



# ***Eleventh Air Force***

*Integrity - Service - Excellence*

# Alaska Civil / Military Aviation Council Welcome!

**Please Check in at Sign-up Table**



# *Eleventh Air Force*

## *Airspace Management Team*

## *Joint Base Elmendorf-Richardson*

## *Maj Robert Peck*

Data SIO, NOAA, U.S. Navy, NGA, GEBCO  
Image © 2012 TerraMetrics

*Integrity - Service - Excellence*

61°07'39.51" N 151°15'19.72" W elev 369 ft

Google earth

Eye alt 386.60 mi<sup>2</sup>



# *Eleventh Air Force*

## **ADMINISTRATION**

**Silence cell phones and other accessories**

**Emergency Exits**

**Please ensure you have signed in**

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# Meeting Agenda



## Topic

- **Introduction**
- **Opening Remarks**
- **Red Flag Alaska Update**
- **Military Airspace update**
- **Airfield Status Update**
- **FAA Regional Office Re-Org**
- **Approach Manning/Special VFR**

## Break

- **MATSU CTAF**
- **Arctic Thunder Open House Info**
- **AK UAS**
- **Open Forum**
- **Closing Comments**

## Briefer

- (Maj Robert Peck)
- (Col Pat Miller)
- (Mr. Pete Bussa)
- (Maj. Rob Peck)
- (Multiple speakers)
- (Mr. Greg Holt)
- (Dave Chilson)
  
- (Mr. Mike Yorke)
- (Maj Easterly)
- (Mr. Leonard Ligon)
  
- (Col Miller)



# Alaska Civil/Military Aviation Council

Col Pat Miller



# ACMAC



## Welcome to the 353rd CTS Eielson AFB AK

THIS BRIEFING IS UNCLASSIFIED

*Integrity - Service - Excellence*



# Overview



## ■ CY – 2014 Update

- RF-A 14-1
- RF-A 14-2
- RF-A 14-3
- RF-A 15-1

## ■ Questions





# RF-A 14-1

(8 – 23 May 14)



## ■ Eielson:

- Fam Day (9 May 14)
- 18 AGRS (Eielson) 12xF-16C+
- 425 FS (RSAF) 6xF-16C
- 67 FS (Kadena) 12xF-15C
- 909 ARS (Kadena) 6xKC-135
- 210 RQS 1xHH-60
- VAQ-142 (Whidbey Is) 3xEA-6B
- 148 ASOS (Indiantown) JTACS
- 1SFG ODA-1121(Okinawa)SF
- 345 FS (Davis-Monthan) 8xA-10C

## ■ JBER:

- 90/525 FS (JBER) 12xF-22
- 962 AACS (JBER) 1xE-3
- 961 AACS (Kadena) 1xE-3
- 517 AS (JBER) 2xC-17
- 123 AW (Louisville) 3xC-130
- 353 SOG (Kadena) 2xMC-130H

## ■ USARAK:

- 1-25 SBCT (FWW) 42xStryker

## ■ Distant Frontier:

- 425 FS 2-7 May
- 67 FS 24 May-6 Jun
- ODA 1121 24 May-6 Jun

- 68 Aircraft / 1,000 participants



# RF-A 14-2

(12 – 27 Jun 14)



## ■ Eielson:

- Fam Day (13 Jun 14)
- 18 AGRS (Eielson) 12xF-16C+
- 36 FS (Osan) 12xF-16CM
- 25 FS (Osan) 12xA-10C
- 159 FS (Jacksonville) 12xF-15C
- VAQ-138 (Whidbey IS) 5xEA-18G
- JASDF 6xF-15J
- JASDF 2xKC-767
- JASDF Stinger
- GAF 6xTornado
- TTF (AMC) 6xKC-135
- 210 RQS 1xHH-60
- USARAK:
- 3 ASOS, DET 1 (FWW) JTACS

## ■ JBER:

- 90/525 FS (JBER) 12xF-22
- 962 AACS (JBER) 1xE-3
- 961 AACS (Kadena) 1xE-3
- JASDF 1xE-767
- JASDF 3xC-130
- RAAF 2xC-130J
- 192 AS (Reno) 2xC-130

## ■ Distant Frontier:

- 25 FS 25 May-11 Jun
- 36 FS 25 May-11 Jun
- 122 ASOS 27 May-10 Jun
- JASDF 9-11 Jun
- 159 FS 10-11 Jun
- 90 Aircraft / 1,400 participants



# RF-A 14-3

(7 – 22 Aug 14)



## ■ Eielson:

- **Fam Day (8 Aug 14)**
- **18 AGRS (Eielson)**      **12xF-16C+**
- 14 FS (Misawa)      16xF-16CM
- 80 FS (Kunsan)      12xF-16CM
- 104 FS (Baltimore ANG)      10xA-10
- 176 FS (Madison ANG)      10xF-16+
- VAQ-135 (Whidbey IS)      4xEA-18G
- VMFA-323 (Miramar)      10xF/A-18C
- 22 ARW (McConnell)      6xKC-135
- 210 RQS (JBER)      1xHH-60
- 146,113 ASOS      JTACS
- **527 SAS (Schriever)**      **GPS Jam**

## ■ JBER:

- 90/525 FS (JBER)      10xF-22
- 962 AACS (JBER)      1xE-3
- 961 AACS (Kadena)      1xE-3
- 43 ECS (Davis-Monthan)      1xEC-130H
- 36 AS (Yokota)      3xC-130
- 39 AS (Dyess)      2xC-130
- **RAF**      **2xE-3D**
- **RAF**      **1xC-130**
- **RAAF**      **1xE-7**
- **Distant Frontier:**
- **14 FS**      **Pre EX**
- **80 FS**      **Post EX**
- **103 Aircraft / 1,700 participants**



# RF-A 15-1

(2 – 17 Oct 14)



## ■ Eielson:

■ **Fam Day (3 Oct 14)**

- **18 AGRS (Eielson)**      **12xF-16C+**
- 35 FS (Kunsan)      12xF-16CM
- **ROKAF**      **6xKF-16C/D**
- TTF (AMC)      6xKC-135
- 210 RQS      1xHH-60
- VMA-311 (MCAS Yuma)      14xAV-8B
- 21 STS (Ft Bragg)      JTAC/CCT
- 3 ASOS, DET 1 (FWW)      JTAC

## ■ Grand Forks:

- 348 RS (Grand Forks)      2xRQ-4B

## ■ USARAK:

- 4-25 ACBT(JBER)      Airborne

## ■ JBER:

- 90/525 FS (JBER)      10xF-22
- 962 AACS (JBER)      1xE3
- 961 AACS (Kadena)      1xE3
- 517 AS (JBER)      2xC-17
- 41 AS (Little Rock)      3xC-130J
- 700 AS (Dobbins)      1xC-130H3
- 211 RQS (JBER)      1xMC-130N
- **NATO**      **1xE3**
- **ROKAF**      **2xC-130H**

## ■ Distant Frontier:

- **35 FS**      **10 Sep – 1 Oct**
- **161 ARW**      **8 – 12 Sep**
- **ROKAF**      **25 Sep – 1 Oct**
- **VMA 311**      **14 Sep – 1 Oct**
- **77 Aircraft / 1,300 participants**



# Questions



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## 611 AOC / Airspace and Range Office

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# Maj Rob Peck



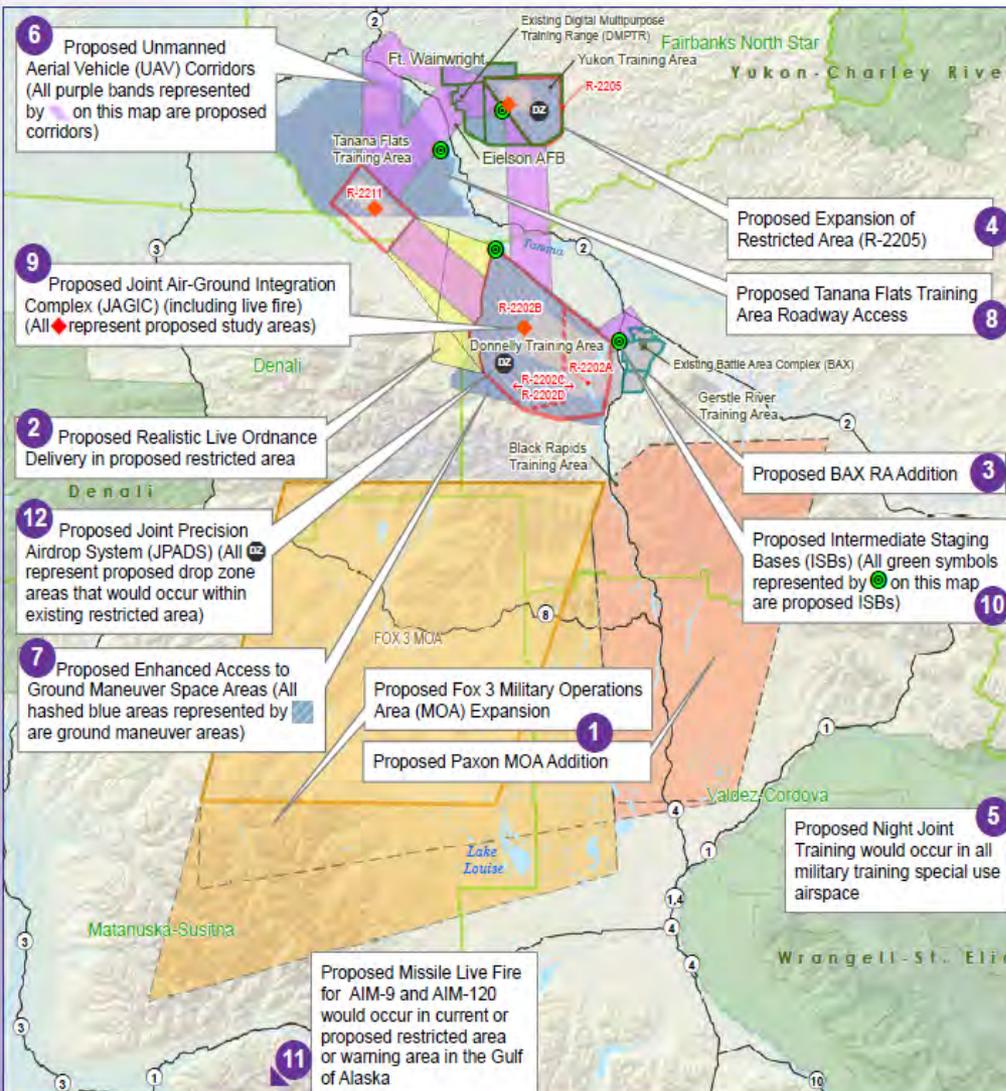
## 611 AOC / Airspace and Range Office



- **GPS Jamming**
- **JPARC Airspace Proposal Update**
- **MTR routes**
- **Chartered Times / Scheduled Time / Activated Times**
- **Arctic Shield/Arctic Sentry TFR**



# JPARC Airspace Proposal Update



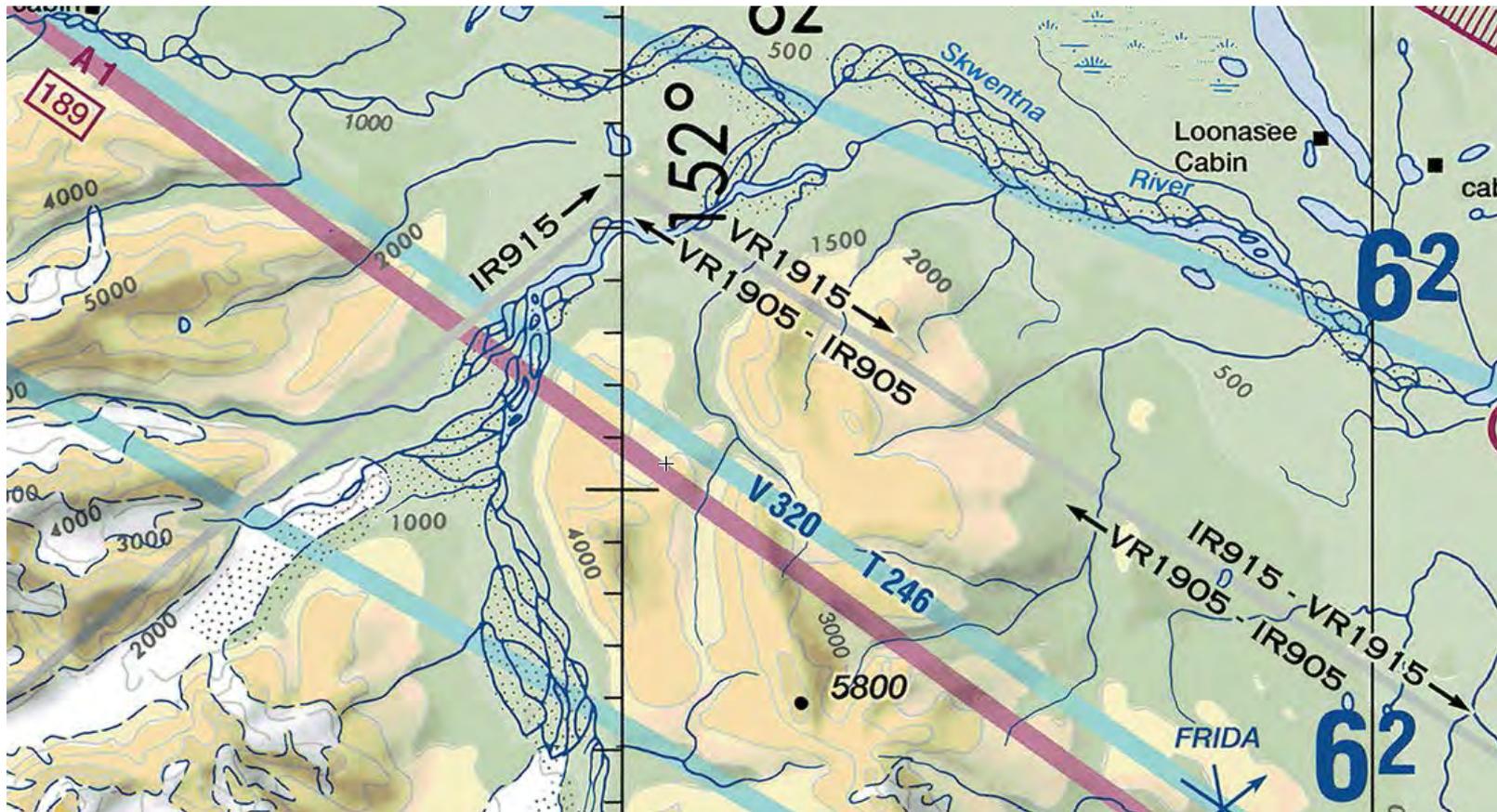
Calendar Days	Action
D	Proposal received by FAA regional/service area office.
D+30	Proposal reviewed by region/service area office; aeronautical study initiated. Proposal sent to Airspace Regulations and ATC Procedures Group to begin Rulemaking Process.
D+95	Proposal reviewed by Airspace Regulations and ATC Procedures Group.
D+105	NPRM published in Federal Register; Public comments directed to appropriate region.
D+150	Public comment period ends.
D+180	Comments reviewed by the region/service area office, and recommendations sent to Airspace Regulations and ATC Procedures Group.
D+240	Headquarters review of proposal, comments, and regional/service area office recommendations. Final determination; Rule prepared and submitted to Federal Register.
D+250	Rule published in Federal Register (at least 30 days prior to effective date).
D+250-306	Within this time frame; AeroNav cutoff date, and Rule effective date.



# Military Training Routes



- **ROUTE WIDTH - 5 NM either side of centerline.**





# Sectional Clip



## MILITARY TRAINING ROUTES (MTRs)

All IR and VR MTRs are shown, and may extend from the surface upwards. Only the route centerline, direction of flight along the route and the route designator are depicted - route widths and altitudes are not shown.

Since these routes are subject to change every 56 days, and the charts are reissued every 6 to 12 months, you are cautioned and advised to contact Flight Service for route dimensions and current status for those routes affecting your flight.

Routes with a change in the alignment will be indicated in the Associated Data Section of the Supplement Alaska.

DoD users refer to Area Planning AP/1B Military Training Routes North and South America for current routes.



# Chartered Times / Scheduled Time / Activated Times



- **Chartered Time → 0700 – 1800 MON-FRI†**
  - † = Other time by NOTAM
- **Scheduled time → Times scheduled with the FAA**
  - Info available at <http://sua.faa.gov/sua/siteFrame.app>
- **Activated Times → When actually being utilized**

U.S. P-PROHIBITED, R-RESTRICTED, W-WARNING, A-ALERT, MOA-MILITARY OPERATIONS AREA

NUMBER	ALTITUDE	TIME OF USE	CONTROLLING AGENCY/ CONTACT FACILITY	FREQUENCIES
R-2202 A, B	TO BUT NOT INCL 10,000	0700-1800 MON-FRI†	ANCHORAGE CNTR	135.3 322.5
R-2202 C	10,000 TO FL 310	INTERMITTENT BY NOTAM	ANCHORAGE CNTR	135.3 322.5
R-2203 A, B	TO 11,000	0500-2400 MON-FRI †24 HRS IN ADV	STEVENS ANCHORAGE INTL ATCT	118.6
R-2203 C	TO 5000	0500-2400 MON-FRI †24 HRS IN ADV	STEVENS ANCHORAGE INTL ATCT	118.6
R-2211	TO FL 310	0800-1800 MON-FRI O/T BY NOTAM FROM USAF	FAIRBANKS INTL ATCT	126.5



<http://sua.faa.gov/sua/siteFrame.app>




**Federal Aviation Administration**

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 Auto-Refresh

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Welcome to the enhanced SUA Web site. This site offers improved design and enhanced functionality as documented in the Release Notes, which are accessible via a link at the top of the Web site.

Map as of: Apr 21, 2014 18:20 (Z)

United States      Canada

200 km  
100 nmi

-131.30762, 62.12598

Active  
  < 1hour  
  1h - 2h  
  2h - 4h  
  4h - 8h  
  8h - 24h  
  Not Scheduled

# Arctic Shield/Arctic Sentry TFR



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# Airfield Operations

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- **Eielson AFB**
- **Fairbanks International**
- **Ladd AAF**
- **Elmendorf AFB**
- **Bryant AAF**
- **Ted Stevens International**

# Eielson AFB



# Eielson AFB Construction

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<b>PROJECT</b>	<b>DATES</b>	<b>IMPACT</b>
Airfield Paint	1 – 30 May	Portions of airfield unusable after wing flying
Paving and Maintenance	1 May – 30 Aug	Portions of Foxtrot, Oscar and Bravo unusable after wing flying
Golf Phase IV	7 Jul – 30 Aug	Golf between Delta and Charlie Closed
ILS Modernization	11 Jul – 5 Aug	ILS may be unusable
TACAN Modernization	Expected FY15	TBD

# Eielson AFB

## Holiday Closures

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<b>CLOSED</b>	<b>OPEN</b>
24 – 27 May 14	0700L on 28 May 14
4 – 7 Jul 14	0700L on 8 Jul 14
29 Aug – 1 Sep 14	0700L on 2 Sep 14
11 Nov 14	0700L on 12 Nov 14
27 – 30 Nov 14	0700L on 1 Dec 14
25 – 28 Dec 14	0700L on 29 Dec 14
1 – 4 Jan 15	0700L on 5 Jan 15

# Eielson AFB

## Exercise Schedule

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<b>EXERCISE</b>	<b>INCLUSIVE DATES</b>
Distant Frontier	2 – 7 May 14
RED FLAG – Alaska 14-1	8 – 23 May 14
Distant Frontier	24 – 11 Jun 14
RED FLAG – Alaska 14-2	12 – 27 Jun 14
Distant Frontier	TBD
RED FLAG – Alaska 14-3	7 – 22 Aug 14
Distant Frontier	TBD
RED FLAG – Alaska 15-1	2 – 17 Oct 14

# Eielson AFB

## MAGVAR

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### **Key Points:**

- MAGVAR Scheduled – 08 Jan 2015
- Eielson Airfield and TACAN MAGVAR change from 23 East to 19 East
- Expect to see all radials change by a minimum of 4 degrees
- Eielson runway designation of 14/32 will not change
- You may have local data, not tracked by PACAF/TERPS that may need updating

### **PACAF/TERPS Timeline:**

- 1-April-14: All procedure packages updates complete by Eielson TERPS Specialist and sent to HQ PACAF TERPS for QA.
- 1-May-14: All procedure packages will be sent from HQ PACAF to EIL AOF/CC for appropriate distro to signatories.
- 1-Jul-14: Suspense date to have all signed AF Form 4342 sent back to HQ PACAF TERPS.
- 10-Jul-14: All Packages prepared and sent to Flight Check Office for NAVAID and Procedure flight check scheduling.
- 30-Oct-14: Deadline to get all Flight check reports and procedure packages to NGA for DoD publication in the 8-Feb-2015 FLIP cycle.

# Eielson AFB

## RNAV

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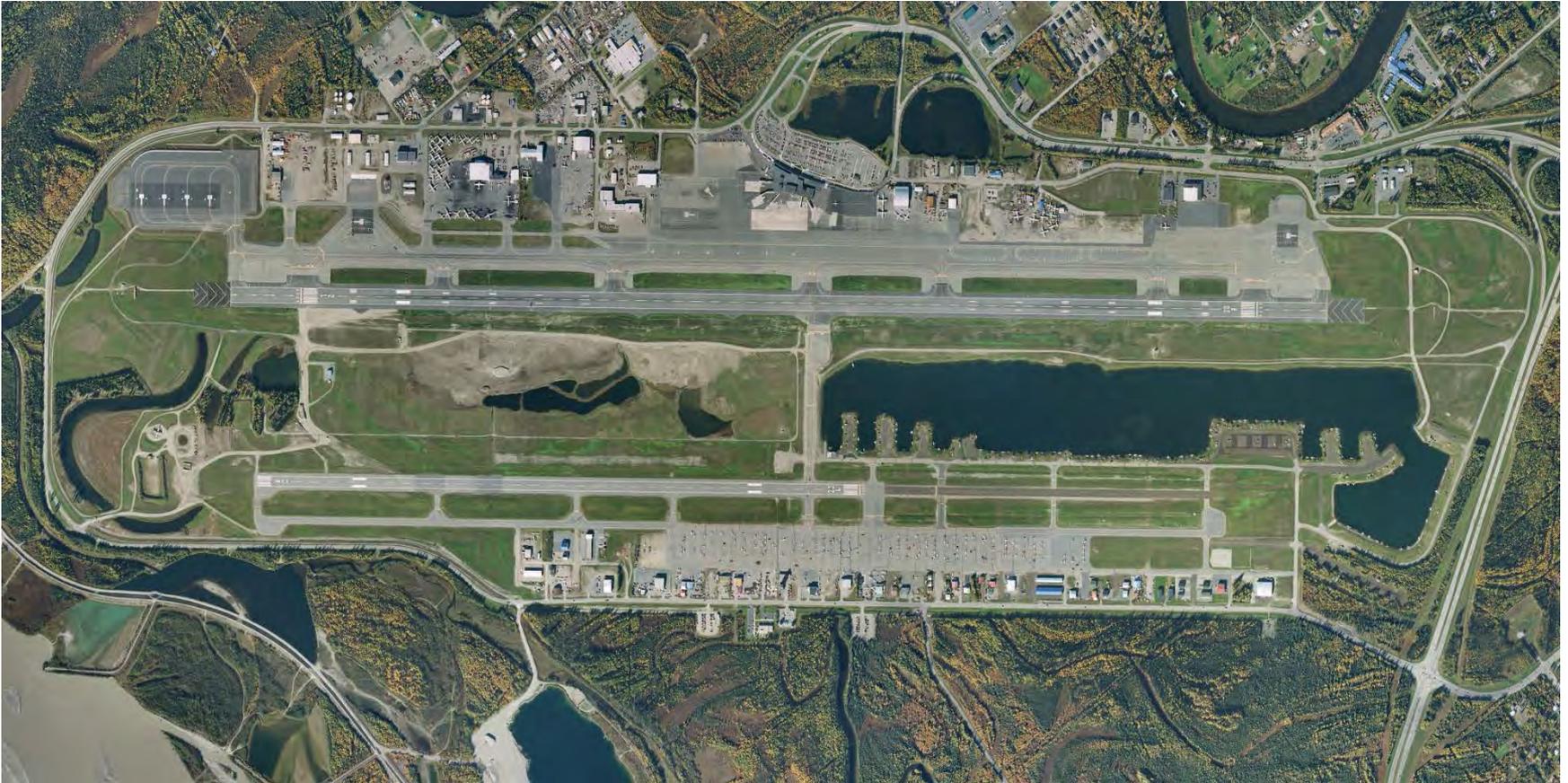
### **Key Points:**

- Procedures published yet not authorized until Flight Check is performed
- Flight Check TBD



# Fairbanks

International Airport  
*"AeroNexus"*



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# FAI RUNWAY 20R FAA MALSR WORK Fairbanks Int'l Airport

**Date- 06/03/2014 through 06/14/2014**

**RWY 20R-MALSR will be OTS during these dates**

**FAA Maintenance work times – Daily from 0000-0800L**

**RWY 2L CLOSED - Daily from 0000-0800L**

**RWY 20R will remain open.**

## **WORK DESCRIPTION- RWY 20R MALSR OTS.**

FAA work crew will be working along the RWY 20R light line approximately 1500ft north of RWY 20R threshold, updating approach lighting fixtures bases.

RWY 02L will be closed daily from 0000-0800 (weather permitting), available for use with 40 minute PPR (Prior Permission Required 907-474-2530)

For flight planning please review all NOTAMS for Fairbanks Int'l Airport.

# Ladd Army Airfield



# New Rotary Wing Hangar #5

(Operational October 2013)



# New Rotary Wing Hangar #4

(Completion Date 2014)

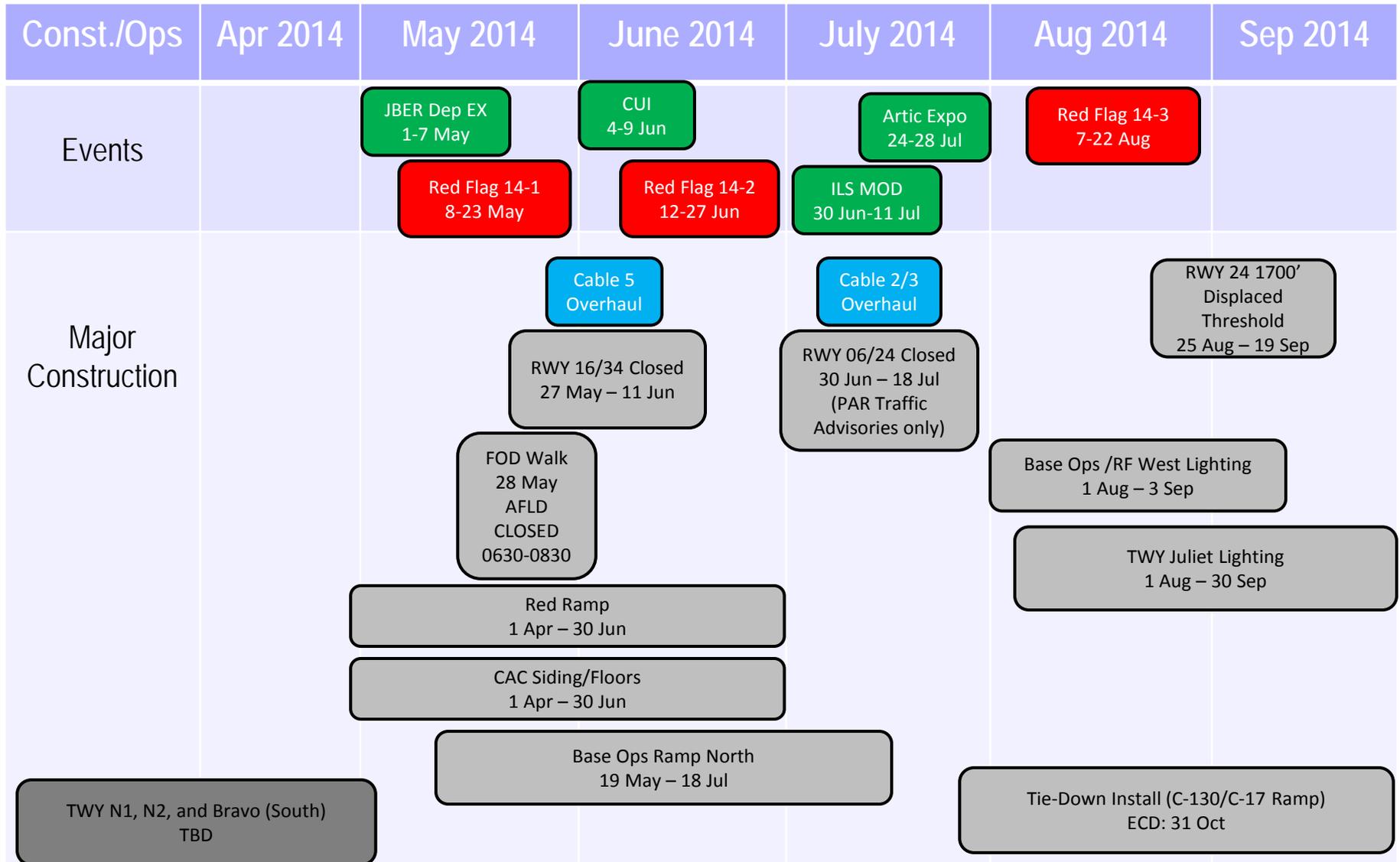




NASA ER-2 Research Flight Operations  
7 July thru 1 August

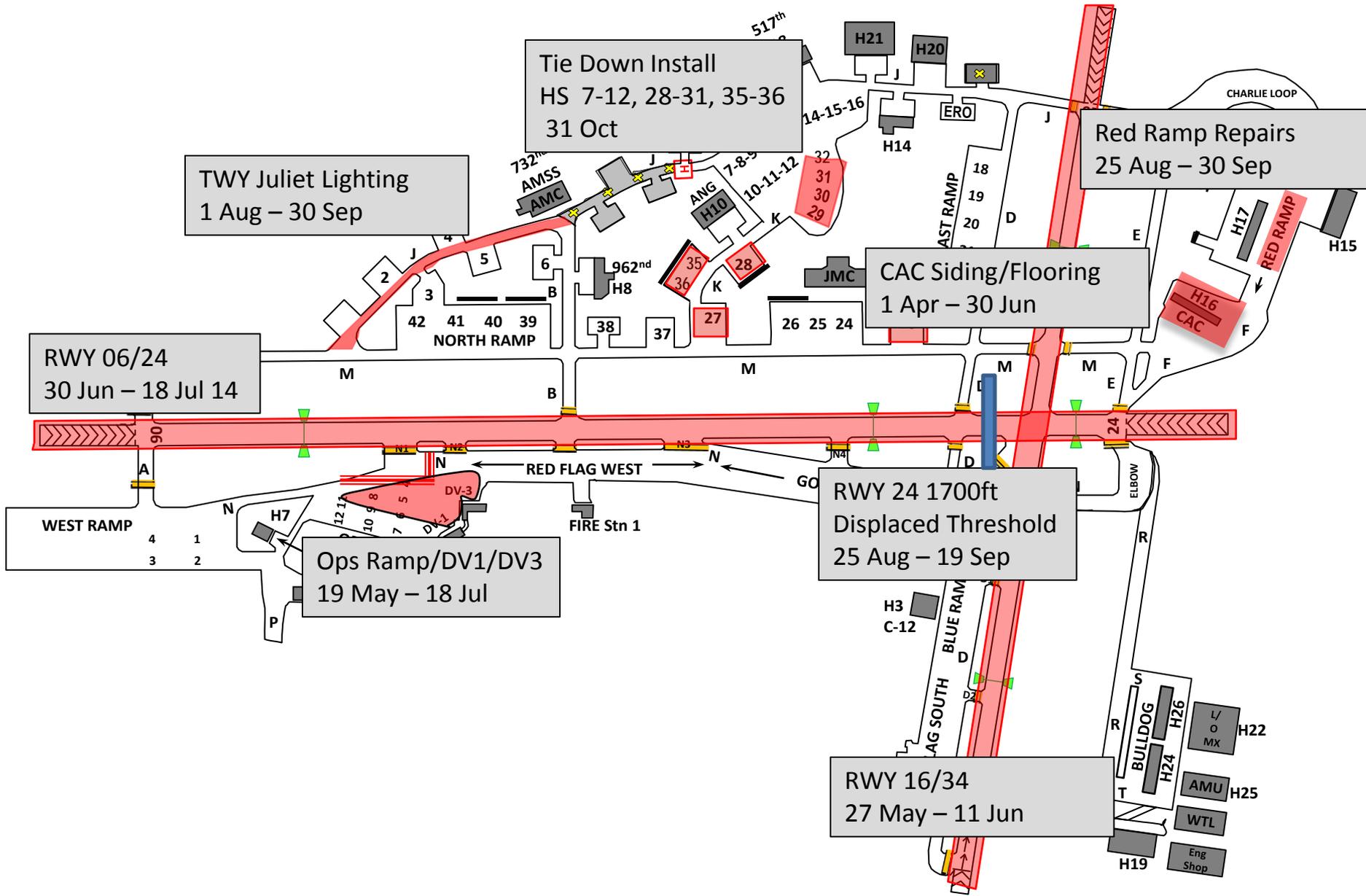
# Elmendorf AFB Airfield Environment

## Summer Outlook



# Elmendorf AFB Airfield Environment

2014 Proposed Construction





# Bryant Army Airfield



- **Class D Airspace**

Footprint: Same as Bryant Segment minus that portion east of Glenn Highway, Surface – 2900' MSL  
Effective: Monday – Friday 08:00 – 16:00

- **Traffic Pattern**

Open to civilian traffic – No touchdown, presently

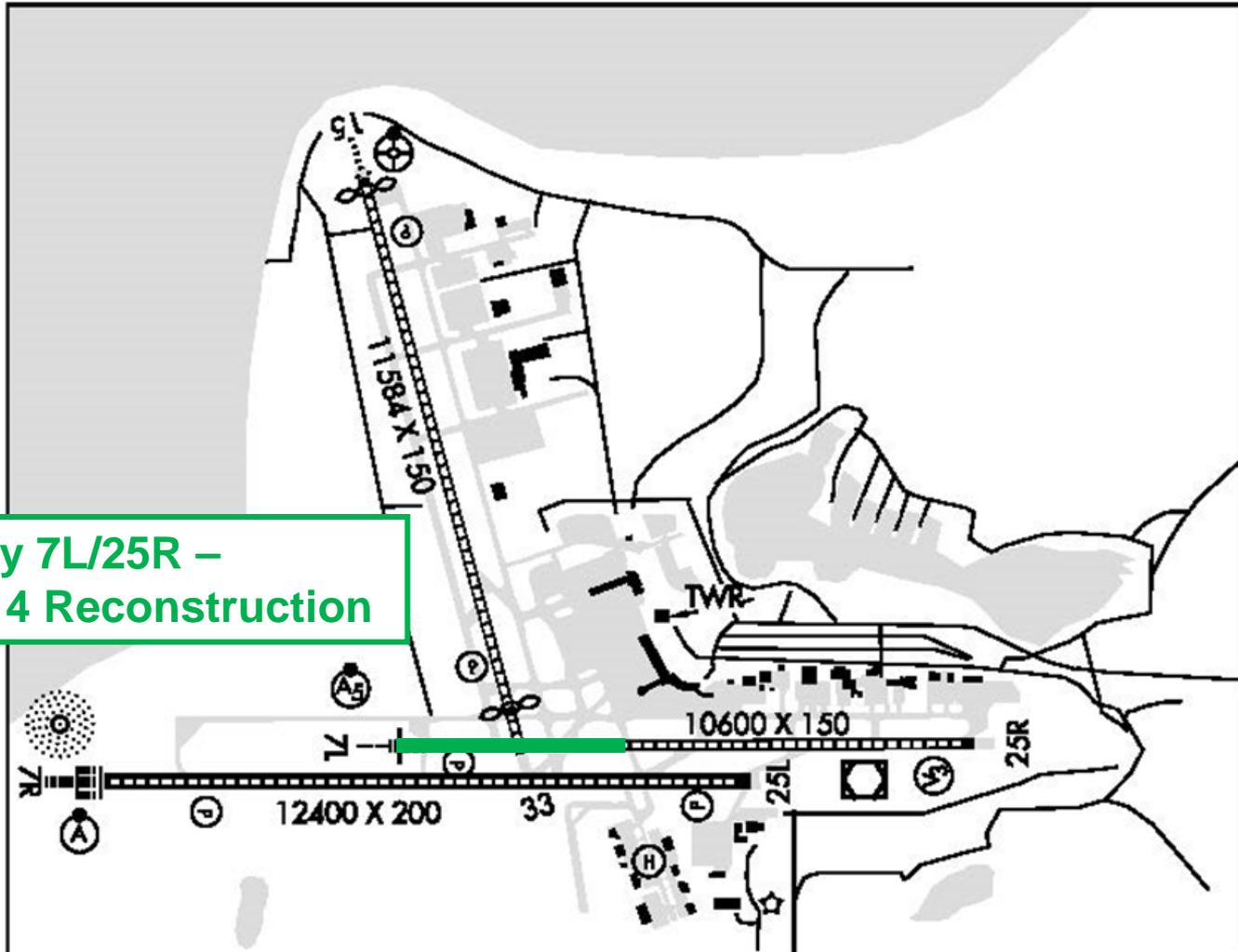
- **Airfield Construction**

All horizontal surfaces being resurfaced except runway

# Ted Stevens International

## Major Airfield Projects/Closures 2014

Rwy 7L/25R –  
2014 Reconstruction

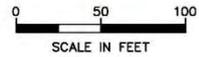
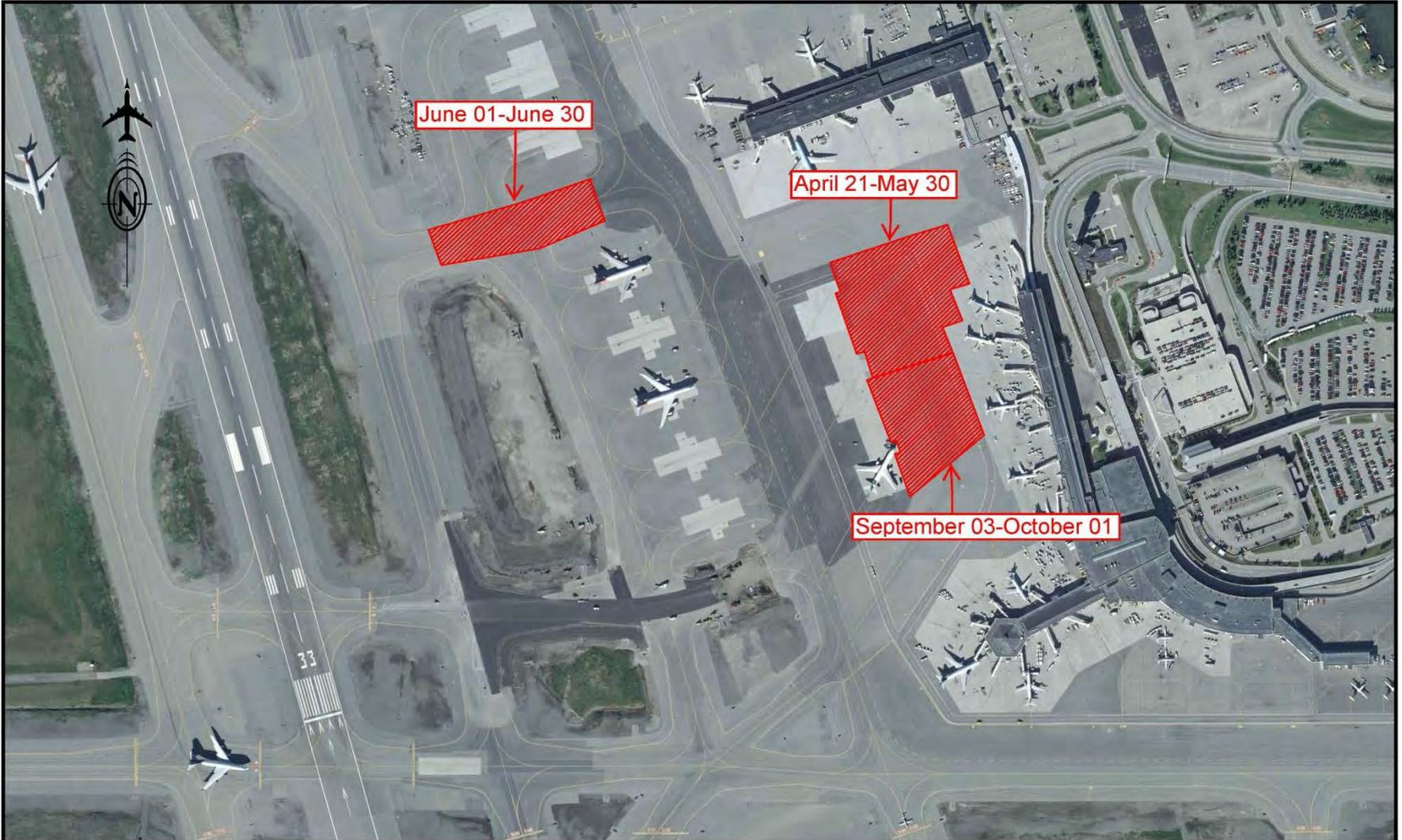


# Ted Stevens Anchorage International

<b>CONSTRUCTION CLOSURES</b>	<b>CONSTRUCTION PERIOD</b>	<b>EFFECTS/LIMFACs/ TEMPORARY OPS</b>
Taxilane Echo 2 North Phase	April 21 - May 30	R2-4 Closed
RWY 7R/25L Concrete Spall Repairs	May 15 - June 25	RWY 7R/25L closed
Taxiway Mike	June 01 - June 30	-Taxiway Mike closed -Taxilane Golf 1 between R11 & R 12 closed -R13 Closed to private access to R12 & R14
RWY 7L/25R Rebuild Phase 1A	July 01 - October 15	-RWY 7L/25R closed -Taxiway Hotel between Rwy 7R/L closed -Taxiways Romeo & Golf closed between RWY 7R/L closed -RWY 7L departures from Taxi Echo during daylight hours
RWY 7L/25R Rebuild Phase 1B	July 01 - July 31	-RWY 15/33 shortened to approximately 9500 feet -No RWY 33 arrivals permitted
Taxilane Echo 2 South Phase	September 03 - October 01	R3-4 closed

# Taxilane Echo 2 and Taxiway Mike

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AIRPORT OPERATIONS

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES



## EXHIBIT

TWs M, & TL E2 Reconstruction  
2014 Staging Plan

DRAFTED:      CHECKED:      APPROVED:

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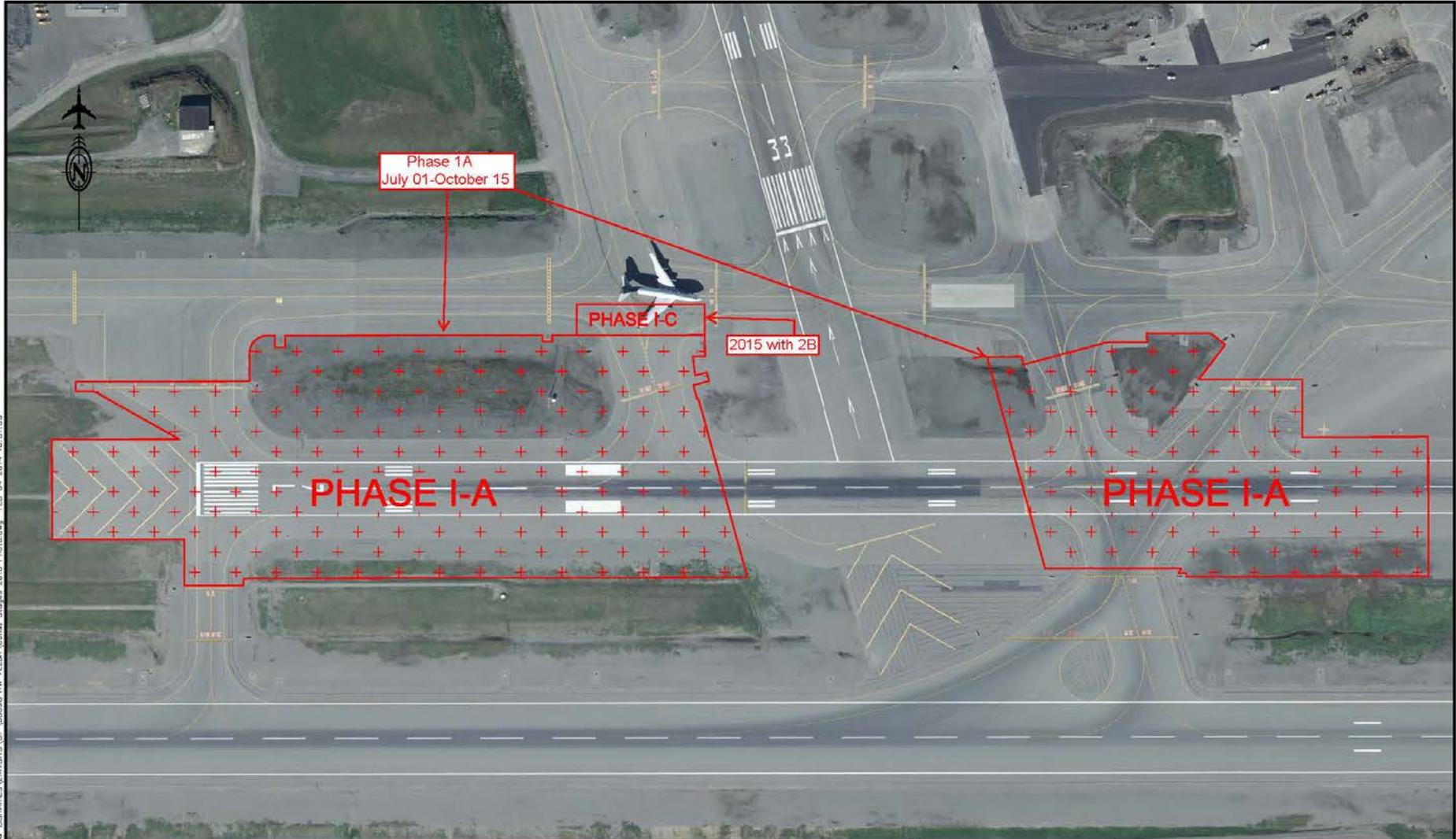
# RWY 7R/25L Concrete Spall Repairs

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# RWY 7L/25R Rebuild Phase 1A



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STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
Ted Stevens  
**Anchorage**  
International Airport  
AlaskaNWA

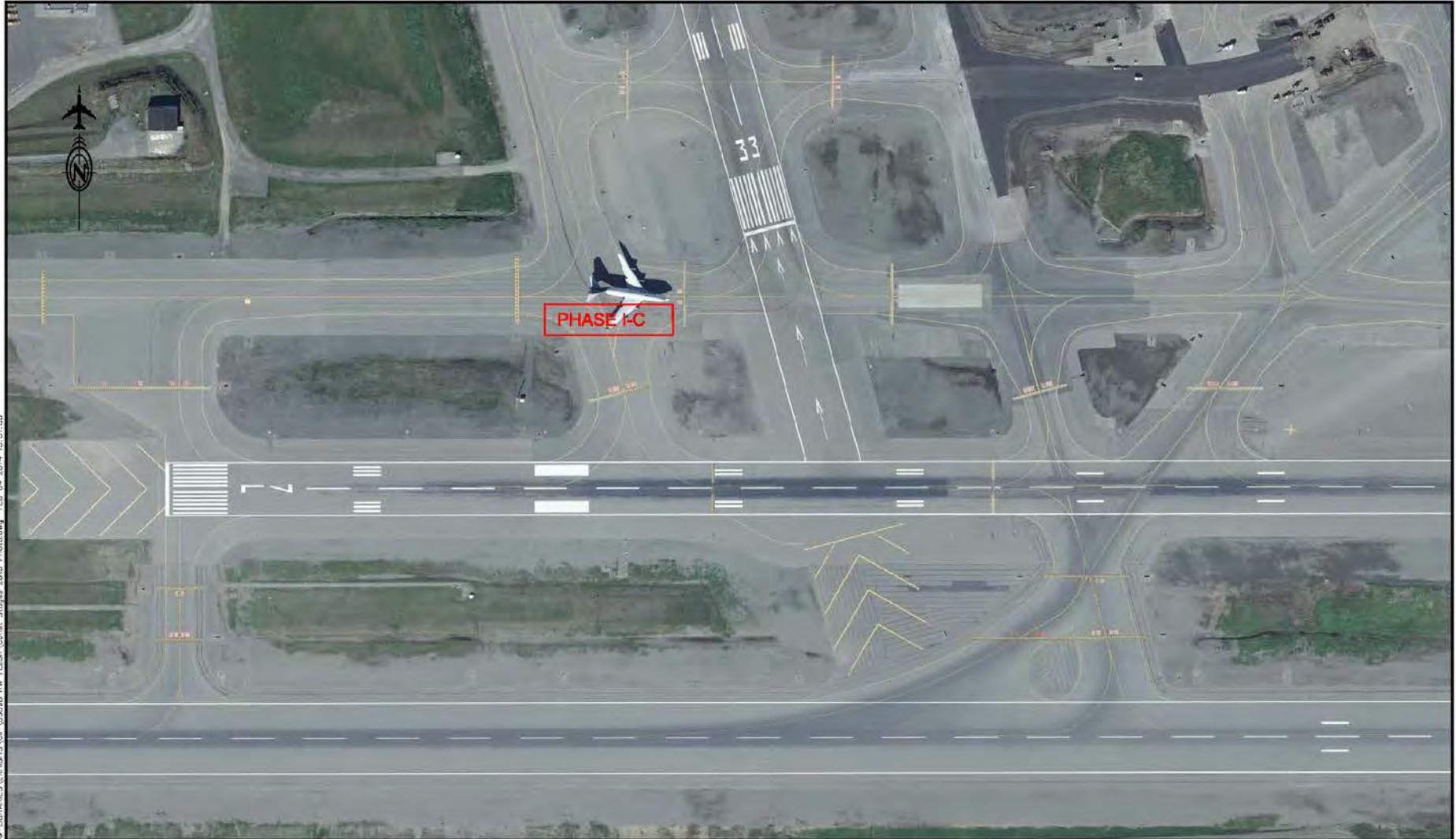
RW 7L/25R REHABILITATION  
PHASE I-A  
ALSO SHOWING I-C

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# RWY 7L/25R Rebuild Phase 1B



# RWY 7L/25R Rebuild Phase 1C



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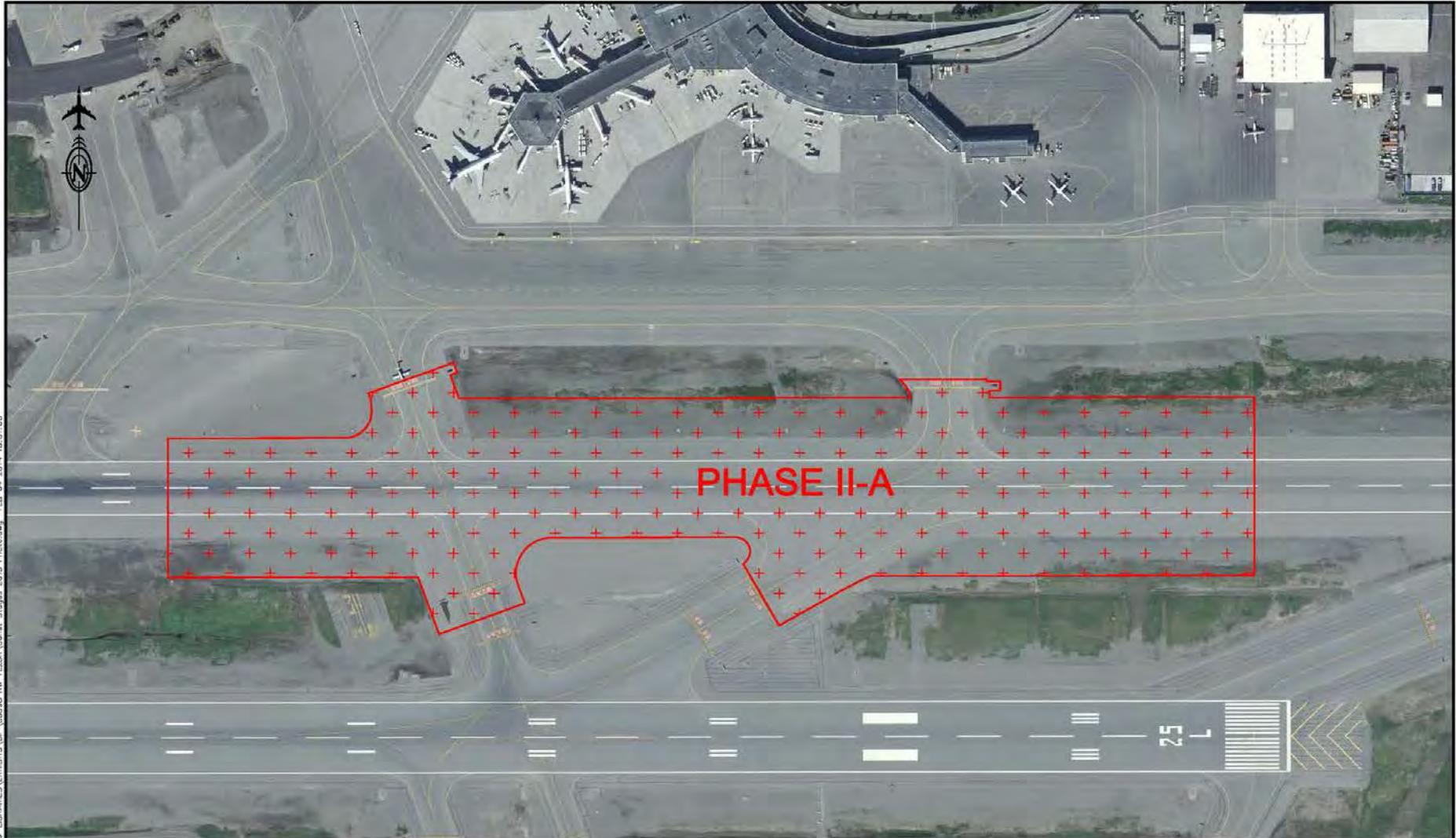
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STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
Ted Stevens  
**Anchorage**  
International Airport  
"Gateway"

RW 7L/25R REHABILITATION  
PHASE I-C

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# RWY 7L/25R Rebuild Phase II-A (2015)



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STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
Ted Stevens  
**Anchorage**  
International Airport  
*"Gateway"*

RW 7L/25R REHABILITATION  
PHASE II-A

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# RWY 7L/25R Rebuild Phase II-B (2015)



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SCALE IN FEET  
AIRPORT ENGINEERING

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
Ted Stevens  
**Anchorage**  
International Airport  
"Aardvark"

RW 7L/25R REHABILITATION  
PHASE II-B

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# FAA Regional Office Re-Org

Mr. Greg Holt



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# **ANC Approach Manning /Special VFR**

Mr. Dave Chilson





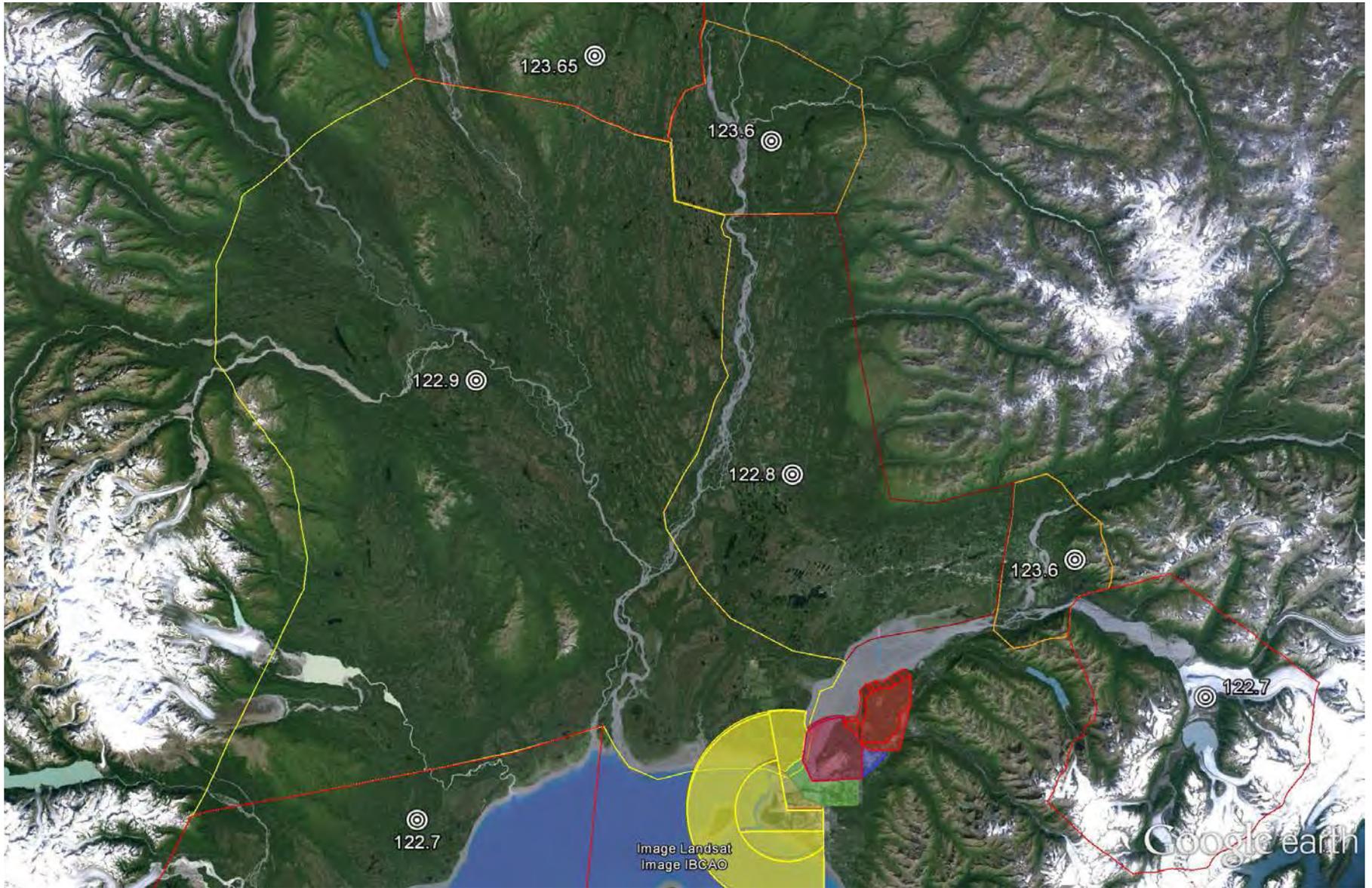
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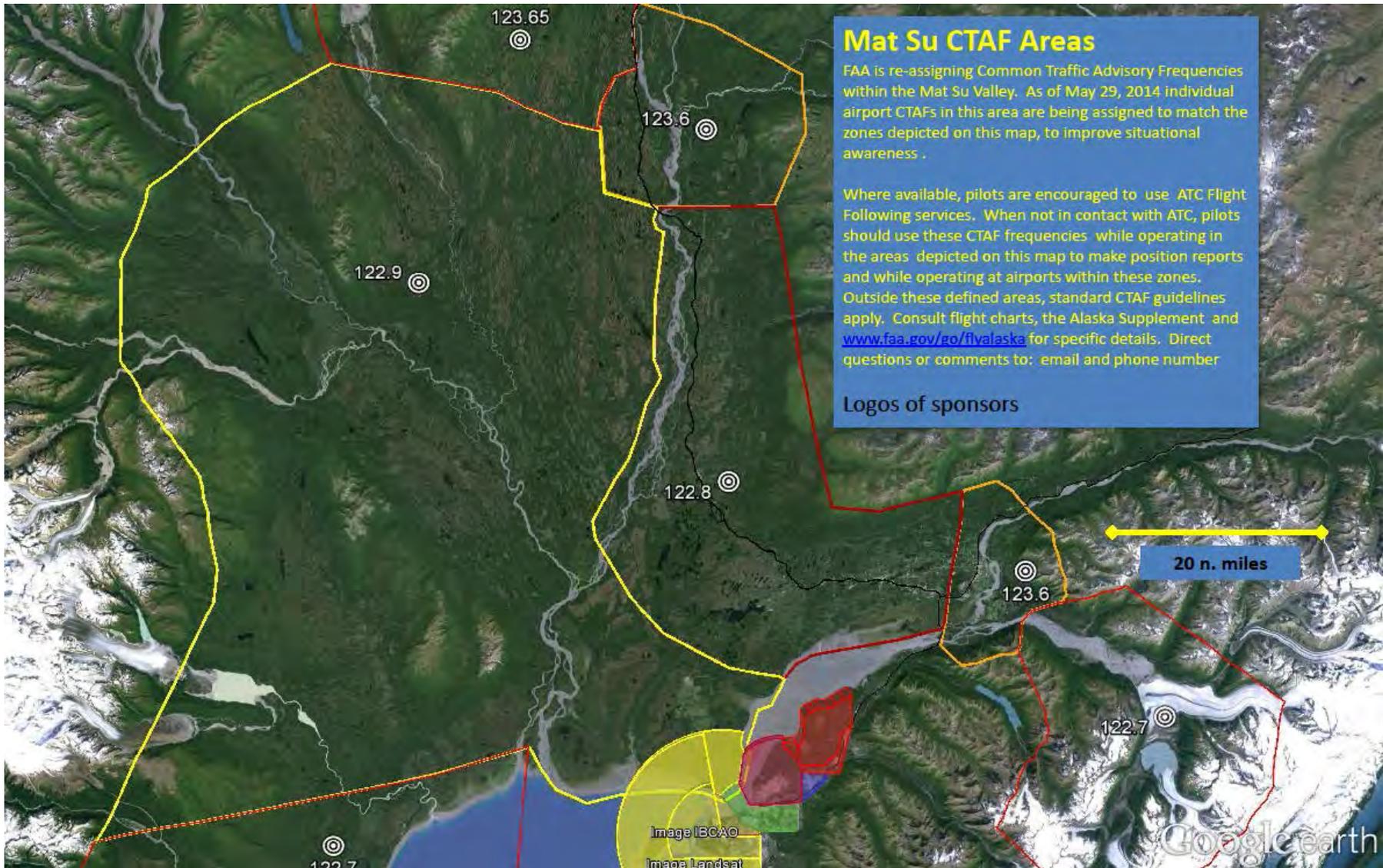
# MATSU CTAF

Mr. Mike Yorke









## Mat Su CTAF Areas

FAA is re-assigning Common Traffic Advisory Frequencies within the Mat Su Valley. As of May 29, 2014 individual airport CTAFs in this area are being assigned to match the zones depicted on this map, to improve situational awareness .

Where available, pilots are encouraged to use ATC Flight Following services. When not in contact with ATC, pilots should use these CTAF frequencies while operating in the areas depicted on this map to make position reports and while operating at airports within these zones. Outside these defined areas, standard CTAF guidelines apply. Consult flight charts, the Alaska Supplement and [www.faa.gov/go/flvalaska](http://www.faa.gov/go/flvalaska) for specific details. Direct questions or comments to: email and phone number

Logos of sponsors

20 n. miles

Image IBCAO  
Image Landsat

Google earth

# *Arctic Thunder 2014*



22 Apr 14

# Schedule of Events

- Thursday 24 July
  - Performer and static aircraft arrival day
  - TFR requested from 1000-1800L
    - Assumes 5NM buffer
    - Actual time dependent on USAF Thunderbird arrival time from CONUS
- Friday 25 July
  - Airshow Practice and Special Needs Day
    - Open House Open to DoD Card Holders and Special Needs Invitees
    - FAA implications mirror those of Saturday and Sunday
- Saturday and Sunday, 26-27 July
  - Aerial Events Conducted at Elmendorf AFB
  - TFR in effect
    - 5NM and 2.5NM buffers in effect
    - Aerial events conducted notionally from 1000-1800L

# Performers

## • MILITARY

- Thunderbirds
- F-22 Demo
- C-17 Demo
- 3 Wg Fly-Bys (C-12, C-17, E-3, F-22)
- *USARAK Demo*
- *JBER Parachute Drop*

### *\*Tentative*

- *\*3 Wg Dissimilar Form Fly-by*
- *\*ANG*
- *\*B-2 Fly-by*
- *\*PJ Rescue*
- *\*K-9 Performance*
- *\*Heritage Flight (F-22 + Bremont Horsemen, x3 P-51 )*

## • CIVILIAN

- Immortals (Pembertons/Stewart/Wall of Flame)
- Valdez Mini-Fly in Demo
- Japanese Zero (Warbird)

### *\*Tentative*

- *\*Oregon Aero Skydancer (Skywrite)*
- *\*Jet Powered Sailplane*
- *\*Smallest Jet Acrobatic Act*

# Statics

- **MILITARY**

- Thunderbirds
- 3 Wg (C-12, C-17, E-3, F-22)
- B-52
- C-5
- F-16
- KC-135
- *USARAK Static*

- *\*Tentative*

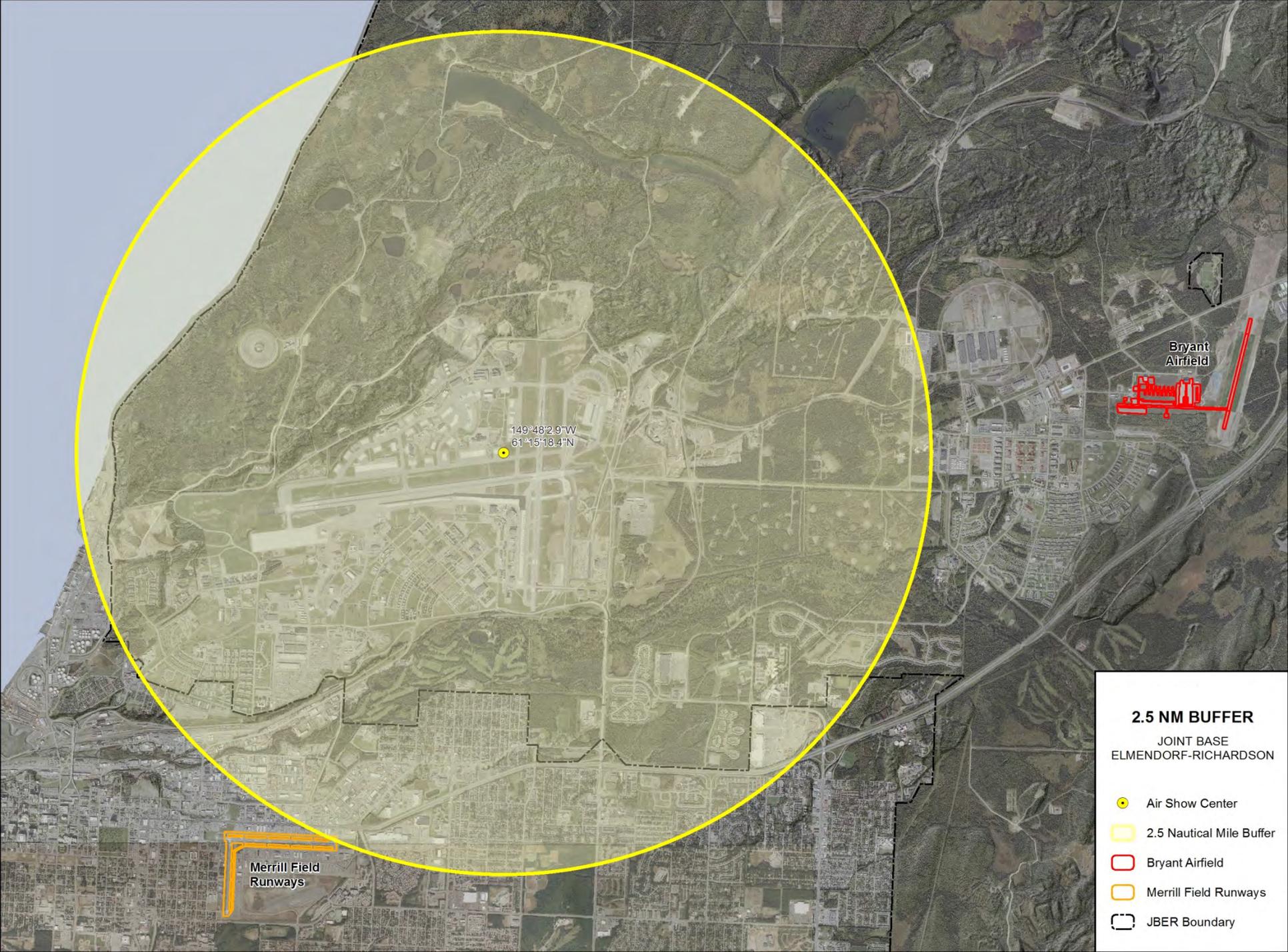
- *\*ANG C-130, HH-60*
- *\*B-2*
- *\*Coast Guard*
- *\*RCAF F-18, Airbus Tanker, C-130J*

- **CIVILIAN**

- Valdez Mini
- Japanese Zero (Warbird)
- B-25
- Tulugaq (Diamond DA42)
- Horizon Bombardier - Q400 (DH4)

- *\*Tentative*

- *\*Oregon Aero Skydancer (Skywriting)*
- *\*Jet Powered Sailplane*
- *\*Smallest Jet Acrobatic Act*
- *\*Bremont Horsemen (x3 P-51)*
- *\*Fed Ex*



149°48'2.9"W  
61°15'18.4"N

Bryant  
Airfield

Merrill Field  
Runways

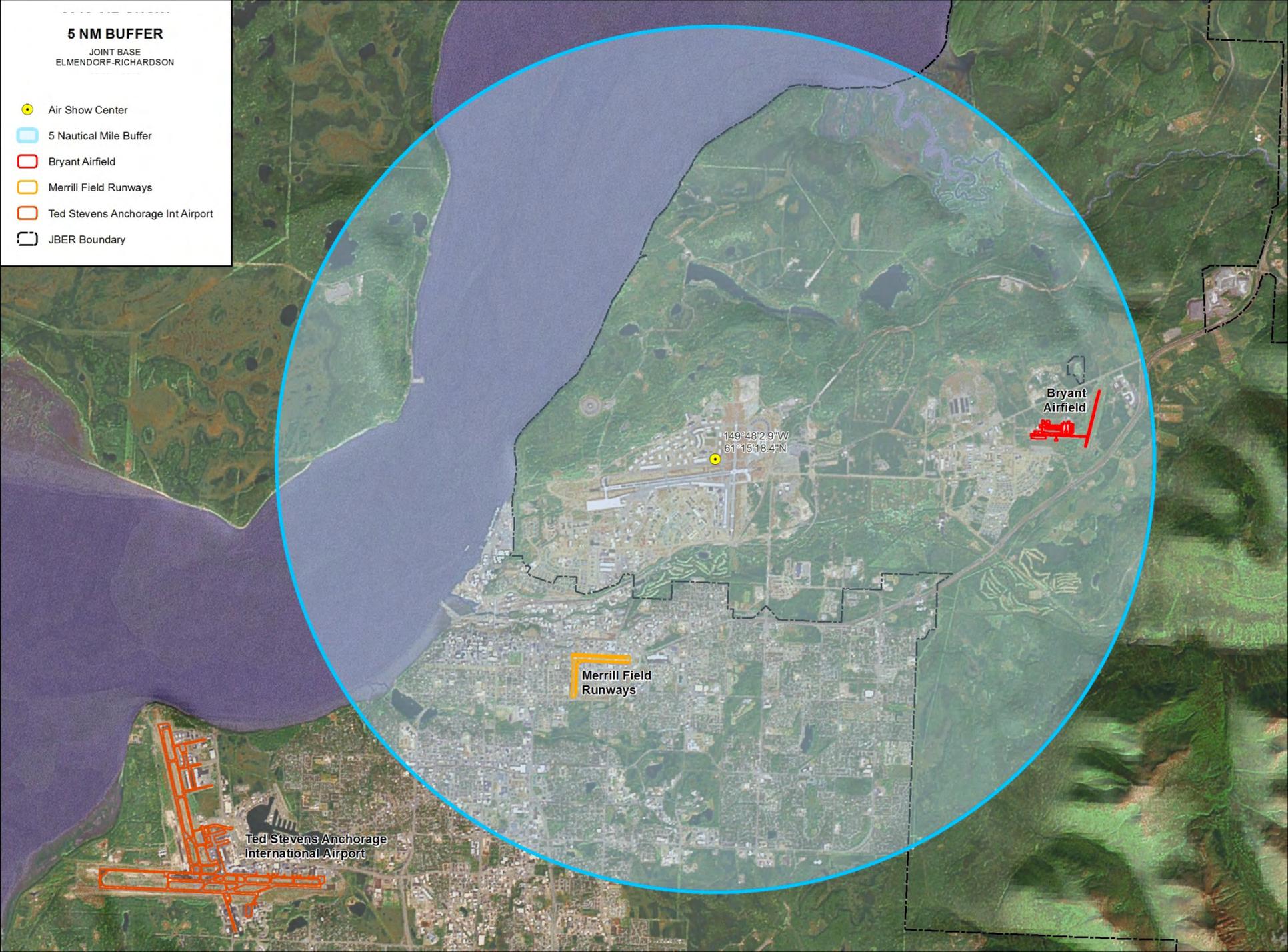
**2.5 NM BUFFER**  
JOINT BASE  
ELMENDORF-RICHARDSON

-  Air Show Center
-  2.5 Nautical Mile Buffer
-  Bryant Airfield
-  Merrill Field Runways
-  JBER Boundary

# 5 NM BUFFER

JOINT BASE  
ELMENDORF-RICHARDSON

-  Air Show Center
-  5 Nautical Mile Buffer
-  Bryant Airfield
-  Merrill Field Runways
-  Ted Stevens Anchorage Int Airport
-  JBER Boundary



149°48'2.9\"/>  
61°15'18.4\"

Bryant  
Airfield

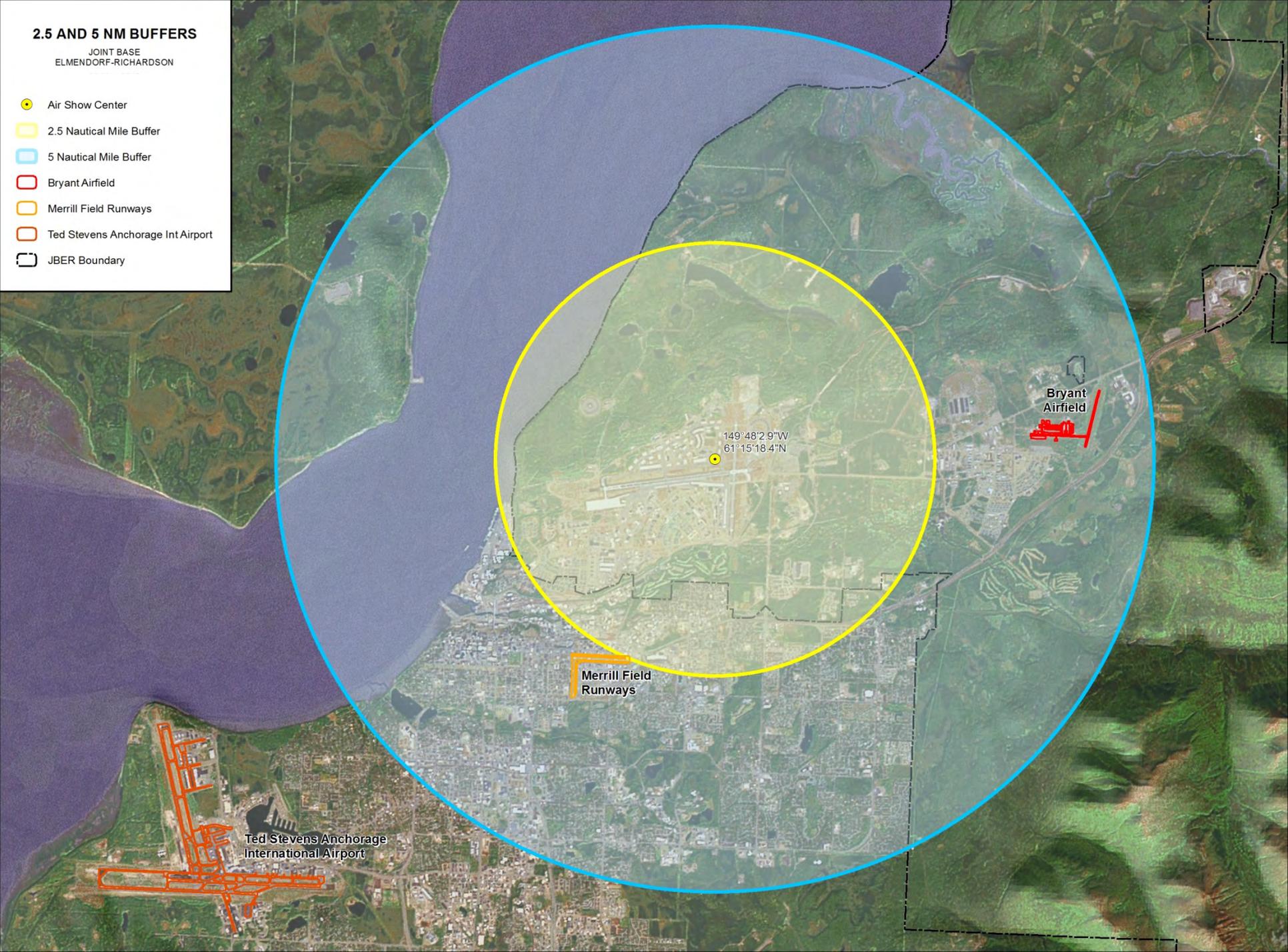
Merrill Field  
Runways

Ted Stevens Anchorage  
International Airport

## 2.5 AND 5 NM BUFFERS

JOINT BASE  
ELMENDORF-RICHARDSON

-  Air Show Center
-  2.5 Nautical Mile Buffer
-  5 Nautical Mile Buffer
-  Bryant Airfield
-  Merrill Field Runways
-  Ted Stevens Anchorage Int Airport
-  JBER Boundary



# Tentative TFR Overview

Timeline	24 July	25 July	26 July	27 July
0900L				
1000L	5NM TFR  *TIMES TBD BASED ON PERFORMER ETAs			
1100L				
1200L		2.5NM TFR	2.5NM TFR	2.5NM TFR
1300L				
1400L				
1500L				
1600L		5NM TFR	5NM TFR	5NM TFR
1700L				
1800L				

TFR Dimensions – TFR dimensions established from Show Center (61°15'18.4N/149°48'2.9W)

- 2.5NM, SFC – 15,000' AGL
- 5 NM, SFC – 15,000' AGL

# Contact

- ATOH Director

- Maj Karl “Chris” Easterly
- 907-552-7471
- [arctic.thunder@us.af.mil](mailto:arctic.thunder@us.af.mil) (*preferred*)

# Pan-Pacific UAS Test Range Complex (PPUTRC)

## Thank You

### Alaska Civil-Military Aviation Counsel



**Leonard Ligon**

Operations Officer

Alaska Center for Unmanned Aircraft Systems Integration (ACUASI)

Pan-Pacific UAS Test Range Complex (PPUTRC)

University of Alaska Fairbanks (UAF)

ACUASI (907) 455-2013

lligon@gi.alaska.edu



# UAF Background

**The UAF has a 13-year Rocket and Unmanned Aircraft history that expands into all of Alaska, throughout the US and around the world**

# UAF's History of Unmanned Aircraft

- 2001 - Partnership with New Mexico State University
  - Tasked to develop applications within the Technical Analysis and Applications Center (TAAC)
- 2003/2004 - Funded to work with USAF and USCG
  - Maritime domain awareness
  - Wildfires in the Interior of Alaska
- 2006 - Acquired first ScanEagle with 50% loan from University Foundation
- 2007 to present - Multiple missions for science, emergency response, humanitarian needs, and engineering development, over 150 flying days per year
- Today our unmanned aircraft fleet is diverse and growing, eight different platforms and over 100 UAS



# 2013 UAS Research Missions

- Marginal Ice Zone Ocean and Ice Observations Processes Experiment (MIZOPEX)
- Salmon Spawning and Habitat Study
- Oil and Gas Exploration Feasibility Study
- US Coast Guard Pressure Ridge Navigation Study
- Geo-thermal Energy Study (Pilgrim Hot Springs)
- Ugak Island Marine Mammal Study
- Iceland Mapping Flights
- Search & Rescue (Bear Bite Mass Casualty Exercise in Bethel AK)
- North Slope Road Mapping
- Earth Quarry Volumetrics Study
- FEMS and AK State Emergency Management Agency Feasibility Study

# 2014 UAS Research Missions

- State Emergency Management and AK National Guard Support (Vigilant Guard & Alaska Shield) (Anchorage)
- Electrical Powerline and Terminus Support (Texas and Alabama)
- Oil & Gas Exploration Feasibility Studies (Chukchi Sea)
- Salmon Spawning and Habitat Study (Idaho)
- Iceland Expansion
- USRS Sikuliaq Ice Trials
- North Slope Methane Hydrate Trials
- North Slope Permafrost Study
- Whale Biological Research (Alaska Panhandle)
- Alaska Large Animal Population and Habitat Studies
  - Moose, Caribou, Dall Sheep, etc.
- Urban Area Public Safety Feasibility Study (Fairbanks)

# SIR Selection Criteria Considerations

## Capability Considerations

1. Conventional Take-off and Landing Capability
2. High Speed Flight Operations [ $>250$ kts]
3. Maritime Launch, Maneuver and Recovery Capability
4. Extremely High Altitude Flight Operations [Class A and Class E above A]
5. Evaluation of Dissimilar Aircraft, incl a mix of manned and unmanned, in multiple altitude stratum

## Location Considerations

1. Geographic & Climatic Diversity
2. Location and Adequacy of Ground Infrastructure and Research Ability
3. Air Traffic, Surface and Population Densities are conducive to Assessments
4. Range Areas Meet Specific Goals and Objectives to be Accomplished

# Test Sites Responsibility

**Develop and operate a true Geographically and Climatically Diverse Test Site that focuses on Aviation Safety, UA Airworthiness, Whole-system Human-Machine interface capability and Systems and Personnel certitude**

# PPUTRC

## Mission Statement

**Provide quantifiable data and accurate information that provide for the safe and efficient introduction of Unmanned Aircraft into the National Airspace System.**

# What is the PPUTRC?

- **Multiple ranges in three states**
  - Safety on the ground and in the air is the core operating pillar
  - Strong links with military ranges
  - Ongoing outreach program is forging links with local media and manned aviation communities
  - Formal agreements with Restricted Area operators allow rapid access for testing and aircraft certification
- **Key questions to answer:**
  - Procedures to protect manned aviation
  - Policies to protect privacy
  - Technical testing to assure control, detect & avoid, lost link procedures, airworthiness, personnel certitude, etc.
  - Standards for UAS certification

# Test Site Overall Mission

## What will the Test Site Program accomplish?

- Assist the FAA in establishing recommendations that will lead to fact-based NAS-integration regulations
- Provide for FAA-approved RDT&E environment, thereby enabling a phased UAS~NAS implementation
- Enable widespread engineering and applications development for research and commercialization
- Enable innovative companies, large and small, to commercialize UAS technologies and applications
- The safe integration of UAS into the NAS

# The PPUTRC will Focus on:

- All-weather, geography and climate operational data
- Human factors areas
- Assisting the FAA by providing operational data that is not COA or “Range” centric
- Testing new and emerging systems
- Growing operational boundaries by extending COAs beyond their written purpose
- Learn how to integrate into ALL classes of airspace
- International relationship development

# The PPUTRC Presently:

- **University of Alaska is “the operator” per FAA**
  - Establishing Board of Directors, management team, procedures, policies, & how to fund
- **Funding is a challenge**
  - No FAA (start-up) funding provided
  - Alaska legislature provided \$5M in 2012
  - Oregon EDC provided \$.8M in 2013
  - Hawaii seeking funding now
  - Plan is to add FAA research tasks & data needs into PPUTRC business plan and fund through test-specific customers
  - FAA will seek funding but not likely this year

# FAA Test Site End-State Vision

- “Test Site” (*blanket /multiple system*) COA Issued
  - Test site authority to grant subordinate COAs
- Certified DAR/DER authorities
  - Enables us to certify UAS for airworthiness,
  - Allows charging \$ for Test Site work
- Delegated SMS Process for
  - Safety Study scoring determinations
  - Flight Operations
  - Impact on the NAS
- Audits will verify compliance with FAA required process

# PPUTRC Construct



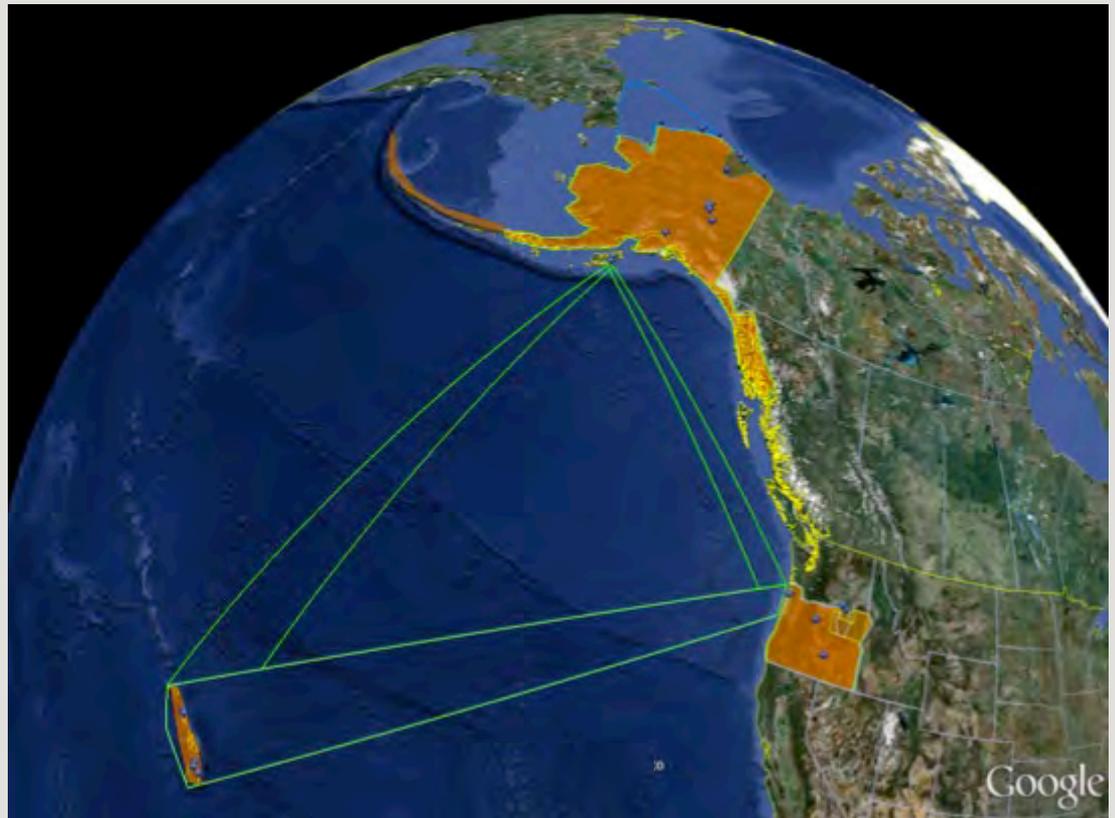
Alaska: Center for Unmanned Aircraft Systems Integration (ACUASI)



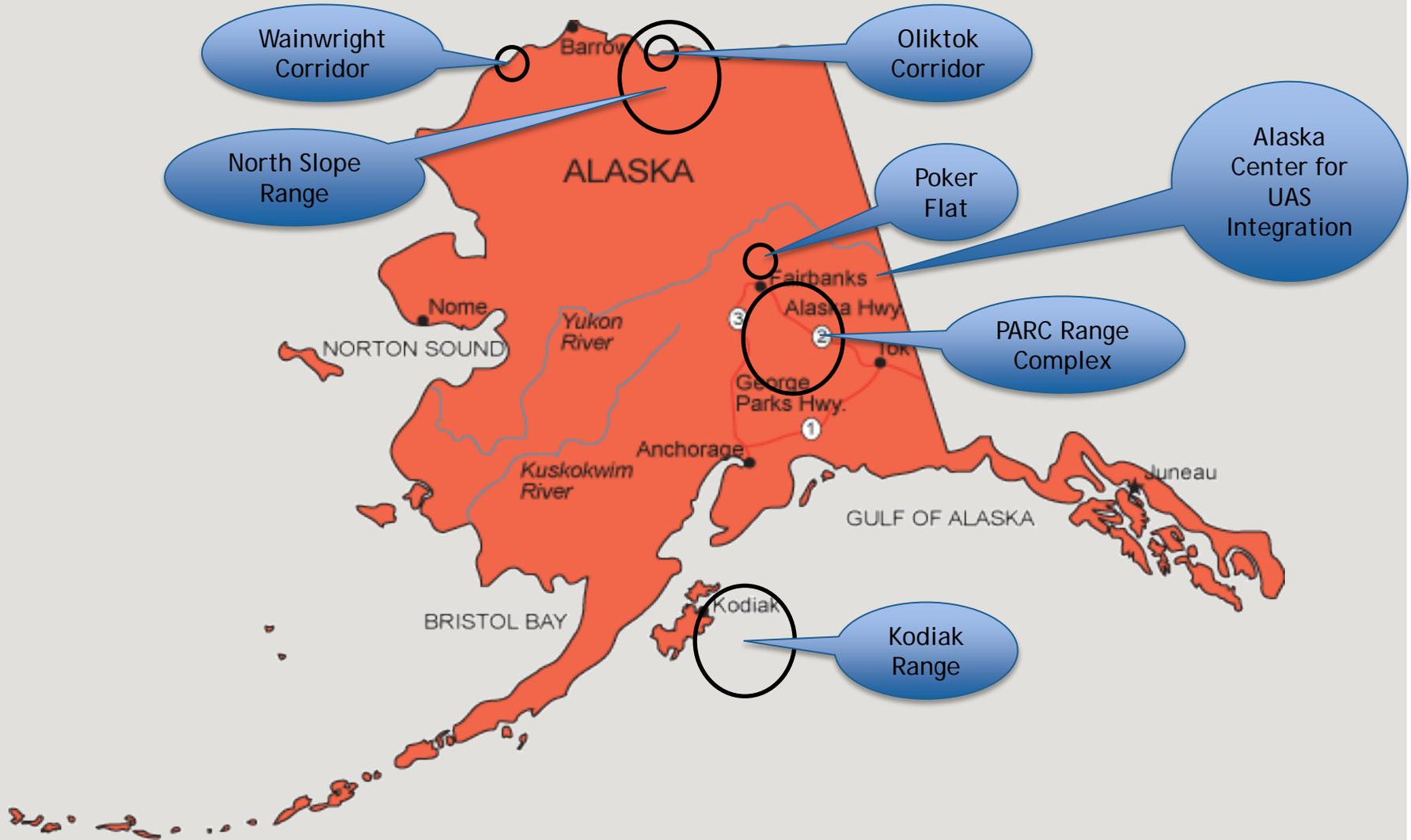
Oregon



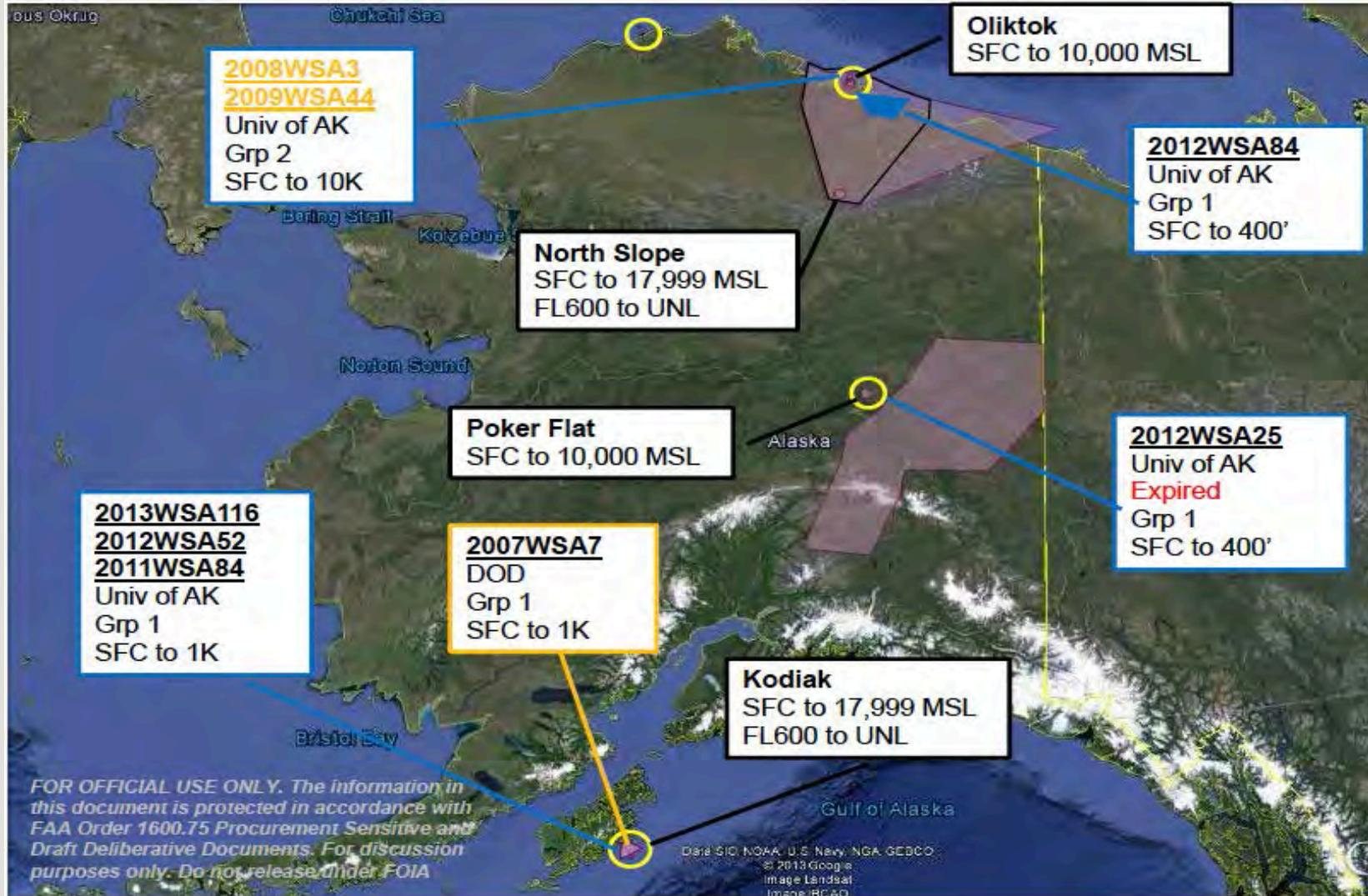
Hawaii



# Alaska's Test Ranges



# AK Effect Specifics



# Alaska Offers:

- **Vast open airspace with little traffic**
- **Wild, extreme, unpopulated, diverse terrain**
- **Access to large military ranges with data gathering ability**
- **History of pioneering aviation technology**
- **Culture of innovative use of aviation**
- **Close relationship with regional FAA**
- **Legislative willingness to be thoughtful and methodical in political policy decisions**
- **State government taking balanced approach**
- **Extensive experience pioneering UAS in new applications & gaining new levels of FAA approvals**
- **Research Vessels/Ships provide Maritime/Oceanic access**

# Contributing Alaskan Sites

## Non-Military

- Galbraith Lake
- Happy Valley
- Deadhorse
- Oliktok Point
- Wainwright
- Kodiak
- Research Vessel Sikuliaq

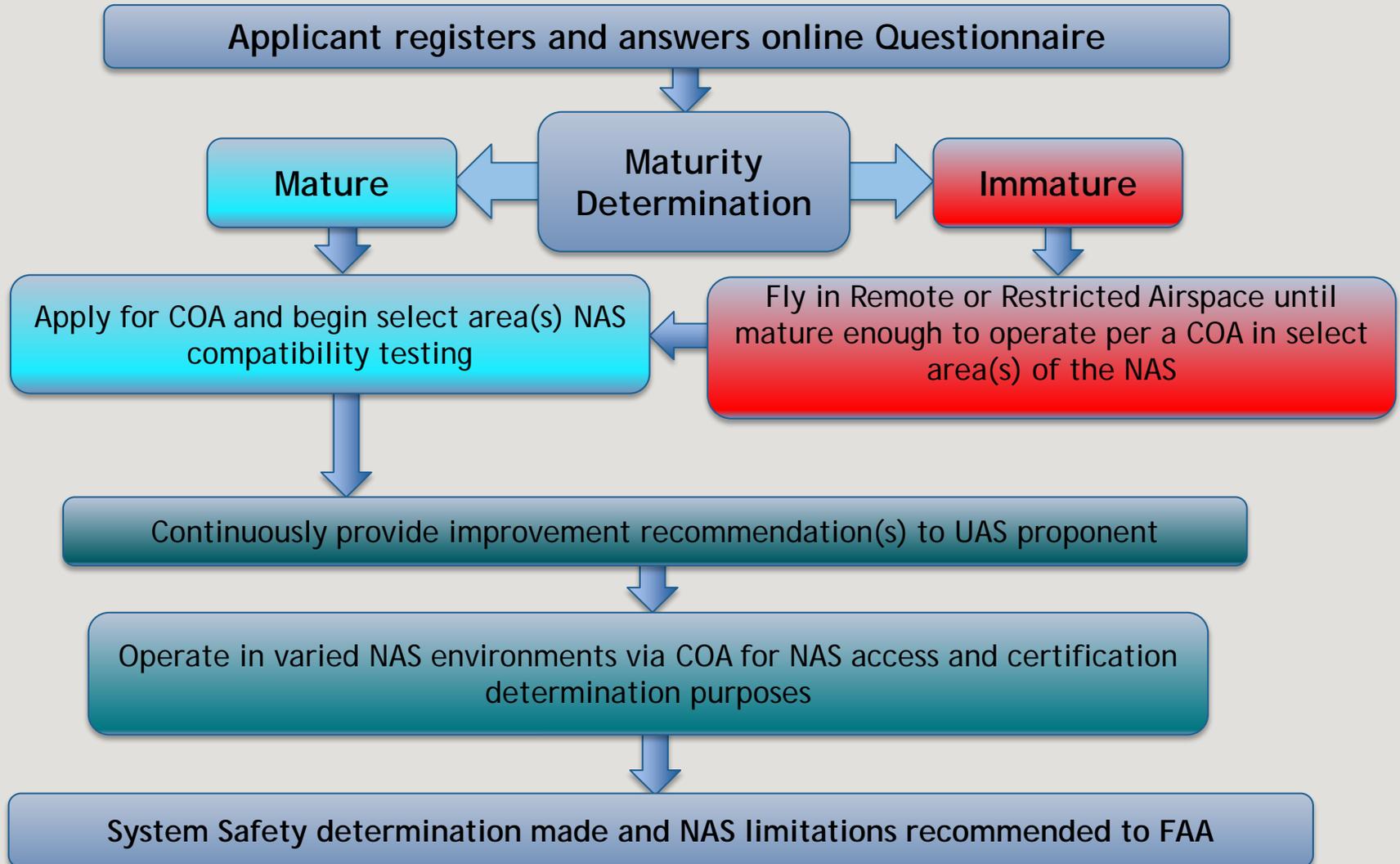
## Military

- Eielson AFB
- Ft. Greely
  - Allen AAF
- Ft. Wainwright
  - Ladd AAF
- Elmendorf AFB
- Ft. Richardson
  - Bryant AAF

\*State permission to use other infrastructure as operational necessity dictates

# Risk Management

## (Range User Maturity Determination Process)



# Safety Risk Management

(Aviation / System / Range / Site)

- Institutional Programmatic Safety Program
- Core Safety Requirements, Scope, Framework and Processes
- Operational Safety
- Aviation Safety
- Hazardous Materials Handling, Safety and Disposal
- Safety Training and Personnel Certification
- Facilities, Construction, Site Activation and Remote Site Considerations
- SMS, SRM, SRMD training program that continuously teaches the evolving needs of emerging safety concerns

# Privacy

- Dedicated to protect privacy of our citizens so beneficial uses can be obtained
- Current statutory/case law strongly protects privacy while defining legal airborne activities (manned)
  - UAS a new technology, but subject to same restrictions
  - FAA added guidelines to OTA which rely on existing law, (they need our help to develop policy)
  - AK legislative task force focusing on management & control of data rather than the tool that collected it
  - Strict adherence to in-practice policies of the National Institute of Justice, the International Association of Chief's of Police, the Airborne Law Enforcement Association, the Alaska State Troopers and enacted State legislation (all 3 states)
  - PPUTRC-specific policy under development

# Questions?



# ALASKA CIVIL MILITARY AVIATION CONCIL



*Integrity - Service - Excellence*

# OPEN FORUM



# ALASKA CIVIL MILITARY AVIATION CONCIL

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Two fighter jets are flying in formation against a clear blue sky. The jet in the foreground is a light blue F-16, and the one behind it is a black and white F-16. Both jets are carrying several missiles under their wings. The text 'CLOSING COMMENTS' is overlaid in large, dark, 3D block letters across the center of the image.

# CLOSING COMMENTS

Col Pat Miller

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# Next ACMAC

**Tentative: Tues, 18 November  
1000-1200**

**Inputs to:  
[alaskamilitaryairspace@us.af.mil](mailto:alaskamilitaryairspace@us.af.mil)**