Friedman Memorial Airport Authority

Regular Board Meeting

May 1, 2018

FRIEDMAN MEMORIAL AIRPORT

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Approve Agenda

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Public Comment

(10 Minutes)

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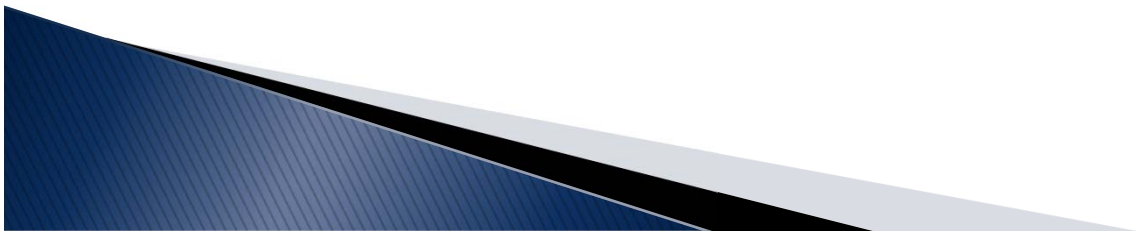
Approval of Meeting Minutes

April 3, 2018

Reports

Reports

- Chairman Report
- Blaine County Report
- City of Hailey Report
- Fly Sun Valley Alliance Report
- Airport Manager Report



Airport Manager's Report

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Contract Tower Program and FAA Reauthorization

- H.R. 4 FAA Reauthorization – Passed!
  - April 27
  - Very positive Contract Tower Provisions
  - rTWR pilot program

- Omnibus Bill
  - FAA Funding – Through Sept. 20
  - $1 Billion in Discretionary AIP funds
    - GA
    - Small commercial service

- Annual CTA Workshop
  - Washington D.C.
  - June 18-20
  - Delegation visits planned

Airport Communications/Public Information Workshop

- Deb Smith, PIO – Centennial Airport, Denver
  - Facilitator

- April 25 – workshop(s) – airport staff
  - Airport specific:
    - Communications planning
    - Outreach
    - Crisis management

- Excellent session!

Other Happenings and Updates…

- Idaho Airport Management Conference
  - Sun Valley Lodge – April 16-17
    - Great tour of SUN
    - +35 people!
- SUN/FSVA Air Service Workshop – May 2
- Next phase – Rates and Charges
  - Initial meeting with airlines – May 9

- Spring/Summer SAAC Rotation
- May 17

Runway Pavement Maintenance

- *REMINDER!*

- Final Markings
  - Originally scheduled for this Fall
  - Revised schedule: June 5-6, 2018
  - Closures:
    - June 5: 8:15 am – 9:00 pm
    - June 6: 8:15 am – 5:00 pm (or until work is complete)

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“On the Horizon”

- Parking management rates and charges review
- Review of Regulation 94-1 – maybe?

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Airport Staff Brief Questions

Action Items

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Action– New Business

Equipment Acquisition – Loader

- Case 1121C Front End Loader
- Replacement for 921C
  - $140,000 to repair
- Larger, more efficient
  - New Kodiak blower
  - Ramp Hog
- Lease for the 2017/2018 Winter
  - $50,000 month
  - 5 month term
  - Coupler included with lease
- Hard to get lease during winter
- Allows for full year use

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Equipment Acquisition – Loader

- Consideration of Lease Purchase Agreement
  - 61 Month Term
  - $53,900 annual lease amount
  - $280,667 selling price
  - Original price – $318,000 (credit for use)
- Complies with government purchasing requirements
- Agreement can be terminated (with penalty) if necessary
- Action Requested:
  - Motion to approve staff to execute 61 month lease purchase agreement with Burkes Tractor for a lease to own option of a Case 1121C loader.

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Action – Continuing Business

Communications Services RFP

- RFP submittal deadline – April 5
- One submittal – Centerlyne
- Selection committee and staff met to review and discuss proposal
- Committee recommends retaining Centerlyne for three year contract
- Action Requested:
  - Motion to approve recommendation of selection committee to retain Centerlyne for airport communications services for a three year term.

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Discussion and Updates

New Business

SUN AIR TRAFFIC CONTROL TOWER REPLACEMENT ALTERNATIVES

Friedman Memorial Airport Authority Board
May 1, 2018

Greg Dyer
Jviation

William E. Payne
William E. Payne & Associates

Purpose of Alternatives Study

- What is the study about?
- What have we done to date?
- How will this serve the Board?
- William E. Payne & Associates developed cost estimates for traditional ATCT replacement and Digital Tower Technology solution
  - Uniquely qualified due to experience with traditional towers and is the Program Manager for the State of Colorado for the Colorado Remote Tower Project at the Northern Colorado Regional Airport
- Evaluation of Digital Tower Technologies current vendors

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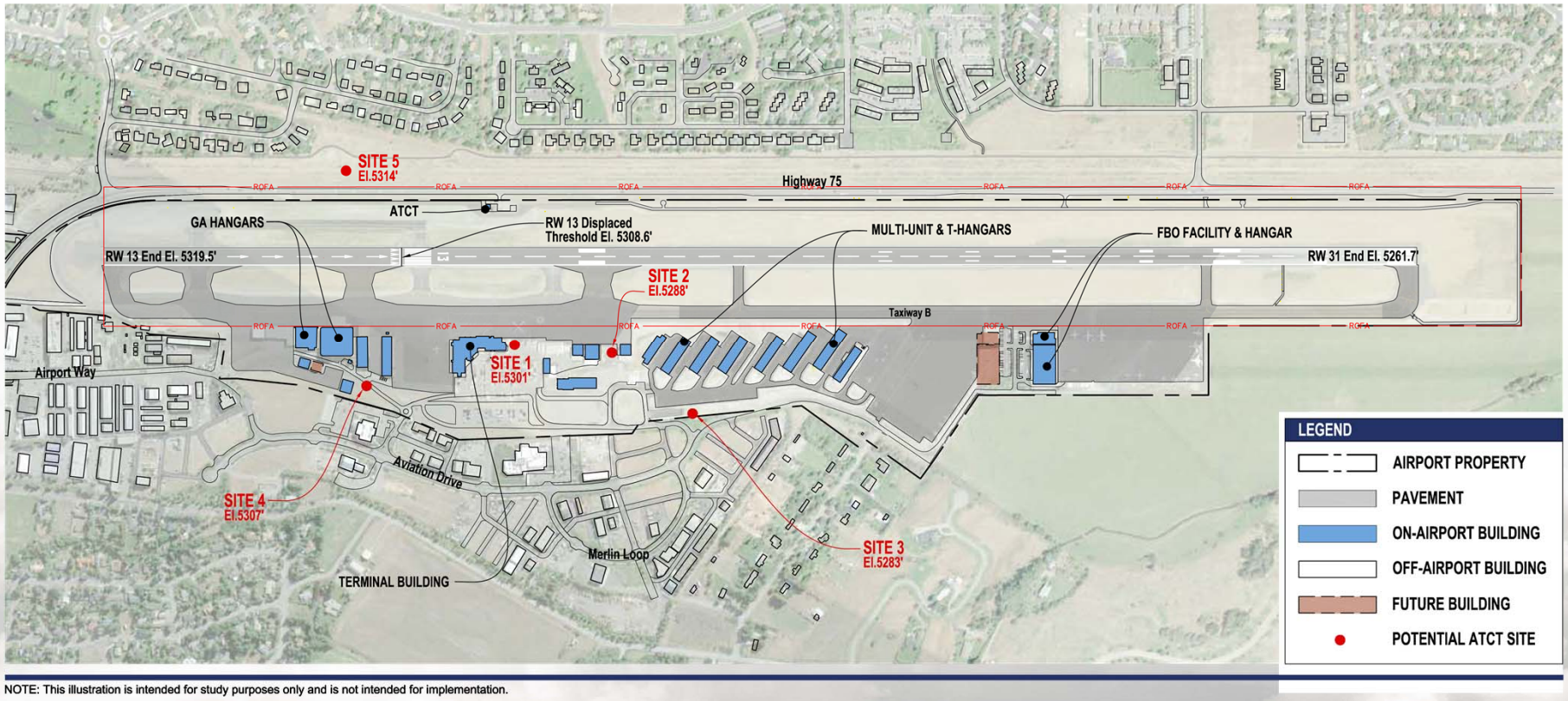
Draft Master Plan ATCT Site Alternatives



NOTE: This illustration is intended for study purposes only and is not intended for implementation.

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Existing Airport Site Alternatives

Table D3 **TIER ONE ATCT SITING ANALYSIS**

Item	1	2	3	4	5
Site Location on Airport (Lat/Long)	43° 30′ 22.28″ N 114° 18′ 0.98″ W	43° 30′ 17.43″ N 114° 17′ 57.10″ W	43° 30′ 16.76″ N 114° 17′ 59.24″ W	43° 30′ 27.80″ N 114° 18′ 10.26″ W	43° 30′ 35.82″ N 114° 17′ 57.44″ W
Site Elevation (AMSL)[1]	5,301 FT	5,288 FT	5,283 FT	5,307 FT	5,314 FT
Tower Cab (Control Room) Floor Height (AGL)	47 FT	68 FT	237 FT	118 FT	29 FT
Controller Eye Height (AGL)[2]	52 FT	73 FT	242 FT	123 FT	34 FT
Total Tower Height (AGL)	77 FT	98 FT	267 FT	148 FT	59 FT
Environmental Issues	None Known	None Known	None Known	None Known	None Known
ATCT Potential Impacts to Existing and Future NAVAIDS	None Known	None Known	None Known	None Known	None Known
Part 77 Impacts (Transitional Surface Penetration)	+37 FT	+53 FT	+174 FT	+78 FT	+24 FT
Construction Cost Estimate ($65K per vertical foot)	$5.0 Million	$6.4 Million	$17.4 Million	$9.6 Million	$3.8 Million
Access to ATCT Site	Via Parking Lot	Via New Road	Via Airport Cir.	Via Airport Access Road	Via Highway 75
Key Point	Runway 13 End	Runway 13 End	Runway 13 End	Runway 31 End	Runway 31 End
Distance	2,398 FT	2,956 FT	3,479 FT	6,113 FT	6,211 FT
Elevation (AMSL)	5,308.6 FT	5,308.6 FT	5,308.6 FT	5,261.9 FT	5,261.9 FT
Visibility Performance Analysis					
Object Discrimination Analysis	Pass	Pass	Pass	Pass	Pass
Detection: Threshold > 95.5%	100%	99.9%	99.9%	98.9%	98.8%
Recognition: Threshold > 11.5%	95.7%	90.7%	84.0%	33.2%	30.5%
Identification: Threshold > 0.91%	62.6%	41.7%	29.0%	3.6%	3.2%
LOS Angle of Incidence, Minimum = 0.80 degrees[3]	0.80 degrees	0.80 degrees	3.56 degrees	1.58 degrees	0.80 degrees
2-Point Lateral Discrimination (0.13 degrees or greater)	7 degrees (RW 13 & Parallel TW); 3 degrees (RW 31 & Parallel TW)	6 degrees (RW 13 & Parallel TW); 4 degrees (RW 31 & Parallel TW)	5 degrees (RW 13 & Parallel TW); 4 degrees (RW 31 & Parallel TW)	10 degrees (RW 13 & Parallel TW); 3 degrees (RW 31 & Parallel TW)	12 degrees (RW 13 & Parallel TW); 3 degrees (RW 31 & Parallel TW)
ATCT Orientation, Primary Operations View Direction	South/East	South/East	South/East	South	South

SOURCE: Mead & Hunt, T-O Engineers

NOTE: [1] Determined utilizing 2014 AGIS Data

[2] Calculated based on LOS angle of incidence analysis and/or ability to see all movement areas (runway and taxiways).

[3] Where angle of incidence is greater than 0.80 degrees, tower height was determined based on clear LOS to all movement areas.

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High Level Goals

- What can we do to lead the 2023 date for ATCT replacement?
  - Evaluate siting characteristics of the Friedman Memorial Airport
  - Select a path between traditional ATCT or Digital Tower Technology
  - Identify the “knowns” of each path vs. the areas with variables
- Will this work help us shorten or improve the tower replacement process going forward?

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Cost Estimates

Traditional ATCT		Digital Tower System	
ATCT and Base Building	$2,406,718	Airfield Infrastructure	$895,375
Site Work	$214,831	Digital Tower Facility Building	$651,854
Air Traffic Control Equipment	$445,000	Camera Surveillance System	$668,000
Fees	$849,289	ATCT Minimum Equipment List	$375,000
Contingency	$361,008	Communications and Power	$115,000
		Contingency (20%)	$612,846
		Fees	$364,915
Total	$4,276,846	Total	$3,682,990
ADS-B	$359,000	ADS-B	$359,000

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Airport Traffic Control Options

Traditional VFR ATCT

1. **Advantages**
   a. Provides on airport traffic control services
   b. Direct visual observation:
      1) Inspection of runway movement area
      2) Verify weather conditions
      3) Observation of aircraft movement
   c. Existing trained workforce
   d. Well understood and accepted certification requirements
2. **Disadvantages**
   a. Escalating development and operational/maintenance costs
   b. Inevitable replacement or modernization
   c. Limited visual range
   d. Visibility affected by weather

Airport Traffic Control Options

Remote Tower

1. **Advantages**
   a. Eliminates the requirement to construct a multistory ATCT
   b. Sight picture of airfield similar to traditional ATCT feel and operation
   c. Visual displays can improve the controller's view of airfield surface and approach and departure corridors
   d. Scalable and expandable-Apps vs. Mainframe

2. **Disadvantages**
   a. Visual observation susceptible to weather
   b. Cannot exactly reproduce the out-of-the-window view from legacy ATCT
   c. Track-aided display may be required to provide full services depending on traffic levels and airspace complexity.
   d. Certification requirements may evolve

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Looking Forward

- **Traditional ATCT**
  - Relatively Certain Path
  - This study provides a start to tower design, siting and FMAA planning
  - William E. Payne & Associates experience with traditional towers would help to anticipate FAA processes and optimize for cost avoidance

- **Digital Tower Technology**
  - FAA Reauthorization (H.R. 4, para. 510)
  - Advocacy effort to develop priority and funding options
    - Partnership with FAA-Airports District Office, Western Service Area, FAA Headquarters
    - FMAA teamwork with Idaho State resources
  - Other interested airports could affect path
  - Motivation and Options within vendor firms

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Challenges/Considerations

- Current congressional work on FAA reauthorization indicates timing is important-for either option
- Certification uncertainties for digital tower technology
  - Requirements not fully defined
  - Experiences at pilot projects may alter end state conclusions
- Timing considerations for procurement efforts to maximize vendor competition
- It may be possible to pursue the DTT option with the traditional ATCT option as a fallback
- It is important to stay fully integrated with FAA offices/processes throughout program execution to manage costs
- Serco support for project

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Leesburg, VA Digital Tower Technology Facility (Saab-Sensis)

Camera Options

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Saab-Sensis Simulation - Friedman Memorial Airport - MP Site 1-North View
3
4
SOUTH
6


Saab-Sensis Simulation - Friedman Memorial Airport - MP Site 1-South View
8
WEST
10
11
NORTH
13

Overall Projection of Saab-Sensis Simulation Friedman Memorial Airport

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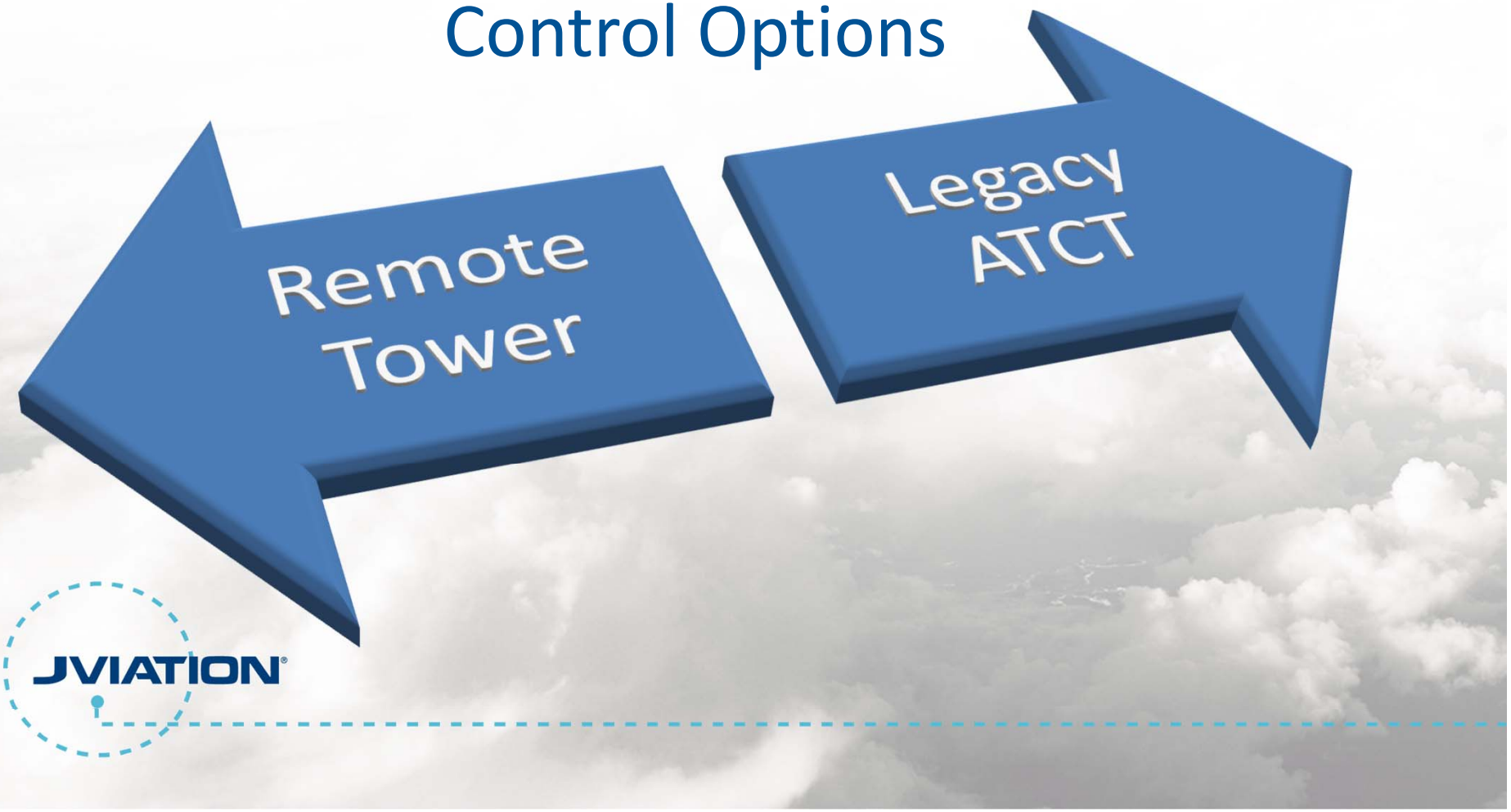
Questions, Comments, Discussion…

Air Traffic Control Options



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Discussion and Updates

Continuing Business

Construction and Capital Projects

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Runway Pavement Maintenance

- *REMINDER!*

- Final Markings
  - Originally scheduled for this Fall
  - Revised schedule: June 5-6, 2018
  - Closures:
    - June 5: 8:15 am – 9:00 pm
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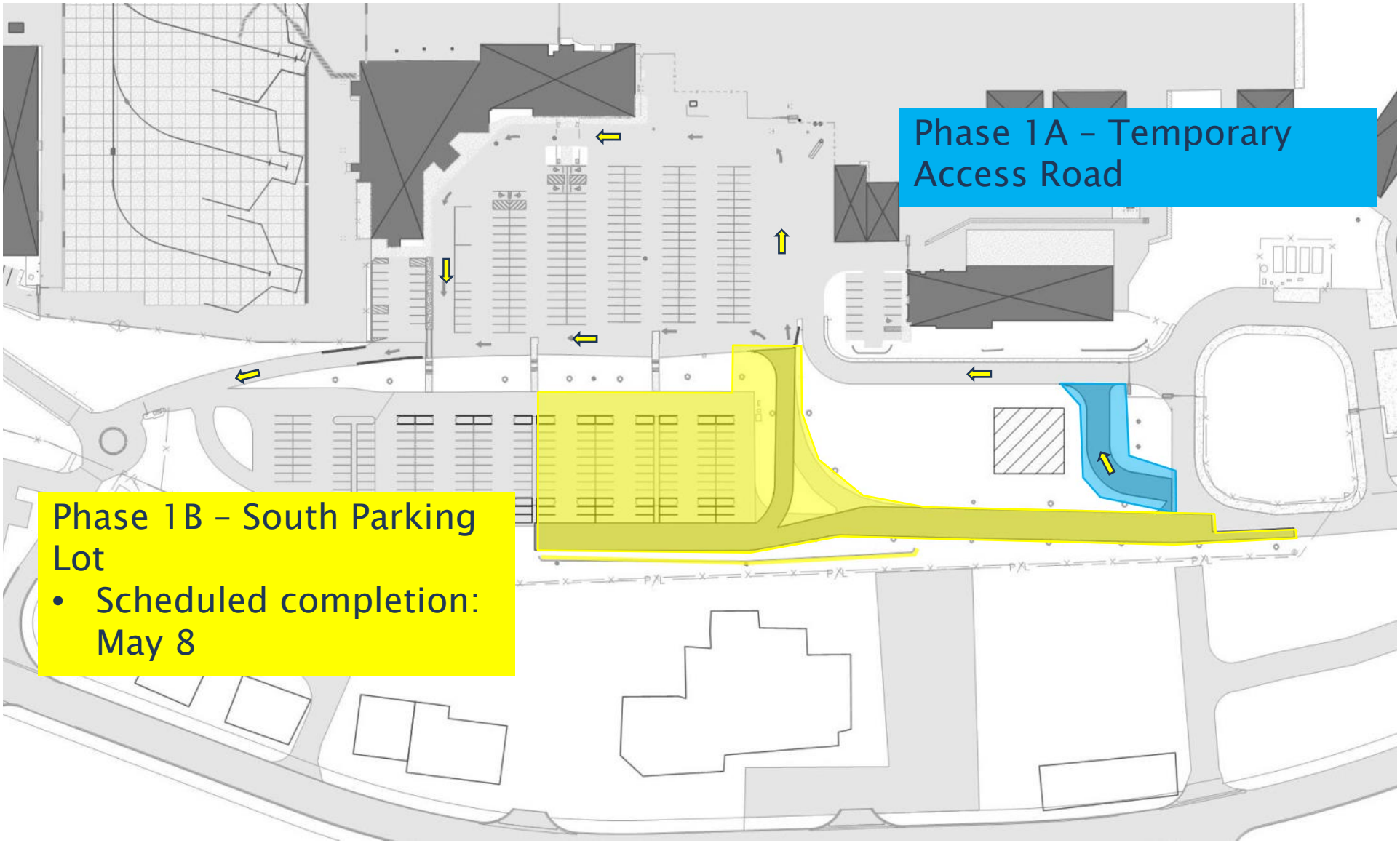
Terminal Air Carrier Apron and Parking Lot Improvements

Apron/Parking Lot Status

- Phase 1A complete
- Phase 1B underway

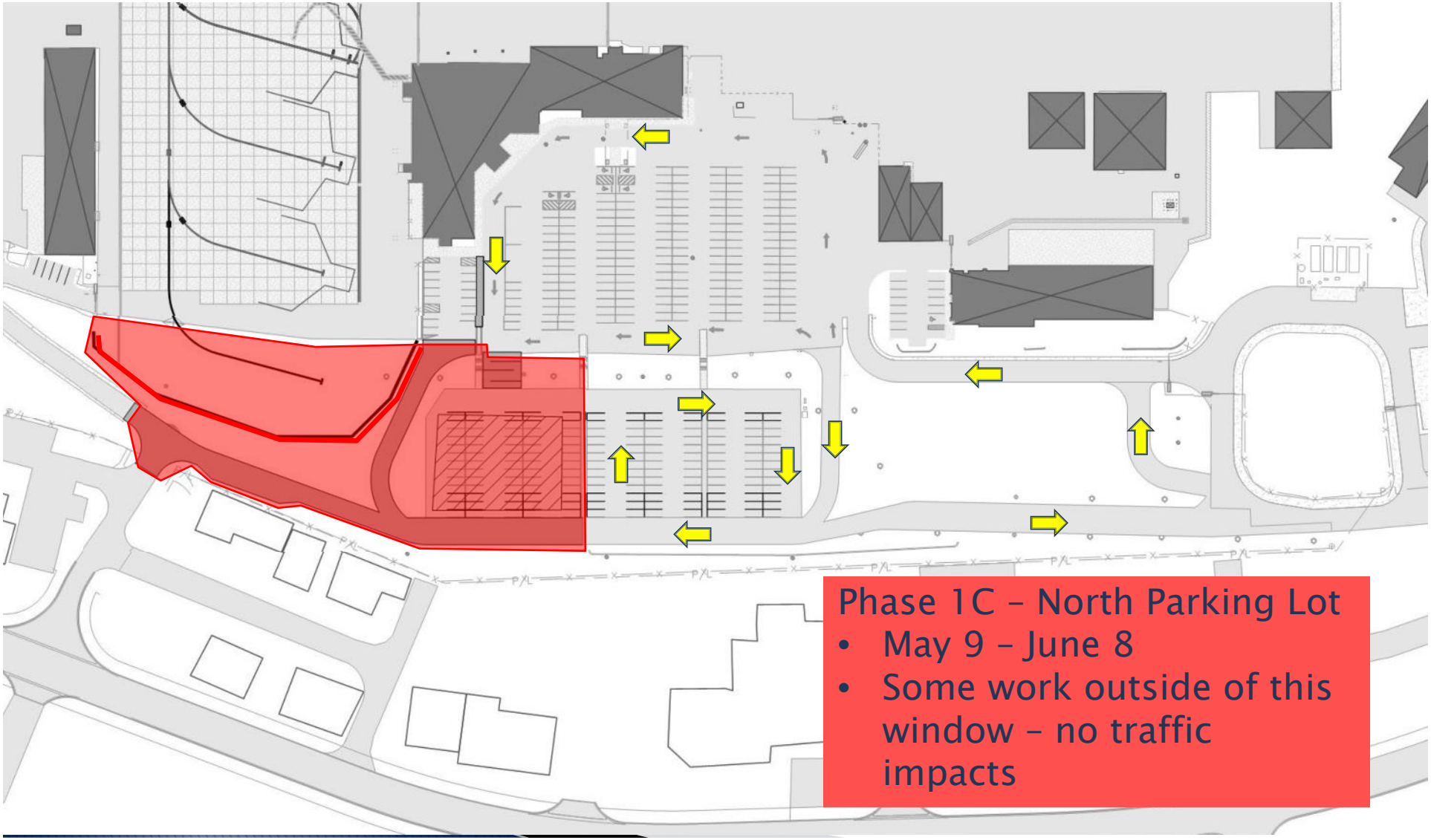
Phases 1A and 1B




AP1055E


CAT
NEW HOLLAND

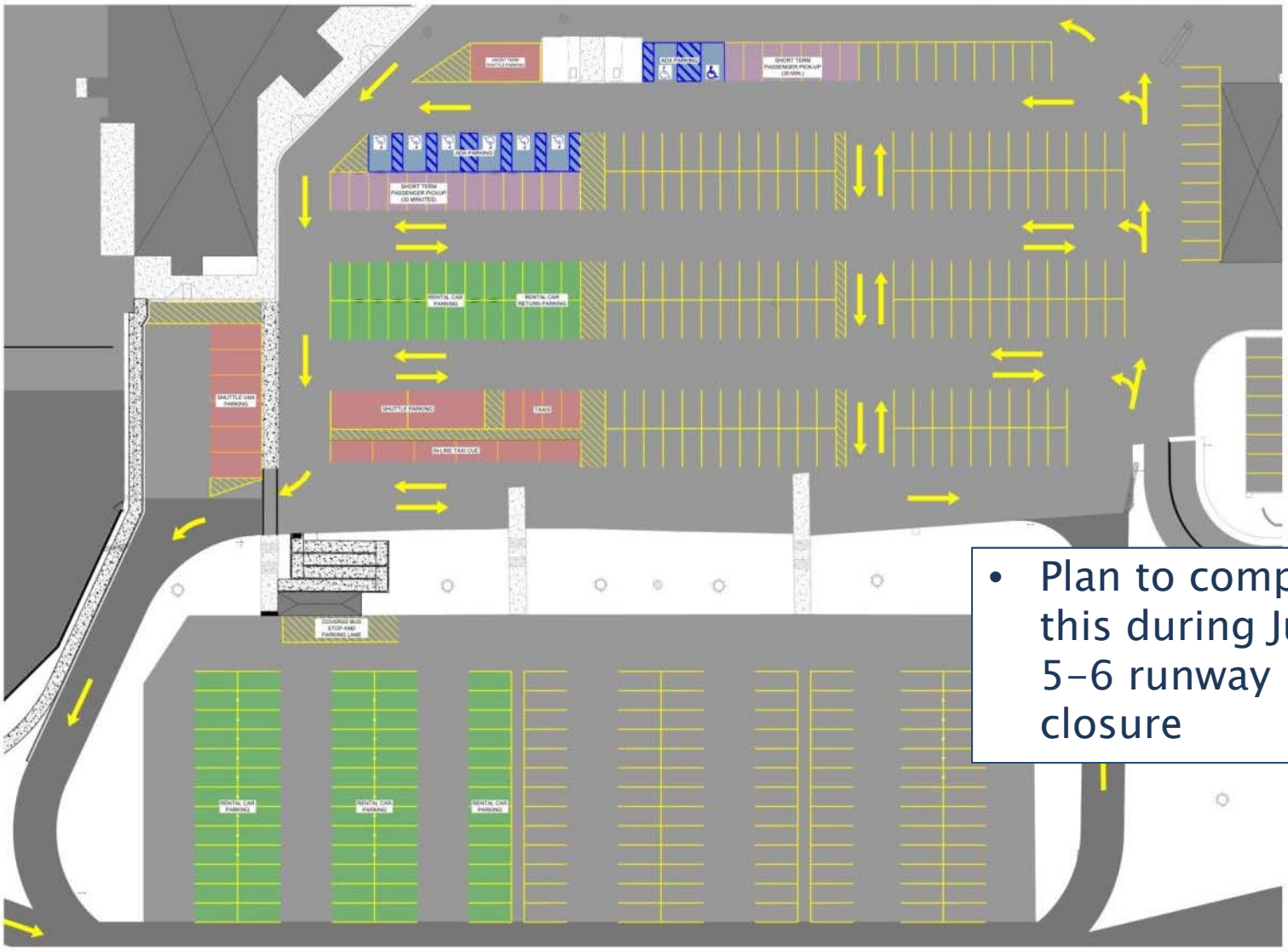
Phase 1C



Phase 1C – North Parking Lot

- May 9 – June 8
- Some work outside of this window – no traffic impacts

Phase 3 – Upper Lot Reconfiguration

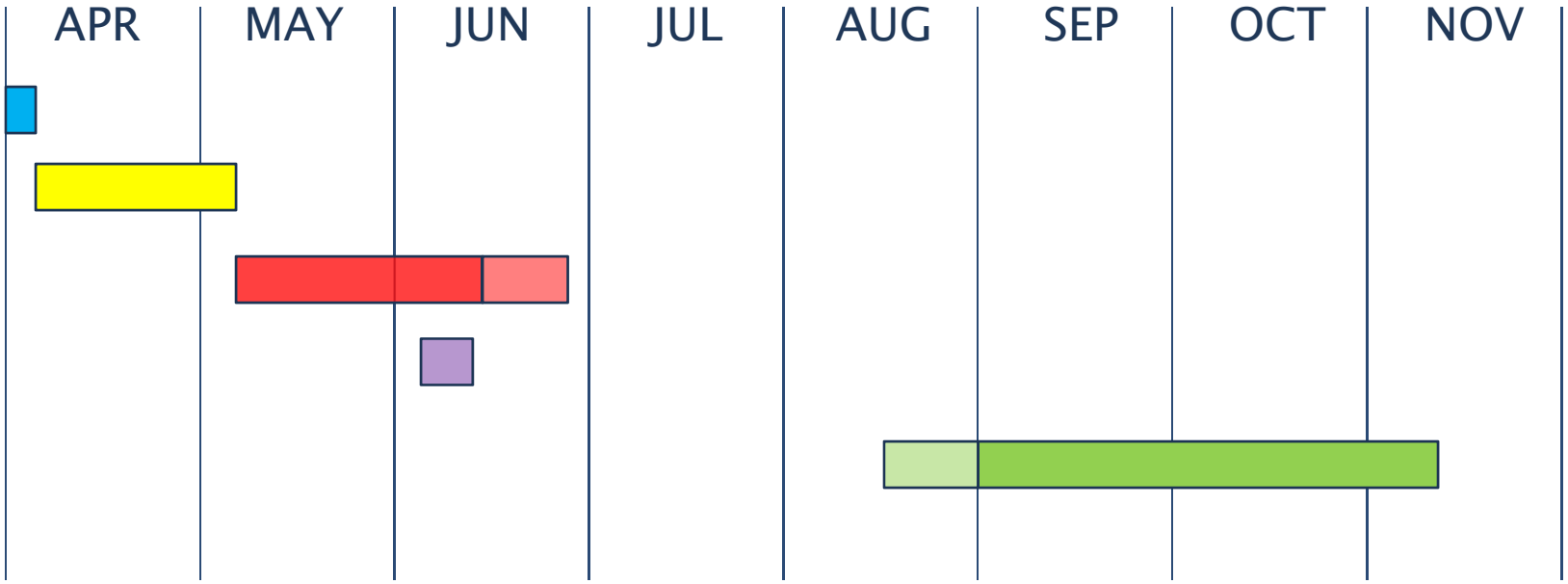


- Plan to complete this during June 5-6 runway closure

TERMINAL APRON EXPANSION - PARKING LOT EXHIBIT

T-O ENGINEERS
2471 S. TITANIUM PLACE

Parking Lot Construction Timeline



Phase 1A – Temporary Access

Phase 1B – South Parking Lot

Phase 1C – North Parking Lot

Phase 2 – Apron Expansion

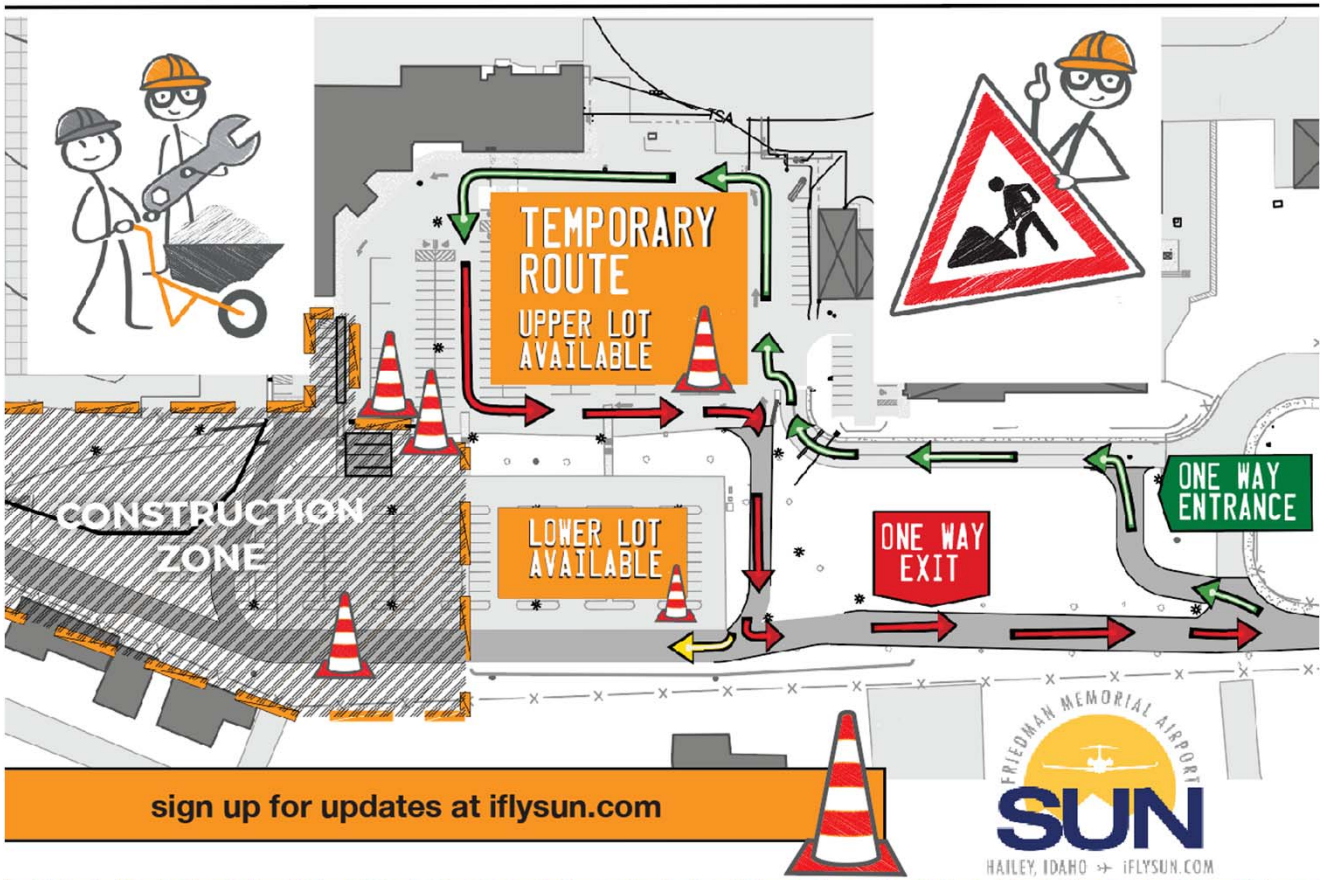
Phase 3 – Upper Lot Reconfiguration

Apron/Parking Lot Status

- On track
- No major issues, so far
- Questions?

CONSTRUCTION UPDATE

FRIDAY MAY 4 THROUGH EARLY JUNE



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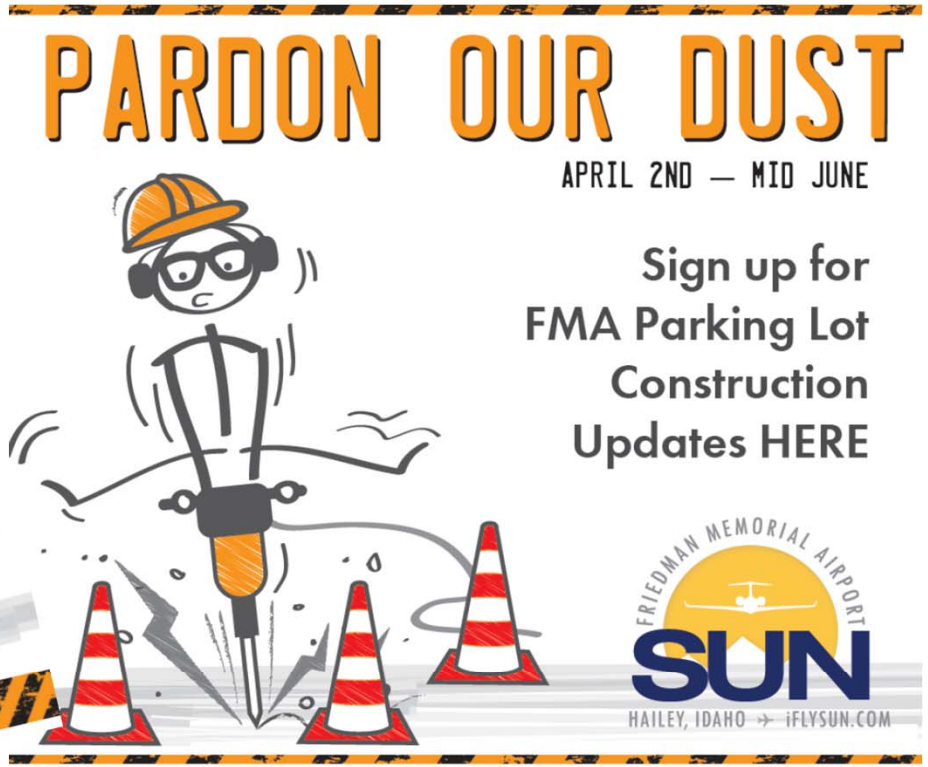

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Airport Planning Projects

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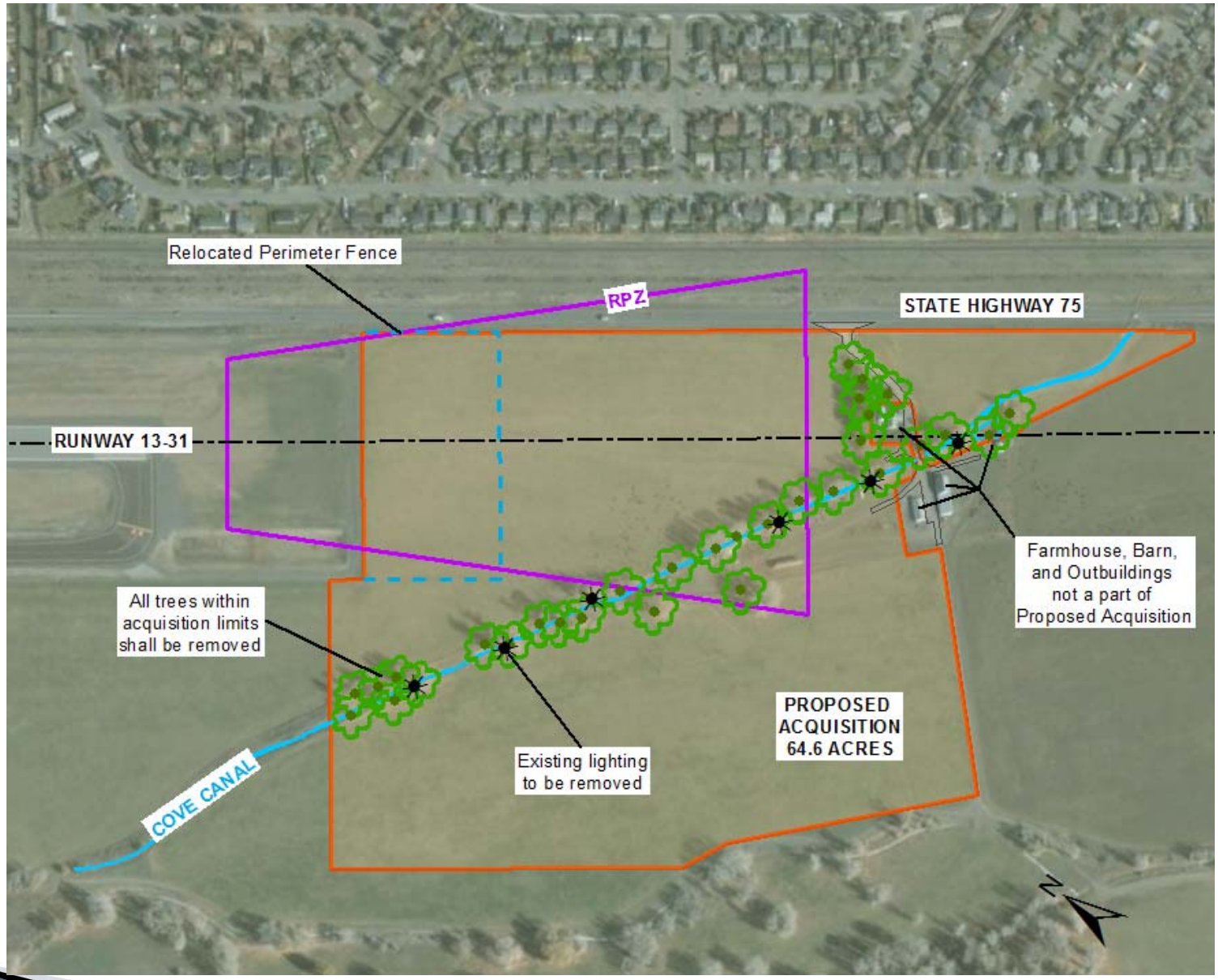
Environmental Assessment Land Acquisition and Obstruction Removal

EA Status

- Documents have been updated to reflect changes to Alternative 5-Modified which was discussed at April meeting
- Based on discussions with land owner, easement area south of ranch house was converted to acquisition

EA Status con't…

- Proposed Action Alternative includes:
  - Acquisition total of 64.6 acres
  - Same acreage as Alternative 5 Modified
  - Continues to have "No Averse Effect" to Historic Resources – Avoids Farmhouse


Relocated Perimeter Fence
RPZ
STATE HIGHWAY 75
RUNWAY 13-31
Farmhouse, Barn, and Outbuildings not a part of Proposed Acquisition
All trees within acquisition limits shall be removed
PROPOSED ACQUISITION 64.6 ACRES
Existing lighting to be removed
COVE CANAL
N

EA Status con't…

- FAA provided comments to Chapters 1-3 on April 20.
- Cultural Resources Report was submitted to FAA on April 2 for submittal to SHPO
- Addressing comments on Chapters 1-3 and incorporate Chapter 4, supporting information and finalized Draft EA is being completed
- Draft EA to be submitted to FAA approximately May 3

EA Status con't…

- Subject to FAA review/concurrence, publish draft EA in May
- Public Hearing June
- FONSI in June

Airport Noise Modeling


SUN
AIRPORT NOISE REVIEW
Friedman Memorial Airport Authority
Board Meeting
May 1, 2018

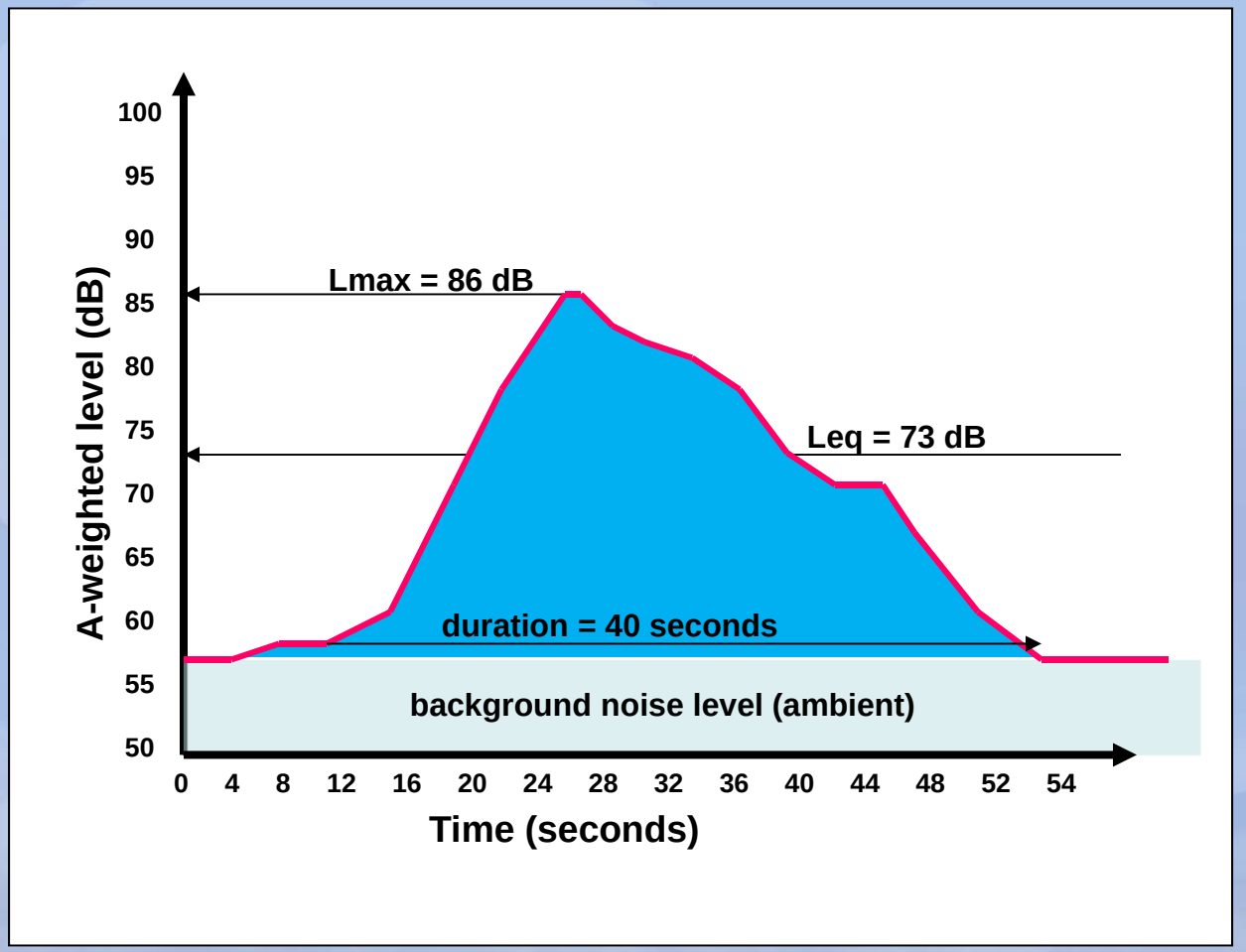
AGENDA

- Noise Metrics
- Federal Noise Policies
- Current Noise Environment
- Limitations at SUN
- Case Studies
- Next Steps

NOISE METRICS

- **Lmax - Maximum noise level**
- **Leq – Equivalent sound level**
- SEL - Sound exposure Level
- **DNL - Day-night average sound level**
- CNEL – Community noise equivalent level
- TA – Time above threshold
- **NA – Number of events above**

Leq - Equivalent Sound Level



The average sound level for a given period of time

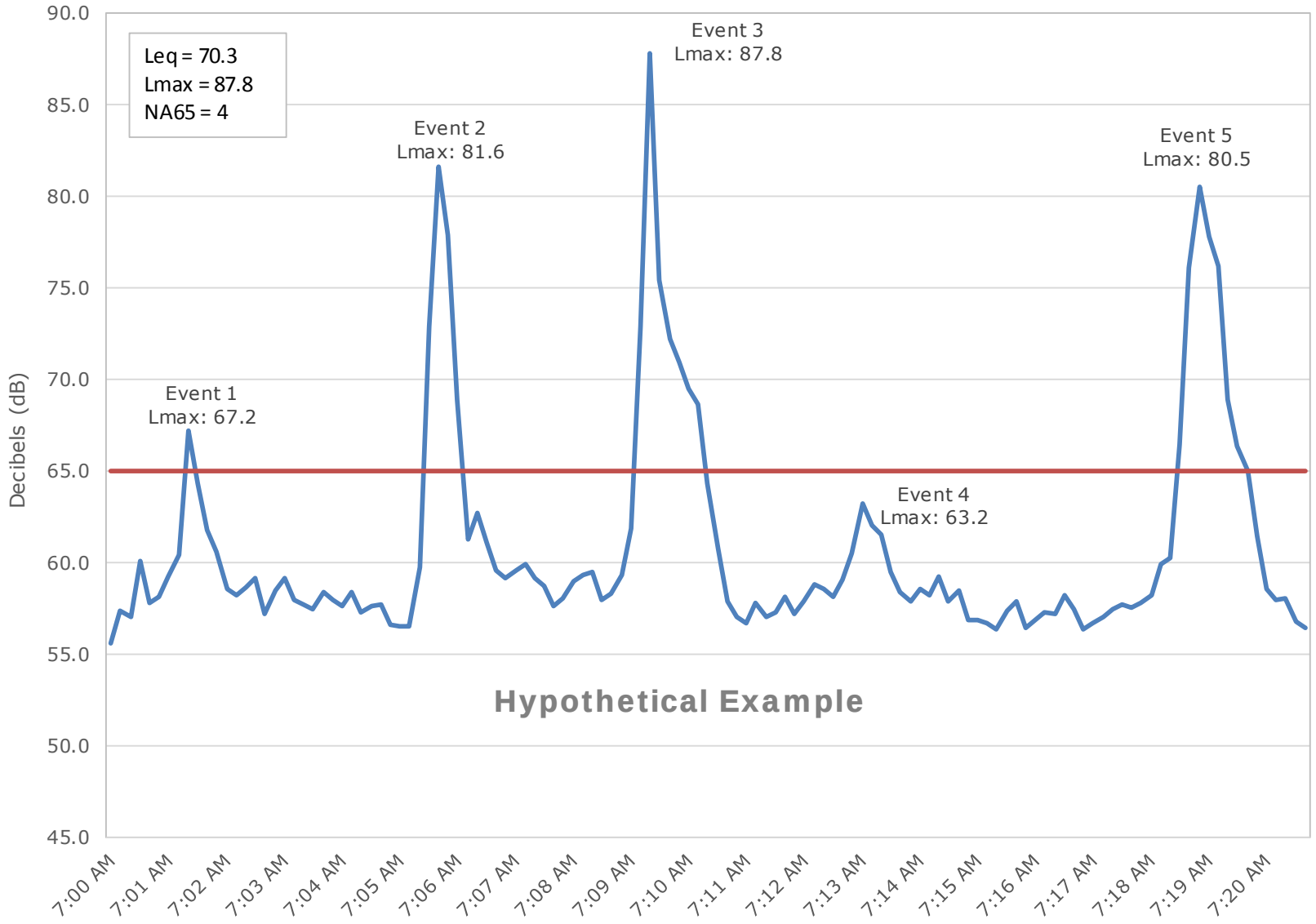
DNL - Day-Night Average Sound Level

- 24-hour time-averaged sound level with a 10 dB nighttime (10:00 pm-7:00 am) weighting
- DNL = Total Daytime Sound Energy + 10 times Total Nighttime Sound Energy divided by Time (in seconds)
- DNL is the metric required to define noise contours of equal exposure in the U.S. per Federal guidelines
- Other metrics can be used for informational purposes

NA – Number of Events Above

- NA represents the number of events above a specified noise level for a period of time
- NA combines both noise level and number of overflights to develop an expression of the experience
- NA can be a useful tool for explaining what a person is currently experiencing or what they may experience in the future

Figure 1, Relationship Between Noise Metrics



FEDERAL NOISE POLICIES

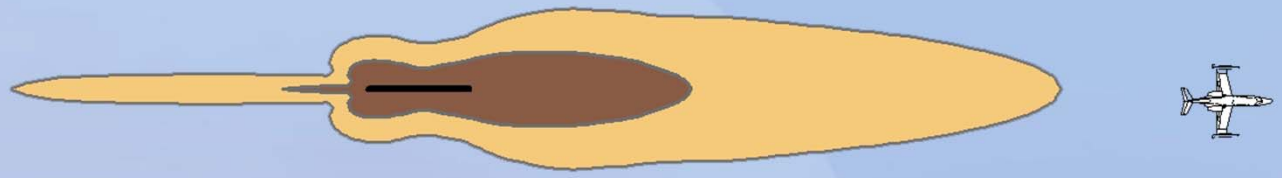
- The Federal Aviation Act of 1958;
- The Noise Control Act of 1972;
- Aviation Safety and Noise Abatement Act of 1979;
- Airport Noise and Capacity Act of 1990;
- 14 C.F.R. Part 36: Aircraft Type and Air Worthiness Certification Standards;
- 14 C.F.R. Part 91: General Operating and Flight Rules;
- 14 C.F.R. Part 150: Airport Noise Compatibility Planning; and,
- 14 C.F.R. Part 161: Notice and Approval of Airport Noise and Access Restrictions.

PART 36 NOISE CERTIFICATION

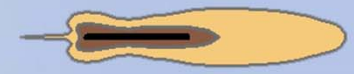
- FAA regulates the maximum noise level that an individual civil aircraft can emit through Part 36 certification;
- Noise limits are measured in Stages, with Stage 1 being the highest;
- In 1990, Congress passed the Aviation Noise and Capacity Act, which required that by the year 2000 all jet and large turboprop aircraft (>75,000 lbs) at civilian airports be Stage 3.
- FAA Modernization and Reform Act of 2012 established that after December 31, 2015, small aircraft (<75,000 lbs) will not be allowed to operate in the contiguous United States unless they meet Stage 3 noise levels.

PART 36 - STAGE 2 PHASE-OUT

Lear 25
(Stage 2)



Lear 35
(Stage 3)



- Since the phase-out, no Stage 2 aircraft are permitted to operate at SUN
- Current fleet consists of Stage 3 and quieter Stage 4 aircraft.

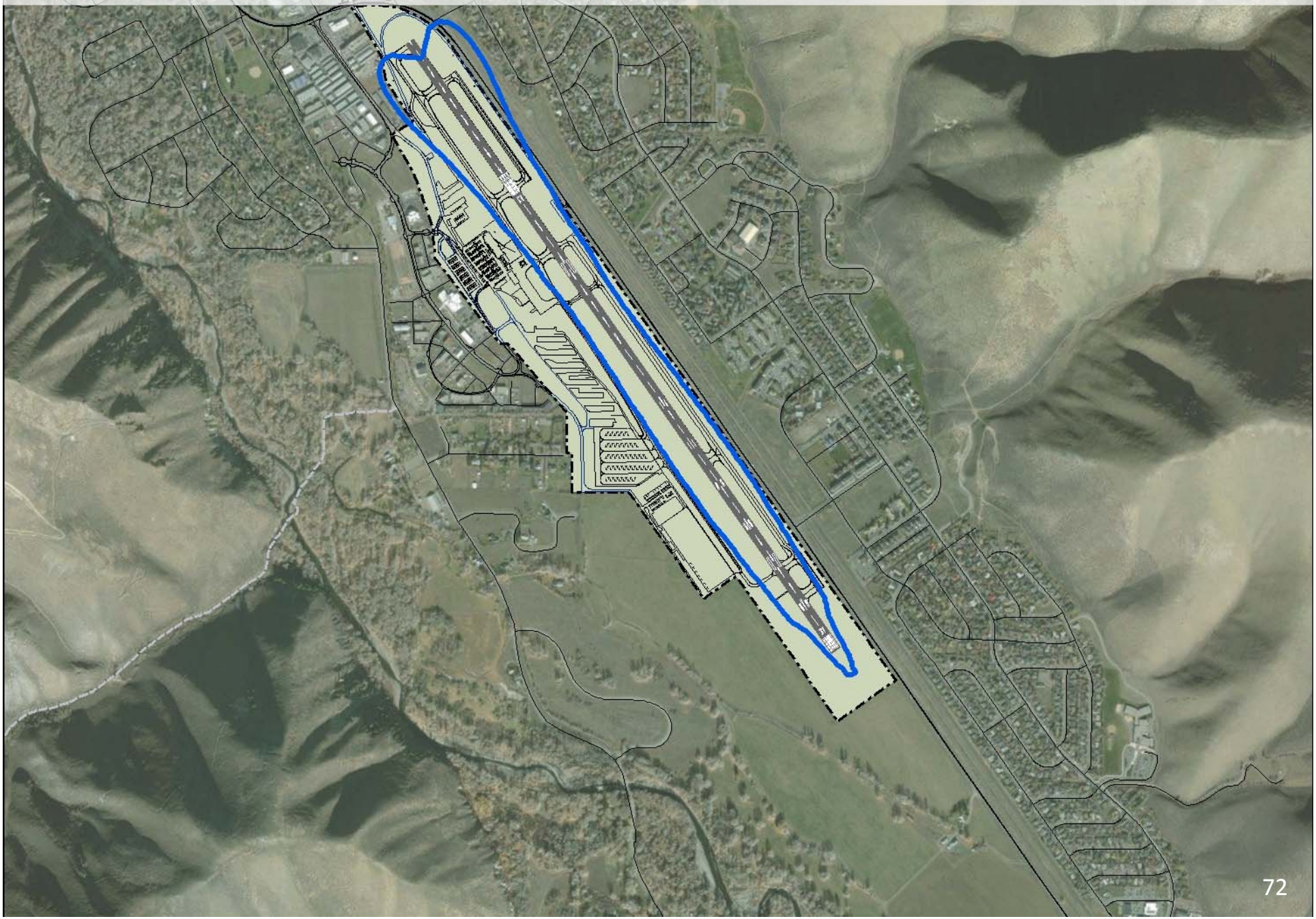
FEDERAL NOISE POLICIES

- All Federal agencies have adopted DNL as the metric for airport noise analysis
- 65 dB DNL is the threshold that the FAA has established for 'significant' impacts (some other agencies have confirmed this threshold while others have suggested lower thresholds)
- AEDT is the required tool for calculation of aircraft noise contours.

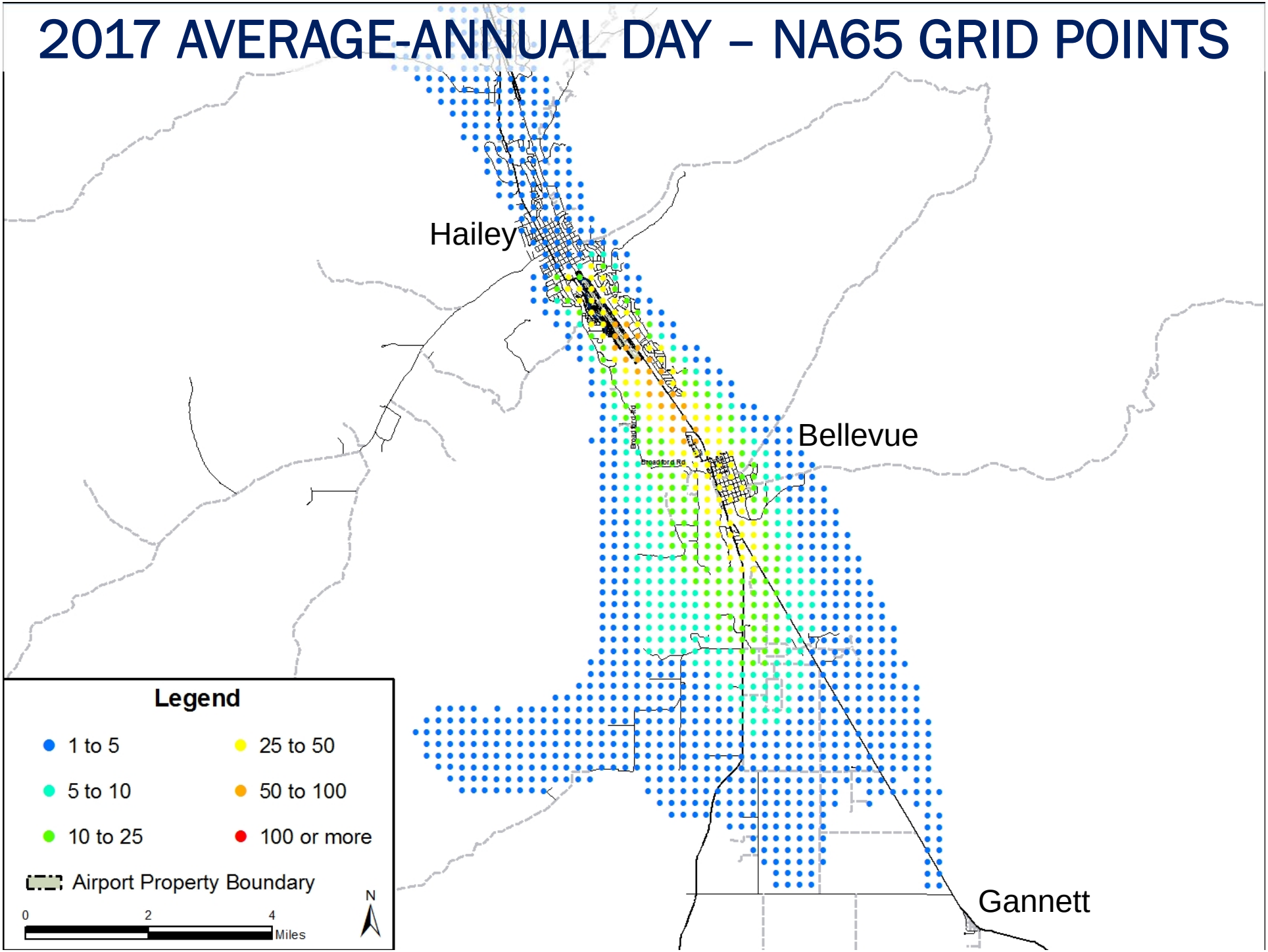
CURRENT NOISE ENVIRONMENT

- Noise contours and grid point analysis has been prepared for existing conditions at SUN
  - 2017 Average-Annual Day
  - 2017 Peak Month / Average Day
  - 2017 Peak Day
- Average-Annual Day is the test for determination of significant impacts

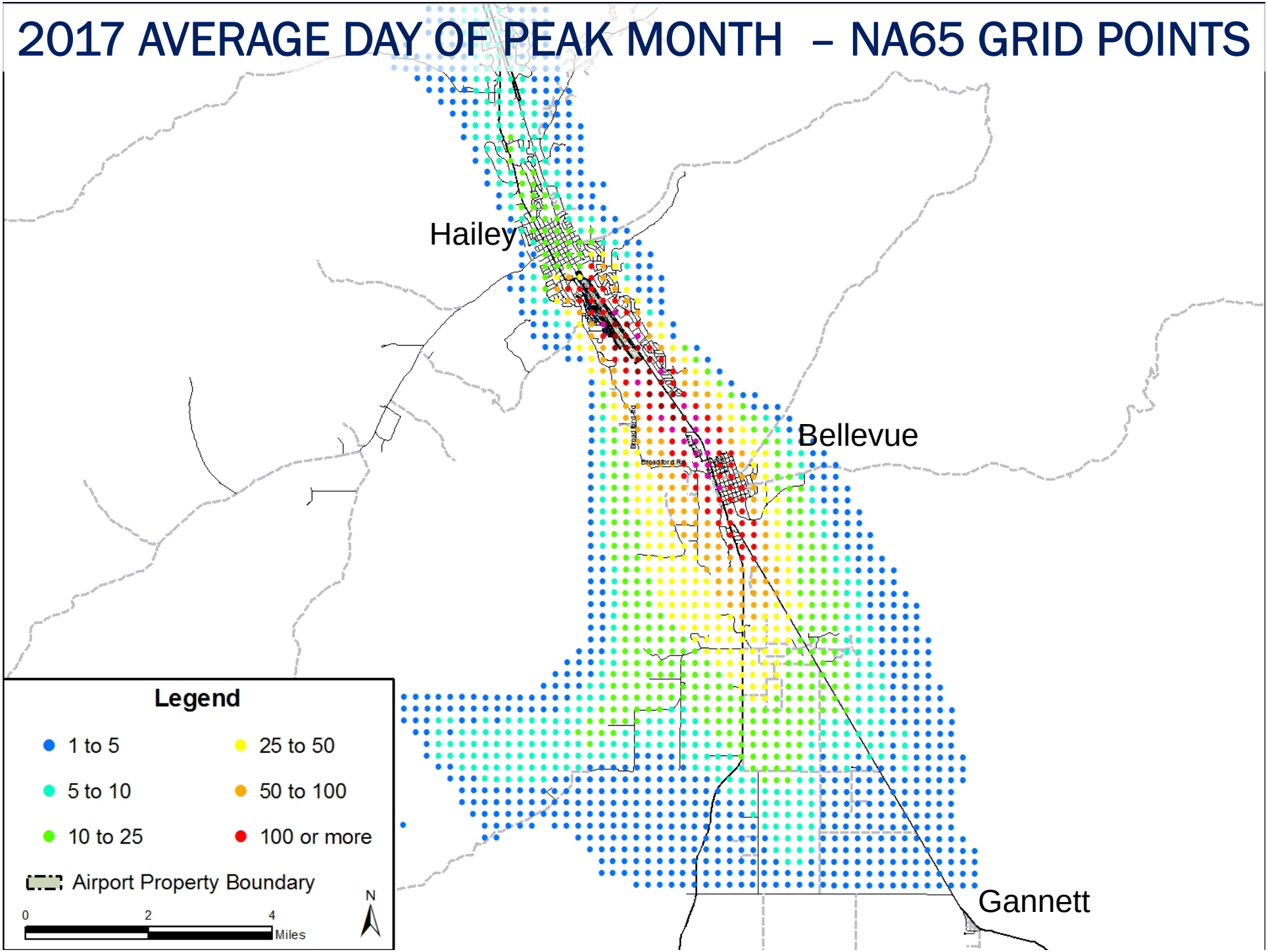
2017 AVERAGE-ANNUAL DAY – 65 DNL



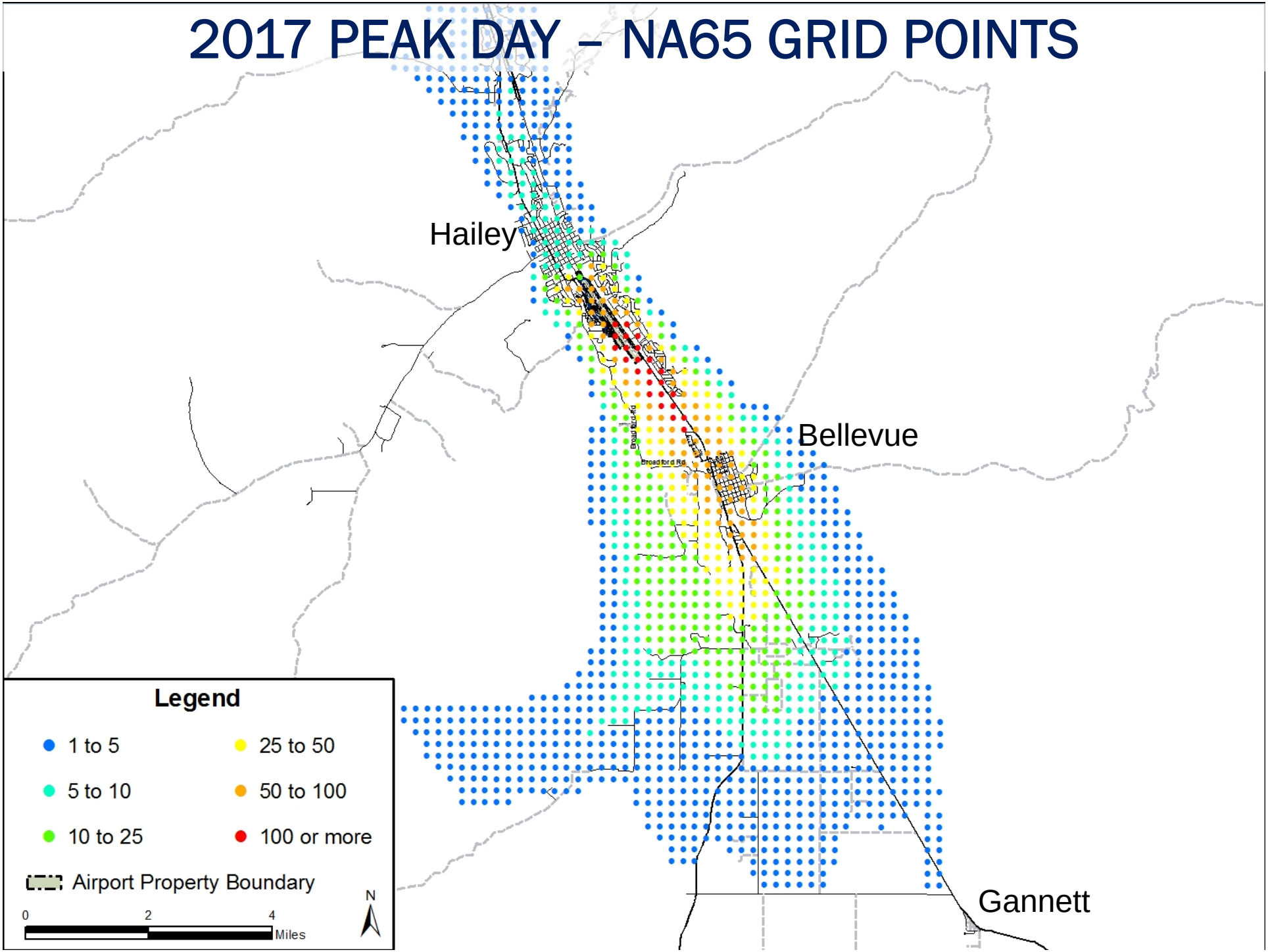
2017 AVERAGE-ANNUAL DAY – NA65 GRID POINTS



2017 AVERAGE DAY OF PEAK MONTH – NA65 GRID POINTS



2017 PEAK DAY – NA65 GRID POINTS



LIMITATIONS TO NOISE ABATEMENT AT SUN

- Terrain
  - Minimal opportunity to adjust flight paths
- Surrounding land use
  - Development around SUN limits options for facility modifications
  - FAA has previously stated runway threshold modifications are not feasible

CASE STUDIES

- Offset Approaches
  - Columbus – recommended but not implemented due to concerns from airlines
  - Detroit – Developed an ILS approach to Runway 22L/4R with offset between one degrees and three degrees

CASE STUDIES

- John Wayne Airport, Orange County, CA
  - General Aviation Noise Ordinance – regulates the hours of operation and the maximum permitted noise levels associated with general aviation operations.
  - Noise Abatement Departure Procedures - Some commercial aircraft operating at JWA do utilize a power cut-back upon take-off to meet the noise restrictions.
  - JWA noise restrictions are ‘grandfathered’ and are no longer permitted without onerous Part 161 study.

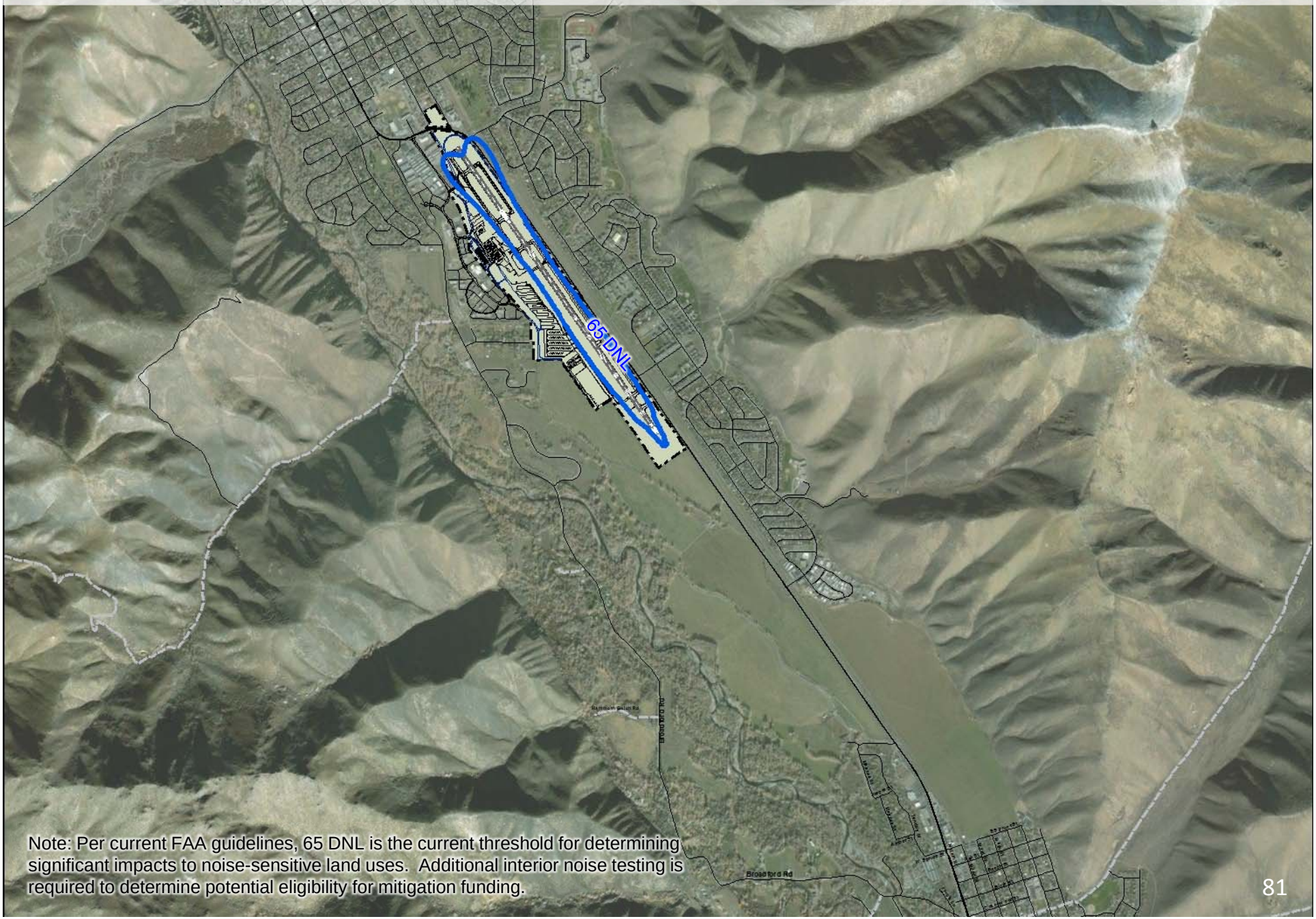
CASE STUDIES

- Land Use Mitigation
  - Minneapolis – Amended Mitigation Program provided sound insulation for homes within the 60-64 DNL noise contour for three consecutive years per a Consent Decree. Typically 65 DNL is the threshold for mitigation eligibility.
  - Louisville – to address noise issues from UPS cargo hub, FAA approved a residential relocation program which was implemented in the 1990s.
  - These programs were rare cases to support major airport hub expansion.

NEXT STEPS

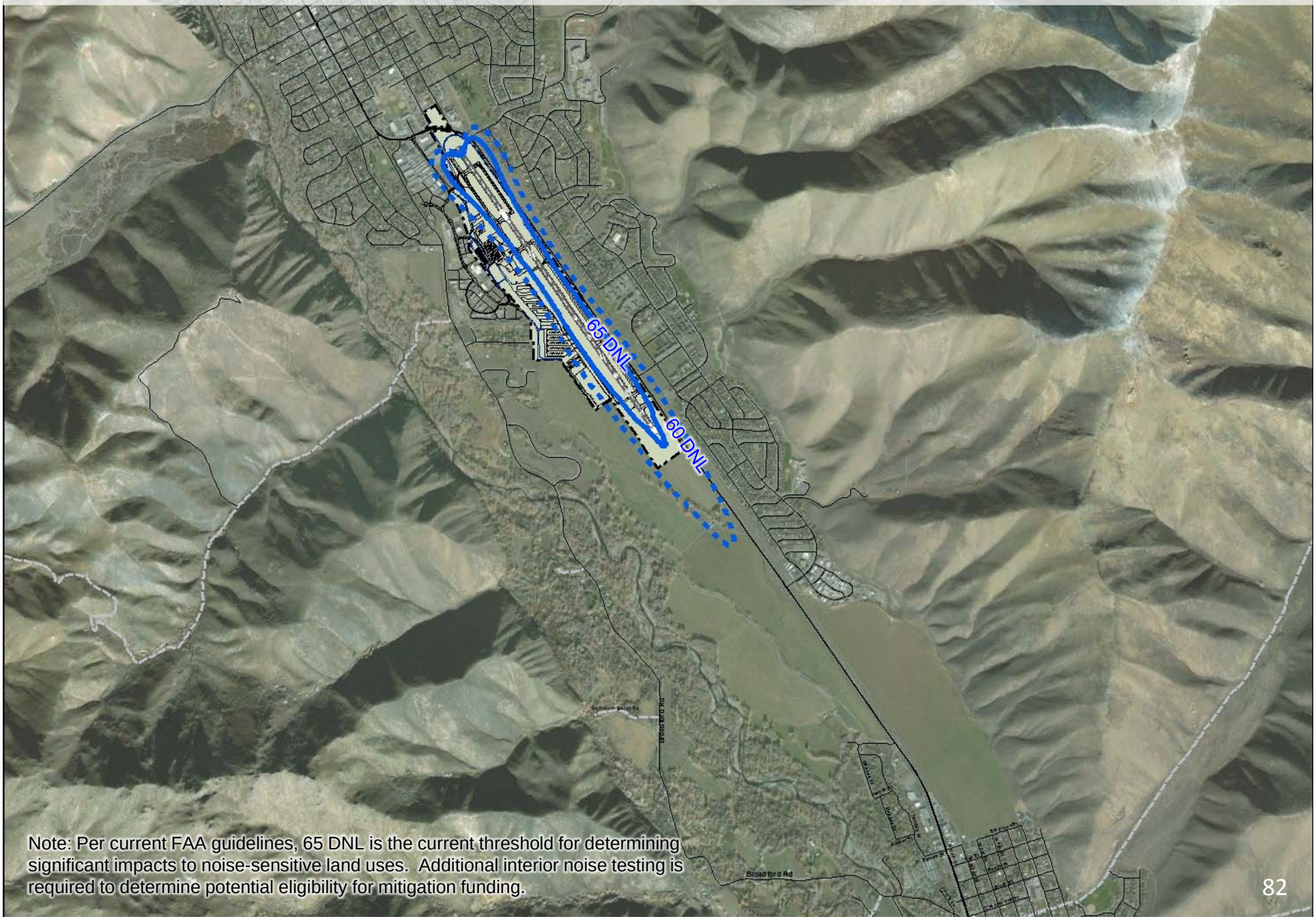
- FAA Re-evaluation of Methods for Measuring Effects of Aircraft Noise
  - In 1981, the FAA established DNL 65 decibels as the threshold for noise mitigation.
  - 65 DNL was reaffirmed in studies conducted during the late 1980s and early 1990s.
  - FAA has conducted surveys on the relationship between aircraft noise and annoyance and is in the process of making recommendations.
  - If changes are warranted, the FAA will propose revised policy and related guidance and regulations, subject to interagency coordination, as well as public review and comment.

2017 AVERAGE-ANNUAL DAY – 65 DNL



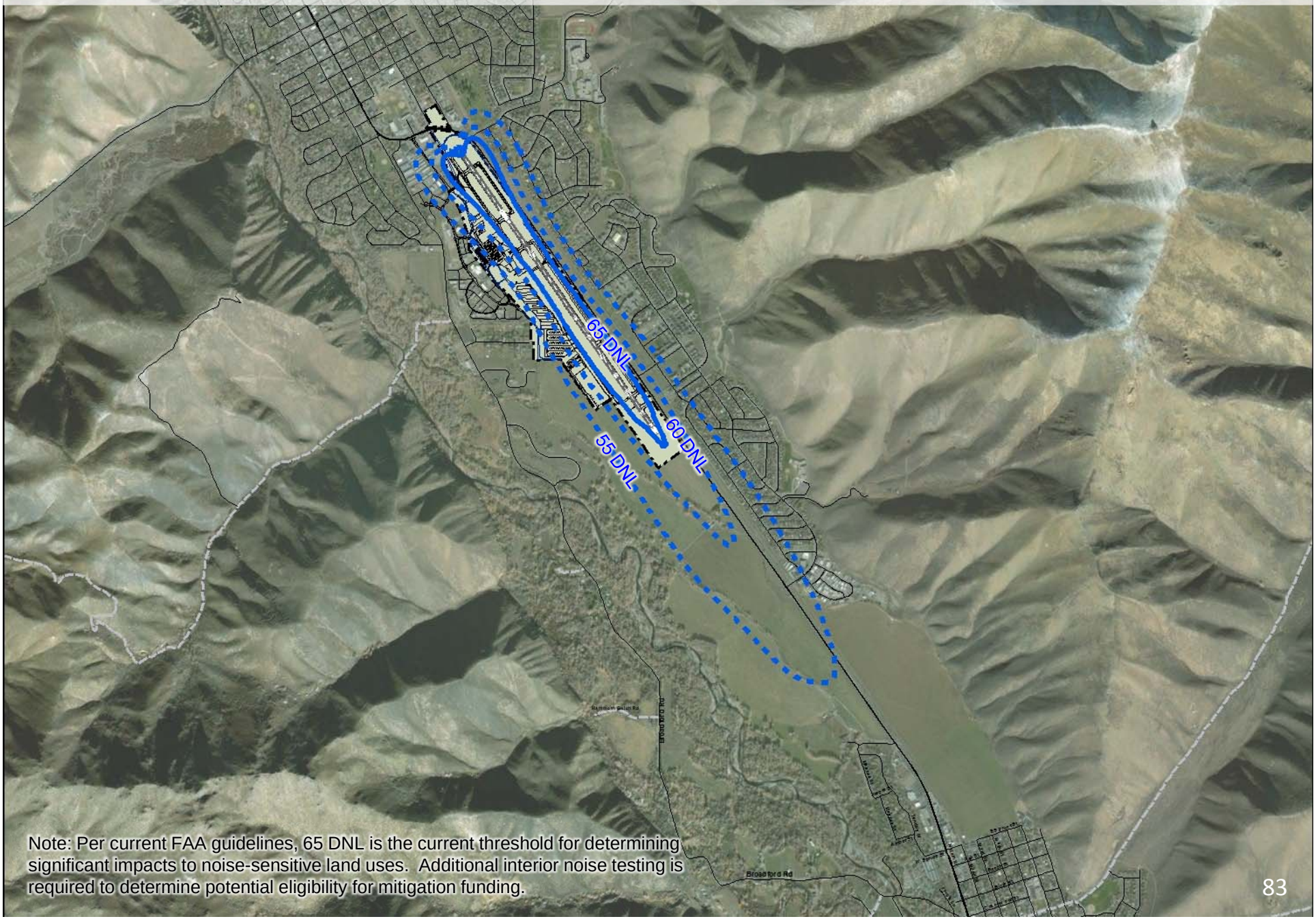
Note: Per current FAA guidelines, 65 DNL is the current threshold for determining significant impacts to noise-sensitive land uses. Additional interior noise testing is required to determine potential eligibility for mitigation funding.

2017 AVERAGE-ANNUAL DAY – 60 & 65 DNL



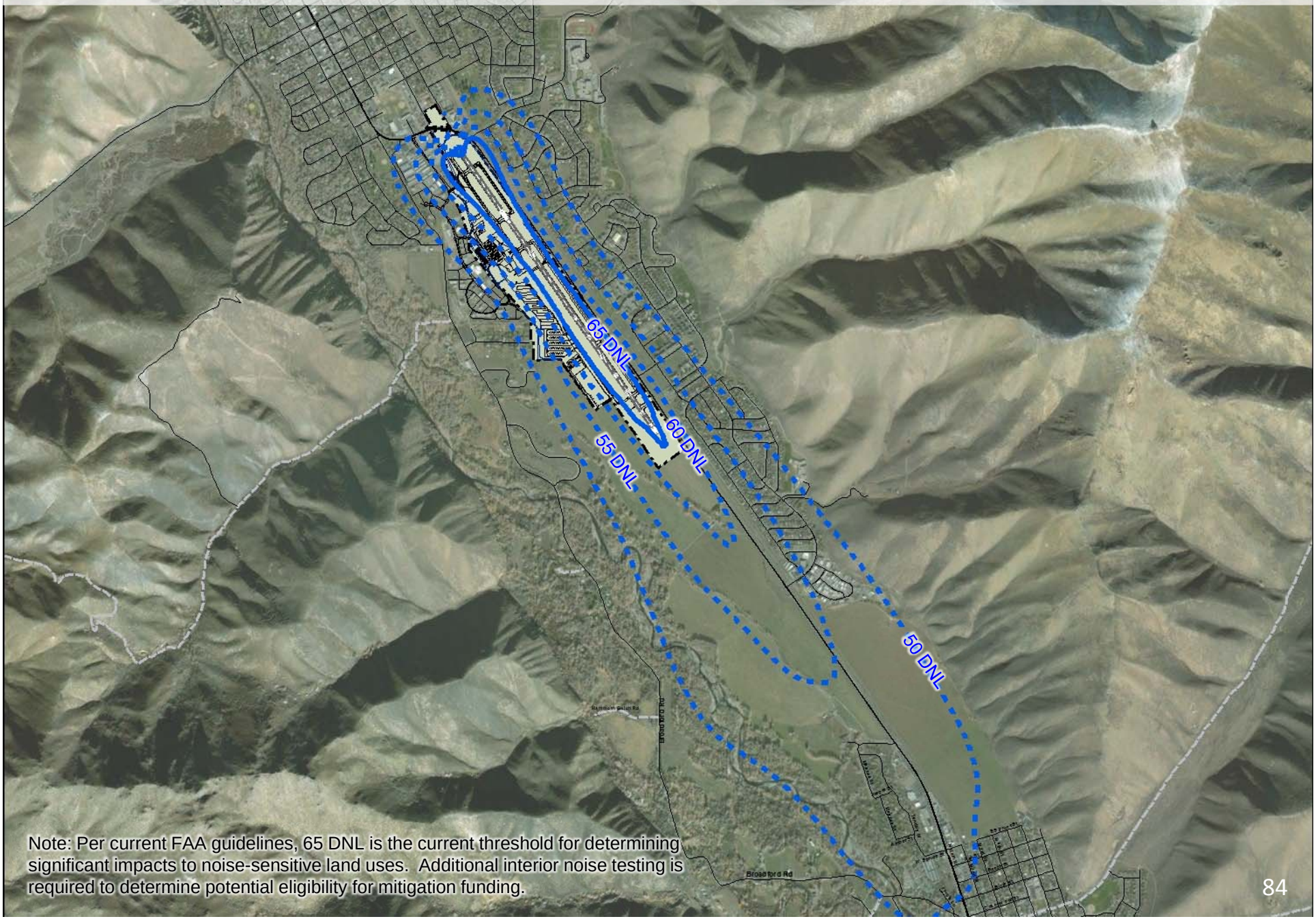
Note: Per current FAA guidelines, 65 DNL is the current threshold for determining significant impacts to noise-sensitive land uses. Additional interior noise testing is required to determine potential eligibility for mitigation funding.

2017 AVERAGE-ANNUAL DAY – 55, 60, & 65 DNL



Note: Per current FAA guidelines, 65 DNL is the current threshold for determining significant impacts to noise-sensitive land uses. Additional interior noise testing is required to determine potential eligibility for mitigation funding.

2017 AVERAGE-ANNUAL DAY – 50, 55, 60, & 65 DNL



Note: Per current FAA guidelines, 65 DNL is the current threshold for determining significant impacts to noise-sensitive land uses. Additional interior noise testing is required to determine potential eligibility for mitigation funding.


Questions / Comments

Misc.

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Terminal Concessions RFP – Update

- RFP submittal deadline – March 26
  - Two submittals
    - The Coffee House
    - 7 Fuego
- Selection committee and staff interview with The Coffee House April 12
  - 7 Fuego pulled proposal from consideration
- Offer extended to The Coffee House
  - Coordinating agreement
  - Badging

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Public Comment

Executive Session

I.C §74-206 (c)To acquire an interest in real property which is not owned by a public agency

I.C §74-206 (f) to communicate with legal counsel to discuss legal ramifications for controversy imminently likely to be litigated

Possible Action to Authorize Initiation of Proceedings under Eminent Domain

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Thank You!