
FINAL
ENVIRONMENTAL ASSESSMENT

**PROPOSED RENTAL CAR CENTER AND
AIRTRAIN EXTENSION**

**San Francisco International Airport
City and County of San Francisco, California**

Prepared For

City and County of San Francisco
San Francisco Airport Commission

U.S. Department of Transportation
Federal Aviation Administration

As lead Federal Agency pursuant to the National Environmental Policy Act of 1969

Prepared by

Ricondo & Associates, Inc.

In association with
Environmental Science Associates

October 2017

This Environmental Assessment becomes a Federal document when evaluated, signed and dated by the responsible FAA Official.



Responsible FAA Official



Date

GENERAL INFORMATION ABOUT THIS DOCUMENT

WHAT'S IN THIS DOCUMENT? This document contains a Final Environmental Assessment (EA) for the City and County of San Francisco's (the City's) proposed Rental Car Center and AirTrain Extension project at San Francisco International Airport (SFO). The City proposes to construct a new Rental Car Center and extend the AirTrain to serve the new Rental Car Center to provide facilities to meet forecast rental car demand in an efficient facility with convenient access. This document discloses the analysis, floodplain encroachment, and findings of the potential impacts of Proposed Action, the No Action, and other reasonable alternatives.

The Draft EA was made available for public review and comment for a 36-day period that extended from Monday, July 31, 2017, to Tuesday, September 5, 2017. Additionally, the City held a Public Workshop and Hearing on Wednesday, August 30, 2017, from 6:30 to 8:30 p.m. Pacific Daylight Time (PDT), in the Millbrae City Hall. To notify the public of the availability of the Draft EA and announce the opportunity to attend the Public Workshop and Hearing, the City prepared a Notice of Availability (NOA), which was published on July 31, 2017, in the *San Francisco Chronicle*, the *San Jose Mercury News*, and the *San Mateo County Times*, daily newspapers serving the San Francisco Bay Area counties and Santa Cruz County to the south.

The document presents the Final EA for the federal decision-making process, in fulfillment of the Federal Aviation Administration's (FAA's) policies and procedures relative to the National Environmental Policy Act (NEPA) and other related federal requirements. Copies of the document are available for inspection at the following locations:

Online: www.flysfo.com/rental-car-center-and-airtrain-extension

Print Copies:

Public Library Locations: **South San Francisco Main Library** (840 West Orange Ave, South San Francisco, CA 94080); **San Bruno Library** (701 Angus Ave West, San Bruno, CA 94066); **Millbrae Library** (1 Library Ave, Millbrae, CA 94030); **Foster City Library** (1000 East Hillsdale Blvd., Foster City, CA 94404); **Burlingame Public Library** (480 Primrose, Road, Burlingame, CA 94010); **San Mateo Main Library** (55 West 3rd Ave, San Mateo, CA 94402); **Serramonte Main Library** (40 Wembley Drive, Daly City, CA 94015); **San Francisco Main Library** (100 Larkin Street, San Francisco, CA 94102)

San Francisco International Airport, Bureau of Planning and Environmental Affairs, 710 North McDonnell Road, 3rd Floor, San Francisco, CA 94128

Federal Aviation Administration, San Francisco Airports District Office, 1000 Marina Boulevard, Suite 220, Brisbane, CA 94005-1835

WHAT SHOULD YOU DO? Read this Final Environmental Assessment to understand the actions that the City and County of San Francisco proposes.

WHAT HAPPENS AFTER THIS? The FAA will decide to prepare and issue a Finding of No Significant Impact (FONSI) or decide to prepare an Environmental Impact Statement (EIS).

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1. Purpose and Need

1.1 Introduction

San Francisco International Airport (the Airport or SFO) is located in San Mateo County, California. The Airport is owned and operated by the City and County of San Francisco (the City), acting by and through the San Francisco Airport Commission (the Airport Commission or the Sponsor). The City proposes to construct a new rental car center (RCC), extend the AirTrain to serve the new RCC, and complete other connected and associated actions to support the new facilities, all of which are the subject of this Environmental Assessment (EA). The existing RCC facilities are inadequately sized to meet forecast demand for rental cars at the Airport and are operationally inefficient.

Federal agencies are required to consider the environmental consequences of proposed actions in the decision-making process under the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [U.S.C.] §§ 4321-4335) and the Council on Environmental Quality (CEQ) implementing regulations for NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508). NEPA requires federal agencies to disclose to decision-makers and the interested public a clear, accurate description of the potential environmental impacts of proposed federal actions and the reasonable alternatives to those actions. Under NEPA, federal agencies are required to consider the environmental effects of a proposed action, the alternatives to the proposed action, and a no action alternative (assessing the potential environmental effects of not undertaking the proposed action). The Federal Aviation Administration (FAA) has established a process to ensure compliance with the provisions of NEPA through FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*,¹ and FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*.²

For this EA, the Proposed Action is the construction of a new RCC, the extension of the AirTrain to serve the new RCC, and the completion of other connected and associated actions. The EA describes the Proposed Action; why it is being proposed; alternatives to the Proposed Action; the existing environment that could be affected by the alternatives; potential impacts associated with each alternative; and environmental impact avoidance, minimization, and/or mitigation measures.

¹ U.S. Department of Transportation, Federal Aviation Administration, Order 1050.1F, *Environmental Impacts: Policies and Procedures*, July 16, 2015.

² U.S. Department of Transportation, Federal Aviation Administration, Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*, April 28, 2006.

1.2 Background

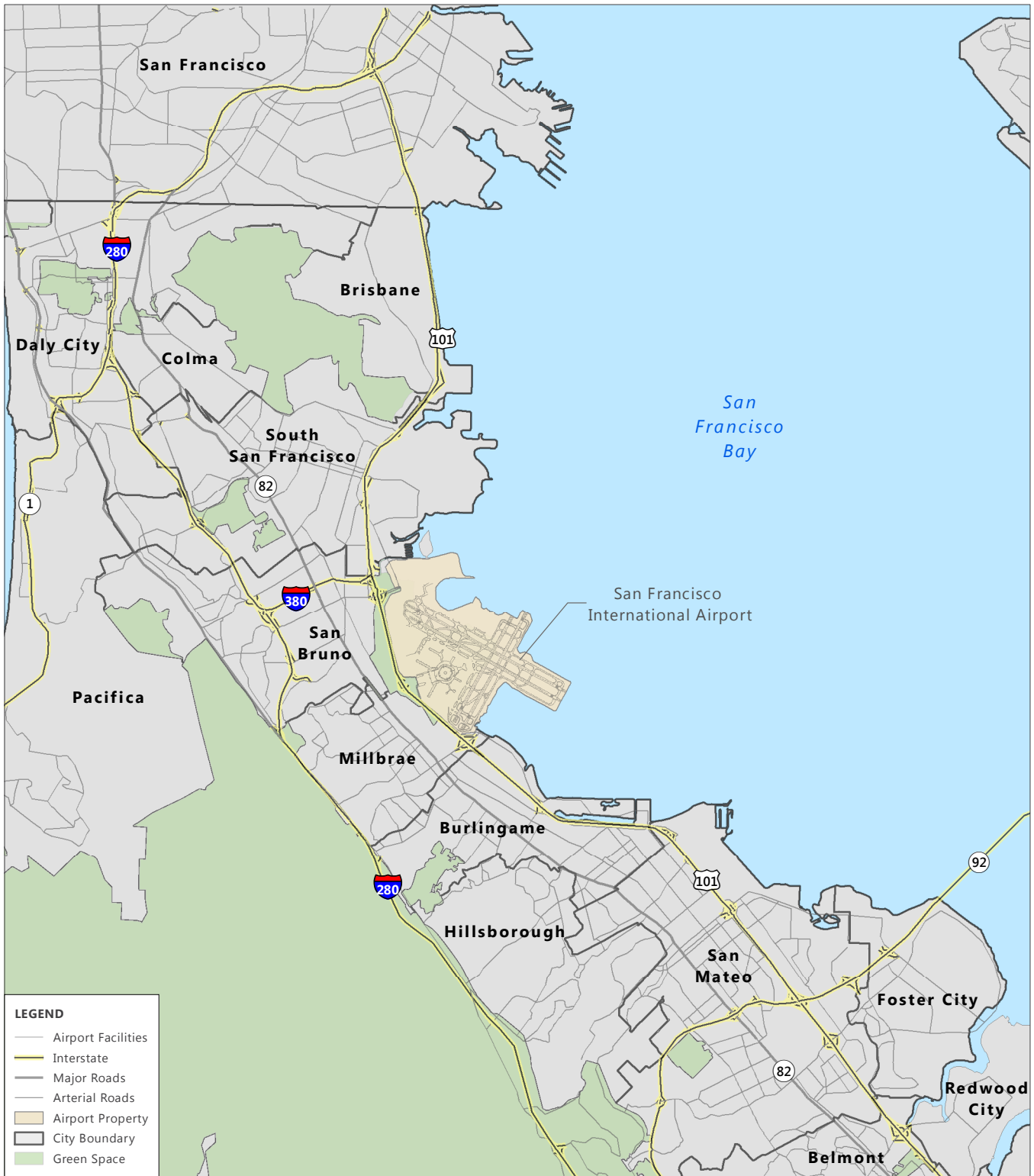
1.2.1 DESCRIPTION OF EXISTING AIRPORT

The Airport is located 13 miles south of downtown San Francisco and is surrounded by the cities of South San Francisco to the north, San Bruno to the west, and Millbrae to the southwest. The regional setting of the Airport, the project location, is shown on **Exhibit 1-1**. The operational area of the Airport is generally bordered by U.S. Highway 101 (U.S. 101), also referred to as the Bayshore Freeway, to the west and the San Francisco Bay to the east, as shown on **Exhibit 1-2**. Airport property also includes the area west of U.S. 101, referred to as the West-of-Bayshore property, comprising approximately 180 acres of undeveloped land supporting aquatic, wetland, and upland habitats.

SFO is the largest air carrier airport in the San Francisco Bay Area. Other air carrier airports in the San Francisco Bay Area include Oakland and San Jose International Airports. SFO comprises two sets of parallel runways, oriented in north-south and east-west configurations; supporting airfield facilities and infrastructure; a passenger terminal area served by access roads, parking facilities, and RCC facilities; and other facilities typical of a large air carrier airport, such as cargo and general aviation.

In 1992, the City adopted the San Francisco International Airport Master Plan to guide future Airport facility expansion, relocation, and development necessary to accommodate forecast passenger activity. The Airport experienced a steady increase in passengers until the economic recession in early 2000, when passenger numbers fell. Aircraft operations and passenger levels have since recovered and have continued to grow, including growth during the economic downturn in 2008. Many of the projects included in the 1992 Airport Master Plan have been implemented. The City has developed more than 5 million square feet of landside improvements, such as the International Terminal Building, two international boarding areas, the existing RCC, and the AirTrain.

The existing RCC was constructed in 1998. SFO was one of the first airports in the United States that consolidated on-airport rental car companies in one facility. The existing RCC is located on North McDonnell Road in Lot D, as shown on **Exhibit 1-3**, approximately three-quarters of a mile northwest of the Airport terminal complex. The existing RCC is served by the AirTrain, an on-Airport automated people mover system that transports passengers between the terminals and RCC. These facilities are the subject of this EA, and additional background is provided in the following section.



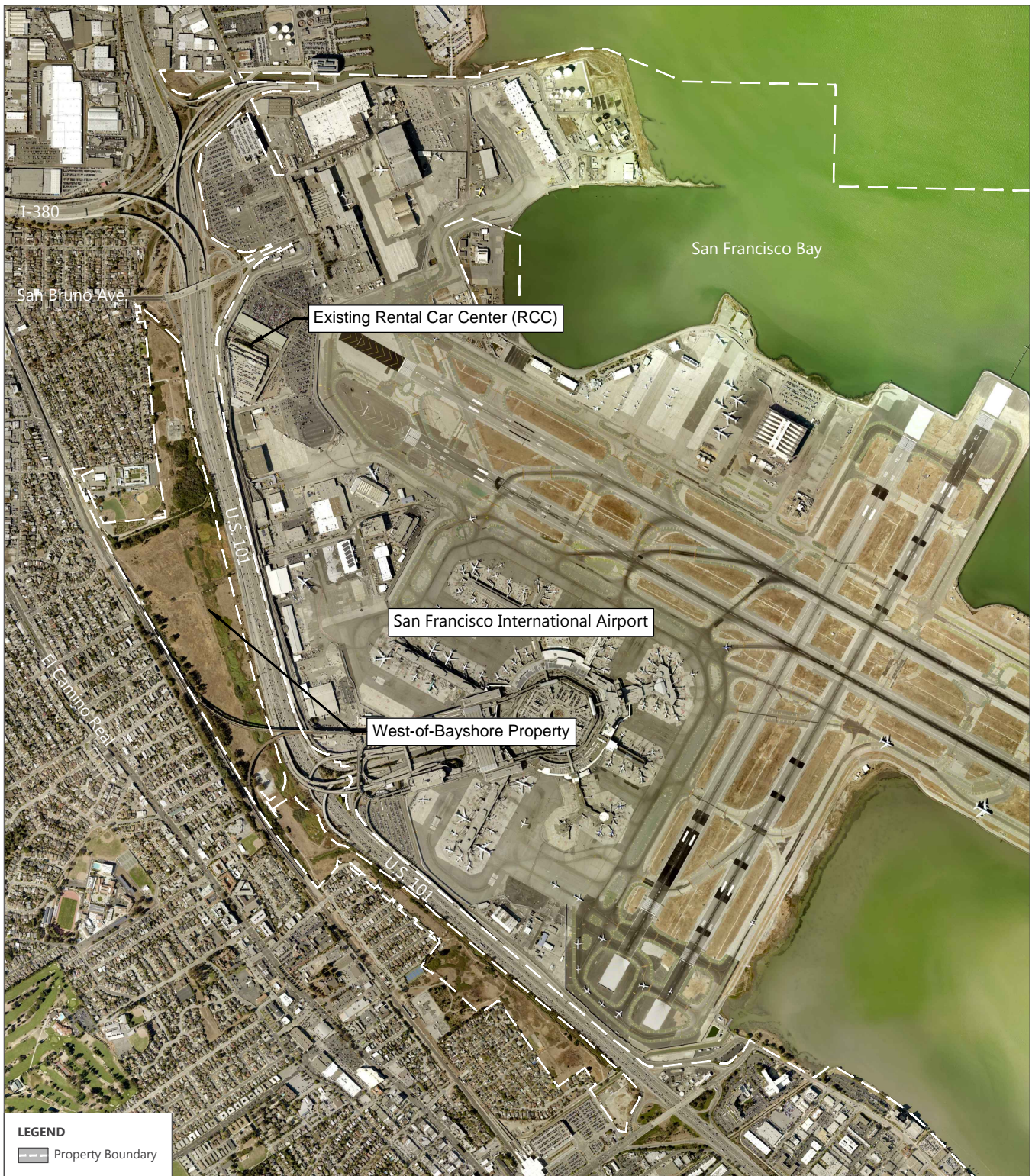
SOURCES: Esri GIS Data, 2011 (roadways, water features, county boundaries); Esri Online GIS Data, Tele Atlas North America, Inc., Accessed November 2016 (airport property); San Francisco International Airport, Existing Airport Layout Plan, FAA approved on September 23, 2016 (airport layout plan linework); Ricondo & Associates, Inc., November 2016 (city boundaries) based on Esri Online GIS Data, November 2016.
 PREPARED BY: Ricondo & Associates, Inc., January 2017.

EXHIBIT 1-1



Airport Location

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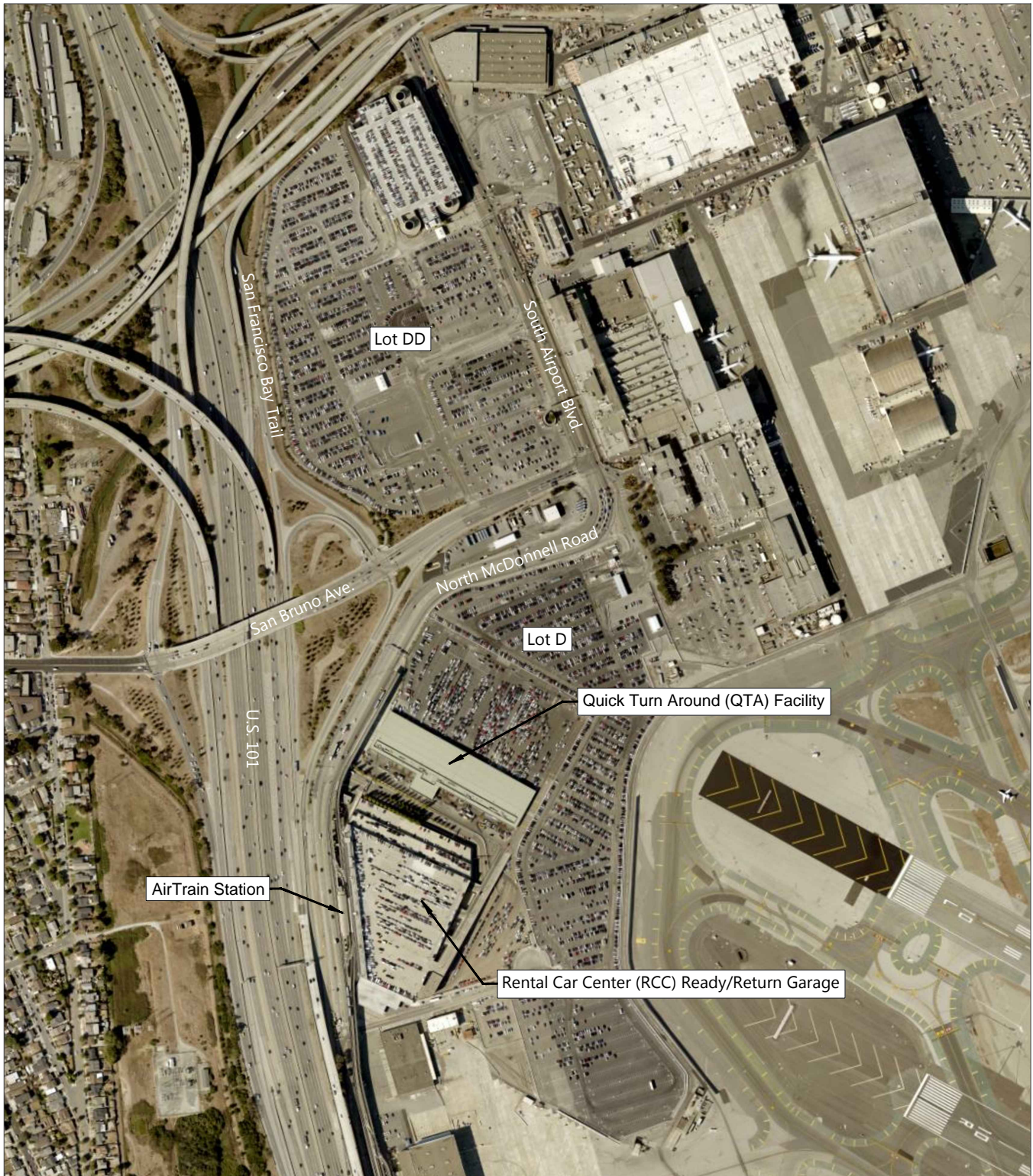
SOURCE: Bureau of Land Management, Esri, HERE, DeLorme, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA, June 2015 (aerial).
PREPARED BY: Ricondo & Associates, Inc., July 2016.

EXHIBIT 1-2

General Airport Vicinity

Drawing: 2\SF001 - SFO NEPA On-Call 2016\02 - RCC AirTrain EA\CAD Exhibits\Exhibit 1-2 Project Vicinity_2017-05-26.dwg Layout: 8.5x11P Plotted: Sep 25, 2017, 09:07AM

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SOURCE: Bureau of Land Management, Esri, HERE, DeLorme, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA, June 2015 (aerial).
PREPARED BY: Ricondo & Associates, Inc., July 2016.

EXHIBIT 1-3



Proposed Project Vicinity

Drawing: Z:\SFO01 - SFO NEPA On-Call 2016\02 - RCC AirTrain EA\CAD Exhibits\Exhibit 1-3_Purpose and Need_Proposed Project Vicinity_2017-05-26.dwg Layout: 8.5x11P Plotted: Sep 25, 2017, 09:09AM

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1.2.2 DESCRIPTION OF THE EXISTING RENTAL CAR CENTER AND AIRTRAIN CONNECTION TO TERMINALS

The existing RCC comprises the five-story Ready/Return Garage and the adjacent Quick Turn Around (QTA) facility, which accommodate the following functions:

- Ready/Return Garage
 - Customer Service Lobbies—Customer service lobbies are accommodated on Levels 1 and 4 of the garage and include check-in counters with queuing space for the rental car companies. The customer service lobbies total approximately 26,200 square feet.
 - Ready/Return Spaces—The garage provides 2,861 ready/return spaces,³ which are spaces used to stage vehicles ready for rental and those recently returned.
- QTA Facility—Adjacent to the Ready/Return Garage, the QTA facility provides space for the washing, refueling, and short-term storage of returned vehicles. The QTA facility includes 14 carwash bays, 120 fuel nozzles/vacuums, 1,714 spaces for vehicle staging/stacking, and 1,820 spaces for short-term vehicle storage.
- Each rental car company is allocated area within the RCC for check-in counters and ready/return operations in the Ready/Return Garage, as well as area for washing, refueling, and the short-term storage of vehicles within the QTA facility. Rental car companies also maintain off-site facilities for long-term storage and maintenance of rental cars as insufficient space is available for on-Airport rental car storage.

The RCC is located in Lot D. Portions of Lot D, along with Lot DD to the north, also accommodate public and employee parking in surface lots and in a parking garage. An AirTrain station adjacent to the Ready/Return Garage provides a convenient connection for rental car patrons between the existing RCC and all the terminals.

1.2.3 AIRPORT DEVELOPMENT PLAN

In 2014, the City initiated a long-range planning study to guide Airport development in a manner consistent with the City's vision to be the premier international gateway to the Pacific—providing the highest level of international and domestic guest service, as well as facilitating the economic growth of the San Francisco Bay Area. The plan—referred to as the Airport Development Plan (ADP)—includes an aviation activity forecast, identifies future Airport facility needs, evaluates alternatives to meet forecast activity and resulting demand for facilities, and identifies a preferred development plan for the Airport.⁴ This section summarizes the forecast aviation activity, rental car facility needs, and needs for connected and associated facilities that were defined in the ADP.

³ Ready/return spaces reflect a compact parking configuration, which is typical of rental car operations.

⁴ City and County of San Francisco, San Francisco International Airport, *Airport Development Plan – Draft Final*, September 2016.

1.2.3.1 Aviation Activity

The ADP includes aviation activity forecasts used to identify requirements to guide long-term facility planning. The ADP forecast is derived from a forecast update prepared for the Airport in 2014, with a base year of 2013⁵ (2014 Forecast). The forecasts are based on historical and projected demographic and socioeconomic data, industry trends, aircraft fleet mix,⁶ and aircraft load factor⁷ assumptions in order to forecast the numbers of passengers and aircraft operations. Since completion of the 2014 Forecast, passenger activity levels increased at a rate faster than forecast, resulting in the actual number of enplaned passengers at the Airport in 2015 being nearly equal to the number of enplaned passengers forecast for 2018. It is anticipated that increases in passenger activity will continue, with those increases accommodated both through increases in the number of flights serving the Airport as well as increases in seating capacities through use of larger aircraft, consistent with current airline trends. Therefore, for this EA a proposed forecast of enplaned passengers was developed by applying the 2014 Forecast rates of increase to the actual number of enplaned passengers in 2015.

The proposed forecast, referred to herein as the EA forecast, was submitted to the FAA and subsequently approved for use in this EA. The letter submitting the forecast to the FAA and the FAA letter approving the forecast for use in this EA are provided in **Appendix A. Table 1-1** presents the EA forecast of domestic and international enplaned passengers, which represent half of the total number of passengers served at the Airport.⁸ As shown in the table, there were just under 25 million enplaned passengers served at the Airport in the base year 2015.⁹ The number of enplaned passengers is forecast to increase to about 31.6 million in 2024 and 35.5 million in 2028.

⁵ Landrum & Brown, Inc., *San Francisco International Airport Forecast Update*, April 2014.

⁶ Fleet mix refers to the types and seating capacity of aircraft operating at the Airport.

⁷ Load factor refers to the average percentage of aircraft seats filled with passengers.

⁸ The total of enplaned and deplaned passengers represents the total number of passengers served at an airport. Enplaned passengers are those boarding an aircraft and deplaned passengers are those disembarking from an aircraft. Enplaned passengers could be boarding an aircraft to begin their current air travel trip from SFO or boarding an aircraft as part of a connection at SFO. The numbers of enplaned and deplaned passengers are assumed to be equal with enplaned passengers representing half of the total passengers.

⁹ Statistics for 2016 were released following the completion of the EA Forecast. Approximately 26.4 million enplaned passengers were served at the Airport in 2016.

Table 1-1: Enplaned Passenger Forecast

YEAR	DOMESTIC	INTERNATIONAL	TOTAL
Historical			
2010	15,145,876	4,393,816	19,539,692
2011	15,899,323	4,489,394	20,388,717
2012	17,415,286	4,732,903	22,148,189
2013	17,577,273	4,840,512	22,417,785
2014	18,357,357	5,107,071	23,464,428
Base Year for Forecast			
2015	19,400,379	5,554,640	24,955,019
Forecast			
2024	22,237,960	9,406,494	31,644,454
2028	23,628,912	11,887,874	35,516,785

NOTE: Totals may not equal due to rounding.

SOURCES: City and County of San Francisco, San Francisco International Airport, 2010–2015 (historical); Ricondo & Associates, Inc., 2016 (based on historical 2015 enplanements, forecast growth rates, and the High Constrained forecast by Landrum & Brown, Inc., *San Francisco International Airport Forecast Update*, April 2014, as approved by the FAA on June 9, 2014).

PREPARED BY: Ricondo & Associates, Inc., August 2016.

1.2.3.2 Rental Car Facility Requirements

Demand for rental car transactions is driven by origination and destination (O&D) passengers¹⁰ and the propensity for those passengers to rent a car. The percentage of O&D passengers as a proportion of overall passengers at the Airport has not materially changed over the past 10 years (approximately 77–79 percent), and it is not anticipated to do so in the future. The ADP included a review of historical rental car transaction trends, in particular the percentage of O&D passengers that rent cars. The review found that the propensity for passengers to rent a car at SFO has increased, as evidenced by the trend in the ratio of rental car transactions to O&D passengers, which increased from approximately 44.4 rental car transactions per 1,000 O&D passengers in 2010 to approximately 49.2 rental car transactions per 1,000 O&D passengers in 2014.¹¹ Therefore, future rental car facility requirements projected in the ADP considered both the forecast growth in O&D passengers at the Airport and the increase in the propensity of those passengers to rent cars.

The numbers of ready/return spaces and QTA stacking/staging spaces determine facility footprint needs, and thus are presented to quantify rental car facility requirements. **Table 1-2** provides a comparison of the existing numbers of rental car ready/return and QTA stacking/staging spaces with the requirements to accommodate the rental car needs of O&D passengers corresponding to a maximum level of 35.5 million total enplanements anticipated to occur in 2028. The table presents existing facilities alongside future facility

¹⁰ Origination and destination passengers are those that begin or end their air travel at the Airport.

¹¹ City and County of San Francisco, San Francisco International Airport, *Airport Development Plan – Draft Final*, Exhibit 3.5-12, “On-Airport Rental Car Contracts,” September 2016.

requirements and demonstrates that the existing RCC facilities are not sufficient to accommodate future requirements; furthermore, the ADP indicates that demand for certain facility components would reach their useful capacity at current passenger activity levels.¹²

Table 1-2: Comparison of Future RCC Facility Requirements with the Existing RCC Facilities

FACILITY COMPONENT	EXISTING FACILITY	FUTURE REQUIREMENTS (2028) ^{1/}	COMPARISON OF EXISTING FACILITIES TO FUTURE REQUIREMENTS
Ready/Return Facility Spaces (number) ^{2/}	2,861	3,700	(839)
QTA Facility Vehicle Stacking/Staging Spaces (number) ^{3/}	1,714	2,600	(886)

NOTES:

QTA—Quick Turn Around facility

1/ The facility requirements represent the Low-Growth scenario of the High Constrained forecast for future rental car facility needs identified in the Airport Development Plan. Under this scenario, RCC facility requirements would increase in direct proportion to increases in O&D passengers and the propensity for those passengers to rent cars.

2/ Ready/return facility spaces calculated to represent a compact parking configuration, which is typical of rental car operations.

3/ Vehicle staging/stacking spaces are nose-to-tail.

SOURCE: Ricondo & Associates, Inc., 2016 (based on City and County of San Francisco, San Francisco International Airport, *Airport Development Plan – Draft Final*, September 2016).

PREPARED BY: Ricondo & Associates, Inc., July 2016.

The limited space for storing cars in the existing facilities is insufficient for current demand, resulting in vehicles being stored at off-Airport facilities. Off-Airport rental car storage facilities are located approximately 1.25 miles north of the existing RCC facilities in South San Francisco and over 3 miles south in Burlingame. Storing vehicles at off-Airport facilities requires shuttling vehicles between the RCC and the off-Airport storage and is operationally inefficient. In some periods of high demand, rental car patrons may be required to wait for cars to be shuttled from the off-site locations, creating inconveniences to those patrons.

In addition to functional capacity concerns, being one of the first consolidated rental car facilities in the country, the existing RCC does not offer the same open design and customer amenities that are the standard for newer facilities at other airports. Modern consolidated rental car facilities are an extension of the passenger terminals and offer a comfortable, open space with passenger amenities, including waiting areas, concessions, and other conveniences. The existing RCC does not provide such amenities nor is it sized to accommodate such amenities. Similar to ongoing terminal upgrades at the Airport, the City desires to provide a modern consolidated rental car facility that offers a customer experience that matches that of the Airport terminals and is consistent with similar, modern facilities at other airports.

¹² City and County of San Francisco, San Francisco International Airport, *Airport Development Plan – Draft Final*, Table 4.4-8, "Rental Car Facility Requirements," September 2016.

1.2.3.3 Terminal and RCC Curbsides

The terminal roadways and curbsides are congested, and congestion is expected to increase as O&D passenger activity increases. The terminal roadways and curbsides accommodate pick-up and drop-off activity by private vehicles, Airport shuttles from remote long-term and employee parking facilities, and a mix of off-Airport ground transportation providers (e.g., taxicabs, limousines, off-Airport parking shuttles) in designated curbside areas at each terminal. The existing RCC provides a remote curbside, referred to as the Kiss & Fly, at which passengers can be dropped off and picked up, connecting to the terminals via the AirTrain, thereby allowing vehicles to bypass the congested terminal roadways and curbsides. Areas are designated for off-Airport rental car companies and private vehicles at the Kiss & Fly curbside. The RCC curbside was evaluated in the ADP and determined to not be able to meet demand for curbside area through 2024.¹³

Concurrent with planning for the rental car facility, the City is seeking to manage congestion at the terminal curbsides and has recognized the need to introduce facilities to which terminal roadway trips can be reallocated, including remote curbsides or other locations for passenger access to the Airport terminals.¹⁴

1.2.3.4 Automobile Parking

Concurrent with planning for the rental car facility, the City is seeking opportunities to accommodate increasing demand for long-term public parking as O&D passenger activity increases. Passenger long-term parking and employee parking are accommodated in the vicinity of the existing RCC facilities in Lots D and DD (Exhibit 1-3). The demand for parking associated with increased passenger activity is expected to be compounded by future plans to expand close-in parking.

1.3 Description of the Proposed Action

The key elements of the Sponsor's Proposed Action are:

- Construct a new RCC and associated facilities on Lot DD at the Airport:
 - Construct a five-level Ready/Return Garage, approximately 160,000 square feet per level, with ready/return spaces, a customer service lobby, and rental car offices.
 - Construct a multi-level QTA facility with storage/stacking spaces.¹⁵

¹³ City and County of San Francisco, San Francisco International Airport, *Airport Development Plan – Draft Final*, Table 5.4-5, "Evaluation of Terminal Area Alternatives – Domestic Curbsides," September 2016.

¹⁴ City and County of San Francisco, San Francisco International Airport, *Report #1: Impact of the AirTrain Extension on Terminal Curbside Congestion, Curbside Congestion Study*, March 2017.

¹⁵ The existing QTA facility would be demolished, and the site would be used to support 2,200 short-term spaces to supplement the storage/stacking spaces at the new QTA facility.

- Extend AirTrain to the new RCC:
 - Construct approximately 1,750 linear feet of guideway from the existing AirTrain terminus in Lot D to the new RCC in Lot DD.
 - The portion near the existing AirTrain terminus would be a single shared guideway approximately 30 feet wide, which includes a 6-foot-wide emergency walkway in the middle.
 - The single shared guideway would split into two separate guideways, widening to approximately 67 feet and rising to an elevation of approximately 54 feet above ground level at the new RCC.
 - The extended guideway and new AirTrain station (see below) would be supported by a series of approximately 20 columns on pile-supported foundations. The pile foundations would be formed by groups of approximately 19 to 45 24-inch diameter piles placed to a depth of 80 to 135 feet below the ground and capped with a concrete slab at ground level.
 - Construct a new AirTrain station, approximately 240 feet long and approximately 70 feet wide, near the north end of the RCC.
 - Construct a new curbside for passenger pickup and drop-off at the new Lot DD AirTrain station. The curbside is assumed to be accommodated at ground-level under the AirTrain guideway and station.

The following connected and associated elements of the Proposed Action are necessary to support the new RCC and AirTrain extension or to take advantage of the opportunity to meet long-term parking needs with existing facilities:

- Close and abandon in-place 14 underground storage tanks (USTs) at the existing QTA that provide 177,000 gallons of fuel storage for rental cars and replace in-kind within the footprint of the new QTA facility.
- Construct roadway, access, and intersection improvements in the vicinity of the new RCC:
 - Reconfigure the intersection of South Airport Boulevard, North McDonnell Road, and San Bruno Avenue.
 - Construct a public vehicle access road serving Lot DD from South Airport Boulevard to accommodate public access to the Ready/Return Garage.
 - Construct a service vehicle access road serving the Ready/Return Garage and the QTA facility.
- Construct utility improvements:
 - Improve the utility corridor serving Lot DD, including expansion of substation in Lot D. A segment of the utility corridor would be constructed under the San Francisco Bay Conservation and Development Commission's San Francisco Bay Trail (the Bay Trail) along the west side of the garage. Construct utility links to existing utility nodes in Lot DD.

- Construct pump stations along utility corridor improvements between Lots D and DD.
- Construct a fire lane along the north and west sides of the Ready/Return Garage, following the on-Airport alignment of the Bay Trail along the west side of the garage.
- Convert existing RCC facilities to public parking and rental car vehicle storage:
 - Restripe the existing Ready/Return Garage and install entrance and exit booths to provide 3,700 long-term public parking spaces.
 - Remove the existing QTA structure and repave, as needed, to provide approximately 2,200 short-term rental car storage spaces in a surface lot. No new structure would be constructed to replace the demolished QTA structure.

Exhibit 1-4 illustrates the elements of the Proposed Action and the connected and associated actions described above. The existing column spacing supporting the AirTrain (photographs of which are provided in **Appendix B**) is representative of the column spacing to be used to support the proposed AirTrain extension.

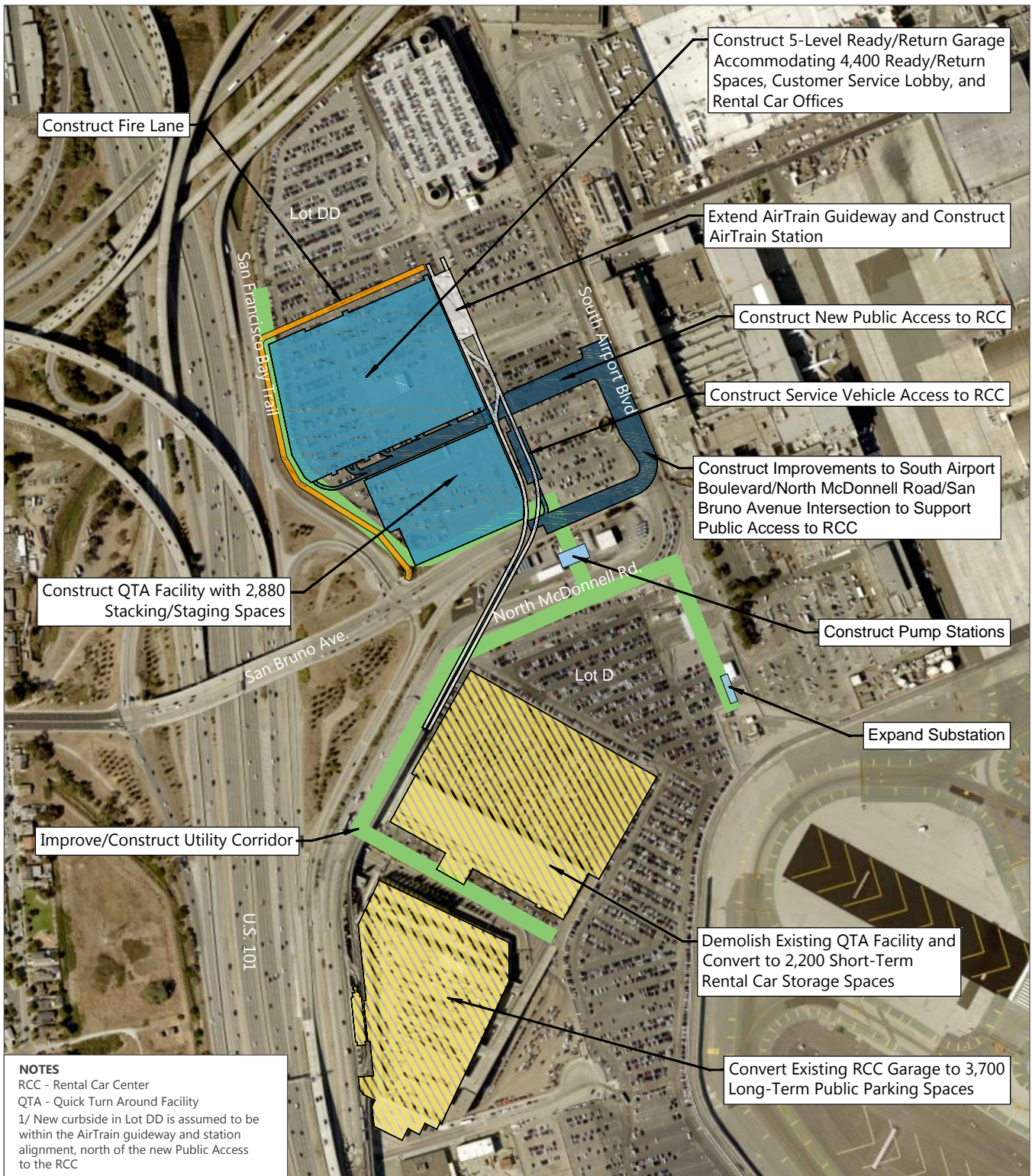
The construction would not require acquisition of property. The implementation of the Proposed Action would not result in an increase in the number of passengers or aircraft operations beyond those currently forecast for the Airport.

1.4 Purpose and Need for the Proposed Action

1.4.1 SPONSOR'S PURPOSE AND NEED

The existing RCC is operationally inefficient and inadequately sized to meet future demand for rental cars. As noted in Section 1.2.3.2, the numbers of ready/return spaces and QTA facility stacking/staging spaces are insufficient to meet long-term needs. The existing RCC also does not provide the desired level of service to customers consistent with the Airport terminal facilities or with newer, more modern consolidated rental car facilities at airports around the country. In providing facilities to meet demand, convenient access between the RCC facilities and the passenger terminals as well as to the regional roadway network must be maintained. Patrons currently access the facility via the AirTrain and have convenient access to the roadway network. As noted in Section 1.2.3.2, there is a deficiency in on-Airport rental car storage resulting in operational inefficiencies and potential inconveniences to rental car patrons. As noted in Section 1.2.3.3, there is an existing and long-term need to improve management of terminal roadway and curbside congestion by removing vehicular activity from the terminal curbsides. Finally, as noted in Section 1.2.3.4, the City is seeking opportunities to accommodate increasing demand for long-term parking.

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SOURCES: Bureau of Land Management, Esri, HERE, DeLorme, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA, June 2015 (aerial); San Francisco International Airport, July 2016 (project description).
 PREPARED BY: Ricondo & Associates, Inc., May 2017.

EXHIBIT 1-4



Proposed Action

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The purpose of the Proposed Action is to provide:

- Adequate RCC facilities to meet future demand for rental car service in efficient and modern facilities with convenient access to and from the Airport passenger terminals and safe and efficient vehicular access to the regional roadway network through efficient entrances, exits, roadways, and intersections.
- Additional space for on-Airport rental car storage, reducing trips on local roadways associated with the storage and shuttling of rental cars to and from offsite locations.
- Facilities to reallocate a portion of the terminal roadway trips from the terminal roadways and curbsides to a remote location that provides passenger access to the Airport terminals to reduce curbside congestion.
- Facilities to provide additional on-Airport long-term parking.

1.4.2 FAA'S PURPOSE AND NEED

The FAA's statutory mission is to ensure the safe and efficient use of navigable airspace in the United States. The FAA must ensure that the Proposed Action does not derogate the safety of aircraft and Airport operations at SFO. Moreover, it is the policy of the FAA under 49 U.S.C. Sections 47101(a)(5), (a)(6), and (a)(7) to encourage development of intermodal connections on airport property between aeronautical and other transportation modes and systems to serve air transportation passengers and cargo efficiently and effectively and promote economic development; that airport development projects provide for the protection and enhancement of natural resources and the quality of the environment of the United States; and that airport construction and improvement projects that increase the capacity of facilities to accommodate passenger and cargo traffic be undertaken to the maximum feasible extent such that safety and efficiency increase and delays decrease.

1.5 Requested Federal Action

The requested federal actions include the following:

- Unconditional approval of the portion of the Airport Layout Plan (ALP) for the Airport that depicts the proposed improvements pursuant to 49 U.S.C. §§ 40103(b) and 47107(a)(16).
- Determination of the effects of the proposed projects upon the safe and efficient utilization of navigable airspace pursuant to 14 CFR Parts 77 and 157. The FAA performed an airspace review (Airspace Case No. 2016-AWP-1066-NRA) of the proposed development at SFO.
- Determination under 49 U.S.C. § 44502(b) and 49 U.S.C. §§ 47101 *et seq.* that the Airport development is reasonably necessary for use in air commerce or in the interests of national defense.
- Approval of a Construction Safety and Phasing Plan to maintain aviation and airfield safety during construction pursuant to FAA Advisory Circular (AC) 150/5370-2F, *Operational Safety on Airports During Construction* (14 CFR Part 139 [49 U.S.C. § 44706]).

- Determinations under 49 U.S.C. §§ 47106 and 47107 relating to eligibility of the Proposed Action for federal funding assistance under the Airport Improvement Program (AIP) and under 49 U.S.C. § 40117, as implemented by 14 CFR Part 158.25, to impose and use passenger facility charges (PFCs) for the Proposed Action.
- Determination of eligibility for federal assistance for the near-term development projects under the federal grant-in-aid program authorized by the Airport and Airway Improvement Act of 1982, as amended (49 U.S.C. § 47101 *et seq.*).
- FAA determination of the Proposed Action’s effects on the safe and efficient use of navigable airspace.

1.6 Timeframe of Proposed Action

The Sponsor proposes to construct the Proposed Action starting in the third quarter of 2017 and completing in 2024, with the first full year of operation of the new RCC served by an extended AirTrain and new station in 2025. The timeframes to construct the major components of the Proposed Action are shown in **Table 1-3**.

Table 1-3: Construction Schedule

PROPOSED PROJECT COMPONENT	2017	2018	2019	2020	2021	2022	2023	2024
AirTrain Extension								
New RCC Facilities								
Roadway Improvements								
Utility Improvements								
Existing RCC Conversion								

NOTE: RCC—Rental Car Center (includes the Ready/Return Garage and QTA facility)

SOURCES: City and County of San Francisco, San Francisco International Airport, *FY 2016/2017 San Francisco International Airport Capital Improvement Plan*, December 30, 2016; City and County of San Francisco, *San Francisco International Draft Final Airport Development Plan*, September 2016.

PREPARED BY: Ricondo & Associates, Inc., December 2016.

1.7 Document Organization

The format and content of this EA conforms to the requirements of Section § 102(2)(c) of NEPA and § 509(b)(5) of the Airport and Airway Improvement Act of 1982, as amended. The content of each section of this EA is summarized as follows:

- Chapter 2, Alternatives—provides the alternatives analysis.
- Chapter 3, Affected Environment—describes the existing environmental conditions within the proposed project area.

- Chapter 4, Environmental Consequences—describes the potential environmental effects, including cumulative impacts of the Proposed Action and No Action Alternative, along with any required mitigation measures.
- Chapter 5, Acronyms and References—lists acronyms used in the EA and references considered in the analysis of the proposed project.
- Chapter 6, List of Preparers—provides the names and qualifications of those who prepared, contributed to, and reviewed this EA.
- Chapter 7, Coordination and Public Involvement—provides a summary of coordination activities conducted to support development of this EA.

The appendices contain various reference materials, including technical information and records of coordination activities.

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2. Alternatives

2.1 Introduction

This chapter summarizes the process employed to identify, compare, and screen a reasonable range of alternatives to the Proposed Action in order to determine whether alternatives exist that would reasonably satisfy the purpose of and need for the Proposed Action. The alternatives presented in this EA include those developed as part of the ADP, as well as alternatives identified during development of the EA.

FAA Orders 1050.1F and 5050.4B set forth the policies and procedures to be followed in assessing the environmental impacts of aviation-related projects in compliance with NEPA. These Orders require a thorough and objective assessment of the Proposed Action, the No Action Alternative, and all reasonable alternatives that would achieve the stated purpose of and need for the Proposed Action. The alternatives analysis presented in this chapter is consistent with the requirements of FAA Orders 1050.1F and 5050.4B. Lists of applicable federal laws and regulations considered during the analysis are provided at the end of this chapter.

CEQ regulations (Title 40 CFR 1502.14) for implementing NEPA require that federal agencies perform the following tasks:

- rigorously explore and objectively evaluate all reasonable alternatives and, for alternatives that were eliminated from detailed study, briefly discuss the reasons for their elimination;
- devote substantial treatment to each alternative considered in detail, including the Proposed Action, so that reviewers may evaluate the alternatives' comparative merits;
- include reasonable alternatives not within the jurisdiction of the lead agency; and,
- include an assessment of the no action alternative.

The Proposed Action is needed because the existing RCC is operationally inefficient and inadequately sized to meet future demand for rental cars, existing on-Airport rental car storage is deficient, and the terminal roadway and curbsides are congested. The purpose of the Proposed Action is to provide RCC facilities that are capable of meeting future demand for rental car facilities in efficient and modern facilities with convenient access to and from the Airport passenger terminals and efficient vehicular access to the regional roadway network; additional space for on-Airport rental car storage; adding supplemental curbside at an AirTrain

station to improve congestion management along the terminal roadways and curbsides; and opportunities for additional on-Airport long-term parking.

2.2 Alternatives Identified

This section provides a brief description of the alternatives identified as potentially able to accomplish the Purpose and Need described in Section 1.4. Two alternatives (Alternatives 1 and 2) define options for expanding existing rental car facilities and constructing new facilities in the vicinity of the existing facilities in Lots D and DD, an area identified for redevelopment to be served by the AirTrain in the ADP. These two alternatives were identified as representative of the alternatives evaluated in the ADP.¹ Given the adjacency of Lots D and DD to the airfield, the identification of alternatives in this EA has been limited to those that would not include construction of new facilities in a Runway Protection Zone (RPZ)² and would not include construction of a facility of such height that it would be an obstruction to air navigation.³ Two additional alternatives (Alternatives 3 and 4) define options to locate rental car facilities in other locations on and off Airport property. Lastly, the No Action Alternative is included as Alternative 5. **Exhibit 2-1** presents illustrations of Alternatives 1 and 2 and the No Action Alternative. The alternatives are described in this section.

Alternative 1—Expand Existing RCC Facilities in Lot D and Extend AirTrain to Lot DD

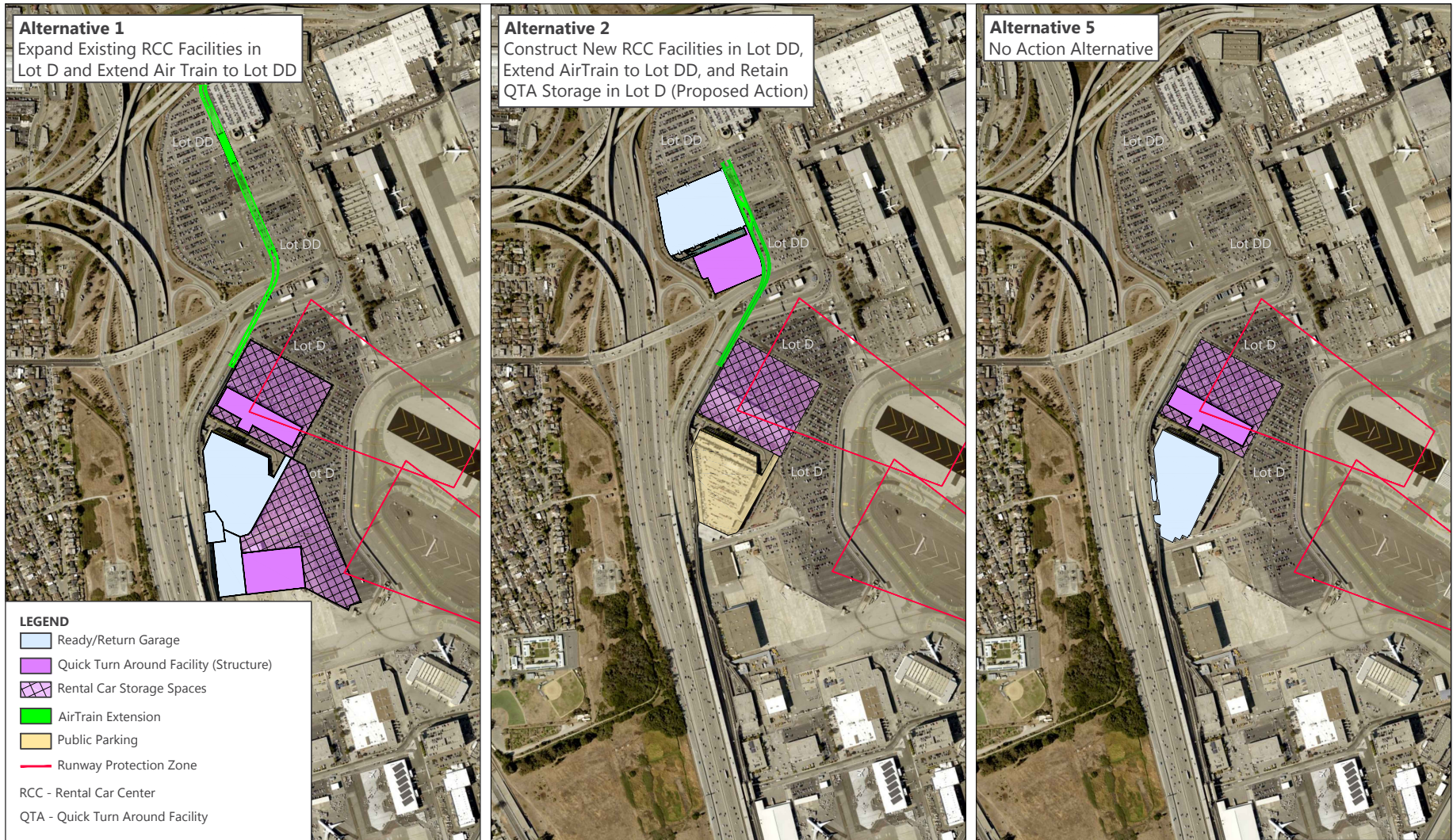
Alternative 1 includes expansion of the existing Ready/Return Garage to the south, conversion of Level 5 of the existing Ready/Return Garage from a staging area to ready/return spaces shaded by service canopies, reallocation of the rental car companies between the Levels 1 and 4 Customer Service Lobbies, and expansion of the QTA facility with construction of a second structure adjacent to and south of the new Ready/Return Garage expansion in Lot D. The alternative provides 4,500 ready/return spaces and 3,300 stacking/staging spaces, although space for additional on-Airport vehicle storage was not identified as part of this alternative.

The AirTrain would be extended to Lot DD and a new station would be constructed in Lot DD to provide AirTrain access to customers parking in the long-term parking garage in Lot DD and a remote curbside, which would present a new entry point to the terminals. Rental car patrons would continue to use the Lot D AirTrain station. Existing access routes between the regional roadway network and the expanded RCC would be maintained. Bus trips from the Lot DD long-term parking garage to the passenger terminals would be eliminated.

¹ Upon cursory review, the environmental impacts of the two alternatives presented in the EA are representative of those associated with the five alternatives evaluated in the ADP that considered various RCC facility configurations in Lots D and DD.

² An RPZ is a trapezoidal area defined by the FAA off the runway end that is defined to enhance the safety and protection of people and property on the ground.

³ The height of a structure in an area near an airfield may be limited to prevent it from being an obstruction to air navigation.



SOURCES: Bureau of Land Management, Esri, HERE, DeLorme, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA, June 2015 (aerial); San Francisco International Airport, *Airport Development Plan*, 2016 (alternatives).
PREPARED BY: Ricondo & Associates, Inc., May 2017.

EXHIBIT 2-1

Alternatives Within or Adjacent to Existing Rental Car Facilities



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Construction of new facilities would comply with FAA design standards; however, a portion of the existing QTA facility that lies within the Runway 10L-28R RPZ would remain. This alternative is consistent with the planned land use of ground access and parking for Lots D and DD.

Alternative 2—Construct New RCC Facilities in Lot DD, Extend AirTrain to Lot DD, and Retain QTA Storage in Lot D (Proposed Action)

Alternative 2 includes construction of a new five-level Ready/Return Garage, with a Customer Service Lobby provided on a portion of the sixth floor (positioned to avoid being an airspace obstruction), and a three-level QTA facility in Lot DD. The alternative provides 4,400 ready/return spaces and 2,880 stacking/storage spaces.

The AirTrain would be extended to Lot DD with a new station to serve the new RCC and AirTrain access to customers parking in the long-term parking garage in Lot DD as well as a remote curbside, which would present a new entry point to the terminals. Existing access routes between the regional roadway network and the point at which rental car patrons access the Airport roadway system would be maintained; however, intersection improvements would be made to accommodate changes in turning movements for the on-Airport segment of the trip. Bus trips from the Lot DD long-term parking garage to the passenger terminals would be eliminated. In addition, the relocation of rental car and Kiss & Fly activities to Lot DD would remove off-Airport rental car busses and private vehicles from the curbside at the existing RCC and therefore allow Lot D shuttle busses to access that curbside. Bus trips from Lot D to the terminal curbsides would be eliminated.

The existing Ready/Return Garage would be converted to a long-term public parking garage. The existing QTA facility would be demolished, and the site would be converted to a surface-level lot that provides 2,200 spaces for the short-term storage of rental cars. An additional area in the southeast portion of Lot D would provide an additional 2,340 spaces for on-site rental car storage.

This alternative is consistent with the planned land use of ground access and parking for Lots D and DD.

Alternative 3—Construct New RCC Facilities in New Airport Location

Consideration of the construction of new RCC facilities in another location on Airport property is the subject of Alternative 3. It is assumed that this alternative would be designed to support the facility requirements defined for ready/return spaces, stacking spaces, and general need for on-Airport storage spaces.

No undeveloped parcels exist along the AirTrain alignment (as demonstrated on the ALP provided in **Appendix C**), and no other area on Airport, aside from Lots D and DD and the terminal, has been designated to support ground access and parking land uses. Assuming a parcel of land on Airport property but not located along the AirTrain alignment was identified, this alternative would not include a new AirTrain station to serve the new RCC facilities and would require shuttle buses to transport passengers directly to the terminals or to the Lot D AirTrain for transport to the terminals. Because a specific site has not been identified on Airport property, evaluation of whether this alternative would provide safe and convenient access to the

regional roadway system is unknown. Furthermore, without a new AirTrain station serving the new RCC facilities, this alternative would not provide a new remote curbside and entry point to the terminals.

Under this alternative, the existing Ready/Return Garage would be converted to a long-term parking garage to meet the need for additional parking supply, and the existing QTA facility would be demolished.

Alternative 4—New RCC Facilities Located Off-Airport

Consideration of the construction of new RCC facilities at an off-Airport location is the subject of Alternative 4. It is assumed that this alternative would be designed to support the facility requirements defined for ready/return spaces and stacking spaces; however, under this alternative, it is assumed that nearby storage spaces may also be provided to minimize the transporting of rentals cars between the off-Airport site and remote rental car company sites.

Given the alternative's off-Airport location, the alternative does not include a new AirTrain station to serve the new RCC facilities. This alternative would involve the use of shuttle buses to transport passengers between the off-Airport rental car facility and the passenger terminals or an AirTrain station and would not provide a new remote curbside and entry point to the terminals. Because a specific site has not been identified, evaluation of whether this alternative would provide safe and convenient access to the regional roadway system is unknown.

Under this alternative, the existing Ready/Return Garage could be converted to a long-term parking garage to meet the need for additional parking supply, and the existing QTA facility could be demolished.

Alternative 5—No Action Alternative

Under this alternative, rental car activity would continue to be accommodated in existing RCC facilities in Lot D and the AirTrain would not be extended to provide a new curbside and entry point to the terminals or AirTrain access to passengers using the Lot DD parking garage. The No Action Alternative does not meet the Purpose and Need, but it is retained for consideration pursuant to 40 CFR 1502.14(d), which defines the types of alternatives to be considered in a NEPA evaluation.

2.3 Description of Alternatives Screening

A series of criteria were defined to assess the ability of each alternative to meet the stated Purpose and Need for the Proposed Action. These evaluation criteria, along with the pass/fail definitions used to evaluate the alternatives against the evaluation criteria, are listed in **Table 2-1**. An alternative must pass all screening criteria to be carried forward for detailed evaluation of environmental consequences in the EA.

Table 2-1: Alternatives Screening Criteria

EVALUATION TOPIC	EVALUATION CRITERIA	PASS	FAIL
Rental Car Facility Space Requirements	Would the alternative provide the required ready/return spaces and stacking spaces defined to meet the rental car demand associated with the forecast of 35.5 million enplaned passengers?	Alternative provides at least 3,700 ready/return spaces and 2,600 stacking spaces.	Alternative does not provide at least 3,700 ready/return spaces and 2,600 stacking spaces.
	Would the alternative increase the number of on-Airport rental car storage spaces?	Alternative provides more than 1,820 on-Airport rental car storage spaces.	Alternative provides equal to or less than 1,820 on-Airport rental car storage spaces.
Rental Car Facility Level of Service	Would the alternative provide the desired level of service to customers consistent with the Airport terminals and with newer, more modern consolidated rental car facilities at airports around the country?	Alternative involves construction of a new facility or substantial renovation of the existing facility, which would enable the provision of the desired level of service.	Alternative does not include substantial changes to passengers' RCC facility experience that would provide the desired level of service.
Rental Car Facility Access	Would the alternative maintain a convenient connection between the Ready/Return Garage and the terminals similar to that provided by the AirTrain system?	Alternative maintains convenient access between the RCC and the passenger terminal similar to that provided by the AirTrain system.	Alternative introduces access to the passenger terminals not as convenient as the existing AirTrain system.
	Would the alternative provide safe and efficient vehicular access to the regional roadway network?	Alternative provides convenient access to regional highway network using existing roadways.	Alternative requires construction of new roadways to access regional highway network.
Terminal Curbside Congestion Management	Would the alternative aid the management of congestion along the terminal roadways and curbsides?	Alternative removes vehicle trips from the terminal roadways and curbsides.	Alternative does not remove or potentially adds vehicle trips to the terminal roadways and curbsides.

SOURCE: Ricondo & Associates, Inc., May 2017.

PREPARED BY: Ricondo & Associates, Inc., May 2017.

2.4 Alternatives Screening Results

Alternatives remaining after screening were carried forward for evaluation in the Environmental Consequences chapter of this EA. The exception is the No Action Alternative, which is retained for consideration pursuant to 40 CFR 1502.14(d).

Exhibit 2-2 presents a summary comparison of the alternatives considered and the screening process results. A discussion of the alternatives eliminated from further consideration, as well as a discussion of the alternatives carried forward for evaluation in the Environmental Consequences chapter is also provided.

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Exhibit 2-2: Alternatives Comparison Summary

EVALUATION TOPIC	EVALUATION CRITERIA	PASS	FAIL	ALTERNATIVE 1	ALTERNATIVE 2 (PROPOSED ACTION)	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5
			<i>Alternative Description:</i>	<i>Expand Existing RCC Facilities in Lot D and extend AirTrain to Lot DD</i>	<i>Construct New RCC Facilities in Lot DD, Extend AirTrain to Lot DD, and Retain QTA Storage in Lot D</i>	<i>Construct New RCC Facilities at a New Airport Location</i>	<i>Construct New Off-Airport RCC Facilities</i>	<i>No Action</i>
Rental Car Facility Space Requirements	Would the alternative provide the required ready/return spaces and stacking spaces defined to meet the rental car demand associated with the forecast of 35.5 million enplaned passengers?	Alternative provides at least 3,700 ready/return spaces and 2,600 stacking spaces.	Alternative does not provide at least 3,700 ready/return spaces and 2,600 stacking spaces.	PASS (provides 4,500 ready/return spaces and 3,300 stacking spaces)	PASS (provides 4,400 ready/return spaces and 2,880 stacking spaces)	PASS (assumes space would be available to support facility design that meets facility requirements)	PASS (assumes space would be available to support facility design that meets facility requirements)	FAIL (does not provide required ready/return and stacking spaces)
	Would the alternative increase the number of on-Airport rental car storage spaces?	Alternative provides more than 1,820 on-Airport rental car storage spaces.	Alternative provides equal to or less than 1,820 on-Airport rental car storage spaces.	FAIL (no additional on-Airport storage spaces provided)	PASS (provides 4,540 on-Airport storage spaces)	PASS (assumes space would be available to support facility design that meets facility requirements)	NOT APPLICABLE (assumes no need for on-Airport storage spaces as storage spaces would be provided at off-Airport site)	FAIL (no additional on-Airport storage spaces provided)
Rental Car Facility Level of Service	Would the alternative provide the desired level of service to customers consistent with the Airport terminals and with newer, more modern consolidated rental car facilities at airports around the country?	Alternative involves construction of a new facility or substantial renovation of the existing facility, which would enable the provision of the desired level of service.	Alternative does not include substantial changes to passengers' RCC facility experience that would provide the desired level of service.	FAIL (does not include redesign that would change the passenger experience of the RCC facilities to meet the desired level of service)	PASS (new facility would be designed to achieve desired level of service)	PASS (assumes new facility would be designed to achieve desired level of service)	PASS (assumes new facility would be designed to achieve desired level of service)	FAIL (existing facility does not provide desired level of service)
Rental Car Facility Access	Would the alternative maintain a convenient connection between the Ready/Return Garage and the terminals similar to that provided by the AirTrain system?	Alternative maintains convenient access between the RCC and the passenger terminal similar to that provided by the AirTrain system.	Alternative introduces access to the passenger terminals not as convenient as the existing AirTrain system.	PASS (connection provided via existing Lot D AirTrain station)	PASS (connection provided via new AirTrain station in Lot DD)	FAIL (no location along the existing AirTrain alignment would support a new RCC with new AirTrain station; therefore, a shuttle to a terminal or remote curbside would be required)	FAIL (the AirTrain system could not be extended off Airport to an off-Airport RCC; therefore, a shuttle to a terminal or remote curbside would be required)	PASS (connection via existing Lot D AirTrain station)
	Would the alternative provide safe and efficient vehicular access to the regional roadway network?	Alternative provides convenient access to regional highway network using existing roadways.	Alternative requires construction of new roadways to access regional highway network.	PASS (access via existing publicly accessible roadway network)	PASS (access via existing publicly accessible roadway network with improvements to accommodate turning movement changes)	UNKNOWN^{1/}	UNKNOWN^{1/}	PASS (maintains existing vehicular access routes)
Terminal Curbside Congestion Management	Would the alternative aid the management of congestion along the terminal roadways and curbsides?	Alternative supports the reduction of vehicle trips from the terminal roadways and curbsides.	Alternative does not remove or potentially adds vehicle trips to the terminal roadways and curbsides.	PASS (provides remote curbside and new terminal access point in Lot DD)	PASS (provides remote curbside and new terminal access point in Lot DD)	FAIL (does not reduce terminal roadway vehicle trips and may introduce new shuttle trips to the terminal curbsides)	FAIL (does not reduce terminal roadway vehicle trips and may introduce new shuttle trips to the terminal curbsides)	FAIL (does not reduce vehicle trips along the terminal roadways and curbsides)
Analyze in Environmental Consequences? (yes/no)				NO	YES	NO	NO	YES^{1/}

NOTE:

^{1/} Although the No Action Alternative does not meet the Purpose and Need screening criteria, the alternative was retained for consideration of environmental consequences pursuant to 40 CFR 1502.14(d).

SOURCE: Ricondo & Associates, Inc., May 2017.

PREPARED BY: Ricondo & Associates, Inc., May 2017.

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2.4.1 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION

The following alternatives failed to pass the criteria developed to screen for meeting the Purpose and Need and were eliminated from further consideration in this EA.

- **Alternative 1: Expand Existing RCC Facilities in Lot D and Extend AirTrain to Lot DD**—This alternative does not meet the stated Purpose and Need for the Proposed Action and was eliminated. Although the alternative provides the required area to increase the number of ready/return spaces and stacking/staging spaces and expand the QTA facility, it would not provide the desired level of service to passengers with facilities that meet the standards in the Airport terminal, nor the standards at other RCC facilities across the country. Additionally, expanding the RCC facilities in Lot D does not allow for the provision of area to also increase the number of on-Airport rental car storage spaces. Finally, the alternative does not address the need to improve congestion management by reducing vehicle trips along the terminal roadway and curbside.
- **Alternative 3: Construct New RCC Facilities at a New Airport Location**—This alternative does not meet the stated Purpose and Need for the Proposed Action and was thus eliminated. Review of the ALP (Appendix C) demonstrates that no developable parcels exist along the AirTrain alignment nor have other areas been designated to support ground access and parking needs on Airport. However, for the purposes of evaluating this alternative, it was assumed that sufficient area to meet the RCC facility requirements could be identified and that design of the new facility would achieve the desired level of service for the RCC facilities. Without the ability to identify a specific parcel on Airport for the RCC outside of the Lots D and DD area, the alternative does not achieve the facility access needs as it is assumed that a shuttle bus operation to transport passengers to and from the passenger terminals or an existing AirTrain station would be required, which could exacerbate congestion management strategies for the terminal curbside. Furthermore, the inability to designate an Airport parcel for this facility does not allow evaluation of whether new publicly accessible roadways are needed to provide a safe and efficient connection to the regional roadway network.
- **Alternative 4: Construct New Off-Airport RCC Facilities**—This alternative does not meet the stated Purpose and Need for the Proposed Action and was eliminated. For purposes of evaluating this alternative, it was assumed that sufficient area to meet the RCC facility requirements would be identified and that design of the new facility would achieve the desired level of service for the RCC facilities. The alternative, however, would not achieve the facility access needs as it is assumed that a shuttle bus operation to transport passengers to and from the passenger terminals or an existing AirTrain station would be required, which would not maintain convenient access between the facility and passenger terminals and may exacerbate congestion management strategies for and thus reduce customer level of service at the terminal curbside. Furthermore, without identifying a specific parcel for this facility, evaluation of whether new publicly accessible roadways are needed to provide a safe and efficient connection to the regional roadway network cannot be evaluated.

2.4.2 ALTERNATIVES CARRIED FORWARD FOR FUTURE CONSIDERATION

Two alternatives are carried forward for evaluation of environmental consequences:

- **Alternative 2: Construct New RCC Facilities in Lot DD, Extend AirTrain to Lot DD, and Retain QTA storage in Lot D (Proposed Action)**—This alternative meets the screening criteria defined to evaluate achievement of the stated Purpose and Need for the Proposed Action and was retained for evaluation of environmental consequences.
- **Alternative 5: No Action Alternative**—The No Action Alternative does not meet the screening criteria defined to evaluate achievement of the stated Purpose and Need. However, the No Action Alternative is retained for further consideration pursuant to 40 CFR 1502.14(d).

2.5 Airport Sponsor's Preferred Alternative

The Sponsor's preferred alternative to meet the Purpose and Need is Alternative 2—the construction of new RCC facilities in Lot DD, extension of the AirTrain to Lot DD, and the provision of short-term rental cars storage spaces in Lot D, as defined in Section 1.3.

2.6 Summary Comparison of Alternatives

Table 2-2 presents a summary comparison of the expected environmental effects between the No Action Alternative and the Proposed Action. These effects are further described in Chapter 4, Environmental Consequences.

2.7 Permits Required

As required under Chapter 6-1, paragraph a(4) of FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, a preliminary list of permits required for implementation of the Proposed Action is provided in **Table 2-3**.

2.8 Federal Laws and Regulations Considered

In accordance with FAA Order 1050.1F, the relevant federal laws and statutes, executive orders, and other federal regulations considered during preparation of this EA are listed in **Table 2-4**, **Table 2-5**, and **Table 2-6**, respectively.

Table 2-2 (1 of 5): Summary Comparison of Alternatives

CATEGORY	NO ACTION ALTERNATIVE ^{1/}	PROPOSED ACTION
Air Quality	Emissions generated by the operation of ground access vehicles (e.g., rental cars, long-term parking, and shuttle buses) in the Proposed Project Area would increase commensurate with the forecast passenger growth and increased propensity to rent cars at the Airport.	Construction and operation of the Proposed Action would not cause net pollutant concentrations (i.e., the difference in emissions between the Proposed Action and the No Action Alternative) to exceed <i>de minimis</i> thresholds set for criteria pollutants, which are those pollutants for which National Ambient Air Quality Standards (NAAQS) have been established by the U.S. Environmental Protection Agency. Emissions generated by the operation of ground access vehicles (e.g., rental cars, long-term parking, and shuttle buses) in the Proposed Project Area would increase commensurate with the forecast passenger growth and increased propensity to rent cars at the Airport, as under the No Action Alternative. Therefore, the Proposed Action would conform to the State Implementation Plans (SIPs) that have been prepared for the San Francisco Bay Area.
Biological Resources	No federal or state listed species or critical habitat for such species are present in the Proposed Project Area.	The entire Proposed Project Area is located within the built (paved) portion of the Airport where no natural habitat communities exist. No federal or state listed species or critical habitats for such species are present in the Proposed Project Area. Therefore, the Proposed Action would have no effect on federal or state listed species or critical habitat.
Climate	Emissions generated by the operation of ground access vehicles (e.g., rental cars, long-term parking, and shuttle buses) in the Proposed Project Area would increase commensurate with the forecast passenger growth and propensity to rent cars at the Airport.	The Proposed Action would not have a significant effect on climate as compared with the No Action Alternative. Emissions generated by the operation of ground access vehicles (e.g., rental cars, long-term parking, and shuttle buses) in the Proposed Project Area would increase commensurate with the forecast passenger growth and increased propensity to rent cars at the Airport, as under the No Action Alternative. GHG emissions would temporarily increase during construction of the Proposed Action.
Coastal Resources	The No Action Alternative is consistent with the relevant state coastal zone management plan (i.e., the Bay Plan), and public access to the Bay Trail would continue as currently permitted by the Bay Conservation and Development Commission (BCDC).	The Proposed Action is consistent with the relevant state coastal zone management plan (i.e., the Bay Plan), and public access to the Bay Trail and use of the east construction staging area would continue to be consistent with the requirements of the BCDC permit.
Department of Transportation Act, Section 4(f) [Section 4(f)]	No Section 4(f) resources would be affected by the No Action Alternative.	One Section 4(f) resource, the Bay Trail, is located within the Proposed Project Area. Temporary construction activities and use of the Bay Trail to support a fire lane and underground utility corridor under the Proposed Action are exempt from Section 4(f) requirements per 23 CFR 774.13(f)(3). ^{2/}

Table 2-2 (2 of 5): Summary Comparison of Alternatives

CATEGORY	NO ACTION ALTERNATIVE ^{1/}	PROPOSED ACTION
Hazardous Materials, Solid Waste, and Pollution Prevention	<p>Operation of the Airport under the No Action Alternative would involve a variety of hazardous substances typically associated with the operation of a rental car facility, including management of tanks that store and dispense fuel in the QTA facilities. Management of the fuel tanks would remain in compliance with the Resource Conservation and Recovery Act (RCRA), as managed by the San Mateo County Environmental Health Division.</p> <p>The amount of solid waste generated in the Proposed Project Area may increase over time proportionately to the increase in passenger numbers served at the Airport and the RCC. Waste from the Airport is typically sent to the Ox Mountain Landfill or Keller Canyon Landfill in Contra Costa County. The Bay Area region is projected to have over 200 million tons of remaining landfill capacity (including Ox Mountain and Keller Canyon Landfills), which is projected to support the region for over 40 years at existing waste-generation rates, so sufficient regional disposal capacity exists. Solid waste would be recycled to the extent practical and remaining debris would be disposed of in accordance with all applicable federal, state, and local laws and regulations.</p> <p>Stormwater would be managed in accordance with the Airport’s National Pollution Discharge Elimination System (NPDES) permit to prevent pollutants in stormwater discharge. The fuel storage tanks in the QTA facility would be subject to pollution prevention measures documented in the Airport’s Spill Prevention, Control and Countermeasures (SPCC) Plan.</p>	<p>During construction of the Proposed Action the potential to encounter previously unknown contaminated soil exists. Construction of the Proposed Action would also involve the use of hazardous substances that are typical of the construction industry. Contaminated soil and hazardous materials would be handled in accordance with federal, state, and local regulations, and disposal facilities are available. Operation under the Proposed Action would involve the same types and quantities of hazardous substances typically associated with the operation of a rental car facility as under the No Action Alternative. The fuel dispensing operation within the existing QTA facility would be closed and abandoned in place, and replaced in-kind within the footprint of the proposed QTA facility, in compliance with all federal, state, and local hazardous substance laws and regulations. Underground storage tank closure, abandonment, and replacement would be subject to permitting and inspections by the San Mateo County Environmental Health Division. The Proposed Action would not cause a significant impact related to hazardous materials in comparison with the No Action Alternative.</p> <p>Solid waste generated during construction would be recycled to the extent practical, and the Bay Area region is projected to have over 200 million tons of remaining landfill capacity, which is projected to support the region for over 40 years at existing waste-generation rates. Operation of the Proposed Action would not produce an appreciable different quantity or type of solid or hazardous waste as compared with the No Action Alternative. Construction and operation of the Proposed Action would not produce a quantity or type of solid or hazardous waste that would exceed local capacity.</p> <p>Construction and operation of the Proposed Action would be managed in accordance with the Airport’s NPDES permits to prevent pollutants in stormwater discharge. The Airport’s SPCC Plan would be updated to document pollution prevention measures associated with the relocated fuel dispensing operation in the proposed QTA facility. Therefore, the Proposed Action would not result in a hazardous materials, solid waste, or pollution prevention impact.</p>
Historical, Architectural, Archaeological, and Cultural Resources	<p>No cultural resources are present in the Areas of Potential Effects (APE). The No Action Alternative would not impact cultural resources.</p>	<p>No cultural resources are present in the APE. In the event that a previously unknown archaeological or cultural resource is encountered during construction activities, work in the area will cease. The FAA will be notified and consultations will occur in accordance with 36 Code of Federal Regulations Part 800.13. The Proposed Action would result in no historical, architectural, archaeological, and cultural resource impacts.</p>

Table 2-2 (3 of 5): Summary Comparison of Alternatives

CATEGORY	NO ACTION ALTERNATIVE ^{1/}	PROPOSED ACTION
Land Use	Land uses would not change from current designations, and the No Action would be consistent with land use plans of adjacent communities and the Airport.	Land uses would not change from current designations, and the Proposed Action would be consistent with land use plans of adjacent communities and the Airport. One element of the Proposed Action, a portion of one of the pile-supported foundations for the AirTrain, would be within the State ROW on the periphery of San Bruno Avenue and would require an encroachment permit. The City has initiated the permitting process with Caltrans for the ROW encroachment and coordination is ongoing. The encroachment would not require a change in use of the land or result in a significant land use impact.
Natural Resources and Energy Supply	The No Action Alternative would involve the use of water and energy (vehicles fuel and building energy), which would increase in proportion to the growth in rental car transactions and long-term parking demand, but would not exceed available supply.	A temporary increase in demand for commonly available consumable natural resources and energy would occur during construction of the Proposed Action; however, these increases would not be significant. The Proposed Action involves the addition of two new structures and an extension to the AirTrain, as well as a new substation and utility corridor to connect these facilities to the Airport’s electrical utility distribution system. Although demand for electricity would increase under the Proposed Action, the increase is expected to be minor in comparison with the Airport’s total demand for electricity, and it would not appreciably increase energy use compared with the No Action Alternative. Vehicle fuel and water use under the Proposed Action would be comparable to the No Action Alternative.
Socioeconomics, Environmental Justice, and Children’s Environmental Health and Safety Risks	The No Action Alternative would not have a disproportionately high and adverse impact to a low-income or minority population or a disproportionate health or safety risk to children. Operation of the No Action Alternative would not disrupt or divide established communities, cause relocation of residences or businesses, or affect the community tax base. Economic activities associated with rental car and long-term parking transaction fees would continue, and revenues from these activities would be expected increase commensurate with the increase in O&D passenger activity and related demand for long-term parking and rental cars. Vehicle trips under the No Action Alternative would increase and would therefore not support opportunities to alleviate level of service concerns on the terminal roadways and curbsides.	The Proposed Action would not result in a significant impact in any environmental impact category that would have the potential to lead to a disproportionately high and adverse impact to an environmental justice population or a disproportionate health or safety risk to children. A low-income or minority population is not located in the Proposed Project Area that could otherwise be affected. The Proposed Action would not disrupt or divide established communities, cause relocation of residences or businesses, or affect the community tax base. Economic activities associated with rental car and long-term parking transaction fees would continue, and revenues from these activities would be expected increase commensurate with the increase in O&D passenger activity and related demand for long-term parking and rental cars, and the Proposed Action would result in a temporary increase in construction-related jobs. The Proposed Action provides the opportunity to reduce trips on the terminal roadways and curbsides, in support of the City’s congestion management strategies to improve the level of service on these roadway segments. Operation of the Proposed Action would not disrupt local traffic patterns or substantially reduce the levels of service of roads supporting trips related to the Proposed Action.

Table 2-2 (4 of 5): Summary Comparison of Alternatives

CATEGORY	NO ACTION ALTERNATIVE ^{1/}	PROPOSED ACTION
Visual Effects	<p>Light emissions under the No Action Alternative would not create an annoyance or interfere with activities given the high ambient light environment of the Proposed Project Area, the distance of approximately 1,000 feet to the nearest residences, and the location of U.S. 101 between the light sources in the Proposed Project Area and these residences.</p> <p>The No Action Alternative would not affect or contrast the visual character of the area, defined by transportation-related infrastructure, and would maintain partially blocked views of San Bruno Mountain.</p>	<p>Light emissions during construction and operation of the Proposed Action would not create an annoyance or interfere with normal activities given the high ambient light environment of the Proposed Project Area, the distance of approximately 1,000 feet to the nearest residences, and the location of U.S. 101 between the light sources in the Proposed Project Area and these residences.</p> <p>The Proposed Action would not affect the nature of or contrast with the visual character of the area, which would be defined by transportation-related structures. The new RCC facilities would further obstruct the partial views of San Bruno Mountain but would not be significant compared with the partial views under the No Action Alternative. Therefore, the Proposed Action would not create a visual impact in comparison with the No Action Alternative.</p>
Water Resources	<p>No wetlands or Wild and Scenic Rivers exist within the Proposed Project Area.</p> <p>Under the No Action Alternative, operation of ground access activities would occur within the 100-year floodplain and would continue the existing floodplain encroachment. The City has flood control measures in place; has plans to improve flood control measures; and complies with federal, state, and local regulations and permits to properly store and contain hazardous materials onsite to minimize the potential for harm to vital transportation facilities (i.e., the Airport and the adjacent freeway system). Furthermore, the existing developed characteristics of the floodplain in the Proposed Project Area have eliminated the natural and beneficial floodplain values, and the lack of these conditions would remain under the No Action Alternative. Therefore, the floodplain encroachment would not be significant because it would not result in a considerable probability of loss of human life, likely future damage that could be substantial in cost or extent, or a notable adverse impact on natural and beneficial floodplain values.</p> <p>The No Action Alternative would comply with water quality standards established by federal, state, and local laws and regulations to protect surface waters and groundwater and would not affect the public drinking water supply, so it would not affect these water resources.</p>	<p>No wetlands or Wild and Scenic Rivers exist within the Proposed Project Area.</p> <p>The Proposed Action would occur within a 100-year floodplain and would represent a floodplain encroachment. Although the intensity of use of the Proposed Project Area would increase under the Proposed Action as compared with the No Action, the City would continue to implement existing and planned flood control measures; the City would continue to store and contain hazardous materials in compliance with federal, state, and local regulations and permits; and the lack of natural and beneficial floodplain values given the developed nature of the Proposed Project Area would continue. Therefore, in comparison to the No Action Alternative, the Proposed Action would not result in a significant floodplain encroachment, as defined under DOT Order 5650.2^{3/} because the encroachment would not result in a considerable probability of loss of human life, likely future damage that could be substantial in cost or extent, or a notable adverse impact on natural and beneficial floodplain values.</p> <p>The Proposed Action would comply with water quality standards established by federal, state, and local laws and regulations to protect surface waters and groundwater and would not affect the public drinking water supply, so it would not affect these water resources.</p>

Table 2-2 (5 of 5): Summary Comparison of Alternatives

NOTES:

- 1/ Although the No Action Alternative does not meet the screening criteria, the alternative is retained for consideration pursuant to 40 CFR 1502.14(d).
- 2/ Title 23 CFR 774.13(f)(3).
- 3/ U.S. Department of Transportation, Order 5650.2, "Floodplain Management and Protection," April 23, 1979.

SOURCE: Ricondo & Associates, Inc., May 2017.

PREPARED BY: Ricondo & Associates, Inc., May 2017.

Table 2-3: Preliminary List of Permits Required for the Proposed Action

ISSUING AGENCY	PERMIT NAME/TYPE
California Department of Transportation	Encroachment Permit
San Francisco Bay Conservation and Development Commission	Major Permit (Amendment)
San Francisco International Airport Building Inspection & Code Enforcement	Building Permit
San Francisco Regional Water Quality Control Board	Maintain compliance with the Airport's National Pollutant Discharge Elimination System (NPDES) Permit and the California General Construction NPDES Permit through preparation of a site-specific Stormwater Pollution Prevention Plan (SWPPP) for construction activities and updates to the Airport's Spill Prevention Control and Countermeasures (SPCC) Plan
San Mateo County Environmental Health Division	Underground Storage Tank System Closure Permit; Permit to Construct/Replace/Modify Underground Storage Tank System; and Underground Storage Tank Operating Permit

SOURCE: City and County of San Francisco, July 2017.

PREPARED BY: Ricondo & Associates, Inc., July 2017.

Table 2-4 (1 of 2): Federal Laws and Statutes Considered

FEDERAL LAW OR STATUTE	CITATION
Federal Aviation Act of 1958, as amended	49 U.S.C. §§ 40101 <i>et seq.</i>
Airport and Airway Improvement Act of 1982, as amended	49 U.S.C. §§ 47101 <i>et seq.</i>
Airport Improvement Program	49 U.S.C. § 47106
Vision 100 – Century of Aviation Reauthorization Act of 2003	49 U.S.C. § 40101
National Environmental Policy Act of 1969	42 U.S.C. §§ 4321 <i>et seq.</i>
Clean Air Act of 1970, as amended	42 U.S.C. §§ 7401 <i>et seq.</i>
Endangered Species Act of 1973	16 U.S.C. §§ 1531 <i>et seq.</i>
Fish and Wildlife Coordination Act of 1958	16 U.S.C. §§ 661 <i>et seq.</i>
Migratory Bird Treaty Act	16 U.S.C. §§ 703 <i>et seq.</i>
Bald and Golden Eagle Protection Act	16 U.S.C. §§ 668 <i>et seq.</i>
Coastal Zone Management Act of 1972	16 U.S.C. §§ 1451 <i>et seq.</i>
Land and Water Conservation Fund Act of 1965	16 U.S.C. §§ 4601 <i>et seq.</i>
Department of Transportation Act of 1966, Section 4(f)	49 U.S.C. § 303
Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Community Environmental Response Facilitation Act of 1992	42 U.S.C. §§ 9601 <i>et seq.</i>
Emergency Planning and Community Right to Know Act	42 U.S.C. §§ 11001-11050
Federal Facilities Compliance Act	42 U.S.C. § 6961

Table 2-4 (2 of 2): Federal Laws and Statutes Considered

FEDERAL LAW OR STATUTE	CITATION
Hazardous Materials Transportation Act	49 U.S.C. §§ 5101-5128
Oil Pollution Act of 1990	33 U.S.C. §§ 2701 <i>et seq.</i>
Pollution Prevention Act	42 U.S.C. §§ 13101 <i>et seq.</i>
Resource Conservation and Recovery Act of 1976, as amended by the Solid Waste Disposal Act of 1980	42 U.S.C. §§ 6901 <i>et seq.</i>
Toxic Substances Control Act	15 U.S.C. §§ 2601 <i>et seq.</i>
American Indian Religious Freedom Act	42 U.S.C. § 1996
Archaeological and Historic Preservation Act of 1974, as amended	54 U.S.C. §§ 312501 <i>et seq.</i>
Archaeological Resources Protection Act	16 U.S.C. § 470
National Historic Preservation Act of 1966, as amended	54 U.S.C. §§ 300101 <i>et seq.</i>
Energy Independence and Security Act	42 U.S.C. §§ 17001 <i>et seq.</i>
Energy Policy Act	42 U.S.C. §§ 15801 <i>et seq.</i>
The Noise Control Act of 1972	42 U.S.C. §§ 4901 <i>et seq.</i>
Aviation Safety and Noise Abatement Act of 1979	49 U.S.C. §§ 47501 <i>et seq.</i>
Clean Water Act	33 U.S.C. §§ 1251 <i>et seq.</i>
National Flood Insurance Act and the Flood Disaster Act	42 U.S.C. §§ 4001 <i>et seq.</i>
Safe Drinking Water Act	42 U.S.C. § 300

SOURCE: Ricondo & Associates, Inc., May 2017.

PREPARED BY: Ricondo & Associates, Inc., May 2017.

Table 2-5: Executive Orders Considered

EXECUTIVE ORDER	CITATION
EO 13186, Responsibilities of Federal Agencies to Protect Migratory Birds	66 Federal Register (FR) 3853
EO 13693, Planning for Federal Sustainability in the Next Decade	80 FR 15869
EO 12088, Federal Compliance with Pollution Control Standards	43 FR 47707
EO 11593, Protection and Enhancement of the Cultural Environment	36 FR 8921
EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations	59 FR 7629
EO 13045, Protection of Children from Environmental and Health Risks and Safety Risks	62 FR 19885
EO 11988, Floodplain Management	43 FR 26951

SOURCE: Ricondo & Associates, Inc., May 2017.

PREPARED BY: Ricondo & Associates, Inc., May 2017.

Table 2-6: FAA Orders, Advisory Circulars, and Federal Regulations Considered**ORDERS, ADVISORY CIRCULARS, AND FEDERAL REGULATIONS****U.S. Department of Transportation and FAA Orders**

U.S. Department of Transportation (DOT) FAA Order 1050.1F, Environmental Impacts: Policies and Procedures

U.S. DOT FAA Order 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions

U.S. DOT FAA Order 5100.38D, Airport Improvement Program Handbook

U.S. DOT FAA Order 5190.6B, FAA Airport Compliance Manual

U.S. DOT FAA Order 5280.5C, Airport Certification Program Handbook

U.S. DOT Order 5650.2, Floodplain Management and Protection

U.S. DOT Order 5650.1, Protection and Enhancement of the Cultural Environment

U.S. DOT Order 5610, Environmental Justice in Minority and Low-Income Populations

FAA Advisory Circulars

U.S. DOT, FAA AC 150/5200-33A, Hazardous Wildlife Attractants on or near Airports

U.S. DOT, FAA AC 150/5300-13A, Airport Design

U.S. DOT, FAA AC 150/5370-10A, Standards for Specifying Construction of Airports

U.S. DOT, FAA AC 150/5370-2F, Operational Safety on Airports During Construction

Code of Federal Regulations

Title 14 CFR Part 77, Objects Affecting Navigable Airspace

Title 40 CFR Part 93, Determining Conformity of Federal Actions to State or Federal Implementation Plans, Subpart B

Title 40 CFR Part 122, EPA Administered Permit Programs: The National Pollutant Discharge Elimination System

Title 40 CFR Part 123, State Program Requirements

Title 40 CFR Part 124, Procedures for Decision-Making

Title 40 CFR Part 172, Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements

Title 14 CFR Part 157, Notice of Construction, Alternation, Activation, and Deactivation of Airports

Title 14 CFR Part 139, Certification and Operations: Land Airports Serving Certain Air Carriers

Title 15 CFR Part 930, Federal Consistency with Approved Coastal Management Programs

Title 40 CFR Part 1500, Council on Environmental Quality

SOURCE: Ricondo & Associates, Inc., September 2017.

PREPARED BY: Ricondo & Associates, Inc., September 2017.

3. Affected Environment

In accordance with FAA Orders 1050.1F and 5050.4B, the affected environment encompasses those areas that would be directly or indirectly affected by the Proposed Action, if it is implemented. This chapter identifies the geographic areas potentially affected by the Proposed Action, identifies environmental resources that would not be affected by the Proposed Action, and documents existing conditions for potentially affected resources.

3.1 Identification and Description of Proposed Project Area and Study Years

3.1.1 PROPOSED PROJECT AREA

For purposes of assessing the potential direct and indirect effects of the Proposed Action and the No Action Alternative on environmental resources, a study area, referred to as the Proposed Project Area, was defined to encompass the existing RCC facilities and the AirTrain Station at the RCC, as well as areas proposed to support the new RCC facilities, AirTrain extension, and supporting infrastructure in Lot DD. As depicted on **Exhibit 3-1**, this area encompasses the maximum area expected to be disturbed during construction of the Proposed Action. Exhibit 3-1 also identifies the proposed construction equipment staging areas and construction vehicle routes.

3.1.2 STUDY YEARS

Temporary effects and ground disturbance effects associated with construction of the Proposed Action would occur between 2017 and 2024, as discussed in Section 1.6. The first full year of operation of the new RCC served by an extended AirTrain and new station would be 2025.

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SOURCES: Bureau of Land Management, Esri, HERE, DeLorme, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA, June 2015 (aerial); Ricondo & Associates, Inc., November 2016 (proposed project area and ground disturbance area).
 PREPARED BY: Ricondo & Associates, Inc., November 2016.

EXHIBIT 3-1



Proposed Project Area

Drawing: Z:\SFO\01 - SFO NEPA On-Call 2016\02 - RCC AirTrain EA\CAD Exhibits\Exhibit 3-1 Proposed Project Area_2017-02-16_Prop_boundary.dwg Layout: 8.5x11L Plotted: Sep 25, 2017, 09:15AM

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3.2 Environmental Resources Not Affected

Of the environmental impact categories defined in FAA Order 1050.1F, the following resources have been eliminated from further consideration, because they do not exist within the Proposed Project Area or would otherwise not be affected by the Proposed Action:

- Farmlands—No prime or unique farmlands are present in the Proposed Project Area. The entire area is paved, with the exception of a few landscaped areas maintained along roadways.
- Water Resources: Wild and Scenic Rivers—The nearest river segment designated as Wild and Scenic is the Lower American River, approximately 80 miles north and east of the Airport in Sacramento. No Wild and Scenic Rivers are located within the Proposed Project Area.

3.3 Air Quality

This section summarizes the documentation of air quality standards, requirements, and existing conditions. More detailed information is provided in **Appendix D**.

3.3.1 REGULATORY SETTING

Under the federal Clean Air Act (CAA), as amended, the U.S. Environmental Protection Agency (EPA) has developed National Ambient Air Quality Standards (NAAQS) for the following air pollutants, referred to as criteria air pollutants: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), sulfur dioxide (SO₂), lead (Pb), particulate matter up to 10 micrometers in size (PM₁₀), and particulate matter smaller than 2.5 micrometers in size (PM_{2.5}). The CAA defines the need to establish two standards, both of which define maximum concentrations of criteria air pollutants. Primary standards are defined to protect public health, and secondary standards are defined to protect public welfare.¹

Individual states are required to identify general geographic areas where the NAAQS for these criteria air pollutants are not met. The EPA designates such areas as nonattainment areas and qualifies the nonattainment status by severity of nonattainment, ranging from marginal to moderate to serious to extreme nonattainment. Areas that were in nonattainment but have since attained the NAAQS are considered to be an attainment/maintenance area for several years before being designated as being in attainment. A state with a nonattainment or maintenance area must prepare a State Implementation Plan (SIP) that describes the programs and requirements that the state will implement to attain or maintain the NAAQS by the deadlines specified in the CAA, as well as subsequent related documents promulgated by the EPA.

The Clean Air Act Amendments of 1990 (CAAA) require federal agencies to ensure that actions proposed to occur in a designated nonattainment or maintenance area conform to the appropriate SIP, following a review

¹ Title 40 Code of Federal Regulations Part 50, *National Primary and Secondary Ambient Air Quality Standards*, Section 2(b).

process known as General Conformity. The General Conformity Rule establishes the *de minimis* levels by which it may be shown that a proposed action complies with the SIP's purpose of eliminating or reducing the severity and number of violations of the NAAQS in support of achieving expeditious attainment of such standards. Pursuant to FAA Order 1050.1F, a proposed action would generally be considered in compliance if it would not cause emissions that exceed NAAQS *de minimis* levels. If the emissions associated with a proposed action exceed the *de minimis* levels, then a conformity determination would be required.

The California Air Resources Board (CARB) monitors air quality conditions throughout the state; it enforces state air regulations, issues permits, and formulates and maintains SIPs. Under the California Clean Air Act, patterned after the federal CAA, areas are designated as attainment or nonattainment for California Ambient Air Quality Standards (CAAQS).

At the local level, the Bay Area Air Quality Management District (BAAQMD) is responsible for ensuring that federal and state air quality standards are met by monitoring ambient air pollutant levels throughout the Bay Area. The BAAQMD implements strategies to ensure SIP requirements are met and issues air quality permits for stationary equipment operating in the Bay Area.

3.3.2 AFFECTED ENVIRONMENT

Air quality effects are considered on a regional scale; thus, the affected environment for air quality considers conditions in the San Francisco Bay Area Air Basin. The Bay Area Air Basin falls under the jurisdiction of the BAAQMD, which encompasses all or portions of the nine counties surrounding the San Francisco Bay: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, southwestern Solano, and southern Sonoma.²

The Bay Area Air Basin is in marginal nonattainment for O₃ NAAQS and in moderate nonattainment for the PM_{2.5} NAAQS. The air basin was historically a nonattainment area for CO but was re-designated in April 1998 to attainment/maintenance for the 8-hour CO NAAQS, and it remains designated as a maintenance area until 2018. For the CAAQS, the Bay Area Air Basin is designated as a nonattainment area for O₃, PM₁₀, and PM_{2.5}. **Table 3-1** lists the NAAQS and CAAQS standards and the attainment status for the criteria pollutants within the project area.

² Bay Area Air Quality Management District, "About the Air District," www.baaqmd.gov/about-the-air-district (accessed August 18, 2016).

Table 3-1: Air Quality Standards and Attainment Status

CRITERIA POLLUTANT (AVERAGE TIME)	NAAQS			CAAQS		
	PRIMARY STANDARD	SECONDARY STANDARD	ATTAINMENT STATUS	CONCENTRATION	ATTAINMENT STATUS	
CO	(8-hour)	9 ppm	--	9 ppm	Attainment	
	(1-hour)	35 ppm	--			20 ppm
NO ₂	(1-hour)	100 ppb	--	0.18 ppm	Attainment	
	(Annual)	53 ppb	53 ppb			0.030 ppm
O ₃	(8-hour) ^{2/}	0.070 ppm	0.070 ppm	0.070 ppm	Nonattainment	
	(1-hour)	--	--			0.09 ppm
Pb	(rolling 3-month average)	0.15 µg/m ³	0.15 µg/m ³	--	Unclassified	
	(30-day average)	--	--			1.5 µg/m ³
PM ₁₀	(24-hour)	150 µg/m ³	150 µg/m ³	50 µg/m ³	Nonattainment	
	(Annual)	--	--			20 µg/m ³
PM _{2.5}	(Annual)	12 µg/m ³	15 µg/m ³	12 µg/m ³	Nonattainment	
	(24-hour)	35 µg/m ³	35 µg/m ³			--
SO ₂	(1-hour)	75 ppb	--	0.25 ppm	Attainment	
	(3-hour)	--	0.5 ppm			--
	(24-hour)	--	--			0.04 ppm

NOTES:

n/a—data not measured by the Bay Area Air Quality Management District for the Bay Area Basin.

-- no standard

CAAQS—California Ambient Air Quality Standards

CO—carbon monoxide

NAAQS—National Ambient Air Quality Standards

NO₂—nitrogen dioxide

O₃—ozone

Pb—lead

PM₁₀—particulate matter

PM_{2.5}—fine particulate matter

ppm—parts per million

SO₂—sulfur dioxide

µg/m³—micrograms per cubic meter

1/ On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour ozone concentration per year, averaged over three years, is equal to or less than 0.070 ppm. The EPA published state and tribal recommendations on attainment designations on November 9, 2016, and will issue final designations on October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the ozone level in the area.

SOURCES: U.S. Environmental Protection Agency, NAAQS Table, www.epa.gov/criteria-air-pollutants/naaq-table, (accessed May 9, 2017); Bay Area Air Quality Management District, "Air Quality Standards and Attainment Status," www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status (accessed May 9, 2017).

PREPARED BY: Ricondo & Associates, Inc., May 2017.

The Airport is located in the mid-section of the San Francisco Peninsula on the Bay side. The Santa Cruz Mountains, with elevations exceeding 2,000 feet, extend north-south along the center of the Peninsula and serve to block the marine air from the Bay side that causes foggy days and a cool and windy climate on the Pacific Ocean side. However, the San Bruno Gap, a break in the mountain range, extends from the ocean side of the Peninsula to the Airport. The gap is oriented northwest to southeast, which aligns with the prevailing winds, and thus allows the cool and foggy marine air to enter the Bay near the Airport and supports higher wind speeds than other Bay side areas. These topographic and meteorological conditions support the dispersal of air pollutant emissions near the Airport. The potential for localized air pollution is highest along the southeastern portion of the Peninsula, over 15 miles south of the Airport, because the area is protected from high winds by the Santa Cruz Mountains. Localized emissions can also build up between buildings in San Francisco at the north end of the Peninsula; however, high winds typically disperse emissions in this area before they accumulate.³ The closest air monitoring stations to the Airport are 10 miles to the north in San Francisco and 15 miles to the southeast in Redwood City, consistent with the areas in the region with the potential for localized air pollution. Due to prevailing winds in the region, monitoring data collected at these stations are not representative of conditions at the Airport.

Within the Proposed Project Area, sources of air emissions are typical of those associated with consolidated rental car center facilities (i.e., vehicle operation, fueling, washing, and light maintenance); public parking; and maintenance of parking lots, roadways, and landscaped areas along roadways.

The City holds one air permit, a Major Facility Review Permit (Facility # A1784) issued by the BAAQMD pursuant to the Title V of the CAA. Title V requires large industrial facilities to obtain a single comprehensive operating permit that shows all federal, state, and local air quality requirements that apply to the facility.

3.4 Biological Resources

3.4.1 REGULATORY SETTING

The primary federal statutes related to the consideration of biological resources in the Proposed Project Area are:

- The federal Endangered Species Act (ESA) was established to protect threatened and endangered species and their habitat. The ESA is administered by the U.S. Fish and Wildlife Service (FWS), with responsibility for terrestrial and freshwater species, and the National Marine Fisheries Service (NMFS), with responsibility for marine species. The ESA prohibits activities affecting protected species and their habitats, unless authorized by a permit from the FWS or the NMFS. Section 7(a)(2) requires federal agencies, in consultation with the FWS and/or the NMFS, to ensure that any federal action authorized,

³ Bay Area Air Quality Management District, Planning and Research Division, *BAAQMD CEQ Guidelines, Assessing the Air Quality Impacts of Projects and Plans*, Appendix D, "Climate, Topography, and Air Pollution Potential," December 1999, www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqaguid.pdf (accessed May 9, 2017).

funded, or carried out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat.

- The Bald and Golden Eagle Protection Act protects bald and golden eagles from the unauthorized capture, purchase, or transportation of the birds, their nests, or their eggs. The act is administered by the FWS.
- The Migratory Bird Treaty Act protects migratory birds by prohibiting intentional taking, selling, or other activities that would harm migratory birds, their eggs, or their nests (such as removal of an active nest or nest tree), unless authorized under a special permit from the FWS.

The primary state statutes and regulations related to the consideration of biological resources in the Proposed Project Area are:

- The California Endangered Species Act (CESA), California Fish and Game Code §§ 2050-2116, was modeled after the federal ESA and serves to conserve, protect, restore, and enhance endangered or threatened species and associated habitat. The CESA is administered by the California Department of Fish and Wildlife (CDFW) and prohibits activities affecting protected species and their habitats, unless authorized by a permit from the CDFW.⁴
- The California Fish and Game Code (F&G Code) includes various statutes and regulations that protect biological resources, including the Native Plant Protection Act of 1977 (NPPA). The NPPA (F&G Code Sections 1900–1913) authorizes the Fish and Game Commission to designate plants as endangered or rare and prohibits take of any such plants, except as authorized under limited circumstances.

3.4.2 AFFECTED ENVIRONMENT

The Proposed Project Area is located between 4 and 20 feet above sea level and is developed Airport property comprising surface and structured parking areas, roadways, and structures/facilities supporting rental car operations. Natural habitat areas and vegetation communities are not present in the Proposed Project Area, although maintained landscaped areas consisting of ornamental trees and shrubs are present along surrounding roadways. Although not within the Proposed Project Area, a constructed stormwater drainage channel (the North Channel, described in more detail below) is present approximately 200 feet northwest of the Proposed Project Area. Given the highly developed condition and exposure to disturbance from Airport operations and vehicle traffic, the Proposed Project Area provides little biological resource function or value. Additionally, pursuant to the requirements of 14 CFR Part 139.337, the City implements a Wildlife Hazard Management Plan (WHMP) to take immediate action to alleviate wildlife hazards that pose a risk to aircraft and human safety.

Wildlife use of the Proposed Project Area is minimal due to lack of suitable habitat. The majority of wildlife with potential to use the Proposed Project Area are bird species adapted to developed areas, such as American crow (*Corvus brachyrhynchos*), rock pigeon (*Columba livia*) and house finch (*Carpodacus mexicana*). Other bird species, such as the bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*), are known to be in the vicinity of SFO, but suitable nesting and foraging habitat is not present within the Proposed Project

⁴ California Department of Fish and Wildlife, "Explore CDFW," www.wildlife.ca.gov/Explore (accessed August 9, 2016).

Area. Mammal species with potential to occur within the Proposed Project Area are urban-adapted generalist species, such as northern raccoon (*Procyon lotor*) and striped skunk (*Mephitis mephitis*). Additionally, building ledges and other man-made structures, as well as ornamental landscaped areas with ground cover, shrubs, and/or trees in the Proposed Project Area provide potential seasonal nesting habitat for migratory birds.

As noted above, the North Channel passes within 200 feet northwest of the Proposed Project Area and has the potential to be indirectly affected by construction activities conducted within the Proposed Project Area. The North Channel is the downstream reach of a constructed stormwater system that conveys stormflows from the City of San Bruno, around the Airport, to San Francisco Bay. However, the channel does not have direct connection to the San Francisco Bay due to the presence of tide gates at its terminal end. Due to flow of Bay waters through the tide gates during high tide events, the lower reaches of the North Channel support plant communities that are characteristic of brackish environments. Upland vegetation on the channel banks consists of annual grasses, forbs, and other non-natives, such as pampas grass (*Cortaderia sp.*), on the upper banks; and mixed stands of alkali bulrush (*Scirpus robustus*), pickleweed (*Salicornia virginica*), fat hen (*Atriplex prostrata*), and marsh gumplant (*Grindelia hirsutula*) on the lower banks fringing the channel bottom. Wildlife species anticipated to be present in the North Channel include the California slender salamander (*Batrachoseps attenuates*), great egrets (*Adrea albus*), bufflehead (*Bucephala albeola*), and Botta's pocket gopher (*Thomomys bottae*).⁵

The waters of the San Francisco Bay are outside of but adjacent to the Proposed Project Area. Given the entirely upland setting of the Proposed Project Area, oceanic species known to occur in the Pacific Ocean (e.g., black abalone, whales, and sea turtles) were not included in this evaluation.

The potential presence of federally listed threatened or endangered species and species proposed for listing was considered in this analysis. Official species lists provided by the FWS (from two adjacent regions) pursuant to Section 7 of the ESA were collected and compiled.⁶ The FWS species lists comprise federally threatened and endangered plants and animals as well as species proposed for listing and species identified as candidates for listing under the ESA. The official species lists, along with a report documenting biological resource conditions in the North Channel, are provided in **Appendix E**. The lists identify 22 known species (17 wildlife and 5 plant species) with the potential to occur in the vicinity of the Proposed Project Area, as summarized in **Tables 3-2** and **3-3**. The FWS official species lists include statements that no critical habitats are located in the Proposed Project Area. Based on a review of the habitat requirements and distribution of the species identified in

⁵ LSA Associates, Inc., *Special-Status Species Report for the Lot DD and Adjacent Parcels Study Area, San Francisco International Airport, San Mateo County, California*, March 6, 1998.

⁶ U.S. Department of Interior, U.S. Fish and Wildlife Service, Sacramento Fish And Wildlife Office, "List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project," (Consultation Code: 08ESMF00-2017-SLI-1971; Event Code: 08ESMF00-2017-E-05013; Project Name: SFO Rental Car Center and Air Train Project), May 4, 2017; and U.S. Department of Interior, U.S. Fish and Wildlife Service, Sacramento Bay-delta Fish And Wildlife, "List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project," (Consultation Code: 08FBTD00-2017-SLI-0174; Event Code: 08FBTD00-2017-E-00306; Project Name: SFO Rental Car Center and Air Train Project), May 4, 2017.

Tables 3-2 and 3-3 and an evaluation of existing conditions in the Proposed Project Area, none of these species are considered to be present in the Proposed Project Area due to the absence of suitable habitat.

The potential presence of state-listed threatened or endangered species or species proposed for listing was also considered through a search of the California Department of Fish and Wildlife's California Natural Diversity Database.⁷ The search results are provided in Appendix E. The list identified 20 species (7 wildlife and 13 plant species) with potential to occur in the vicinity of the Proposed Project Area, as summarized in **Tables 3-4** and **3-5**. The default state database search area encompassing the Proposed Project Area differed from the default FWS search area. These additional federally listed species not identified in the FWS species lists are noted in Table 3-5. Based on a review of the habitat requirements and distribution of the species identified in Tables 3-4 and 3-5 and an evaluation of existing conditions in the Proposed Project Area, none of these species are considered to be present in the Proposed Project Area due to the absence of suitable habitat.

In addition to evaluating the environmental conditions and species potentially present in the Proposed Project Area, this analysis also assessed the potential for special-status species to occur in the North Channel, given its proximity to the Proposed Project Area. Based on an evaluation of habitat requirements and existing environmental conditions in the North Channel, the following species were evaluated and are not considered to be present, and, therefore, would not be affected by activities in the Proposed Project Area:^{8, 9}

- California red-legged frog—this species is not expected to occur in the North Channel because of the high salinity levels and lack of suitable aquatic breeding and foraging habitats and suitable adjacent uplands. This species has never been observed and documented west of U.S. 101 at the Airport.
- San Francisco garter snake—this species is not expected to occur in the North Channel due to the high salinity levels and lack of suitable habitat for its preferred prey species, the California red-legged frog. This species has never been documented west of U.S. 101 at the Airport.

⁷ Two state databases were queried for species listed in U.S. Geological Survey 7.5 minute quadrangles for Montara Mountain, San Mateo, Hunters Point, and San Francisco South: the California Department of Fish and Wildlife, *California Natural Diversity Database (CNDDDB)*, RareFind, Commercial Version 5.2.7, www.dfg.ca.gov/biogeodata/cnddb/rarefind.asp (accessed January 12, 2017); and California Native Plant Society, *Inventory of Rare and Endangered Plants* (online edition, v8-02), Sacramento, California: California Native Plant Society, Rare Plant Program, www.rareplants.cnps.org (accessed January 12, 2017).

⁸ LSA Associates, Inc., *Special-Status Species Report for the Lot DD and Adjacent Parcels Study Area, San Francisco International Airport, San Mateo County, California*, March 6, 1998.

⁹ Dudek, May 2017.

Table 3-2 (1 of 2): Federally Listed Wildlife with the Potential to Occur in the Vicinity of San Francisco International Airport

SPECIES NAME (SCIENTIFIC) BY TYPE	COMMON NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN PROPOSED PROJECT AREA
Mammals				
<i>Enhydra lutris nereis</i>	Southern Sea Otter	FT	Shallow, near shore, coastal marine habitats with kelp forest	None: suitable habitat not present; Proposed Project Area is outside of species' known range
<i>Reithrodontomys raviventris</i>	Salt Marsh Harvest Mouse	FE	Tidal salt marshes of San Francisco Bay and its tributaries; requires tall, dense pickleweed (<i>Salicornia sp.</i>) for cover; also uses adjacent grasslands	None: no known records in the Airport vicinity; Proposed Project Area lacks suitable salt marsh habitat
Birds				
<i>Rallus obsoletus</i> (formerly <i>Rallus longirostris obsoletus</i>) ^{1/}	Ridgeway Rail (formerly California Clapper Rail) ^{1/}	FE	Tidal salt marshes and brackish marshes with sloughs and cordgrass (<i>Spartina sp.</i>)	None: suitable habitat not present and proximity to disturbance precludes presence of this species
<i>Sterna antillarum browni</i>	California Least Tern	FE	Sandy beaches, alkali flats, hard-pan surfaces (salt ponds)	None: migrating individuals rarely forage over San Francisco Bay waters adjacent to the Airport; Proposed Project Area lacks suitable habitat for nesting or foraging
<i>Brachyramphus marmoratus</i>	Marbled Murrelet	FT	Nests in old-growth coniferous forests near the coast, requires trees with large branches or deformities that provide nest platforms	None: suitable habitat not present; Proposed Project Area outside of known range of species
<i>Phoebastria</i> (=Diomedea) <i>albatrus</i>)	Short-tailed Albatross	FE	Forages widely across the temperate and subarctic North Pacific Ocean; nests in Japan and on Pacific Islands	None: Proposed Project Area outside of known range of species
<i>Charadrius alexandrinus nivosus</i>	Western Snowy Plover	FT	Sandy beaches, salt ponds, and salt pond levees; needs sandy, gravelly, or friable soils for nesting	None: suitable habitat not present; no known nesting locations in vicinity of Proposed Project Area
Reptiles				
<i>Thamnophis sirtalis tetrataenia</i>	San Francisco Garter Snake	FE	Wide range of habitats including grasslands or wetlands adjacent to ponds, marshes, and sloughs	None: species has never been observed west of U.S. 101 due to lack of suitable aquatic and associated upland habitats
Amphibians				
<i>Rana draytonii</i>	California Red-legged Frog	FT	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands	None: species has never been observed west of U.S. 101 due to lack of suitable aquatic and associated upland habitats

Table 3-2 (2 of 2): Federally Listed Wildlife with the Potential to Occur in the Vicinity of San Francisco International Airport

SPECIES NAME (SCIENTIFIC) BY TYPE	COMMON NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN PROPOSED PROJECT AREA
Fish				
<i>Eucyclogobius newberryi</i>	Tidewater Goby	FE	Brackish shallow lagoons and lower stream reaches with still, but not stagnant water	None: species considered extirpated from San Francisco Bay ^{2/}
<i>Hypomesus transpacificus</i>	Delta Smelt	FT	Brackish river channels and tidally influenced backwater sloughs of Sacramento-San Joaquin Delta	None: the Proposed Project Area is outside known range of the species
<i>Oncorhynchus (=Salmo) mykiss</i>	Steelhead–Central California Coast (Distinct Population Segment)	FT	Anadromous: spawns in coastal streams in fall and winter; occurs in small numbers in Central San Francisco Bay	None: the Proposed Project Area does not support suitable habitat and is outside the known range of this species
Insects				
<i>Callophrys mossii bayensis</i>	San Bruno Elfin Butterfly	FE	Coastal scrub in San Mateo County, colonies located on steep north-facing slopes within fog belt, dependent on <i>Sedum spathulifolium</i> for larval host plant	None: coastal scrub with <i>Sedum spathulifolium</i> not present
<i>Euphydryas editha bayensis</i>	Bay Checkerspot Butterfly	FT	Native grasslands on serpentine soils in San Francisco Bay Area, dependent on host plants <i>Plantago erecta</i> (primary), <i>Castilleja densiflorus</i> , and <i>C. exserta</i>	None: native grasslands with serpentine soils not present
<i>Icaricia icarioides missionensis</i>	Mission Blue Butterfly	FE	Coastal grassland and chaparral between 690 and 850 feet elevation, known colonies range from Fort Baker (Marin County) to Sweeny Ridge (San Mateo County), larval host plants include <i>Lupinus albifrons</i> , <i>L. formosus</i> , and <i>L. variicolor</i>	None: coastal grassland and chaparral not present, and the Proposed Project Area is outside of required elevation range
<i>Speyeria callippe</i>	Callippe Silverspot Butterfly	FE	Grassy hilltops and ridges at San Bruno Mountain and Sign Hill (San Mateo County), in the hills near Pleasanton (Alameda County), at Sears Point (Sonoma County), and in the hills between Vallejo and Cordelia	None: the Proposed Project Area is outside the known range of species and suitable grassland habitat is absent
<i>Speyeria zerene myrtleae</i>	Myrtle's Silverspot Butterfly	FE	Coastal terrace prairie, coastal bluff scrub, and associated grasslands in western Marin and southwestern Sonoma Counties, extirpated south of Golden Gate	None: the Proposed Project Area is outside the known range of species and suitable habitats are absent

NOTES:

FE—Federally listed as endangered FT—Federally listed as threatened

1/ The English name Clapper Rail was transferred to a different scientific name in 2014, and *Rallus longirostris obsoletus* was renamed Ridgeway Rail (*Rallus obsoletus obsoletus*) (The Auk Ornithological Advances, Fifty-fifth Supplement to the American Ornithologists' Union Check-list of North American Birds, volume 131, July 30, 2014.)

2/ Moyle, P.B., *Inland Fishes of California: Revised and Expanded*, University of California Press, Berkeley, 2002.

SOURCES: U.S. Department of Interior, U.S. Fish and Wildlife Service, Sacramento Fish And Wildlife Office, "List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project," (Consultation Code: 08ESMF00-2017-SLI-1971; Event Code: 08ESMF00-2017-E-05013; Project Name: SFO Rental Car Center and Air Train Project), May 4, 2017 ; U.S. Department of Interior, U.S. Fish and Wildlife Service, Sacramento Bay-delta Fish And Wildlife, "List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project," (Consultation Code: 08FBTD00-2017-SLI-0174; Event Code: 08FBTD00-2017-E-00306; Project Name: SFO Rental Car Center and Air Train Project), May 4, 2017; City and County of San Francisco, San Francisco International Airport, Planning and Environmental Affairs, *Biological Assessment: San Francisco International Airport Wildlife Hazard Management Plan*, May 4, 2016 (potential to occur in proposed project area; Dudek, May 2017 (potential to occur in proposed project area).

PREPARED BY: Dudek and Ricondo & Associates, Inc., May 2017.

Table 3-3: Federally Listed Plants with the Potential to Occur in the Vicinity of San Francisco International Airport

SPECIES NAME (SCIENTIFIC)	COMMON NAME	STATUS	HABITAT		POTENTIAL TO OCCUR IN THE PROPOSED PROJECT AREA
			PRIMARY HABITAT ASSOCIATIONS	ELEVATION RANGE (FEET)	
<i>Arctostaphylos franciscana</i>	Franciscan Manzanita	FE	Open, rocky serpentine outcrops in chaparral, coastal prairie, and coastal scrub	197–984	None: serpentine outcrops not present and the Proposed Project Area is outside of the species' known elevation range
<i>Arctostaphylos hookeri var. ravenii</i>	Presidio Manzanita	FE	Open, rocky serpentine slopes in chaparral, coastal prairie, and coastal scrub	148–705	None: suitable habitats not present and the Proposed Project Area is outside of the species' known elevation range
<i>Chorizanthe robusta var. robusta</i>	Robust Spineflower	FE	Sandy terraces and bluffs in woodland, coastal dunes, and coastal scrub	10–984	None: sandy substrates and suitable habitats not present
<i>Lessingia germanorum</i>	San Francisco Lessingia	FE	Old coastal sand dune deposits in spare, relatively open dune scrub, coastal scrub, and grassland; limited to six sites in the Presidio of San Francisco and one site in Daly City	82–361	None: sand substrates not present and the Proposed Project Area is outside the known elevation range and distribution of species
<i>Blennosperma bakeri</i>	Sonoma Sunshine	FE	Vernal pools, grassy margins of swales, and seasonally wet grasslands	32-360	None: known to occur only in Sonoma County, vernal pools not present

NOTE:

FE—Federally listed as endangered

SOURCES: U.S. Department of Interior, U.S. Fish and Wildlife Service, Sacramento Fish And Wildlife Office, "List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project," (Consultation Code: 08ESMF00-2017-SLI-1971; Event Code: 08ESMF00-2017-E-05013; Project Name: SFO Rental Car Center and Air Train Project), May 4, 2017 ; U.S. Department of Interior, U.S. Fish and Wildlife Service, Sacramento Bay-delta Fish And Wildlife, "List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project," (Consultation Code: 08FBDT00-2017-SLI-0174; Event Code: 08FBDT00-2017-E-00306; Project Name: SFO Rental Car Center and Air Train Project), May 4, 2017; City and County of San Francisco, San Francisco International Airport, Planning and Environmental Affairs, *Biological Assessment: San Francisco International Airport Wildlife Hazard Management Plan*, May 4, 2016; 2016 (potential to occur in proposed project area; Dudek, May 2017 (potential to occur in proposed project area).

PREPARED BY: Dudek and Ricondo & Associates, Inc., May 2017.

Table 3-4 (1 of 2): State-Listed Wildlife with the Potential to Occur in the Vicinity of San Francisco International Airport

SPECIES NAME (SCIENTIFIC)	COMMON	STATUS	HABITAT	POTENTIAL TO OCCUR IN PROPOSED PROJECT AREA
Mammals				
<i>Reithrodontomys raviventris</i>	Salt Marsh Harvest Mouse	CE, CFP	Tidal salt marshes of San Francisco Bay and its tributaries; requires tall, dense pickleweed (<i>Salicornia sp.</i>) for cover; also uses adjacent grasslands	None: no known records in the Airport vicinity; Proposed Project Area lacks suitable salt marsh habitat
Birds				
<i>Brachyramphus marmoratus</i>	Marbled Murrelet	CE	Nests in old-growth coniferous forests near the coast, requires trees with large branches or deformities that provide nest platforms	None: suitable habitat not present; Proposed Project Area outside of known range of species
<i>Laterallus jamaicensis coturniculus</i>	California Black Rail	CT, CFP	Tidal marshes, shallow freshwater margins, wet meadows, and flooded grassy vegetation; suitable habitats are often supplied by canal leakage in Sierra Nevada foothill populations	None: suitable habitat not present
<i>Rallus obsoletus</i> (formerly <i>Rallus longirostris obsoletus</i>) ^{1/}	Ridgeway Rail (formerly California Clapper Rail) ^{1/}	CE, CFP	Tidal salt marshes and brackish marshes with sloughs and cordgrass (<i>Spartina sp.</i>)	None: suitable habitat not present and proximity to disturbance precludes presence of this species
<i>Riparia</i>	Bank Swallow	CT	Nests in riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with sandy soils; open country and water during migration	None: suitable habitat not present
Reptiles				
<i>Thamnophis sirtalis tetrataenia</i>	San Francisco Garter Snake	CE, CFP	Wide range of habitats including grasslands or wetlands adjacent to ponds, marshes, and sloughs	None: species has never been observed west of U.S. 101 due to lack of suitable aquatic and associated upland habitats
Amphibians				
[none]				

Table 3-4 (2 of 2): State-Listed Wildlife with the Potential to Occur in the Vicinity of San Francisco International Airport

SPECIES NAME (SCIENTIFIC)	COMMON	STATUS	HABITAT	POTENTIAL TO OCCUR IN PROPOSED PROJECT AREA
Fish				
<i>Spirinchus thaleichthys</i>	Longfin Smelt	CT	Bays, estuaries, and nearshore coastal areas from San Francisco Bay to the Oregon border; adults migrate into freshwater rivers to spawn	None: the Proposed Project Area does not support suitable habitat for this species
Invertebrates				
[none]				

NOTES:

CE—State listed as endangered

CT—State listed as threatened

CFP—California Fully Protected Species

1/ The English name Clapper Rail was transferred to a different scientific name in 2014, and *Rallus longirostris obsoletus* was renamed Ridgeway Rail (*Rallus obsoletus obsoletus*) (The Auk Ornithological Advances, *Fifty-fifth Supplement to the American Ornithologists' Union Check-list of North American Birds*, volume 131, July 30, 2014).

SOURCES: California Department of Fish and Wildlife, California Natural Diversity Database (CNDDDB), RareFind, Commercial Version 5.2.7, www.dfg.ca.gov/biogeodata/cnddb/rarefind.asp (accessed January 12, 2017); City and County of San Francisco, San Francisco International Airport, Planning and Environmental Affairs, *Biological Assessment: San Francisco International Airport Wildlife Hazard Management Plan*, May 4, 2016; 2016 (potential to occur in proposed project area; Dudek, May 2017 (potential to occur in proposed project area).

PREPARED BY: Dudek and Ricondo & Associates, Inc., May 2017.

Table 3-5 (1 of 2): State-Listed Plants with the Potential to Occur in the Vicinity of San Francisco International Airport

SPECIES NAME (SCIENTIFIC)	COMMON NAME	STATE	HABITAT		POTENTIAL TO OCCUR IN THE PROPOSED PROJECT AREA
			PRIMARY HABITAT ASSOCIATIONS	ELEVATION RANGE (FEET)	
<i>Acanthomintha duttonii</i> ^{1/}	San Mateo Thorn-mint	CE	Serpentine soils of chaparral and grassland in San Mateo County	164–984	None: serpentine soils not present and the Proposed Project Area is outside of the species' known elevation range
<i>Arctostaphylos imbricata</i>	San Bruno Mountain Manzanita	CE	Chaparral, coastal scrub; rocky	902–1214	None: the Proposed Project Area is outside of the species' known elevation range
<i>Arctostaphylos m montana ssp. ravenii</i>	Presidio Manzanita	CE	Open, rocky serpentine slopes in chaparral, coastal prairie, and coastal scrub	148–705	None: rocky, serpentine slopes not present and the Proposed Project Area is outside of the species' known elevation range
<i>Arctostaphylos pacifica</i>	Pacific Manzanita	CE	Chaparral, coastal scrub	918-1,214 ^{3/}	None: the Proposed Project Area is outside of the species' known elevation range
<i>Cirsium fontinale var. fontinale</i> ^{1/}	Crystal Springs Fountain Thistle	CE	Perpetually moist openings in riparian or serpentine chaparral	148–574	None: riparian or serpentine chaparral not present; the Proposed Project Area is outside of the species' known elevation range
<i>Eriophyllum latilobum</i> ^{1/}	San Mateo Woolly Sunflower	CE	Shaded moist sites on steep grassy or sparsely wooded slopes; grows particularly well under or adjacent to coast live oaks	148–1,083	None: serpentine soils in oak woodland not present and the Proposed Project Area is outside of the species' known elevation range
<i>Hesperolinon congestum</i> ^{2/}	Marin Western Flax	CT	Chaparral, valley, and foothill grassland; serpentine soils	16–1,214	None: suitable habitats and serpentine soils not present
<i>Layia carnos</i> ^{1/}	Beach Layia	CE	Coastal sand dunes	0–197	None: coastal sand dunes not present
<i>Leptosiphon croceus</i>	Coast Yellow Leptosiphon	CCD	Open, grassy areas, coastal bluffs	25–785	None: suitable habitats not present
<i>Lessingia germanorum</i>	San Francisco Lessingia	CE	Old coastal sand dune deposits in spare, relatively open dune scrub, coastal scrub, and grassland; limited to six sites in the Presidio of San Francisco and one site in Daly City	82–361	None: sand substrates and suitable habitats not present and the Proposed Project Area is outside the known distribution of species

Table 3-5 (2 of 2): State-Listed Plants with the Potential to Occur in the Vicinity of San Francisco International Airport

SPECIES NAME (SCIENTIFIC)	COMMON NAME	STATE	HABITAT		POTENTIAL TO OCCUR IN THE PROPOSED PROJECT AREA
			PRIMARY HABITAT ASSOCIATIONS	ELEVATION RANGE (FEET)	
<i>Pentachaeta bellidiflora</i> ^{1/}	White-rayed Pentachaeta	CE	Open dry rocky slopes in grassland, often on slopes derived from serpentine bedrock	115–2,034	None: rocky, serpentine slopes not present and the Proposed Project Area is outside of the species' known elevation range
<i>Potentilla hickmanii</i> ^{1/}	Hickman's Cinquefoil	CE	Coastal bluff scrub, closed-cone coniferous forest, meadows and seeps (vernally mesic) freshwater-marshes and swamps	62–328	None: suitable habitats not present and the Proposed Project Area is outside of the species' known elevation range
<i>Sanicula maritima</i>	Adobe Sanicle	CR	Chaparral, coastal prairie, meadows and seeps, valley and foothill grassland; clay, serpentine	98–787	None: Proposed Project Area is outside of the species' known elevation range and there is no suitable habitat present

NOTES:

CE—State listed as endangered

CT—State listed as threatened

CCD—State listed as Candidate Endangered

CR—State Rare

1/ Species is also federally listed as endangered but was not included on the official species list from the U.S. Fish and Wildlife Service, and therefore was not included in Table 3-3.

2/ Species is also federally listed as threatened but was not included on the official species list from the U.S. Fish and Wildlife Service, and therefore was not included in Table 3-3.

3/ Habitat elevation range for *Arctostaphylos pacifica* supplemented by Dudek, January 17, 2017.

SOURCES: California Department of Fish and Wildlife, California Natural Diversity Database (CNDDDB), RareFind, Commercial Version 5.2.7, www.dfg.ca.gov/biogeodata/cnddb/rarefind.asp (accessed January 12, 2017); California Native Plant Society, Inventory of Rare and Endangered Plants (online edition, v8-02), Sacramento, California: California Native Plant Society, Rare Plant Program, www.rareplants.cnps.org (accessed January 12, 2017); City and County of San Francisco, San Francisco International Airport, Planning and Environmental Affairs, *Biological Assessment: San Francisco International Airport Wildlife Hazard Management Plan*, May 4, 2016; 2016 (potential to occur in proposed project area; Dudek, May 2017 (potential to occur in proposed project area).

PREPARED BY: Dudek and Ricondo & Associates, Inc., May 2017.

- Salt marsh harvest mouse—although the North Channel supports pickleweed, the salt marsh harvest mouse is not expected to occur because the area of pickleweed habitat along the channel margins is very small, the area available for upland refuge is extremely limited, and the North Channel is isolated from known occurrences of the species to the south.
- Tidewater goby—this species occurs in brackish water habitats along the California coast; however, the species is not expected to occur in the North Channel because it is not connected to natural streams and lagoons and records do not indicate its presence in the San Francisco Bay estuary. Furthermore, although Bay waters flow through the tide gates during high tide events, the gates preclude the development of brackish/estuarine conditions suitable for this species that would develop without tide gates.
- Steelhead—the North Channel is a constructed stormwater channel that does not support suitable habitat conditions for steelhead. Furthermore, the tide gates, even at high tidal events, preclude presence of this species in the channel and the upstream watershed.
- Ridgeway's Rail—although this species is known to occur in the vicinity of the Airport, the North Channel does not support suitable conditions for Ridgeway's rail. The very limited extent of suitable marsh habitat within the channel and proximity to developed areas, heavily traveled roadways and associated disturbance, the North Channel is not expected to support the Ridgeway's rail.

3.5 Climate

3.5.1 REGULATORY SETTING

Research has shown a direct correlation between fuel combustion and greenhouse gas (GHG) emissions. GHGs, known to trap heat in the earth's atmosphere, include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), O₃, and water vapor.¹⁰ GHGs result primarily from the combustion of fuels. In terms of U.S. contributions, the General Accountability Office (GAO) reports that "domestic aviation contributes about 3 percent of total carbon dioxide emissions, according to the U.S. EPA data," compared with other industrial sources including the remainder of the transportation sector (20 percent) and power generation (41 percent).¹¹ The International Civil Aviation Organization (ICAO) estimates that GHG emissions from aircraft account for roughly 3 percent of all anthropogenic GHG emissions globally.¹²

The scientific community is continuing efforts to better understand the impact of aviation emissions on the global atmosphere. The FAA is leading and participating in a number of initiatives intended to clarify the role

¹⁰ U.S. Environmental Protection Agency, "Overview of Greenhouse Gases," www3.epa.gov/climatechange/ghgemissions/gases.html (accessed January 20, 2016).

¹¹ U.S. General Accountability Office, Report to Congressional Committees, *Aviation and Climate Change*, (2009). <http://www.gao.gov/new.items/d09554.pdf>, accessed: April 6, 2017.

¹² Melrose, Alan, The International Civil Aviation Organization Environmental Report, "European ATM and Climate Adaptation: A Scoping Study," 2010.

that commercial aviation plays in GHG emissions and climate. The FAA, with support from the U.S. Global Change Research Program and its participating federal agencies (e.g., National Aeronautics and Space Administration [NASA], National Oceanographic and Atmospheric Administration [NOAA], EPA, and Department of Energy [DOE]), has developed the Aviation Climate Change Research Initiative (ACCRI) in an effort to advance scientific understanding of regional and global climate impacts of aircraft emissions. FAA also funds the Partnership for Air Transportation Noise & Emissions Reduction (PARTNER) Center of Excellence research initiative to quantify the effects of aircraft exhaust and contrails¹³ on global and U.S. climate and atmospheric composition. Similar research topics are being examined at the international level by the ICAO.¹⁴

3.5.2 AFFECTED ENVIRONMENT

In 2008, the San Francisco Mayor signed into law Ordinance No. 81-08 Climate Change Goals and Action Plan, which mandates the achievement of the following GHG emission targets by each City Department: 25 percent below the 1990 emission level by 2017, 40 percent below the 1990 emission level by 2025, and 80 percent below the 1990 emission level by 2050. City Ordinance 81-08 required the Airport Commission to develop the SFO Department Climate Action Plan (DCAP), through which the Airport Commission manages a variety of initiatives relative to climate change.

The Airport's 2015 *Climate Action Plan*¹⁵ recognized the overall impact of GHG emissions on the environment, as well as the role of the Airport in emissions reduction. The *Climate Action Plan* identified the main sources of GHG production on Airport property. These sources, and associated emissions, are summarized in **Table 3-6**. In accordance with federal protocol, GHG emissions are reported in metric tons of CO₂ equivalent (MT CO₂e), a single metric that represents all GHGs. By 2015, Airport-related GHG emissions had been reduced 38.8 percent from 1990 levels, and the goal is to achieve zero GHG emissions by 2021.¹⁶

¹³ Contrails are line-shaped clouds or "condensation trails," composed of ice particles, that are visible behind jet aircraft engines, typically at cruise altitudes in the upper atmosphere.

¹⁴ Maurice and Lee, Final Report of the International Civil Aviation Organization (ICAO) Committee on Aviation and Environmental Protection (CAEP) Workshop. October 29th –November 2nd, 2007, Chapter 5: "Aviation Impacts on Climate," 2007.

¹⁵ City and County of San Francisco, San Francisco International Airport, *Climate Action Plan 2015*, May 2016, media.flysfo.com/media/sfo/community-environment/2015-sfo-climate-action-plan.pdf (accessed February 10, 2017).

¹⁶ City and County of San Francisco, San Francisco International Airport, *Climate Action Plan 2015*, May 2016, media.flysfo.com/media/sfo/community-environment/2015-sfo-climate-action-plan.pdf (accessed February 10, 2017).

Table 3-6: Airport Greenhouse Gas Emissions Inventory

EMISSION SOURCE	EMISSIONS (MT CO ₂ e)			
	1990	2013	2014	2015
GHG Emissions				
Natural Gas Consumption	11,734	19,991	19,302	17,939
Electrical Consumption ^{1/}	8,689	0	0	0
Fuel Consumption	4,731	4,703	5,332	5,299
Fugitive Refrigerant Gas Emissions	4,874	279	165	227
Solid Waste Disposal	2,880	2,158	2,439	2,503
Wastewater Treatment	87	135	138	128
Total GHG Emissions^{2/}	32,995	27,266	27,365	26,096
GHG Emission Offsets				
Solid Waste Recycling	0	-5,181	-4,700	-5,774
Tree Sequestration	0	-121	-121	-121
Total GHG Emission Offsets^{2/}	0	-5,302	-4,821	-5,895
Net GHG Emissions^{2/}	32,995	21,964	22,544	20,201

NOTES:

MT CO₂e—metric tons of CO₂ equivalent

GHG—greenhouse gases

1/ In 2013, the California Air Resources Board designated the San Francisco Public Utilities Commission (SFPUC) a zero GHG Emission Electric Utility. Subsequently, the Airport assigned a GHG emission factor of 0.00 for all electricity provided by SFPUC.

2/ Totals may not add due to rounding.

SOURCE: City and County of San Francisco, San Francisco International Airport, *Climate Action Plan 2015*, May 2016, media.flysfo.com/media/sfo/community-environment/2015-sfo-climate-action-plan.pdf (accessed February 10, 2017).

PREPARED BY: Ricondo & Associates, Inc., August 2016.

The following potential effects of climate change have been identified for the San Francisco Bay Area: sea level rise, an increase in the likelihood and intensity of flooding, an increase in temperature (greater in the summer than the winter), and an increase in the frequency and severity of extreme heat events. These potential climate effects have been identified as having the potential to affect the City's water supply through changes in precipitation patterns; wastewater management through flooding that inundates infrastructure; energy infrastructure through increased demand during extreme heat days; transportation infrastructure through inundation related to sea level rise, storm surges, and increased flooding events; and ecosystems affected by

changing weather patterns.¹⁷ In response to climate change threats, a *Shoreline Protection Feasibility Study* was prepared for the Airport, which qualitatively assessed sea level rise impacts to the Airport's shoreline and identified adaptation strategies, such as the development of a shoreline protection plan.

Within the Proposed Project Area, sources of air emissions are typical of those associated with fuel combustion resulting from the operation of consolidated rental car facilities (i.e., vehicle operation, fueling, washing, and light maintenance); public parking; maintenance of parking lots, roadways, and landscaped areas along roadways; and solid waste disposal from the ground transportation facilities in the Proposed Project Area. Fuel combustion results in emissions of CO₂, CH₄, and N₂O. The AirTrain and facilities in the Proposed Project Area use electricity; however, the San Francisco Public Utilities Commission (SFPUC) has been designated a zero GHG Emission Electric Utility by the California Air Resources Board. Therefore, GHG emissions are not associated with electricity use by the AirTrain or at the Proposed Project Area facilities.

3.6 Coastal Resources

3.6.1 REGULATORY SETTING

The Coastal Zone Management Act (CZMA), 16 U.S.C. §§ 1451-1466, provides for the management of U.S. coastal resources. If the proposed action or its alternative(s) have the potential for impacts within a coastal zone, the federal agencies must initiate consultation with the relevant state agency to ensure that the proposed action and alternative(s) are consistent with the state's coast zone management program. The National Marine Sanctuaries Act, 16 U.S.C. §§ 1431 *et seq.*, protects areas of the marine environment with special national significance and requires federal agencies whose actions could impact sanctuary resources to consult with the program before taking action.

The San Francisco Bay Conservation and Development Commission (BCDC) is the California planning and regulatory agency with regional authority over the San Francisco Bay, the Bay's shoreline, and the Suisun Marsh, which is located 45 miles northeast of the Airport. The BCDC administers the provisions of the Coastal Zone Management Act under the California Coastal Management Program. The program is based on the provisions of the McAteer-Petris Act, the California Coastal Act, the Suisun Marsh Preservation Act of 1977, the San Francisco Bay Plan (Bay Plan), the Suisun Marsh Protection Plan, and the BCDC's administrative regulations.

The BCDC's Bay Plan was originally adopted in 1969, and it has been periodically updated to guide future uses of the San Francisco Bay and its shoreline.¹⁸ The Bay Plan includes policies that address San Francisco Bay resources, uses of the shoreline, and the filling of the Bay, as well as maps that apply the plan policies to present

¹⁷ San Francisco Department of the Environment, *San Francisco Climate Action Strategy*, 2013 Update, sfenvironment.org/sites/default/files/engagement_files/sfe_cc_ClimateActionStrategyUpdate2013.pdf (accessed May 16, 2017).

¹⁸ San Francisco Bay Conservation and Development Commission, *San Francisco Bay Plan, Adopted 1968*, February 2008.

uses of the Bay shoreline. BCDC requires consistency with Bay Plan policies for the issuance of BCDC permits for filling, dredging, and shoreline development.

3.6.2 AFFECTED ENVIRONMENT

The BCDC has jurisdiction over all areas subject to regular tidal action in the San Francisco Bay and a shoreline band that extends 100 feet inland from the mean high-tide line, referred to as the 100-foot shoreline band. Within BCDC jurisdiction, a BCDC permit is required for filling, dredging, and shoreline development activities. Airport property includes approximately 7 miles of San Francisco Bay shoreline, as well as approach lighting systems for Runways 19L, 28L, and 28R mounted on wooden trestles in the Bay.

As shown on **Exhibit 3-2**, the Proposed Project Area is located approximately one-quarter mile west of the shoreline and is not within the 100-foot shoreline band. A portion of the east construction staging area, currently used to stage equipment, and the associated truck route along an existing access road lie within the 100-foot shoreline band.

The San Francisco Bay, east of the Proposed Project Area, is not part of a designated National Marine Sanctuary.

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SOURCES: Bureau of Land Management, Esri, HERE, DeLorme, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA, June 2015 (aerial); San Francisco Bay Conservation and Development Commission, October 2016 (BCDC Jurisdiction); Association of Bay Area Governments, San Francisco Bay Trail, August 2016 (Bay Trail); Ricondo & Associates, Inc., November 2016 (proposed project area and ground disturbance area).
 PREPARED BY: Ricondo & Associates, Inc., May 2017.

EXHIBIT 3-2



Coastal Resources

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3.7 Department of Transportation Act, Section 4(f), and Land and Water Conservation Fund Act, Section 6(f)

3.7.1 REGULATORY SETTING

Section 4(f) of the Department of Transportation (DOT) Act of 1966, which was codified and renumbered as Section 303(c), dictates that, for any transportation program or project undertaken or approved by the DOT, impacts to the use of any publicly owned park; recreation area; wildlife and waterfowl refuge of national, state, or local significance; or land from a historic site of national, state, or local significance must be considered. The act prohibits the use of these properties for transportation purposes unless no prudent and feasible alternative exists and all efforts have been made to minimize impacts.

For Section 4(f) purposes, use includes not only actual physical takings of Section 4(f) lands but also adverse indirect impacts, referred to as constructive use. Constructive use occurs if Section 4(f) lands are substantially impaired by a proposed action, which includes substantially diminishing the activities, features, or attributes that contribute to the significance or enjoyment of the Section 4(f) resource.

Exceptions to the requirement for Section 4(f) approval are codified in 23 CFR 774.13, which identifies, among other exceptions, that certain trails, paths, bikeways, and sidewalks qualify as an exception in several circumstances. Specifically, 23 CFR 774.13(f)(3) excepts "trails, paths, bikeways, and sidewalks that occupy a transportation facility right-of-way without limitation to any specific location within that right-of-way, so long as the continuity of the trail, path, bikeway, or sidewalk is maintained."¹⁹

Section 6(f) of the National Park Service Land and Water Conservation Fund (LWCF) Act contains provisions for the protection of federal investments in land and water resources. The LWCF Act discourages the conversion of parks or recreational facilities to other uses.

3.7.2 AFFECTED ENVIRONMENT

The Proposed Project Area contains one Section 4(f) resource: the segment of the on-Airport Bay Trail that is permitted by BCDC. By permit originally issued to the Airport in 1996, BCDC approved a series of Airport projects (near-term Master Plan projects) within the 100-foot shoreline band and in the Bay along with three Master Public Access Program projects that provided sufficient public access benefits for Master Plan projects. One of the Master Public Access Program projects was the Bay Trail Link.²⁰ A portion of the Bay Trail is located along the western boundary of the Proposed Project Area and provides an on-Airport connection between the City of South San Francisco Bay Trail terminus to the north and San Bruno Avenue to the south. The Bay Trail is

¹⁹ Title 23 Code of Federal Regulations 774.13(f)(3). These regulations were issued by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA), and are used as guidance by the FAA.

²⁰ San Francisco Bay Conservation and Development Commission, Permit No. 1996.002.07, issued to the City and County of San Francisco, San Francisco International Airport, issued on September 10, 1996, as amended through February 6, 2017.

a 350-mile semi-continuous walking and cycling path surrounding San Francisco Bay.²¹ If the City proposes any changes to the on-Airport Bay Trail segment, BCDC may approve the changes through an amendment to the permit as long as they do not materially affect the quality of the public access experience, do not prevent a continuous access trail around the Airport, meet all San Francisco Bay Trail Project standards (which are maintained by the Association of Bay Area Governments [ABAG]), and provide, on average, a landscaped or natural trail corridor that has a width equal to/or greater than the approved Bay Train Alignment Plan.

As shown on **Exhibit 3-3**, a portion of the Bay Trail is located along the western boundary of the Proposed Project Area and provides an on-Airport connection between the City of South San Francisco Bay Trail Terminus to the north and San Bruno Avenue to the south. This portion of the Bay Trail, which provides a walking trail and bikeway, occupies a right-of-way (ROW) within a transportation facility (the Airport).

The exception described in Section 3.7.1 (23 CRF 774.13 (f)(3)), is applicable to the segment of the Bay Trail in the Proposed Project Area.

No other Section 4(f) resources are located within the Proposed Project Area. No Section 6(f) resources are located within the Proposed Project Area.

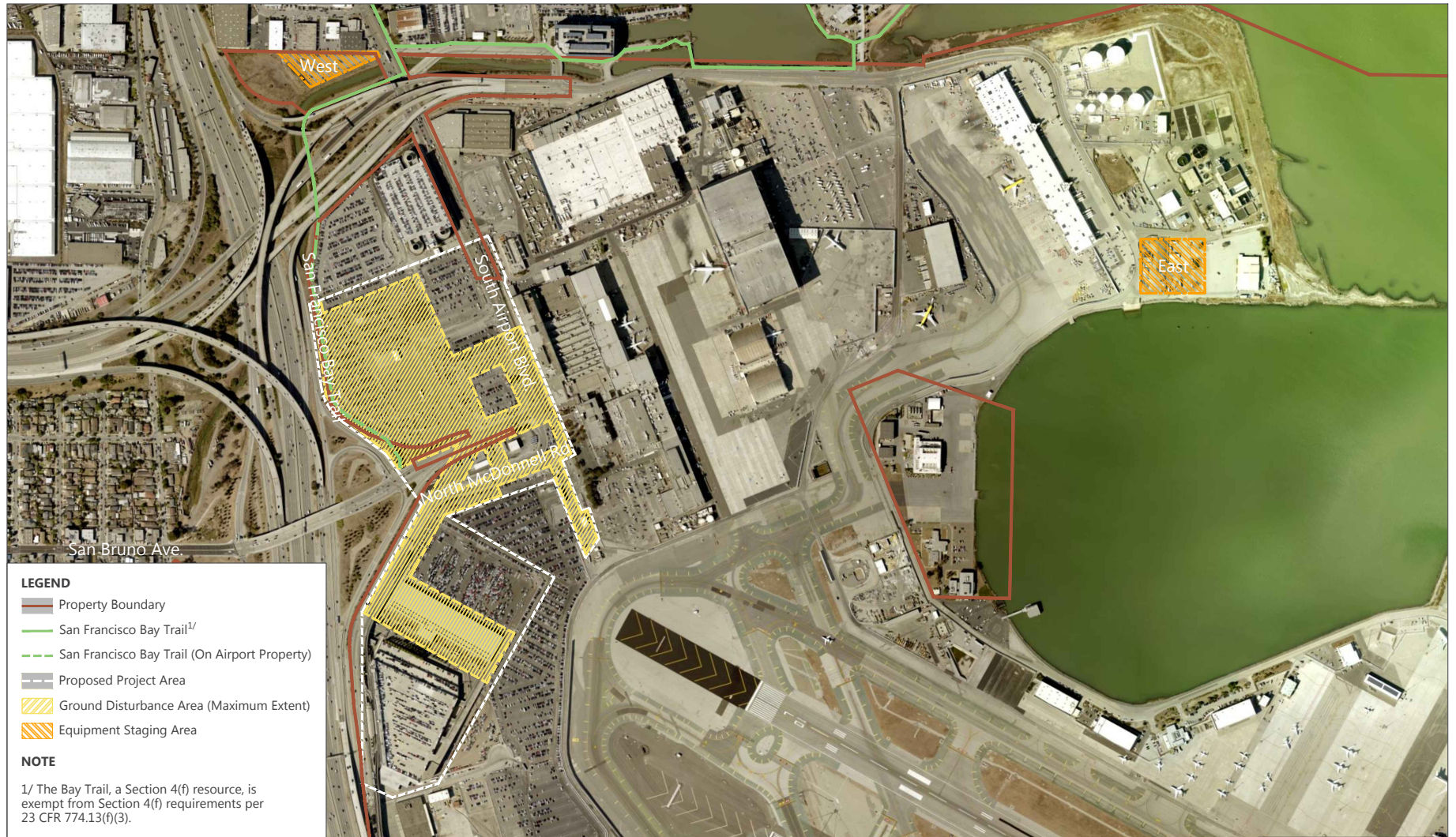
No historic resources of national, state, or local significance subject to Section 4(f) protection were identified within the Proposed Project Area. Additional information pertaining to historic resources is included in Section 3.9.

3.8 Hazardous Materials, Solid Waste, and Pollution Prevention

This section provides a discussion of hazardous materials, existing contamination, and waste streams present in the Proposed Project Area. This section is organized to present a discussion of the following:

- Hazardous materials
- Solid waste
- Pollution prevention measures

²¹ Association of Bay Area Governments, San Francisco Bay Trail, "Welcome to the San Francisco Bay Trail," baytrail.org/about-the-trail/welcome-to-the-san-francisco-bay-trail/ (accessed August 11, 2016).



SOURCES: Bureau of Land Management, Esri, HERE, DeLorme, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA, June 2015 (aerial); Association of Bay Area Governments, San Francisco Bay Trail, August 2016 (Bay Trail); Ricondo & Associates, Inc., November 2016 (proposed project area and ground disturbance area).
 PREPARED BY: Ricondo & Associates, Inc., May 2017.

EXHIBIT 3-3



Section 4(f) Resources

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3.8.1 HAZARDOUS MATERIALS

3.8.1.1 Regulatory Setting

At the federal level, hazardous materials are controlled by a number of federal laws and regulations, most of which are promulgated by the EPA. The two statutes most applicable to airport projects are the Resource Conservation and Recovery Act (RCRA, as amended by the Federal Facilities Compliance Act of 1992) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended (also known as Superfund). RCRA governs the generation, treatment, storage, and disposal of hazardous wastes. CERCLA provides for cleanup of any release of a hazardous substance (excluding petroleum) in the environment. In addition to RCRA and CERCLA, the Hazardous Materials Transportation Act (HMTA) and the Emergency Planning and Community Right to Know Act (EPCRA) serve as additional requirements governing the storage, use, and transportation of hazardous and other regulated materials from their time of origin to their ultimate disposal. These regulations also govern the recovery and cleanup of environmental contamination resulting from the accidental or unlawful release of hazardous materials and substances. Additional regulations related to hazardous materials include:

- Clean Water Act—regulates discharges and spills of pollutants (including hazardous materials) to surface and groundwater.
- Safe Drinking Water Act—regulates discharges of pollutants to underground aquifers.
- Clean Air Act—regulates discharges of air emissions (including hazardous air pollutants) to the ambient (i.e., outside) air.

At the state level, the California Code of Regulations Title 22, Division 4.5, *Environmental Health Standards for the Management of Hazardous Waste*, regulates the disposal and management of hazardous waste within the state of California. The California Environmental Protection Agency (CalEPA) oversees the Unified Program to ensure statewide consistency in hazardous waste and materials administrative requirements, permits, inspections, and enforcement. In addition to CalEPA, the following four state agencies are involved with implementing the Unified Program: Department of Toxic Substances Control, Governor's Office of Emergency Services, Department of Forestry and Fire Protection Office of the State Fire Marshall, and the State Water Resources Control Board (SWRCB).

Local government agencies are certified by CalEPA to implement the hazardous waste and materials standards of these four state agencies.²² The San Mateo County Environmental Health Division is the Certified Unified Program Agency that implements federal and state regulations in the county pertaining to hazardous materials, solid waste, underground storage tanks (USTs), and aboveground storage tanks (ASTs). The San Francisco Regional Water Quality Control Board (RWQCB) is the lead agency with regulatory authority over spills and cleanup of hazardous materials at the Airport. Finally, the Airport Rules and Regulations outline procedures for the storage, handling, and disposal of hazardous materials.

²² California Environmental Protection Agency, "Unified Program," www.calepa.ca.gov/cupa/ (accessed August 19, 2016).

3.8.1.2 Affected Environment

Gasoline is stored in 14 USTs within the QTA facility in Lot D (the location of the existing QTA facility is shown on Exhibit 1-3). A total capacity of 177,000 gallons (eleven 12,000-gallon tanks and three 15,000-gallon tanks) of gasoline is available and distributed via 60 above-ground fuel dispensers. The USTs and fuel dispensing system were installed when the existing Ready/Return Garage and QTA facility were constructed in 1997.

Recognizing that soil and groundwater at the Airport have been affected primarily by free products,²³ including total petroleum hydrocarbons and fuel constituents, the San Francisco RWQCB issued Order No. 99-045, which defines a framework to implement an Airport-wide cleanup and management strategy. The purpose of the order is to streamline regulatory oversight and allow cleanup decisions to be made consistently for similar sites. Four Remediation Management Zones (RMZs) were delineated, and risk-based cleanup standards were defined for each zone based on conservative assumptions. The Proposed Project Area is located in two RMZs: the Human Health Protection Zone (HHPZ) and the Horizontal Migration Management Zone (HMMZ). The HHPZ is defined as all areas that are currently developed, or may be developed, as part of the Airport's Master Plan and other planned construction and are generally defined as all non-aircraft movement areas. The HMMZ covers the entire Airport site, excluding a zone along the Bay shoreline.²⁴

A review of hazardous material cleanup-site records found no active cleanup sites within the Proposed Project Area. The closest active cleanup site is located north of the North Access Road. This site is approximately 1,100 feet to the northeast of the Proposed Project Area and 600 feet to the east of the west equipment staging area. The site is designated Open-Remediation as of July 1, 2002, which means the responsible party, which is Equilon Enterprises, LLC (Shell Oil Products US), is implementing one or more remedies under an approved cleanup plan for the site.²⁵

3.8.2 SOLID WASTE

3.8.2.1 Regulatory Setting

The EPA regulates household, industrial, and manufacturing solid wastes under the RCRA. Subtitle D of the RCRA establishes the Solid Waste Program, which encourages states to develop comprehensive plans to manage nonhazardous solid waste, sets criteria for municipal solid waste landfills, and prohibits the open dumping of solid waste.

²³ Free product is a term used to describe hydrocarbon contamination (such as kerosene, diesel, and petroleum contamination) that is present as a discrete substance rather than mixed with soil or water because the liquid is less dense than water. These liquids are termed non-aqueous phase liquids. (Soilutions Ltd., "Environmental Remediation Definitions," blog.soilutions.co.uk/2011/11/14/environmental-remediation-definitions/ [accessed May 17, 2017]).

²⁴ California Regional Water Quality Control Board, San Francisco Bay Region, Order No. 99-045, *Adoption of Revised Site Cleanup Requirements and Rescission of Order Nos. 95-136, 95-018, 94-044, 92-152, and 92-140 for the City and County of San Francisco, the United States Coast Guard, and San Francisco International Airport Tenants/Operators*, June 16, 1999.

²⁵ California State Water Resources Control Board, "GeoTracker," geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=san+francisco+airport (accessed November 7, 2016).

The California Code of Regulations, Titles 14 and 27, contain regulations related to waste management. The regulations are enforced by the California Department of Resources Recycling and Recovery (CalRecycle). CalRecycle regulates the collection, processing, storage, handling, and disposal of solid waste and the associated facilities.

The City has a goal of achieving zero waste by 2020, and it has adopted a variety of policies to accomplish this goal. In support of the City's goal, the Airport, through the Zero Waste Plan, aims to achieve a recycling rate of 85 percent by 2017 and 100 percent by 2020.²⁶

3.8.2.2 Affected Environment

In 2015, approximately 10,924 tons of solid waste were generated at the Airport, 55 percent of which was either composted or recycled. The majority of solid waste comprises food/compostable materials, cardboard, and paper. Approximately 17 percent of the solid waste is separated for recycling at the Airport, with the majority separated off-site by the South San Francisco Scavenger Company at the Blue Line Transfer Station. Residual waste from the Blue Line Transfer Station is currently transported to Ox Mountain Landfill near Half Moon Bay in San Mateo County.²⁷ Operational activities within the Proposed Project Area that generate solid waste include typical office waste and rental car passenger waste.

The City's Green Building Ordinance calls for recycling a minimum of 75 percent of non-hazardous construction and demolition (C&D) solid waste generated by City-sponsored projects that are located within City limits; this recycling rate goal increases to 85 percent in 2018.²⁸ Construction projects at the Airport, which is located in unincorporated San Mateo County, follow California Building Standards Code and consistently surpass this goal with C&D recycling rates above 90 percent.

The Bay Area region is projected to have over 200 million tons of remaining landfill capacity, which is projected to support the region for over 40 years at existing waste-generation rates.²⁹

Waste from the Airport, such as that generated during construction projects, is typically sent to the Ox Mountain Landfill or Keller Canyon Landfill in Contra Costa County. Both landfills accept asbestos, soils with petroleum, pesticide containers, among other items that are typically generated during Airport construction projects and are included among the regional estimate of available landfill capacity. The Clean Harbors Buttonwillow facility

²⁶ City and County of San Francisco, San Francisco International Airport, *Climate Action Plan 2015*, May 2016, media.flysfo.com/media/sfo/community-environment/2015-sfo-climate-action-plan.pdf (accessed February 10, 2017).

²⁷ Vanasse Hangen Brustlin, Inc., *San Francisco International Airport Commission, San Francisco International Airport 2014 Environmental Sustainability Report*, December 2014.

²⁸ City and County of San Francisco, *Green Building Code 2013 Edition*, effective November 5, 2013.

²⁹ California Department of Resources Recycling and Recovery, *State of Disposal in California*, March 2015.

in Kern County accepts Class I hazardous waste in California. Clean Harbors Buttonwillow has a permitted landfill capacity in excess of 10 million cubic yards and is able to stabilize 100 tons of waste per hour for landfill.³⁰

3.8.3 POLLUTION PREVENTION

3.8.3.1 Regulatory Setting

The EPA is responsible for the administration and enforcement of Spill Prevention Control and Countermeasures (SPCC) Plan requirements. The requirements are intended to prevent oil from reaching navigable waters through measures to prevent, control, and mitigate oil spills. An SPCC Plan must be prepared for a facility that has a reasonable potential for oil, including petroleum, to discharge to a navigable water if the facility stores either (1) 1,320 gallons or greater of oil in ASTs or (2) 42,000 gallons or greater of oil in USTs.

Section 402 of the Clean Water Act (CWA) formed the National Pollutant Discharge Elimination System (NPDES) to regulate pollutant discharge, including stormwater, into navigable waters, referred to as waters of the United States. The SWRCB administers the NPDES program in California, with implementation and enforcement by the nine RWQCBs. The San Francisco Bay RWQCB administers the NPDES program at the Airport. Locally, Airport's Bay Pollution Prevention Program (BPPP) is responsible for ensuring that pollutants generated on Airport property do not enter the San Francisco Bay through the storm water drainage system and employs prevention strategies.

A General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ) is required for any project disturbing one or more acre. The Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) that describes best management practices (BMPs) and other measures to prevent the discharge of sediment and other pollutants to the stormwater system. Stormwater, which may be polluted, is transported through municipal separate storm sewer systems (MS4s) and discharged into local water bodies. Under the NPDES, municipalities with populations of 100,000 or more must obtain an NPDES permit for stormwater discharges transported through MS4s. The NPDES permit requires the development and implementation of BMPs to minimize the discharge of pollutants from the sewer system.

3.8.3.2 Affected Environment

The City maintains an SPCC Plan for the Airport and facility-wide SWPPPs for industrial and construction activities.³¹ The SWPPPs were prepared under the NPDES Program administered by the CalEPA, the SWRCB, and the RWQCB to conform to the provisions outlined in the Airport's NPDES Permit Number CA0038318 and the statewide General Permits for industrial and construction activities.

³⁰ Clean Harbors Buttonwillow, LLC, "Transportation & Disposal: Buttonwillow, California Facility Facts," www.cleanharbors.com/location/buttonwillow-landfill-facility (accessed May 23, 2017).

³¹ City and County of San Francisco, San Francisco International Airport, *Stormwater Pollution Prevention Plan for Industrial Activities*, December 9, 2011 (last plan review June 29, 2015); City and County of San Francisco, San Francisco International Airport, *Stormwater Pollution Prevention Plan for Construction Activities*, September 23, 2013 (last plan review June 1, 2016).

The SWPPP for industrial activities addresses the prevention of pollutants in stormwater discharges that are associated with activities classified as industrial and occur at the Airport, such as maintenance and fuel storage and dispensing. The SWPPP defines BMPs for industrial activities. Within the Proposed Project Area, vehicle operation, fueling, washing, and maintenance activities have the potential to contribute pollutants to stormwater runoff.

In addition to BMPs for these activities, the SWPPP documents the Airport's infrastructure and practices to manage stormwater. The first flush of stormwater runoff during a storm event from the Proposed Project Area drains to the West Field Detention Basin, one of four on-Airport stormwater detention basins, for conveyance to the on-Airport Industrial Wastewater Plant (IWP) at the Mel Leong Treatment Plant for treatment and reuse as nonpotable water in the terminal area or transfer to South San Francisco for final treatment and release into San Francisco Bay. If the capacity of the stormwater detention basin is exceeded during extended rain events, then the excess stormwater is discharged to the San Francisco Bay in accordance with the Airport's NPDES permit.

Because Airport construction activities collectively exceed 5 acres of land area, construction at the Airport must be permitted under the NPDES Construction General Permit that regulates stormwater discharges associated with construction activities. The Airport's Construction SWPPP requires preparation, review, and implementation of project-specific SWPPPs for each construction site prior to the start of construction. The project-specific SWPPPs are prepared consistent with the state's Construction General Permit and become part of the Airport's Construction SWPPP. Construction within the Proposed Project Area would require preparation of a project-specific construction SWPPP.

3.9 Historic, Architectural, Archaeological, and Cultural Resources

3.9.1 REGULATORY SETTING

Cultural resources are prehistoric and historic sites, districts, structures, artifacts, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. Numerous laws and regulations require that possible effects on cultural resources be considered during the planning and execution of federal actions. These laws and regulations stipulate a process of compliance, define the responsibilities of the federal agency proposing the actions, and prescribe the relationships among involved agencies. NEPA directs federal agencies to assess the environmental impacts of proposed actions, including impacts to historic and cultural resources.

The primary federal laws pertaining to potential cultural resources in the Proposed Project Area are the following:

- The National Historic Preservation Act (NHPA) establishes the National Register of Historic Places (NRHP); Section 106 of the NHPA requires federal agencies to consider whether proposed activities have the potential to have an adverse effect on historic properties that are already listed, determined

eligible, or not yet evaluated under the NRHP criteria. Properties that are either listed in or eligible for listing in the NRHP are provided the same measure of protection under Section 106. Federal agencies are required to consider the effects of proposed undertakings on historic properties through consultation with the State Historic Preservation Officer (SHPO) and Tribal Historic Preservation Officers (THPOs).

- The American Indian Religious Freedom Act requires federal agencies to consult with Native American groups concerning federal actions that may affect sacred sites.
- The Native American Graves Protection and Repatriation Act addresses the disposition of certain Native American cultural items, including human remains, and it governs the inadvertent discovery of Native American cultural items on federal and tribal lands.
- The Archeological and Historic Preservation Act provides for the preservation of historical and archaeological data that might otherwise be destroyed or irreparably lost due to a federal action.

At the state level, the California State Law and Historic Preservation Statutes, Regulations, and Administrative Policies Regarding the Preservation and Protection of Cultural and Historical Resources outlines the requirements established related to antiquities encountered during construction by a state or local government agency. The California Register of Historical Resources (Title 14, Chapter 11.5 of the California Code of Regulations) describes the guidelines to establish a historic resource within the state of California. All historic resources are considered part of the environment, and any project that has the potential to cause a significant adverse effect on a historical resource is identified as having the potential to result in a significant adverse effect on the environment and, therefore, is subject to California Environmental Quality Act (CEQA) regulations.³²

Locally, the San Francisco Historic Preservation Commission (SFHPC) identifies and designates historic resources within the San Francisco area. The SFHPC ensures that all standards and guidelines established by the California State Office of Historic Preservation (the California SHPO) are followed, as well as determines local historical designations. Local historic designation falls under San Francisco Planning Code Articles 10 and 11. These articles provide protection for historically significant resources located in San Francisco that are facing demolition or exterior alterations.³³

3.9.2 AFFECTED ENVIRONMENT

The Area of Potential Effects (APE) is defined as the geographic area within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties.³⁴ For evaluation of the Proposed Action, the APE was defined as the Proposed Project Area to a maximum depth of 135 feet below ground (consistent with the AirTrain pilings) and the equipment staging areas (no ground disturbance). The Proposed

³² California Office of Historic Preservation, Department of Parks and Recreation, *California Office of Historic Preservation Technical Assistance Series #10: California State Law and Historic Preservation Statutes, Regulations and Administrative Policies Regarding the Preservation and Protection of Cultural and Historical Resources*, September 2005.

³³ City and County of San Francisco, Planning Department, "Historic Preservation FAQs," sf-planning.org/historic-preservation-faqs (accessed August 30, 2016).

³⁴ Title 36 Code of Federal Regulations Part 800, *Protection of Historic Properties*, Section 800.16(d).

Action would not affect the number or type of aircraft using the Airport, nor would it change the visual character (i.e., surface and structured parking, roadways, and rental car facilities) of the project area vicinity; therefore, the APE was limited to the Proposed Project Area to assess direct project effects. As shown on **Exhibit 3-4**, the APE comprises previously disturbed, developed, and paved areas on Airport property (e.g., parking facilities and roadways).

Archaeological evidence indicates that the San Francisco Bay region was inhabited by prehistoric populations and its resources were used intensively during prehistoric times. However, most of the land surface of the Airport was tidal marsh until the 1920s. From the 1920s through the 1970s, much of the land surface supporting Airport facilities was created through the placement of fill. The APE was tidal marsh until the late 1990s, when the area was filled to support construction of the RCC facilities in Lot D and parking facilities in Lot DD. It is highly unlikely that *in situ* cultural resources would be present in the fill material within the APE.

Structures located within the APE include the Ready/Return Garage and the QTA facility, which were constructed in the late 1990s and are therefore less than 50 years old. They also lack any architectural or historic integrity to be eligible for listing in the NRHP or California Register of Historic Places.

A cultural and architectural evaluation of the entire Airport, in support of the 1992 Airport Master Plan, was completed in 1991³⁵ and reconfirmed in a 1997 focused evaluation³⁶ that concentrated on proposals that would occur in two areas of the Airport property: (1) Airport terminals and other landside facilities generally between U.S. 101 on the west and the airfield on the east; and (2) the east field maintenance hangar and fixed-base operator projects generally north of Runways 28R and 28L and west of Runways 10R and 10L.³⁷ Based on the 1991 and 1997 evaluations, the FAA determined that no properties within the Airport Master Plan APE were eligible for inclusion in the National Register of Historic Places, and the undertaking proposed at that time would not affect any properties eligible for or listed in the NRHP. On August 6, 1998, the California SHPO, in reply to the FAA, stated:

³⁵ David Chavez & Associates, *Cultural Resources Evaluation for the San Francisco International Airport Master Plan EIR, San Mateo County, California*, February 1991.

³⁶ David Chavez & Associates, "San Francisco International Airport (SFIA) Master Plan EA (ESA Project No. 960244), July 3, 1997.

³⁷ City and County of San Francisco, *Final Environmental Assessment, Volume 1 – Documentation, Airport Master Plan Improvements, San Francisco International Airport, San Francisco, California*, Section 4.8, "Historic, Architectural, Archaeological, and Cultural Resources, October 1998.

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SOURCES: Bureau of Land Management, Esri, HERE, DeLorme, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA, June 2015 (aerial); Ricondo and Associates, Inc., November 2016 (area of potential effects).
 PREPARED BY: Ricondo & Associates, Inc., May 2017.

EXHIBIT 3-4



Areas of Potential Effects

Drawing: Z:\SFO\01 - SFO NEPA On-Call 2016\02 - RCC AirTrain EA\CAD Exhibits\Exhibit 3-4 Area of Potential Effects_2017-05-26.dwg Layout: 8.5x11L Plotted: Sep 25, 2017, 09:27AM

Rental Car Center and AirTrain Extension EA
 Affected Environment

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"The FAA has now determined in accordance with 36 CFR Section 800.4(d), that the APE delineated for the federal action subject to Section 106 does not contain historic properties. I do not object to this determination. Accordingly, the FAA has satisfactorily complied with Section 106 of the National Historic Preservation Act and its implementing regulations for the undertaking as defined in your correspondence."³⁸

The proposed RCC and AirTrain Extension APE, shown on Exhibit 3-4, is within the boundaries of the 1991 and 1997 evaluations. After discussions with the California SHPO regarding the Proposed Action addressed in this EA, an updated Cultural Resource Inventory Report was prepared in June 2017. Based upon the earlier evaluations and the 2017 Cultural Resource Inventory Report, the FAA found that no cultural or historic properties are present in the proposed RCC and AirTrain extension APE and issued a No Historic Properties Affected determination in its consultation with the California SHPO on June 20, 2017. The California SHPO concurred with the FAA's No Historic Properties Affected finding and confirmed that it had no concerns with the FAA's delineation of the APE, as documented in its letter to the FAA on August 22, 2017. The SHPO also advised the FAA of additional consultation responsibilities in the event of an unanticipated discovery or a change in the scale or scope of the project. Copies of the FAA and SHPO correspondence are provided in **Appendix F**. Consultation with representatives of Native American tribes who may have additional knowledge of potential cultural resources in the area occurred on July 10, 2017, as documented in Section 5.3.

3.10 Land Use

3.10.1 REGULATORY SETTING

Pursuant to 49 U.S.C. § 47107(a)(10), an airport sponsor is required to provide written assurance that appropriate action has been, or will be, taken to ensure existing and planned land uses adjacent to or in the immediate vicinity of an airport are compatible with normal airport operations. Additionally, pursuant to 49 U.S.C. § 47106(a)(1), the airport sponsor must provide assurance that a proposed action is consistent with existing land use plans.

Pursuant to the California State Aeronautics Act (California Public Utilities Code §§ 21670 *et seq.*), every county that contains an airport with scheduled airline service is required to establish an airport land use commission (ALUC). The ALUC is required to develop and implement an airport land use compatibility plan (ALUCP) to provide for the orderly growth of a public airport and the area surrounding the airport. The ALUCP should reflect the anticipated growth of the airport over the next 20 years. Planning documents and zoning ordinances for jurisdictions within the area covered by an ALUCP must be consistent with the ALUCP unless the jurisdiction has formally overruled the ALUCP. While the Airport participates in the ALUCP process, the doctrine of intergovernmental immunity exempts property owned or leased by governmental entities from local

³⁸ Cheryl Widell, California State Historic Preservation Officer, "Section 106 Consultation for San Francisco International Airport Layout Plan Approval; San Francisco International Airport Master Plan," letter to Joseph R. Rodriguez, Supervisor, Planning and Programming Section, Federal Aviation Administration, Airports District Office, August 6, 1998.

government building and zoning laws that would otherwise be pertinent; therefore, the Airport is not subject to land use controls of San Mateo County or the neighboring municipalities within San Mateo County.

3.10.2 AFFECTED ENVIRONMENT

The City/County Association of Governments of San Mateo County (C/CAG) serves as the ALUC for San Mateo County. The ALUCP for San Francisco International Airport (SFO ALUCP) was adopted by C/CAG on November 8, 2012.³⁹ Permits, land use proposals, and zoning changes within unincorporated San Mateo County and the cities of South San Francisco, San Bruno, Millbrae, and Burlingame are reviewed by C/CAG to identify possible incompatible development that may affect the Airport.

As required under 49 U.S.C. § 47107(a)(10), the City assures that appropriate action, including the adoption of zoning laws, has been or will be taken, to the extent reasonable, to restrict the use of land adjacent to or in the immediate vicinity of the Airport to activities compatible with normal Airport operations, including the landing and takeoff of aircraft. A copy of the letter documenting this assurance is provided in **Appendix G**.

While the Proposed Action would be constructed on Airport property, state ROW is within the Proposed Project Area along the north and south sides of San Bruno Avenue. Encroachment into the state ROW would require an Encroachment Permit from the California Department of Transportation (Caltrans).

3.11 Natural Resources and Energy Supply

3.11.1 REGULATORY SETTING

Executive Order 13693, *Planning for Federal Sustainability in the Next Decade*, sets sustainability goals for federal agencies to promote energy conservation, efficiency, and management by reducing energy consumption and GHG emissions.

3.11.2 AFFECTED ENVIRONMENT

As described in Section 3.5, the Airport Commission has developed initiatives to enhance energy and fuel use efficiencies, increase solid waste recycling, and advance the use of clean or renewable energy in support of the Citywide GHG reduction strategies. One such initiative was a pilot subsidy to encourage procurement of fuel-efficient vehicles by rental car companies at SFO and converting shuttle buses to compressed natural gas (CNG) and electric buses.

Within the Proposed Project Area, facilities rely on the electricity supplied by the SFPUC. From July 1, 2014 through June 30, 2015 (fiscal year [FY] 2014/2015), 326 million kilowatt hours (kWh) of electricity were consumed at the Airport. **Table 3-7** presents AirTrain, Ready/Return Garage, and QTA facility electricity consumption during this time period. Of total Airport electricity usage, 2.4 percent is used by the AirTrain system and

³⁹ Ricondo & Associates, Inc., *Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport*, November 2012.

3.4 percent is used by the RCC facilities. Rental car vehicles and shuttle bus operations in the Proposed Project Area also consume energy in the form of fuel.

Table 3-7: Electricity Use (Fiscal Year 2014/2015)

FACILITY	ELECTRICITY USE (million kWh)	PERCENT OF TOTAL AIRPORT
Total Airport	326.0	100.0%
Facilities in the Proposed Project Area		
RCC Facilities		
Ready/Return Garage	7.3	
QTA Facility	3.8	
RCC Facilities Total	11.1	3.4%
AirTrain (system)	7.7	2.4%

NOTES:

kWh—kilowatt hour

RCC—Rental Car Center

QTA—Quick Turn-around Facility

FY—fiscal year (July 1–June 30)

SOURCE: City and County of San Francisco, San Francisco International Airport, Planning and Environmental Affairs, September 2016.

PREPARED BY: Ricondo & Associates, Inc., October 2016.

In addition to clean hydroelectricity provided by SFPUC, the Airport Commission installed 50,000 square feet of solar panels on the roof of Terminal 3 to supply electricity to the terminal. Pacific Gas and Electric (PG&E) supplies natural gas to the Airport, including the existing RCC, which uses natural gas for facility and water heating.

Mining activities for oil, coal, natural gas, sand, gravel, and crushed stone do not occur within the Proposed Project Area, and no known important deposits of such resources exist within the Proposed Project Area.

3.12 Noise and Noise-Compatible Land Use

3.12.1 REGULATORY SETTING

The FAA has laws and regulations that provide a basis for local development of airport plans, analysis of potential impacts from airport development, and compatibility policies. In terms of land-use compatibility, the primary role of the FAA is regulation of noise at the source. This includes the development of noise standards for certificated aircraft and the approval of noise abatement flight procedures. The FAA also plays a supporting role in the development of local airport noise abatement plans and policies to ensure that land uses in the

immediate vicinity of airports are compatible with normal airport operations. The FAA requires an analysis of noise exposure when development actions may change the cumulative noise exposure of individuals to aircraft noise in areas surrounding an airport.

California law mandates the use of the Community Noise Equivalent Level (CNEL) as the metric for aircraft noise exposure.⁴⁰ The FAA recognizes CNEL as the noise metric for use in evaluating actions in California.⁴¹ CNEL is a 24-hour time-weighted average noise metric expressed in A-weighted decibels (dBA); it accounts for noise levels of individual aircraft operations, the number of operations, and the time of day that the operations occur. CNEL is measured for three time periods: day (7:00 a.m. to 6:59 p.m.), evening (7:00 p.m. to 9:59 p.m.), and night (10:00 p.m. to 6:59 a.m.). To represent the added intrusiveness of sounds during evening and nighttime hours, CNEL adds weights of 4.77 dBA and 10 dBA, respectively to events occurring during those hours. CNEL contours are a graphical representation of the distribution of noise from average annual daily aircraft operations over the area surrounding an airport. Pursuant to 14 CFR 150, the FAA defines CNEL 65 as the threshold of noise compatibility for residential land uses in California.

3.12.2 AFFECTED ENVIRONMENT

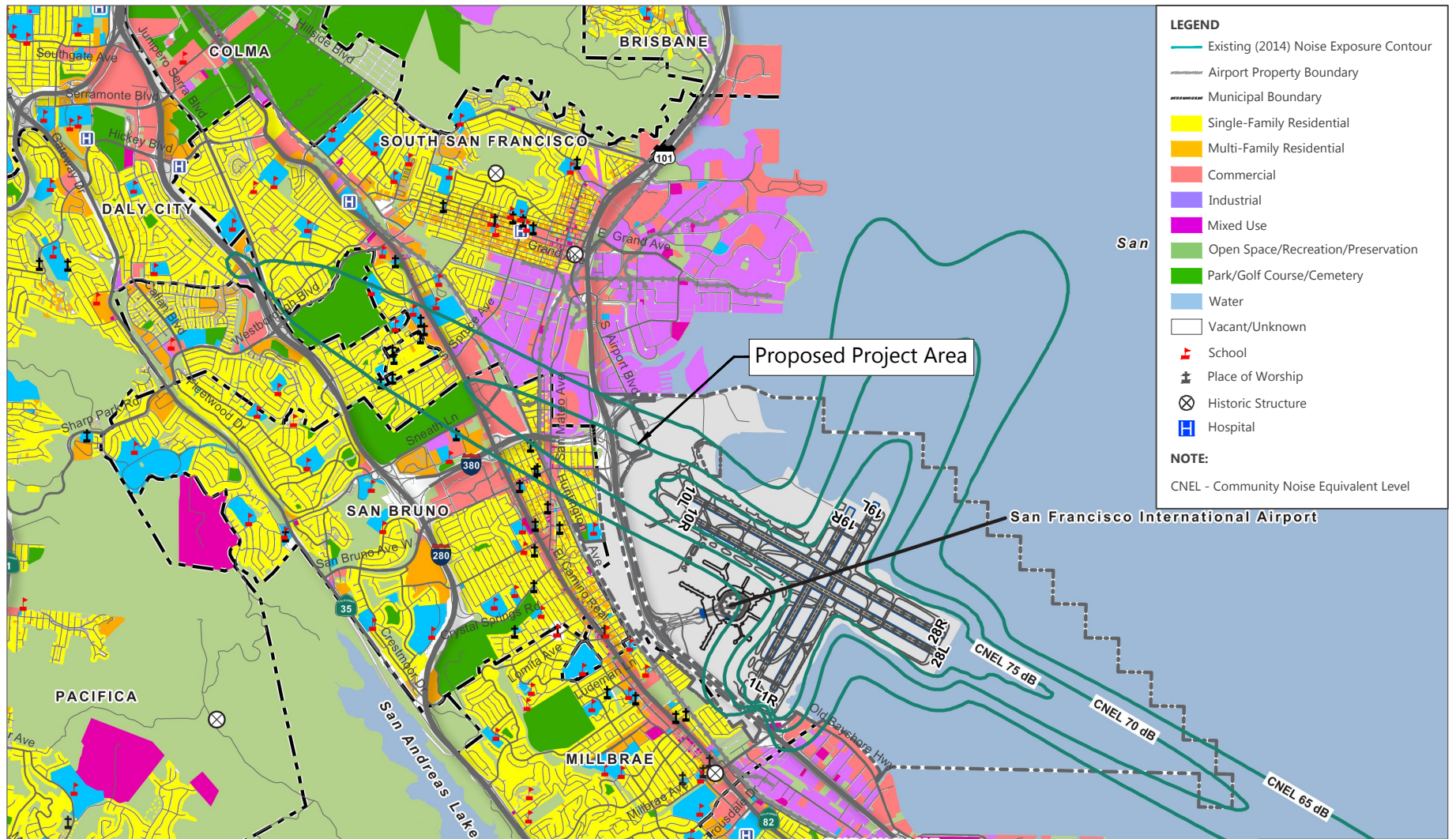
The existing noise environment in and around the Proposed Project Area is dominated by noise from Airport-related activity, including aircraft taxiing, taking off, and landing at the Airport. An existing conditions (2014) noise exposure map was developed as part of the 14 CFR Part 150 Noise Exposure Map Update for the Airport.⁴² The 2014 noise exposure contours are shown on **Exhibit 3-5**. Aircraft noise exposure would be affected if changes in the number of aircraft operations, aircraft types, aircraft movement, runway use, or flight tracks would occur as a result of the Proposed Action.

The Proposed Project Area is exposed to average aircraft noise levels of CNEL 65 dBA and higher. No noise-sensitive areas are within the Proposed Project Area, and land use within the Proposed Project Area is compatible with this level of noise exposure.

⁴⁰ State of California, California Code of Federal Regulations, Title 21, Division 2.5, Chapter 6, *Noise Standards*, March 22, 1990.

⁴¹ U.S. Department of Transportation, Federal Aviation Administration, Order 1050.1F, *Environmental Impacts: Policies and Procedures*, July 16, 2015.

⁴² Environmental Science Associates, *San Francisco International Airport, 14 Code of Federal Regulations (CFR) Part 150 Study Update, Noise Exposure Map Report*, August 2015.



SOURCES: ESRI, 2014, San Mateo County Planning and Building Department, 2014 (basemap); Environmental Science Associates, San Francisco International Airport, 14 Code of Federal Regulations (CFR) Part 150 Study Update, Noise Exposure Map Report, August 2015 (noise contours).
PREPARED BY: Ricondo & Associates, Inc., May 2017.

EXHIBIT 3-5



Existing Conditions Noise Exposure Map (2014)

Drawing: Z:\SFO\01 - SFO NEPA On-Call 2016\02 - RCC AirTrain EA\CAD Exhibits\Exhibit 3-5 Noise Exposure_2017-05-26.dwg Layout: 8.5x11L Plotted: Sep 25, 2017, 09:28AM

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3.13 Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks

3.13.1 REGULATORY SETTING

Evaluation of socioeconomic effects encompass aspects of a project that are either social or economic in nature and include consideration of the activities and resources associated with the everyday human environment, particularly related to population centers, their demographics, and the economic activities generated. One statute, the *Uniform Relocation Assistance and Real Property Acquisitions Policy Act of 1970*, defines requirements related to the displacement of people resulting from a proposed action. Additionally, Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, was enacted in 1994 to ensure the fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. The principal social impacts to be considered are those associated with relocation or other community disruption, transportation, planned development, and employment. Finally, Executive Order 13045, *Protection of Children from Environmental and Health Risks and Safety Risks*, was enacted in 1997 to direct federal agencies to give high priority to the identification and assessment of environmental health risks and safety risks that may disproportionately affect children, such as through substances a child may come into contact with or ingest.

3.13.2 AFFECTED ENVIRONMENT

The socioeconomic conditions of the Proposed Project Area and the surrounding environs are reflective of a highly urbanized area supporting ground and air transportation facilities and activities. The environs to the northwest and north of the Proposed Project Area support industrial activities, while environs to the east and south support operation of the Airport. An urban residential area is located approximately 1,000 feet to the west of the Proposed Project Area and is separated from the Proposed Project Area by U.S. 101 and a landscaped buffer area. Coordination of public services, such as police and fire protection, occurs outside of the Proposed Project Area. No residential communities including environmental justice (low-income or minority) populations are present in or immediately adjacent to the Proposed Project Area.

Members of environmental justice and children populations may pass through the Proposed Project Area when using the ground access and parking facilities in Lots D and DD or the Bay Trail. However, populations accessing these facilities are expected to be reflective of the general population rather than a disproportionate environmental justice population and cannot be defined as residing within a discrete geographic area.

Economic and employment activities in the Proposed Project Area are related to the provision of ground access to the Airport specifically associated with long-term parking and car rentals. These activities are subject to the

City's Local Business Enterprise Ordinance,⁴³ which includes protections and corrective adjustments to help small and disadvantaged businesses compete for City contracts.

Ground access activities in the Proposed Project Area are connected to, and thus affect, the surrounding community by vehicle trips between the Proposed Project Area roadways and the local roadway network. Therefore, the affected environment includes on- and off-Airport roadway segments affected by activities in the Proposed Project Area. **Table 3-8** summarizes trip types associated with activities in the affected environment for ground access considerations.

Table 3-8: Surface Transportation Vehicle Trip Types Associated with the Proposed Project Area

TRIP TYPE	VEHICLE TRIP ROUTE BETWEEN OFF-AIRPORT LOCATION AND PROPOSED PROJECT AREA	ASSOCIATED VEHICLE TRIP ROUTE TO TERMINAL
Rental Car Passengers Using the SFO RCC	Private vehicle (rental car) between regional roadway network and Lot D via on-Airport roadways in the Proposed Project Area	None ^{1/}
Rental Car Passengers Using off-Airport Rental Car Facilities	Shuttle bus between off-Airport rental car facility and Lot D Kiss & Fly via on-Airport roadways in the Proposed Project Area	None ^{1/}
Long-term Parking Passengers Using SFO Lots D ^{2/} or DD	Private vehicle between regional roadway network and Lots D or DD via on-Airport roadways in the Proposed Project Area	Shuttle bus between Lot D and terminal curbsides and between Lot DD and the terminal curbsides via on-Airport roadways (including those in the Proposed Project Area), local roadways, and terminal area roadways
Long-term Parking Passengers Using off-Airport Parking Facilities	None ^{3/}	Shuttle bus between off-Airport lot and terminal curbsides
Passengers Dropped Off and Picked Up ^{4/} Via Private Vehicle	Private vehicle between the off-Airport location and the Lot D Kiss & Fly curbside	None ^{1/}
	None ^{3/}	Private vehicle between off-Airport location and the terminal curbside

NOTES:

1/ Trip segment completed via AirTrain so there is no associated vehicle ground access trip.

2/ Lot D is used intermittently for overflow long-term parking.

3/ Trip type does not access the Proposed Project Area roadways but is included given relationship to ground access activities in Proposed Project Area.

4/ Trip type includes Transportation Network Companies (TNCs).

SOURCE: Ricondo & Associates, Inc., May 2017.

PREPARED BY: Ricondo & Associates, Inc., May 2017.

⁴³ San Francisco Administrative Code, Chapter 14B, Local Business Enterprise Ordinance.

3.14 Visual Setting

3.14.1 REGULATORY SETTING

Although federal laws or requirements do not regulate visual resources and light emissions, visual effects on other protected resources, such as historic properties, must be considered along with applicable state and local regulations, policies, and zoning ordinances that apply to visual effects.

3.14.2 AFFECTED ENVIRONMENT

The visual setting of the Proposed Project Area is considered in terms of light emissions and visual character.

The Proposed Project Area is a high ambient light environment comprising surface and structured parking and roadways, and it is surrounded by airfield, terminal, and freeway facilities. The nearest residences are located approximately 1,000 feet to the west of the Proposed Project Area and separated from the Proposed Project Area by U.S. 101. Lighting in the Proposed Project Area is shielded and directed downward to reduce the potential for light pollution, glare, light trespass, and wasted energy caused by deficient lighting design and misdirected light.

The Airport lies between the San Francisco Bay and U.S. 101, which runs north-south along the western side of Airport property and separates the Airport from neighboring residential properties. The Airport is a mix of transportation-related, commercial, and industrial development. The visual character of the area is defined by transportation-related structures (Airport facilities and adjacent freeway system) and partial views of San Bruno Mountain to the north and east. The visual character of the Proposed Project Area is defined by surface and structured parking facilities and roadways.

3.15 Water Resources

The regulatory setting and affected environment for water resources are organized by water resource type:

- wetlands
- floodplains
- surface waters
- groundwater

3.15.1 WETLANDS

Wetlands, waterways, and special aquatic sites, together referred to as waters of the United States, are protected under federal and state regulations and have important functions and values. The U.S. Army Corps of Engineers (USACE) defines wetlands as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of

vegetation typically adapted for life in saturated soil conditions. Wetlands provide valuable water quality enhancement and recharge functions, as well as serve as valuable wildlife habitat.

3.15.1.1 Regulatory Setting

Section 401 of the Clean Water Act gives the EPA and the state of California certification responsibility and authority over violation of water quality standards within their respective jurisdictions. Section 404 of the Clean Water Act gives the USACE responsibility and authority over activities that result in the discharge of dredge or fill material into wetlands and waterways.

Executive Order 11990, *Protection of Wetlands*, requires consideration of indirect effects on wetlands and provides a long-term goal of no net loss of wetlands. DOT Order 5660.1A, *Preservation of the Nation's Wetlands*, implements the guidelines set forth in Executive Order 11990 to assure the protection, preservation, and enhancement of the nation's wetlands to the fullest extent practicable.

3.15.1.2 Affected Environment

An August 11, 2016, query of the FWS's online National Wetlands Inventory data identified no potential wetlands within the Proposed Project Area.⁴⁴ The Proposed Project Area is fully developed with paved parking lots, parking structures, and roadways with maintained landscaped areas. No wetlands are located in the Proposed Project Area.

3.15.2 FLOODPLAINS

Floodplains are defined as low-lying lands and adjoining waters that are subject to a 1 percent or greater chance of flooding in any given year (i.e., a 100-year flood event).

3.15.2.1 Regulatory Setting

DOT Order 5650.2, *Floodplain Management and Protection*, and FAA Orders 1050.1F and 5050.4B contain policies and procedures for implementing Executive Order No. 11988, *Floodplain Management*, the National Flood Insurance Act of 1968, and the Flood Disaster Act of 1973. Executive Order 11988, *Floodplain Management*, directs federal agencies to take action to reduce the risk of flood loss; to minimize the impact of floods on human safety, health, and welfare; and to restore and preserve the natural and beneficial values served by floodplains. Pursuant to these orders, the FAA is required to review potential floodplain impacts and avoid development within the floodplain. When no practical alternative exists and floodplain encroachment would occur, steps must be taken to minimize the long- and short-term adverse impacts.

The City Administrator's Office acts as the Floodplain Administrator for the National Flood Insurance Program (NFIP). As a condition of participation in the NFIP, the City adopted and enforces the Floodplain Management

⁴⁴ U.S. Department of Interior, Fish & Wildlife Service, National Wetlands Inventory, Wetlands Mapper v2, www.fws.gov/wetlands/data/mapper.html (accessed August 11, 2016).

Ordinance.⁴⁵ The Ordinance addresses construction and development in floodplains by requiring that the design of all new construction and substantial improvements in designated flood-prone areas include mitigation against flood damage and employ materials and equipment resistant to flood damage.

The Airport Commission's Building Inspection and Code Enforcement division (BICE) ensures that Airport buildings and structures are constructed in conformance with all applicable fire life safety codes and standards, enforces all code requirements, monitors construction activity, and ensures code compliance. BICE, deputized by the City Administrator's office as the Floodplain Manager for the Airport property, is responsible for enforcing the provisions of the Ordinance on Airport property. To do so, BICE uses the California Building Code, which incorporates provisions of the American Society of Civil Engineers (ASCE) document entitled "Flood Resistant Design and Construction" (ASCE 24-14). ASCE 24-14 contains design and construction standards above the minimum requirements of the NFIP.

3.15.2.2 Affected Environment

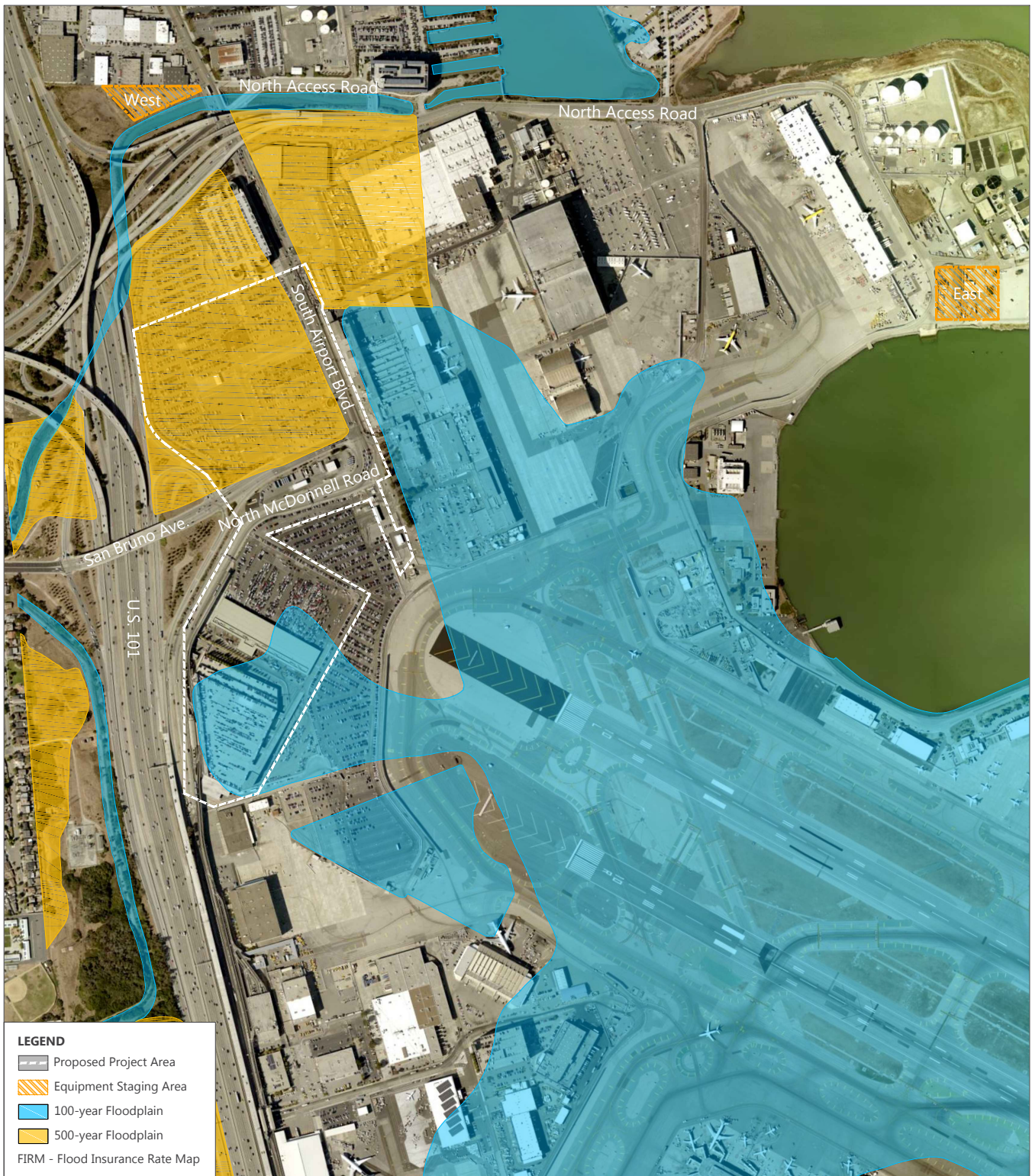
Currently, the Federal Emergency Management Agency (FEMA) includes the Airport on the 1984 San Mateo County Flood Insurance Rate Map (FIRM). The FIRM identifies Special Flood Hazard Areas (SFHA) as areas within the 100-year floodplain. The FIRM also identifies areas between the limits of 100-year and 500-year flood, referred to as the 500-year floodplain. A portion of the southern end of the Proposed Project Area is located within a 100-year floodplain and the northern end of the Proposed Project Area is within a 500-year floodplain. The 100-year and 500-year floodplains depicted on the 1984 FIRM are shown on **Exhibit 3-6**. The 1984 FIRM is provided in **Appendix H**.

On November 12, 2015, FEMA issued a Preliminary FIRM for the City of San Francisco, which included Airport property. If and when FEMA makes effective the final FIRM, the majority of the Proposed Project Area would be within in the 100-year floodplain, as shown on **Exhibit 3-7**. The 2015 Preliminary FIRM is provided in Appendix H.

The Proposed Project Area is fully developed and paved (i.e., an impermeable surface) with the exception of small landscaped areas along roadways and the Bay Trail. Both equipment staging areas are fully paved, impermeable surfaces that currently accommodate equipment storage. The east equipment staging area is in the 100-year floodplain, but the west area is not. Given these conditions, the Proposed Project Area has limited natural and beneficial floodplain values (natural moderation of floods, water quality maintenance, groundwater recharge, fish, wildlife, plants, open space, natural beauty, scientific study, outdoor recreation, agriculture, aquaculture, and forestry). The City employs pollution-prevention measures and maintains compliance with all appropriate federal, state, and local permits, as discussed in Section 3.8.3, to minimize or avoid the effects of pollution from stormwater runoff.

⁴⁵ City and County of San Francisco, Ordinance No. 56-10, "Floodplain Management Program," February 2, 2010 (amends the floodplain management program established by San Francisco Administrative Code, Chapter 2A, Article XX, Sections 2A.280 – 2A.285).

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SOURCES: Bureau of Land Management, Esri, HERE, DeLorme, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA, June 2015 (aerial); U.S. Department of Homeland Security, Federal Emergency Management Agency, FIRM panels 060311-00198, 060311-01078, and 060311-01268, effective July 5, 1984, and FIRM panel 065062-00088, effective September 2, 1981 (floodplain); Ricondo & Associates, Inc., November 2016 (proposed project area).
 PREPARED BY: Ricondo & Associates, Inc., May 2017.

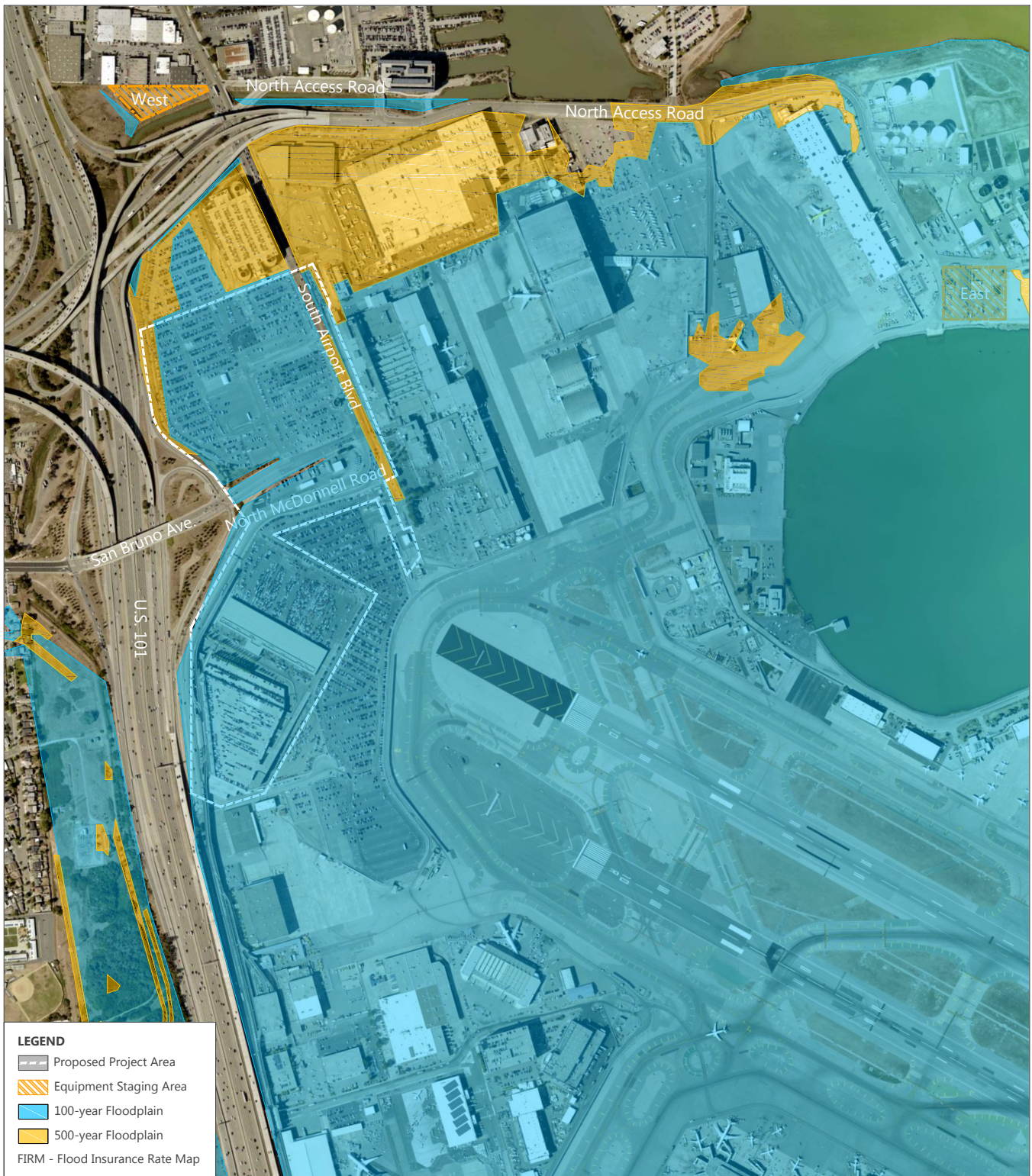
EXHIBIT 3-6



Floodplains on Airport Property 1984 FIRM

Drawing: Z:\SFO\01 - SFO NEPA On-Call 2016\02 - RCC AirTrain EA\CAD Exhibits\Exhibit 3-6 Floodplain-1984_2017-05-26.dwg Layout: 6.5x11P Plotted: Sep 25, 2017, 09:35AM

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SOURCES: Bureau of Land Management, Esri, HERE, DeLorme, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA, June 2015 (aerial); Federal Emergency Management Agency, Preliminary Flood Insurance Rate Map, 2015; Ricondo & Associates, Inc., November 2016 (proposed project area).
 PREPARED BY: Ricondo & Associates, Inc., May 2017.

EXHIBIT 3-7



Floodplains on Airport Property 2015 Preliminary FIRM

Drawing: Z:\SFO\01 - SFO NEPA On-Call 2016\02 - RCC AirTrain EA\CAD Exhibits\Exhibit 3-7 Floodplain-2015_2017-05-26.dwg Layout: 6.5x11P Plotted: Sep 25, 2017, 09:30AM

Rental Car Center and AirTrain Extension EA
Affected Environment

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The City has implemented a variety of flood protection measures and is also developing a Shoreline Protection Program (SPP) to improve the Airport-wide shoreline protection system. The SPP would provide flood protection against 100-year floods and sea level rise through the construction of shoreline protection improvements, such as seawalls, flood/tidal gates, pump stations, and levee and embankment stabilization. The improved shoreline protection system will meet FEMA's certification standards.⁴⁶ In addition to the SPP, construction at the Airport complies with applicable building standards, as prescribed by the City's Floodplain Management Ordinance, regarding construction and development in floodplains.

3.15.3 SURFACE WATERS

3.15.3.1 Regulatory Setting

Section 401 of the CWA is the primary federal statute governing the discharge of pollutants into waters of the United States. Section 401 authorizes states to review and approve, condition, or deny federal permits that might result in discharge into waters of the United States. Federal permits or licenses are not issued until Section 401 Water Quality Certification is obtained from the state in which the discharge originates. The certification process ensures that prospective permits comply with the state's water quality standards.

The SWRCB administers the 401 Water Quality Certification and Wetlands Program, which regulates discharges of fill and dredged material in California under Section 401 of the CWA. The San Francisco Bay RWQCB is responsible for Section 401 Water Quality Certification and has primary authority for ensuring Bay Area water resources are protected from degradation by pollutant discharges. The San Francisco Bay RWQCB identifies impaired waters, which are water bodies that do not meet water quality standards pursuant to Section 303(d) of the CWA.

The California Water Code protects and regulates waters of the state, which are defined as any surface water or groundwater, including saline waters, within the boundaries of the state. Waters of the United States, discussed in Section 3.14.1, within the borders of California are considered waters of the state; however, waters of the state are not always waters of the United States. The RWQCBs determine whether action to address potential pollutants in waste discharge is needed for projects proposing to discharge waste, which includes fill, into waters of the state.⁴⁷

3.15.3.2 Affected Environment

No surface water features are present in the Proposed Project Area, which is a fully developed, impermeable surface with maintained landscape areas along roadways and the Bay Trail. The major surface water features in the vicinity of the Proposed Project Area are the San Francisco Bay, forming the eastern border of the Airport, and the North Channel, the downstream reach of a constructed stormwater system, passes within 200 feet

⁴⁶ City and County of San Francisco, Airport Commission, San Francisco International Airport, *Official Statement Airport Commission of the City and County of San Francisco, San Francisco International Airport Second Series Revenue Refunding Bonds Series 2016A*, January 26, 2016.

⁴⁷ San Francisco Bay Regional Water Quality Control Board, "Water Quality Certification," waterboards.ca.gov/sanfranciscobay/certs.shtml (accessed November 4, 2016).

northwest of the Proposed Project Area. Neither the San Francisco Bay nor the North Channel are sources of public drinking water.

Stormwater runoff from the Proposed Project Area is treated on-Airport for reuse at the Airport or transferred to South San Francisco for final treatment and release into San Francisco Bay. In accordance with the Airport's NPDES permit, if Airport detention capacity is exceeded during extended rain events, then the excess stormwater is discharged into the San Francisco Bay following the first flush, which refers to the initial stormwater runoff during a rain event that contains a high pollutant load. The SWRCB assessed the water quality of the lower San Francisco Bay, the portion of the Bay in which the Airport lies, and listed it as an impaired water body due to the presence of chlordane, dichlorodiphenyltrichloroethane, dieldrin, dioxin compounds, furan compounds, invasive species, mercury, polychlorinated biphenyls, and trash.⁴⁸ Therefore, changes in facilities or activities within the Proposed Project Area that would affect stormwater runoff would be subject to RWQCB review.

3.15.4 GROUND WATER

3.15.4.1 Regulatory Setting

The Safe Drinking Water Act (SDWA) authorizes the EPA to set standards for drinking water quality, and the EPA can delegate authority to states to implement the Act within their jurisdictions, if they meet or exceed EPA standards. Title 40 CFR Parts 141-149 prohibit federal agencies from funding actions that would contaminate EPA-designated sole-source aquifers or recharge zones.

The SWRCB enforces the California Safe Drinking Water Act. Groundwater is a shared resource that does not follow jurisdictional lines; therefore, the level of groundwater management is often dependent on groundwater availability, demand, and quality. The California Water Code encourages local agencies to work cooperatively to manage groundwater resources within their jurisdiction. The Sustainable Groundwater Management Act authorizes local agencies to assess conditions of groundwater basins in their jurisdiction and to take steps to address groundwater balances. The Act also requires the formation of locally controlled groundwater sustainability agencies (GSAs) for basins designated by the California Department of Water Resources (DWR) as medium and high priority. GSAs for these basins are required to develop and implement groundwater sustainability plans. If no GSA is formed for a high or medium priority groundwater basin, then the SWRCB assumes jurisdiction.⁴⁹

⁴⁸ State Water Resources Control Board, *2010 Integrated Report (Clean Water Act Section 303(d) List/305(b) Report), California 2010 303(d) Combined List*, www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml (accessed February 7, 2010).

⁴⁹ California Department of Water Resources, "Groundwater Sustainability Agencies," www.water.ca.gov/groundwater/sgm/gsa.cfm (accessed November 7, 2016).

3.15.4.2 Affected Environment

Given the developed and paved (i.e., impermeable) surface of the Proposed Project Area, along with the stormwater collection and treatment practices employed at the Airport, stormwater water within the Proposed Project Area does not serve as a significant source of groundwater recharge.

The Airport is located within the Westside Groundwater Basin, which is designated by the DWR as a very-low priority basin, and a framework for managing the groundwater within the basin is provided by the South Westside Basin Groundwater Management Plan.⁵⁰ The basin comprises a series of aquifers that extend from Golden Gate Park in San Francisco to the Airport and beyond to Burlingame. The Westside Groundwater Basin is separated into two sub-basins, north and south; the Airport is located in the South Westside Groundwater Basin. In the vicinity of the Airport, the top elevation of the aquifer zone is approximately 200 feet below mean seal level (MSL) underneath a thick layer of fine-grained clays, sandy clay, and sand beds.⁵¹ Additionally, bedrock, which forms the bottom elevation of the Westside Groundwater Basin aquifers, ranges from 100 to 300 feet below MSL under the Proposed Project Area where it forms a subterranean ridge between the Westside Basin and the San Francisco Bay.⁵²

Two groundwater monitoring wells are located on Airport property east and outside of the Proposed Project Area. These wells were installed to monitor the groundwater levels near the surface and water quality parameters along the Bay side of the Westside Groundwater Basin.⁵³ Due to fluctuations in seasonal precipitation and tidal levels, the depth of groundwater at the Airport may vary by several feet. Fluctuations calculated from geotechnical studies and boring data identified the range of depths to be within 0 and 17 feet, with the common depth between 3 and 10 feet below ground surface.⁵⁴ The SWPPP covering construction activities at the Airport specifies dewatering practices to manage groundwater suspected of contamination during construction.

The EPA has not designated a sole source aquifer, one that would supply at least 50 percent of drinking water to its service area, in the vicinity of the Proposed Project Area.

⁵⁰ RMC Water and Environment, *South Westside Basin Groundwater Management Plan*, July 2012, sfwater.org/Modules/ShowDocument.aspx?documentid=3104 (accessed November 7, 2016).

⁵¹ San Francisco Public Utilities Commission, *2013 Annual Groundwater Monitoring Report, Westside Basin, San Francisco and San Mateo Counties, California*, May 2014.

⁵² San Francisco Planning Department, *SFPUC Water System Improvement Program Environmental Impact Report*, October 2008.

⁵³ San Francisco Public Utilities Commission, *2013 Annual Groundwater Monitoring Report Westside Basin San Francisco and San Mateo Counties, California*, May 2014.

⁵⁴ URS Corporation, *Final Environmental Assessment, Proposed Runway Safety Area Program, San Francisco International Airport, San Francisco, San Mateo County, California*, November 2011.

3.16 Past, Present, and Reasonably Foreseeable Future Actions

Cumulative impacts to environmental resources result from incremental effects of future actions combined with past, present, and reasonably foreseeable future actions in the area. Cumulative impacts can result from individually minor, but collectively substantial, actions undertaken over a period of time by various agencies (federal, state, and local), as well as by individuals. In accordance with NEPA, a discussion of cumulative impacts resulting from projects proposed, under construction, recently completed, or planned for implementation in the near future is required. For purposes of this analysis, projects implemented within the last five years or proposed to be implemented within the same time frame as the Proposed Action (2017–2024) and located within the vicinity of the Proposed Project Area were considered. A Cumulative Impact Area, shown on **Exhibit 3-8**, was defined to identify projects within the vicinity of the Proposed Project Area. The Cumulative Impact Area is generally bounded by I-380 and the Airport property boundary to the north, the San Francisco Bay and an Airport access road to the east, West Field Road to the south, and El Camino Real to the west. Projects within the Cumulative Impact Area that were analyzed for potential cumulative impacts in Chapter 4 are listed in **Table 3-9**.



SOURCES: Google Earth Pro, 2017; CSUMB SPML, CA OPC, 2017; SIO, NOAA, U.S. Navy, NGA, GEBCO, 2017 (aerial); Ricondo & Associates, Inc., November 2016 (proposed project area, ground disturbance area, and cumulative impact area).
PREPARED BY: Ricondo & Associates, Inc., May 2017.

EXHIBIT 3-8



Cumulative Impact Area

Drawing: Z:\SFO\01 - SFO NEPA On-Call 2016\02 - RCC AirTrain EA\CAD Exhibits\Exhibit 3-8 Cumulative Impact Area_2017-05-30.dwg Layout: 8.5x11L Plotted: Sep 25, 2017, 09:31AM

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Table 3-9 (1 of 2): Past, Present, and Reasonably Foreseeable Future Actions

PROJECT NAME	PROJECT DESCRIPTION	LOCATION	CONSTRUCTION TIMEFRAME
Past			
Airport Traffic Control Tower (ATCT)	Relocated ATCT from Terminal 2 to Courtyard 2 (the area between Terminals 1 and 2).	Airport Property	2012-2015
Present			
Emergency Rescue Fire Fighting (ERF) Facility No.3 Reconstruction	Relocate ERF No. 3 while removing other nonessential support services away from the southern end of the airfield to facilitate safe aircraft movement in the area.	Airport Property	2015-2017
Terminal 1 Redevelopment	Demolish Terminal 1 facilities and reconstruct a new Terminal 1 Center and Boarding Area B.	Airport Property	2015-2024
Former ATCT Demolition	Demolish ATCT at Terminal 2.	Airport Property	2016
Aircraft Service International Group (ASIG)/Menzies Relocation	Relocate two ground service equipment providers (ASIG and Menzies) from the South Field area to optimized facilities, including an equipment wash rack and fueling station, in the West Field area.	Airport Property	2016
Plot 700 Development, including GTU Redevelopment	Redevelop Plot 700, a paved parking lot located on the north side of Airport property, to support SFO Shuttle Bus and Ground Transportation Unit (GTU) facilities, a CNG station, and a City vehicle fueling station/car wash.	Airport Property	2016-2018
Superbay Fire Suppression System	Construct fire suppression system tanks, a water and foam pump house, and backup generator adjacent to the Superbay aircraft maintenance hangar. Upgrade the Superbay interior utilities, drainage, and internal fire suppression elements. Replace water transmissions pipeline, roof, and elevator.	Airport Property	2016-2019
Taxiway Improvements	Realign, shift, widen, remove, and redesignate (from taxiway to taxilane) segments of taxiways to accommodate current and forecast aircraft fleet operating at the Airport.	Airport Property	2016-2024
South McDonnell Road Realignment	Realign a segment of South McDonnell Road immediately south of the terminal roadways.	Airport Property	2017
Police Training Facility	Replace temporary buildings at the existing Police Training Facility with permanent structures, including a range house/administration building, a storage building, a K-9 training facility, and a vehicle garage.	Airport Property	2017-2018
Wastewater Treatment System Improvements	Replace the existing industrial wastewater treatment plant (IWTP) systems, administrative building, and a portion of the existing sludge drying beds at the Mel Leong Treatment Plant with modern wastewater treatment and recycled water facilities.	Airport Property	2017-2018
Consolidated Administration Facilities	Construct facilities to allow consolidation of Administration located at the International Terminal Building and Buildings 575, 679, and 710 into a single location at the north corner of West Field Road and South McDonnell Road.	Airport Property	2017-2019

Table 3-9 (2 of 2): Past, Present, and Reasonably Foreseeable Future Actions

PROJECT NAME	PROJECT DESCRIPTION	LOCATION	CONSTRUCTION TIMEFRAME
Long-Term Garage Development	Construct a long-term parking garage in the northwest quadrant of Lot DD.	Airport Property	2017–2019
Airport Hotel and Hotel AirTrain Station	Construct a new hotel and AirTrain station along the south side of the terminal roadways, immediately east of U.S. 101.	Airport Property	2017-2020
Reasonably Foreseeable			
Building 624 Relocation	Relocate Building 624 to provide space for future ground service equipment operations.	Airport Property	2018
Materials Testing Lab	Replace an existing temporary materials testing lab with a permanent building at the existing location in the East Field area of the Airport.	Airport Property	2018
Terminal 2/Terminal 3 Connector Building	Construct a new post-security connector between Terminals 2 and 3. Reconstruct the existing pre-security connector and construct four floors of office/administrative space above the connectors.	Airport Property	2018-2022
Terminal 3 West Redevelopment	Reconstruct Terminal 3 between Boarding Area F (B/A F) and the International Terminal, including the B/A F bridge, to accommodate expanded holdrooms, administrative offices, concessions, passenger processing, and baggage handling system.	Airport Property	2018-2023
New Fuel Farm Tanks	Construct new aboveground fuel storage tanks at the Airport's fuel farm, located in the northeast quadrant of Airport property.	Airport Property	2018–2019
U.S. Coast Guard Air Station Shoreline Protection Enhancements	Construct a seawall adjacent to the U.S. Coast Guard Air Station to provide flood protection against 100-year floods and sea level rise.	Airport Property	2019–2021
Mel Leong Treatment Plant Shoreline Protection	Enhance the shoreline protection system along the Mel Leong Treatment Plant property to provide flood protection against 100-year floods and sea level rise.	Airport Property	2019–2021
Airport Maintenance Facility	Construct a new Airport Maintenance Facility in the North Field area of Airport property.	Airport Property	2020
Building 575 Demolition	Demolish the SFO Business Center, referred to as Building 575, which is located along the north side of the terminal roadways.	Airport Property	2020–2021

NOTE:

1/ A Hot Spot is identified by the International Civil Aviation Organization as "a location on an aerodrome movement area with a history or potential risk of collision or runway incursion, and where heightened attention by pilots/drivers is necessary."

SOURCES: A. Ramsey, Airport Planner, San Francisco International Airport, City and County of San Francisco, "RCC EA - Cumulative Projects," email to L. Reznar, Ricondo & Associates, Inc., May 23, 2017.

PREPARED BY: Ricondo & Associates, Inc., May 2017.

4. Environmental Consequences

The potential environmental consequences associated with the Proposed Action and the No Action Alternative are discussed in this chapter. Of the environmental categories specified in FAA Orders 1050.1F and 5050.4B, the following were evaluated as part of this EA and are documented in the following sections:

- Air Quality—Section 4.1
- Biological Resources—Section 4.2
- Climate—Section 4.3
- Coastal Resources—Section 4.4
- Department of Transportation Act, Section 4(f) Resources—Section 4.5
- Hazardous Materials, Solid Waste, and Pollution Prevention—Section 4.6
- Historic, Architectural, Archaeological, and Cultural Resources—Section 4.7
- Land Use—Section 4.8
- Natural Resources and Energy Supply—Section 4.9
- Socioeconomics—Section 4.10
- Visual Effects—Section 4.11
- Water Resources—Section 4.12
- Cumulative Impacts—Section 4.13

The remaining environmental impact categories specified in FAA Orders 1050.1F and 5050.4B are not present in the Proposed Project Area or would not be affected by the Proposed Action or No Action Alternative. Two categories, Farmlands and Water Resources-Wild and Scenic Rivers, were identified in Section 3.2 as not present and therefore not relevant to the affected environment of the Proposed Project Area. In addition, the Proposed Action and the No Action Alternative would not affect the following environmental impact categories:

- Noise and Noise-Compatible Land Uses—The number of aircraft operations, aircraft types, aircraft movement, runway use, and flight tracks would be the same under the Proposed Action and the No

Action Alternative, and thus, aircraft noise exposure would be the same under the Proposed Action and the No Action Alternative.

- Environmental Justice (part of the Socioeconomics, Environmental Justice, and Children’s Environmental Health and Safety Risks category)—Populations residing to the west of the Proposed Project Area would not be affected by ground access activities within the Proposed Project Area. Additionally, neither the Proposed Action nor the No Action Alternative would result in a significant impact in another environmental resource category that would have the potential to lead to a disproportionately high and adverse impact to an environmental justice population. Additionally, the City’s Local Business Enterprise Ordinance would continue to provide protections and corrective adjustments to help small and disadvantaged businesses compete for City contracts under the Proposed Action and the No Action Alternative. Therefore, neither the Proposed Action nor the No Action Alternative would result in an environmental justice impact.
- Children’s Environmental Health and Safety Risks (part of the Socioeconomics, Environmental Justice, and Children’s Environmental Health and Safety Risks category)—The Proposed Action and No Action Alternative would occur entirely on Airport property, and no children’s daycares, parks, or health clinics are in the Proposed Project Area. No significant impact in another environmental resource category would have the potential to lead to a disproportionate health or safety risk impact to children.
- Water Resources-Wetlands—No wetlands exist within the Proposed Project Area, and the land cover (i.e., developed and paved) would be the same under the Proposed Action and the No Action Alternative. The Proposed Action and the No Action Alternative would not affect wetlands.

4.1 Air Quality

4.1.1 METHODOLOGY

The CAAA require federal agencies to ensure that their actions conform to applicable SIPs. Conformity is defined as demonstrating that a project or action conforms to the SIP’s purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards. Federally funded and approved actions at airports are subject to EPA’s “General Conformity” regulations. A conformity determination for a Proposed Action is required if the total direct and indirect¹ pollutant emissions resulting from a project are above *de minimis*² emissions threshold levels specified in the conformity regulations. The Proposed Action is not specifically exempt³ from the provisions of the general conformity regulations and does not meet the definition of a “Presumed to Conform” project as described in *Federal Presumed to Conform Actions*

¹ Total direct and indirect emissions are the sum of the emissions increases and decreases associated with a proposed project, or the “net” change in emissions anticipated to occur as a result of the proposed project (40 Code of Federal Regulations 93.152).

² Emissions are so small as to be negligible or insignificant. If an action has *de minimis* emissions, a conformity determination/NAAQS assessment pursuant to the CAAA is not required (40 Code of Federal Regulations 93.153(c)).

³ Projects that are excluded from General Conformity are listed at 40 Code of Federal Regulations 93.153(c)(2).

Under General Conformity (72 Federal Register 41565); therefore, a general conformity applicability analysis was conducted for the Proposed Action

In support of the conformity applicability analysis, emissions estimates were prepared for air pollutants (or their precursor compounds) for which the Bay Area Air Basin is not in attainment or unclassified. Table 3-1 lists the NAAQS and CAAQS attainment statuses for the criteria pollutants in the Bay Area Air Basin. Therefore, emissions estimates were prepared for the following criteria pollutants⁴: CO; PM₁₀; PM_{2.5}; and volatile organic compounds (VOCs) and nitrogen oxides (NO_x), which are primary precursor compounds that lead to the formation of O₃.

The California Emissions Estimator Model (CalEEMod)⁵ was used to conduct the analysis of construction emissions associated with the Proposed Action. A combination of default and user-defined parameters were utilized in the model based on a description of and construction schedule for each individual Proposed Action project component, as documented in Sections 1.3 and 1.6. Default model parameters regarding the use of specific construction equipment types and worker trips were assumed through the selection of project types and construction phases appropriate for each element of the Proposed Action. Assumptions for project areas and quantities, including applicable material hauling trips, were derived using project drawings and input into CalEEMod. Emissions were estimated for a variety of applicable construction activities, such as those that support pavement demolition, site preparation, grading, building construction, paving, and architectural coating/painting. Off-gassing emissions associated with asphalt paving and painting activities were also quantified within CalEEMod.

After the Proposed Action is constructed, criteria air pollutant emissions from the operation of the Airport are expected to be lower than the No Action Alternative as described in Section 4.1.3; therefore, operational changes that effect emissions related to ground access activities in the Proposed Project Area are qualitatively discussed.

4.1.2 THRESHOLDS OF SIGNIFICANCE

The evaluation of significance for impacts to air quality involves identifying whether the Proposed Action would cause pollutant concentrations to exceed one or more of the NAAQS for any of the time periods analyzed, or if it would increase the frequency or severity of any existing violations.

The *de minimis* thresholds used to evaluate the applicability of the General Conformity Rule to the Proposed Action are 100 tons per year for CO, NO_x, VOCs, and PM_{2.5}. If the changes in emissions associated with the proposed project do not exceed the *de minimis* thresholds, then the FAA can determine that a formal conformity determination is not required and no further analysis or documentation is needed.

⁴ Although Pb is a criteria air pollutant, it was not evaluated in the analysis, since the Proposed Action would not affect Pb emissions. The only source of Pb emissions at the Airport is aviation gasoline, and the Proposed Action does not change the number of aircraft operations or the routing of aircraft on the ground or in the air in comparison with the No Action Alternative.

⁵ California Air Pollution Control Officers Association, *California Emission Estimator Model® User's Guide*, Version 2016.3.1, September 2016.

4.1.3 EVALUATION OF ALTERNATIVES

The Proposed Action would not cause net pollutant concentrations (i.e., the difference in emissions between the Proposed Action and the No Action Alternative) to exceed the *de minimis* thresholds set for criteria pollutants for which the Bay Area Air Basin is classified as nonattainment for the time periods analyzed. The Proposed Action would not increase the frequency or severity of existing air quality violations in the San Francisco Bay Area in comparison with the No Action Alternative. Therefore, the conformity determination requirements do not apply to the Proposed Action.

4.1.3.1 No Action

Construction Impacts

No construction activities would occur under the No Action Alternative. Therefore, the consideration of the generation of criteria pollutants during construction under the No Action Alternative is not applicable.

Operational Impacts

Operation of the No Action Alternative considers emissions generated from vehicles related to ground access activities in the Proposed Project Area. Rental car transactions are projected to increase commensurate with forecast passenger growth and the increased propensity to rent cars. Therefore, consideration of the types of trips associated with ground access activities in the Proposed Project Area as they relate to areas of congestion was considered. Existing trip routes by trip type include:

- On-Airport rental car passengers—AirTrain between existing RCC facilities in Lot D and terminals
- On-Airport long-term parking passengers (Lot D)—Shuttle bus between Lot D and terminal curbsides
- On-Airport long-term parking passengers (Lot DD)—Shuttle bus between Lot DD and terminal curbsides
- Off-Airport rental car passengers—Shuttle bus or van to Lot D AirTrain curbside, then AirTrain between Lot D AirTrain curbside and terminals
- Off-Airport parking passengers—Shuttle bus between off-Airport lot and terminal curbsides
- Passengers dropped off and picked up via Private Vehicle (including Transportation Network Companies [TNCs])—Private vehicle from off-Airport location directly to terminal curbside or Lot D AirTrain curbside

The trip types conducted using shuttle buses or vans generate emissions, which are compounded when the buses and vans operate along congested roadways such as the terminal roadway and curbside. The increases in emissions under the No Action Alternative are not attributable to a federal action. Therefore, no further consideration is needed.

4.1.3.2 Proposed Action

Construction Impacts

Construction of the Proposed Action would result in short-term effects on air quality. Emission sources from construction of the Proposed Action include the following: exhaust emissions from off-road construction equipment, haul trucks, and construction worker vehicles; fugitive VOC emissions from paving; and fugitive dust emissions from grading, materials handling, and vehicles traveling on paved and unpaved roads.

Table 4-1 summarizes the annual emissions estimated for construction of the Proposed Action, which would occur beginning in 2017 and continue through 2024, and compares the annual emissions with the applicable *de minimis* thresholds. Appendix D provides additional information on the methodologies, models, and assumptions applied to the air quality analysis. Even with the short-term increase in emissions, the changes in emissions attributed to construction of the Proposed Action would be less than the *de minimis* NAAQS thresholds for each year of construction and therefore would not increase the frequency or severity of existing air quality violations in the San Francisco Bay Area. *De minimis* thresholds only apply to pollutants for which the airport location is classified as nonattainment or maintenance.

The City would also incorporate provisions of the FAA Advisory Circular 150/5370-10G, *Standards for Specifying Construction of Airports*, to reduce construction-related emissions, including:

- Reduction of exposed erodible surface area through appropriate materials and equipment staging procedures;
- Reduction of equipment idling times;
- Ensuring contractor knowledge of appropriate fugitive dust and equipment exhaust controls;
- Soil and stock-pile stabilization via cover or periodic watering;
- Use of covered haul trucks and conveyors during materials transportation; and
- Reduction of electrical generator usage, wherever possible.

The City would implement construction dust control BMPs during construction to minimize fugitive dust including, but not be limited to: 1) controlling construction dust as required by the FAA Advisory Circular 150/5370-2F, *Operational Safety on Airports During Construction*; 2) sprinkling demolition sites with water where dust is created; 3) covering stockpiles of soil, sand, and other fine materials; 4) covering trucks hauling debris, soil, and, and other fine materials; and 5) sweeping all roadways surrounding demolition and construction areas and along haul routes at least once per day.

Table 4-1: Annual Emissions of Criteria Pollutants Due to Construction of the Proposed Action

CONSTRUCTION YEAR	ANNUAL EMISSIONS OF CRITERIA POLLUTANTS (TONS/YEAR)				
	CO	VOC	NO _x	PM ₁₀	PM _{2.5}
2017	15.5	2.6	24.0	2.2	1.7
2018	8.6	1.3	12.6	1.4	1.0
2019	0.3	<0.1	0.5	0.1	<0.1
2020	0.3	0.1	0.4	0.1	0.1
2021	9.4	1.1	11.4	2.6	0.8
2022	8.5	0.9	9.2	1.8	0.6
2023	9.4	1.0	10.0	2.4	0.7
2024	8.0	1.6	7.6	1.6	0.5
Total Maximum Annual Emissions	15.5	2.6	24.0	2.6	1.7
<i>de minimis</i> Threshold	100.0	100.0	100.0	– ^{1/}	100.0
Difference (Under)/Over <i>de minimis</i> Threshold					
2017	(84.5)	(97.4)	(76.0)		(98.3)
2018	(91.4)	(98.7)	(87.4)		(99.0)
2019	(99.7)	>(99.9)	(99.5)		>(99.9)
2020	(99.7)	(99.9)	(99.6)		(99.9)
2021	(90.6)	(98.9)	(88.6)		(99.2)
2022	(91.5)	(99.1)	(90.8)		(99.4)
2023	(90.6)	(99.0)	(90.0)		(99.3)
2024	(92.0)	(98.4)	(92.4)		(99.5)
Exceedance?	NO	NO	NO	NO ^{1/}	NO

NOTES:

Totals may not add due to rounding.

– No applicable federal *de minimis* threshold

CO—carbon monoxide

NO_x—oxides of nitrogen

PM_{2.5}—fine particulate matter

PM₁₀—particulate matter

VOC—volatile organic compounds

1/ There is no *de minimis* threshold for PM₁₀ because San Mateo County is not designated as a nonattainment or maintenance area for PM₁₀ NAAQS and therefore *de minimis* thresholds do not apply. The applicable PM₁₀ *de minimis* thresholds for a serious nonattainment area and a moderate nonattainment area or maintenance area are 70 tons per year and 100 tons per year, respectively. Based on PM₁₀ emissions estimated for 2017 through 2024, maximum annual emissions of PM₁₀ associated with construction of the Proposed Action would not exceed a PM₁₀ *de minimis* threshold.

SOURCE: Ricondo & Associates, Inc., December 2016.

PREPARED BY: Ricondo & Associates, Inc., May 2017.

Operational Impacts

The number of rental car transactions under the Proposed Action would be the same as under the No Action Alternative; however, extension of the AirTrain to Lot DD and construction of the remote curbside at the AirTrain station in Lot DD would provide the opportunity to reallocate or eliminate several trip types associated with the ground access and parking activities in the Proposed Project Area. Trip types affected by the extension of the AirTrain to Lot DD, provision of a remote curbside, and provision of a new Airport access point are summarized in **Table 4-2**. Extension of the AirTrain would be completed in 2018 and operational in 2019, so although construction of the new RCC facilities would not be completed until 2024, it is anticipated that some ground access operational changes would be implemented in 2019, reflecting interim conditions, as identified in the table. The table also summarizes qualitatively the overall effects on pollutant emissions for the proposed ground access trip changes. As shown, the changes are estimated to have neutral to positive effects on air emissions, reflective of no net changes in distance travelled and elimination of some trip types as passengers are shifted to the AirTrain and shuttle bus trips are eliminated.

Table 4-2 (1 of 2): Summary of Changes in Trip Routes by Trip Type and Effect on Air Emissions

TRIP TYPE	TRIP ROUTE ^{1/}		EFFECT OF THE PROPOSED ACTION ON AIR EMISSIONS (COMPARED WITH THE NO ACTION ALTERNATIVE)	
	NO ACTION	PROPOSED ACTION		
		INTERIM CONDITIONS ^{2/}		PROJECT COMPLETION
On-Airport Rental Car Passengers	<ul style="list-style-type: none"> Rental car between existing RCC in Lot D ^{3/} and off-Airport location AirTrain between Lot D and terminals 	<ul style="list-style-type: none"> Same as the No Action 	<ul style="list-style-type: none"> Rental car between new RCC in Lot DD ^{4/} and off-Airport location AirTrain between Lot DD and terminals 	NEUTRAL (Minor change [turning movement] in rental car routing on Airport roadways; VMTs expected to be similar to No Action; thus, no effect on emissions)
On-Airport Long-Term Parking Passengers (Lot D)	<ul style="list-style-type: none"> Private vehicle between Lot D and off-Airport location Shuttle between Lot D and terminal curbsides 	<ul style="list-style-type: none"> Private vehicle between Lot D and off-Airport location Lot D Circulator Shuttle to Lot D curbside AirTrain between Lot D curbside and terminals 		POSITIVE (Removal of Airport shuttles traveling along Airport and regional roadways between Lot D and the terminal curbsides would reduce emissions)
On-Airport Long-Term Parking Passengers (Lot DD)	<ul style="list-style-type: none"> Private vehicle between Lot DD and off-Airport location Shuttle between Lot DD and terminal curbsides 	<ul style="list-style-type: none"> Private vehicle between Lot DD and off-Airport location Walk between parking space and Lot DD AirTrain Station AirTrain between Lot DD and terminals 		POSITIVE (Removal of Airport shuttles traveling along Airport and regional roadways between Lot DD and the terminal curbsides would reduce emissions)
Off-Airport Rental Car Passengers	<ul style="list-style-type: none"> Shuttle between off-Airport lot and Lot D AirTrain curbside AirTrain between Lot D and terminals 	<ul style="list-style-type: none"> Same as No Action 		NEUTRAL (No change in operation, thus no effect on emissions)

Table 4-2 (2 of 2): Summary of Changes in Trip Routes by Trip Type and Effect on Air Emissions

TRIP TYPE	TRIP ROUTE ^{1/}		EFFECT OF THE PROPOSED ACTION ON AIR EMISSIONS (COMPARED WITH THE NO ACTION ALTERNATIVE)	
	NO ACTION	PROPOSED ACTION		
		INTERIM CONDITIONS ^{2/}		PROJECT COMPLETION
Off-Airport Parking Passengers	<ul style="list-style-type: none"> Shuttle between off-Airport lot and terminal curbsides 	<ul style="list-style-type: none"> Shuttle between off-Airport lot and Lot DD AirTrain Station AirTrain between Lot DD and terminals 	<p>POSITIVE</p> <p>(VMTs of parking passengers to and from the parking lots expected to be similar to No Action^{5/}; elimination of shuttle trips on congested terminal roadways and curbsides would reduce emissions)</p>	
Passengers Dropped Off and Picked Up via Private Vehicles (including Transportation Network Companies [TNCs])	<ul style="list-style-type: none"> Private vehicle between off-Airport location and terminal curbside <p>OR</p> <ul style="list-style-type: none"> Private vehicle between off-Airport location and Lot D AirTrain curbside AirTrain between Lot D and terminals 	<ul style="list-style-type: none"> Private vehicle between off-Airport location and terminal curbside (same as No Action) <p>OR</p> <ul style="list-style-type: none"> Private vehicle between off-Airport location and Lot DD AirTrain curbside AirTrain between Lot DD and terminals 	<p>POSITIVE</p> <p>(Minor change [turning movement] in routing of private vehicles accessing the Lot D curbside under No Action on Airport roadways; VMTs expected to be similar to No Action; however, new Lot DD curbside would be a positive alternative to the congested terminal curbsides during peak vehicle traffic periods so reduced travel times would reduce emissions)</p>	

NOTES:

RCC—Rental Car Center

VMT—Vehicle Miles Traveled

- 1/ Trip route descriptions described from the point at which the passenger accesses or departs Airport property.
- 2/ Interim conditions would be experienced from 2019–2024 when the AirTrain is extended and a Lot DD new station is available. The new RCC facilities would not be operational until 2025.
- 3/ Trips between off-Airport locations and Lot D are assumed to access Lot D from North McDonnell Road, using San Bruno Avenue to connect to the regional roadway network.
- 4/ Trips between off-Airport locations and Lot DD are assumed to access Lot DD from South Airport Boulevard, using San Bruno Avenue to connect to the regional roadway network.
- 5/ Although the Airport access point will shift from the terminal area to the Lot DD area; it is assumed that VMTs will be reduced for by approximately 1.25 miles off-Airport parking shuttles originating from points north of the Airport and increased by approximately 1.25 miles for shuttles originating from points south of the Airport. The overall effect would therefore be neutral.

SOURCE: Ricondo & Associates, Inc., May 2017.

PREPARED BY: Ricondo & Associates, Inc., May 2017.

Given the proposed operational changes described above, it is estimated that operational emissions levels under the Proposed Action would be less than under the No Action Alternative; therefore, operation of the Proposed Action, in both interim conditions and following full build, would not cause an exceedance of the *de minimis* NAAQS thresholds and therefore would not increase the frequency or severity of existing air quality violations in the San Francisco Bay Area.

4.2 Biological Resources

4.2.1 METHODOLOGY

The potential for impacts to biological resources, including threatened and endangered species and migratory birds, was assessed by: (1) determining whether biological resources are present in the Proposed Project Area, and (2) qualitatively evaluating whether construction or operation of the Proposed Action would change conditions such that habitat of present species would be destroyed or altered, or individuals or local populations of species would be disturbed or eliminated.

4.2.2 THRESHOLDS OF SIGNIFICANCE

Under the ESA, the FAA, as the responsible federal agency, determines whether the Proposed Action may affect any threatened or endangered species. If so, the FAA must initiate consultation with the FWS for terrestrial and freshwater species and with NMFS for marine species in order to determine the significance of those effects.

The FAA's significance threshold for impacts to biological resources (including fish, wildlife, and plants), as described in FAA Order 1050.1F is as follows:

A significant impact to biological resources would occur when: The U.S. Fish and Wildlife Service or the National Marine Fisheries Service determines that the action would be likely to jeopardize the continued existence of a Federally-listed threatened or endangered species, or would result in the destruction or adverse modification of federally-designated critical habitat.

4.2.3 EVALUATION OF ALTERNATIVES

The Proposed Project Area is entirely within the built portion of the Airport where no natural habitat communities exist. No federal or state protected species or habitat for such species are present in the Proposed Project Area. Although no migratory birds were identified in the Proposed Project Area, existing building ledges and other man-made structures as well as ornamental landscaped areas with ground cover, shrubs, and/or trees have the potential to provide seasonal nesting habitat for migratory birds under the Proposed Action and the No Action Alternative; however, neither the Proposed Action nor the No Action Alternative would affect migratory birds. Therefore, neither the Proposed Action nor the No Action Alternative would have an effect on federal or state listed species or critical habitat.

4.2.3.1 No Action

Construction Impacts

No construction activities would occur under the No Action Alternative. Therefore, biological resources would not be affected by construction-related activities under the No Action Alternative.

Operational Impacts

No permanent natural habitat communities exist within the Proposed Project Area. Seasonal nesting habitat in areas of the Proposed Project Area would remain and continue to be available to migratory birds under

operation of the No Action Alternative. Therefore, operation of ground access activities in the Proposed Project Area under the No Action Alternative would not affect biological resources.

4.2.3.2 Proposed Action

Construction Impacts

To address short-term effects associated with construction of the Proposed Action, the City would conduct pre-construction surveys to confirm the continued absence of biological resources that could be affected by construction activities. If construction activities are proposed during the nesting season (i.e., February 1 to August 31), nesting bird surveys would be performed by a qualified biologist no earlier than 2 weeks prior to the initiation of construction to identify the presence of nesting birds within and adjacent to the Proposed Project Area. If any active nests are observed during these surveys, a suitable avoidance buffer from the nests would be determined by the qualified biologist based on species, planned construction activity, and proximity to the nest. The nest would be avoided until the eggs have hatched, the chicks have fledged, and/or the nest is confirmed to be no longer active. Alternatively, if daily monitoring of the nest demonstrates that construction activities are not causing disturbance to the nesting birds or disrupting the nesting activity, construction activities would proceed in such situations subject to the case-specific recommendations of the qualified biologist.

No permanent biological communities exist within the Proposed Project Area, and no federal or state listed species or critical habitat are present. Construction of the Proposed Action would have no effect on federal or state listed species or critical habitat.

Operational Impacts

No permanent natural habitat communities exist within the Proposed Project Area, and no federal or state listed species or critical habitat are present. Seasonal nesting habitat exists in areas of the Proposed Project Area and would continue to be available to migratory birds under operation of the Proposed Action. Therefore, operation of ground access related activities in the Proposed Project Area under the Proposed Action would have no effect on federal or state listed species or critical habitat.

4.3 Climate

4.3.1 METHODOLOGY

Consistent with the air quality analysis, short-term increases in GHG emissions would be expected during construction of the Proposed Action. Therefore, an inventory of GHG emissions associated with construction of the Proposed Action was conducted using the same methodology as the air quality analysis (defined in Section 4.1.1 and in Appendix D).

This analysis addresses both direct and indirect GHG emissions, which are defined as follows:

- Direct Emissions—Direct sources of GHG emissions include on-Airport stationary sources, including heating/cooling; operational changes to surface traffic activity and surface traffic flows within the Airport area; construction and operation equipment; construction haul trips; and construction worker commute trips.
- Indirect Emissions—Indirect sources of GHG emissions include the consumption of purchased electricity, solid waste disposal, water usage, and wastewater treatment.

GHGs of concern from construction sources are primarily CO₂, CH₄, and N₂O. This analysis focuses on CO₂ emissions and others are reported in terms of CO₂ equivalents (CO₂e). Comparable to the Air Quality analysis of Proposed Action and No Action Alternative operations, long-term changes in GHG emissions and effects on climate related to operations are discussed qualitatively.

4.3.2 THRESHOLDS OF SIGNIFICANCE

Some courts have indicated that GHG emissions and climate change should be considered in NEPA analyses. Projected GHG emissions associated with proposed actions can be used to assess a proposed action's climate change effects. Climate change results from the addition of GHG emissions from millions of individual sources. Thus, the FAA has not established a significance threshold for climate and GHG emissions.

4.3.3 EVALUATION OF ALTERNATIVES

The Proposed Action would not have a significant effect on climate as compared with the No Action Alternative. GHG emissions would temporarily increase during construction of the Proposed Action, but would be lower during operation of the Proposed Action in comparison with the No Action Alternative.

4.3.3.1 No Action

Construction Impacts

No construction would occur under the No Action Alternative; therefore, GHGs would not be emitted due to construction activities under the No Action Alternative.

Operational Impacts

Under the No Action Alternative, rental car transactions are projected to increase commensurate with forecast passenger growth and the propensity to rent cars at SFO. As the terminal roadway and curbsides become increasingly congested, the existing operation, as it relates to passenger transit to/from the terminals as well as rental car/remote parking facilities related to ground access and remote parking land uses, would continue as described in Section 4.1.3.1. Although congestion at the terminal roadway and curbsides would be expected to increase, this increase is not attributed to a federal action that would increase fuel consumption and generate GHG emissions.

4.3.3.2 Proposed Action

Construction Impacts

GHG emissions would temporarily increase during construction of the Proposed Action over the 8-year construction period (2017–2024). Annual GHG emissions, based on the methodology documented in Section 4.1.1 and Appendix D, are presented in **Table 4-3**. The following actions support the minimization of GHG emissions during construction in order to reduce the effects of the Proposed Action:

- Crush, stockpile, and recycle concrete to the extent possible.
- Maintain and properly tune all construction equipment in accordance with manufacture’s specifications.
- Reduce equipment idling times.

Table 4-3: Proposed Action Construction Greenhouse Gas Emissions

YEAR	MT CO ₂ e
2017	2517.8
2018	1548.6
2019	74.0
2020	56.6
2021	3318.7
2022	3014.3
2023	3622.7
2024	3150.9
Total	17,303.6

NOTE:

MT CO₂e—metric tons of CO₂ equivalent

SOURCE: Ricondo & Associates, Inc., November 2016.

PREPARED BY: Ricondo & Associates, Inc., November 2016.

Operational Impacts

Long-term effects on climate may result from GHG emissions, and, considering emissions sources at the Airport, the Proposed Action has the potential to affect electricity and fuel consumption. The SFPUC has been designated a zero GHG Emission Electric Utility by the California Air Resources Board; therefore, any changes in electricity use due to changes in facilities under the Proposed Action would not affect GHG emissions. Consequently, this evaluation focuses on potential changes to fuel consumption given vehicle operations associated with the Proposed Action.

The number of rental car transactions under the Proposed Action would be the same as under the No Action Alternative; however, extension of the AirTrain to Lot DD and construction of the remote curbside at the AirTrain

station in Lot DD would provide the opportunity to reallocate or eliminate several trip types associated with the ground access and parking activities in the Proposed Project Area, as discussed in Section 4.1.3.2. As shown in Table 4-2, changes in vehicle trip types under the Proposed Action are estimated to have neutral to positive effects on air emissions, reflective of no net changes in distance travelled and elimination of some trip types as passengers are shifted to the AirTrain and shuttle bus trips are eliminated. Therefore, fuel use would be expected to be lower under the Proposed Action, which would result in lower GHG emissions under the operation of the Proposed Action compared with the No Action Alternative.

4.4 Coastal Resources

4.4.1 METHODOLOGY

The Proposed Action was reviewed for consistency with the BCDC's Bay Plan, which is the coastal zone management plan for the San Francisco Bay Area by evaluating changes in activities within the 100-foot shoreline band under BCDC's jurisdiction. In accordance with 15 CFR 930.98,⁶ activities associated with the Proposed Action and No Action Alternative outside the coastal zone were evaluated for the potential to impact resources within the coastal zone. The Proposed Action was also reviewed for conformance with permit conditions related to changes to the Bay Trail that BCDC may approve through an amendment to the BCDC permit by as long as the proposed changes:

- Do not materially affect the quality of the public access experience;
- Do not prevent a continuous access trail around the Airport, meet all San Francisco Bay Trail Project standards maintained by Association of Bay Area Governments (ABAG); and
- Provide, on average, a landscaped or natural trail corridor that has a width equal to/or greater than the approved Bay Train Alignment Plan.

4.4.2 THRESHOLDS OF SIGNIFICANCE

The FAA has not established thresholds of significance for impacts on coastal resources. However, when the state, having an approved coastal zone management program, raises an objection to the Proposed Action because the action would not be consistent with the applicable coastal zone management plan, the FAA cannot approve the action, unless the objection is satisfied, or it is successfully appealed to the Secretary of Commerce.

4.4.3 EVALUATION OF ALTERNATIVES

Coastal resources within the Proposed Project Area, construction staging areas, and truck routes include the 100-foot shoreline band and the Bay Trail. Both the Proposed Action and the No Action Alternative are consistent with, and would not result in an impact to resources identified in, the relevant state coastal zone management plan (i.e., the Bay Plan), and uses of the Bay Trail would remain consistent with the approved Bay Trail Alignment Plan, as permitted by BCDC. The City would seek an amendment to the BCDC permit regarding

⁶ Title 15 Code of Federal Regulations 930.98, "Federally assisted activities outside of the coastal zone or the described geographic area."

changes to the Bay Trail under the Proposed Action. Therefore, as discussed in this section, neither the Proposed Action nor the No Action Alternative would affect coastal resources.

4.4.3.1 No Action

Construction Impacts

No construction would occur under the No Action Alternative. Therefore, coastal resources would not be affected by construction-related activities under the No Action Alternative.

Operational Impacts

Under the No Action Alternative, the existing operation within the Proposed Project Area, which is not within the 100-foot shoreline band, would be maintained, and would not result in reasonably foreseeable coastal effects. Therefore, operation of the No Action Alternative is not subject to review of consistency with the coastal zone management plan. Additionally, the Bay Trail would remain consistent with the approved Bay Trail Alignment Plan, as permitted by BCDC.

4.4.3.2 Proposed Action

Construction Impacts

Construction of the Proposed Action would not occur within the BCDC 100-foot shoreline band. Portions of the east construction staging area and the associated truck route are located within the 100-foot shoreline band; however, they would continue to serve in their existing capacities by accommodating equipment staging and vehicle trips along an access road, respectively. There is no change in use, the areas would remain consistent with the Bay Plan, and no reasonably foreseeable coastal effects would occur.

A segment of the Bay Trail under BCDC permit would be affected during construction of the Proposed Action as the trail is reconstructed to serve as a fire lane for the RCC and a utility corridor is constructed under the trail and fire lane. The City has developed a detour plan to maintain trail connectivity during construction and would meet all Bay Trail Project standards maintained by ABAG. On April 5, 2017, the FAA initiated consultation with the BCDC regarding the proposed location of the fire lane and utilities within the on-Airport segment of the Bay Trail. Additional detail for the proposed temporary pedestrian detour route was provided to BCDC on April 26, 2017. BCDC responded on June 1, 2017, that the Proposed Project would not have an adverse impact on public access, and that it generally conforms to the requirements of the BCDC permit. Copies of the correspondence are provided in **Appendix I**.

Therefore, construction of the Proposed Action would be consistent with the Bay Plan, and the City would seek an amendment to the BCDC permit regarding temporary changes to the Bay Trail during construction.

Operational Impacts

The Proposed Project Area is outside of the 100-foot shoreline band and no reasonably foreseeable effects to coastal resources would occur. Therefore, operation of the Proposed Action is not subject to a review of consistency with the coastal zone management plan.

Following temporary construction effects, the reconstructed segment of the on-Airport Bay Trail would be functionally consistent with the trail alignment under the No Action Alternative in that it would maintain a continuous access trail from South San Francisco to San Bruno Avenue. The reconstructed trail would meet all Bay Trail Project standards maintained by ABAG. Landscaping along the trail corridor and additional trail width for pedestrian and cyclist lanes would enhance the quality of the public access experience in comparison with the No Action Alternative.

The BCDC determined that the Proposed Action would not have an adverse impact on public access and generally conforms to the requirements of the Airport's BCDC permit No. 1996.002.07 (see Appendix I). To ensure compliance with the permit, the City would request plan review approval of the Proposed Action element affecting the Bay Trail, and BCDC would approve the Proposed Action as already authorized by the permit or determine that a permit amendment is necessary.

Therefore, operation of the Proposed Action would not affect coastal resources, and the City would seek an amendment to the BCDC permit regarding changes to the Bay Trail that are consistent with the approved Bay Trail Alignment Plan.

4.5 Department of Transportation Act, Section 4(f), and Land and Water Conservation Fund Act, Section 6(f)

4.5.1 METHODOLOGY

The assessment of potential impacts to Section 4(f) resources was conducted by determining whether the Proposed Action would result in the physical use of any Section 4(f) resources within the Proposed Project Area or would constitute a constructive use of a Section 4(f) resource that would substantially impair the resource and whether such use requires Section 4(f) approval. There are no Section 6(f) resources within the Proposed Project Area.

4.5.2 THRESHOLDS OF SIGNIFICANCE

FAA Order 1050.1 F defines the significance threshold for Section 4(f) resources as: "The action involves more than a minimal physical use of a Section 4(f) resource or constitutes a "constructive use" based on an FAA determination that the aviation project would substantially impair the Section 4(f) resource. Resources that are protected by Section 4(f) are publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance; and publicly or privately owned land from an historic site of national, state, or local significance. Substantial impairment occurs when the activities, features, or attributes of the resource that contribute to its significance or enjoyment are substantially diminished."⁷

⁷ U.S. Department of Transportation, Federal Aviation Administration, Order 1050.1F, *Environmental Impacts: Policies and Procedures*, Table 4-1, "Significance Determination for FAA Actions," July 16, 2015.

4.5.3 EVALUATION OF ALTERNATIVES

One Section 4(f) resource, the Bay Trail, is located within the Proposed Project Area. The Bay Trail would not be substantially impaired by an action related to the Proposed Action or the No Action Alternative, and temporary construction activities and use of the Bay Trail to support a fire lane and underground utility corridor under the Proposed Action are excepted from Section 4(f) approval per 23 CFR 774.13(f)(3).

4.5.3.1 No Action

Construction Impacts

No construction would occur under the No Action Alternative, and no action would be taken that would involve a use of the Bay Trail.

Operational Impacts

Under the No Action Alternative, the existing ground access related operations within the Proposed Project Area would be maintained, the segment of the Bay Trail within the Proposed Project Area would continue to serve as a trail (supporting pedestrians and cyclists), and no action would be taken that would involve a use of the Bay Trail. No Section 4(f) resources would be substantially impaired.

4.5.3.2 Proposed Action

Construction Impacts

Under the Proposed Action, approximately 1,150 linear feet of the Bay Trail (comprising an area of approximately 1.2 acres) would be closed to the public for approximately 4 months to accommodate reconstruction of the trail. The reconstructed trail would serve as a fire lane for the RCC, and a utility corridor would be constructed under the trail/fire lane. The City has developed a detour plan to maintain trail connectivity during construction. The effects would be temporary, and the City would return the Bay Trail to a condition functionally and aesthetically consistent with the current trail.

The FAA determined that the Section 4(f) approval exception provided by 23 CFR Part 774.13(f)(3) applies to the Proposed Action. The Bay Trail occupies a right-of-way on Airport property, which is a transportation facility, and the continuity of the public access trail would be maintained during construction. On June 1, 2017, BCDC did not object to the FAA's determination to apply the Section 4(f) approval exception and concurred that the Proposed Action would not have an adverse impact on public access and generally conforms with the requirements of the BCDC permit (see Appendix I). Therefore, the Proposed Action would not constitute a use within the meaning of Section 4(f).

Operational Impacts

Following temporary construction effects, the reconstructed segment of the on-Airport Bay Trail would be functionally consistent with the trail alignment under the No Action Alternative in that it would maintain a continuous public access trail from South San Francisco to San Bruno Avenue. The reconstructed trail would meet all Bay Trail Project standards maintained by ABAG. Landscaping along the trail corridor and additional

trail width for pedestrian and cyclist lanes would enhance the quality of the public access experience in comparison with the No Action Alternative.

The FAA determined that the Section 4(f) approval exception provided by 23 CFR Part 774.13(f)(3) applies to the Proposed Action. The Bay Trail occupies a right-of-way on Airport property, which is a transportation facility, and the continuity of the public access trail would be maintained under the Proposed Action. On June 1, 2017, BCDC did not object to the FAA's determination and concurred that the Proposed Action would not have an adverse impact on public access and generally conforms with the requirements of the BCDC permit (see Appendix I). Therefore, operation of the Proposed Action would not affect this Section 4(f) resource, and the City would seek an amendment to the BCDC permit regarding changes to the Bay Trail that are consistent with the approved Bay Trail Alignment Plan.

4.6 Hazardous Materials, Solid Waste, and Pollution Prevention

4.6.1 METHODOLOGY

The Proposed Action and No Action Alternative were evaluated for the potential to result in activities (including temporary construction activities) that would affect the generation and/or disposal of hazardous materials and municipal solid waste. Measures to prevent pollution were also identified.

4.6.2 THRESHOLDS OF SIGNIFICANCE

The FAA has not established a significance threshold for hazardous materials, solid waste, or pollution prevention. Therefore, the Proposed Action and the No Action Alternative were reviewed to determine whether any of the following would occur, which would indicate a potential for significant hazardous materials, solid waste, or pollution prevention impact:

- violate hazardous waste or solid waste management laws and regulations;
- affect a contaminated site;
- produce an appreciably different quantity or type of hazardous waste;
- produce an appreciably different quantity or type of solid waste that would exceed local capacity; or
- adversely affect human health and the environment.

4.6.3 EVALUATION OF ALTERNATIVES

4.6.3.1 Hazardous Materials

The Proposed Action and the No Action Alternative would not violate federal, state, or local hazardous substance laws and regulations; affect a contaminated site; produce an appreciably different quantity or type of hazardous substance; or adversely affect human health and the environment. Therefore, the Proposed Action would not cause a significant impact related to hazardous materials in comparison with the No Action Alternative.

No Action—Construction Impacts

No construction would occur under the No Action Alternative, so the No Action Alternative would not affect a contaminated site, involve the use of hazardous materials, or generate hazardous waste that would require storage and management during construction.

No Action—Operational Impacts

Operation of the Airport under the No Action Alternative would involve a variety of hazardous substances typically associated with the operation of a rental car facility, including management of 14 tanks that store and dispense fuel in the QTA facility. The fuel storage capacity of the 14 tanks is 177,000 gallons and is expected to remain constant despite the forecast increase in rental car transactions because the rental car fleet is expected to continue to transition to more fuel-efficient vehicles. The San Mateo County Environmental Health Division would oversee compliance of the fuel tanks with the RCRA.

Although soil and groundwater at the Proposed Project Area may have been affected by petroleum hydrocarbons and fuel constituents, operation of the No Action Alternative would not affect soil or groundwater.

Proposed Action—Construction Impacts

The potential to encounter hazardous substances during construction activities exists. Although no contaminants or contaminated soils are known to be within the Proposed Project Area, construction of the Proposed Action has the potential to affect previously unknown contaminated soil and produce a different quantity or type of hazardous waste. Hazardous substances (e.g., fuel, waste oil, solvents, paint, and other hydrocarbon-based products) would be used during construction in quantities that are typical in the construction industry. All hazardous materials utilized during construction of the Proposed Action would be stored, labeled, and disposed of in accordance with federal, state, and local regulations, as well as the latest edition of the San Francisco International Airport Tenant Improvement Guide.

Construction of the Proposed Action includes the closure and abandonment of 14 USTs at the existing QTA facility and replacement in-kind of the 177,000-gallon fuel storage capacity for rental cars at the proposed QTA facility. The San Mateo County Environmental Health Division oversees the UST Program for San Mateo County, which includes the Airport. The County permits the closure and removal of USTs, which includes requirements for inspections to ensure safety standards are met and County staff supervision of soil and groundwater sampling to assess for potential contamination. The County also permits construction of USTs to ensure that USTs are made of approved materials, protect against corrosion, and have the ability to detect and intercept leaks. During construction, County staff inspect the tanks to ensure standards are met.⁸ The City would obtain permits from the San Mateo County Environmental Health Division for the closure of the USTs at the existing QTA facility and the construction of new USTs at the proposed QTA facility.

Airport construction projects that include soil excavation and dewatering require materials and soil/water testing prior to the start of construction and demolition activities. Materials and soil/water testing are to be

⁸ County of San Mateo Health System, "Underground Storage Tank Program," www.smchealth.org/cupa/ust, (Accessed July 14, 2017).

conducted according to federal, state, and local regulations, as well as San Francisco Bay RWQCB Order R2-1999-0045. The City includes regulatory testing requirements in all construction bid documents pertaining to the handling of construction and demolition debris and soil testing, worker safety, and the safe handling and disposal of construction-related materials. The City, or its construction contractor, would conduct testing of all excavated soil to determine whether it would be acceptable for reuse or would require hauling to an off-site facility that is able to accept the soil for disposal. Therefore, any contaminated hazardous waste generated as part of the Proposed Action would be handled in accordance with federal, state, and local regulations. Hazardous waste disposal facilities are available in California, as identified in Section 3.8.2.2. Implementation of the applicable regulations and permit requirements would ensure that no hazardous materials or pollutant impacts would occur during construction of the Proposed Action.

Proposed Action—Operational Impacts

Operation of the Airport under the Proposed Action would involve the same types and quantities of hazardous substances typically associated with the operation of a rental car facility as under the No Action Alternative.

Under the Proposed Action, USTs would be located within the footprint of the proposed QTA facility for rental car fuel storage. The USTs would provide 177,000 gallons of fuel storage capacity and would remain in compliance with the RCRA. The capacity of USTs at the proposed QTA facility would be equal to the UST capacity of the existing QTA facility, even as rental car transactions increase, because the rental car fleet continues to transition to more fuel-efficient vehicles. Operation of the USTs would conform to all federal, state, and local hazardous substance laws and regulations, and the City would maintain a UST operating permit from the San Mateo County Environmental Health Division, which requires tank owners to possess a valid operating permit, conduct routine testing, maintain equipment, prepare an approved leak-response plan, and upgrade tank systems as required.⁹ Given comparable fuel quantities and fuel management procedures, operation under the Proposed Action would not produce an appreciably different quantity or type of hazardous substances compared with the No Action Alternative. A hazardous materials impact would not occur due to operation of the Proposed Action.

4.6.3.2 Solid Waste

Neither the Proposed Action nor the No Action Alternative would produce a quantity of solid waste that would exceed local capacity or a type of waste that could not be disposed of in accordance with all applicable federal, state, and local laws and regulations. Therefore, the Proposed Action would not cause a significant impact related to solid waste in comparison with the No Action Alternative.

No Action—Construction Impacts

No construction would occur under the No Action Alternative, so the No Action Alternative would not generate construction-related solid waste.

⁹ County of San Mateo Health System, "Underground Storage Tank Program," www.smchealth.org/cupa/ust, (Accessed July 14, 2017).

No Action—Operational Impacts

Under the No Action Alternative, the amount of solid waste may increase over time proportionately to the increase in passenger numbers served at the Airport and the RCC. Sufficient regional disposal capacity has been identified for municipal solid waste (the Bay Area region is projected to have landfill capacity to support the region for over 40 years, as identified in Section 3.8.2.2). Solid waste would be recycled to the extent practical, and the remaining debris would be disposed of in accordance with all applicable federal, state, and local laws and regulations. The No Action Alternative would not produce a quantity or type of solid waste that would exceed local capacity.

Proposed Action—Construction Impacts

Solid waste generated during construction of the Proposed Action would be recycled to the extent practical. As discussed in Section 3.8.2.2, the City aims to achieve a recycling rate of 85 percent for nonhazardous construction and demolition solid waste by 2018, while in practice Airport construction projects often achieve a C&D recycling rate above 90 percent. Pursuant to Airport Commission requirements, an Environmental Protection Plan (EPP) for construction of the Proposed Action would be submitted by the contractor and approved by the Airport Commission prior to construction. Furthermore, the Bay Area region is projected to have landfill capacity to support the region for over 40 years, so sufficient solid waste disposal capacity is available. Therefore, construction of the Proposed Action would not produce a quantity or type of solid waste that would exceed local capacity. Thus, no solid waste impact would result from construction of the Proposed Action.

Waste generated from Airport construction projects may require the disposal of hazardous waste. As noted in Section 4.6.3.1, hazardous waste receiving facilities are available regionally to accept materials that would be expected to be generated during construction in the Proposed Project Area.

Proposed Action—Operational Impacts

Under the Proposed Action, the amount of solid waste may increase over time proportionately to the increase in passenger numbers served at the Airport and the RCC. This increase would be similar to conditions under the No Action Alternative. Sufficient regional disposal capacity has been identified for municipal solid waste because the Bay Area region is projected to have landfill capacity to support the region for over 40 years. Solid waste would be recycled to the extent practical, and the remaining debris would be disposed of in accordance with all applicable federal, state, and local laws and regulations. The Proposed Action would not produce an appreciably different quantity or type of solid waste as compared with the No Action Alternative, nor would the quantity produced exceed local capacity. No solid waste impact would result from operation of the Proposed Action.

4.6.3.3 Pollution Prevention

Neither the Proposed Action nor the No Action Alternative would adversely affect human health or the environment as a result of pollution, and both alternatives would comply with applicable federal, state, or local laws or regulations regarding hazardous materials. Therefore, the Proposed Action Alternative would not cause a significant impact related to pollution compared with the No Action Alternative.

No Action—Construction Impacts

No construction would occur under the No Action Alternative, so the No Action Alternative would not generate construction-related pollution.

No Action—Operational Impacts

Stormwater conveyance outside of the Proposed Project Area would be maintained under the No Action Alternative. Stormwater would continue to be managed in accordance with the provisions and requirements of the Airport's NPDES Permit (RWQCB Order No. R2-2013-0011).¹⁰ In accordance with the NPDES Permit, the City maintains a SWPPP for stormwater discharges associated with industrial activities at the Airport.

Operation of the No Action Alternative would continue to be conducted utilizing BMPs identified in the Airport's SWPPP for industrial activities in order to prevent pollutants in stormwater discharge, and the Airport's SPCC Plan documents pollution prevention measures for, and conditions of, the fuel storage tanks in the QTA facility.

Proposed Action—Construction Impacts

Stormwater would continue to be managed in accordance with the provisions and requirements of the Construction General Permit (SWRCB Order No. 2009-0009-DWQ, as amended by Orders 2010-0014-DWQ and 2012-0006-DWQ).¹¹ In accordance with the Construction General Permit, the City maintains a SWPPP for stormwater discharges associated with construction activities at the Airport.

A site-specific construction SWPPP would be prepared for the Proposed Action consistent with the Construction General Permit, and it would be incorporated into the Airport's SWPPP for construction activities. BMPs identified in the site-specific SWPPP would ensure that construction of the Proposed Action would not affect stormwater. The construction contractor would also be required to conform to the Airport-wide SWPPP measures. These procedures are subject to review and approval by the Bay Pollution Prevention Program Officer at the Airport.

Proposed Action—Operational Impacts

Stormwater conveyance outside of the Proposed Project Area would not be affected under the Proposed Action. Under the Proposed Action, stormwater would continue to be managed in accordance with the provisions and requirements of the Airport's NPDES Permit.¹² In accordance with the NPDES Permit, the City maintains a SWPPP for stormwater discharges associated with industrial activities at the Airport.

¹⁰ City and County of San Francisco, *Stormwater Pollution Prevention Plan for Construction Activities*, September 23, 2013 (last plan review on June 1, 2016).

¹¹ City and County of San Francisco, *Stormwater Pollution Prevention Plan for Construction Activities*, September 23, 2013 (last plan review on June 1, 2016).

¹² City and County of San Francisco, *Stormwater Pollution Prevention Plan for Construction Activities*, September 23, 2013 (last plan review on June 1, 2016).

Operation of the Proposed Action would utilize BMPs identified in the Airport's SWPPP for industrial activities in order to prevent pollutants in stormwater discharge. The Proposed Action includes the relocation of the existing fuel dispensing operation from the existing QTA facility in Lot D to a location within the footprint of the new QTA facility in southwestern corner of Lot DD (see the location of the new QTA facility in Exhibit I-4). The Airport's SPCC Plan would be updated to reflect the new location of the fuel storage tanks and disposal conditions under the Proposed Action.

4.7 Historic, Architectural, Archaeological, and Cultural Resources

4.7.1 METHODOLOGY

The methods for assessing potential impacts to historical, architectural, archeological, and cultural resources outlined in FAA Order 1050.1F include (1) defining the APE that encompasses the direct or indirect areas of influence for the proposed project, which is documented in Section 3.9; (2) identifying and assessing any historic properties or resources present; and (3) determining whether the resources, if any, are on or eligible for listing on the NRHP as set forth in 36 CFR § 800.4(b). To determine whether any cultural or historic resources were present, prior survey reports that had an APE that coincided with the APE for this Proposed Action were evaluated. This information was supplemented with (1) a records search of the Northwest Information Center and (2) a Native American Heritage Commission search of the Sacred Land File. In addition, the FAA consulted with the California SHPO and Native American tribes identified by the Native American Heritage Commission.

4.7.2 THRESHOLDS OF SIGNIFICANCE

The FAA has not established a significance threshold for cultural resources. If the potential for an adverse effect on a cultural resource is identified, then the effects of the action are evaluated and determined through the Section 106 consultation process with the SHPO and THPOs. Examples of adverse effects include physical destruction, damage, or alteration of a property; removal of the property from its historic location; change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance; introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features; neglect of a property that causes its deterioration; and transfer, lease, or sale of a property out of federal ownership, or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.¹³

4.7.3 EVALUATION OF ALTERNATIVES

No known cultural resources are located within the APE, so neither the Proposed Action nor the No Action Alternative would impact historical, architectural, archaeological, or cultural resources. The City has practices in place to address previously unknown archaeological resources if any are identified during construction. The FAA determined that there are no effects to resources listed in or eligible for the NRHP and a finding of No Historic Properties Affected is appropriate. On June 20, 2017, the FAA provided its written effects determination along with supporting information to the California SHPO. On August 22, 2017, the California SHPO concurred

¹³ Title 36 Code of Federal Regulations, Part 800, *Assessment of Adverse Effects*, Section 5.

with the FAA's No Historic Properties Affected finding and confirmed that it had no concerns with the FAA's delineation of the APE. The SHPO also advised the FAA of additional consultation responsibilities in the event of an unanticipated discovery or a change in the scale or scope of the project. Copies of the correspondence are provided in Appendix F.

4.7.3.1 No Action

Construction Impacts

No construction or other ground-disturbing activities would occur under the No Action Alternative, so cultural resources would not be affected by construction-related activities under the No Action Alternative.

Operational Impacts

Operation of the existing rental car and other ground access operations in the APE under the No Action Alternative would not affect cultural resources because no cultural resources are present in the APE, and no ground disturbing activities would occur that could affect previously unknown archaeological resources.

4.7.3.2 Proposed Action

Construction Impacts

No cultural resources have been identified in the APE. Construction of the Proposed Action would not affect historic, architectural, archaeological, or cultural resources.

Because the Proposed Action is being constructed on land developed through the placement of fill in the 1900s, it is unlikely that previously undiscovered archaeological or cultural resources would be exposed during ground-disturbing construction activities. In the event of an unanticipated discovery, however, all ground-disturbing activities within 100 feet of the find would be temporarily suspended until the find could be evaluated by a qualified archaeologist and then properly managed in accordance with applicable federal, state, and local requirements.

Operational Impacts

Operation of rental car and other ground access operations in the APE would not affect cultural resources given that no cultural resources are present in the APE.

4.8 Land Use

4.8.1 METHODOLOGY

The development plans of public agencies for the areas surrounding the Proposed Project Area (the County of San Mateo and the cities of South San Francisco, San Bruno, Millbrae, and Burlingame) were reviewed to evaluate compatibility of the Proposed Action and No Action Alternative with existing or planned land uses. Additionally, the Proposed Action and No Action Alternative were reviewed for consistency with Airport plans

and for consistency of new construction with FAA guidance related to compatibility of structures and aircraft operations with aircraft operations given proximity of the Proposed Project Area to the airfield.

4.8.2 THRESHOLD OF SIGNIFICANCE

The FAA has not established a significance threshold for land use; however, the FAA cannot approve an airport project's funding unless the project is in compliance with development plans of public agencies responsible for the area in which the airport is located. Additionally, the determination of whether a significant impact exists for land use is often dependent on impacts of the Proposed Action or the alternatives on other environmental impact categories. Since neither the Proposed Action nor the No Action Alternative would result in significant effects in other environmental impact categories that could affect land use compatibility, this evaluation was limited to the evaluation of land use changes within the Proposed Project Area.

4.8.3 EVALUATION OF ALTERNATIVES

The Proposed Action and No Action Alternative are consistent with land use plans of the adjacent communities and the Airport. The City is coordinating with Caltrans regarding the location of an AirTrain guideway foundation element within the State ROW under the Proposed Action and has confirmed the need to obtain an encroachment permit from Caltrans. The encroachment would not require a change in use of the land or result in a significant impact on land use. (Appendix K provides a copy of Caltrans's January 10, 2017, response to the City's scoping letter.) Therefore, the Proposed Action would not result in a significant effect on land use.

4.8.3.1 No Action

Construction Impacts

No construction would occur under the No Action Alternative, so land use would not be affected by construction-related activities under the No Action Alternative.

Operational Impacts

The Airport Commission adheres to all grant assurances and applicable U.S.C. regulations related to land use compatibility. Pursuant to 49 U.S.C. § 47107(a)(10), the Airport Commission has provided written assurance to the FAA that appropriate action is being taken, to the extent reasonable, to restrict the use of land adjacent to or in the immediate vicinity of the Airport to activities and purposes compatible with normal airport operations. A copy of the written assurance is provided in Appendix G.

The San Mateo County General Plan designates the Airport as a Special Urban Area devoted primarily to airport and transportation-related use, expansion, and redevelopment.¹⁴ As required by California Public Utilities Code §§ 21670 *et seq.*, the San Mateo County General Plan and the General Plans for the cities of South San Francisco, San Bruno, Millbrae, and Burlingame were reviewed by the C/CAG ALUC and determined to be consistent with the Airport's ALUCP. Land use under the No Action Alternative would not change existing uses such that safety

¹⁴ County of San Mateo Planning and Building Department, *General Plan Policies*, planning.smcgov.org/documents/general-plan-policies (accessed September 21, 2016).

and noise compatibility requirements surrounding the Airport would require updates or changes. Thus, the No Action Alternative would be consistent with the SFO ALUCP.

Retaining RCC facilities in Lot D under the No Action is compatible with the existing and planned Airport land use of ground access and parking for Lots D and DD. Although a portion of the existing QTA facility would remain within the Runway 10L-28R RPZ, as shown on Exhibit 2-1, no new facilities would be constructed, so the No Action Alternative would not adversely affect safe aircraft operations.

4.8.3.2 Proposed Action

Construction Impacts

During construction of the Proposed Action, the City would continue to take appropriate action, to the extent reasonable, to restrict the use of land adjacent to or in the immediate vicinity of the Airport to activities and purposes compatible with normal airport operations, as expressed in the Airport Commission's written assurance to the FAA (Appendix G).

One element of the Proposed Action, a portion of one of the pile-supported foundations for the AirTrain, would be within the State ROW on San Bruno Avenue. The City is coordinating with Caltrans regarding the location of an AirTrain foundation element within the State ROW and has confirmed the need to obtain an encroachment permit from Caltrans. The City has initiated the permitting process with Caltrans for the ROW encroachment and coordination is ongoing. The encroachment would not require a change in use of the land or result in a significant impact on land use. (Appendix K provides a copy of Caltrans's January 10, 2017, response to the City's scoping letter.)

Operational Impacts

Under the Proposed Action, the City would continue to take appropriate action, to the extent reasonable, to restrict the use of land adjacent to or in the immediate vicinity of the Airport to activities and purposes compatible with normal airport operations, as expressed in the Airport Commission's written assurance to the FAA (Appendix G).

Land use under the Proposed Action would not change existing uses such that safety and noise compatibility requirements surrounding the Airport would require updates or changes. Thus, the Proposed Action would remain consistent with the SFO ALUCP.

Accommodating RCC facilities, including the fuel dispensing operation to be relocated from the existing to the new QTA facility, in Lot DD under the Proposed Action is compatible with the existing and planned Airport land use of ground access and parking for Lots D and DD. Additionally, the new RCC facilities are not located within an RPZ or of such height as to present an obstruction to air navigation, so the Proposed Action would not adversely affect safe aircraft operations. No land use impacts would result from operation of the Proposed Action.

4.9 Natural Resources and Energy Supply

4.9.1 METHODOLOGY

Demand for consumable natural resources (e.g., water, oil, and coal) and energy (e.g., electricity and natural gas) under the Proposed Action and the No Action Alternative were determined by evaluating the extent to which construction and operation would affect demand under the Proposed Action compared with the No Action Alternative, as well as by assessing whether the change under the Proposed Action would cause demand to exceed available or future supplies, as compared with the No Action Alternative.

4.9.2 THRESHOLDS OF SIGNIFICANCE

The FAA has not established a significance threshold for consumable natural resources and energy supply. For the purposes of this EA, significant impacts would occur when an action's construction or operation would cause demand for scarce consumable natural resources and energy to exceed available or future supplies.

4.9.3 EVALUATION OF ALTERNATIVES

Demand for consumable natural resources and energy would not exceed available or future supplies; therefore, neither the Proposed Action nor the No Action Alternative would have a significant impact on consumable natural resources or on energy supply.

4.9.3.1 No Action

Construction Impacts

The No Action Alternative would not involve construction activities requiring consumable natural resources (such as water, asphalt, aggregate, and wood) or energy (such as coal for electricity, natural gas for heating, and fuel for vehicles and shuttle buses). Therefore, the No Action Alternative would not affect consumable natural resources or energy supply due to construction activities.

Operational Impacts

Operation of the No Action Alternative would continue to require the use of water, a consumable natural resource, for on-site car washing at the QTA facility. The consumption of water would be expected to increase in proportion to the growth in rental car transactions. Similarly, operation of the No Action Alternative would continue to require use of energy, including electricity, fuel for rental car vehicles, and fuel for shuttle buses, all of which would be expected to increase along with the growth in rental car transactions. The demand for consumable natural resources and energy under the No Action Alternative, however, would not exceed available supply.

4.9.3.2 Proposed Action

Construction Impacts

Construction of the Proposed Action would require commonly available consumable natural resources and would incorporate recycled content materials to reduce the effects of extracting and processing virgin materials

to the extent practicable. Fossil fuels would also be consumed by construction equipment and vehicles. Construction activities for the Proposed Action would be carried out consistent with up-to-date industry standards and all applicable federal, state, and local regulations. Construction of the Proposed Action would also require water for fugitive dust suppression; however, the water would be sourced from the Airport's recycled water facilities. These utility needs are expected to be within the capacity of the respective utility systems; therefore, the temporary increase in demand for consumable natural resources and energy from construction activities would not be significant.

Operational Impacts

The Proposed Action involves the addition of two new structures (the Ready/Return Garage and the QTA facility) and an extension to the AirTrain, as well as a new substation and utility corridor to connect these facilities to the Airport's electrical utility distribution system. The new facilities would increase demand for electricity and natural gas compared with the No Action Alternative. As presented in Table 3-7, the RCC facilities combined accounted for 3.4 percent of the total electricity used at the Airport in FY 2014/2015, and the entire AirTrain system accounted for an additional 2.4 percent. The new facilities would include energy and water efficiency measures, consistent with the city's pursuit of the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Gold rating for new development. Therefore, although demand for electricity and natural gas would increase under the Proposed Action, the increase is expected to be minor in comparison with the total energy demand at the Airport, and it would not appreciably increase energy use; therefore, it is not considered significant.

The Proposed Action includes relocation of the existing fuel dispensing system for rental car vehicles. The tanks and dispensing operation at the existing QTA facility would be closed and reestablished at the proposed QTA facility under the Proposed Action. The volume of fuel storage capacity and amount of fuel expected to be dispensed would be the same under the Proposed Action and No Action Alternative. Therefore, the Proposed Action would not result in a change in fuel storage quantity or use compared with the No Action Alternative. No significant impact would occur.

Operation of the Proposed Action and the No Action Alternative requires water resources for onsite car washing at the QTA facility. The activity and the quantity of water used would be similar under the Proposed Action and the No Action Alternative; therefore, the Proposed Action would not appreciably increase water use when compared with the No Action Alternative. No significant natural resource or energy supply impact would occur with the operation of the Proposed Action.

4.10 Socioeconomics

4.10.1 METHODOLOGY

Socioeconomic impacts associated with the Proposed Action and the No Action Alternative were assessed by evaluating the extent to which the project could induce socioeconomic growth, physically disrupt an established community, result in a substantial relocation of residents or businesses, disrupt local traffic patterns or levels of service, or produce a substantial change in the community tax base. Given the potential for the Proposed Action

to affect local traffic patterns, levels of service on roadway segments within and adjacent to the Proposed Project Area were determined by considering the context and intensity of the changes in traffic patterns and their effect on levels of service.

4.10.2 THRESHOLDS OF SIGNIFICANCE

The FAA has not established significance thresholds for socioeconomic effects. The FAA has identified factors to consider when evaluating potential environmental impacts for socioeconomics. If any of the factors exist, the FAA evaluates the context and intensity of the factors to determine if the impact is significant. Factors to consider include, but are not limited to, situations in which a proposed action would have the potential to:

- Induce substantial economic growth in an area, either directly or indirectly (e.g., through establishing projects in an undeveloped area);
- Disrupt or divide the physical arrangement of an established community;
- Cause extensive relocation when sufficient replacement housing is unavailable;
- Cause extensive relocation of community businesses that would cause severe economic hardship for affected communities;
- Disrupt local traffic patterns and substantially reduce the levels of service of roads serving an airport and its surrounding community; or
- Produce a substantial change in the community tax base.

4.10.3 EVALUATION OF ALTERNATIVES

Neither the Proposed Action nor the No Action Alternative would induce substantial economic growth (including employment opportunities), disrupt or divide established communities, cause the relocation of residences or businesses, or produce an appreciable change in the community tax base. Construction of the Proposed Action would temporarily increase employment opportunities, benefiting the local economy and incomes, but this economic growth is not expected to be substantial given the economic activities and employment associated with the surrounding highly developed, urban area. The Proposed Action changes local traffic patterns in comparison with the No Action Alternative, but it reduces the number of trips on local roadways and thus would not substantially reduce levels of service of local roadways serving the Airport or the surrounding community. Therefore, the Proposed Action would not have a significant socioeconomic impact in comparison with the No Action Alternative.

4.10.3.1 No Action

Construction Impacts

The No Action Alternative would not involve construction activities. Therefore, the No Action Alternative would not affect economic growth in the area, disrupt or divide established communities, cause relocation of residences or businesses, affect local traffic patterns, or affect the community tax base as a result of construction activities.

Operational Impacts

Operation of the No Action Alternative would not disrupt or divide established communities, cause relocation of residences or businesses, or affect the community tax base. Under the No Action Alternative, economic activities associated with rental car and long-term parking transaction fees would continue, and revenues from these activities would be expected increase commensurate with the increase in O&D passenger activity and related demand for long-term parking and rental cars.

Similarly, existing vehicle trip types associated with rental car and parking activities in the Proposed Project Area (identified in Table 3-8) would be expected to increase. The No Action Alternative, therefore, would not support City efforts to manage congestion at the terminal roadways and curbsides because shuttle bus trips serving Lots D and DD would continue to transport passengers to the terminal curbsides and the lack of additional curbside frontage at the Lot D Kiss & Fly would not support increased diversion of passenger drop-off and pickup trips from the terminal curbsides to a remote curbside. Therefore, the No Action Alternative would not support opportunities to alleviate level of service concerns on terminal roadways and curbsides through a new remote curbside area that supports congestion management strategies.

4.10.3.2 Proposed Action

Construction Impacts

Construction of the Proposed Action would not disrupt or divide established communities, cause the relocation of residences or businesses, or affect the community tax base. Construction-related jobs would provide temporary economic benefits to the local economy, but this economic growth is not expected to be substantial given the economic and employment activities associated with the surrounding highly developed, urban area.

Construction of the Proposed Action, including project elements such as roadway improvements and the AirTrain extension over San Bruno Avenue, would have a temporary effect on traffic patterns and levels of service of area roadways. The City has developed a *Transportation Management Plan*, which is under review by Caltrans, to define temporary traffic restrictions and detours during construction. A copy of the *Transportation Management Plan* is provided in **Appendix J**. Effects on traffic patterns and levels of service on area roadways would be temporary and are not considered a significant impact.

Operational Impacts

Operation of the Proposed Action would not disrupt or divide established communities, cause relocation of residences or businesses, or affect the community tax base. Under the Proposed Action, economic activities associated with rental car and long-term parking transaction fees would continue, and revenues from the economic activities and employment opportunities associated with these activities would be expected to increase commensurate with the increase in O&D passenger activities and related demand for long-term parking and rental cars. This effect is expected to be the same as under the No Action Alternative, so the Proposed Action would not induce substantial economic growth in comparison with the No Action Alternative.

The potential to affect traffic patterns and level of service along roads serving the Airport and adjacent communities was considered in the evaluation of the Proposed Action. The roadway improvements defined to support the Proposed Action would not disrupt local traffic patterns.

Rental car trips and parking activities in the Proposed Project Area, and their use of the local roadway network and the terminal area roadways, would be expected to increase commensurate with the increase under the No Action Alternative, as the demand for rental cars and parking increases. Roadway traffic volumes on the surrounding transportation network would not be affected by the Proposed Action because the rental car volumes would be the same as the No Action Alternative. The Proposed Action, however, shifts the Rental Car Center ingress and egress from North McDonnell Road to South Airport Boulevard. San Bruno Avenue would serve in the same capacity under both the Proposed Action and No Action Alternative, as the link between the surrounding transportation network and the Rental Car Center ingress and egress. Traffic pattern shifts under the Proposed Action are located on Airport property, and the Proposed Action includes roadway improvements to support a turning movement change associated with the relocated ingress and egress to the Rental Car Center as well as to improve traffic flow in this area.

Additionally, the AirTrain Extension to Lot DD and new remote curbside under the Proposed Action provides the ability to eliminate or reduce several trip types that currently access the congested terminal roadways and curbsides. Two shuttle bus routes operate between on-Airport long-term parking and the terminal curbsides: a route between Lot D and the terminal curbsides and a route between Lot DD and the terminal curbsides. The Lot D shuttle bus route would change to a circulator route within the Lot (with one segment on North McDonnell Road), and the Lot DD shuttle bus route would be eliminated. Removing these trips types from the terminal roadways as passengers connect to the terminals via AirTrain stations in their respective lots supports the City's congestion management strategies for the terminal roadways and curbsides and contributes to improving levels of service on these roadway segments. A new remote curbside in Lot DD served by the AirTrain also provides the ability to encourage shifting private vehicle passenger drop-offs and pickups from the terminal curbsides to the new remote curbside, which further benefits levels of service on the terminal roadways and curbsides.

Therefore, the Proposed Action would not disrupt local traffic patterns or substantially reduce the levels of service of the roadway network. Furthermore, the Proposed Action would result in a beneficial socioeconomic impact by contributing to the improvement of levels of service by reducing trips on the Terminal roadways and the regional roadway network between Lots D and DD and the terminal curbsides.

4.11 Visual Effects

4.11.1 METHODOLOGY

Impacts from light emissions associated with the Proposed Action and the No Action Alternative were determined by evaluating the extent to which Airport lighting would change, as well as evaluating the potential for the change to create an annoyance for land uses in the vicinity of the Proposed Project Area. Impacts to visual resources and character were determined by considering the potential changes in landscape and views in the vicinity of the Proposed Project Area.

4.11.2 THRESHOLDS OF SIGNIFICANCE

The FAA has not established significance thresholds for visual effects. For this EA, a light emission impact would occur when light from an action would create annoyance or interfere with normal activities. A visual impact would occur if an action would significantly contrast with the existing environment or block or obstruct views of visual resources.

4.11.3 EVALUATION OF ALTERNATIVES

Neither the Proposed Action nor the No Action Alternative would create an annoyance, interfere with normal activities, or affect the visual character due to light emissions. Additionally, neither would affect the nature of or contrast with the visual character of the area. Under both the Proposed Action and the No Action Alternative, views to San Bruno Mountain to the north and east would be partially obstructed by Airport and highway facilities. Therefore, the Proposed Action would not create a significant effect related to light emissions, visual resources, or the visual character of the area as compared with the No Action Alternative.

4.11.3.1 No Action

Construction Impacts

The No Action Alternative would not involve construction activities. Therefore, the No Action Alternative would not affect lighting or change the views due to construction activities in the Proposed Project Area.

Operational Impacts

Lighting associated with surface and structured parking areas, roadways, airfield, terminal, and freeway facilities create a high ambient light environment in the vicinity of the Proposed Project Area. Given the distance to the nearest residences (approximately 1,000 feet to the west) and location of U.S. 101 between the light sources in the Proposed Project Area and these residences, lighting under the No Action Alternative would not create annoyance or interfere with activities from light emissions. Furthermore, the light emissions would not affect the visual character of the area that is dominated by high ambient light.

Within the Proposed Project Area, the visual character would be defined by surface and structured parking and roadways. These views are reflective of the visual character of the vicinity of the Proposed Project Area, which is defined by transportation-related structures (i.e., Airport facilities and the adjacent freeway system) and partial views of San Bruno Mountain to the north and east. Therefore, the No Action Alternative would not affect or contrast the visual character of the area, and existing Airport and freeway facilities would continue to partially block views of San Bruno Mountain.

4.11.3.2 Proposed Action

Construction Impacts

During construction of the Proposed Action, construction equipment would temporarily change light emissions and the visual character of the Proposed Project Area. Given the high ambient light environment of the Proposed Project Area, construction would not create an annoyance or interfere with normal activities or affect the visual character of the area due to light emissions. Effects by construction equipment on the visual character

of the Proposed Project Area would not significantly affect the nature of the visual character or contrast with the visual character. Construction equipment may temporarily block or obstruct the partial views of San Bruno Mountain during construction, but given the visual character of the area, this would not constitute a significant impact.

Operational Impacts

Additional lighting would be installed to support the new RCC facilities as part of the Proposed Action. Lighting at the Airport is typically installed following the guidance in the Illuminating Engineering Society handbook. Parking lot and parking structure lights would be shielded and directed downward in order to reduce the potential for light pollution, glare, light trespass, and wasted energy caused by deficient lighting design and misdirected light. Given the high-ambient light environment, lighting associated with the Proposed Action would be similar to light emissions under the No Action Alternative, and thus the Proposed Action would not create an annoyance or interfere with normal activities or affect the visual character of the area in comparison with the No Action Alternative.

New RCC facilities would be constructed in Lot DD under the Proposed Action, which would change the view of the area but not alter the visual character of the Proposed Project Area. As discussed in Section 4.5, a portion of the Bay Trail is within the Proposed Project Area. The current view from the trail consists of surface parking and a structured parking facility in Lot DD to the east, partial views of San Bruno Mountain to the north, and U.S. 101 to the west. Implementation of the Proposed Action would not affect views of San Bruno Mountain from the Bay Trail. Given the developed nature of the Proposed Project Area, the Proposed Action would not affect the nature of the visual character or contrast with the visual character of the area. The new RCC facilities would further obstruct the partial views of San Bruno Mountain but would not be significant compared with the partially obstructed views of the No Action Alternative. Therefore, the Proposed Action would not result in a significant visual impact.

4.12 Water Resources

4.12.1 METHODOLOGY

FAA Order 1050.1F, which defines the water resources impact categories, specifies the consideration of wetlands, floodplains, surface waters, groundwater, and Wild and Scenic Rivers. As stated at the beginning of this chapter, neither wetlands nor Wild and Scenic Rivers are present in the Proposed Project Area, so there is no further consideration of these resources.

Therefore, potential floodplain, surface water, and groundwater impacts were evaluated. The methodology employed to evaluate impacts was:

- Floodplains—Requirements for evaluating floodplain impacts defined in Executive Order 11988, FAA Order 1050.1F, and FAA Order 5050.4B, were considered. Portions of the Proposed Project Area are currently within Zone A (the 100-year floodplain) on the 1984 FEMA Map, and the remainder of the Proposed Project Area is classified as Zone X (outside of the 500-year floodplain). However, the

Proposed Project Area would be primarily within the 100-year floodplain if and when the pending Preliminary FIRM becomes effective. Therefore, the analysis of floodplain impacts is based on the pending Preliminary FIRM, which presents the more comprehensive coverage of 100-year floodplain in the Proposed Project Area of the two FIRMs.

- Surface Waters—The Proposed Project Area is fully developed with paved impervious surfaces. No water resources exist within the Proposed Project Area; therefore, this analysis provides a discussion of potential secondary effects on water resources, such as stormwater runoff.
- Groundwater—This analysis provides a discussion of potential secondary effects on groundwater.

4.12.2 THRESHOLDS OF SIGNIFICANCE

Thresholds of significance for floodplains, surface waters, and groundwater resources include:

- Floodplains—A significant impact to floodplains would exist if the action would cause notable adverse impacts on natural and beneficial values of a floodplain, which include natural moderation of floods, water quality maintenance, groundwater recharge, fish, wildlife, plants, open space, natural beauty, scientific study, outdoor recreation, agriculture, aquaculture, and forestry.
- Surface Waters and Groundwater—A significant impact to surface waters or groundwater would exist if the action would cause an exceedance of water quality standards established by federal, state, local, or tribal regulatory agencies or contaminate the public drinking water supply, including an aquifer used for public water supply, such that public health may be adversely affected.

4.12.3 EVALUATION OF ALTERNATIVES

4.12.3.1 Floodplains

The Proposed Action would occur within a 100-year floodplain and would, therefore, represent a floodplain encroachment. As compared with the No Action Alternative, the Proposed Action would not constitute a significant encroachment because the Proposed Action would not present a risk to or from the Airport and other adjacent transportation facilities due to floodplains, change the natural and beneficial values of the floodplain in comparison with the No Action Alternative, or provide direct or indirect support for development within the base floodplain. Additionally, the City's Floodplain Management Ordinance requires the design of all new construction and substantial improvements in designated flood-prone areas to include mitigation against flood damage and employ materials and equipment resistant to flood damage, consistent with the criteria set forth in 44 CFR § 60.3. BICE is responsible for enforcing the provisions of the Ordinance on Airport property and does so by following California Building Code that incorporates ASCE 24-14, which contains design and construction standards above the minimum requirements of the NFIP.

No Action—Construction Impacts

The No Action Alternative would not involve construction activities. Therefore, floodplains would not be affected by construction-related activities under the No Action Alternative.

No Action—Operational Impacts

Under the No Action Alternative, the Proposed Project Area, a fully developed and almost entirely paved (i.e., impermeable) parking lot surface, would be in the 100-year floodplain as designated on the 2015 Preliminary FIRM. The No Action Alternative represents the continuation of an existing floodplain encroachment. The intensity of the encroachment would increase over time proportionate to the increase in passenger activity at the Airport. Furthermore, the No Action Alternative would be consistent with the planned ground access and parking uses defined for the vicinity of the Proposed Project Area and would not provide direct or indirect support for new development in the floodplain.

For decades, the City has taken steps to protect the Airport, a vital transportation facility, from flooding through the development, maintenance, and update of flood control measures through the Airport's shoreline protection system. The measures comprise various types of seawalls, including earth berms, concrete dikes, and vinyl sheet piles, that serve as perimeter levees to withstand flooding events, although a few gaps remain. No interruptions to Airport operations or threats to public safety have occurred due to levee failure at the Airport.¹⁵

Recognizing the need to complete the shoreline protection system and to be in compliance with the NFIP, which the City joined in 2010, the City's SPP defines strategies to protect the Airport and adjacent areas (including adjacent portions of the highway transportation system) that could be affected by a 100-year flood event along the Airport shoreline.¹⁶ Near-term SPP strategies to enhance the Airport-wide flood control system include completion of the levee system concurrent with the construction timeframe for the Proposed Action. Beyond the near-term strategies, the SPP is an ongoing program to protect Airport facilities from flooding and sea level rise through an iterative process of designing and constructing new, enhanced, or replacement shoreline protection elements (e.g., new seawalls, flood/tidal gates, pump stations, and levee and embankment stabilization¹⁷); evaluating their effectiveness; and continuing design and construction of new, enhanced, or replacement elements.

In addition to the shoreline protection system, the City complies with all appropriate federal, state, and local regulations and permits to properly store and contain hazardous materials onsite, including maintaining an SPCC Plan, to minimize the potential for flood-induced spills of hazardous materials (see Section 4.6.3). Furthermore, the City's stormwater drainage system is designed to treat, store, and discharge stormwater to minimize the potential for flooding of Airport facilities (see Section 3.8.3.2). Therefore, the City has existing methods in place and plans to improve flood control methods to minimize harm to the Airport and adjacent

¹⁵ City and County of San Francisco, *Final Environmental Assessment, Volume 1 – Documentation, Airport Master Plan Improvements, San Francisco International Airport, San Francisco, California*, October 1998; Joe Birrer, PE, Director of Engineering and Construction Services, San Francisco International Airport, City and County of San Francisco, "RCC EA – Flood Protection," email to A. Ramsey, Airport Planner, Bureau of Planning and Environmental Affairs, San Francisco International Airport, City and County of San Francisco, July 12, 2017.

¹⁶ City and County of San Francisco, "Floodplain," www.flysfo.com/community/floodplain (Accessed July 11, 2017).

¹⁷ Bay Area Integrated Regional Water Management Plan, "SFO Airport Shoreline Protection," bairwmp.org/projects/sfo-airport-shoreline-protection (Accessed July 11, 2017).

highway transportation facilities resulting from a 100-year flood event, so the No Action Alternative would not likely result in the loss of human life or substantial encroachment-related costs or damage.

The existing developed, impervious characteristics of the floodplain in the Proposed Project Area and surrounding Airport property have eliminated the natural and beneficial values of the floodplain, and the lack of these conditions would remain under the No Action Alternative. Of the factors to consider when assessing impacts on a floodplain's natural and beneficial values, the abilities of the floodplain to provide flood control and groundwater recharge were considered relevant to this assessment of potential effects:

- **Flood Control**—The expanse of floodplains and the natural obstructions present in floodplains support flood control through the slowing and storage of water, which lessen the probability of upstream or downstream flooding. Although the floodplain in the Proposed Project Area does not provide natural flood control benefits, the City has implemented and has plans to improve flood control methods to protect the Airport and adjacent highway transportation facilities, as discussed earlier in this section.
- **Groundwater Recharge**—The slow flow of water through floodplains allows water to infiltrate the ground and recharge aquifers. The Proposed Project Area would continue to primarily comprise impervious surfaces, with limited area for groundwater recharge along water diversion channels and a few landscaped areas maintained along roadways.

Therefore, the existing lack of natural and beneficial floodplain values provided in the Proposed Action Area would continue under the No Action Alternative, and the City would maintain and enhance flood control methods through the shoreline protection system to minimize harm due to flooding. As such, the No Action Alternative would not result in impacts on natural and beneficial floodplain values.

Although the No Action Alternative continues the existing floodplain encroachment, the encroachment would not be significant because it would not result in a considerable probability of loss of human life, likely future damage that could be substantial in cost or extent, or a notable adverse impact on natural and beneficial floodplain values.

Proposed Action—Construction Impacts

Construction of the Proposed Action would occur in a fully developed and almost entirely impermeable surface area in the 100-year floodplain as designated on the 2015 Preliminary FIRM. Therefore, construction of the Proposed Action represents a floodplain encroachment.

The City would employ flood control measures and other methods to minimize harm to human life and transportation facilities from 100-year flood events (e.g., the shoreline protection system, compliance with controls for hazardous material spills, and stormwater drainage system), as presented in the discussion of No Action Alternative operational impacts. Temporary disturbance in the floodplain during construction of the Proposed Action would not affect the City's flood control methods, and construction contracts would require contractors to comply with federal, state, and local regulations and permits to properly store and contain hazardous materials onsite to minimize the potential for flood-induced spills of hazardous materials (see Section

4.6.3). Furthermore, the City's flood control methods would minimize harm to construction equipment and persons working in the Proposed Project Area should a 100-year flood event occur during construction.

The lack of natural and beneficial floodplain values of the Proposed Project Area under the No Action Alternative would be present during construction of the Proposed Action. The Proposed Project Area lacks natural flood control characteristics; however, the City's flood control methods would minimize harm from flood events. Although opportunities for ground water recharge would be present during ground-disturbing construction activities that temporarily reduce impervious surfaces, the City's flood control methods would preclude slow moving water flowing over the floodplain. As such, construction of the Proposed Action would not result in impacts on natural and beneficial floodplain values.

Although construction of the Proposed Action presents a floodplain encroachment, the encroachment would not be significant because it would not result in a considerable probability of loss of human life, likely future damage that could be substantial in cost or extent, or a notable adverse impact on natural and beneficial floodplain values.

Proposed Action—Operational Impacts

Under the Proposed Action, the Proposed Project Area, a fully developed and almost entirely impermeable surface, would be in the 100-year floodplain as designated on the 2015 Preliminary FIRM. Therefore, the Proposed Action represents a floodplain encroachment.

The intensity of the encroachment related to structures would change under the Proposed Action as compared with the No Action Alternative within the Proposed Project Area. Within the Proposed Project Area, new structures would be developed (the proposed Ready/Return Garage, the proposed QTA facility, and the proposed AirTrain extension guideway) and one structure, the existing QTA facility, would be demolished. Additionally, along with the increase in the number of people in the Proposed Project Area under the No Action Alternative (proportionate to the increase in passenger activity at the Airport), the Proposed Action includes relocation of a portion of the curbside activity from the terminal curbsides to the Proposed Project Area (see Section 4.1.3.2). Therefore, the floodplain encroachment would increase existing activities within the Proposed Project Area under the Proposed Action in comparison with the No Action Alternative. However, the terminal curbsides are located in the same contiguous 100-year floodplain as the Proposed Project Area; therefore, the Proposed Action would result in a redistribution of activity within the floodplain rather than a change in the overall intensity of use within the floodplain as a whole compared with the No Action Alternative.

The Proposed Action would be consistent with the planned ground access and parking uses defined for the vicinity of the Proposed Project Area and would not provide direct or indirect support for new development in the floodplain.

In addition to the City's flood control measures and other methods to minimize harm to human life and transportation facilities from 100-year flood events (e.g., the shoreline protection system, compliance with controls for hazardous material spills, and stormwater drainage system) discussed earlier in this section, the City must comply with requirements defined in 44 CFR Part 60.3 for new development within a floodplain. The City's Floodplain Management Ordinance requires all new construction and substantial improvements in designated

flood-prone areas be designed to mitigate against flood damage and employ materials and equipment resistant to flood damage. These requirements are enforced by BICE and follow the California Building Code, which contains design and construction standards above the minimum requirements of the NFIP. California Building Code design and construction standards include requirements such as elevating the lowest floor of structures above the flood elevation; prohibiting the use of fill for structural support; designing water utilities to minimize infiltration of floodwaters into the water utility systems; meeting ASCE standards for the design, construction, installation, and anchoring of USTs; and using flood damage resistant materials below the flood elevation. Therefore, although the intensity of building development would increase in the Proposed Project Area under the Proposed Action compared with the No Action Alternative, the proposed facilities, one of which replaces the existing QTA facility, would comply with the NFIP and thus would reduce the potential for harm to human life or to a transportation facility caused by a 100-year flood event.

The lack of natural and beneficial floodplain values provided in the Proposed Project Area under the No Action Alternative would be present under the Proposed Action. As under the No Action Alternative, the Proposed Action would lack natural flood control characteristics; however, the City's flood control methods would minimize harm from flood events. Additionally, minimal opportunities for groundwater recharge would be present under the Proposed Action, as under the No Action Alternative, because the area would primarily comprise impervious surfaces. As such, the Proposed Action would not result in impacts on natural and beneficial floodplain values.

Although the Proposed Action presents a floodplain encroachment, the encroachment would not be significant because it would not result in a considerable probability of loss of human life, likely future damage that could be substantial in cost or extent, or a notable adverse impact on natural and beneficial floodplain values. Only one of the alternatives considered in this EA, Alternative 4, Construct New Off-Airport FCC Facilities, would potentially involve development of an RCC outside of the floodplain. However, the Proposed Project Area and surrounding Airport property are already fully developed and do not present natural and beneficial floodplain values, and it is not expected that the Proposed Project Area would return to conditions that support natural and beneficial floodplain values under Alternative 4 given existing development surrounding the Proposed Project Area. Furthermore, as demonstrated in Section 2.4, the Proposed Action is the only practical alternative.

4.12.3.2 Surface Waters

Neither the Proposed Action nor the No Action Alternative would cause an exceedance of water quality standards established by federal, state, and local regulatory agencies or contaminate the public drinking water supply. Therefore, the Proposed Action would not cause a significant impact on surface waters as compared with the No Action Alternative.

No Action—Construction Impacts

The No Action Alternative would not involve construction activities. Therefore, surface waters would not be affected by construction-related activities under the No Action Alternative.

No Action—Operational Impacts

The Proposed Project Area would be a developed and paved (i.e., impermeable) area under the No Action Alternative. Operation in the Proposed Project Area would include vehicle maintenance, storage, and parking and would require controls of associated pollutants to minimize and avoid effects on surface water. Controls include employing pollution-prevention measures (i.e., SPCC Plan, SWPPP, and NPDES permits) identified in Section 4.6.3 and maintaining compliance with all appropriate federal, state, and local permits. Water quality would be in compliance with standards established by federal, state, and local laws and regulations under the No Action Alternative. Therefore, the No Action Alternative would not cause an exceedance of water quality standards established by federal, state, and local regulatory agencies.

Nearby surface waters do not provide public drinking water, so the No Action Alternative would not contaminate the public drinking water supply from surface water resources.

Proposed Action—Construction Impacts

Short-term effects on surface water during construction of the Proposed Action could result from the temporary increase in water pollutants generated during grading and other ground-disturbing activities conducted in areas with potentially contaminated soils. Additionally, fuels, oil, grease, and solvents from construction equipment fueling and servicing; paints; miscellaneous chemicals stored and used during construction; and trash and debris generated during construction could present potential short-term effects on surface water. Potential water quality impacts would be addressed through compliance with the Airport's NPDES Permit and the Construction General Permit, which require development of a site-specific construction SWPPP with BMPs for construction activities in order to prevent the discharge of sediments and other pollutants into the storm-drain system or surface waters. Therefore, construction of the Proposed Action would not cause an exceedance of water quality standards established by federal, state, and local regulatory agencies.

Nearby surface waters do not provide public drinking water, so construction of the Proposed Action would not contaminate the public drinking water supply from surface water resources. Implementation of BMPs would ensure that no surface water impact would occur during construction of the Proposed Action.

Proposed Action—Operational Impacts

The Proposed Project Area would be a developed and paved (i.e., impermeable) area under the Proposed Action; therefore, the quantity of stormwater runoff entering surface water resources would not be affected by the Proposed Action. The operation of the Airport under the Proposed Action would be consistent with that under the No Action Alternative and would include vehicle maintenance, storage, and parking. Therefore, the total amount and type of industry-specific pollutants to be controlled in the runoff would not change as a result of the Proposed Action. By employing pollution-prevention measures (i.e., SPCC Plan, SWPPP, and NPDES permits) identified in Section 4.6.3 and maintaining compliance with all appropriate federal, state, and local permits, effects on surface water would be minimized or avoided. Water quality would remain in compliance with water quality standards established by federal, state, and local laws and regulations under the Proposed Action. Therefore, operation of the Proposed Action would not cause an exceedance of water quality standards established by federal, state, and local regulatory agencies ensuring no surface water impacts would occur.

Nearby surface waters do not provide public drinking water, so the Proposed Action would not contaminate the public drinking water supply from surface water resources.

4.12.3.3 Groundwater

The developed and paved (i.e., impermeable) surface conditions of the Proposed Project Area and operational activities conducted under the Proposed Action would be consistent with the No Action Alternative; therefore, potential effects on groundwater quality would not change as a result of the Proposed Action. Furthermore, construction of the Proposed Action Alternative includes practices to manage contaminated ground water and would not affect public drinking water sourced from local aquifers. Therefore, the Proposed Action would not cause a significant impact on groundwater compared with the No Action Alternative.

No Action—Construction Impacts

The No Action Alternative would not involve construction activities. Therefore, groundwater would not be affected by construction-related activities under the No Action Alternative.

No Action—Operational Impacts

The developed and paved (i.e., impermeable) surface of the Proposed Project Area and the stormwater collection and treatment practices employed at the Airport do not permit stormwater at the Proposed Project Area to serve as a source of groundwater recharge. Therefore, operation of the No Action Alternative would not affect groundwater quality or otherwise contaminate the public water supply.

Proposed Action—Construction Impacts

Construction of the Proposed Action includes ground disturbance depths ranging from 80 to 135 feet below the surface.

Construction activities would not affect the Westside Groundwater Basin aquifers that serve as a public drinking water source because they are approximately 200 feet below MSL in the Proposed Project Area.

Groundwater near the surface in the Proposed Project Area would likely be encountered during construction. Per the *Airport SWPPP for Construction Activities*, groundwater would be assessed by visual and olfactory examination, and concentrations of VOCs and chemicals of concern (COCs) would be measured. Groundwater with concentrations below the levels for discharge of treated groundwater in the RWQCB General Order No. 96-078 would be discharged into either a storm drain or the industrial sewer system. If results show concentrations of COCs in excess of RWQCB Order No. 96-078 levels, then groundwater would be discharged into the industrial sewer system. Groundwater with concentrations greater than the prescribed influent levels for the industrial sewer system would be treated appropriately, such as by oil/water separation, carbon filtration,

or both, if necessary, and discharged into the industrial sewer system.¹⁸ Therefore, the Proposed Action would not negatively impact groundwater quality.

Proposed Action—Operational Impacts

As under the No Action Alternative, the developed and paved (i.e., impermeable) surface of the Proposed Project Area and the stormwater collection practices employed at the Airport do not permit stormwater at the Proposed Project Area to serve as a source of groundwater recharge. Additionally, the City would operate the USTs in compliance with permits and regulations that require routine testing for leaks, routine maintenance of equipment, preparation of a leak-response plan, and conduct of annual inspections by the regulatory agency to protect against groundwater contamination. Therefore, operation of the Proposed Action would not affect groundwater quality or otherwise contaminate the public water supply under the Proposed Action. No groundwater impact would occur with implementation of the Proposed Action.

4.13 Cumulative Impacts

CEQ Regulations, Section 1508.7, define cumulative impacts as the incremental effects of a proposed action when added to other past, present, and reasonably foreseeable future actions, regardless of the agency (i.e., federal or nonfederal) or person undertaking such actions. In some cases, individually minor, but collectively significant, actions occurring over a defined period of time can cause cumulative impacts.

The past, present, and reasonably foreseeable actions (Cumulative Impact Projects) considered in this EA are identified in Table 3-8 in Section 3.16. For a project to have potential cumulative effects with the Proposed Action, the project must result in impacts on the same resources impacted by the Proposed Action.

The potential for the Proposed Action to cumulatively contribute to effects on resource categories discussed in this chapter with other past, present, and reasonably foreseeable future projects are described as follows:

- **Air Quality**—Due to the nature of emissions, all emissions have the potential to contribute to cumulative air quality effects. Therefore, *de minimis* thresholds are set for the purpose of determining potential cumulative air quality effects resulting from individual project emission contributions. If a project's emissions are below the *de minimis* thresholds, then it is expected that the project would not contribute to the cumulative air quality effects in that region. Even with the short-term increase in emissions from the construction of the Proposed Action, emission levels would be less than *de minimis* thresholds. Therefore, changes in the criteria air pollutant emissions as a result of the Proposed Action would not cumulatively contribute to a significant impact on air quality.
- **Biological Resources**—The Proposed Action would not have direct or indirect effects on biological resources. No federal or state listed species or critical habitat are present within the Proposed Project

¹⁸ City and County of San Francisco, *Stormwater Pollution Prevention Plan for Construction Activities*, September 23, 2013 (last plan review on June 1, 2016).

Area. Therefore, the Proposed Action would not cumulatively contribute to a significant impact on biological resources.

- **Climate**—The FAA has not established a threshold of significance for climate and GHG emissions. GHG emissions would temporarily increase during construction of the Proposed Action; however, GHG emissions would be slightly lower under the operation of the Proposed Action as compared with the No Action Alternative due changes in vehicle trip types under the Proposed Action, which are estimated to have a neutral to positive effect on emissions.
- **Coastal Resources**—The Proposed Action would not affect coastal resources within the jurisdiction of the BCDC. During construction of the Proposed Action, the City would support colocation of the Burlingame Force Main Sewer Line with the utility corridor under the Bay Trail. If the Cities of San Francisco and Burlingame elect not to relocate the force main, the City would maintain access to a corridor within Lot DD that would not involve disruption to the Bay Trail for future construction of the Burlingame Force Main Sewer Line. Therefore, the Proposed Action would not cumulatively contribute to a significant impact on coastal resources.
- **DOT Section 4(f)**—Effects on the Bay Trail under the Proposed Action would be exempt from Section 4(f) approval; therefore, the Proposed Action would not cumulatively contribute to a significant impact on Section 4(f) resources.
- **Hazardous Materials, Solid Waste, and Pollution Prevention**—The Proposed Action would not violate laws and regulations or result in a change in the amount of hazardous or solid waste generated by operation of the Proposed Action compared with the No Action Alternative. Pollution-prevention measures would be employed to address short-term construction activities and long-term operation of the Proposed Action as well as construction and operation of other on-Airport cumulative projects. Therefore, the Proposed Action would not cumulatively contribute to a significant impact in this category.
- **Historic, Architectural, Archaeological, and Cultural Resources**—There are no documented cultural resources within the APE associated with the Proposed Action. In the event of an unanticipated discovery during ground-disturbing construction activities, cultural resources would be properly evaluated and managed in accordance with applicable federal, state, and local requirements. These procedures for handling unanticipated discoveries during ground-disturbing construction would be followed during all on-Airport Cumulative Impact Projects. Therefore, the Proposed Action would not cumulatively contribute to a significant impact on historic, architectural, archaeological, or cultural resources.
- **Land Use**—The Proposed Action and on-Airport Cumulative Impact Projects would be in compliance with the City and County of San Francisco and County of San Mateo’s land use designation of Airport property as a Special Urban Area devoted primarily to airport and transportation related use, expansion, and redevelopment. Cumulative Impact Projects proposed to occur off Airport property would be in compliance with the Airport’s ALUCP. One Cumulative Impact Project, the Long-Term Garage Development, comprises construction of a second structured parking garage in Lot DD that is currently underway. This project is compatible with the ground access land uses in the Proposed Project Area

and compatible with the Proposed Action. Therefore, the Proposed Action would not cumulatively contribute to a significant impact on land use.

- **Natural Resources and Energy Supply**—Demand for consumable natural resources would not be affected by operation of the Proposed Action; although, demand for electricity would be expected to increase slightly. Slight increases in energy demand would be minimized through the use of energy efficiency measures consistent with the city's commitment to obtaining LEED Gold certification for new development. Temporary increases in demand for consumable natural resources would occur during construction of the Proposed Action, which is anticipated to begin in 2017. Twenty-three Cumulative Impact Projects on Airport property and one off-Airport Property are anticipated to have concurrent construction schedules with the Proposed Action; however, cumulative effects on natural resources would not be expected because the Proposed Action would require commonly available natural resources and energy sources and would incorporate recycled content materials to the extent practical. Therefore, the Proposed Action would not cumulatively contribute to a significant impact on consumable natural resources and energy supply.
- **Socioeconomics**—The Proposed Action would not disrupt or divide established communities, cause relocation of residences or businesses, or affect the community tax base. One Cumulative Impact Project, the Long-Term Garage Development, supports additional ground access trips to the Proposed Project Area due to the increase in parking supply. The Proposed Project Area was designed to support these land uses and associated trips and would not result in a cumulative effect on the level of service of Airport and area roadways. No other Cumulative Impact Projects would affect trip volumes or routing in such manner as to present a cumulative effect with the Proposed Action Alternative. Based on a review of Cumulative Impact Projects, no cumulative socioeconomic impacts would occur as a result of the Proposed Action.
- **Visual Effects**—Changes to lighting and the visual character of the Proposed Project Area resulting from the Proposed Action would be consistent with the No Action Alternative. Views from surrounding roadways and the Bay Trail would not be significantly altered. Other development near the Proposed Action is consistent with the transportation-related visual character of the area. Therefore, the Proposed Action would not cumulatively contribute to a visual impact.
- **Water Resources**—No cumulative impact projects would occur within the Proposed Project Area and contribute to increasing the intensity of use such that a cumulative impact to floodplains would occur. Two cumulative impact projects, the shoreline protection enhancements at the U.S. Coast Guard Air Station and the Mel Leong Treatment Plant, would contribute to enhancing flood control measures in the Proposed Project Area. Furthermore, the Proposed Action would be in compliance with surface water and groundwater quality standards established by federal, state, and local laws and regulations, as well as the Airport SWPPPs for construction and industrial activities. The Proposed Action would not affect public drinking water sources. Therefore, the Proposed Action would not cumulatively contribute to a significant impact on water resources.

5. Coordination, Agency Consultation, and Public Involvement

5.1 Introduction

Federal agencies are required to invite affected federal, state, and local agencies, any affected Native American tribes, and other interested parties to provide input on the scope of issues to be addressed in an EA. Additionally, the Draft and Final EA are shared with interested parties and the public. This chapter summarizes coordination, agency consultation, and public involvement conducted in support of this EA.

5.2 Scoping

5.2.1 SCOPING LETTERS

The city of San Francisco issued scoping letters to local jurisdictions, local and state agencies, and stakeholder groups on December 23, 2016, to provide early notification of the preparation of an EA for the Proposed Action and to seek input on the scope of the EA. The scoping letters provided information about the Proposed Action, the purpose of and need for the Proposed Action, and potential environmental issues of concern. The intent of scoping was to:

- advise agencies and organizations of the preparation of the EA;
- request any relevant information that agencies or organizations may have regarding the Airport's environs;
- solicit early comments regarding potential environmental, social, and economic issues for consideration during the preparation of the EA; and
- provide early notification that the Proposed Action would occur within an existing floodplain.

A sample of the agency scoping letter and a listing of local jurisdiction, agency, and stakeholder group contacts that received the scoping letter are provided in **Appendix K-1**.

The scoping letter was sent to representatives at the following local jurisdictions, agencies, and stakeholder groups:

- City of Brisbane
- City of Burlingame
- City of Daly City
- City of Foster City
- City of Millbrae
- City of Pacifica
- City of San Bruno
- City of San Mateo
- City of South San Francisco
- San Mateo County
- California Department of Transportation, Division of Aeronautics
- California Department of Transportation, District 4, Environmental Planning and Engineering
- California Department of Transportation, Division of Right of Way, Property Management
- City/County Association of Governments of San Mateo County
- SFO Airport/Community Roundtable
- SF Bay Area Air Quality Management District
- California State Lands Commission
- San Francisco Bay Conservation and Development Commission
- San Mateo County Transit District
- Metropolitan Transportation Commission
- California Regional Water Quality Control Board – San Francisco Bay Region 2, Watershed Management Division and Toxics Cleanup Division
- Association of Bay Area Governments
- Bay Area Council
- Bay Planning Coalition
- Greenbelt Alliance
- League of Women Voters, North and Central San Mateo County
- League of Women Voters, San Francisco
- Natural Resources Defense Council
- Save the Bay
- Sierra Club, Loma Prieta Chapter
- Sequoia Audubon Society

5.2.2 SCOPING COMMENTS RECEIVED

The scoping period was open for 34 days, closing at 5:00 p.m. Pacific Standard Time on January 26, 2017. During this time, local jurisdictions, agencies, and stakeholder groups were provided the opportunity to offer input on environmental issues of concern relevant to the Proposed Action that should be examined in the EA.

One comment letter was received during the scoping period. The California Department of Transportation (Caltrans), District 4 Office of Transit and Community Planning submitted a letter verifying the project scope and describing the required approvals based on an assessment of the project scope. A copy of the comment letter is provided in **Appendix K-2**.

5.3 Agency Consultation

The FAA, as the lead federal agency, consulted with the California SHPO and BCDC, as summarized in Appendices F and I. The FAA also consulted with representatives of the following Native American tribes:

- Amah Mutsun Tribal Band of Mission San Juan Bautista
- Coastanoan Rumsen Carmel Tribe
- Indian Canyon Mutsun Band of Costanoan
- Muwekma Ohlone Indian Tribe of the SF Bay Area
- The Ohlone Indian Tribe

5.4 Draft EA

The Draft EA was available for review by the general public and interested parties, such as representatives of local jurisdictions, agencies, and stakeholder groups for a period of 36 days, from July 31, 2017, to September 5, 2017.

To support review by the public and other interested parties, the City published a Notice of Availability (NOA) of the Draft EA with Notice of Floodplain Encroachment on July 31, 2017, in the *San Francisco Chronicle*, the *San Jose Mercury News*, and the *San Mateo County Times*. The Draft EA and the NOA were posted to the Airport's website (www.flysfo.com), and the Draft EA was made available for review at the locations listed in **Table 5-1**.

In addition to making the Draft EA available to the public and interested parties for review on July 31, 2017, the City held a public workshop on Wednesday, August 30, 2017, from 6:30 to 7:30 p.m. Pacific Daylight Time (PDT) in the Millbrae City Hall, immediately followed by a public hearing from 7:30 to 8:30 p.m. PDT in the same location. Notice of the public workshop and hearing was included in the NOA published in local newspapers and posted to the Airport's website on July 31, 2017.

The NOA and Notice of Floodplain Encroachment published in newspapers and on the Airport's website provided information on submitting comments on the Draft EA and the floodplain encroachment. Opportunities to provide comments included:

- In writing via mail or email during the public comment period (July 31–September 5, 2017).
- In writing or orally at the August 30, 2017, public workshop and hearing. A court reporter was present at the public workshop to capture oral comments.

Table 5-1: Locations Where the Draft EA was Available for Public Review

LOCATION	ADDRESS
South San Francisco Main Library	840 West Orange Avenue, South San Francisco, California 94080
San Bruno Library	701 Angus Avenue West, San Bruno, California 94066
Millbrae Library ^{1/}	1 Library Avenue, Millbrae, California 94030
Foster City Library ^{1/}	1000 East Hillsdale Boulevard, Foster City, California 94404
Burlingame Public Library	480 Primrose Road, Burlingame, California 94010
San Mateo Main Library	55 West 3rd Avenue, San Mateo, California 94402
Serramonte Main Library	40 Wembley Drive, Daly City, California 94015
San Francisco Main Library	100 Larkin Street, San Francisco, California 94102
San Francisco International Airport, Bureau of Planning and Environmental Affairs	710 North McDonnell Road, 3rd Floor, San Francisco, California 94128
Federal Aviation Administration, San Francisco Airports District Office	1000 Marina Boulevard, Suite 220, Brisbane, California 94005-1853

NOTE:

^{1/} Part of the San Mateo County Library, a Joint Power Authority, comprises the cities of Atherton, Belmont, Brisbane, East Palo Alto, Foster City, Half Moon Bay, Millbrae, Pacifica, Portola Valley, San Carlos, Woodside, and the unincorporated areas of the county.

SOURCE: City and County of San Francisco, San Francisco International Airport, September 2016.

PREPARED BY: Ricondo & Associates, Inc., September 2017.

A copy of the NOA and Notice of Floodplain Encroachment published in local newspapers and on the Airport's website along with proofs of publication in local newspapers are provided in **Appendix K-3**.

5.5 Comments on the Draft EA

The City did not receive any written comments during the public review period (July 31–September 5, 2017) nor did it receive written or oral comments at the public workshop and hearing on August 30, 2017.

5.6 Final EA

No public comments were received on the Draft EA, so the document was finalized and will be submitted by the City to the FAA for their determination of whether to issue a Finding of No Significant Impact/Record of Decision (FONSI/ROD) or to prepare an Environmental Impact Statement (EIS).

Copies of the Final EA are available for review at the locations listed in **Table 5-2**.

Table 5-2: Locations Where the Final EA is Available for Public Review

LOCATION	ADDRESS
South San Francisco Main Library	840 West Orange Avenue, South San Francisco, California 94080
San Bruno Library	701 Angus Avenue West, San Bruno, California 94066
Millbrae Library ^{1/}	1 Library Avenue, Millbrae, California 94030
Foster City Library ^{1/}	1000 East Hillsdale Boulevard, Foster City, California 94404
Burlingame Public Library	480 Primrose Road, Burlingame, California 94010
San Mateo Main Library	55 West 3rd Avenue, San Mateo, California 94402
Serramonte Main Library	40 Wembley Drive, Daly City, California 94015
San Francisco Main Library	100 Larkin Street, San Francisco, California 94102
San Francisco International Airport, Bureau of Planning and Environmental Affairs	710 North McDonnell Road, 3rd Floor, San Francisco, California 94128
Federal Aviation Administration, San Francisco Airports District Office	1000 Marina Boulevard, Suite 220, Brisbane, California 94005-1853

NOTE:

^{1/} Part of the San Mateo County Library, a Joint Power Authority, comprises the cities of Atherton, Belmont, Brisbane, East Palo Alto, Foster City, Half Moon Bay, Millbrae, Pacifica, Portola Valley, San Carlos, Woodside, and the unincorporated areas of the county.

SOURCE: City and County of San Francisco, San Francisco International Airport, September 2016.

PREPARED BY: Ricondo & Associates, Inc., September 2017.

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6. List of Preparers

The following individuals contributed to the preparation of this EA. This section provides brief synopses of the qualifications and responsibilities of those responsible for the preparation of this document.

6.1 Federal Aviation Administration

Federal Aviation Administration
San Francisco Airports District Office
1000 Marina Boulevard, Suite 220
Brisbane, California 94005-1853

Camille Garibaldi, Environmental Protection Specialist

- **Qualifications**—Ms. Garibaldi has over 20 years of experience. She is the FAA Environmental Specialist responsible for detailed FAA evaluation of Environmental Assessments and Environmental Impact Statements, as well as coordination of comments from various federal and state agencies in the FAA's San Francisco Airports District Office.
- **Responsibilities**—Performed and reviewed consultation with agencies; directed the preparation of this EA for the FAA.

6.2 City and County of San Francisco, Airport Commission

Bureau of Planning and Environmental Affairs
P.O. Box 8097
San Francisco, California 94128

Avant Ramsey, AICP, Planner III—Environmental Review

- **Qualifications**—Mr. Ramsey has eight years of airport and environmental planning experience, including facilities requirements analyses; NEPA documents preparation; impact analyses; and local, state, and federal agency coordination and permitting.
- **Responsibilities**—Directed the NEPA process for this EA. Mr. Ramsey was responsible for the overall review, management, and coordination of the EA with the FAA San Francisco Airports District Office, SFO, regulatory agencies, stakeholders, and the consultant team.

6.3 Consultant Team

John Williams, Senior Vice President, Ricondo & Associates, Inc.

- **Qualifications**—Mr. Williams has over 30 years of experience in airport environmental and facilities planning studies, with significant experience preparing and managing environmental assessments and environmental impact statements, airport master plans, and aviation activity forecasts.
- **Responsibilities**—Project management and quality assurance/quality control.

Lisa Reznar, Director, Ricondo & Associates, Inc.

- **Qualifications**—Ms. Reznar has 20 years of experience in airport environmental and planning analyses, with experience preparing and managing environmental assessments, airport sustainability master plans, and airport ground transportation planning studies.
- **Responsibilities**—Project management, Purpose and Need, Alternatives, and overall NEPA documentation.

Julie Car, Senior Consultant, Ricondo & Associates, Inc.

- **Qualifications**—Ms. Car has more than nine years of experience in aviation and environmental planning, with expertise in protected species, sensitive habitat, wetlands, and wildlife management.
- **Responsibilities**—Analyses and documentation for the following EA components: Affected Environment and Environmental Consequences.

Jason Apt, Managing Consultant, Ricondo & Associates, Inc.

- **Qualifications**—Mr. Apt has more than 14 years of experience in aviation and environmental planning, including significant experience conducting airport construction and operational air quality analyses.
- **Responsibilities**—Construction air quality analysis and documentation.

Adrian Jones, Director, Environmental Science Associates

- **Qualifications**—Mr. Jones has more than 20 years of experience in aviation and environmental planning, with specialized expertise in noise and air quality evaluations.
- **Responsibilities**—Overall documentation review and construction air quality analysis.

Sean M. O'Brien, Principal Biologist, Dudek

- **Qualifications**—Mr. O'Brien has more than 23 years of experience with large and complex projects involving biological resource analyses, impact assessments, habitat evaluations, wetlands and endangered species permitting, and mitigation planning.
- **Responsibilities**—Peer review of Biological Resources sections of Affected Environment and Environmental Consequences chapters.

Ross A. Dobberteen, Ph.D, Principal – Wetland Biologist, LSA

- **Qualifications**— Dr. Dobberteen has over 25 years of project experience with wetlands and endangered species permitting projects in the Bay area and has developed excellent working relationships with key regulatory staff from the USACE, FWS, NMFS, RWQCB, CDFW, and BCDC.
- **Responsibilities**—Biological resources analysis of North Channel.

Micah Hale, PhD, RPA, Archaeologist, Dudek

- **Qualifications**— Dr. Hale is the Dudek Overall Cultural Practice Lead has more than 20 years of experience developing, managing, and implementing archaeological inventories, evaluations, data recoveries, monitoring, MND/EIR/EA/EIS preparation, as well as programmatic and other regional investigations. He manages Dudek’s cultural resources group and is responsible for cultural resources investigations, assistance with tribal outreach, SHPO consultation, and cultural regulatory compliance.
- **Responsibilities**—Cultural resources analysis and consultation support.

Adam Giacinto, M.A., RPA, Archaeologist, Dudek

- **Qualifications**— Mr. Giacinto has more than 11 years of experience developing, managing, and implementing archaeological inventories, evaluations, data recoveries, monitoring, MND/EIR/EA/EIS preparation, as well as programmatic and other regional investigations.
- **Responsibilities**— Cultural resources analysis and consultation support.

Samantha Murray, M.A., Architectural Historian, Dudek

- **Qualifications**—Ms. Murray has more than 11 years of experience developing, managing, and implementing built environment inventories, and evaluations, MND/EIR/EA/EIS preparation, as well as programmatic and other regional investigations.
- **Responsibilities**—Cultural resources analysis and consultation support.

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8. List of Abbreviations and Acronyms

A

ABAG—Association of Bay Area Governments

AC—Advisory Circular

ACCRI—Aviation Climate Change Research Initiative

ADP—Airport Development Plan

AIP—Airport Improvement Program

ALP—Airport Layout Plan

ALUC—Airport Land Use Commission

ALUCP—Airport Land Use Compatibility Plan

APE—Area of Potential Effects

ASCE—American Society of Civil Engineers

AST—Aboveground Storage Tank

B

BAAQMD—Bay Area Air Quality Management District

BCDC—Bay Conservation and Development Commission

BICE—Building Inspection and Code Enforcement Division

BMP—Best Management Practice

BPP—Bay Pollution Prevention Program

C

C&D—Construction and Demolition

CAA—Clean Air Act

CAAA—Clean Air Act Amendments of 1990

CAAQS—California Ambient Air Quality Standards

CalEEMOD—California Emissions Estimator Model

CalEPA—California Environmental Protection Agency

CalRecycle—California Department of Resources, Recycling, and Recovery

CalTrans—California Department of Transportation

CARB—California Air Resources Board

C/CAG—City/County Association of Governments of San Mateo County

CDFW—California Department of Fish and Wildlife

CEQ—Council on Environmental Quality

CEQA—California Environmental Quality Act

CERCLA—Comprehensive Environmental Response, Compensation, and Liability Act

CESA—California Endangered Species Act

CFR—Code of Federal Regulations

CH₄—Methane

CNEL—Community Noise Equivalent Level

CO—Carbon Monoxide

CO₂—Carbon Dioxide

CO₂e—Carbon Dioxide Equivalent

COC—Chemicals of Concern

CWA—Clean Water Act

CZMA—Coastal Zone Management Act

D

dBA—A-Weighted Decibel

DCAP—Department Climate Action Plan

DOT—Department of Transportation

DWR—Department of Water Resources

E

EA—Environmental Assessment

EIR—Environmental Impact Report

EIS—Environmental Impact Statement

EO—Executive Order

EPA—U.S. Environmental Protection Agency

EPCRA—Emergency Planning and Community Right to Know Act

EPP—Environmental Protection Plan

ESA—Endangered Species Act

F

F&G—California Fish and Game

FAA—Federal Aviation Administration

FEMA—Federal Emergency Management Agency

FIRM—Flood Insurance Rate Map

FONSI—Finding of No Significant Impact

FR—Federal Register

FWS—U.S. Fish and Wildlife Service

FY—Fiscal year

G

GAO—General Accountability Office

GHG—Greenhouse Gases

GSA—Groundwater Sustainability Agency

H

HHPZ—Human Health Protection Zone
 HMMZ—Horizontal Migration Management Zone
 HMTA—Hazardous Materials Transportation Act

I

ICAO—The International Civil Aviation Organization
 IWP—Industrial Wastewater Plant

J**K**

kWH—Kilowatt Hour

L

LEED—Leadership in Energy and Environmental Design
 LWCF Act—Land and Water Conservation Fund Act of 1965

M

MS4—Municipal Stormwater Separate Storm Sewer System
 MSL—Mean Sea Level
 MT CO₂e—Metric tons of CO₂ equivalent

N

N₂O—Nitrous oxide
 NAAQS—National Ambient Air Quality Standards
 NEPA—National Environmental Policy Act of 1969

NHPA—National Historic Preservation Act

NMFS—National Marine Fisheries Service

NO₂—Nitrogen Dioxide

NO_x—Nitrogen Oxides

NOA—Notice of Availability

NPDES—National Pollutant Discharge Elimination System

NPPA—Native Plant Protection Act of 1977

NRHP—National Register of Historic Places

O

O₃—Ozone

O&D—Origination and Destination

P

PARTNER—Partnership for Air Transportation Noise & Emissions Reduction

Pb—Lead

PDT—Pacific Daylight Time

PFC—Passenger Facility Charge

PG&E—Pacific Gas and Electric

PM₁₀—Particulate Matter

PM_{2.5}—Fine Particulate Matter

Q

QTA—Quick Turn Around

R

RCC—Rental Car Center

RCRA—Resource Conservation and Recovery Act

RMZ—Remediation Management Zone

ROD—Record of Decision

ROW—Right-of-Way

RPZ—Runway Protection Zone

RWQCB—Regional Water Quality Control Board

S

SDWA—Safe Drinking Water Act

SFHA—Special Flood Hazard Area

SFHPC—San Francisco Historic Preservation Commission

SFPUC—San Francisco Public Utilities Commission

SFO—San Francisco International Airport

SHPO—State Historic Preservation Officer

SIP—State Implementation Plan

SO₂—Sulfur Dioxide

SO_x—Oxides of Sulfur

SPCC Plan—Spill Prevention Control and Countermeasures Plan

SPP—Shoreline Protection Plan

SWPPP—Stormwater Pollution Prevention Plan

SWRCB—State Water Resources Control Board

T

TAF—Terminal Area Forecast

THPO—Tribal Historic Preservation Officer

U

USACE—U.S. Army Corps of Engineers

U.S.C.—United States Code

UST—Underground Storage Tank

V

VOCs—Volatile Organic Compounds

W

WHMP—Wildlife Hazard Management Plan

X

Y

Z
