File No. 161311 Committee Item No. 7
Board Item No. 2

COMMITTEE/BOARD OF SUPERVISORS

AGENDA PACKET CONTENTS LIST

Committee: Budget & Finance Committee **Date** January 25, 2017

Board of Supervisors Meeting **Date** February 7, 2017

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Completed by: Linda Wong **Date** January 20, 2017
Completed by: Linda Wong **Date** January 26, 2017

[Waiving Fiscal Feasibility Study and Determination Requirements - Airport Development Plan, Except for Individual Projects as Required by Administrative Code, Chapter 29]

Ordinance exempting the proposed Airport Development Plan from Administrative Code, Chapter 29, including from the requirements for a fiscal feasibility study and a Board of Supervisors fiscal feasibility determination prior to initiating environmental review, but retaining requirements for possible future individual projects under the Recommended Airport Development Plan which would otherwise be subject to Administrative Code, Chapter 29.

NOTE: **Unchanged Code text and uncodified text** are in plain Arial font.
Additions to Codes are in *single-underline italics Times New Roman font*.
Deletions to Codes are in *~~strikethrough italics Times New Roman font~~*.
Board amendment additions are in double-underlined Arial font.
Board amendment deletions are in ~~strikethrough Arial font~~.
Asterisks (* * * *) indicate the omission of unchanged Code subsections or parts of tables.

Be it ordained by the People of the City and County of San Francisco:

Section 1. Background and Findings.

(a) Chapter 29 of the Administrative Code ("Chapter 29") requires, prior to initiating environmental review, that a City department, board, or commission proposing a project as defined by the California Environmental Quality Act, Public Resources Code Sections 21000 *et seq.* that is estimated to have implementation and/or construction costs exceeding twenty-five million dollars ($25,000,000) and to use in excess of one million dollars ($1,000,000) in public monies for predevelopment, planning, or construction costs prepare a financial feasibility study and submit it to the Board of Supervisors for a determination that the plan for undertaking and implementing the proposed project is fiscally feasible and responsible.

(b) The Airport Commission, through its Bureau of Planning and Environmental Affairs, has prepared and intends to seek environmental review of the recommended Airport Development Plan ("Recommended ADP"), a comprehensive project that, absent this ordinance, would be subject to the requirements of Chapter 29. The Recommended ADP consists of individual ADP projects to be implemented over a 20-year time frame, to accommodate a projected future 71.1 million annual passengers. Given the uncertainties inherent in preparing a meaningful fiscal feasibility study today for a 20-year plan, an exception to the requirements of Chapter 29 is appropriate.

(c) The Airport Commission, by Resolution No. 16-0288, adopted on November 22, 2016, a copy of which is on file with the Clerk of the Board of Supervisors in File No. 161311, approved this ordinance and requested that the Board adopt the ordinance.

Section 2. Waiver of Fiscal Feasibility Study and Determination of Fiscal Feasibility Requirements.

(a) The Board of Supervisors hereby exempts the Recommended ADP from Administrative Code Chapter 29, and thereby waives the requirements for a fiscal feasibility study of the Recommended ADP and a Board determination that the Recommended ADP is fiscally feasible and responsible. Accordingly, environmental review of the Recommended ADP may be initiated absent compliance with Chapter 29.

(b) In the event that (1) environmental review of the Recommended ADP is completed and (2) the Airport Commission approves the Recommended ADP or some portion of the Recommended ADP, then for any individual ADP project under the Recommended ADP meeting the applicable dollar thresholds of Administrative Code Section 29.1(a), as it may be amended from time to time, and prior to initiating any detailed design work (design development) for such individual ADP project, the Commission shall proceed in conformance

with Chapter 29 to prepare a fiscal feasibility study and obtain a determination by the Board of Supervisors that the individual ADP project is fiscally feasible and responsible.

Section 3. Effective Date. This ordinance shall become effective 30 days after enactment. Enactment occurs when the Mayor signs the ordinance, the Mayor returns the ordinance unsigned or does not sign the ordinance within ten days of receiving it, or the Board of Supervisors overrides the Mayor's veto of the ordinance.

APPROVED AS TO FORM:
DENNIS J. HERRERA, City Attorney

By: _____
Loretta A. Wider
Deputy City Attorney

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FILE NO. 161311

LEGISLATIVE DIGEST

[Waiving Fiscal Feasibility Study and Determination Requirements - Airport Development Plan, Except for Individual Projects as Required by Administrative Code, Chapter 29]

Ordinance exempting the proposed Airport Development Plan from Administrative Code, Chapter 29, including from the requirements for a fiscal feasibility study and a Board of Supervisors fiscal feasibility determination prior to initiating environmental review, but retaining requirements for possible future individual projects under the Recommended Airport Development Plan which would otherwise be subject to Administrative Code, Chapter 29.

Existing Law

Chapter 29 of the Administrative Code ("Chapter 29") requires, prior to initiating environmental review, that a City department, board, or commission proposing a project as defined by the California Environmental Quality Act that is estimated to have implementation and/or construction costs exceeding twenty-five million dollars ($25,000,000) and to use in excess of one million dollars ($1,000,000) in public monies for predevelopment, planning, or construction costs prepare a financial feasibility study and submit it to the Board of Supervisors for a determination that the plan for undertaking and implementing the proposed project is fiscally feasible and responsible.

Amendments to Current Law

This ordinance would not amend Chapter 29 but would exempt and thereby waive Chapter 29 requirements for a fiscal feasibility study of the San Francisco International Airport's Recommended Airport Development Plan ("Recommended ADP") and a Board of Supervisors determination that the Recommended ADP is fiscally feasible and responsible, thereby allowing environmental review of the Recommended ADP to proceed. If environmental review for the Recommended ADP is completed and thereafter the Recommended ADP or some portion thereof is approved by the Airport Commission, then prior to initiating detailed design for any individual project under the Recommended ADP meeting the applicable dollar thresholds of Chapter 29, the Airport Commission would be required to prepare a fiscal feasibility study and obtain a determination by the Board of Supervisors that such individual ADP project is fiscally feasible and responsible.

Background Information

The Recommended ADP is a proposed comprehensive plan consisting of individual ADP projects to be implemented over a 20-year time frame to accommodate a projected 71.1 million annual passengers at San Francisco International Airport.

Item 7 File 16-1311	Department: San Francisco International Airport (Airport)

EXECUTIVE SUMMARY

Legislative Objectives

- The proposed ordinance would exempt the Recommended Airport Development Plan from Administrative Code, Chapter 29, including the requirements to prepare a fiscal feasibility study and for the Board of Supervisors to make a fiscal feasibility determination prior to initiating environmental review. The proposed ordinance would retain the fiscal feasibility requirements of Chapter 29 for possible future individual projects under the Recommended Airport Development Plan, which would otherwise have been subject to Administrative Code Chapter 29. Under this ordinance, the requirements of Chapter 29 would be applied prior to the individual project proceeding with detailed design work rather than environmental review, as currently required.

Key Points

- From late 2014 to 2016, Airport staff prepared an Airport Development Plan for future passenger operations and growth for up to 71.1 million annual passengers over the next 20 years. The Recommended Airport Development Plan serves as a roadmap to guide the long-term landside Airport development, in conjunction with the Airport's Capital Plan, up to the estimated maximum capacity of the existing runway system. There are no airfield capacity increasing projects identified in the Recommended Airport Development Plan.
- Unlike the Capital Plan, the Recommended Airport Development Plan projects are not scheduled for a date and time, but rather will be implemented if and when they become necessary based on passenger demand.
- The Airport is requesting to waive the provisions of Chapter 29 prior to conducting environmental review of the Recommended Airport Development Plan because the criteria to determine fiscal feasibility cannot be accurately evaluated by the Airport at this time for projects that may be constructed over 20 years.
- The proposed ordinance would retain the fiscal feasibility requirements of Chapter 29 of the Administrative Code for future individual projects under the Recommended Airport Development Plan.
- If the proposed ordinance is approved, the Airport would proceed to an environmental review for the entire Recommended Airport Development Plan, as required under CEQA and Chapter 31 of the Administrative Code.

Fiscal Impact

- The Recommended Airport Development Plan does not contain project costs or a financing plan. According to the Recommended Airport Development Plan, development of specific projects within the Plan will depend on the source of project financing and future need for the project.
- All approved Recommended Airport Development Plan projects will be evaluated together with other Airport projects during the capital planning process. The Airport's capital plan is subject to fiscal review and approval by the Board of Supervisors.

Recommendation

- Approval of the proposed ordinance is a policy decision for the Board of Supervisors.

MANDATE STATEMENT

Chapter 29 of the Administrative Code requires that prior to requesting an environmental review from the Planning Department, as is required under the California Environmental Quality Act (CEQA), City departments proposing to implement a project that is estimated to have construction costs greater than $25,000,000, and that will use more than $1,000,000 in public monies, must prepare a fiscal feasibility study and submit such study to the Board of Supervisors for a finding that the proposed project is fiscally feasible and responsible.

BACKGROUND

In 1992, the San Francisco Planning Commission certified the Airport's Master Plan Environmental Impact Report ("EIR"). Subsequent to the EIR, the Master Plan was adopted by the Airport Commission, which provided a long-term strategy for the Airport's growth up to approximately 51 million annual passengers in 2006. This number of annual passengers was reached in 2016. Many significant capital projects were completed or are ongoing under the Master Plan, including the International Terminal Building, the AirTrain system, Terminal 2 renovation, Terminal 1 redevelopment, hotel development, and administrative office development.

From late 2014 to 2016, Airport staff prepared an Airport Development Plan for future passenger operations and growth for up to 71.1 million annual passengers over the next 20 years. Beginning with a forecast of future passenger and operations activity levels, the Airport inventoried Airport facilities, analyzed facility requirements, developed and evaluated planning alternatives to meet requirements, selected a recommended long-range plan ("Recommended Airport Development Plan"), and developed an implementation plan. The Recommended Airport Development Plan serves as a roadmap to guide the long-term Airport development, in conjunction with the Airport's Capital Plan, up to the estimated maximum capacity of the existing runway system.[1] Unlike the Capital Plan, the Recommended Airport Development Plan projects are not scheduled for a date and time, but rather will be implemented if and when they become necessary based on passenger demand.

The Draft Final Airport Development Plan was completed in September 2016.

DETAILS OF PROPOSED LEGISLATION

The proposed ordinance would exempt the Recommended Airport Development Plan from Administrative Code, Chapter 29, including the requirements to prepare a fiscal feasibility study and for the Board of Supervisors to make a fiscal feasibility determination prior to initiating environmental review. The Airport plans to conduct environmental review of the Recommended Airport Development Plan in accordance with the California Environmental Quality Act (CEQA) and Chapter 31 of the Administrative Code. Individual projects within the Recommended Airport Development Plan may require additional environmental review,

[1] According to Ms. Cathy Widener, the Airport's Government Affairs Manager, none of the Projects would increase the existing airfield capacity.

depending upon further determinations to be made by the Planning Department at the time an individual recommended project is proposed to go forward.

The proposed ordinance would retain the fiscal feasibility requirements of Chapter 29 of the Administrative Code for possible future individual projects under the Recommended Airport Development Plan, which would otherwise have been subject to Administrative Code Chapter 29. Under this ordinance, the requirements of Chapter 29 would be applied prior to the individual project proceeding with detailed design work rather than environmental review, as currently required.

If the proposed ordinance is approved, the Airport would proceed to an environmental review for the entire Recommended Airport Development Plan, as required under CEQA.

Airport Development Plan

The Airport Development Plan (a) maximizes airfield, gate, and shared use (such as baggage claim) capacity, (b) maximizes terminal connections to facilitate passenger transfers, and (c) increases lobby and security access, including use of technology. The Recommended Airport Development Plan projects, which would be implemented over 20 years, consist of:

- Realigning taxiways A and B near Boarding Areas F and G;
- Adding a boarding area to the International Terminal (including extending existing boarding areas to accommodate wide body aircraft), and extending boarding areas in Terminal 3;
- Reconfiguring the lobby and security checkpoints in the International Terminal;
- Improving waiting and concession locations;
- Installing technology and other improvements to the baggage handling area;
- Improving the Rental Car Center, long term parking and ground transportation facilities and curbside access;
- Expanding of the AirTrain System;
- Improving the North Field, East Field, and West Field maintenance and support facilities; and
- Implementing various utility projects.

There are currently no scheduled Recommended Airport Development Plan projects before July 2019. According to Ms. Widener, following the completion of the environmental review, the Airport will include the Recommended Airport Development Plan projects in the Airport's overall capital planning process. This capital planning process would rank the Airport's future capital needs, including Recommended Airport Development Plan projects and other ongoing and future Airport capital projects, and set priorities for project financing.

Requested Waiver of Chapter 29 Requirements

According to Ms. Cathy Widener, the Airport is requesting to waive the provisions of Chapter 29 prior to conducting environmental review of the Recommended Airport Development Plan

because the criteria[2] to determine fiscal feasibility cannot be accurately evaluated at this time for projects that would be constructed over 20 years. According to Ms. Widener, environmental review of the Recommended Airport Development Plan may result in revisions to the Recommended Airport Development Plan projects. The environmental review would assess the aggregate impacts that the land uses and development proposed under the Recommended Airport Development Plan would have on the environment, and could lead to early disclosure of potential environmental impacts and implementation of mitigation measures to lessen impacts on the environment.

According to Mr. John Bergener of the Airport's Bureau of Planning and Environmental Affairs, because the Recommended Airport Development Plan is based on Federal Aviation Administration-approved aviation forecast increases in Airport passengers and cargo, changes to these projections will result in changes to Recommended Airport Development Plan project priorities, scope, and timelines.

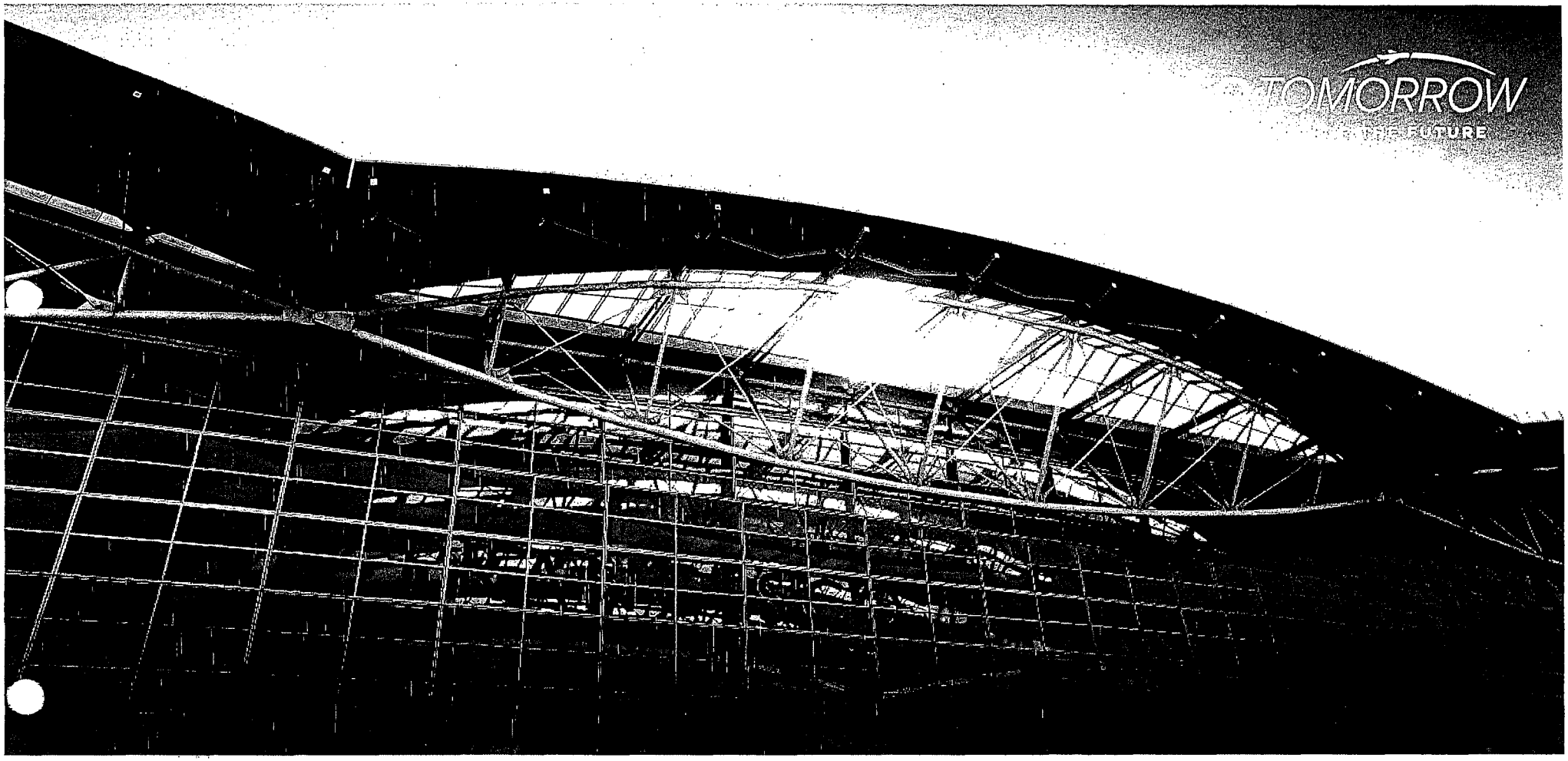
FISCAL IMPACT

The Recommended Airport Development Plan does not contain project costs or a financing plan. According to the Recommended Airport Development Plan, development of specific projects within the Plan will depend on the source of project financing and future need for the project. According to Ms. Widener, all approved Recommended Airport Development Plan projects will be evaluated together with other Airport projects during the capital planning process. The Airport's capital plan is subject to fiscal review and approval by the Board of Supervisors.

RECOMMENDATION

Approval of the proposed ordinance is a policy decision for the Board of Supervisors.

[2] Chapter 29 project fiscal feasibility criteria consist of: (a) direct and indirect financial benefits of the project to the City, including cost savings and new revenues; (b) construction costs; (c) available funding; (d) long term operating and maintenance costs; and (e) debt load.



Airport Development Plan 2016

Executive Summary

SFO San Francisco International Airport

San Francisco International Airport

Airport Development Plan 2016

Executive Summary

30

September 2016

EXECUTIVE SUMMARY

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INTRODUCTION

The San Francisco International Airport (SFO, or the Airport) Master Plan, adopted by the City and County of San Francisco (CCSF) Airport Commission in 1992, provided a long-term plan for Airport facility relocation, expansion, and development to accommodate 51.3 million annual passengers (MAP) forecast for 2006. In 1997, SFO accommodated 40 MAP and traffic continued to grow until the U.S. economy slowed in early 2000. SFO experienced a steady decline in passenger activity in the following years as a result of the recession. Since then, passenger activity at SFO has recovered and the Airport served a record 50 MAP in 2015. Implementation of projects under the Master Plan has continued. The sustained increase in passenger activity coupled with the execution of Master Plan projects prompted the need to develop a new plan to accommodate future growth at SFO. From late 2014 through early 2016, the *San Francisco International Airport | Airport Development Plan 2016* (ADP) was prepared for SFO by Airport management, supported by their consultant team.

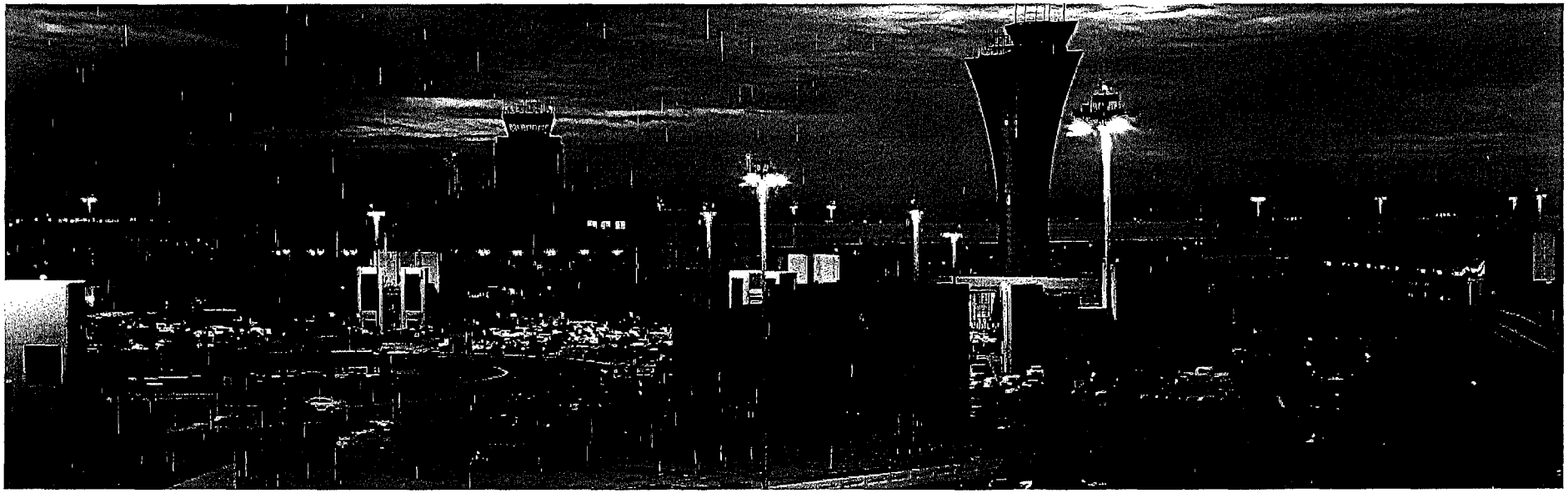
The ADP sets forth a long-range plan to guide the Airport's development as the premier long-haul and international gateway of choice, providing the highest level of international and domestic guest service and facilitating the economic growth of the San Francisco Bay Area. Building upon ongoing projects at SFO, the ADP defines recommended facility development that would accommodate long-term demand at the Airport, forecast to reach 71.1 MAP.

Industry evolution and the challenges associated with predicting the future must be considered in any planning effort. A successful plan establishes flexible development concepts based on historical events, considerations for change, and industry familiarity to guide Airport management toward a recommended outcome. The SFO ADP was prepared using this approach and accounts for the dynamic aviation industry by forecasting demand over time to establish a plan for incremental facility expansion.

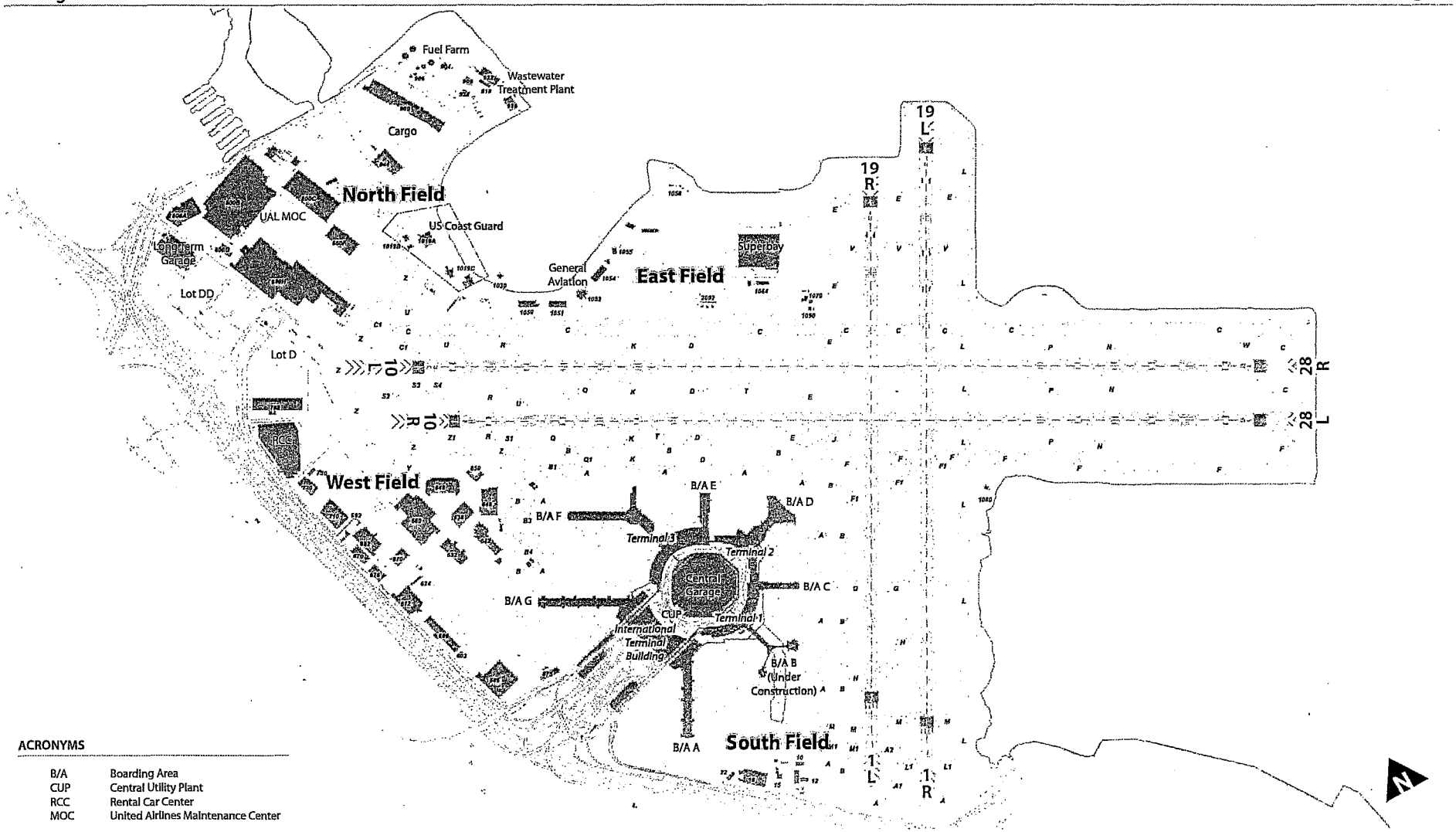
Since improvement needs at SFO are fluid, the ADP assessment incorporates Master Plan and other projects currently being implemented, projects under consideration to meet current and near-term requirements, and projects to meet long-term needs. The basis of ADP planning analyses was developed with the flexibility to adapt to aviation activity demand materializing sooner or later than forecast. The timing of some projects may change; however, the recommendations for future projects remain relevant.

Practical decisions concerning service levels, market competition, feasibility, and finances must be made before a project evolves from analysis to a construction commitment. The ADP implementation and feasibility analyses identify critical decision points in the execution timeline to help determine when to advance or defer facility implementation. This flexibility enables the ADP to serve as a roadmap to the future, helping Airport stakeholders, management, and governing organizations to respond pragmatically as air service grows and Airport facilities must expand to accommodate that growth.

The purpose of this ADP Executive Summary is to summarize the recommended long-term development plan for SFO. The ADP, including the technical appendices, should be reviewed for additional information on the assumptions, methodologies, analyses, and alternatives evaluation supporting the ADP findings and recommendations.



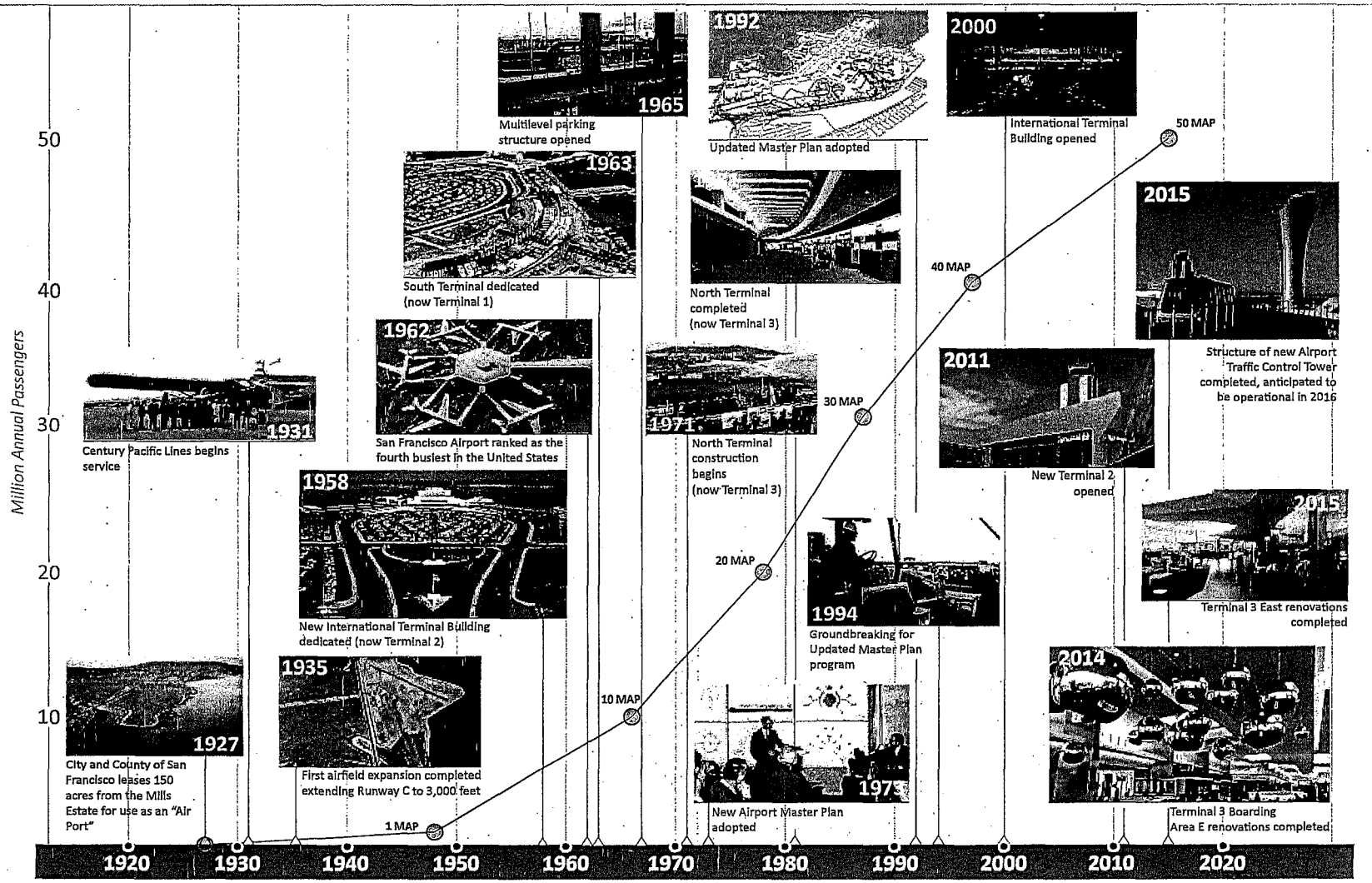
Existing Facilities



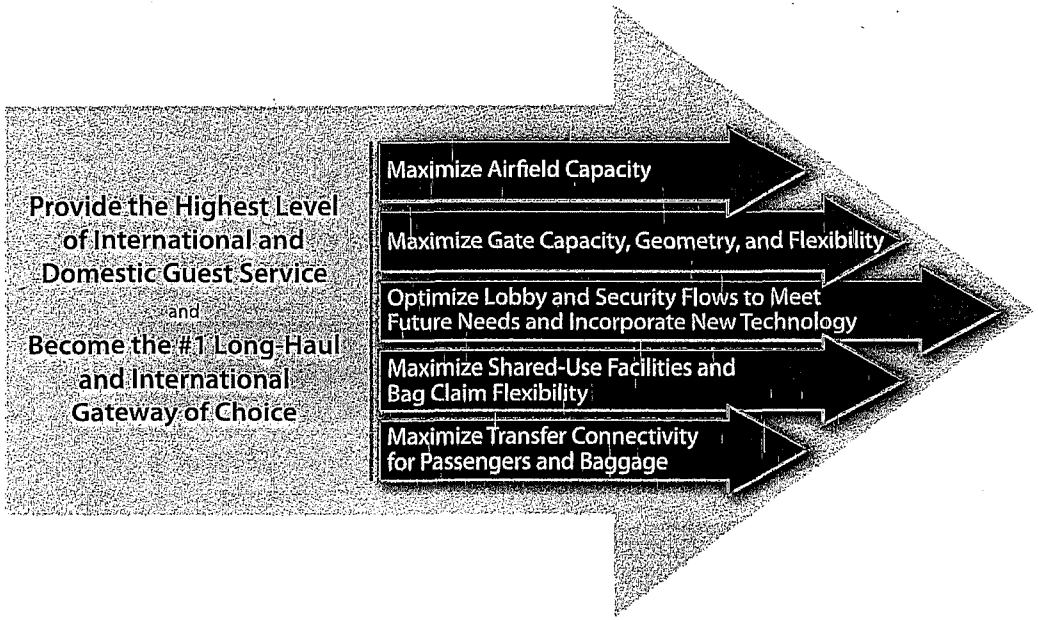
ACRONYMS

B/A	Boarding Area
CUP	Central Utility Plant
RCC	Rental Car Center
MOC	United Airlines Maintenance Center

History


Million Annual Passengers
50
40
30
20
10
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
2020
1 MAP
10 MAP
20 MAP
30 MAP
40 MAP
50 MAP
1927
City and County of San Francisco leases 150 acres from the Mills Estate for use as an "Air Port"
1931
Century Pacific Lines begins service
1935
First airfield expansion completed extending Runway C to 3,000 feet
1958
New International Terminal Building dedicated (now Terminal 2)
1962
San Francisco Airport ranked as the fourth busiest in the United States
1963
South Terminal dedicated (now Terminal 1)
1965
Multilevel parking structure opened
1971
North Terminal construction begins (now Terminal 3)
1973
New Airport Master Plan adopted
1992
Updated Master Plan adopted
1994
Groundbreaking for Updated Master Plan program
2000
International Terminal Building opened
2011
New Terminal 2 opened
2014
Terminal 3 Boarding Area E renovations completed
2015
Terminal 3 East renovations completed
2015
Structure of new Airport Traffic Control Tower completed, anticipated to be operational in 2016
North Terminal completed (now Terminal 3)

Long-Term Airport Development Goals



GOALS AND OBJECTIVES

The ADP represents the beginning of a new planning cycle and defines the recommended development needed to accommodate long-term demand at SFO while supporting the Airport's strategic objectives. In establishing the inventory of SFO facilities, the ADP includes projects currently being implemented to meet immediate or near-term Airport needs. Projects proposed through the ADP alternatives analysis account for these ongoing developments.

Airport management has identified overarching goals to improve and enhance safety, the guest experience, the use of public transit, sustainability, technology, operational and organizational capacity, and economic stability at SFO. These goals led to the tangible objectives that shaped the specific ADP development alternatives. The potential development solutions were evaluated to determine how they would advance the Airport's overarching goals.

The ADP assumes that the existing runway system will remain unchanged, constraining future aircraft activity. The ADP provides a strategy to accommodate future Airport demand in a safe, cost-effective, operationally efficient, and flexible manner given forecasts of aviation activity constrained by the existing runway layout.

The *SFO Five-Year Strategic Plan (2011-2016)* is the basis for objectives related to business operations, sustainability, and the development of terminal, airside, and landside functional areas analyzed in preparing the ADP. *The Principles of R.E.A.C.H.*,[1] or Revenue Enhancement And Customer Hospitality, establish the aspirational standard for guest experience at the Airport to maintain SFO as a world-renowned facility and a premier gateway to the Pacific. The collection of goals and objectives reinforces SFO's mission "to provide an exceptional airport in service to our communities."

1 *The Principles of R.E.A.C.H. 2013* is an aspirational document for architects, designers, tenants, and SFO employees who work in and with SFO. *The Principles of R.E.A.C.H.* is an effort to enhance the customer experience, drive revenue generation, and bring a cohesive character to the entire Airport campus. The document is designed to provide an overview of SFO and how the terminals work and function as a whole. In addition, the document explores the different typologies of guests who frequent the Airport in order to better understand their needs. The guiding principles of the document have influenced the development of the ADP, where appropriate.

STUDY PROCESS

The ADP serves as a roadmap for guiding future Airport development. The planning process began with an inventory of the physical, operational, and functional characteristics of the Airport. Workshops and ongoing coordination between the planning consultants and stakeholders from various divisions of the Airport were used during the process.

As part of the inventory process, projects already in the environmental review, programming, design, or construction phase were identified. These include the continued implementation of 1992 Master Plan projects. Ongoing projects were inventoried as part of the ADP assessment to provide a complete picture of future development opportunities and constraints. The ADP document differentiates these Ongoing Projects from ADP Projects with the symbols as indicated below:

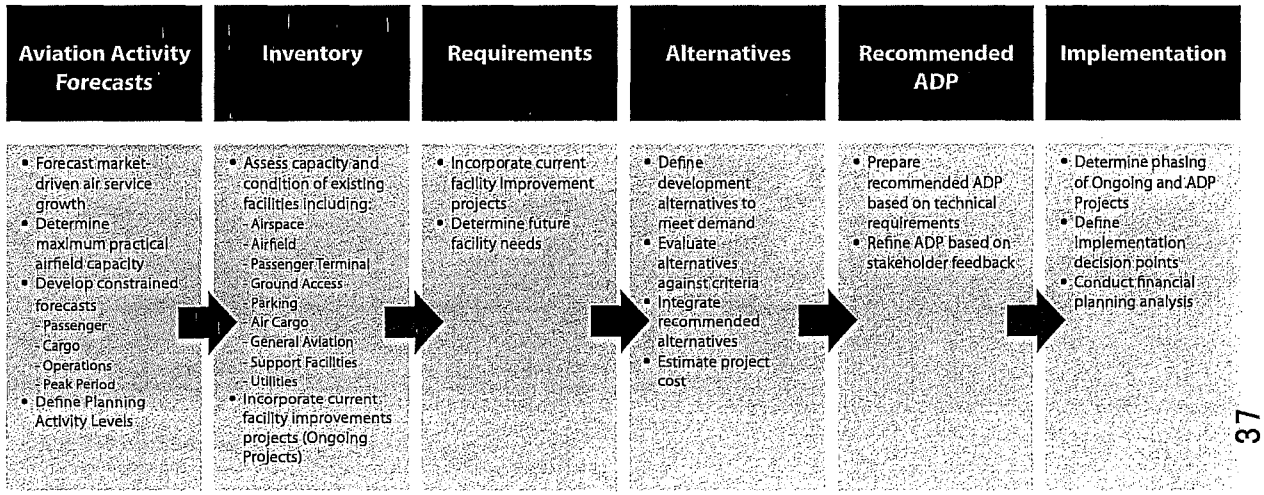
■ Ongoing Projects

These projects have been authorized to proceed by the Airport Commission or have been identified by Airport management as needing to be implemented in the near future, subject to Airport Commission and other necessary approvals. They are in various stages of planning, programming, design, or construction. Appropriate environmental reviews, as required under the California Environmental Quality Act (CEQA) or National Environmental Policy Act (NEPA), are completed, in process, or will be conducted. These projects are proceeding, or would proceed if approved, irrespective of any ADP projects and do not address long-term demands and capacity needs. The redevelopment of Terminal 1 and Boarding Area B and the Airport hotel are examples of the projects in this category.

● ADP Projects

These are ADP recommended long-term projects and are anticipated to undergo appropriate environmental review, financial assessment, programming, and design prior to consideration for approval and implementation.

Airport Development Plan Study Process



The designations for Ongoing Projects and ADP Projects are used throughout this Executive Summary. All projects are described in greater detail in the Implementation section of this Executive Summary.

Runway capacity was analyzed and aviation activity at the Airport was forecast based on the airfield's practical capacity. Near-term and long-term activity was developed from the forecasts and used to define incremental facility requirements to accommodate long-term growth at SFO.

Facility expansion alternatives for the airfield, terminal, baggage handling systems, ground access, support facilities, and utilities were developed based on the aviation activity forecast requirements. A number of existing planning studies were also incorporated into the alternatives analyses. The alternatives for each development area were evaluated within the context of the entire Airport, including the Ongoing Projects, to identify a recommended alternative. Each recommended alternative was then incorporated into the recommended ADP and the Airport Layout Plan (ALP).

An implementation strategy was developed based on demand triggers for development, which define decision points to advance or defer projects. Construction and financial considerations influenced the phasing of recommended ADP projects.

The ADP contains the most current information available at the time of its publication, but the aviation environment will continue to evolve over time. To incorporate updated demand forecasts and to reflect the most current vision for the Airport, elements of the ADP will be updated regularly in consultation with Airport management and advisors.

AVIATION ACTIVITY FORECASTS

To assess Airport facilities and evaluate the need for new or expanded facilities, aviation activity forecasts were developed for airline passengers, cargo tonnage, and aircraft operations. The forecasts show how air service could increase based on market trends while understanding that the existing runway system at SFO constrains potential growth. The forecasts were based on calendar year 2013 data and developed for four future planning activity levels: 2018, 2023, Base Constrained, and High Constrained. These demand levels provide an enduring and adaptable framework for understanding long-term facility needs at SFO.

The maximum practical capacity of an airport is the maximum demand that can be accommodated while maintaining an acceptable level of service. Because maintaining airline schedule integrity is the primary operational goal of airport level of service, the maximum practical capacity of an airport is the maximum demand that can be accommodated without causing severe or unrecoverable delays. Based on simulation modeling, the current configuration of the SFO runway system has a maximum practical capacity between 1,400 and 1,425 daily operations. With the implementation of technological procedures and adjustments to flight schedules, the practical capacity of the airfield could increase to between 1,475 and 1,500 daily operations.

The 2018 and 2023 demand levels reflect unconstrained growth based on the market-driven demand for air service, notwithstanding facility constraints. In other words, the activity forecasts for 2018 and 2023 are based on the assumption that facilities will be able to accommodate demand.

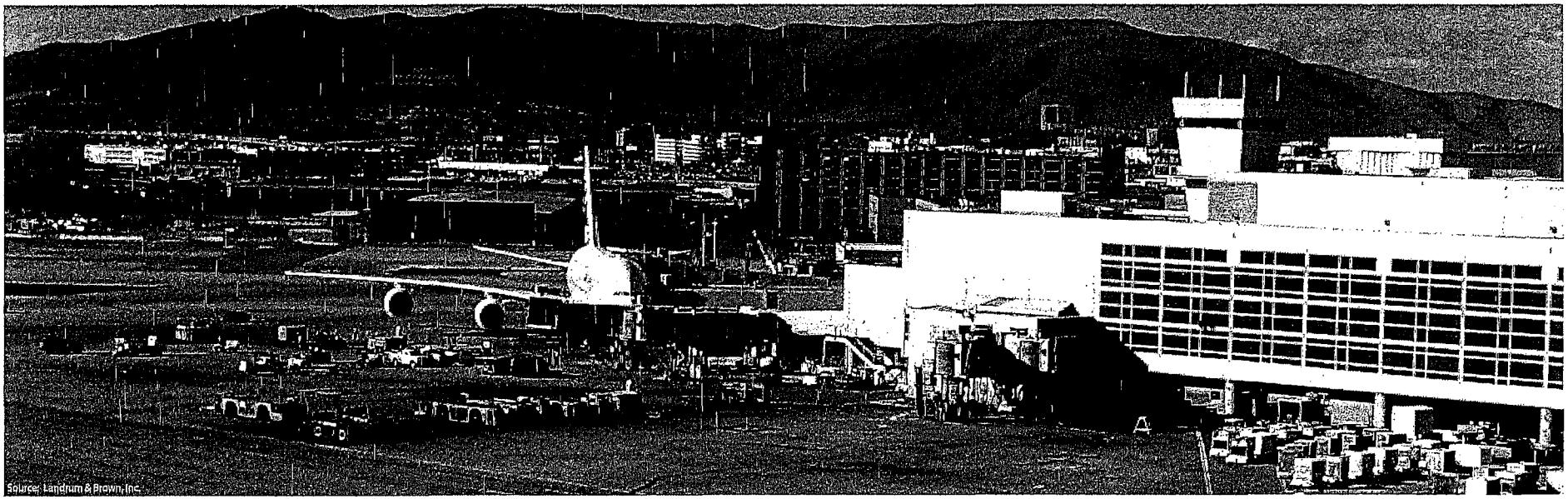
Beyond 2023, the forecasts are constrained based on the maximum runway capacity at SFO. While the number of aircraft operations approaches this practical limit, passenger growth is forecast to continue through increased load factors (i.e., the number of passengers per aircraft operation) and larger aircraft.

To reflect the potential variability of the constrained forecast analysis, two demand levels were developed. The Base Constrained demand forecast was based on the assumption that the average size and capacity ("gauge") of the aircraft types serving SFO will increase and load factors will reach an average of 88 percent. Aircraft operating in peak hours would achieve 95 percent to 100 percent load factors. The High Constrained forecast was based on the assumption that the average gauge of the aircraft types serving SFO will continue to increase, load factors will reach an average of 95 percent, and airlines will operate additional flights in off-peak periods. These additional flights were assumed to have the same domestic-to-international split as in the Base Constrained case.

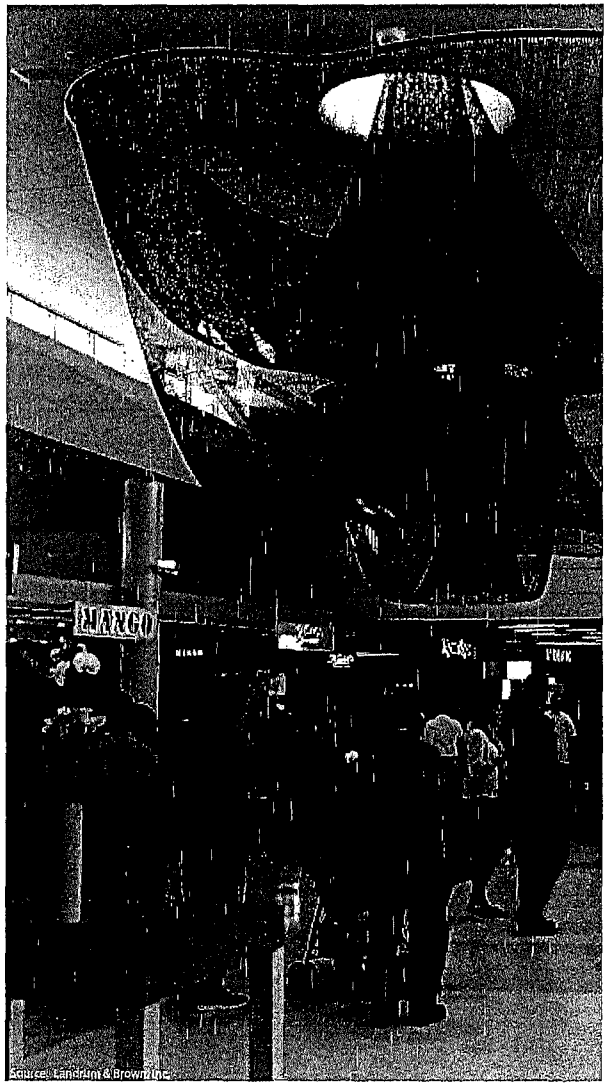
The commercial passenger aircraft operations forecasts are driven by the passenger forecasts, load factors, aircraft gauge assumptions, and runway capacity. Annual passenger aircraft operations are forecast to increase by 20 percent between 2013 and the High Constrained planning activity level. Cargo, general aviation, and air taxi aircraft operations forecasts are also driven by industry and national trends. Military aircraft operations are forecast to remain constant throughout the planning horizon.

The passenger forecasts reflect the economic outlook for the local, national, and global markets; historical airline activity trends; the demographic base for air travel demand; and other factors that may affect the demand for air travel over the planning horizon.

The cargo tonnage forecasts are based on the assumption that long-term economic growth in the Bay Area and the broader U.S. economy will increase demand for the shipment of goods and services.



Source: Langrum & Brown, Inc.



Source: Landrum & Brown, Inc.

In 2013, connecting passengers at the Airport numbered 10.2 million, which accounted for approximately 22.4 percent of total annual passengers at the Airport. By 2023, the number of connecting passengers is forecast to increase to 13.1 million, which would account for approximately 22.6 percent of total passengers forecast for the Airport in 2023. The share of connecting passengers at SFO is forecast to remain at 22.6 percent under the Base Constrained and the High Constrained demand levels, which equates to 14.1 million and 16.1 million connecting passengers, respectively.

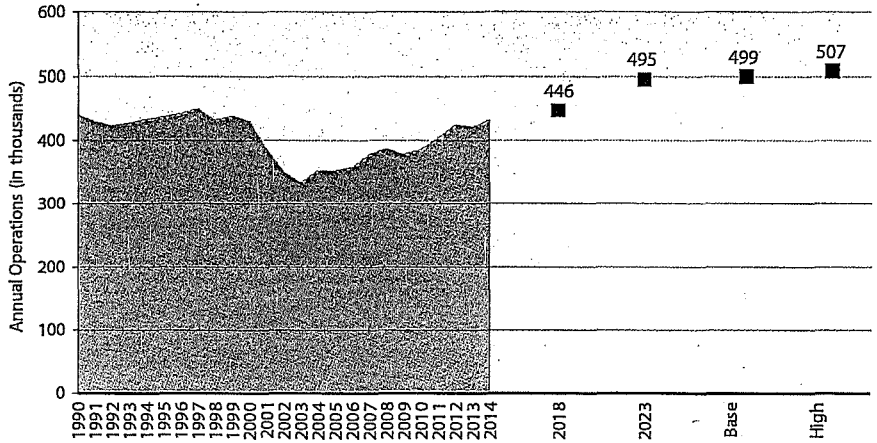
The forecasts represent an average growth rate over time, which accounts for the cyclical nature of economics. However, all forecasts are subject to uncertainty. Factors such as airline mergers and acquisitions, market shares, local and global events, and aircraft replacement vary with time. Therefore, actual results will vary from the forecasts presented herein. However, the planning analyses maintain flexibility by focusing on needs associated with planning activity demand levels rather than specific forecast years.

Forecast Summary

Demand Level	Annual Passengers (Millions)	Peak Hour Passengers	Annual Passenger Aircraft Operations	Annual Total Aircraft Operations	Design Day Passenger Aircraft Operations	Design Day Total Aircraft Operations	Peak Hour Passenger Aircraft Operations	Peak Hour Total Aircraft Operations	Forecast Implications
Historical 2013	44.84	10,543	386,400	421,400	1,142	1,237	95	96	
2018	50.48	12,721	407,800	446,100	1,203	1,307	98	102	Increased demand on all facilities
2023	57.66	14,852	451,900	494,500	1,340	1,456	107	114	Increased demand on all facilities
Base	62.22	15,711	455,400	498,900	1,368	1,475	108	117	Constrained operational activity, larger aircraft, increased saturation of facilities
High	71.07	18,020	463,100	506,600	1,393	1,500	111	120	Constrained operational activity, larger aircraft, increased saturation of facilities

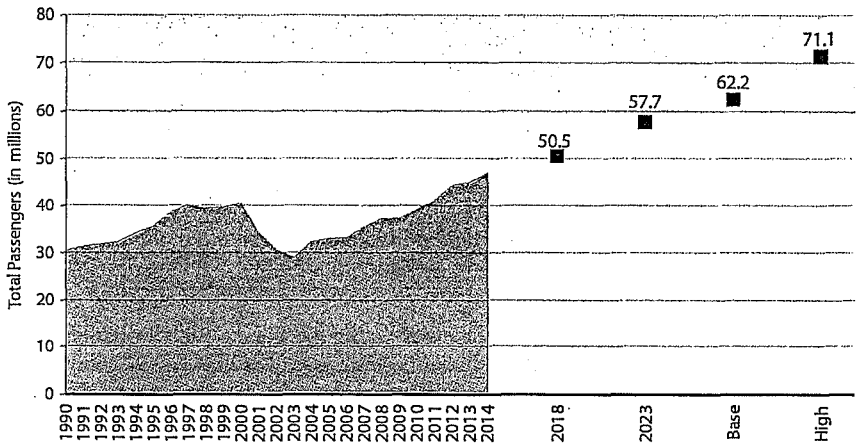
Note: Base and High refer to Base Constrained demand level and High Constrained demand level.
Sources: SFO Year End Traffic Reports 2007-2014; SFO Forecast Update, 2013

Historical and Forecast Total Aircraft Operations



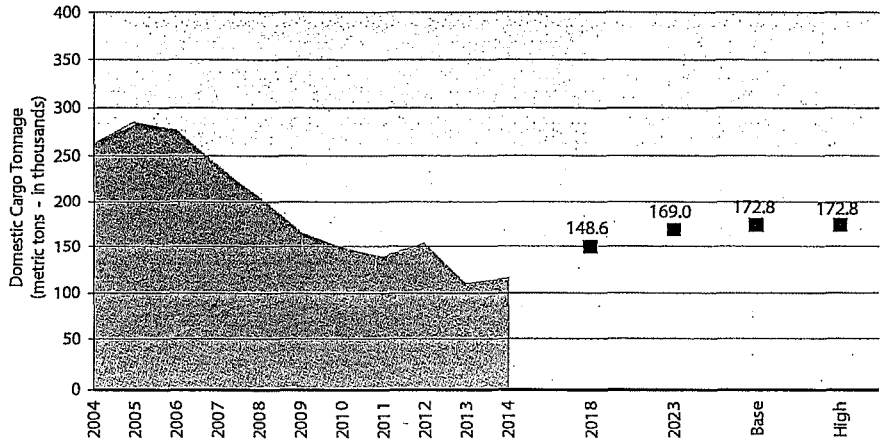
Sources: SFO Year End Traffic Reports 2007-2014; FAA ATADS 2014; SFO Forecast Update, 2013

Historical and Forecast Airline Passengers



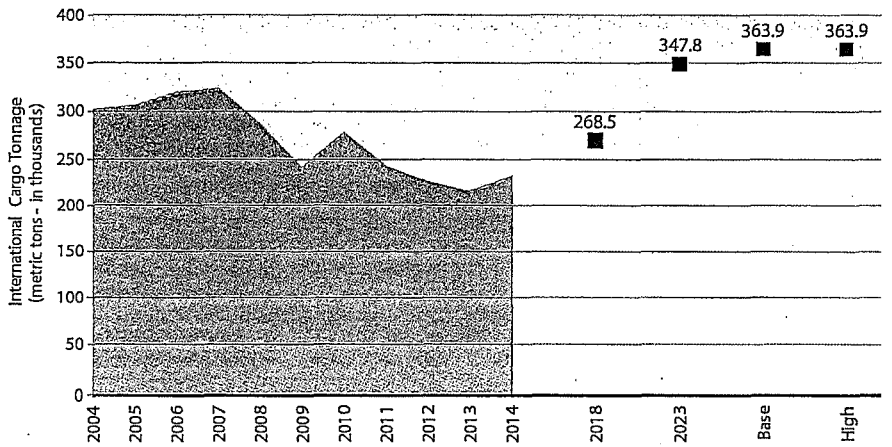
Sources: SFO Year End Traffic Reports 2007-2014; SFO Forecast Update, 2013

Historical and Forecast Cargo Tonnage - Domestic



Source: SFO Year End Traffic Reports 2007-2014; SFO Forecast Update, 2013

Historical and Forecast Cargo Tonnage - International



Source: SFO Year End Traffic Reports 2007-2014; SFO Forecast Update, 2013

Historical Unconstrained Forecast Constrained Forecast

40

AIRFIELD

The SFO airfield consists of runways, primary taxiways, exit taxiways, aircraft aprons, navigational aids, and vehicle service roads. Two parallel runways are oriented in the east-west direction (designated "10-28") and are intersected by two parallel runways oriented in the north-south direction (designated "1-19"). Taxiways parallel to each runway and dual parallel taxiways around the perimeter of the passenger terminal area allow aircraft to maneuver between the runways, terminal areas, and support area aprons.

Runways at SFO

Runway	Length (feet)	Width (feet)
10L-28R	11,870	200
10R-28L	11,381	200
1L-19R	7,650	200
1R-19L	8,650	200

The standard runway flow configuration, known as the West Plan, is used approximately 83 percent of the time and is used by the airlines in developing flight schedules. In this configuration, Runways 28L and 28R are the primary arrival runways and Runways 1L and 1R are the primary departure runways. However, long-haul heavy aircraft depart primarily from Runways 28L and 28R, which are the longest runways at the Airport. The West Plan is referred to as the "28-1" runway configuration.

When visibility permits, aircraft arrive side by side to Runways 28L and 28R with sufficient space between the next pair of arriving aircraft to permit side-by-side departures on Runways 1L and 1R. In reduced-visibility conditions, such as fog or low clouds, aircraft arrive on a single runway. The Airport, Federal Aviation Administration (FAA), and the airlines serving SFO continue to work together to develop procedures and technologies to maintain the paired runway approaches during low-visibility conditions, thereby reducing aircraft delays and maintaining a higher runway capacity.

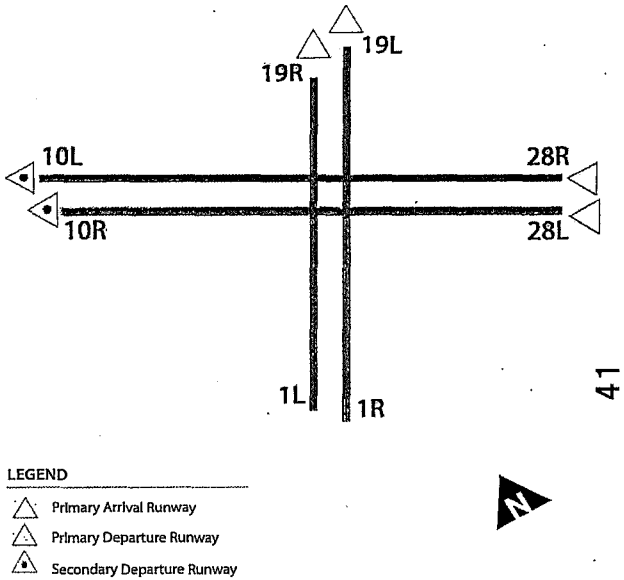
In their existing configuration, the runways will be able to accommodate increasing numbers of aircraft operations up to their practical capacity. The airfield-related Ongoing and ADP Projects are intended to improve conformance with FAA design standards and provide increased aircraft maneuvering flexibility, rather than enhance capacity. The planned taxiway structure follows FAA taxiway design standards to:

- Meet taxiway separation standards
- Reduce the complexity of taxiway/runway intersections
- Reduce congestion
- Provide for standard airfield signage placement
- Reduce the number of acute-angle runway crossings
- Reduce aircraft departure dependencies
- Reduce the potential for pilot confusion

A number of Ongoing Projects related to taxiway geometry have been presented to the FAA through the Airport Layout Plan and Airport Capital Improvement Plan.

As SFO is a legacy, land-constrained airport, it is infeasible to rebuild the entire airfield to achieve modern design standards. The airfield project recommendations balance conformance with design standards and consideration of the constrained local condition.

Standard 28-1 Runway Configuration at SFO



Airfield Development Projects

Runways 10L and 10R End Taxiways

The existing taxiways intersect the runways at acute angles. The new design reconfigures these taxiways to be right-angled crossings and runway entrances, thereby improving pilot lines of sight along the runway and complying with FAA design standards.

Helipad

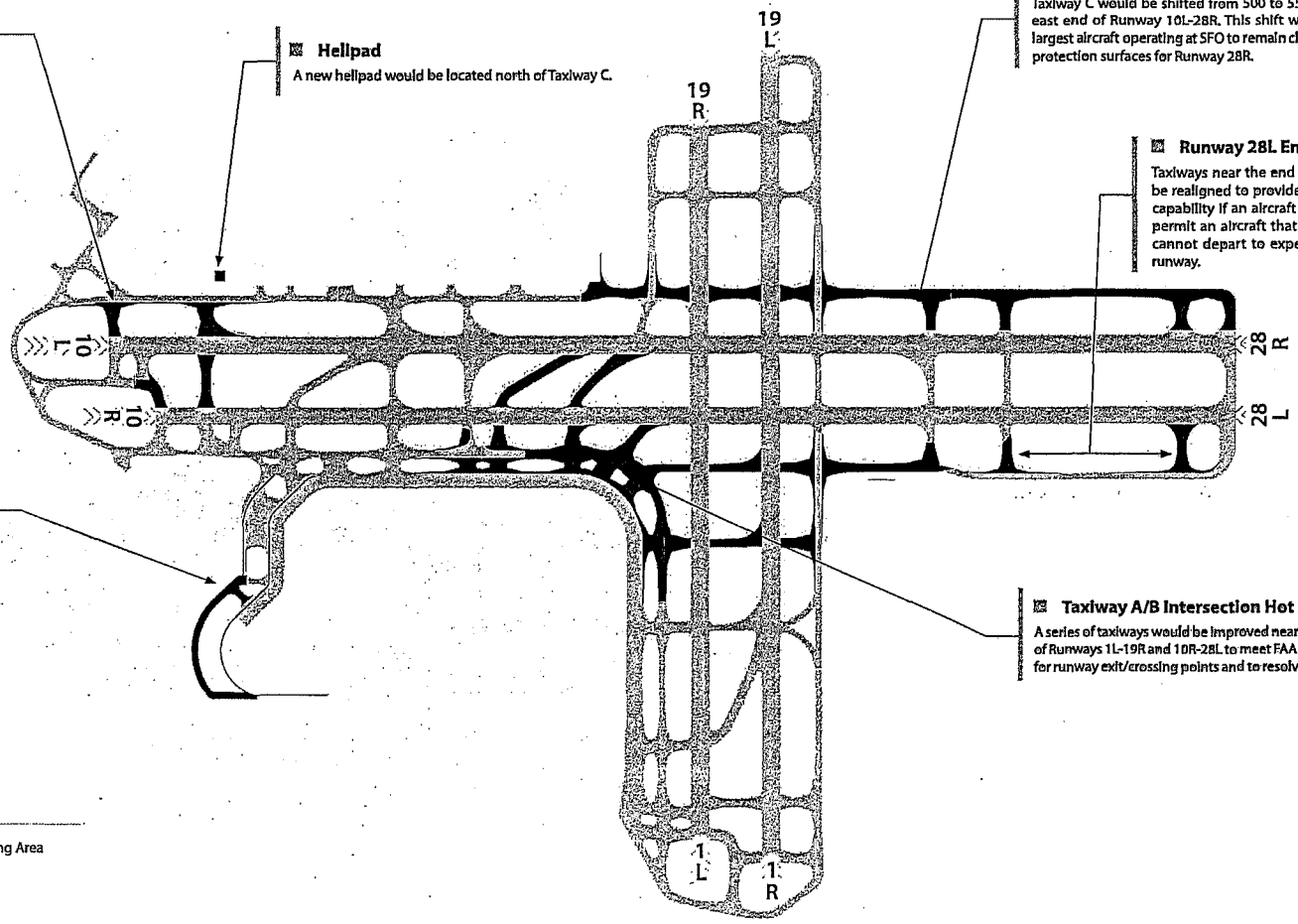
A new helipad would be located north of Taxiway C.

Runway-to-Taxiway Separation

Taxiway C would be shifted from 500 to 550 feet along the east end of Runway 10L-28R. This shift would permit the largest aircraft operating at SFO to remain clear of all airspace protection surfaces for Runway 28R.

Runway 28L End Taxiways

Taxiways near the end of Runway 28L would be realigned to provide for additional bypass capability if an aircraft cannot depart and to permit an aircraft that is on the runway but cannot depart to expedite its exit from the runway.



Taxiways A and B near Boarding Areas F and G

Taxiways A and B would be realigned around B/A F by 15 and 22 feet, respectively, to meet FAA separation design standards. An additional taxilane would be provided around the end of B/A G to facilitate aircraft movements around B/A G and B/A H.

Taxiway A/B Intersection Hot Spot

A series of taxiways would be improved near the intersections of Runways 1L-19R and 10R-28L to meet FAA design standards for runway exit/crossing points and to resolve pilot confusion.

LEGEND		ACRONYM	
■	Ongoing Projects	B/A	Boarding Area
●	ADP Projects		

PASSENGER TERMINAL

The existing terminal complex consists of four terminals with seven aircraft boarding areas (B/As): International Terminal Building (ITB) (B/As A and G), Terminal 1 (B/As B and C), Terminal 2 (B/A D), and Terminal 3 (B/As E and F). In total, 88 passenger aircraft contact gates were provided at the Airport through summer 2015.

Existing Boarding Area Aircraft Gates – April 2015

Terminal	Boarding Area	Number of Gates
ITB	A	12
ITB	G	12
1	B	9
1	C	10
2	D	14
3	E	10
3	F	21
Total		88

Passenger terminal facility requirements are typically driven by activity during peak demand periods. Providing sufficient gate capacity during busy operational periods is essential for SFO to remain competitive as an international and long-haul gateway and to limit delays. Passenger processing and baggage handling facilities within the terminals are also important elements of Airport operations and influence the guest experience.

Ongoing domestic terminal planning projects include the Terminal 1 redevelopment project, which is currently under construction. The ADP recommends a new redevelopment program for the ITB Departures Level and boarding areas. SFO's high standard for the guest experience has guided, and will continue to guide, plans for terminal development.

Gate Requirements

The Airport is planning facility enhancements to meet its goal of providing a high level of service while operating as a preeminent global air service hub. In recent years, renovations have been completed in B/A D and B/A E and, as of 2015, B/A B and B/A F are being renovated to enhance the guest experience. In addition to these improvements, gate capacity at the Airport will also have to be increased to accommodate the forecast growth in air traffic.

Steady growth in passenger traffic and operations is anticipated until airfield capacity is reached. Growth after that point would continue by increasing the size of aircraft serving the Airport, aircraft load factors, and the number of aircraft operations at the Airport during low-demand hours of the day. The ADP provides the gate configuration and expansion plans to meet the gate capacity requirements by:

- Maintaining adequate gate capacity while other terminal projects are under construction
- Accommodating international gate requirements to meet long-term demand
- Accommodating domestic gate requirements to meet long-term demand

The demand is anticipated to increase to 121 aircraft gates, some of which will be widebody aircraft gates that could alternately accommodate two narrowbody aircraft parking positions. The size of the gates would need to increase in anticipation of the expected increase in aircraft gauge over time.

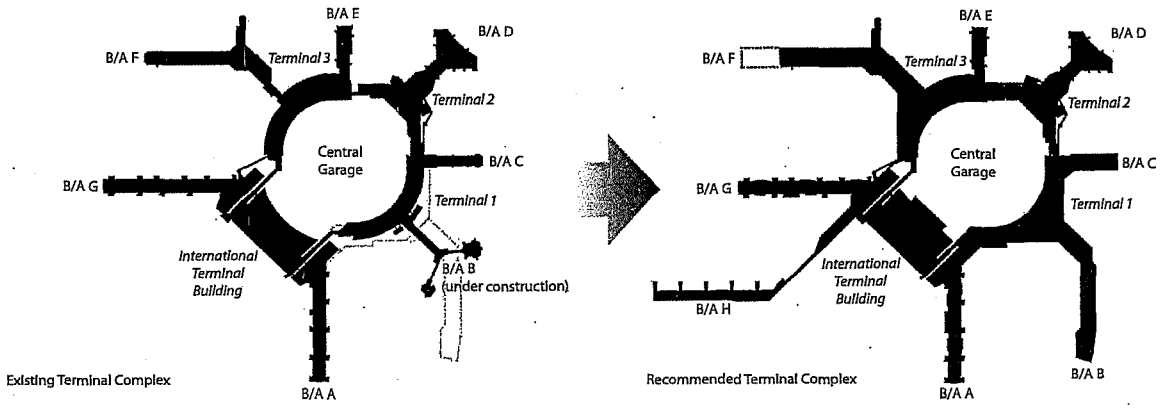
As demand increases, terminal facilities must be flexible enough to adapt to new aircraft types and airline service patterns. The ADP process identified trends and design criteria for new gate facilities:

Accommodating Increased Aircraft Wingspans: To accommodate long-term demand, gate configurations would need to adapt to the increased wingspans of new aircraft in the global airline aircraft fleet mix.

Accommodating Increased Aircraft Lengths: While many of the international gates at SFO are wide enough to accommodate increased wingspans, they are not deep enough to accommodate longer widebody aircraft (e.g., Airbus A350-1000, Boeing 777X series). To accommodate the longer aircraft anticipated in the future, reconfiguration of the ramp area, shifting of taxilanes, and associated adjustments to nearby facilities would be needed.

Flexibility to Accommodate Widebody and Narrowbody Aircraft: To provide the flexibility needed to accommodate a range of aircraft sizes, several Multiple Aircraft Ramp System (MARS) gates that can alternately accommodate one widebody or two aircraft parking positions at the same gate are needed. Such facilities are being provided through Ongoing Projects in B/As B and F.

Terminal Plan



Flexibility to Accommodate Domestic or International Aircraft: To provide flexibility in responding to changes in domestic and international growth patterns, "swing" gates able to accommodate international and domestic arrivals are needed. International arrivals would use a sterile corridor to the Federal Inspection Services (FIS) area of the ITB. The international parking position supply chart below demonstrates the total international parking position capacity at SFO assuming a mix of widebody gates at the ITB and narrowbody or widebody parking positions at the other boarding areas. In a scenario where domestic gate demand is greater than anticipated in the long term, the ADP reserves the flexibility to extend B/A F to provide additional domestic gates.

The terminal gate expansions will accommodate the long-term demand for gates. While slight deficiencies in gate supply may occur in some years as a result of construction activities, it is anticipated that these deficiencies can be managed as such temporary deficiencies have been during previous construction programs.

The international swing gates that would be provided in B/As B and H and the frontage gates in Terminal 3 West may accommodate a substantial number of international flights. The ADP reserves the flexibility to extend B/A F to provide additional domestic gates, if necessary. This arrangement provides flexibility for the Airport to respond to future changes in domestic and international growth patterns.

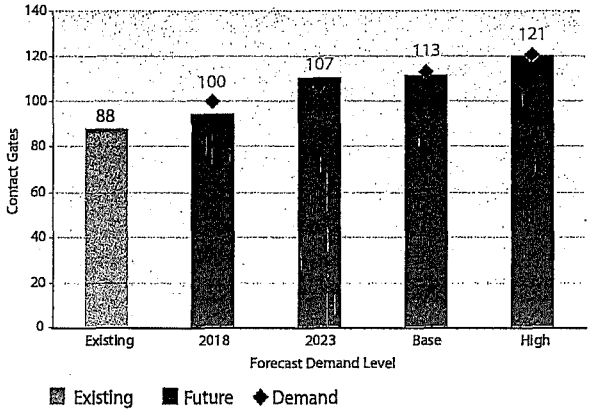
Enhanced Guest Experience: SFO's mission is "to provide an exceptional airport in service to our communities," which embodies Airport management's vision of "Reaching for Number 1." As has been proven through the Terminal 2, B/A E, and Terminal 3 East construction projects completed from 2011 through 2015, Airport staff has succeeded in incorporating the principles of R.E.A.C.H. into projects to make SFO a world-renowned facility and the premier international gateway to the Pacific. In addition to the improvements mentioned above, a number of additional terminal improvements are needed to:

- Extend the useful life of existing terminals and boarding areas
- Improve passenger flows
- Enhance concession opportunities
- Meet established standards for the guest experience
- Improve the building systems' performance
- Comply with current building codes

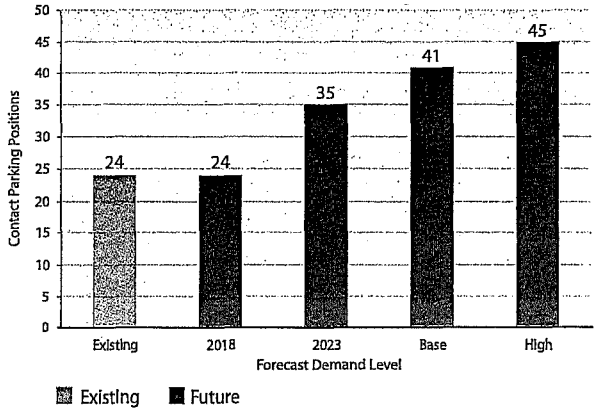
Boarding Area Connectivity: Post-security connecting corridors are needed for aircraft gating flexibility and passenger convenience. Once these corridors are completed, arriving domestic or precleared passengers would no longer need rescreening at security when connecting between any of the terminals or boarding areas, and departing and connecting passengers would have access to all post-security amenities in every boarding area. These corridors would also provide greater gate use flexibility, allowing airlines to use gates at neighboring boarding areas. Passengers would still have the option to use AirTrain to connect between terminals, but would then need to be rescreened at the security checkpoints.

Transformation of the terminal complex continues to be undertaken through Ongoing Projects. Implementation of the ADP Projects would provide the gate capacity needed to meet long-term demand.

Aircraft Gate Supply and Demand



International Parking Position Supply



Terminal Development Projects

● **B/A F Improvements**

To enhance the guest experience, B/A F would be reconstructed and upgraded to improve facilities and services, including airside concession spaces, public restrooms, and other amenities at B/A F.

B/A F – Gate Expansion

If additional domestic demand materializes, B/A F could be further extended off the end of the boarding area to accommodate four new gates.

▩ **Terminal 3 West Expansion and Renovation**

The frontage gates between B/As F and G (referred to as T3 West) will be MARS and domestic/international-capable swing gates able to accommodate three widebody or five narrowbody aircraft. Holdrooms and concession areas will be upgraded to enhance the guest experience and the BHS will be expanded. In addition, five passenger boarding bridges on B/A F will be replaced and the aircraft parking area reconfigured.

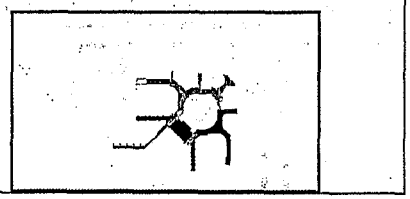
● **B/A G – Enhance the Guest Experience and Accommodate Longer Aircraft**

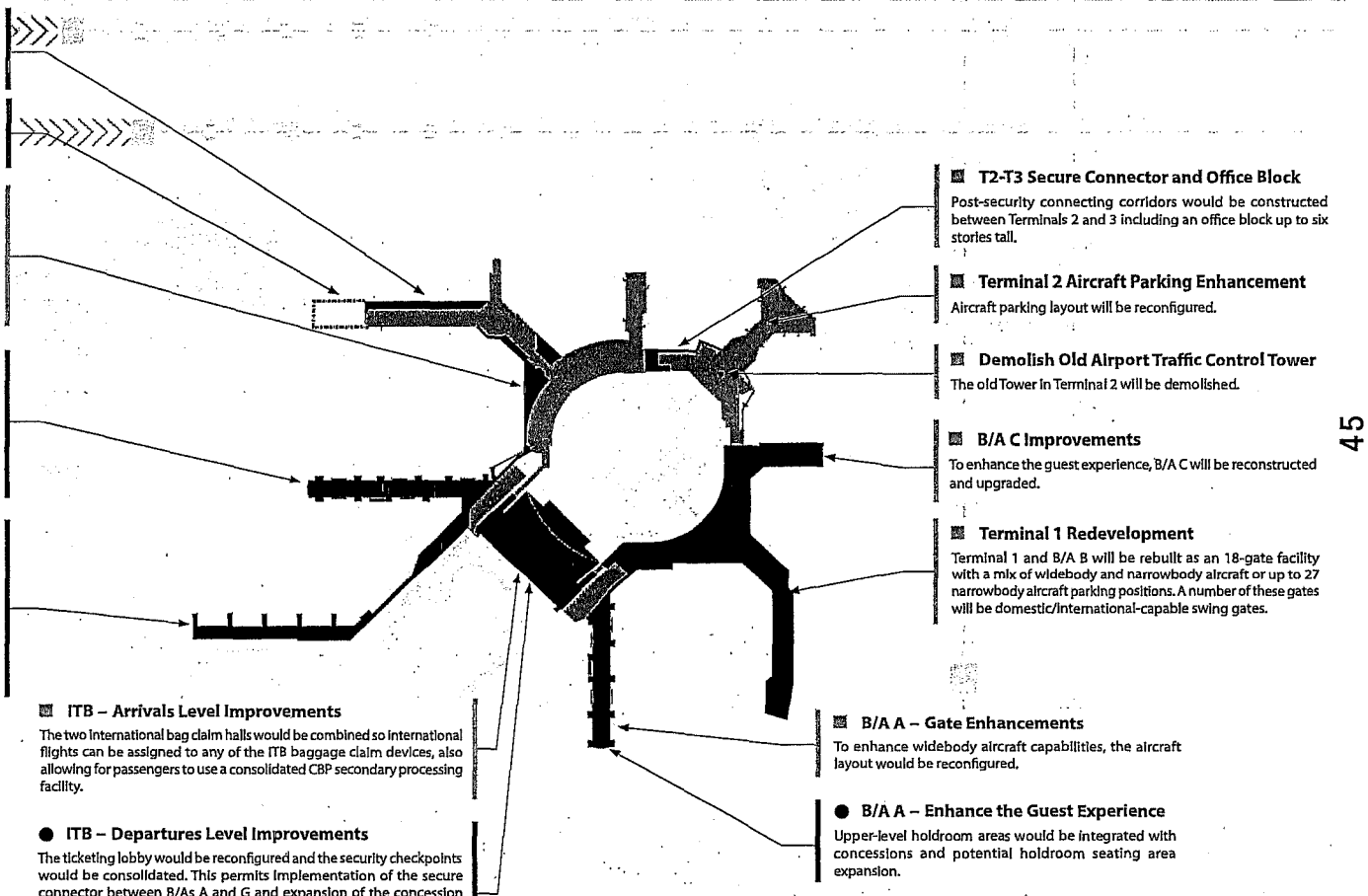
Gates and the taxilane on the south side would be reconfigured to accommodate longer widebody aircraft. The connector for the new B/A H would require the removal of one gate position, reducing the total number of gates from 12 to 11. Upper-level holdroom areas would be integrated with concessions and the seating areas potentially expanded.

● **New B/A H**

A new boarding area would have MARS and domestic/international-capable swing gates able to accommodate six widebody or 10 narrowbody aircraft. Passengers would access B/A H through a connecting corridor from the landside facilities in the ITB. The connecting corridor would contain additional domestic bag claim devices to support preclear and domestic operations in B/As G and H. The construction of B/A H would be planned in two phases to minimize near-term disruption to West Field facilities. Phase 2 of the project would include a realignment of Taxiways A and B. See Airfield Development Projects (p. 10) for Taxiways A and B project description.

KEY MAP





▩ **T2-T3 Secure Connector and Office Block**

Post-security connecting corridors would be constructed between Terminals 2 and 3 including an office block up to six stories tall.

▩ **Terminal 2 Aircraft Parking Enhancement**

Aircraft parking layout will be reconfigured.

▩ **Demolish Old Airport Traffic Control Tower**

The old Tower in Terminal 2 will be demolished.

▩ **B/A C Improvements**

To enhance the guest experience, B/A C will be reconstructed and upgraded.

▩ **Terminal 1 Redevelopment**

Terminal 1 and B/A B will be rebuilt as an 18-gate facility with a mix of widebody and narrowbody aircraft or up to 27 narrowbody aircraft parking positions. A number of these gates will be domestic/international-capable swing gates.

▩ **ITB – Arrivals Level Improvements**

The two international bag claim halls would be combined so international flights can be assigned to any of the ITB baggage claim devices, also allowing for passengers to use a consolidated CBP secondary processing facility.

● **ITB – Departures Level Improvements**

The ticketing lobby would be reconfigured and the security checkpoints would be consolidated. This permits implementation of the secure connector between B/As A and G and expansion of the concession areas. As a follow-on phase, the back of the ITB would be expanded outward to provide space for a world-class marketplace and additional recompose space beyond the security checkpoint.

▩ **B/A A – Gate Enhancements**

To enhance widebody aircraft capabilities, the aircraft layout would be reconfigured.

● **B/A A – Enhance the Guest Experience**

Upper-level holdroom areas would be integrated with concessions and potential holdroom seating area expansion.

LEGEND

▩ Ongoing Projects

● ADP Projects

ACRONYMS

B/A	Boarding Area
BHS	Baggage Handling System
CBP	U.S. Customs and Border Protection
ITB	International Terminal Building
MARS	Multiple Aircraft Ramp System

N

Baggage Handling System

The existing baggage handling systems (BHS) are aging and in need of upgrades and/or replacement within the next 10 years. The existing BHS are primarily belt-driven, transferring departing bags from ticketing to security screening to baggage makeup areas and transferring arriving bags to the baggage claim devices or to baggage makeup areas for loading onto connecting flights. Bags are generally transferred manually via baggage carts/tugs between terminals and between airlines. Most of the airlines operate their own BHS without automated connectivity to another airline's system.

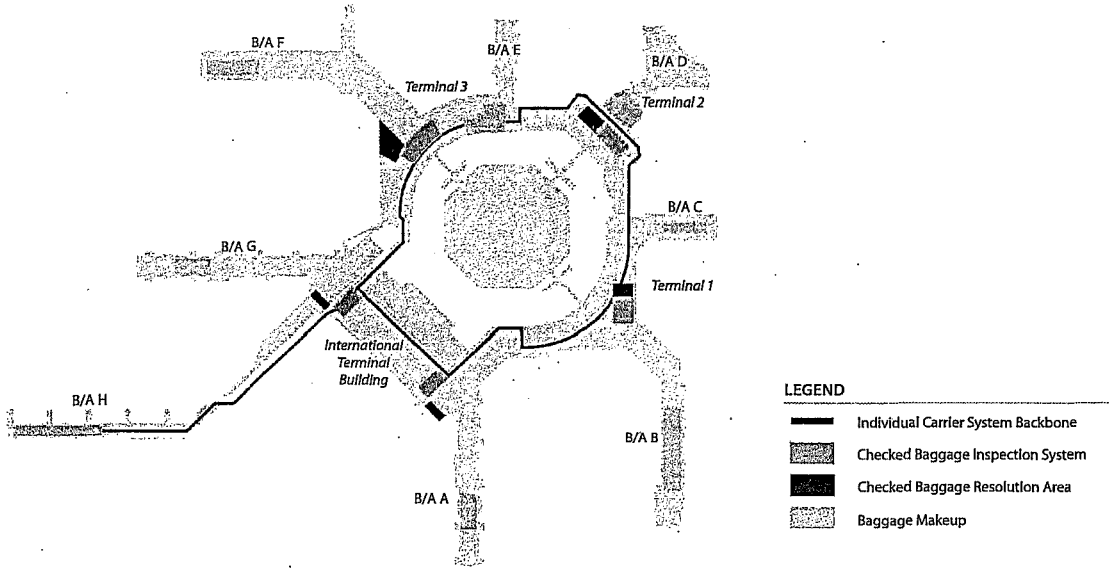
An Airport-wide baggage handling strategy would support the required performance of the BHS and establish a sophisticated baggage distribution system by upgrading and/or augmenting outdated components. To meet long-term demand and support Airport performance and sustainability goals, the ADP recommends gradual replacement of the existing BHS with an Airport-wide Individual Carrier System (ICS). In the ICS, each bag would be placed on an individual tray rather than directly onto a series of conveyor belts, and the bag would be tracked and traced with virtually 100 percent accuracy using low-cost, highly deployable radio frequency identification (RFID) readers. The ICS would also support future airline initiatives for the control, transfer, and delivery of both departing and arriving bags. The ICS would operate along "backbone" tracks that would connect each of the terminals and eventually circle the terminals and connect all boarding areas. The new system would be implemented over time as individual terminals and boarding areas are rehabilitated or reconstructed.

An ICS conveyor operates for only the few seconds that the bag tray passes over it, thus reducing power consumption compared to a conventional system. The energy savings and sustainability gains from this modular design are expected to provide a 30 percent reduction in power consumption compared to a conventional system.

ICS technology allows for the following benefits compared to a conventional system:

- Reduced maintenance cost.
- Reduced energy cost.
- Potential for consolidation of Transportation Security Administration (TSA) Checked Baggage Resolution Areas (CBRAs), thereby reducing TSA staffing requirements.
- Flexibility for baggage to be screened at locations other than the primary terminal, thus moderating baggage throughput and potentially reducing TSA staffing requirements.
- Risk-based screening, improving security and processing rates.
- Early baggage storage/bag indexing/bag buffers and related baggage makeup methods to reduce ground handler staffing requirements, improve working conditions, and reduce peaks, possibly reducing the number of required screening devices.

Baggage Handling System Development Concept



The proposed ICS backbone would provide connectivity for baggage transport between terminals and boarding areas. The transfer of baggage between airlines and terminals has been stated as the leading cause of baggage mishandling by the airlines. This backbone would enable:

- Flexible use of boarding areas (e.g., bags dropped at any check-in counter could be routed to any gate). This flexibility will be more important when swing gates are implemented for international arrivals at Terminals 1 and 3.
- More automated transfer and handling of arriving bags, which reduces staffing and the chance of errors/mishandling, and also reduces the number of ground service vehicles on the ramp.
- Bag drops at the Bay Area Rapid Transit (BART) or AirTrain stations and the new Airport hotel for delivery to any boarding area BHS with an automated connection.
- High-capacity bag drops, which could accept bags collected manually from remote areas such as the Rental Car Center (RCC), Long Term Parking Garages, or off-Airport locations through the provision of high-capacity industrial bag drop areas.

Individual Carrier System Conveyor

GROUND ACCESS AND PARKING

The landside transportation system at the Airport consists of a complex network of facilities used by various ground access modes. Requirements for ground access and parking are primarily driven by passenger demand. Origin and destination passengers are the primary users of the Airport's ground access and parking facilities, and typically drive the requirements for future capacity.

In accordance with the CCSF's Transit First Policy, Airport management promotes connections to SFO using high-occupancy ground transportation, including public transit, and prioritizes the use of commercial shared-ride services over private vehicles. The evolving landscape of ground access technologies, including high-speed rail, alternative fuels, and autonomous vehicles, was also considered in determining the demand for future facilities.

Roadways

The landside transportation systems support passenger, tenant, service, and employee access to the Airport. These systems include regional roadways, terminal roadways, and service roads. Traffic volumes on all segments of the ground access system are expected to increase throughout the planning period as aviation activity increases.

Curbsides

There are two curbside loops serving the domestic and international terminals for passenger pick-up and drop-off: one at the Arrivals Level and one at the Departures Level. At each terminal and at each level, frontage is offered along an inner sidewalk and an island curb. A number of these curbsides operate at or above capacity during existing peak periods and traffic volumes are expected to increase throughout the planning period.

Public and Commercial Transportation

A BART[2] station at the International Terminal provides heavy rail transit access to downtown San Francisco and the East Bay. BART also connects riders to the Caltrain commuter rail system via the Millbrae Intermodal Station. The Caltrain commuter rail provides service between San Francisco (to the north) and San Jose (to the south), with further southern service to Gilroy during commute hours. The San Mateo County Transit District provides the SamTrans[3] bus service connecting the Airport to San Mateo County and downtown San Francisco. A future California high-speed rail station at the Millbrae Intermodal Station would be accessible from the Airport via the existing BART connection. To provide a more seamless transit connection between SFO and Millbrae Intermodal Station, the Airport is studying the feasibility of extending the SFO AirTrain to Millbrae. Because of the complex physical and regulatory constraints and the lack of right-of-way availability, the Airport will conduct an engineering and planning study to assess the feasibility of this option.

Other commercial transportation modes available at the Airport include taxicabs, limousines, transportation network companies (e.g., Lyft, UberX), shared ride vans, Airporter[4] buses, hotel shuttles, and charter bus services.

Rental Car Center

The existing RCC is nearing capacity in its operational areas and customer service lobby. A new RCC and QuickTurn Around (QTA) facility in Lot DD would improve the guest experience and meet increased demand. This facility would provide 4,400 ready/return spaces and 2,880 stacking spaces for a total of 7,280 parking spaces for rental cars. A new AirTrain station would provide direct access to the lobby area. Upon completion of the RCC, the existing facility would be converted to a public parking garage.

Public Parking

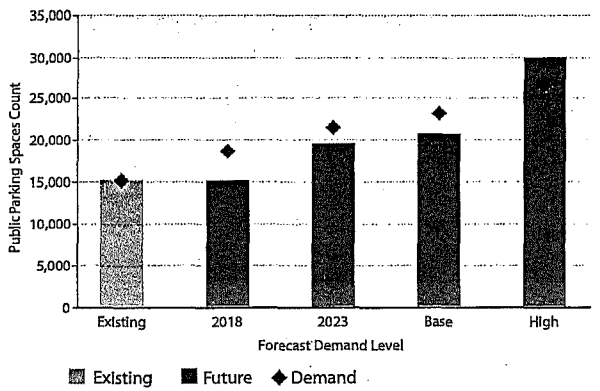
Parking garages that accommodate short-term public parking are located in the terminal core (Central Parking Garage) and adjacent to the International Terminal Building (Garages A and G). Long-term public parking is provided in Long Term Parking Garage #1 in Lot DD and surface parking in Lots D and DD. Privately operated off-Airport parking is also available. A total of 15,200 public parking spaces are provided on-Airport for short-term and long-term parking. Long Term Parking Garage #2, an Ongoing Project, will add approximately 3,000 parking spaces.

2 **Bay Area Rapid Transit (BART):** Regional rail service providing access to SFO from four Bay Area counties (Alameda, Contra Costa, San Francisco, and San Mateo). The SFO Airport station is at the International Terminal Building's G side, and all three domestic Terminals 1, 2, and 3 can be accessed via AirTrain.

3 **San Mateo County Transit District:** The administrative body for the principal public transit and transportation programs in San Mateo County, which includes SamTrans bus service, Redi-Wheels paratransit service, and the Caltrain commuter rail.

4 **Airporters:** Privately operated scheduled highway coach and high-occupancy vehicle services providing transportation between SFO and many Peninsula and South Bay cities.

Public Parking Spaces – Supply vs. Demand



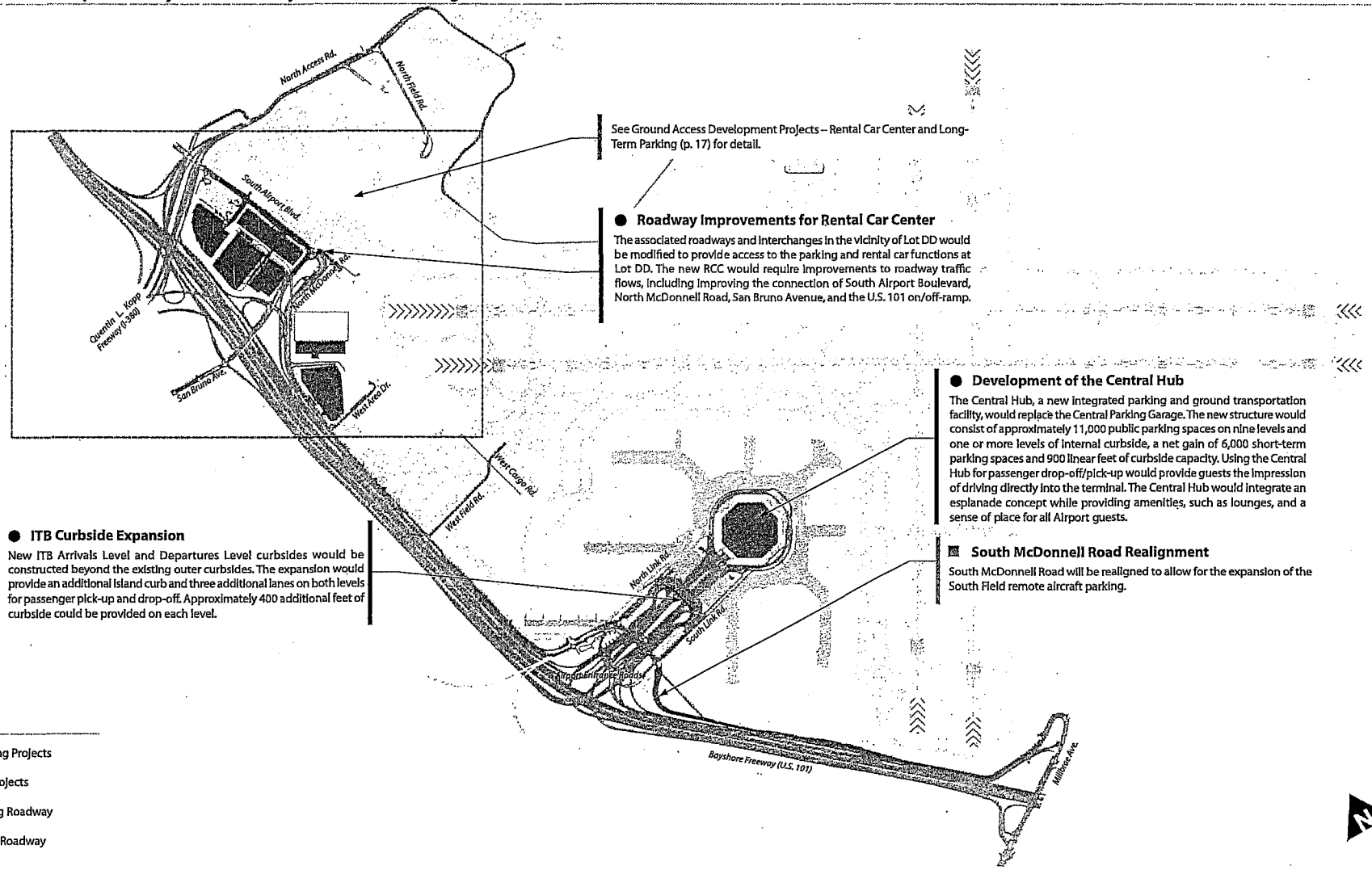
Historically, use of public parking is proportional to the number of origin and destination passengers. At SFO, this relationship could change in the future with shifts in travel patterns and the use of alternative modes of access, such as public transportation. A range of public parking growth scenarios were developed to establish parking expansion alternatives that have the flexibility to defer or accelerate the supply of parking in response to demand. At the High Constrained planning activity level, a total of nearly 30,000 parking stalls would allow SFO to accommodate public parking demand.

AirTrain

The AirTrain automated people mover provides passenger access between the terminals, garages, BART station, West Field cargo area, and RCC. The two-line, nine-station AirTrain system operates 24 hours a day. Additional vehicles, longer trains, and increased service frequency are recommended to serve increased passenger demand throughout the planning period.

An Ongoing Project will extend the AirTrain system into Lot DD and a new station will be added to serve Long Term Parking Garages #1 and #2 and, eventually, the planned RCC and Long Term Parking Garage #3. Additionally, a new AirTrain station will be constructed along the existing guideway to serve the future Airport hotel.

Ground Access Development Projects – Roadways and Public Parking



See Ground Access Development Projects – Rental Car Center and Long-Term Parking (p. 17) for detail.

● **Roadway Improvements for Rental Car Center**

The associated roadways and interchanges in the vicinity of Lot DD would be modified to provide access to the parking and rental car functions at Lot DD. The new RCC would require improvements to roadway traffic flows, including improving the connection of South Airport Boulevard, North McDonnell Road, San Bruno Avenue, and the U.S. 101 on/off-ramp.

● **Development of the Central Hub**

The Central Hub, a new integrated parking and ground transportation facility, would replace the Central Parking Garage. The new structure would consist of approximately 11,000 public parking spaces on nine levels and one or more levels of internal curbside, a net gain of 6,000 short-term parking spaces and 900 linear feet of curbside capacity. Using the Central Hub for passenger drop-off/pick-up would provide guests the impression of driving directly into the terminal. The Central Hub would integrate an esplanade concept while providing amenities, such as lounges, and a sense of place for all Airport guests.

● **ITB Curbside Expansion**

New ITB Arrivals Level and Departures Level curbsides would be constructed beyond the existing outer curbsides. The expansion would provide an additional island curb and three additional lanes on both levels for passenger pick-up and drop-off. Approximately 400 additional feet of curbside could be provided on each level.

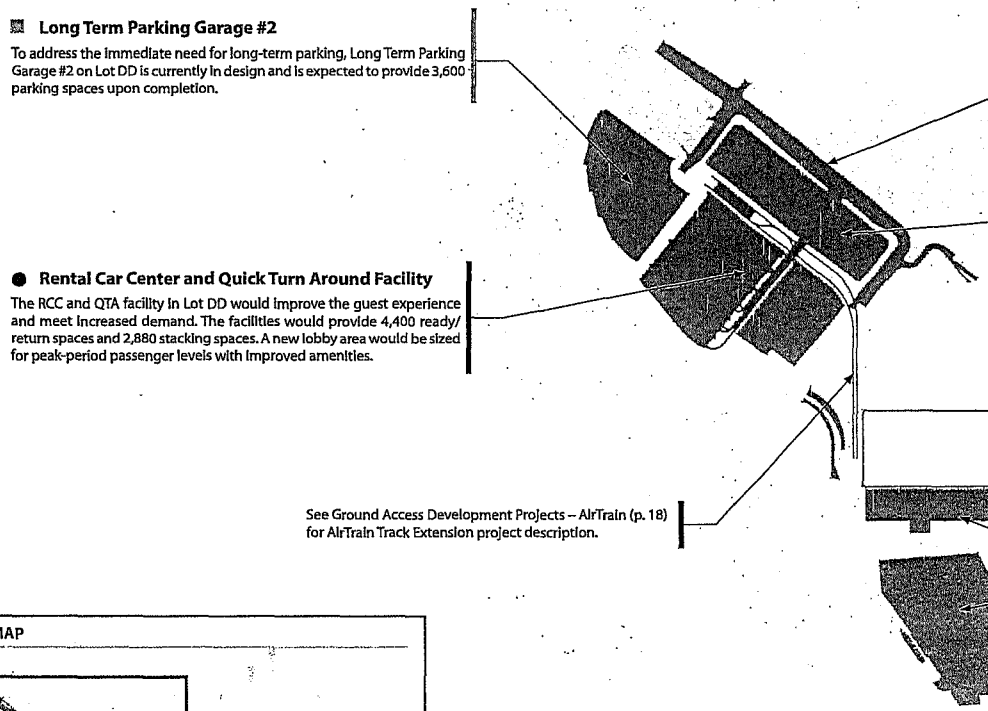
■ **South McDonnell Road Realignment**

South McDonnell Road will be realigned to allow for the expansion of the South Field remote aircraft parking.

LEGEND

- ■ Ongoing Projects
- ● ADP Projects
- Existing Roadway
- Future Roadway

Ground Access Development Projects – Rental Car Center and Long-Term Parking



Long Term Parking Garage #2

To address the immediate need for long-term parking, Long Term Parking Garage #2 on Lot DD is currently in design and is expected to provide 3,600 parking spaces upon completion.

Rental Car Center and Quick Turn Around Facility

The RCC and QTA facility in Lot DD would improve the guest experience and meet increased demand. The facilities would provide 4,400 ready/return spaces and 2,880 stacking spaces. A new lobby area would be sized for peak-period passenger levels with improved amenities.

See Ground Access Development Projects – AirTrain (p. 18) for AirTrain Track Extension project description.

Roadway Improvements for Rental Car Center

See Ground Access Development Projects – Roadways and Public Parking (p. 16) for Roadway Improvements for Rental Car Center project description.

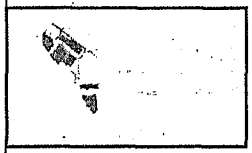
Long Term Parking Garage #3

Long Term Parking Garage #3 would provide an additional 3,200 parking spaces.

Conversion of the Existing Rental Car Center to Public Parking

Completion of the new RCC would allow for conversion of the existing RCC to a public parking garage with 3,700 parking spaces. An additional 2,200 short-term rental car storage spaces would be provided at the former QTA facility.

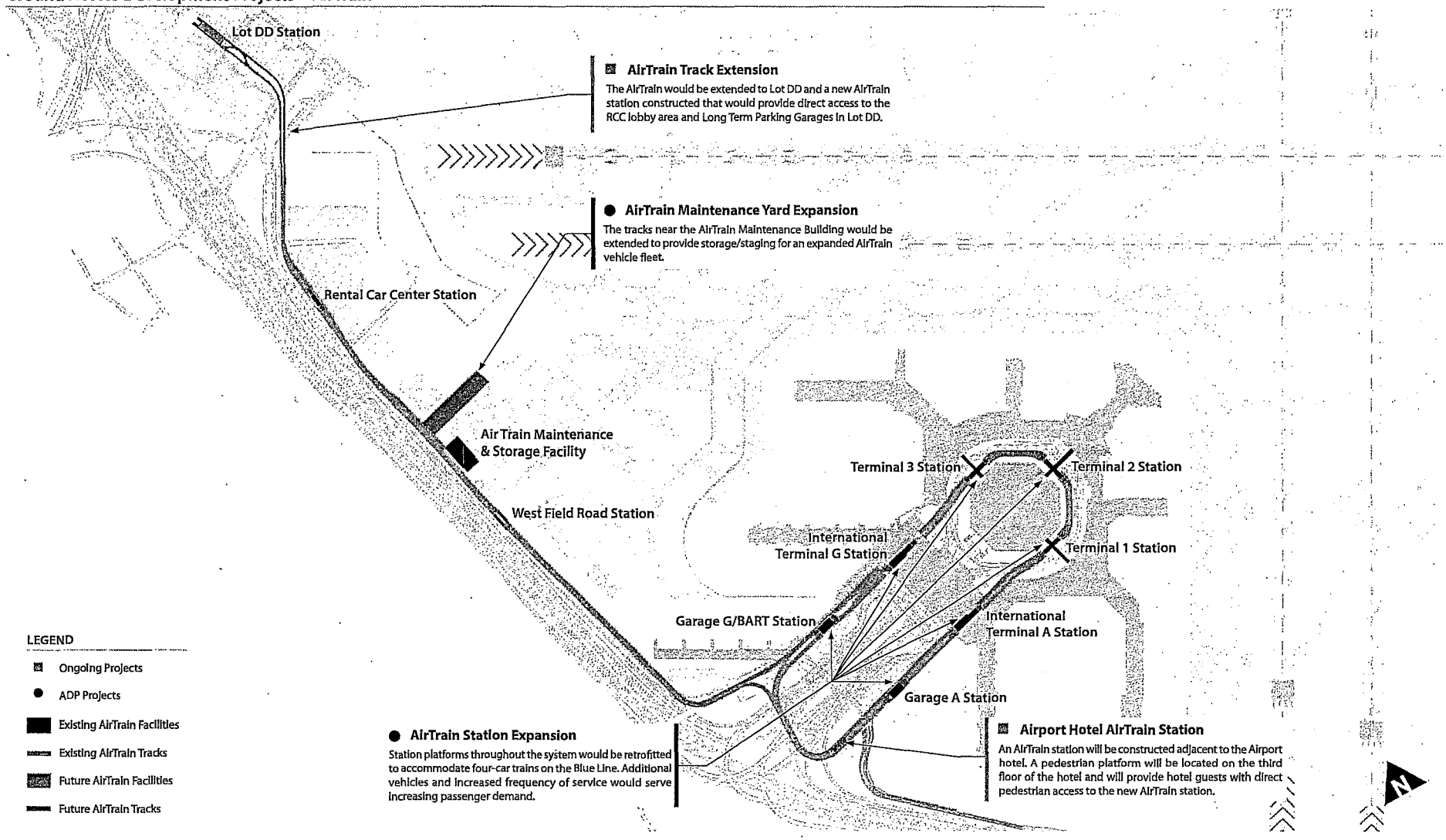
KEY MAP



LEGEND

- Ongoing Projects
- ADP Projects

Ground Access Development Projects – AirTrain



SUPPORT FACILITIES

Airport support facilities include Airport and airline maintenance facilities, Airport administration offices, AirTrain maintenance facilities, hotel, employee parking, remain overnight (RON) aircraft parking, cargo facilities, flight kitchens, general aviation facilities, and Emergency Response Facilities (ERF). Support facilities at SFO are clustered in four geographic regions: South Field, North Field, East Field, and West Field.

The future development of cargo facilities, general aviation facilities, maintenance facilities, and flight kitchens will be driven primarily by increases in aircraft operations and passengers. Specific requirements are based on planning factors that consider demand for each facility type.

In addition to accommodating demand, the alternatives analysis considered integration with ongoing development concepts, protecting facilities that cannot be or would be very difficult to be relocated or removed, avoiding demolition of functional buildings, tenant lease terms, and replacing buildings at the end their useful lives. Consideration was also given to colocating related facilities to maximize efficiency and minimize travel distances.

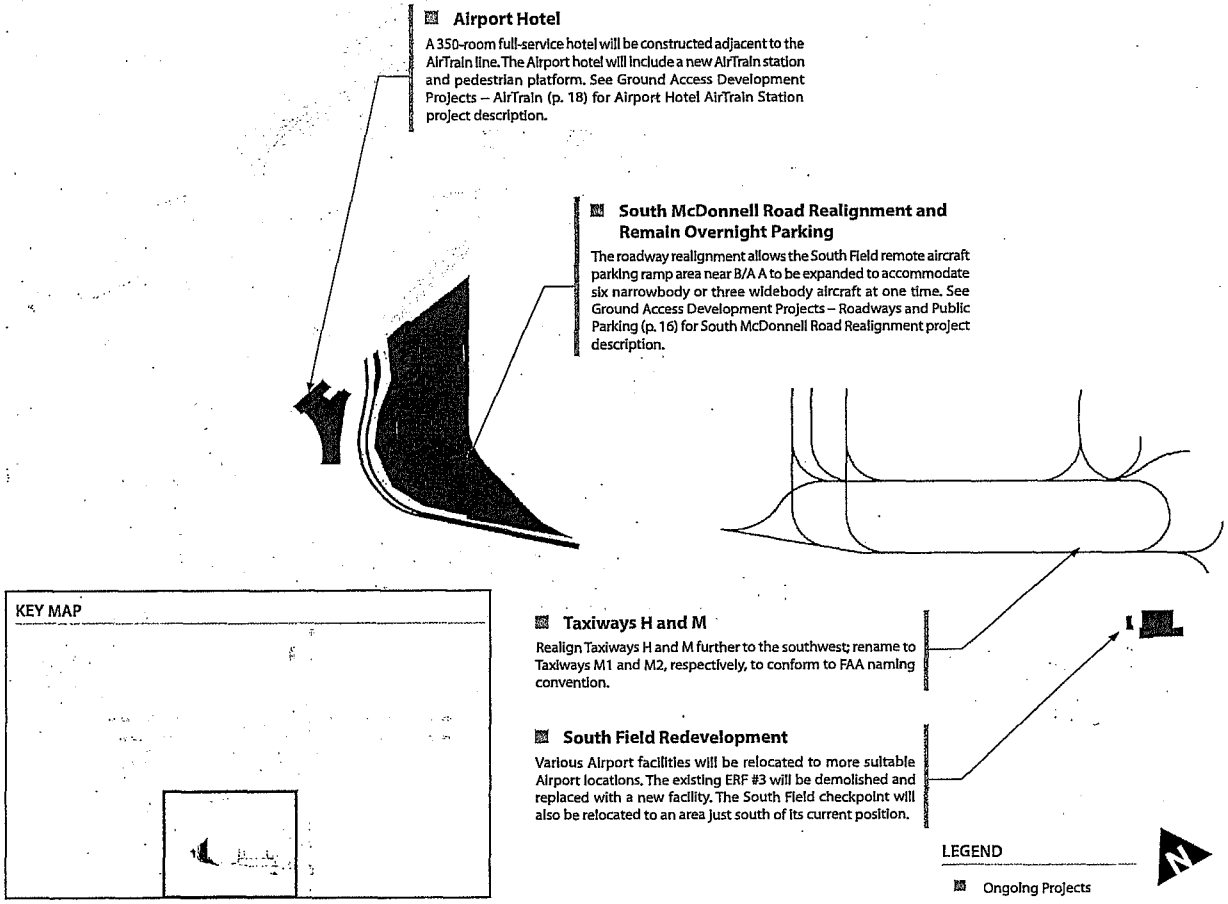
Overall development priorities were also considered in the context of the Airport's land constraints, given that certain facility types must be located on-Airport while others can be located more flexibly. This consideration is especially important in the West Field, which is adjacent to the terminal complex and is thus the most desirable location for many Airport facilities.

As aircraft operations at SFO increase, the development of supporting systems and functions is recommended to maintain adequate levels of service and operational efficiency.

South Field Support Facilities

Most of the support functions in the South Field have been moved or are planned for relocation to more suitable Airport locations. ERF #3 will be demolished and replaced near its existing location. South McDonnell Road is planned to be realigned to provide additional airside area for a close-in RON parking ramp and will provide roadway access to the new Airport hotel.

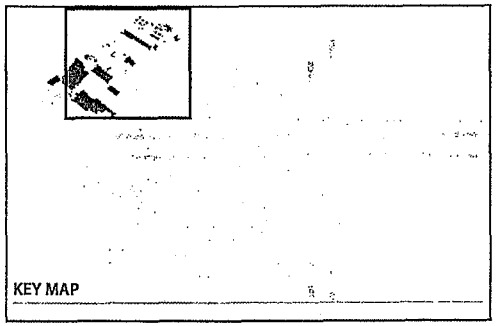
Support Facility Projects – South Field



North Field Support Facilities

The North Field primarily contains air freight, fueling, and water treatment facilities, as well as the United Airlines San Francisco Maintenance Operations Center. In the North Field, ADP Projects include the renovation of existing buildings for reuse. The North Field would be the center of air freight operations at the Airport, while also including the Ground Transportation Unit (GTU), ground service equipment (GSE) maintenance and Airport maintenance facilities, and a flight kitchen.

Support Facility Projects – North Field



East Field Support Facilities

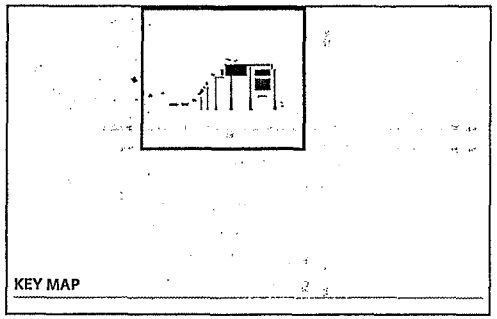
The East Field contains RON aircraft parking, general aviation, Airport operations, and airline maintenance facilities. The recommended changes in the East Field include the expanded Superbay Hangar, additional GSE maintenance facilities, relocated fire suppression tanks, and reconfigured/expanded RON parking.

West Field Support Facilities

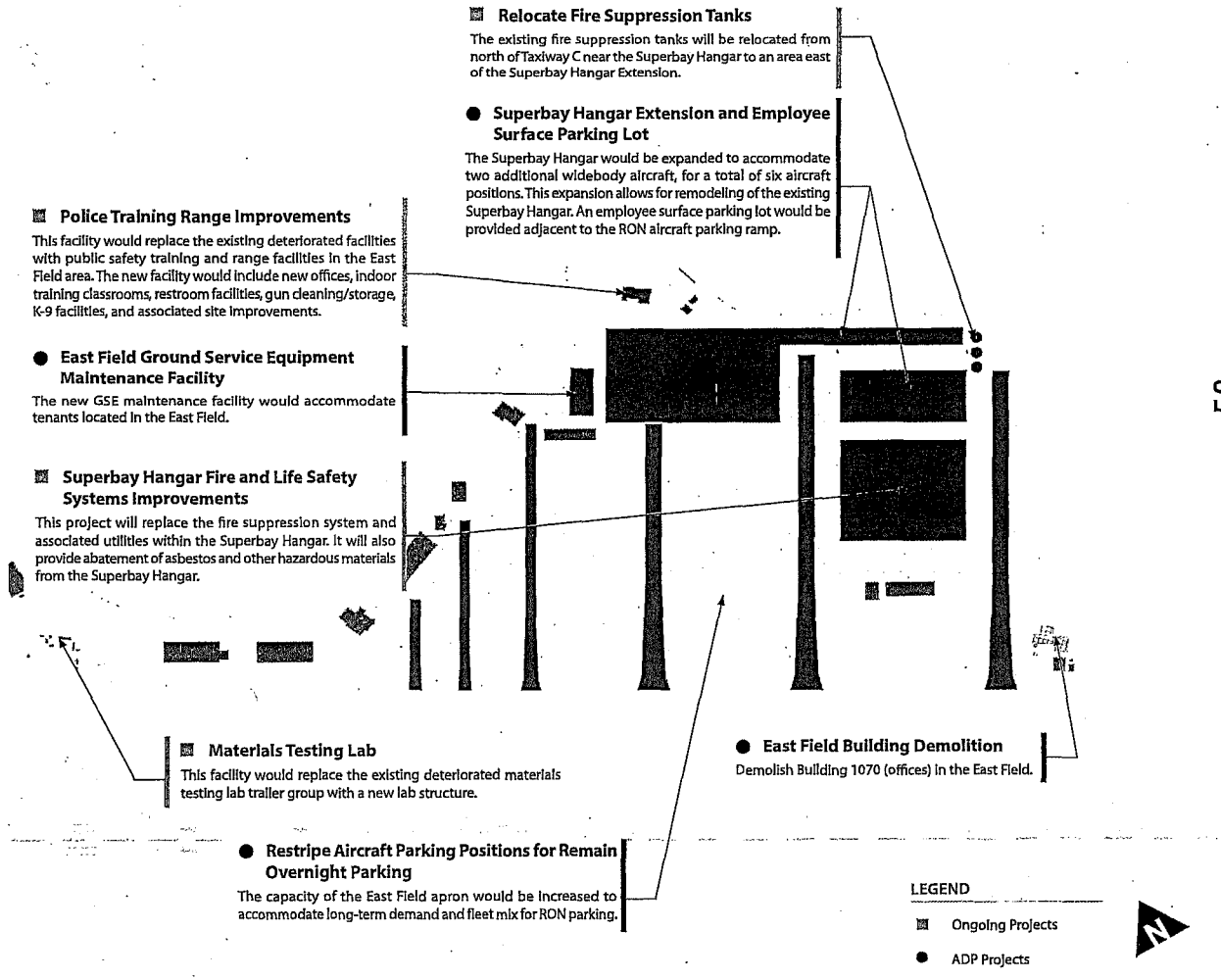
Because of the West Field's proximity to the terminal complex, its primary functions include belly cargo, close-in aircraft remote parking, and Airport administration and maintenance facilities. An existing flight kitchen facility is also located in the West Field. ADP recommendations in the West Field include renovating existing buildings for reuse, replacing buildings that are beyond their useful lives, and demolition of facilities to enable expansion of the terminal area.

The Ongoing Projects in the West Field include the Consolidated Administration Campus (CAC), an employee parking garage, GSE maintenance (Building 730), and the replacement cargo facilities.

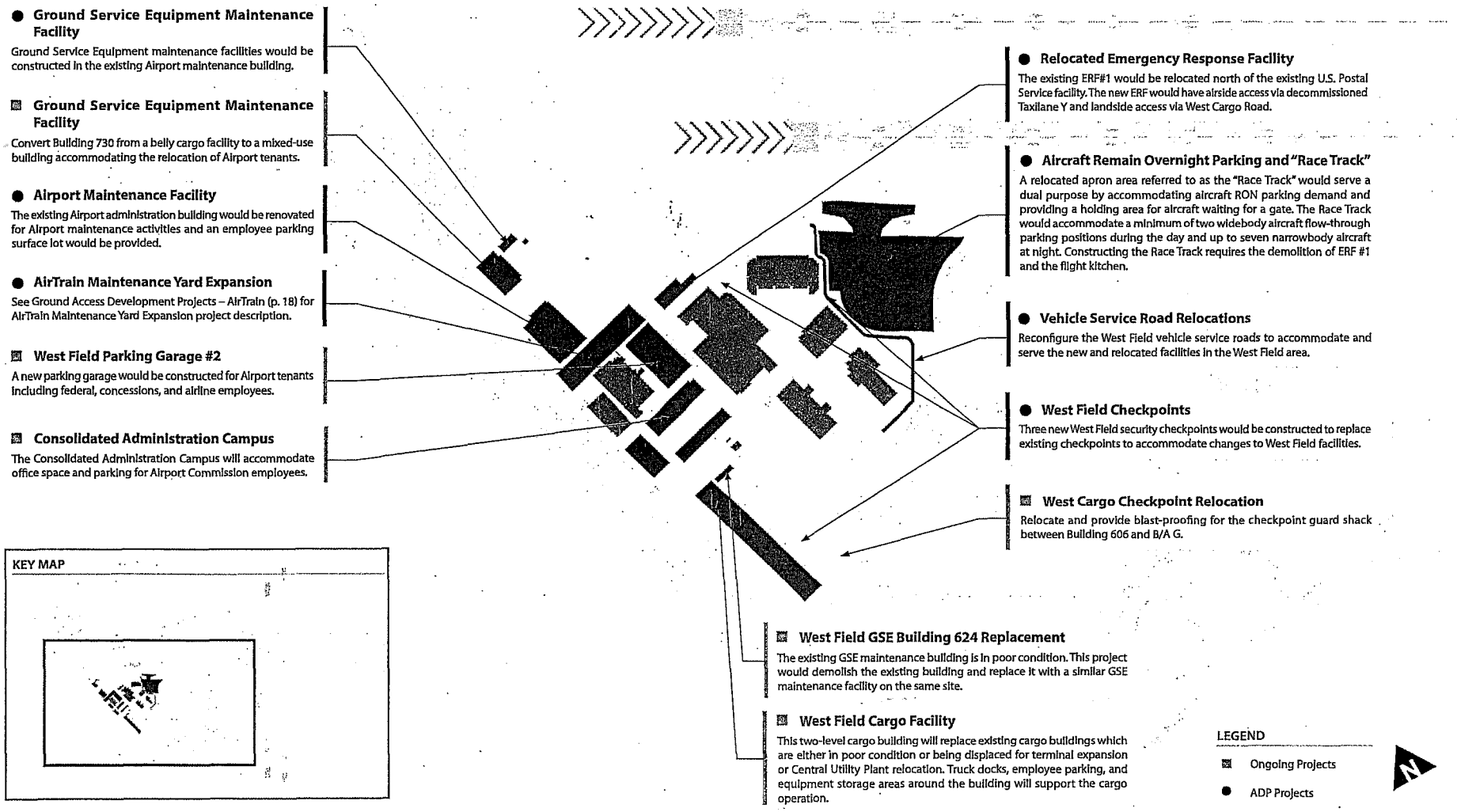
Improvements proposed under ADP Projects include an expansion of the AirTrain maintenance yard, additional close-in RON parking, and vehicle service road (VSR) relocations.



Support Facility Projects – East Field



Support Facility Projects – West Field



UTILITIES

The utility infrastructure at the Airport includes pipelines, pump stations, high-capacity wiring conduits, distribution centers, the Mel Leong Water Treatment Plant, and a Central Utility Plant (CUP) serving the terminal complex. The inventory of existing electrical, telecommunications, aviation fuel, natural gas, potable and fire supply water, sanitary sewer, industrial waste sewer, storm drainage sewer, and shoreline protection systems indicates that these systems are mostly adequate to support current activity. Several Ongoing Projects in the planning, design, and construction phases would resolve deficiencies identified in the current systems and add a recycled water pipeline system.

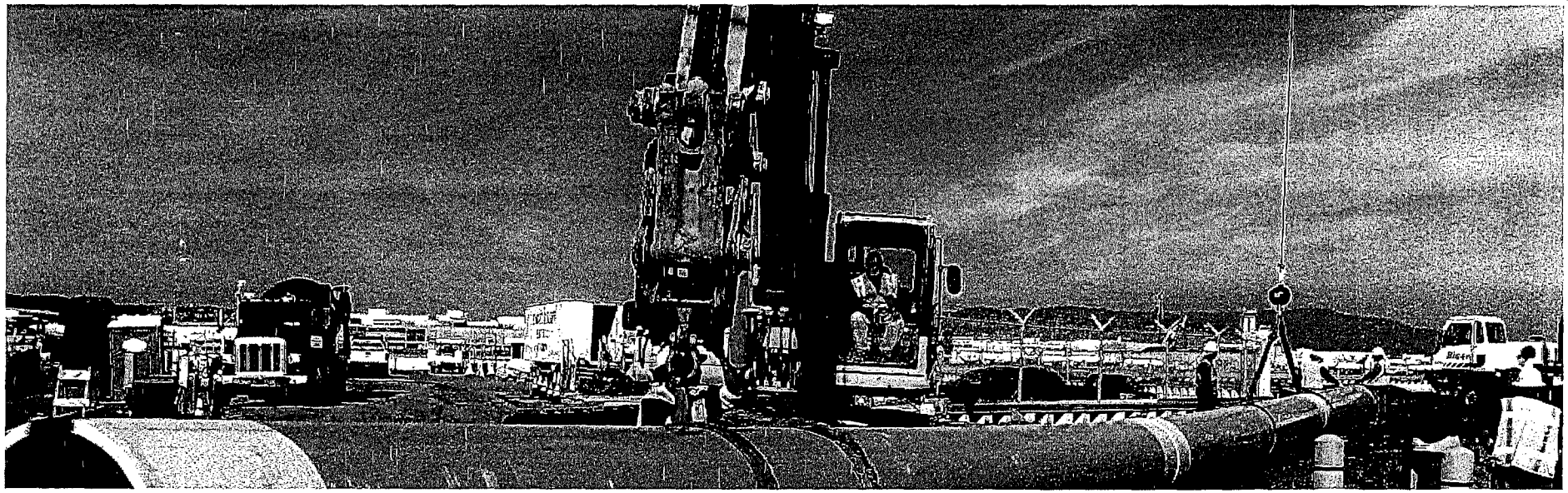
The utility projects under the Recommended ADP address Airport requirements to: (1) support increased demand and the growth of terminal and airfield facilities, (2) support SFO strategic initiatives, and (3) propose solutions to modify utilities to eliminate any conflicts with airfield modifications or building expansions, overall defining a comprehensive approach to utilities systems growth.

As the Airport is improved to accommodate additional passengers and operations, the demand on certain utility systems will increase. The new resource-efficient buildings that will replace many older facilities will offset some of this increased demand.

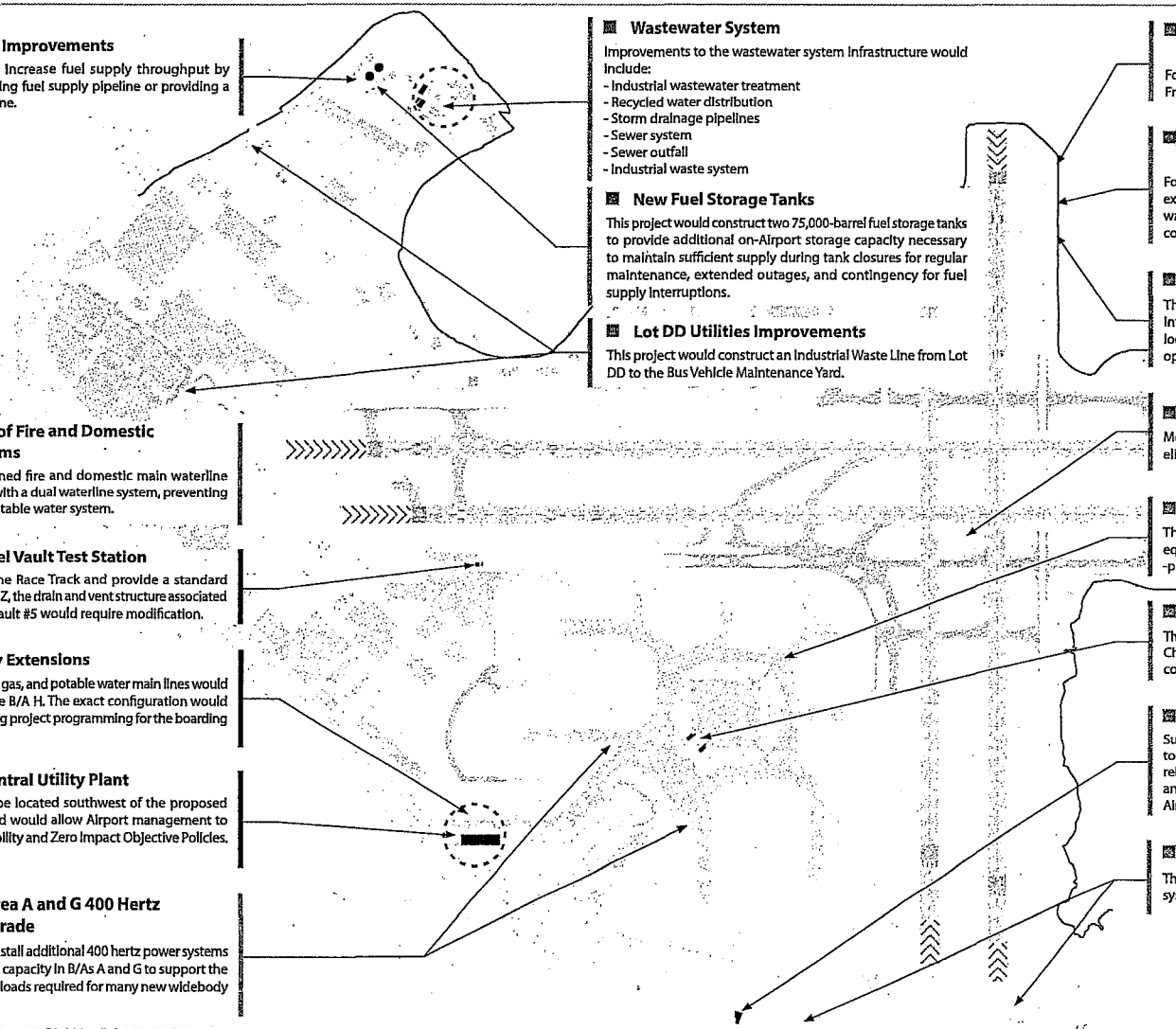
Beyond demand-driven utility requirements, Airport management has defined strategic initiatives to upgrade the existing utility infrastructure to be more environmentally efficient and resilient to climate change. These initiatives include the SFO Sustainability and Zero Impact Objective Policies, SFO Climate Action Plan, Carbon Neutrality Initiatives, Perimeter Security Enhancements, and Shoreline Protection Program.

The 2014 SFO Climate Action Plan incorporates San Francisco Ordinance 81-08, requiring each City department to achieve greenhouse gas (GHG) emissions reduction by 80 percent below 1990 emission levels by 2050. Several measures already implemented at SFO have achieved an interim 25 percent reduction goal. Although Airport facilities are powered by 100 percent GHG-free electricity, use of natural gas is a significant contributor to Airport GHG emissions, with the CUP being one of the largest consumers. To meet the strategic initiatives of improved energy efficiency and reduced GHG emissions, the ADP provides for the replacement of the existing CUP with an all-electric facility.

Several recommended airfield, terminal, and ground access projects would conflict with existing utility infrastructure. When these conflicts would be confined to infrastructure serving those projects directly, the utility effects are included in the primary projects. If these conflicts would affect main distribution lines, relocation of these facilities is recommended in the ADP to eliminate the potential conflicts. Subsequent studies will coordinate infrastructure planning for various utility systems with long-term ADP development projects.



Utility Projects



Fuel Supply Improvements

This project would increase fuel supply throughput by upgrading the existing fuel supply pipeline or providing a supplemental pipeline.

Wastewater System

Improvements to the wastewater system infrastructure would include:
- Industrial wastewater treatment
- Recycled water distribution
- Storm drainage pipelines
- Sewer system
- Sewer outfall
- Industrial waste system

New Fuel Storage Tanks

This project would construct two 75,000-barrel fuel storage tanks to provide additional on-Airport storage capacity necessary to maintain sufficient supply during tank closures for regular maintenance, extended outages, and contingency for fuel supply interruptions.

Lot DD Utilities Improvements

This project would construct an Industrial Waste Line from Lot DD to the Bus Vehicle Maintenance Yard.

Airport Shoreline Protection Project – Sea Level Rise

For protection against sea level rise, the seawall along San Francisco Bay would be improved.

Airport Shoreline Protection Project – Flood Control

For protection against flooding, all remaining gaps within the existing seawall along San Francisco Bay would be filled, potential water infiltration paths would be closed, and additional flood control protection would be established at existing seawalls.

Perimeter Intrusion Detection System

This project would install a ground-based radar perimeter intrusion detection system comprising of multiple radar units located at points on Airport property to detect objects over large open areas such as the waterfront and airfield.

Separation of Fire and Domestic Water Systems

The existing combined fire and domestic main waterline would be replaced with a dual waterline system, preventing stagnation in the potable water system.

Airfield Utility Improvements

Modifications to underground utilities would be necessary to eliminate conflicts with proposed airfield modifications.

Relocate Fuel Vault Test Station

To accommodate the Race Track and provide a standard clearance for Taxiway Z, the drain and vent structure associated with Aviation Fuel Vault #5 would require modification.

Airport-wide GSE Electrical Infrastructure

This project would install or upgrade power distribution equipment and electrical infrastructure in support of electrical -powered GSE vehicles.

B/A H Utility Extensions

Aviation fuel, natural gas, and potable water main lines would be relocated to serve B/A H. The exact configuration would be determined during project programming for the boarding area.

Central Utility Plant Improvement

The CUP Chiller No. 1 Improvement Project would replace existing Chiller No. 1 with a new unit that would result in lower operating costs and improved environmental performance.

Relocate Central Utility Plant

A new CUP would be located southwest of the proposed B/A H expansion and would allow Airport management to achieve its Sustainability and Zero Impact Objective Policies.

Upgrade Substation M

Substation M, located west of Highway 101, would be expanded to include a second 55 megavolt ampere (MVA) transformer, related switchgear, and protection equipment to support the anticipated increase in electrical demand associated with future Airport development.

Boarding Area A and G 400 Hertz System Upgrade

This project would install additional 400 hertz power systems to increase available capacity in B/As A and G to support the additional electrical loads required for many new widebody aircraft.

SFO and City of Millbrae Water Tie-ins

This project would install equipment to tie-in the domestic water systems between SFO the City of Millbrae.

LEGEND

- Ongoing Projects
- ADP Projects

IMPLEMENTATION

The timeframe for implementation of each ADP project is intended to provide sufficient capacity to accommodate demand as it materializes over time. Therefore, the sequence of project implementation is based primarily on the aviation activity forecast, although factors such as construction feasibility, enabling projects, financial factors, organizational capacity, and Airport policy directives were also considered. These additional considerations are important, as sequencing construction projects based solely on demand could result in an excessive number of simultaneous construction projects. Therefore, a holistic approach was taken in developing the implementation plan.

As previously discussed, the ADP recognizes Ongoing Projects already in the environmental review, programming, design, or construction phase. These projects were incorporated into the ADP to provide a complete picture of future development opportunities and constraints. The ADP identifies these Ongoing Projects and ADP Projects with the symbols as indicated below:

▩ Ongoing Projects

These projects have been authorized to proceed by the Airport Commission or have been identified by Airport management as needing to be implemented in the near future, subject to Airport Commission and other necessary approvals. They are in various stages of planning, programming, design, or construction. Appropriate environmental reviews, as required under the California Environmental Quality Act (CEQA) or National Environmental Policy Act (NEPA), are completed, in process, or will be conducted. These projects are proceeding, or would proceed if approved, irrespective of any ADP projects and do not address long-term demands and capacity needs.

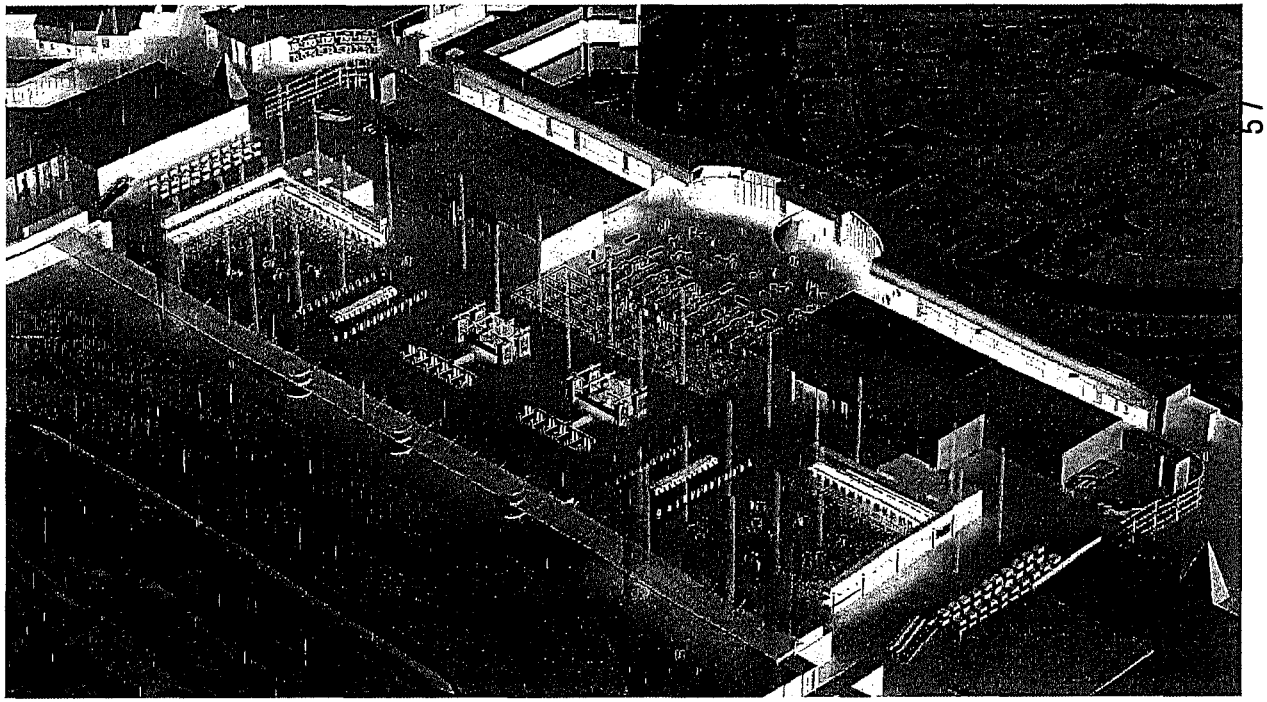
● ADP Projects

These are ADP recommended long-term projects and are anticipated to undergo appropriate environmental review, financial assessment, programming, and design prior to consideration for approval and implementation.

Major ADP Projects

Certain ADP projects become possible only after another project (or projects) has been implemented. While projects may be independently necessary and useful, in certain cases their sequencing is vital to the timely completion of other projects. The ADP considered building conditions and lease terms in assessing project phasing and potential reuse, changes in land use, or new construction. Examples of such circumstances include the relocation of a facility to a more appropriate location, leaving the previous site available for new development, or the completion of the first phase of a project before construction can begin on the second phase. The sequence in which projects are implemented could ensure the success of the overall ADP, while failure to sequence projects appropriately may prevent a project from being completed in time to meet projected demand. Therefore, adequate advance planning is necessary.

The phases of implementation are presented by program area, which encompasses a major project along with projects that are related either in function, location, or phasing dependency. Because of the interrelated nature of Airport development, programs can consist of projects from various functional areas and may span more than one phase of ADP development.



International Terminal Building Departures Level Reconfiguration
Source: Landrum & Brown, Inc., March 2016

Ongoing Projects

Airfield
Helipad
Taxiway C East
Taxiway C3
Taxiways E and J
Taxiway F East
Taxiway F West
Taxiway F1
Taxiway F2
Taxiway N
Taxiway R North
Taxiway R South
Taxiway S3
Taxiways T and D

Passenger Terminal
B/A A, F, and G Near-Term BHS Screening Projects
B/A C Improvements
B/A F Passenger Boarding Bridge and Modernization
Demolish Old Airport Traffic Control Tower
Gate Enhancements
ITB Arrivals Level Improvements
ITB BHS Upgrade

Passenger Terminal (continued)
Terminal 1 Redevelopment and BHS
T2-T3 Secure Connector and Office Block
Terminal 2 Aircraft Parking Enhancement
Terminal 3 West Expansion and Renovation

Ground Access and Parking
AirTrain Track Extension
Long Term Parking Garage #2

Support Facilities
Airport Hotel and AirTrain Station
Building 730 Conversion to Airline and Airport GSE Maintenance
Consolidated Administration Campus
West Field Cargo Buildings Redevelopment
ERF #3
West Field GSE Building 624 Replacement
GTU Redevelopment
High-Speed Gate Checkpoints
Materials Testing Lab
Police Training Range Improvements
Relocate Fire Suppression Tanks
South McDonnell Road Realignment and RON Parking
Superbay Hangar Fire and Life Safety Systems Improvements

Support Facilities (continued)
Taxiways H and M
West Cargo Checkpoint Relocation
West Field Cargo Facility
West Field Parking Garage #2

Utilities
Airfield Utility Improvements
Airport Shoreline Protection Project – Flood Control
Airport Shoreline Protection Project – Sea Level Rise
Airport-wide GSE Electrical Infrastructure
Boarding Areas A and G 400 Hertz System Upgrade
Central Utility Plant Improvement
Fuel Supply Improvements
Lot DD Utilities Improvements
New Fuel Storage Tanks
Perimeter Intrusion Detection System
Separation of Fire and Domestic Water Systems
SFO and City of Millbrae Water Tie-Ins
Upgrade Substation M
Wastewater System

ADP Projects

Airfield
New Parallel Taxilane around B/A G
Taxiway A Realignment
Taxiway B Realignment
West Field RON Parking and Race Track

Passenger Terminal
B/A A and ITB South BHS
B/A F Improvements
B/A G and ITB North BHS
B/A H BHS
B/A H Phase 1
B/A H Phase 2
B/As A and G Improvements
ITB Departures Level Improvements – Phase 1
ITB Departures Level Improvements – Phase 2
Terminal 2 BHS

Ground Access and Parking
AirTrain Maintenance Yard Expansion
AirTrain Vehicle Acquisition
Central Hub

Ground Access and Parking (continued)
Conversion of the Existing RCC to Public Parking
Four-Car AirTrain Station Expansion
ITB Curbside Expansion
Long Term Parking Garage #3
Phased Demolition of Central Parking Garage
Rental Car Center and Quick Turn Around Facility
Roadway Improvements for RCC

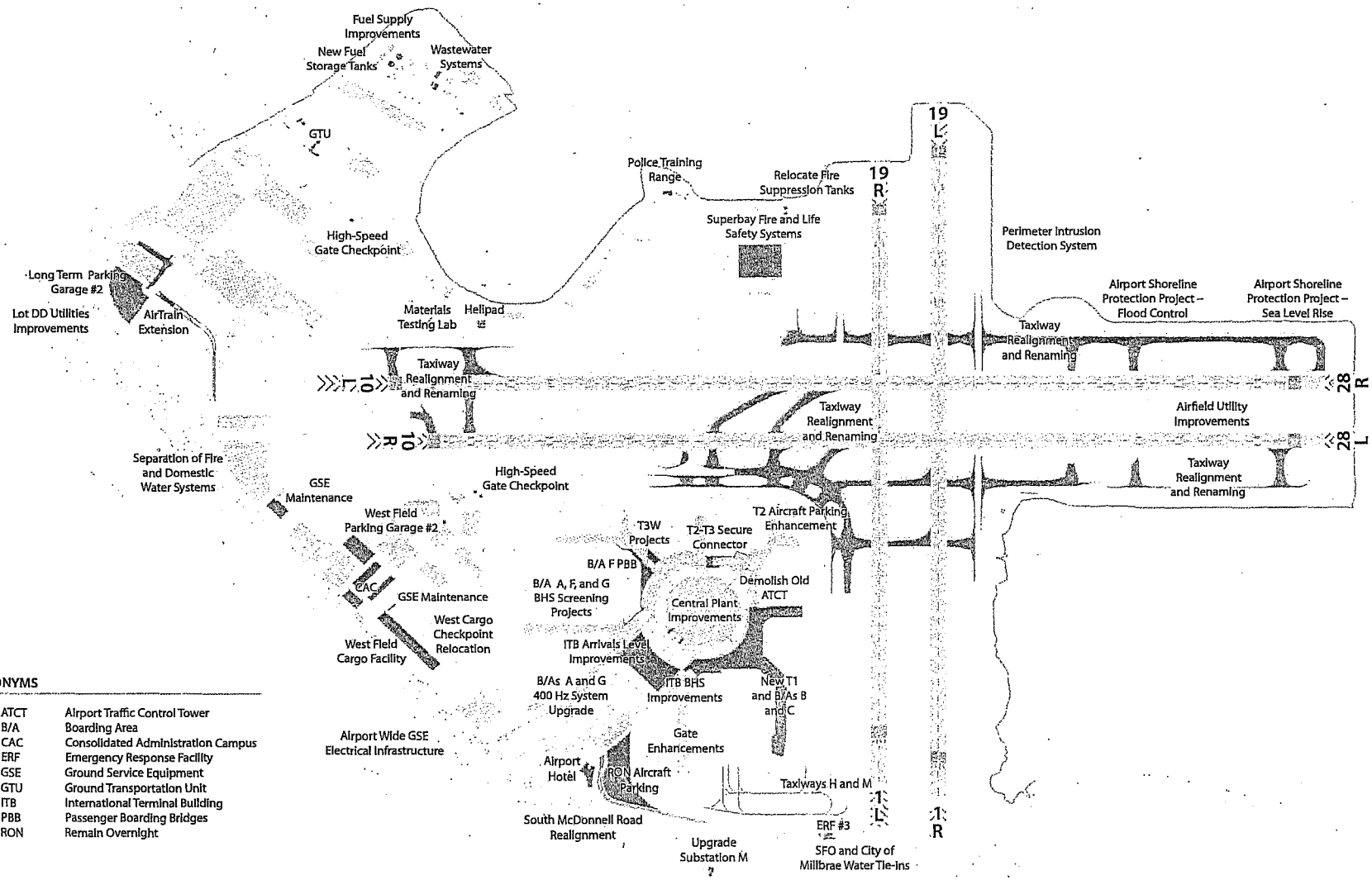
Support Facilities
Building 710 and 750 Renovations
Demolish Airport Maintenance Building 692
Demolish the SFO Business Center
East Field Building Demolition
East Field GSE Maintenance Facility
North Field Airport Maintenance Facility
North Field Airport Maintenance Conversion
North Field Flight Kitchen
North Field GSE Maintenance Facility
Relocation of ERF #1 and Closure of Taxilane Y
Restripe Aircraft Parking Positions for RON Parking

Support Facilities (continued)
Superbay Hangar Extension and Employee Surface Parking Lot
Vehicle Service Road Relocations
West Field Building Demolitions
West Field Checkpoints

Utilities
B/A H Utility Extensions
Relocate Central Utility Plant
Relocate Fuel Vault Test Station
Relocate Utilities (B/A H)
Relocate Utilities (San Bruno Avenue)

Note: See the Implementation section of this Executive Summary for a description of Ongoing and ADP Projects.

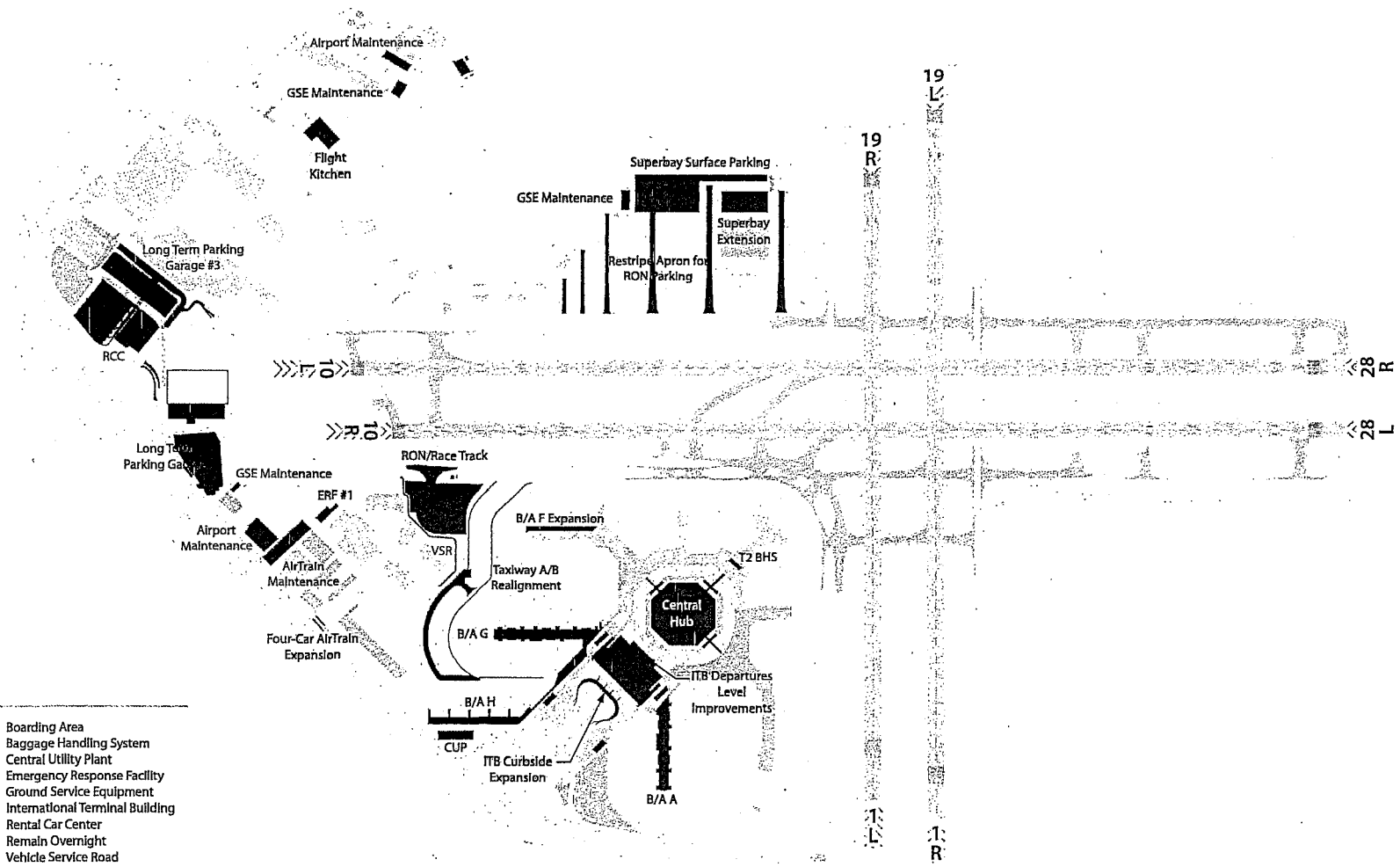
Ongoing Projects



ACRONYMS

ATCT	Airport Traffic Control Tower
B/A	Boarding Area
CAC	Consolidated Administration Campus
ERF	Emergency Response Facility
GSE	Ground Service Equipment
GTU	Ground Transportation Unit
ITB	International Terminal Building
PBB	Passenger Boarding Bridges
RON	Remain Overnight

ADP Projects



ACRONYMS

B/A	Boarding Area
BHS	Baggage Handling System
CUP	Central Utility Plant
ERF	Emergency Response Facility
GSE	Ground Service Equipment
ITB	International Terminal Building
RCC	Rental Car Center
RON	Remain Overnight
VSR	Vehicle Service Road

Near-Term Development Projects

The Near-Term Development Projects are proposed to be implemented between 2016 and 2021, pending necessary approvals.

1 Airfield Compliance, Taxiway Realignment, and Renaming

Eliminate the complex intersections between Taxiways A, B, E, F, F1, and J and the related complex intersection of Taxiways T and D. Realign the access taxiways for Runways 10L, 10R, 28L, and 28R to conform to FAA design standards. Rename select taxiways to conform to FAA standard naming conventions.

- **Taxiway F2:** Provide a second runway-entrance taxiway to Runway 28L.
- **Taxiway S3:** Add a fillet to Taxiway S (to be renamed Taxiway S3 later) at the end of Runway 10R.
- **Taxiway C East:** Shift Taxiway C to a separation distance of 550 feet from the Runway 28R centerline along the eastern 6,850 feet of the runway. Relocate the existing Stormwater Pump Station 1B to the northwest. Rename Taxiway W to Taxiway C2.
- **Taxiway C3:** Realign Taxiway C1 perpendicular to Runway 10L-28R and rename it Taxiway C3.
- **Taxiway R North:** Realign Taxiway R perpendicular to the runway between Runway 10L-28R and Taxiway C.
- **Taxiway R South:** Upgrade Taxiway R between Runways 10L-28R and 10R-28L to accommodate larger aircraft and close Taxiway U between Taxiway C and Runway 10R-28L.
- **Taxiway F1:** Realign Taxiway F1 at a separation of 800 feet from Taxiway F and rename it Taxiway W.
- **Taxiways T and D:** Realign Taxiway T to a similar angle as Taxiway Q and separate Taxiways D and T at the Runway 10R-28L crossing point.
- **Taxiways E and J:** Reconfigure Taxiway E as an acute-angled exit taxiway and realign and shift Taxiway J farther from Runway 1L-19R.
- **Taxiway F West:** Shift Taxiway F farther from Runway 10R-28L between Taxiways B and L.
- **Taxiway F East:** Shift Taxiway F farther from Runway 10R-28L between Taxiways L and N.
- **Taxiway N:** Realign Taxiway N at its intersection with Taxiway F.
- **Helipad:** Provide a dedicated helipad northwest of Building 1050.

2 International Terminal Building Arrivals Level Improvements

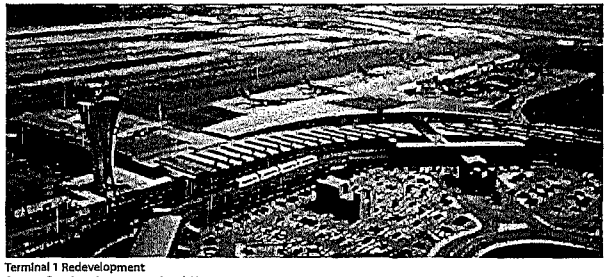
Reconfigure the arrivals facilities within the ITB to optimize operational flexibility and allocation of staffing resources. Enhance the guest experience through redeveloped arrivals lobby and concession areas.

- **ITB Arrivals Level Improvements:** Reconfigure U.S. Customs and Border Protection secondary processing facilities and combine the two international bag claim halls. Provide improved concessions in the meeter/greeter lobby.
- **ITB BHS Upgrade:** Upgrade the ITB BHS by replacing controls and installing appropriate conveyors and diverters; implement a reporting system to monitor and manage performance.
- **B/A A, F, and G Near-Term BHS Screening Projects:** Replace BHS screening equipment in B/As A, F, and G with newer screening devices.

3 Terminal 1 Redevelopment

Replace existing Terminal 1 and B/As B and C with a modern facility designed to accommodate forecast demand, enhance passenger level of service, address Terminal 1 foundation deficiencies, and provide an enhanced and modernized guest experience.

- **T1 Redevelopment and BHS:** Reconstruct Terminal 1 and B/A B, providing 18 gates for widebody and narrowbody aircraft or up to 27 aircraft parking positions with all narrowbody aircraft. Redevelop B/A C upon completion of B/A B (see Project #23). The project includes new security screening checkpoints, baggage screening updates, secure and sterile connections to the ITB, and a new BHS incorporating ICS technologies.



Terminal 1 Redevelopment
Source: San Francisco International Airport

4 Terminal 3 Improvements

Upgrade Terminal 3 to provide additional gate flexibility, enhance the guest experience, and allow improved movement of passengers and baggage between Terminal 3 and B/As D and G.

- **T2-T3 Secure Connector and Office Block:** Construct a secure connector between Terminals 2 and 3 to enable post-security passenger access, enhance existing pre-security passenger circulation, and add a new security checkpoint. An office block up to six stories tall is proposed to be built above and adjacent to the connector.
- **Terminal 3 West Expansion and Renovation:** Expand Terminal 3 frontage gate holdrooms, add domestic/international swing gate capability, improve concessions and guest amenities, modernize the BHS, and enhance building efficiency.
- **B/A F Passenger Boarding Bridge and Modernization:** Replace five passenger boarding bridges. Reconfigure the aircraft parking area and install two new hydrant fueling pits.

5 Terminal (Other)

- **Terminal 2 Aircraft Parking Enhancement:** Reconfigure the aircraft parking area at B/A D by down-gauging two widebody parking positions and modify the existing aircraft parking area to include an additional narrowbody aircraft parking position.
- **Gate Enhancements:** Enhance gate flexibility by improving the A380 gates at B/A A, providing B/A A fleet flexibility, and installing bus-gate access at B/As A and G.

6 Security Improvements

- **High-Speed Gate Checkpoints:** Upgrade existing vehicle checkpoints with new security features and install high-speed gates and crash barriers at gates.
- **Perimeter Intrusion Detection System:** Install a ground-based radar perimeter intrusion detection system, comprising multiple radar units located at points on Airport property to detect objects over large open areas such as the waterfront and airfield.

7 Long Term Parking Garage #2 and AirTrain Extension

Provide additional long-term parking capacity and improve passenger access to the terminals.

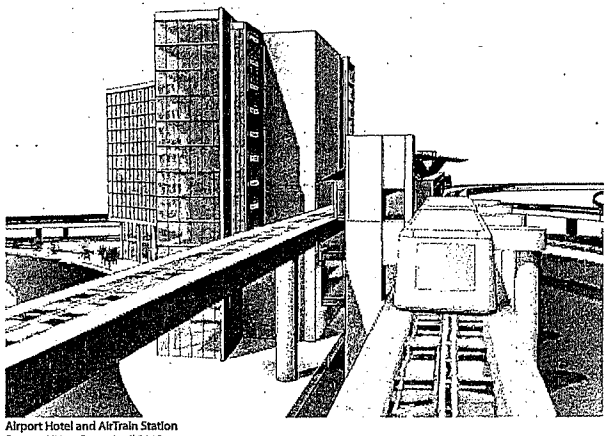
- **Long Term Parking Garage #2:** Construct Long Term Parking Garage #2 with 3,600 parking spaces in Lot DD. Relocate existing Sanitary Sewer Force Main (SSFM) within Lot DD.
- **AirTrain Track Extension:** Extend the AirTrain tracks approximately 1,800 feet from the current terminus to a new AirTrain station in Lot DD.
- **Lot DD Utilities Improvements:** Construct an Industrial Waste Line from Lot DD to the Bus Vehicle Maintenance Yard.

8 International Terminal Building Curbside Expansion

- **ITB Curbside Expansion:** Construct a new ITB Arrivals Level and Departures Level curbside beyond the existing outer curbsides, providing an additional island curb and three additional lanes on both levels for passenger pick-up and drop-off.

9 Airport Hotel

- **Airport Hotel and AirTrain Station:** Construct a new 350-room full-service hotel and a new AirTrain station with direct hotel access.



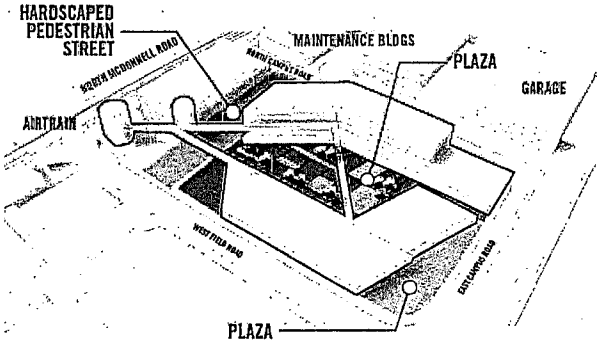
Airport Hotel and AirTrain Station
Source: HNTB Corp., April 2013

10 Demolish Old Airport Traffic Control Tower

- **Demolish Old Airport Traffic Control Tower:** Demolish the old Airport Traffic Control Tower (ATCT) upon completion of new ATCT.

11 Consolidated Administration Campus

- **Consolidated Administration Campus:** Demolish the existing Jason Yuen Architecture & Engineering Building and the Airport Museum warehouse (Buildings 676 and 670) and construct new office buildings and employee parking to accommodate Airport Commission employees.



Consolidated Administration Campus
Source: San Francisco International Airport

12 Remain Overnight Parking

Expand close-in and RON aircraft parking positions to accommodate forecast demand.

- **South McDonnell Road Realignment and RON Parking:** Realign South McDonnell Road and expand the B/A A RON ramp to better accommodate existing and near-term close-in RON demand.
- **Restripe Aircraft Parking Positions for RON Parking:** Restripe the Plot 41 East Field RON area to provide additional aircraft parking capabilities.
- **East Field Building Demolition:** Demolish Building 1070 (offices) in the East Field.

13 Superbay Hangar

- **Superbay Hangar Fire and Life Safety Systems Improvements:** Replace fire suppression system and associated utilities within the Superbay Hangar. Provide abatement of asbestos and other hazardous materials from the Superbay Hangar.
- **Relocate Fire Suppression Tanks:** Relocate the existing fire suppression tanks north of Taxiway C from near the Superbay Hangar to an area east of the Superbay Hangar Extension.
- **Superbay Hangar Extension and Employee Surface Parking Lot:** Expand the Superbay Hangar to accommodate two additional widebody aircraft (for a total of six) and expand the employee surface parking lot.

14 South Field Redevelopment

- **ERF #3:** Relocate and upgrade ERF #3 to a location near the existing ERF #3 building.
- **Taxiways H and M:** Realign Taxiways H and M to the southwest; rename to Taxiways M1 and M2, respectively, to conform to FAA naming convention.

15 East Field Facility Renewal

- **Materials Testing Lab:** Replace the existing deteriorated materials testing lab trailer group with a new lab structure.
- **Police Training Range Improvements:** Replace the existing deteriorated facilities with public safety training and range facilities in the East Field area. The new facility would include new offices, indoor training classrooms, restroom facilities, gun cleaning/storage, K-9 facilities, and associated site improvements.
- **East Field GSE Maintenance Facility:** Construct a new GSE maintenance facility for East Field ground handlers and airlines.

16 North Field Facility Renewal

- **GTU Redevelopment:** Relocate the existing GTU, Shop, shuttle bus parking area, and fueling station.
- **New Fuel Storage Tanks:** Construct two 75,000-barrel fuel storage tanks to provide additional on-Airport storage capacity necessary to maintain sufficient supply during tank closures for regular maintenance, extended outages, and contingency for fuel supply interruptions.
- **Fuel Supply Improvements:** Increase fuel supply throughput by upgrading the existing fuel supply pipeline or providing a supplemental pipeline.
- **North Field Airport Maintenance Facility:** Construct a new Airport maintenance facility consisting of 37,000 square feet of building and 492,000 square feet of landside area.
- **North Field GSE Maintenance Facility:** Construct a new GSE maintenance facility for North Field ground handlers and airlines.

17 West Field Facility Renewal

Renovate or replace aging West Field support facilities with modern and energy efficient facilities.

- **West Field Cargo Facility:** Construct a two-level cargo facility totaling approximately 220,000 square feet with employee parking provided on the roof.
- **West Cargo Checkpoint Relocation:** Relocate and provide blast-proofing for the checkpoint guard shack between Building 606 and B/A G.
- **West Field Cargo Buildings Redevelopment:** Demolish aging Cargo Buildings 602, 606, and 612 to permit construction of the West Field Cargo Facility.
- **Building 730 Conversion to Airline and Airport GSE Maintenance:** Convert Building 730 from a belly cargo facility to a mixed-use building accommodating the relocation of Airport tenants.
- **West Field Parking Garage #2:** Construct an additional parking garage in the West Field to accommodate Airport tenants, including federal, concessions, and airline employees.
- **West Field GSE Building 624 Replacement:** Demolish existing Building 624 and construct a new facility for GSE use.
- **Building 710 and 750 Renovations:** Convert Building 710 for Airport maintenance use and add GSE maintenance facilities in Building 750.

18 Airport Shoreline Protection

- **Airport Shoreline Protection Project – Flood Control:** Fill remaining gaps within the existing seawall along the San Francisco Bay, close potential water infiltration paths, and establish additional flood control protection at existing seawalls.

19 Central Utility Plant Improvement

- **Central Utility Plant Improvement:** Replace the existing Chiller No. 1 with a new unit with lower operating costs and improved environmental performance.

20 Wastewater System Improvements

- **Wastewater System:** Upgrades and expansion of sewer, wastewater treatment, and recycled water systems including:
  - *Industrial Wastewater Treatment Plant Upgrade*
  - *Recycled Water Distribution System*
  - *Storm Drainage Pipeline Improvements*
  - *Sewer System Improvements*
  - *New Sewer Outfall*
  - *Industrial Waste System Improvements*

21 Water System Improvements

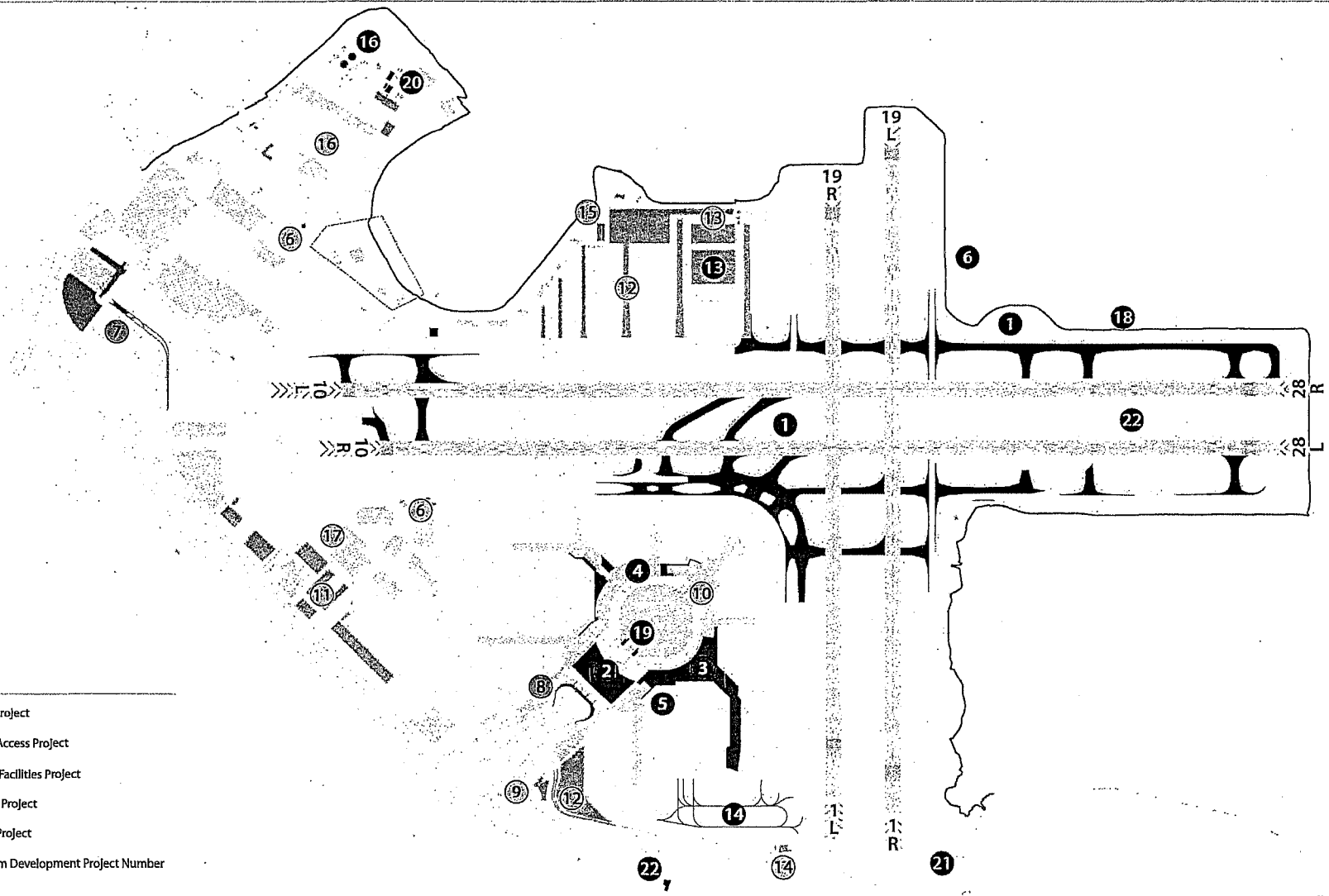
- **Separation of Fire and Domestic Water Systems:** The existing combined fire main waterline and domestic waterline would be replaced with a dual waterline system, preventing water stagnation in the potable water system.
- **SFO and City of Millbrae Water Tie-ins:** This project would install equipment to tie-in the domestic water systems between SFO and the city of Millbrae.

22 Energy and Lighting Improvements

- **Airfield Utility Improvements:** Modify airfield utilities to replace aging infrastructure, meet FAA Advisory Circular requirements, and eliminate conflicts with recommended airfield modifications. These projects include:
  - *Airfield Lighting Building No. 1 Renovation:* Replace and upgrade switchgear and associated electrical equipment.
  - *Airfield Lighting 5kV Cable Replacement:* Replace the aging primary circuit cables feeding the runways and taxiways in various locations.
  - *Airfield Lighting System Upgrade:* Replace lighting, signage, cabling, and underground infrastructure to meet FAA Advisory Circular standards. The Airfield Lighting Control System Computer hardware and software would also be upgraded.
- **Airport-wide GSE Electrical Infrastructure:** This project would install or upgrade power distribution equipment and electrical infrastructure in support of electric-powered GSE vehicles.
- **Boarding Areas A and G 400 Hertz System Upgrade:** This project would install additional 400 hertz power systems to increase available capacity in B/As A and G to support the additional electrical loads required for many new widebody aircraft.
- **Upgrade Substation M:** Upgrade Substation M to include a second 55 MVA transformer, related switchgear, and protection equipment.

63

Near-Term Development Projects



Long-Term Development Projects

The Long-Term Development Projects would be initiated beginning in 2022 through the High Constrained planning activity level.

(23) Terminal 1 Redevelopment (Continuation of Project #5)

- **B/A C Improvements:** Reconstruct B/A C to provide enhanced concession spaces, public restrooms, and other passenger amenities.

(24) Boarding Area F Improvements

Upgrade Terminal 3 to provide additional gate flexibility and to enhance the guest experience.

- **B/A F Improvements:** To enhance the guest experience, B/A F would be reconstructed and upgraded to improve facilities and services, including airside concession spaces, public restrooms, and other passenger amenities.

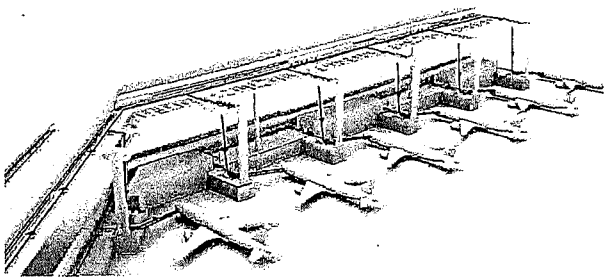
(25) Terminal 2 Baggage Handling System Improvements

- **Terminal 2 BHS:** Extend the Terminal 3 ICS BHS backbone into Terminal 2 to connect the transfer input, makeup, and sortation systems.

(26) International Terminal Building Departures Level and Boarding Area Capacity

Reconfigure and expand the capacity of ITB facilities to accommodate the forecast increases in international passenger traffic and enhance the guest experience through redeveloped concessions areas.

- **ITB Departures Level Improvements – Phase 1:** Combine the existing security screening checkpoints, reconfigure the ticketing hall, expand the concession areas, and provide a post-security connector between B/As A and G.
- **ITB Departures Level Improvements – Phase 2:** Expand the Departures Level of the ITB in the area immediately beyond the new centralized security checkpoint.
- **B/As A and G Improvements:** Integrate upper level holdroom areas with concessions and provide additional holdroom seating area on the Departures and, potentially, Arrivals Levels of B/As A and G.
- **B/A A and ITB South BHS:** Upgrade the B/A A and ITB South BHS to connect with the ICS.
- **B/A G and ITB North BHS:** Upgrade the B/A G and ITB North BHS to connect with the ICS.

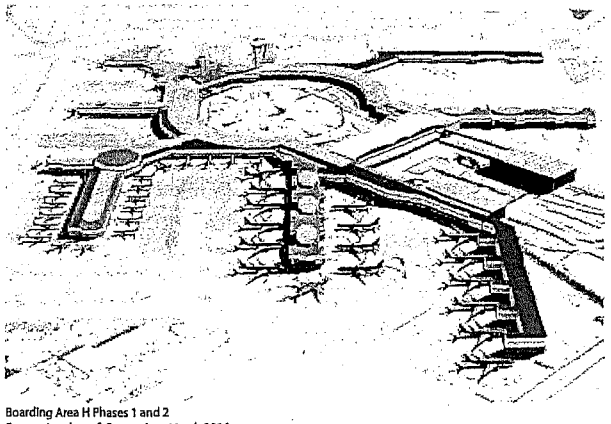


Boarding Area H Phases 1 and 2
Source: Landrum & Brown, Inc., March 2016

(27) Boarding Area H Phase 1

Construct new Boarding Area H to provide sufficient international and domestic gate capacity to accommodate forecast demand.

- **B/A H Phase 1:** Construct a new boarding area with three widebody or five narrowbody swing gates with domestic and international arrivals capability and create an additional domestic and preclear bag claim area.
- **B/A H Utility Extensions:** Extend aviation fuel, natural gas, and potable water service lines.
- **Demolish the SFO Business Center:** Demolish Building 575 to permit the construction of B/A H Phase 1 and the relocated Central Utility Plant.
- **Relocate Utilities (B/A H):** Relocate Sanitary Sewer Pump Station SSPS-11 and Industrial Waste Pump Station IWPS-B to avoid the B/A H apron.



Boarding Area H Phases 1 and 2
Source: Landrum & Brown, Inc., March 2016

(28) Boarding Area H Phase 2

Expand B/A H to provide sufficient international and domestic gate capacity to accommodate forecast demand.

- **B/A H Phase 2:** Extend B/A H Phase 1 to provide an additional three widebody or five narrowbody contact gates.
- **B/A H BHS:** Extend the BHS backbone and provide baggage makeup area for B/A H.
- **New Parallel Taxilane around B/A G:** Construct a second taxilane around B/A G.
- **Taxiway B Realignment:** Shift Taxiway B 22 feet to the northwest to meet FAA design standards.
- **Taxiway A Realignment:** Shift Taxiway A 15 feet to the northwest to meet FAA design standards.
- **Relocation of ERF #1 and Closure of Taxilane Y:** Relocate the West Field ERF #1 to an area just north of the U.S. Postal Service facility and close the majority of Taxilane Y.
- **West Field RON Parking and Race Track:** Construct a new apron to accommodate RON aircraft parking demand and to provide a relocated Race Track (flow-through aircraft parking positions so that passenger aircraft can hold while waiting for an available gate).
- **Vehicle Service Road Relocations:** Reconfigure the West Field VSRs to accommodate and serve the new and relocated facilities in the West Field area.
- **West Field Checkpoints:** Construct three new West Field security checkpoints to replace existing checkpoints to accommodate changes to West Field facilities.
- **North Field Flight Kitchen:** Renovate or rebuild a North Field cargo building (Building 944) for use as a flight kitchen.
- **North Field Airport Maintenance Conversion:** Convert the North Field Education Facilities (Buildings 928 and 928A) for use by Airport maintenance.
- **Relocate Fuel Vault Test Station:** Modify the drain and vent structures associated with Aviation Fuel Vault #5.
- **West Field Building Demolitions:**
  - Demolish belly cargo and GSE maintenance building (Building 585) to allow for construction of B/A H Phase 2 and/or the relocated CUP (see Project #33).
  - Demolish one bay of a GSE maintenance building (Building 642) to allow for the shift of Taxilanes A and B.
  - Demolish the flight kitchen (Building 649) and ERF #1 (Building 650) to allow for construction of the Race Track, RON parking, and the shift of Taxilanes A and B.

(29) Rental Car Center and Quick Turn Around Facility

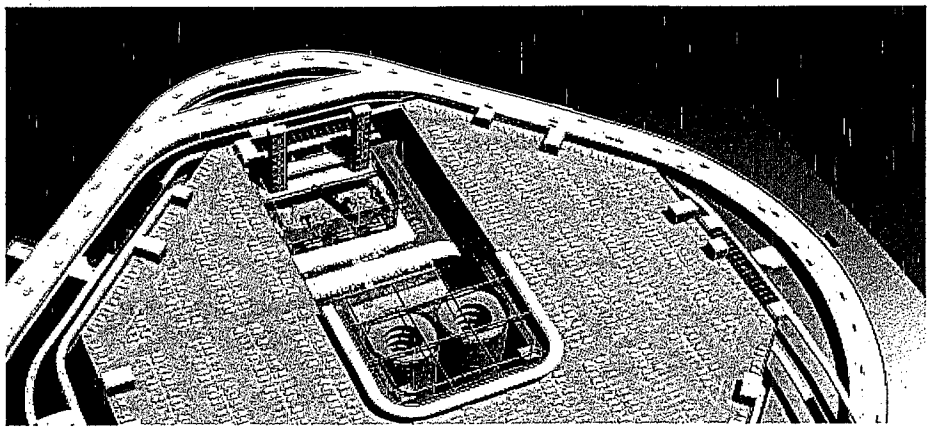
Provide a new RCC and ground transportation upgrades to accommodate forecast demand and to elevate the passenger experience.

- **Rental Car Center and Quick Turn Around Facility:** Construct a new RCC and QTA facility in Lot DD with 4,400 ready/return spaces and 2,880 stacking spaces.
- **Conversion of the Existing RCC to Public Parking:** Convert the existing RCC to a public parking garage with 3,700 parking spaces.
- **Roadway Improvements for RCC:** Reconfigure the connection of South Airport Boulevard, North McDonnell Road, San Bruno Avenue, and the U.S. 101 North on/off ramps.
- **Relocate Utilities (San Bruno Avenue):** Relocate Sanitary Sewage Pump Station SSPS-17 and Industrial Waste Pump Station IWPS-G to accommodate the roadway improvements.

(30) AirTrain System Capacity

Upgrade the AirTrain system to accommodate four-car trains.

- **AirTrain Vehicle Acquisition:** Acquire 30 additional AirTrain vehicles.
- **Four-Car AirTrain Station Expansion:** Expand the platforms at each AirTrain station to accommodate the length of four-car trains (currently accommodates length of three-car trains).
- **AirTrain Maintenance Yard Expansion:** Extend the tracks at the AirTrain Maintenance Building into the adjacent aircraft ramp area.
- **Demolish Airport Maintenance Building 692:** Demolish Building 692 to permit expansion of the AirTrain storage facility.



Cutaway, Central Hub
Source: LeighFisher, December 2015

(31) Central Hub

Replace the existing Central Parking Garage with a modern parking and ground transportation facility to accommodate forecast demand for close-in parking and terminal curbside length.

- **Central Hub:** Replace the Central Parking Garage with a new structure consisting of approximately 11,000 public parking spaces and one level of curbside to augment passenger pick-up and drop-off at the domestic terminals and ITB.
- **Phased Demolition of Central Parking Garage:** Demolish the Central Parking Garage in phases to accommodate construction of the Central Hub.

(32) Long Term Parking Garage #3

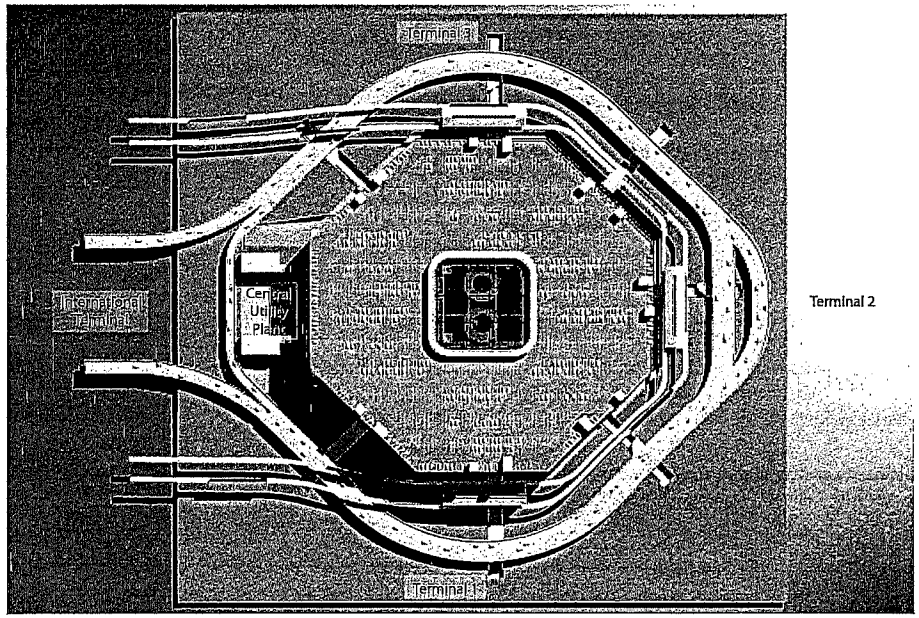
- **Long Term Parking Garage #3:** Construct Long Term Parking Garage #3 on Lot DD.

(33) Central Utility Plant

- **Relocate Central Utility Plant:** Construct a new replacement CUP southwest of the proposed B/A H expansion to assist in achieving Airport sustainability goals.

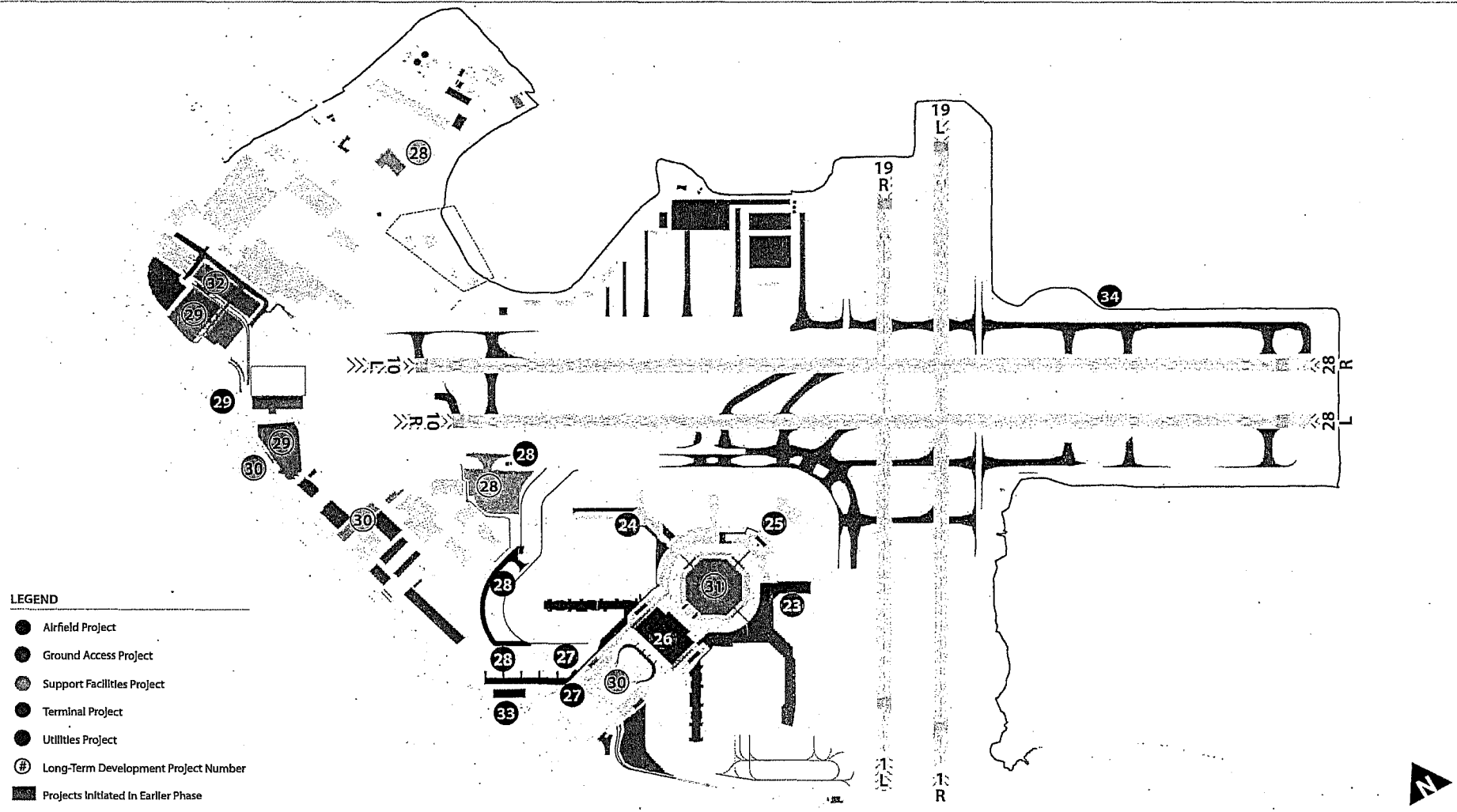
(34) Airport Shoreline Protection

- **Airport Shoreline Protection Project – Sea Level Rise:** Improve the seawall along the San Francisco Bay for protection against sea level rise.



Roof Level, Central Hub
Source: LeighFisher, December 2015

Long-Term Development Projects



Implementation Planning

Flexibility

Recognizing that actual demand often does not materialize as forecast, the phased nature of the implementation plan allows Airport management to adjust project timelines accordingly. If demand materializes sooner than expected, Airport management may choose to accelerate a project. Conversely, if demand does not materialize as expected, Airport management may choose to defer, change, or cancel a project.

An example of the flexibility built into the ADP is preservation of the capability to accommodate an extension of B/A F. A four-gate extension of B/A F was evaluated as an alternative in the ADP, but a new B/A H was recommended to better accommodate forecast demand. However, if additional narrowbody domestic gate capability beyond the High Constrained forecast demand requirements is required, the ADP provides sufficient flexibility to relocate additional facilities in the West Field (employee parking garage, cargo building, and GSE maintenance facilities) to accommodate a B/A F extension.

Decision Points

The implementation path of each project includes decision points that provide opportunities for Airport management to reevaluate the need for a project based on demand or other factors. This framework allows the Airport to operate as efficiently as possible without compromising operational performance or the guest experience. Some projects include a phased approach where later phases could be deferred; other projects may be deferred or canceled entirely. These decision points allow Airport management to respond to changes with appropriate adjustments instead of following plans that may no longer be justified.

Project financing is another important consideration for the timing of decision points. Depending on the source of project financing, obtaining funding may require substantial lead time that needs to be built into the decision point schedule. The availability of project financing may also be a prerequisite for determining whether the project proceeds to the next step. In cases such as enabling projects, project financing may be obtained in advance for multiple project elements, or for a group of projects. Certain forms of financing can be accessed in advance of beginning construction. Others require that the project be planned, designed, and ready to proceed before the financing is secured.

While the decision points associated with some projects provide the flexibility for Airport management and the Airport Commission to determine if a project should proceed, the substantial lead time needed for many projects requires that the Airport Commission commit to a project by a decision point several years in advance. Adhering to these decision points will ensure that enough time is allocated to ensure the project's success. The decision point chart shows the relationship among multiple ADP project elements, identifies enabling or dependent projects, and shows the decision points for several major projects.

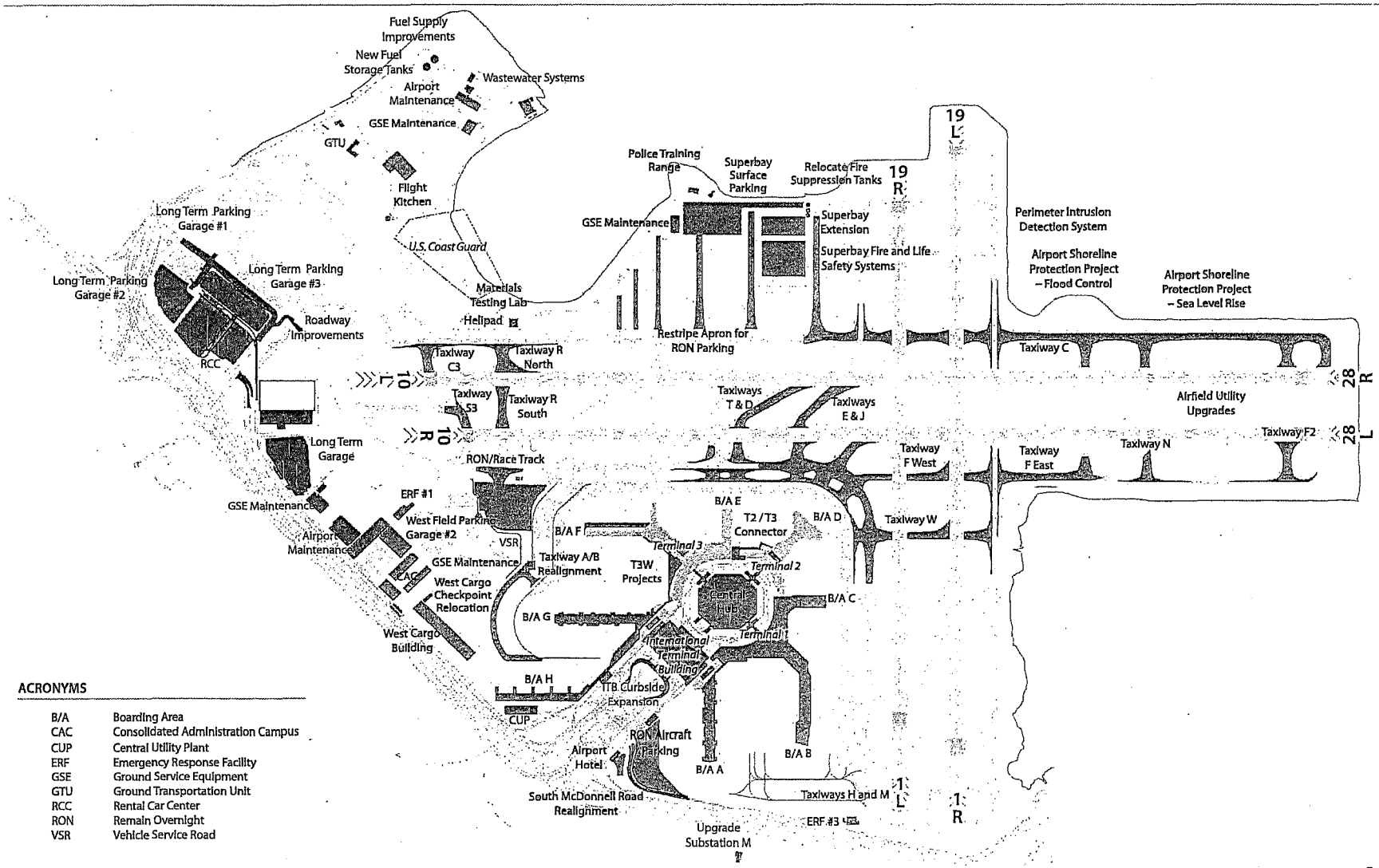
Decision Points for Major ADP Projects

ADP Project	Component Project	Lead Time For Decision (Years)	Fiscal Year[1] '19/'20	'20/'21	'21/'22	'22/'23	'23/'24	'24/'25	'25/'26	'26/'27	'27/'28	'28/'29	'29/'30	Trigger
B/A H – PHASE 1														
	Demolish the SFO Business Center (575)	5	●	■										Based on gate demand, which is forecast to be at the end of the near term.
	Relocate Utilities (B/A H)				■									
	B/A H Utility Extensions				■	■	■							
	B/A H – Phase I			■	■	■	■							
B/A H – PHASE 2														
	West Field Checkpoints	9			●	■			■	■				The project can be accelerated or deferred based on international and domestic demand. The West Field Cargo Facility and B/A H Phase 1 must be completed before B/A H Phase 2.
	Vehicle Service Road Relocations				■				■	■				
	Demolish Belly Cargo and GSE Maintenance Building (585)					■								
	Relocation of ERF and Closure of Taxilane Y							■						
	North Field Flight Kitchen							■						
	Demolish Flight Kitchen (649) and ERF #1 (650)								■					
	Relocate Fuel Vault Test Station													
	West Field RON Parking and Race Track									■				
	B/A H BHS									■	■	■		
	Demolish One Bay of a GSE Maintenance Building (642)										■			
	New Parallel Taxilane around B/A G										■			
	Taxiway B Realignment										■			
	Taxiway A Realignment											■		
	B/A H – Phase 2										■	■		
RELOCATE CENTRAL UTILITY PLANT														
	West Field Checkpoint (Partial)	5			●	■								Location of the new CUP (relocate or replace the CUP in-place). Airport policy decisions on carbon neutrality. The location and timing of this project could affect the timing of the West Field Cargo Facility and B/A H Phase 2 projects.
	Vehicle Service Road Relocations (Partial)				■									
	Demolish Belly Cargo and GSE Maintenance Building (585)					■								
	New Central Utility Plant					■	■	■						
B/A A AND G IMPROVEMENTS														
	B/A G Improvements	5			●	■	■							Airport policy decisions on guest experience. This project can be accelerated or deferred on a gate-by-gate basis.
	B/A A Improvements						■	■						
ITB DEPARTURES LEVEL IMPROVEMENTS – PHASE 2														
	ITB Departures Level Improvements – Phase 2	4					●	■	■					Completion of ITB Departures Level Improvements – Phase 1. Timing based on availability of funding and concessions demand. Expansion can be deferred indefinitely, if needed.
CENTRAL HUB														
	Demolish Central Parking Garage	5					●		■					Demand already outstrips capacity and the existing Central Parking Garage is seismically deficient. The Long Term Parking Garage #3 and/or the conversion of the existing RCC to public parking could assist in accommodating public parking demand during construction.
	Central Hub						■	■	■	■				

Note 1: CCSF Fiscal year from July 1 through June 30.

■ Primary Project ■ Enabling Project ● Decision Point

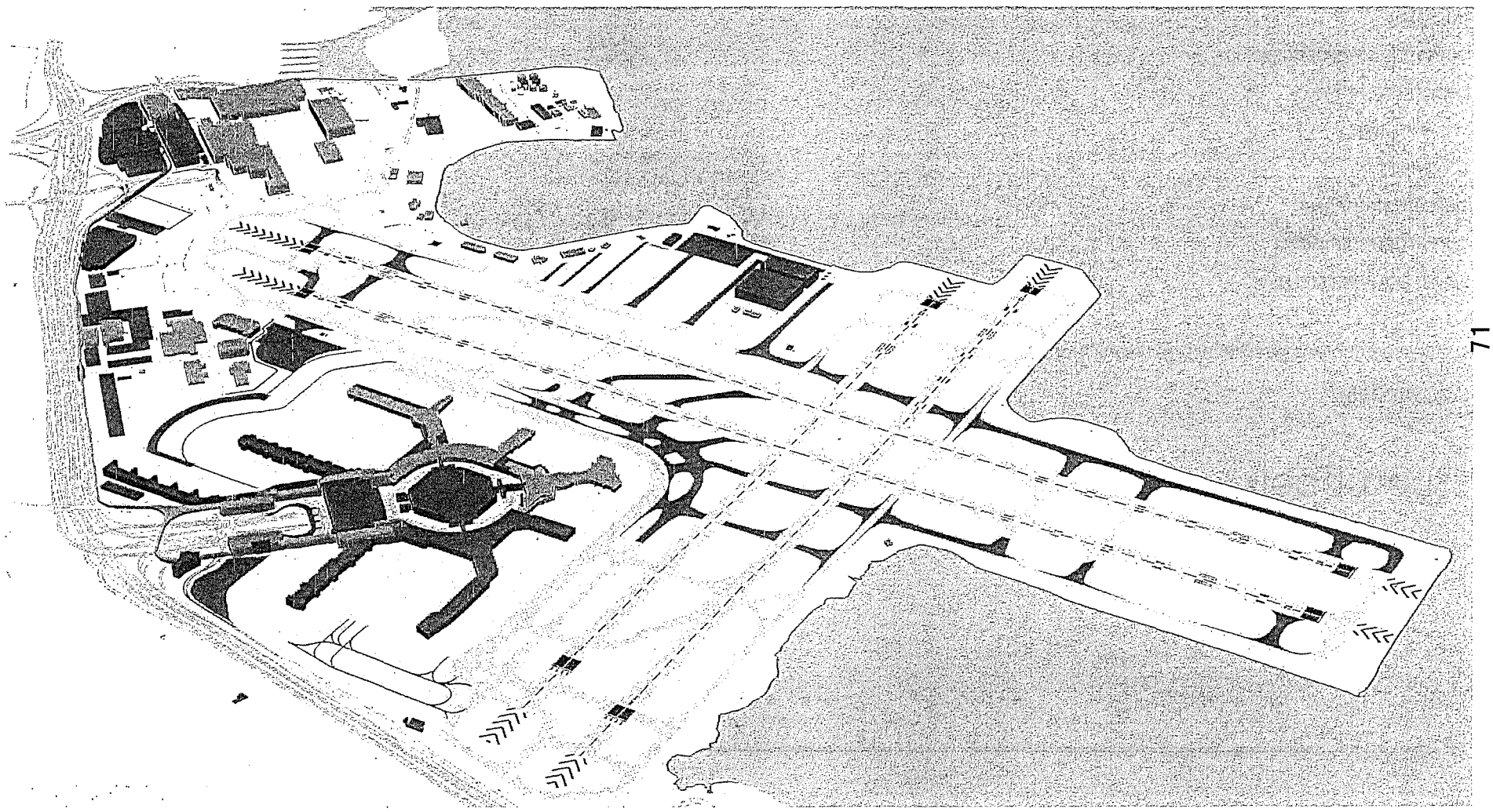
Future Facilities



ACRONYMS

B/A	Boarding Area
CAC	Consolidated Administration Campus
CUP	Central Utility Plant
ERF	Emergency Response Facility
GSE	Ground Service Equipment
GTU	Ground Transportation Unit
RCC	Rental Car Center
RON	Remain Overnight
VSR	Vehicle Service Road

Future Facilities Overview



Acknowledgments

Prepared by:

San Francisco International Airport, Bureau of Planning and Environmental Affairs

with assistance from:

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BNP Asssociates, Inc.

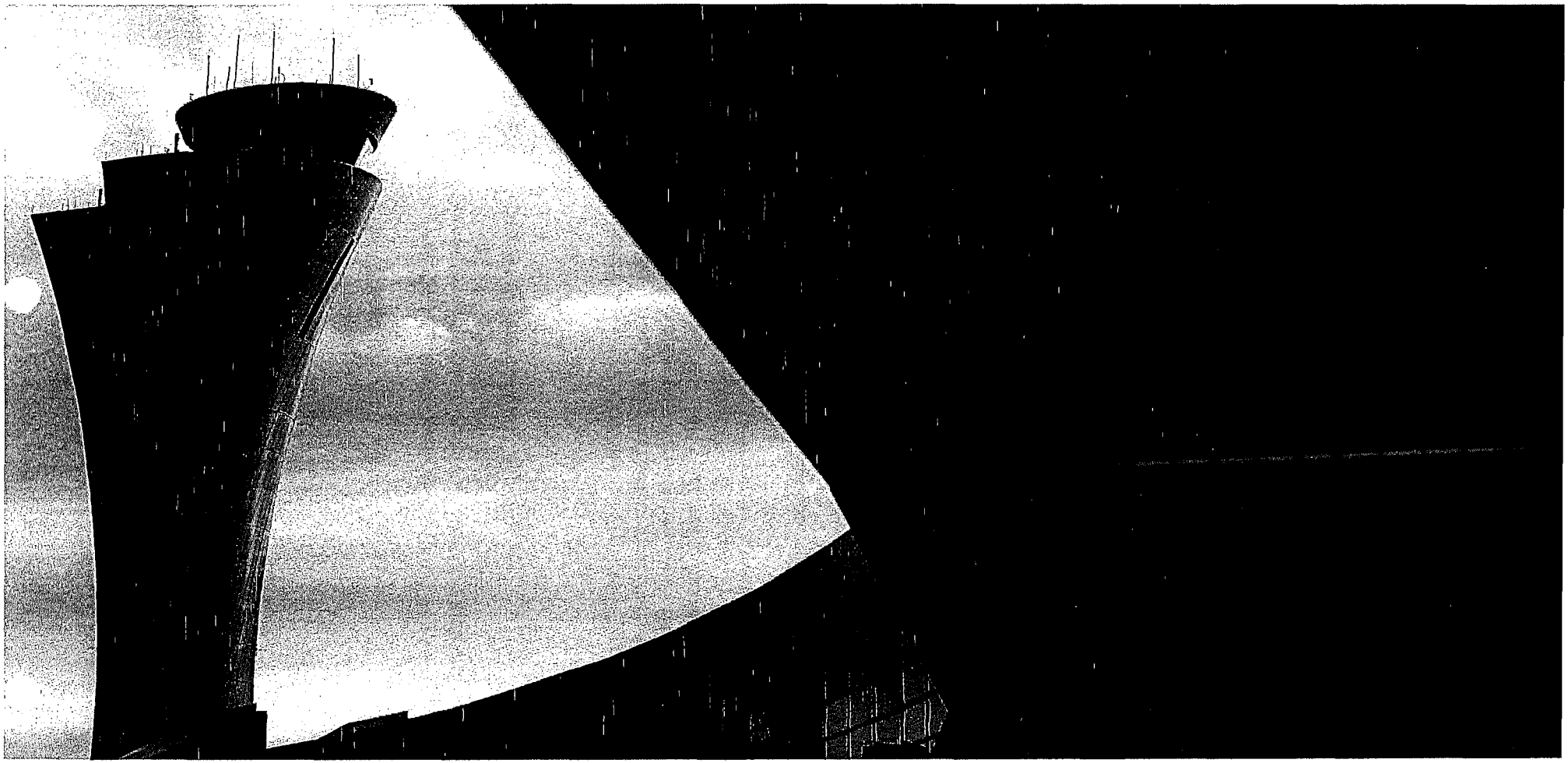
Lea+Elliott

LeighFisher, Inc.

M Lee Corporation

Ricondo & Associates, Inc.

RS&H, Inc.



SFO

San Francisco International Airport

December 2, 2016

Ms. Angela Calvillo
Clerk of the Board
Board of Supervisors
City Hall
1 Dr. Carlton B. Goodlett Place, Room 244
San Francisco, California 94102-4689

Subject: *Transmittal of Proposed Ordinance to the Board of Supervisors: Waiving Fiscal Feasibility Study and Determination Requirements for Airport Development Plan, Except for Individual Projects as Required by Administrative Code Chapter 29.*
Airport Commission Recommendation: Approval

Dear Ms. Calvillo:

Enclosed is a proposed ordinance that would allow the San Francisco Planning Department to proceed with environmental review of the Recommended Airport Development Plan (ADP). In the event that the environmental review is completed, Airport staff would subsequently return to the Board of Supervisors for fiscal feasibility determinations for individual projects under the Recommended ADP that meet applicable dollar thresholds under Chapter 29, as those projects are triggered by demand for implementation over the long-term and prior to initiating detailed design work for the individual project.

At the November 22, 2016 meeting, the Airport Commission voted to recommend approval of the proposed Ordinance.

Please find attached documents relating to the proposed ordinance. You may contact Cathy Widener of Airport Governmental Affairs with any questions at (650) 821-5023 regarding this matter.

Very truly yours,

Jean Caramatti
Commission Secretary

Attachments:
Draft Ordinance (signed to form)
Legislative Digest
Airport Commission Resolution No.16-0288 and Commission Memorandum
Summary Sheet of the Draft Final Airport Development Plan
Draft Final Airport Development Plan – Executive Summary

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2016 DEC -2 PM 2:04
BY

SFO TOMORROW
PLANNING FOR THE FUTURE

December 2, 2016

SUMMARY SHEET

CITY AND COUNTY OF SAN FRANCISCO
SAN FRANCISCO INTERNATIONAL AIRPORT
AIRPORT DEVELOPMENT PLAN

IN REFERENCE TO:
Proposed Ordinance Waiving Fiscal Feasibility Study and Determination Requirements under Chapter 29 of the San Francisco Administrative Code for the Recommended Airport Development Plan (ADP).

INTRODUCTION
The subsequent sections provides background on the Draft Final ADP planning process, and summarizes the Recommended ADP.

BACKGROUND
From late 2014 to 2016, Airport staff prepared the ADP to plan for future passenger and operations growth at SFO. The ADP serves as a roadmap to guide long-term Airport development up to the estimated maximum capacity of the existing runway system and supports SFO's overarching strategic objectives. The Draft Final ADP was completed in September 2016.

The prior Master Plan was certified by the San Francisco Planning Commission and approved by the Airport Commission in 1992. The 1992 Master Plan provided a long-term plan for the Airport's growth up to approximately 51 million annual passengers. A number of significant capital projects were completed or are in the process of being implemented under the Master Plan, including the International Terminal Building, the AirTrain system, Terminal 2 renovation, Terminal 1 redevelopment, hotel development, and administrative office development.

The ADP sets forth a long-range plan to guide the Airport's development while providing the highest level of international and domestic guest service. Building upon ongoing projects at SFO, the ADP defines recommended projects that would accommodate long-term demand at the Airport, forecasted to reach 71.1 million annual passengers at the estimated maximum airfield capacity. Collectively, these projects form the Recommended ADP.

Beginning with a forecast of future passenger and operations activity levels, the study involved a comprehensive inventory of Airport facilities, analysis of facility requirements, development and evaluation of planning alternatives to meet requirements, selection of a recommended long-range plan, and development of an implementation plan. The ADP Executive Summary summarizes the entire study and Recommended ADP. The ADP Technical Report contains more detailed analyses and is organized into the following chapters:

1. **Introduction** – This chapter provides the background for the preparation of the ADP; an overview of the history of SFO; the current planning context; ADP methodology, process and structure; and the goals, objectives, and land use planning principles applied to development alternatives.
2. **Aviation Activity Forecasts** – This chapter presents forecasts of aviation activity, including passenger enplanements, air cargo, aircraft operations, and commercial passenger fleet mix, for four planning activity levels: 2018, 2023, Base Constrained, and High Constrained. Peak period forecasts were derived from design day flight schedules to guide the planning process.
3. **Inventory** – This chapter presents information on existing conditions, including facilities data that was collected for planning analysis. Ongoing projects were considered as part of this process. The areas of airspace operating environment, airfield, passenger terminal, ground access and parking, support facilities, and utilities were inventoried.
4. **Requirements** – This chapter presents the facility capacity required to accommodate forecast growth at the four planning activity levels defined in the forecast. Regulatory criteria and design guidelines were applied to facilities where applicable. The capacity requirements for landside facilities match estimated maximum airfield capacity in the long-term.
5. **Alternatives Development and Evaluation** – This chapter presents the range of alternatives to meet requirements by facility type, and the evaluation of alternatives against criteria to identify a recommended alternative. Criteria were developed for each facility type to account for differences in evaluation metrics. At a minimum, all alternatives were assessed against facility requirements and mandatory design standards. Improvements to guest experience, cost feasibility, operational efficiency, and land use priority were also considered in evaluating alternatives.
6. **Recommended Airport Development Plan** – This chapter presents the collection of recommended ADP Projects resulting from the alternatives analysis and evaluation. These projects are summarized below.
7. **Implementation** – This chapter summarizes all Ongoing and ADP Projects to be implemented in the near-term and long-term timeframes.

RECOMMENDED AIRPORT DEVELOPMENT PLAN

The Recommended ADP is composed of individual projects ("ADP Projects") that would be required to accommodate long-term passenger and operations demand. The ADP is a demand-driven development plan. Individual ADP Projects would be triggered for implementation when activity thresholds are reached in the future and the need for those projects is identified.

The list below presents a summary of ADP Projects ("Recommended ADP") organized by major functional area. No runway expansion projects are proposed as part of the Recommended ADP. Rather, the ADP Projects would match the landside and terminal capacity to airfield capacity.

SFO TOMORROW
PLANNING FOR THE FUTURE

LIST OF RECOMMENDED ADP PROJECTS

AIRFIELD	BRIEF DESCRIPTION
New Parallel Taxilane around Boarding Area G	Construct a second parallel taxilane around Boarding Area G to facilitate aircraft movement.
Taxiway A Realignment	Shift Taxiway A to the northwest to meet Federal Aviation Administration (FAA) taxiway design standards.
Taxiway B Realignment	Shift Taxiway B to the northwest to meet FAA taxiway design standards.
West Field Remain Overnight (RON) Parking and "Race Track"	Construct a new apron to accommodate aircraft parking demand and to provide a relocated "Race Track" (flow-through aircraft parking positions so that passenger aircraft can hold while waiting for an available gate).
PASSENGER TERMINAL	
Boarding Area A (B/A A) and International Terminal Building (ITB) South Baggage Handling System (BHS)	Upgrade the B/A A and ITB South BHS to connect with the individual carrier system (ICS).
B/A F Improvements	To enhance guest experience, reconstruct B/A F and upgrade facilities and services, including airside concessions, public restrooms, and other passenger amenities.
B/A G and ITB North BHS	Upgrade the B/A G and ITB South BHS to connect with the ICS.
B/A H BHS	Extend the BHS backbone and provide baggage makeup area for B/A H.
B/A H Phase 1	Construct a new boarding area with three widebody or five narrowbody swing gates with domestic and international arrivals capability and create an additional domestic and preclear bag claim area.
B/A H Phase 2	Extend B/A H Phase 1 to provide an additional three widebody or five narrowbody contact gates.
B/As A and G Improvements	Integrate upper level holdroom areas with concessions and provide additional holdroom seating area on the departures and, potentially, arrivals levels of B/As A and G.
ITB Departures Level Improvements - Phase 1	Combine the existing security screening checkpoints, reconfigure the ticketing hall, expand the concession areas, and provide a post-security connector between B/As A and G.
ITB Departures Level Improvements – Phase 2	Expand the Departures Level of the ITB in the area immediately beyond the new centralized security checkpoint.
Terminal 2 BHS	Extend the Terminal 3 ICS BHS backbone into Terminal 2 to connect the transfer input, makeup, and sortation systems.

GROUND ACCESS AND PARKING	
AirTrain Maintenance Yard Expansion	Extend the tracks at the AirTrain Maintenance Building into the adjacent aircraft ramp area.
AirTrain Vehicle Acquisition	Acquire 30 additional AirTrain vehicles.
Central Hub	Replace the Central Parking Garage with a new structure consisting of approximately 11,000 public parking spaces and one level of curbside to augment passenger pick-up and drop-off at the domestic terminals and ITB.
Phased Demolition of Central Parking Garage	Demolish the Central Parking Garage in phases to accommodate construction of the Central Hub.
Four-Car AirTrain Station Expansion	Expand the platforms at each AirTrain station to accommodate the length of four-car trains.
ITB Curbside Expansion	Construct a new ITB Arrivals Level and Departures Level curbside beyond the existing outer curbsides, providing an additional island curb and three additional lanes on both levels for passenger pick-up and drop-off.
Long Term Parking Garage #3	Construct new Long Term Parking Garage #3 on Lot DD.
Rental Car Center (RCC) and Quick Turn Around (QTA) Facility	Construct a new RCC and QTA facility in Lot DD with 4,400 ready/return spaces and 2,880 stacking spaces.
Conversion of the Existing RCC to Public Parking	Convert the existing RCC to a public parking garage with 3,700 parking spaces.
Roadway Improvements for RCC	Reconfigure the connection of South Airport Boulevard, North McDonnell Road, San Bruno Avenue, and the U.S. 101 North on- and off-ramps.
SUPPORT FACILITIES	
Building 710 and 750 Renovations	Convert Building 710 for Airport maintenance use and add GSE maintenance facilities in Building 750.
Demolish Airport Maintenance Building 692	Demolish Building 692 to permit expansion of the AirTrain storage facility.
Demolish the SFO Business Center	Demolish Building 575 to permit the construction of B/A H Phase 1 and the relocated Central Utility Plant.
East Field Building Demolition	Demolish Building 1070 (offices) in the East Field.
East Field Ground Service Equipment (GSE) Maintenance Facility	Construct a new GSE maintenance facility for North Field ground handlers and airlines.
North Field Airport Maintenance Facility	Construct a new Airport maintenance facility consisting of 37,000 square feet of building and 492,000 square feet of landside area.
North Field Airport Maintenance Conversion	Convert the North Field education facilities for use by Airport maintenance.
North Field Flight Kitchen	Renovate or rebuild a North Field cargo building (Building 944) for use as a flight kitchen.
North Field GSE Maintenance Facility	Construct a new GSE maintenance facility for North Field ground handlers and airlines.

SFO TOMORROW
PLANNING FOR THE FUTURE

SUPPORT FACILITIES (CONTINUED)	
Relocation of Emergency Response Facility (ERF) #1 and Closure of Taxilane Y	Relocate the West Field ERF #1 to an area just north of the U.S. Postal Service facility and close the majority of Taxilane Y.
Restripe Aircraft Parking Positions for RON Parking	Restripe the Plot 41 East Field apron area to provide additional aircraft parking capabilities.
Superbay Hangar Extension and Employee Surface Parking Lot	Expand the Superbay Hangar to accommodate two additional widebody aircraft (for a total of six) and expand the employee surface parking lot.
Vehicle Service Road Relocations	Reconfigure the West Field vehicle service roads to accommodate and serve the new and relocated facilities in the West Field area.
West Field Buildings Redevelopment	Demolish belly cargo and GSE maintenance building (Building 585) to allow for construction of B/A H Phase 2 and/or the relocated Central Utility Plant. Demolish one bay of a GSE maintenance building (Building 642) to allow for the shift of Taxilanes A and B. Demolish the flight kitchen (Building 649) and ERF #1 (Building 650) to allow for construction of the Race Track, RON parking, and the shift of Taxilanes A and B.
West Field Checkpoints	Construct three new West Field security checkpoints to replace existing checkpoints and to accommodate changes to West Field facilities.
UTILITIES	
B/A H Utility Extensions	Extend aviation fuel, natural gas, and potable water service lines.
Relocate Central Utility Plant	Construct a new replacement Central Utility Plant southwest of the proposed B/A H expansion to assist in achieving Airport sustainability goals.
Relocate Fuel Vault Test Station	Modify the drain and vent structures associated with Aviation Fuel Vault #5.
Relocate Utilities (B/A H)	Relocate a sanitary sewer pump station and industrial waste pump station to avoid the B/A H apron.
Relocate Utilities (San Bruno Ave.)	Relocate a sanitary sewer pump station and industrial waste pump station to accommodate roadway improvements on San Bruno Avenue.

San Francisco International Airport

MEMORANDUM
November 22, 2016

TO: AIRPORT COMMISSION
Hon. Larry Mazzola, President
Hon. Linda S. Crayton, Vice President
Hon. Eleanor Johns
Hon. Richard J. Guggenhime
Hon. Peter A. Stern

FROM: Airport Director

SUBJECT: Proposed Ordinance Waiving Fiscal Feasibility Study and Determination Requirements under Chapter 29 of the San Francisco Administrative Code for the Recommended Airport Development Plan and Recommendation to the Board of Supervisors to Adopt the Proposed Ordinance

DIRECTOR'S RECOMMENDATION: ADOPT THE RESOLUTION APPROVING THE FORM OF PROPOSED ORDINANCE EXEMPTING THE PROPOSED RECOMMENDED AIRPORT DEVELOPMENT PLAN (ADP) FROM CHAPTER 29 OF THE SAN FRANCISCO ADMINISTRATIVE CODE, AND THEREBY WAIVING, THE REQUIREMENTS FOR A FISCAL FEASIBILITY STUDY AND A BOARD OF SUPERVISORS FISCAL FEASIBILITY DETERMINATION, BUT RETAINING REQUIREMENTS FOR POSSIBLE FUTURE INDIVIDUAL PROJECTS UNDER THE ADP WHICH WOULD OTHERWISE BE SUBJECT TO CHAPTER 29, AND RECOMMENDING THAT THE BOARD OF SUPERVISORS ADOPT THE PROPOSED ORDINANCE.

Executive Summary

The Airport Development Plan (ADP) serves as a roadmap to guide long-term Airport landside development up to the maximum capacity of the existing runway system and identifies a collection of Recommended ADP Projects that would be required to accommodate up to 71.1 million annual passengers (MAP), the estimated maximum capacity of the existing airfield, over the next 20 years.

Per Chapter 29 of the City Administrative Code, City Departments proposing a project as defined by the California Environmental Quality Act (CEQA; Public Resources Code Sections 21000, *et seq.*) must prepare a financial feasibility study and submit it to the San Francisco Board of Supervisors (Board) for a determination that the proposed project is fiscally feasible and responsible prior to initiating environmental review.

Given the uncertainties inherent in preparing a meaningful fiscal feasibility study today for a long-term plan, Staff is seeking the Airport Commission's approval of a proposed ordinance that would waive the requirements of Chapter 29 for the Recommended ADP. If adopted by the Board, the proposed ordinance ("Proposed Ordinance") would allow the San Francisco Planning Department to proceed with the environmental review for the Recommended ADP. The Proposed Ordinance, a copy of which is attached, would resequence fiscal feasibility determinations, allowing environmental review of the Recommended ADP to commence but retaining the requirement for fiscal feasibility determinations for individual

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projects under the Recommended ADP that meet applicable dollar thresholds under Chapter 29, as they are triggered by demand for implementation over the long-term. The Proposed Ordinance, if approved, would preserve the intent of Chapter 29.

Background

The 1989 Master Plan was adopted by the Airport Commission in 1992, and provided a long-term plan for the Airport's growth to accommodate about 51 MAP by 2006. The Airport accommodated about 51 MAP in 2015. A number of significant capital projects were completed or are in the process of being implemented under the Master Plan, including the International Terminal Building, the AirTrain system, Terminal 2 renovation, Terminal 1 redevelopment, hotel development and administrative office development.

Building upon the Master Plan and other ongoing projects, Staff from late 2014 to 2016 prepared the ADP to plan for and accommodate forecast future passenger and operations growth at SFO. The ADP sets forth a long-range plan to guide the Airport's development while providing the highest level of international and domestic guest service. The ADP identifies a collection of ADP Projects that would be required to accommodate up to 71.1 MAP, the estimated maximum capacity of the existing runway complex, over the next 20 years; this collection of projects constitutes the Recommended ADP. The Recommended ADP is a demand-driven development plan consisting of individual ADP Projects that would be triggered for implementation when activity thresholds (i.e., passenger demand) are reached in the future and the need for those projects are identified. None of the Recommended ADP projects would add runway capacity.

The San Francisco Planning Department has determined that the Recommended ADP is a "Project" under CEQA and would require preparation of an EIR. However, per Chapter 29 of the City Administrative Code, City Departments proposing a project as defined by CEQA must prepare a financial feasibility study and submit it to the Board for a determination that the plan for undertaking and implementing the proposed project is fiscally feasible and responsible prior to initiating environmental review if a project meets both of the following criteria:

(1) the cost of implementing and/or constructing the proposed project exceeds twenty-five million dollars ($25,000,000); and

(2) the Project Sponsor reasonably estimates at the time of filing the application for environmental review that a portion of the predevelopment, planning or construction costs of the proposed project in excess of one million dollars ($1,000,000), but excluding the costs of City personnel working on such project, will be paid from public monies.

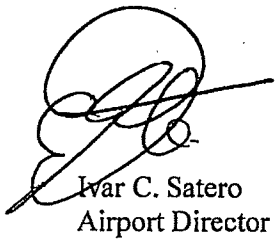
Given the uncertainties inherent in preparing a meaningful fiscal feasibility study today for a long-term, 20-year plan, Staff is seeking the Airport Commission's approval of an ordinance that would waive the requirements of Chapter 29 for the Recommended ADP. The Proposed Ordinance would allow the San Francisco Planning Department to proceed with preparation of the EIR for the Recommended ADP. The Proposed Ordinance, a copy of which is attached, would resequence fiscal feasibility determinations, allowing environmental review of the Recommended ADP to commence but retaining the requirement for fiscal feasibility determinations for individual projects under the Recommended ADP that meet applicable dollar thresholds under Chapter 29, as they are triggered for implementation when activity thresholds are reached and then are subject to the capital planning process.

In the event that (1) environmental review of the Recommended ADP is completed; and (2) the Airport Commission thereafter adopts the Recommended ADP, Staff would return to the Airport Commission and

the Board to proceed in conformance with Chapter 29 prior to initiating any detailed design work for such individual ADP projects. The Proposed Ordinance, if approved, would preserve the intent of Chapter 29.

Recommendation

I recommend that the Airport Commission adopt this Resolution approving the form of the Proposed Ordinance and recommending that the Board of Supervisors adopt the Proposed Ordinance exempting the Recommended Airport Development Plan from, and thereby waiving, the requirements of Chapter 29 of the San Francisco Administrative Code, including the requirements for a fiscal feasibility study and a Board of Supervisors fiscal feasibility determination.



Ivar C. Satero
Airport Director

Prepared by: Geoffrey W. Neumayr
Chief Development Officer
Planning, Design & Construction

Attachments

AIRPORT COMMISSION

CITY AND COUNTY OF SAN FRANCISCO

RESOLUTION NO. 16-0286

APPROVING THE FORM OF PROPOSED ORDINANCE EXEMPTING RECOMMENDED AIRPORT DEVELOPMENT PLAN FROM, AND THEREBY WAIVING, THE REQUIREMENTS OF CHAPTER 29 OF THE SAN FRANCISCO ADMINISTRATIVE CODE, INCLUDING FROM THE REQUIREMENTS FOR A FISCAL FEASIBILITY STUDY AND A BOARD OF SUPERVISORS FISCAL FEASIBILITY DETERMINATION, AND RECOMMENDING ADOPTION OF THE PROPOSED ORDINANCE BY THE BOARD OF SUPERVISORS

WHEREAS, the 1989 Master Plan was adopted by the Airport Commission in 1992, to provide a long-term vision plan for the Airport's growth to accommodate up to 51 million annual passengers by 2006; and

WHEREAS, Staff, building upon the Master Plan and other ongoing projects, prepared the Airport Development Plan ("ADP"), from late 2014 to 2016, to plan for and accommodate forecast future passenger and operations growth at the Airport; and

WHEREAS, the ADP identifies a collection of Recommended ADP Projects ("Recommended ADP") that would be required to accommodate up to 71.1 million annual passengers, the estimated maximum capacity of the existing runway complex, over the next 20 years; and

WHEREAS, the Recommended ADP is a demand-driven development plan consisting of individual ADP Projects that would be triggered for implementation when activity thresholds are reached in the future and the need for those projects are identified; and

WHEREAS, Chapter 29 ("Chapter 29") of the San Francisco Administrative Code requires City Departments, for City projects meeting certain threshold requirements as specified in Chapter 29, to prepare a financial feasibility study and submit it to the Board of Supervisors for a determination that the proposed project is fiscally feasible and responsible prior to initiating environmental review; and

WHEREAS, the San Francisco Planning Department, Environmental Planning Division ("SFEP"), has determined that the Recommended ADP would require preparation of an Environmental Impact Report ("EIR") under the California Environmental Quality Act (Public Resources Code Section 21000 *et seq.*); and

WHEREAS, given the uncertainties inherent in preparing a meaningful fiscal feasibility study today for a long term, 20-year plan, Airport staff has proposed an ordinance (the "Proposed Ordinance") that would exempt from, and thereby waive, the requirements of Chapter 29 for the Recommended ADP and allow SFEP to proceed with preparation of the EIR; and

WHEREAS, the Proposed Ordinance would resequence fiscal feasibility determinations, allowing environmental review of the Recommended ADP to commence but retaining the requirement for fiscal feasibility determinations for individual project under the Recommended ADP meeting

applicable dollar thresholds under Chapter 29, prior to initiating detailed design work for the individual project; and

WHEREAS, under the Proposed Ordinance, in the event that environmental review of the Recommended ADP is completed and the Commission approves the Recommended ADP, Airport staff would return to the Commission and Board of Supervisors to proceed in conformance with Chapter 29 prior to initiating any detailed design work for an individual project under the Recommended ADP meeting applicable dollar thresholds under Chapter 29; and

WHEREAS, the Commission has reviewed the Proposed Ordinance; now, therefore, be it

RESOLVED, that this Commission hereby approves the Proposed Ordinance substantially in the form attached to the Memorandum to the Commission and recommends that the Board of Supervisors adopt the Proposed Ordinance.

I hereby certify that the foregoing resolution was adopted by the Airport Commission

at its meeting of NOV 22 2016

Jean Caramatti

Secretary