Del Norte County Regional Airport

Jack McNamara Field (CEC)

Airport Layout Plan Update

June 17, 2020

Border Coast Regional Airport Authority

WHPacific

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Border Coast Regional Airport Authority
Board of Commissioners
Lori Cowan, Del Norte County
David Finigan, Public Member
Gerry Hemmingsen, Del Norte County
Heidi Kime, City of Crescent City
Dale Miller, Elk Valley Rancheria
Gary Milliman, City of Brookings
Sue Gold, Curry County
Jeri Thompson, Tolowa Dee-ni' Nation

Del Norte County Regional Airport
Jack McNamara Field
Randy Hooper, Airport Director

Federal Aviation Administration
Katherine Kennedy, Airport Planner

WHPacific Inc. an NV5 company
John Shute, Senior Aviation Manager
Laura Elbert, Aviation Project Engineer
Alexander Bird, Aviation Engineer
Ric Stephens, Senior Aviation Planner

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1. Executive Summary

The Del Norte County Regional Airport is uniquely sited on the Pacific Ocean coast just south of the California/Oregon border and 3 miles northwest of Crescent City (Figure 2A: Location Map). The airport is categorized in the National Plan of Integrated Airport Systems as CS: *Commercial Service—nonprimary*, publicly owned with a minimum of 2,500 passenger boardings each year. The airport is currently classified by Airport Reference Code (ARC) C-III which accommodates aircraft with approach speeds up to 140 knots and wingspans up to 118 feet and tail heights up to 45 feet. This ARC will be shifted to C -II (wingspan to a maximum of up to 79 feet and a tail height of 30 feet) which accommodates the regional jet air service by Contour Airlines and allows for future aircraft within the forecast period. The ARC is further described in the Aeronautical Forecasts section of this report.

The Del Norte County Regional Airport (Jack McNamara Field) is the aviation gateway to the Border Coast, Crescent City and the giant redwoods

Regional population growth and development have increased demand for commercial aviation, and the airport is currently expanding its capacity with multiple projects including a new terminal building, hangars and other improvements.

Airport Layout Plan Requirements and Objectives

An Airport Layout Plan is required by statute to be up-to-date. Further, any proposed Airport Improvement Program or Passenger Facility Charge funded projects must be on an approved ALP: "A current airport layout plan that depicts the proposed project and which has Federal Aviation Administration approval from the standpoint of safety, utility, and efficiency of the airport shall be required before a development project is approved." (AIP Handbook)

The ALP Update supports the New Implementation Programs of the Del Norte County General Plan (dated: January 28, 2003): "The County shall prepare an updated Airport Land Use Plan. The plan supports the airport further through Policies 8.F.1, 8.F.3, 8.F.5, and 8.F.9. (Responsibility: Community Development Department. Time Frame: First five years)
[Table 6A: General Plan Policies]

1.1 Proposed Projects

The Border Coast Regional Airport Authority approved the Del Norte County Regional Airport

Capital Improvement Plan for fiscal years 2019-2025 with 12 projects.
[Table 5A: Airport Capital Improvement Plan]
These include the following:

- Part 77 Obstruction Clearance
- Runway 18/36 Pavement Rehabilitation, Overlay, Marking, Lighting (Design and Construction)
- Prior Airport Improvement Program Project Mitigation Monitoring
- Hangar #8
- Taxiways A/B Lighting (Design and Construction)
- Aircraft Rescue and Firefighting Truck Purchase
- Runway 12/30 Pavement Rehabilitation and Overlay with Markings (Design and Construction)
- Master Plan with Airport Layout Plan and Airport Geographic Information System

1.2 Timeline

The timeline for these projects is phased with the final project—a Master Plan Update—initiated in 2025. The Airport Capital Improvement Plan Timeline outlines the target years for each project. [Table 1A: CIP Timeline]

1.3 Implementation Actions

The schedule of improvements coincides with projected maintenance and development, and there are no significant milestones or triggering events connected with the non-pavement projects in the Airport Capital Improvement Plan. The runway rehabilitations are triggered by the deterioration of the existing pavements and the need to restore the pavement condition. The action items and next steps for the airport should be coordinated with the Western/Pacific Airport District/Development Office in San Francisco.

This Update complies with the FAA Standard Operating Procedure establishing uniform procedures for reviewing and approving Airport Layout Plans (ALPs). (FAA, 2013) The required narrative and drawings are included in the following sections:

- Executive Summary
- Environmental Overview
- Aeronautical Forecasts

Table 1A: CIP Timeline

Year	Project
2019	■ Part 77 Obstruction Clearance Project (Environmental/Project/Mitigation Design) ■ Prior AIP Project Required Mitigation Monitoring Project for Years 2019-2022
2020	■ Part 77 Obstruction Clearance Project (Construction—including Land Purchase/ Easements and Mitigation) ■ Hangar #8 Design and Construction Project ■ Runway 18/36 Pavement Rehab/Overlay / Marking/Lighting Project (Design)
2021	■ Runway 18/36 Pavement Rehab/Overlay/ Marking/Lighting (Construction) ■ Taxiways A/B Lighting Project (Design) ■ ARFF Truck Purchase
2022	Taxiways A/B Lighting and Marking Project (Construction)
2023	Design Runway 12/30 Pavement Rehab & Overlay with Markings
2024	Construct Runway 12/30 Pavement Rehab & Overlay
2025	Master Plan with ALP and AGIS

- Alternatives / Proposed Development
- Capital Improvement / Financial Program
- Airport Layout Plan

The appendices include a Glossary, References and an Index. Additional information and report progress is available on the project website at https://mcnamara-field-airport-layout-plan.com/

The Airport Layout Plan provides guidance for airport expansion to meet forecasted development. Del Norte County Regional Airport will continue to provide exceptional service in its role as a commercial service airport within the National Plan of Integrated Airport Systems.

2. Environmental Overview

The airport's field is dedicated to Jack McNamara, who sold about 500 acres of his estate near Point St. George to Del Norte County. (Atherton, 2008) This was at the beginning of World War II, and the federal government wanted the airport to support Naval Air Station Alameda. Crescent City Outlying Field was activated August, 1943. The first scheduled airline flight landing was in 1948, and two years later Southwest Airways Douglas DC-3s were flying to numerous west coast destinations. Multiple airlines provided commercial service for Jack McNamara Field (CEC) over the following years. In the late 1990s SkyWest Airlines operating as United Express began service to San Francisco with *Embraer EMB-120 Brasilia* turboprop aircraft. SkyWest ended all United Express service into CEC in 2015. PenAir continued flights to Portland International Airport with *Saab 340* twin-engine turboprop aircraft until 2017.

In 2018, Contour Airlines began *Embraer ERJ-135* twin-engine regional jet aircraft flights connecting Crescent City with Oakland, CA. Ameriflight and FedEx operate cargo flights connecting with North Bend/Coos Bay and Portland, Oregon, and Arcata/Eureka, and Sacramento, California respectively. The current airport sponsor is the Border Coast Regional Airport Authority (BCRAA) which administers the airport for Del Norte County. [Table 2A: Airport Profile]
[Figure 2B: Existing Conditions]

Table 2A: Airport Profile

Sponsor	Border Coast Regional Airport Authority
City Location	Crescent City, California
Airport Type	FAR Part 139 Class III
IATA Airport Code	CEC
Elevation	Runway 12 - 56.9 feet MSL Runway 18 - 60.6 feet MSL
Coordinates	41°46'49"N 124°14'12"W
Climate	Cool-summer Mediterranean
Average Temperatures	January 54° F and 41°F August 66° F and 51° F
Annual Rainfall	71 inches
Runway 12/30	5,002 feet (asphalt)
Runway 18/36	5,000 feet (asphalt)
Aircraft Operations	12,565
Based Aircraft	29
Airspace	Class E
Weather	ASOS 119.925 MHz
McNamara CTAF	122.8 MHz
Crescent City VORTAC	109.0 MHz

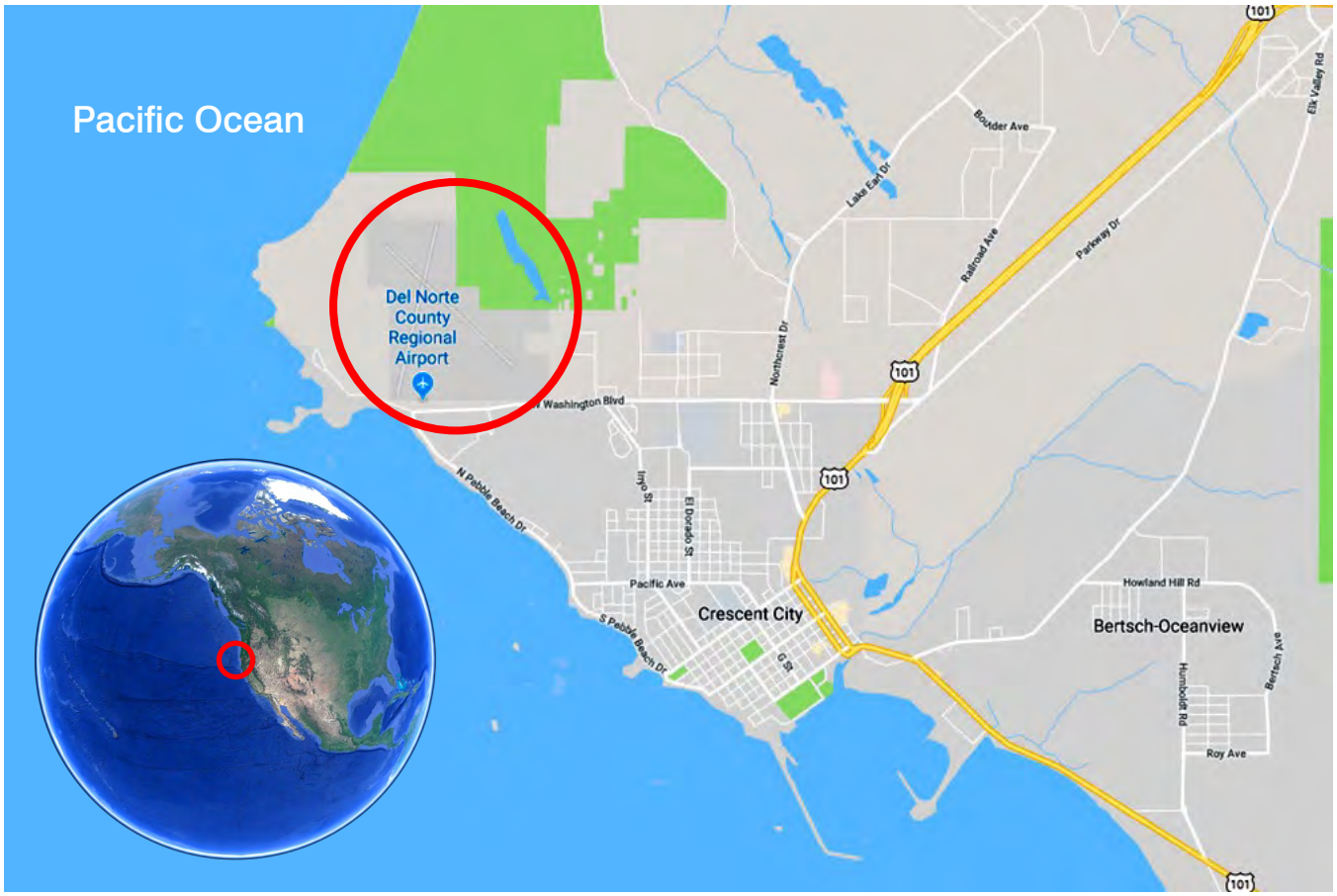

Figure 2A: Location Map

2.1 Setting

The Jack McNamara Field Airport is located on the northern California coast north of Crescent City in Del Norte County. The airport covers 544 acres on Point St. George northwest of Crescent City, south of the Tolowa Dunes State Park, east of the Pacific Ocean, and west of the Jedediah Smith Redwoods State Park. The airport is about three miles west of U.S. Route 101 connecting it with San Francisco 360 miles southeast and Portland, Oregon 330 miles northeast.
[Figure 2A: Location Map]
[Figure 2B: Site Map]

Del Norte County has over 28,000 residents within more than 1,230 square miles. The geography is defined by the Coastal Range and Klamath Mountains with elevations exceeding 6,400 feet.

A General Study Area (GSA) was defined for an Environmental Assessment prepared for Border Coast Regional Airport Authority by GHD in 2018. [Figure 2C: General Study Area]

A significant portion of the areas in the GSA that are more likely to have wetlands or other environmentally sensitive flora or fauna that require review and permitting are located outside of the existing airport property. A majority of the area within the airport property that is a likely candidate to be an environmentally sensitive area requiring permitting and/or mitigation is not programmed for development within the 20-year study period. All FAA funded projects are required to go through the NEPA process regardless of the location on or off airport.

2.2 Wildlife Hazard Management

The majority of the General Study Area (GSA) is managed by the airport in compliance with FAA Advisory Circular (AC) 150/5200-33B, *Hazardous Wildlife Attractants On or Near Airports*, to discourage use by wildlife to the maximum extent

Del Norte County Regional Airport

Figure 2B: Existing Conditions

- Aircraft Rescue & Fire Fighting
- Emergency Generator Shed
1. 4-Box VASI
2. Aircraft Hangars
3. ASOS & ILS Glide Slope
4. Backup Generator
5. Commercial Apron
6. Fixed Base Operator Buildings
7. Fuel Island
8. Localizer Equipment Shelter
9. Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR) & Shed
10. Passenger Terminal
11. Remote Communications Outlet
12. Residential Development
13. Runway Aiming Point Marking
14. Runway Designators
15. Runway Protection Zone
16. Runway Touchdown Marker
17. Runway Threshold Marking
18. State Park
19. Terminal Auto Parking
20. Transient Tiedowns
21. Utility Tower
22. VORTAC
23. Wind Cone and Segmented Circle
- ★ Rotating Beacon

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practicable. The airport works and is covered by the California Department of Fish and Wildlife depredation permit, which allows for actions to ensure safe aircraft operations. (GHD, 2018) A *Wildlife Hazard Management Plan* was prepared in 2014 for the Border Coast Regional Airport Authority in compliance with CFR Title 14 § 139.337.

2.3 Major Airport Drainage Ditches

There are two drainage ditches: one adjacent Runway 12/30 and another south of the airport parking lot. These are relatively shallow and have standing water during the October through April rainy season.

2.4 Wetlands

The GSA contains potential jurisdictional wetlands as defined by the United States Army Corps of Engineers (ACE) and California Coastal Commission. Wetlands under the California Coastal Act (CCA) are defined as lands within the coastal zone that may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens. The CCA classifies wetlands as environmentally sensitive habitat areas (ESHA), and all special-status species and natural communities are to be avoided to the maximum extent feasible. (GHD, 2018).

2.5 Flood Zones

The majority of the GSA is located in the FEMA Flood Insurance Rate Map (FIRM) in Zone C, minimal flooding, however the airport property is outside of the flood zone. A very small area is located in the 100-year floodplain, but this portion of Marhoffer Creek south of Washington Boulevard is not projected for development.

2.6 Historic or Cultural Features

"Several prior cultural resource investigations have revealed no historical, architectural, archeological, or cultural resources in the GSA." These resources include traditional cultural places, protected tribal resources, Indian sacred sites, cultural items, historic properties or buildings, National Natural Landmarks, objects and antiquities of national

Figure 2C: General Study Area

significance, archeological resources, and graves/ human remains. (GHD, 2018)

Sensitive cultural debris were reburied in an area of the airport, and these sites shall be protected. Consultations with the Native American community and California State Historic Preservation Officer have been conducted, and this area is considered part of a larger known off-airport site. These sites and future development will be coordinated with further consultations as part of the next Master Plan Update.

2.7 Section 4(f) Features

Section 4(f) refers to the original section within the U.S. Department of Transportation Act of 1966 which provided for consideration of park and recreation lands, wildlife and waterfowl refuges, and historic sites during transportation project development. Section 4(f) protects the following basic types of properties: publicly owned park and recreation areas that are open to the general public, publicly owned wildlife and waterfowl refuges, and public or privately owned historic sites. (US Department of Transportation, n.d.) The Tolowa Dunes State Park (TDSP) is a Section 4(f) resource. Approximately ½ acre along the southwest border of the Park is within the airport obstruction removal area. None of the Airport near

-term developments are proposed on TDSP, and there will be no significant or cumulative impacts. (GHD, 2018)

2.8 Flora / Fauna

The airport is within the Klamath/Cascade Coast Range bioregion, and the primary vegetation is coastal/shrub formations. Plant communities within the GSA include introduced perennial grassland (ruderal), salt rush stabilized dunes, sedge wetlands, Hooker's willow wetlands, Sitka spruce forest, and Beach pine forest. (Sawyer, 1995) Coastal dune willow thickets are present west of Runway 18/36 and in Tolowa Dunes State Park. (GHD, 2018)

The forested triangular area between Runways 36 and 30 is considered Environmentally Sensitive Habitat Area by the California Coastal Commission. This area is protected from future development.

2.9 Natural Resources and Other Features

Del Norte County has a Local Coastal Program (LCP) with policies to guide development activities in and affecting their coastal zones. The GSA is within Del Norte County's coastal zone which was certified by the California Coastal Commission in 1983. (Del Norte County, 1983)

The airport is located within the California Coastal Zone, and coastal resources and development are regulated by the California Coastal Commission as described in previous sections. The Del Norte County General Plan Air Transportation Policy 8.F.4. describes how the Airport conforms to overall Coastal Zone goals.
[Table 6A: General Plan Policies]

The Coastal Act defines environmentally sensitive area as "any area in which plant of animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments." (Public Resources Code, § 30107.5) A Mitigation and Monitoring Plan (MMP) is in place for the Border Coast Regional Airport Authority (BCRAA) Obstruction Removal Project (ORP). This Plan is detailed in the 2018 Del Norte County Regional Airport Environmental Assessment and it addresses sensitive area conservation, ORP mitigation (including on-airport mitigation sites) and monitoring. (GHD, 2018)

Figure 2D: Crescent City Outlying Field 1943

Figure 2E: Del Norte Co. Regional Airport 2018

Figure 2F: CEC Terminal Building

Figure 2G: Aircraft Rescue and Fire Fighting Building

Figure 2H: Typical Hangar

3. Aeronautical Forecasts

Aeronautical forecasts help determine the size and timing of needed airport improvements. Projections of airport aviation activity are presented for total annual operations, annual itinerant operations by all aircraft, annual itinerant operations by current and future critical aircraft, number of based aircraft, annual instrument approaches, and number of enplanements.

Aviation Paradigm Shift

The aviation industry is entering a transition from historical commercial and general aviation trends to a quantum shift which integrates autonomous aviation, urban air mobility, air logistics and other transformational technologies. The role of airports will also change to accommodate piloted, optionally piloted, and autonomous aircraft which are not currently included in the forecasting fleet mix. It is likely that the exponential increase in online retail delivery will rapidly exceed the capacity of many ground transportation networks creating a demand for unmanned aircraft vehicle (UAV) delivery. Decreased levels of service will also make urban air mobility (UAM) more economic. Collectively these trends may redefine airports as part of an intelligent transportation system (ITS) that is more intermodal and interdependent than today's model. This intermodal system will increase both vertical and takeoff and landing (VTOL) aircraft and also new types of fixed-wing aircraft operations. These changes will be accelerated with advances in autonomous systems that combine innovative aeronautics and artificial intelligence. The resulting aviation paradigm shift makes projections beyond five years less and less reliable.

The Airport Design (C-II) will accommodate the Bombardier CRJ, Cessna Citation, Grumman Gulfstream series, and Embraer ERJ, twin-engine turboprop and jet aircraft

3.1 Total Annual Operations

Total annual operations for Jack McNamara Field were 12,565 (daily average of 34) in 2019. This is almost equally divided between itinerant (6,365) and local operations (6,200). Total annual operations over the last four decades have varied greatly corresponding to airline industry deregulation in 1976, the September 11 attacks in 2001, and the global financial crisis in 2008. General Aviation (GA) has had difficulty recovering from the global financial crisis, and national trends are marginal for this sector. Commercial aviation continues to grow incrementally with the largest increases in regional and international operations. The Terminal Area Forecast (TAF) for CEC indicates no change in growth corresponding with

national GA trends. The launch of the jet aircraft commercial service by Contour Airlines is consistent with earlier forecasts to reduce smaller turboprop aircraft with larger seating capacity regional jets. The forecast recognizes this trend which expands growth beyond the TAF.
[Table 3A: Summary of Aeronautical Activity Forecasts]

3.2 Annual Itinerant Operations by all Aircraft

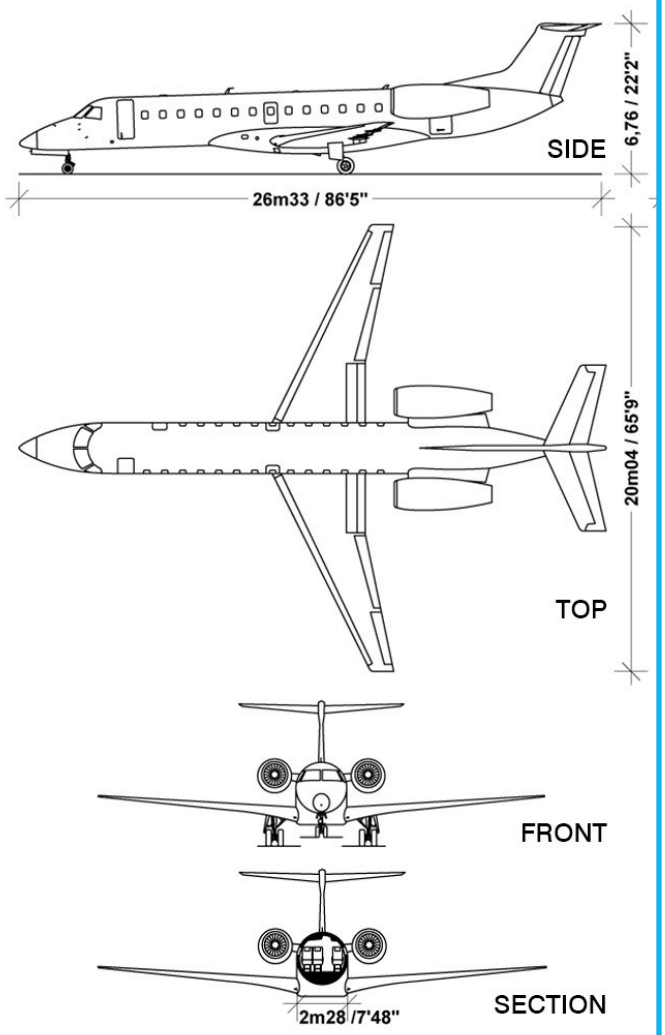
Annual itinerant operations by all aircraft are 6,365 for the study period. Itinerant operations by type include 3,390 air taxi & commuter, 2,800 general aviation, and 175 military flights. General trends in aviation show an increase in air taxi and commuter operations and an overall decline in general aviation. (FAA Terminal Area Forecast, 2019)

The July 2017 *Airport Land Use Compatibility Plan for the County of Del Norte, California* included an Aircraft Fleet Mix and Operations table for Jack McNamara Field. The fleet mix was based on assumptions included in the Jack McNamara Field Terminal Replacement (2009) and projections from an FAA Terminal Area Forecast (2020) indicating an operations grand total of 12,566 for 2036.
[Table 3C: Fleet Mix and Operations]
This table does not include the recent initiation of commercial jet service by Contour Airlines with the Embraer ERJ-135, but did predict expanded operations with Cessna Citation III. Both aircraft meet the C-II Aircraft Reference Code.
[Table 3B: Airport Reference Code]

3.3 Annual Itinerant Operations by Current Critical Aircraft

The current ALP Drawings show the critical aircraft as the Bombardier Q400 / RJ-700 for Runway 12/30 and the Embraer Brasilia EMB 120 for Runway 18/36. Scheduled passenger service with the Embraer ERJ-135 is forecast for four operations per day or about 1,400 annual operations making it the most common aircraft serviced by CEC. The ERJ-135 will serve as the new critical aircraft. The ERJ-135 ARC has a C-II Airport Reference Code, and the Airport will shift from the ARC C-III to C-II for Runway 12/30.
[Figure 3A: Critical Aircraft]

Embraer ERJ-135



Embraer ERJ-135
Approach Speed: 124 knots
Wingspan: 65.8 feet
Length: 86.4 feet
Tail Height: 22.2 feet
Maximum Takeoff Weight: 41,888 pounds
Taxi Design Group: 2

Figure 3A: Critical Aircraft

[Table 3B: Airport Reference Code]

3.4 Annual Itinerant Operations by Future Critical Aircraft

The critical aircraft airport approach category (AAC) and airplane design group (ADG) for Runway 12/30 (C-II) and Runway 18/36 (B-II) will serve for the entire 20-year forecast. As noted,

Table 3A: Summary of Aeronautical Activity Forecasts

Forecast Element	2020	2025	2030	2040
Based Aircraft				
Single Engine Piston	19	19	20	20
Multi-Engine Piston	9	9	10	10
Jet	1	1	1	1
Helicopter	0	0	0	0
Preferred Total		29	31	31
Terminal Area Forecast	29[1]	29	29	29
Percent Difference	0	0	10%	10%
Aircraft Operations				
Air Taxi - Itinerant	3,390	3,390	3,559	3,729
General Aviation - Itinerant	2,800	2,800	2,940	3,080
General Aviation - Local	6,200	6,200	6,510	6,820
Military	175	175	183	192
Preferred Total	12,565	12,565	13,192	13,821
Terminal Area Forecast	12,565[1]	12,565	12,565	12,565
Percent Difference	0%	0%	5%	10%
Peak Demand (Operations)				
Peak Month (20%)	2,513	2,513	2,638	2,764
Design Day (Pk. Mo. / 31)	81	81	85	89
Peak Design Hour (15%)	12	12	12	13
Population and Enplanements				
Del Norte Co. Population[2]	27,828[2]	29,000	31,000	33,000
Linear Projection[3]	7,922	9,791	11,661	11,404
Optimistic Scenario[4]	10,000	10,900	11,800	13,700
Terminal Area Forecast[1]	8,193	8,193	8,193	8,193

1 APO Terminal Area Forecast Issued January 2020
2 2019 United States Census (~1% annual growth projection)
3 2005 Del Norte County Airport Master Plan Report
4 FAA Aerospace Forecast 2019-2039 (U.S. Regional Air Carrier Enplanements) with targeted 10,000 enplanements

there are several disruptive technologies that may significantly change this approach to defining aircraft operations.
[Table 3B: Airport Reference Code]

3.5 Number of Based Aircraft

The most recent General Aviation survey (2018) estimates an active national fleet at 211,749 aircraft. The following changes in national fleet by aircraft from 2017 were:

- Single engine piston 0.03%
- Multi-engine piston -0.02%
- Turboprop -0.02%
- Turbojet 0.02%
- Rotorcraft -5.25%

The 2020 TAF data show 29 based aircraft at Jack McNamara Field composed of 19 single engine piston and 10 multi-engine piston aircraft. This forecast replaces the discontinued SkyWest Airlines twin-turboprop *Embraer EMB 120 Brasilia* and PenAir *Saab 340* with the Contour Airlines *Embraer ERJ-135* regional jet.
[Figure 3A: Critical Aircraft]
[Table 3C: Fleet Mix & Operations]

The APO Terminal Area Forecast does not indicate a change in based aircraft throughout the forecast period. This is based on national trends and is not specific to CEC. The 2005 *Airport Role and Activity Forecasts* linked based aircraft with the projected 33% population increase. (Mead & Hunt, 2005). Current projections show a marginal population decrease starting in 2023. (CalTrans, 2018) The preferred forecast applies the General Aviation survey projections listed above. In addition, it is highly likely that rotary-wing aircraft will be based within the study period as part of the trends described in the forecast introduction, and these will be re-evaluated with the next Master Plan Update. The resulting forecast deviates from the TAF, but is more consistent with the unique features of the study area, national trends, and upcoming shift in the aviation paradigm.

3.6 Annual Instrument Approaches

The APO Terminal Area Forecast 2018 does not include IFR itinerant operations at CEC.

Table 3B: Airport Reference Code

Aircraft Approach Category (AAC)	
Category A	Aircraft approach speed less than 91 knots
Category B	91 knots or more, but less than 121 knots
Category C	121 knots or more, but less than 141 knots
Category D	141 knots or more, but less than 166 knots
Category E	166 knots or more
Airplane Design Group (ADG)	
Group I	Wingspan up to, but not including 49 feet
Group II	49 feet up to, but not including 79 feet
Group III	79 feet up to, but not including 118 feet
Group IV	118 feet up to, but not including 171 feet
Group V	171 feet up to, but not including 214 feet
Group VI	Wingspan greater than 214 feet

Table 3C: Fleet Mix & Operations

Operations	Aircraft	2016	2036
Itinerant			
Single Engine, Fixed	GASEPF	250	275
Single, Variable	GASEPV	488	536
Twin Engine	BEC58P	168	184
Turboprop	CNA441	405	445
Business Jet	CIT3	84	92
Commercial Turboprop	SF340	1,456	1,601
Military Turboprop, lg	C-130E	14	15
Military Turboprop, sm	DHC6	110	121
Military Helicopter	SA365N	14	15
Subtotal		**2,989**	**3,284**
Local			
Single Engine, Fixed	GASEPF	1,420	1,562
Single Engine, Var.	GASEPV	2,760	3,036
Twin Engine	BEC58P	946	1,040
Subtotal		**5,126**	**5,368**
Grand Total		**8,115**	**8,922**

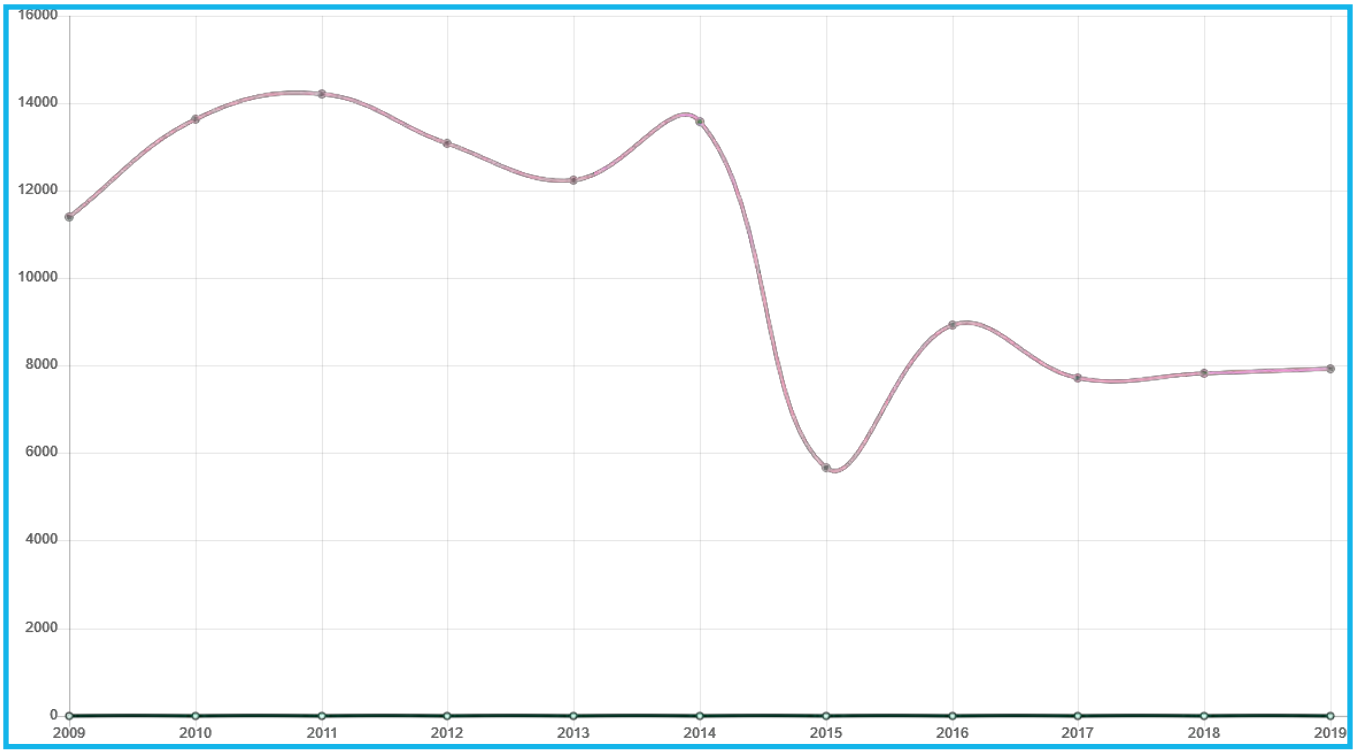


Figure 3B: Enplanements 2009-2019

3.7 Number of Enplanements

There were 8,193 enplanements in 2019 which was a 39% increase from 2018. This number is expected to rise in conjunction with Contour Airline's new commercial service launched in 2018. CEC was ranked 455 in the Air Carrier Activity Information System (ACAIS) listing of all Commercial Service Airports with 100+ enplanements updated 12/20/2019.
[Table 3B: Enplanement Data]

According to the 2005 *Airport Role and Activity Forecasts* "The linear projection yielded a 2023 forecast of 439 enplanements per 1,000 population in the airports service area. The trend line resulted in a forecast of 485 enplanements per 1,000 population." (Mead & Hunt, 2005) According to a February 2019 article in the *Del Norte Triplicate*, Contour Airlines "is on track to receive about 8,300 boarded passengers per year." (Cejnar, 2019)

From November 2019 to February 2020, the monthly enplanements averaged ~682 for an annual projection of ~8,184. This represents a 39% increase over 2018 and is due to the introduction of Contour Airline's new commercial service.
[Table 3D: Enplanement Data]

Table 3D: Enplanement Data

Year	Enplanements	CEC Year-to-year Change	National Year-to-year Change
2020	8,184[6]	0%	
2019	8,193[5]	39%	
2018	5,907	-23.5%	4.9%[5]
2017	6,802	-13.2%[2]	3.0%[5]
2016	6,907[1]	57.6%	3.8%
2015	5,671[1]	-58.3%[3]	5.0%
2014	13,588[1]	11.0%	3.0%
2013	12,238[1]	-6.5%	1.0%
2012	13,093[1]	-7.9%	1.0%
2011	14,212[1]	4.3%	1.7%
2010	13,626[1]	19.6%	2.3%
2009[4]	11,392[1]		

1) 2019 TAF; 2 PenAir ended service, 3) SkyWest ended service, 4) Enplanements following the global fiscal crisis, 5) TAF January 2020, 6) CEC projection based on 2019-11 through 2020-02 enplanements

CRESCENT CITY

JACK MC NAMARA FLD (CEC)(KCEC) 3 NW UTC–8(–7DT) N41°46.81′ W124°14.19′ — KLAMATH FALLS H–3B, L–2I IAP

61 B Class I, ARFF Index A NOTAM FILE CEC

RWY 12–30: H5002X150 (ASPH) S–30, D–43 PCN 9 F/D/Y/U HIRL

RWY 12: MALSR.

RWY 30: REIL. VASI(V4L)—GA 3.5° TCH 60′. Trees.

RWY 18–36: H5000X150 (ASPH) S–30, D–43 PCN 9 F/D/Y/U MIRL

RWY 18: REIL. Thld dsplcd 148′. Ground.

RWY 36: REIL. VASI(V4L)—GA 3.0° TCH 48′. Road.

SERVICE: S2 **FUEL** 100LL, JET A **LGT** ACTIVATE MALSR Rwy 12, REIL Rwy 18, Rwy 36, and Rwy 30, HIRL Rwy 12–30, and MIRL Rwy 18–36—CTAF.

AIRPORT REMARKS: Attended 1600–0200Z‡. Other hrs fixed–base operator rqr call out fee. Birds and deer on and in vicinity of arpt. A 150′ lgtd twr 3300′ W CEC VOR. Occasional standing water on Rwy 18–36 and Rwy 30 runup area. Ridge lines of shifting sand dunes 30–50′ AGL and 1000′ off apch end Rwy 18. PPR for unscheduled air carrier ops with more than 30 passenger seats call arpt manager 707–464–7288 or 707–465–3804. Transient parking ramp estimated weight limit 20,000 lbs, FBO ramp estimated weight limit 60,000 lbs.

AIRPORT MANAGER: 707-464-7288

WEATHER DATA SOURCES: ASOS 119.925 (707) 465–5458.

COMMUNICATIONS: CTAF/UNICOM 122.8

CRESCENT CITY RCO 122.3 (OAKLAND RADIO)

SEATTLE CENTER APP/DEP CON 124.85

AIRSPACE: CLASS E.

RADIO AIDS TO NAVIGATION: NOTAM FILE CEC.

CRESCENT CITY (L) VORTACW 109.0 CEC Chan 27 N41°46.77′ W124°14.45′ at fld. 55/14E.

TACAN AZIMUTH & DME unusable:
195°–235° byd 20 NM

ILS 108.7 I–CEC Rwy 12. Class IA. LOC unusable within 0.3 NM fm thld. Unmonitored.

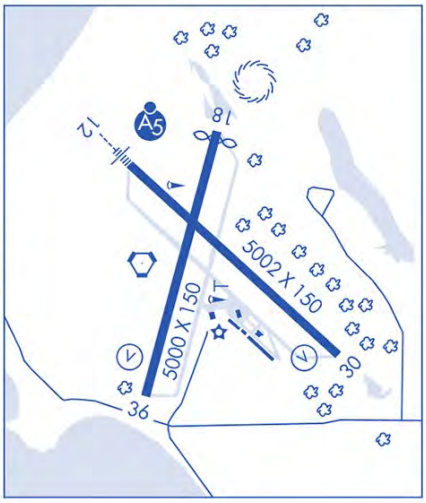


Figure 3C: Supplemental Chart

National, domestic regional enplanement growth is forecast to remain about 1.4% during the forecast period [2018-2038]. (FAA Aerospace Forecast, 2018-2038)

However, there are several factors that indicate a higher growth rate for CEC:

- Rapid population growth especially in adjacent Curry County, Oregon
- Increase in retiree demographics with more disposable income
- Development of Elk Valley Casino and other tourism venues

The 2017 TAF anticipates an average annual growth of 1.3% with a total increase of 26% for the forecast period. The 2018 Del Norte County Economic Forecast indicates a gradual increase in population growth until 2023. (State of California, 2018) Although there is a projected incremental decrease in population after 2023, the factors above support the higher levels of growth. Using the optimistic case for the Aerospace Forecast, enplanements will average 2.5 percent per year. "This scenario is marked by a more favorable business environment and lower fuel prices which make the price of flying more affordable to business and leisure travelers." (FAA Aerospace Forecast, 2018-2038) [Table 3A: Summary of Aeronautical Activity Forecast]

[Table 3D: Enplanements]

3.8 Critical Aircraft

The critical aircraft is the most demanding aircraft type, or grouping of aircraft with similar characteristics, that make regular use of the airport. Regular use is 500 annual operations, including both itinerant and local operations but excluding touch-and-go operations. An operation is either a takeoff or landing. (FAA AC 150/5000-17, 2017)

Formerly, United Express (operated by SkyWest) provided commercial flights with a twin-engine, turboprop aircraft *Embraer EMB-120 Brasilia* and PenAir flew the similar *Saab 340*. The Brasilia and Saab 340 fit the B-II Airport Reference Code with

approach speeds less than 121 knots and wingspans less than of 79 feet. SkyWest ended service in 2015, and PenAir discontinued flights in 2017. In 2018, Contour Airlines began flying *Embraer ERJ-135* regional jets between Crescent City and Oakland. There are approximately 1,400 operations per year which exceeds the 500 operations required to designate the critical aircraft. The ERJ-135 has an approach speed of 124 knots and wingspan of 65.8 feet placing it in the C-II Airport Reference Code. As noted before, to reflect the characteristics of this aircraft, the Airport will shift from the C-III to C-II ARC for Runway 12/30.
[Figure 3A: Critical Aircraft]
[Table 3B: Airport Reference Code]

3.9 Runway Design Code

The aircraft approach category (AAC) and airplane design group (ADG) are combined to form the airport reference code (ARC) of a particular runway. This code also serves as the Runway Design Code which provides the information needed to determine certain design standards that apply. The first component, depicted by a letter, is the Aircraft Approach Category (AAC) and relates to aircraft approach speed (operational characteristics). The second component, depicted by a Roman numeral, is the Airplane Design Group (ADG) and relates to either the aircraft wingspan or tail height (physical characteristics). The Runway Design Code (RDC) for CEC Runway 12/30 is C-II which accommodates aircraft with approach speeds less than 141 knots and wingspans up to 79 feet. Runway 18/36 RDC is B-II which accommodates aircraft with approach speeds less than 121 knots and wingspans up to 79 feet. (FAA AC 150/5300-13A, 2012)
[Figure 3C: Supplemental Chart]
[Table 3B: Airport Reference Code]

Upgrading or downgrading AAC/RDC categories may result in several changes in airport design standards:

- Increase in crosswind component
- Increase in Runway separation standards
- Increase in RPZ dimensions
- Increase in Runway design standards
- Increase in surface gradient standards

(FAA AC 150/5300-13A, 2012)

3.10 Runway Reference Code

The Runway Reference Code (RRC) describes the current operational capabilities of a Runway. Certain critical standards determine which aircraft can land on a Runway under particular meteorological conditions. The Aircraft Approach Category (AAC), Airplane Design Group (ADG), and visibility minimums are combined to form the RRC. Visibility minimums are expressed as Runway Visual Range (RVR) values of 1200, 2400, and 4000 (corresponding to CAT II, ½ mile, and ¾ mile respectively), or as "NPA" for non-precision and visual Runways. (FAA AC 150/5300-13A) The runway reference code (RRC) for CEC Runway 12/30 corresponds to the airport reference code C-II. The runway reference code for 18/36 is B-II. Additional data is provided on the Runway Data Table in the Data Sheet drawing, Figure 6C.
[Figure 3C: Supplemental Chart]
[Table 3B: Airport Reference Code]

4. Proposed Development

4.1 Proposed Development

The proposed development plan for Jack McNamara Field is designed to maintain and enhance critical functionality of this regional airport through obstruction clearance, Runway/taxiway pavement and lighting improvements, hangar expansion, ARFF truck purchase, and a new Master Plan. The Capital Improvement Plan details the projects, sequence, and costs and is discussed in Chapter 5, Capital Improvement / Financial Program.

4.2 Approach Procedure

Runway 12 is served by an instrument landing system (ILS) approach. An ILS Category 1 approach procedure can have minimums to 200 feet above ground level (AGL) and ½ mile of forward visibility. However, Runway 12 ILS has minimums of 250 feet and ¾ mile. The two approaches to Runway 36 have minimums of 444 feet AGL and one mile forward visibility. Runways 18 and 30 may only be accessed via circle-to-land with an approach to Runway 12 or 36 with minimums of 479 AGL and one mile visibility. The straight-in approaches to Runways 12 and 36 are supplemented with circle-to-land approaches with the same minimums for Runways 18 and 30. (Mead & Hunt, 2005) There are no forecasted changes in approach procedures.

4.3 Navigational Aids

McNamara Field Instrument Approach Procedures (IAPs) include the following:

- ILS or LOC Runway 12
- RNAV (GPS) Runway 12
- VOR/DME Runway 12
- VOR Runway 12
- RNAV (GPS) Runway 36
- VOR/DEM Runway 36

[Table 4A: Airside Facility Data]

4.4 Wind Coverage

Wind coverage data is provided on the Airport Data Sheet.
[Figure 6F: Airport Data Sheet]

4.5 Modifications to Standards

There are several non-standard conditions, and these are shown in the Airport Layout Plan along with recommendations in Chapter 6.

4.6 Obstruction Surfaces

Currently identified obstructions include the following:

- Runway 12: None
- Runway 30: 86-foot trees, 1,520 feet from Runway, 250 feet right of centerline, 15:1 slope to clear

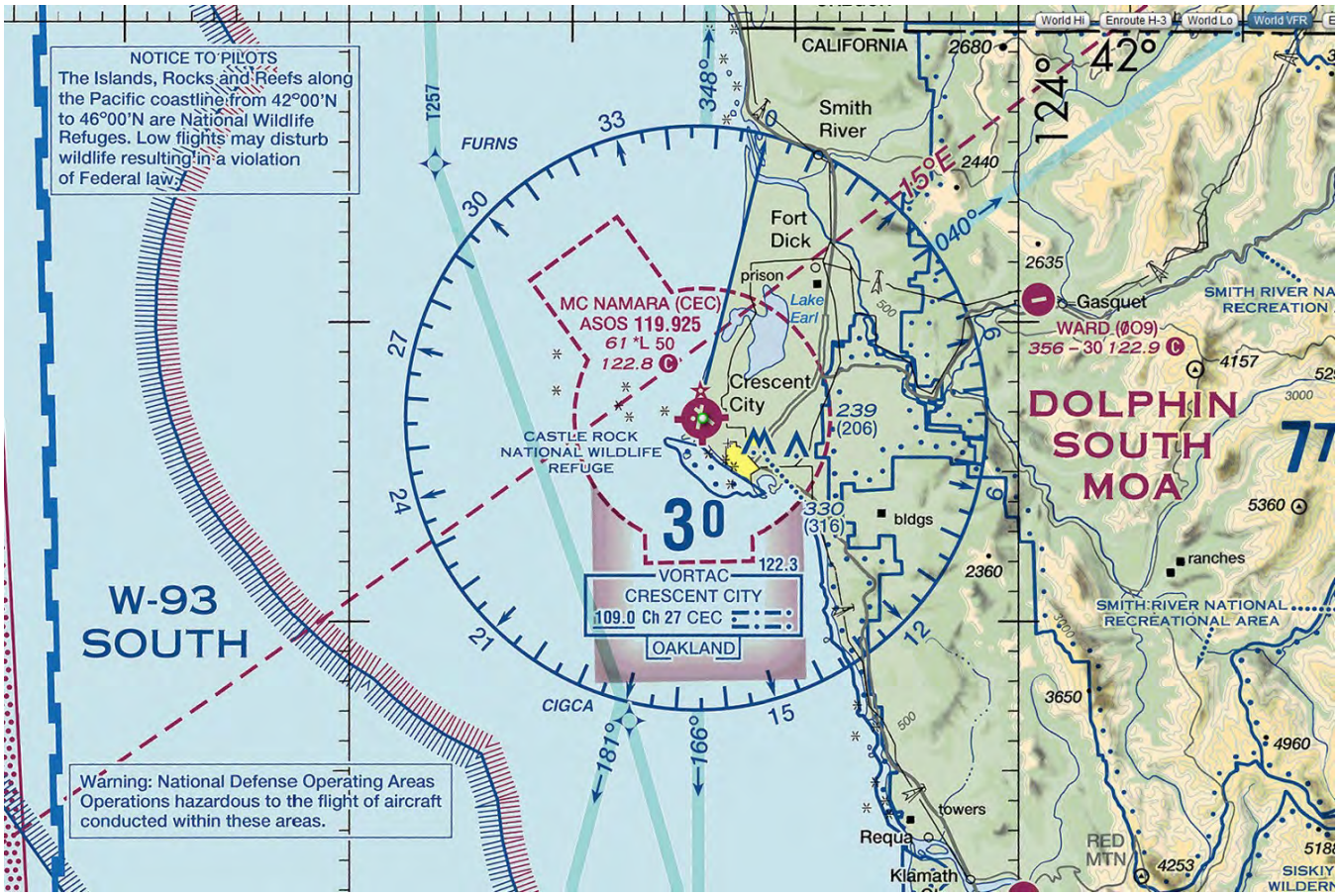


Figure 4A: Aeronautical Chart

- Runway 18: 55-foot ground, 1,075 feet from Runway, 250 feet right of centerline, 15:1 slope to clear
- Runway 36: 9-foot road, 350 feet from Runway, 16:1 slope to clear

Specific obstruction data is included in the Airport Layout Plan drawings.

4.7 Runway Protection Zone

Runway protection zones are the trapezoidal areas off the end of the runway end that serves to enhance the protection of people and property on the ground in the event an aircraft lands or crashes beyond the runway end. The Runway protection zone dimensions for Jack McNamara Field are summarized in Table 4B: Runway Protection Zones.

4.8 Landside Facility Requirements

Landside facilities are those facilities necessary for handling aircraft on the ground, and those facilities that provide an interface between the air and ground transportation modes.

Terminal Building

Construction for the new passenger terminal building was completed in early 2019, and the facility was opened February 22nd. The new terminal meets the demand for the study period.

Hangars and Buildings

There are currently 26 existing hangars on the airport and a number of supporting buildings. Collectively these are sufficient for projected demand within the study period.
[Figure 6K: Terminal Area Plan]

Airport Access and Vehicle Parking

Current access is via Dale Rupert Road which connects to East Washington Boulevard and Highway 101 approximately 3 miles to the east. The northern parking area has 88 spaces, and the passenger terminal parking area has 143 spaces.

Table 4A: Airside Facility Data

	Runway 18	Runway 36	Runway 12	Runway 30
Length Width Surface Material	5,000 ft. 150 ft. Asphalt		5,002 ft. 150 ft. Asphalt	
Load Bearing Strength Single Wheel Loading Double Wheel Loading	30,000 lbs. 43,000 lbs.		30,000 lbs. 43,000 lbs.	
Instrument Approach Procedures	None	RNAV/GPS, VOR/DME	ILS, LOC, RNAV/GPS, VOR/DME, VOR	None
Approach Aids	REIL	REIL VASI (V4L)	Localizer, MALSR	REIL VASI (V4L)
Pavement Edge Lighting	MIRL		HIRL	
Displaced Threshold	150 ft.	None	None	None
Fixed Wing Aircraft Traffic Pattern	Left	Left	Left	Left
Weather Reporting	Automated Surface Observing System (ASOS)			

Airport access and parking exceed the demand for the study period.
[Figure 6K: Terminal Area Plan]

Utilities
The Airport has power, water and sanitary sewer service on-site. In addition to the existing domestic water system, a dedicated fire suppression water line extends to the airport terminal.

Airport Fencing
There is existing fencing around the current airport and plans to fence the Runway 30 expansion area as depicted on the Airport Layout Plan. The existing fencing is sufficient for the study period.

4.9 Development Summary

The key projects completed since the 2013 ALP including the following:

- Access roads
- Commercial apron
- Passenger terminal
- Runway safety area improvements
- Terminal parking area
- Wetlands mitigation and erosion control

Table 4B: Runway Protection Zones

Runway	Visibility Min.	Length	Inner Width	Outer Width
12	C-II <¾ mile	1,700'	1,000'	1,510'
30	C-II 1 mile	1,700'	500'	1,010'
18	B-II 1 mile	1,000'	500'	700'
36	B-II 1 mile	1,000'	500'	700'

4.10 Development Projects

Development projects include non-standard condition recommendations and Airport Capital Improvement Projects described in more detail in the next chapter and shown on the ALP. They can be summarized as:

- ARFF truck purchase
- Building removal
- Commercial Apron
- FAA Remote Communications Outlet (RCO relocation)
- Fence expansion and relocation
- Hangar design, construction and relocation
- Master Plan & Airport Layout Plan

- Mitigation projects (continued)
- Obstruction clearance
- Paving rehabilitation
- Pond fill and grading
- Property acquisitions
- Taxiway realignment and improvements

4.11 Shadow or Line-of-Sight Study

CEC does not have a control tower that would require a shadow or line-of-sight study.

4.12 Letters of Coordination

[See Appendices]

4.12 Runway Safety Program Office

There are no items from the Runway Safety Program Office or Runway Safety Action Plan.

4.13 Declared Distance

The narrative on declared distances is used to aid in understanding the maximum distances available and suitable for meeting takeoff, rejected takeoff, and landing distances performance requirements for turbine powered aircraft. The narrative shall also provide clarification on why declared distances have been implemented. Declared distances data must be listed for all Runway ends. The TORA, TODA, ASDA, and LDA will be equal to the Runway length in cases where a Runway does not have displaced thresholds, stopways, or clearway, and have standard RSAs, ROFAs, RPZs, and TSS.

Detailed declared distances are shown in the Airport Layout Plan drawings.
[Figure 6L: Declared Distances Runway 18-36]

4.14 Airport Land Use Compatibility Plan

The State of California Department of Transportation (Caltrans) Division of Aeronautics administers the California State Aeronautics Act (SAA) "to protect the public interest in aeronautics and aeronautical progress." The Division provides guidance for conducting airport land use compatibility and requires an Airport Land Use Compatibility Plan (ALUCP). The ALUCP includes a scope, airport information, compatibility policies and criteria, compatibility zone maps, review

Figure 4B: ALUCP

policies, preliminary review of plans and projects for consistency determinations, land use information, discussion of compatibility issues, local government implementation, and supporting materials. The Airport Layout Plan Update is consistent with the ALUCP and implements its policies. The ALUCP designates 6 safety zones as follows:

- Zone 1: Runway protection zone (RPZ) and within Runway object free area (ROFA) adjacent to the Runway
- Zone 2: Inner approach/departure zone
- Zone 3: Inner turning zone
- Zone 4: Outer Approach/departure zone
- Zone 5: Sideline zone
- Zone 6: Traffic pattern zone / Airport Influence

Development regulations within the safety zones are described in the *California Airport Land Use Planning Handbook*. (State of California, 2011)
[Figure 4B: ALUCP]

5. Capital Improvement / Financial Program

5.1 AIP Grant History

From 2005-2017 Jack McNamara Field received 20 AIP Grants. The average annual grant was $4,028,593, and the estimated annual development cost (NPIAS) was $4,717,853. This amount was also the annual development estimate for 2017-2021. (Aireform, n.d.)

The 2014-2023 Capital Improvement Plan included:

- Installing Precision Approach Path Indicator (PAPI)
- Installing taxiway lighting
- Constructing a terminal parking lot
- Constructing a new terminal apron and terminal building
- Extending Runway 12/30

5.2 Open Airport Improvement Program (AIP) Projects

CEC is currently completing three AIP projects:

- Terminal Phase I (AIP 32). Expected close-out date February 2020.
- Airport Layout Plan (AIP 37). Expected close-out date March 2020.
- Runway safety area (RSA) mitigation project including Terminal project permit required mitigation (AIP 38). Expected close-out date September 2023.
- Part 77 Obstruction Removal Project (AIP 39). Expected closeout date September 2023.

5.3 2019-2025 Airport Capital Improvement Plan

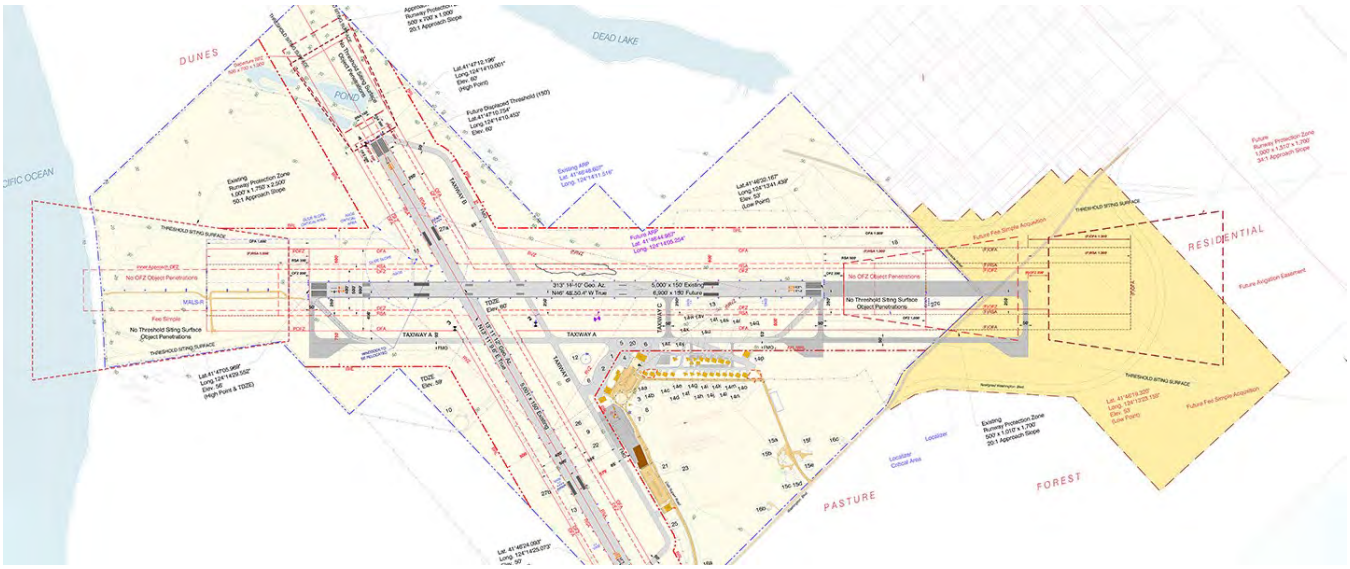
The Board Coast Regional Airport Authority (BCRAA) approved the Airport Capital Improvement Plan (ACIP) for fiscal years 2019-2025 on November 7, 2018. The ACIP provides detailed information on project schedules, NEPA Environmental Status, Land Title Status, and Open AIP Funded Projects for twelve (12) specific development projects. The total cost for these projects is $26,092,300 with a local share $1,304,615.

[Table 5A: Airport Capital Improvement Plan]

The Airport Capital Improvement Plan envisions over $26 million dollars in development over the next 6 years

Table 5A: Airport Capital Improvement Plan

No.	Year	Project	AIP Funding (95%)	Sponsor Match (5%)	Total
1	2020	Runway 18-36 Rehabilitation (Phase 1—Project Design: Overlay, Marking, and Lighting)	$688,750	$36,350	$725,000
2	2020	Pavement Management Report	$71,250	$3,750	$75,000
3	2021	Runway 18-36 Rehabilitation (Phase 2—Construction: Overlay, Marking, and Lighting)	$7,600,000	$400,000	$8,000,000
4	2022	Obstruction Removal (Phase 2—Construction: Removal of Obstructions)	$3,610,000	$190,000	$3,800,000
5	2023	ARFF Truck Replacement	$475,000	$25,000	$500,000
6	2024	Taxiways A and B Rehabilitation (Phase 1—Design: Overlay, Marking, and Lighting)	$304,000	$16,000	$320,000
7	2025	Taxiways A and B Rehabilitation (Phase 2—Construction: Overlay, Marking, and Lighting)	$2,375,000	$125,000	$2,500,000
8	2026	Runway 12-30 Rehabilitation (Phase 1—Project Design: Overlay, Marking, and Lighting)	$617,500	$32,500	$650,000
9	2027	Runway 12-30 Rehabilitation (Phase 2—Construction: Overlay, Marking, and Lighting)	$7,125,000	$375,000	$7,500,000
10	2028	Master Plan	$712,500	$37,500	$750,000
11	2030	Environmental	$475,000	$25,000	$500,000
		TOTAL	$24,054,000	$1,266,000	$24,070,000



6. Airport Layout Plan

6.1 Introduction

The Airport Layout Plan (ALP) drawings are a depiction of the development solutions derived throughout the master planning process. A major purpose of the ALP drawing set is to establish funding eligibility for the Federal Aviation Administration's (FAAs) Airport Improvement Program (AIP), as capital projects must appear on an FAA-approved ALP to receive AIP grant funding.

6.2 Airport Layout Plan

The following paragraphs provide an overview of major elements found on each sheet within the ALP drawing set. The ALP drawing set was developed utilizing ARP SOP 2.00—Standard Procedures for FAA Review and Approval of Airport Layout Plans (ALPs).

Jack McNamara Field is the major air transportation and service facility in the region
Del Norte County General Plan

6.3 Data Sheet

The Airport Data Sheet is a companion to the ALP that contains detailed information relative to the Airport, including:

- Airport, Runway, and taxiway data tables that identify relevant design criteria at the Airport, along with existing and future conditions.
- Existing and future instrument approach components and lowest approach minimums for each Runway.

[Figure 6E: Airport Data Sheet]

6.4 Facilities Layout Plan

The ALP depicts the current airport layout and proposed improvements to the Airport for the 20-year planning period and beyond. Detailed descriptions of the improvements and expected capital costs over the next 20 years are included in Chapter 5, Capital Improvement Plan. The ALP is a development guide; the timing of development depends upon when it is needed and can be funded.

[Figure 6D: Airport Layout Plan]

Some noteworthy items reflected on the ALP include, but are not limited to:

- New terminal building and apron area
- Potential hangar relocation site
- Runway improvements
- Future Runway Protection Zone and avigation easement
- Future airport reference point (ARP)
- Bay Meadows property/road conversions
- Pacific Shores property/road conversions

6.5 Terminal Area Plan

The Terminal Area Plan drawing provides a large-scale view of the terminal area depicted on the ALP, so that features such as aprons, buildings, hangars, and parking lots area easier to discern. [Figure 6J: Terminal Area Plan]

6.6 Airport Airspace Drawing

This drawing shows the Part 77 Imaginary Surfaces for the future layout of the Airport with a USGS topographic map as the background. The Part 77 surfaces are the basis for protecting airspace around an airport; therefore, it is ideal to keep these surfaces clear of obstructions whenever possible. The FAA decides if any of the obstructions to Part 77 surfaces are hazardous to aviation.
[6F: Airport Airspace Plan]

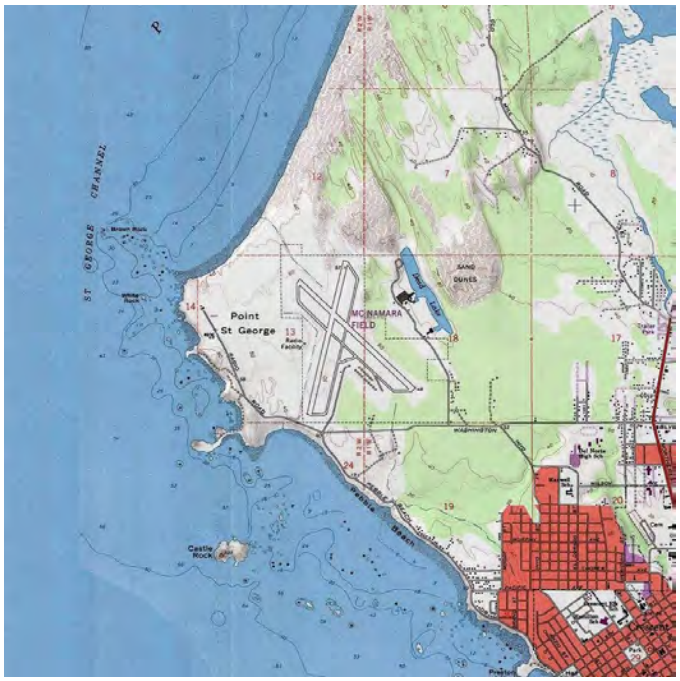


Figure 6A: USGS Map

Imaginary Surfaces

Part 77 defines five distinct surfaces, each with a different size and shape. The dimensions of these surfaces are based on the type of Runway and the type of approach ultimately planned for the Airport. The imaginary surfaces are defined as follows:

Primary Surface

The primary surface is rectangular, is centered on the Runway, extends 200 feet beyond each end of the Runway, and has a width that varies according to airport-specific criteria. The elevation of the primary surface corresponds to the elevation of the nearest point of the Runway centerline. The current width of the primary surface for Runway 12 -30 is 500 feet from centerline (Precision Instrument Approach); 250 feet from centerline for a runway with a visual approach procedure, and it is planned for the width to remain the same throughout the planning period.

Approach Surface

Each Runway end has an approach surface. The approach surface is centered on the extended Runway centerline, starts at the end of the primary surface (200 feet beyond each end of the Runway), and has a width equal to that of the primary surface. Approach surfaces slope upward and outward from the Runway ends. The angle of the slope depends on the type of instrument approach procedure available to each end of the runway.

Runway Protection Zones (RPZs)

RPZs are not Part 77 surfaces, but mirror the inner portions of approach surfaces on the ground. The existing and future RPZ dimensions are based on the standards of C-II and B-II Runway Design Codes (RDC).

Transitional Surface

The transitional surface is a sloping 7:1 surface that extends outward and upward at right angles to the Runway centerline from the sides of the primary surface and from the sides of the approach surfaces. It extends outward and upward until intersecting the horizontal surface.

Horizontal Surface

The horizontal surface is a flat, elliptical surface at an elevation 150 feet above the established airport elevation. The extent of the horizontal surface is determined by swinging arcs of 5,000 to 10,000-foot radius from the center of each end of the primary surface.

Conical Surface
The conical surface extends outward and upward from the horizontal surface at a slope of 20:1 for a horizontal distance of 4,000 feet.
[Figure 6G: Airport Airspace Profiles]

6.7 Inner Portion of the Approach
Inner Approach Runway 12/30
This drawing is a close-in view of the inner approach area of Runway 12/30 approach surface and the objects/obstructions up to 100' above the Runway ends.

Inner Approach Runway 18/36
This drawing is a close-in view of the inner approach area of Runway 18/36 approach surface and the objects/obstructions up to 100' above the Runway end.

6.8 Surface Drawing
Declared Distances Runway 18/36
The declared distances drawing depicts the plan and profile views of the Runway 18/36 departure surfaces, which apply to Runways with instrument departure procedures. Each departure surface at the Airport begins at the departure end of the Runway, extends outward and slopes up at 40:1.
[Figure 6K: Declared Distances Rwy 18/36]

6.9 On-Airport Land Use
The purpose of the on-airport land use plan is to identify the land uses and facilities currently within the Airport.

General Plan
The Del Norte County General Plan addresses the Airport in Air Transportation Goal 8.F: "To promote the maintenance and improvement of general and commercial aviation facilities." (Mintier, 2003)
[Table 6A: General Plan Policies]

Zoning
The airport is designated PF-C(A)(H) on the Del Norte County zoning maps: Public Facility, with Coastal Combining Districts related to Access and Hazard provisions of the Local Coastal Program.
[Figure 6B: Zoning Map]

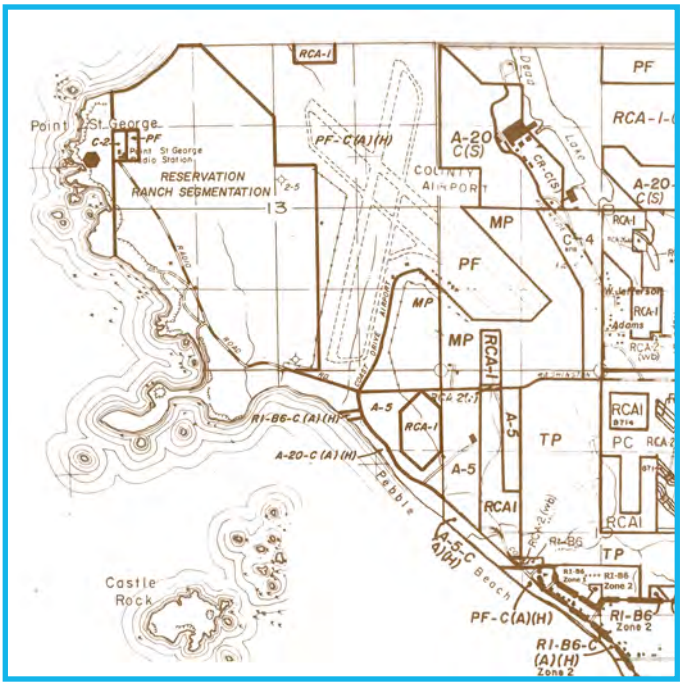


Figure 6B: Zoning Map

Figure 6C: CEC Terminal

Facilities
Terminal
The new Del Norte County Regional Airport terminal opened February 22, 2019. The terminal is approximately 24,000 square feet and part of a five-phase airport development program totaling $55 million.
[Figure 6C: CEC Terminal]

Runway 12/30
The primary Runway is 5,000 x 150 feet with an asphalt surface capable of bearing 30,000 lbs. single wheel loading and 43,000 lbs. double wheel loading. Runway 12 has instrument approach procedures with Instrument Landing System (ILS), Localizer (LOC), Area Navigation/Global Positioning System (RNAV/GPS), and Very High Frequency Omnidirectional Range Station/ Distance Measuring Equipment (VOR/DME). Runway 12 is also supported by a localizer (LOC), Medium Intensity Approach Lighting with Sequenced Flashers (MALSR), and High Intensity Runway Lighting (HIRL). Runway 30 has Runway End Identifier Lights (REIL) and a 4-box Visual Approach Slope Indicator lights (VASI V4L).

Runway 18/36
The crosswind Runway is 5,002 x 150 feet with an asphalt surface capable of bearing 30,000 lbs. single wheel loading and 43,000 lbs. double wheel loading. Runway 36 has Area Navigation/Global Positioning System (RNAV/GPS), Very High Frequency Omnidirectional Range Station/ Distance Measuring Equipment (VOR/DME), and 4-box Visual Approach Slope Indicator lights (VASI V4L). Runway 18/36 has Runway End Identifier Lights (REIL) and Medium Intensity Runway Lighting (MIRL).
[Figure 3C: Supplemental Chart]
[Table 4A: Airside Facility Data]
[Figure 6M: On-Airport Land Use]

6.10 Off-Airport Land Use

The purpose of the off-airport land use plan is to identify the land uses currently surrounding the Airport. The drawing also depicts the proposed land use overlay zones associated with the future FAA Part 77 surfaces so as to inform future local discussions about airport growth and development as well as the growth and development of properties surrounding the Airport.

General Plan

The surrounding General Plan classifications are Resource Conservation Area (RCA) to the north; Agriculture to the south; RCA, Agriculture, Visitor Serving Commercial [Dead Lake], and Suburban Residential to the east; and no certified land use

Table 6A: General Plan Policies

No.	Air Transportation Policy
8.F.1.	The County Shall continue to pursue opportunities for the economic development of McNamara Field which is the major air transportation and service facility in the region.
8.F.2	The County shall plan and pursue funding for the redevelopment of the regional terminal facilities at McNamara Field.
8.F.3	The County shall continue to provide areas for commercial and recreational hangars for the storage of aircraft based at McNamara Field.
8.F.4	McNamara Field (Crescent City Airport) is designated as a coastal-dependent use due to its location on a coastal headland and there is no less damaging environmental alternative site within the Coastal Zone (which extends to the foothills 5½ miles inland of the ocean), there is no feasible alternate location to construct a replacement commercial airport outside of the Coastal Zone, and the airport is an essential public facility for transportation, commerce, medical transport, and emergency services to this isolated community.
8.F.5.	The County shall continue to maintain navigational aids at McNamara Field to improve the reliability and safety of service.
8.F.6.	Agricultural leases may be offered for lands at McNamara Field to improve the reliability and safety of service.
8.F.7.	The County shall provide that land uses in the vicinity of McNamara Field's approach and takeoff zones is held to the lowest densities and development intensities possible. Height zoning should be vigorously enforced. Encroachment into the horizontal or vertical zones should be prohibited.
8.F.8.	The County shall retain Ward Field as a secondary backup to McNamara Field and for use as an emergency staging area.
8.F.9.	The County shall continue to maintain a list of improvements and construction projects to be accomplished at County airports.
8.F. 10	The County shall allow, where appropriate, public or group recreational events on airport properties subject to the securement of a permit.

designation to the west which is identified as "Reservation Ranch Segmentation." (Mintier, 2003)

Zoning

Surrounding zoning is primarily Public Facility (PF) and Resource Conservation Area (RCA) to the north and south; Agriculture (A), Manufacturing and Industrial Performance (MP), and General Commercial (C4) to the east; and Public Facilities Airport (PF-C(A)(H)) to the west.
[Figure 6B: Zoning Map]
[Figure 6N: Off-Airport Land Use]

6.11 Airport Property Map

The airport Exhibit "A" property map is intended to depict the areas of existing airport ownership and areas proposed for ownership or release. The map also shows easement, buildings, aprons, fences, roads, and other features of concern. Parcels are shown for depiction purposes only and this map is not intended to be used for survey or land acquisition purposes. Property information typically includes known and recorded information including ownership, date of acquisition, and federal involvement if applicable.
[Figure 6O-U: Exhibit A]

Airspace Obstruction Table
Runway 12 Obstruction Table
Runway 30 Obstruction Table
Runway 12-30 Departure Obstruction Table

The obstruction data tables present the data depicted in the Airport Airspace Plan along with data depicted in the approach and departure plan and profile drawings. The data typically includes the object identification number, description, and a future disposition for the object. The data was obtained from an Airport Geographic Information System (AGIS) Survey conducted in 2017.

DEL NORTE COUNTY REGIONAL AIRPORT
JACK McNAMARA FIELD

CRESCENT CITY, CALIFORNIA

Airport Layout Plan Drawing Set

MARCH 2020

SHEET INDEX	
COVER	TITLE SHEET
C1	AIRPORT LAYOUT PLAN
C2	AIRPORT DATA SHEET
C3	AIRPORT AIRSPACE PLAN
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C5	INNER APPROACH RWY 12-30
C6	INNER APPROACH RWY 18-36
C7	TERMINAL AREA PLAN
C8	DECLARED DISTANCES RWY 18-36
C9	ON AIRPORT LAND USE
C10	OFF AIRPORT LAND USE
C11	CEC - SHEETS C11-C17 (EXHIBIT A)
C12	CEC - SHEETS C11-C17 (EXHIBIT A)
C13	CEC - SHEETS C11-C17 (EXHIBIT A)
C14	CEC - SHEETS C11-C17 (EXHIBIT A)
C15	CEC - SHEETS C11-C17 (EXHIBIT A)
C16	CEC - SHEETS C11-C17 (EXHIBIT A)
C17	CEC - SHEETS C11-C17 (EXHIBIT A)

DEL NORTE COUNTY

LOCATION MAP

VICINITY MAP

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DESIGNED	ALB
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REVISIONS			
NO.	BY	DATE	REMARKS

TITLE SHEET

BORDER COAST REGIONAL AIRPORT AUTHORITY
JACK MCNAMARA FIELD ALP

PROJECT NUMBER	DRAWING FILE NAME	SCALE
P0023415W	CEC - SHEET COVER (TITLE SHEET)	AS SHOWN

SHEET NUMBER

COVER

[DATE: 6/17/2020 9:27 AM] [AUTHOR: dbird] [PLOTTER: ...DWG To PDF.pc3] [STYLE: WHP-Standard.ctb]
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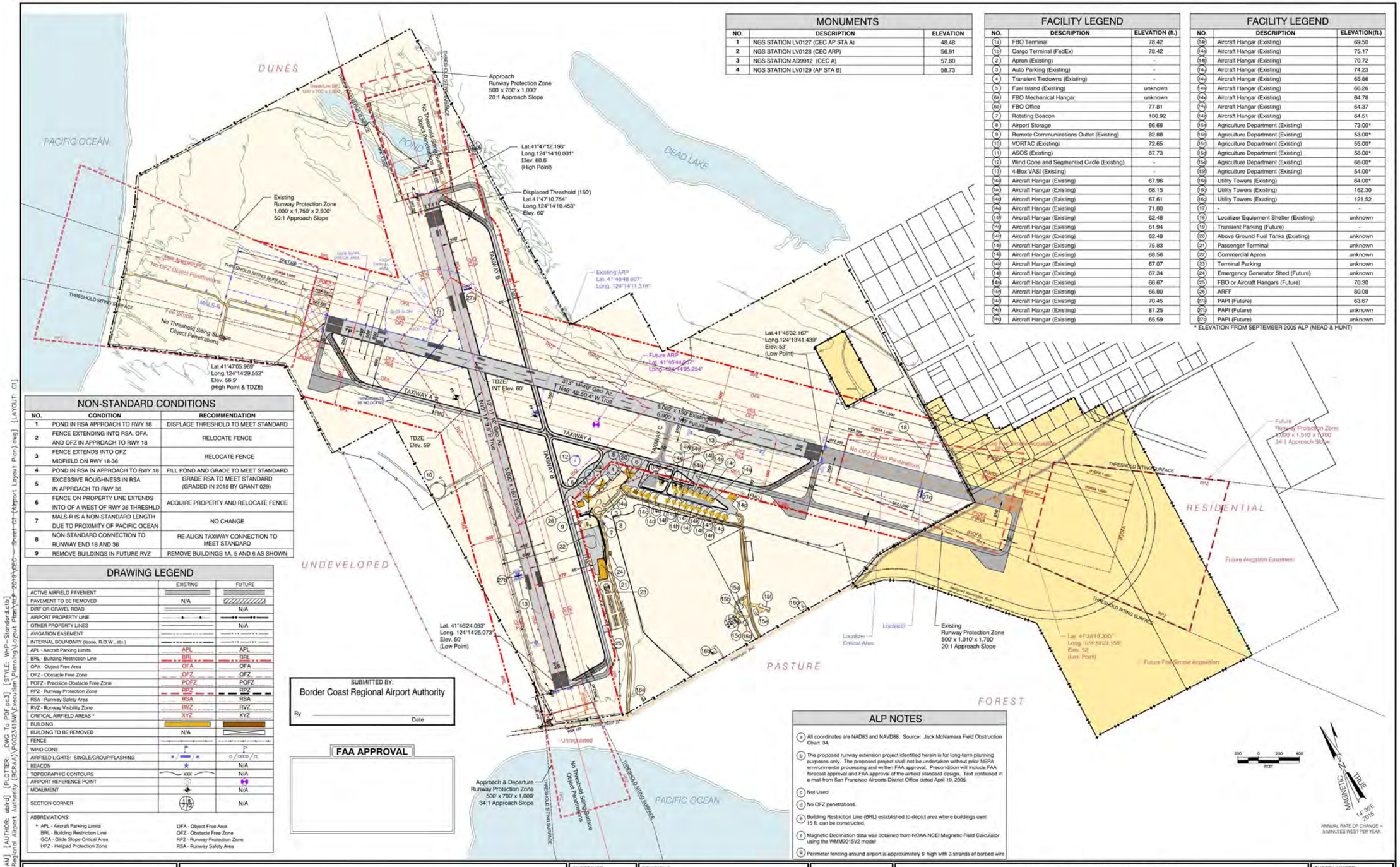
[LAYOUT: COVER]

Figure 6D: Title Sheet

Figure 6E: Airport Layout Plan



MONUMENTS

NO.	DESCRIPTION	ELEVATION
1	NGS STATION LV0127 (CEC AP STA A)	48.48
2	NGS STATION LV0128 (CEC ARP)	56.91
3	NGS STATION AD9912 (CEC A)	57.80
4	NGS STATION LV0129 (AP STA B)	58.73

FACILITY LEGEND

NO.	DESCRIPTION	ELEVATION (ft.)
1a	FBO Terminal	78.42
1b	Cargo Terminal (FedEx)	78.42
2	Apron (Existing)	-
3	Auto Parking (Existing)	-
4	Transient Tiedowns (Existing)	-
5	Fuel Island (Existing)	unknown
6a	FBO Mechanical Hangar	unknown
6b	FBO Office	77.81
7	Rotating Beacon	100.92
8	Airport Storage	66.68
9	Remote Communications Outlet (Existing)	82.88
10	VORTAC (Existing)	72.65
11	ASOS (Existing)	87.73
12	Wind Cone and Segmented Circle (Existing)	-
13	4-Box VASI (Existing)	-
14a	Aircraft Hangar (Existing)	67.96
14c	Aircraft Hangar (Existing)	68.15
14d	Aircraft Hangar (Existing)	67.61
14g	Aircraft Hangar (Existing)	71.80
14i	Aircraft Hangar (Existing)	62.48
14j	Aircraft Hangar (Existing)	61.94
14k	Aircraft Hangar (Existing)	62.48
14l	Aircraft Hangar (Existing)	75.83
14n	Aircraft Hangar (Existing)	68.56
14o	Aircraft Hangar (Existing)	67.07
14p	Aircraft Hangar (Existing)	67.34
14q	Aircraft Hangar (Existing)	66.67
14r	Aircraft Hangar (Existing)	66.80
14s	Aircraft Hangar (Existing)	70.45
14t	Aircraft Hangar (Existing)	81.25
14u	Aircraft Hangar (Existing)	65.59

FACILITY LEGEND

NO.	DESCRIPTION	ELEVATION(ft.)
14v	Aircraft Hangar (Existing)	69.50
14w	Aircraft Hangar (Existing)	75.17
14x	Aircraft Hangar (Existing)	70.72
14y	Aircraft Hangar (Existing)	74.23
14z	Aircraft Hangar (Existing)	65.66
14aa	Aircraft Hangar (Existing)	66.26
14ab	Aircraft Hangar (Existing)	64.78
14ac	Aircraft Hangar (Existing)	64.37
14ad	Aircraft Hangar (Existing)	64.51
15a	Agriculture Department (Existing)	73.00*
15b	Agriculture Department (Existing)	53.00*
15c	Agriculture Department (Existing)	55.00*
15d	Agriculture Department (Existing)	58.00*
15e	Agriculture Department (Existing)	66.00*
15f	Agriculture Department (Existing)	54.00*
16a	Utility Towers (Existing)	64.00*
16b	Utility Towers (Existing)	162.30
16c	Utility Towers (Existing)	121.52
17	-	-
18	Localizer Equipment Shelter (Existing)	unknown
19	Transient Parking (Future)	-
20	Above Ground Fuel Tanks (Existing)	unknown
21	Passenger Terminal	unknown
22	Commercial Apron	unknown
23	Terminal Parking	unknown
24	Emergency Generator Shed (Future)	unknown
25	FBO or Aircraft Hangars (Future)	70.30
26	ARFF	80.08
27a	PAPI (Future)	63.67
27b	PAPI (Future)	unknown
27c	PAPI (Future)	unknown

* ELEVATION FROM SEPTEMBER 2005 ALP (MEAD & HUNT)

NON-STANDARD CONDITIONS

NO.	CONDITION	RECOMMENDATION
1	POND IN RSA APPROACH TO RWY 18	DISPLACE THRESHOLD TO MEET STANDARD
2	FENCE EXTENDING INTO RSA, OFA, AND OFZ IN APPROACH TO RWY 18	RELOCATE FENCE
3	FENCE EXTENDS INTO OFZ MIDFIELD ON RWY 18-36	RELOCATE FENCE
4	POND IN RSA IN APPROACH TO RWY 18	FILL POND AND GRADE TO MEET STANDARD
5	EXCESSIVE ROUGHNESS IN RSA IN APPROACH TO RWY 36	GRADE RSA TO MEET STANDARD (GRADED IN 2015 BY GRANT 029)
6	FENCE ON PROPERTY LINE EXTENDS INTO OF A WEST OF RWY 36 THRESHLD	ACQUIRE PROPERTY AND RELOCATE FENCE
7	MALS-R IS A NON-STANDARD LENGTH DUE TO PROXIMITY OF PACIFIC OCEAN	NO CHANGE
8	NON-STANDARD CONNECTION TO RUNWAY END 18 AND 36	RE-ALIGN TAXIWAY CONNECTION TO MEET STANDARD
9	REMOVE BUILDINGS IN FUTURE RVZ	REMOVE BUILDINGS 1A, 5 AND 6 AS SHOWN

DRAWING LEGEND

	EXISTING	FUTURE
ACTIVE AIRFIELD PAVEMENT		
PAVEMENT TO BE REMOVED	N/A	
DIRT OR GRAVEL ROAD		N/A
AIRPORT PROPERTY LINE		
OTHER PROPERTY LINES		N/A
AVIGATION EASEMENT		
INTERNAL BOUNDARY (lease, R.O.W., etc.)		
APL - Aircraft Parking Limits	APL	APL
BRL - Building Restriction Line	BRL	BRL
OFA - Object Free Area	OFA	OFA
OFZ - Obstacle Free Zone	OFZ	OFZ
POFZ - Precision Obstacle Free Zone	POFZ	POFZ
RPZ - Runway Protection Zone	RPZ	RPZ
RSA - Runway Safety Area	RSA	RSA
RVZ - Runway Visibility Zone	RVZ	RVZ
CRITICAL AIRFIELD AREAS *	XYZ	XYZ
BUILDING		
BUILDING TO BE REMOVED	N/A	
FENCE		
WIND CONE		
AIRFIELD LIGHTS: SINGLE/GROUP/FLASHING	/ /	/ /
BEACON		N/A
TOPOGRAPHIC CONTOURS	XXX	N/A
AIRPORT REFERENCE POINT		
MONUMENT		N/A
SECTION CORNER		N/A

ABBREVIATIONS:

- APL - Aircraft Parking Limits
- BRL - Building Restriction Line
- GCA - Glide Slope Critical Area
- HPZ - Helipad Protection Zone
- OFA - Object Free Area
- OFZ - Obstacle Free Zone
- RPZ - Runway Protection Zone
- RSA - Runway Safety Area

SUBMITTED BY:
Border Coast Regional Airport Authority
By _____ Date

FAA APPROVAL

ALP NOTES

(a) All coordinates are NAD83 and NAVD88. Source: Jack McNamara Field Obstruction Chart 34.

(b) The proposed runway extension project identified herein is for long-term planning purposes only. The proposed project shall not be undertaken without prior NEPA environmental processing and written FAA approval. Precondition will include FAA forecast approval and FAA approval of the airfield standard design. Text contained in e-mail from San Francisco Airports District Office dated April 19, 2005.

(c) Not Used

(d) No OFZ penetrations.

(e) Building Restriction Line (BRL) established to depict area where buildings over 15 ft. can be constructed.

(f) Magnetic Declination data was obtained from NOAA NCEI Magnetic Field Calculator using the WMM2015V2 model

(g) Perimeter fencing around airport is approximately 6' high with 3 strands of barbed wire

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Portland, OR 97225
503-626-0455 Fax 503-526-0775
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REVISIONS			
NO.	BY	DATE	REMARKS

AIRPORT LAYOUT PLAN

BORDER COAST REGIONAL AIRPORT AUTHORITY
JACK MCNAMARA FIELD ALP

PROJECT NUMBER	DRAWING FILE NAME	SCALE
P0023415W	CEC - SHEET C1 (AIRPORT LAYOUT PLAN)	AS SHOWN

SHEET NUMBER: C1

[DATE: 6/17/2020 9:27 AM] [AUTHOR: obird] [PLOTTER: _DWG To PDF.pc3] [STYLE: WHP-Standard.ctb]
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RUNWAY DATA TABLE

ITEM		RUNWAY 12-30				RUNWAY 18-36			
		RUNWAY 12		RUNWAY 30		RUNWAY 18		RUNWAY 36	
		EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED
CRITICAL AIRCRAFT	TYPE	Q400/RJ-700	EMBRAER ERJ-135	Q400/RJ-700	EMBRAER ERJ-135	EMB BRASILIA	SAME	EMB BRASILIA	SAME
	WINGSPAN	93 FT 3 IN/76 FT 3 IN	65.8 FT	93 FT 3 IN/76 FT 3 IN	65.8 FT	64 FT 11 IN	SAME	64 FT 11 IN	SAME
	UNDERCARRIAGE WIDTH	33-46 FT	15.7 FT	33-46 FT	15.7 FT	22.9 FT	SAME	22.9 FT	SAME
	APPROACH SPEED (kts.)	-	124	-	124	91-121	SAME	91-121	SAME
	MAX. TAKEOFF WT. (lbs.)	92,000	41,888	92,000	41,888	25,353	SAME	25,353	SAME
RUNWAY DESIGN CODE (RDC)		C-III	C-II	C-III	C-II	B-II	SAME	B-II	SAME
RUNWAY REFERENCE CODE (RRC)		C-III	C-II	C-III	C-II	B-II	SAME	B-II	SAME
RUNWAY DIMENSIONS	LENGTH (FEET)	5,002	6,900	5,002	6,900	5,000	SAME	5,000	SAME
	WIDTH (FEET)	150	150	150	150	150	SAME	150	SAME
RUNWAY ORIENTATION (TRUE BEARING)		N 46 DEG 48 MIN 50.4 SEC W				N 13 DEG 11 MIN 9.6 SEC E			
AERONAUTICAL SURVEY REQUIRED		VG	SAME	NVG	SAME	NVG	SAME	VG	SAME
EFFECTIVE GRADIENT (%)		0.06	0.04	0.06	0.04	0.2	SAME	0.2	SAME
MAXIMUM GRADIENT (%)		0.06	0.04	0.06	0.04	0.2	SAME	0.2	SAME
RUNWAY END COORDINATES	LATITUDE	41° 47' 05.969" N	SAME	41° 46' 32.167" N	41° 46' 19.320" N	41° 47' 12.196" N	SAME	41° 46' 24.093" N	SAME
	LONGITUDE	124° 14' 29.552" W	SAME	124° 13' 41.439" W	124° 13' 23.158" W	124° 14' 10.001" W	SAME	124° 14' 25.073" W	SAME
	LATITUDE (DT)	NONE	NONE	NONE	NONE	NONE	41° 47' 10.754" N	NONE	NONE
	LONGITUDE (DT)	NONE	NONE	NONE	NONE	NONE	124° 14' 10.453" W	NONE	NONE
RUNWAY ELEVATIONS	END	56.9'	SAME	53'	53'	60.6'	SAME	50'	SAME
	TOUCHDOWN ZONE	56.9'	SAME	53'	53'	60.6'	SAME	50'	SAME
	HIGH POINT	56.9'				60.6'			
	LOW POINT	53'				50'			
	DISPLACED THRESHOLD	NONE	NONE	NONE	NONE	150'	SAME	NONE	NONE
WIND COVERAGE (13-KNOT %)		94.72%	SAME	94.72%	SAME	99.21%	SAME	99.21%	SAME
NAVAIDS		ILS/VOR/DME/GPS	SAME	NONE	GPS/LDA	NONE	SAME	GPS	SAME
VISUAL AIDS		MALS-R	SAME	REIL/VASI	PAPI/ODALS	REIL	REIL/PAPI	REIL/VASI	REIL/PAPI
APPROACH INFORMATION	TYPE	PRECISION	SAME	VISUAL	NON PRECISION	VISUAL	SAME	NON PRECISION	SAME
	MINIMUMS	3/4 MILE	SAME	1 MILE	3/4 MILE	1 MILE	SAME	1 MILE	SAME
	APPROACH SLOPE	50:1	SAME	20:1	34:1	20:1	34:1	34:1	SAME
PAVEMENT TYPE		ASPHALT	SAME	ASPHALT	SAME	ASPHALT	SAME	ASPHALT	SAME
PAVEMENT STRENGTH	SINGLE WHEEL GEAR (LBS)	30,000	60,000	30,000	60,000	30,000	SAME	30,000	SAME
	DUAL WHEEL GEAR (LBS)	43,000	92,000	43,000	92,000	43,000	SAME	43,000	SAME
LINE-OF-SIGHT		UNOBSTRUCTED	SAME	UNOBSTRUCTED	SAME	UNOBSTRUCTED	SAME	UNOBSTRUCTED	SAME
RUNWAY LIGHTING		HIRL	SAME	HIRL	SAME	MIRL	SAME	MIRL	SAME
RUNWAY MARKING		PRECISION	SAME	PRECISION	SAME	VISUAL	NON PRECISION	NON PRECISION	SAME
RUNWAY SAFETY AREA (RSA)	WIDTH (FEET)	500	SAME	500	SAME	150	SAME	150	SAME
	LENGTH BEYOND RUNWAY END	300	1,000	500	1,000	300	SAME	300	SAME
OBJECT FREE AREA (OFA)	WIDTH (FEET)	800	SAME	800	SAME	500	SAME	500	SAME
	LENGTH BEYOND RUNWAY END	1,000	SAME	1,000	SAME	0	SAME	140	SAME
OBJECT FREE ZONE (OFZ)	WIDTH (FEET)	400	SAME	400	SAME	400	SAME	400	SAME
	LENGTH BEYOND RUNWAY END	200	SAME	200	SAME	140	SAME	125	SAME
RUNWAY PROTECTION ZONE DIMENSIONS (W1,W2,L)		1000' X 1510' X 1700'	500' X 1010' X 1700'	500' X 1010' X 1700'	500' X 1010' X 1700'	500' X 700' X 1000'	SAME	500' X 700' X 1000'	SAME
OBSTRUCTION FREE CLEARANCE		40:1	40:1	40:1	40:1	20:1	20:1	34:1	34:1
RUNWAY CENTERLINE TO TAXIWAY CENTERLINE*		498	400	498	400	504	240	504	240
TAXIWAY INFORMATION	CENTERLINE TO FIXED OR MOVABLE OBJECT (FOMO)	93	93	93	93	65.5	65.5	65.5	65.5
	OBJECT FREE AREA	186	186	186	186	131	131	131	131
	SAFETY AREA WIDTH	118	118	118	118	79	79	79	79
	EDGE SAFETY MARGIN	7.5	SAME	7.5	SAME	7.5	SAME	7.5	SAME
	WINGTIP CLEARANCE	34	34	34	34	26	26	26	26
	SURFACE TYPE	ASPHALT	ASPHALT	ASPHALT	ASPHALT	ASPHALT	ASPHALT	ASPHALT	ASPHALT
	LIGHTING	NONE	MEDIUM INTENSITY	NONE	MEDIUM INTENSITY	NONE	MEDIUM INTENSITY	NONE	MEDIUM INTENSITY

*EXISTING REPRESENTS ACTUAL
PROPOSED REPRESENTS FAA CRITERIA

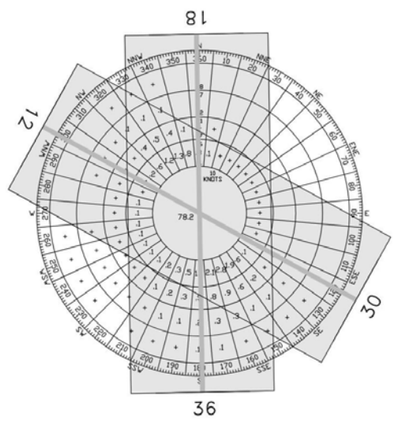
TAXIWAY	CURRENT TDG	FUTURE TDG	CURRENT ADG	FUTURE ADG
A	2	2	II	II
B	2	2	II	II
C (FUTURE)	2	2	II	II

AIRPORT DATA TABLE

ITEM		EXISTING	FUTURE
AIRPORT CODE		CEC	SAME
AIRPORT ELEVATION (Above Mean Sea Level)		61' MSL	SAME
AIRPORT REFERENCE POINT	Latitude	41° 46' 48.607" N	41° 46' 44.957" N
	Longitude	124° 14' 11.516" W	124° 14' 05.254" W
MEAN MAX. TEMP. (Hottest Month)*		66° F (AUG-SEPT)	SAME
WIND COVERAGE - 13 KTS		99.84%	SAME
MAGNETIC DECLINATION		15° 36' E	-
AIRPORT REFERENCE CODE (ARC)		CIII	CII
CRITICAL AIRCRAFT		Q400/RJ-700	EMBRAER ERJ-135
NPIAS SERVICE LEVEL		COMMERCIAL	SAME
AIRPORT ACREAGE	FEE	574	725
	EASEMENT	0	58.9

*NOAA

ALL WEATHER WIND ROSE

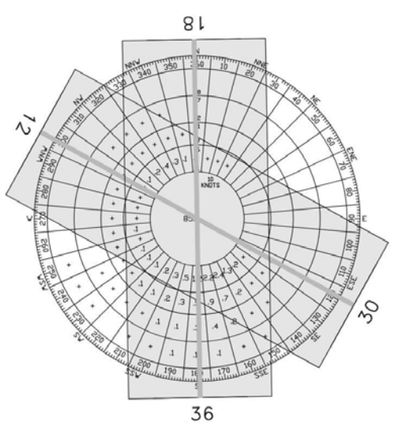


OBSERVATIONS: 145,833

RUNWAY	12 MPH (10.5 KNOTS)	15 MPH (13 KNOTS)	18 MPH (16 KNOTS)	23 MPH (20 KNOTS)
12-30	90.04%	94.72%	97.60%	99.14%
18-36	97.89%	99.21%	99.81%	99.97%
COMBINED	99.35%	99.83%	99.96%	99.99%

SOURCE: FAA WIND ROSE CALCULATOR "725946 JACK MCNAMARA FIELD ARPT ANNUAL PERIOD RECORD 2009-2018"

INSTRUMENT FLIGHT RULES WIND ROSE



OBSERVATIONS: 59,733

RUNWAY	12 MPH (10.5 KNOTS)	15 MPH (13 KNOTS)	18 MPH (16 KNOTS)	23 MPH (20 KNOTS)
12-30	91.80%	95.40%	97.38%	98.95%
18-36	99.19%	99.65%	99.89%	99.98%
COMBINED	99.58%	99.85%	99.95%	99.99%

DECLARED DISTANCES TABLE

	EXISTING			
	12	30	18	36
TAKEOFF RUN AVAILABLE (TORA)	5,002'	5,002'	5,000'	5,000'
TAKEOFF DISTANCE AVAILABLE (TODA)	5,002'	5,002'	5,000'	5,000'
ACCELERATE STOP DISTANCE AVAILABLE (ASDA)	5,002'	5,002'	4,850'	5,000'
LANDING DISTANCE AVAILABLE (LDA)	5,002'	5,002'	4,850'	4,850'

14° 36'E
2015

ANNUAL RATE OF CHANGE = 5 MINUTES WEST PER YEAR

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Portland, OR 97225
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NO.	BY	DATE	REMARKS

AIRPORT DATA SHEET

BORDER COAST REGIONAL AIRPORT AUTHORITY
JACK MCNAMARA FIELD ALP

PROJECT NUMBER	DRAWING FILE NAME	SCALE
P0023415W	CEC - SHEET C2 (AIRPORT DATA SHEET)	AS SHOWN

SHEET NUMBER
C2

Figure 6F: Airport Data Sheet

[DATE: 6/17/2020 9:27 AM] [AUTHOR: abird] [PLOTTER: _DWG To PDF.pc3] [STYLE: WHP-Standard.ctb]
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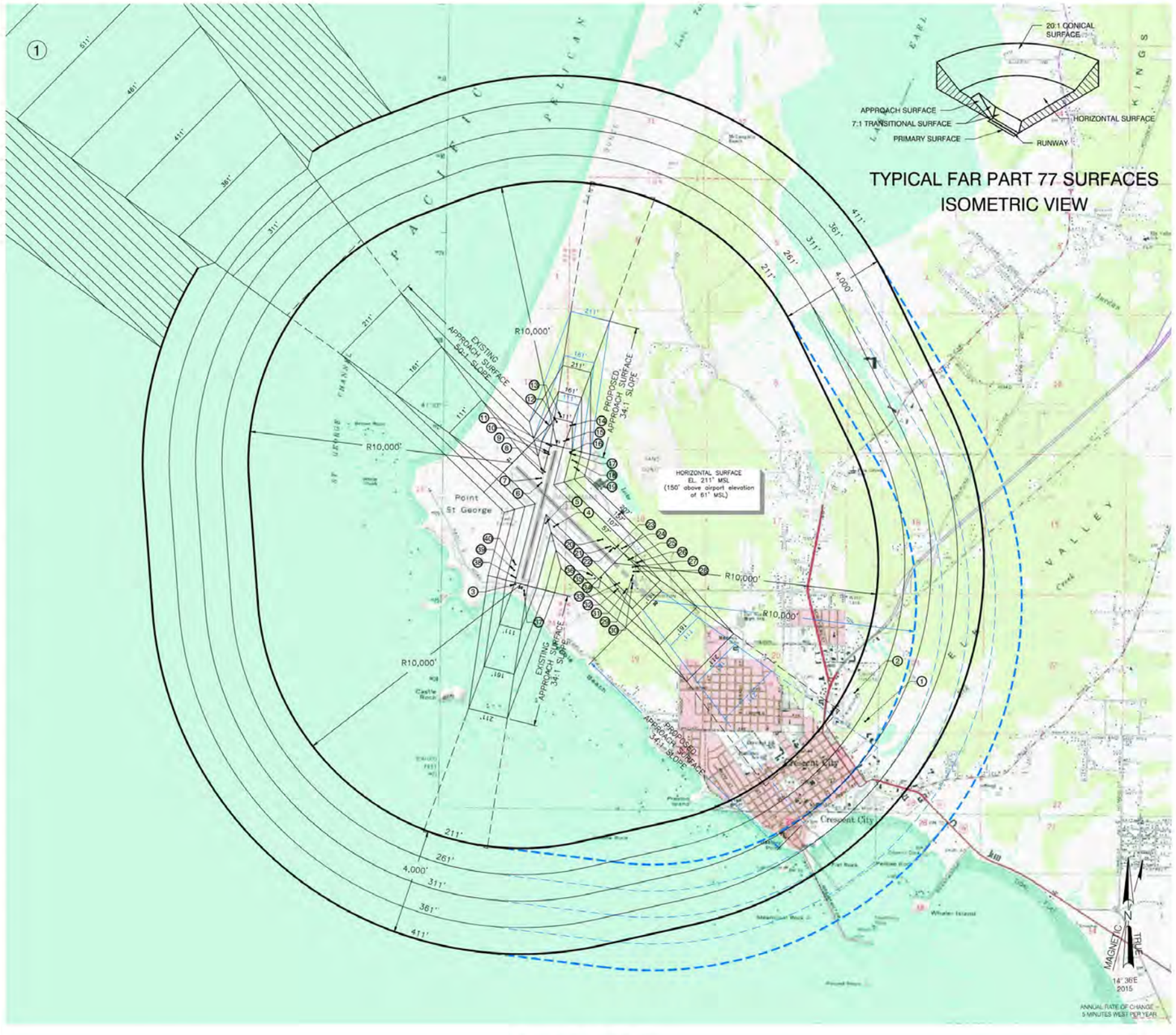

AIRSPACE PLAN

FAR PART 77 DIMENSIONAL CRITERIA				
ITEM	RUNWAY 12-30		RUNWAY 18-36	
	Runway 12	Runway 30	Runway 18	Runway 36
RUNWAY TYPE	Precision Instrument with visibility minimums greater than 3/4 mile	Visual with visibility minimums greater than 1 mile	Visual with visibility minimums greater than 1 mile	Non-precision Instrument with visibility minimums greater than 1 mile
APPROACH SLOPE	50:1	20:1	20:1	34:1
APPROACH SLOPE INNER WIDTH	1,000	1,000	1,000	1,000
APPROACH SLOPE OUTER WIDTH	16,000	3,500	3,500	3,500
APPROACH SLOPE LENGTH	10,000	10,000	10,000	10,000
PRIMARY SURFACE WIDTH	1,000	1,000	1,000	1,000
RADIUS OF HORIZONTAL SURFACE	10,000	10,000	10,000	10,000

NO OBSTRUCTIONS IDENTIFIED.

OBSTRUCTION DATA TABLE					
NO.	Description	EL (MSL)	Surface	Penetration	Corrective Action
(1)	TOWER	326'	HORIZONTAL	115'	LIGHTED
(2)	TOWER	229'	HORIZONTAL	18'	LIGHTED
(3)	BUILDING	56'	APPROACH	10'	LIGHT OR REMOVE
(4)	GENERATOR	61'	PRIMARY	2'	NONE
(5)	POLE	75'	TRANSITIONAL	4'	REMOVE
(6)	POLE	74'	PRIMARY	13'	RELOCATE
(7)	TOWER	86'	PRIMARY	20'	RELOCATE
(8)	TREE	77'	PRIMARY	17'	REMOVE
(9)	TREE	71.5'	PRIMARY	11.5'	REMOVE
(10)	TREE	73.2'	PRIMARY	13.2'	REMOVE
(11)	TREE	75.8'	PRIMARY	15.8'	REMOVE
(12)	TREE	150.9'	APPROACH	44.2'	REMOVE
(13)	TREE	121.6'	APPROACH	28.3	REMOVE
(14)	TREE	104.9'	APPROACH	18.4	REMOVE
(15)	TREE	78'	APPROACH	9.8'	REMOVE
(16)	TREE	107.3'	TRANSITIONAL	4.4'	REMOVE
(17)	TREE	115.3'	TRANSITIONAL	8.6'	REMOVE
(18)	TREE	132.6'	TRANSITIONAL	7.3'	REMOVE
(19)	TREE	152.8'	TRANSITIONAL	4.6'	REMOVE
(20)	TREE	94.2'	PRIMARY	39.6'	REMOVE
(21)	TREE	86.4'	PRIMARY	32.4'	REMOVE
(22)	TREE	90.4'	PRIMARY	36.8'	REMOVE
(23)	TREE	85.4'	PRIMARY	31.9'	REMOVE
(24)	TREE	101.4'	TRANSITIONAL	24.3'	REMOVE
(25)	TREE	103.1'	APPROACH	41.1'	REMOVE
(26)	TREE	149.7'	TRANSITIONAL	68.8'	REMOVE
(27)	TREE	106.9'	APPROACH	35.9'	REMOVE
(28)	TREE	106.2'	APPROACH	31.1'	REMOVE
(29)	TREE	95.9'	APPROACH	18.3'	REMOVE
(30)	TREE	89.5'	APPROACH	6.1'	REMOVE
(31)	TREE	127.7'	APPROACH	44.4'	REMOVE
(32)	TREE	135.0'	APPROACH	58.9'	REMOVE
(33)	TREE	112.7'	APPROACH	40.1'	REMOVE
(34)	TREE	122.2'	TRANSITIONAL	24.2'	REMOVE
(35)	TREE	138.5'	TRANSITIONAL	13.8'	REMOVE
(36)	TREE	129.5'	TRANSITIONAL	6.1'	REMOVE
(37)	TREE	61.8'	APPROACH	5.6'	REMOVE
(38)	TREE	66.3'	TRANSITIONAL	13.4'	REMOVE
(39)	TREE	88.3'	TRANSITIONAL	18.1'	REMOVE
(40)	TREE	95.1'	TRANSITIONAL	24.1'	REMOVE

NOTES

(1) IT IS COMMON TO PROVIDE AIRSPACE DRAWINGS TO THE FULL EXTENT OF THE APPROACH ZONE. IN THIS CASE THE APPROACH ZONE RISES AT A 40:1 SLOPE OVER OPEN OCEAN. NO DRAWINGS IS PROVIDED.

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NO.	BY	DATE	REMARKS

AIRPORT AIRSPACE PLAN

BORDER COAST REGIONAL AIRPORT AUTHORITY
JACK MCNAMARA FIELD ALP

PROJECT NUMBER	DRAWING FILE NAME	SCALE
P0023415W	CEC - SHEET C3 (AIRPORT AIRSPACE PLAN)	AS SHOWN

SHEET NUMBER
C3

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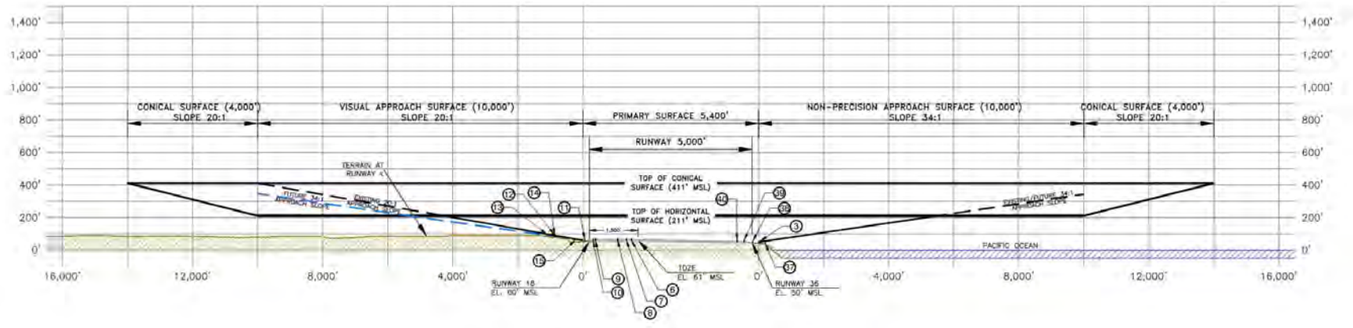
Figure 6G: Airport Airspace Plan

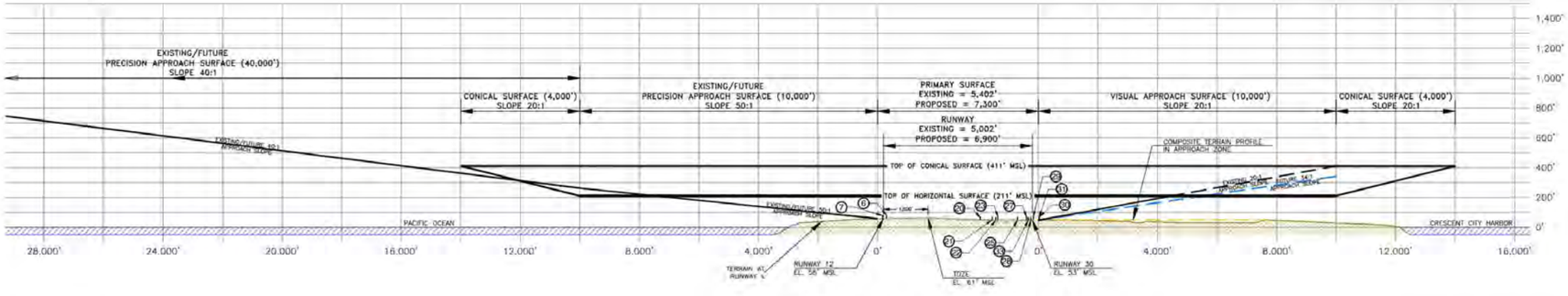


AIRSPACE PROFILE, RUNWAY 18-36

FAR PART 77 DIMENSIONAL CRITERIA				
ITEM	RUNWAY 12-30		RUNWAY 18-36	
	Runway 12	Runway 30	Runway 18	Runway 36
RUNWAY TYPE	Precision Instrument with visibility minimums greater than 3/4 mile	Visual with visibility minimums greater than 1 mile	Visual with visibility minimums greater than 1 mile	Non-precision Instrument with visibility minimums greater than 1 mile
APPROACH SLOPE	50:1	20:1	20:1	34:1
APPROACH SLOPE INNER WIDTH	1,000	1,000	1,000	1,000
APPROACH SLOPE OUTER WIDTH	16,000	3,500	3,500	3,500
APPROACH SLOPE LENGTH	10,000	10,000	10,000	10,000
PRIMARY SURFACE WIDTH	1,000	1,000	1,000	1,000
RADIUS OF HORIZONTAL SURFACE	10,000	10,000	10,000	10,000

NO OBSTRUCTIONS IDENTIFIED.

OBSTRUCTION DATA TABLE					
NO.	Description	EL (MSL)	Surface	Penetration	Corrective Action
1	TOWER	326'	HORIZONTAL	115'	LIGHTED
2	TOWER	229'	HORIZONTAL	18'	LIGHTED
3	BUILDING	56'	APPROACH	10'	LIGHT OR REMOVE
4	GENERATOR	61'	PRIMARY	2'	NONE
5	POLE	75'	TRANSITIONAL	4'	REMOVE
6	POLE	74'	PRIMARY	13'	RELOCATE
7	TOWER	86'	PRIMARY	20'	RELOCATE
8	TREE	77'	PRIMARY	17'	REMOVE
9	TREE	71.5'	PRIMARY	11.5'	REMOVE
10	TREE	73.2'	PRIMARY	13.2'	REMOVE
11	TREE	75.8'	PRIMARY	15.8'	REMOVE
12	TREE	130.9'	APPROACH	44.2'	REMOVE
13	TREE	121.6'	APPROACH	28.3'	REMOVE
14	TREE	104.9'	APPROACH	18.4'	REMOVE
15	TREE	78'	APPROACH	9.8'	REMOVE
16	TREE	107.3'	TRANSITIONAL	4.4'	REMOVE
17	TREE	115.3'	TRANSITIONAL	5.6'	REMOVE
18	TREE	132.6'	TRANSITIONAL	7.3'	REMOVE
19	TREE	152.8'	TRANSITIONAL	4.6'	REMOVE
20	TREE	94.2'	PRIMARY	39.6'	REMOVE
21	TREE	86.4'	PRIMARY	32.4'	REMOVE
22	TREE	90.4'	PRIMARY	36.8'	REMOVE
23	TREE	83.4'	PRIMARY	31.9'	REMOVE
24	TREE	101.4'	TRANSITIONAL	24.3'	REMOVE
25	TREE	103.1'	APPROACH	41.1'	REMOVE
26	TREE	149.7'	TRANSITIONAL	68.8'	REMOVE
27	TREE	108.9'	APPROACH	35.9'	REMOVE
28	TREE	106.2'	APPROACH	31.1'	REMOVE
29	TREE	95.9'	APPROACH	18.3'	REMOVE
30	TREE	89.5'	APPROACH	6.1'	REMOVE
31	TREE	127.7'	APPROACH	44.4'	REMOVE
32	TREE	135.0'	APPROACH	58.9'	REMOVE
33	TREE	112.7'	APPROACH	40.1'	REMOVE
34	TREE	122.2'	TRANSITIONAL	24.2'	REMOVE
35	TREE	138.5'	TRANSITIONAL	12.8'	REMOVE
36	TREE	129.5'	TRANSITIONAL	6.1'	REMOVE
37	TREE	61.8'	APPROACH	5.6'	REMOVE
38	TREE	66.3'	TRANSITIONAL	13.4'	REMOVE
39	TREE	88.3'	TRANSITIONAL	18.1'	REMOVE
40	TREE	95.1'	TRANSITIONAL	24.1'	REMOVE



AIRSPACE PROFILE, RUNWAY 12-30

NOTES

All elevations in feet above mean sea level (MSL).
No obstructions identified.
Runway End Elevations and coordinates are in NAD83 and NAVD88.

SOURCE

USGS topographic maps.
USGS aerial photo.
National Ocean Service Obstruction Chart #34 (January 1993).

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AIRPORT AIRSPACE PROFILES

BORDER COAST REGIONAL AIRPORT AUTHORITY
JACK MCNAMARA FIELD ALP

PROJECT NUMBER	DRAWING FILE NAME	SCALE
P0023415W	CEC - SHEET C4 (AIRPORT AIRSPACE PROFILES)	AS SHOWN

SHEET NUMBER
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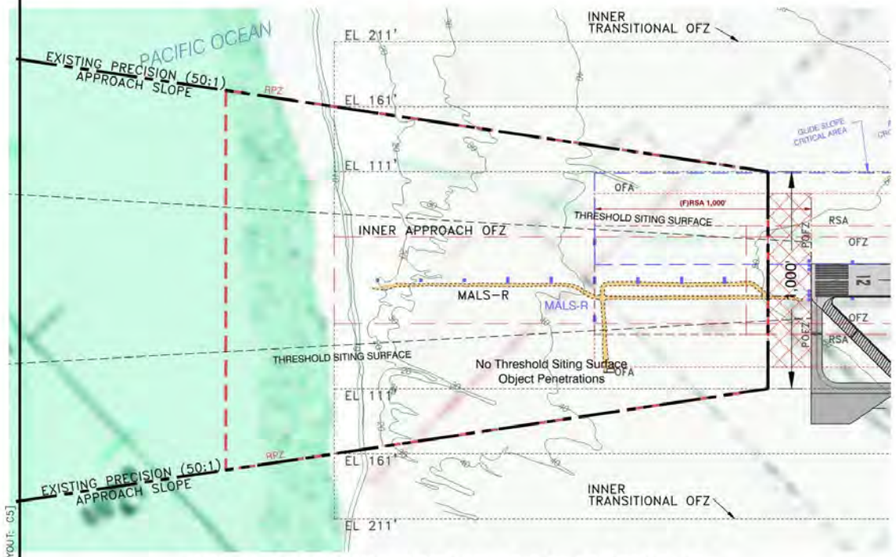
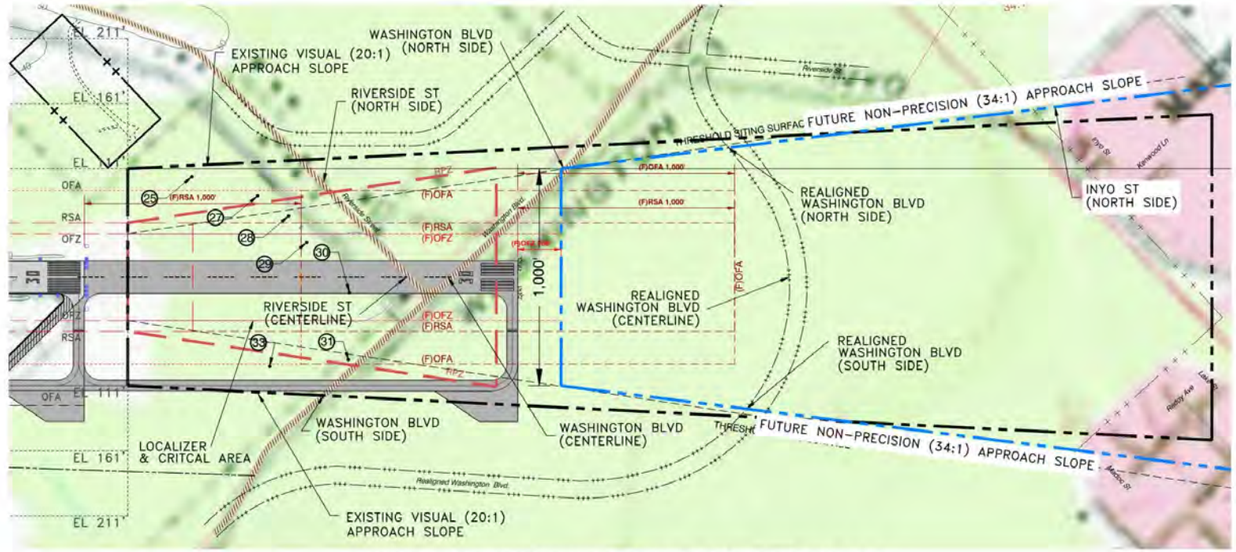
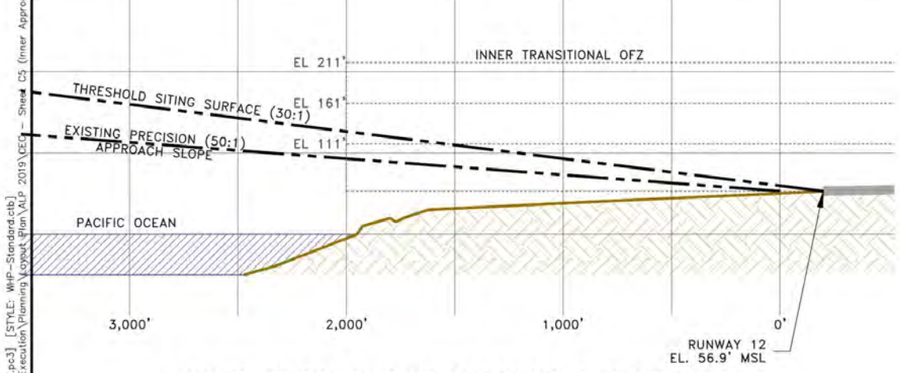
Figure 6H: Airport Airspace Profiles



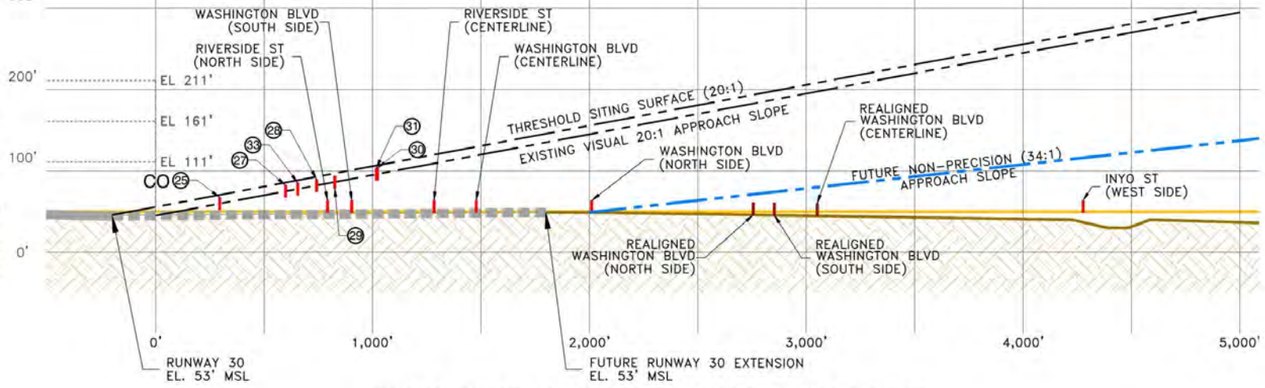
INNER APPROACH SURFACE PLAN, RUNWAY 12



INNER APPROACH SURFACE PLAN, RUNWAY 30



INNER APPROACH SURFACE PROFILE, RUNWAY 12



INNER APPROACH SURFACE PROFILE, RUNWAY 30

OBSTRUCTION DATA TABLE

NO.	Description	EL (MSL)	TSS Surface Penetration	Approach Surface Penetration	Corrective Action
25	TREE	103.1'	31.1'	41.1'	REMOVE
27	TREE	106.9'	25.9'	35.9'	REMOVE
28	TREE	106.2'	21.1'	31.1'	REMOVE
29	TREE	95.9'	8.3'	18.3'	REMOVE
30	TREE	89.5'	--	6.1'	REMOVE
31	TREE	127.7'	34.4'	44.4'	REMOVE
33	TREE	112.7'	30.1'	40.1'	REMOVE

DRAWING LEGEND	
FARR PART 77 APPROACH SURFACES	
OBSTRUCTION	
CONTROLLING OBJECT (CO)	XXX (CO)
TERRAIN CENTERLINE ELEVATION	

NOTES

1. ALL ELEVATIONS IN FEET ABOVE MEAN SEA LEVEL (MSL) AT TOP OF OBJECT. THIS VALUE INCLUDES 15 FEET ADDED TO NON-INTERSTATE ROADWAYS, 17 FEET ADDED TO INTERSTATE HIGHWAYS, AND 23 FEET ADDED TO RAILROADS.
2. NO OFZ OBJECT PENETRATIONS
3. RUNWAY ELEVATIONS ARE NAD83 AND NAVD88

SOURCE

USGS topographic maps.
National Ocean Service Obstruction - Chart #34 (January 1993).

150 0 150 300
HORIZONTAL SCALE IN FEET
40 0 40 80
VERTICAL SCALE IN FEET

TRUE
MAGNETIC
14° 36'E
2015
ANNUAL RATE OF CHANGE – 6 MINUTES WEST PER YEAR

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INNER APPROACH RWY 12-30

BORDER COAST REGIONAL AIRPORT AUTHORITY
JACK MCNAMARA FIELD ALP

PROJECT NUMBER	DRAWING FILE NAME	SCALE
P0023415W	CEC - SHEET C5 (INNER APPROACH RWY 12-30)	AS SHOWN

SHEET NUMBER
C5

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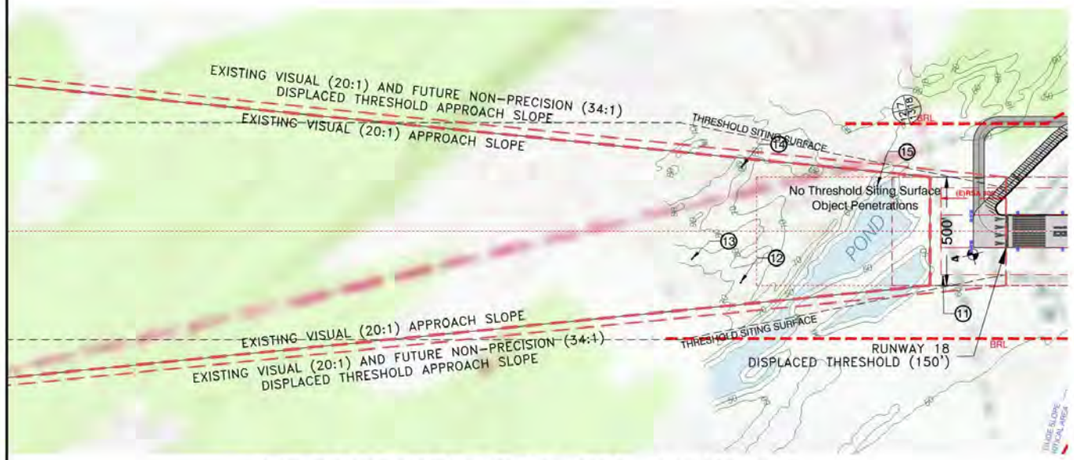
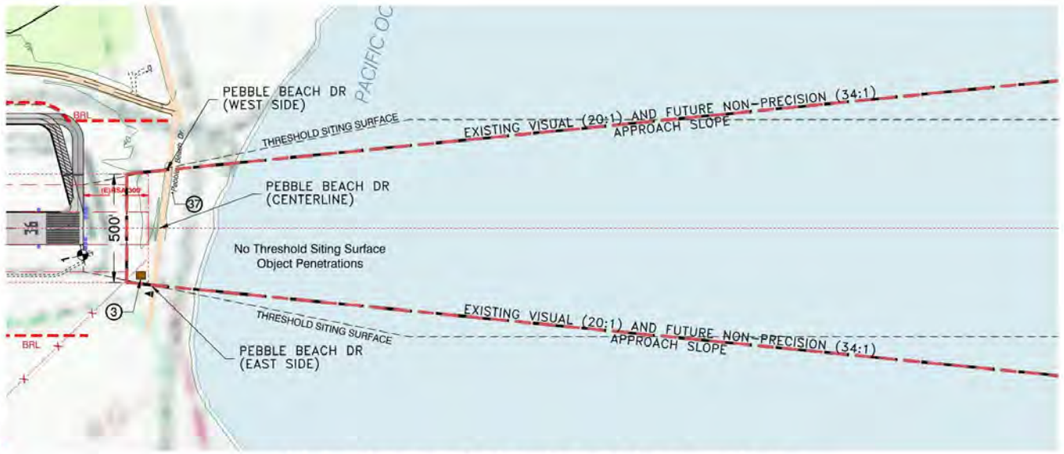
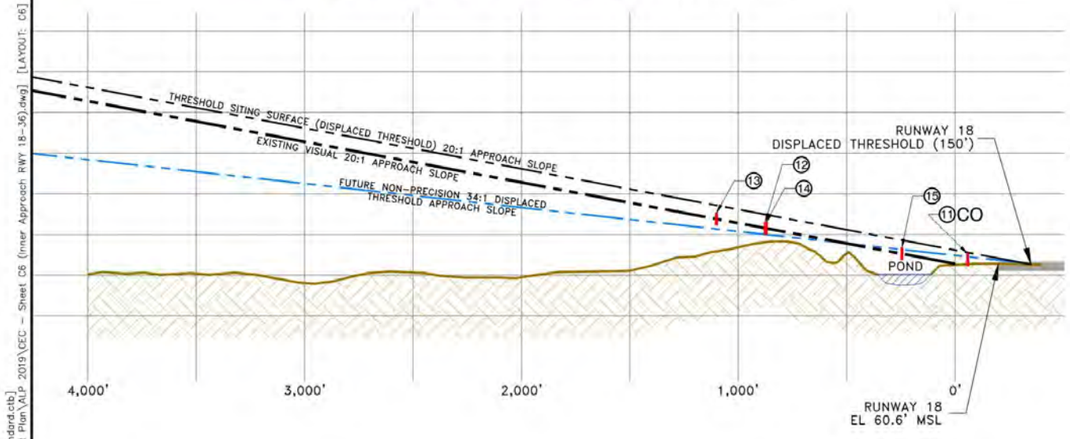
Figure 6I: Inner Approach Rwy 12-30



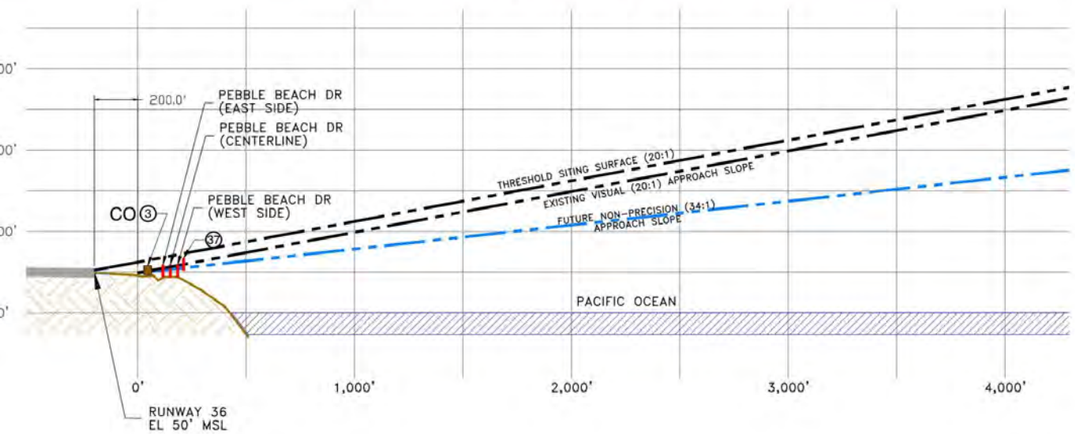
INNER APPROACH SURFACE PLAN, RUNWAY 18



INNER APPROACH SURFACE PLAN, RUNWAY 36



INNER APPROACH SURFACE PROFILE, RUNWAY 18



INNER APPROACH SURFACE PROFILE, RUNWAY 36

OBSTRUCTION DATA TABLE

NO.	Description	EL (MSL)	Surface	TSS Penetration	Approach Surface Penetration	Corrective Action
③	BUILDING	56'	APPROACH	10'	-	LIGHT OR REMOVE
⑪	TREE	75.8'	PRIMARY	15.8'	-	REMOVE
⑫	TREE	130.9'	APPROACH	44.2'	26.7'	REMOVE
⑬	TREE	121.6'	APPROACH	28.3	10.8'	REMOVE
⑭	TREE	104.9'	APPROACH	18.4	0.9'	REMOVE
⑮	TREE	78'	APPROACH	9.8'	-	REMOVE
㊲	TREE	61.8'	APPROACH	5.6'	-	REMOVE

DRAWING LEGEND	
FARR PART 77 APPROACH SURFACES	
OBSTRUCTION	
CONTROLLING OBJECT (CO)	XXX (CO)
TERRAIN CENTERLINE ELEVATION	

150 0 150 300
HORIZONTAL SCALE IN FEET
40 0 40 80
VERTICAL SCALE IN FEET

TRUE
MAGNETIC
2015
14° 36'
ANNUAL RATE OF CHANGE ≈ 5 MINUTES WEST PER YEAR

NOTES

1. ALL ELEVATIONS IN FEET ABOVE MEAN SEA LEVEL (MSL) AT TOP OF OBJECT. THIS VALUE INCLUDES 15 FEET ADDED TO NON-INTERSTATE ROADWAYS, 17 FEET ADDED TO INTERSTATE HIGHWAYS, AND 23 FEET ADDED TO RAILROADS.
2. NO OFZ OBJECT PENETRATIONS
3. RUNWAY ELEVATIONS ARE NAD83 AND NAVD88

SOURCE

USGS topographic maps.
National Ocean Service Obstruction - Chart #34 (January 1993).

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INNER APPROACH RWY 18-36

BORDER COAST REGIONAL AIRPORT AUTHORITY
JACK MCNAMARA FIELD ALP

PROJECT NUMBER	DRAWING FILE NAME	SCALE
P0023415W	CEC - SHEET C6 (INNER APPROACH RWY 18-36)	AS SHOWN

SHEET NUMBER
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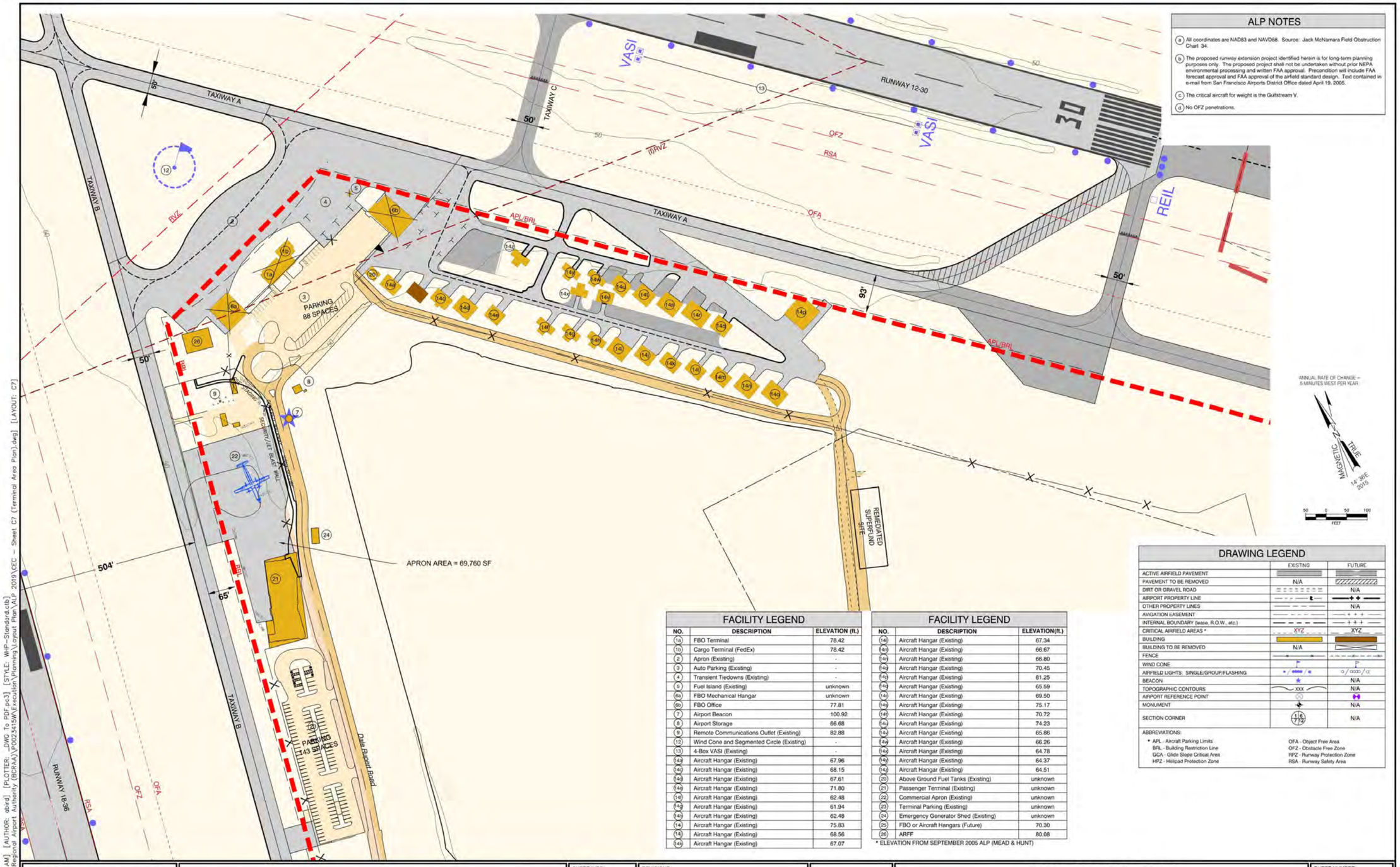
Figure 6J: Inner Approach Rwy 18-36

Figure 6K: Terminal Area Plan



ALP NOTES

(a) All coordinates are NAD83 and NAVD88. Source: Jack McNamara Field Obstruction Chart 34.

(b) The proposed runway extension project identified herein is for long-term planning purposes only. The proposed project shall not be undertaken without prior NEPA environmental processing and written FAA approval. Precondition will include FAA forecast approval and FAA approval of the airfield standard design. Text contained in e-mail from San Francisco Airports District Office dated April 19, 2005.

(c) The critical aircraft for weight is the Gulfstream V.

(d) No OFZ penetrations.

FACILITY LEGEND

NO.	DESCRIPTION	ELEVATION (ft.)
1a	FBO Terminal	78.42
1b	Cargo Terminal (FedEx)	78.42
2	Apron (Existing)	-
3	Auto Parking (Existing)	-
4	Transient Tiedowns (Existing)	-
5	Fuel Island (Existing)	unknown
6a	FBO Mechanical Hangar	unknown
6b	FBO Office	77.81
7	Airport Beacon	100.92
8	Airport Storage	66.68
9	Remote Communications Outlet (Existing)	82.88
12	Wind Cone and Segmented Circle (Existing)	-
13	4-Box VASI (Existing)	-
14g	Aircraft Hangar (Existing)	67.96
14z	Aircraft Hangar (Existing)	68.15
14a	Aircraft Hangar (Existing)	67.61
14m	Aircraft Hangar (Existing)	71.80
14l	Aircraft Hangar (Existing)	62.48
14s	Aircraft Hangar (Existing)	61.94
14h	Aircraft Hangar (Existing)	62.48
14c	Aircraft Hangar (Existing)	75.83
14d	Aircraft Hangar (Existing)	68.56
14b	Aircraft Hangar (Existing)	67.07

FACILITY LEGEND

NO.	DESCRIPTION	ELEVATION(ft.)
14j	Aircraft Hangar (Existing)	67.34
14n	Aircraft Hangar (Existing)	66.67
14y	Aircraft Hangar (Existing)	66.80
14q	Aircraft Hangar (Existing)	70.45
14p	Aircraft Hangar (Existing)	81.25
14o	Aircraft Hangar (Existing)	65.59
14i	Aircraft Hangar (Existing)	69.50
14m	Aircraft Hangar (Existing)	75.17
14f	Aircraft Hangar (Existing)	70.72
14u	Aircraft Hangar (Existing)	74.23
14x	Aircraft Hangar (Existing)	65.86
14w	Aircraft Hangar (Existing)	66.26
14k	Aircraft Hangar (Existing)	64.78
14e	Aircraft Hangar (Existing)	64.37
14r	Aircraft Hangar (Existing)	64.51
20	Above Ground Fuel Tanks (Existing)	unknown
21	Passenger Terminal (Existing)	unknown
22	Commercial Apron (Existing)	unknown
23	Terminal Parking (Existing)	unknown
24	Emergency Generator Shed (Existing)	unknown
25	FBO or Aircraft Hangars (Future)	70.30
26	ARFF	80.08

* ELEVATION FROM SEPTEMBER 2005 ALP (MEAD & HUNT)

DRAWING LEGEND

	EXISTING	FUTURE
ACTIVE AIRFIELD PAVEMENT		
PAVEMENT TO BE REMOVED	N/A	
DIRT OR GRAVEL ROAD		N/A
AIRPORT PROPERTY LINE		
OTHER PROPERTY LINES		N/A
AVIGATION EASEMENT		
INTERNAL BOUNDARY (lease, R.O.W., etc.)		
CRITICAL AIRFIELD AREAS *	XYZ	XYZ
BUILDING		
BUILDING TO BE REMOVED	N/A	
FENCE		
WIND CONE		
AIRFIELD LIGHTS: SINGLE/GROUP/FLASHING	/	/
BEACON		N/A
TOPOGRAPHIC CONTOURS	XXX	N/A
AIRPORT REFERENCE POINT		
MONUMENT		N/A
SECTION CORNER		N/A

ABBREVIATIONS:

- APL - Aircraft Parking Limits
- BRL - Building Restriction Line
- GCA - Glide Slope Critical Area
- HPZ - Helipad Protection Zone
- OFA - Object Free Area
- OFZ - Obstacle Free Zone
- RPZ - Runway Protection Zone
- RSA - Runway Safety Area

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TERMINAL AREA PLAN

BORDER COAST REGIONAL AIRPORT AUTHORITY
JACK MCNAMARA FIELD ALP

PROJECT NUMBER	DRAWING FILE NAME	SCALE
P0023415W	CEC - SHEET C7 (TERMINAL AREA PLAN)	AS SHOWN

SHEET NUMBER: C7

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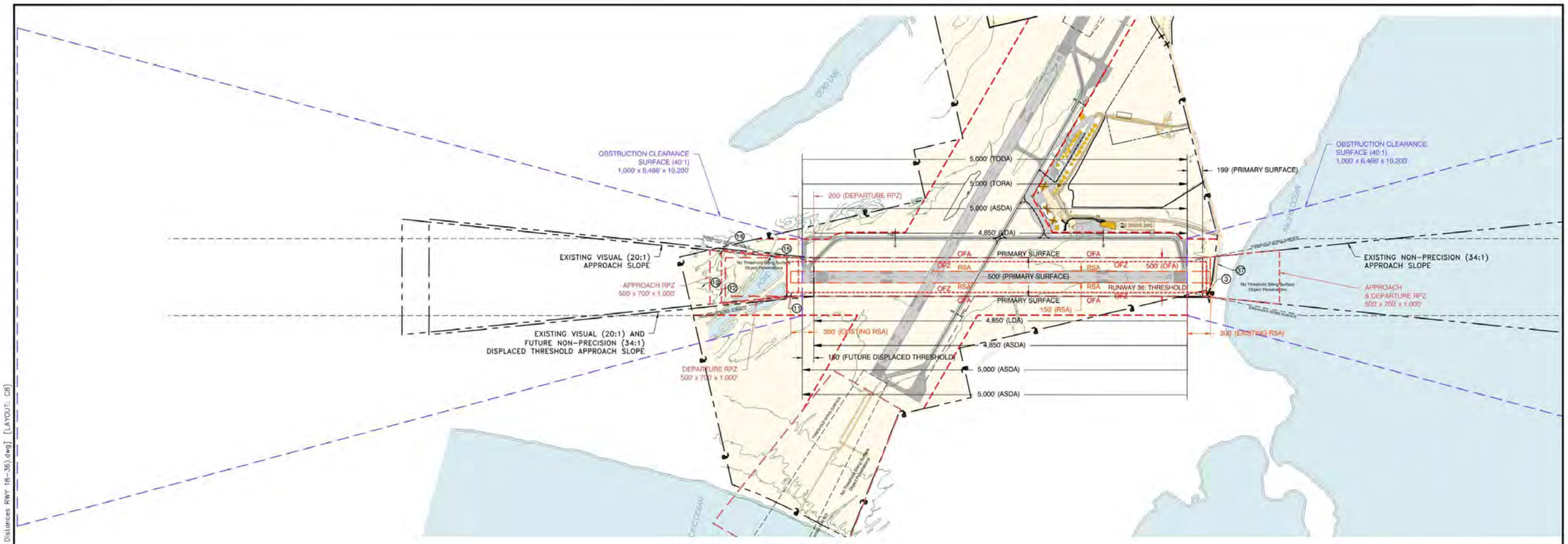

RUNWAY 18-36: PLAN VIEW

RUNWAY 18-36: PROFILE VIEW

OBSTRUCTION DATA TABLE					
NO.	Description	EL (MSL)	Surface	Penetration	Corrective Action
③	BUILDING	56'	APPROACH	10'	LIGHT OR REMOVE
⑬	TREE	75.8'	PRIMARY	15.8'	REMOVE
⑫	TREE	130.9'	APPROACH	44.2'	REMOVE
⑬	TREE	121.6'	APPROACH	28.3	REMOVE
⑭	TREE	104.9'	APPROACH	18.4	REMOVE
⑮	TREE	78'	APPROACH	9.8'	REMOVE
⑰	TREE	61.8'	APPROACH	5.6'	REMOVE

NOTES

1. ALL ELEVATIONS IN FEET ABOVE MEAN SEA LEVEL (MSL) AT TOP OF OBJECT. THIS VALUE INCLUDES 15 FEET ADDED TO NON-INTERSTATE ROADWAYS, 17 FEET ADDED TO INTERSTATE HIGHWAYS, AND 23 FEET ADDED TO RAILROADS.
2. RUNWAY END ELEVATIONS ARE NAVD88.

SOURCE

USGS topographic maps.
National Ocean Service Obstruction - Chart #34 (January 1993).

HORIZONTAL SCALE IN FEET: 500 0 500 600
VERTICAL SCALE IN FEET: 80 0 80 160

TRUE NORTH / MAGNETIC
ANNUAL RATE OF CHANGE = 5 MINUTES WEST PER YEAR

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DECLARED DISTANCES RWY 18-36

BORDER COAST REGIONAL AIRPORT AUTHORITY
JACK MCNAMARA FIELD ALP

PROJECT NUMBER	DRAWING FILE NAME	SCALE
P0023415W	CEC - SHEET C8 (DECLARED DISTANCES RWY 18-36)	AS SHOWN

SHEET NUMBER: C8

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[PATH: P:\Border Coast Regional Airport Authority (BCRAA)\P0023415W\Execution\Planning\Layout Plan\ALP 2019\CEC - Sheet C8 (Declared Distances RWY 18-36).dwg] [LAYOUT: C8]

Figure 6L: Declared Distances Rwy 18-36

Figure 6M: On Airport Land Use

DUNES

PACIFIC OCEAN

DEAD LAKE

Approach
Runway Protection Zone
500' x 700' x 1,000'
20:1 Approach Slope

Lat:41°47'12.196"
Long.124°14'10.001"
Elev. 60.6'
(High Point)

Displaced Threshold (150')
Lat.41°47'10.754"
Long.124°14'10.453"
Elev. 60'

Existing
Runway Protection Zone
1,000' x 1,750' x 2,500'
50:1 Approach Slope

Existing ARP
Lat. 41°46'49.607"
Long. 124°14'11.516"

Lat.41°47'05.969"
Long.124°14'29.652"
Elev. 56.9'
(High Point & TDZE)

Lat.41°46'32.167"
Long.124°13'41.439"
Elev. 53'
(Low Point)

Future ARP
Lat. 41°46'44.907"
Long. 124°14'05.054"

TDZE
Elev. 59'

TDZE
INT Elev. 60'

Future
Runway Protection Zone
1,000' x 1,510' x 1,700'
34:1 Approach Slope

Future Fee Simple Acquisition

Future Aviation Easement

Lat. 41°46'24.093"
Long. 124°14'25.073"
Elev. 50'
(Low Point)

Existing
Runway Protection Zone
500' x 1,010' x 1,700'
20:1 Approach Slope

Lat. 41°46'19.320"
Long. 124°13'23.158"
Elev. 53'
(Low Point)

Approach & Departure
Runway Protection Zone
500' x 700' x 1,000'
34:1 Approach Slope

DRAWING LEGEND	
EXISTING AIRPORT PROPERTY LINE	
FUTURE AIRPORT PROPERTY LINE	
EXISTING HANGAR AREA	
AIRFIELD	
FUTURE AIRPORT PROPERTY	
MANUFACTURING & INDUSTRIAL PERFORMANCE	
PUBLIC FACILITY	
NATURAL RESOURCE AREA	

UNDEVELOPED

PASTURE

FOREST

RESIDENTIAL

PACIFIC OCEAN

Unregulated

10 ACRES
AREAL SCALE

200 0 200 400
FEET

MAGNETIC TRUE
14° 36E
2015

ANNUAL RATE OF CHANGE = 0 MINUTES WEST PER YEAR.

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[PATH: P:\Border Coast Regional Airport Authority (BCRAA)\P0023415W\Execution\Planning\Layout Plan\ALP 2019\CEC — Sheet C9 (On-Airport Land Use).dwg] [LAYOUT: C9]

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ON AIRPORT LAND USE

BORDER COAST REGIONAL AIRPORT AUTHORITY
JACK MCNAMARA FIELD ALP

PROJECT NUMBER	DRAWING FILE NAME	SCALE
P0023415W	CEC - SHEET C9 (ON AIRPORT LAND USE)	AS SHOWN

SHEET NUMBER
C9

Figure 6N: Off Airport Land Use

DRAWING LEGEND	
EXISTING AIRPORT PROPERTY LINE	
FUTURE AIRPORT PROPERTY LINE	
RESERVATION RANCH SEGMENTATION	
FUTURE AIRPORT PROPERTY	
RESIDENTIAL	
UNDEVELOPED LAND	
PUBLIC FACILITY	

10 ACRES
AREAL SCALE

200 0 200 400
FEET

MAGNETIC TRUE
14° 30'E
2015
ANNUAL RATE OF CHANGE: 9 MINUTES WEST PER YEAR

DUNES
PACIFIC OCEAN
DEAD LAKE
POND
UNDEVELOPED
PASTURE
FOREST
PACIFIC OCEAN
PACIFIC OCEAN

Approach
Runway Protection Zone
500' x 700' x 1,000'
20:1 Approach Slope

Lat.41°47'12.196"
Long.124°14'10.001"
Elev. 60.6'
(High Point)

Displaced Threshold (150')
Lat.41°47'10.754"
Long.124°14'10.453"
Elev. 60'

Existing
Runway Protection Zone
1,000' x 1,750' x 2,500'
50:1 Approach Slope

Existing ARP
Lat. 41°48'48.607"
Long. 124°14'11.516"

Future ARP
Lat. 41°48'44.607"
Long. 124°14'05.254"

Lat.41°46'32.167"
Long.124°13'41.439"
Elev. 53'
(Low Point)

Lat.41°47'05.969"
Long.124°14'23.652"
Elev. 56.9'
(High Point & TDZE)

TDZE
INT Elev. 60'

TDZE
Elev. 59'

315° 14°40' Geo. Az.
N46° 48' 50.4" W True

5,002' x 150' Existing
6,900' x 150' Future

5,002' x 150' Existing

Lat. 41°46'24.093"
Long. 124°14'25.073"
Elev. 50'
(Low Point)

Existing
Runway Protection Zone
500' x 1,010' x 1,700'
20:1 Approach Slope

Localizer
Localizer Critical Area

Approach & Departure
Runway Protection Zone
500' x 700' x 1,000'
34:1 Approach Slope

No Threshold Siting Surface Object Penetrations

THRESHOLD SITING SURFACE

TAXIWAY A
TAXIWAY B
TAXIWAY C

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OFF AIRPORT LAND USE

BORDER COAST REGIONAL AIRPORT AUTHORITY
JACK MCNAMARA FIELD ALP

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PACIFIC SHORES
SEE SHEETS C13-C16

BAY MEADOWS
SEE SHEET C17

JACK MCNAMARA FIELD
SEE SHEET C12

APPROVAL BLOCK	
AIRPORT SPONSOR: BCRAA	
Signature	
Title	Date

MAGNETIC TRUE

14° 05'E
2015

ANNUAL RATE OF CHANGE =
(MINUTES WEST PER YEAR)

THE PREPARATION OF THIS AIRPORT LAYOUT PLAN (ALP) WAS FINANCED IN PART THROUGH A PLANNING GRANT FROM THE FEDERAL AVIATION ADMINISTRATION (FAA) AS PROVIDED UNDER SECTION 505 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982. THE CONTENTS DO NOT NECESSARILY REFLECT THE OFFICIAL VIEWS OR POLICIES OF THE FAA. ACCEPTANCE OF THE ALP BY THE FAA DOES NOT IN ANY WAY CONSTITUTE A COMMITMENT ON THE PART OF THE UNITED STATES TO PARTICIPATE IN ANY DEVELOPMENT DEPICTED THEREIN NOR DOES IT IMPLY THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS.

12500' 0 12500' 25000'
FEET

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DEL NORTE COUNTY REGIONAL AIRPORT
BORDER COAST REGIONAL AIRPORT AUTHORITY
JACK MCNAMARA FIELD - CRESCENT CITY, CALIFORNIA
EXHIBIT A

PROJECT NUMBER	DRAWING FILE NAME	SCALE
P0023415W	CEC - SHEETS C11-C17 (EXHIBIT A)	AS SHOWN

SHEET NUMBER
C11

Figure 6O: Exhibit A

Figure 6P: Exhibit A

LAND PARCELS

HATCH	PARCEL	ACREAGE	GRANTOR (S)			DATE	FEDERAL AGREEMENT	OWNERSHIP TYPE
	1	4.96	M. McNAMARA			4/28/1943	NONE	FEE SIMPLE
	2	4.96						
	3	4.96	J. J. McNAMARA	JOHN. J. McNAMARA	N. F. McNAMARA			
			MARGARET WAKEFIELD	MARIAN A. PARSONS	RICHARD H. McNAMARA	8/2/1943	NONE	FEE SIMPLE
	4	23.16	MABEL C. McNAMARA	ELINOR HUFFMAN	THOMAS F. McNAMARA			
	5	4.96	J. J. McNAMARA	JOHN. J. McNAMARA	N. F. McNAMARA			
	6	19.75	MARGARET WAKEFIELD	MARIAN A. PARSONS	RICHARD H. McNAMARA	8/5/1943	NONE	FEE SIMPLE
	7	4.96	MABEL C. McNAMARA	ELINOR HUFFMAN	THOMAS F. McNAMARA			
	8	4.96	A. T. MANUEL E. R. GRIFFIN			5/17/1949	NONE	FEE SIMPLE
	9	79.46						
	10	79.46	STATE OF CALIFORNIA			5/26/1972	NONE	FEE SIMPLE
	11	9.86						
	12	16.10	LUCILE M. MAX HENRY WESTBROOK III ROBERT L. WESTBROOK			12/19/1972	NONE	FEE SIMPLE
	13	101.68	MARGARET P. BRENNAN JOHN L. BRENNAN ROBERT L. DOSSEE	RALPH V. HAMPSON MARGARET HAMPSON		2/3/1976	NONE	FEE SIMPLE
	14	4.96	MARK DIETZ			9/24/2003	NONE	FEE SIMPLE
	F15	141.29	TO BE PURCHASED FOR RUNWAY EXTENSION			TBD	N/A	FEE SIMPLE
	F16	58.88	TO BE PURCHASED FOR RUNWAY EXTENSION			TBD	N/A	FEE SIMPLE
	F17	5.23	TO BE PURCHASED FOR AIRPORT DEVELOPMENT			TBD	N/A	FEE SIMPLE

NOTE: AIRPORT PROPERTY DETAILS FROM DEL NORTE COUNTY RECORDS.

PACIFIC OCEAN

DEAD LAKE

PACIFIC OCEAN

LEGEND

	EXISTING	PROPOSED
AIRFIELD PAVEMENT		
AIRPORT PROPERTY BOUNDRY		
AVIGATION EASEMENT	N/A	
RUNWAY PROTECTION ZONE		

NON-AERONAUTICAL LEASES

LETTER	LESSEE	USE	LOCATION
A	HERTZ (OPERATED BY FBO, CAL ORE)	CAR RENTAL	i) PRIMARY OFFICE AT FBO ii) KIOSK AT TERMINAL iii) 10-PARKING SPACES IN PARKING LOT
B	CHARTER SPECTRUM	COMMUNICATION TOWER	41°46'20.51"N 124°14'05.74"W
C	U.S. CELLULAR	CELLULAR TOWER	41°46'20.18"N 124°13'52.87"W
D	CALIFORNIA HIGHWAY PATROL	COMMUNICATION TOWER	41°46'19.56"N 124°14'16.55"W

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CEC - SHEETS C11-C17 (EXHIBIT A)

BORDER COAST REGIONAL AIRPORT AUTHORITY
JACK MCNAMARA FIELD ALP

PROJECT NUMBER	DRAWING FILE NAME	SCALE
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SHEET NUMBER C12

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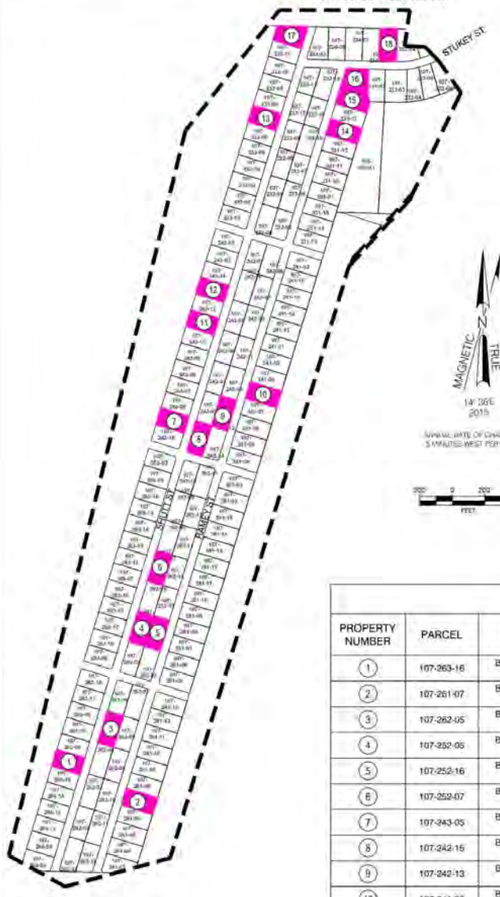
MATCH LINE A



LEGEND	
PACIFIC SHORES PROPERTY NUMBER	XX
ROAD NUMBER	XX
ROAD ACQUIRED FOR MITIGATION	

OWNERSHIP DATA

PROPERTY NUMBER	PARCEL	LAND/OWNER	ACRES	RECORDED	BOOK, PAGE	PREVIOUS OWNER	AIP NUMBER		RELEASE
1	107-263-16	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.43	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		12/21/2016
2	107-261-07	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.46	12/8/2014	4, 154	McDONALD	3-06-0057-028-2014		12/21/2016
3	107-262-05	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.47	12/23/2014	4, 154	STUMPF	3-06-0057-028-2014		12/21/2016
4	107-252-05	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.45	10/6/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		12/21/2016
5	107-252-16	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.45	12/17/2014	4, 154	GRAY	3-06-0057-028-2014		12/21/2016
6	107-252-07	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.45	12/8/2014	4, 154	HASTINGS	3-06-0057-028-2014		12/21/2016
7	107-243-05	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.43	11/25/2014	4, 154	CHAMBERLIN	3-06-0057-028-2014		12/21/2016
8	107-242-15	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.45	12/31/2014	4, 154	CLAY	3-06-0057-028-2014		12/21/2016
9	107-242-13	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.45	12/8/2014	4, 154	KIEFER	3-06-0057-028-2014		12/21/2016
10	107-241-08	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.48	10/6/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		12/21/2016
11	107-243-11	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.43	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		12/21/2016
12	107-243-13	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.43	12/17/2014	4, 154	GRATTAN	3-06-0057-028-2014		12/21/2016
13	107-233-07	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.43	10/6/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		12/21/2016
14	107-231-16	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.46	11/19/2014	4, 154	BECKENDORF	3-06-0057-028-2014		12/21/2016
15	107-231-18	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.45	12/23/2014	4, 154	WECHSBERG	3-06-0057-028-2014		12/21/2016
16	107-231-19	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	12/23/2014	4, 154	WECHSBERG	3-06-0057-028-2014		12/21/2016
17	107-233-12	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.46	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		12/21/2016
18	107-222-15	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.48	12/31/2014	4, 154	OGATA	3-06-0057-028-2014		12/21/2016

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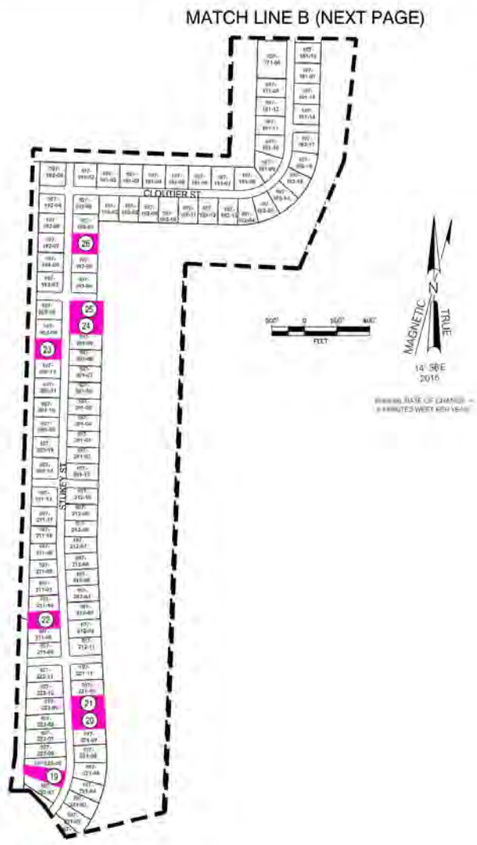

MATCH LINE A

OWNERSHIP DATA

PROPERTY NUMBER	PARCEL	LAND/OWNER	ACRES	RECORDED	BOOK, PAGE	PREVIOUS OWNER	AIP NUMBER		RELEASED
19	107-222-04	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.43	PENDING	4, 154	GRIFFY	3-06-0057-028-2014		12/21/2016
20	107-221-08	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.46	PENDING	4, 154	GRIFFY	3-06-0057-028-2014		12/21/2016
21	107-221-09	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.46	1/15/2015	4, 154	HARTLEY	3-06-0057-028-2014		12/21/2016
22	107-211-13	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.44	10/6/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		12/21/2016
23	107-202-13	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.44	12/31/2014	4, 154	AH NEE	3-06-0057-028-2014		12/21/2016
24	107-201-10	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.46	10/9/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		12/21/2016
25	107-201-11	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.46	10/9/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		12/21/2016
26	107-193-06	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.44	10/6/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		12/21/2016

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PROJECT NUMBER	DRAWING FILE NAME	SCALE
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SHEET NUMBER
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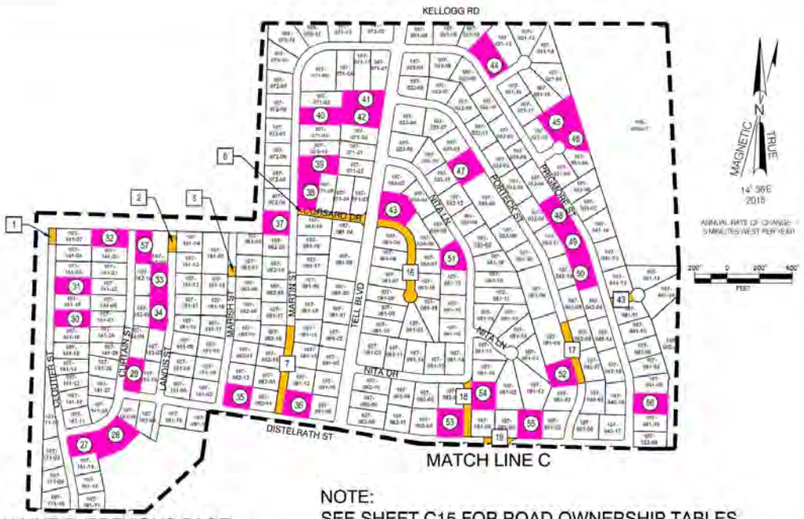
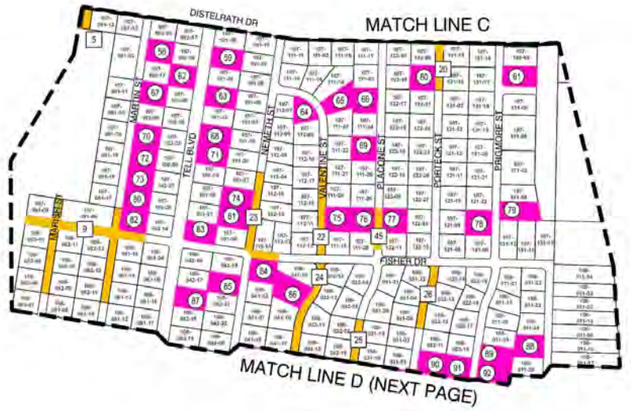
Figure 6Q: Exhibit A



NOTE:
SEE SHEET C15 FOR ROAD OWNERSHIP TABLES



LEGEND	
PACIFIC SHORES PROPERTY NUMBER	XX
ROAD NUMBER	XX
ROAD ACQUIRED FOR MITIGATION	

OWNERSHIP DATA

PROPERTY NUMBER	PARCEL	LAND/OWNER	ACRES	RECORDED	BOOK, PAGE	INTEREST ACQUIRED	PREVIOUS OWNER	AIP NUMBER	RELEASED
27	107-161-10	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.45	12/31/2014	4, 154	FEE	SYLVESTER	3-06-0057-028-2014	12/21/2016
28	107-161-02	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.93	1/30/2015	4, 154	FEE	LEWIS	3-06-0057-028-2014	12/21/2016
29	107-152-15	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.46	11/25/2014	4, 154	FEE	TRAN	3-06-0057-028-2014	12/21/2016
30	107-141-17	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	11/12/2014	4, 154	FEE	ROSE	3-06-0057-028-2014	12/21/2016
31	107-141-19	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	10/8/2014	4, 154	FEE	COUNTY OF DEL NORTE	3-06-0057-028-2014	12/21/2016
32	107-141-06	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	11/12/2014	4, 154	FEE	CASTELLI	3-06-0057-028-2014	4/25/2018
33	107-152-12	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.46	12/17/2014	4, 154	FEE	SMERDON	3-06-0057-028-2014	12/21/2016
34	107-152-13	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.47	12/17/2014	4, 154	FEE	SMERDON	3-06-0057-028-2014	12/21/2016
35	107-082-13	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.49	11/26/2014	4, 154	FEE	CHONG	3-06-0057-028-2014	4/25/2018
36	107-081-11	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.55	9/10/2014	4, 154	FEE	McGREW	3-06-0057-028-2014	4/25/2018
37	107-082-02	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	12/8/2014	4, 154	FEE	CLOUD	3-06-0057-028-2014	12/21/2016
38	107-071-26	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.66	10/9/2014	4, 154	FEE	COUNTY OF DEL NORTE	3-06-0057-028-2014	4/25/2018
39	107-071-19	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.54	12/23/2014	4, 154	FEE	TRAMEL	3-06-0057-028-2014	12/21/2016
40	107-071-12	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.59	10/9/2014	4, 154	FEE	COUNTY OF DEL NORTE	3-06-0057-028-2014	12/21/2016
41	107-071-18	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.62	10/6/2014	4, 154	FEE	COUNTY OF DEL NORTE	3-06-0057-028-2014	4/18/2017
42	107-071-09	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.58	10/9/2014	4, 154	FEE	COUNTY OF DEL NORTE	3-06-0057-028-2014	4/18/2017
43	107-034-05	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.75	11/12/2014	4, 154	FEE	READNOUR	3-06-0057-028-2014	4/25/2018
44	107-021-11	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.70	10/8/2014	4, 154	FEE	COUNTY OF DEL NORTE	3-06-0057-028-2014	9/18/2018
45	107-021-06	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.72	12/31/2014	4, 154	FEE	SYLVESTER	3-06-0057-028-2014	4/18/2017
46	107-031-02	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.60	12/31/2014	4, 154	FEE	SYLVESTER	3-06-0057-028-2014	4/18/2017
47	107-033-09	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.63	10/9/2014	4, 154	FEE	COUNTY OF DEL NORTE	3-06-0057-028-2014	12/21/2016
48	107-032-07	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.55	10/9/2014	4, 154	FEE	COUNTY OF DEL NORTE	3-06-0057-028-2014	9/18/2018
49	107-042-12	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.55	12/23/2014	4, 154	FEE	WEIGAND	3-06-0057-028-2014	12/21/2016
50	107-042-13	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.57	12/23/2014	4, 154	FEE	EUSTAQUIO	3-06-0057-028-2014	12/21/2016
51	107-034-09	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.49	10/9/2014	4, 154	FEE	COUNTY OF DEL NORTE	3-06-0057-028-2014	12/21/2016
52	107-051-21	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.53	10/9/2014	4, 154	FEE	COUNTY OF DEL NORTE	3-06-0057-028-2014	4/25/2018
53	107-062-07	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.60	11/26/2014	4, 154	FEE	TOURVILLE	3-06-0057-028-2014	4/25/2018
54	107-051-09	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.55	8/26/2014	4, 154	FEE	CHONG	3-06-0057-028-2014	4/25/2018
55	107-051-24	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.57	10/9/2014	4, 154	FEE	COUNTY OF DEL NORTE	3-06-0057-028-2014	12/21/2016
56	107-041-07	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.57	10/9/2014	4, 154	FEE	COUNTY OF DEL NORTE	3-06-0057-028-2014	12/21/2016
57	107-152-11	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.46	12/17/2014	4, 154	FEE	WOMACK	3-06-0057-028-2014	4/25/2018

OWNERSHIP DATA

PROPERTY NUMBER	PARCEL	LAND/OWNER	ACRES	RECORDED	BOOK, PAGE	PREVIOUS OWNER	AIP NUMBER	RELEASED
58	107-102-18	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.49	12/31/2014	4, 154	SYLVESTER	3-06-0057-028-2014	12/21/2016
59	107-101-12	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.52	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014	12/21/2016
60	107-122-20	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	10/8/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014	4/25/2018
61	107-132-02	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.56	11/19/2014	4, 154	FRANKENFIELD	3-06-0057-028-2014	9/18/2018
62	107-102-19	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.48	12/8/2014	4, 154	BRINK	3-06-0057-028-2014	12/21/2016
63	107-101-23	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.52	10/8/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014	12/21/2016
64	107-112-06	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.39	12/17/2014	4, 154	DUFF	3-06-0057-028-2014	9/18/2018
65	107-111-05	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.54	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014	12/21/2016
66	107-111-06	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	12/8/2014	4, 154	HAUGEBAK	3-06-0057-028-2014	12/21/2016
67	107-102-07	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.48	2/6/2015	4, 154	SUGIYAMA	3-06-0057-028-2014	12/21/2016
68	107-101-21	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.52	12/8/2014	4, 154	NEAPOLITA	3-06-0057-028-2014	12/21/2016
69	107-111-09	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	10/8/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014	12/21/2016
70	107-102-23	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.48	11/19/2014	4, 154	SMITH RIVER ALLIANCE	3-06-0057-028-2014	12/21/2016
71	107-101-20	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.52	12/8/2014	4, 154	NEAPOLITA	3-06-0057-028-2014	12/21/2016
72	107-102-22	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.49	11/25/2014	4, 154	SARGENT	3-06-0057-028-2014	12/21/2016
73	107-102-21	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.48	12/23/2014	4, 154	LEYDER	3-06-0057-028-2014	12/21/2016
74	107-101-28	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.52	12/17/2014	4, 154	GLASS	3-06-0057-028-2014	4/25/2018
75	107-111-19	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	10/6/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014	4/25/2018
76	107-111-27	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	10/6/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014	4/25/2018
77	107-122-12	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014	4/25/2018
78	107-121-23	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.54	1/13/2015	4, 154	JOHNSON	3-06-0057-028-2014	12/21/2016
79	107-131-07	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.59	10/6/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014	9/18/2018
80	107-102-20	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.48	1/29/2015	4, 154	SUGIYAMA	3-06-0057-028-2014	4/25/2018
81	107-101-29	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.52	12/23/2014	4, 154	LOPEZ	3-06-0057-028-2014	4/25/2018
82	107-102-06	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.48	2/6/2015	4, 154	SUGIYAMA	3-06-0057-028-2014	4/25/2018
83	107-101-06	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.52	12/8/2014	4, 154	DELFIN	3-06-0057-028-2014	12/21/2016
84	108-041-09	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	8/21/2014	4, 154	FRANKLIN	3-06-0057-028-2014	4/25/2018
85	108-042-20	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.52	11/25/2014	4, 154	TRAN	3-06-0057-028-2014	12/21/2016
86	108-041-04	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.73	11/19/2014	4, 154	BECKENDORF	3-06-0057-028-2014	4/25/2018
87	108-042-16	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.52	2/17/2015	4, 154	JEFFRIES	3-06-0057-028-2014	12/21/2016
88	108-011-25	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.54	11/26/2014	4, 154	MIYASHIRO	3-06-0057-028-2014	12/21/2016
89	108-011-11	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	1/29/2015	4, 154	MILNIKEL	3-06-0057-028-2014	12/21/2016
90	108-022-10	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014	12/21/2016
91	108-022-19	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	12/31/2014	4, 154	EVEN	3-06-0057-028-2014	12/21/2016
92	108-021-04	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	12/23/2014	4, 154	WECHSBERG	3-06-0057-028-2014	9/18/2018

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REVISIONS			
NO.	BY	DATE	REMARKS

DEL NORTE COUNTY REGIONAL AIRPORT
BORDER COAST REGIONAL AIRPORT AUTHORITY
JACK MCNAMARA FIELD - CRESCENT CITY, CALIFORNIA
EXHIBIT A

PROJECT NUMBER	DRAWING FILE NAME	SCALE
P0023415W	CEC - SHEETS C11-C17 (EXHIBIT A)	AS SHOWN

SHEET NUMBER
C14

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Figure 6R: Exhibit A

LEGEND	
PACIFIC SHORES PROPERTY NUMBER	XX
ROAD NUMBER	XX
ROAD ACQUIRED FOR MITIGATION	

NOTE:
SEE SHEET C15 FOR ROAD OWNERSHIP TABLES

OWNERSHIP DATA

PROPERTY NUMBER	PARCEL	LAND/OWNER	ACRES	RECORDED	BOOK, PAGE	PREVIOUS OWNER	AIP NUMBER		RELEASED
93	108-041-14	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	12/17/2014	4, 154	LOPORCHIO	3-06-0057-026-2014		12/21/2016
94	108-031-24	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-026-2014		12/21/2016
95	108-041-13	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	10/3/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-026-2014		12/21/2016
96	108-022-08	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	PENDING	4, 154	COUNTY OF DEL NORTE	3-06-0057-026-2014		12/21/2016
97	108-051-02	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.49	12/23/2014	4, 154	WECHSBERG	3-06-0057-026-2014		12/21/2016
98	108-071-14	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.52	12/23/2014	4, 154	GABLE	3-06-0057-026-2014		12/21/2016
99	108-063-10	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	1/29/2015	4, 154	DAVI	3-06-0057-026-2014		12/21/2016
100	108-071-13	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.52	11/19/2014	4, 154	WEITNER	3-06-0057-026-2014		12/21/2016
101	108-071-15	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.52	12/8/2014	4, 154	KIEFER	3-06-0057-026-2014		12/21/2016
102	108-072-10	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	PENDING	4, 154	COUNTY OF DEL NORTE	3-06-0057-026-2014		12/21/2016
103	108-062-10	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	11/25/2014	4, 154	HEADLEY	3-06-0057-026-2014		9/18/2018
104	108-062-12	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	12/8/2014	4, 154	McDONALD	3-06-0057-026-2014		4/25/2018
105	108-062-13	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	12/8/2014	4, 154	McDONALD	3-06-0057-026-2014		4/25/2018
106	108-101-13	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	12/23/2014	4, 154	MILLER	3-06-0057-026-2014		12/21/2016
107	108-091-13	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	8/21/2014	4, 154	TOMERSON	3-06-0057-026-2014		4/25/2018
108	108-063-08	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-026-2014		4/25/2018
109	108-081-09	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-026-2014		4/25/2018
110	108-082-11	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	8/21/2014	4, 154	STEPHENS	3-06-0057-026-2014		12/21/2016
111	108-071-09	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.52	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-026-2014		12/21/2016
112	108-072-07	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-026-2014		4/25/2018
113	108-072-15	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	12/8/2014	4, 154	JASPER	3-06-0057-026-2014		12/21/2016
114	108-072-05	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	8/21/2014	4, 154	BRUCE	3-06-0057-026-2014		4/25/2018
115	108-072-17	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.49	11/12/2014	4, 154	SAWICKI	3-06-0057-026-2014		12/21/2016
116	108-062-06	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.49	11/19/2014	4, 154	ZENZOLA	3-06-0057-026-2014		12/21/2016
117	108-071-06	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.52	10/3/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-026-2014		12/21/2016
118	108-081-18	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	11/12/2014	4, 154	BRIGGS	3-06-0057-026-2014		12/21/2016
119	108-091-21	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.49	10/3/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-026-2014		4/25/2018
120	108-091-22	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	10/3/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-026-2014		4/18/2017
121	108-311-12	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	12/31/2014	4, 154	CELESTINO	3-06-0057-026-2014		4/25/2018
122	108-152-09	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.49	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-026-2014		12/21/2016
123	108-151-10	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	11/26/2014	4, 154	ISBELL	3-06-0057-026-2014		4/25/2018
124	108-311-11	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	12/31/2014	4, 154	CELESTINO	3-06-0057-026-2014		4/25/2018
125	108-122-20	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	10/3/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-026-2014		4/25/2018
126	108-122-19	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.48	2/6/2015	4, 154	ROTHERMAL LUMBER	3-06-0057-026-2014		4/25/2018
127	108-152-06	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.49	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-026-2014		12/21/2016
128	108-141-25	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.60	11/26/2014	4, 154	RODRIGUEZ	3-06-0057-026-2014		4/25/2018
129	108-122-13	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	12/23/2014	4, 154	JAMES	3-06-0057-026-2014		12/21/2016
130	108-141-03	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.64	1/29/2015	4, 154	SELVA	3-06-0057-026-2014		4/25/2018
131	108-141-20	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-026-2014		12/21/2016
132	108-312-04	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.32	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-026-2014		4/25/2018
133	108-280-24	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.44	11/19/2014	4, 154	TEJADA	3-06-0057-026-2014		12/21/2016
134	108-171-05	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.63	11/26/2014	4, 154	McBEE	3-06-0057-026-2014		4/25/2018
135	108-171-04	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.53	11/26/2014	4, 154	McBEE	3-06-0057-026-2014		4/25/2018
136	108-142-13	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.52	10/3/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-026-2014		12/21/2016
137	108-142-14	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-026-2014		12/21/2016
138	108-130-09	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-026-2014		12/21/2016
139	108-131-14	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.72	10/3/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-026-2014		12/21/2016
140	108-182-07	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.53	11/12/2014	4, 154	FLORES	3-06-0057-026-2014		12/21/2016
141	108-183-02	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	8/24/2014	4, 154	ADAMSON	3-06-0057-026-2014		9/18/2018
142	108-141-10	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.49	1/29/2015	4, 154	GREMP	3-06-0057-026-2014		12/21/2016
143	108-220-25	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.52	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-026-2014		12/21/2016
144	108-220-26	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	10/14/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-026-2014		9/18/2018
145	108-220-36	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-026-2014		12/21/2016
184	108-082-17	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.49	12/23/2014	4, 154	STONE	3-06-0057-026-2014		4/25/2018
185	108-071-07	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.52	12/23/2014	4, 154	STONE	3-06-0057-026-2014		12/21/2016

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DEL NORTE COUNTY REGIONAL AIRPORT
BORDER COAST REGIONAL AIRPORT AUTHORITY
JACK MCNAMARA FIELD - CRESCENT CITY, CALIFORNIA
EXHIBIT A

PROJECT NUMBER	DRAWING FILE NAME	SCALE
P0023415W	CEC - SHEETS C11-C17 (EXHIBIT A)	AS SHOWN

SHEET NUMBER
C15

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Figure 6S: Exhibit A

LEGEND	
PACIFIC SHORES PROPERTY NUMBER	XX
ROAD NUMBER	XX
ROAD ACQUIRED FOR MITIGATION	

NOTE:
SEE SHEET C15 FOR ROAD OWNERSHIP TABLES

OWNERSHIP DATA

PROPERTY NUMBER	PARCEL	LAND/OWNER	ACRES	RECORDED	BOOK, PAGE	PREVIOUS OWNER	AIP NUMBER		RELEASED
146	108-291-08	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	11/12/2014	4, 154	GARLAND	3-06-0057-028-2014		4/18/2017
147	108-291-02	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.52	11/12/2014	4, 154	McCOURTNEY	3-06-0057-028-2014		4/18/2017
148	108-291-09	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.53	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		12/21/2016
149	108-292-17	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		4/25/2018
150	108-292-18	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.48	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		4/25/2018
151	108-330-09	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.47	2/12/2015	4, 154	KREBS	3-06-0057-028-2014		12/21/2016
152	108-293-06	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.54	11/26/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		12/21/2016
153	108-251-13	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	5/21/2014	4, 154	SEAMAN	3-06-0057-028-2014		4/25/2018
154	108-251-17	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.54	12/23/2014	4, 154	GRAHAM	3-06-0057-028-2014		12/21/2016
156	108-231-18	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.53	PENDING	4, 154	KREBS	3-06-0057-028-2014		12/21/2016
156	108-231-19	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.53	11/12/2014	4, 154	LYNCH	3-06-0057-028-2014		12/21/2016
157	108-250-10	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.53	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		9/19/2018
158	108-251-14	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.53	10/3/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		12/21/2016
159	108-250-09	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.53	12/23/2014	4, 154	HAYASHIDA	3-06-0057-028-2014		4/25/2018
160	108-250-12	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.53	12/23/2014	4, 154	HAYASHIDA	3-06-0057-028-2014		4/18/2017
161	108-251-11	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.53	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		12/21/2016
162	108-231-28	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.52	2/6/2015	4, 154	ROTHERMAL LUMBER	3-06-0057-028-2014		4/25/2018
163	108-231-25	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	11/25/2014	4, 154	LIMONGCO	3-06-0057-028-2014		12/21/2016
164	108-221-16	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.49	11/19/2014	4, 154	NORMAN	3-06-0057-028-2014		12/21/2016
165	108-220-10	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.52	12/31/2014	4, 154	FOSTER	3-06-0057-028-2014		4/25/2018
166	108-220-11	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.52	11/19/2014	4, 154	VEREB	3-06-0057-028-2014		4/25/2018
167	108-221-04	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	10/3/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		4/25/2018
168	108-221-08	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	3/17/2015	4, 154	ABRAHAM	3-06-0057-028-2014		N/A
169	108-221-11	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		12/21/2016
170	108-220-32	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.52	12/23/2014	4, 154	SWIFT	3-06-0057-028-2014		12/21/2016
171	108-201-19	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.55	12/31/2014	4, 154	LU	3-06-0057-028-2014		12/21/2016
172	108-220-33	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	2/12/2015	4, 154	ROSSI	3-06-0057-028-2014		12/21/2016
173	108-220-04	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.45	11/12/2014	4, 154	LIN	3-06-0057-028-2014		12/21/2016
174	108-230-20	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		4/25/2018
175	108-230-19	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	11/26/2014	4, 154	RODRIGUEZ	3-06-0057-028-2014		4/25/2018
176	108-230-18	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.53	11/26/2014	4, 154	RODRIGUEZ	3-06-0057-028-2014		4/25/2018
177	108-231-24	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	10/3/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		4/25/2018
178	108-260-04	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.53	11/26/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		12/21/2016
179	108-260-08	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.54	8/22/2014	4, 154	KOLUVEK	3-06-0057-028-2014		4/18/2017
180	108-270-09	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.51	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		4/25/2018
181	108-270-08	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.50	10/9/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		4/25/2018
182	108-210-07	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.49	12/31/2014	4, 154	SHEPARD FOR LU	3-06-0057-028-2014		12/21/2016
183	108-241-05	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.52	10/3/2014	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014		4/25/2018

WHPacific
9755 SW Barnes Rd, Suite 300
Portland, OR 97225
503-626-0455 Fax 503-626-0775
www.whpacific.com

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SUBMITTAL	

REVISIONS			
NO.	BY	DATE	REMARKS

DEL NORTE COUNTY REGIONAL AIRPORT
BORDER COAST REGIONAL AIRPORT AUTHORITY
JACK MCNAMARA FIELD - CRESCENT CITY, CALIFORNIA
EXHIBIT A

PROJECT NUMBER	DRAWING FILE NAME	SCALE
P0023415W	CEC - SHEETS C11-C17 (EXHIBIT A)	AS SHOWN

SHEET NUMBER
C16

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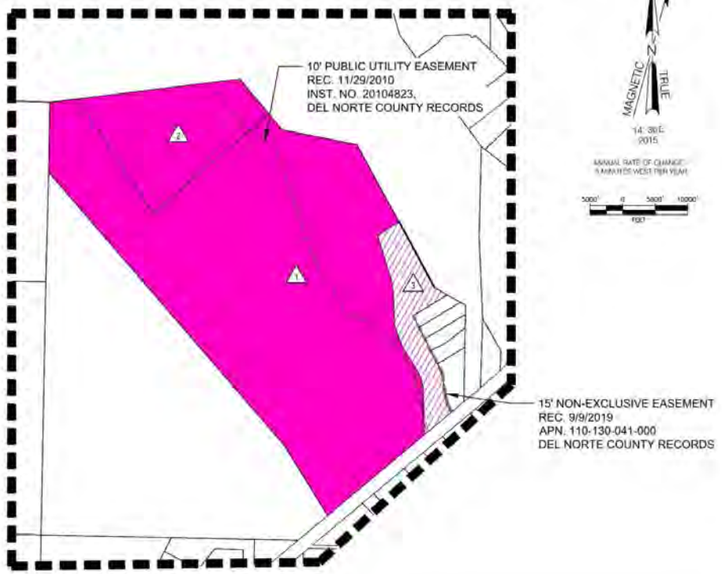
Figure 6T: Exhibit A



OWNERSHIP DATA

PROPERTY NUMBER	PARCEL (APN #)	LAND/OWNER	ACRES	RECORDED	INSTRUMENT NO.	PREVIOUS OWNER	AIP NUMBER		RELEASED*
1	110-020-85	BORDER COAST REGIONAL AIRPORT AUTHORITY	79.9	06/26/2014	20160906	JHP, LLC	3-06-0057-028-2014		
2	110-020-79	BORDER COAST REGIONAL AIRPORT AUTHORITY	11.7	06/26/2014	20160903	JHP, LLC	3-06-0057-028-2014		
3	110-130-041	BORDER COAST REGIONAL AIRPORT AUTHORITY	5.2	09/09/2019		JHP, LLC	3-06-0057-028-2014		09/09/2019

*NOTE: MITIGATION PARCELS PURCHASED FOR ACCESS TO ROADS AND MAINTAINED FOR 5 YEARS.

LEGEND

BAY MEADOWS PROPERTY NUMBER	XX
ROAD NUMBER	XX
ROAD ACQUIRED FOR MITIGATION	
EASEMENT	

OWNERSHIP DATA

PARCEL NUMBER	ROAD NAME	LAND/OWNER	ACRES	RECORDED	BOOK, PAGE	PREVIOUS OWNER	AIP NUMBER		RELEASED*	USE
1	CLOUTIER ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.11	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
2	LANDIS ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.11	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
3	MARISH ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.07	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			DUNE
5	MARISH ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.15	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
6	CORSARO DR.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.49	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
7	MARTIN ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.63	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
9	MARISH ST. MARIN ST. & FISHER	BORDER COAST REGIONAL AIRPORT AUTHORITY	2.09	2/11/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
10	HINCKLEY ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.19	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
12	OCEAN DR.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.19	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
13	MARTIN ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.15	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
14	MARTIN ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.46	1/22/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
15	MIDDLETON DR.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.98	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
16	NEMETH ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.76	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
17	PORTECK ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.43	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
18	PLACONE ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.39	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
19	DISTELRATH DR.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.19	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
20	PORTECK ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.34	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
22	VALENTINE ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.62	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
23	NEMETH ST. & FISHER ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.76	1/22/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
24	VALENTINE ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.84	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			DUNE
25	PLACONE ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.46	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND/DUNE
26	PORTECK ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.46	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
27	VALENTINE ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.15	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
28	PLACONE ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.15	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND/DUNE
29	PORTECK ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.77	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
30	PORTECK ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.62	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
31	VERGINE DR. & PLACONE ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.55	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
32	PRIGMORE, VERGOME DR. & CARSON LN.	BORDER COAST REGIONAL AIRPORT AUTHORITY	1.80	2/11/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
33	VALENTINE ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	1.13	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			DUNE
34	PORTECK ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.39	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
35	WRIGHT ST & DE MARS DR	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.92	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
36	SURF DR.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.17	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
37	SURF DR. PLACONE ST. & VALENTINE ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	1.77	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
38	PRIGMORE ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.65	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
40	VIEW DR.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.16	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
41	VIEW DR.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.32	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
42	NEMETH ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.55	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
43	NITA CR.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.25	1/16/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND
44	CARSON LN.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.39	1/22/2015	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			DUNE
45	PLACONE ST.	BORDER COAST REGIONAL AIRPORT AUTHORITY	0.31	1/22/2016	4, 154	COUNTY OF DEL NORTE	3-06-0057-028-2014			WETLAND

*NOTE: ROADS USED FOR MITIGATION PARCELS PURCHASED FOR ACCESS TO ROADS.
ROADS MAINTAINED 5 YEARS FOR MITIGATION. BRCAA SILL OWNS ROADS.

WHPacific
9755 SW Barnes Rd, Suite 300
Portland, OR 97225
503-626-0455 Fax 503-626-0775
www.whpacific.com

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REVISIONS:			
NO.	BY	DATE	REMARKS

DEL NORTE COUNTY REGIONAL AIRPORT
BORDER COAST REGIONAL AIRPORT AUTHORITY
JACK MCNAMARA FIELD - CRESCENT CITY, CALIFORNIA
EXHIBIT A

PROJECT NUMBER	DRAWING FILE NAME	SCALE
P0023415W	CEC - SHEETS C11-C17 (EXHIBIT A)	AS SHOWN

SHEET NUMBER: C17

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Figure 6U: Exhibit A


Del Norte
County
Regional
Airport
W Washington Blvd
W Washington Blvd
Seawood Village
Del Norte County
School District
E Washington Blvd
Northcrest Dr
Lake Earl Dr
Parkway Dr
101
101
W Harding Ave
Harding Ave
CRESCENT
CITY NORTH
Ing St

Appendices

Abbreviations

A&P	Airframe & Powerplant Mechanic
AC	Advisory Circular
AD	Airport Design
AGIS	Airports Geographic Information Systems
AGL	above ground level
AGLA	Alternative Grass Landing Area
AIP	Airport Improvement Program
ALP	Airport Layout Plan
ALS	Airport Lighting System
ALSF	Approach Lighting System with Sequenced Flashing Light
APR	Airport Planning Rule
ARC	Airport Reference Code
ARFF	Air Rescue and Firefighting
ALUCP	Airport Land Use Compatibility Plan
ASOS	Automated Surface Observing System
ATC	Air Traffic Control
ATCT	Air Traffic Control Tower
AvGas	Aviation Gasoline
AWOS	Automated Weather Observing System
CFR	Code of Federal Regulation
CIP	Capital Improvement Plan
DME	Distance Measuring Equipment
DNL	Day-Night Noise Level
EAA	Experimental Aircraft Association
EL	Elevation
F	Fahrenheit
FAA	Federal Aviation Administration
FBO	Fixed Base Operator
FOD	Foreign Object Debris
FPPA	Farmland Protection Policy Act
GA	General Aviation
GPS	Global Positioning System
HIRL	High Intensity Runway Lighting
HOA	Home Owners Association
IAP	Instrument Approach Procedure
IFR	Instrument Flight Rules
ILS	Instrument Landing System
LITL	Low Intensity Taxiway Lighting
LOC	Localizer
LSA	Light-Sport Aircraft
MALS	Medium Intensity Approach Lighting
MALSF	Medium Intensity Approach Lighting with Sequenced Flashers
MALSR	Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights
MIRL	Medium Intensity Runway Lighting
MITL	Medium Intensity Taxiway Lighting
MSL	Mean Sea Level
MoGas	Motor gasoline (light aircraft fuel)
NAAQS	National Ambient Air Quality Standards
NAVAID	Navigational Aid
NPA	Non-Precision Approach
NHPA	National Historic Preservation Act
NPIAS	National Plan of Integrated Airport Systems
NWI	National Wetlands Inventory
OAP	Oregon Aviation Plan
OAR	Oregon Administrative Rule
ODA	Oregon Department of Aviation
ODAL	Omnidirectional Approach Lighting Operation - Takeoff or Landing
OFA	Object Free Area
OFZ	Obstacle Free Zone
ORS	Oregon Revised Statutes
P	Precision (Markings)
PA	Precision Approach
PAC	Planning Advisory Committee
PAPI	Precision Approach Path Indicator
PCI	Pavement Condition Index
PMP	Pavement Maintenance Program
RDC	Runway Design Code
REIL	Runway End Identifier Lights
RNAV	Area Navigation
ROFA	Runway Object Free Area
ROM	Rough Order of Magnitude
RPZ	Runway Protection Zone
RSA	Runway Safety Area
RTTF	Residential Through the Fence
RW	Runway
STC	Supplemental Type Certificate
SWG	Single Wheel Gear
SWY	Stopway
TERPS	Terminal Instrument Procedures
TH	Threshold
TL	Taxilane
TODA	Takeoff Distance Available
TORA	Takeoff Run Available
TSA	Taxiway Safety Area
TW	Taxiway
UGB	Urban Growth Boundary
USDOT	U.S. Department of Transportation
USGS	United States Geological Survey
V	Visual (Markings)
VASI	Visual Approach Slope Indicator
VFR	Visual Flight Rules
VOR	Very High Frequency Omnidirectional Range Station

Glossary

acoustical - Relating to the deadening or absorbing of sound.

Advisory Circular (AC) - A document published by the Federal Aviation Administration (FAA) giving guidance on aviation issues, and which becomes binding on those airports receiving federal grant funding.

Aeronautical Study - A study performed pursuant to FAR Part 77 "Objects Affecting Navigable Airspace" concerning the effect of proposed construction or alternation on the use of air navigation facilities or navigable airspace by aircraft. The conclusion of each study is normally a determination as to whether the specific proposal studied would be a hazard to air navigation and/or a determination for marking and/or lighting.

Air Traffic Control (ATC) - Control of the airspace by an appropriate authority to promote the safe, orderly and expeditious movement of terminal air traffic.

aircraft - Includes airplanes and helicopters, but not hot air balloons or ultralights.

aircraft operation - An aircraft arrival or departure from an airport. There are two types of operations: local and itinerant.

airport – 1) Any area of land or water, within or without this state, that is used, or intended for use, for the landing and take-off of aircraft, and any appurtenant areas that are used, or intended for use, for airport buildings or other airport facilities or rights of way, together with all airport buildings and facilities located thereon. 2) The strip of land used for taking off and landing aircraft, together with all adjacent land used in connection with the aircraft landing or taking off from the strip of land, including but not limited to land used for existing airport uses.

airport approach safety zone - An element of either an Airport Impact Zone or an Airport Overlay Zone which consists of a portion of the Airport Approach surface as defined in FAR Part 77. The actual boundaries and land use provisions are determined by the local jurisdiction.

airport development zone - A zone which replaces the existing zoning for the airport property encompassing the land presently owned by the airport and, if feasible, areas identified for future purchase, clear zones and areas with noise levels greater than DNL 70.

airport direct impact area - The area located within 5,000 feet of an airport Runway, excluding lands within the Runway protection zone and approach surface.

airport elevation - The highest point on an airport's usable Runway(s) expressed in feet above mean sea level.

airport environs - The land use and people in the areas surrounding an airport which can be directly affected by the operation of the airport.

airport hazard - Any structure or object of man-made or natural growth located on or near the airport, or any use of land near the airport that obstructs the airspace required for the flight of aircraft in landing or taking off, or is otherwise hazardous to such landing and taking off.

airport imaginary surfaces - Imaginary areas in space and on the ground that are established in relation to the airport and its Runways. Imaginary areas are defined by the primary surface, Runway protection zone, approach surface, horizontal surface, conical surface and transitional surface.

airport impact zones - A zone used to place land use conditions on land impacted by airport operations. It establishes a new zone and provisions which replaces an existing zone and standards.

Airport Improvement Program (AIP) - The AIP is authorized by the Airport and airway Improvement Act of 1982 (P.L. 97-248, as amended). The Act's broad objective is to assist in the development of a nationwide system of public- use airports adequate to meet the current and projected growth of civil aviation. The Act provides funding for airport planning and development projects at airports included in the National Plan of Integrated Airport Systems. The Act also authorizes funds for noise compatibility planning and to carry out noise compatibility programs as set forth in the Aviation Safety and Noise Abatement Act of 1979 (P.L. 96-143).

Glossary

Airport Layout Plan (ALP) - A scaled drawing of existing and proposed airside and landside facilities necessary for the operation and development of the airport. The ALP shows (1) boundaries and proposed additions to areas owned or controlled by the sponsor, (2) the location and nature of existing and proposed airport facilities and structures and (3) the location on the airport of existing and proposed non-aviation areas and improvements. The ALP may also depict those properties adjacent to the airport ownership that may have legal access to the airport.

Airport Layout Plan Set – This document typically contains a set of drawings which illustrate the existing and future development of the airport. An ALP set may often contain the following: (1) Airport Layout Drawing (Plan), (2) Airport Airspace Drawing, (3) Inner Portion of the Approach Surface Drawing, (4) Terminal Area Drawing, (5) Land Use Drawing and (6) Airport Property Map. The drawings depict existing and proposed airport facilities, land uses, approach zones and other defined areas of airspace, and environmental features that may influence airport usage and expansion capabilities.

airport manager - The person authorized by the airport sponsor to exercise administrative control of the airport.

airport master plan - Long-term development plan for the airport adopted by the airport proprietor and local jurisdictions.

Airport Noise Abatement Program - A program designed to reduce noise around an airport through changes in the manner in which aircraft are flown, or changes in the operation or layout of the airport. (Compatible land use planning).

Airport Noise and Capacity Act of 1990 - This act required the establishment of a National Noise Policy and a requirement to eliminate Stage 2 aircraft weighing 75,000 pounds or greater operating in the contiguous United States by the year 2000.

airport noise and impact boundary - Areas located within 1,500 feet of an airport Runway or within established noise contour boundaries exceeding 55Ldn [day-night average sound level].

airport obstruction zoning ordinance - A local height restriction ordinance which follows FAR Part 77, implements a local community's comprehensive plan and provides specific height standards for the area beneath the airport Imaginary Surface.

airport overlay zone - A zone intended to place additional land use conditions on land impacted by the airport while retaining the existing underlying zone.

airport owner - Any person or authority having the operational control of an airport as defined in the ASNA Act. (See OAR 660-113)

Airport Reference Code (ARC) - The ARC is a FAA coding system used to relate airport design criteria to the operational and physical characteristics of the airplanes intended to operate at the airport.

Airport Reference Point - The latitude and longitude of the approximate center of the airport, based upon the Runway facilities.

airport sponsor – 1) The airport owner or tax-supported organization such as an airport authority, that is authorized to own and operate, to obtain property interests, to obtain funds, and to legally, financially and otherwise able to meet all applicable requirements of current laws and regulations related to the operation of an airport. (See OAR 660-13) 2) The owner, manager, person or entity designated to represent the interests of an airport.

airside - That portion of the airport facility where aircraft movements take place, airline operations areas, and areas that directly serve the aircraft, such as taxiway, Runway, maintenance and fueling areas.

airspace - Space above the ground in which aircraft travel. Often airspace is divided into corridors, routes and restricted zones.

ambient noise - All-encompassing noise associated with a given environment, being usually a composite of sounds from many sources near and far.

Approach and Runway Protection Zone Map - The approach and Runway Protection Zone

Glossary

Map is compiled from the criteria in FAR Part 77, Objects Affecting Navigable Airspace. It shows the area affected by the Airport Obstructions Zoning Ordinance, and includes layout of Runways, airport boundary, elevations and area topography. Applicable height limitation areas are shown in detail.

approach slopes - The rations of horizontal to vertical distance indicating the degree of inclination of the Approach Surface. The various rations include:

approach surface – 1) A surface defined by FAR Part 77 "Objects Affecting Navigable Airspace, "that is longitudinally centered on the Runway centerline and extends outward and upward from each end of the primary surface. An approach surface is applied to each end of each Runway based on the type of approach available or planned for that Runway end. 2) A surface longitudinally centered on the extended Runway centerline and extending outward and upward from each end of the primary surface.

ASNA Act - The Aviation Safety and Noise Abatement Act of 1979, as amended (49 U.S.C. 2101 et seq.).

attainment area - An area in which the federal or state standards for ambient air quality are being achieved.

attenuation - The lessening of the magnitude.

average day-night sound level (DNL) - Average day-night sound level (DNL) is the FAA standard metric for determining the cumulative exposure of individuals to noise. DNL is the equivalent of noise levels produced by aircraft operations during a 24-hour period, with a ten-decibel penalty applied to the level measured during nighttime hours (10:00 pm to 7:00 am).

average sound level - The level in decibels, of the mean square, A-weighted sound pressure during a specified period, with reference to the square of the standard reference sound pressure of 20 micropascals [μPa].

avigation easement - A grant of a property interest in land over which a right of unobstructed flight in the airspace is established and which prohibits any structures, growth or other obstructions from penetrating the approach surface and provides a right of entry to remove, mark or light any structure or any such obstruction.

A-weighted sound level (also referred to as dBA) - The sound pressure level which has been filtered or weighted to reduce the influence of the low and high frequency noise; designed to approximate the manner in which the human ear responds to sounds.

based aircraft - An aircraft permanently stationed at an airport by agreement between the aircraft owner and the airport management.

building codes - Codes, either local or state, that control the functional and structural aspects of buildings and/or structures. Local ordinances typically require proposed buildings to comply with zoning requirements before building permits can be issued under the building codes.

commercial service airport - A public airport that has at least 2,500 passenger boardings each year and is receiving scheduled passenger aircraft service.

compatibility - The degree to which land uses or types of development can coexist or integrate.

compatible land use - As defined in FAR 150: The use of land (e.g. commercial, industrial, agricultural) that is normally compatible with aircraft and airport operations, or sound insulated land uses (e.g. sound insulated homes, schools, nursing homes, hospitals, libraries) that would otherwise be considered incompatible with aircraft and airports operations.

Comprehensive Plan - Similar to a Master Plan, the comprehensive plan is a governmental entity's official statement of its plans and policies for long-term development. The plan includes maps, graphics and written proposals, which indicate the general location for streets, parks, schools, public buildings, airports and other physical development of the jurisdiction.

conditional zoning - The imposition or exaction of conditions or promises upon the grant of zoning by the zoning authority.

conformity (Air Quality) - No department, agency or instrumentality of the federal government shall engage in, support in any way or provide financial assistance for, license, or

permit, or approve, any activity which does not conform to a State Implementation Plan (SIP). There are two types of Air Quality Conformity: General Conformity and Transportation Conformity:

conical surface - A surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet.

decibel (dB) - A unit for describing the intensity or level of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to a standard reference pressure.

Department of Aviation - The Oregon Department of Aviation (ODA), formerly the Aeronautics Division of the Oregon Department of Transportation.

easement - A grant of one or more of the property rights by the property owner to and/or for the use by the public, a corporation or another person orentity.

enplanement - A passenger boarding of a commercial flight.

Environmental Assessment (EA) - A concise document that assesses the environmental impacts of a proposed federal action. The EA discusses the need for and environmental impacts of the proposed action and alternative actions. An EA should provide sufficient evidence and analysis for a federal determination whether to prepare an Environmental Impact Statement or a Finding of No Significant Impact.

Environmental Impact Statement (EIS) - A document that provides full and fair discussion of the significant environmental impacts that would occur as a result of a proposed project and informs decision makers and the public of the reasonable alternatives that would avoid or minimize adverse impacts.

Euclidean Zoning - A traditional legislative method or device for controlling land use by establishing districts with boundaries and providing for specific uniform regulations as to type of permitted land use, height, bulk and lot coverage of structure, setback and similar building restrictions. (Reference from 1929 U.S. Supreme Court landmark decision upholding zoning as a means of land use control in "City of Euclid, Ohio v. Ambler Realty:)

FAA's Technical Representative - A used in this ordinance, the federal agency providing the FAA with expertise on wildlife and bird strike hazards as they relate to airports. This may include, but is not limited to, the United States Department of Agriculture - Animal and Plant Health Inspection Service - Wildlife Service (USDA-APHIS-WS).

FAR Part 150 - Regulation pertaining to Airport Noise Compatibility Planning.

FAR Part 161 - Regulation pertaining to notice and approval of airport noise and access restrictions.

FAR Part 36 - Regulation establishing noise standards for the civil aviation fleet.

FAR Part 91 - Regulation pertaining to Air Traffic and General Operating Rules, including operating noise limits.

Federal Aviation Administration (FAA) - A federal agency charged with regulating air commerce to promote its safety and development, encouraging and developing civil aviation, air traffic control and air navigation and promoting the development of a national system of airports.

Federal Aviation Regulations (FAR) - Regulations established and administered by the FAA that govern civil aviation and aviation-related activities.

Federal Aviation Regulations Part 77 - Objects Affecting Navigable Airspace" - Part 77 (a) establishes standards for determining obstructions in navigable airspace; (b) defines the requirements for notice to the FAA Administrator of certain proposed construction or alteration; (c) provides for aeronautical studies of obstructions to air navigation to determine their effect on the safe and efficient use of airspace; (d) provides for public hearings on the hazardous effect of proposed construction or alteration on air navigation; and (e) provides for establishing antenna farm areas.

Federal Grant Assurance - The terms and conditions of accepting Airport Improvement Program (AIP) grants from the Federal Aviation

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Administration for carrying out the provisions of Title 49 United State Code. The terms and conditions become applicable when the airport sponsor accepts a grant offer from the FAA.

general aviation (GA) - Refers to all civil aircraft and operations that are not classified as air carrier, commuter or regional. The types of aircraft used in general aviation activities cover a wide spectrum from corporate multi-engine jet aircraft piloted by professional crews to amateur-built single engine piston acrobatic planes, balloons and dirigibles.

general conformity - All federal actions (except those involving highways and transit projects) within non-attainment and maintenance areas that result in a net increase in emissions above specified levels.

hazard to air navigation - An obstruction determined to have a substantial adverse effect on the safe and efficient utilization of the navigable airspace.

height - The highest point of a structure or tree, plant or other object of natural growth, measured from mean sea level.

Hold Harmless Agreement - An agreement which holds airport sponsors or jurisdictions harmless for alleged damages resulting from airport operations. Such agreements are recorded in deeds or permits as a condition of approval of a regulatory land use decision.

horizontal surface - A horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of specified radii from the center of each end of the primary surface of each Runway of each airport and connecting the adjacent arcs by lines tangent to those arcs. The radius of each arc is:
(A) 5,000 feet for all Runways designated as utility.
(B) 10,000 feet for all other Runways.
(C) The radius of the arc specified for each end of a Runway will have the same arithmetical value. That value will be the highest determined for either end of the Runway. When a 5,000-foot arc is encompassed by tangents connecting two adjacent 10,000-foot arcs, the 5,000-foot arc shall be disregarded on the construction of the perimeter of the horizontal surface.

housing codes - The codes that usually apply to both existing and future living units. The codes include minimum standards of occupancy, and usually govern spatial, ventilation, wiring, plumbing, structural and heating requirements.

hubbing - A method of airline scheduling that times the arrival and departure of several aircraft in a close time period to allow the transfer of passengers between different flights of the same airline. Several airlines may conduct hubbing operations at an airport.

imaginary surfaces - Those areas established in relation to the airport and to each Runway consistent with FAR Part 77 in which any object extending above these imaginary surfaces, by definition, is an obstruction.

incompatible land use - The use of land, which is defined in Appendix A, Table 1 of FAR Part 150, which is normally incompatible with the aircraft and airport operations (such as homes, schools, nursing homes, hospitals and libraries).

infrastructure - A community's built elements that establish the community's foundation for maintaining existing populations, activities, future growth and development. Infrastructure elements include airports, roads and highways, bridges, water and sewer systems, waste disposal facilities, utilities and telecommunications systems, schools, and governmental and community facilities.

instrument approach - A series of predetermined maneuvers for the orderly transfer of an aircraft under instrument flight conditions from the beginning of the initial approach to a landing or to a point from which a landing may be made visually.

Instrument Flight Rules (IFR) - Rules by which aircraft are operated without visual reference to the ground; in effect when cloud ceilings are equal to or less than 1,000 feet, or visibility is less than 3 miles.

Instrument Landing System (ILS) - The instrument landing system is designed to provide electronic instrument guidance to the pilot to permit exact alignment and angle of descent of a properly equipped aircraft on final approach for landing.

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Integrated Noise Model (INM) - FAA' s computer model used by the civilian aviation community for evaluating aircraft noise impacts near airports. The INM uses a standard database of aircraft characteristics and applies them to an airport's average operational day to produce noise contours.

itinerant operation - Any aircraft arrival and/ or departure other than a local operation.

land banking - The purchase of property by the government to be held for future use and development either by the government or for resale for the development of compatible uses.

land use compatibility - The coexistence of land uses surrounding the airport with airport-related activities.

land use controls - Measures established by state or local government that are designed to carry out land use planning. The controls include among other measures: zoning, subdivision regulations, planned acquisition, easements, covenants or conditions in building codes and capital improvement programs, such as establishment of sewer, water, utilities or their service facilities.

land use management measures - Land use management techniques that consist of both remedial and preventive measures. Remedial, or corrective, measures typically include sound insulation or land acquisition. Preventive measures typically involve land use controls that emend or update the local zoning ordinance, comprehensive plan, subdivision regulations and building code.

landside - That part of an airport uses for activities other than the movement of aircraft, such as vehicular access roads and parking.

lighting and marking of hazards to air navigation - Installation of appropriate lighting fixtures, painted markings or other devices to such objects or structures that constitute hazards to air navigation.

Limited Avigation Easement - An easement which provides right of flight above approach slope surfaces, prohibits any obstruction penetrating the approach slope surface, and provides right of entry to remove any structure or growth penetrating the approach slope surface.

local operation - Any operation performed by an aircraft that (a) operations in the local traffic pattern or within sight of the tower or airport, or (b) is known to be departing for, or arriving from, flight in local practice areas located within a 20- mile radius of the control tower or airport, or (c) executes a simulated instrument approach or low pass at the airport.

maintenance area - a geographical area which was once designated as nonattainment, but the pollution levels have met the National Ambient Air Quality standards for two consecutive y ears and has an approved maintenance plan which outlines how the geographical area will continue to meet these standards.

mediation - The use of a mediator or co-mediators to facilitate open discussion between disputants and assist them to negotiate a mutually agreeable resolution. Mediation is a method of alternative dispute resolution that provides an initial forum to informally settle disputes prior to regulatory intervention on the part of the FAA.

mitigation - The avoidance, minimization, reduction, elimination or compensation for adverse environmental effects of a proposed action.

mitigation measure - An action taken to alleviate adverse impacts.

National Environmental Policy Act of 1969 (NEPA) - The original legislation establishing the environmental review process.

National Plan of Integrated Airport Systems (NPIAS) - A primary purpose of the NPIAS is to identify the airports that are important to national transportation and, therefore, eligible to receive grants under the Airport Improvement Program (AIP). The NPIAS is composed of all commercial service airports, all reliever airports, and selected general aviation airports.

Nautical Mile - A measure of distance equal to one minute of arc on the earth's surface, which is approximately 6,080 feet.

Navigation Aids (NAVAIDS) - Any facility used by an aircraft for guiding or controlling

flight in the air or the landing or take-off of an aircraft.

noise - Defined subjectively as unwanted sound, the measurement of noise evaluates three characteristics of sound: intensity, frequency and duration.

noise abatement procedures - Changes in Runway usage, flight approach and departure routes and procedures, and vehicle movement, such as ground maneuvers or other air traffic procedures that shift aviation impacts away from noise sensitive areas.

Noise Compatibility Plan (NCP) - The NCP consists of an optimum combination of preferred noise abatement and land use management measures, and a plan for implementation of the measures. For planning purposes, the implementation plan also includes the estimated cost for each of the recommended measures to the airport sponsor, the FAA, airport users, and the local units of government.

Noise Compatibility Program - See "Part 150 Study"

noise exposure contours - Lines drawn about a noise source indicating constant energy levels of noise exposure. DNL is the measure used to describe community exposure to noise.

Noise Exposure Map (NEM) - The NEM is a scaled map of the airport, its noise contours and surrounding land uses. The NEM depicts the levels of noise exposure around the airport, both for the existing conditions and forecasts for the five-year planning period. The area of noise exposure is designated using the DNL (Day-Night Average Sound Level) noise metric.

noise impact - A condition that exists when the noise levels that occur in an area exceed a level identified as appropriate for the activities in that area.

Noise Level Reduction (NLR) - The amount of noise level reduction in decibels achieved through incorporation of noise attenuation (between outdoor and indoor levels) in the design and construction of a structure.

Noise-Sensitive Area - Areas where aircraft noise may interfere with existing or planned use of the land. Whether noise interferes with a particular use depends upon the level of noise exposure and the types of activities that are involved. Residential neighborhoods, educational, health, and religious structures and sites, outdoor recreational, cultural and historic sites may be noise sensitive areas.

non-attainment - Areas that exceeded the national ambient air quality standards for any of six pollutants (ozone, or smog; carbon monoxide; lead; particulate matter; or PM-10; or nitrogen dioxide).

non-conforming Use - Any pre-existing structure, tree, or use of land that is inconsistent with the provisions of the local land use or airport master plans.

non-precision instrument Runway – 1) A Runway having an existing instrument approach procedure utilizing air navigation facilities with only horizontal guidance, or area type navigation equipment, for which a straight-in non-precision instrument approach has been approved, or planned, and for which no precision approach facilities are planned or indicated on an FAA-approved airport layout plan or other FAA planning document. A Runway having an existing or planned instrument approach that is essentially aligned with the Runway centerline and has horizontal information for guidance of the aircraft on course and relays altimeter and intermediate fixes for descent to the touchdown point on the Runway.

obstruction - Any structure, growth, or other object of natural growth that penetrates an imaginary surface.

off-airport property - Property that is beyond the boundary of land owned by the airport sponsor.

Official Map - A legally adopted map that conclusively shows the locations and width of proposed streets, public facilities, public areas and drainage rights-of- way.

on-airport property - Property that is within the boundary of land owned by the airport sponsor.

Other than Utility Runway - A Runway that is constructed for and intended to be used by

turbine driven aircraft or by propeller-driven aircraft exceeding 12,500 pounds gross weight.

overlay zone - A mapped zone that imposes a set of requirements in addition to those of the underlying zoning district.

Part 150 Study - Part 150 is the abbreviated name for the airport noise compatibility planning process outlined in Part 150 of the Federal Aviation Regulation (FAR) that allows airport owners to voluntarily submit noise exposure maps and noise compatibility programs to the FAA for review and approval. See "Noise Compatibility Plan."

Passenger Facility Charge (PFC) Program - The PFC Program, first authorized by the Aviation Safety and Capacity Expansion Act of 1990 and now codified under Section 40117 of Title 49 U.S.C., provides a source of additional capital to improve, expand and repair the nation's airport infrastructure. The legislation allows public agencies controlling commercial service airports to charge enplaning passengers using the airport a facility charge. The FAA must approve any facility charges imposed on enplaning passengers.

performance standards - Minimum acceptable levels of performance, imposed by zoning that must be met by each land use.

precision instrument Runway – 1) A Runway having an existing instrument approach procedure utilizing air navigation facilities that provide both horizontal and vertical guidance, such as an Instrument Landing System (ILS) or Precision Approach Radar (PAR). It also means a Runway for which a precision approach system is planned and is so indicated by an FAA -approved airport layout plan or other FAA planning document. 2) A Runway having an existing or planned instrument approach that is essential aligned with the Runway centerline and has horizontal information for guidance of the descent of the aircraft to the touchdown point of the Runway.

primary Runway - The Runway used for the majority of airport operations. Large, high-activity airports may operate two or more parallel primary Runways.

primary surface - 1) A primary surface is longitudinally centered on a Runway. When the Runway has a specially prepared hard surface, the primary surface extends 200 feet beyond each end of that Runway. When the Runway has no specially prepared hard surface, or planned hard surface, the primary surface terminates at each end of the Runway. The width of a primary surface ranges from 250 feet to 1,000 feet, depending on the existing or planned approach system. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the Runway centerline. 2) **Primary Surface** - A surface longitudinally centered on a Runway. When a Runway has a specially prepared hard surface, the primary surface extends 200 feet beyond each end of that Runway. When a Runway has not specially prepared hard surface, or planned hard surface, the primary surface ends at each end of that Runway. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the Runway centerline. The width of the primary surface is:
(A) 500 feet for utility Runways having non-precision instrument approaches,
(B) 500 feet for other than utility Runways having non-precision instrument approaches with visibility minimums greater than three-fourths statute mile, and
(C) 1,000 feet for non-precision instrument Runways with visibility minimums at or below three-fourths statute mile, and for precision instrument Runways.

proponent - Any person who proposes to erect or construct any object or structure that exceeds certain minimum altitudes that may be a potential hazard to air navigation and who may be responsible for lighting and marking such object or structure.

public assembly facility - A permanent or temporary structure or facility, place or activity where concentrations of people gather in reasonably close quarters for purposes such as deliberation, education, worship, shopping, employment, entertainment, recreation, sporting events, or similar activities. Public assembly facilities include, but are not limited to, schools, churches, conference or convention facilities, employment and shopping centers, arenas, athletic fields, stadiums, clubhouses, museums, and similar facilities and places, but do not include parks, golf courses or similar

facilities unless used in a manner where people are concentrated in reasonably close quarters. Public assembly facilities also do not include air shows, structures or uses approved by the FAA in an adopted airport master plan, or places where people congregate for short periods of time such as parking lots or bus stops.

public use airport - A publicly or privately-owned airport that offers the use of its facilities to the public without prior notice or special invitation or clearance.

reliever airport - An airport that meets certain FAA criteria and relieves the aeronautical demand on a busier air carrier airport.

Runway - A defined area on the airport prepared for landing and takeoff of aircraft along its length.

Runway protection zone - An area off the Runway end used to enhance the protection of people and property on the ground. The RPZ is trapezoidal in shape and centered about the extended Runway centerline. The inner width of the RPZ is the same as the width of the primary surface. The outer width of the RPZ is a function of the type of aircraft and specified approach visibility minimum associated with the Runway end. The RPZ extends from each end of the primary surface for a horizontal distance of:
(A) 1,000 feet for utility Runways.
(B) 1,700 feet for other than utility Runways having non-precision instrument approaches.
(C) 2,500 feet for precision instrument Runways.

Runway Protection Zone (RPZ) - A trapezoidal-shaped area centered about the extended Runway centerline that is used to enhance the protection of people and property on the ground. It begins 200 feet beyond the end of the Runway or area usable for takeoff or landing. The RPZ dimensions are functions of the design aircraft, type of operation and visibility minimums.

significant - As it relates to bird strike hazards, "significant" means a level of increased flight activity by birds across an approach surface or Runway that is more than incidental or occasional, considering the existing ambient level of flight activity by birds in the vicinity.

sound attenuation - Acoustical phenomenon whereby a reduction of sound energy is experienced between the noise source and the receiver. This energy loss can be attributed to atmospheric conditions, terrain, vegetation, constructed features (e.g., sound insulation) and natural features.

Sound Exposure Level (SEL) - A measure of the physical energy of the noise event that takes into account both intensity and duration. By definition SEL values are referenced to a duration of one second. SEL is higher than the average and the maximum noise levels as long as the event is longer than one second. Sound exposure level is expressed in decibels (dB). People do not hear SEL.

Sound Transmission Class (STC) - A number rating of the sound that indicates the amount of noise attenuation in tested acoustical materials.

special exceptions - Land uses that are not specifically permitted as a matter of right, but can be permitted in accordance with performance standards and other local criteria. Also known as "conditional uses."

Stage 2 Aircraft - Aircraft that meet the noise levels prescribed by FAR Part 36 and are less stringent than noise levels established for the quieter designation State 3 aircraft. The Airport Noise and Capacity Act requires the phase-out of all State 2 aircraft by December 31, 1999, with case-by-case exceptions through the year 2003.

Stage 3 Aircraft - Aircraft that meet the most stringent noise levels set forth in FAR Part 36.

State Implementation Plan (SIP) - A detailed description of the programs a state will use to carry out its responsibilities under the Clean Air Act. State Implementation Plans are collections of the regulations used by a state to reduce air pollution.

statute mile - A measure of distance equal to 5,280 feet.

structure - Any constructed or erected object which requires location on the ground or is attached to something located on the ground. Structures include but are not limited to buildings, decks, fences, signs, towers, cranes, flagpoles, antennas, smokestacks, earth

formations and overhead transmission lines. Structures do not include paved areas.

supplemental type certificate (STC) - A supplemental type certificate (STC) is a type certificate (TC) issued when an applicant has received FAA approval to modify an aeronautical product from its original design.

terminal area - A general term used to describe airspace in which airport traffic control or approach control service is provided.

Transfer of Development Rights (TDR) - The removal of the right to develop or build, expressed in dwelling units per acre, from land in one location to land in another location where such transfer is permitted.

Transitional Surface - 1) An element of the Imaginary Surfaces extending outward and upward at right angles to the Runway centerline and Runway centerline extended at a slope of 7:1 from the sides of the primary and approach surfaces to where they intersect the horizontal and conical surfaces. 2) Those surfaces that extend upward and outward at 90-degree angles to the Runway centerline and the Runway centerline extended at a slope of seven (7) feet horizontally for each foot vertically from the sides of the primary and approach surfaces. Transitional surfaces for those portions of the precision approach surfaces which project through and beyond the limits of the conical surface, extend a distance of 5,000 feet measured horizontally from the edge of the approach surface and at a 90-degree angle to the extended Runway centerline.

transportation conformity - Federally funded or approved highway or transit projects; (and regionally significant non-federal highway and transit projects) within non-attainment and maintenance areas.

turbojet aircraft - Aircraft operated by jet engines incorporating a turbine-driven air compressor to take in and compress the air for the combustion of fuel, the gases of combustion (or the heated air) being used both to rotate the turbine and to create a thrust-producing jet.

turboprop aircraft - Aircraft in which the main propulsive force is supplied by a gas turbine driven conventional propeller. Additional propulsive force may be supplied from the discharged turbine exhaust gas.

urbanized land - Lands within the urban growth boundary which are: (a) determined to be necessary and suitable for future urban areas; (b) served by urban services and facilities; and (c) needed for the expansion of an urban area.

utility Runway - A Runway that is constructed for and intended to be used by propeller driven aircraft of 12,500 pounds maximum gross weight or less.

variance - An authorization for the construction or maintenance of a building or structure, or for the establishment or maintenance of a use of land that is prohibited by a zoning ordinance. A lawful exception from specific zoning ordinance standards and regulations predicated on the practical difficulties and/or unnecessary hardships on the petitioner being required to comply with those regulations and standards from which an exemption or exception is sought.

visual approach - An approach to an airport conducted with visual reference to the terrain.

visual approach Runway - A Runway intended for visual approaches only, with no straight-in instrument approach procedure either existing or planned for that Runway.

visual flight rules (VFR) - FAA rules that govern procedures for flight under visual conditions.

visual Runway - A Runway intended solely for the operation of aircraft using visual approach procedures, where no straight-in instrument approach procedures or instrument designations have been approved or planned, or area indicated on an FAA-approved airport layout plan or any other FAA planning document.

water impoundment - Incudes wastewater treatment settling ponds, surface mining ponds, detention and retention ponds, artificial lakes and ponds, and similar water features. A new water impoundment includes an expansion of an existing water impoundment except where such expansion was previously authorized by land use action approved prior to the effective date of this ordinance.

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wetland mitigation banking - involves consolidating fragmented wetland mitigation projects into one large contiguous site. Unites of restored, created enhanced or preserved wetlands are expressed as “credits” which may be withdrawn to offset “debits” incurred at a project development site**.**

yearly day-night average sound level (YDNL) - The 365-day average, in decibels, day-night average sound level. The symbol for YDNL is also Ldn.

zoning - The partitioning of land parcels in a community by ordinance into zones and the establishment of regulations in the ordinance to govern the land use and the location, height, use and land coverages of buildings within each zone. The zoning ordinance usually consists of text and zoning map.

zoning ordinance - Primarily a legal document that allows a local government effective and legal regulation of uses of property while protecting and promoting the public interest.

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