

# SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION

Thirty Van Ness Avenue • Suite 2011 • San Francisco, California 94102 • (415) 557-3686 • FAX: (415) 557-3767

Agenda Item #10

July 19, 1996

**BAY PLANNING COALITION**  
303 WORLD TRADE CENTER  
SAN FRANCISCO, CA 94111

## Application Summary (For Commission consideration on August 1, 1996)

**Number:** 2-96  
**Date Filed:** July 3, 1996  
**90th Day:** October 1, 1996  
**Staff Assigned:** Jeffrey G. Jensen

### Summary

**Applicant:** City and County of San Francisco  
**Location:** San Francisco International Airport (SFIA), unincorporated San Mateo County  
**Project:** The San Francisco International Airport Master Plan  
**Site:** Located on the west shore of San Francisco Bay, the SFIA controls approximately 5,270 acres of upland and submerged baylands. SFIA is the principal commercial air passenger and cargo facility in the Bay Area, handling approximately 30 million annual passengers in 1990. The airfield system occupies approximately 1,700 acres of land, some of which consists of diked or filled baylands. Among other features, SFIA has two sets of intersecting parallel runways; 2.6 million square feet of passenger terminal space serving 80 passenger terminal gates; a five-level parking garage with 6,765 stalls; air freight facilities with 34 aircraft parking spots; and general aviation facilities (see Exhibits A and B).

### Issues

**Raised:** The staff believes that the application raises three issues: (1) whether the proposed Master Plan projects are consistent with the Airport Priority Use Designation of the *San Francisco Bay Plan*; (2) whether the proposed Public Access Master Plan provides the maximum feasible public access consistent with the proposed Master Plan projects; and (3) whether SFIA should provide mitigation to offset the potential, individual or cumulative impacts of those Master Plan projects that would result in new Bay fill.

### Background

The Commission has long been concerned that SFIA would need to expand its runways into the Bay to meet future air traffic demands. In November of 1993, the Commission staff became aware that SFIA submitted an airport layout plan (ALP) to the Federal Aviation Administration (FAA). The Executive Director informed SFIA, the FAA and the National Oceanic and Atmospheric Administration (NOAA) that approval of the ALP by the FAA was a federal action that required a federal consistency review by the Commission pursuant to the federal Coastal Zone Management Act. The ALP, which is an integral step in implementing the SFIA Master Plan, concerned staff in that it would affect the coastal zone in two signifi-

cant ways: (1) the large increase in traffic on Highway 101 could result in pressures for additional fill in San Francisco Bay to alleviate congestion and could cause additional air pollution that could affect Bay resources; and (2) full build-out under the SFIA Master Plan could increase pressure to create additional runway capacity through new Bay fill. At that time, information in the SFIA Master Plan, the Final Environmental Impact Report (FEIR), and the FAA's 1991-92 *Aviation Capacity Plan* strongly suggested that additional runway capacity, which could only be provided through Bay fill, might be needed to meet the increased air traffic demand that would result from the build out of the SFIA Master Plan and the ALP.

The SFIA raised several procedural and substantive objections to the Commission's determination that SFIA submit a federal consistency review to the Commission. SFIA asserted that the Commission had no authority to review the ALP. The Airport noted that the SFIA Master Plan did not propose any new Bay fill to extend or realign the runways. SFIA stated that its Master Plan projects were necessary to accommodate significant projected increases in passengers and to reduce terminal and other landside congestion. SFIA believes that the improvements under the Master Plan are not driven by current or foreseeable air space congestion. Moreover, the Airport asserted that current runway configurations are adequate to handle projected airline operations into the next century and that the Master Plan improvements are designed to accommodate projected increases in passenger traffic based on currently runway capacity and would not increase demand for additional runway capacity.

In February of 1994, the NOAA agreed to stay any decisions regarding BCDC's request to review the ALP until the Commission and SFIA could negotiate an informal solution. To avoid the costs of litigation, the Commission entered into an agreement with SFIA that the Commission would withdraw its assertion of federal consistency review authority over SFIA's ALP. The Commission further agreed not to request consistency review of future Airport ALPs with respect to projects contained in the SFIA Master Plan. The SFIA concurred with BCDC's withdrawal and agreed to provide the Commission with copies of all future ALPs at the same time SFIA submits the ALPs to the FAA. SFIA further agreed to confirm and acknowledge BCDC's state statutory authority under the McAteer-Petris Act to issue permits for certain SFIA Master Plan projects. As described below, SFIA has now submitted a permit application for those Master Plan projects that fall within the Commission's Bay and 100-foot shoreline band jurisdictions.

## Project Description

### Project Details:

The primary objectives of the San Francisco International Airport Master Plan are twofold: (1) to provide a coordinated development plan that will consolidate and relocate many of the existing, airport-owned, landside facilities to improve the efficiency and cost-effectiveness of airport operations; and (2) to respond to the projected economic growth of the Bay Area and ensure that the future development required to meet that demand at the airport is implemented in a manner that is compatible with the plan. The Master Plan is based on two chronological thresholds: the ten-year, short-term (1996) and the twenty-year, long-term (2006) milestones.

As part of its Master Plan Development Program, the SFIA is requesting Commission approval for six short-term, development projects and a Master Public Access Program. SFIA is also requesting preliminary review of four, long-term projects, whose siting and design details are not yet complete. The purpose of

evaluating both short and long-term projects at this time is to determine the appropriate level of public access required to fully implement the SFIA Master Plan within the Commission's jurisdiction. This would allow SFIA the flexibility to provide one Public Access Program to cover all SFIA projects, rather than individual, piece-meal public access projects for each of the ten proposed developments. Nevertheless, SFIA is required to gain final Commission approval for the four, long-term projects. The applicant describes the project as follows:

**Short Term Projects:**

**a. Emergency Response Facility #4**

**In the Bay:**

1. Construct and use an approximately 40-foot-wide and 125-foot-long boat launch ramp, totaling approximately 3,450 square feet of new, solid fill;
2. Construct and use an approximately 52-foot-wide and 60-foot-long boat shed and gangway/float, totaling approximately 3,120-square feet of new, pile-supported and floating fill;
3. Construct and use an approximately 8-foot-wide and 130-foot long access pier to the boat shed, totaling approximately 1,156 square feet of new, pile supported fill;

**Within the 100-foot shoreline band:**

1. Construct and use an approximately 40-foot-wide and 125-foot-long boat launch ramp, totaling approximately 1,550 square feet in the shoreline band;
2. Construct and use approximately 13,000 square feet of an approximately 30,000-square-foot, asphalt paved parking lot; and
3. Construct and use an approximately 8-foot-wide and 130-foot long access pier to the boat shed, totaling approximately 404 square feet within the shoreline band.

**b. Police Training Facility/Emergency Operations Staging Facility**

1. Install and use an approximately 240-square-foot bullet trap to collect and recycle spent bullets at Range A; and
2. Install and use an approximately 168-square-foot bullet trap to collect and recycle spent bullets at Range B.

**c. East Field Aircraft Maintenance Facility and Apron (Plot 41)**

1. Construct and use approximately 35,950 square feet of a total of approximately 1,978,120 square feet of asphalt concrete pavement and cement-treated base material for aircraft parking;
2. Relocate approximately 850 feet of an approximately 1,900-foot-long and 10-foot-high, chain link, security fence, covering a total of 1,750 square feet;
3. Install and use approximately 600 square feet of an approximately 3,600-square-foot blast deflector; and
4. Construct a utility trench and install and use approximately 4,250 square feet of a total of approximately 9,500 square feet of support utilities below grade.

**d. Fixed Base Operator (FBO) Facility**

1. Install and use approximately 59,000 square feet of approximately 65,000 square feet of landscaping; and
2. Install and use approximately 70,000 square feet of approximately 529,870 square feet of asphalt pavement for new driveways including:
  - (a) Replacing the existing driveway to the Air-Cal Hangar with a new driveway to access AMR Combs Hangar "A";
  - (b) Replacing the existing driveway to Evergreen Cargo with a new e Executive Terminal, and the Vehicle Maintenance Building by excavating existing asphalt and replacing it with new asphalt.

**e. North Access Road Realignment, Cargo Apron (Sea Plane Harbor Road) Phase I**

1. Install and use approximately 112,000 square feet of a total of 140,000 square feet of asphalt concrete to realign the North Access Road;
2. Install and use approximately 1,100 feet of a 1,300-foot-long and 10-foot-high, chain link, security fence, covering a total of 2,200 square feet, and installing and using approximately 9,900 square feet of an approximately 10,300-square-foot blast deflector for safety and security measures; and
3. Construct a utility trench and relocate and use approximately 24,000 square feet of a total of approximately 60,000 square feet of support utilities below grade and within the new road alignment.

**f. North Access Road Realignment, North Cargo Facility**

1. Install and use approximately 68,000 square feet of a total of 134,000 square feet of asphalt concrete to realign the North Access Road; and
  2. Repair and replace approximately 700 feet of a 1,000-foot-long and 10-foot-high chain link, security fence, covering a total of 1,400 square feet.
- g. Repair, replace and maintain, on an in-kind basis only, all improvements within the Bay and the 100-foot shoreline band to their original, Commission-approved specifications.

**Long-Term Projects--Actual construction would not be authorized at this time.****a. Harbor Dock Facility****In the Bay:**

1. Construct and use an approximately 2,800-square-foot pile-supported dock, totaling approximately 2,080 square feet of new, pile-supported fill;

**Within the 100-foot shoreline band:**

1. Construct and use an approximately 2,800-square-foot, pile-supported dock, totaling approximately 720 square feet within the shoreline band;
2. Construct and use approximately 6,500 square feet of an approximately 10,000-square-foot building to support off-loading of cargo and passengers;
3. Install and use approximately 30,100 square feet of a total of 42,500 square feet of asphalt concrete for new driveways and parking; and

4. Construct a utility trench and install approximately 8,000 square feet of a total of approximately 10,000 square feet of support utilities below grade.
- b. **North Access Road Realignment, Seaplane Harbor at Coast Guard Station Phase 2**
    1. Install and use approximately 78,000 square feet of a total of 124,000 square feet of asphalt concrete to realign the North Access Road and to provide adequate wind-tip clearance for safe maneuvering of airplanes;
    2. Construct a utility trench and install approximately 10,500 square feet of a total of 20,000 square feet of support utilities below grade; and
    3. Install and use approximately 1,050 feet of a new 2,000-foot-long and 10-foot-high, chain link, security fence, covering approximately 2,100 square feet.
  - c. **Airport Light Rail System (ARTS), Phase 2**
    1. Construct and use 131,000 square feet of a total of 775,800 square feet of an electrically-powered, tracked vehicle, Airport Rail Transit System. The ARTS would be at an elevation of approximately 33-1/2 feet, from the existing grade to the top of a guided vehicle. The approximately 4-1/2-foot-high and 28-1/2-foot-wide rail platform would be supported by several 8-inch-in-diameter and 15-foot-high, concrete columns;
    2. Construct and use a light rail station at the United Airlines' (UAL) parking area east of the UAL maintenance building;
    3. Construct and use a light rail station at the new Harbor Dock Facility;
    4. Construct and use a light rail station at the General Aviation Facility; and
    5. Construct a utility trench and install approximately 23,000 square feet of a total of 136,000 square feet of support utilities below grade.
  - d. **North Access Road Widening, UAL Base**
    1. Install and use approximately 95,000 square feet of a total of 100,000 square feet of asphalt concrete to widen and realign North Access Road.
  - e. Repair, replace and maintain, on an in-kind basis only, all improvements within the 100-foot shoreline band and the Bay to their original, Commission-approved specifications.

**Fill:**

SFIA proposes to place a total of approximately 9,806 square feet of fill for the Emergency Response (short-term) and Harbor Dock Facilities (long-term). The new fill includes a total of approximately 6,356 square feet of pile-supported fill for an access pier, boat shed, and boat dock, and 3,450 square feet of submerged fill for a boat launch ramp. SFIA believes that "these projects are, by definition, water-oriented uses. They will improve the health, safety and welfare of any passengers of aircraft that are downed in the Bay...The facilities are planned at the minimum size necessary to meet anticipated emergency response requirements. It is not possible to meet these emergency response needs (i.e., aircraft in the water) with an upland facility." SFIA also believes that "the impacts of fill will be limited because of the limited nature of the project (i.e., placement of piles for the boat shed and dock."

**Public  
Access:**

SFIA believes that “public recreational access along the Airport’s shoreline located east of U.S. Highway 101 cannot be feasibly or safely provided due to the significant safety, security, and use conflicts resulting from intense and concentrated Airport operations. As a result, the Airport cannot permit public recreational access at the Airport; to do so would constitute a dereliction of the Airport’s duty to provide a safe and secure air transportation center for Airport users and employees. Any requirement to provide public recreational access at the Airport would be contrary to the provisions of the McAteer-Petris Act and the *San Francisco Bay Plan*.”

Because of safety and operation constraints, SFIA is proposing an in-lieu Master Public Access Program with three components: (1) improvements to Bayfront Park; (2) a bicycle/pedestrian trail link, west of U.S. Highway 101, to provide a portion of the San Mateo County Bay Trail around the Airport; and (3) a bicycle/pedestrian trail link from South Airport Boulevard along North Access Road to the existing public access at Belle Air Island. SFIA intends for the Master Public Access program to satisfy the public access requirements for all of the short and long-term Master Plan projects that would fall within the Commission’s jurisdiction.

1. **Bayfront Park Improvements.** SFIA is proposing to improve the landscaping at the approximately 1.6 acre Bayfront Park by: (1) removing unhealthy trees at the southern edge of the lawn; (2) removing turf under trees at the north and west edges of the lawns and replacing them with new ground cover to improve watering conditions for existing trees; (3) planting an arc shaped grove of Cottonwoods at the north end of the lawn to buffer winds and enhance micro-climate for trees and park users in the lawn area; (4) interspersing trees at the west edge of the park to create a wind buffer; and (5) providing a landscape plan for infill planting with horticulturally appropriate material.

SFIA is also proposing to expand Bayfront park with an additional 0.5 acres of new park area including installing: (1) an approximately 10-foot-wide, asphalt loop trail connecting to the existing Bayfront trail; (2) a turf berm for viewing the Bay, marsh and Airport; (3) concrete stepped walls to create amphitheater-like terraces oriented to accentuate views of the marsh and airplane landing areas of the East-West runways; (4) shoreline protection extending along the marsh edge; (5) interpretive signage located near the tidal flood gate explaining tidal action and the operation of flood gates; (6) extensive landscaping along the west periphery of the project site to provide wind protection, a buffer from street activity, and aesthetic enhancement of the park.

SFIA is proposing to fund and construct the public access improvements not to exceed \$150,000, subject to the approvals of the City of Millbrae and Westin Hotel. The City of Millbrae holds a one-year renewable permit from SFIA to operate the park.

2. **Bay Trail Link.** Within 60 days of issuance of a permit for the six, short-term, Master Plan projects, SFIA proposes to enter into an agreement with San Mateo County to fund the planning, design, and construction costs, not to exceed \$845,000, of a bicycle/pedestrian trail link aligned either: (1) between the Bayfront Park at the southeast corner of the San Francisco International Airport, running adjacent to or along the perimeter of Airport Property (West Bayshore parcel), located west of U.S. Highway 101, proceeding along San Bruno Avenue to South Airport Boulevard, to the SamTrams Island (Belle Air Island) entrance roadway at the northwest corner of the Airport, and connecting with the existing BCDC required public access at that location; or (2) west along

Millbrae Avenue from Old Bayshore Road to the JPB/CalTrain right-of-way, continuing north along the JPB/CalTrain right-of-way from Millbrae Avenue to connect to the existing Bay Trail Colma Creek bike path (see Exhibit E).

The agreement would provide funds for the planning and construction costs for the trail link as follows: (1) payment by San Mateo County to the San Francisco Bay Trail Project of up to \$95,000 to prepare an access study on alternative alignments; and (2) payment by San Mateo County of up to \$750,000 for the design and construction of a trail alignment substantially similar to the alignments described above, with San Mateo County assuming program management responsibilities of the trail, including environmental review, permitting, construction contracting and management.

Except for its responsibility in funding the study and the implementation of the Bay Trail alignment, the Airport states that it will "not bear any responsibility for the implementation of said trail nor...be responsible for obtaining any required approvals, permits or environmental clearances for the bicycle/pedestrian trail link."

SFIA states that to the extent that BCDC seeks to place any portions of the trail link on SFIA property west of U.S. Highway 101 (West Bayshore parcel), that its consideration of such a request would be governed by the following factors: (1) the trail does not conflict with Airport operations and safety; (2) does not unduly conflict with future Airport development; and (3) does not create significant environmental impacts, particularly with regard to wetlands and endangered species.

3. **North Access Road Link.** If a trail alignment is selected and constructed that would proceed around the Airport perimeter to South Airport Boulevard, the Airport would fund the on-Airport portions of the trail link west along North Access Road from South Airport Boulevard to Belle Air Island, not to exceed \$20,000, if the \$750,000 allocation is insufficient to fund the development of this portion of the trail. SFIA is proposing two five-foot-wide, on-street, bicycle pathways along North Access Road.

**Mitigation:** The SFIA is not proposing any mitigation for the approximately 9,806 square feet of new Bay fill, including 6,356 square feet of new pile-supported fill and approximately 3,450 square feet of submerged fill.

**Priority**

**Use Area:** The *San Francisco Bay Plan* Map 9 designates the entire project site as an Airport Priority Use area. The *Bay Plan* Map notes that "further expansion into Bay only if clear need is shown by regional airport system study. Keep runway approach and takeoff areas free from tall structures and incompatible uses".

**Public**

**Benefits:** Implementation of the SFIA Master Plan projects would enable the Airport to more efficiently and effectively handle the projected increases in Airport passengers and cargo, would allow the Airport to remain competitive with other Airports on a regional and state-wide basis, would provide enhanced security to prevent terrorist attacks to Airport facilities, and would provide more efficient water rescue facilities to respond to air-related disasters within the Bay. Moreover, implementation of the Master Plan would provide for up to approximately one million dollars to implement public access improvements along the Bay and an in-lieu public access trail along the western perimeter of the Airport.

**Schedule  
and Cost:**

The total project cost to implement the SFIA Master Plan is approximately \$2.4 billion dollars. Work within the Commission's regulatory jurisdiction is approximately \$10 million dollars. Under the Airport Master Plan, SFIA will carry out six projects in the short-term and four projects in the long-term. SFIA has already begun construction for some portions of work under its Master Plan that falls outside the 100-foot shoreline band. SFIA proposes to begin construction within the Commission's jurisdiction as soon as the Commission grants authorization for the first six projects and SFIA would carry out the work through July, 1998. SFIA will determine the specific construction scheduling for the additional four long-term projects at a later date, but it is likely SFIA would carry out these projects through the year 2006.

**Staff Analysis**

**A. Issues Raised:** The staff believes that the application raises three primary issues: (1) whether the Proposed Master Plan projects are consistent with the Airport Priority Use Designation of the *San Francisco Bay Plan*; (2) whether the proposed Public Access Master Plan provides the maximum feasible public access consistent with the proposed Master Plan projects; and (3) whether SFIA should provide mitigation to offset the potential, individual or cumulative impacts of those Master Plan projects that would result in new Bay fill.

1. **Consistency with Airport Priority Use Designation.** Section 66602 of the McAteer-Petris Act finds that "certain water-oriented land uses along the Bay shoreline are essential to the public welfare of the Bay Area, and that these uses include...airports..." and requires "that the *San Francisco Bay Plan* should make provision for adequate and suitable locations for all these uses, thereby minimizing the necessity for future Bay fill to create new sites for these uses." The *San Francisco Bay Plan* Map designates SFIA as an Airport Priority Use Area. The *San Francisco Bay Plan* calls for a regional approach to airport planning to reduce the pressure to expand airports by filling the Bay. Airport priority use areas may include passenger, cargo, and general aviation terminals; parking and supporting transportation facilities; and ancillary activities such as aircraft maintenance bases. Airport-related industries may be located within airports, but no fill should be permitted to provide space for these industries.

The SFIA Master Plan projects are necessary to accommodate significant projected increases in passengers from approximately 30 million in 1990 to approximately 52 million by the year 2006 and to reduce terminal and other landside congestion. Implementation of the SFIA Master Plan would consolidate and relocate many of the existing airport-owned landside facilities to improve the efficiency and cost-effectiveness of airport operations. One can generally group new or expanded uses proposed within the Commission's jurisdiction into two major categories: (1) new and expanded transportation infrastructure to move airplanes, airport personnel, passengers, and cargo more efficiently through and within the Airport; and (2) public safety improvements to enhance existing security functions at the Airport, and to develop more efficient water rescue facilities.

Transportation improvements are critical to meet the projected increases in passengers and cargo and to provide direct support to all airport uses. Transportation improvements include:

- (a) East Field Aircraft Maintenance Facility and Apron (short-term);
- (b) Fixed Base operator Facility (short-term);
- (c) North Access Road Realignment, Cargo Apron (short-term);



- (d) North Access Road Realignment, North Cargo Facility (short-term);
- (e) Harbor Dock Facility (long-term);
- (f) North Access Road Realignment, Coast Guard (long-term);
- (g) Airport Rail Transit System, Phase II (long-term); and
- (h) North Access Road Widening, UAL Base.

Public safety improvements and support uses are critical to ensure that the airport and its personnel are able to respond to perceived and real security threats, including terrorism, in a rapid and professional manner, and to provide more efficient water rescue facilities to respond to downed aircraft within the Bay. Public safety improvements include:

- (a) Police Training Facility and Emergency Operation Staging Facility; and
- (b) Emergency Response Facility.

The proposed uses appear to be consistent with the Airport Priority Use designation as the uses would provide direct support to critical and necessary Airport functions. No new Bay fill is being proposed to expand or reconfigure existing runways. Approximately 9,806 square feet of new Bay fill is being proposed for the Emergency Response and Harbor Dock Facilities. The Commission should determine whether the proposed Master Plan projects are consistent with the Airport Priority Use Designation of the *San Francisco Bay Plan*.

2. **Maximum Feasible Public Access.** Section 66602 of the McAteer-Petris Act finds that "existing public access to the shoreline and waters of the San Francisco Bay is inadequate and that maximum feasible public access, consistent with a proposed project, should be provided." In determining whether the proposed project provides the maximum feasible public access, the Commission should address five inter-related questions: (1) whether there are sufficient public safety and/or significant use conflicts that prevent SFIA from providing public access to all or a portion of the project sites; (2) whether the proposed Master Public Access Program adequately addresses impacts to existing public access and uses of the SFIA shoreline; (3) whether the proposed Master Public Access Program adequately provides for future public access needs; (4) whether the proposed Master Public Access Program adequately provides for the potential visual impacts of the Airport Rail Transit System; and (5) whether SFIA has provided sufficient resources and other assurances to complete the public access planning study and implement the selected Bay Trail alternative.

- (1) **Public Safety and/or Significant Use Conflicts.** The *Bay Plan* policies on public access state that "maximum feasible public access to and along the waterfront and on any permitted fills should be provided in and through every new development in the Bay or on the shoreline, whether it be for housing, industry, port, airport, public facility, or other use, except in cases where public access is clearly inconsistent with the project because of public safety considerations or significant use conflicts (emphasis added). In these cases, access at other locations preferably near the project, should be provided whenever feasible."

SFIA believes that public access along the Airport's shoreline is not feasible and cannot be safely provided due to significant safety, security, and use conflicts resulting from intense and concentrated Airport operations. To provide such access would, in the opinion of SFIA, constitute a dereliction of the Airport's duty to provide a safe and secure Airport for passengers and employees. Because of the Airport's concerns regarding on-site public access, SFIA is proposing an in-lieu Master Public Access Program with three major components: (1) site

improvements to Bayfront Park at the southern end of SFIA, not to exceed \$150,000; (2) approximately \$845,000 to study and implement a bicycle/pedestrian trail link, west of U.S. Highway 101, and to provide a portion of the San Mateo County Bay Trail around the Airport; and (3) construction of a bicycle/pedestrian trail link on Airport property from South Airport Boulevard along North Access Road to Belle Air Island.

The Commission staff first became aware of SFIA's concerns regarding public safety and use conflicts in October of 1991 when SFIA installed a security fence and jersey barriers along portions of North Access Road to prevent vehicular access in areas near their aviation fuel tank farm. SFIA installed the security fence and jersey barriers without the benefit of a Commission permit and effectively shut down a popular boardsailing area called the "Flying Tigers". The new security measures were largely a result of concern that Operation Desert Storm and the Persian Gulf crisis might result in terrorist activities in the U.S., and were based on a directive from the FAA to reduce access to restricted areas. SFIA asserted that the security fence was necessary to respond to potential terrorist threats to the fuel tanks, particularly from car bombs, as identified by the Federal Bureau of Investigation (FBI) and the FAA in their *Joint Airport Vulnerability Assessment*. SFIA also cited evidence of arson, discharge of firearms, and alcohol use at areas near the tank farm and concerns that such incompatible activities could lead to a catastrophic explosion. Both the FAA and the SFIA deemed the tank farm and its fuel lines as especially critical because they provide the vast majority (95%) of jet fuel to the airlines. SFIA also asserted that other public access points were available for boardsailors and fisherman at the terminus of North Access Road, near the Community College and Coast Guard Facilities, wherein there existed a public parking area and portals to bypass the fence and access the shoreline (Lou Turpin, Airport Director, in a letter to Roberta Jones, BCDC Enforcement Analyst, dated March 5, 1992).

BCDC staff continued to unsuccessfully negotiate alternative, on-site, public access that would meet the Airport's security concerns while addressing the needs of boardsailors and fisherman who previously used the area that SFIA fenced off. In January of 1995, negotiations ceased after the Airport asserted that federal law pre-empts the Commission's jurisdiction over the placement of the security fence and jersey barrier. However, it is unclear whether the FAA security directive issued just prior to the Persian Gulf Crisis, and which resulted in the unauthorized closure of "Flying Tigers", is still in effect.

Since the closure of "Flying Tigers", SFIA has completed its Master Plan that would significantly change the operations and configuration of existing uses at SFIA. The Airport continues to believe that security and operational concerns preclude the provision of on-site public access. As shown on Exhibit F, SFIA is divided into six areas that reflect its classification of the shoreline, and shows existing and proposed improvements. SFIA believes it cannot provide public access in these areas for the following reasons:

- (a) **Area I.** SFIA believes that public access is not compatible with Area I, the northernmost portion of the Airport shoreline along North Access Road, because the shoreline is dangerously close to the heavily used North Access Road. SFIA proposes to eventually widen North Access Road to accommodate increased auto and truck traffic. In addition, the areas inland of North Access Road contain employee parking lots and the United Airline overhaul shop.

- (b) **Area II.** SFIA believes that public access is wholly incompatible with Area II, which contains SFIA's industrial uses including the aviation fuel tank farm, the water quality control plant, the FAA localizer and directional aid, the airport beacon, and would contain new proposed uses including a new sewage and industrial waste treatment plant. In particular, the Airport continues to assert that it should restrict public access near the Aviation Fuel Tank Farm due to its vulnerability to terrorist attacks on the Airport.
- (c) **Area III.** SFIA believes that public access is incompatible with Area III because of the significant security and public safety threats posed by aircraft landing, taking-off and surface maneuvering. SFIA identifies these areas as the Aircraft Operation Area, Security Area.
- (d) **Area IV.** SFIA believes that public access is incompatible with Area IV, which includes the U.S. Coast Guard Air Station and other industrial activities. The Coast Guard has a lease agreement with SFIA for most of this area. Because of the Coast Guard's operations, which include helicopter landing areas, SFIA could not provide safe public access. However, it should be noted that the Master Plan envisions a new Harbor Dock Facility at this site to replace the Coast Guard Station which may be used as an off-loading area to transport ferry passengers to and from the terminals. The Commission has often required applicants to install public access amenities as part of ferry terminals.
- (e) **Area V.** SFIA believes that public access is not compatible with Area V, which includes the Police Range and Training Facility, and the proposed Emergency Response Facility. Because of the use of firearms, explosives, and police dog training, SFIA could not provide safe public access. Furthermore, public access along the shoreline parcels to the west and east of this facility is incompatible due to a narrow shoulder and heavy vehicular traffic along these portions of the roadway.
- (f) **Area VI.** Area VI is located on the southern most portion of the Airport and consists of Bayfront Park. Other than along a portion of North Access Road, this is the only area that SFIA believes public access to the shoreline is appropriate.

The Airport has not provided any additional supporting evidence from the FAA, the FBI, the U.S. Customs, or any other state or federal security agency to corroborate that public access to certain shoreline areas at the Airport poses a significant security and/or operations risk. In discussing the closure of "Flying Tigers", SFIA was unable to release to the Commission staff copies of the FAA directive to reduce access to restricted areas, copies of the FAA/FBI *Joint Airport Vulnerability Assessment*, and other documents relating to necessary security. According to SFIA, public disclosure of the Airport's vulnerability and security operations could unnecessarily compromise existing and future security.

The Commission should determine whether there are sufficient public safety and/or significant use conflicts that prevent SFIA from providing public access to all or a portion of the project sites.

- (2) **Impacts to Existing Public Access.** Informal public access has historically occurred on Airport property at "Flying Tigers" and the Community College. The "Flying Tigers" site is located along North Access Road near the Aviation Fuel Tank Farm. Boardsailors would access the site by driving on an informal dirt access road and would launch from the easternmost point, beyond the fuel tank

farm. Boardsailors consider "Flying Tigers" to be one of the best, high-wind, advanced boardsailing sites in San Francisco Bay, rivaling even the famed eastern shore in Maui and the Columbia River Gorge in Oregon.

Despite the unimproved and uninviting nature of the site, which in the early 1990's included illegally dumped cars, appliances and other garbage, broken asphalt, concrete and rebar along the shoreline, nearby industrial uses, and what many boardsailors considered questionable water quality, boardsailors had been using the site since at least the early 1980's. A National Boardsailing magazine and guide once described the site as "one of those mythical 'hard core' spots that is valued purely by speed freaks for its combination of high wind speed and flat water."

Because "Flying Tigers" is the first open water at the mouth of the San Bruno Mountain gap, it generates some of the strongest and most reliable winds in the Bay making the site ideal for advanced boardsailors. When other nearby boardsailing sites, such as Candlestick Park and Coyote Point, are closed, due to seasonally changing wind conditions, "Flying Tigers" often remains open. In fact, because of the longer sailing season and high wind and flat water conditions provided by the site, some boardsailors have used "Flying Tigers" to train and develop skills for speed trials and other boardsailing competitions held throughout the West Coast. In the early 1980's boardsailors held several competitions at "Flying Tigers".

On the other hand, as described above, the Airport believes that allowing public access along the shoreline near "Flying Tigers" would pose an unnecessary public safety risk and operations conflict. On several occasions, strong winds have washed boardsailors ashore into the Aircraft Operation Areas (see Exhibit F, Areas III). When this occurs, the Airport must respond with a security team to remove the boardsailors.

When the Airport closed "Flying Tigers" in 1991, its action was highly controversial among boardsailors and the Commission received seventeen letters of objection, although the Airport argued that access to the shoreline was still available to boardsailors and fisherman at the end of North Access Road near the Community College and Coast Guard Facilities. As a result of the unauthorized installation of the security fence and barriers, the Commission opened an enforcement case (ER 91-30) which, to date, has not been formally resolved. With the approval of the Airport's proposed Master Plan projects, the Commission would, in effect, finalize the closure of "Flying Tigers" and the enforcement issue would be rendered moot. In addition, because the Airport is constructing a new security check point outside the Commission's jurisdiction on North Access Road (just north of the Aviation Fuel Tank Farm), the Airport would effectively close the parking area and public access portals that fisherman use at the Community College site.

While the SFIA is proposing approximately one million dollars in public access benefits including improving Bayfront Park, providing funding to study and implement a portion of the San Mateo County Bay Trail around the western edge of the Airport and constructing a bicycle/pedestrian trail link on Airport property from South Airport Boulevard to Belle Air Island, these benefits would not specifically address the impacts of closing "Flying Tigers" and the fishing access at the Community College. The permanent closure of "Flying Tigers" would result primarily in the loss of a unique "world class" boardsailing site, and secondarily may have resulted in greater use and overcrowding at Candlestick Park and Coyote Point. However, it is difficult to determine or quantify the relative impact

the closure of "Flying Tigers" has had on other boardsailing sites. The closure of the Community College access point would result in the loss of one of the relatively few deep-water fishing opportunities on the Bay in San Mateo County. The Airport's proposed public access improvements would provide additional opportunities to view the Bay at Bayfront Park and an alternative inland Bay Trail route for hikers, joggers, and bicyclists who wish to travel around the Airport. The *Bay Plan* policies on public access encourage that a diversity of Bay-related activities be promoted through the design and siting of public access. SFIA's Master Public Access Program would shift public access opportunities and benefits from a set of existing users to a set of potentially different and new users, rather than accommodating the widest possible range of users.

In a similar case involving boardsailing access, Foster City's 1991 proposal to upgrade its exterior levee, the Commission found that the project would result in the closure of an informal boardsailing launch site and would adversely affect boardsailor's ability to access the Bay (BCDC Permit No. 16-91). At that time, the Commission heard public testimony that boardsailors heavily use existing boardsailing areas at Candlestick Park and Coyote Point. Because boardsailing is wind and tide dependent, the Commission found that access from various portions of the shoreline is necessary for this relatively new and growing water-oriented sport. The Commission further found that public access parking close to shoreline launch facilities is critical since boardsailors must transport, unload, and carry bulky and often heavy sails and boards to launch areas. As a condition of approving the City's project, the Commission required Foster City to provide, among other public access benefits, a boardsailing launch facility with an access road, a 50-60 car parking area, a pea gravel rigging area, two Bay access ramps, two benches, a portable restroom, and six downwind emergency egress ramps with seven associated benches and four garbage cans. Because of the popularity of the boardsailing launch facility, Foster City recently gained Commission approval to expand the required parking lot to accommodate an additional 19 vehicles within the parking lot itself and 80 vehicles along the access road.

The Commission should determine whether the proposed Master Public Access Program adequately addresses impacts to existing public access and uses of the SFIA shoreline.

- (3) **Future Public Access Needs.** In evaluating future public access needs, the Commission should look at the relative demand generated by the SFIA Master Plan for public access in relationship to existing and proposed public access. The SFIA Master Plan is designed to accommodate significant projected increases in passengers from approximately 30 million in 1990 to approximately 52 million by the year 2006. According to the Final Environmental Impact Report for the Master Plan, employment at SFIA under the proposed Master Plan is expected to increase from about 33,400 employees in 1990 to about 38,000 in 1996 and to about 42,300 employees in 2006. The majority of new employees would be flight-crew and passenger-service personnel employed by the airlines. Employment growth associated with the short-term SFIA Master Plan would generate a demand for approximately 3,460 dwelling units, with approximately 2,450 of these needed in San Mateo County. Furthermore, increases in passenger volumes could induce pressure for hotel, restaurant, and other travel-serving development, many of which are located along the Bay shoreline in Millbrae, Burlingame, and other parts of San Mateo County, while increases in SFIA employment could stimulate a demand for additional housing and public services in the Airport environs.

The employment and population growth associated with the SFIA Master Plan could generate a greater demand for, and impact existing, public access to the Bay and shoreline in San Mateo County. It is expected that a certain number of new employees and residents may use the nearby shoreline before and after work and during lunch, thereby adding to the existing public access demand. As well, it is expected that a certain number of passengers staying in nearby hotels and eating at local restaurants would use adjacent public access areas, such as those along Bayshore Road. However, it is difficult to quantify the new incremental demand and impacts on public access associated with the SFIA Master Plan. Participation rates for certain water-oriented recreation, such as birdwatching, bicycling, rollerblading, boardsailing and other public access activities are not readily available for San Mateo County; therefore, one cannot estimate the potential number of new public access users from the pool of new residents, employees and passengers. Nevertheless, it is reasonable to assume that, in the absence of any new access facilities, existing public access areas would become relatively more crowded and that additional users could affect the quality of the public access experience.

According to staff of the Bay Trail Project, San Mateo County has the largest percentage of completed Bay Trail (64%) of the nine Bay Area counties. The County's Bay Trail leads to long stretches of accessible shoreline and numerous shoreline parks, marinas and other amenities. Because the County's Bay Trail alignment is a fairly direct route along San Mateo County's shoreline, accessible to nearby residential and commercial developments as well as waterfront recreation, the County designates it as county-wide bicycle commute route.

According to staff of the Bay Trail Project, three major gaps remain in the County's Bay Trail. One is around the San Francisco Airport. While there is existing shoreline access both to the north and south of the Airport at Belle Air Island and Bayfront Park, the Airport's Bayside location prevents direct access by pedestrians, cyclists and other shoreline users. The adopted Bay Trail route currently circumvents the Airport by crossing to the west side of the Bayshore Freeway at San Bruno Avenue, then returning to the shoreline south of the Airport at Millbrae Avenue. Both of these overcrossings are inadequate and dangerous for pedestrians and cyclists, requiring them to cross unsignalized freeway access ramps. Thus, the Airport presents a major detour to shoreline access and to bicycle commuting in San Mateo County.

In implementing the SFIA Master Plan, the Airport would construct ten new projects within the Bay and the 100-foot-shoreline band. The Master Plan projects would result in the elimination of two existing, informal, public access areas at "Flying Tigers" and the Community College. In addition, the Airport would permanently preclude public access along approximately 10,700 linear feet of Bay shoreline, based on SFIA's concerns regarding public safety and use conflicts.

On the other hand, SFIA is proposing approximately one million dollars in new public access benefits including improving Bayfront Park, providing funds to study and implement a portion of the San Mateo County Bay Trail around the western edge of the Airport and constructing a bicycle/pedestrian trail link on Airport property from South Airport Boulevard to Belle Air Island. Improvements at Bayfront Park would provide additional viewing opportunities, and would make the site more user-friendly by installing more appropriate landscaping and much needed wind buffers. The addition of a new and improved, one-half-acre area to Bayfront Park would also help accommodate a variety of new shoreline users. The funds to study and implement a portion of the San Mateo County Bay Trail around the western edge of the Airport would potentially provide for a much needed, continuous Bay Trail linkage, albeit substantially inland of the Bay.



Because a final alignment would be selected based on a planning study carried out by the Bay Trail Project and San Mateo County, it is unclear whether the inland trail experience would be comparable to a shoreline trail. The final alignment could potentially occur entirely upon surface streets, on surface streets and the CalTrain right-of-way, on surface streets and the Airport's West Bayshore parcel, or through a combination of all of the above. Finally, the bicycle/pedestrian trail link from South Airport Boulevard to Belle Air Island would provide an important spur trail to the existing, but little used, public access around the SamTrans Facility.

The Commission should determine whether the proposed Master Public Access Program adequately provides for future public access needs generated by the SFIA Master Plan projects.

- (4) **View Impacts of the Airport Rail Transit System.** In evaluating public access, the Commission should not only consider physical access to and along the Bay shoreline, but should also consider the visual impacts of any proposed project. Among the projects proposed by SFIA that may have visual impacts is the Airport Rail Transit System, Phase 2. SFIA would construct a portion of the light-rail system along approximately 1,950 feet of the Bay shoreline and within the median of the realigned and widened North Access Road at UAL and the North Cargo Facility. The ARTS would be approximately 33-1/2 feet high, from the existing grade to the top of a guided vehicle. The approximately 4-1/2-foot-high and 28-1/2-foot-wide rail platform would be supported by several 8-inch-in-diameter and 15-foot-high, concrete columns (see Exhibit D-2 for a typical cross-section).

The elevated structures could potentially block views to the Bay from eastbound users of North Access Road near and around Belle Air Island and could potentially tower over the proposed pedestrian/bicycle trail link from South Airport Boulevard to Belle Air Island and detract from the public access experience. SFIA would construct the ARTS in other locations within the Commission's jurisdiction, but the North Access Road at UAL and the North Cargo Facility are the only locations that the ARTS would potentially affect public views to the Bay. Because the ARTS is a long-term project, SFIA has not provided a visual analysis of the elevated structure nor has the Design Review Board evaluated it. The *Bay Plan* policies on appearance, design and scenic views state that "maximum efforts should be made to provide, enhance, or preserve views of the Bay and shoreline, especially from public areas, from the Bay itself, and from the opposite shore."

In several previous shoreline projects, most notably Caltrans' HOV Flyover at the Emeryville Crescent, the Commission has expressed serious concerns about elevated transportation structures along the Bay shoreline due to their visual impacts. At this time, the staff believes that the proposed Master Public Access Program may not adequately address the visual impacts of the ARTS. When SFIA has final design details and submits a subsequent permit application for this project, the Commission's Design Review Board and staff should evaluate the visual impacts of the proposed ARTS and its integration with the proposed public access trail.

The Commission should determine whether the proposed Master Public Access Program adequately provides for the potential visual impacts of the Airport Rail Transit System.

- (5) **Ability to Implement the Master Public Access Program.** While the in-lieu Master Public Access Program appears to be a sound concept, there are several concerns regarding whether SFIA has allocated sufficient resources and provided adequate assurances to carry out the details and fully implement the Program. SFIA is proposing an approximately one million dollar, in-lieu Master Public Access Program with three components: (1) improvements to Bayfront Park; (2) a bicycle/pedestrian trail link, west of U.S. Highway 101, to provide a portion of the San Mateo County Bay Trail around the Airport; and (3) a bicycle/pedestrian trail link from South Airport Boulevard along North Access Road to the existing public access at Belle Air Island.
- (a) **Bayfront Park.** SFIA would provide up to \$150,000 for improvements at Bayfront Park. The Airport has advanced a conceptual plan showing certain improvements (see public access description above). However, it is unclear whether the \$150,000 would be sufficient to implement SFIA's conceptual design improvements at Bayfront Park and the additional improvements to the new 1/2-acre site. SFIA has not provided any cost estimates for the conceptual plan. Apparently, the determination of final improvements would be left to BCDC and the City of Millbrae, but with the City having the ultimate decision as it has a one-year, renewable permit from SFIA to operate Bayfront Park. It is unclear from SFIA's proposal what entity would be responsible for design, permitting and construction, and future maintenance of the public access improvements. Furthermore, SFIA has not provided a time certain as to when it would provide the improvements and whether it would permanently dedicate Bayfront Park for public access. Normally, the Commission requires applicants to provide public access benefits prior to or at the same time construction of the project is carried out and requires applicants to permanently dedicate the public access areas. In the event SFIA does not implement the improvements at Bayfront Park, it is unclear whether SFIA intends to use the \$150,000 to improve another portion of the shoreline in San Mateo County. Finally, the Commission's Design Review Board has not reviewed the conceptual public access improvements for Bayfront Park. The staff believes their review and recommendation is important to ensure that this element adequately contributes to providing maximum feasible public access.
- (b) **Bay Trail Link.** SFIA is proposing that within 60 days of BCDC issuance of a permit, SFIA would enter into an agreement with San Mateo County to fund the planning, design, and construction costs, not to exceed \$845,000, of a Bay Trail link around the western portion of the Airport. Because the Airport's charter precludes it from paying for improvements outside the Airport boundaries, it would enter into an agreement with San Mateo County for the County to fund the Bay Trail Link in-lieu of the County paying the Airport funds it owes. The agreement would provide that San Mateo County pay up to \$95,000 to the Bay Trail Project to prepare an access study on alternative trail alignments and up to \$750,000 for the design and construction of a trail alignment. San Mateo County would be responsible for assuming program management for development of the trail, including environmental review, permitting, and construction contracting. The Airport expressly indicated that it would not have any responsibility for implementation of the trail or for obtaining any required approvals, permits or environmental clearances.



There is some uncertainty as to the roles San Mateo County, SFIA, BCDC and the Bay Trail would play in approving a final public access plan and selecting the preferred alternative trail alignment. According to the Bay Trail Project's preliminary proposal, it, with input from the SFIA, would select a planning team to prepare a long-term Bay Trail Alignment Plan and final report. However, whether each political body must approve the preferred trail alignment is unknown. It is also unclear what entity would hold and disburse the funds. Clearly, the funds would come from San Mateo County and they would, according to SFIA's proposal, manage the overall planning process. However, the Commission generally requires that such funding be placed in an interest bearing account with the Commission named as one of the trustees so that it can ensure that the funds are disbursed for appropriate improvements that meet the Commission's permit conditions and provide the requisite public access benefits.

It is unclear whether \$750,000 would be sufficient to construct a trail alignment. The funding allocated by SFIA is based on a preliminary cost estimate provided by the Bay Trail Project. That estimate assumed: (1) a relatively flat paved trail with no new or improved bridge or rail crossings, culverts, fencing, utility relocation, or grading and drainage beyond normal for a level grade; (2) no shoulder widening, paving, signalization, curb cuts or other structural work, including to freeway overpasses; (3) no environmental mitigation; (4) no funds for environmental review; and (5) no land acquisition. Because a preferred trail alignment would be selected based on a future public access study, it is unclear whether additional funding would be required. Although San Mateo County would be responsible for environmental review, it is unclear whether it has committed a certain amount of funds or staff resources to complete the environmental review. If the preferred trail alignment requires additional funding to implement, it is unclear where the funds would come from and SFIA's role in securing such resources. Furthermore, if unforeseen delays prevented the study and implementation of the Bay Trail from occurring in a timely fashion, inflation could erode the purchasing power of SFIA's initial allocation for the trail. However, SFIA has not provided any inflation or escalator clause in its Master Public Access Program to ensure that the purchasing power remains constant. SFIA has not provided a date certain as to when the Bay Trail link would be completed. If for some reason the Bay Trails Project and San Mateo County could not implement the preferred trail alignment, it is unclear whether BCDC could use the funding to provide alternative access in and around San Mateo County.

SFIA has proposed that the Bay Trails Project study two alternative trail alignments: (1) between the existing Bayfront Park at the southeast corner of the SFIA, running adjacent to or along the perimeter of Airport property (West Bayshore parcel), located west of U.S. Highway 101, proceeding along San Bruno Avenue to South Airport Boulevard to Belle Air Island; and (2) west along Millbrae Avenue from Old Bayshore Road to the JPB/CalTrain right-of-way, proceeding north to the existing Bay Trail Colma Creek bike path. While the two proposed alternatives would physically provide a link around the Airport, there are some potentially major obstacles that could prevent the provision of a safe and enjoyable access experience.

Caltrans has configured the existing freeway overcrossings and onramps at Millbrae and San Bruno Avenues as standard clover-leaves with free right-hand turns for vehicles. This poses a dangerous situation for bicyclists and pedestrians. SFIA indicates that both overcrossings would be reconfigured as part of the SFIA Master Plan. However, it is unclear whether the overcrossings would be reconfigured in a manner that is safer for future pedestrians and bicyclists who would be using the inland Bay Trail route. It is also unclear what, if any, role SFIA has in the design and construction of the overcrossings and whether it could effect a pedestrian and bicycle friendly design.

At this time, it appears that an alignment along the Airport's West Bayshore Parcel would provide the most enjoyable public access experience since it is generally open space with an existing service road along the western perimeter near the CalTrain right-of-way. However, the West Bayshore site has significant wetland areas, is habitat for the endangered red-legged frog and the threatened San Francisco garter snake, would have a future Bart rail alignment into the Airport, and may be the subject of future Airport development. SFIA states that, to the extent any of the preferred Bay Trail alignment is located on the West Bayshore parcel, the Airport's allowance of such an alignment would be determined by the Airport and governed by the following: (1) the trail does not conflict with Airport operations and safety; (2) does not unduly conflict with future Airport development; and (3) does not create significant environmental impacts, particularly with regard to wetlands and endangered species. Ostensibly, the public access plan prepared by the Bay Trail Project would evaluate all of the various site constraints in determining a preferred alternative. However, the environmental and development constraints at the site could effectively preclude serious consideration of this alignment from the beginning or, at a minimum, may require additional funding to conduct environmental review and implement appropriate mitigation such as fencing, signage, etc. Comparatively, an alternative alignment along the CalTrain right-of-way may not provide as enjoyable an access experience, as it runs through residential areas and, of course, has significant rail traffic. In addition, San Mateo County is already considering a County-wide commute trail to run along the CalTrain right-of-way. Thus, a Bay Trail alignment along some portions of the right-of-way may be duplicative.

- (c) **North Access Road Link.** SFIA is also proposing to construct a bicycle/pedestrian trail link from South Airport Boulevard along North Access Road to the existing public access at Belle Air Island. The Airport states that it is willing to fund the on-Airport portions of the trail link not to exceed \$20,000 if the \$750,000 allocation is insufficient to fund the development of this portion of the trail. This would provide an important link to the existing but, little-used, public access at Belle Air Island. The trail link would consist of two, five-foot-wide paths along each side of the realigned and widened North Access Road and Airport Rail Transit System. Apparently, SFIA would not separate the pathways from the road. However it is unclear, given the proposed transportation improvements, whether SFIA can accommodate the trail within the road right-of-way without the need for additional Bay fill and whether the ARTS would affect the public access experience along this trail link. Because the North Access Road improvements and the ARTS are both long-term projects, it is also unclear how SFIA will integrate the trail link into the design of these transportation projects and when SFIA would provide this link. Ostensibly, the public

access plan prepared by the Bay Trail Project would consider the design of this trail link and would use a portion of the \$750,000 allocated by the Airport to construct it. Finally, there is another segment of a potential Bay Trail alignment that would fall on the Airport's property between the San Bruno Avenue overcrossing and the intersection of South Airport Boulevard and North Access Road. Vehicle and truck traffic along this section of roadway is heavy and SFIA is planning to improve McDonnell Road from two to four lanes to accommodate increased traffic and access to new employee parking areas. However, it is unclear whether the Airport has considered potential future Bay Trail alignments in its design of the roadway.

3. **Necessity of Mitigation.** For projects within the Bay, Section 66605 of the McAteer-Petris Act requires, among other things, that "the further filling of San Francisco Bay...should be authorized only when public benefits from fill clearly exceed public detriments from the loss of the water areas and should be limited to water-oriented uses..." and that "the nature, location and extent of any fill should be such that it will minimize harmful effects to the Bay Area, such as, the reduction or impairment of the volume, surface area or circulation of water, water quality, fertility of marshes or fish or wildlife resources."

SFIA proposes to place a total of approximately 9,806 square feet of fill for the Emergency Response (short-term) and Harbor Dock Facilities (long-term), including approximately 6,356 square feet of pile-supported fill for an access pier, boat shed, and boat dock, and 3,450 square feet of submerged fill for a boat launch ramp. The proposed location for both the Emergency Response and Harbor Dock Facilities are within Seaplane Harbor, which historically has served as a landing and docking facility for seaplanes. SFIA has already armored much of the shoreline with rip-rap and a concrete sea-wall. According to the applicant, neither location has existing wetland habitat. Construction of the boat launch ramp and boat access to the Harbor Dock and the Emergency Response Facility would require approximately 245,000 cubic yards of dredging. However, dredging is not part of this application, as SFIA has not conducted the appropriate water quality testing to meet the requirements of state and federal permitting agencies. Dredging to implement the Emergency Response and Harbor Dock Facilities would require further Commission approval.

Generally, the environmental impacts to the Bay associated with pile-supported fill includes: (1) disruption and displacement of existing benthic communities or bottom dwelling communities; (2) creation of shade, which can affect water and soil temperature and influence an area's plant and animal communities; (3) dampening of wave energy and creation of eddies which can alter water circulation and can increase the rate of sedimentation; and (4) the disruption of animal use of an area and animal movement between areas. The environmental impacts to the Bay associated with submerged fill include: (1) changes in substrate that can significantly affect the kinds and number of benthic or bottom dwelling organisms that live in an area; (2) alteration of currents and circulation patterns that can affect the rate of sedimentation; (3) resuspension of sediments if dredging is involved; and (4) alteration of the natural processes of shoreline erosion and accretion.

According to the Commission's Mitigation Practices Guidebook, the Commission has rarely required mitigation for pile-supported or floating boat docks. However, such fills have been small, generally less than 9,000 square feet, and usually involve the removal of existing pile-supported fill to make room for the newly authorized pile-supported facility, a public benefit recognized by the Commission. Similarly, the Commission has

rarely required mitigation for fill placed for boat launch ramps. However, such fills are usually part of larger public access or boating facility, which is also a public benefit recognized by the Commission.

While it is unlikely that the fill for the Master Plan projects would individually, adversely, affect significant Bay resources such as wetlands, intertidal mudflats or eel grass beds and, therefore, would not normally require mitigation, the fill may have a cumulative impact within the project area by covering slightly less than 1/4 of an acre of the Bay. In the last ten years, the Commission on average has authorized approximately 4.3 acres of new Bay fill annually. The approximately 9,806 square feet of fill proposed by SFIA would be slightly more than five percent of all fill approved annually. SFIA would not remove existing pile-supported structures or submerged structures to accommodate the new uses and compensate for the placement of new fill. However, it is important to note that in 1990, the Commission issued a federal consistency determination to the U.S. Coast Guard to remove approximately 3,552 square feet of a pile-supported dock at the proposed Harbor Dock Facility. At that time, the Commission did not authorize new fill to replace the Coast Guard dock.

Because the Final Environmental Impact Report (FEIR) for the SFIA Master Plan projects is a programmatic level report, it did not specifically evaluate and identify the potential adverse impacts to Bay resources that would result from the proposed new Bay fill and dredging. In a recent fill project at Candlestick Point, the Commission required the California Department of Parks and Recreation to excavate 15,000 cubic yards to create a 0.95-acre intertidal and subtidal habitat as mitigation for the impacts of placing fill for an approximately 12,040-square-foot boat launch ramp that involved 62,500 cubic yards of dredging. However, the mitigation was largely for dredging impacts. In this case, SFIA is not seeking authorization for the approximately 245,000 cubic yards of dredging needed to construct the boat launch ramp and provide access to the Harbor Dock Facility and Emergency Response Facility. When SFIA completes water quality testing and submits a subsequent permit application, the Commission would have the opportunity to evaluate potential adverse impacts of dredging on Bay resources such as wetlands, intertidal mudflats and eel grass beds.

The Commission should determine whether SFIA should provide mitigation to offset the potential, individual or cumulative impacts of those Master Plan projects that would result in new Bay fill.

## **B. Review Boards**

1. **Engineering Criteria Review Board.** Several of the SFIA Master Plan projects require Bay fill and are essential for public safety, such as the Emergency Response Facility, or may result in the assembly of large numbers of the public, such as the Harbor Dock Facility. However, the Engineering Criteria Review Board (ECRB) has not reviewed any of the SFIA Master Plan projects. The staff believes that the ECRB should review the two fill projects prior to construction to ensure that the engineering criteria developed by the Airport is appropriate.
2. **Design Review Board.** SFIA is proposing two onsite public access projects as part of its Master Public Access Program, including improvements at Bayfront Park and a trail link along the North Access Road, and the Harbor Dock Facility that may result in the assembly of large numbers of the public. However, the Design Review Board has not reviewed these projects. In addition, because the affected parties would further define the Master Public Access Program through a future planning effort, and because the Bay Trail Project would subsequently identify Bay Trail alignments and develop an implementation plan, the Design Review Board has not reviewed the Master Public Access Program. The staff believes that the DRB should review the following: (1) all proposed onsite public access improvements prior to construction, (2) the

Harbor Dock Facility to determine what, if any, public access amenities SFIA should include as part of the ferry terminal to accommodate public use (similar to any public ferry facility), and (3) the Public Access Plan and alternative Bay Trail alignments to be developed by the Bay Trail Project.

**C. Environmental Review.** On May 28, 1992, the San Francisco Planning Commission, acting as lead agency under the California Environmental Quality Act (CEQA), certified the final environmental impact report (FEIR), including mitigation measures, for the SFIA Final Draft Master Plan. Because the FEIR is a programmatic level report for the SFIA Master Plan, it does not provide specific mitigation requirements for Bay fill, public access or other concerns relevant to the Commission's mandate. The Commission does, however, have independent authority under the McAteer-Petris Act to evaluate and require mitigation to offset the impacts of fill on Bay resources and to require the maximum feasible public access consistent with the project.

**D. Relevant Portions of the McAteer-Petris Act**

1. Section 66602 (page I-1)
2. Section 66605 (page I-2)

**E. Relevant Portions of the *San Francisco Bay Plan***

1. *Bay Plan* Policies on Fish and Wildlife (page 7)
2. *Bay Plan* Policies on Water Quality (page 8)
3. *Bay Plan* Policies on Water Surface Area and Volume (page 9)
4. *Bay Plan* Policies on Marshes and Mudflats (page 9)
5. *Bay Plan* Policies on Safety of Fills (page 13)
6. *Bay Plan* Policies on Airports (page 20)
7. *Bay Plan* Policies on Public Access (pages 26, 27 and 28)
8. *Bay Plan* Policies on Appearance Design and Scenic Views (pages 29 and 30)
9. *Bay Plan* Policies on Control of Filling and Dredging in the Bay (Amendment No. 3-91)

**F. Relevant Portions of the *San Francisco Bay Plan* Maps**

*Bay Plan* Map 9

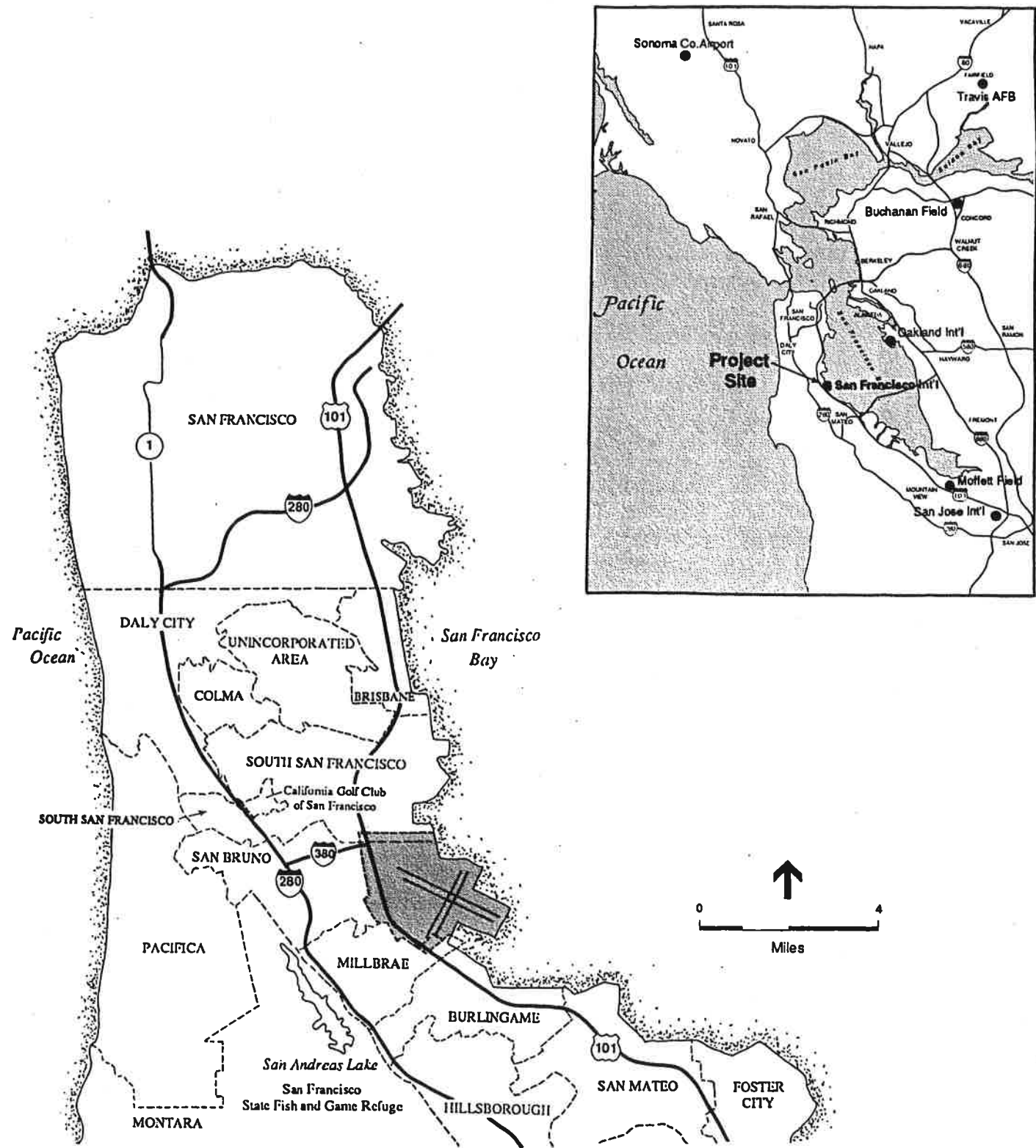
**G. Relevant Portions of the Regional Airport System Plan Update**

**H. Relevant Portions of the Commission's Regulations**

Chapters 3,4, and 5; Major Permit Procedures (pages 508 to 518)

**I. Relevant Portions of Federal Laws and Regulations**

Federal Coastal Zone Management Act

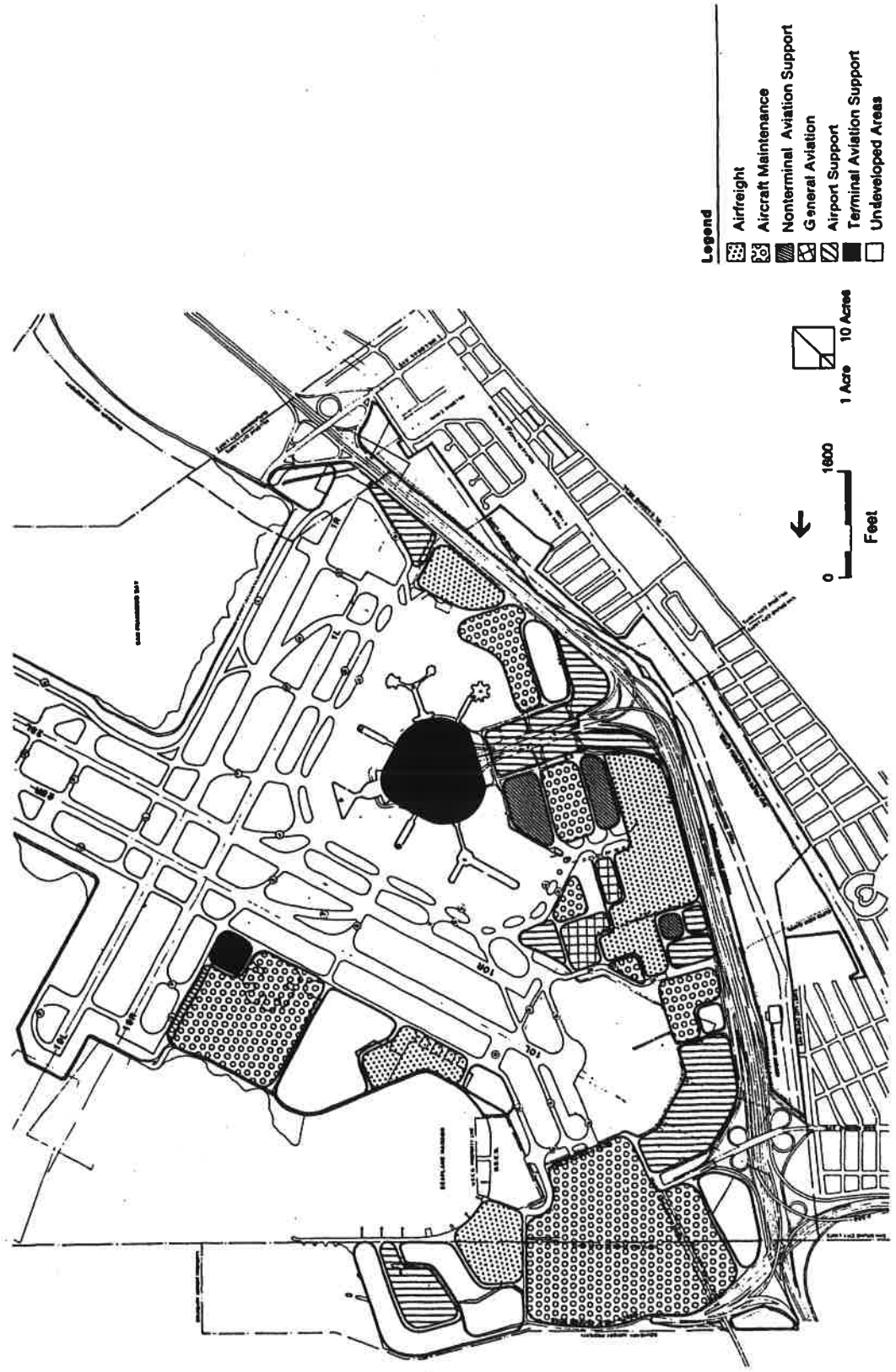


SOURCE: Environmental Science Associates, Inc.

San Francisco International Airport ■

Exhibit A  
Vicinity Map  
BCDC Permit No. 2-96





San Francisco International Airport ■

SOURCE: San Francisco International Airport Master Plan

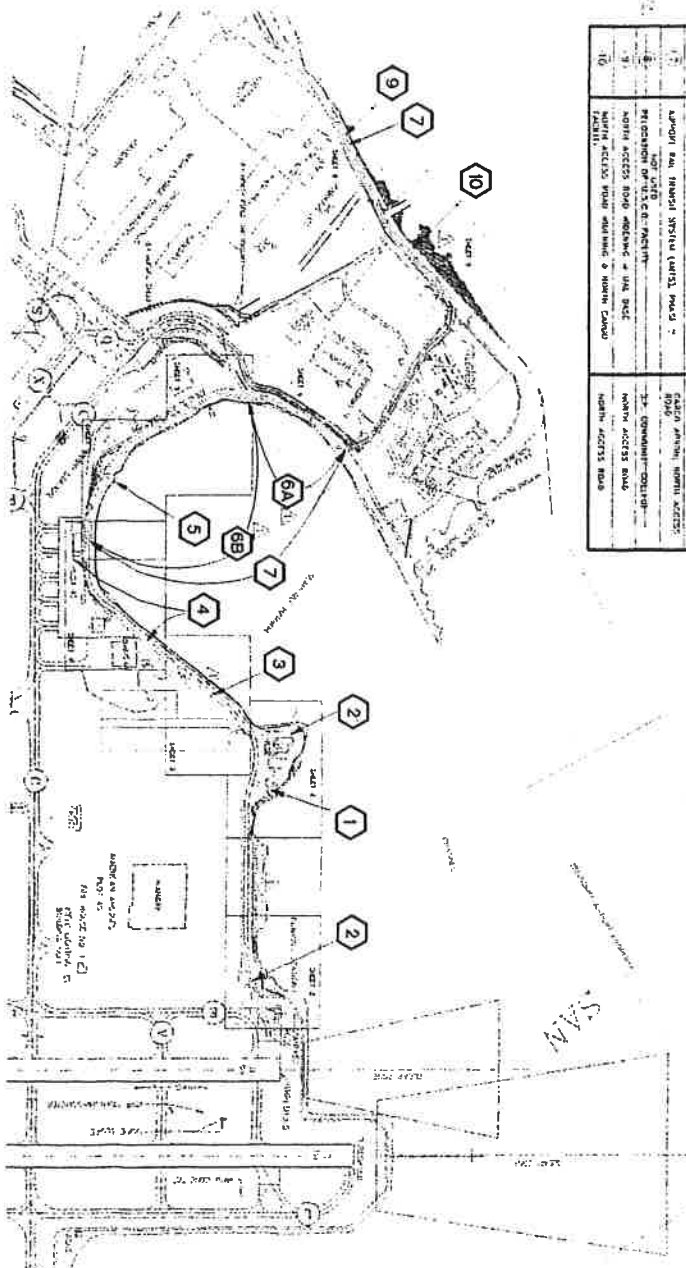
**Exhibit B**  
**Existing Land Use**  
 BCDC Permit No. 2-96

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ITEM NO.	PROPOSED PROJECTS	CURRENT USE
1	1. BLDG. REPAIR AND RENOVATION	INDUSTRIAL FACILITY
2	2. BLDG. REPAIR AND RENOVATION	INDUSTRIAL FACILITY
3	3. BLDG. REPAIR AND RENOVATION	INDUSTRIAL FACILITY
4	4. BLDG. REPAIR AND RENOVATION	INDUSTRIAL FACILITY
5	5. BLDG. REPAIR AND RENOVATION	INDUSTRIAL FACILITY
6	6. BLDG. REPAIR AND RENOVATION	INDUSTRIAL FACILITY
7	7. BLDG. REPAIR AND RENOVATION	INDUSTRIAL FACILITY
8	8. BLDG. REPAIR AND RENOVATION	INDUSTRIAL FACILITY
9	9. BLDG. REPAIR AND RENOVATION	INDUSTRIAL FACILITY
10	10. BLDG. REPAIR AND RENOVATION	INDUSTRIAL FACILITY



1. BLDG. REPAIR AND RENOVATION  
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 8. BLDG. REPAIR AND RENOVATION  
 9. BLDG. REPAIR AND RENOVATION  
 10. BLDG. REPAIR AND RENOVATION

NOTES  
 1. REFER TO LATEST SCALE DRAWINGS  
 2. APPROXIMATE LOCATIONS AND SIZES  
 AND USE OF EXISTING BUILDINGS  
 SHOWN

PROPOSED AIRPORT PROJECTS WITHIN BCDC SHORELINE BAND

PREPARED BY: [Name]  
 APPROVED BY: [Name]  
 DATE: [Date]

CONTRACT NO. [Number]

CITY AND COUNTY OF SAN FRANCISCO  
 AIRPORTS COMMISSION  
 SAN FRANCISCO INTERNATIONAL AIRPORT  
 BCDC APPLICATION

PROPOSED AIRPORT PROJECTS  
 WITHIN BCDC SHORELINE BAND

DATE: 1994, 10 14 PM

REVISIONS

NO.	DESCRIPTION	DATE
1	ISSUED FOR PERMITTING	10/14/94
2	ISSUED FOR PERMITTING	10/14/94

SHEET 1 OF 11 SHEETS

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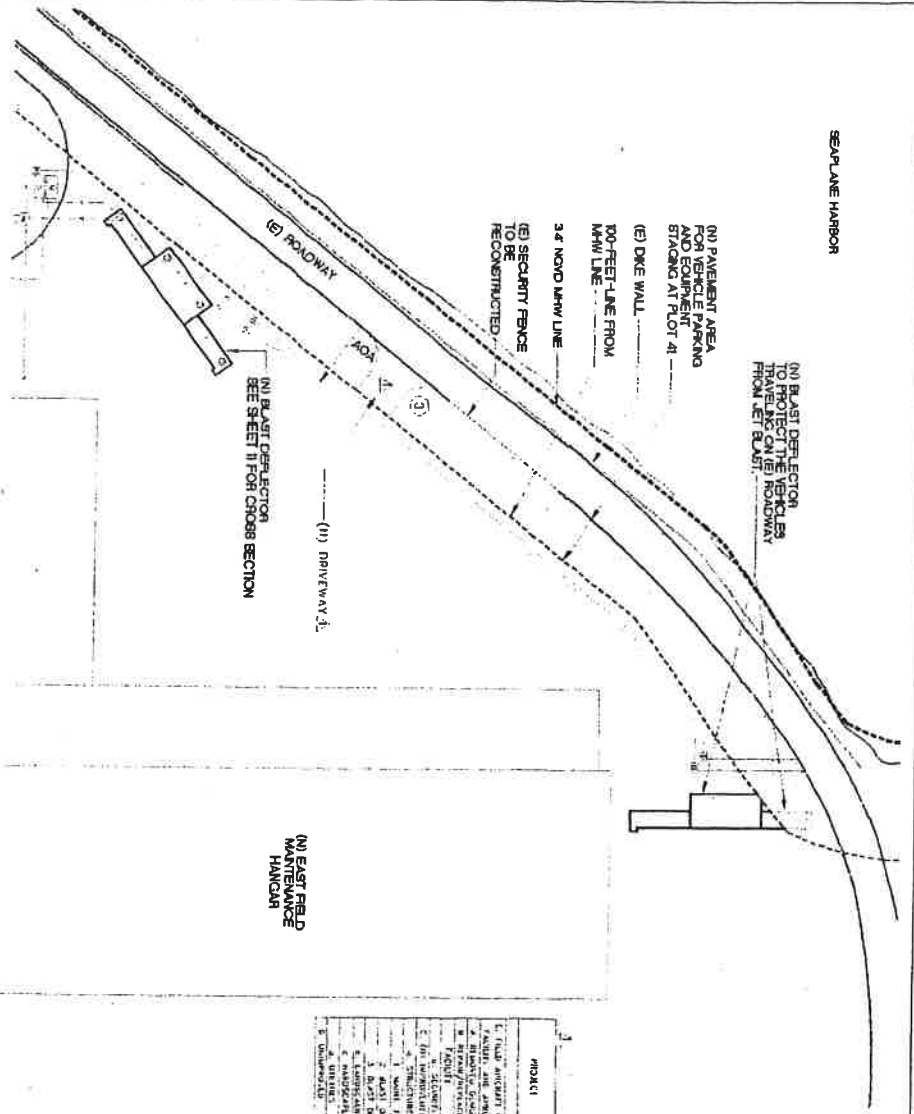
Exhibit C-1  
 Site and Project Plans  
 BCDC Permit No. 2-96





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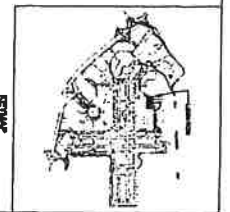
DATE 03/24/08



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EAST FIELD AIRCRAFT MAINTENANCE FACILITY AND APRON (PLOT 41)

DATE 03/24/08

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PROJECT NO. 08-001

DESIGNED BY: [Name]

DRAWN BY: [Name]

CHECKED BY: [Name]

APPROVED BY: [Name]

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CITY AND COUNTY OF SAN FRANCISCO

AIRPORTS COMMISSION

SAN FRANCISCO INTERNATIONAL AIRPORT

BCDC APPLICATION

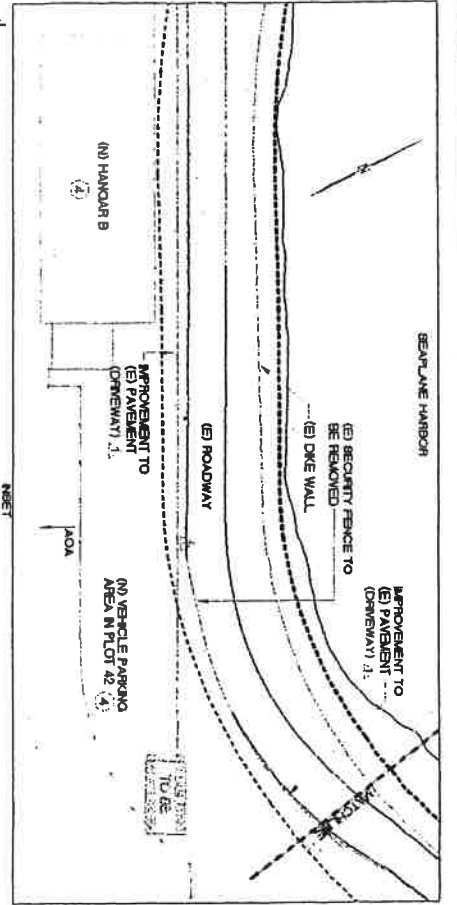
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Exhibit C-3

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800/8200400

PROJECT	QUANTITY	UNIT PRICE	TOTAL PRICE	EST. QUANTITY	EST. PRICE	TYPE OF STRUCTURE	NOTES
1. IMPROVEMENT TO (E) PAVEMENT TO (CONCREMENT) 1.1	1,440	60/2.86	128,000	0	0	N/A	
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**FIXED BASE OPERATOR (FBO) FACILITY (PLOT 42)**

**CONTRACT NO.**  
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 SAN FRANCISCO INTERNATIONAL AIRPORT  
**BODC APPLICATION**

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Exhibit C-4





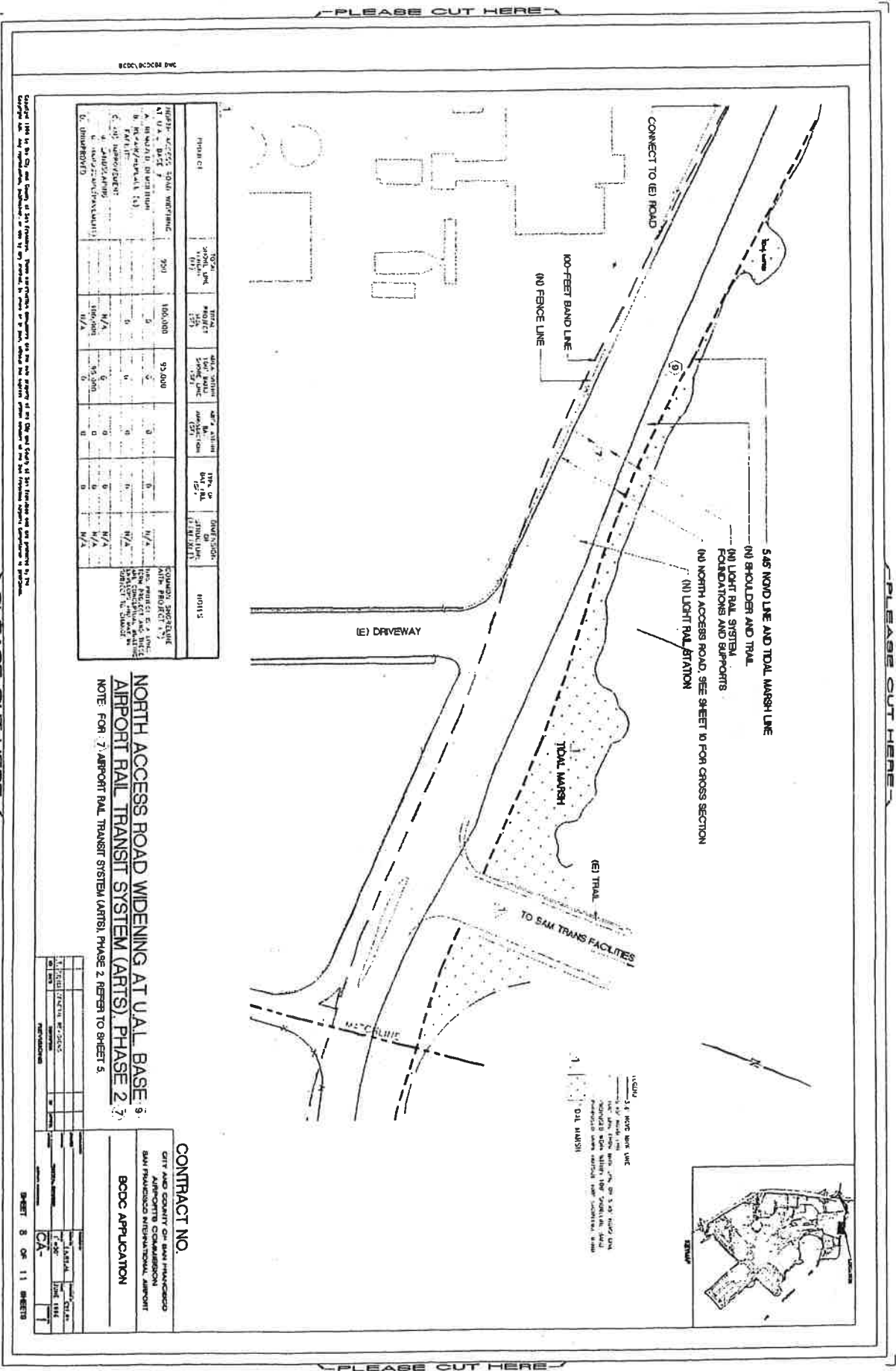


Exhibit C-7

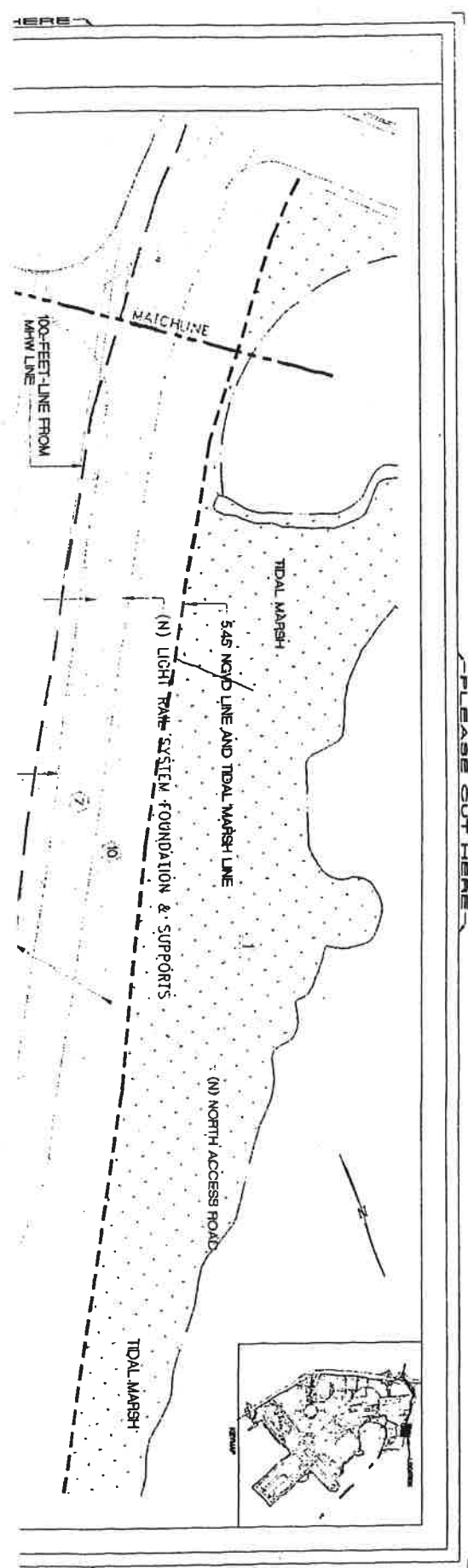
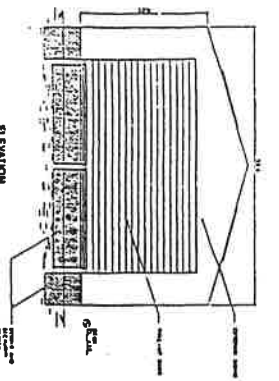
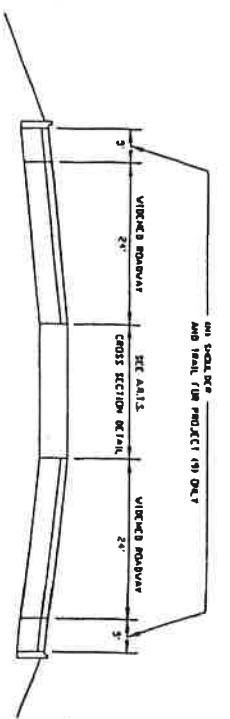
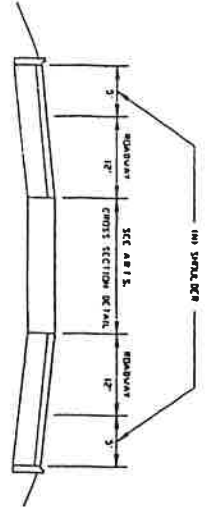
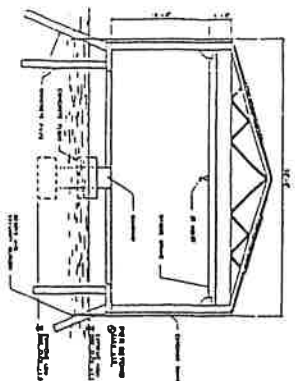
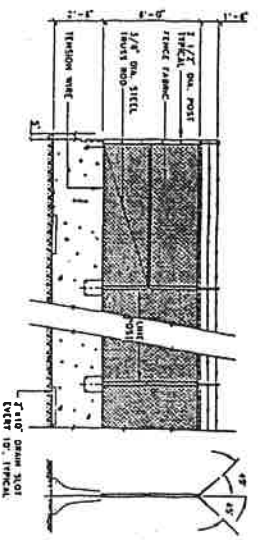
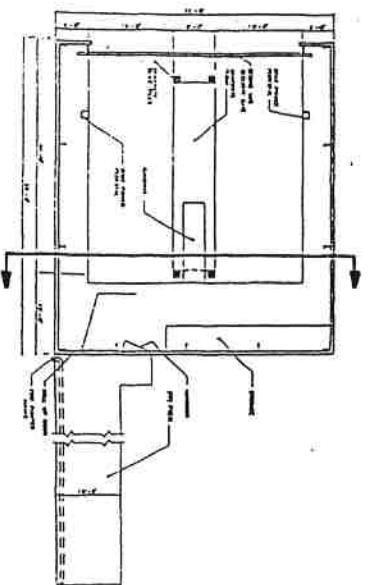


Exhibit C-8





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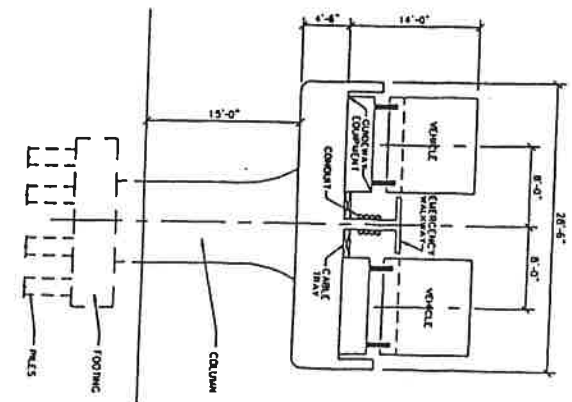
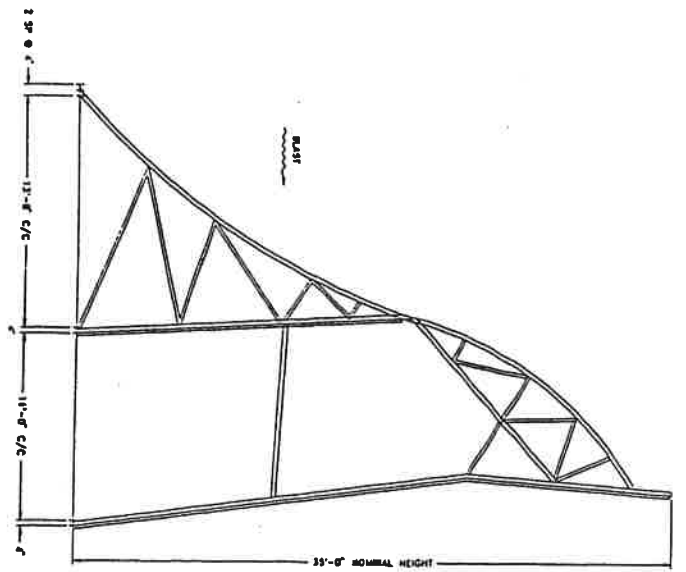
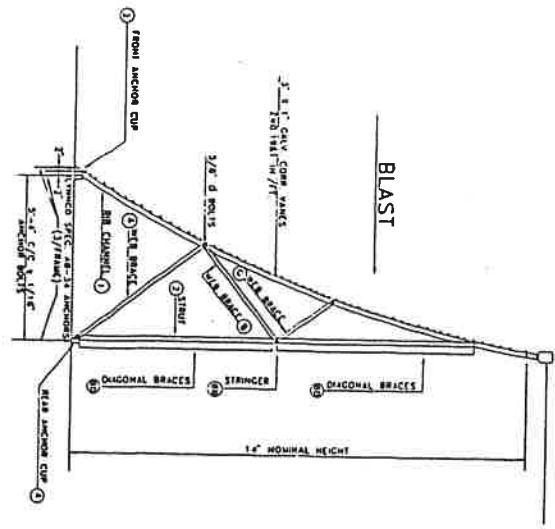
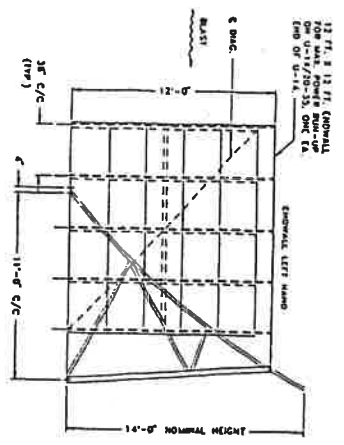
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CROSS SECTIONS

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Exhibit D-1  
 Project Cross-Sections  
 BCDC Permit No. 2-96



AIRPORT RAIL TRANSIT SYSTEM

BLAST DEFLECTORS

Exhibit D-2

Prepared by the City and County of San Francisco. These specifications developed by the staff property of the City and County of San Francisco and are published in the

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**AIRPORTS COMMISSION**  
**SAN FRANCISCO INTERNATIONAL AIRPORT**

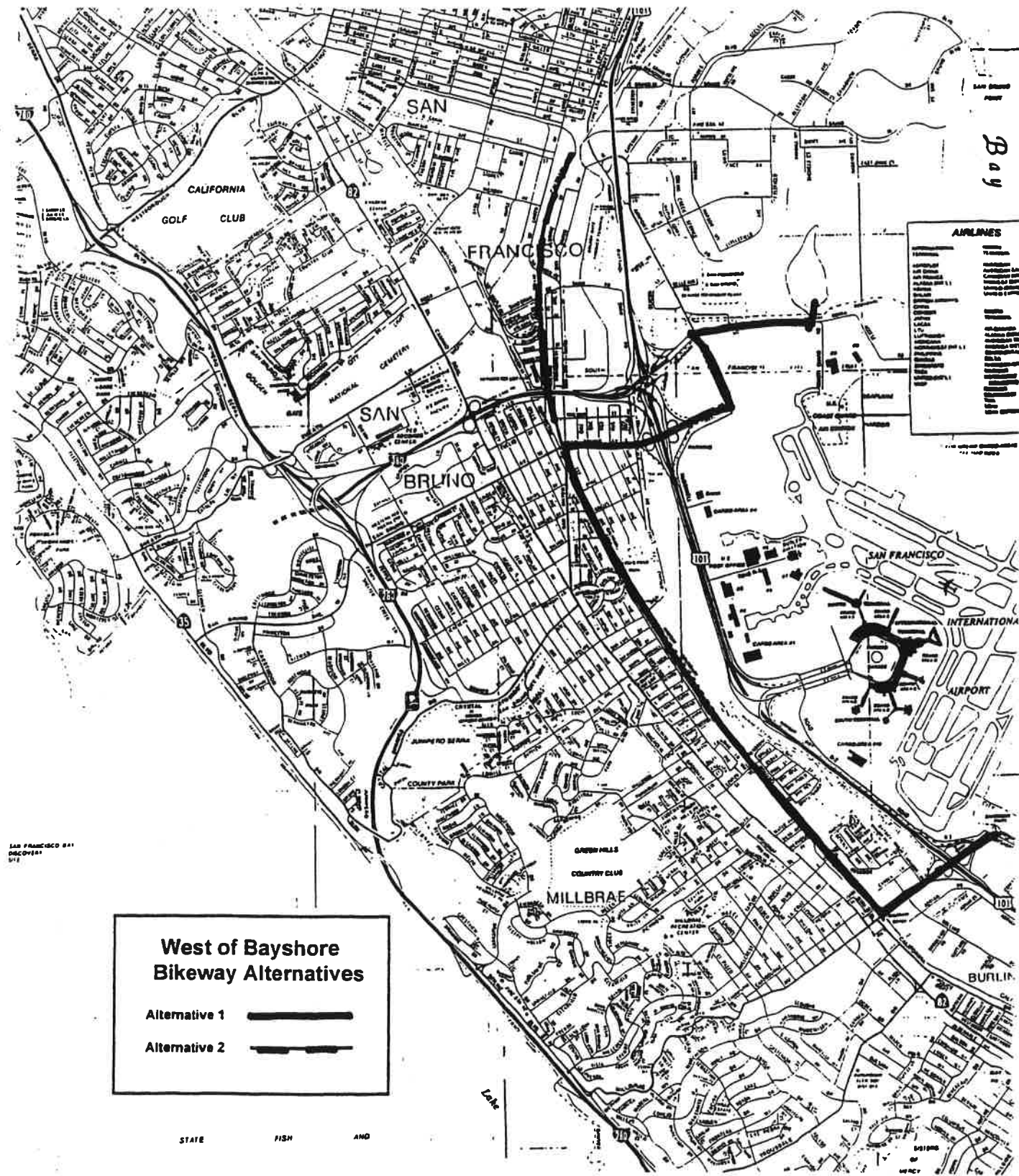
**BCDC APPLICATION**

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SHEET 11 OF 11 SHEETS





**West of Bayshore  
Bikeway Alternatives**

Alternative 1 

Alternative 2 

STATE FISH AND

**Exhibit E  
Bay Trail Alternatives  
BCDC Permit No. 2-96**

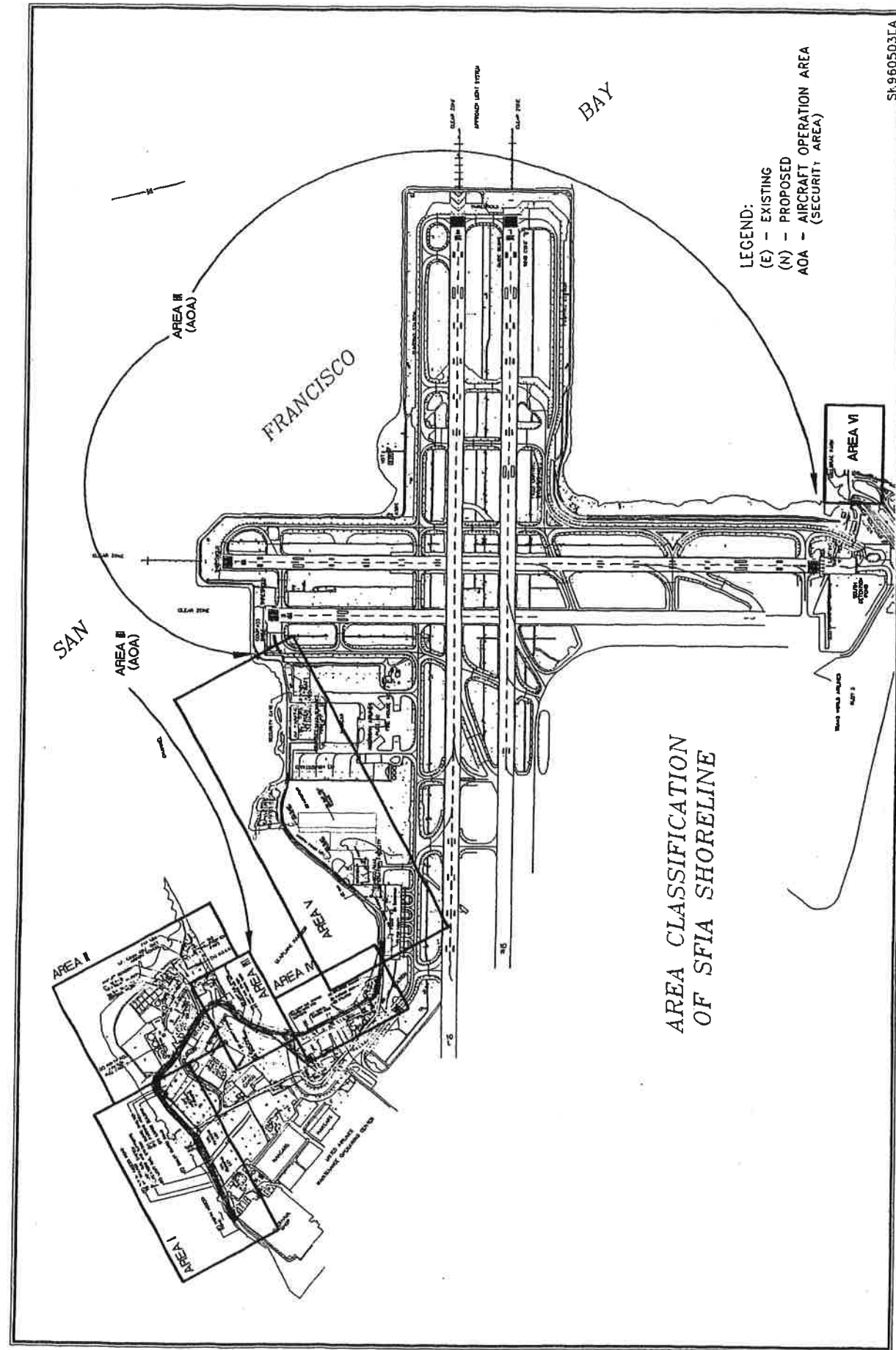


Exhibit F  
 Classification at SFIA Shoreline  
 BCDC Permit No. 2-96

# SAN FRANCISCO INTERNATIONAL AIRPORT

## MASTER PLAN DEVELOPMENT PERMIT

### Attachment 3: -- Environmental Impact Documentation (Box 21)

This Appendix D provides a summary of the San Francisco Master Plan Final Environmental Impact Report (EIR). An EIR was prepared to analyze the impacts of the San Francisco International Airport Master Plan. The Final EIR was certified on May 28, 1992. The text which follows summarizes the environmental effects and lists the adopted mitigation measures.

#### **I. MAIN ENVIRONMENTAL EFFECTS**

##### TRANSPORTATION

This section takes into consideration all future ground travel related to the projected airside and landside operations at SFIA, with special emphasis on the off-site transportation impacts of those operations. The EIR analysis, which makes use of surveyed traffic, pedestrian, parking and transit data collected in the SFIA vicinity, considers the projected increases in air passengers, freight tonnage and SFIA employment.

The EIR analysis indicates the following impacts of the proposed SFIA expansion:

Vehicular traffic would increase from approximately 110,700 daily, 5,100 a.m. peak hour and 5,530 p.m.-peak-hour trips in 1990 to 151,000 daily, 6,950 a.m.-peak-hour and 7,550 p.m.-peak-hour trips in 1996; and 179,700 daily, 8,270 a.m.-peak-hour and 8,990 p.m.-peak-hour trips in 2006. If the Bay Area Rapid Transit (BART) system (or other transit service) is extended to SFIA by 2006, future vehicular traffic would not increase as much. With a mass transit extension to SFIA, it is projected that SFIA would generate 168,500 daily, 7,750 a.m.-peak-hour and 8,430 p.m.-peak-hour vehicle trips in 2006.

Peak-day parking demand would increase from about 28,800 spaces in 1990 to about 35,200 spaces in 1996 and about 42,200 spaces in 2006. There would be a surplus of spaces in 1996. A peak-day deficit of about 4,400 spaces would exist in 2006.

Given the improvements programmed by Caltrans, area local governments and the Airports Commission, the project proposed for 1996 would cause El Camino Real (State Route 82) at Millbrae Avenue and Rollins Road at Millbrae Avenue to worsen below level of service (LOS) E during the a.m. peak hour. The project alone would not cause p.m.-peak-hour conditions to worsen below LOS D. Four intersections (either in the a.m. or p.m.) would operate below LOS D. Four intersections (either in the a.m. or p.m.) would operate below LOS D in

1996 even without the project. LOS at these intersections would not worsen as a result of the project.

In the year 2006, the Master Plan project would cause no study intersections to worsen further during the a.m. peak hour, except for South Airport Boulevard at North Access Road South, which would degrade from LOS A to LOS B; and California Drive at Millbrae Avenue, for which minor street turns into the major street would degrade from LOS D to LOS E. In the p.m. peak hour, the Rollins Road at Millbrae Avenue intersection would worsen below LOS D; the intersections of South Airport Boulevard with North Access Road South and North world degrade from LOS A to LOS C and B, respectively; San Mateo Avenue at San Bruno Avenue would degrade from LOS B to C; at California Drive and Millbrae Avenue, minor street turns into the major street would degrade from LOS D to LOS E; and at Long-term Parking and Road R-3, minor street turns into the major street would degrade from LOS C to LOS E. Three intersections (either in the a.m. or p.m.) Will operate below LOS D in 2006 even without the project. LOS at these intersections would not worsen as a result of the project.

The Master Plan project would cause further deterioration of levels of service on the surrounding freeway network, and decreases in levels of service on the arterial street network in surrounding communities.

The Master Plan project would affect existing transit and shuttle services to SFIA such that both systems would require expansion to serve the increased demand.

## NOISE

Construction activities from the Master Plan would temporarily increase noise levels in the vicinity of construction sites. Nearby noise-sensitive areas include residential land uses, schools and hospitals. During project construction, exterior noise levels at all these noise sensitive areas would exceed San Francisco Noise Ordinance standards.

## AIR QUALITY

Project construction of the Master Plan would temporarily affect local air quality in the project area through dust emissions generated by vehicle movement, building demolition, and other construction-related activities. Land clearing, excavation, and grading activities would generate particulate matter in the form of fugitive dust during the construction period.

Project-related surface traffic would add to cumulative regional pollutant emissions. Existing roadside CO concentrations at many intersections examined already violate State CO standards. Project-related surface traffic would further contribute to these violations, but would not cause any new violations at intersections examined. However, project-generated vehicular traffic would probably lead to an increase in the frequency of standards violations in the project area over future CO levels without the project. Project-related traffic would contribute more than one percent of transportation-related emissions resulting from development in the County, based on the BAAQMD Emissions Summary Report.

Emissions from aircraft and total Airport operations would increase in the future. In 1996, total SFIA emissions of CO, nitrogen oxides, hydrocarbons and fine particulate matter would make up 3.8, 4.7, 3.8 and 1.2 percent, respectively, of the countywide emissions. In 2006, these total SFIA emissions of CO, nitrogen oxides, hydrocarbons and fine particulate matter would increase to .7, 9.8, 11.6 and 4.4 percent, respectively, of the countywide emissions.

## CULTURAL RESOURCES

SFIA Master Plan construction and demolition projects would have no discernible effect on known prehistoric resources and would have little potential to affect historic resources. It is possible, but unlikely, that unsuspected archaeological deposits could be discovered by excavations associated with SFIA Master Plan projects that would extend beneath the artificial fill that covers the site. The thickness of the artificial fill at SFIA varies widely across the site, and on average ranges from about 8 to 16 feet. No roadways, mission outposts or adobe structures from the Spanish or Mexican periods are known to have existed on, or immediately adjacent to, the project area. However, the Jose Sanchez family did construct a levee and wharf southeast of present day Millbrae Avenue, just outside the southern land boundary of Airport property. During the early American period, shrimp and oyster industry activities and cement factory operations took place in the vicinity of the project site. At present, evidence exists of shrimp camp sites, oyster industry structures or cement company dredging equipment near or within the project area. These cultural resources would not be impacted by project implementation.

Pre-1946 airport structures that would be affected by SFIA Master Plan projects are representative of common building types found throughout the state and county. These buildings lack architectural distinction, are not the work of a master architect and are not associated with important people or significant historical events. The remaining SFIA buildings are post-1946 structures, most of which were constructed over the past three decades and appear to have no historical importance.

## GEOLOGY

During construction, soil would be temporarily exposed to erosion. If dewatering were required, the effluent could contain substantial sediment loads. Sediments from these sources could enter storm drains and/or the Bay.

## HAZARDS

Implementation of the SFIA Master Plan would affect hazardous-material handling during construction of new facilities and overall airport operations. The SFIA Master Plan proposes construction of new facilities and demolition of existing facilities in areas of known contamination. Construction activities could uncover hazardous materials in the soil or groundwater. Most of the known contamination at SFIA is the result of past petroleum fuel leaks. Some buildings planned for demolition are known to contain asbestos and may have PCB-containing equipment. Potential impacts pertaining to the health and safety of workers and the public that may result could be mitigated by site investigation and remediation of contaminated areas prior to excavation, dewatering or construction activities. In addition,

buildings would be inspected for hazardous materials before demolition or renovation begins. PCBs, asbestos or other hazardous materials must be removed prior to demolition in accordance with applicable regulations.

Expansion of the Airport to accommodate increased Airport activity may result in an increase in hazardous material use and hazardous waste production. Hazardous-material use at line-maintenance and Airport-owned facilities is limited and any increase would have minimal effect if safe handling practices are continued. As no expansion is planned for the only "major" maintenance facility at SFIA, the United Airlines Maintenance Center, increases in hazardous-material use at this facility would not be expected. The industrial waste treatment facility at SFIA has the capacity to treat increased wastewater flow and higher contaminant concentrations than would result from SFIA Master Plan implementation. Increases in hazardous wastes produced may be lessened by recycling and treatment efforts, but may inevitably contribute to the shortage of landfill space for these wastes.

## II. ALTERNATIVES

In addition to the No-Project Alternative, the EIR includes the following two categories of alternatives to the Master Plan project: (1) on-site alternative; and (2) off-site alternative.

On-Site Alternative. The on-site alternative (reduced-intensity Airport landside development) would not include a new international terminal and, overall, would require less demolition and construction than the Master Plan project. Operationally, however, impacts of the on-site alternative are based on the same passenger, cargo and aircraft operations forecasts as the Master Plan. Thus, impacts of this alternative would be essentially the same as the impacts of the Master Plan project.

Off-Site Alternative. This alternative would provide for the redistribution of forecast aviation demand not met by the San Francisco International Airport to other airports and transportation modes. For areas in the vicinity of the Airport, impacts from this alternative would be similar to the No-Project Alternative. Impacts would worsen in other geographic locations such as Oakland and/or San Jose.

## III. MITIGATION MEASURES

### TRANSPORTATION

Transportation System Management Program. The Airports Commission will fund and implement a Transportation System Management (TSM) program for SFIA. The goal of the TSM program will be to attain a reduction in single occupant vehicle trip rates (e.g., 72 percent drive alone to 52 percent drive alone). A TSM Manager will develop the specific program and coordinate it with activities of SFIA, San Mateo County, the City and County of San Francisco, SamTrans, BART, CalTrain, shuttle/van/taxi companies that serve SFIA, and other public agencies whose services or regulatory functions would affect the mode of travel chosen by employees and air passengers.



Transit Information Program. The Airport will develop and implement a transit information program. The program will require the Airport to work with the airlines and travel agencies to provide information to encourage air passengers to take transit (e.g., up-to-date shuttle and bus information distributed with all airline tickets-by-mail (sent to Northern California zip codes) and tickets sold at SFIA and Bay Area airline counters). The program will also establish procedures for improving transit information dissemination within the airport complex. These procedures will include, but are not limited to, working with SamTrans and other transit providers to provide signage and marketing strategies designed to promote transit use.

Temporary Construction Measures. During construction of the new ramps proposed for U.S. 101 and construction of the Ground Transportation Center, the Airport will maintain safe conditions in and out of the Airport that minimize congestion of U.S. 101 and surrounding roads, and will maintain the maximum lanes feasible during peak periods that exist today to mitigate traffic conditions. Safely marked, temporary sidewalks and pedestrian paths may be used in association with lane closures.

Replacement Parking Spaces. The inventory of public and employee parking will be maintained at all times during lot, garage and building construction. When a building or garage replaces an existing parking lot, the Airport will make replacement parking spaces ready for use and, if necessary, shuttles available for easy access to the terminal and employment sites.

Additional Parking. The Airport will add approximately 7,000 parking stalls by the end of the Near-Term, and an additional 930 parking stalls by the end of the Long-Term.

Parking Capacity Management. The Airport will reallocate parking spaces in the proposed new parking facilities in favor of air passengers, as TSM program elements could be expected to reduce employee parking demand more than air passenger parking demand. The expansion of parking supply at SFIA will be phased to allow evaluation of the effectiveness of expanded TSM programs and transit improvements before the addition of parking (adding parking before or simultaneous with TSM programs and transit improvements may itself undermine the relative attractiveness of alternatives to single-occupant automobile travel). The Airport will monitor parking demand in the garage, Lot D, Lot DD and the Ground Transportation Center and direct motorists to currently available parking locations through changeable message signs.

Roadway Parking Prohibition. The Airport will continue prohibition of parking on all SFIA area roadways. This will eliminate parking overflow from using SFIA roadways and will preserve roadway capacity.

Temporary Parking. To alleviate year-to-year occurrence of parking deficits, the Airport will use vacant land for temporary overflow parking pending and during the construction of lots and garages.

Index of Parking Cost. The Airport will index air passenger and employee parking costs to ensure that parking costs escalate with the costs of all goods and services.

Construction of Light Rail System. The Airport will construct a Light Rail System from the new Ground Transportation Center to the SFIA terminal building and extend the system from the Ground Transportation Center to parking Lots D and DD by the end of the Near-Term. For passenger convenience, the design of the Light Rail System will strive to minimize air passenger walking distance and, where possible, level changes.

Design of Light Rail System. The Airport will work with airlines to design the Light Rail/Terminal connections to minimize air passenger pedestrian circulation, with baggage service available where departing air passengers exit the BART station or parking areas.

Pedestrian Access. The Airport will incorporate into the Ground Transportation Center design safe and convenient walkways, amenities, easy access to transit and other modal transfer points, and other measures that facilitate safe pedestrian movements.

Radio Broadcasts. To minimize unnecessary circulation and reduce vehicle miles traveled, the Airport will continue to provide a radio broadcast of parking availability, with signage on U.S. 101, I-280 and I-380 indicating the frequency to which motorists should tune to obtain the information. Update the information as necessary to manage the flow of traffic to SFIA parking areas, and, when necessary, relatively major private lots or garages.

Roadway Improvements. The Airport will widen McDonnell Road (Road R-3) from two lanes to four lanes from U.S. 101 to San Bruno Avenue and widen North Access Road from two lanes to four lanes. The Airport will also consolidate curb cuts on Road R-2 and McDonnell Road (Road R-3) to ensure that these facilities provide the best possible future levels of service.

Variable Message Signs. To improve access to SFIA parking areas by minimizing weaving and maintaining flow, the Airport will install variable message signs along all roadways entering SFIA directing vehicles to various SFIA locations. To improve access to SFIA parking areas by minimizing weaving and maintaining flow, the Airport will install variable message signs in the short-term garage and the Ground Transportation Center that direct exiting vehicles to use the appropriate exit (toll) gates.

Light Rail Connections. In the long-term, SFIA will consider an extension of the Airport Light Rail System to the west of Bayshore to connect with mass transit.

High Occupancy Vehicle Lanes. The Airport will modify Ground Transportation Center ramps to include an exclusive lane for buses, shuttles and high-occupancy vehicles (HOV) in order to minimize delay for these vehicles and maximize their attractiveness as modes of travel to SFIA. The ramps will be designed so that only minor modifications would be required when exclusive HOV/bus lanes are designated by Caltrans on U.S. 101.

## AIR QUALITY

Construction Period Activities. Require the contractor to sprinkle demolition sites with water continuously during demolition activity; sprinkle unpaved construction areas with water at least twice per day; cover stockpiles of soil, sand, and other material; cover trucks



hauling debris, soils, sand or other such material; and sweep streets surrounding demolition and construction sites at least once per day to reduce particulate emissions. Also require the project contractor to maintain and operate construction equipment so as to minimize exhaust emissions of particulates and other pollutants, by such means as a prohibition on idling of motors when equipment is not in use or when trucks are waiting in queues, and implementation of specific maintenance programs to reduce emissions for equipment that would be in frequent use for much of the construction period.

Aircraft Operating Procedures. Seek to reduce the time each aircraft spends in the taxi/idle phase within the parameters of FAA regulations. Adopt operating procedures to provide to each airline that aircraft engines not be started until the aircraft is ready to pull away from the gate. When no gate is immediately available to unload newly arrived aircraft, aircraft engines should be turned off and aircraft should be towed when a gate becomes available.

Traffic Mitigation Measures. Adopt the TSM Program described above, which will also serve to mitigate air quality impacts.

## CONSTRUCTION NOISE

Noise Reduction Measures. Require the project contractor to muffle and shield intakes and exhausts, shroud or shield impact tools, and use electric-powered rather than diesel-powered construction equipment, as feasible, so that noise from construction activities is reduced to the fullest extent possible at noise-impacted locations.

Predrilling Holes. Require the project contractor to predrill holes (if feasible based on soils) for piles to the maximum feasible depth to minimize noise and vibration from pile driving.

Restrictions on Pile Driving. Consult with neighboring jurisdictions to determine the time when pile driving would cause the least disturbance to neighboring use. Require that the construction contractor limit pile driving activity to result in least disturbance.

Construction Barriers. Require the general contractor to consider construction of barriers around the site, if feasible, and around stationary equipment such as compressors if such barriers would reduce noise by at least 5 dBA less than ambient noise caused by aircraft operations, and to locate stationary equipment in pit areas or excavated areas if possible, as these areas could serve as noise barriers.

## CULTURAL RESOURCES

Review by Project Archaeologist. The project sponsor will retain the services of an archaeologist. The sponsor will submit copies of the general soil survey and site-specific geotechnical investigations prepared for the San Francisco Airport expansion projects for review by the project archaeologist. The project archaeologist will report recommendations to the Environmental Review Officer (ERO). The archaeologist will give consideration to the potential presence of coastal prehistoric sites below existing bay alluvium and remains of Chinese shrimp

camps (c. 1870 to c. 1910 A.D.) in evaluating the archaeological sensitivity of individual projects sites and in developing recommendations.

Procedure for Reporting Significant Artifacts. Should evidence of cultural or historic artifacts or features of potential significance, as determined by the project archaeologist, be found during project excavation, the Environmental Review Office (ERO) and the President of the Landmarks Preservation Advisory Board (LPAB) would be notified immediately, and any excavation which could damage such artifacts or features halted. The archaeologist would prepare a report to be submitted to the ERO and the President of the LPAB containing an assessment of the potential significance of the find and recommendations for what measures should be implemented, including an appropriate security program, and a program for the preservation and recovery of any potential artifacts/features. Should evidence of prehistoric or historic Native American artifacts be found during excavation, the Native American Heritage Commission would be notified immediately, an action required by state law when Native American remains are found. Also, an appropriate representative of the local Native American group would be retained as needed if burial remains were found. Three copies of written reports documenting results of study, recovery and plan for preservation shall be submitted to the ERO.

Inspection and Retrieval of Significant Artifacts. Excavation or construction activities which might damage discovered cultural resources would be suspended for a total maximum of four weeks over the course of construction to permit inspection, recommendation and retrieval, if appropriate.

Archeologist Report. The archaeologist would prepare a draft report documenting the artifacts/features that were discovered, an evaluation as to their significance, and a description as to how any archaeological testing, exploration and/or recovery program was conducted. Copies of the draft reports prepared according to these mitigation measures would be sent first and directly to the Environmental Review Officer and to the President of the Landmarks Preservation Advisory Board for review. Following approval of the report by the ERO and the President of LPAB, a final report is to be sent to California Archaeological Site Survey Office at Sonoma State University. The Office of Environmental Review shall receive final copies of the final archaeological findings report.

## GEOLOGY

Excavation Depth Limitations. Where practical, limit excavation to depths above the water table to reduce the need for dewatering and special below groundwater engineering design and construction techniques.

Dewatering Techniques. If dewatering were required, temporarily retain groundwater pumped from the site in a holding tank before discharge to allow suspended particles to settle.

Erosion Control Plans. Prepare and implement erosion control plans for any construction activities during the wet season that involve grading or other activities that would expose soil to erosion.

## HAZARDS

**Site Investigation.** Perform a site investigation if construction is proposed in areas of known or suspected contamination. A site investigation includes the collection of soil and/or groundwater samples at a site, transportation of the samples to any analytical laboratory, and analysis and reporting.

**Remediation Activities.** Perform remediation activities if levels of contaminants found in any site investigation exceed regulatory requirements and/or pose a threat to the public health and the environment as defined by the responsible regulatory agencies. Remediation could be required for both soils and groundwater. Soil remediation methods could include excavation and on-site treatment, excavation and off-site treatment or disposal, or treatment without excavation. Remediation alternatives for clean-up of contaminated groundwater could include in-site treatment, extraction and on-site treatment and/or disposal. Discharge of treated groundwater to the industrial wastewater treatment plant at the Airport or to San Francisco Bay would require regulatory agency approval.

**Safety and Health Plan.** If site remediation is found necessary, prepare and submit a site-specific Safety and Health Plan for hazardous materials and waste operations to the appropriate agency having jurisdiction before site activities would proceed. The site-specific Safety and Health Plan, which would be applicable to all activities at the site prior to completion of site remediation, would establish policies and procedures to protect workers and the public from potential hazards posed by hazardous wastes. The Plan would be prepared according to federal and California OSHA regulations for hazardous waste site Safety and Health plans (if such regulations are not adopted prior to initial site activities, National Institute for Occupational Safety and Health guidelines would be followed). The site safety officer's log would be made available to the San Francisco Department of Public Health for inspection.

**Dust Control Program.** The site mitigation plan should include a dust control program, to minimize potential public health impacts associated with exposure to contaminated soil dust.

**Review of Reports.** Reports (including locations, chain of custody forms, and laboratory analysis reports) of further site investigations (if any) should be sent to the appropriate agency for review.

**Remediation Report.** Prepare a report describing the remediation process in detail and certifying completion of remediation should be prepared by a Registered Environmental Assessor (REA) or registered engineer, and submitted to the appropriate agency having jurisdiction. The report should include copies of hazardous waste transport manifests.

**Asbestos Surveys.** Conduct asbestos surveys for all structures planned for demolition or renovation that have not been previously surveyed. For development involving any structure identified to contain asbestos, retain a registered asbestos inspector to inspect buildings after asbestos removal or encasing to ensure adequacy of remediation, proceeding with demolition or renovation only when the quality assurance inspector agrees that asbestos abatement is complete.

PCB-Containing Electrical Equipment. Consult Airport and tenant records of PCB-containing electrical articles before any demolition or renovation occurs. Remove PCB-containing equipment prior to demolition following all regulations for worker safety and disposal in accordance with applicable laws and regulations.

Reduction of Excavation Impacts. Reduce excavation impacts in areas of suspected contamination by performing a site investigation and any necessary remedial activities.

Procedure for Locating Underground Obstructions. Prior to any excavation, consult Airport records for locations of underground tanks, utility lines and fuel distribution pipes. Tank-locating technologies would be used to determine whether any unrecorded or misrecorded underground tanks, utility lines or fuel distribution pipelines are present on-site. In the case of relatively large excavations, contingency plans would be developed for protection and possible evacuation of workers and nearby public.

Groundwater Testing. Conduct groundwater testing for petroleum hydrocarbons before dewatering is performed at any airport site. Treatment would be applied, in consultation with the RWQCB and/or wastewater treatment plant operators to ensure that all discharges meet applicable quality requirements.