BANDON STATE AIRPORT
AIRPORT MASTER PLAN

Bandon State Airport

Airport Master Plan

Meeting #3 –November 6, 2014

CENTURY WEST ENGINEERING CORPORATION

OREGON DEPARTMENT OF AVIATION

Airport Facility Requirements

Introduction

- The purpose of the facility requirements analysis is to define current and future facility needs for the 20-year planning period
  - **Airside** Facilities (runway, taxiway, lighting, etc.)
  - **Landside** Facilities (aircraft parking, hangars, fuel etc.)
  - **Support** Facilities/Infrastructure (access roads, vehicle parking, utilities, etc.)

Airside Facility Requirements

- Runway
  - length, width, orientation, pavement strength, markings, etc.
- Taxiways
  - Parallel taxiway
  - Exit taxiways
  - Aircraft hold areas
  - Access taxiways

Airside Facility Requirements

- Airfield Lighting
  - Runway edge lighting, visual guidance indicators (PAPI), runway end identifier lights (REIL), airport rotating beacon
- Instrument Approach
  - Requires obstruction survey and procedure development
- On-site Weather Observation (AWOS or ASOS)

Landside Facility Requirements

- Aircraft Apron
  - Parking capacity and demand
  - Aircraft parking needs
    - Single-engine tiedowns (based and transient)
    - Drive through parking (business class aircraft)
    - Transient helicopter parking
  - FBO/GA terminal operating area (passenger loading / unloading)

Landside Facility Requirements

- Aircraft Apron (continued)
  - Aircraft fueling apron, fuel storage (multiple tanks / grades), mobile fueling parking and spill containment
  - FAA dimensional standards (taxilane obstacle clearance)
- Aircraft Hangars
  - Commercial/FBO and aircraft storage
  - Conventional hangars and multi-unit hangars
  - Majority of new based aircraft will be hangared

Support/Infrastructure Facility Requirements

- Airport Access Roads
  - Public vehicle access and parking
  - Tenant vehicle access and parking
  - On-airport and off-airport development
- Utilities (water, sewer, electric)
- Stormwater

FAA Airport Design Standards

- The forecasts of aviation activity project an increase in Airplane Design Group II (ADG II) activity over the next 20+ years
- Most airport facilities are currently designed to meet Airplane Design Group I (ADG I) standards
- Future facility needs to be driven by increased demand and meeting current and future design standards

OREGON DEPARTMENT OF AVIATION

BANDON STATE AIRPORT

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A-I

12,500 lbs. or less (small)

Beech Baron 55
Beech Bonanza
Cessna 182
Piper Archer
Piper Seneca

B-I

12,500 lbs. or less (small)

Beech Baron 58
Beech King Air 100
Cessna 402
Cessna 421
Piper Navajo
Piper Cheyenne
Cessna Citation I

A-II, B-II

12,500 lbs. or less (small)

Super King Air 200
Cessna 441
DHC Twin Otter
Cessna Caravan
King Air C90

B-II

Greater than 12,500 lbs.

Super King Air 300, 350
Beech 1900
Jetstream 31
Falcon 20, 50
Falcon 200, 900
Citation II, Bravo XLS+
Citation CJ3

A-III, B-III

Greater than 12,500 lbs.

DHC Dash 7
DHC Dash 8
Q-300, Q-400
DC-3
Convair 580
Fairchild F-27
ATR 72
ATP

C-I, D-I

Lear 25, 35, 55, 60
Israeli Westwind
HS 125-700

C-II, D-II

Gulfstream II, III, IV
Canadair 600
Canadair Regional Jet
Lockheed JetStar
Citation X
Citation Sovereign
Hawker 800 XP

C-III, D-III

Boeing Business Jet
B 727-200
B 737-300 Series
MD-80, DC-9
Foker 70, 100
A319, A320
Gulfstream V
Global Express

C-IV, D-IV

B-757
B-767
DC - 8-70
DC - 10
MD - 11
L 1011

D-V

B - 747 Series
B - 777

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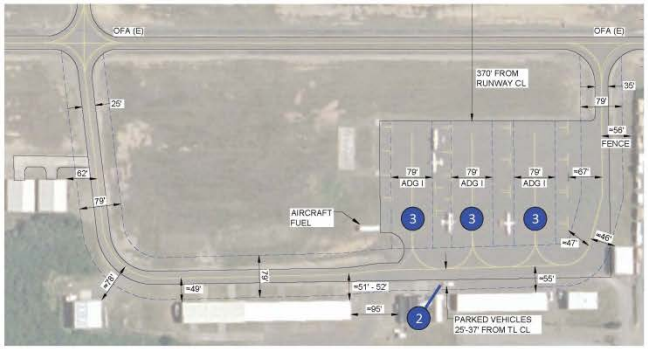
AIRPORT REFERENCE CODES (ARC)

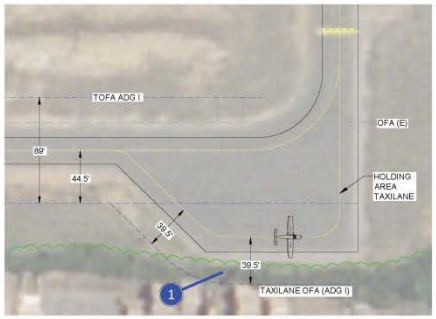
FAA Airport Design Standards

- Examples of facilities with different (increased) dimensional standards in ADG I and ADG II:
  - Runway width
  - Runway length (determined by design aircraft needs)
  - Runway protected areas (safety area, object clearances)
  - Parallel taxiway separation (from runway)
  - Parallel taxiway width
  - Apron taxilane clearances and size of parking areas

BANDON STATE AIRPORT
AIRPORT MASTER PLAN



TERMINAL AREA VIEW



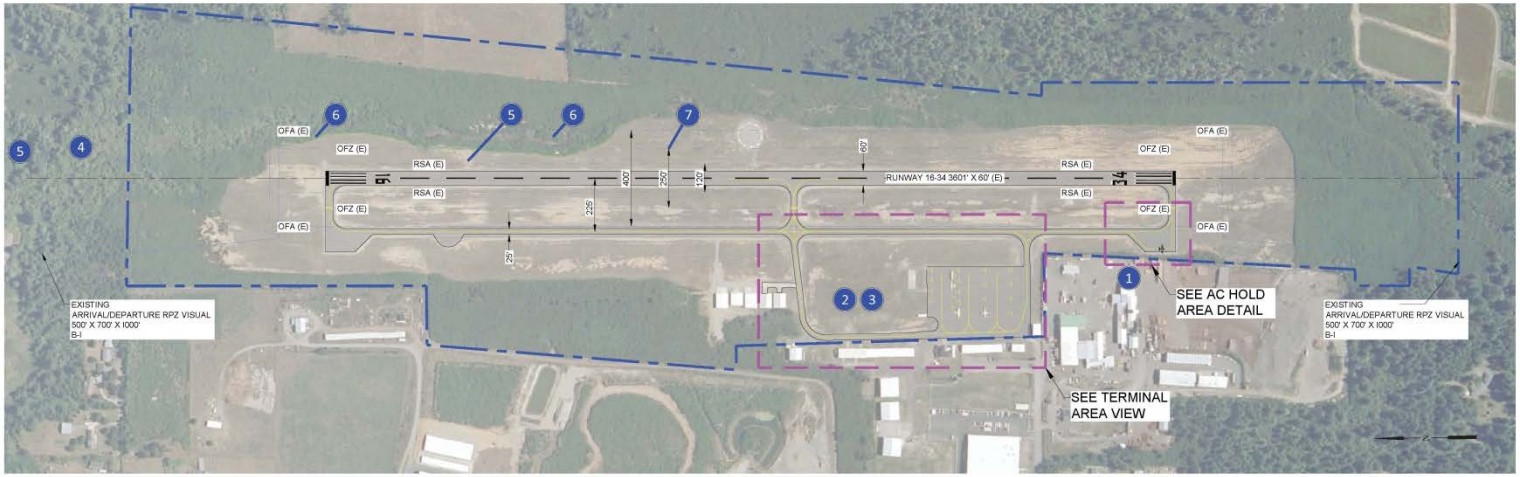
AC HOLD DETAIL

LEGEND

1. HOLD AREA TAXILANE OFA (WINGTIP CLEARANCES -BUSHES, FENCE)
2. TAXILANE OFA (PARKED VEHICLES)
3. TAXILANE OFA (AIRCRAFT PARKING/TIEDOWNS)
4. RPZ (PROPERTY CONTROL)
5. PAPI (VISUAL GLIDE PATH OBSTRUCTED (TREES))
6. RUNWAY OFA, OFZ (BRUSH)
7. RUNWAY OFZ (400' WIDTH)

NOTE:

1. AN UPGRADE TO ADG II STANDARDS MAY REQUIRE RUNWAY EXTENSION TO ACCOMMODATE DESIGN AIRCRAFT, WHICH WOULD EXTEND PROTECTED AREAS ASSOCIATED WITH THE RUNWAY. ACTUAL CONFIGURATION TO BE DETERMINED IN ALTERNATIVES ANALYSIS.



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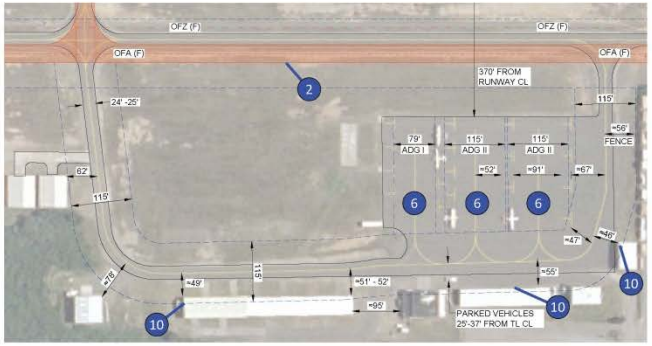

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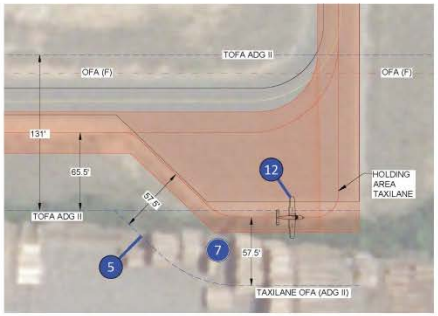
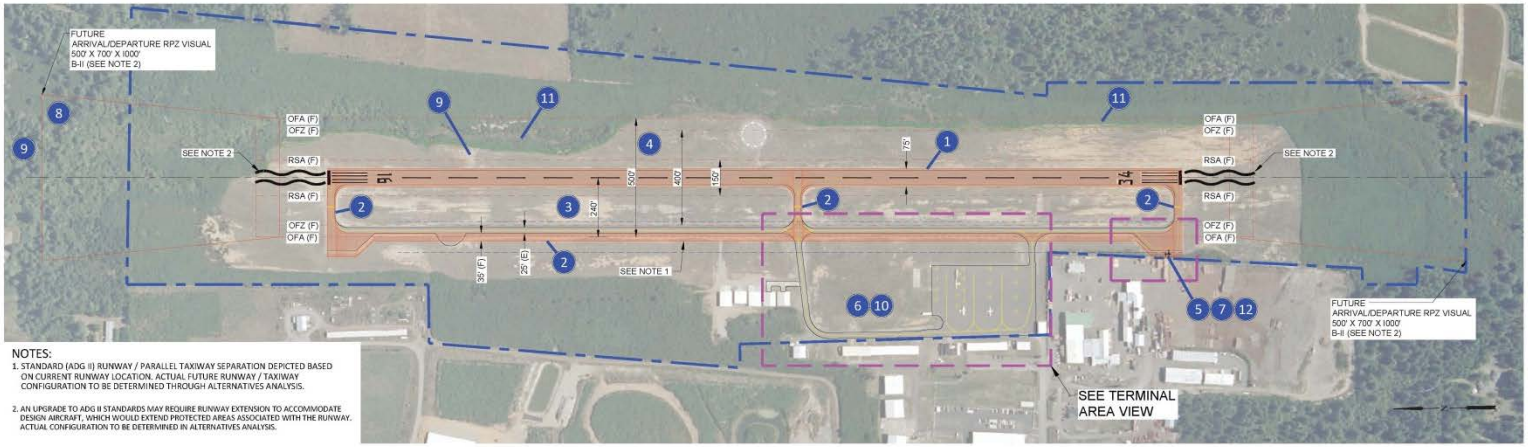


AC HOLD DETAIL

LEGEND

1. RUNWAY (WIDTH INCREASED TO 75')
2. PARALLEL & EXIT TAXIWAYS (WIDTH INCREASED TO 35')
3. RUNWAY CENTERLINE TO PARALLEL TAXIWAY SEPARATION INCREASES TO 240'
4. RUNWAY OBJECT FREE AREA (WIDTH INCREASES TO 500'; LENGTH EXTENDS 300' BEYOND RWY ENDS)
5. TAXIWAY OBJECT FREE AREA (WIDTH INCREASES TO 131')
6. TAXILANE OFA ADG I/II (AIRCRAFT PARKING/TIEDOWNS)
7. HOLD AREA (WINGTIP CLEARANCE FENCE, LUMBER STORAGE)
8. RPZ (PROPERTY CONTROL)
9. PAPI (VISUAL GLIDE PATH OBSTRUCTED (TREES))
10. TAXILANE OFA (BUILDINGS, PARKED VEHICLES)
11. RUNWAY OFA, OFZ (BRUSH, TERRAIN)
12. TAXIWAY OFA (HOLDING AIRCRAFT)



NOTES:
1. STANDARD (ADG II) RUNWAY / PARALLEL TAXIWAY SEPARATION DEPICTED BASED ON CURRENT RUNWAY LOCATION. ACTUAL FUTURE RUNWAY / TAXIWAY CONFIGURATION TO BE DETERMINED THROUGH ALTERNATIVES ANALYSIS.
2. AN UPGRADE TO ADG II STANDARDS MAY REQUIRE RUNWAY EXTENSION TO ACCOMMODATE DESIGN AIRCRAFT, WHICH WOULD EXTEND PROTECTED AREAS ASSOCIATED WITH THE RUNWAY. ACTUAL CONFIGURATION TO BE DETERMINED IN ALTERNATIVES ANALYSIS.

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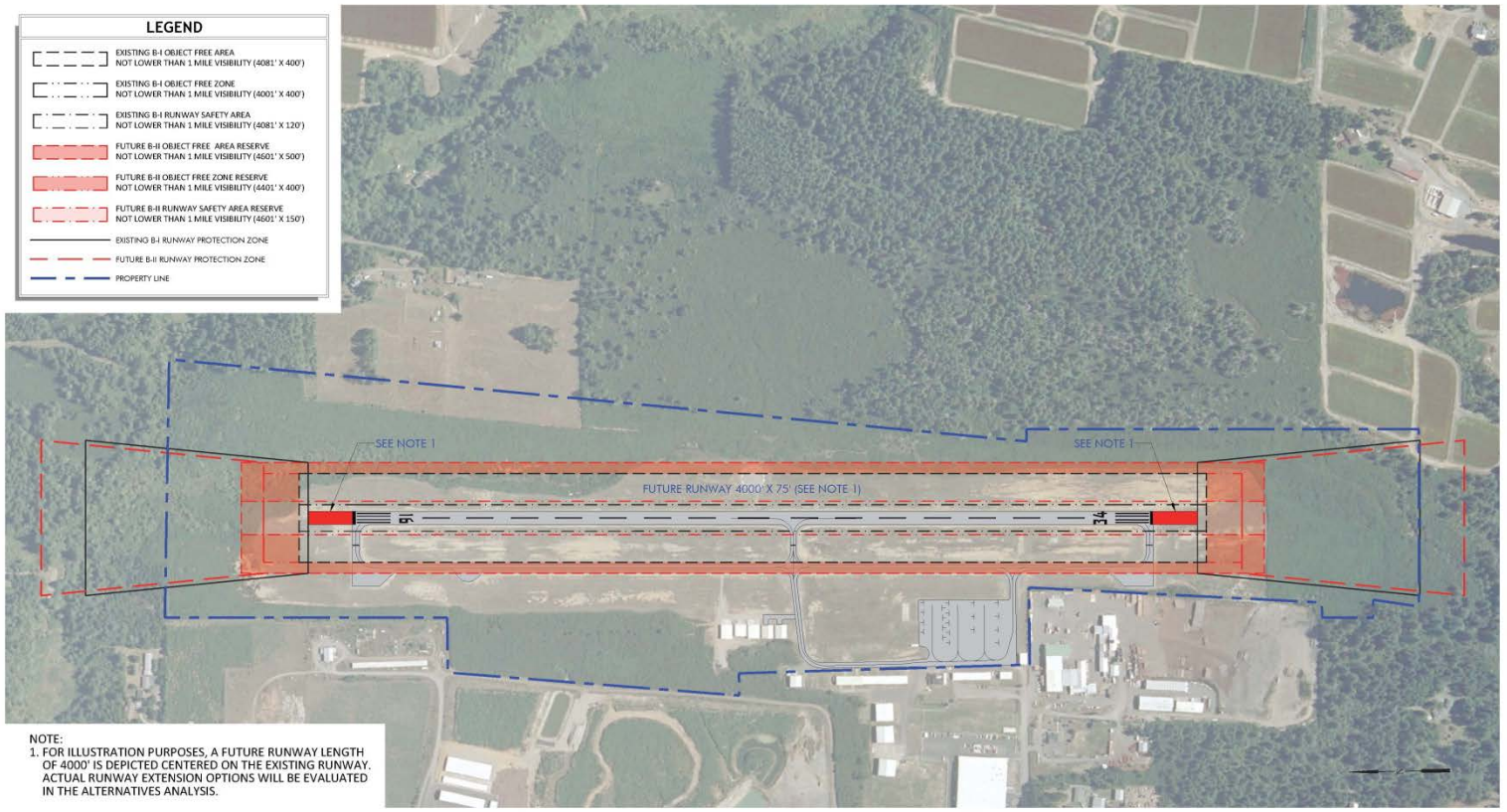

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ARC B-I & B-II | **FIG. 4-3**

Development Alternatives Evaluation

Create facility layouts to address current, short-term and long-term needs

- Airside improvements
  - Runway-taxiway configuration
  - Runway length
  - Pavement strength
  - Runway clear areas

Development Alternatives Evaluation

- Landside improvements
  - Aircraft Apron
    - Aircraft Parking and Taxilane Configuration
    - Aircraft Parking
    - Aircraft Fueling
  - Aircraft Hangars
  - FBO/GA terminal
  - Vehicle access and parking
- On airport and off-airport development