PROF	POSED JOBY AVIATION MANUFACTURING FACILITY
	at
	Marina Municipal Airport Monterey County, California
	Prepared for:
	City of Marina 211 Hillcrest Aveue Marina, California 93933
	U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION As lead Federal Agency pursuant to the National Environmental Policy Act of 1969
	Prepared by:
	Coffman Associates, Inc. Scottsdale, Arizona
	April 2021

GENERAL INFORMATION ABOUT THIS DOCUMENT

WHAT'S IN THIS DOCUMENT? This document contains a Draft Environmental Assessment (EA) for the City of Marina's proposed Joby Aviation Manufacturing Facility at the Marina Municipal Airport in Monterey County, California. The city, as Airport Sponsor, has the obligation to make the Airport as self-sustaining as possible to comply with national policy and to minimize, and preferably eliminate, the use of any city general fund revenues to support the Airport. The Proposed Project would result in larger revenue to the Airport, which will be used to cover the cost of operating and maintaining the Airport and to ensure its long-term viability.

The City of Marina is asking the Federal Aviation Administration (FAA) to "unconditionally" approve revisions to the airport layout plan (ALP) to depict the proposed airport development. This EA has been prepared pursuant to the requirements of Section 102(2)(c) of National Environmental Policy Act of 1969 (NEPA) (42 United States Code §§4321 et seq.) and the implementing regulations for NEPA (40 Code of Federal Regulations §§1500-1508). FAA is the lead federal agency under NEPA for airport development actions.

PROPOSED PROJECT: The Proposed Project involves the development of 25.7 acres on the Marina Municipal Airport between the planned Marina Airport Business Park and an existing taxilane with aeronautical/mixed-use land uses. The Proposed Project consists of the construction of a single story, 580,000-square foot steel building, which would be used for producing lightweight, all-electric, vertical take-off and landing (VTOL) aircraft. Activities proposed within the new building include manufacturing, composite fabrication, assemblage of aircraft, parts testing, and research and development. All manufacturing would be conducted within the building. Operations would also include aircraft testing and integration utilizing airport taxiways and remote test areas for propulsion testing, antenna performance testing, acoustics measurement testing, hover testing and flight-testing of the manufactured prototype.

WHAT SHOULD YOU DO? Read the Draft EA on this Proposed Project and submit comments if you choose to do so. The Draft EA is available for review at: https://cityofmarina.org. (If a hard copy is required, please contact the Assistant City Manager's Office at (831) 884-1240 or mmogensen@cityofmarina.org.)

You may submit your written comments by letter or e-mail to the following address **not later than 5:00 PM** - **Pacific Daylight Time, May 21, 2021.** Please allow enough time for mailing. The City of Marina must **receive** your comments by the deadline, not simply postmarked by that date.

Mr. Matt Mogensen, Assistant City Manager
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Marina, CA 93933

mmogensen@cityofmarina.org

WHAT HAPPENS AFTER THIS? Per the *National Environmental Policy Act*, written responses to comments received during the public review period of the Draft EA will be prepared, and a Final EA will be submitted to the FAA for approval and consideration. Following review of the Final EA, the FAA will either issue a Finding of No Significant Impact or decide to prepare a federal Environmental Impact Statement.

PRIVACY NOTICE: Before including your address, phone number, e-mail address, or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comment to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.



DRAFT ENVIRONMENTAL ASSESSMENT FOR A PROPOSED JOBY AVIATION MANUFACTURING FACILITY

ΑT

MARINA MUNICIPAL AIRPORT Monterey County, California

Prepared For

City of Marina

U.S. Department of Transportation Federal Aviation Administration

By

Coffman Associates, Inc.

APRIL 2021



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CHAPTER ONE PURPOSE AND NEED



Chapter One PURPOSE AND NEED

Joby Aviation Manufacturing Facility

Environmental Assessment

1.1 INTRODUCTION

The City of Marina (city) is the owner and operator of the Marina Municipal Airport (Airport or OAR), which is located north of Reservation Road near the intersection of Imjin Parkway, approximately two miles east of the city's central business district. The city is in the northern portion of Monterey County (county), California (Exhibit 1A). The city is seeking to develop 25.7 acres of airport property between the planned Marina Airport Business Park and an existing taxilane with aeronautical/mixed use land uses via a ground lease with a private party (Proposed Project). The Proposed Project consists of the construction of a single story, 580,000-square foot (sf) steel building, which would be used for producing lightweight, all-electric, vertical take-off and landing (VTOL) aircraft. Approval of a change to the airport layout plan (ALP) to depict the Proposed Project constitutes a federal action.

This Environmental Assessment (EA) has been prepared pursuant to the requirements of Section 102(2)(c) of the *National Environmental Policy Act of 1969* (NEPA) (Title 42 United States Code [U.S.C.] Sections 4321 et seq.), the implementing regulations for NEPA (i.e., the President's Council on Environmental Quality [CEQ] Regulations) (Title 40 Code of Federal Regulations [C.F.R.] Sections 1500-1508), and Section 509(b)(5) of the *Airport and Airway Improvement Act of 1982* (Public Law 97-248), as amended. This EA has also been prepared in accordance with Federal Aviation Administration (FAA) Order 1050.1F, *Environmental Impacts: Policies and Procedures* (FAA 2015) and FAA Order 5050.4B, *National Environmental Policy Act Implementing Instructions for Airport Actions* (FAA 2006). FAA is the lead federal agency to ensure compliance with NEPA for airport development actions.

This chapter provides background information on the Airport and project site, identifies the project's purpose and need, describes the Proposed Project, lists associated federal actions, and outlines the EA's format. Following publication of a Draft EA, an agency/public review and comment period will occur, subject to proper noticing requirements. The Final EA will include an appendix that documents the public involvement process and that contains all comments received during the Draft EA comment period. Written responses to comments received during the Draft EA comment period will also be provided.

1.2 BACKGROUND INFORMATION

The Marina Municipal Airport encompasses approximately 845 acres of property and was formerly known as Fritzsche Army Airfield, originally constructed and used to support the military functions of the former Fort Ord Army post. The Airport was conveyed to the City of Marina to be maintained for the use and benefit of the public as an airport in 1995 as a part of the Fort Ord Reuse Plan (Reuse Plan) (Fort Ord Reuse Authority [FORA] 1997). At the same time, University of California Monterey Bay Education, Science and Technology (UC MBEST) received approximately 1,100 acres of land adjacent to the Airport to the south and east.





Since the conveyance of the Airport to the city, its facilities have continued to be improved through development grants from the federal and state governments. The Airport is categorized as a "local" general aviation facility within the *National Plan of Integrated Airport System* (NPIAS) (2019-2023) (FAA 2018). FAA-approved forecasts from the Marina Municipal Airport Master Plan predict a moderate growth rate at the Airport through 2033 (1.49 percent), with projected annual operations of 35,900 by 2023 (City of Marina 2018b, Table 2L). The most recent accounting of based aircraft by the Airport reports 52 based aircraft (2 jets, 2 turbo prop, and 47 single-engine) and 1 ultra-light (Crechriou, J., Airport Services Manager, Marina Municipal Airport, 2020b).

The Airport is served by a single runway (Runway 11-29) oriented in an east-west manner at an elevation of 136 feet (41 meters) above mean sea level (amsl). It is 3,483 feet long and 75 feet wide and is strength-rated at 20,000 pounds for aircraft with single wheel landing gear configurations and 50,000 pounds for dual wheel landing gear configurations. The airfield system also includes four taxiways and two hold aprons. Aircraft aprons, various types of hangars, a fuel farm, a fire station, offices and an administration building, and several non-aviation businesses are also located at the Airport (**Exhibit 1B**).

In the southeast corner of the Airport, land is reserved for a future Airport Business Park (Exhibit 1B). This land is part of the city's specific plan area for the Marina Municipal Airport Business and Industrial Park/UC MBEST Center. The specific plan area encompasses both Airport and UC MBEST land (75 acres each), with the associated planning document representing a joint collaborative planning effort on the part of the city and the university (LSA Associates, Inc. [LSA] 2020). The city-owned land in the specific plan area is located on the Airport and is largely undeveloped, except for one-half of the Research Drive right-of-way improvements and various paved areas associated with airport taxiway and apron areas that connect with the project site.

Former Fort Ord was listed as a National Priorities List (NPL) (i.e., Superfund) site in February 1990. The southeast corner of the Airport, including the project site, is located within United States (U.S.) Army parcel number L1.5. An Environmental Baseline Survey for the Airport undertaken at that time identified several hazardous and toxic waste sites at the Airport, including within the parcel number L1.5 (United States Army Corps of Engineers [USACE] 1995). (This area is also within the boundaries of a designated Fort Ord Habitat Management Plan "development" parcel [USACE 1997].¹) Under the Federal Facilities Agreement (FFA), the U.S. Army was responsible for conducting the Superfund clean-up process under the oversight of the U.S. Environmental Protection Agency (U.S. EPA) (FORA 1997, Figure 4.6-2). Before any potentially contaminated land or remediated parcel could be transferred to non-federal agencies (i.e., the City of Marina), the U.S. Army and other FFA agencies had to complete a remedial action Record of Determination certifying that the lands were clean and protective of human health and the environment (FORA 1997, page 4-83). A Finding of Suitability to Transfer (FOST) for the portion of the Airport containing the project study area was completed in 1995 (U.S. Department of the Army 1995).²

Draft EA 1-3

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¹ The 1993 Final Biological Opinion on the disposal and reuse of former Fort Ord required that a habitat management plan be developed and implemented to reduce the incidental take of listed species and loss of habitat that supports these species (United States Fish and Wildlife Service [USFWS] 1993). The Fort Ord Installation-Wide Multispecies Habitat Management Plan (HMP) was prepared to assess impacts on vegetation and wildlife resources and provide mitigation for their loss associated with the disposal and reuse of former Fort Ord (USACE 1997). The HMP is a legally binding document, and all recipients of former Fort Ord lands are required to abide by its management requirements and procedures. The HMP, deed restrictions, and Memoranda of Agreement between the U.S. Army and various land recipients provide the legal mechanism to ensure HMP implementation.

² The project study area is contained in the area noted as Phase 1 in the FOST.



1.3 PURPOSE AND NEED

The purpose of the Proposed Project is to support the long-term viability of the Airport by providing a sustainable revenue source from a parcel of land that is currently vacant. The City of Marina recognizes that 49 U.S.C. §47101 (a)(13) establishes that it is national policy that airports should be as self-sustaining as possible under the circumstances existing at each airport.

The project site is outside the Air Operations Area (AOA)³ and has been identified for aeronautical/mixed use on the most recent proposed ALP currently under review by FAA. The city, as Airport Sponsor, has the obligation to make the Airport as self-sustaining as possible to comply with national policy and to minimize, and preferably eliminate, the use of any city general fund revenues to support the Airport. The Proposed Project would result in larger revenue to the Airport, which will be used to cover the cost of operating and maintaining the Airport and to ensure its long-term viability.

The proposed 25.7-acre development would also encourage the eventual build-out of the Marina Airport Business Park, further enhancing airport revenue, and facilitate the consolidation of Joby Aviation activities at the Airport. The placement of a large aviation-related manufacturing building in the southeast corner of the Airport will provide a land use that will complement both the Airport's aeronautical activities as well as the Marina Airport Business Park's future development. Placement of the Joby Aviation building adjacent to the Airport's available non-aeronautical land would allow the future placement of additional Joby Aviation facilities, if needed, to occur within appropriately zoned non-aeronautical or aeronautical/mixed use areas.

FAA Purpose and Need

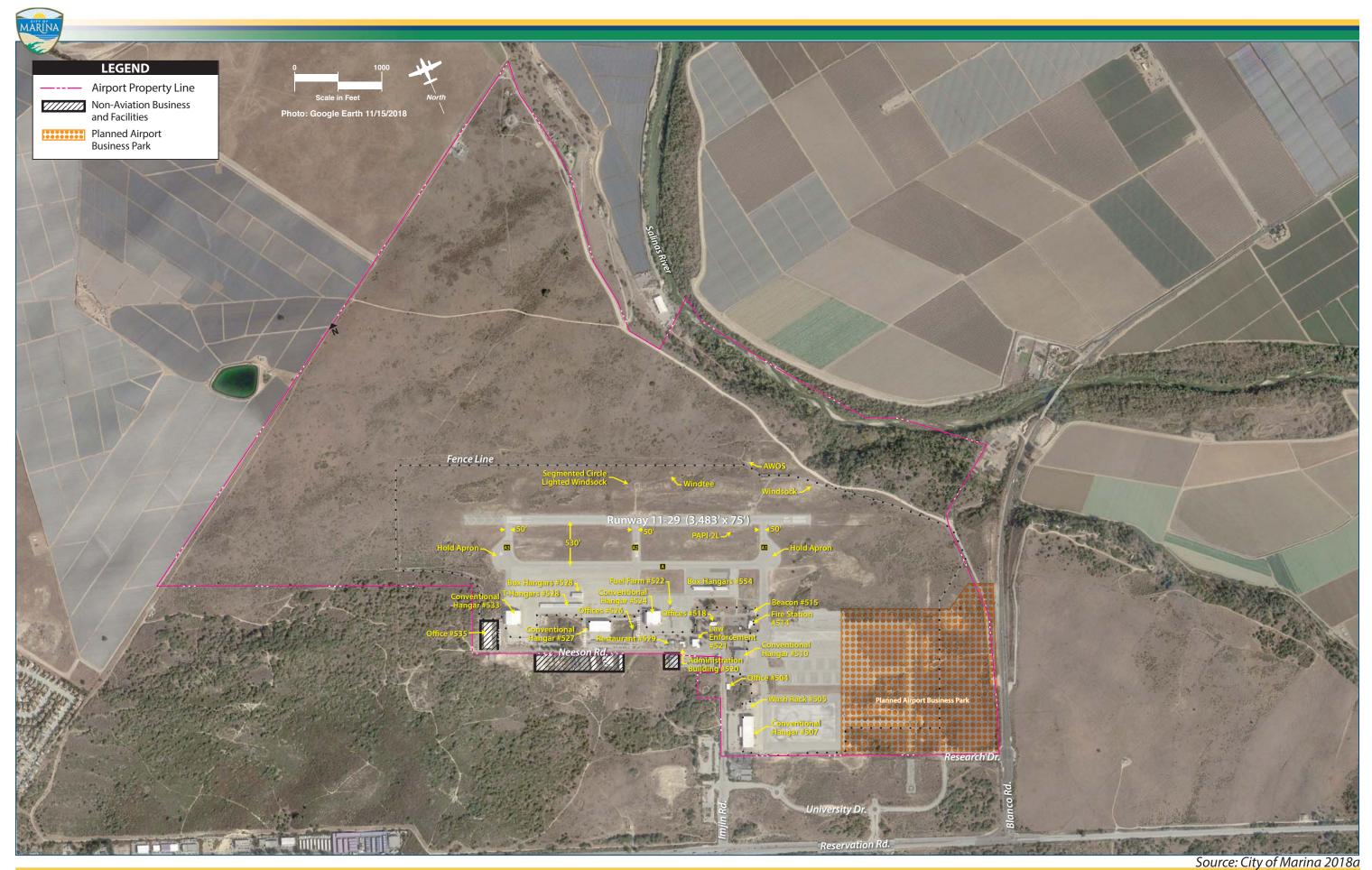
FAA's overall purpose and need is to fulfill its statutory mission and ensure the safe and efficient use of navigable airspace in the U.S. pursuant to 49 U.S.C. §47101 (a)(1). FAA must ensure that the Proposed Project does not derogate the safety of aircraft operations at the Marina Municipal Airport.

Additionally, the purpose of the Proposed Project in connection with the city's request to modify the existing ALP is to ensure the proposed improvements to the Airport do not adversely affect the safety, utility, and efficiency of the Airport. Pursuant to 49 U.S.C. §47101 (a)(16), the FAA Administrator (under authority delegated by the Secretary of Transportation) must approve any revision or modification to an ALP regarding safety, utility, and efficiency of an airport before the revision or modification takes effect. The Administrator's approval reflects a determination that the proposed alterations to the Airport, reflected in the ALP revision or modification, do not adversely affect the safety, utility, or efficiency of the Airport. The FAA also needs to support national policy as described in 49 U.S.C. §47101 (a)(13) that airports be as financially self-sustaining as possible.

Draft EA 1-4

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³ The Air Operations Area (AOA) is that area of the airport used or intended to be used for landing, takeoff, or surface maneuvering of aircraft. The AOA includes the active runways, taxiways, ramp, and turf areas. The AOA is considered part of the Airport Restricted Area and is off-limits to the public without proper access clearance.







1.4 DESCRIPTION OF THE PROPOSED PROJECT

The Proposed Project site is relatively flat and consists mostly of concrete pavement with small pockets of undeveloped areas (approximately 2.5 acres of the overall 25.7-acre area). The site can be accessed from the airfield via a taxilane (**Exhibit 1C**). Vehicular access to the site would be via an access road/driveway that extends from Imjin Road to the southeast corner of the site.

A single story, 580,000-sf steel building would be constructed to provide space for component fabrication, 3D printing, assembly, paint, offices and meeting space, shipping and receiving, a kitchen/cafeteria area, and a lobby/main entry for the manufacturing of VTOL aircraft (**Exhibits 1D** and **1E**). Shipping and receiving docks would be constructed for semi-trucks and bobtail truck deliveries. The building would extend to a height of 51 feet (ft) for the main roof area and up to 56 ft where screened roof-mounted electrical equipment would be located.

The project would include an equipment yard that would be surrounded by an approximately 10-ft-high fence to provide separation from the parking lot. The equipment yard would include two 9,000-gallon inert gas tanks, two 15-ft x 15-ft cooling towers, five 11-ft x 40-ft autoclaves that would be set into the ground (and extend approximately five feet into the building), a 2,010-sf H-1 storage building,⁴ and dust collectors. The project would also include 627 parking sites, landscaping, two detention basins, and a Monterey spineflower (*Chorizanthe pungens* var. *pungens*) avoidance area.

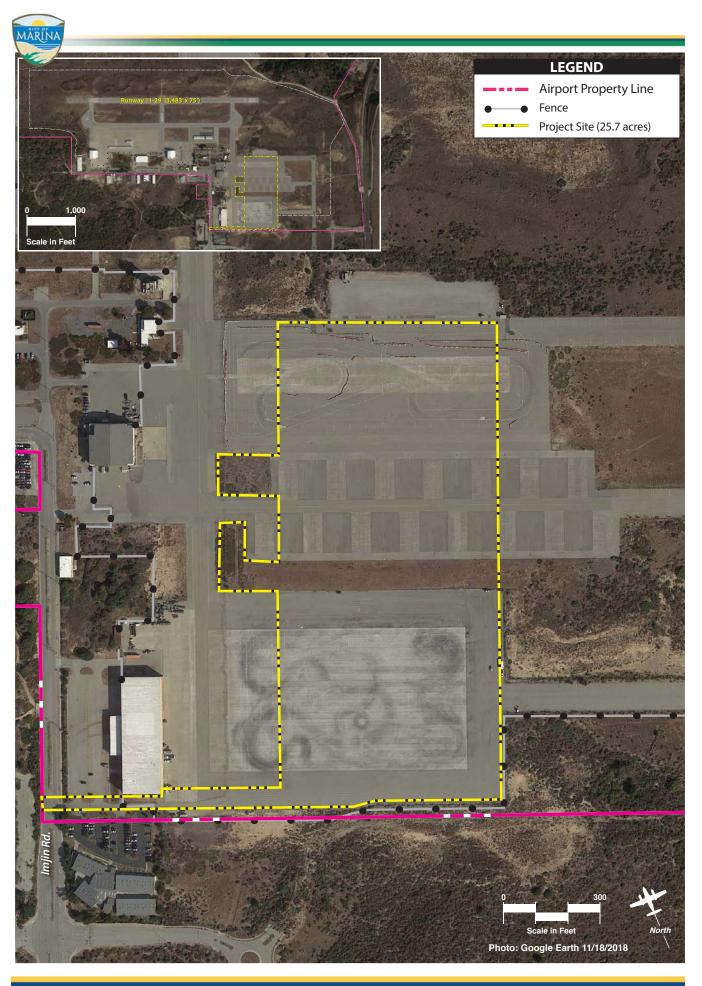
Activity proposed within the new building includes manufacturing, composite fabrication, assemblage of aircraft, parts testing, and research and development. The manufacturing process includes aircraft part layup, oven curing, trimming, adhesive bonding, and painting. Operations would also include utilization of taxiways and remote test areas on the Airport for propulsion testing, antenna performance testing, acoustics measurement testing, hover testing, and flight testing.

All manufacturing would be conducted within the building in two shifts with two-thirds of the manufacturing employees working during the day shift and one-third working a late evening or overnight shift. Based on the most recent estimates from the project applicant, a maximum of 400 manufacturing employees would be on-site per day (Brennan, J., Manufacturing Lead, Joby Aero, Inc. 2020). Additional support staff would also be on or connected to the premises. The total number of direct and indirect jobs associated with the Proposed Project is unknown, as some support functions could occur from off-site Joby campuses. At this time, and in part due to the unprecedented changes occurring in job placement due to the COVID-19 pandemic, more detailed information is considered speculative.

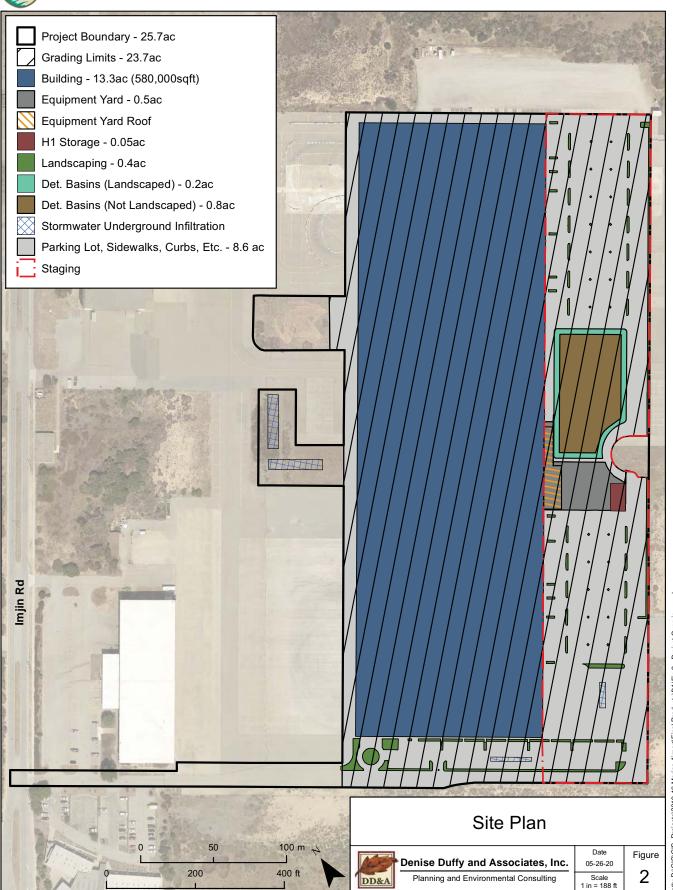
Draft EA 1-7

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⁴ According to the 2010 California Fire Code (24 California Code of Regulations [CCR] Part 9), high-hazard Group H occupancy includes, among others, the use of a building or structure, or a portion thereof, that involves the manufacturing, processing, generation or storage of materials that constitute a physical or health hazard in quantities in excess of those allowed in control areas complying with Section 2703.8.3, based on the maximum allowable quantity limits for control areas. Hazardous occupancies are classified in Groups H-1, H-2, H-3, H-4 and H-5; Group H-1 includes buildings and structures containing materials that pose a detonation hazard.







Source: DDA 2020



The Proposed Project may be constructed in one or two phases (290,000 sf per phase) (see below under *Construction Activity*); however, the whole of the Proposed Project is analyzed within this EA. If the project is phased, Phase 1 could involve two to five helicopter flights out of the Airport per week for employees, executives, or guests. At final buildout, the project applicant estimates that approximately 10-20 company flights per month (inclusive of the Phase 1 helicopter trips) could occur using a helicopter, a single-engine aircraft, such as a Cessna 172, or a small jet, such as a Cessna Citation (Gross, A., Sustainability Manager, Joby Aero, Inc. 2020). These flights would be primarily within the daylight hours. The Proposed Project would not have an impact on flight patterns. There would be no change in airfield configuration or impacts to airfield navigation aids.

Construction Activity

If the project is phased, Phase 1 construction would occur over a period of 15 months, beginning in 2021 and continuing until the anticipated completion in mid-2023; Phase 2 would be completed within three to five years after the first phase is operational over a second approximately 15-month construction period. Construction would be from Monday through Saturday between the hours of 7 AM to 5 PM.

Minimal grading would be necessary. Approximately 28,500 cubic yards (cy) of cut and 28,500 cy of fill are anticipated. Existing paving to be removed would be crushed and used as engineered fill. No grading materials would be exported from the site or would be required to be imported onto the site. The Proposed Project would not result in an increase of impervious surfaces at the Airport.

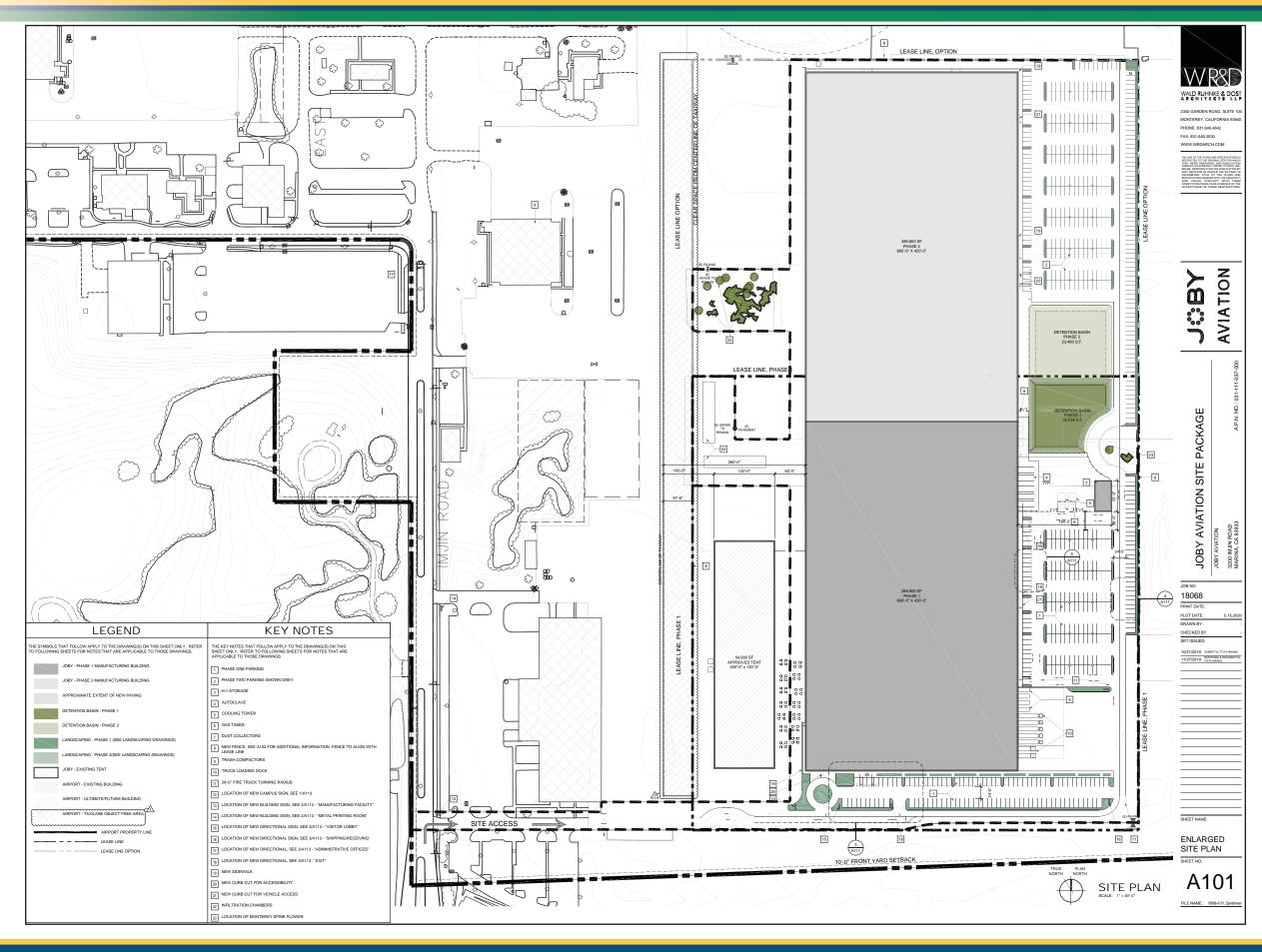
If the building is constructed all at once, construction staging would occur in areas designated for Phase 2 parking. However, if the project is phased, construction staging for Phase 1 would be located on future Phase 2 development areas and Phase 2 construction staging would occur in areas designated for Phase 2 parking. All project activities, including staging, would remain within the overall project limits shown in **Exhibits 1C** and **1D**.

1.5 REQUESTED FEDERAL ACTIONS

The specific federal actions that are requested include:

- Unconditional approval of the Airport Layout Plan, as portions of the proposed development project may have a material impact on aircraft operations at, to, or from the airport, pursuant to 49 U.S.C. Sections 40103(b), 44718, and 47107(a)(16) and 14 C.F.R. Part 157.
- Release of obligations to use portions of the airport property that may be deemed non-aeronautical land uses, pursuant to 49 U.S.C. Section 47153(c).
- FAA determination of the Proposed Project's effects on the "safe and efficient use of navigable airspace."





Source: Joby Aviation

Draft EA

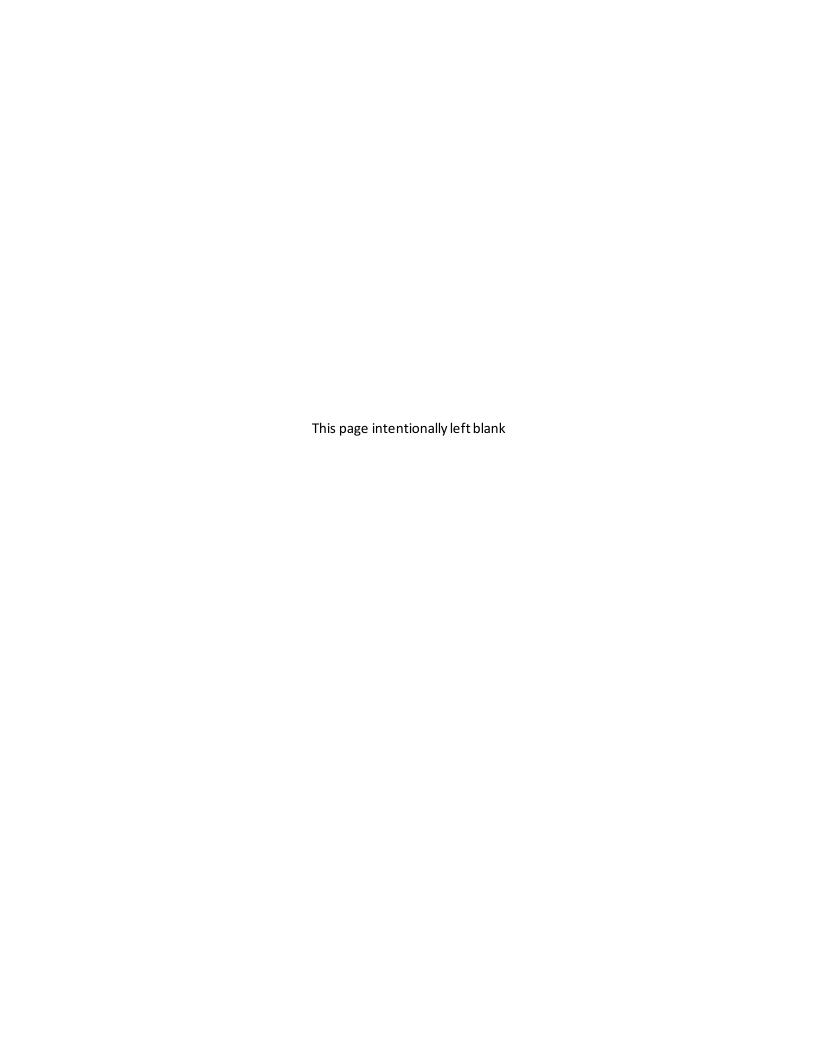




1.6 EA DOCUMENT ORGANIZATION

This EA evaluates the Proposed Project by organizing the information as shown below:

Chapter 1, Purpose and Need	Provides background information on the Airport and the project site, the purpose and need, a brief description of the Proposed Project, and requested federal actions.
Chapter 2, Alternatives	Provides an overview of the identification and screening of alternatives considered as part of the environmental evaluation process.
Chapter 3, Affected Environment	Describes existing environmental conditions within the project study area.
Chapter 4, Environmental Consequences and Mitigation	Discusses and compares the environmental impacts associated with the Proposed Project, the No Action alternative, other alternatives considered for analysis (if any), and avoidance, minimization, or mitigation measures, where applicable.
Chapter 5, Coordination and Public Involvement	Discusses the coordination and public involvement associated with the EA process.
Chapter 6, List of Preparers	Identifies the EA reviewers/preparers and their qualifications.
Chapter 7, References	Lists websites and other source material used in document preparation.





CHAPTER TWO ALTERNATIVES



Chapter Two ALTERNATIVES

Joby Aviation Manufacturing Facility

Environmental Assessment

2.1 INTRODUCTION

This chapter identifies reasonable alternatives for evaluation in this Environmental Assessment (EA) based on the purpose and need identified in Chapter One. Council on Environmental Quality (CEQ) regulations (Title 40 Code of Federal Regulations [C.F.R.] Section 1502.14) regarding implementation of the *National Environmental Policy Act* (NEPA) require that federal agencies perform the following tasks:

- Rigorously explore and objectively evaluate all reasonable alternatives and, for alternatives which were eliminated from detailed study, briefly discuss the reasons for elimination;
- Devote substantial treatment to each alternative considered in detail, including the Proposed Action, so that reviewers may evaluate their comparative merits;
- Include reasonable alternatives not within the jurisdiction of the lead agency; and
- Include the alternative of No Action.

As stated in Federal Aviation Administration (FAA) Order 5050.4B, paragraph 706 (d)(7), an alternative can be eliminated from further consideration when the alternative has been judged "not reasonable." Whether a proposed alternative is reasonable depends, in large part, upon the extent to which it meets the purpose and need (FAA Order 1050.1F, paragraph 7-1.1[e]). FAA Orders 1050.1F and 5050.4B also state that "an EA may limit the range of alternatives to the proposed action and no action when there are no unresolved conflicts concerning alternative uses of available resources (FAA Order 1050.1F, para. 6-2.1[d]; FAA Order 5050.4B, para. 706[d][5]). As discussed above, 40 C.F.R. 1502.14(c) requires the evaluation of the No Action alternative regardless of whether it meets the stated purpose and need or is reasonable to implement.

2.2 OVERVIEW OF THE ALTERNATIVES SCREENING PROCESS

The alternatives evaluation of the Proposed Project involves a two-step screening process (**Exhibit 2A**). The first step addresses whether the alternatives are "reasonable." An alternative is considered reasonable if it meets the purpose and need as identified in Section 1.3.

If an alternative is deemed reasonable, then the second step determines if an alternative is "feasible." The feasibility of an alternative is established by considering other important factors, such as logistical, technical, or cost considerations.

<u>Step 1: Reasonable</u>: The following criteria were considered to determine if proposed alternatives were reasonable based on the stated purpose and need :



Alternatives Screening Criteria

Is the alternative "Reasonable"? Could the alternative meet the basic purpose and need for the Proposed Project?

Would the alternative:

STEP

1

Provide the Airport with revenue support?

Provide future opportunities to complement the Marina Airport Business Park and consolidate Joby Aviation activities at the Airport?

If Yes to all, continue to Step 2

Is the alternative "Feasible" based on costs?

Would the alternative:

Result in unacceptable or unfavorable costs when compared to other proposed alternatives?

STEP 2

If No to all

Retain Alternative for analysis.



- 1. Would the alternative provide the Airport with revenue support?
- 2. Would the alternative provide future opportunities to complement the Marina Airport Business Park and consolidate Joby Aviation activities at the Airport?

<u>Step 2: Feasible</u>: If an alternative is considered reasonable, it is then evaluated in terms of feasibility. The following criterion was considered to determine if proposed alternatives were feasible:

1. Would the alternative result in unacceptable or unfavorable costs when compared to other proposed alternatives?

2.3 PROPOSED PROJECT ALTERNATIVE

The Proposed Project alternative would construct a single story, 580,000-square-foot (sf) steel building to provide space for the manufacturing of lightweight, all-electric, vertical take-off and landing (VTOL) aircraft on a 25.7-acre site between the planned Marina Airport Business Park and an existing taxilane at Marina Municipal Airport. Shipping and receiving docks would be constructed for semi-trucks and bobtail truck deliveries. The building would extend to a height of 41 feet (ft) for the main roof area and up to 51 ft where screened roof-mounted electrical equipment would be located. The project would also include an equipment yard that would be surrounded by an approximately 10-ft-high fence to provide separation from the parking lot. Vehicular access to the Proposed Project site would be via an access road/driveway that extends from Imjin Road to the southeast corner of the site.

Operations proposed within the new building include manufacturing, composite fabrication, assemblage of aircraft, parts testing, and research and development. The manufacturing process includes aircraft part layup, oven curing, trimming, adhesive bonding, and painting. Operations would also include aircraft testing and integration. All manufacturing would be conducted within the building.

Operations would also include utilization of taxiways and remote test areas on the Airport for propulsion testing, antenna performance testing, acoustics measurement testing, hover testing, and flight testing of the manufactured prototype (i.e., a lightweight, all-electric, VTOL aircraft).

The Proposed Project alternative meets both "reasonable" criteria of: 1) providing the Airport with a project that would generate revenue support; and 2) providing future opportunities to complement the Marina Airport Business Park and consolidate Joby Aviation activities at the Airport. In addition, it is the least costly of the alternatives considered (other than the No Action alternative), as discussed below.

2.4 NO ACTION ALTERNATIVE

Under the No Action alternative, the 25.7-acre site would remain as concrete pavement bisected by a small drainage swale. No additional revenue support or the consolidation of Joby Aviation operations at the Airport would occur. The No Action Alternative does not meet either "reasonable" criteria. However, per 40 C.F.R. 1502.14(c), the No Action alternative has been retained for evaluation to allow a comparison of the impacts between the No Action alternative and other alternatives being considered.



2.5 ALTERNATIVE LOCATIONS

2.5.1 Off-Airport Alternatives

There are numerous alternate locations other than the Marina Municipal Airport for the proposed manufacturing of VTOL aircraft; however, they are beyond the scope of this EA and would not meet the stated "reasonable" criteria. Therefore, alternative off-airport locations have not been evaluated further in this EA.

2.5.2 Business Park Alternative

The Business Park alternative considers constructing the project on vacant undeveloped land east of the proposed location in the area designated for the Marina Airport Business Park. While meeting both the "reasonable" criteria described in Section 2.2, this alternative would require a biological mitigation program involving incidental take permits for sensitive flora present in the area that are protected under both the federal and state *Endangered Species Act*. This would make the Business Park alternative more costly than the Proposed Project alternative. As such, it does not meet the stated "feasible" criterion and has not been evaluated further in this EA.

2.5.3 North Side Alternative

The North Side alternative considers constructing the project on vacant undeveloped land north of the airfield. While meeting the first stated "reasonable" criteria of a project that would provide the Airport with revenue support, it would not meet the second "reasonable" criteria regarding siting the project where it would complement the planned business park. Therefore, the North Side alternative location has not been evaluated further in this EA. (NOTE: This alternative could also require incidental take permits for protected flora present in the area, making this alternative location more costly than the Proposed Project alternative.)

2.6 SUMMARY OF ALTERNATIVES SCREENING PROCESS

Table 2A identifies five alternatives discussed in the preceding sections and summarizes the alternatives screening process. Only the Proposed Project alternative satisfies all the criteria contained in the screening process. Therefore, it is carried forward for evaluation in Chapter Four of this EA. As noted previously, 40 C.F.R. 1502.14(c) requires the evaluation of the No Action alternative regardless of whether it meets the stated purpose and need or is reasonable to implement.



TABLE 2A

Alternative Evaluation Summary

ON	ON-AIRPORT ALTERNATIVES						
	EVALUATION CRITERIA	PROPOSED PROJECT ALTERNATIVE	NO ACTION ALTERNATIVE	OFF-AIRPORT ALTERNATIVES	BUSINESS PARK LOCATION	NORTH SIDE LOCATION	
Ste	p 1: Reasonable - If YES, ther	n go to Step 2.					
1.	Would the alternative provide the Airport with revenue support?	YES	NO ¹ (No further screening is necessary.)	NO (No further screening is necessary.)	YES	YES	
2.	Would the alternative provide future opportunities to complement the Marina Airport Business Park and consolidate Joby Aviation activities at the Airport?	YES			YES	NO (No further screening is necessary.)	
Ste	p 2: Feasible - If NO, then ret	tain for analysis.					
1.	Costs - Would the alternative result in unacceptable or unfavorable costs when compared to other proposed alternatives?	NO			YES		

¹ 40 C.F.R. 1502.14(c) requires the evaluation of the No Action alternative regardless of whether it meets the stated purpose and need or is reasonable to implement.

2.7 FEDERAL LAWS AND REGULATIONS CONSIDERED

Table 2B includes a list of federal laws and statutes, United States (U.S.) Department of Transportation (DOT) orders, Executive Orders, and FAA orders and/or advisory circulars (AC) considered in the evaluation of Proposed Project alternatives and throughout the preparation of this EA.

TABLE 2B

List of Applicable Federal Laws and Regulations

Marina Municipal Airport

- mail	Laws	- 10 al	CL-L.	
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Airport and Airway Improvement Act of 1982, as amended (P.L. 97-248; 43 C.F.R. §2640)

Airport and Airway Revenue Act of 1987 (P.L. 100-223, Title IV)

Archaeological and Historic Data Preservation Act of 1974 (P.L. 93-291, 16 U.S.C. §469)

Aviation Safety and Capacity Expansion Act of 1990 (P.L. 101-508, as amended)

Aviation Safety and Noise Abatement Act of 1979 (P.L. 96-193; 49 U.S.C. App. 2101)

Clean Air Act of 1977 (as amended) (42 U.S.C. §§7409 et seq.)

Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. §9601; P.L. 96-510)

Endangered Species Act of 1973 (P.L. 85-624; 16 U.S.C. §§661, 664 note, 1008 note)

Federal Water Pollution Control Act Amendments for 1972, Section 404 (33 U.S.C. §1344; P.L. 92-500), as amended by the Clean Water Act of 1977 (33 U.S.C. §1251; P.L. 95-217)

Hazardous Material Transportation Act (49 U.S.C. §§5101-5128)

Migratory Bird Treaty Act (16 U.S.C. §703 et seq.)

National Environmental Policy Act of 1969 (NEPA) (P.L. 91-190; 42 U.S.C. §§4321 et seq.)

National Historic Preservation Act of 1966, Section 106, (16 U.S.C. §470[f]; P.L. 89-665)

Noise Control Act of 1972 (P.L. 92-574; 42 U.S.C. §4901)



TABLE 2B (Continued)

List of Applicable Federal Laws and Regulations

Marina Municipal Airport

Federal Laws and Statutes (continued)

Pollution Prevention Act (42 U.S.C. §§13101-13109)

Resource Conservation and Recovery Act of 1976 (42 U.S.C. §§6901, et seq.; P.L. 94-580, as amended by the Solid Waste Disposal Act of 1980 [P.L. 96-482]; and the 1984 Hazardous and Solid Waste Amendments [P.L. 98-616]

Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. §§2000d-2000d-7)

Toxic Substances Control Act (15 U.S.C. §§2601-2697)

U.S. Department of Transportation Act of 1966 – Section 4(f) (as amended by 49 U.S.C. §303, Policy on lands, wildlife and waterfowl refuges, and historic sites [P.L. 97-449])

14 C.F.R. part 150, Airport Noise Compatibility Planning

36 C.F.R. part 800 (39 FR 3365, January 25, 1974, and 51 FR 31115, September 2, 1986), Protection of Historic Properties

40 C.F.R. parts 6, 9. 50-53, 60, 61, 63, 66, 67, 81, 82, and 93

40 C.F.R. parts 300, 311, 355, 370, and 373

40 C.F.R. parts 745, 761, and 763

40 C.F.R. parts 1500-1508, CEQ implementation of NEPA procedural provisions, establishes uniform procedures, terminology, and standards for implementing the procedural requirements of NEPA's section 102(2)

49 C.F.R. parts 100-185

50 C.F.R. part 17, Endangered and Threatened Wildlife and Plants

50 C.F.R. part 21, Migratory Bird Permits

50 C.F.R. part 402, Interagency Cooperation - Endangered Species Act of 1973, as amended

Executive Orders

Executive Order 11514, Protection and Enhancement of Environmental Quality (dated March 4, 1970)

Executive Order 11593, Protection and Enhancement of the Cultural Environment (dated May 13, 1971)

Executive Order 12088, Federal Compliance with Pollution Control Standards (43 FR 47707) (October 13, 1978)

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations

Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks (62 FR 19883)

Executive Order 13112, Invasive Species

Executive Order 13175, Consultation and Coordination with Indian Tribal Governments (65 FR 67249) (November 9, 2000)

Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds (66 FR 3853) (January 17, 2001)

Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management (72 FR 3919) (January 24, 2007)

Executive Order 13990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis

DOT and FAA Orders

DOT Order 5301.1, Department of Transportation Programs, Policies, and Procedures Affecting American Indians, Alaskan Natives, and Tribes (November 16, 1999)

DOT Order 5610.2A, Environmental Justice (77 FR 27534)

DOT Order 5650.1, Protection and Enhancement of the Cultural Environment (November 20, 1972)

FAA Order 1050.1F, Environmental Impacts: Policies and Procedures

FAA Order 1210.20, American Indian and Alaskan Native Tribal Consultation Policy and Procedures (January 28, 2004)

FAA Order 5050.4B, National Environmental Policy Act Implementing Instructions for Airport Actions

FAA Advisory Circulars

AC 150/5020-1, Noise Control and Compatibility Planning for Airports

AC 150/5370-10H, Standard Specifications for Construction of Airports

AC - Advisory Circular

CEQ - Council on Environmental Quality

C.F.R. - Code of Federal Regulations

DOT - U.S. Department of Transportation

FAA - Federal Aviation Administration

FR - Federal Register

NEPA - National Environmental Policy Act

P.L. - Public Law

U.S.C. - United States Code



CHAPTER THREE AFFECTED ENVIRONMENT



Chapter Three AFFECTED ENVIRONMENT

Joby Aviation Manufacturing Facility

Environmental Assessment

This chapter describes the existing environment at the Marina Municipal Airport (Airport or OAR), and more specifically, in the project study areas for each resource category (i.e., affected environment). Per Federal Aviation Administration (FAA) Order 1050.1F, paragraph 6-2.1e and FAA Order 5050.4B, paragraph 706 (e), this chapter will be "no longer than is necessary to understand the impacts of the alternatives; data and analyses should be presented in detail commensurate with the importance of the impact."

3.1 PROJECT STUDY AREAS

The study area for <u>direct</u> project impacts is defined as the area where potential environmental impacts resulting from the Proposed Project may occur. For this Environmental Assessment (EA), the direct project study area is comprised of the 25.7-acre project area, as depicted in Exhibit 1C of Chapter One.

The study area for <u>indirect</u> impacts is different for each of the various impact categories. In some cases, the indirect study area is the airport property. In other cases, the indirect study area is more widespread, for example regional air quality is discussed in the context of the local air basin.

The study areas used to assess potential <u>cumulative</u> impacts are dependent on the resource category under evaluation and are the same areas as are defined for the direct and indirect study areas.

3.2 ENVIRONMENTAL RESOURCES NOT WITHIN THE PROJECT STUDY AREA

Sections within this chapter are based on impact categories required to be addressed in FAA Order 1050.1F. **Table 3A** lists impact categories that are not discussed further as they do not occur within the project study areas.

TABLE 3A
Environmental Resources Not Present within the Project Study Area

Environmental Resource Category	Rationale for No Further Discussion
Coastal Resources	The project study area is approximately 2.25 miles from the nearest portion of the California Coastal Zone (west of Del Monte Boulevard at Reservation Road). The closest National Marine Sanctuary is the Monterey Bay National Marine Sanctuary, located approximately three miles west of the project study area. The project study area is not in proximity to Coastal Barrier Resource Systems.
Farmlands	No portion of the Airport is used for agricultural purposes. The project study area is paved except for a strip of ground located between two existing concrete aircraft aprons and former taxilanes. The Airport is located within a designated United States (U.S.) Census "urban" area (i.e., City of Marina) (city), and is not subject to the <i>Farmland Policy Protection Act</i> .



TABLE 3A (Continued)

Environmental Resources Not Present within the Project Study Area

Environmental Resource Category	Rationale for No Further Discussion
Visual Resources - Visual Effects/Visual Character	There are no designated scenic roadways near the Airport, although Monterey County (county) identifies the Reservation Road corridor east of Blanco Road as a proposed scenic route. This county section of Reservation Road is approximately 0.5 mile away from the project study area. The city's General Plan states that there are no major defining natural topographic features within the city (Policy 4.16), but that scenic views of inland hills from Reservation Road should be retained (Policy 4.126). The project study area is set back from Reservation Road more than 1,000 feet and is not within lines of sight of the inland hills from the roadway. The maximum building height (including roof screens) would be 50 feet.
Water Resources – Wetlands	No wetlands or other waters of the U.S. have been identified within the project study area and most of the project site is paved. The closest wetland identified on the United States Fish and Wildlife Service's (USFWS) National Wetlands Inventory is the Salinas River, which is approximately 0.4 mile to the east. A wetland assessment of the project study area was conducted in the spring of 2019 by a qualified biologist.
Water Resources – Floodplains	Per Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel 06053C0195H, the project study area is mapped as Zone X, Area of Minimal Flood Hazard.
Water Resources - Wild and Scenic Rivers	No Wild and Scenic River segments are within or near the project study area. The closest Wild and Scenic River is the Big Sur River, located approximately 30 miles south of the project study area. There are also no rivers listed on the Nationwide Rivers Inventory, which lists additional free-flowing river segments believed to possess one or more "outstandingly remarkable" values.

Sources:

- Coastal Resources City of Marina 2013.
- Farmlands U.S. EPA EJSCREEN website 2020.
- Visual Resources/Visual Character County of Monterey Resource Management Agency (RMA) Planning Department 2010a; City of Marina 2010; California Department of Transportation website 2020.
- Wetlands USFWS National Wetlands Inventory, Wetlands Mapper website 2020; Denise Duffy and Associates (DDA) 2019.
- Floodplains FEMA 2017. Flood Map Service Center Panel #06053C0195H, effective date June 21.
- Wild and Scenic Rivers National Wild and Scenic Rivers System website 2020; National Park Service (NPS) Nationwide Rivers Inventory website 2020.

The affected environment related to the remaining impact categories are presented in the following sections as listed within Section 4-1 of FAA Order 1050.1F.

3.3 AIR QUALITY

Under the *Clean Air Act*, the U.S. Environmental Protection Agency (U.S. EPA) established National Ambient Air Quality Standards (NAAQS) based on health risks for the following pollutants:

- Carbon monoxide (CO)
- Nitrogen dioxide (NO₂)
- Sulfur dioxide (SO₂)
- Lead (Pb)
- Ozone (O₃)
- Respirable particulate matter (PM₁₀) (i.e., "inhalable coarse" PM with an aerodynamic diameter of 10 microns or less)
- Fine particulate matter (PM_{2.5}) (i.e., with an aerodynamic diameter of 2.5 microns or less)



An area with ambient air concentrations exceeding the NAAQS for a criteria pollutant is said to be a nonattainment area, while an area where ambient concentrations are below the NAAQS is considered an attainment area. The U.S. EPA requires that areas designated as nonattainment demonstrate how they will attain the NAAQS by an established deadline. An airport action may also be subject to the General Conformity requirements of the *Clean Air Act* if it will occur in a nonattainment or maintenance area. The General Conformity Rule of the *Clean Air Act* establishes the procedures and criteria for determining whether certain federal actions conform to state or federal air quality implementation plans.

The direct project study area for air quality is the 25.7-acre project area; the indirect project study area is the North Central Coast Air Basin (NCCAB) and, specifically, Monterey County. According to U.S. EPA's Green Book - California Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants, as June 30, 2020, the county is in attainment for all NAAQS (U.S. EPA 2020). There are three air pollutant monitoring stations in Monterey County. The station distances from the project study area and a tabulation of pertinent recent monitoring data are provided in **Table 3B**.

TABLE 3B
Local Monitoring Station Data

Monitoring Station Name	Monitoring Station Number	Location	Distance from Project Study Area	Pollutant Standard	Arithmetic Mea		⁄lean
					2017	2018	2019
Carmel Valley	6-53-2	35 Ford Road Carmel Valley Village, CA	13 miles southeast	PM _{2.5} (μg/m³)	5.2	6.3	3.7
				O₃ (ppm)	0.04	0.03	0.03
	6-53-8	415 Pearl Street King City, CA	44 miles southeast	PM _{2.5} (μg/m ³)	6.4	7.3	5.5
King City				$PM_{10} (\mu g/m^3)$	28.6	28.2	19.1
				O ₃ (ppm)	0.04	0.04	0.04
	6-53-1003	867 E. Laurel Dr. Salinas, CA	6 miles northeast	$PM_{2.5} (\mu g/m^3)$	5.6	5.1	4.1
Salinas				O ₃ (ppm)	0.03	0.03	0.03
				NO _x (ppb)	5.1	5.2	4.4

Source: U.S. EPA 2017, 2018, 2019.

 $\mu g/m^3$ = micrograms/cubic meter; ppm = parts per million; $NO_{x=}$ oxides of nitrogen; ppb = parts per billion

NOTE: O_3 metric used is the "daily maximum of 8-hour running average" of the 2015 8-hour ozone pollutant standard. $PM_{2.5}$ metric used is the "daily mean" of the $PM_{2.5}$ 24-hour 2012 pollutant standard.

Topography and Meteorology

The NCCAB encompasses the central California coastal counties of Monterey, Santa Cruz, and San Benito, and is bounded by the Santa Cruz Mountains to the northwest, the Gabilan Mountains to the west, and the Diablo Mountains to the northeast. During the summer, atmospheric circulation is controlled by the Pacific high-pressure system in the eastern Pacific Ocean, which typically causes a temperature inversion¹ that restricts vertical air mixing and draws onshore air currents into the area from the west and northwest. The nearby mountain ranges also intensify the onshore currents, both by channeling air flow and by creating low pressure systems in the afternoon and evening as landmasses cool.

¹ A temperature inversion is a reversal of the normal conditions in the air. Normally, the air temperature decreases with height. However, when a layer of cool air at the earth's surface is overlain by a layer of warmer air, this inversion acts like a lid, preventing the dispersion of air pollutants and trapping them below the inversion.



Onshore air movement is dampened in the fall. Instead, the area experiences more frequent stationary air masses and occasional offshore currents, which help to transport air pollutants from the San Francisco Bay and Central Valley to the north and east. The influence of the Pacific high-pressure system increases the persistence of these air pollutants at ground level until the pressure system migrates southward during the winter and spring. Once this occurs, there are fewer temperature inversions to restrict air circulation, as well as a reduction in ambient pollutant concentrations in the NCCAB.

3.4 BIOLOGICAL RESOURCES

The direct project study area for biological resources is the 25.7-acre project area; the indirect project study area is the airport property. Approximately 23.2 acres of the project study area are developed and covered with concrete apron and former taxilanes. The only vegetative communities within the project study area are 0.5 acre of white-tip clover (*Trifolium variegatum*) swale and 2.0 acres of ruderal/disturbed habitat (**Exhibit 3A**). Both areas are routinely mowed and maintained by the Airport.

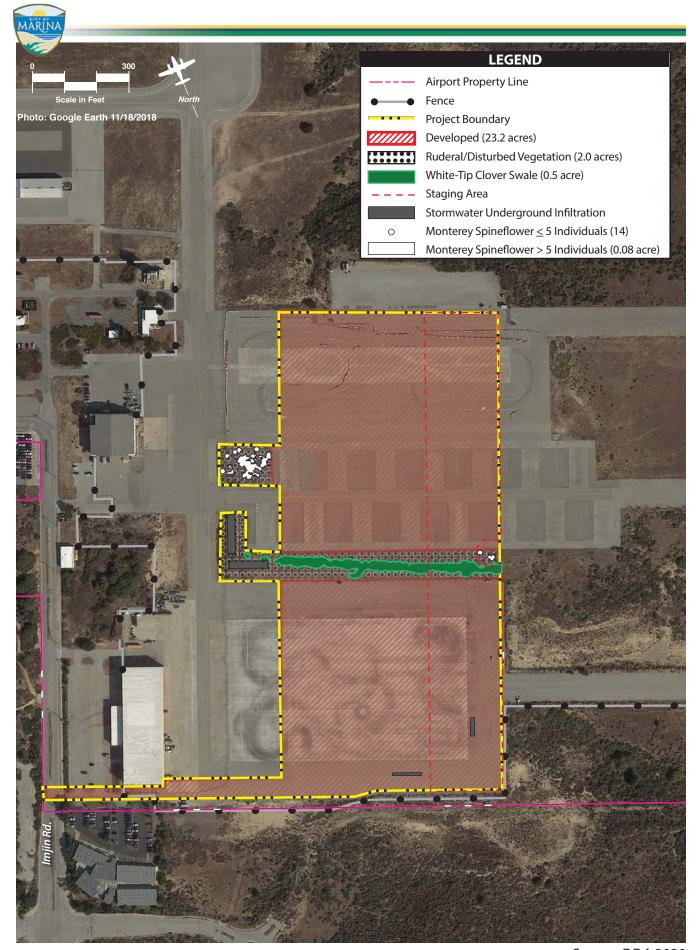
The white-tip clover occurs within a man-made, linear depression (i.e., swale) that receives runoff from the adjacent paved areas during precipitation events. White-tip clover swale forms in mesic areas² with a conspicuous mix of native and non-native plants. While the on-site swale is seasonally mesic, it does not meet the federal criteria for a jurisdictional wetland due to the lack of hydric soils.

Ruderal areas are those areas which have been disturbed by human activities and are dominated by nonnative annual grasses and other "weedy" species. The ruderal vegetation within the project study area is comprised of hottentot fig (*Carpobrotus* sp.), silvery hairgrass (*Aira caryophyllea*), slender wild oat (*Avena barbata*), Italian thistle (*Carduus pycnocephalus*), filaree (*Erodium* sp.), bur clover (*Medicago* sp.), and sheep sorrel (*Rumex acetosella*). Ruderal areas are generally dominated by non-native plant species and consist of relatively low-quality habitat from a wildlife perspective. However, in the project study area, the ruderal area supports one federally listed plant species: Monterey spineflower (*Chorizanthe purgens* var. *pungens*).

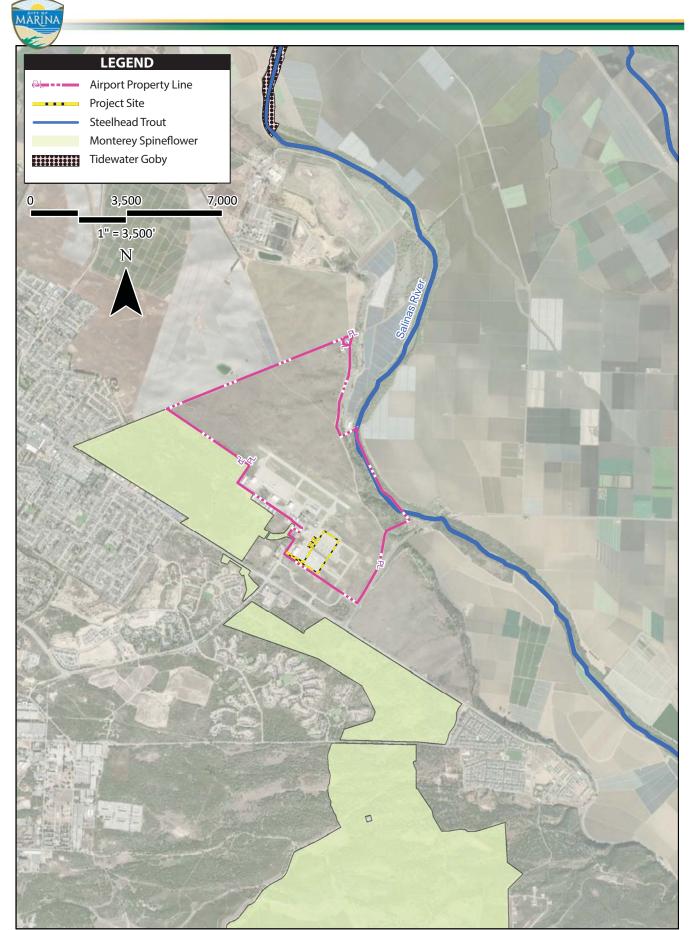
Monterey spineflower is a threatened plant species under the federal *Endangered Species Act* (ESA). Approximately 0.08 acre and 14 individuals were identified in two small ruderal areas within the project study area during 2019 botanical surveys (**Exhibit 3A**). Monterey spineflower occurs in sandy soils within coastal habitats from the Monterey Peninsula northward along the coast to southern Santa Cruz County. Critical habitat for Monterey spineflower was designated in 2002 by USFWS and revised in 2006, 2007, and 2008. The closest designated critical habitat is in proximity to the project study area to the west and south (**Exhibit 3B**) (University of California Berkeley Library website 2014).

Appendix A contains a Biological Assessment completed on the Proposed Project, which lists all the federally listed, proposed, or candidate species that could potentially occur in the project study area based on review of the USFWS Information for Planning and Consultation (IPaC) Trust Resource List and other appropriate source documents. The project study area does not contain suitable habitat for any federally listed species other than Monterey spineflower. In addition to the critical habitat for Monterey spineflower shown on **Exhibit 3B**, approximately 0.4 mile east of the project study area within the Salinas River is designated critical habitat for the south-central California steelhead (*Oncorhynchus mykiss irideus*), a federally threatened species.

² Mesic means an environment or habitat containing a moderate amount of moisture.



Source: DDA 2020



Source: ESRI Basemap Imagery (2019), US Fish & Wildlife Service.



During the 2019 biological surveys of the project study area, California horned larks, which are nesting birds protected by the *Migratory Bird Treaty Act*, were observed foraging on the parking aprons (DDA 2019). White-tip clover swale and ruderal habitat are both suitable habitat for California horned lark.

The Airport is also known to have the potential for special-status wildlife species, including those protected by the State of California (state) as California Species of Concern. These species (i.e., northern California legless lizard [Anniella pulchra]³ and coast horned lizard [Phrynosoma blainvillii]) have the potential to be found within the project study area but were not found during the 2019 surveys (DDA 2019). White-tip clover swale is suitable habitat for the northern California legless lizard, while ruderal habitat is suitable habitat for both northern California legless lizard and coast horned lizard. Northern California legless lizard is also managed by the Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord (Fort Ord HMP).⁴ (See discussion below.)

Fort Ord Habitat Management Plan

The project study area is located within a parcel designated as "development" (Parcel L5.1) in the Fort Ord HMP. Through implementation of the Fort Ord HMP, impacts to HMP species and habitats occurring within the designated development parcel were anticipated and mitigated through the establishment of habitat reserves and corridors and the implementation of habitat management requirements within habitat reserve parcels on the former Fort Ord. Parcels designated as "development" have no management restrictions; however, the 2017 Programmatic BO and Fort Ord HMP require the identification of sensitive botanical resources within these parcels that may be salvaged for use in restoration activities in reserve areas (USFWS 2017; United States Army Corps of Engineers [USACE] 1997). The Fort Ord HMP does not provide specific authorization for incidental take of federal or state listed species to existing or future non-federal land recipients under the ESA or the California ESA.

Several special-status plant species, including the following Fort Ord HMP species, Monterey spine-flower, sandmat manzanita (*Arctostaphylos pumila*), and sand gilia (*Gilia tenuiflora* ssp. *arenaria*), were identified directly adjacent to the project site during 2019 botanical surveys.⁵ Suitable habitat for other special-status plants, such as seaside bird's-beak (*Cordylanthus rigidus* ssp. *littoralis*) and Yadon's piperia (*Piperia yadonii*), is present directly adjacent to the project study area to the east (DDA 2019). Sand gilia is listed as endangered in the federal ESA and threatened in the California ESA. Yadon's piperia is listed as endangered in the federal ESA. Seaside bird's-beak is listed as endangered in the California ESA.

³ The Fort Ord HMP identifies this species as black-legless lizard (*Anniella pulchra* ssp. *nigra*) in order to differentiate it from the previously identified silvery-legless lizard (*A. p.* ssp. *pulchra*). Currently, California Department of Fish and Wildlife (CDFW) identifies both subspecies as the northern California legless lizard (DDA 2019).

⁴ During the closure and disposal of the former Fort Ord in the 1990s, several studies and plans were prepared. In conjunction with the environmental studies, the USFWS issued a Biological Opinion (BO), which required that a Habitat Management Plan be developed and implemented as a mitigation measure for impacts on vegetation and wildlife resources (USFWS 1993). Consequently, the Fort Ord HMP was prepared by the United States Army Corps of Engineers (USACE) in 1994 and revised in 1997. The USFWS issued five additional BOs and one amendment between 1999 and 2014 as a result of consultation reinitiated by the U.S. Department of the Army (Army). On May 28, 2015, USFWS issued a Programmatic BO that superseded the previous BOs. Then on June 7, 2017, USFWS issued a reinitiated Programmatic BO that supersedes the 2015 Programmatic BO. The 2017 Programmatic BO is the current and relevant BO for activities at the former Fort Ord and contains additional conservation measures and recommendations relating to environmental cleanup actions at former Fort Ord cleanup sites.

⁵ Spring botanical surveys were conducted within a larger area than the project study area described in this document. Summer surveys were conducted only within the project study area.



3.5 CLIMATE

Similar to the study area for air quality (Section 3.3), the direct project study area for Climate is the 25.7-acre project area and the indirect project study area is the NCCAB. Scientific measurements show that Earth's climate is warming, with concurrent impacts, such as warmer air temperatures, increased sea level rise, increased storm activity, and an increased intensity in precipitation events. Increasing concentrations of greenhouse gases (GHGs)⁶ in the atmosphere affect global climate (International Panel on Climate Change [IPCC] 2014; U.S. Global Change Research Program 2009); this climate change, while a global phenomenon, can also have local impacts.

Research has also shown that there is a direct correlation between fuel combustion and GHG emissions. GHGs from anthropogenic (human-made) sources include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). CO_2 is the most important anthropogenic GHG because it is a long-lived gas that remains in the atmosphere for up to 100 years.

The IPCC estimates that aviation accounts for 4.1 percent of global transportation GHG emissions. U.S. EPA data indicates that commercial aviation contributed 6.6 percent of total U.S. CO₂ emissions in 2013, compared with other sources, including the remainder of the transportation sector (20.7 percent), industry (28.2 percent), commercial (16.9 percent), residential (16.9 percent), agricultural (9.7 percent), and U.S. territories (0.05 percent) (U.S. EPA 2015). Scientific research is ongoing to better understand climate change, including any incremental atmospheric impacts that may be caused by aviation.

The National Environmental Policy Act (NEPA) requires federal agencies to consider the environmental impacts of proposed major federal actions significantly affecting the quality of the human environment. Executive Order (E.O.) 13990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis was issued on January 20, 2021 by President Biden and revokes E.O. 13783, Promoting Energy Independence and Economic Growth, which directed the Council on Environmental Quality (CEQ) to rescind the final guidance issued August 5, 2016, titled "Final Guidance for Federal Departments and Agencies on Consideration of [GHG] Emissions and the Effects of Climate Change in [NEPA] Reviews."

3.6 DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(f)

Section 4(f) of the *Department of Transportation (DOT) Act* provides that the U.S. Secretary of Transportation shall not approve any program or project that requires the use of publicly owned land from parks, recreational areas, wildlife and waterfowl refuges, or historic sites of national, state, or local significance unless there is no feasible or prudent alternative and the use of such land includes all possible planning to minimize harm resulting from the use. This includes lands purchased under Section 6(f) of the *Land and Water Conservation Fund Act of 1965*, which provided funds for buying or developing public use recreation lands.

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 $^{^6}$ Mass GHG emissions are calculated by converting pollutant-specific emissions to carbon dioxide equivalent (CO₂e) emissions by applying the proper global warming potential (GWP) value. GWP represents the amount of heat captured by a mass of GHG compared to a similar mass of CO₂. These GWP ratios are provided by the IPCC in its Fourth and Fifth Assessment Reports (IPCC 2007; 2014). By applying the GWP ratios, project CO₂e emissions can be tabulated in metric tons per year. Typically, the GWP ratio corresponding to the warming potential of CO₂ over a 100-year period is used as a baseline.



The direct project study area for Section 4(f) resources is the 25.7-acre project area; the indirect study area is the Airport and a 0.5-mile radius from the Airport. There are no Section 4(f) properties within the direct or indirect project study areas. The closest Section 4(f) resources are two neighborhood parks located within residential neighborhoods south of the Airport. Preston Park is approximately 0.55 mile from the Airport; Schoonover Park is approximately 0.7 mile from the Airport. The Salinas River National Wildlife Refuge is approximately four miles from the Airport to the northwest where the Salinas River empties into the Pacific Ocean. There are no public parks, recreational areas, or wildlife or waterfowl refuges within 0.5 mile of the project study area.

Section 4(f) properties can also be significant historic sites. As discussed in Section 3.8, there are no significant historic resources known to remain intact within or in proximity to the project study area. The nearest resource listed on the National Register of Historic Places (NRHP) is the Peter J. Bontadelli House, located more than five miles east of the Airport in Salinas, California.

There are also no lands conveyed to the Airport per the *Land and Water Conservation Fund Act of 1965,* Section 6(f). The Airport is a former U.S. Army property (known as Fort Ord).

3.7 HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION

The direct study area for hazardous materials, solid waste, and pollution prevention is the 25.7-acre project area; the indirect study area is the airport property.

3.7.1 Hazardous Materials

Former Fort Ord was listed as a Superfund site in February 1990. The project study area is located within U.S. Army parcel number L1.5, which was transferred to the City of Marina. An Environmental Baseline Survey for the Airport undertaken at that time identified several hazardous and toxic waste sites at the Airport, including within the parcel number L1.5; however, none of these hazardous and toxic waste sites were located within the project study area (USACE 1995). Before any potentially contaminated land or remediated parcel could be transferred to non-federal agencies (i.e., the City of Marina), the U.S. Army (and other Federal Facilities Agreement agencies) had to complete a remedial action Record of Determination certifying that the lands were clean and protective of human health and the environment (Fort Ord Reuse Authority [FORA] 1997, page 4-83). A Finding of Suitability to Transfer (FOST) for the portion of the Airport containing the project study area was completed in 1995 (U.S. Department of the Army 1995).⁷

The former Fort Ord was used for training military personnel with equipment and munitions. These training activities left behind munitions and explosives of concern (MEC). The Airport has been evaluated for the presence of MEC and, in 1995, most of the Airport, including the project study area, was determined to be suitable to the city for general aviation purposes (U.S. Department of the Army 1995).⁸

⁷ The project study area is contained in the area noted as Phase 1 in the FOST.

⁸ MEC cleanup activities were implemented north of the project study area in the remaining portions of the Airport (Phase II of the FOST), which was transferred at a later date.



Additionally, the U.S. Army's FOST identified that groundwater underlying portions of the former Fort Ord were contaminated by volatile organic compounds (VOCs), primarily trichloroethene (TCE), an industrial solvent that was used for degreasing, dry cleaning, and cleaning of mechanical parts. These organic contaminants formed a groundwater plume in the various aquifers underlying the former Fort Ord near the former landfill (City of Marina 2020). A groundwater plume near the Airport (OU1) was subsequently treated for TCE. As of September 2014, all sampling results from monitoring wells have been below the Aquifer Cleanup Level (typically the same as the maximum contaminant level [MCL] or lower). Groundwater treatment has ceased and evaluation for site closeout is in progress (GHD 2017). No groundwater plumes exist under the project study area.

3.7.2 Solid Waste

Solid waste for the Marina area is managed by the Monterey Regional Waste Management District (MRWMD) and disposed of at the Monterey Peninsula Landfill (and Materials Recovery Facility), located approximately 1.5 mile north of the Airport. The Solid Waste Facility Permit for the landfill states that the peak tonnage of incoming waste shall not exceed 3,500 tons/day (CalRecycle website 2020b). The landfill currently receives approximately 200,000 tons/year (approximately 550 tons/day) of municipal solid waste for disposal. Engineers project that there is space for more than 100 more years of waste at current disposal rates (i.e., through 2120). The Materials Recovery Facility has diverted more than 1.6 million tons of recyclable and re-usable materials from landfill disposal over the last 20 years (MRWMD website 2020).

3.7.3 Pollution Prevention

The project study area is currently vacant and does not require active pollution prevention procedures. The Airport operates under the statewide General Permit for Storm Water Discharges Associated with Industrial Activities (Order 2014-0057-DWQ). See Section 3.13.1 for more information.

3.8 HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

The direct study area for historical, architectural, archaeological, and cultural resources is the 25.7-acre project area; the indirect study area is a 311.8-acre area in proximity to the project area that encompasses historic-age resources as discussed below. Together, these areas have been identified as the Area of Potential Effect (APE) for the Proposed Project (see Section 4.8 and Exhibit 4A). Based on a cultural resources survey of the ground surface that is available for inspection (i.e., approximately 2.5 acres), no cultural resources are present within the direct APE (SWCA Environmental Consultants, Inc. [SWCA] 2020).

Two historic-era resources (P-27-1723 and P-27-3170) have been previously identified within the airport property. P-27-1723 is the remnants of a historic ranch site, which through limited test excavations was recommended as eligible for the NRHP (and, in association, the California Register of Historic Resources [CRHR]) in 1994. The site appears to be located outside the existing airport perimeter fence and is not located within the APE. P-27-3170 is the Marina Municipal Airport Tower, which was recommended as ineligible for inclusion on the NRHP in 2012.



There are also historic-era structures associated with Fort Ord and the Airport that have "come of age" in recent years (i.e., would be 50 years of age or older by the time the Proposed Project is implemented) and were not addressed by past studies. These structures, constructed between 1959 and 1963, have been included in the indirect APE for the Proposed Project. **Table 3C** identifies each building, its approximate age, and eligibility for listing on the NRHP. Building #515 is the previously mentioned P-27-3170 (Marina Municipal Airport Tower). Based on an evaluation of the significance of these structures by a qualified historian, none are recommended as eligible for inclusion on the NRHP (SWCA 2020).

TABLE 3C Historic-Age Buildings/Structures Marina Municipal Airport

Number¹BuiltUsageFeet (sf)StoriesExterior MaterialElig#5041961Aviation Operations2,5081Concrete BlockI#5101959Maintenance Hangar21,9471Metal/Concrete BlockI#5141961Fire and Rescue Station2,8571Concrete BlockI#5151961Flight Control Tower2,9427Metal/Concrete BlockI#5181961Airfield Operations4,5672Concrete BlockI#5191961Lighting Equipment Vault5811ConcreteI#5201961Snack Bar or Petroleum Supply2,1091Concrete BlockI#5241961Maintenance Hangar36,0071Metal/Concrete Block	Widthia Widthiapar All porc						
#510 1959 Maintenance Hangar 21,947 1 Metal/Concrete Block Fire and Rescue Station 2,857 1 Concrete Block Metal/Concrete Block Meta			Usage		Stories	Exterior Material	NRHP Eligibility
#514 1961 Fire and Rescue Station 2,857 1 Concrete Block 1 Flight Control Tower 2,942 7 Metal/Concrete Block 1 Flight State 1961 Airfield Operations 4,567 2 Concrete Block 1 Flighting Equipment Vault 581 1 Concrete I Concrete I Flighting Equipment Valle 581 1 Concrete Block I Flighting Equipment Valle 581	#504	1961	Aviation Operations	2,508	1	Concrete Block	No
#515 1961 Flight Control Tower 2,942 7 Metal/Concrete Block I 4518 1961 Airfield Operations 4,567 2 Concrete Block I 519 1961 Lighting Equipment Vault 581 1 Concrete I 519 1961 Snack Bar or Petroleum Supply 2,109 1 Concrete Block I 519 1961 Maintenance Hangar 36,007 1 Metal/Concrete Block I 519 1961 Maint	#510	1959	Maintenance Hangar	21,947	1	Metal/Concrete Block	No
#518 1961 Airfield Operations 4,567 2 Concrete Block I #519 1961 Lighting Equipment Vault 581 1 Concrete I #520 1961 Snack Bar or Petroleum Supply 2,109 1 Concrete Block I #524 1961 Maintenance Hangar 36,007 1 Metal/Concrete Block I	#514	1961	Fire and Rescue Station	2,857	1	Concrete Block	No
#519 1961 Lighting Equipment Vault 581 1 Concrete II #520 1961 Snack Bar or Petroleum Supply 2,109 1 Concrete Block II #524 1961 Maintenance Hangar 36,007 1 Metal/Concrete Block II	#515	1961	Flight Control Tower	2,942	7	Metal/Concrete Block	No
#520 1961 Snack Bar or Petroleum Supply 2,109 1 Concrete Block I #524 1961 Maintenance Hangar 36,007 1 Metal/Concrete Block I	#518	1961	Airfield Operations	4,567	2	Concrete Block	No
#524 1961 Maintenance Hangar 36,007 1 Metal/Concrete Block	#519	1961	Lighting Equipment Vault	581	1	Concrete	No
	#520	1961	Snack Bar or Petroleum Supply	2,109	1	Concrete Block	No
#F36 1061 Aviation Operations 4 F30 3 Congrete Plack	#524	1961	Maintenance Hangar	36,007	1	Metal/Concrete Block	No
#526 1961 Aviation Operations 4,520 2 Concrete Block 1	#526	1961	Aviation Operations	4,520	2	Concrete Block	No
#529 1940 Enlisted Personnel Dining 2,206 1 Wood (now with some stucco)	#529	1940	Enlisted Personnel Dining	2,206	1	,	No
#533 1963 Maintenance Hangar 35,000 1 Metal/Concrete Block	#533	1963	Maintenance Hangar	35,000	1	Metal/Concrete Block	No
#535 1963 Aircraft Parts Supply 27,456 1 Concrete	#535	1963	Aircraft Parts Supply	27,456	1	Concrete	No

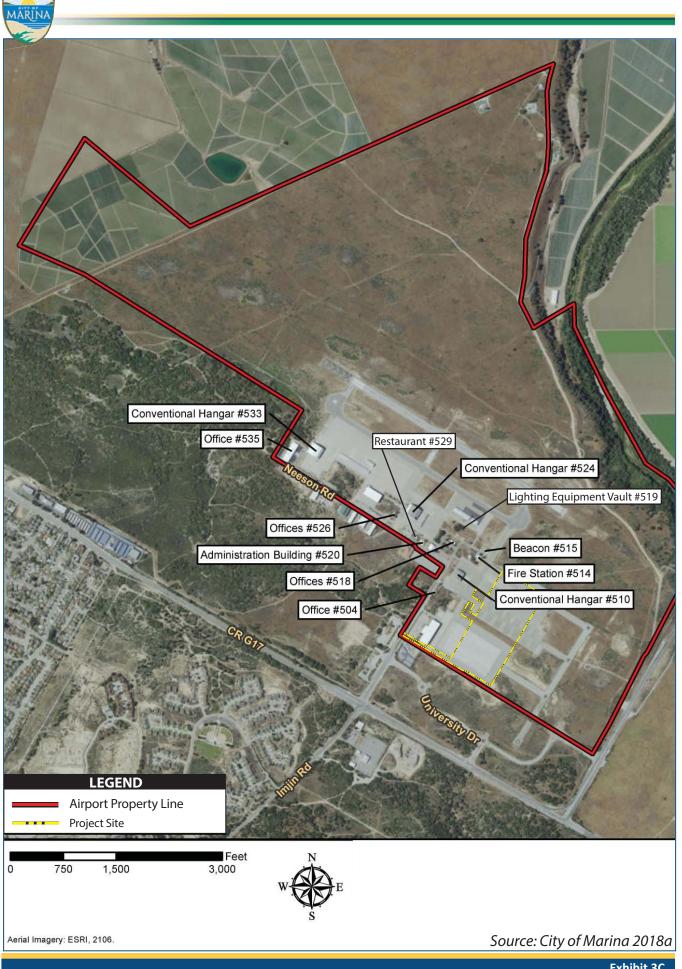
Source: SWCA 2020

NRHP = National Register of Historic Places ¹ Refer to **Exhibit 3C** for building location.

There are no federally recognized tribes affiliated with the project study area. However, FAA provided the following tribes, identified by the Native American Heritage Commission (NAHC) as traditionally and culturally affiliated with the project study area, with an opportunity to request consultation on the Proposed Project: Costanoan Rumsen Carmel Tribe; Ohlone/Costanoan-Esselen Nation; Esselen Tribe of Monterey County; Amah Mutsun Tribal Band; Amah Mutsun Tribal Band of Mission San Juan Bautista; and Indian Canyon Mutsun Band of Costanoan. The tribes were contacted via letter on March 17, 2021. Based on the lack of responses received, no traditional cultural properties or Native American sacred sites are present within the APE.

3.9 LAND USE

The direct study area for land use is the 25.7-acre project area, while the indirect study area is the airport property. The project study area is located internal to the airport property and is currently partially developed with a temporary tent structure that is housing interim Joby Aviation activities. East of the project study area is open space designated in the Marina Municipal Airport Master Plan as "Planned Airport Business Park." West are the developed portions of the Airport, while north is an area reserved for future aviation land uses. South is a vacant parcel of land owned by the University of California,





Monterey Bay Education, Science, and Technology Center (UC MBEST). The project study area is designated as "Light Industrial/Service Commercial" on the City of Marina General Plan Land Use Map (**Exhibit 3D**). The project study area is zoned as A-1 (Airport District, Aviation-Related Zone) (**Exhibit 3E**).

The city has provided a Land Assurance letter specifying that appropriate action has been or will be taken, to the extent reasonable, to restrict the use of land next to or near the Airport to uses that are compatible with normal airport operations pursuant to 49 U.S.C. §47107(a)(10) (Appendix B).

3.10 NATURAL RESOURCES AND ENERGY SUPPLY

The direct project study area for natural resources and energy supply is the Airport; the indirect study area is Monterey County.

No mineral extraction occurs on airport property nor is the Airport or the project study area identified as a Mineral Resource Zone (County of Monterey, RMA Planning Department 2010b). Based on the city's General Plan (Policy 4.124), the two areas of the city recognized for the presence of mineral resources are west of Highway 1 (i.e., sand-mining) and east of Highway 1 to the west of the Airport within the Armstrong Ranch portion of the city's Sphere of Influence (City of Marina 2010).

The project site lies within the service area of Pacific Gas and Electric Company (PG&E) for natural gas, and PG&E and Monterey Bay Community Power (MBCP), a locally-controlled public agency providing carbon-free electricity to residents and businesses, for electricity. MBCP partners with PG&E, which continues to provide billing, power transmission and distribution, customer service, grid maintenance services, and natural gas services to Monterey County (MBCP website 2020).

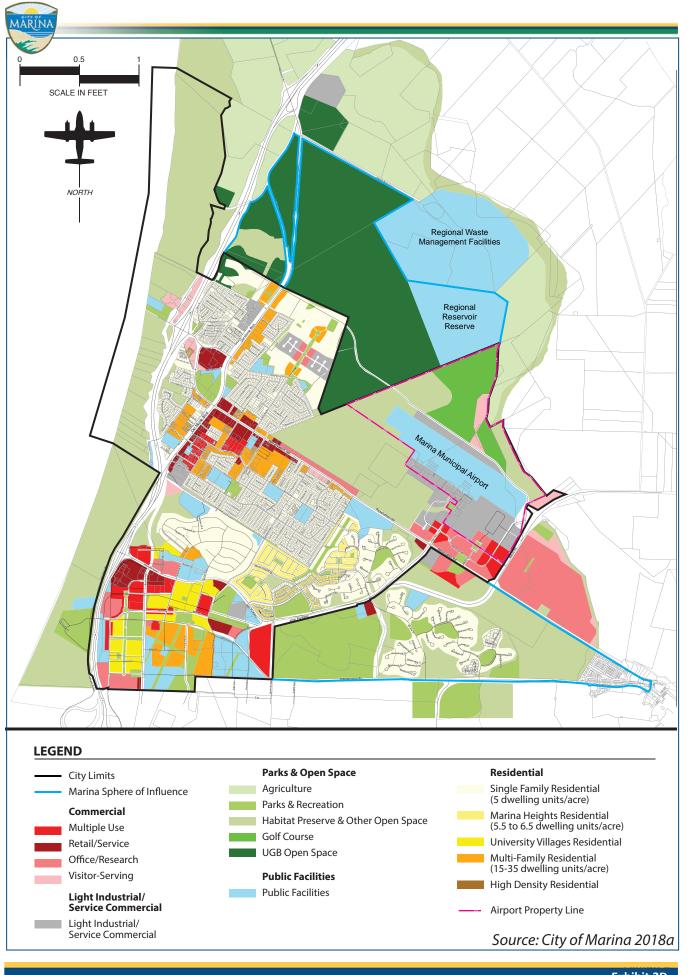
Potable (domestic) water is provided for the Airport by the Marina Coast Water District (MCWD), which provides domestic water service not only to the City of Marina, but the County of Monterey, the City of Seaside, the City of Monterey, and the City of Del Rey Oaks. Water for the Central Marina service area is provided primarily from groundwater wells in the Salinas Valley groundwater basin (SVGB). MCWD's groundwater withdrawals are approximately 3,200 acre-feet/year (AFY) and account for less than one percent of total annual SVGB withdrawals (City of Marina 2020). Future development will require improvements to the MCWD's existing groundwater wells; however, the current groundwater capacity can meet the maximum day water demands for both the existing and planned "intermediate-term" development¹⁰ (MCWD website 2020). Water is supplied to the Airport via an 18-inch water line alongside Imjin Road. On March 3, 2020, the City of Marina City Council considered a Water Usage Estimate Report by Axiom Engineers for the proposed project. After consideration, the City Council approved the necessary allocation of 26.2-acre feet of water per year from its Former Fort Ord water allocation.

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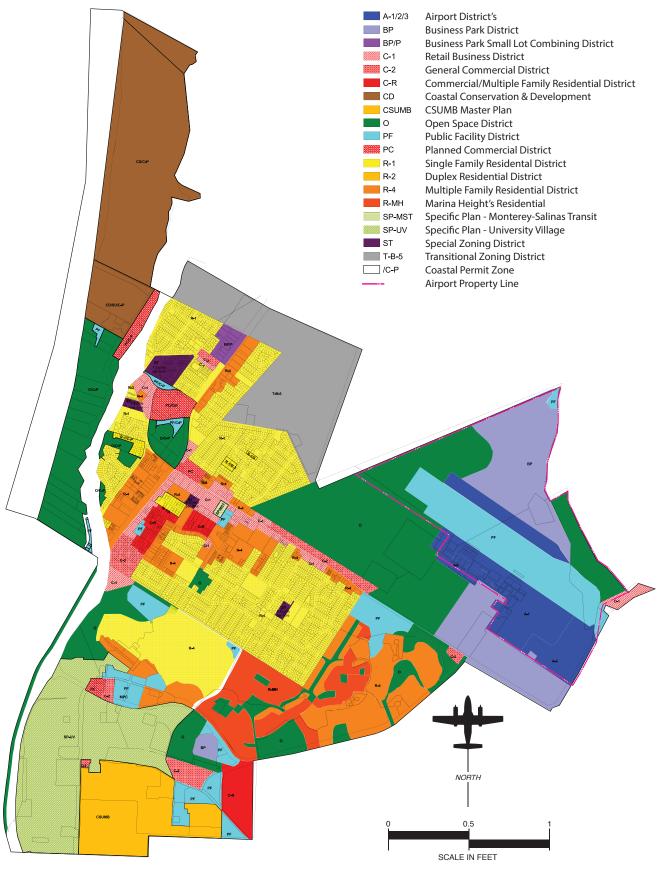
⁹ Formed in February 2017, MBCP is a joint powers authority, and is based on a local energy model called community choice energy. MBCP's standard electricity offering is carbon free and 30 percent renewable.

¹⁰ Intermediate-term development is defined in the MCWD *Water Master Plan* (2020) as buildout of the Central Marina service area consistent with the Fort Ord Authority Development Allocations, known specific plans, and other known developments.





LEGEND





3.11 NOISE AND NOISE-COMPATIBLE LAND USE

The direct study area for noise and noise-compatible land use is the 25.7-acre project area, while the indirect study area is the airport property. The current noise environment at the Airport was evaluated as part of the most recent Airport Mater Plan update and adopted Airport Land Use Compatibility Plan, Marina Municipal Airport, Monterey County, California (ALUCP) noise contours (Exhibit 3F). As shown in this exhibit, the 65 decibel (dB) Community Noise Equivalent Level (CNEL)¹¹ and higher noise contours remain on airport property. The project study area is outside even the 60 CNEL. Aircraft noise forecast to occur in 2024 (even with a proposed runway extension) would also remain on airport property.

3.12 SOCIOECONOMICS, ENVIRONMENTAL JUSTICE, AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS

The direct project study area for socioeconomics is the 25.7-acre project area; the indirect study area is the City of Marina. The direct project study area for environmental justice and children's environmental health and safety risks is the 25.7-acre project area; the indirect study area is the census tract that contains the Airport (C.T. 06053014102).

3.12.1 Socioeconomics

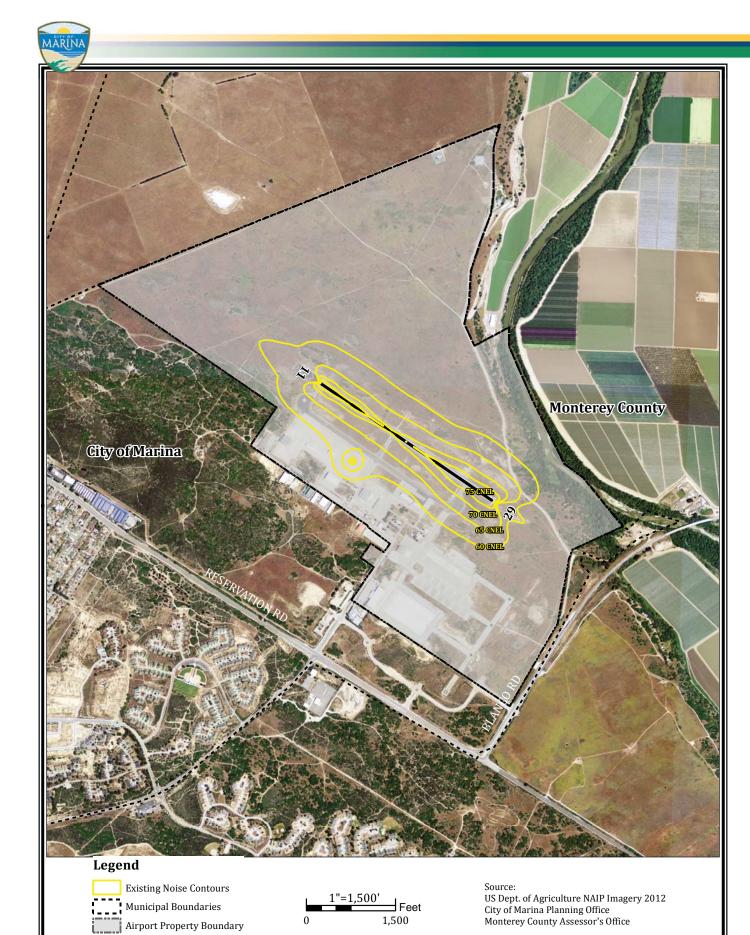
<u>Economic Activity and Employment</u>. The project study area is currently vacant and does not support either economic activity or employment opportunities. The Airport itself, however, supports miscellaneous employment and economic activity associated with a variety of aviation-related functions. Among other things, these include airport administration and maintenance, a sky diving business, flight training, and limited manufacturing and research and development (R&D) by Joby Aviation.

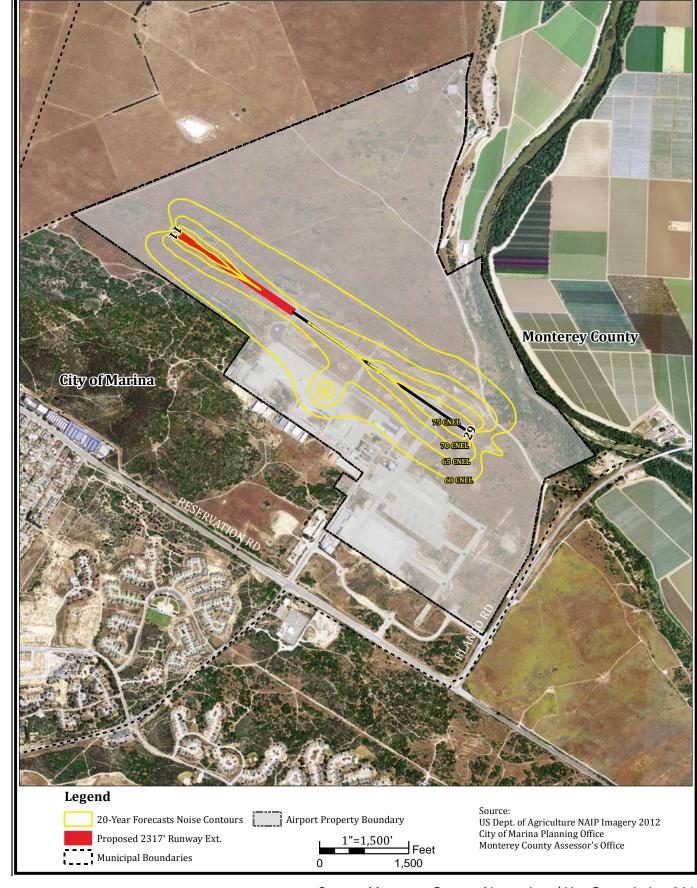
Table 3D shows the number of civilian jobs by industry within the City of Marina based on the 2018 American Community Survey (ACS) estimates conducted by the U.S. Census Bureau. The top two industries in terms of civilian employment are 1) education, health care, and social services and 2) arts, entertainment, recreation, accommodation, and food services. The transportation/warehousing and utilities and manufacturing industries each currently comprise about three percent of the city's jobs.

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¹¹The Day-Night Average Sound Level (DNL) accounts for the increased sensitivity to noise at night (10:00 PM to 7:00 AM) and is the metric preferred by FAA, the U.S. EPA, and the U.S. Department of Housing and Urban Development (HUD) as an appropriate measure of cumulative noise exposure. In California, however, these agencies accept the use of CNEL, which, in addition to night-time sensitivities, also accounts for increased sensitivities during the evening hours (7:00 PM to 10:00 PM).





Source: Monterey County Airport Land Use Commission 2019





TABLE 3D
Civilian Employment Characteristics (2018 Estimates)
City of Marina

Industry	Estimated Civilian Employment	Percent of Jobs within City
Agriculture, forestry, fishing and hunting, and mining	173	1.7%
Construction	632	6.1%
Manufacturing	307	3.0%
Wholesale trade	279	2.7%
Retail trade	1,140	11.0%
Transportation and warehousing, and utilities	337	3.2%
Information	173	1.7%
Finance and insurance, and real estate and rental and leasing	308	3.0%
Professional, scientific, and management, and administrative and waste management services	1,142	11.0%
Educational services, and health care and social assistance	2,598	25.0%
Arts, entertainment, and recreation, and accommodation and food services	1,854	17.9%
Other services, except public administration	717	6.9%
Public administration	718	6.9%
Total Civilian Employed Population	10,378	100%

Source: U.S. Department of Commerce, Census Bureau website 2020a. (Table DP03, Selected Economic Characteristics)

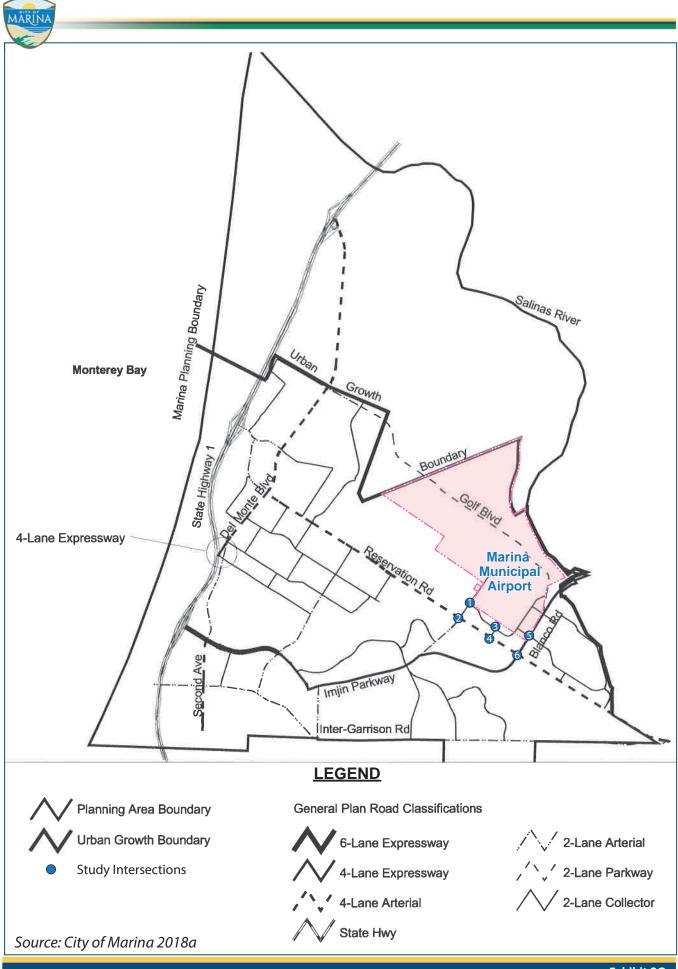
<u>Population and Housing</u>. There are no housing units within the project study area or on the Airport. The nearest residential neighborhood is approximately 0.42 mile from the closest part of the project study area. Housing stock within the city overall is over 8,000 units (U.S. Department of Commerce, Census Bureau website 2020b).

<u>Public Services and Social Conditions</u>. Police and fire protection at the Airport are provided by the City of Marina. The closest fire station is located at City Hall, approximately two miles to the east. City firefighters receive aircraft rescue and firefighting (ARFF) training to respond to on-airport incidents.

<u>Traffic Circulation</u>. There are three primary roads that control access to the Airport. Imjin Parkway/Imjin Road and Reservation Road west of Blanco Road are located within the city limits, while Blanco Road and Reservation Road east of Blanco Road are within the county. **Exhibit 3G** shows the ultimate planned buildout of the city's circulation system. (NOTE: Golf Boulevard is no longer on the city's list of capital improvement projects and will be removed from the General Plan once it is updated [Khayata, N., City of Marina, Project Manager 2016]).

A brief description of the roadways in proximity to the project study area is below (LSA Associates, Inc. [LSA] 2019):

Reservation Road is a five-lane east-west arterial roadway of which three are westbound lanes
and two are eastbound lanes. The speed limit on Reservation Road near the Airport is 55 miles
per hour (mph).





- Imjin Parkway/Road runs both north and south of Reservation Road between Highway 1 to the south and west and the Airport to the north. South of Reservation Road, Imjin Parkway is designated in the city's General Plan as an expressway, while Imjin Road north of Reservation Road is designated as a collector street. Imjin Road leads into the Airport and transitions from a divided four-lane roadway to a two-lane roadway just north of the Imjin Road/University Drive intersection. The speed limit on Imjin Road within the Airport is 25 mph.
- **Blanco Road**, which is designated in the city's General Plan as an expressway, provides direct access to the Airport from the city of Salinas and terminates at Reservation Road. Near the Airport, Blanco Road is a four-lane roadway with a speed limit of 55 mph.

Two other roadways internal to the Airport have been constructed but are not fully operational:

- **MBEST Drive**, which is designated in the city's General Plan as a collector street, is a four-lane roadway connecting Reservation Road with University Drive. There is no posted speed limit on MBEST Drive as the roadway is currently closed to vehicular traffic.
- University Drive/Research Drive, designated in the city's General Plan as a collector street, is a
 two-lane roadway connecting Imjin Road with Blanco Road. The speed limit on University
 Drive/Research Drive within the Airport is 25 mph. There is no posted speed limit on Research
 Drive as the roadway is currently closed to vehicular traffic.

Based on a traffic study completed in conjunction with the Marina Municipal Airport Business and Industrial Park/University of California Monterey Bay Education Science and Technology (US MBEST) Center Specific Plan, the following traffic volumes are present on the road segments in proximity to the Airport (LSA 2019) (Table 3E). All the roadway segments near the Airport are below the city's level of service (LOS) threshold of significance as stated in its General Plan (Table 3.1.A), i.e., LOS D.¹²

TABLE 3E
Roadway Segment Capacity (LOS D) and Existing Volumes

Roadway Segment	Functional Classification	LOS D Threshold ¹	Existing ADT	Exceeds LOS D Threshold?
Imjin Road (between University Drive and Reservation Road)	4-lane Arterial	32,500	1,400	No
Reservation Road (between Imjin Parkway/Road and MBEST Drive)	5-lane Arterial	40,500	33,100	No
Reservation Road (MBEST Drive and Blanco Road)	5-lane Arterial	40,500	33,200	No
Blanco Road (between Research Drive and Reservation Road)	4-lane Expressway	45,000	26,100	No

Source: LSA 2019

LOS = level of service; ADT = average daily trips

¹ Capacity based on LOS standard D per Table 3.1.A of the City of Marina General Plan (updated August 2010).

¹² Note that per recent state regulations under the *California Environmental Quality Act*, local jurisdictions are required to use a different metric than LOS for measuring traffic impacts, (i.e. vehicle miles travelled or VMT). However, for FAA's purposes under NEPA, the LOS is still a factor to consider.



Table 3F shows the existing intersection LOS for the same area.

TABLE 3F Existing Intersection Levels of Service¹

Intersection No./Location ²	Jurisdiction	Control	LOS Standard	AM Peak Hour LOS	PM Peak Hour LOS
1. Imjin Road/University Drive	City of Marina	All-way Stop	D	Α	Α
2. Imjin Parkway/Reservation	City of Marina/	Signal	D	С	С
Road	County of Monterey				
3. MBEST Drive/University	City of Marina	Roundabout	D	No use at this	No use at this
Drive				time.	time.
4. MBEST Drive/Reservation	City of Marina/	Signal	D	No conflicting	No conflicting
Road	County of Monterey			movements.	movements.
5. Blanco Road/Research Drive	City of Marina/	Signal	D	Α	Α
	County of Monterey				
6. Blanco Road/Reservation	City of Marina/	Signal	D	D	С
Road	County of Monterey				

Source: LSA 2019 LOS = level of service

3.12.2 Environmental Justice

The project study area does not contain residences or environmental justice populations. The nearest residential neighborhood is approximately 0.42 mile from the closest part of the project study area and is separated from the project study area by the future UC MBEST campus, additional open space, and Reservation Road.

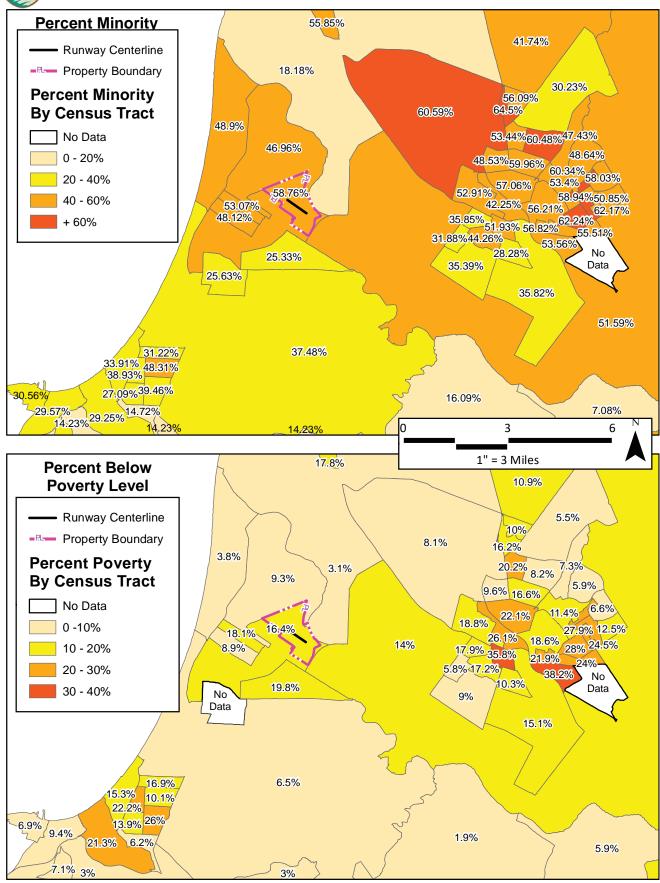
Exhibit 3H shows the percent of minority population by census tract in and around the Airport, including the project study area, based on 2018 ACS estimates. Within C.T. 06053014102, approximately 59 percent are minority populations. Additional information is available from the 2017 ACS, which estimated that C.T. 06053014102 contains approximately 2,500 persons (U.S. EPA EJSCREEN website 2020).

Table 3G provides context for the census tract information by providing similar population characteristics for the City of Marina (city), the County of Monterey (county), and the State of California (state) overall. Approximately 42 percent of the population in the city is at least partially from a minority race, including Hispanic or Latino populations. The county is approximately 37 percent minority population, including Hispanic or Latino populations, and the state is approximately 36 percent minority population, including Hispanic or Latino populations. Thus, the census tract containing the Airport has a higher percent of minority population than does the city or county overall.

¹ Capacity based on LOS standard D per Table 3.1.A of the City of Marina General Plan (updated August 2010).

² Refer to **Exhibit 3G** for location of intersections.





Source: 2018 ACS 5-Year Estimates,

2018 U.S. Census Tracts



TABLE 3G

Population Characteristics (2018 Estimates)

City of Marina, Monterey County, and State of California

Characteristic	City of Marina	Monterey County	State of California
Total Population	21,608	21,608 433,212	
Race (alone or in combination with one or	more other races)		
White	58.4%	62.7%	64.1%
Minority Population	41.6%	37.3%	35.9%
- Black or African American	12.1%	3.6%	7.0%
- American Indian and Alaska Native	3.1%	1.7%	1.9%
- Asian	25.8%	7.8%	16.4%
- Native Hawaiian/Pacific Islander	5.5%	1.0%	0.8%
- Other	10.9%	28.1%	15.0%
Hispanic or Latino (of any race)	29.5%	58.3%	38.9%

Source: U.S. Department of Commerce, Census Bureau website 2020c. (Table DP05, ACS Demographic and Housing Estimates)

Exhibit 3H also shows the percentage of the population below poverty level by census tract in areas at and near the project study area. Approximately 16 percent of the population within the census tract containing the Airport are considered low-income (i.e., living below the poverty level). Based on the 2017 ACS (which is the most current information reported in the EJSCREEN website), per capita income in the census tract was \$20,794; only four percent of the civilian labor force was unemployed (U.S. EPA EJSCREEN website 2020).

Table 3H summarizes economic characteristics of the city, the county, and the state overall. The city has a lower median household than either the county or the state. Per capita income, however, while lower than the state average, is higher than the county overall. In addition, the percentage of families living below the poverty level is lower than either the state or the county. The city's unemployment rate is lower than the state overall and the same as the unemployment rate countywide. The census tract containing the Airport has a higher percent of the population living below the poverty level than does the city or county overall.

TABLE 3H

Economic Characteristics (2018 Estimates)

City of Marina, Monterey County, and State of California

Characteristic	City of Marina	Monterey County	State of California
Median Household Income	\$62,803	\$66,676	\$71,228
Per Capita Income	\$29,686	\$28,836	\$35,021
Families Below the Poverty Level	6.4%	10.5%	10.4%
Unemployment (civilians)	5.4%	5.4%	6.7%

Source: U.S. Department of Commerce, Census Bureau website 2020a. (Table DP03, Selected Economic Characteristics)

3.12.3 Children's Environmental Health and Safety Risks

The project study area itself does not contain residences or other land uses supporting children. Based on the 2017 ACS (which is the most current information reported in the EJSCREEN website), 714 children age 0-17 lived within the census tract that contains the Airport. Of that total, 161 children were age 0-4 (U.S. EPA EJSCREEN website 2020). The closest existing school facilities to the project study area are



located adjacent to the Airport, approximately 500 feet from the project study area, within the north-west corner of the UC MBEST property. The Learning for Life Charter School is a small charter school that serves grades 7 through 12 and caters to students who have dropped out of more traditional school environments (Learning for Life Charter School website 2020). A second school in this corner of the UC MBEST property is the Pine Hill School, which is a non-public school program that provides special education for grades 1-12. Courses are offered in several core academic subjects (Pine Hill School South Monterey website 2020). Both the Learning for Life Charter School and the Pine Hill School are tenants of UC MBEST.

The nearest residential neighborhood is approximately 0.42 mile from the closest part of the project study area. The nearest public park or recreation areas likely to cater to children are Preston Park and Schoonover Park, located approximately 0.55 mile and 0.71 mile to the southwest and south, respectively, within residential neighborhoods.

3.13 VISUAL EFFECTS - Light Emissions

The direct project study area for visual effects is the 25.7-acre project area; the indirect study area is the Airport and a 0.25-mile radius from the project study area, which extends past Reservation Road on the south side. The project study area does not contain light sources.

The Airport contains the following sources of light emissions: a rotating beacon, 2-box precision approach path (PAPI) indicator lights, medium intensity runway and taxiway edge lighting, apron edge lighting, lighted airfield signs, a lighted windsock, building and vehicular parking lot security lighting, and street lighting.

Land uses sensitive to light emissions are not present in or adjacent to the project study area. The closest residential neighborhoods are separated from the project study area by intervening open space and vegetation, as well as Reservation Road, a U.S. Army Reserve Center, and a recycling facility.

3.14 WATER RESOURCES

3.14.1 Surface Waters

The direct project study area for surface waters is the 25.7-acre project area; the indirect study area is the Parker Flats-Frontal Monterey Bay watershed. There are no lakes and rivers, natural streams, or ponds within the project study area. The closest impaired water bodies or streams is the Salinas River, located approximately 0.4 mile east of the project study area. However, this water body is within a different watershed. There are no impaired streams within the Parker Flats-Frontal Monterey Bay watershed (U.S. EPA EJSCREEN website 2020).

Within the project site, a shallow swale that collects localized runoff is located between two areas of pavement. Additional runoff from the project site flows onto adjacent undeveloped areas on the Airport and into existing storm drainages that discharge into the open areas on the Airport immediately northeast of the project site.



The Airport operates under the statewide General Permit for Storm Water Discharges Associated with Industrial Activities (Order 2014-0057-DWQ). However, because the Airport retains its stormwater onsite, it is not required to implement a stormwater pollution prevention plan (SWPPP).

3.14.2 Groundwater

The direct project study area for groundwater is the 25.7-acre project area; the indirect study area is the Monterey subbasin of the Salinas Valley groundwater basin. The groundwater basin is managed by the Salinas Valley Basin Groundwater Sustainability Agency (SVBGSA), which is tasked with implementing a sustainability plan that will achieve basin sustainability by 2040. The Salinas Valley groundwater basin is designated by the state as a priority basin under the *Sustainable Groundwater Management Act* (SMGA). The Monterey subbasin groundwater sustainability plan is due by January 31, 2022 (MCWD website 2020).

Water from the Salinas Valley groundwater basin is used for potable water via groundwater wells. The groundwater basin has two major water quality issues: nitrate contamination due to the irrigated agriculture that occurs within the Salinas Valley and seawater intrusion. MCWD monitors for compliance of over 110 constituents in drinking water, including many natural occurring substances. Groundwater contamination associated with former Fort Ord activities has been treated by the USACE; groundwater treatment has ceased, and evaluation for site closeout is in progress (GHD 2017). See Section 3.7.1 for more information.

3.15 PAST, PRESENT, AND REASONABLY FORESEEABLE FUTURE ACTIONS

FAA Order 5050.4B states that the Affected Environment chapter of an EA should include background information of past, present, and reasonably foreseeable, future actions within a spatial area that is suitable for considering projects that could create incremental impacts, especially during construction, in conjunction with the Proposed Project. For this EA, the selected cumulative project spatial area is the Airport and areas within one mile of the Airport.

Temporal boundaries for the analysis have also been established. For this EA, past projects are defined as those which occurred between 2015 and 2019. Ongoing projects are those that are occurring in 2020. Reasonably foreseeable, future actions are defined as those which are likely to become a reality, such as projects that have been included within the Airport's five-year airport capital improvement program (ACIP) or are approved or pending approval by the city or county between 2021 and 2025.

3.15.1 Past, Present, and Reasonably Foreseeable Future On-Airport Actions

Table 3I provides information on on-airport projects that have occurred in the past five years (2015 - 2019), are ongoing (2020), or are planned for the next five years (2021-2025).



TABLE 3I
Past, Present, and Reasonably Foreseeable Future On-Airport Actions
Marina Municipal Airport

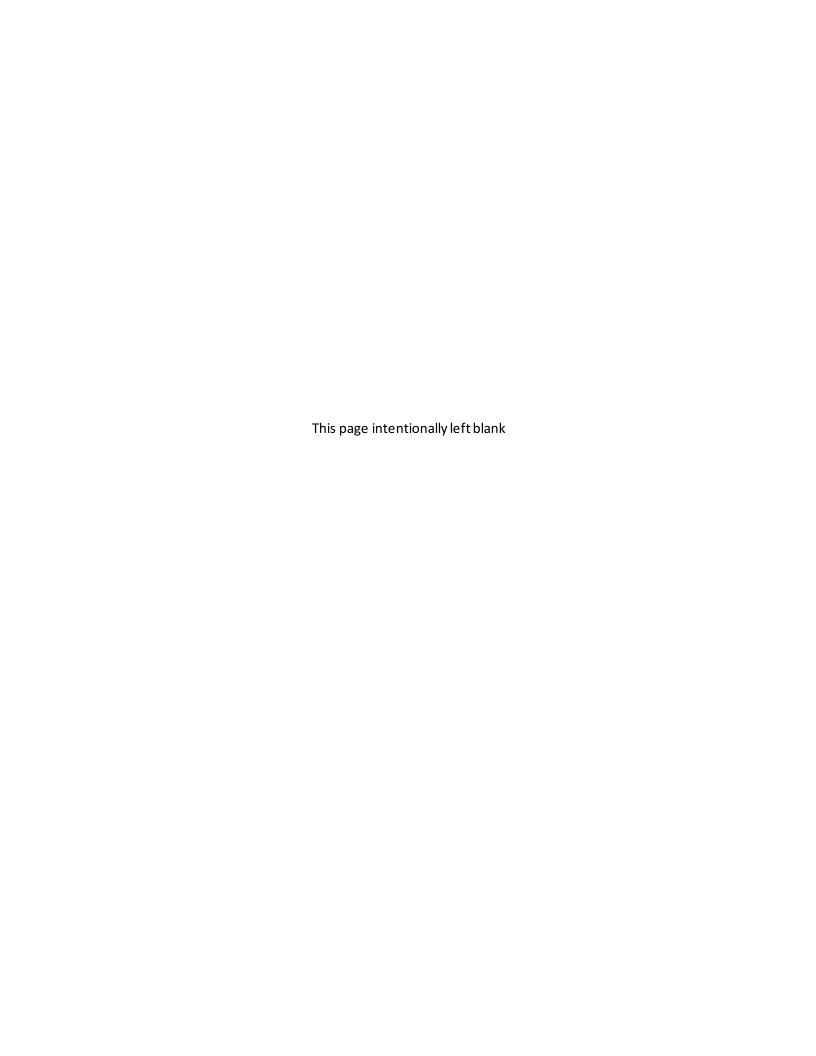
Year	Type of Project	Project Decription
2015	AIP	Replaced perimeter fence and access control improvements (4,800 lf; 9 automobile
2015	AIP	gates; 7 pedestrian gates)
2016	AIP	Installed new airport beacon on 60-ft tip-down pole
2020	AIP	Extended Taxiway B east to the Runway 29 threshold (now renamed Taxiway A)
2020	Private (Joby Aviation)	Tent construction on southeast tarmac (55,000 sf)
2020	Private (Joby Aviation)	Installed autoclave unit on apron north of Building 527
2020	Non-AIP	Replaced roof on Building 510
2020	Non-AIP	Paint and/or replace siding on Building 533
2021	Non-AIP	Remodel bathroom for ADA-compliance in Building 533
2021	Non-AIP	Construct Tower North hangars - appx. 100,000 sf in a variety of hangar sizes
2021	Non-AIP	Construct 4 or 5 aircraft storage hangars - (18,000 - 25,600 sf) north of Building 533
2021	Private (Joby Aviation)	Construct 1 conventional hangar (appx. 45,000 sf) north of Building 507
2022	AIP	Rehabiliate taxilane (former Taxiway A) pavement, including edge lighting
2023	AIP	Acquire 11.4 acres of land in Runway Protection Zone
2024	AID	Extend and widen Runway 11-29 and extend Parallel Taxiway A (2,317-If runway and
2024	AIP	taxiway extension and 25-ft runway widening)

Sources: Crechriou, J., Airport Services Manager, Marina Municipal Airport 2020a; Marina Municipal Airport 2019.

3.15.2 Past, Present, and Reasonably Foreseeable Future Off-Airport Actions

A review of potential offsite development in the City of Marina and within unincorporated parts of Monterey County within the spatial area around the Airport selected for purposes of identifying potential cumulative projects (i.e., within one mile of the Airport) was also undertaken for this EA. The following past, present (ongoing), and future development project was identified:

<u>Sea Haven Residential Development</u>. This ongoing project is on approximately 248 acres located from 0.8 to 2 miles southwest of the Airport. The project removed 828 abandoned housing units associated with the old Fort Ord Army Base and is in the process of replacing them with 1,050 new townhouse, cottage, and single-family residential housing units. Upon full buildout, the community will also include 35 acres of park, greenbelts, and open space (City of Marina website 2020).





ENVIRONMENTAL CONSEQUENCES AND MITIGATION



Chapter Four ENVIRONMENT CONSEQUENCES AND MITIGATION

Joby Aviation Manufacturing Facility

Environmental Assessment

4.1 INTRODUCTION

The potential for environmental effects resulting from the Proposed Project and No Action alternatives are presented in this chapter in accordance with Federal Aviation Administration (FAA) Order 1050.1F, Environmental Impacts: Policies and Procedures (FAA 2015b) and FAA Order 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions (FAA 2006). The environmental consequences of each impact category include consideration of the following:¹

- Direct effects Direct effects are defined as those which are caused by the action and occur at
 the same time and place (Title 40 Code of Federal Regulations [C.F.R.] 1508.8[a], Council of Environmental Quality [CEQ] Regulations).
- Indirect effects and their significance Indirect effects are defined as those which are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable (40 C.F.R. 1508.8[b], CEQ Regulations).
- Cumulative effects and their significance Cumulative effects are defined as the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes the other actions (40 C.F.R. 1508.7, 1508.8, 1508.27[b][7], CEQ Regulations, and CEQ Guidance on considering cumulative impacts under NEPA).

If warranted, avoidance, minimization, or mitigation measures are listed which will reduce or eliminate potential environmental impacts. Special purpose laws which protect various environmental resources are also identified, as applicable.

4.2 RESOURCES NOT IMPACTED BY PROJECT ALTERNATIVES

The Proposed Project or No Action alternatives would have no direct, indirect, or cumulative impact to the categories that are listed below. Either these resources do not occur within or in proximity to the project study area, or no change to the existing condition would result from the Proposed Project, or both. Table 3A (Chapter Three) provides the rationale for those environmental resource categories that have been eliminated from further consideration and evaluation in this EA.

- Coastal Resources
- Farmlands
- Visual Resources/Visual Character
- Wetlands

¹ Although the Council of Environmental Quality (CEQ) has released the final rule amending its NEPA regulations, detailed

guidance on its implementation is not yet available, and this EA was initiated before September 2020. Therefore, this EA has followed the existing FAA orders for NEPA.



- Floodplains
- Wild and Scenic Rivers

4.3 AIR QUALITY

Analysis Methodology

<u>FAA Order 1050.1F Significance Threshold</u>: A significant impact to air quality would occur when pollutant concentrations exceed one or more of the National Ambient Air Quality Standards (NAAQS) as established by the United States (U.S.) Environmental Protection Agency (EPA) under the Clean Air Act (CAA), for any of the time periods analyzed, or increase the frequency or severity of any such existing violations.

Under the federal CAA, as amended by the *Clean Air Act Amendments of 1990*, the U.S. EPA has established NAAQS for six criteria pollutants, as described in Section 3.3. Section 176(c) of the CAA requires projects overseen by federal agencies to demonstrate that they conform to State Implementation Plans (SIPs) in U.S. EPA-designated air quality nonattainment areas. Pursuant to this responsibility, U.S. EPA codified the General Conformity regulations of the CAA. Per these regulations, federal actions in nonattainment areas must demonstrate that annual project-related air emissions do not cause or contribute to continued air quality violations in the area by remaining within the applicable *de minimis* thresholds.² Both the federal CAA and FAA provide guidance for conducting air quality analyses for airport projects under NEPA (FAA 2015a).

The project study area, which is in Monterey County, is in attainment for all NAAQS. Therefore, a General Conformity analysis is not required for the Proposed Project. However, for purposes of disclosure, construction and operation inventories of anticipated emissions have been prepared using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2 (City of Marina 2020). The CalEEMod software model, published by the California Air Pollution Control Officers Association (CAPCOA), in collaboration with various California air districts, estimates on-road vehicle emissions, such as those from dump trucks or light-duty work trucks, and off-road vehicle emissions, such as heavy construction equipment. CalE-EMod includes emissions factors that are adjusted to local climatic conditions. The resulting reports are on file with the City of Marina (city).

No aircraft operational emissions inventory was prepared for the Proposed Project. The Proposed Project would result in a minimal number of annual operations (estimated to be 120 - 240 [Gross, A., Sustainability Manager, Joby Aero, Inc. 2020]), which would represent less than one percent of the annual operations forecast to occur at the Airport by 2023 (City of Marina 2018b, Table 2L). The Proposed Project would not change the airport fleet mix or aircraft traffic patterns and, thus, would not result in increases in air emissions when compared to the No Action alternative. Testing of vertical take-off and landing (VTOL) aircraft would occur, but since these prototypes are electric, no direct aircraft-related emissions would be generated.

sions exceeding the thresholds require additional analysis to determine if the emissions are in violation of the applicable SIP.

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² Under the General Conformity Rule, all reasonably foreseeable *direct* and *indirect* emissions occurring due to federally supported actions should be quantified and compared against *de minimis* thresholds in what is known as an applicability test. The applicability test is only conducted on pollutants for which the area is classified as either maintenance or nonattainment. Annual project-related emissions beneath the *de minimis* thresholds are considered to conform to state SIPs; annual emissions



Proposed Project Alternative

<u>Temporary Construction Impacts</u>. During the 15-month construction period(s), grading and the removal and pulverization of existing pavement would result in temporary impacts to air quality. Site disturbance and other construction activities would result in a localized decrease in air quality due to the generation of coarse particulate matter (PM₁₀) and nitrous oxides (NO_x) and reactive organic gases (ROG), which are precursors to ozone (O₃). **Table 4A** shows the estimated unmitigated amounts of criteria pollutants in tons/year for two (partial) construction years. No *de minimis* thresholds for criteria pollutants would be exceeded.

With standard emission reduction methods, an additional 20 to 30 percent reduction in fugitive PM_{10} and $PM_{2.5}$ would occur, respectively (City of Marina 2020, CalEEMod version 2016.3.2). See *Avoidance, Minimization, and Mitigation Measures* below. If the Proposed Project construction is completed in two phases separated by a period of three to five years, a lesser amount of emissions compared to what is shown in **Table 4A** would occur during each of the construction periods.

TABLE 4A
Proposed Project Construction Emissions vs. Federal *De Minimis* Thresholds (Tons per Year)¹

	ROG ²	NO _x ²	СО	SO ₂	PM ₁₀	PM _{2.5}
Federal De Minimis Thresholds ³	100	100	100	100	100	100
Construction Year 1	0.63	5.85	4.69	0.01	1.14	0.57
Construction Year 2	0.39	3.35	3.13	0.01	0.48	0.19
Exceed <i>De Minimis</i> Thresholds?	NO ²	NO ²	NO	NO	NO	NO

Sources: U.S. EPA website 2020; City of Marina 2020 (CalEEMod version 2016.3.2)

<u>Operational Impacts</u>. Operational air quality emissions would be generated due to area sources (such as cleaning products, architectural coatings, and landscape equipment), emissions from energy use, vehicular trips related to the employees and deliveries (large truck traffic), and operational off-road equipment (such as forklifts, loaders, etc.). **Table 4B** shows the estimated amounts of criteria pollutants in tons/year for the Proposed Project at full buildout. No *de minimis* thresholds for criteria pollutants would be exceeded.

TABLE 4B
Proposed Project Operational Emissions vs. Federal *De Minimis* Thresholds (Tons per Year)

	ROG ¹	NO _x ¹	СО	SO ₂	PM ₁₀	PM _{2.5}
Federal De Minimis Thresholds ²	100	100	100	100	100	100
Area	2.71	0.00	0.01	0.00	0.00	0.00
Energy	0.08	0.75	0.63	0.00	0.06	0.06
Mobile	0.76	4.01	9.12	0.03	1.96	0.54
Off-road	0.01	0.03	0.03	0.00	0.00	0.00
Total	3.56	4.79	9.79	0.03	2.02	0.60
Exceed <i>De Minimis</i> Thresholds?	NO ²	NO ²	NO	NO	NO	NO

Sources: U.S. EPA website 2020; City of Marina 2020 (CalEEMod version 2016.3.2)

¹ Assumes all construction activity occurs in one 15-month construction phase.

 $^{^2}$ ROGs and NOx, which are O_3 precursors, are used in modeling for O_3 and are combined to compare to the O_3 de minimis thresholds.

³ Since all criteria pollutants are in attainment, the *de minimis* thresholds for maintenance areas are shown for purposes of comparison.

 $^{^{1}}$ ROGs and NOx, which are O₃ precursors, are used in modeling for O₃ and are combined to compare to the O₃ de minimis thresholds.

² Since all criteria pollutants are in attainment, the *de minimis* thresholds for maintenance areas are shown for purposes of comparison.



The Proposed Project could cause long-term exposure to toxic air contaminants (TACs), primarily associated with the manufacturing processes, which would use heavy metals during welding, machining, cutting, grinding, and blasting, as well as aircraft painting. These activities would be conducted inside the building and could cause a health risk to workers. (See also discussion below under <u>Indirect Impacts</u> regarding the presence of two small schools in proximity to the project study area.)

As part of the Monterey Bay Air Resources District (MBARD) permitting process, MBARD will conduct a New Source Review which will include a health risk assessment (HRA) on the Proposed Project. The HRA will be used by MBARD to determine the potential cancer risk that would be generated by the project (i.e., the HRA results will be compared to the MBARD significance threshold for probability of cancer of greater than 10 in one million). Should the HRA indicate a health risk that exceeds the MBARD significance threshold, the project applicant will be required by MBARD to conduct public notification and outline a plan to implement risk reduction measures. The documents will be included in the MBARD Permit to Operate and will describe the methods the Proposed Project would use to reduce its risk below a level of significance.

In addition, as part of the Permit to Operate, the project applicant will conduct performance testing and inspection of the project TAC emissions sources, as determined appropriate by MBARD, and provide all inspection documentation to MBARD. The frequency of inspections and reporting will be determined by MBARD and made a condition of approval in the MBARD Permit to Operate as well as any other conditions as detailed per MBARD permit requirements. Through compliance with MBARD permit requirements, the Proposed Project would not have a significant impact to sensitive receptors due to long-term operations. MBARD's Rule 200 requires any business to obtain an Authority to Construct (ATC) and Permit to Operate before installing or operating new equipment or processes that may release or control air pollutants.

Indirect Impacts. All manufacturing processes for the Proposed Project would take place within the proposed building. Therefore, although two small schools that are tenants of the UC MBEST Center are located approximately 500 feet (ft) to the southwest of the Proposed Project (i.e., the Learning for Life Charter School and the Pine Hill School [refer to Section 3.12.3]), no significant indirect impacts from TACs related to the proposed manufacturing processes would occur. There are no outdoor play areas associated with either school. As discussed above, if an HRA indicates a health risk that exceeds the MBARD significance threshold, the project applicant will be required by MBARD to conduct public notification and outline a plan to implement risk reduction measures. The documents will be included in the MBARD Permit to Operate and will describe the methods the Proposed Project would use to reduce its risk below a level of significance.

<u>Conclusion</u>. Since Monterey County (county) is in attainment for all NAAQS, an applicability test under the General Conformity Rule of the *Clean Air Act* is not required. In addition, based on the construction and operation inventories conducted on the Proposed Project, federal *de minimis* thresholds will not be exceeded. The Proposed Project would be required to comply with all conditions of MBARD, which will issue the local Authority to Construct and Permit to Operate. No significant impacts related to air quality would occur.

No Action Alternative

No construction or operational emissions would occur under the No Action alternative.



Avoidance, Minimization, or Mitigation Measures

As the impacts of the Proposed Project are not significant for Air Quality due to the implementation of standard construction best management practices (BMPs) and other avoidance and minimization measures required by MBARD, there are no mitigation measures required to reduce the impacts to a not significant level.

Avoidance and Minimization Measures

- The Proposed Project will implement standard construction BMPs related to dust suppression as identified by MBARD, which include:
 - 1. Watering active construction areas.
 - 2. Prohibiting grading activities during periods of high wind (over 15 miles per hour [mph]).
 - 3. Covering trucks hauling soil.
 - 4. Covering exposed stockpiles and inactive storage piles.
 - 5. Maintaining at least 2 ft of freeboard on haul trucks.
 - 6. Applying non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut and fill operations and hydroseeding any exposed areas.
 - 7. Sweeping streets if visible soil materials are carried out from the construction site.
- The project applicant will be required by MBARD to conduct public notification and outline a plan
 to implement risk reduction measures if the HRA indicates a health risk that exceeds the MBARD
 significance threshold. The documents will be included in the MBARD Permit to Operate and will
 describe the methods the Proposed Project would use to reduce its risk below a level of significance.

4.4 BIOLOGICAL RESOURCES

Analysis Methodology

<u>FAA Order 1050.1F Significance Threshold</u>: A significant impact to federally listed threatened or endangered species would occur when the United States Fish and Wildlife Service (USFWS) determines the Proposed Project would be likely to jeopardize the continued existence of a federally listed threatened or endangered species or would result in the destruction or adverse modification of federally designated critical habitat. FAA has not established a significance threshold for non-listed species.

Biotic resources are the various types of flora (plants) and fauna (animals) and the habitat supporting those species located in a particular area. The following regulations and mitigation programs are pertinent to this analysis:

• The federal Endangered Species Act of 1973 (ESA) provides protection for species that are facing potential extinction. Impacts to listed species resulting from the implementation of a project require the responsible agency or individual to formally consult with the USFWS to determine the extent of impact to a particular species. If the USFWS determines that impacts to a listed species would likely occur, alternatives and measures to avoid or reduce impacts must be identified. USFWS also regulates activities conducted in federal critical habitat, which are geographic units designated as areas that support primary habitat constituent elements for listed species.



- The *Migratory Bird Treaty Act* (MBTA) prohibits private parties and federal agencies from intentionally taking a migratory bird, their eggs, or nests.
- State regulations include the California Endangered Species Act (California ESA), which ensures
 legal protection for plants listed as rare or endangered and species of wildlife that are formally
 listed as endangered or threatened.
- The Airport is within the planning area of the *Installation-Wide Multispecies Habitat Manage-ment Plan for Former Fort Ord* (Fort Ord HMP), a federally approved mitigation program established for the closure and dispensation of former Ford Ord (USFWS 2017; United States Army Corps of Engineers [USACE] 1997). The Fort Ord HMP does not provide specific authorization for incidental take of federal or state listed species.

To evaluate potential impacts to federally protected biological resources, a Biological Assessment (BA) was completed for the Proposed Project (Denise Duffy and Associates [DDA] 2020). The BA was based on a field survey of the project study area and an immediately adjacent area.

Proposed Project Alternative

<u>Temporary Construction and Operational Impacts</u>. As discussed in Section 3.4, 90 percent of the project site is covered with pavement (23.2 acres). The remaining 2.5 acres is primarily disturbed, ruderal habitat (2.0 acres) with 0.5 acre of white-tip clover swale (Exhibit 3A). One federally listed species (i.e., Monterey spineflower [Chorizanthe pungens var. pungens]) and no designated critical habitat are within the project study area.

Based on the field survey completed in support of the BA, Monterey spineflower is present in two areas within the ruderal habitat on the project site as shown previously in Exhibit 3A. Approximately 0.08 acre of occupied habitat and 18 individuals were noted. No individuals were in the white-tip clover swale, which does not meet the specific habitat conditions needed to support spineflower (DDA 2020).

The Proposed Project has been redesigned to avoid the existing Monterey spineflower individuals and occupied habitat. The two noted habitat areas (shown on Exhibit 3A) will be protected during both construction and operation. See *Avoidance, Minimization, or Mitigation Measures* below. FAA has determined that the Proposed Project would have "no effect" on Monterey spineflower and initiated informal Section 7 consultation under the ESA with the USFWS on March 12, 2021. (See **Appendix A** for applicable correspondence.)

Birds protected by the MBTA have been observed foraging within the project study area (i.e., California horned lark) and could use the vegetated 2.5 acres within the project site for ground nesting. Grading activities would result in direct take of these birds and/or their eggs and nests if present during the onset of construction. See *Avoidance*, *Minimization*, or *Mitigation Measures* below.



Impacts could also occur during construction to the California legless lizard (*Anniella pulchra*),³ which is a wildlife species protected by the Fort Ord HMP that has a potential to be present within the project site. Grading activities could result in direct take of these reptiles. Direct take may include being struck by equipment, entrapped in stockpiled materials or trenches, or trampled or collected by construction personnel. See *Avoidance*, *Minimization*, *or Mitigation Measures* below.

Indirect Impacts. The project study area is in proximity to two designated critical habitat areas (Exhibit 3B). Critical habitat for Monterey spineflower is located approximately 0.15 mile west and 0.3 mile southeast and southwest of the project site. Critical habitat for the south-central California coast steel-head (*Oncorhynchus mykess irideus*) is within the Salinas River, approximately 0.4 mile from the project site. No indirect impacts to these critical habitat areas or the biological resources contained in these areas would occur due to project construction or operation. All project activities would be confined within the project site and appropriate BMPs would be implemented. See *Avoidance*, *Minimization*, or *Mitigation Measures* below.

<u>Conclusion</u>. No significant impacts to biological resources would occur because of the Proposed Project due to the implementation of avoidance and minimization measures listed below.

No Action Alternative

No project area disturbance would occur under the No Action alternative and, thus, no impacts to biological resources would occur.

Avoidance, Minimization, or Mitigation Measures

As the impacts of the Proposed Project are not significant for Biological Resources due to the proposed avoidance and minimization measures, there are no mitigation measures required to reduce the impacts to a not significant level.

Avoidance and Minimization Measures

The project applicant will implement the following avoidance and minimization measures to ensure that no adverse effects occur to Monterey spineflower:

- Installation of temporary exclusion fencing and flagging to prevent encroachment by construction personnel and equipment into sensitive areas to be avoided.
- Presence of an on-site biological monitor during construction activities.
- Implementation of construction BMPs, including mandatory worker environmental awareness training for all construction personnel, erosion, dust and sediment control, and trash disposal.

Additional measures to avoid or minimize potential impacts (i.e., take) of migratory birds and California legless lizards will also be implemented:

³ While not protected under the federal or California ESA, the California legless lizard is a California Special Species of Concern.



- Construction activities that may directly (e.g., vegetation removal) or indirectly (e.g., noise/ground disturbance) affect ground nesting birds will be timed to avoid the applicable breeding and nesting season(s). Specifically, for California horned lark, vegetation removal will be scheduled after September 16 and before January 31. Alternatively, a qualified biologist will be retained by the project applicant to conduct pre-construction surveys for nests within 300 ft of proposed construction activities if construction occurs between February 1 and September 15. Pre-construction surveys will be conducted no more than 14 days prior to the start of construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August).
- If California horned lark or other ground nesting bird nests are identified during the pre-construction surveys, the qualified biologist will notify the city, who will notify the appropriate resource agencies. An adequate no-disturbance buffer (as determined by the resource agency) will be imposed within which no construction activities or disturbance should take place (generally 300 ft in all directions) until the young of the year have fledged and are no longer reliant upon the nest or parental care for survival.
- Within 30 days prior to site grading, an environmental monitor will conduct surveys for California legless lizards and other reptiles. The monitor will utilize hand search or cover board methods in areas of disturbance where legless lizards are expected to be found (e.g., under shrubs, other vegetation, or debris). If cover board methods are used, they will commence at least 30 days prior to the start of construction. If hand search methods are used, the surveys will be completed immediately prior to and during grading activities. The monitor will capture and relocate any legless lizards or other reptiles observed during the survey effort. The captured individuals will be relocated from the construction area(s) and placed in suitable habitat on the airport property.

4.5 CLIMATE

Analysis Methodology

FAA has not identified any significance thresholds for aviation-related greenhouse gas (GHG) emissions, and there are currently no accepted methods of determining significance applicable to aviation projects given the small percentage of emissions they contribute. However, although there are no federal standards for aviation-related emissions, it is well-established that GHG emissions can affect climate (Intergovernmental Panel on Climate Change [IPCC] 2014; U.S. Global Change Research Program 2009). For further discussion of federal guidance on GHG review, see Section 3.5.

The following EA section discloses the potential incremental change in GHG emissions that would result from the Proposed Project compared to the No Action alternative for the same timeframe. It then discusses the context for interpreting and understanding the potential changes. The methodology to disclose GHG emissions within this EA includes quantification of emissions with computer software. As described previously in Section 4.3, emissions from proposed construction and operational activity were modeled using the CalEEMod, Version 2016.3.2. The inputs used to calculate the air pollutant emissions in Section 4.3.1 were also used to calculate GHG emissions. The resulting reports are on file with the city.



The GHG estimates are provided for information only as the FAA has not identified specific factors to consider in making a significance determination for GHG emissions. As previously discussed under Section 4.3, the Proposed Project would not result in increases in GHG emissions related to aviation activity at the Airport when compared to the No Action alternative since it would not permanently change the airport fleet mix or aircraft traffic patterns. The Proposed Project would result in less than one percent of the annual operations forecast to occur at the Airport by 2023 (City of Marina 2018b, Table 2L). Testing of VTOL aircraft would occur, but since these prototypes are electric, no direct GHGs would be generated.

Proposed Project Alternative

<u>Temporary Construction Impacts</u>. Construction activities for the Proposed Project would result in a temporary generation of GHGs. **Table 4C** shows the estimated amounts of GHG pollutants in metric tons per year [MT/yr]) calculated by CalEEMod for each GHG per calendar year of construction. These amounts are then multiplied by the global warming potential (GWP) for each GHG to determine the final carbon dioxide equivalent⁴ (CO₂e) total for that calendar year. As shown in the table, the first year of construction would result in approximately 1,177 MT of CO_2e ; the second year of construction would result in approximately 871 MT of CO_2e . The analysis assumes that all construction would occur in one phase. If the Proposed Project construction is completed in two phases separated by a period of three to five years, a lesser amount of GHGs compared to what is shown in **Table 4C** would occur during each of the construction periods.

TABLE 4C
Proposed Project Construction Greenhouse Gas Emissions (MT/yr)¹

	CO ₂	CH₄	N₂O	Total CO₂e ²
GWP	1	36	298	
Construction Year 1	1,173.73	0.14	<0.01	1,177.35
Construction Year 2	869.35	0.08	0.00	871.46

Sources: City of Marina 2020 (CalEEMod version 2016.3.2)

MT/yr = metric tons per year; GWP = global warming potential; CO₂e = carbon dioxide equivalent

Operational Impacts. Operational GHG emissions would be generated due to area sources (such as cleaning products, architectural coatings, and landscape equipment), emissions from energy use, vehicular trips related to the employees and deliveries (large truck traffic), and operational off-road equipment (such as forklifts, loaders, etc.), as well as GHGs related to solid waste disposal and water use.⁵ The estimated amounts of annual GHGs for the Proposed Project are 3,877.55 MT/CO₂e (**Table 4D**). As previously mentioned in Section 4.3, no aircraft operational GHG inventory was prepared for the Proposed Project.

¹ Assumes that all construction activity occurs in one phase.

 $^{^{2}}$ CO₂e totals account for the GWP of each GHG. Final CO₂e numbers may differ slightly from those shown in the reports generated by CalEEMod, due to rounding of numbers.

 $^{^4}$ CO₂e factors in the individual GWPs for carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). This allows the computation of overall global warming impacts by accounting for how much energy the emissions of one ton of a particular gas would absorb over a given period of time compared to the emissions of one ton of CO₂.

⁵ Project-related GHGs are based on the "Mitigated" CalEEMod outputs in order to incorporate the 2019 Title 24 CALGreen standards, high efficiency outdoor lighting, construction BMPs, water conservation strategies (use of reclaimed water, installation of low flow fixtures, etc.), and 50 percent waste diversion.



TABLE 4D
Proposed Project Operational Greenhouse Gas Emissions (MT/yr)

	CO ₂	CH₄	N ₂ O	Total CO₂e ¹
GWP	1	36	298	
Area	0.03	0.00	0.00	0.03
Energy	1,289.92	0.08	0.03	1,299.29
Mobile	2,385.63	0.13	0.00	2,388.81
Off-road	3.37	0.00	0.00	3.40
Waste	73.00	4.31	0.00	180.84
Water	4.14	0.00	0.00	5.18
Total	3,756.09	4.52	0.03	<i>3,877.55</i>

Sources: City of Marina 2020 (CalEEMod version 2016.3.2)

<u>Indirect Impacts</u>. The Proposed Project would involve the manufacturing of electric air taxis (i.e., VTOLs), which have the potential to significantly reduce GHG emissions associated with modern aircraft operations powered by jet fuel or aviation gasoline (AvGas). By replacing portions of the future aircraft fleet with electric air taxis, the Proposed Project could result in a benefit to the climate by reducing GHG emissions associated with aviation's fossil fuel usage.

<u>Conclusion</u>. The Proposed Project alternative would contribute to increases in GHGs temporarily during construction as well as in the long term due to the manufacturing operations. However, the Proposed Project may result in an indirect decrease in GHGs in the long term due to the potential benefits of the project discussed above under <u>Indirect Impacts</u>.

No Action Alternative

No construction or operational GHGs would occur under the No Action alternative.

Avoidance, Minimization, or Mitigation Measures

As the impacts of the Proposed Project are not significant for Climate, there are no mitigation measures required to reduce the impacts to a not significant level. Avoidance and minimization measures are not needed as state requirements already mandate a variety of measures to reduce statewide GHGs.

4.6 DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(f)

Analysis Methodology

<u>FAA Order 1050.1F Significance Threshold</u>: A significant impact to Section 4(f) resources would occur if the action involves more than a minimal physical use of a Section 4(f) resource or constitutes a "constructive use" based on an FAA determination that the aviation project would substantially impair the Section 4(f) resources.

 $^{^{1}}$ CO₂e totals account for the GWP of each GHG. Final CO₂e numbers may differ slightly from those shown in the reports generated by CalEEMod, due to rounding of numbers.

MT/yr = metric tons per year; GWP = global warming potential; CO₂e = carbon dioxide equivalent



Resources that are protected by Section 4(f) are publicly owned land from a park, recreation area, or wild-life or waterfowl refuge of national, state, or local significance, or publicly owned land from an historic site of national, state, or local significance. Substantial impairment occurs when the activities, features, or attributes of the resource that contributes to its significance or enjoyment are substantially diminished. The analysis in this EA, therefore, evaluates the potential use of Section 4(f) resources within the direct project study area and an indirect study area of the Airport and a 0.5-mile radius from the Airport.

Proposed Project Alternative

<u>Temporary Construction and Operational Impacts</u>. As discussed in Sections 3.6 and 3.8, there are no Section 4(f) properties within the direct or indirect project study areas. There are also no lands conveyed to the Airport per the *Land and Water Conservation Fund Act of 1965*, Section 6(f). Therefore, no physical or constructive use of Section 4(f) resources would occur because of the Proposed Project.

<u>Indirect Impacts</u>. See previous paragraph. Since no constructive use of Section 4(f) resources would result from the Proposed Project, no substantial impairment of Section 4(f) resources would occur.

<u>Conclusion</u>. No physical (direct) or indirect use or substantial impairment of Section 4(f) resources would occur due to the Proposed Project. Therefore, implementation of the Proposed Project alternative would not result in a significant impact on Section 4(f) resources.

No Action Alternative

No use or substantial impairment of Section 4(f) resources would occur due to the No Action alternative.

Avoidance, Minimization, or Mitigation Measures

As the impacts of the Proposed Project are not significant for Section 4(f) Resources, there are no mitigation measures required to reduce the impacts to a not significant level. In addition, avoidance or minimization are not applicable.

4.7 HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION

4.7.1 Hazardous Materials

Analysis Methodology

<u>FAA Order 1050.1F Factors to Consider</u>: FAA has not established a significance threshold for this impact category. However, factors to consider are the Proposed Project's potential to:

- Violate applicable federal, state, tribal, or local laws or regulations regarding hazardous materials management;
- Involve a contaminated site, including, but not limited to, a site listed on the National Priorities List (NPL);
- Produce an appreciably different quantity or type of hazardous waste; or
- Adversely affect human health and the environment.



Four primary federal laws govern the handling and disposal of hazardous materials, chemicals, substances, and wastes. The two statutes of most importance to airport projects are the *Resource Conservation Recovery Act* (RCRA) (as amended by the *Federal Facilities Compliance Act of 1992*) and the *Comprehensive Environmental Response, Compensation, Liability Act* (CERCLA), as amended (also known as Superfund). RCRA governs the generation, treatment, storage, and disposal of hazardous wastes. CERCLA provides for cleanup of any release of a hazardous substance (excluding petroleum) into the environment. Other laws include the *Hazardous Materials Transportation Act*, which regulates the handling and transport of hazardous materials and wastes, and the *Toxic Substances Control Act*, which regulates and controls the use of polychlorinated biphenyls (PCBs), as well as other chemicals or toxic substances in commercial use.

State hazardous materials regulations and programs include: the California Health and Safety Code (CHSC), California Fire Code, California Unified Program Administration, California *Hazardous Waste Control Law*, and various titles and sections within the California Code of Regulations (CCR).

For preparation of this EA, federal and state online databases related to the presence and/or cleanup of hazardous materials, as well as available information on known airport hazardous or formerly hazardous conditions, have been accessed relative to the project study area. The potential for the Proposed Project to create or result in increased risk of exposing surrounding populations or the environment to hazardous materials was evaluated based on the Proposed Project's likely use and/or treatment of hazardous materials and wastes, as well as a review of previous remediation activity conducted at the Airport.

Proposed Project Alternative

<u>Temporary Construction Impacts</u>. Construction activities for the Proposed Project would require the use of hazardous substances, such as fuel for machinery and equipment. Use of hazardous substances during construction could result in the exposure of persons and/or the environment to an adverse environmental impact due to the accidental release of a hazardous material. However, standard BMPs to reduce the risk would be required. See <u>Avoidance and Minimization Measures</u> below.

The Proposed Project would be located on the former Fort Ord within an area with the potential for munitions and explosives of concern (MEC). Even following the U.S. Army's completion of MEC response actions (as described in Section 3.7.1), it is possible that some MEC may remain within former Fort Ord parcels. As such, project grading would be subject to specific conditions identified on the grading permit in compliance with the Marina Municipal Code (Title 15, Buildings and Construction, Chapter 15.56, Digging and Excavation on the Former Fort Ord). The city has designated its former Fort Ord lands as a special "ordnance remediation" district (depicted by an "ORD" suffix) and depicted these lands as such on a grading district map (City of Marina Municipal Code 1998).

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be handled and disposed of as hazardous waste when excavated or pumped from an aquifer (City of Marina 2020).

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⁶ Hazardous materials are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed, or otherwise managed. A hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. Hazardous materials and waste can result in public health hazards if improperly handled, released into the soil or groundwater, or through airborne releases in vapors, fumes, or dust. Soil and groundwater having concentrations of hazardous constituents higher than specific regulatory levels must



No groundwater plumes exist under the project study area, and groundwater contamination on the former Fort Ord would not affect the Proposed Project. (Note: All potable water used by the Proposed Project would be from existing municipal supplies, which are not affected by the TCE plume.)

<u>Operational Impacts</u>. Use of hazardous substances during operation of the Proposed Project, such as paints, solvents, lubricants, coolants, resin, adhesives, additive manufacturing powder (titanium and aluminum alloys), fuel for machinery and equipment, and inert gas, could result in the exposure of persons and/or the environment to an adverse environmental impact due to the accidental release of a hazardous material. The use or storage of hazardous materials would be subject to all applicable federal, state, and local requirements (including the California Fire Code and the California Health and Safety Code, Division 20, chapter 6.5, Hazardous Waste Control). See <u>Avoidance and Minimization Measures</u> below.

<u>Indirect Impacts</u>. As previously discussed under Section 4.3, Air Quality, an HRA will be used by MBARD to determine the potential cancer risk that would be generated by the project due to TACs. Should the HRA indicate a health risk that exceeds the MBARD significance threshold, the project applicant will be required by MBARD to conduct public notification and outline a plan to implement risk reduction measures. The documents will be included in the MBARD Permit to Operate and will describe the methods the Proposed Project would use to reduce its risk below a level of significance.

<u>Conclusion</u>. Although the Proposed Project would be constructed on former Fort Ord land, which was previously contaminated by hazardous materials and MEC, a considerable amount of remediation has already occurred at the Airport and the lands were cleared for transfer. In addition, the city has conditions required prior to the issuance of grading permits, while MBARD has requirements for the preparation of an HRA as part of its New Source Review for the proposed manufacturing activity. Due to the previous remediation efforts, as well as the ongoing oversight for development at the Airport and within the air basin, no significant impacts related to hazardous materials would occur because of the Proposed Project.

No Action Alternative

No change to the existing conditions at the Airport as they relate to hazardous materials would occur under the No Action alternative.

Avoidance, Minimization, or Mitigation Measures

Due to the previous remediation efforts, as well as the ongoing oversight for development at the Airport and within the air basin as it relates to Hazardous Materials, no mitigation measures are required to reduce the impacts to a not significant level.

<u>Avoidance and Minimization Measures - Construction</u>

During construction, if previously unknown contaminants are discovered or a spill occurs, work
will be halted, and the National Response Center notified, where applicable. The contractor will
immediately report any release or threatened release of hazardous materials to the Monterey
County Health Department and airport management.

⁷ The Monterey County Health Department requires a hazardous materials management and disposal plan for all non-house-hold projects exceeding 27 gallons of hazardous wastes monthly. However, the operation of the Proposed Project would not exceed this threshold.



- Prior to commencement of construction-related activities, the project applicant and/or contractor will prepare a spill prevention, control, and countermeasure plan (SPCC) that addresses potential impacts associated with hazardous material usage during construction and operation. The project applicant and/or contractor will be responsible for implementing the SPCC on-site for the duration of construction, and all personnel working on the site would be notified of its location. The SPCC will, at a minimum, consist of the following:
 - Identify applicable safety and clean-up procedures in the event of a spill.
 - Designate construction staging areas where hazardous materials may be stored. All staging areas will be located outside of sensitive biological areas. Staging areas will be designed to contain runoff to prevent contaminants (e.g., oil, grease, fuel products, etc.) from draining towards receiving waters and sensitive areas.
 - Identify appropriate emergency notification procedures and emergency contacts.
 - Designate location where a spill kit will be maintained on-site throughout the project.
 - Identify dedicated storage areas where hazardous material may be stored and/or used during construction.

To minimize potential health and safety risks due to the exposure to MEC, the following avoidance and minimization measures will be implemented by the Proposed Project:

- Project grading will be subject to specific conditions identified on the grading permit in compliance with Marina Municipal Code (Title 15, Buildings and Construction, chapter 15.56, Digging and Excavation on the Former Fort Ord).
- Prior to the commencement of any ground-disturbing activity proposed, the project applicant and/or contractor will coordinate with the city to develop a safety program that specifies protocols relative to MEC in accordance with city, California Division of Occupational Health and Safety (Cal-OSHA), and U.S. Army regulations. If MEC are uncovered during construction and other site disturbing activities, all work will cease, and the project applicant and/or contractor will notify the appropriate authorities. Work will not commence until the ordnance has been removed from the site and the surrounding site soils have been sampled and remediated to acceptable levels if soil sampling reveals lead or other soil contamination has occurred due to the presence of munitions.
- All construction personnel will attend an U.S. Army-sponsored MEC safety debriefing prior to the
 any ground-disturbing activities. This briefing will identify the variety of MEC that is expected to
 exist on the former Fort Ord, and the necessary actions to be taken if a suspicious item is discovered during project construction.



Avoidance and Minimization Measures - Operation

The project applicant will be required by MBARD to conduct public notification and outline a plan
to implement risk reduction measures if the HRA indicates a health risk that exceeds the MBARD
significance threshold. The documents will be included in the MBARD Permit to Operate and will
describe the methods the Proposed Project would use to reduce its risk below a level of significance.

4.7.2 Solid Waste

Analysis Methodology

<u>FAA Order 1050.1F Factor to Consider</u>: FAA has not established a significance threshold for this impact category. However, a factor to consider is the Proposed Project's potential to:

 Generate an appreciably different quantity or type of solid waste or use a different method of collection or disposal and/or would exceed local capacity.

The U.S. EPA is the lead agency that enforces federal regulations impacting public health as it relates to the environment. The U.S. EPA primarily regulates household, industrial, and manufacturing solid waste under RCRA. Under RCRA Subtitle D, states are encouraged to develop comprehensive plans to manage nonhazardous industrial solid and municipal waste. Subtitle D also establishes criteria for municipal solid waste landfills and prohibits the open dumping of solid waste.

California's Department of Resources Recycling and Recovery (CalRecycle) brings together the state's recycling and waste management programs. Assembly Bill (AB) 341 *Solid Waste: Diversion*, approved in October 2011, set forth the requirements of the statewide mandatory commercial recycling program, which has the goal of reducing GHG emissions through the diversion of commercial solid waste to recycling efforts.⁸ The California Green Building Standards Code (CALGreen) (CCR, Title 24, part 11) includes mandatory measures for residential and nonresidential development in a variety of categories, one of which relates to materials conservation and resource efficiency.

Estimates of construction solid waste were obtained based on estimates of pavement depth to be removed (approximately 10 inches [in.] of asphalt concrete) from a geotechnical investigation of the Proposed Project site (Soil Surveys Group, Inc. 2019) and area of pavement (23.2 acres [1,010,592 square feet, sf]). For operational solid waste estimates, average solid waste generation factors based on land use are available from CalRecycle. CalRecycle compiles solid waste generation rates for commercial and industrial activities over an amount of time (i.e., day, year) to estimate new developments' impact on the local waste stream. These estimates include information from city and county planning departments, as well as environmental departments across the state (CalRecycle website 2020a).

⁸ AB 341 is designed to help meet California's recycling goal of 75 percent by the year 2020. Among other things, it requires that all commercial business and public entities that generate four cubic yards or more of waste per week have a recycling program in place.



Proposed Project Alternative

<u>Temporary Construction Impacts</u>. Solid waste would be generated during construction. However, to reduce solid waste, the existing asphalt concrete on-site would be crushed and used as engineered fill under future development. It is estimated that approximately 100,000 cubic yards (cy) of old pavement $(1,010,592 \text{ sf x } 0.83 \text{ ft } [10 \text{ in.}] \div 9 = 93,199 \text{ cy})$ would be removed and repurposed. Thus, the Proposed Project would comply with the state-mandated solid waste diversion requirements and would not result in a significant impact on the Monterey Peninsula Landfill.

Operational Impacts. Wastes from operation of the Proposed Project would involve both hazardous and non-hazardous waste products. Based on CalRecycle solid waste generation rates for manufacturing/warehouse industrial activity of 1.42 pounds/100 sf/day, the Proposed Project would generate approximately 8,236 pounds/day of solid waste (580,000 sf/100 sf x 1.42 pounds/100 sf/day = 8,236 pounds/day). Assuming a diversion rate of 75 percent, approximately 2,059 pounds/day (approximately 1 ton/day) could be disposed within the Monterey Peninsula Landfill. This amount of waste would not exceed the landfill's capacity. The Solid Waste Facility Permit for the landfill states that the peak tonnage of incoming waste shall not exceed 3,500 tons/day (CalRecycle website 2020b).

<u>Indirect Impacts</u>. No indirect impacts related to solid waste generation and disposal would occur. The Proposed Project would comply with mandated state solid waste diversion requirements, as well as all regulations regarding hazardous waste treatment and/or disposal.

<u>Conclusion</u>. The Monterey Peninsula Landfill has adequate capacity to manage all solid waste disposal at the Airport, including waste generated from construction and operation of the project. To reduce solid waste generated during construction, the existing asphalt concrete pavement would be crushed and used as engineered fill under future development.

No Action Alternative

No new types of solid waste or additional solid waste disposal would occur because of the No Action alternative.

Avoidance, Minimization, or Mitigation Measures

As the impacts of the Proposed Project are not significant for Solid Waste, there are no mitigation measures required to reduce the impacts to a not significant level. Additional avoidance or minimization measures beyond those required by existing state mandates are not necessary.

4.7.3 Pollution Prevention

Analysis Methodology

<u>FAA Order 1050.1F Factor to Consider</u>: FAA has not established a significance threshold for this impact category. However, a factor to consider is the Proposed Project's potential to:

Adversely affect human health and the environment.



Refer to Section 4.7.1 for a description of the analysis methodology and regulatory environment used to evaluate pollution prevention at the Airport.

Proposed Project Alternative

<u>Construction Impacts</u>. During construction under the Proposed Project, contractors would be held responsible for reporting any discharges of hazardous materials or other substances; BMPs would be used to minimize the potential adverse effect to the public and environment. Applicable federal, state, and local regulatory requirements, as discussed in Section 4.7.1, would ensure that impacts related to the use of hazardous materials and/or accidental spills during construction would not adversely affect human health and the environment.

Operation Impacts. Applicable federal, state, and local regulatory requirements, as discussed in Section 4.7.1, would ensure that impacts related to the use of hazardous materials during operation of the Proposed Project would not adversely affect human health and the environment. Since there are avoidance and minimization measures already in place that are applied to all development at the Airport (i.e., former Fort Ord lands), impacts related to pollution prevention, the operation of the Proposed Project would not adversely affect human health and the environment.

<u>Indirect Impacts</u>. No indirect impacts related to pollution prevention would occur. As discussed in the preceding sections, the city, as well as the Airport, have procedures and plans in place that are applied to all development at the Airport (i.e., former Fort Ord lands).

<u>Conclusion</u>. The city has procedures and plans in place that are applied to all development at the Airport. Implementation of the Proposed Project for pollution prevention would not result in a significant impact to the city or the Airport's ability to implement plans and procedures to prevent pollution.

No Action Alternative

No impacts related to the pollution prevention at the Airport would occur due to the No Action alternative. No changes to the existing airport environment and operating procedures would occur.

Mitigation, Avoidance, and Minimization Measures

As the impacts of the Proposed Project are not significant for Pollution Prevention, there are no mitigation measures required to reduce the impacts to a not significant level. Avoidance or minimization measures are also not necessary.

4.8 HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

Analysis Methodology

<u>FAA Order 1050.1F Factor to Consider</u>: FAA has not established a significance threshold for this impact category. However, a factor to consider is if the Proposed Project would result in a finding of "adverse effect" through the Section 106 process.



Determination of a Proposed Project's environmental impact to historic and cultural resources is made under guidance contained in the *National Historic Preservation Act of 1966* (NHPA), as amended, and the *Archaeological and Historic Preservation Act of 1974*. Section 106 of the NHPA requires federal agencies to consider the effects of their undertaking (or action) on properties listed on or eligible for listing in the National Register of Historic Places (NRHP). An approximately 25.7-acre direct Area of Potential Effect (APE), which is congruent with the direct project impact area, and an approximately 311.8-acre indirect APE was established for the Proposed Project for a total APE of 337.5 acres (**Exhibit 4A**).

Proposed Project Alternative

Temporary Construction and Operational Impacts. The Proposed Project site consists almost entirely of existing pavement within the Marina Municipal Airport, which is located on the former site of the Fritzche Army Airfield (constructed in the early 1960s). Installation of the paved areas required significant grading and ground disturbance to a depth of approximately three feet. As such, the Proposed Project will not expose or disturb any native soils that have not been previously disturbed through grading. This makes the presence and impacts to cultural resources highly unlikely. In addition, all accessible ground within the direct APE was evaluated through a pedestrian survey conducted on August 27, 2020. No resources were identified as part of this survey effort.

FAA has made a determination of "No Historic Properties Affected" due to the Proposed Project. Therefore, the Proposed Project would not have a significant impact on historical, architectural, archaeological, or cultural resources. By letter dated March 12, 2021 (**Appendix C**), the FAA has initiated a NHPA, Section 106 consultation with the California State Historic Preservation Office (SHPO). By letter dated April 13, 2021 (**Appendix C**), the California SHPO concurred with the FAA determination that no historic properties would be affected by the Proposed Project, completing the NHPA, Section 106 consultation process.

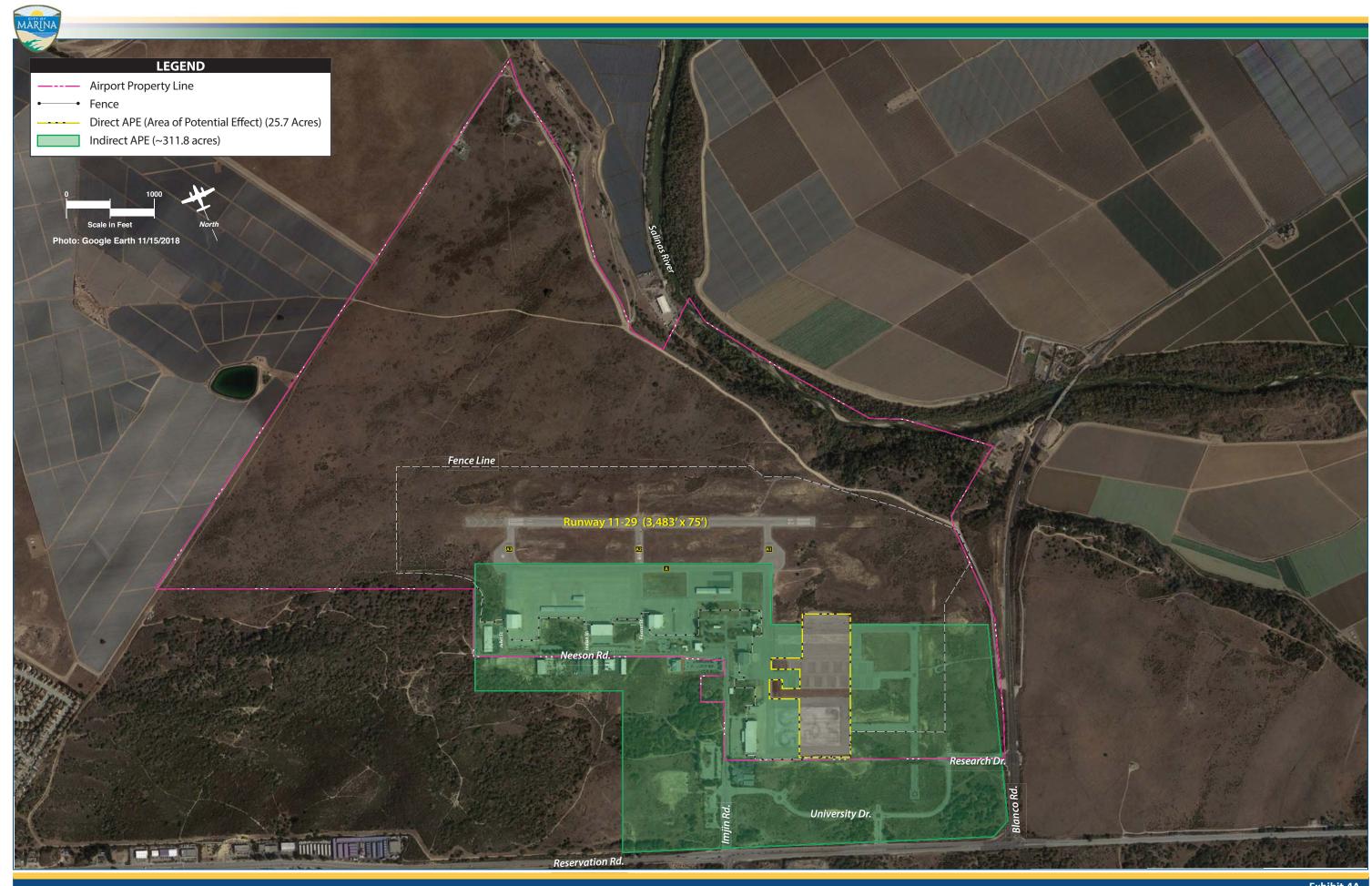
As part of its Section 106 responsibilities under the NHPA, FAA contacted the following Native American tribes regarding the Proposed Project via letter on March 17, 2021: Costanoan Rumsen Carmel Tribe; Ohlone/Costanoan-Esselen Nation; Esselen Tribe of Monterey County; Amah Mutsun Tribal Band; Amah Mutsun Tribal Band of Mission San Juan Bautista; and Indian Canyon Mutsun Band of Costanoan. Based on the lack of responses received, no traditional cultural properties or Native American sacred sites would be adversely affected by the Proposed Project.

<u>Indirect Impacts</u>. No indirect impacts to historical, architectural, archaeological, or cultural resources would occur.

<u>Conclusion</u>. No impacts to known historical, architectural, archaeological, or cultural resources would occur due to the Proposed Project. Impacts to unknown cultural resources or the unanticipated discovery of human remains are, however, always a possibility. This EA includes avoidance and minimization measures in case of an unanticipated discovery of resources.

No Action Alternative

Since no ground disturbance or change in airport use would result from the No Action alternative, no impacts to historical properties or other cultural resources would occur.







Avoidance, Minimization, or Mitigation Measures

As the impacts of the Proposed Project are not significant for Historical, Architectural, Archaeological, or Cultural Resources, there are no mitigation measures required to reduce the impacts to a not significant level. The following avoidance and minimization measures are standard regulatory requirements in the event of an unanticipated discovery of cultural resources or human remains.

Avoidance and Minimization Measures

- In the event that cultural resources are exposed during project implementation, work will stop in the immediate vicinity, and an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards will be retained to evaluate the find and recommend relevant mitigation measures.
- If human remains are discovered during construction, no further disturbance to the site will occur, and the County Coroner must be notified (14 CCR §15064.5; California Public Resources Code [PRC] §5097.98) to identify the appropriate disposition of such remains.

4.9 LAND USE

Analysis Methodology

<u>FAA Order 1050.1F Factor to Consider</u>: FAA Order 1050.1F, Exhibit 4-1 states that the FAA has not established a significance threshold for land use and that there are no specific independent factors to consider. Rather, the determination that significant impacts exist in the land use impact category is normally dependent on the significance of other impacts (for example, noise and land use compatibility, socioeconomics, disproportionate impacts to environmental justice or children populations, or visual effects).

Pursuant to Title 49 United States Code (U.S.C.) Section 47107(a)(10), an airport sponsor is required to provide written assurance that appropriate action has been taken, or will be taken, to ensure that existing and planned land uses adjacent to or near an airport are compatible with normal airport operations. An airport is also required, per 49 U.S.C. 47106(a)(1), to ensure that its proposed actions would be consistent with existing land use plans.

In addition, 40 C.F.R. 1502.16(c) requires that an EA discuss possible conflicts between the proposed action and the objectives of applicable land use plans, policies, and controls for the areas concerned. Where an inconsistency exists, the EA should describe the extent to which the agency would reconcile its action with the plan (40 C.F.R. 1506.2[d]).

The following analysis focuses on consistency with applicable land use plans and policies. As discussed in their respective sections, noise, socioeconomics, disproportionate impacts to environmental justice or children populations, and visual effects would not be significant.



Proposed Project Alternative

Temporary Construction, Operational, and Indirect Impacts. The Proposed Project would not disrupt the community, any planned development, or be inconsistent with plans or goals of the City of Marina and would be consistent with the function of the Airport. The city has provided a Land Assurance letter specifying that appropriate action has been or will be taken, to the extent reasonable, to restrict the use of land next to or near the Airport to uses that are compatible with normal airport operations pursuant to 49 U.S.C. 47107(a)(10) (Appendix B). In addition, the city has determined that the Proposed Project has "less than significant" impacts with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect (City of Marina 2020).

The Transportation Agency for Monterey County (TAMC) is designated by the State of California as the regional transportation planning agency for the county and coordinates with the Association of Monterey Bay Governments (AMBAG) for regional growth forecasts and sustainability goals. A regional transportation plan (RTP) is prepared every four years and provides a basis for state and federal funding allocations to transportation projects. The most recent RTP was prepared in 2018 and references the recent Airport Master Plan update (TAMC 2018). The Proposed Project would not affect the RTP policies and plans for the county.

The Proposed Project would be located within an area designated for "Aeronautical Mixed-Use" on the Airport Land Use Drawing of the Airport Layout Plan (ALP) (updated on July 21, 2020). Since 1995 when the city took over operation of the Airport, the existing tarmac areas on the Proposed Project site have been utilized for revenue generation through a variety of non-aviation activity. However, this is not preferred from an aeronautical standpoint, and the city and FAA have approved some Joby Aviation activities as an interim land use under a temporary (i.e., tent) structure. The Proposed Project would provide an opportunity for the consolidation of Joby Aviation activities on an appropriate area of the Airport and would serve as a transitional land use between the aeronautical uses on the Airport and a planned business park in the southeastern corner of airport property.

<u>Conclusion</u>. No impacts to land use would occur due to the Proposed Project. The Proposed Project is consistent with applicable airport, city, and regional plans for the area. All impacts would be contained on airport property.

No Action Alternative

No changes in land use or land use policy inconsistencies would occur under the No Action alternative. Portions of the Proposed Project site would continue to be used by Joby Aviation as an interim land use until the limits of the existing lease expire.

Mitigation, Avoidance, and Minimization Measures

As the impacts of the Proposed Project are not significant for Land Use, there are no mitigation measures required to reduce the impacts to a not significant level. Avoidance or minimization measures are also not necessary.



4.10 NATURAL RESOURCES AND ENERGY SUPPLY

Analysis Methodology

<u>FAA Order 1050.1F Factor to Consider</u>: FAA has not established a significance threshold for this impact category. However, a factor to consider is if the Proposed Project would have the potential to exceed available or future supplies of natural or energy supply resources.

The 2016 California Green Building Standards Code (CALGreen) requires numerous energy and resource efficiency measures. Therefore, the following analysis provides estimates of the proposed natural and energy resource use by the Proposed Project and provides references to the state resource and energy efficiency mandates, as well as known supplies of local building materials and other resources, including domestic water supplies.

Proposed Project Alternative

<u>Temporary Construction Impacts</u>. The Proposed Project would require approximately 13.3 acres (579,348 sf) of asphalt concrete (6 in. deep) for the foundation for the proposed building. Additional asphalt or cement would be needed for the approximately 8.6 acres (374,616 sf) of parking lot, sidewalks, and driveway. Normal building materials such as aggregate, lumber, and metal would be needed for construction of the building foundation and other paved areas, the proposed 580,000-sf building, equipment yard, and H1 storage area (refer to Exhibit 1D). The Proposed Project does not require unusual building materials or at quantities that would exceed available or future supplies of these types of resources.

Fossil fuels and electricity would also be required for construction activity. This energy use would result from the operation of on- and off-road equipment and vehicles. The Proposed Project would complete the construction in the most efficient way possible to reduce unnecessary energy consumption. The California Air Resources Board's energy efficiency measures (2016) applies to all self-propelled off-road vehicles that are 25 horsepower (hp) or more, as well as most two-engine vehicles. Energy consumption during construction would not exceed market supplies.

Similarly, non-potable water use during construction would be necessary for dust suppression and the washing of construction vehicles but would not exceed local water supplies.

Operational Impacts. Energy would be used primarily for building heating, cooling, and lighting, material conveyance, and the production and testing of VTOL aircraft. Based on the CalEEMod outputs for the project, operation of the Proposed Project would require an estimated 4,790,800 kilowatt hours (kWh)/year of electricity and 14,728,800 kilo-British thermal units of natural gas (kBTU)/year once the project is completed and operational (City of Marina 2020). This estimate is based on the area (in square feet) of the proposed building and the energy required to light, heat, cool, and provide energy sources for proposed building functions. The estimated energy demand does not account for specific energy

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⁹ On-road sources of energy consumption include the fuel consumption from: construction workers driving to and from the Airport; delivery vehicles transporting materials to and from the Airport; earth removal activities both on and off the Airport; and construction debris removal (i.e., solid waste hauled off the Airport). Off-road sources of energy consumption include the fuel consumption for equipment during each phase of construction.



efficiency measures.¹⁰ The Proposed Project would tie into existing natural gas lines and existing overhead electric lines within or on Imjin Road.

The ultimate water demand for the Proposed Project is anticipated to be 14.92 acre-feet/year (AFY) (City of Marina 2020). New water system piping for the project would be installed and connected to the Marina Coast Water District's (MCWD's) existing water supply infrastructure located on the western side of the project site. Water would be required for interior (domestic) uses, manufacturing processes, and landscape irrigation. Approximately 15 AFY is less than 0.5 percent of the MCWD's total groundwater withdrawal (3,200 AFY) and would not be a significant impact to regional water supply sources. Water demands within MCWD are significantly below state and regional averages due to the district's aggressive water conservation practices (MCWD website 2020). As previously discussed in Chapter Three, on March 3, 2020, the City of Marina City Council considered a Water Usage Estimate Report by Axiom Engineers for the Proposed Project. After consideration, the City Council approved the necessary allocation of 26.2-acre feet of water per year from its Former Fort Ord water allocation.

Indirect Impacts. Energy related to vehicular traffic associated with the Proposed Project was also estimated by the CalEEMod analysis. Based on estimated annual vehicle miles traveled (VMT) from workers and delivery trucks, operation of the Proposed Project could result in the indirect consumption of approximately 221,153 gallons of gasoline per year. This estimate is based on the U.S. EPA's average fuel economy value of 23.2 miles per gallon. However, as more fuel-efficient automobiles enter the personal and work vehicle fleets, average fuel economy is anticipated to continue to improve and, thus, gasoline consumption would decrease over time. The Proposed Project would provide approximately 10 percent of its on-site parking spaces with charging stations for electric vehicles, which would further decrease the estimated vehicle fuel consumption related to the Proposed Project (City of Marina 2020).

As mentioned previously under Section 4.5, Climate, the Proposed Project would involve the manufacturing of electric air taxis, which have the potential to significantly reduce energy demand associated with modern aircraft operations powered by jet fuel and AvGas. By replacing the aviation fleet with electric air taxis, the Proposed Project could result in a decrease in the demand for fossil fuels and energy related to the current aircraft fleets.

<u>Conclusion</u>. The Proposed Project alternative would not cause demand to exceed available or future supplies of natural or energy resources. No significant impacts related to this resource category would occur.

No Action Alternative

No direct natural or energy resources consumption increases would occur under the No Action alternative. However, the potential indirect benefits of the Proposed Project discussed above under <u>Indirect Impacts</u> would not occur.

¹⁰ The new building would be constructed to meet CALGreen (CCR, Title 24, part 11), which includes mandatory measures for nonresidential development in a variety of categories, one of which relates to materials conservation and resource efficiency. CCR, Title 24, part 6 building regulations would apply to all new development or redevelopment, including: compliance with American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) 90.1 national standards; efficiency requirements for elevators and digital controls; and energy efficiency measures pertaining to building envelopes, mechanical systems, lighting (indoor, outdoor, and signage), electrical power distribution, and solar readiness.

¹¹ Landscaping would conform to City of Marina landscaping requirements, and would include native, drought-tolerant plants. The irrigation system would meet current water efficiency standards and would use recycled water to the greatest extent feasible.



Avoidance, Minimization, or Mitigation Measures

As the impacts of the Proposed Project are not significant for Natural Resources and Energy Supply, there are no mitigation measures required to reduce the impacts to a not significant level.

Avoidance and Minimization Measures

- The new building will be constructed to meet CALGreen (CCR, Title 24, part 11) energy and water efficiency requirements.
- The Proposed Project will provide approximately 10 percent of its on-site parking spaces with charging stations for electric vehicles.
- Landscaping will conform to City of Marina landscaping requirements and would include native, drought-tolerant plants. The irrigation system will meet current water efficiency standards and would use recycled water to the greatest extent feasible.

4.11 NOISE AND NOISE-COMPATIBLE LAND USE

Analysis Methodology

FAA Order 1050.1F, Exhibit 4-1, states that a significant noise increase occurs when the Proposed Project would increase noise by DNL (Day-Night Average Sound Level) 1.5 decibel (dB) or more for a noise-sensitive area (such as residents, schools, hospitals, and places of worship) that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65 dB level due to a 1.5 dB or greater increase, when compared to the No Action alternative for the same timeframe.

As part of this EA, FAA's Area Equivalent Method (AEM) was used to evaluate projected noise increases as the result of the Proposed Project. Per Section 11.1.3 of FAA's 1050.1F Desk Reference, if the AEM calculations indicate that the action would result in less than a 17 percent increase in the contour area, there would be no significant impact over noise-sensitive areas and no further noise analysis is required.

Proposed Project Alternative

Operational and Indirect Impacts. The Proposed Project would not increase aircraft activity at the Airport beyond what was identified in the most recently FAA-approved forecasts and the adopted *Airport Land Use Compatibility Plan, Marina Municipal Airport, Monterey County, California* (ALUCP) noise contours (Exhibit 3F). At full buildout, the project applicant estimates up to 240 annual operations (20 per month) related to the Proposed Project could occur. Based on the results of the AEM analysis, the projected increase in the noise contour area would be 0.5 percent. Therefore, no further noise analysis for aircraft operations is required. The project study area itself is outside the Community Noise Equivalent Level (CNEL) 60 dB noise contour. (CNEL is used in lieu of DNL in California - see Section 3.11).

All manufacturing activities within the Proposed Project would be subject to city policies, including their noise standards for stationary noise sources (City of Marina 2010: Policy 4.111). The city is currently in the process of reviewing the Proposed Project development plans and approving a Building Permit.



Temporary Construction Impacts. The construction phase of the Proposed Project would involve minor earthwork/grading, the pouring of asphalt, and the construction of a building and associated infrastructure. **Table 4E** provides average noise levels at 50 feet from the construction site for the types of construction equipment that could be used based on information available from the Federal Highway Administration (FHWA).¹² Construction delivery vehicular noise would also occur. However, construction noise is not generally constant during the daytime hours and stops toward the evening when construction crews complete their daily work. Construction noise is a temporary impact and would not be above 65 dB for an extended period. The closest sensitive noise receptors are two small schools operating approximately 500 feet from the proposed manufacturing facility. There are no outdoor play areas associated with either school. The closest residential neighborhood is approximately 0.42 mile from the Proposed Project site. See Section 4.12.3 for more information.

TABLE 4E
Construction Equipment and Associated Noise Levels

Equipment	Typical Noise Level (dBA) 50 feet from Source
Air Compressor	81
Backhoe	80
Concrete Mixer	85
Concrete Vibrator	76
Crane Mobile	83
Generator	81
Grader	85
Loader	85
Paver	89
Roller	74
Saw	76
Scraper	89
Shovel	82
Truck	88

Source: FHWA 2006.

<u>Conclusion</u>. No impacts related to noise and noise-compatible land use would occur due to the Proposed Project. The Proposed Project is consistent with applicable airport operational forecasts and the approved ALUCP noise contours for the Airport. All impacts would be contained on airport property.

No Action Alternative

The No Action alternative would not result in construction or operational noise impacts as no land use changes or additional construction would occur on the Proposed Project site.

Avoidance, Minimization, or Mitigation Measures

As the impacts of the Proposed Project are not significant for Noise and Noise-Compatible Land Use, there are no mitigation measures required to reduce the impacts to a not significant level.

¹² The noise levels given in **Table 4E** are in A-weighted decibels (dBA), which are an expression of the relative loudness of sounds in air as perceived by the human ear. In comparison, FAA noise thresholds are expressed in DNL dB, which is an annual average sound level. These noise metrics are not equivalent. Therefore, **Table 4E** is provided for informational purposes only and is not intended for use in determining an impact based on FAA significance thresholds.



Avoidance and Minimization Measures - Construction

Mitigation Measure 9.2 from the City of Marina General Plan, which calls for "reasonable construction practices" (such as limiting construction hours to avoid early morning and evening activity and muffling and properly maintaining construction equipment used at project sites, etc.), would minimize the temporary effects of construction noise.

4.12 SOCIOECONOMICS, ENVIRONMENTAL JUSTICE, AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS

The direct project study area for socioeconomics, environmental justice, and children's environmental health and safety risks is the 25.7-acre project area; the indirect study area is the City of Marina.

4.12.1 Socioeconomics

Analysis Methodology

<u>FAA Order 1050.1F Factors to Consider</u>: FAA has not established a significance threshold for this impact category. However, factors to consider are if the Proposed Project would have the potential to:

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

The number of manufacturing jobs, as well as vehicle trips, resulting from the Proposed Project have been estimated by the project applicant and the city.¹³ Using the anticipated number of employees per shift, trip generation for the project was calculated using rates from the Institute of Transportation Engineers' (ITE) publication, *Trip Generation*, 10th Edition, which is a standard reference used by jurisdictions for the estimation of trip generation.¹⁴ Based on the project description and discussions with the project applicant, it was deemed that the most applicable ITE land use is Manufacturing (ITE Land Use Code 140) since the estimated percentage split between office employees and manufacturing employees

¹³ As discussed in Section 1.4, all manufacturing would be conducted within the building in two shifts with two-thirds of the manufacturing employees working during the day shift and one-third working a late evening or overnight shift. Based on the most recent estimates from the project applicant, a maximum of 400 manufacturing employees would be on-site per day (Brennan, J., Manufacturing Lead, Joby Aero, Inc. 2020). Additional support staff would also be on or connected to the premises. The total number of direct and indirect jobs associated with the Proposed Project is unknown, as some support functions could occur from off-site Joby campuses. At this time, and in part due to the unprecedented changes occurring in job placement due to the COVID-19 pandemic, more detailed information is considered speculative.

¹⁴ A trip is defined in *Trip Generation* as a single or one-directional vehicle movement with either the origin or destination at the project site. In other words, a trip can be either "to" or "from" the site. Therefore, a normal work-day commute would be counted as two separate trips (i.e., one to and one from the site).



matches the ITE land use description. Also, the time-of-day distribution data presented in the *Trip Generation* manual for industrial land uses aligns with the Proposed Project. **Appendix D** contains a traffic impact evaluation for a total of 300 employees per shift to account for both the manufacturing employees per shift as well as on-site support staff.

Proposed Project Alternative

The Airport and the Marina Airport Business Park have been part of Airport and city planning efforts for a long time. The Proposed Project is an integral piece of the overall planning effort for this part of the city and is consistent with existing land use designations and zoning, as well as the Marina Municipal Airport Master Plan. The Proposed Project would not induce economic growth for which the city and Airport have not planned nor would it disrupt or divide the physical arrangement of an established community. No housing or business relocations would occur because of the project, and no substantial changes in the community tax base would occur. Since 1995 when the city took over operation of the Airport, the project area has been utilized for revenue generation through a variety of non-aviation activity.

The project applicant estimates that approximately 300 manufacturing and support staff would be hired to operate the proposed manufacturing facility during the day. Based on these numbers, approximately 111 AM peak trips and 98 PM peak trips would occur as a result of the Proposed Project (**Table 4F**).

TABLE 4F
Proposed Project Trip Generation Estimates

# of Employees/ daytime shift ¹	ITE Trip Generation Rate ²	Average Daily Trips	AM Peak Hour Trips (In/Out)	PM Peak Hour Trips (In/Out)
300	2.47 trips/employee	870	111 (82/29)	98 (38/60)

Source: Kimley-Horn Associates, Inc. (KHA) 2019

Based on the trip distribution and assignments in the traffic report (**Appendix D**),¹⁵ the Proposed Project would contribute trips to several intersections in the region that currently exceed a LOS D threshold. None of the intersections within the project study area (refer to Exhibit 3G) are currently at LOS D. However, local and regional traffic impact fees are required for all new development within the city and the county based on proposed square feet of building space. These fees are used by the city and the Transportation Agency of Monterey County (TAMC) for the completion of planned local and regional street network improvements and would offset regional traffic impacts related to the proposed development. As a result, no substantial reductions to LOS would occur due to the Proposed Project.

No impacts to public and emergency services would occur because of the Proposed Project. The Airport is part of the city's emergency response and evacuation plan. The city reviews this plan on an annual

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¹ It is assumed that late evening or nighttime shifts would not impact local traffic levels.

² Based on ITE *Trip Generation*, 10th Edition, Code 140 - Manufacturing

¹⁵ Trip assignment was qualitatively assessed to determine which regional and local roadways the trips would utilize. Based on the regional distribution trips, trips from within Marina would access the project using Reservation Road and Imjin Parkway. Trips from the north would likely use State Route 1 southbound and exit at either Reservation Road or Imjin Parkway. Trips from the south would likely use State Route 1 northbound and exit at Imjin Parkway or Del Monte Boulevard or utilize surface streets, mainly the route consisting of General Jim Moore Boulevard, Lightfighter Drive, 2nd Avenue and Imjin Parkway (KHA 2019).



basis and updates it as necessary to account for additional development or changes in operations at the Airport. See also <u>Indirect Impacts</u> below. Indirect employment, population, and housing resulting from the Proposed Project have been anticipated by the city and the regional planning council of governments. This includes general plan policies to expand fire and police protection services and facilities as needed. Due to the nature of the Proposed Project, no changes to social conditions in the study area would occur.

<u>Indirect Impacts</u>. The project applicant estimates that the Proposed Project could generate approximately 400 manufacturing jobs, in addition to an unknown number of support jobs. At least some of the Proposed Project's direct 400+ jobs, as well as any indirect jobs, would be filled by existing city or county residents, while the remainder of the jobs would be filled by new residents moving into the city or county.

The city and the county base their population estimates and projected housing needs on population, housing, and employment forecasts prepared by AMBAG (2018). **Table 4G** below outlines AMBAG's projected changes in the city's and county's population, employment, and housing from 2015 to 2040. Based on AMBAG forecasts, significant population and employment growth is anticipated for both the city and the county over the next 20+ years. The Proposed Project would not substantially induce population growth or housing needs in the city or county beyond what has already been anticipated, and, therefore, would not have a significant impact on induced indirect population, employment, or housing growth in the area.

TABLE 4G 2015 to 2040 Population, Employment, and Housing Forecast Association of Monterey Bay Area Governments

Geography	Projected Change from 2015 to 2040		
	Population	Employment	Housing Units
City of Marina	+ 49%	+20%	+37%
County of Monterey	+16%	+16%	+17%
Source: AMBAG 2018			

<u>Conclusion</u>. No socioeconomic impacts related to the Proposed Project would occur since the Proposed Project is consistent with the overall land use plans and growth forecasts for the area. Development associated with the Airport and the Airport's planned business park have been included in regional and local plans since the former Fort Ord Army lands related to the Airport were transferred to the City of Marina.

No Action Alternative

No socioeconomic impacts would occur if the No Action alternative is implemented. The Airport would continue operating as it is today, although future development of the project study area would not be precluded from occurring at another time.

Avoidance, Minimization, or Mitigation Measures

As the impacts of the Proposed Project are not significant for Socioeconomics, there are no mitigation measures required to reduce the impacts to a not significant level.



Avoidance and Minimization Measures

- Local and regional traffic impact fees will be required for all new development within the city and the county (based on proposed square feet of building space), which will be used for the completion of planned local and regional street network improvements.
- The Airport is part of the city's emergency response and evacuation plan, which will be reviewed
 on an annual basis and updated, as necessary, to account for the Proposed Project.

4.12.2 Environmental Justice

Analysis Methodology

<u>FAA Order 1050.1F Factors to Consider</u>: FAA has not established a significance threshold for this impact category. However, factors to consider are if the Proposed Project would lead to disproportionately high and adverse impacts to an environmental justice population (i.e., low income or minority) due to:

- Significant impacts in other environmental impact categories; or
- Impacts on the physical or natural environment that affect an environmental justice population in a way that FAA
 determines are unique to the environmental justice population and significant to that population.

Disproportionately high and adverse effects would occur if an adverse effect is predominantly borne by a minority or low-income population or will be suffered by a minority or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or low-income population.

See Section 3.12.2. The U.S. Census Bureau's 2018 American Community Survey (ACS) was used to determine the number and percentage of environmental justice populations living within the census tract containing the project study area and the Airport. Confirmation of the location of the nearest residential areas to the project site was obtained through Google Earth imagery.

Proposed Project Alternative

No disproportionately high and adverse impacts would occur to an environmental justice population because of the Proposed Project. The nearest residential neighborhood is 0.42 mile from the closest part of the project study area and is separated from the project study area by the future UC MBEST campus, additional open space, and Reservation Road. If any adverse impacts occur, for example, temporary construction impacts, they would occur to minority or low-income populations in the same magnitude of severity as similarly located non-environmental justice households. However, due to the intervening distance between residents and the project study area, no adverse impacts of any kind are anticipated.

No Action Alternative

No impacts to environmental justice populations would occur due to the No Action alternative.



Avoidance, Minimization, or Mitigation Measures

As the impacts of the Proposed Project are not significant for Environmental Justice, there are no mitigation measures required to reduce the impacts to a not significant level. In addition, there are no recommended avoidance or minimization measures.

4.12.3 Children's Environmental Health and Safety Risks

Analysis Methodology

<u>FAA Order 1050.1F Factor to Consider</u>: FAA has not established a significance threshold for this impact category. However, a factor to consider is if the Proposed Project would lead to a disproportionate health or safety risk to children.

See Section 3.12.3. The U.S. EPA's EJSCREEN online tool was used to determine the number and percentage of children age 0-17 living within the census tract containing the project study area and the Airport. A survey of schools, residential areas, and parks within 0.5 mile of the project study area was conducted to determine other areas that might contain a concentration of children.

Proposed Project Alternative

As discussed in Section 3.12.3, there are two small schools operating within 0.5 mile of the project study area. These schools lease space within a small four-building complex owned by UC MBEST at the northeast corner of Imjin Road and MBEST Drive, approximately 500 feet from the proposed manufacturing facility. There are no outdoor play areas associated with either school.

No environmental health and safety risks would occur to the children enrolled at the schools. As discussed previously in Section 4.3, the project applicant will be required by MBARD to conduct public notification and outline a plan to implement risk reduction measures if the required health risk assessment indicates a health risk that exceeds the MBARD significance threshold. Standard dust suppression BMPs would also be implemented during construction.

One residential neighborhood is 0.42 mile from the Proposed Project site; there are no parks within a 0.5-mile radius. No environmental health and safety risks to children living within the nearest residential neighborhoods would occur. The neighborhood is separated from the project study area by the future UC MBEST campus, additional open space, and Reservation Road.

No Action Alternative

No environmental health and safety risks to children would occur due to the No Action alternative.

Avoidance, Minimization, or Mitigation Measures

As environmental health and safety risks to children of the Proposed Project are not significant or disproportionate, there are no mitigation measures required to reduce the impacts to a not significant level. In addition, no avoidance or minimization measures other than those already included in Section 4.3, Air Quality are recommended.



4.13 VISUAL EFFECTS - Light Emissions

As discussed in Section 3.2, the project study area does not contain unique visual resources or visual character. Therefore, the discussion below is focused on light emissions.

Analysis Methodology

<u>FAA Order 1050.1F Factors to Consider</u>: FAA has not established a significance threshold for this impact category. However, factors to consider are if the Proposed Project would have the potential to:

- Create annoyance or interfere with normal activities from light emissions.
- Affect the visual character of the area due to light emissions, including the importance, uniqueness, and aesthetic value of the affected visual resources.

Light emission impacts were determined by the extent to which any lighting (or glare) associated with the Proposed Project would create an annoyance for people in the vicinity and/or would interfere with their normal activities or affect the visual character of the area. Glare can be defined as a type of light emission that occurs when light is reflected off a surface (i.e., window glass, solar panels, or reflective building surfaces).

Proposed Project Alternative

Lighting and sources of glare within the project site would be controlled by the city, whose Municipal Code for its Airport District states that "all new exterior lighting within the Airport planning area shall be designed so as to create no glare or interference with aircraft in flight." Conformance with this stipulation would also protect adjacent land uses from substantial sources of light. Specifically, lighting would be pole mounted, shielded, and directed downwards in conformance with city requirements. Therefore, the project would not have a significant impact from new lighting sources and glare based on the stated factors to consider.

The nearest residential neighborhood is 0.42 mile from the closest part of the project study area and is separated from the project study area by the future UC MBEST campus, additional open space, and Reservation Road. No light emission impacts to this or other neighborhoods would occur.

No Action Alternative

No lighting impacts would occur because of the No Action alternative.

Avoidance, Minimization, or Mitigation Measures

As the impacts of the Proposed Project are not significant for this resource category, there are no mitigation measures required to reduce the impacts to a not significant level.

Avoidance and Minimization Measures

 All outside lighting for the Proposed Project would be pole mounted, shielded, and directed downwards in conformance with city requirements.



4.14 WATER RESOURCES

As discussed in Section 3.2, the project study area does not contain wetlands or waters of the U.S., floodplains, or rivers, including designated wild and scenic rivers. Therefore, the following discussion is focused on potential impacts to surface waters and groundwater.

4.14.1 Surface Waters

Analysis Methodology

FAA Order 1050.1F Significance Threshold: An action will have significant impacts to surface waters if it would:

- Exceed water quality standards established by federal, state, local, and tribal regulatory agencies; or
- Contaminate public drinking water supply such that public health may be adversely affected.

Section 402 of the *Clean Water Act* (CWA) created the National Pollutant Discharge Elimination System (NPDES) program to authorize point source discharges of pollutants to waters of the U.S. consistent with the CWA. In terms of water pollution, a point source is a single discharge source, such as a pipe coming from a wastewater treatment plant. However, the federal *Water Quality Control Act of 1987* amended the CWA to include regulation of certain discharges of pollutants in stormwater runoff under the NPDES program. Federal regulations (40 C.F.R. 122.26) require certain industrial facility owners and/or operators to obtain stormwater discharge permits. The specific types of facilities that need coverage are dependent upon the facility's Standard Industrial Classification Code. In California, NPDES permitting authority has been delegated to the State Water Resources Control Board (SWRCB), which, in turn, relies on regional water quality control boards (RWQCBs) to implement the program.

Individual construction projects that have a potential for one acre or more of ground disturbance are required to obtain NPDES coverage under the state's Construction General Permit Order 2009-0009-DWQ (Construction General Permit). Permit conditions typically related to use of the NPDES Construction General Permit include BMPs to reduce erosion and sedimentation through implementation of a construction-specific stormwater pollution prevention plan (SWPPP). The construction SWPPP is a project-specific document which deals primarily with reducing pollutant sources associated with erosion and sediment transfer and chemicals used at construction sites.

Proposed Project Alternative

<u>Temporary Construction Impacts</u>. The Proposed Project would comply with the requirements of the state's Construction General Permit, which requires the implementation of a construction SWPPP, as discussed above. Any temporary water quality concerns related to construction would be minimized through the implementation of standard construction BMPs related to erosion and sedimentation control consistent with FAA Advisory Circular (AC) 150/5370-10H, *Standard Specifications for Construction of Airports*, Item C-102, Temporary Air and Water Pollution, Soil Erosion, and Siltation Control, as well as the California Stormwater Best Management Practices Handbook and applicable city general plan policies. See <u>Avoidance and Minimization</u> measures.

<u>Operational Impacts</u>. The Airport operates under the statewide General Permit for Storm Water Discharges Associated with Industrial Activities (Order 2014-0057-DWQ). However, all storm drainage from the Proposed Project would be dispersed and percolated on-site. Because the Airport retains its storm water on-site, it is not required to implement a facility-wide SWPPP.



The Proposed Project includes the construction of detention basins for stormwater treatment that would be designed according to the city's General Plan Policy 3.57 and FAA design standards, as set forth in AC 150/5320-5D, Airport Drainage Design and AC 150/5200-33B, Hazardous Wildlife Attractants on or Near Airports, which does not allow water to be detained on the Airport longer than 48 hours. The Proposed Project would comply with all applicable regulations to ensure proper discharge into the on-site detention basins, where stormwater would be disposed of via infiltration and evaporation. Infiltration would improve water quality and contribute to groundwater recharge. The adequacy of the detention basins would be determined through preparation of storm drainage reports and plans, approved by the city's Public Works Director.

<u>Indirect Impacts</u>. The Proposed Project would not result in an increase in impervious surfaces. Approximately 1.5 acres of existing vegetation would be paved; however, 1.5 acres of existing paved areas would be converted to vegetated areas within the parking lot and detention basin. No indirect impacts to surface water quality would occur because of a change in impervious surfaces at the Airport.

<u>Conclusion</u>. Impacts to surface water quality or public water supply sources from the Proposed Project would not be significant. All storm drainage from the Proposed Project would be dispersed and percolated on-site. Compliance with city and state requirements, as well as implementation of AC 150/5370-10H and its related BMPs, would ensure that construction activities associated with the Proposed Project would not cause exceedances of applicable water quality standards.

No Action Alternative

No changes to surface water collection or runoff, and thus surface water quality, would occur under the No Action alternative.

Avoidance, Minimization, or Mitigation Measures

As the impacts of the Proposed Project are not significant for Surface Waters, there are no mitigation measures required to reduce the impacts to a not significant level.

Avoidance and Minimization Measures

- Prepare and implement a construction SWPPP per the state's Construction General Permit.
- Prepare and implement a grading/erosion plan and BMPs, such as those included in FAA AC 150/5371-10H, Item C-102, and/or recommended in the California Stormwater Best Management Practices Handbook. Applicable BMPs would include some, or all, of the following:
 - Protect existing storm drain inlets and stabilize disturbed areas.
 - Hydroseed/re-vegetate disturbed areas.
 - Implement run-off controls (e.g., percolation basins and drainage facilities).
 - Properly manage construction materials.
 - Manage waste, aggressively control litter, and implement sediment controls.
- Comply with City of Marina ordinances for all grading, drainage, and construction of improvements.



4.14.2 Groundwater

Analysis Methodology

FAA Order 1050.1F Significance Threshold: An action will have significant impacts to groundwater if it would:

- Exceed groundwater quality standards established by federal, state, local, and tribal regulatory agencies; or
- Contaminate an aquifer used for public drinking water supply such that public health may be adversely affected.

Proposed Project Alternative

As discussed above under Section 4.14.1, Surface Waters, the Proposed Project would comply with all applicable regulations to ensure proper stormwater discharge into on-site detention basins, where stormwater would be disposed of via infiltration and evaporation. Infiltration would improve water quality and contribute to groundwater recharge. Thus, impacts to groundwater quality or public water supply sources from the Proposed Project would not be significant.

No Action Alternative

No changes to groundwater quality would occur under the No Action alternative.

Avoidance, Minimization, or Mitigation Measures

As the impacts of the Proposed Project are not significant for Groundwater, there are no avoidance, minimization, or mitigation measures required to avoid and minimize or reduce groundwater impacts to a not significant level.

4.15 CUMULATIVE IMPACTS

Analysis Methodology

Cumulative impact analysis considers the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions (40 C.F.R. 1508.7). Specific thresholds for cumulative impacts are not established in FAA Order 1050.1F as the significance threshold varies according to the affected resources. In evaluating cumulative impacts, the impact of the Proposed Project has been added to the impacts of other cumulative projects to determine if an applicable significance threshold would be exceeded.

Cumulative impacts are evaluated on the following time horizons: past actions, present actions, and reasonably foreseeable future actions. Past actions are those known to have occurred within the five years immediately prior to the year of project implementation. Present actions are those projects which are ongoing and would continue during the implementation of the Proposed Project. Reasonably fore-seeable future actions are those that have: 1) received local approval for implementation, such as a building permit; 2) are expected to receive local approval during the duration of the Proposed Project construction; 3) are expected to occur within the five years immediately after implementation of the Proposed Project; or 4) are programmed into the five-year Airport Capital Improvement Program (ACIP).



Projects without a building permit, such as those outlined within a community's general plan or specific plan, are not considered reasonably foreseeable as part of this analysis.

The study area for cumulative impacts analysis is the same area as defined for the Proposed Project's direct and indirect impact analysis. Section 3.15 lists the projects considered under the cumulative analysis of this EA. For this analysis, cumulative projects were selected based on two criteria: projects within the airport boundaries that could contribute to physical changes and, thus, cumulative disturbance of the airport environment; and development projects within one mile of the Airport that could contribute to cumulative impacts to regional resources discussed in this Environmental Consequences chapter. As discussed in Section 3.15, several projects on airport property or in proximity to the Airport have been undertaken within the past five years, are ongoing, or are planned to be undertaken in the next five years.

Proposed Project Alternative

Air Quality and Climate. The cumulative impact area for Air Quality and Climate is the North Central Coast Air Basin, and specifically Monterey County. The Proposed Project would contribute air quality emissions and GHGs that would incrementally affect air quality and climate within the air basin in combination with other cumulative projects described in Section 3.15. However, at a regional level, the MBARD requires that all projects include adequate measures to minimize fugitive dust, ozone precursors, and GHGs through its permitting and state-required environmental processes. All cumulative projects considered in this EA would be required by MBARD to comply with the conditions of its rules and regulations. Therefore, unmitigated, significant cumulative impacts to air quality or the emission of GHGs would not occur because of implementation of the Proposed Project in combination with other cumulative projects.

Biological Resources (Monterey spineflower, migratory birds, and California legless lizards). The cumulative impact area for Biological Resources is airport property. Any cumulative project at the Airport with a federal action would be subject to FAA oversight, guidance, funding, and/or approval with FAA initiating consultation(s) with the USFWS for the specific action, when warranted. Therefore, cumulative effects, as defined by the USFWS's guidance on Monterey spineflower or other federal ESA-listed species at the Airport, would not occur.

The analysis of the Proposed Project identifies potential impacts to nesting birds protected under the MBTA, as well as impacts to the California legless lizard; Section 4.4 of this EA provides avoidance and minimization measures to avoid significant incremental impacts of the Proposed Project in combination with other cumulative projects. Preconstruction nesting bird surveys or other protective measures would be conducted prior to development, as necessary, to avoid the nesting season and migratory bird nests. An environmental monitor would conduct surveys for California legless lizards and other reptiles. Therefore, cumulative impacts to protected birds and reptiles would not be significant.

<u>Department of Transportation Act</u>, Section 4(f). The cumulative impact study area for <u>Department of Transportation Act</u>, Section 4(f) resources is the Airport and a 0.5-mile radius from the Airport. Neither the Proposed Project nor the other cumulative projects described in Section 3.15 would result in a physical use of a Section 4(f) resource or constitute a constructive use. Therefore, the Proposed Project, in combination with other cumulative projects, would not use a Section 4(f) resource and would not represent a significant impact on the environment.



Hazardous Materials, Solid Waste, and Pollution Prevention. The cumulative impact area for Hazardous Materials, Solid Waste, and Pollution Prevention is the airport property. Hazardous and solid wastes would be generated by the Proposed Project, as well as by other cumulative projects during the construction phase. Both the federal and state governments have established policies and programs that require the proper disposal and handling of hazardous materials and waste products, in addition to specific policies related to the disposition of former Fort Ord. Due to mandatory compliance with existing programs and regulations, significant impacts related to hazardous materials, solid waste, and pollution prevention would not occur. In addition, any future cumulative development at the Airport would be required to comply with all applicable regulatory requirements regarding the handling, storage, or disposal of hazardous materials.

Future cumulative development projects could generate varying amounts of solid waste based on the type of actual development. As discussed in Section 3.7.2, the Monterey Peninsula Landfill is not projected to reach capacity until the year 2120. Thus, the landfill would not exceed its capacity due to solid waste generated by future cumulative development considered in this EA. Therefore, no significant cumulative impacts to solid waste disposal would occur.

<u>Historical</u>, Architectural, Archaeological, and Cultural Resources. An approximate 337.5-acre direct and indirect APE was established for the Proposed Project and is the cumulative impact area for Historical, Architectural, Archaeological, and Cultural Resources. No incrementally adverse effects on known historic, architectural, archaeological, or cultural resources would occur due to the Proposed Project in combination with other cumulative projects. Standard protocols are required by state and federal law for any unanticipated discovery of cultural resources to ensure that adverse effects to protected resources, including a significant cumulative impact to such resources, do not occur.

<u>Land Use</u>. The cumulative impact area for Land Use is the airport property. The Proposed Project would not cause incremental adverse land use impacts in combination with other past, present, and reasonably foreseeable future airport projects. The ALP (and Airport Master Plan) provide a rationale development concept plan to meet the needs of the Airport in a safe and efficient manner.

<u>Natural Resources and Energy Supply</u>. The cumulative impact area for Natural Resources and Energy Supply is the Airport and Monterey County. Fossil fuels and mineral resources, such as aggregate, would be used during construction and would be obtained by local retail providers. No cumulative impacts would result from this demand, which is controlled by the market and is based on market factors. In addition, no incremental cumulative impacts to energy resources would result from the Proposed Project in combination with past, present, or reasonably foreseeable future development given the regulatory environment for new buildings within the state (i.e., CCR, Title 24, parts 6 and 11).

Potable water for the Airport is provided by the MCWD. No incremental cumulative impacts to the regional water supply would occur from the Proposed Project in combination with other cumulative projects. MCWD's groundwater withdrawals are approximately 3,200 AFY and account for less than one percent of total annual withdrawals to the groundwater basin (City of Marina 2020).

<u>Noise and Noise-Compatible Land Use</u>. The cumulative impact area for Noise and Noise-Compatible Land Use is the airport property. As shown in Exhibit 3F, even with a proposed runway extension and other airport projects considered in the Airport Master Plan, the CNEL 65 dB noise contour would remain on airport property. The Proposed Project would not cause incremental adverse noise impacts in combination with other past, present, and reasonably foreseeable future airport projects.



<u>Socioeconomics</u>. The cumulative impact area for economic benefits is the City of Marina. Any of the cumulative airport projects would help to continue the Airport's role as a driver in economic activity in the city. The Proposed Project, in conjunction with these other airport projects, would help enable the Airport to meet current and future demand in a safe and efficient manner, resulting in further economic activity and job growth.

<u>Environmental Justice and Children's Environmental Health and Safety Risks</u>. The study area for Environmental Justice and Children's Environmental Health and Safety Risks is the area within the census tract containing the Airport. Since there are no environmental justice or children's populations in proximity to the Airport that would experience disproportionately high and adverse impacts due to the Proposed Project, no incremental impacts from the Proposed Project in combination with other cumulative projects would occur.

<u>Visual Effects - Light Emissions</u>. The cumulative impact area for Visual Effects - Light Emissions is the Airport and a 0.25-mile radius from the project study area. Past, present, and future long-term development on the Airport could include several new sources of lighting, including exterior building lights, and an extension of the airfield lighting to coincide with the extension of Taxiway B and a potential extension of the runway. However, there are no residential areas or other sensitive receptors to light emissions within 0.25 mile of the Airport. Thus, incremental impacts related to lighting, glint, or glare from future airport development, in combination with the Proposed Project, would be less than significant. No significant cumulative visual effects would occur.

<u>Water Resources - Surface Waters</u>. The cumulative impact area for Water Resources - Surface Waters is the Parker Flats-Frontal Monterey Bay watershed. The Airport operates under the statewide General Permit for Storm Water Discharges Associated with Industrial Activities (Order 2014-0057-DWQ) but retains its stormwater on-site. Compliance with city and state requirements, as well as implementation of AC 150/5370-10H and its related BMPs, would ensure that construction and operational activities associated with the Proposed Project and other cumulative projects would not cause exceedances of applicable water quality standards. No incremental impacts to the quality of surface waters from the Proposed Project in conjunction with other cumulative projects would occur.

<u>Water Resources - Groundwater</u>. The cumulative impact area for Water Resources - Groundwater is the Monterey subbasin of the Salinas Valley groundwater basin. The city currently monitors its public drinking water supply and its potential effects on the groundwater. The city is in the process of drafting a groundwater basin sustainability plan for the Monterey subbasin, which is due by January 31, 2022 (MCWD website 2020). No incremental impacts to the quality of groundwater or public drinking water sources from the Proposed Project in conjunction with other cumulative projects would occur.

No Action Alternative

No cumulative impacts would occur with the No Action alternative since this alternative would not result in any physical changes at the Airport.



CHAPTER FIVE COORDINATION AND PUBLIC INVOLVEMENT



Chapter Five COORDINATION AND PUBLIC INVOLVEMENT

Joby Aviation Manufacturing Facility

Environmental Assessment

The Draft Environmental Assessment (EA) is available for review by the public and interested parties for a period of 30 days beginning April 21, 2021. A Notice of Availability (NOA) of the Draft EA will be published in the *Monterey Herald*, as well as posted on the City of Marina's website. The Draft EA is available for review at: https://cityofmarina.org. If a hard copy is required, please contact the Assistant City Manager's Office at (831) 884-1240 or mmogensen@cityofmarina.org.

Anyone wishing to comment on the Draft EA can submit written comments by letter or email to the following physical or email addresses:

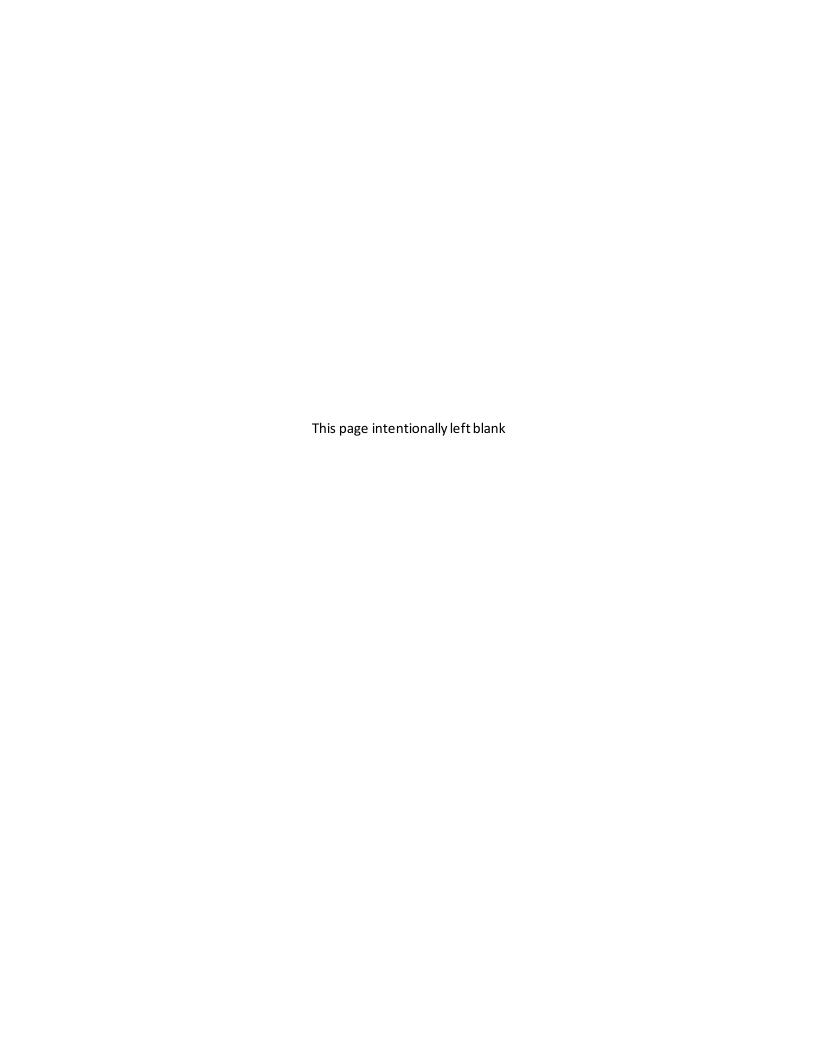
Mr. Matt Mogensen, Assistant City Manager
City of Marina - City Manager's Office
211 Hillcrest Avenue
Marina, CA 93933

mmogensen@cityofmarina.org

The cutoff date for comment submission is not later than **5:00 PM – Pacific Daylight Time, May 21, 2021**. Please allow enough time for mailing. The City of Marina must **receive** the comments by the deadline, rather than the letter simply be postmarked by that date. Emailed comments must also be received by the deadline.

Before including your name, address, telephone number, email, or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comment to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

All agency and/or public comments received during the public comment period will be included in the Final EA (**Appendix E**). Written responses will also be provided for all comments received during the public comment period. Based on the content of the EA and the comments received, the FAA will issue a *National Environmental Policy Act* (NEPA) finding. The Final EA and FAA's finding will be available to the public and all who commented on the EA.





CHAPTER SIX LIST OF PREPARERS

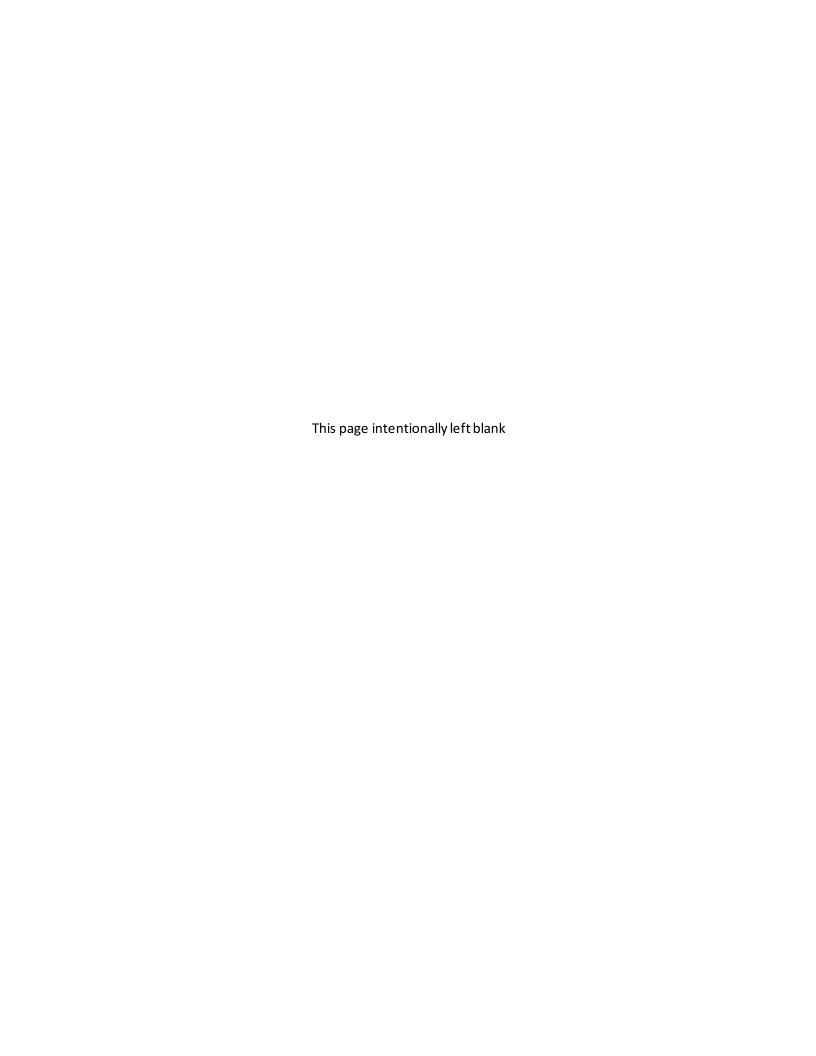


Chapter Six LIST OF PREPARERS

Joby Aviation Manufacturing Facility Environmental Assessment

Persons responsible for preparation of this Environmental Assessment (EA) document and significant supporting background analysis and materials are listed below.

NAME	EXPERTISE	PROFESSIONAL EXPERIENCE				
FEDERAL AVIATION ADMINISTRATION (FAA) REVIEWER						
Richard Doucette	Environmental Protection Specialist, New England Region	M.S., Natural Resource Management, B.S. Parks and Recreation Management. 30+ years of experience. <i>National Environmental Policy Act</i> (NEPA) review and compliance.				
CITY OF MARINA REVIEWERS						
Matthew Mogensen	Assistant City Manager	Master of Public Administration; B.A., Geography. 16 years of experience in land use planning, economic development, and environmental document review.				
Jeff Crechriou	Airport Services Manager	B.S., Computer Information Systems with Business Management Concentration. 7 years of experience in redevelopment and economic development and 7 years of airport management, including airport planning and development.				
EA PREPARERS						
Coffman Associates						
Judi Krauss, AICP	Land Use Planning; Environmental Analysis/Documentation; Socioeconomics	M.A., Economics; B.A., Environmental Studies. Transportation and land use planning, socioeconomic studies, and environmental analysis/documentation. Manages complex, multi-disciplined, environmental studies under NEPA.				
Kory Lewis	Land Use Planning; Environmental Analysis/Documentation; Air Quality and Greenhouse Gas Emission Analysis	Master of Urban Planning; B.A., Geography. Experienced in land use management, air quality and noise assessment, preparation of environmental documentation for airport projects, and air quality, noise, and visual impact computer modeling.				
SWCA Environmental	Consultants					
Paula Juelke Carr	Senior Architectural Historian	M.A., History, Anthropology, Art History, Folklore, and Mythology; B.A., Cultural Anthropology. 25 years of experience in documenting and evaluating California history and architectural history, including more than 11 years as an architectural historian for the California Department of Transportation, District 5.				
Heather Gibson	Principal Investigator	Ph.D., Anthropology; M.A., Anthropology. 15 years of research experience, including archival research, surveys, excavations, and construction monitoring at sites throughout California.				
Leroy Laurie	Project Manager/ Cultural Resources Program Lead	B.S., Social Sciences. 15 years of experience as a cultural resource specialist throughout California and Nevada. Technical experience in archaeological fieldwork, laboratory analysis, archaeological testing plans, and graphics/mapping. Served as the primary point of contact for Native American coordination for Section 106 compliant projects.				





CHAPTER SEVEN REFERENCES



Chapter Seven REFERENCES

Joby Aviation Manufacturing Facility Environmental Assessment

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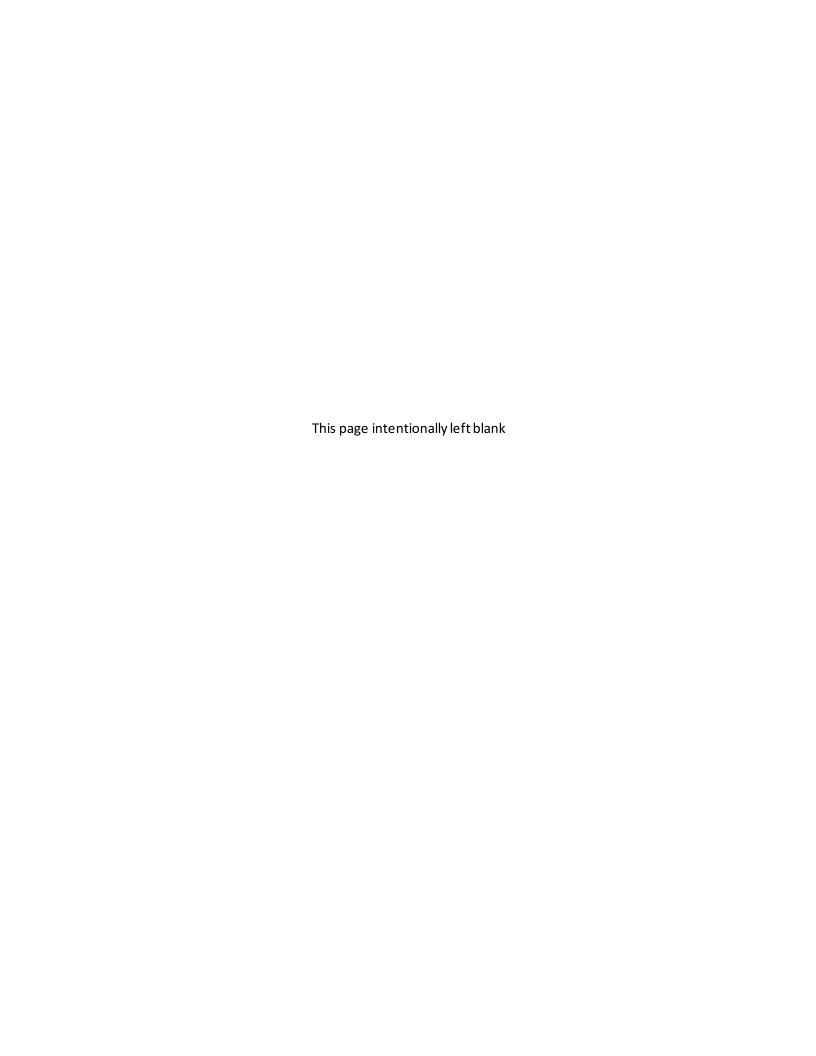
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APPENDIX A

ENDANGERED SPECIES ACT, SECTION 7 CONSULTATION/ BIOLOGICAL ASSESSMENT

Western-Pacific Region San Francisco Airports District Office 1000 Marina Boulevard, Suite 220 Brisbane, CA 94005-1835

March 12, 2021

Mr. Steve Henry Field Supervisor Ventura Fish and Wildlife Office U.S. Fish and Wildlife Service 2493 Portola Road, Suite B Ventura, CA 93003

Subject: Informal Consultation under *Endangered Species Act*, Section 7, for the Marina Municipal Airport (OAR) Proposed Joby Aviation Manufacturing Project

Dear Mr. Henry,

The Federal Aviation Administration (FAA) and the City of Marina are in the process of preparing a Draft Environmental Assessment for the proposed Joby Aviation Manufacturing Project at Marina Municipal Airport in Monterey County, California. The airport is owned and operated as a public use airport by the city. The Proposed Project is the construction of an approximately 580,000-square foot (sf) manufacturing building, which would be used to produce lightweight, all-electric, vertical take-off and landing (VTOL) aircraft. The Action Area is comprised of 25.7 acres and includes all areas where permanent and temporary impacts could occur from project activities.

According to the Biological Assessment that has been prepared for the Proposed Project (enclosed), there is one federally listed species, Monterey spineflower (*Chorizanthe pungens* var. *pungens*), present within the Action Area. No other federally listed species were observed during the field survey, and, due to a lack of suitable habitat, none are expected to occur. Most of the Action Area (23.2 acres) is already developed with paved roads and aircraft parking aprons. Approximately 2.0 acres of ruderal vegetation and 0.5 acre of white-tip clover swale are also present (Figure 3, Biological Assessment). The white-tip clover swale does not meet the specific habitat conditions needed to support Monterey spineflower and is not considered suitable habitat. The Action Area is outside of any federally designated critical habitat for Monterey spineflower or any other federally protected species.

Direct and Indirect Effects

Approximately 0.08 acre and 14 individuals of Monterey spineflower were identified in two locations within the Action Area during spring 2019 botanical surveys. The Proposed Project has been designed to avoid these individuals (Figure 4, Biological Assessment) and

will avoid all impacts to Monterey spineflower and its habitat during construction (see *Project Avoidance Measures*). In addition, there are no impacts expected to occur from the operation of the Proposed Project.

Project Avoidance Measures

The project proponent shall implement the following avoidance measures:

- Installation of temporary exclusion fencing and flagging to prevent encroachment by construction personnel and equipment into sensitive areas to be avoided;
- Presence of an on-site biological monitor during construction activities; and
- Implementation of construction Best Management Practices (BMPs), including mandatory worker environmental awareness training for all construction personnel, erosion, dust, and sediment control, and trash disposal.

Based on the information in the Biological Assessment and the project design, FAA has determined that the Proposed Project will have no effect on federally listed species.

We request your concurrence on FAA's determination at your earliest convenience. If you have any additional questions concerning this matter, please contact me at (781) 238-7613 or richard.doucette@faa.gov or Camille Garibaldi (FAA San Francisco Airports District Office) at camille.garibaldi@faa.gov.

Sincerely,

Richard P. Doucette

R. Soucell

Environmental Protection Specialist

Enclosure:

Joby Aviation Manufacturing Facility Biological Assessment (Denise Duffy and Associates, July 2020).

Cc: Camille Garibaldi, FAA San Francisco Airports District Office

JOBY AVIATION MANUFACTURING FACILITY BIOLOGICAL ASSESSMENT

July 2020

Prepared for

Joby Aero, Inc. 340 Woodpecker Ridge Santa Cruz, California 95060

Prepared by



Denise Duffy & Associates, Inc. 947 Cass Street, Suite 5 Monterey, California 93940

Contact: Josh Harwayne (831) 373 - 4341

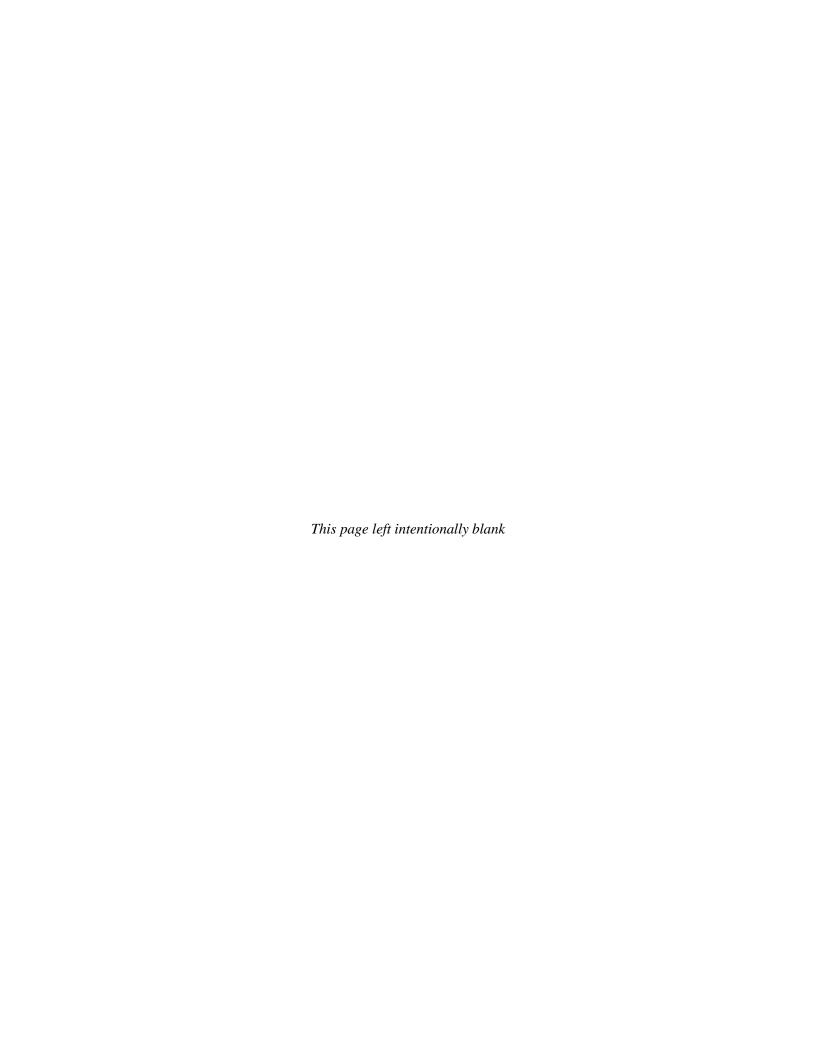


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APPENDIX A: IPaC Resource List

1. INTRODUCTION

Denise Duffy & Associates, Inc. (DD&A) was contracted by Joby Aero, Inc. (Joby) to prepare this Biological Assessment (BA) for the Joby Aviation Manufacturing Facility Project (project), located in the City of Marina in Monterey County, California (**Figure 1**). The project consists of the construction of a new 580,000 ft² single story steel manufacturing building which would be used for the production of lightweight, all-electric, vertical take-off and landing (VTOL) aircrafts.

The purpose of this Biological Assessment (BA) is to evaluate the project in sufficient detail to determine whether any species listed or proposed for listing under the Federal Endangered Species Act (ESA), or any designated or proposed critical habitat for those species, may be adversely affected by the proposed Federal Action. In addition, the following information is provided to comply with statutory requirements to use the best scientific and commercial information available when assessing potential effects to listed and/or candidate species and designated and/or proposed critical habitat resulting from the proposed Federal action. This BA is prepared in accordance with legal requirements set forth under Section 7 of the Federal ESA [16 U.S.C. 1536(c) and 50 C.F.R. Section 402.12].

1.1 Project Description

1.1.1 Action Area

A project's Action Area includes all areas where permanent and temporary impacts are expected to occur as a result of project activities. Indirect effects are not anticipated outside of the project site; therefore, the Action Area includes only the proposed project site (**Figure 2**). The site is located within the former Fort Ord military base in the City of Marina, within Monterey County Assessor's Parcel Number (APN) 031-111-037-000. The proposed development would be located within the boundaries of the Marina Municipal Airport (Airport), within a designated Fort Ord Habitat Management Plan (HMP) "development" parcel (Parcel L5.1). Access to the project site would be via an access road/driveway that extends from Imjin Road to the southeast corner of the project site.

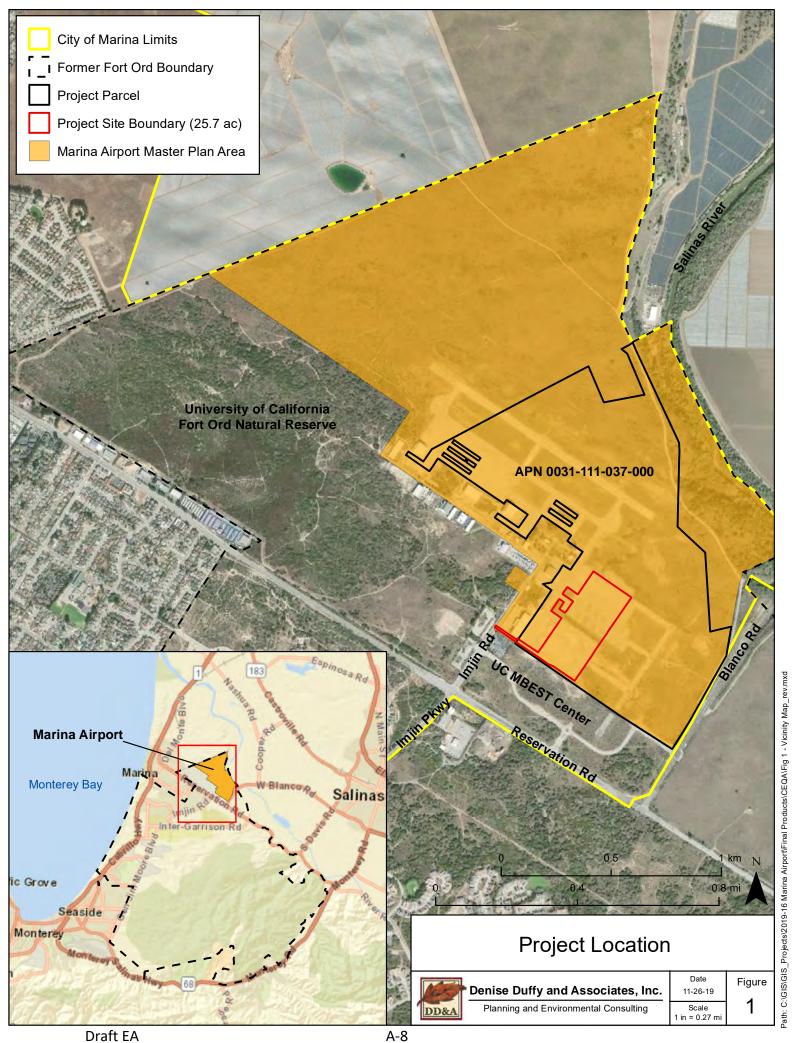
The building would include space for component fabrication, 3D printing, assembly, paint, offices and meeting space, shipping and receiving, a kitchen/cafeteria area, and a lobby/main entry. Shipping and receiving docks would be constructed for semi-trucks and bobtail truck deliveries. The building would extend to a height of 41 feet for the main roof area and up to 51 feet where screened roof-mounted electrical equipment would be located. The project also includes an equipment yard that would be surrounded by an approximately 10-ft fence to provide separation from the parking lot.

The equipment yard would include two 9,000-gallon inert gas tanks, two 15ft x 15ft cooling towers, five 11ft x 40ft autoclaves that would be set into the ground¹, a 2,010 ft² H-1 storage building, and dust collectors. The project will also include 627 parking sites, landscaping, and a 10-ft security fence.

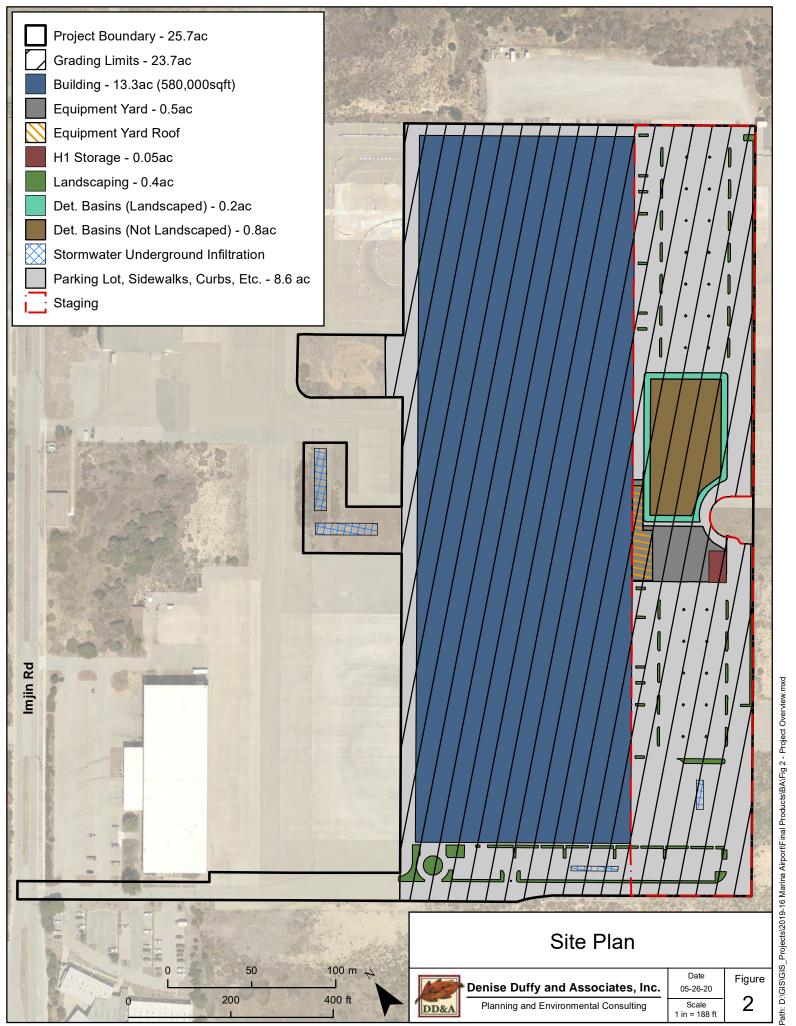
The project site is relatively flat; however, some grading would be necessary. Approximately 28,500 cubic yards (CY) of cut and 28,500 CY of fill are anticipated. Existing paving to be removed would be crushed

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¹ Autoclaves would extend approximately five feet into the building.



Draft EA



and used as engineered fill. No grading materials would be exported from the site or would be required to be imported onto the site.

Construction of the proposed project is expected to occur over a period of 15 months, beginning in 2020 and continuing until the anticipated completion in mid-2022. Equipment that may be used at any one time during construction may include, but not be limited to: excavator, concrete truck, crane, backhoe, dump truck, delivery truck, water truck, asphalt paver, high reach forklift, and McCloskey International 154 crusher (or similar).

1.1.2 Operations

Operations proposed within the new building include manufacturing, composite fabrication, assemblage of aircraft, parts testing, and research and development. The manufacturing process includes aircraft part layup, oven curing, trimming, adhesive bonding, and painting. Operations would also include aircraft testing and integration. All manufacturing would be conducted within the building. Operations would also include utilization of taxiways and remote test areas on the Airport for propulsion testing, antenna performance testing, acoustics measurement testing, hover testing and flight-testing. Operations would occur 24 hours per day, 7 days per week.

1.2 Regulatory Background

1.2.1 <u>Consultation History</u>

The Army's decision to close and dispose of the Fort Ord military base was considered a major federal action that could affect listed species under the federal ESA. The Service issued a Final Biological Opinion (BO) on the disposal and reuse of former Fort Ord on October 19, 1993. The Service issued five additional BOs and one amendment between 1999 and 2014 as a result of consultation with the Army. On May 28, 2015, the Service issued a Programmatic BO that superseded the previous BOs. On June 7, 2017, the Service issued a reinitiated Programmatic BO that supersedes the 2015 Programmatic BO. The 2017 Programmatic BO is the current and relevant BO for Army activities at the former Fort Ord. however, the construction of this project is not an Army activity and is not covered under the programmatic BO.

1.2.2 Fort Ord Habitat Management Plan

The 1993 Final BO on the disposal and reuse of former Fort Ord required that a habitat management plan be developed and implemented to reduce the incidental take of listed species and loss of habitat that supports these species (Service, 1993). The Fort Ord Installation-Wide Multispecies Habitat Management Plan (HMP) was prepared to assess impacts on vegetation and wildlife resources and provide mitigation for their loss associated with the disposal and reuse of former Fort Ord (ACOE, 1997). The HMP has been approved by the Service. It is a legally binding document and all recipients of former Fort Ord lands are required to abide by its management requirements and procedures. The HMP, deed restrictions, and Memoranda of Agreement between the Army and various land recipients provide the legal mechanism to ensure HMP implementation.

The HMP establishes guidelines for the conservation and management of HMP species and their habitats on former Fort Ord lands by identifying lands that are available for development, lands that have some restrictions with development, and habitat reserve areas. The intent of the plan is to establish large, contiguous habitat conservation areas and corridors to compensate for future development in other areas of

the former base. The HMP identifies what type of activities can occur on each parcel at former Fort Ord, and sets the standards to ensure the long-term viability of former Fort Ord's biological resources in the context of base reuse so that no further mitigation should be necessary for impacts to species and habitats considered in the HMP.

The HMP anticipates some losses to HMP species and their habitats as a result of redevelopment of the former Fort Ord. With the designated reserves and corridors and habitat management requirements in place, the losses of individuals of these species and habitats considered in the HMP are not expected to jeopardize the long-term viability of those species, their populations, or sensitive habitats on former Fort Ord. Recipients of disposed land with restrictions or management guidelines designated by the HMP will be obligated to implement those specific measures through the HMP and through deed covenants.

It is important to note that the HMP does not provide authorization for incidental take of species listed under the ESA. The proposed project is located on an airport and requires approvals from the Federal Aviation Administration, and, therefore, requires compliance with Section 7 of the ESA.

2. METHODS

2.1 Personnel and Survey Methods

DD&A Senior Environmental Scientists Josh Harwayne and Jami Colley and Assistant Environmental Scientists Liz Camilo and Max Hofmarcher conducted biological surveys of the project site in April, May, and June 2019. Botanical survey methods included walking the survey area and using aerial maps and GPS to identify general vegetation types and potential sensitive vegetation types and conducting focused surveys for special-status plant species. Reconnaissance-level wildlife habitat surveys were conducted concurrently with botanical surveys to identify any special-status wildlife species or suitable habitat for those species. Data collected during the surveys were used to assess the environmental conditions of the project site and its surroundings, evaluate environmental constraints at the site and within the local vicinity, and provide a basis for recommendations to minimize and avoid impacts to biological resources.

The project site was surveyed for botanical resources following the applicable guidelines outlined in the U.S. Fish and Wildlife Service (Service) *Guidelines for Conducting and Reporting Botanical Inventories for Federally listed, Proposed and Candidate Plants* (Service, 2000), the California Department of Fish and Wildlife (CDFW) *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW, 2018), and the California Native Plant Society (CNPS) *Botanical Survey Guidelines* (CNPS, 2001). All special-status plant species identified were mapped using a Trimble Pro XH GPS unit. Populations of plants with more than five individuals were mapped as a polygon and the density of the population was documented. Densities were recorded as low (1-33% cover), medium (34-66% cover), and high (67-100% cover). Individual plants or populations of five or fewer individuals were mapped as a point and a count of the number of individual plants was documented. Populations included all individuals within approximately three feet of another individual; individual plants further than three feet apart were mapped as a separate polygon or point.

2.2 Data Sources

The primary literature and data sources reviewed to determine the presence or potential presence federal listed, candidate, or proposed species and their designated critical habitat at the project site include:

- Current agency status information from the Service for species listed, proposed for listing, or candidates for listing as threatened or endangered under ESA, including:
 - CNDDB occurrences reports from the Marina quadrangle and the six surrounding quadrangles, including Monterey, Moss Landing, Prunedale, Salinas, Seaside, and Spreckels (CDFW, 2019); and
 - The Service's Information for Planning and Consultation (IPaC) Resource List (Service, 2019; **Appendix A**).
- The Flora and Fauna Baseline Study of Fort Ord (ACOE, 1992); and
- The Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord (HMP) (ACOE, 1997).

From these resources, a list of federally listed species known or with the potential to occur within the project site was created (**Table 1**). This list presents these species along with their legal status, habitat requirements, and a brief statement of the likelihood to occur within the site.

Table 1. Federally Listed, Proposed, or Candidate Species Potentially in the Project Site

Species	Status	General Habitat	Potential Occurrence within Project Site ²
		BIRDS	· ·
Brachyramphus marmoratus Marbled murrelet	Threatened	Occur year-round in marine subtidal and pelagic habitats from the Oregon border to Point Sal. Partial to coastlines with stands of mature redwood and Douglas-fir. Requires dense mature forests of redwood and/or Douglas-fir for breeding and nesting.	Unlikely No suitable habitat within project site.
Charadrius alexandrinus nivosus Western snowy plover	Threatened	Sandy beaches on marine and estuarine shores, also salt pond levees and the shores of large alkali lakes. Requires sandy, gravelly or friable soil substrate for nesting.	Unlikely No suitable habitat within project site.
Empidonax traillii extimus Southwestern willow flycatcher	Endangered	Breeds in riparian habitat in areas ranging in elevation from sea level to over 2,600 meters. Builds nest in trees in densely vegetated areas. This species establishes nesting territories and builds, and forages in mosaics of relatively dense and expansive areas of trees and shrubs, near or adjacent to surface water or underlain by saturated soils. Not typically found nesting in areas without willows (<i>Salix sp.</i>), tamarisk (<i>Tamarix ramosissima</i>), or both.	Unlikely No suitable habitat within project site.
Gymnogyps californianus California condor	Endangered	Roosting sites in isolated rocky cliffs, rugged chaparral, and pine covered mountains 2000-6000 feet above sea level. Foraging area removed from nesting/roosting site (includes rangeland and coastal area - up to 19 mile commute one way). Nest sites in cliffs, crevices, potholes.	Unlikely No suitable habitat within project site.
Rallus obsoletus obsoletus California Ridgway's rail	Endangered	Salt and brackish marshes.	Unlikely No suitable habitat within project site.
Sterna antillarum browni California least tern	Endangered	Prefers undisturbed nest sites on open, sandy/gravelly shores near shallow-water feeding areas in estuaries. Sea beaches, bays, large rivers, bars.	Unlikely No suitable habitat within project site.
Vireo bellii pusillus Least Bell's Vireo	Endangered	Riparian areas and drainages. Breed in willow riparian forest supporting a dense, shrubby understory. Oak woodland with a willow riparian understory is also used in some areas, and individuals sometimes enter adjacent chaparral, coastal sage scrub, or desert scrub habitats to forage. REPTILES AND AMPHIBIANS	Unlikely No suitable habitat within project site. The site is very likely outside of the current range of this species.
Ambystoma californiense California tiger salamander	Threatened	Annual grassland and grassy understory of valley-foothill hardwood habitats in central and northern California. Need underground refuges and vernal pools or other seasonal water sources.	Unlikely The project site is outside of the dispersal range of known breeding resources. The nearest known breeding resource is approximately 2.2km from the project site within the detention basin at East Garrison.

² Present

⁼ known occurrence of species within the site; presence of suitable habitat conditions; or identified during field surveys.

Low

⁼ species known to occur in the vicinity from the CNDDB or other documentation, lack of suitable habitat or poor quality.

Unlikely

⁼ species not known to occur in the vicinity from the CNDDB or other documentation; no suitable habitat is present.

Not Present = species was not identified during surveys.

Species	Status	General Habitat	Potential Occurrence
Ambystoma macrodactylum croceum Santa Cruz long-toed salamander	Endangered	Preferred habitats include ponderosa pine, montane hardwood-conifer, mixed conifer, montane riparian, red fir and wet meadows. Occurs in a small number of localities in Santa Cruz and Monterey Counties. Adults spend the majority of the time in underground burrows and beneath objects. Larvae prefer shallow water with clumps of vegetation.	within Project Site ² Unlikely No suitable habitat within project site. The nearest CNDDB occurrence of this species is reported 7.1 miles from the site, beyond the known dispersal range for the species.
Rana draytonii California red-legged frog	Threatened	Lowlands and foothills in or near permanent or late-season sources of deep water with dense, shrubby, or emergent riparian vegetation. During late summer or fall adults are known to utilize a variety of upland habitats with leaf litter or mammal burrows.	Unlikely No suitable habitat within project site. The nearest CNDDB occurrence is approximately two miles from the project site within the Salinas River.
Eucyclogobius newberryi Tidewater goby	Endangered	Brackish water habitats; found in shallow lagoons and lower stream reaches. Tidewater gobies appear to be naturally absent (now and historically) from three large stretches of coastline where lagoons or estuaries are absent and steep topography or swift currents may prevent tidewater gobies from dispersing between adjacent localities. The southernmost large, natural gap occurs between the Salinas River in Monterey County and Arroyo del Oso in San Luis Obispo County.	Not Present No suitable habitat within project site.
Oncorhynchus mykiss irideus Steelhead (south-central California coast DPS)	Threatened	Cold headwaters, creeks, and small to large rivers and lakes; anadromous in coastal streams.	Not Present No suitable habitat within project site.
Spirinchus thaleichthys Longfin smelt	Candidate	Euryhaline, nektonic & anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefers salinities of 15-30 PPT, but can be found in completely freshwater to almost pure seawater. INVERTEBRATES	Not Present No suitable habitat within project site.
Branchinecta lynchi Vernal pool fairy shrimp	Threatened	Requires ephemeral pools with no flow. Associated with vernal pool/grasslands from near Red Bluff (Shasta County), through the central valley, and into the South Coast Mountains Region.	Not Present No suitable habitat within project site.
Euphilotes enoptes smithi Smith's blue butterfly	Endangered	Most commonly associated with coastal dunes and coastal sage scrub plant communities in Monterey and Santa Cruz Counties. Plant hosts are <i>Eriogonum latifolium</i> and <i>E. parvifolium</i> .	Not Present No suitable habitat within project site. The plant host species were not identified during 2019 botanical surveys.
		PLANTS	
Arenaria paludicola Marsh sandwort	Endangered	Known from only two natural occurrences in Black Lake Canyon and at Oso Flaco Lake. Sandy openings of freshwater of brackish marshes and swamps at elevations of 3-170 meters. Stoloniferous perennial herb in the Caryophyllaceae family; blooms May-August.	Not Present Not identified during 2019 botanical surveys.
Astragalus tener var. titi Coastal dunes milk-vetch	Endangered	Sandy soils in coastal bluff scrub, coastal dunes, coastal prairie (mesic); elevation 3-164 feet. Annual herb in the Fabaceae family; blooms March-May.	Not Present Not identified during 2019 botanical surveys.

Species	Status	General Habitat	Potential Occurrence within Project Site ²
Chorizanthe pungens var. pungens Monterey spineflower	Threatened	Maritime chaparral, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland on sandy soils at elevations of 3-450 meters. Annual herb in the Polygonaceae family; blooms April-July.	Present Identified during 2019 botanical surveys.
Chorizanthe robusta var. robusta Robust spineflower	Endangered	Openings in cismontane woodland, coastal dunes, maritime chaparral, and coastal scrub on sandy or gravelly soils at elevations of 3-300 meters. Annual herb in the Polygonaceae family; blooms April-September.	Not Present Not identified during 2019 botanical surveys.
Erysimum menziesii Menzies' wallflower	Endangered	Coastal dunes at elevations of 0-35 meters. Perennial herb in the Brassicaceae family; blooms March-September.	Not Present Not identified during 2019 botanical surveys.
Gilia tenuiflora ssp. arenaria Monterey gilia	Endangered	Openings in maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub on sandy soils at elevations of 0-45 meters. Annual herb in the Polemoniaceae family; blooms April-June.	Not Present Not identified during 2019 botanical surveys.
Hesperocyparis goveniana Gowen cypress	Threatened	Closed-cone coniferous forest and maritime chaparral at elevations of 30-300 meters. Evergreen tree in the Cupressaceae family. Natively occurring only at Point Lobos near Gibson Creek and the Huckleberry Hill Nature Preserve near Highway 68.	Not Present Not identified during 2019 botanical surveys.
Holocarpha macradenia Santa Cruz tarplant	Threatened	Coastal prairies and valley foothill grasslands, often clay or sandy soils, at elevations of 10-220 meters. Annual herb in the Asteraceae family; blooms June-October.	Not Present Not identified during 2019 botanical surveys.
Lasthenia conjugens Contra Costa goldfields	Endangered	Mesic areas of valley and foothill grassland, alkaline playas, cismontane woodland, and vernal pools at elevations of 0-470 meters. Annual herb in the Asteraceae family; blooms March-June.	Not Present Not identified during 2019 botanical surveys.
Layia carnosa Beach layia	Endangered	Coastal dunes and coastal scrub on sandy soils at elevations of 0-60 meters. Annual herb in the Asteraceae family; blooms March-July.	Not Present Not identified during 2019 botanical surveys.
Lupinus tidestromii Tidestrom's lupine	Endangered	Coastal dunes at elevations of 0-100 meters. Perennial rhizomatous herb in the Fabaceae family; blooms April-June.	Not Present Not identified during 2019 botanical surveys.
Piperia yadonii Yadon's rein orchid	Endangered	Sandy soils in coastal bluff scrub, closed-cone coniferous forest, and maritime chaparral at elevations of 10-510 meters. Annual herb in the Orchidaceae family; blooms February-August.	Not Present Not identified during 2019 botanical surveys.
Potentilla hickmanii Hickman's cinquefoil	Endangered	Coastal bluff scrub, closed-cone coniferous forests, vernally mesic meadows and seeps, and freshwater marshes and swamps at elevations of 10-149 meters. Perennial herb in the Rosaceae family; blooms April-August.	Not Present Not identified during 2019 botanical surveys.
Trifolium trichocalyx Monterey clover	Endangered	Sandy openings and burned areas of closed-cone coniferous forest at elevations of 30-240 meters. Annual herb in the Fabaceae family; blooms April-June.	Not Present Not identified during 2019 botanical surveys.

3. ENVIRONMENTAL SETTING

3.1 Physical Conditions

The project site is relatively flat and consists mostly of concrete with small pockets of undeveloped areas. A shallow swale is located between two of the tarmacs within one of the undeveloped areas which collects localized runoff. Additional runoff from the project site flows onto adjacent undeveloped areas and into existing storm drainages within the tarmacs that discharge into the open areas immediately northeast of the project site. The soils within and surrounding the project site consist mostly of sand and are somewhat excessively drained. There are no natural drainages or waterways within the site; however, the Salinas River is located approximately 0.4 mile from the site (City, 2020).

3.2 Biological Conditions

3.2.1 Vegetation Communities

As described above, the project site is mostly developed but contains small pockets of undeveloped areas. Vegetation communities within undeveloped areas include ruderal/disturbed and white-tip clover swale and ruderal/disturbed (City, 2020; **Figure 3**). A brief description of each vegetation community is included below.

Developed

Most of the project site (23.2 acres) is developed with paved roads and aircraft parking aprons (**Figure 3**). No vegetation is present within developed areas and they are considered to have little biological value. No federally listed species were observed within developed areas during 2019 biological surveys of the project site and, due to lack of suitable habitat, none are expected to occur.

Ruderal/Disturbed

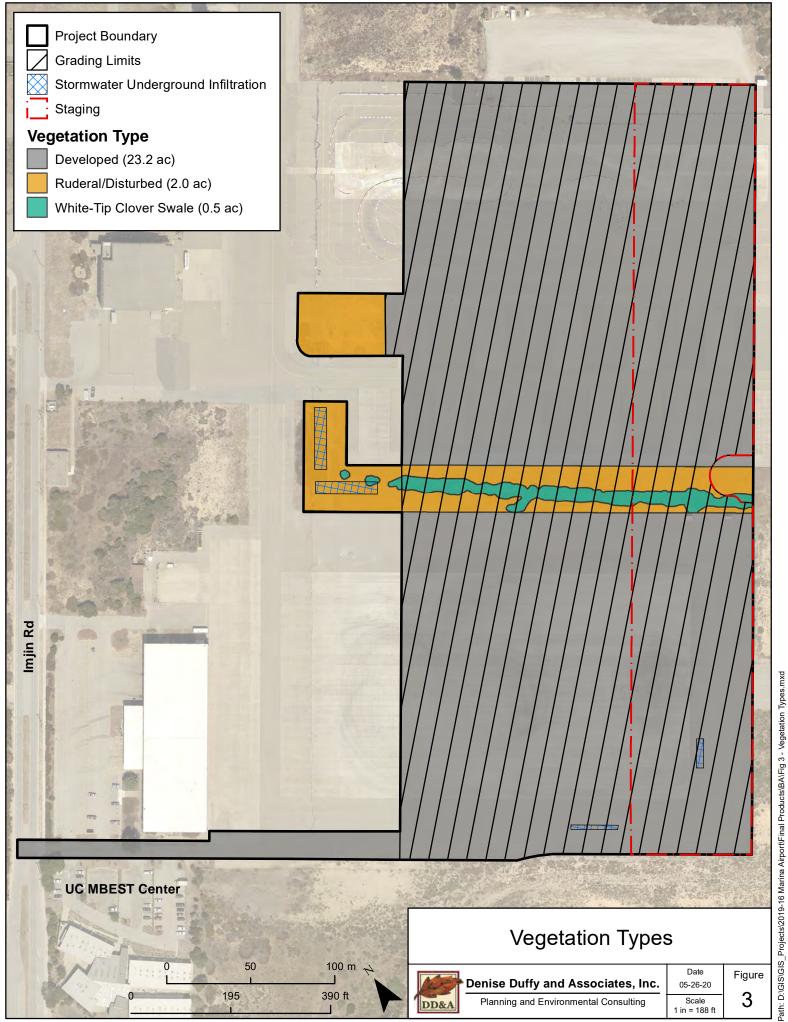
Ruderal areas are those areas which have been disturbed by human activities and are dominated by non-native annual grasses and other "weedy" species. Ruderal areas within the project site include areas dominated by hottentot fig (Carpobrotus sp.), silvery hairgrass (Aira caryophyllea), slender wild oat (Avena barbata), Italian thistle (Carduus pycnocephalus), filaree (Erodium sp.), bur clover (Medicago sp.), and sheep sorrel (Rumex acetosella). Ruderal areas have low biological value because they are generally dominated by non-native plant species and consist of relatively low-quality habitat from a wildlife perspective. Approximately 2.0 acres of ruderal vegetation is present within the project site (Figure 3).

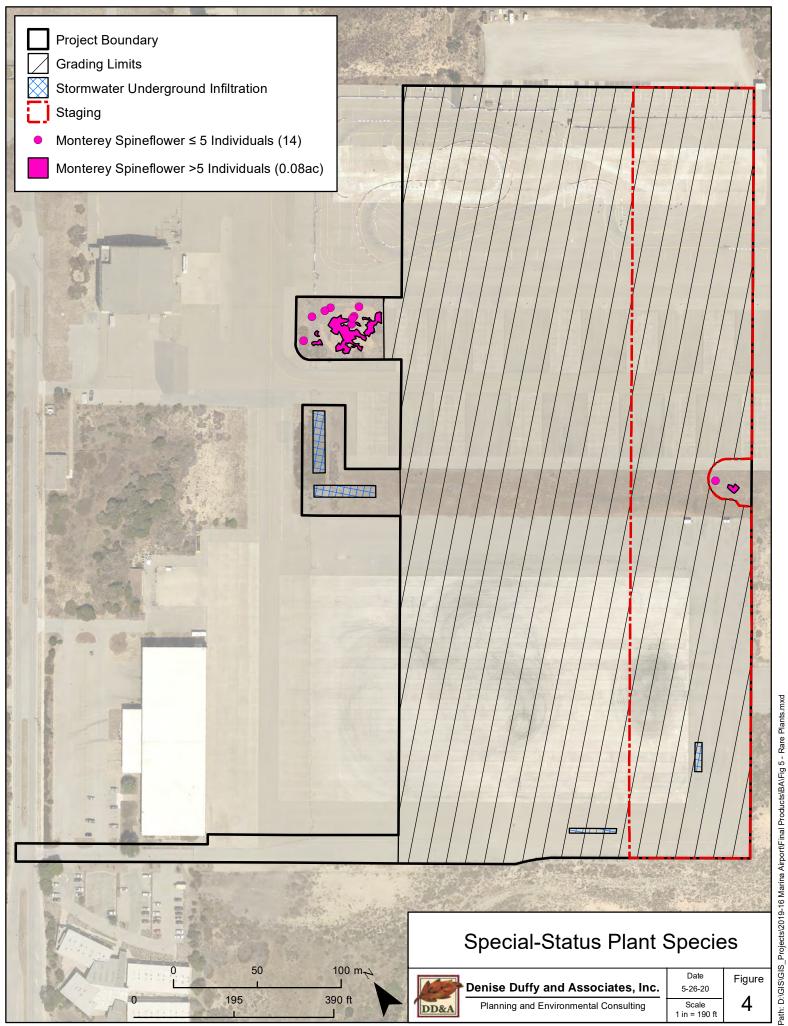
Monterey spineflower (*Chorizanthe pungens* var. *pungens*) was the only federally listed species identified within this vegetation community during 2019 biological surveys (**Figure 4**). No other federally listed species were observed within ruderal areas and, due to lack of suitable habitat, none are expected to occur.

White-Tip Clover Swale

White-tip clover (*Trifolium variegatum*) swale forms in mesic areas with a conspicuous mix of native and non-native plants. This habitat occurs within a portion of a swale; a man-made, linear depression that receives runoff from the adjacent paved areas during precipitation events. While the swale is seasonally mesic, it does not meet the federal criteria for a jurisdictional wetland due to the lack of hydric soils. White-tip clover is the indicator species for this vegetation types; however, it varies in dominance both spatially

and temporally, and in some years or in certain locations, non-native annual grasses or other native forb species may surpass its abundance and cover. In fact, less





than 10 percent cover, or merely presence, of this species is required for classification of this vegetation type.

Within the project site, the dominant species within this vegetation community are bracted popcornflower (*Plagiobothrys bracteatus*), and annual hairgrass (*Deschampsia danthonoides*), and slightly less dominant, nutsedge (*Cyperus eragrostis*), round-fruited toad rush (*Juncus bufonius* var. *occidentalis*), and elegant microseris (*Microseris elegans*); most of these species are identified as species associated with this vegetation type in *A Manual of California Vegetation* (CNPS, 2019). Several *Trifolium* species are also present throughout this vegetation type, including the white-tip clover indicator species; however, they were not dominant at the time of the survey.

While Monterey spineflower was documented to occur adjacent to this habitat type, no federally listed species were observed within the white-tip clover swale during 2019 biological surveys of the project site or during previous surveys. This habitat type does not meet the specific habitat conditions needed to support spineflower and therefore is not considered suitable habitat for spineflower.

Spineflower is not known to be reliant on or associated with a hydrologic condition or source. Specifically, it grows on highly permeable sandy soil and does not occur in drainages or associated with any hydrologic source other than precipitation. Any additional collection of water, either standing or subsurface would negatively affect the potential for this species to occur. Proposed stormwater system basins are not proposed to impact spineflower on site. In addition, no impacts are anticipated to spineflower from reducing or eliminating any hydrological inputs coming from the existing pavement into open areas because spineflower is not associated with or reliant on hydrology beyond precipitation.

4. SPECIES ACCOUNTS, EFFECTS OF THE ACTION, AND AVOIDANCE AND MINIMIZATION MEASURES

4.1 Species Accounts

4.1.1 Federally Listed, Candidate, or Proposed Species

Monterey spineflower is the only federally listed, candidate, or proposed plant or wildlife species which is known to occur or has the potential to occur within the project site. Monterey gilia (*Gilia tenuiflora* ssp. *arenaria*) was identified adjacent to the project site during spring 2019 botanical surveys; however, potentially adverse effects resulting from the project are confined to the project site and, therefore, will not impact Monterey gilia. All other federally listed species are assumed absent for the species-specific reasons presented in **Table 1** and, therefore, will not be affected by the project.

Monterey Spineflower

Monterey spineflower, a small, prostrate annual in the buckwheat family, was listed as threatened under ESA on February 4, 1994 (Service, 1994). Information contained in this species account was obtained primarily from the final rule for listing, Recovery Plan for Seven Coastal Plants and the Myrtle's Silverspot Butterfly, and final rule for designation of critical habitat.

Monterey spineflower occurs in sandy soils within coastal habitats from the Monterey Peninsula (Monterey County) northward along the coast to southern Santa Cruz County, and inland to the coastal plain of the Salinas Valley. At coastal sites ranging from the Monterey Peninsula north to Manresa State Beach, Monterey spineflower is found in active coastal dune systems and on coastal bluffs upon which windblown sand has been deposited. The distribution of suitable habitat is subject to dynamic shifts caused by patterns of dune mobilization, stabilization, and successional trends in coastal dune vegetation that increase in cover over time. Accordingly, individual colonies of Monterey spineflower, found in gaps between stands of scrub, shift in distribution and size over time. Other native plants associated with Monterey spineflower in these areas include beach bur (*Ambrosia chamissonis*), beach sagewort (*Artemisia pycnocephala*), mock heather (*Ericameria ericoides*), Monterey Indian paintbrush (*Castilleja latifolia*), and beach pea (*Lathyrus littoralis*). At some locations, Monterey spineflower occurs in close proximity to other Federally listed species, including Monterey gilia, Menzies' wallflower (*Erysimum menziesii* ssp. *menziesii*), Yadon's piperia (*Piperia yadonii*), Smith's blue butterfly (*Euphilotes enoptes smithi*), and western snowy plover (*Charadrius alexandrinus nivosus*).

At more inland sites, Monterey spineflower occurs on sandy, well-drained soils in a variety of plant communities, most frequently maritime chaparral, coastal scrub, coast live oak woodland, and grassland. Within grassland communities, Monterey spineflower typically occurs along roadsides, in firebreaks, and in other disturbed sites, while in oak woodland, chaparral, and scrub communities, it occurs in sandy openings between shrubs. In older stands with a high cover of shrubs, Monterey spineflower is restricted to roadsides, firebreaks, and trails that bisect these communities. Prior to the onset of human use of this area, Monterey spineflower may have been restricted to openings within these communities created by animal movement corridors, herbivory, and wildfires.

Monterey spineflower is a short-lived annual species that germinates during the winter months and flowers from April through June. Although its pollination ecology has not been studied, Monterey spineflower is

likely visited by a wide array of pollinators. Observations of pollinators on other species of *Chorizanthe* that occur in Santa Cruz County have included leaf cutter bees (*Megachilidae*), at least six species of butterflies, flies, and sphecid wasps (*Sphecidae*). Each flower produces one seed; depending on plant vigor, dozens or hundreds of seeds could be produced per individual. The importance of pollinator activity in seed set has been demonstrated by the production of seed with low viability where pollinator access was limited. The plants turn a rusty hue as they dry through the summer months, eventually shattering during the fall. Seed dispersal is facilitated by the involucre spines, which attach the seed to passing animals. While animal vectors most likely facilitate dispersal between colonies and populations, the prevailing coastal winds undoubtedly play a part in scattering seed within colonies and populations.

Several coastal dune restoration efforts within the last decade have included measures to eliminate nonnative species and to propagate and reintroduce Monterey spineflower, notably at Moss Landing North Harbor, Pajaro Dunes, and the University of California's Moss Landing Marine Laboratory. Such efforts have contributed to the understanding that Monterey spineflower readily grows where suitable sandy substrates occur and competition with other plant species is minimal.

Residential development, agricultural land conversion, recreational use, sand mining, dune stabilization, and competition with non-native plants, such as European beachgrass (*Ammophila arenaria*) and iceplant, have all reduced the populations and habitat of Monterey spineflower. Habitat loss and conversion from agricultural and residential development, activities at military institutions, and invasion by non-native plants were identified as the primary threats to Monterey spineflower at the time of listing (Service, 1994). Hikers and equestrians may trample these plants at various locations throughout its range. Most of the historical locations of the Monterey spineflower in the Salinas Valley have probably been extirpated by conversion of grassland and valley oak woodland habitats to agricultural fields.

Approximately 0.08 acre and 14 individuals of Monterey spineflower were identified within the project site during 2019 botanical surveys (**Figure 4**).

4.1.2 Critical Habitat

Critical Habitat for Monterey spineflower was designated in May 2002 by USFWS (2002) and revised in 2006 (USFWS, 2006), 2007 (USFWS, 2007) and 2008 (USFWS, 2008). Critical habitat for Monterey spineflower has been designated adjacent to, but not within, the project site. In addition, the project site is approximately 0.4 mile from the Salinas River, which is designated critical habitat for south-central California coast steelhead (*Oncorhynchus mykiss irideus*). Potentially adverse effects resulting from the project are confined to the project site and, therefore, will not impact designated critical habitat for these species.

4.2 Effects of the Action

4.2.1 Direct and Indirect Effects

Approximately 0.08 acre and 14 individuals of Monterey spineflower were identified in two locations within the project site during spring 2019 botanical surveys. The project has been designed to avoid these individuals and will avoid all impacts to Monterey spineflower and its habitat during construction (**Figure 4**). In addition, there are no anticipated impacts resulting from the operation of the project. Therefore, with

the implementation of the avoidance measures listed below, the project will not affect Monterey spineflower.

4.2.2 Cumulative Effects

Cumulative effects include the effects of future state, tribal, local, or private actions that are reasonably certain to occur in the Action Area. Future federal actions that are unrelated to the proposed action are not considered in this section because they would require separate consultation pursuant to Section 7 of the ESA. There are no known non-federal future actions that are reasonably certain to occur in the project site that will affect Monterey spineflower.

4.2.3 Interrelated and Interdependent Actions

Interrelated activities are those activities that are part of a proposed action and depend on a proposed action for their justification. Interdependent activities are those activities that have no independent utility apart from an action under consultation. There are no interrelated or interdependent actions associated with the project.

4.3 Avoidance Measures

The project proponent will implement the following avoidance measures:

- Installation of temporary exclusion fencing and flagging to prevent encroachment by construction personnel and equipment into sensitive areas to be avoided;
- Presence of an on-site biological monitor during construction activities; and
- Implementation of construction Best Management Practices (BMPs), including mandatory worker environmental awareness training for all construction personnel, erosion, dust, and sediment control, and trash disposal; and

5. **DETERMINATION**

Implementation of the avoidance measures identified in Section 4.3 above would avoid impacts to Monterey spineflower. Therefore, the project will not affect Monterey spineflower.

It is recommended that the FAA solicit concurrence with the Service through the initiation of informal consultation.

6. REFERENCES

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APPENDIX A

IPaC Resource List

IPaC

U.S. Fish & Wildlife Service

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Monterey County, California



Local office

Ventura Fish And Wildlife Office

4 (805) 644-1766

(805) 644-3958

2493 Portola Road, Suite B Ventura, CA 93003-7726

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

- 1. Draw the project location and click CONTINUE.
- 2. Click DEFINE PROJECT.
- 3. Log in (if directed to do so).
- 4. Provide a name and description for your project.
- 5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the <u>Ecological Services Program</u> of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact <u>NOAA Fisheries</u> for <u>species under their jurisdiction</u>.

- Species listed under the <u>Endangered Species Act</u> are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the <u>listing status page</u> for more information.
- 2. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME STATUS

California Condor Gymnogyps californianus

There is final critical habitat for this species. Your location is outside the critical habitat.

https://ecos.fws.gov/ecp/species/8193

Endangered

Endangered

California Least Tern Sterna antillarum browni

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/8104

Least Bell's Vireo Vireo bellii pusillus

There is **final** critical habitat for this species. Your location is outside the critical habitat.

https://ecos.fws.gov/ecp/species/5945

Endangered

Marbled Murrelet Brachyramphus marmoratus

There is **final** critical habitat for this species. Your location is outside the critical habitat.

https://ecos.fws.gov/ecp/species/4467

Threatened

Southwestern Willow Flycatcher Empidonax traillii extimus

There is final critical habitat for this species. Your location is outside the critical habitat.

https://ecos.fws.gov/ecp/species/6749

Endangered

Western Snowy Plover Charadrius nivosus nivosus

There is final critical habitat for this species. Your location is outside the critical habitat.

https://ecos.fws.gov/ecp/species/8035

Threatened

Amphibians

NAME **STATUS**

California Red-legged Frog Rana draytonii

There is final critical habitat for this species. Your location is outside the critical habitat.

https://ecos.fws.gov/ecp/species/2891

Threatened

California Tiger Salamander Ambystoma californiense

There is **final** critical habitat for this species. Your location is outside the critical habitat.

https://ecos.fws.gov/ecp/species/2076

Threatened

Santa Cruz Long-toed Salamander Ambystoma macrodactylum

croceum

There is **proposed** critical habitat for this species. The location of the critical habitat is not available.

https://ecos.fws.gov/ecp/species/7405

Endangered

IPaC: Explore Location

Fishes

4/15/2019

NAME STATUS

Tidewater Goby Eucyclogobius newberryi

There is **final** critical habitat for this species. Your location is outside the critical habitat.

https://ecos.fws.gov/ecp/species/57

Endangered

Insects

NAME STATUS

Smith's Blue Butterfly Euphilotes enoptes smithi

There is **proposed** critical habitat for this species. The location of the critical habitat is not available.

https://ecos.fws.gov/ecp/species/4418

Endangered

Crustaceans

NAME STATUS

Vernal Pool Fairy Shrimp Branchinecta lynchi

There is **final** critical habitat for this species. Your location is outside the critical habitat.

https://ecos.fws.gov/ecp/species/498

Threatened

Flowering Plants

NAME STATUS

Contra Costa Goldfields Lasthenia conjugens

There is **final** critical habitat for this species. Your location is outside the critical habitat.

https://ecos.fws.gov/ecp/species/7058

Endangered

Marsh Sandwort Arenaria paludicola

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/2229

Endangered

Menzies' Wallflower Erysimum menziesii

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/2935

Endangered

Monterey Gilia Gilia tenuiflora ssp. arenaria

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/856

Endangered

Monterey Spineflower Chorizanthe pungens var. pungens

There is **final** critical habitat for this species. Your location overlaps the critical habitat.

https://ecos.fws.gov/ecp/species/396

Threatened

Yadon's Piperia Piperia yadonii

There is **final** critical habitat for this species. Your location is outside the critical habitat.

https://ecos.fws.gov/ecp/species/4205

Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
Monterey Spineflower Chorizanthe pungens var. pungens	Final
https://ecos.fws.gov/ecp/species/396#crithab	

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act 1 and the Bald and Golden Eagle Protection Act 2 .

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described <u>below</u>.

- 1. The Migratory Birds Treaty Act of 1918.
- 2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds
 http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the <u>USFWS Birds</u> of <u>Conservation Concern</u> (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ

<u>below</u>. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the <u>E-bird data mapping tool</u> (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found <u>below</u>.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A
BREEDING SEASON IS INDICATED
FOR A BIRD ON YOUR LIST, THE
BIRD MAY BREED IN YOUR
PROJECT AREA SOMETIME WITHIN
THE TIMEFRAME SPECIFIED,
WHICH IS A VERY LIBERAL
ESTIMATE OF THE DATES INSIDE
WHICH THE BIRD BREEDS
ACROSS ITS ENTIRE RANGE.
"BREEDS ELSEWHERE" INDICATES
THAT THE BIRD DOES NOT LIKELY
BREED IN YOUR PROJECT AREA.)

Allen's Hummingbird Selasphorus sasin

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/9637

Breeds Feb 1 to Jul 15

Bald Eagle Haliaeetus leucocephalus

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

https://ecos.fws.gov/ecp/species/1626

Breeds Jan 1 to Aug 31

Burrowing Owl Athene cunicularia

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9737

Breeds Mar 15 to Aug 31

California Thrasher Toxostoma redivivum

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Jan 1 to Jul 31

Clark's Grebe Aechmophorus clarkii

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Jan 1 to Dec 31

Common Yellowthroat Geothlypis trichas sinuosa

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084

Breeds May 20 to Jul 31

Golden Eagle Aquila chrysaetos

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Breeds Jan 1 to Aug 31

https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Mar 20 to Sep 2

https://ecos.fws.gov/ecp/species/9464

Lewis's Woodpecker Melanerpes lewis

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Apr 20 to Sep 30

https://ecos.fws.gov/ecp/species/9408

Long-billed Curlew Numenius americanus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/5511

Breeds elsewhere

Marbled Godwit Limosa fedoa

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/9481

Breeds elsewhere

Nuttall's Woodpecker Picoides nuttallii

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

https://ecos.fws.gov/ecp/species/9410

Breeds Apr 1 to Jul 20

Oak Titmouse Baeolophus inornatus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/9656

Breeds Mar 15 to Jul 15

IPaC: Explore Location

4/15/2019

Rufous Hummingbird selasphorus rufus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/8002

Breeds elsewhere

Short-billed Dowitcher Limnodromus griseus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/9480

Breeds elsewhere

Song Sparrow Melospiza melodia

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/4243

Breeds Apr 15 to Jul 20

Breeds Feb 20 to Sep 5

Tricolored Blackbird Agelaius tricolor

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/3910

Breeds Mar 15 to Aug 10

Whimbrel Numenius phaeopus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/9483

Breeds elsewhere

Willet Tringa semipalmata

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

Wrentit Chamaea fasciata

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Mar 15 to Aug 10

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

- 1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
- 2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
- 3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (1)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

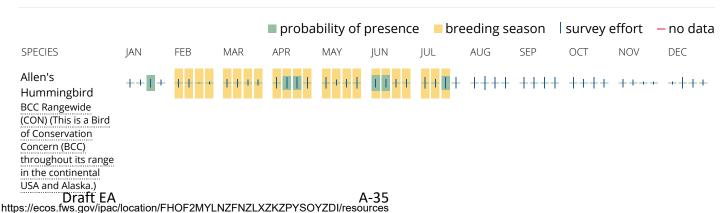
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

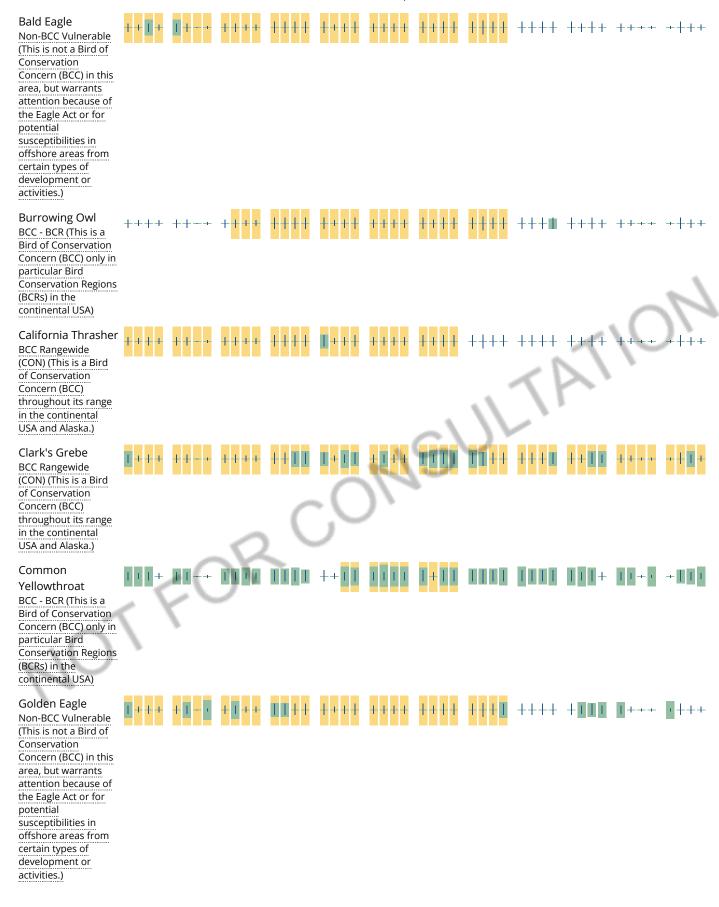
No Data (-)

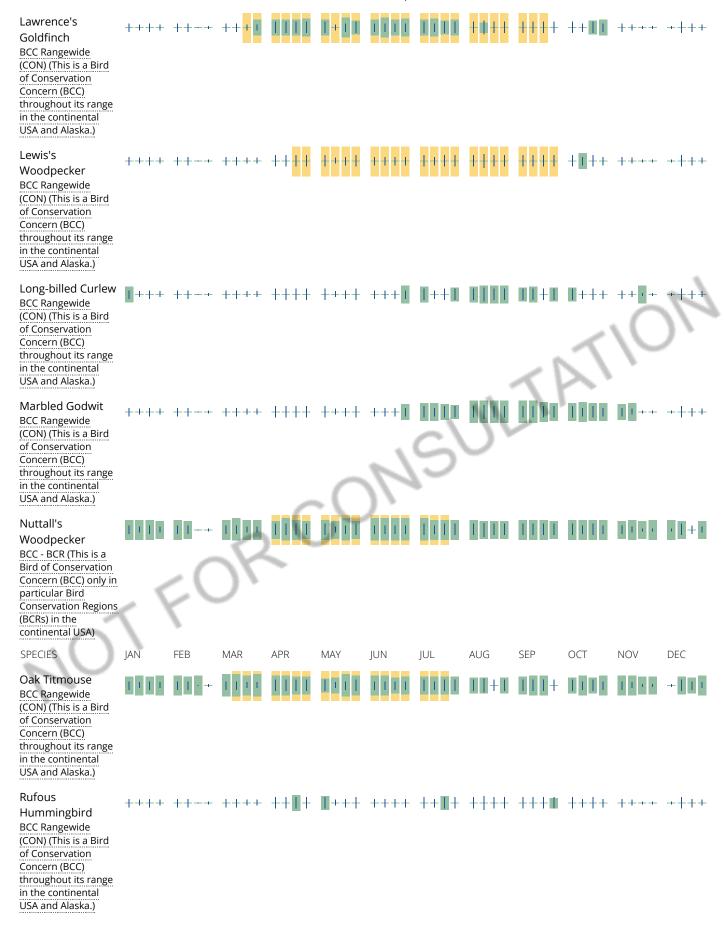
A week is marked as having no data if there were no survey events for that week.

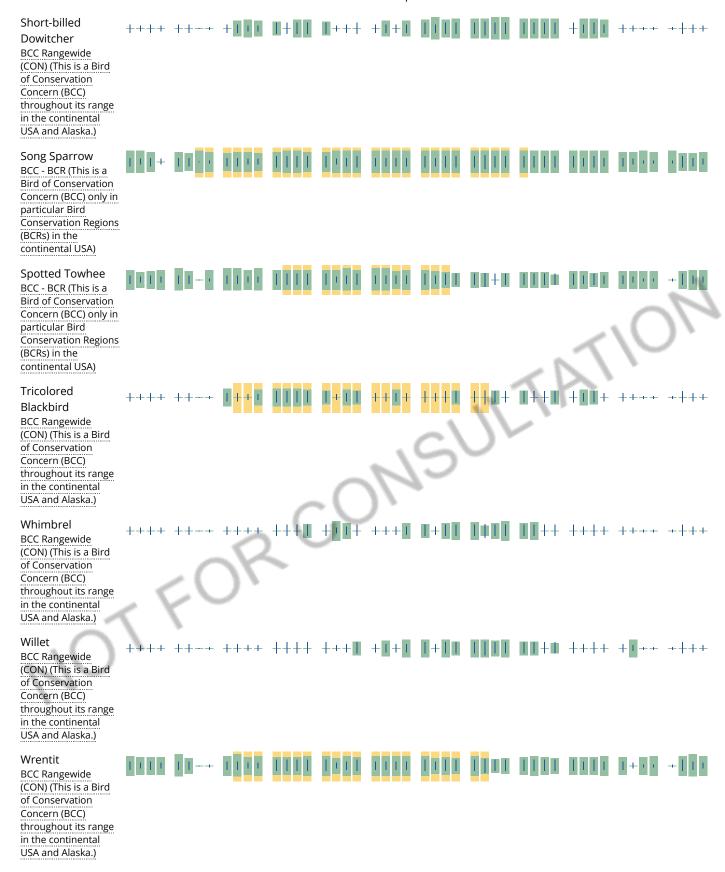
Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.









Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

<u>Nationwide Conservation Measures</u> describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to

occur and be breeding in your project area, view the Probability of Presence Summary. <u>Additional measures</u> and/or <u>permits</u> may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS <u>Birds of Conservation Concern (BCC)</u> and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the <u>Avian Knowledge Network (AKN)</u>. The AKN data is based on a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u> and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (<u>Eagle Act</u> requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the <u>E-bird Explore Data Tool</u>.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the <u>Avian Knowledge Network (AKN)</u>. This data is derived from a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u>.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

- 1. "BCC Rangewide" birds are <u>Birds of Conservation Concern</u> (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
- 2. "BCC BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
- 3. "Non-BCC Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the <u>Eagle Act</u> requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the <u>Northeast Ocean Data Portal</u>. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the <u>NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.</u>

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the <u>Diving Bird Study</u> and the <u>nanotag studies</u> or contact <u>Caleb Spiegel</u> or <u>Pam Loring</u>.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to <u>obtain a permit</u> to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the <u>National Wildlife Refuge</u> system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to <u>NWI wetlands</u> and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local <u>U.S. Army Corps of Engineers District</u>.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.



APPENDIX B AIRPORT LAND ASSURANCE LETTER

CITY OF MARINA

211 Hillcrest Avenue Marina, Ca 93933 831-884-1278

www.cityofmarina.org

August 21, 2020

Mr. Doug Pomeroy **Environmental Protection Specialist** Federal Aviation Administration San Francisco Airports District Office 1000 Marina Boulevard, Suite 220 Brisbane, CA 94005

Dear Mr. Pomeroy,

The City of Marina, California, makes the following statement of compatible land use assurances as required by 49 U.S.C. Section 47 107(a)(10).

The City of Marina provides assurances that the appropriate action, including the adoption of an airport land use compatibility plan/zoning laws, has been or will be taken to the extent reasonable to restrict the use of land next to or near the Marina Municipal Airport to uses that are compatible with normal airport operations. In addition, the City of Marina will encourage and support other jurisdictions in the area in their efforts to do the same.

If you have any questions regarding this matter, please contact me.

Sincerely,

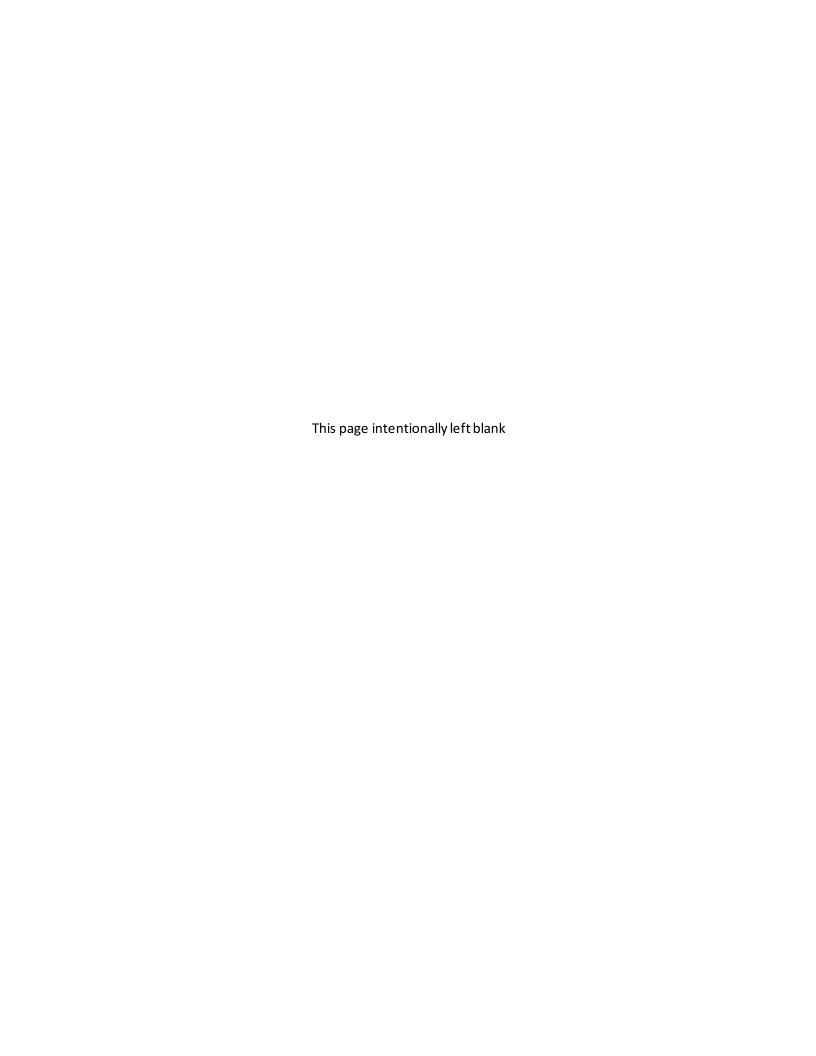
Jeff Crechriou

Airport Services Manager Marina Municipal Airport

Jeff D. Luchion

City of Marina

Draft EA B-1





NATIONAL HISTORIC PRESERVATION ACT, SECTION 106 CONSULTATION



DEPARTMENT OF PARKS AND RECREATION OFFICE OF HISTORIC PRESERVATION

Julianne Polanco, State Historic Preservation Officer
1725 23rd Street, Suite 100, Sacramento, CA 95816-7100
Telephone: (916) 445-7000 FAX: (916) 445-7053
calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

April 13, 2021

Armando Quintero, Director

In Reply Refer to FAA 2021 0315 002

VIA ELECTRONIC MAIL

Richard P. Doucette, Environmental Protection Specialist Western-Pacific Region, Airports Division San Francisco Airports District Office Federal Aviation Administration 1000 Marina Blvd., Suite 220 Brisbane, CA 94005-1835

RE: Proposed Joby Aviation Manufacturing Project, Marina Municipal Airport, Marina,

California (your letter of March 12, 2021 and email of April 7, 2021)

Dear Mr. Doucette:

The Federal Aviation Administration (FAA) is initiating consultation with the State Historic Preservation Officer (SHPO) in accordance with Section 106 of the National Historic Preservation Act of 1966 (54 U.S.C. § 306108), as amended, and its implementing regulation found at 36 CFR Part 800.

The FAA is reviewing the City of Marina's proposal to construct an approximately 580,000 square feet manufacturing building on the east side of the Marina Municipal Airport. The proposed undertaking and the area of potential effects (APE) are described adequately in the FAA's submission.

As documentation for your determination, you provided a report prepared by Morgan Bird, Leroy Laurie, and Dr. Heather Gibson of SWCA and dated October 2020. A records review was conducted at the Northwest Information Center at Sonoma State University on July 18, 2016 which identified that: (1) there were no cultural resources located within the APE, but there were three cultural resources located within the footprint of the airport, but outside of the APE; and (2) that 12 cultural resources surveys had been conducted previously of portions of the APE and 4 other surveys had been conducted within a 0.25 mile radius of the APE. The three cultural resources will not be affected by the proposed undertaking. SWCA personnel conducted a pedestrian survey of the APE on August 12 and 27, 2020 with negative results.

After contacting the Native American Heritage Commission (NAHC), on October 7, 2020, the FAA contacted the seven tribes or tribal groups, identified by NAHC, with request for comment letters. The FAA received no responses to those letters.

The FAA requested that the SHPO concur with your identification of the APE and determination of No Historic Properties Affected. Having reviewed the information submitted with your letter, the SHPO offers the following comments:

- The SHPO has no objections to your identification and delineation of the APE, pursuant to 36 CFR Parts 800.4(a)(1) and 800.16(d);
- The SHPO believes that a finding of No Historic Properties Affected is appropriate for this undertaking and concurs with that finding.

Be advised that under certain circumstances, such as an unanticipated discovery or a change in project description, you may have additional future responsibilities for this undertaking under 36 CFR Part 800. Should you encounter cultural artifacts during ground disturbing activities, please halt all work until a qualified archaeologist can be consulted on the nature and significance of such artifacts.

If you have any questions or comments, please contact Tristan Tozer of my staff at (916) 445-7027 or by email at Tristan.Tozer@parks.ca.gov.

Sincerely,

Julianne Polanco

State Historic Preservation Officer

1000 Marina Boulevard, Suite 220 Brisbane, CA 94005-1835

March 12, 2021

Ms. Julianne Polanco State of California State Historic Preservation Office Office of Historic Preservation 1725 23rd Street, Suite 100 Sacramento, CA 95816

Marina Municipal Airport (OAR)
Proposed Joby Aviation Manufacturing Project
Marina, Monterey County, California
Section 106 Coordination

Dear Ms. Polanco:

The Federal Aviation Administration (FAA) and the City of Marina are preparing a Draft Environmental Assessment evaluating the potential impacts that could result from a proposed Joby Aviation Manufacturing Project at Marina Municipal Airport (**Exhibit 1A**). The City of Marina is the sponsor for Marina Municipal Airport. The FAA is the lead federal agency thereby charged with conducting Section 106 consultation with the State Historic Preservation Office.

The FAA is initiating Section 106 consultation with your office, effective the date of this letter. The purpose of this consultation effort is to seek concurrence that there are no historic, architectural, archaeological, or cultural resources impacts of the proposed undertaking.

Project Information

The proposed undertaking is the construction of an approximately 580,000-square foot (sf) manufacturing building on the east side of the Marina Municipal Airport, which would be used to produce lightweight, all-electric, vertical take-off and landing (VTOL) aircraft.

Exhibit 1B shows both a direct and an indirect Area of Potential Effect (APE). The direct APE (25.7 acres) includes all areas where permanent and temporary impacts could occur from project activities. The indirect APE (311.8 acres) was selected to evaluate potential historic-age buildings that would be within the viewshed of the proposed building.

Project Consultation

On July 18, 2016, staff at the Northwest Information Center (NWIC) conducted a California Historical Resources Information System (CHRIS) records search of the entire airport property and adjacent areas within a 0.25-mile radius as part of the Marina Master Plan Update Project. The records search revealed that one previously identified prehistoric archaeological site (P-27-000385) and two historic archaeological resources (P-27-001723 and P-27-003170) are within airport property. One resource, the Marina Municipal Airport Tower (P-27-003170), is within the indirect APE of the proposed undertaking, but was recommended as NRHP ineligible; no resources are within the direct APE. The records search also revealed that 12 previously conducted cultural resource studies overlap with portions of the APE and an additional four cultural resource studies have been previously conducted within 0.25 mile of the APE. Field surveys were then conducted of both the direct and indirect APE on August 12 and 27, 2020, respectively.

As documented in the enclosed copy of *Cultural Resources Survey Report for the Joby Aviation Manufacturing Facility Project, Marina Airport, Monterey County, California* (SWCA Environmental Consultants, October 2020), no significant resources were identified within or adjacent to the APE as a result of the study. Therefore, FAA has determined there are no historic properties listed or eligible for listing on the National Register of Historic Places within the APE for the proposed undertaking.

Native American Consultation

California Native American Heritage Commission (NAHC) was contacted on October 7, 2020, to request a search of their sacred lands file (SLF). The NAHC responded on October 13, 2020, indicating that the results of the search were negative and providing a list of tribes that they recommend being contacted. Although there are no federally recognized tribes on the NAHC list, FAA is in the process of contacting all tribes on the NAHC list in an attempt to notify these organizations of the proposed undertaking and to inquire about any concerns related to historic properties of a traditional religious or cultural significance. It is not anticipated that any significant Native American concerns will be noted, as the City reached out to Native American tribal representatives as part of its state-required Assembly Bill (AB) 52 process for its Airport Master Plan in October 2016, and no responses were received. However, the results of the Native American consultation will be documented within the Environmental Assessment.

Request for Concurrence

Based on the information contained in the *Cultural Resources Survey Report for the Joby Aviation Manufacturing Facility Project, Marina Airport, Monterey County, California*, there are no historic properties listed or eligible for listing on the National Register of Historic Places within the APE. Therefore, in accordance with 36 CFR 800, FAA has determined that there are no historic properties affected by the proposed undertaking.

We request your concurrence for:

- The enclosed APE
- FAA's finding that there are No Historic Properties Affected.

If you have any questions concerning this matter, please contact me at (781) 238-7613 or richard.doucette@faa.gov or Camille Garibaldi (FAA San Francisco Airports District Office) at camille.garibaldi@faa.gov.

Sincerely,

Richard P. Doucette

R. Soucell

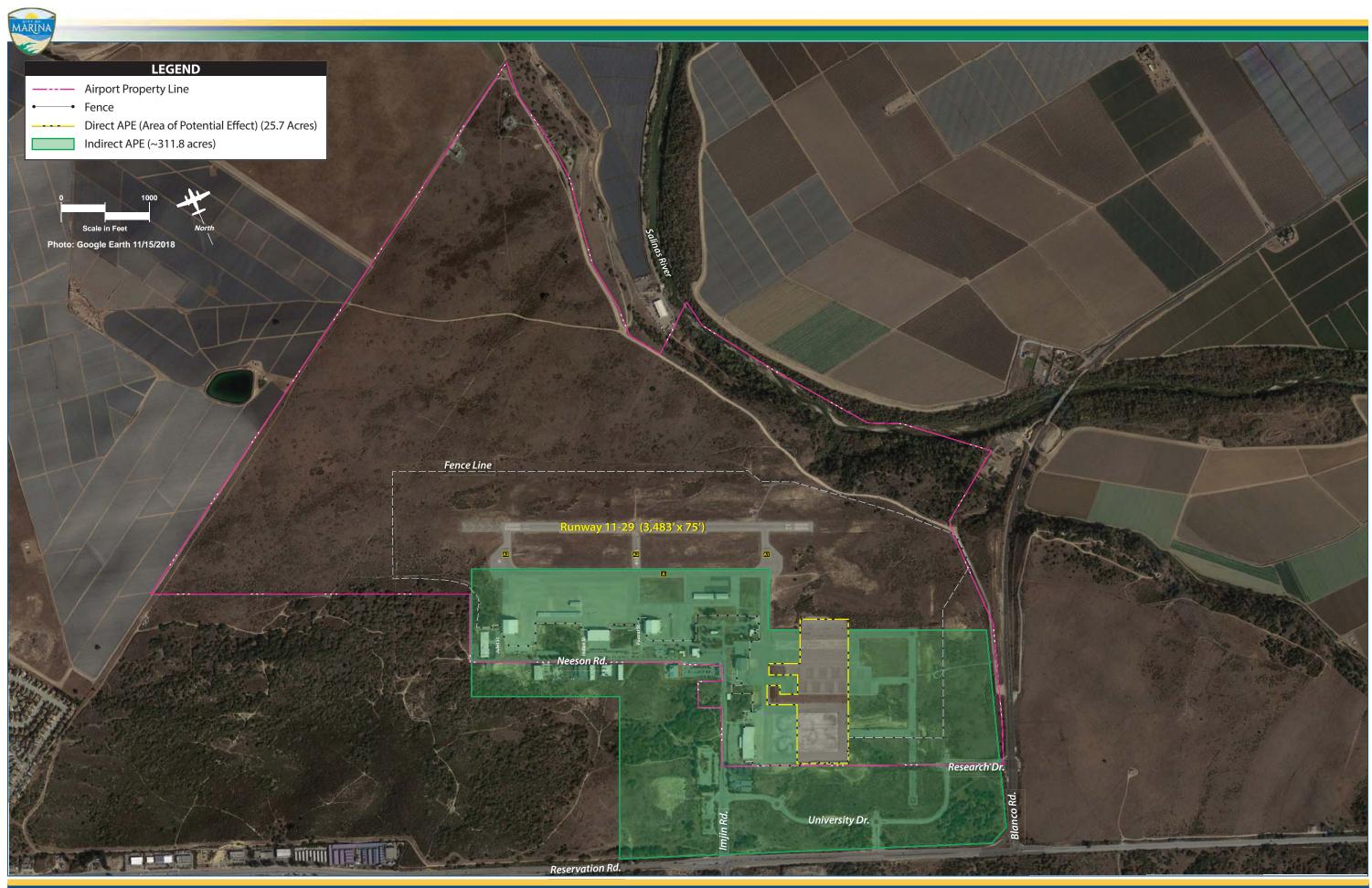
Environmental Protection Specialist

Enclosures:

- 1) Project Location exhibit
- 2) Area of Potential Effect exhibit
- 3) Cultural Resources Survey Report for the Joby Aviation Manufacturing Facility Project, Marina Airport, Monterey County, California

CC: Camille Garibaldi, FAA San Francisco Airports District Office







1000 Marina Boulevard, Suite 220 Brisbane, CA 94005-1835

March 16, 2021

Administration

Christanne Arias Vice Chairperson Ohlone/Costanoan-Esselen Nation 519 Viejo Gabriel Soledad, CA, 93960

Subject: Proposed Joby Aviation Project, Marina Municipal Airport, Marina, California

Dear Vice Chairperson. Arias:

The Federal Aviation Administration (FAA) and the City of Marina are preparing federal environmental information documentation under the National Environmental Policy Act (NEPA) of 1969, as amended, for the proposed Joby Aviation manufacturing facility at Marina Municipal Airport, in Marina, California. The FAA is the lead federal agency for Native American consultation for the proposed project. The City of Marina is the sponsor for Marina Municipal Airport.

Consultation Initiation

With this letter, the FAA is seeking input on concerns that uniquely or significantly affect your Tribe related to planned and proposed airport improvements. Early identification of Tribal concerns will allow the FAA to consider ways to avoid and minimize potential impacts to Tribal resources and practices as project planning and alternatives are refined.

Project Information

The proposed project is the construction of a 580,000 square foot steel building, 627 parking sites, landscaping and two detention basins. Activity proposed within the new building includes manufacturing, composite fabrication, assemblage of aircraft, parts testing, and research and development. The site was previously disturbed by construction of the former Fritzsche Army Airfield. It is relatively flat and consists mostly of concrete pavement with small pockets of undeveloped areas (approximately 2.5 acres of the overall 26-acre area).

The direct study area for historical, architectural, archaeological, and cultural resources is the 26-acre project area; the indirect study area is a 312-acre area in proximity to the project area that encompasses potential historic-age resources. Together, these areas have been identified as the Area of Potential Effect (APE) for the Proposed Action.

Attached are graphics showing the airport, the Area of Potential Effect, and the proposed construction. The cultural resources report was made available during the CEQA process. We would be happy to forward a copy to you if that was not made available previously.

Confidentiality

We understand that you may have concerns about the confidentiality of information on areas or resources of religious, traditional and cultural importance to the Tribe. We would be happy to

discuss these concerns and develop procedures to ensure the confidentiality of such information is maintained.

FAA Contact Information

If you wish to provide comments related to this proposed project, please contact me at (650) 876-7600, or by e-mail at <u>Laurie.Suttmeier@faa.gov</u>. You can also contact Camille Garibaldi, Environmental Protection Specialist, at (650) 827-7613, or by e-mail at <u>Camille.Garibaldi@faa.gov</u>.

Your timely response will greatly assist us in incorporating your concerns into the environmental review process. We respectfully request that your comments be submitted within 30 days of your receipt of this letter.

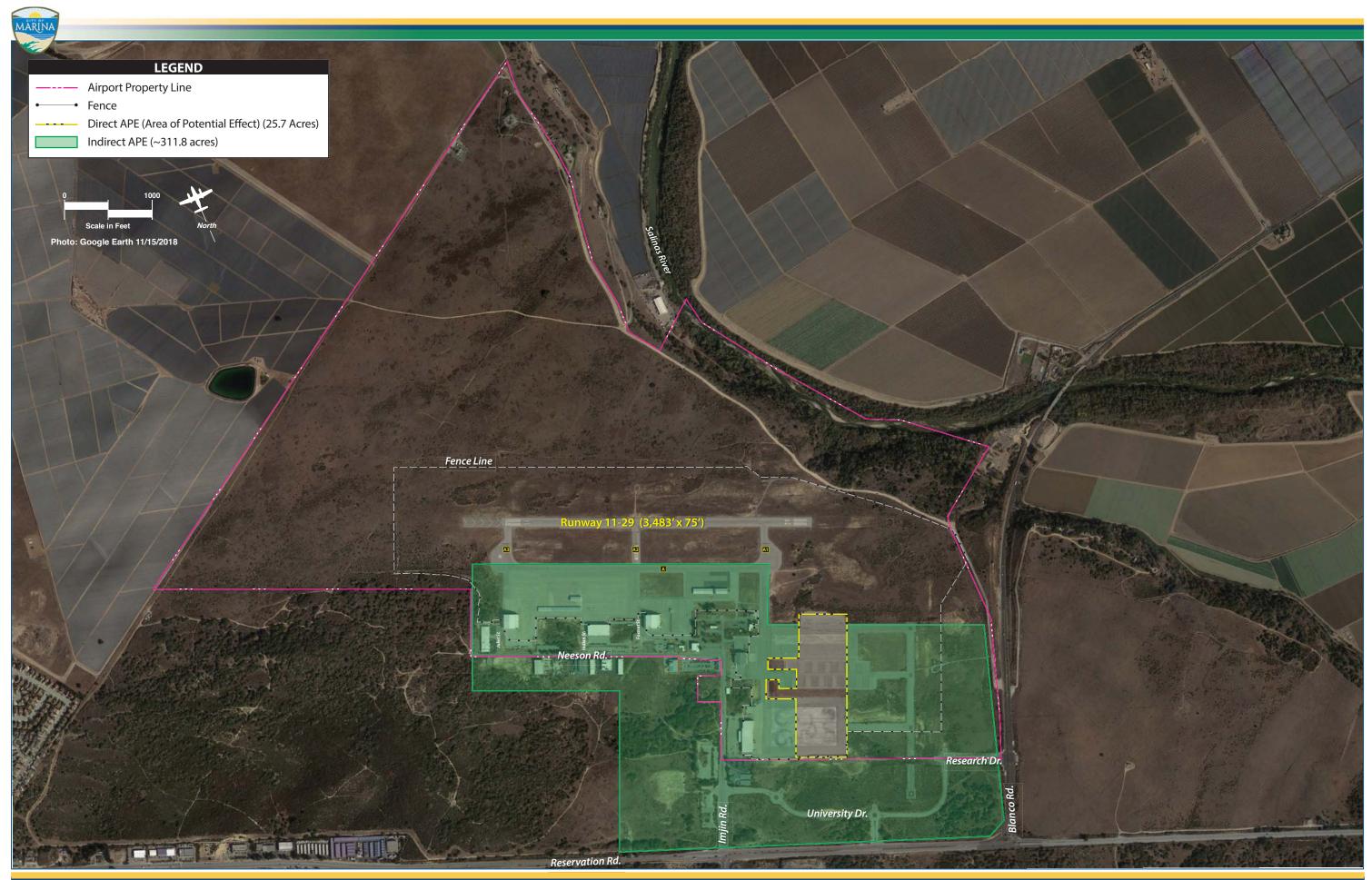
Your attention to this matter is appreciated.

Sincerely,

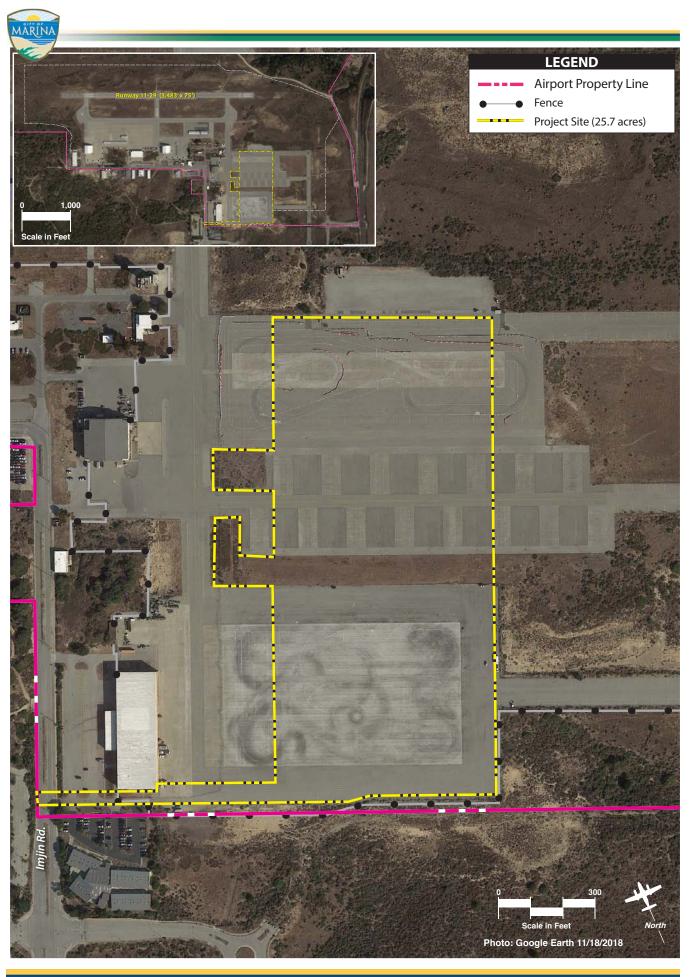
ARLENE B. DRAPER Digitally signed by ARLENE B. DRAPER Date: 2021.03.16 11:10:04-07'00'

Arlene B. Draper, Acting for Laurie J. Suttmeier Manager, San Francisco Airports District Office

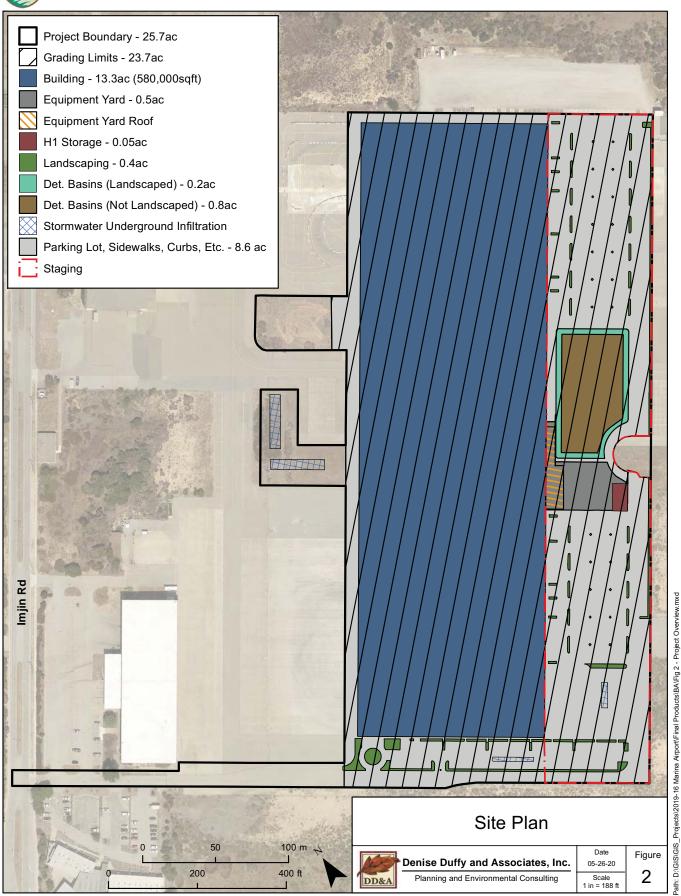
Enclosures











Source: DDA 2020

1000 Marina Boulevard, Suite 220 Brisbane, CA 94005-1835

March 15, 2021

Administration

VIA EMAIL rumsen@aol.com

Tony Cerda Chairperson Costanoan Rumsen Carmel Tribe 244 E. 1st Street Pomona, CA, 91766

Subject: Proposed Joby Aviation Project, Marina Municipal Airport, Marina, California

Dear Chairperson Cerda:

The Federal Aviation Administration (FAA) and the City of Marina are preparing federal environmental information documentation under the National Environmental Policy Act (NEPA) of 1969, as amended, for the proposed Joby Aviation manufacturing facility at Marina Municipal Airport, in Marina, California. The FAA is the lead federal agency for Native American consultation for the proposed project. The City of Marina is the sponsor for Marina Municipal Airport.

Consultation Initiation

With this letter, the FAA is seeking input on concerns that uniquely or significantly affect your Tribe related to planned and proposed airport improvements. Early identification of Tribal concerns will allow the FAA to consider ways to avoid and minimize potential impacts to Tribal resources and practices as project planning and alternatives are refined.

Project Information

The proposed project is the construction of a 580,000 square foot steel building, 627 parking sites, landscaping and two detention basins. Activity proposed within the new building includes manufacturing, composite fabrication, assemblage of aircraft, parts testing, and research and development. The site was previously disturbed by construction of the former Fritzsche Army Airfield. It is relatively flat and consists mostly of concrete pavement with small pockets of undeveloped areas (approximately 2.5 acres of the overall 26-acre area).

The direct study area for historical, architectural, archaeological, and cultural resources is the 26-acre project area; the indirect study area is a 312-acre area in proximity to the project area that encompasses potential historic-age resources. Together, these areas have been identified as the Area of Potential Effect (APE) for the Proposed Action.

Attached are graphics showing the airport, the Area of Potential Effect, and the proposed construction. The cultural resources report was made available during the CEQA process. We would be happy to forward a copy to you if that was not made available previously.

Confidentiality

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FAA Contact Information

If you wish to provide comments related to this proposed project, please contact me at (650) 876-7600, or by e-mail at <u>Laurie.Suttmeier@faa.gov</u>. You can also contact Camille Garibaldi, Environmental Protection Specialist, at (650) 827-7613, or by e-mail at <u>Camille.Garibaldi@faa.gov</u>.

Your timely response will greatly assist us in incorporating your concerns into the environmental review process. We respectfully request that your comments be submitted within 30 days of your receipt of this letter.

Your attention to this matter is appreciated.

Sincerely,

ARLENE B. DRAPER Digitally signed by ARLENE B. DRAPER Date: 2021.03.16 11:07:19 -07'00'

Arlene B. Draper, Acting for Laurie J. Suttmeier Manager, San Francisco Airports District Office

Enclosures

1000 Marina Boulevard, Suite 220 Brisbane, CA 94005-1835

March 16, 2021

Administration

VIA EMAIL vlopez@amahmutsun.org

Valentin Lopez Chairperson Amah Mutsun Tribal Band P.O. Box 5272 Galt, CA, 95632

Subject: Proposed Joby Aviation Project, Marina Municipal Airport, Marina, California

Dear Chairperson Lopez:

The Federal Aviation Administration (FAA) and the City of Marina are preparing federal environmental information documentation under the National Environmental Policy Act (NEPA) of 1969, as amended, for the proposed Joby Aviation manufacturing facility at Marina Municipal Airport, in Marina, California. The FAA is the lead federal agency for Native American consultation for the proposed project. The City of Marina is the sponsor for Marina Municipal Airport.

Consultation Initiation

With this letter, the FAA is seeking input on concerns that uniquely or significantly affect your Tribe related to planned and proposed airport improvements. Early identification of Tribal concerns will allow the FAA to consider ways to avoid and minimize potential impacts to Tribal resources and practices as project planning and alternatives are refined.

Project Information

The proposed project is the construction of a 580,000 square foot steel building, 627 parking sites, landscaping and two detention basins. Activity proposed within the new building includes manufacturing, composite fabrication, assemblage of aircraft, parts testing, and research and development. The site was previously disturbed by construction of the former Fritzsche Army Airfield. It is relatively flat and consists mostly of concrete pavement with small pockets of undeveloped areas (approximately 2.5 acres of the overall 26-acre area).

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Sincerely,

ARLENE B. DRAPER Digitally signed by ARLENE B. DRAPER Date: 2021.03.16 11:04:44 -07'00'

Arlene B. Draper, Acting for Laurie J. Suttmeier Manager, San Francisco Airports District Office

Enclosures

1000 Marina Boulevard, Suite 220 Brisbane, CA 94005-1835

March 16, 2021

VIA EMAIL ramirez.louise@yahoo.com

Louise Miranda-Ramirez Chairperson Ohlone/Costanoan-Esselen Nation P.O. Box 1301 Monterey, CA, 93942

Subject: Proposed Joby Aviation Project, Marina Municipal Airport, Marina, California

Dear Chairperson Miranda-Ramirez:

The Federal Aviation Administration (FAA) and the City of Marina are preparing federal environmental information documentation under the National Environmental Policy Act (NEPA) of 1969, as amended, for the proposed Joby Aviation manufacturing facility at Marina Municipal Airport, in Marina, California. The FAA is the lead federal agency for Native American consultation for the proposed project. The City of Marina is the sponsor for Marina Municipal Airport.

Consultation Initiation

With this letter, the FAA is seeking input on concerns that uniquely or significantly affect your Tribe related to planned and proposed airport improvements. Early identification of Tribal concerns will allow the FAA to consider ways to avoid and minimize potential impacts to Tribal resources and practices as project planning and alternatives are refined.

Project Information

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Sincerely,

ARLENE B. DRAPER DRAPER DRAPER Date: 2021.03.16 11:02:19 -07'00'

Arlene B. Draper, Acting for Laurie J. Suttmeier Manager, San Francisco Airports District Office

Enclosures

1000 Marina Boulevard, Suite 220 Brisbane, CA 94005-1835

March 16, 2021

Administration

VIA EMAIL Resources@EsselenTribe.org

Sue Morley Cultural Resources Esselen Tribe of Monterey County 3059 Bostick Avenue Marina, CA, 93933

Subject: Proposed Joby Aviation Project, Marina Municipal Airport, Marina, California

Dear Ms. Morley:

The Federal Aviation Administration (FAA) and the City of Marina are preparing federal environmental information documentation under the National Environmental Policy Act (NEPA) of 1969, as amended, for the proposed Joby Aviation manufacturing facility at Marina Municipal Airport, in Marina, California. The FAA is the lead federal agency for Native American consultation for the proposed project. The City of Marina is the sponsor for Marina Municipal Airport.

Consultation Initiation

With this letter, the FAA is seeking input on concerns that uniquely or significantly affect your Tribe related to planned and proposed airport improvements. Early identification of Tribal concerns will allow the FAA to consider ways to avoid and minimize potential impacts to Tribal resources and practices as project planning and alternatives are refined.

Project Information

The proposed project is the construction of a 580,000 square foot steel building, 627 parking sites, landscaping and two detention basins. Activity proposed within the new building includes manufacturing, composite fabrication, assemblage of aircraft, parts testing, and research and development. The site was previously disturbed by construction of the former Fritzsche Army Airfield. It is relatively flat and consists mostly of concrete pavement with small pockets of undeveloped areas (approximately 2.5 acres of the overall 26-acre area).

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Your attention to this matter is appreciated.

Sincerely,

ARLENE B. DRAPER Digitally signed by ARLENE B. DRAPER Date: 2021.03.16 10:58:32 -07'00'

Arlene B. Draper, Acting for Laurie J. Suttmeier Manager, San Francisco Airports District Office

Enclosures

1000 Marina Boulevard, Suite 220 Brisbane, CA 94005-1835

March 16, 2021

Administration

VIA EMAIL TribalChairman@EsselenTribe.org

Tom Little Bear Nason, Chairman Esselen Tribe of Monterey County P. O. Box 95 Carmel Valley, CA, 93924

Subject: Proposed Joby Aviation Project, Marina Municipal Airport, Marina, California

Dear Chairman Nason:

The Federal Aviation Administration (FAA) and the City of Marina are preparing federal environmental information documentation under the National Environmental Policy Act (NEPA) of 1969, as amended, for the proposed Joby Aviation manufacturing facility at Marina Municipal Airport, in Marina, California. The FAA is the lead federal agency for Native American consultation for the proposed project. The City of Marina is the sponsor for Marina Municipal Airport.

Consultation Initiation

With this letter, the FAA is seeking input on concerns that uniquely or significantly affect your Tribe related to planned and proposed airport improvements. Early identification of Tribal concerns will allow the FAA to consider ways to avoid and minimize potential impacts to Tribal resources and practices as project planning and alternatives are refined.

Project Information

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Your attention to this matter is appreciated.

Sincerely,

ARLENE B. DRAPER Digitally signed by ARLENE B. DRAPER Date: 2021.03.16 10:54:44 -07'00'

Arlene B. Draper, Acting for Laurie J. Suttmeier Manager, San Francisco Airports District Office

Enclosures

Western-Pacific Region San Francisco Airports District Office 1000 Marina Boulevard, Suite 220 Brisbane, CA 94005-1835

March 16, 2021

Administration

VIA EMAIL ams@indiancanyon.org

Ann Marie Sayers Chairperson Indian Canyon Mutsun Band of Costanoan P.O. Box 28 Hollister, CA, 95024

Subject: Proposed Joby Aviation Project, Marina Municipal Airport, Marina, California

Dear Chairperson. Sayers:

The Federal Aviation Administration (FAA) and the City of Marina are preparing federal environmental information documentation under the National Environmental Policy Act (NEPA) of 1969, as amended, for the proposed Joby Aviation manufacturing facility at Marina Municipal Airport, in Marina, California. The FAA is the lead federal agency for Native American consultation for the proposed project. The City of Marina is the sponsor for Marina Municipal Airport.

Consultation Initiation

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Your attention to this matter is appreciated.

Sincerely,

ARLENE B. DRAPER
Digitally signed by ARLENE B.
DRAPER
Date: 2021.03.16 10:51:25 -07'00'

Acting for Laurie I. Suttmeje

Arlene B. Draper, Acting for Laurie J. Suttmeier Manager, San Francisco Airports District Office

Enclosures

Western-Pacific Region San Francisco Airports District Office 1000 Marina Boulevard, Suite 220 Brisbane, CA 94005-1835

March 16, 2021

Administration

VIA EMAIL kanyon@kanyonkonsulting.com

Kanyon Sayers-Roods MLD Contact Indian Canyon Mutsun Band of Costanoan 1615 Pearson Court San Jose, CA, 95122

Subject: Proposed Joby Aviation Project, Marina Municipal Airport, Marina, California

Dear Ms. Sayers-Roods:

The Federal Aviation Administration (FAA) and the City of Marina are preparing federal environmental information documentation under the National Environmental Policy Act (NEPA) of 1969, as amended, for the proposed Joby Aviation manufacturing facility at Marina Municipal Airport, in Marina, California. The FAA is the lead federal agency for Native American consultation for the proposed project. The City of Marina is the sponsor for Marina Municipal Airport.

Consultation Initiation

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Project Information

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Your attention to this matter is appreciated.

Sincerely,

ARLENE B. DRAPER Digitally signed by ARLENE B. DRAPER Date: 2021.03.16 10:49:03 -07'00'

Arlene B. Draper, Acting for Laurie J. Suttmeier Manager, San Francisco Airports District Office

Enclosures

Administration

Western-Pacific Region San Francisco Airports District Office 1000 Marina Boulevard, Suite 220 Brisbane, CA 94005-1835

March 15, 2021

VIA EMAIL amahmutsuntribal@gmail.com

Irenne Zwierlein Chairperson Amah Mutsun Tribal Band of Mission San Juan Bautista 789 Canada Road Woodside, CA, 94062

Subject: Proposed Joby Aviation Project, Marina Municipal Airport, Marina, California

Dear Chairperson Zwierlein:

The Federal Aviation Administration (FAA) and the City of Marina are preparing federal environmental information documentation under the National Environmental Policy Act (NEPA) of 1969, as amended, for the proposed Joby Aviation manufacturing facility at Marina Municipal Airport, in Marina, California. The FAA is the lead federal agency for Native American consultation for the proposed project. The City of Marina is the sponsor for Marina Municipal Airport.

Consultation Initiation

With this letter, the FAA is seeking input on concerns that uniquely or significantly affect your Tribe related to planned and proposed airport improvements. Early identification of Tribal concerns will allow the FAA to consider ways to avoid and minimize potential impacts to Tribal resources and practices as project planning and alternatives are refined.

Project Information

The proposed project is the construction of a 580,000 square foot steel building, 627 parking sites, landscaping and two detention basins. Activity proposed within the new building includes manufacturing, composite fabrication, assemblage of aircraft, parts testing, and research and development. The site was previously disturbed by construction of the former Fritzsche Army Airfield. It is relatively flat and consists mostly of concrete pavement with small pockets of undeveloped areas (approximately 2.5 acres of the overall 26-acre area).

The direct study area for historical, architectural, archaeological, and cultural resources is the 26-acre project area; the indirect study area is a 312-acre area in proximity to the project area that encompasses potential historic-age resources. Together, these areas have been identified as the Area of Potential Effect (APE) for the Proposed Action.

Attached are graphics showing the airport, the Area of Potential Effect, and the proposed construction. The cultural resources report was made available during the CEQA process. We would be happy to forward a copy to you if that was not made available previously.

We understand that you may have concerns about the confidentiality of information on areas or resources of religious, traditional and cultural importance to the Tribe. We would be happy to discuss these concerns and develop procedures to ensure the confidentiality of such information is maintained.

FAA Contact Information

If you wish to provide comments related to this proposed project, please contact me at (650) 876-7600, or by e-mail at <u>Laurie.Suttmeier@faa.gov</u>. You can also contact Camille Garibaldi, Environmental Protection Specialist, at (650) 827-7613, or by e-mail at <u>Camille.Garibaldi@faa.gov</u>.

Your timely response will greatly assist us in incorporating your concerns into the environmental review process. We respectfully request that your comments be submitted within 30 days of your receipt of this letter.

Your attention to this matter is appreciated.

Sincerely,

ARLENE B. DRAPER Digitally signed by ARLENE B. DRAPER Date: 2021.03.16 10:46:28 -07'00'

Arlene B. Draper, Acting for Laurie J. Suttmeier Manager, San Francisco Airports District Office

Enclosures



APPENDIX D TRAFFIC IMPACT EVALUATION



MEMORANDUM

To: Dan Coughlin, Joby Aero

From: Frederik Venter and Colin Ogilvie, Kimley-Horn and Associates

Date: May 6, 2019

Preliminary Traffic Impact Evaluation for Joby Aero, Marina, CA Re:

Introduction

This memorandum presents a preliminary traffic impact evaluation for the proposed Joby Aviation manufacturing facility at the Marina Municipal Airport. The facility will consist of both manufacturing and office space. The company plans on having 300 employees working at the facility in the near term, the basis for this evaluation, but may scale up operations in the future.

The memorandum evaluates the following:

- 1. Background Documentation
- 2. Trip Generation, Distribution and Assignment
- 3. Qualitative Discussion of Potential Traffic Impacts to the Roadway Network
- 4. Vehicle Miles Traveled Evaluation



Background Documentation

Several previous studies were reviewed for development assumptions at the Marina Airport, the proposed project location.

- Marina Municipal Airport Master Plan
- City of Marina General Plan
- Monterey County General Plan

Marina Municipal Airport Master Plan

The Marina Municipal Airport Master Plan found that the anticipated growth at the airport over the next 20 years would result in "less than significant impact with mitigation incorporated". The traffic analysis assumption was based on the increase of locally-based aircraft only, although the Plan states that the "implementation of the proposed Master Plan could also increase the likelihood that a private entity would establish an FBO at the Airport, which is a goal for the City." The Master Plan anticipates an increase of 20 based aircraft resulting in an increase of 7 PM peak hour trips and 100 daily trips.

Previous studies have stated that the intersection of Reservation Road and Imjin Parkway, which is the main airport entrance, will operate at LOS E in 2035 without improvements. The Master Plan states that "potential traffic impacts of proposed Master Plan projects should be addressed as such projects are being considered and appropriate mitigation included, as necessary, at that time."

The Master Plan also states that the future Golf Boulevard shown in the City of Marina General Plan, that would have connected the north side of the airport to Del Monte Boulevard, is no longer being pursued by the City.

Marina Municipal Airport Business and Industrial Park / UC MBEST Center Specific Plan

A draft version of the Marina Municipal Airport Business and Industrial Park / UC MBEST Center Specific Plan was completed in February 2017. The Specific Plan outlines design guidance and standards for the proposed business park on the southeast side of the Marina Municipal Airport. The south half of the business park is owned by the University of California and the north half is owned by the City of Marina. The circulation chapter describes the existing external roadway network and the planned internal roadway network. Specific Plan roadway cross sections, intersection geometries and planned multimodal networks are provided. No traffic operational analysis is provided to substantiate the internal roadway network or potential impacts to the local and regional external network.

City of Marina General Plan

The City of Marina last updated its General Plan in August 2010. The General Plan outlines several traffic related components that should be noted for the Joby Project.

1. According to Marina General Plan Policy 3.22, new major employers need to implement trip reduction measures achieving a 10% minimum reduction in peak hour vehicular traffic volumes. The General Plan states that the employee threshold for this mandate will be determined on a



case-by-case basis. The General Plan's Mitigation Measure 7.3 outlines potential travel demand management (TDM) strategies to meet the mandated reductions. Some of the outlines measures include: transit incentives, carpool parking spaces, shuttle service, shifted work schedules and telecommuting.

- 2. The City's level of service (LOS) significance threshold for assessing project-level impacts is LOS D except at segments or intersections that were lower than LOS D at the time of plan adoption.
- 3. Planned Improvements:
 - a. Golf Road Planned 2-lane parkway that would connect Del Monte Boulevard to Blanco Road across the north side of the airport. However, according to the latest Airport Master Plan, this roadway extension is no longer being pursued and is not included in this assessment.
 - b. Reservation Road 4-lane arterial that serves as the main point of access to the Airport and has been reserved for future widening to 6-lanes beyond 2020. However, the current Downtown Redevelopment Traffic Study assumes the roadway will remain 4 lanes in the future.
 - c. Imjin Parkway existing 2-lane (planned 4-lane) expressway connecting SR-1 to the Airport's south entrance.
- 4. Marina participates in TAMC's regional transportation fee program for fair share payments (Mitigation Measure 8.1(B)).

Transportation Agency for Monterey (TAMC) Road Regional Transportation Plan

TAMC proposes to improve the Marina-Salinas corridor by widening Reservation Road to four lanes from East Garrison Drive to Davis Road and widening Davis Road from Reservation Road to West Market Street (State Route 183). Blanco Road does not have proposed improvements. TAMC also envisions a bus rapid transit corridor between Marina and Salinas through the former Fort Ord.

Trip Generation, Distribution and Assignment

Trip Generation

Trip generation for the project was calculated using the rates from the Institute of Transportation Engineer's (ITE) publication *Trip Generation*, 10th Edition (2017), which is a standard reference used by jurisdictions for the estimation of trip generation. A trip is defined in *Trip Generation* as a single or one-directional vehicle movement with either the origin or destination at the project site. In other words, a trip can be either "to" or "from" the site. Therefore, a normal work day commute would be counted as two separate trips (i.e., one to and one from the site).

Based on the project description and discussions with Joby, it was deemed that the most applicable land use is Manufacturing (ITE Land Use Code 140). The percentage split between office employees and manufacturing employees matches the ITE land use description. Also, the time-of-day distribution data presented in the Trip Generation manual for industrial land uses aligns with the planned 3-shift, 24-hour operations of the planned Project. The next factor considered was to base trip generation from the planned building area or the number of employees. A site plan was not provided by Joby but an employee



count of 300 was provided. Although common practice is to use building area when calculating trip generation, daily and peak hour trips were estimated using employees since that is the metric known at this time. Once the site plan has been determined, a comparative trip generation analysis should be completed. The Project's trip generation is shown in **Table 1**.

Table 1: Trip Generation

	ITE				AM PEAK HOUR				PM PEAK HOUR			
Land Uses	Land Use Code	Pro	Project Size		Total Peak Hour	IN	/	OUT	Total Peak Hour	IN	/	OUT
Trip Generation Rates												
Land Use			•			-						
Manufacturing ¹	140	1	KSF	3.93	0.62	77%	/	23%	0.67	31%	/	69%
Manufacturing ¹	140	1	Employee	2.47	0.37	74%	/	26%	0.33	39%	/	61%
Trips Generated												
Manufacturing ²	140	300	Employees	870	111	82	/	29	98	38	/	60

Notes:

Source: Kimley-Horn and Associates, Inc., 2019

Trip Distribution

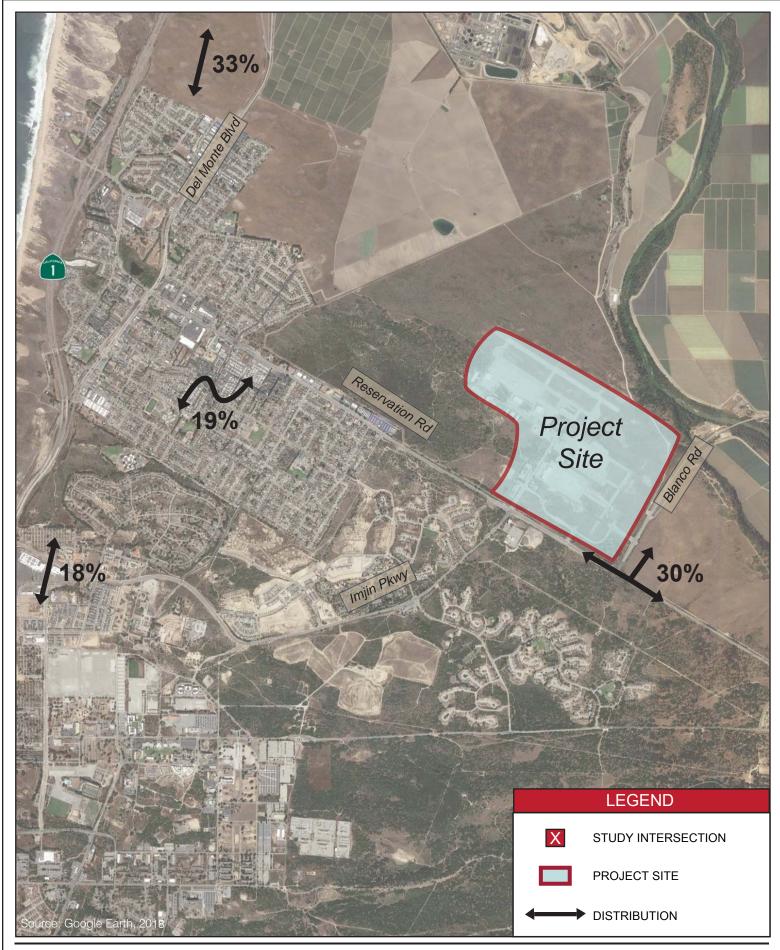
Trip distribution percentages were estimated using U.S. Census Bureau data¹ for work destination trips to employers in the City of Marina. The regional origin of the work trips is the following (shown in Figure 1):

- Within Marina 19%
- From North 33%
- From South 18%
- From East 30%

¹ U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2015)

¹ Average rate used

² Equation used







Joby Aviation Figure 1



Trip Assignment

Trip assignment was qualitatively assessed to determine which regional and local roadways the trips would utilize. Based on the regional distribution trips, trips from within Marina would access the project using Reservation Road and Imjin Parkway. Trips from the north would likely use State Route 1 southbound and exit at either Reservation Road or Imjin Parkway. Trips from the south would likely use State Route 1 northbound and exit at Imjin Parkway or Del Monte Boulevard or utilize surface streets, mainly the route consisting of General Jim Moore Boulevard, Lightfighter Drive, 2nd Avenue and Imjin Parkway.

Potential Traffic Impacts

The City of Marina General Plan states that the City's level of service significance threshold for assessing project-level impacts is LOS D except at segments or intersections that were lower than LOS D at the time of plan adoption.

Although the specific quantitative traffic impacts are not being analyzed at this time, based on the assumed trip distribution and assignments the daily and peak hour trips were calculated and shown in Table 2.

Table 2: Distributed Volumes

Trip Distribution			AM PE		PM PEAK HOUR					
		Daily Trips	Total Peak Hour	IN	1	OUT	Total Peak Hour	IN	/	ОИТ
Marina	19.0%	165	21	16	/	6	19	7	/	11
From North	33.3%	290	37	27	/	10	33	13	/	20
From South	17.9%	156	20	15	/	5	18	7	/	11
From East	29.8%	259	33	24	/	8	28	11	/	18

From local knowledge of traffic conditions in the Project area, it is understood that the Project would affect the following study intersections currently exceeding acceptable LOS:

- 1. Blanco Road and Cooper Road
- 2. Blanco Road and Armstrong Road
- 3. Blanco Road and Hitchcock Road
- 4. Blanco Road and Davis Road
- 5. Imjin Parkway and SR-1 Northbound Ramps



It is anticipated that the Project may affect the following study intersections currently operating at acceptable LOS:

- 1. Del Monte Boulevard and Reservation Road
- 2. Imjin Parkway and Reservation Road
- 3. Imjin Parkway and 2nd Avenue
- 4. Imjin Parkway and SR-1 Southbound Ramps

While the Project could add enough peak hour trips to cause impacts at other locations and require mitigations, the identified locations above represent places that the Project will impact the most. However, it may be possible for the project to tier off the ongoing Marina Municipal Airport Business and Industrial Park / UC MBEST Center Specific Plan/Environmental Impact Report (EIR).

Vehicle Miles Traveled (VMT) Assessment

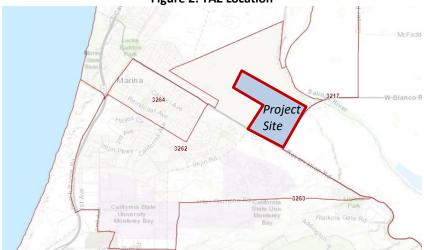
Vehicle miles traveled is the new method for analyzing transportation impacts under CEQA. Many agencies will continue to require LOS analysis for their purposes and policies, mainly complying with general plan obligations, but it will no longer be used for CEQA purposes. Agencies have until July 1, 2020 to institute their own policies for complying with the new CEQA requirements. It is understood that the City of Marina has not instituted its own policies. The Governor's Office of Planning and Research (OPR) has published its *Technical Advisory On Evaluation Transportation Impacts in CEQA* to provide VMT guidance. OPR recommends that "a proposed [office] project exceeding a level of 15 percent below existing regional VMT per employee may indicate a significant transportation impact."

CalEEMod, an environmental analysis tool, was used to determine VMT for the Project. The output of CalEEMod is annual VMT which is then converted to Daily VMT.

The thresholds of significance were determined from the most recent available version of the Caltrans Statewide Travel Demand Model (CSTDM) which provides VMT and VMT per employee for all of California in the year 2010 and 2040. The CSTDM is divided into transportation analysis zones (TAZ) and VMT data was extracted from TAZ 3262 (shown in **Figure 2**), which encompasses south and east portions of Marina including the Marina Municipal Airport.



Figure 2: TAZ Location



To determine existing (2019) VMT, the value was interpolated between the base model year, 2010, and the cumulative year, 2040. Table 3 shows the estimated VMT per employee for the Project from CalEEMod, the baseline existing TAZ VMT from the CSTDM, the baseline VMT with the 15% reduction and the Project's comparison to the threshold. The Project does not exceed regional thresholds of significance and, therefore, is not expected to have a significant impact for future CEQA purposes.

Table 3: VMT per Employee

Study Group	Existing (2019) VMT per Employee	VMT per Employee Threshold (-15%)	Exceeds Threshold?	VMT CEQA Impact?		
TAZ 3262 (Baseline) ¹	22.37	19.01	-	-		
Joby Aviation (Project) ²	16.66	19.01	No	No		

Notes:

- 1. VMT data from the Caltrans Statewide Travel Demand Model (CSTDM)
- 2. VMT data calculated using CalEEMod



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