Faster absorption of units

Including a range of housing types in the development means that the units can be developed and sold faster than a project with fewer product types, because they can be marketed to a broader segment

of the market. As a result, the project can generate revenue sooner, potentially increasing the overall feasibility of the project.

### 3. A higher quality retail environment

A mixed-use, transit-oriented development project could also encourage greater support for retail than a less dense project by clustering retail development within close proximity to a concentration of potential shoppers, (i.e., residents of nearby housing units and/or local employees.

The amount of retail that can be supported at Alameda Point will depend on the amount of new retail in other parts of Alameda, as well as the number of new households at Alameda Point. Increasing the amount of housing at Alameda Point will improve the ability of the project to support desired retail and services.

### 4. Capturing the value of transit

A project of this type would also capitalize on Alameda Point's location near transit that connects to major regional employment centers. Alameda Point is an excellent location for much needed regional housing that offers an alternative to the automobile for commute trips. The types of households that want to live near transit are diverse and include: young families looking to enter the housing market; households that want an independent lifestyle and to reduce

their dependence on the automobile; and seniors and empty-nesters who want to downsize their housing and reduce their household chores. Young workers often choose to live in urban neighborhoods, even if their jobs are in the suburbs. Living near transit can satisfy a desire for community, independence, opportunity, and convenience.

Given this diverse demand, a broad variety of housing types is necessary to allow developers to market to a wide variety of market segments and offer housing units at a wider range of price points. Beyond simple housing type, neighborhoods that offer a good pedestrian environment, convenient access to retail and services, and multiple transit options, also tend to have lower car ownership.

Realizing price premiums from development located within close proximity to successful regional transit helps to make the project more feasible from a development perspective.

### 5. Improved financial feasibility

As the market for single-family homes softens (as it has recently), the financial feasibility of the PDC decreases because it does not offer the range of housing types that allow it to tap into a broad market.

As the financial feasibility of a plan decreases, the Plan's financial ability

to provide funds for open space, preservation of historic buildings, affordable housing, transit services, and other public improvements and benefits decreases.

The greater diversity of housing types provided in the Transit Enhanced and Transit Plus Alternatives is projected to increase average annual absorption to more than 100 units per year and shorten the period of buildout by several years.

The inclusion of mixed use residential and retail development in the Transit Enhanced and Transit Plus Alternatives is expected to contribute additional value to the development by further improving the quality and sense of place. This added value will be realized through increased land values, higher sales/lease rates, and increased tax revenues. To the extent that the project is able to support increased retail development, this will also have a direct impact on sales tax revenues to the City.

The inclusion of multi-family housing in the Transit-Enhanced and Transit-Plus Alternatives will reduce the financial impact of the City's 25% affordable requirements on project developers, and make these alternatives more financially feasible than the PDC.

## Appendix A: Understanding Density and Housing Types

a. Large Lot Single Family Homes | b. Small Lot Single Family Homes | c. Single Family Tuck-under Townhouses |  
d. Fourplex / Courtyard Townhouses | e. Townhouses | f. Mixed Use / Stacked Flats

## a. Large Lot Single Family Homes (‘Measure A’ Compliant)

### 4-8 Dwelling Units/Acre Net

#### “1-2 Story Large Lot Single Family Homes”

- 1-2 stories
- 4 bedroom Single family houses
- Average 1,800-SF dwelling
- 2 car side-by-side garage
- Type V wood construction
- Large Backyard/Side Yard

#### Development

- 7,000-SF avg parcel size



Axonometric



Big Whites, Alameda, CA



PDC: None



Alt. # 2 : 30 SF Homes @ 4-6 Dwelling Units/Acre



Alt. # 3 :: 30 SF Homes @ 4-6 Dwelling Units/Acre



Large Lot Single Family Homes, Livermore, CA

## b. Small Lot Single Family Homes (‘Measure A’ Compliant)

### *14-16 Dwelling Units/Acre Net*

#### *“2-3 Story Single Family houses with mid block alley”*

- 2-3 stories
- 2 bedroom Single family houses
- Ave 1,450-SF dwelling
- 2 car side-by-side tuck-under garage

#### **Development**

- Mid block alley
- 3,000-SF avg parcel size



Axonometric



Small Lot Single Family Homes, Hercules, CA



PDC: 700 SF Homes @ 10-12 Dwelling Units/Acre



Alt. # 2 : 170 SF Homes @ 14-16 Dwelling Units/Acre



Alt. # 3 : 120 SF Homes @ 14-16 Dwelling Units/Acre



Small Lot Single Family Homes, Sacramento, CA

## c. Single Family “Tuck-under” Houses (‘Measure A’ Compliant)

### *18-20 Dwelling Units/Acre Net*

#### *“2-3 Story Single Family houses with mid block alley”*

- 2-3 stories
- 2 bedroom Single family houses
- Ave 1,250-SF dwelling
- 2 car side-by-side tuck-under garage

#### **Development**

- Mid block alley
- 2,000-SF avg parcel size



*Axonometric*



*Single Family Homes, Hercules, CA*



*PDC: 200 SF Homes @ 14-16 Dwelling Units/Acre*



*Alt. # 2 : 700 SF Homes @ 18-20 Dwelling Units/Acre*



*Alt. # 3 : None*



*Single Family Homes, Hercules, CA*



### d. Fourplex / Courtyard Townhouses

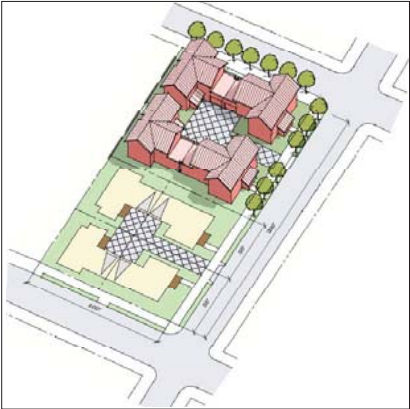
**20-24 Dwelling Units/Acre Net**

**“Four Plex Units/ Courtyard Housing”**

- The units are arranged around a courtyard
- 2-3 stories, 2 bedroom Town houses
- Ave 1,350-SF dwelling
- 1 car garage per unit

**Development**

- Avg parcel size 50’x 50’, Avg 2,500-SF



Axonometric



Courtyard Housing , Stone Leigh, Alameda, CA



PDC: None



Alt. # 2 : None



Alt. # 3 : 300 Fourplexes @ 20-24 Dwelling Units/Acre



Fourplex Courtyard Housing , Fremont, CA

## e. Townhouses

### 20-34 Dwelling Units/Acre Net

#### “Townhouses with Tuck-Under Parking”

- 2-3 stories, 2 bedroom Townhouses
- Mid block alley access for garages
- Ave 1,350-SF dwelling
- 1 car garage per unit, with tuck-under parking
- Type V wood construction

#### Development

- Individual parcel size 20' x 60', 1,200-SF



Axonometric



Townhomes, Mountain View, CA



PDC: 200 Duplexes @ 18-20 DU/Acre



Alt. # 2 : 900 TH's/Fourplexes @ 20-24 Dwelling Units/Acre



Alt. # 3 : 1500 TH's/Fourplexes @ 32-34 Dwelling Units/Acre



Townhomes, San Diego, CA

## f. Mixed-Use / Stacked Flats

### 46-50 Dwelling Units/Acre Net

*“ 4 story Stacked Townhouses over Podium Garage”*

- 4 stories, lofts and 1-2 bedroom Townhouses
- Ave 1,350-SF dwelling
- 1 car/dwelling ratio, at grade parking under podium
- Ground floor units wrap the podium
- Ground floor retail possible

#### Development

- At grade parking under podium



Axonometric



Stacked Flats, Emeryville, CA



PDC: None



Alt. # 2 : None



Alt. # 3 : 1500 Stacked Flats @ 46-50 Dwelling Units/Acre



Stacked Flats, Berkeley,

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