

CHAPTER THREE PROJECT DESCRIPTION

3.1 PROJECT LOCALE AND SETTING

3.1.1 REGIONAL SETTING

Gross Field Airport (DVO or Airport) is owned and operated by Marin County, California. The Airport is located in unincorporated Marin County north of the city of Novato, California and serves an essential regional transportation resource by providing General Aviation (GA) facilities in the northern portion of the San Francisco Bay area. The location of DVO in relation to its regional setting is shown in **Figure 3-A** below.

**Figure 3-A
LOCATION OF GNOSS FIELD AIRPORT**



The Airport is located in an area of reclaimed salt water tidal marshlands that are part of the formerly extensive salt marshes present around the northwest corner of San Pablo Bay, characterized by muds and clays found in marshes, swamps, and waterways. The area comprises an element of the extensive wetlands associated with San Francisco Bay, which once formed the largest contiguous tidal marsh system present on the Pacific Coast of North America.^{1,2,3}

3.1.2 AIRPORT SITE HISTORY

DVO lies within the original flood plain of the Petaluma River at sea level. DVO dates to 1939. In that year, William Wright, who owned the property, built a private grass-landing strip. After trying to sell his Airport to Marin County for \$1,000 an acre in 1945-1946, Wright leased the field to Woody Binford. In 1947, teamed with Jack Lewis, Mr. Binford built a 3,000-foot dirt runway, two hangars, an office, and opened a flying school. It operated until 1949, when a change in flight school training regulations ended its existence. In 1950, operation of the private field passed to Harry Tollefson, who ran the facilities until the late 1960s. During the late 1950s and early 1960s, the Marin County Board of Supervisors considered several sites for a Marin County Airport before finally deciding upon the present-day DVO site. In 1965, Marin County, aided by Federal funding, bought the field, along with additional surrounding land, and named it after William Gness, who had worked for many years to expand aviation in Marin County. In 1968, a 3,300-foot by 60-foot, asphalt-paved runway and a facilities complex were built at the south end of the field. The runway was then expanded to a width of 75 feet in the 1990's. Previous runways, which no longer exist at DVO, were oriented north-south (Runway 01/19) and northeast-southwest (Runway 06/24). The oldest buildings on-site were built in 1968 and 1969. The majority of the hangars were installed from the late 1970's through the early 1980's.^{4,5} A system of levees has been constructed to protect the runway and airport environment from flooding.

The DVO Airport Master Plan⁶ was last updated in 1997 and the master plan provides for a 1,100 linear-foot northern extension of the existing Airport runway and taxiway. The runway extension has been in the Airport Master Plan since 1989, and the runway extension is included in the 2007 update of the Marin Countywide Plan.

¹ Conomos, T.J. (Editor), *San Francisco Bay: the Urbanized Estuary*, 1979, Pacific Division, American Association for the Advancement of Science, San Francisco, California.

² Josselyn, Michael, *The Ecology of San Francisco Bay Tidal Marshes: A Community Profile*, 1983. Report No. FWS/OBS-83/23, U.S. Fish and Wildlife Services, Division of Biological Services, Washington, D.C.

³ Nichols, D.R. and N.A. Wright, *Preliminary Map of Historic Margins of Marshlands, San Francisco Bay, California*, 1972. U.S. Geological Survey Open-File Map 71-216.

⁴ *Cultural Resources, Existing Conditions and Survey Methodology Report for the EIS and EIR to evaluate the Proposed Extension of Runway 13/31 at Gness Field Airport*, Tremaine and Associates, 2009. See Appendix H, *Cultural Resources*.

⁵ Gness Field Airport, 2009.

⁶ *Airport Master Plan Marin County Airport Gness Field*, Prepared by Cortright and Seibold, 1989.

3.1.3 EXISTING AIRPORT AND OPERATIONS

DVO is an essential regional transportation resource providing GA facilities in the northern portion of the San Francisco Bay area. DVO has been defined by the Federal Aviation Administration (FAA) as a reliever Airport in the Bay area and serves approximately ~~95,000~~85,500 arrivals and departures each year. Reliever airports provide GA pilots with attractive alternatives to using congested commercial service airports and provide GA access to the surrounding area. Therefore, the FAA has encouraged the development, maintenance, and expansion of GA airports in major metropolitan areas.

The airfield system consists of one 3,300 foot-long runway (designated 13/31) that is oriented in northwest to southeast direction. The runway is 75 feet wide. Runway 13/31 was widened from 60 feet to 75 feet due to concerns with the periodic presence of crosswind conditions (winds that blow across the runway rather than towards the ends of the runway). A parallel taxiway, located 75 feet to the west of the runway provides access for aircraft to the runway ends. A helicopter landing pad, measuring 60-foot by 60-foot, is located at the southeast corner of the Airport property.

Runway end 13 is equipped with precision approach guidance through a published Global Positioning System approach procedure. Both runway ends are equipped with a Visual Approach Slope Indicator (VASI).

The aircraft parking apron includes approximately 81 tie-downs, 147 T-hangars, and 37 conventional hangars, for a total parking capacity of approximately 265 aircraft.⁷ Aviation fuel (100 Low Lead and Jet-A) is available for purchase from DT Group, LLC, the Fixed Base Operator located at DVO.⁸

Exhibit 3-1, Existing Airport Layout, shows the existing Airport location and facilities. DVO is a B-I Design Group Airport intended to serve aircraft with a wing span of less than 49 feet and approach speed of 91 to 120 knots. The current length of the runway (3,300 linear-feet) requires some pilots to restrict the weight of the aircraft well below what the aircraft could accommodate, which is done by either reducing fuel or by reducing passengers and/or cargo.

The first option limits the distance the aircraft can fly, resulting in some aircraft taking off from the Airport, then flying to another nearby airport where they can then fuel up completely before continuing to the final destination. The second option limits the cargo or number of people carried and/or what each person is allowed to bring on the aircraft, which sometimes results in aircraft making two trips to the same destination to transport the desired number of people/cargo, or the need to use two aircraft rather than one. Currently, approximately five to ten

⁷ Landrum & Brown Analysis, 2009.

⁸ Marin County Airport at Gness Field, Marin County Public Works. On-line at: <http://www.co.marin.ca.us/depts/PW/main/airport.cfm>. Retrieved October 18, 2011.

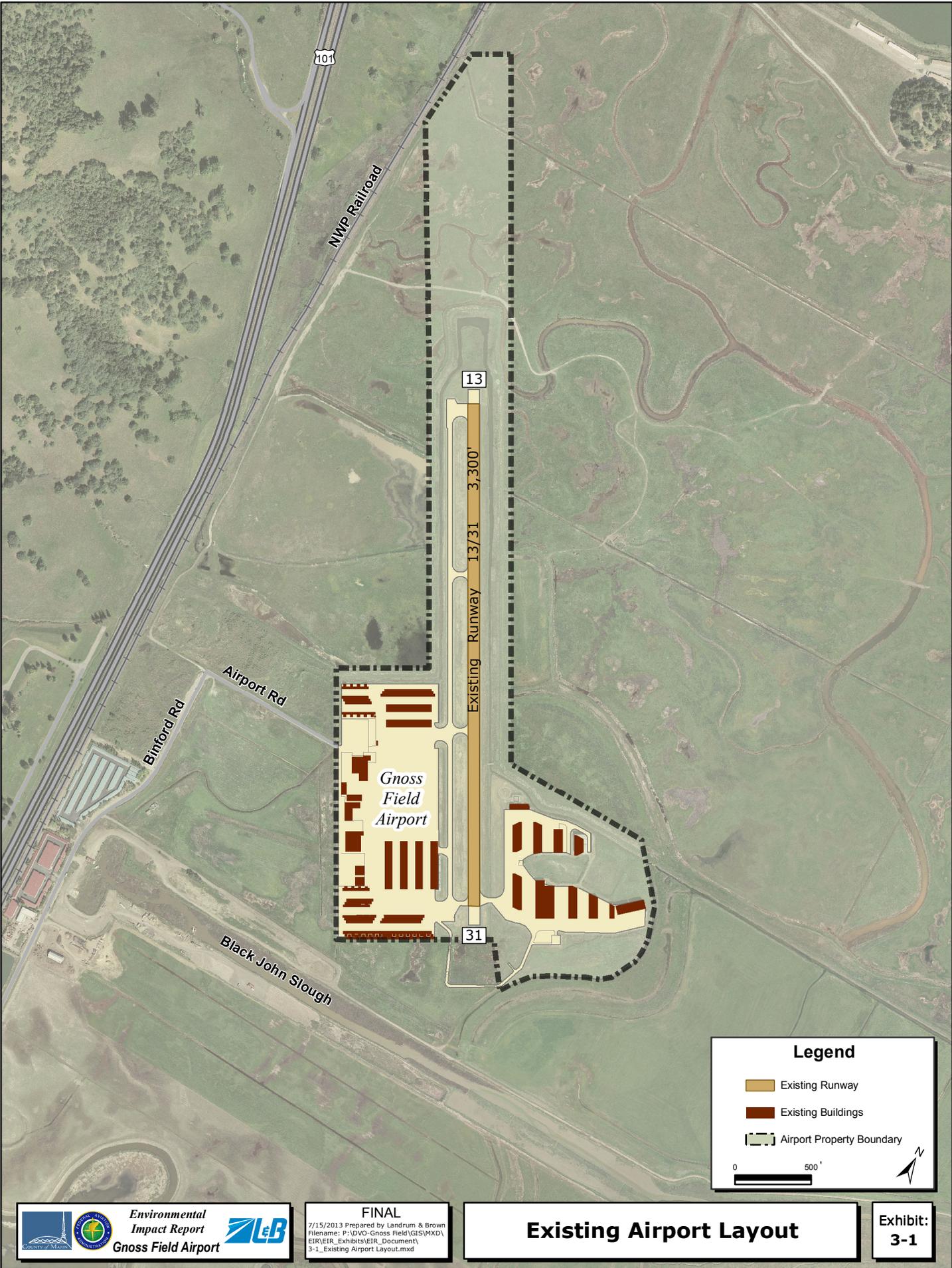
percent of annual takeoffs (~3,000) are weight restricted at DVO. The percentage of aircraft affected by this condition is expected to remain relatively consistent in the future.

3.1.4 RUNWAY LENGTH ANALYSIS

An analysis of the preferred runway length at DVO was conducted using a combination of analytical models and interviews with DVO-based aircraft owners/pilots. It is necessary to include both analytical results with the actual experience of pilots to develop a preferred runway length that takes into account all of the specific conditions at an airport. The analysis is based on the FAA's methodology for determining runway length requirements, which calculates runway length based on the most demanding aircraft (referred to as the 'design-critical aircraft') under the most demanding conditions.⁹

The analysis of runway length at DVO included an assessment of current and future forecasted operating levels at the Airport. As discussed above, DVO serves approximately ~~95,000~~85,500 arrivals and departures each year. Most of those aircraft are single-engine propeller aircraft, but there are also twin-engine propeller and business jet aircraft that operate at DVO. The forecast of aviation activity for DVO indicates that growth at the Airport is expected to be modest (approximately 2.0 percent each year) and that the current types of aircraft operating at the Airport will continue to be present even with the proposed improvements. The proposed extension of the runway would not attract aircraft that are notably larger (e.g., commuter aircraft) due to the limitations of the strength of the runway pavement, the width of the runway, and the distance between the runway and the taxiway. In addition, the forecast of aviation activity identified the ~~Citation~~Cessna 525 business jet as the design aircraft because it was the most demanding aircraft currently using the Airport for at least 500 operations annually. This aircraft is expected to continue to operate at the Airport in the near and long term. The analysis of runway length requirement found that 4,400 feet of runway length would be required to allow existing aircraft, as represented by the critical aircraft at DVO, to operate at Maximum Gross Take Off Weight under hot weather and other adverse weather conditions. ~~allow the Airport to accommodate the design aircraft with a maximum payload in all weather conditions.~~

⁹ FAA Runway Length methodology is found in FAA Advisory Circular (AC) 150/5325-4B Runway Length Requirements for Airport Design. ~~identifies the design aircraft as the most demanding aircraft that has at least 500 annual operations at the airport.~~ For DVO, the Citation-II business Jet (Cessna 525) with a wing span of 46 feet 11 inches and capacity for 10 seats (crew and passengers) is the ~~design-critical~~ aircraft in the B-I design group. The methodology also takes into account Mean Sea Level of the Airport and assumes maximum ~~payload-gross takeoff weight~~ and average hot-day temperatures.



Back of Exhibit 3-1

3.2 PROJECT CHARACTERISTICS

The Sponsor of the Proposed Project is Marin County. Based on the Airport Master Plan and a Preliminary Design Report the project sponsor proposes a runway extension at DVO.¹⁰ The primary elements of the Sponsor's proposal are shown on **Exhibit 3-2, Proposed Project**, and include the following:

- Extend Runway 13/31 from 3,300 feet to a total length of 4,400 feet at the existing runway width of 75 feet;
- Extend the existing FAA standard 120-foot wide Runway Safety Areas (RSAs) centered on the runway centerline to match the length of the runway to meet current Federal Aviation Administration (FAA) guidelines;
- Extend the corresponding taxiway to the full length of the runway;
- Corresponding realignment of drainage channels to drain the extended runway and taxiway;
- Corresponding levee extension to protect the extended runway and taxiway from flooding;
- ~~Re-program~~Relocate the Navigational Aids (NAVAIDs) that pilots use to land at the Airport to reflect the extended runway; and
- Lot Line Adjustment to gain exclusive use of small piece of land south of the Airport necessary to provide for a 240-foot long RSA on the south end of Runway 13/31.

3.3 PROJECT SPONSORS OBJECTIVES

As the Airport sponsor, Marin County has identified the following goals and objectives for the Airport and this project:

1. To make improvements at DVO that are consistent with the 2007 Marin Countywide Plan, the 1997 Update of the Airport Master Plan, and the 1991 Airport Land Use Plan;
2. To make improvements at DVO that are consistent with FAA Advisory Circular 150/5300-13A *Airport Design*, airport design standards for a B-I (small) Design Group Airport intended to serve aircraft with a wing span of less than 49 feet, maximum certificated takeoff weight of 12,500 lbs. or less, and an approach speed of 91 to 120 knots; and
3. To extend the length of the existing runway at DVO, as represented by the critical aircraft, to allow the existing aircraft to operate efficiently during all weather conditions.

¹⁰ Preliminary Design Report, Runway Extension, Gness Field, Prepared by Cortright & Seibold, 2002.

3.4 PUBLIC NOTICE OF EIR PREPARATION

Marin County issued a Notice of Preparation on July 11, 2008 announcing its intent to prepare an Environmental Impact Report (EIR) for the proposed improvements at DVO. In addition, the FAA issued a Notice of Intent in the *Federal Register* on July 11, 2008 to prepare an Environmental Impact Statement (EIS) for the Proposed Project (see Appendix A, *Agency Scoping and Coordination*). Marin County, in cooperation with the FAA, completed a number of scoping activities to determine the range of issues to be analyzed, and to what magnitude they were to be treated in this EIR. These activities included:

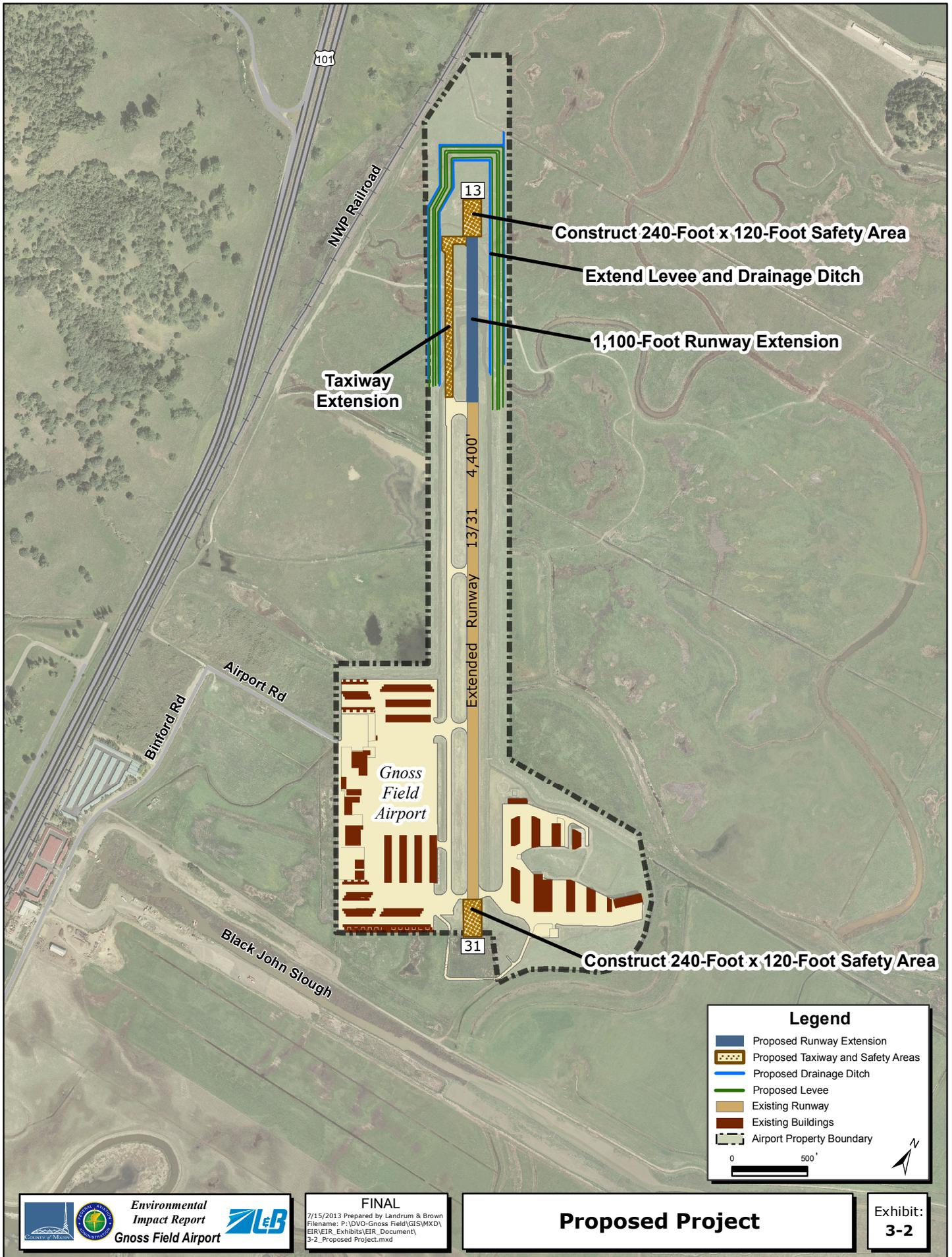
- Early written coordination with Federal, State of California, and local resource agencies;
- Filing of a Notice of Preparation and scheduling a Public Scoping Meeting on the EIR for DVO; and
- Conducting with the FAA a public agency scoping meeting and a public scoping meeting.

In an effort to identify potential issues associated with the Proposed Project, coordination letters were mailed to key agencies responsible for resource protection and public policy. These letters requested responses from Federal, state, and local agencies that might have information pertaining to natural and human resources and their locations within the study area. A copy of the FAA coordination letters and a list of agency addresses are included in Appendix A, as well as, copies of the response letters received from these agencies.

The FAA in co-operation with Marin County conducted an Agency Scoping Meeting at 1:00 PM on August 14, 2008, at the Marin County Civic Center. Members of the FAA, EIR/EIS consultant team, and Marin County were available to respond to questions and discuss issues. Copies of sign-in sheets and other meeting materials for the Agency Scoping Meeting are also included in Appendix A.

A Public Scoping Meeting was held at 6:30 PM on August 14, 2008, at the Marin Humane Society Auditorium, Novato, California. This meeting, afforded the general public an opportunity to review and comment on the preliminary environmental analysis and the Proposed Project. Members of the FAA, EIR/EIS consultant team, and Marin County made a presentation about the project and were available to listen to questions from the public. Copies of the sign-in sheets, advertising, and other meeting materials used for the Public Scoping Meetings are provided in Appendix B, *Public Involvement*.

Comment forms were provided at the scoping meetings to solicit and encourage written comments. Copies of all public comments received throughout the project are provided in Appendix B.



Back of Exhibit 3-2

The County of Marin issued a Notice of Completeness of the Draft EIR for the Gness Field Airport Proposed Extension of Runway 13/31 and circulated the Draft EIR for a 60-day governmental agency and public review on December 9, 2011. During the public review period the Marin County Board of Supervisors in association with the FAA held a public hearing on January 10, 2012 to receive public comment on the Draft EIS/EIR. The County and the FAA accepted comments on the Draft EIS/EIR through February 6, 2012.

All oral comments made at the public hearing on the Draft EIS/EIR and all written comments received during the 60-day public review period are addressed in this Final EIR. A copy of all comments received on the Draft EIS/EIR can be found in Appendix P. The FAA and Marin County have reviewed and responded to all comments received on the Draft EIS and Draft EIR. See Appendix Q, *Response to Comments* for responses to all comments received on the Draft EIS/Draft EIR.

3.5 REQUIRED PROJECT APPROVALS AND PERMITS

Marin County prepared this EIR, in accordance with the provisions of the California Environmental Quality Act (CEQA). Specifically, this chapter complies with CEQA Title 14 Natural Resources, Division 6 Resources Agency, Chapter 3 Guidelines for Implementation of the California Environmental Quality Act, Article 9 Contents of Environmental Impact Reports, § 15124 Project Description, which states that the EIR shall include the objectives sought by the proposed action, including the underlying purpose of the Proposed Project.

The approvals and permits are specifically linked to the requirements to provide sufficient runway length to accommodate existing demand. It is anticipated that the application for Federal assistance to finance the proposed improvement program under the Airport and Airways Improvement Act (AIA), as amended and recodified at 49 U.S.C. § 47101 et seq., will be submitted to the FAA for several elements contained in the Proposed Project. The proposed improvement projects under consideration in the EIR are planned to allow existing aircraft, as represented by the critical aircraft at DVO, to operate at Maximum Gross Take Off Weight under hot weather and other adverse weather conditions. allow the Airport to accommodate existing aviation traffic and passenger demand, as well as demand for the foreseeable future.

3.5.1 FEDERAL APPROVALS

Marin County would ask for several Federal actions to directly or indirectly occur. These include:

- Federal environmental approval necessary to proceed with processing of Federal funding for those development items qualifying under the Airport and Airway Improvement Act as amended;
- Unconditional approval of the Airport Layout Plan (ALP) to depict the land acquisition, proposed runway extensions and parallel taxiway extension pursuant to 49 United States Code (USC) §§ 40103(b) and 47107(a)(16);

- Air traffic control and airspace management procedures designed to affect the safe and efficient movement of air traffic to and from the proposed runway development. Such actions would include, but are not limited to, the establishment or modification of flight procedures and the installation and/or relocation of Navigational Aids (NAVAIDs) associated with the proposed runway and taxiway extension.
- Determination of eligibility for Federal assistance for the proposed projects under the Federal grant-in-aid program authorized by the Airport and Airway Improvement Act of 1982, as amended (49 USC § 47101 et seq.);
- Determinations under 49 USC §§ 47106 and 47107 relating to the eligibility of the Proposed Action for federal funding under the Airport Improvement Program (AIP) to assist with construction of potentially eligible development items shown on the ALP;
- Determination of the effects of the proposed extension of the runway and parallel taxiway and the corresponding increase in size of the associated runway safety area upon the safe and efficient use of navigable airspace pursuant to 14 Code of Federal Regulations (CFR) Part 77, Objects Affecting Navigable Airspace. The FAA must determine if the proposed improvements, as proposed by Marin County are consistent with the existing airspace utilization and procedures;
- Determination under 49 USC § 44502(b) that the airport development is reasonably necessary for use in air commerce or in the interests of national defense;
- Approval of further processing of an application for Federal assistance for near-term eligible projects using federal funds from the Airport Improvement Program, as shown on the ALP; and
- Approval of a Construction Safety and Phasing Plan to maintain aviation and airfield safety during construction pursuant to FAA Advisory Circular 150/5370-2F *Operational Safety on Airports During Construction*.

~~Several Federal actions are directly or indirectly proposed to occur. Marin County would request Federal actions related to the following issues:~~

- ~~Federal environmental approval necessary to proceed with processing of Federal funding for those development items qualifying under the Airport and Airway Improvement Act as amended;~~
- ~~Unconditional Federal approval of the Airport Layout Plan (ALP) to depict the proposed improvements pursuant to 49 U.S.C. 40103 (b) and 47107 (a)(16); and~~
- ~~Development of air traffic control and airspace management procedures designed to affect the safe and efficient movement of air traffic to and from the proposed runway development. Such actions would include, but are not limited to, the establishment or modification of flight procedures and the installation and/or relocation of Navigational Aids (NAVAIDs) associated with the proposed runway and taxiway extension.~~

The proposed improvement projects under consideration in the EIR are planned to allow the Airport to accommodate existing aviation traffic and passenger demand, as well as demand for the foreseeable future.

3.5.2 STATE, COUNTY, AND LOCAL APPROVALS

Several state, county, and local actions/approvals are directly or indirectly required relevant to the Proposed Project.

State approvals include:

- California Air Resource Board, Air Quality Conformity Determination per FAA Order 5050.4A.
- California Department of Fish and Game – Region 3 - California Fish and Game Code 1600 et seq., Streambed Alteration Agreement for any activity proposing the alteration of the bed, bank or channel of any river, stream, or lake.
- California Department of Transportation (Caltrans) - Aeronautics Division – State Airport Permit. As a Responsible Agency, Caltrans will review the EIR impact analyses, findings, and proposed mitigation measures. Caltrans is considered to have technical expertise in the fields of land use compatibility, as well as airport-related noise and safety impacts.
- California Regional Water Quality Control Board – San Francisco Bay Area, Region 2 – Federal Clean Water Act Section 401 Water Quality Certification, Notice of Intent to Comply with the Construction Activities Storm Water General Permit, and a National Pollutant Discharge Elimination System General Industrial Activities Storm Water Permit pursuant to Section 402 of the Clean Water Act.
- State Historic Preservation Office – the State Historic Preservation Office has authority under Section 106 of the National Historic Preservation Act of 1966 as amended, for reviewing proposed projects for potential impacts/adverse effects to cultural, historical, and archaeological sites.

Marin County, as the public agency responsible for carrying out the Proposed Project, will act as the CEQA Lead Agency and would be responsible for the following approvals:

- Marin County Airport Land Use Commission – Review proposed expansion plans per the adopted Airport Master Plan and recommend consistency determination be made by Marin County Board of Supervisors;
- Marin County Board of Supervisors;
 - Consistency Determination, per recommendation by Airport Land Use Commission;
 - Certification of the Final EIR; and
 - Adoption of the Mitigation Monitoring and Reporting Program;

- Decision on the proposed project and filing of the Notice of Determination (NOD);
- Marin County Department of Public Works – Grading and Building Permits, and Engineering Review of construction plans for compliance with grading and excavation; floodplain; urban runoff pollution prevention; and watercourse division or obstruction development standards.

Other Local Approvals include:

- Bay Area Air Quality Management District, Air Quality Conformity Determination

3.5.3 TIME FRAME FOR ACTIONS

Marin County is preparing this EIR to evaluate the impact of the proposed improvements and their alternatives on the environment. The Proposed Project under consideration in the EIR is planned to allow the Airport to accommodate existing aviation traffic and passenger demand, as well as demand for the foreseeable future. The FAA is preparing a concurrent EIS, to be released at a future date, for the Proposed Project.

The Proposed Project or an alternative will be authorized to proceed if the FAA issues a Record of Decision (ROD) formally approving the project, Marin County Board of Supervisors approves a project, and the U.S. Army Corps of Engineers issues a Section 404 permit authorizing fill of waters (wetlands) of within Clean Water Act jurisdiction. Subsequent to the ROD and Board of Supervisors decision, final design for the proposed airfield would begin, including a request for a construction grant. Relocation of NAVAIDs and updating of approach procedures would be conducted concurrent with the construction and would be implemented upon completion of the construction.