



Airport Land Use Compatibility Plan (ALUCP) Update

Planning Advisory Committee Meeting #3
February 25, 2016

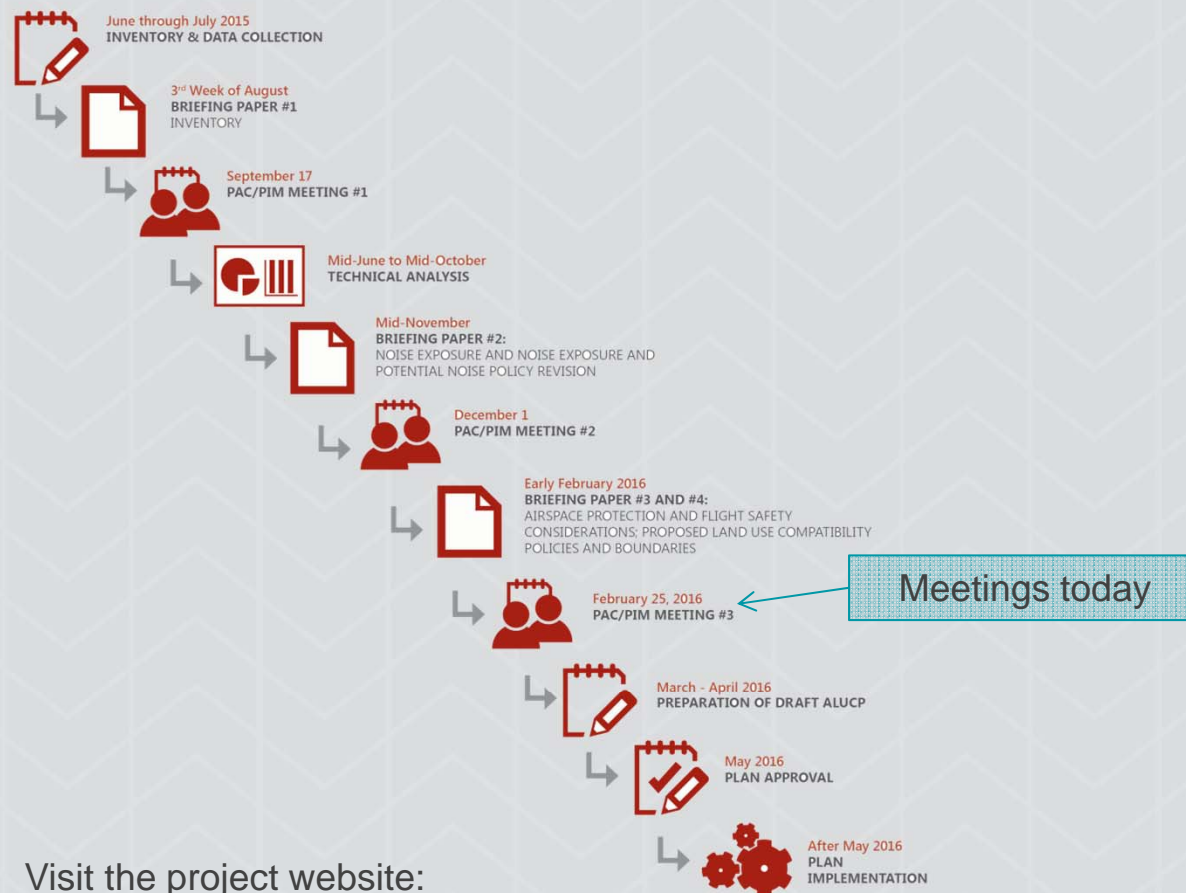




Agenda

1. Welcome and Introductions
2. Status of Study
3. Proposed Traffic Pattern Airspace
4. Proposed Noise and Public Safety Policies
5. Proposed Airspace Protection Policies
6. Proposed Flight Safety Policies
7. Next Steps

ALUCP Planning Process



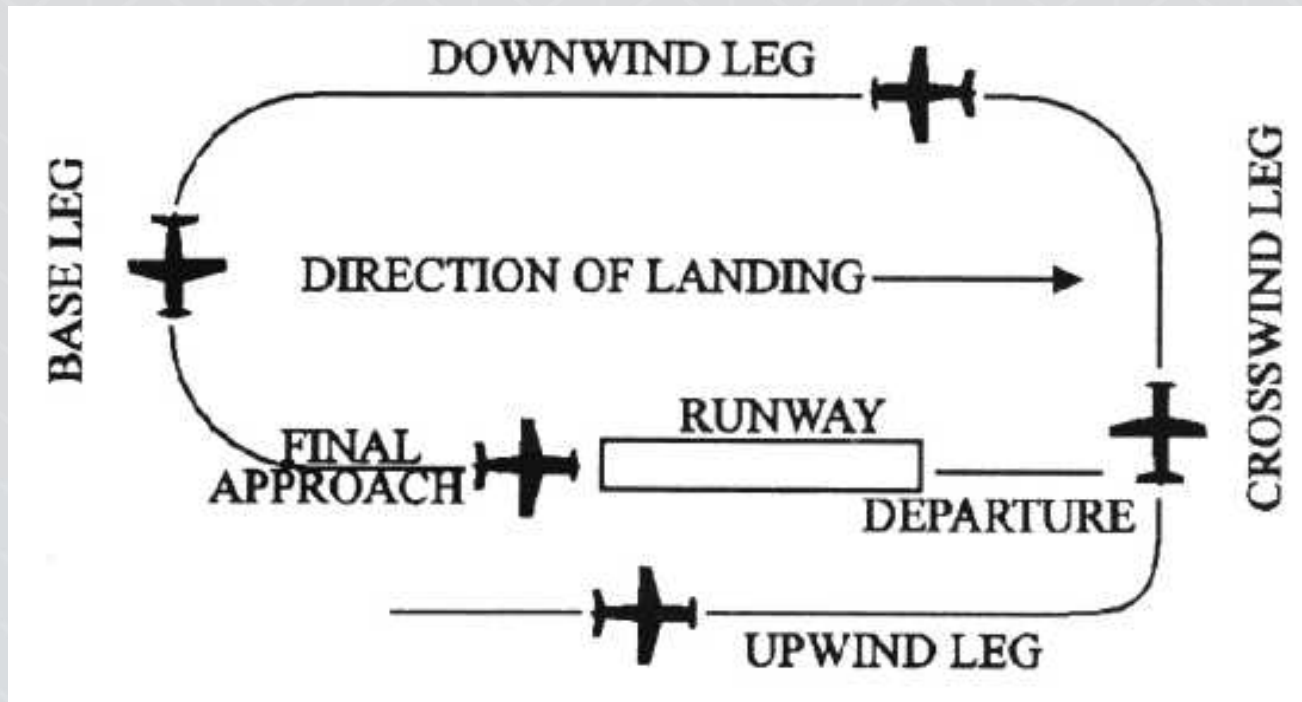
Visit the project website:
<http://www.phxmeseagateway.org/landusestudy.aspx>

State Law – Traffic Pattern Airspace

- State law authorizes:
 - Airport operators to designate “airport influence areas” (AIAs) for property exposed to aircraft noise and overflight.
 - And to record AIA map with the County Recorder.
- State law requires:
 - State real estate department to have and make available to the public maps showing the boundaries of “territory in the vicinity of public airports.”
 - “Territory...” means “traffic pattern airspace as defined by FAA...”

Defining Traffic Pattern Airspace

- A typical traffic pattern includes these elements,
- Size and location vary depending on the number and type of aircraft and weather conditions.



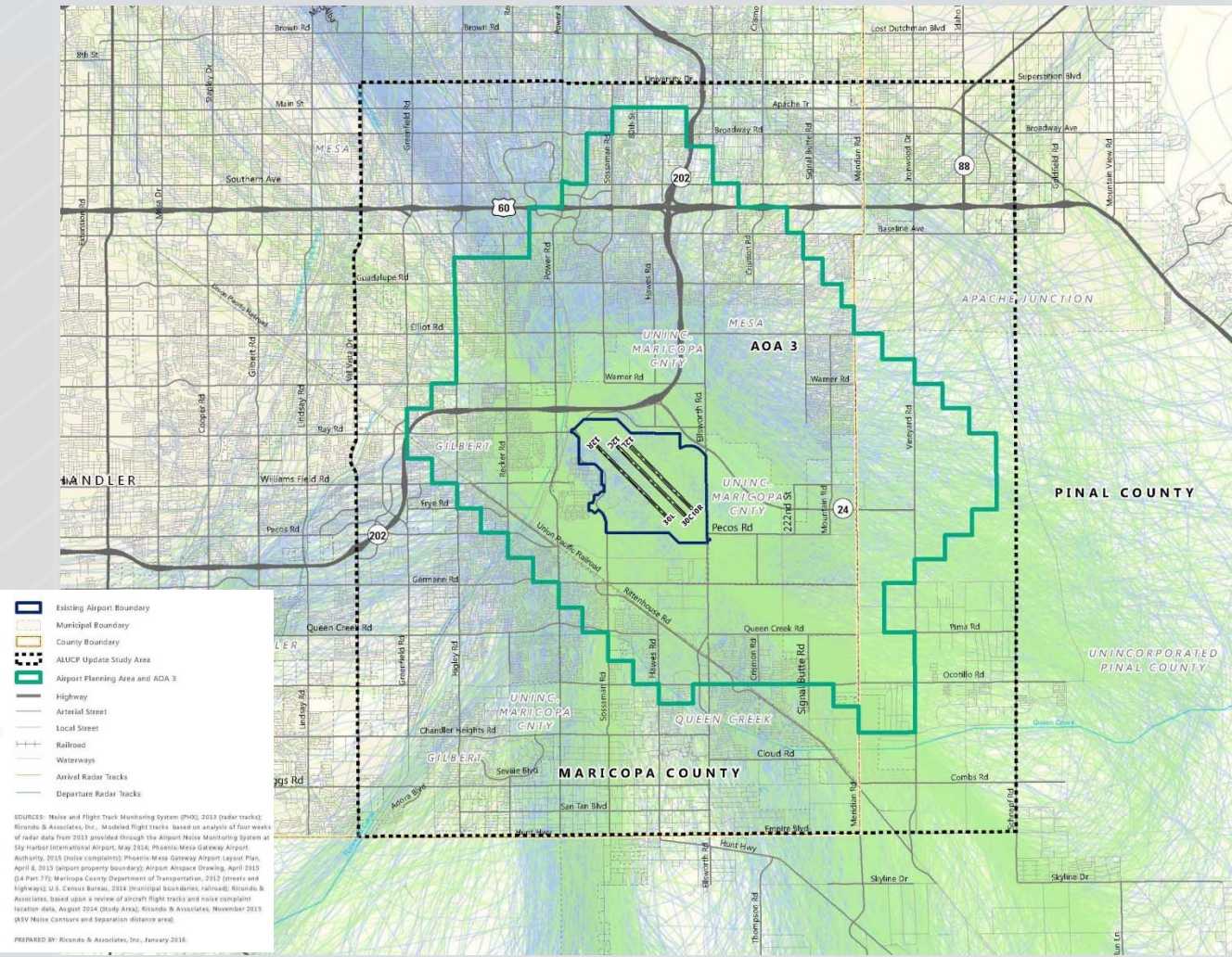


Indicators of Traffic Pattern Airspace

- Low altitude flight tracks

Indicate where aircraft are maneuvering as they approach and depart the Airport

Low Altitude Flight Tracks





Indicators of Traffic Pattern Airspace

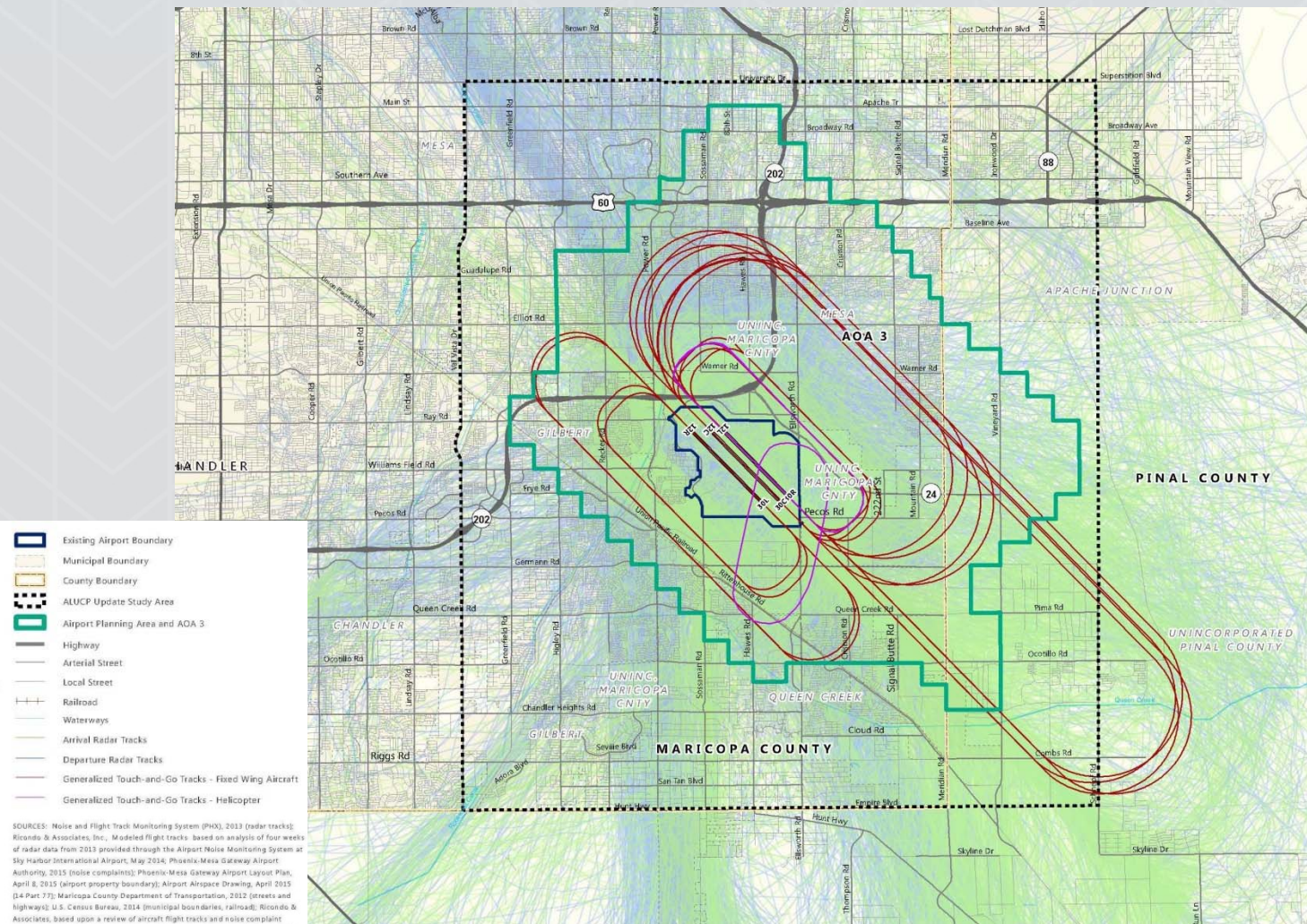
- Low altitude flight tracks
- Generalized touch-and-go flight tracks

Indicate the most commonly used corridors for flight training and proficiency practice



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Generalized Touch-and-Go Tracks



PREPARED BY: Ricondo & Associates, Inc., January 2016.



Indicators of Traffic Pattern Airspace

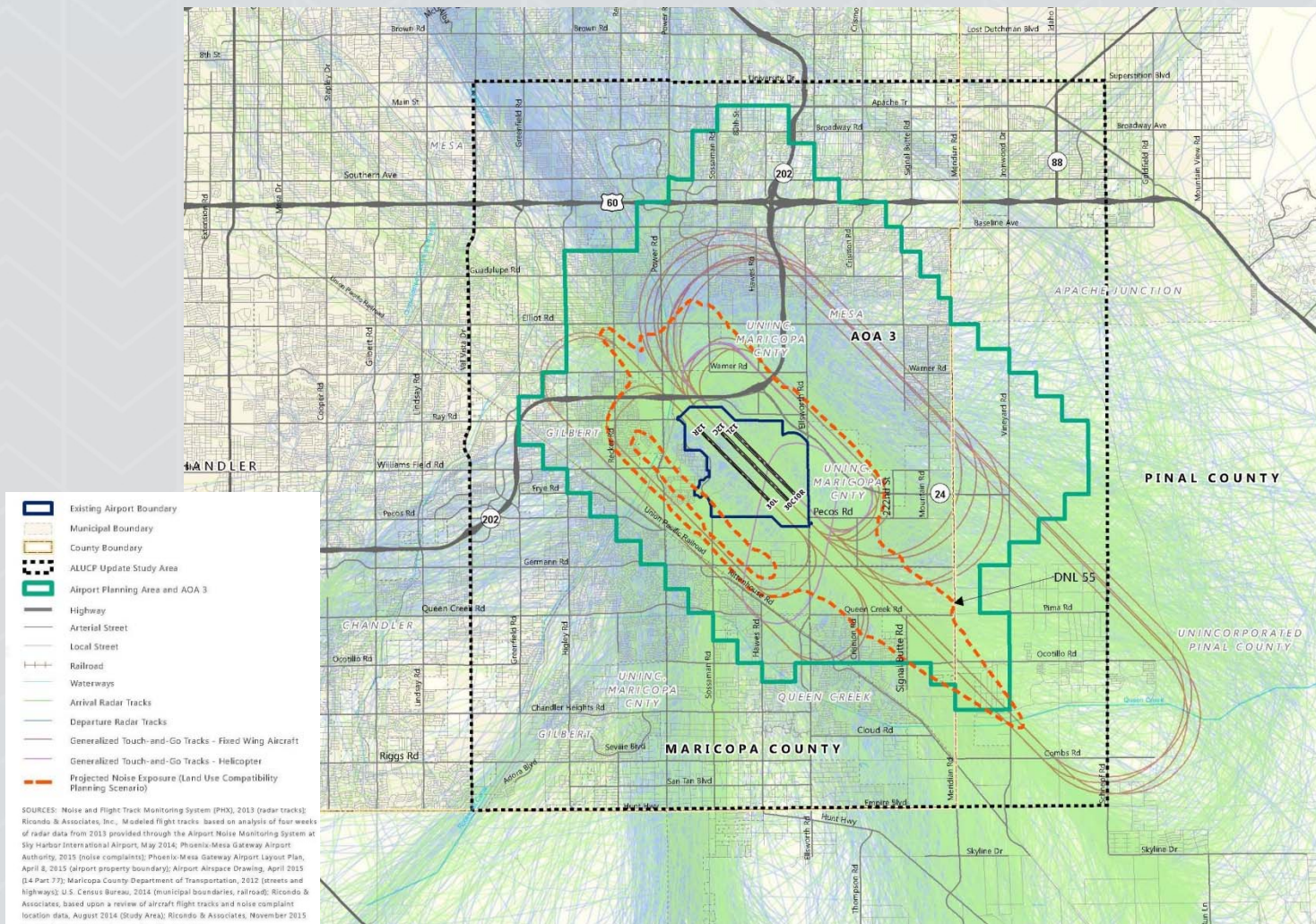
- Low altitude flight tracks
- Generalized touch-and-go flight tracks
- DNL 55 noise contour

Indicates where aircraft noise can disrupt outdoor activity in residential areas



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DNL 55 Noise Exposure





Indicators of Traffic Pattern Airspace

- Low altitude flight tracks
- Generalized touch-and-go flight tracks
- DNL 55 noise contour
- Noise complaint locations

Indicates where people have self-identified themselves as concerned about aircraft noise and overflight





Indicators of Traffic Pattern Airspace

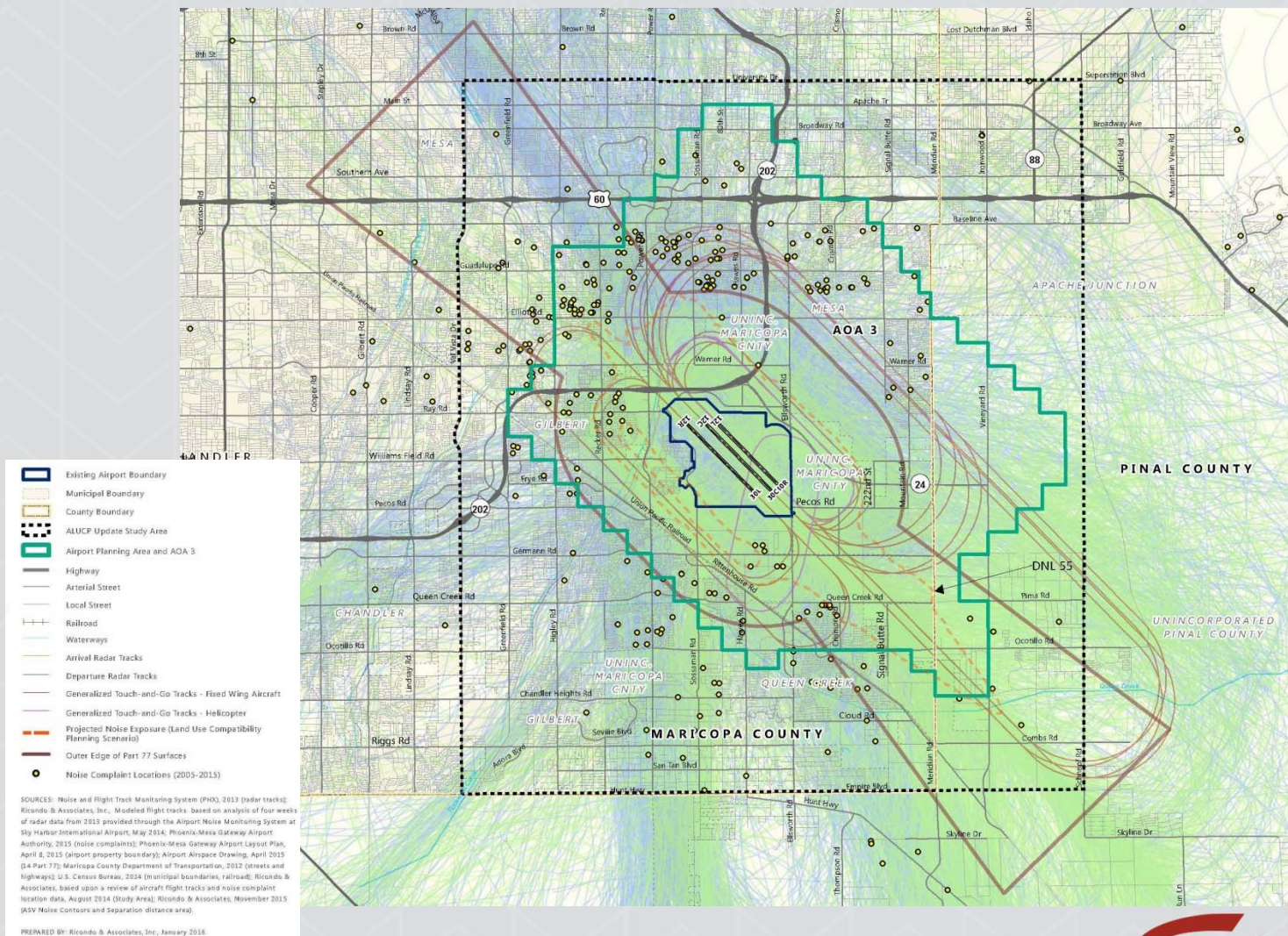
- Low altitude flight tracks
- Generalized touch-and-go flight tracks
- DNL 55 noise contour
- Noise complaint locations
- 14 CFR Part 77 airspace

Defines airspace to be protected for safety of low altitude flight (especially within conical surface)



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14 CFR Part 77 Airspace Boundary





Indicators of Traffic Pattern Airspace

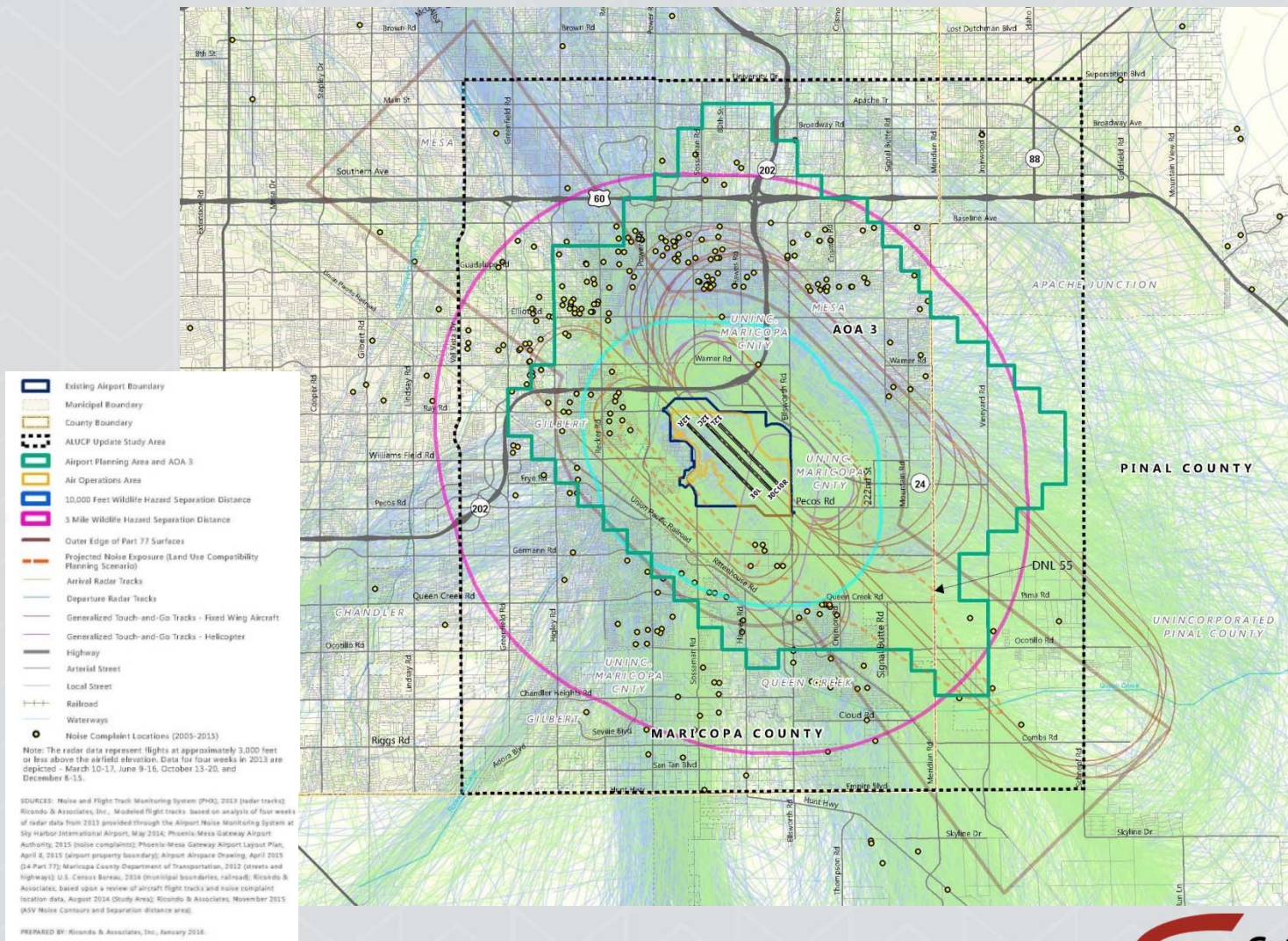
- Low altitude flight tracks
- Generalized touch-and-go flight tracks
- DNL 55 noise contour
- Noise complaint locations
- 14 CFR Part 77 airspace
- FAA-recommended wildlife separation distances

Defines areas where birds may be hazardous to low-flying aircraft



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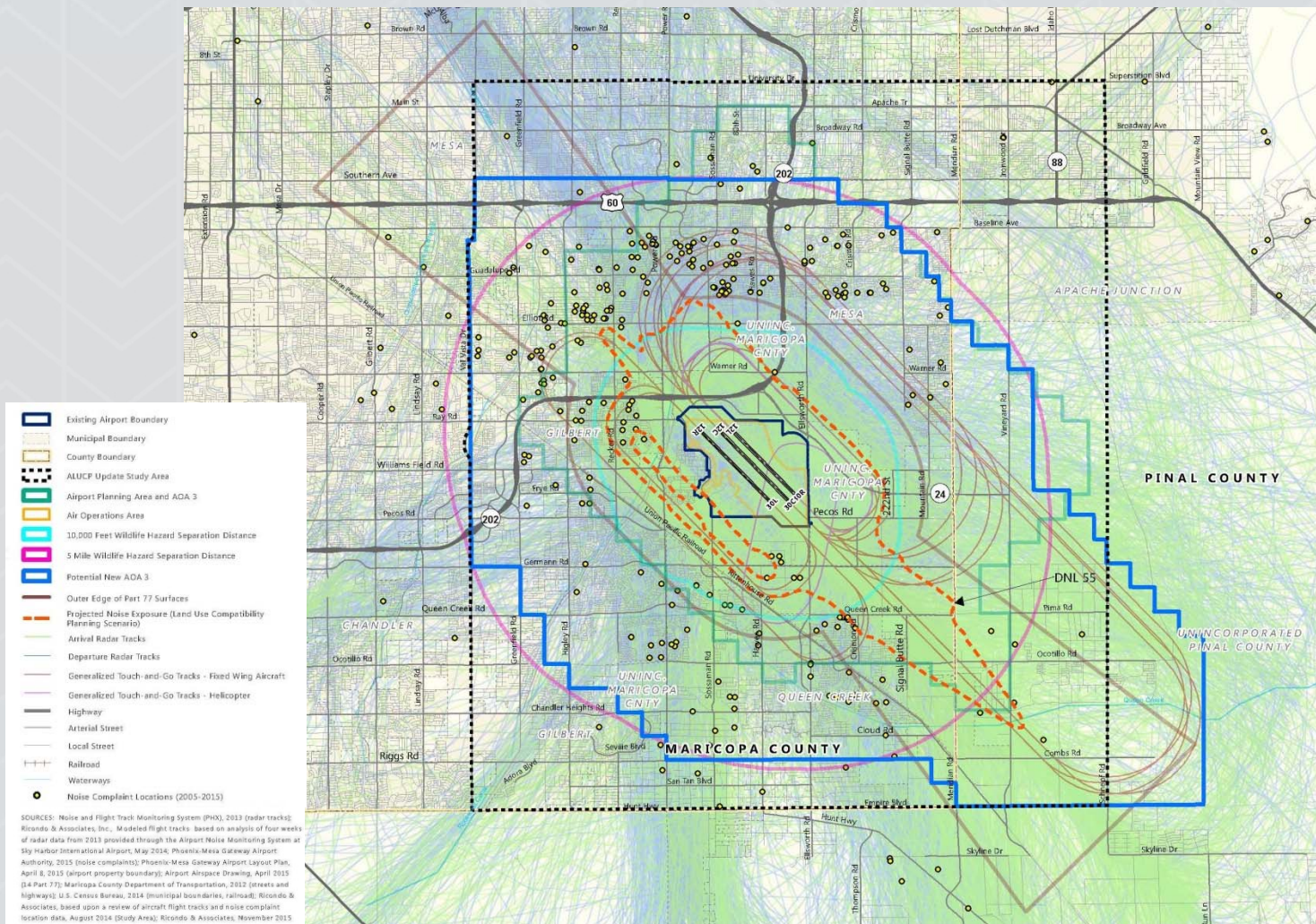
FAA Wildlife Separation Areas





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Proposed Traffic Pattern Airspace

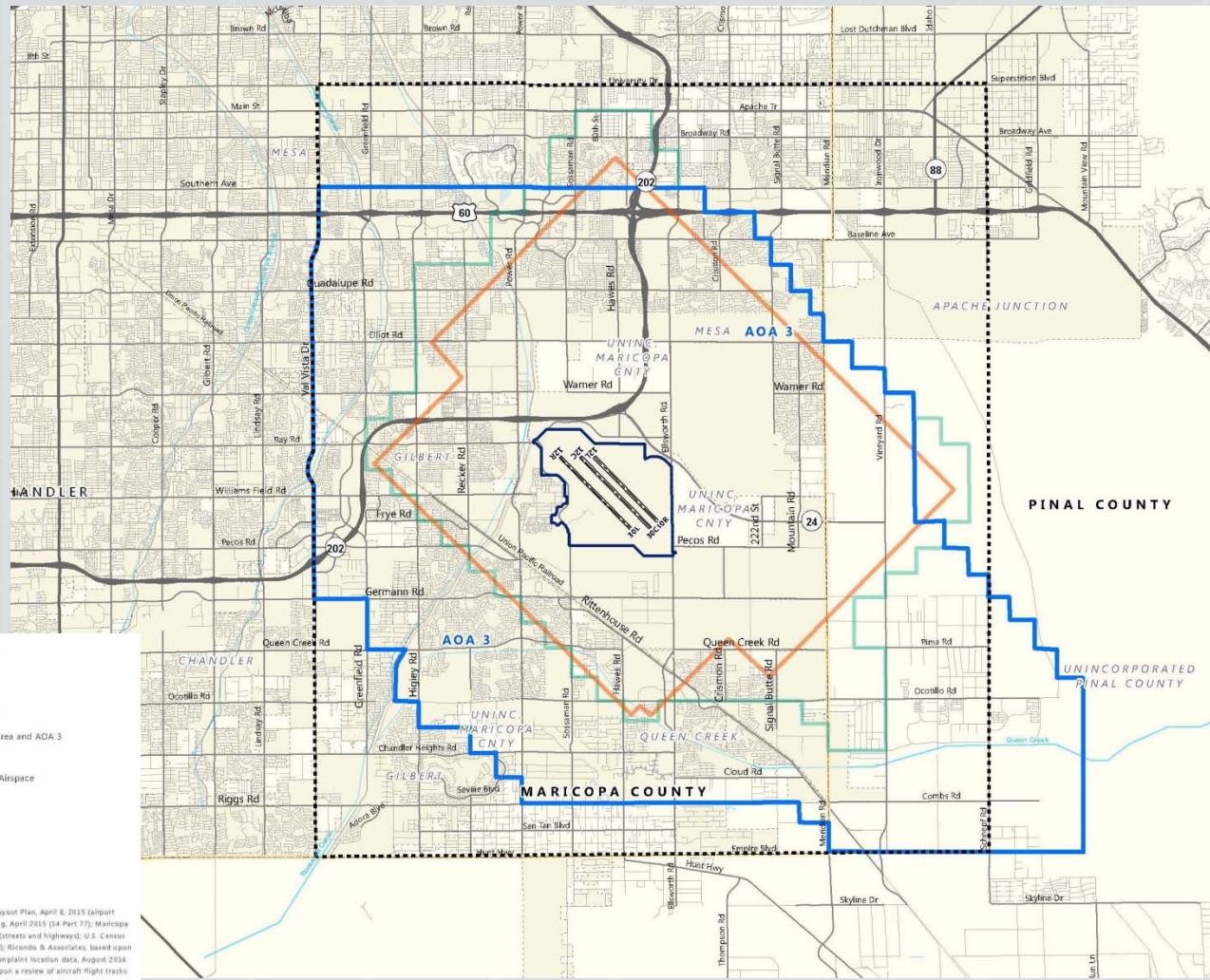


PREPARED BY: Ricondo & Associates, Inc., January 2016.



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Proposed Traffic Pattern Airspace – AOA 3



SOURCES: Phoenix-Mesa Gateway Airport Layout Plan, April 8, 2015 (airport property boundary); Airport Airspace Drawing, April 2015 (14 Part 77); Maricopa County Department of Transportation, 2012 (streets and highways); U.S. Census Bureau, 2014 (municipal boundaries, railroad); Ricondo & Associates, based upon a review of aircraft flight tracks and noise complaint location data, August 2014 (Study Area); Ricondo & Associates, based upon a review of aircraft flight tracks and noise complaint location data, December 2015 (Potential New AOA).

PREPARED BY: Ricondo & Associates, Inc., January 2016.



Proposed Noise and Public Safety Policies

- Update AOA 1 based on projected DNL 65 contour
- Update AOA 2 based on projected DNL 60 contour



Proposed Noise and Public Safety Policies

- Update AOA 1 based on projected DNL 65 contour
- Update AOA 2 based on projected DNL 60 contour
- Prohibit uses involving hazardous substances in AOA 1



Proposed Noise and Public Safety Policies

- Update AOA 1 based on projected DNL 65 contour
- Update AOA 2 based on projected DNL 60 contour
- Prohibit uses involving hazardous substances in AOA 1
- Prohibit highly noise-sensitive land uses in AOA 1 and AOA 2



Proposed Noise and Public Safety Policies

- Update AOA 1 based on projected DNL 65 contour
- Update AOA 2 based on projected DNL 60 contour
- Prohibit uses involving hazardous substances in AOA 1
- Prohibit highly noise-sensitive land uses in AOA 1 and AOA 2
- Prohibit less sensitive uses in AOA 1; require sound insulation, disclosure, and easements in AOA 2



Proposed Noise and Public Safety Policies

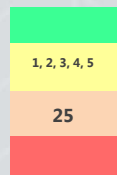
- Update AOA 1 based on projected DNL 65 contour
- Update AOA 2 based on projected DNL 60 contour
- Prohibit uses involving hazardous substances in AOA 1
- Prohibit highly noise-sensitive land uses in AOA 1 and AOA 2
- Prohibit less sensitive uses in AOA 1; require sound insulation, disclosure, and easements in AOA 2
- Require real estate disclosure for all noise-sensitive uses allowed in AOA 3



Proposed Noise and Public Safety Policies

LAND USE	Overflight Zone/Noise Exposure Range (DNL)		
	AOA 1 65+	AOA 2 60-65**	AOA 3 60-APA
Residential			1, 2, 3
Commercial, Office, Service, Transient Lodging			
Hotels, motels	25 ^{1,4}	25 ^{1,4}	1
Retail; professional, personal services; office; auto services; repair services	5		
Indoor recreation, amusements, athletic clubs, gyms, spectator events	5		
Theaters, playhouses, concert halls, performing arts centers		25 ^{1,4}	1
Outdoor sports, entertainment, public assembly, amphitheaters		1, 4	1
Educational, Institutional, Public Services			
Hospitals, other health care facilities			1
Elementary and secondary schools, preschools, stand-alone day care centers			1
Children's day care centers accessory to a business or industrial use		25	
Colleges, universities, trade schools	25 ^{1,4}	25 ^{1,4}	1
Religious facilities; libraries; museums; clubs; lodges		25 ^{1,4}	1
Cemeteries	5		
Industrial			
Manufacturing, processing, and assembly -- general	5		
Refining, manufacturing, and storage of chemicals and hazardous materials			
Agricultural			
Transportation, Communication, Utilities	5		
Recreation, Park, Open Space	5		

LEGEND



Compatible: Use is allowed.

1, 2, 3, 4, 5

Conditionally Compatible: Use is allowed subject to stated conditions.

25

Conditionally Compatible: Use is allowed subject to outdoor-to-indoor noise level reduction of 25 decibels in buildings where people reside sleep, or gather.

Incompatible: Use is not allowed.



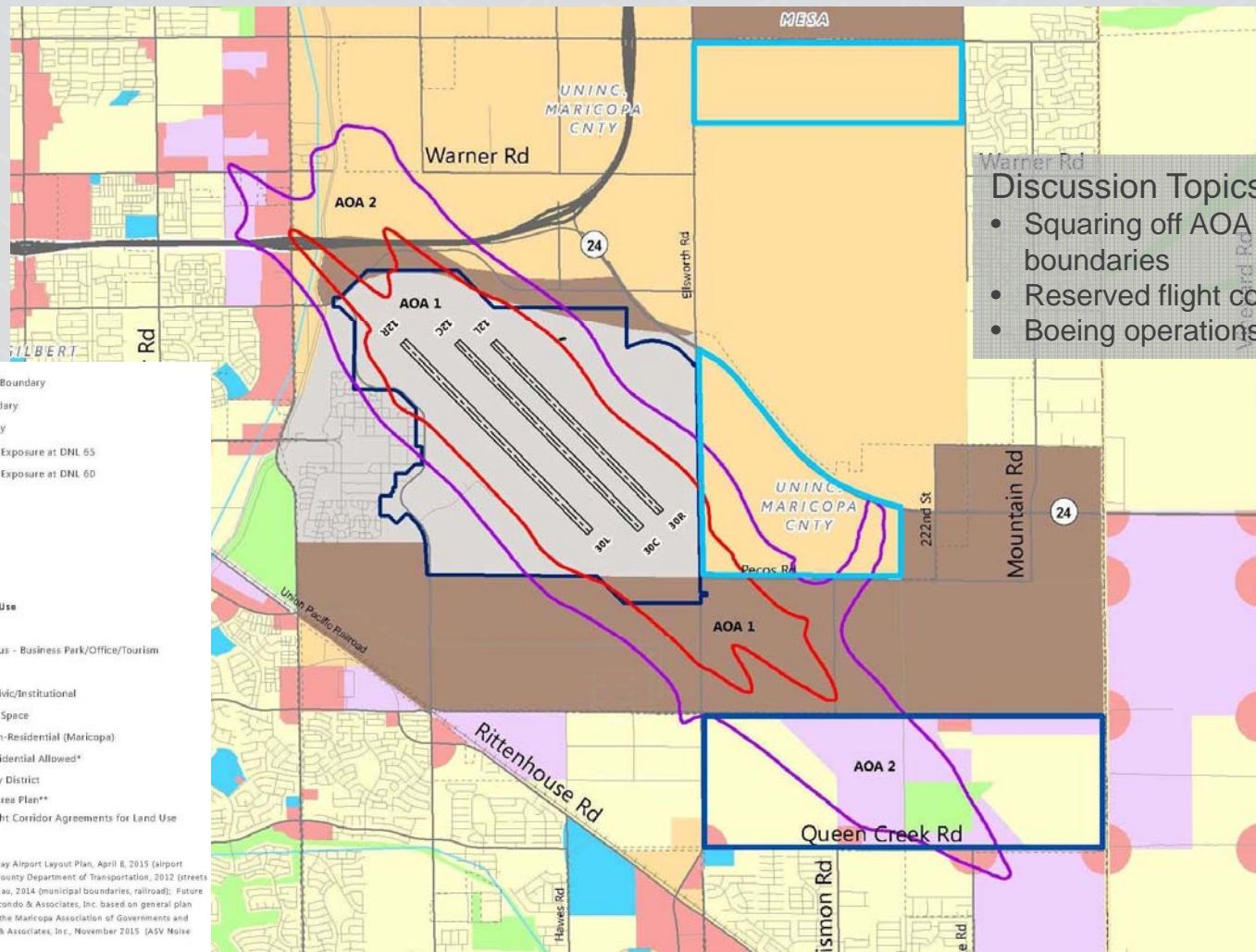
Land Use Compatibility Matrix Notes

NOTES

- 1 A fair disclosure agreement and covenant would be recorded as a condition of development approval.
- 2 All final plats and public reports filed with the Arizona Department of Real Estate would include a fair disclosure notice.
- 3 Sales and leasing offices for new subdivisions and development projects would provide notice to prospective buyer and lessees that the property is in the APA.
- 4 Avigation easements would be required which acknowledge that an airport is located nearby and aircraft to/from the airport have a right to fly over the property.
- 5 The developer would be encouraged to incorporate features into buildings where people live, work, or are otherwise received to achieve an outdoor-to indoor noise level reduction of 25 decibels.

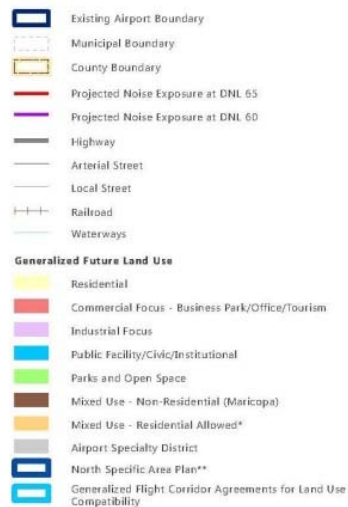


Potential AOA 1 and AOA 2 Boundaries, Generalized Future Land Use



Discussion Topics:

- Squaring off AOA 1 & 2 boundaries
- Reserved flight corridors
- Boeing operations



SOURCES: Phoenix-Mesa Gateway Airport Layout Plan, April 8, 2015 (airport property boundary); Maricopa County Department of Transportation, 2012 (streets and highways); U.S. Census Bureau, 2014 (municipal boundaries, railroad); Future land use data generalized by Ricondo & Associates, Inc. based on general plan land use elements compiled by the Maricopa Association of Governments and County of Pinal, 2015; Ricondo & Associates, Inc., November 2015 (ASV Noise Contours and Revised AOA's).

PREPARED BY: Ricondo & Associates, Inc., November 2015.



Proposed Airspace Protection Policies

- Define critical airspace surfaces as maximum height limits
 - Composite critical airspace surfaces map is under development
 - Protects 14 CFR Part 77 obstruction, TERPS required obstacle clearance, and emergency flight procedure (OEI) surfaces
 - PMGAA to work with local governments to adopt composite airspace map upon completion



Proposed Airspace Protection Policies

- Define critical airspace surfaces as maximum height limits
 - Composite critical airspace surfaces map is under development
 - Protects 14 CFR Part 77 obstruction, TERPS required obstacle clearance, and emergency flight procedure (OEI) surfaces
 - PMGAA to work with local governments to adopt composite airspace map upon completion
- Require developers to comply with 14 CFR Part 77 notification requirements



Proposed Airspace Protection Policies

- Define critical airspace surfaces (14 CFR Part 77, TERPS, OEI) as maximum height limits
 - Composite critical airspace surfaces map is under development
 - Protects 14 CFR Part 77 obstruction, TERPS required obstacle clearance, and emergency flight procedure (OEI) surfaces
 - PMGAA to work with local governments to adopt composite airspace map upon completion
- Require developers to comply with 14 CFR Part 77 notification requirements
- Prohibit of objects determined by FAA to be hazards to air navigation, even if critical airspace surfaces are not penetrated



Airspace Protection Considerations

- Underlying city base zoning provides protection in most areas
- Until composite airspace surfaces map is adopted, use 14 CFR Part 77 surfaces map

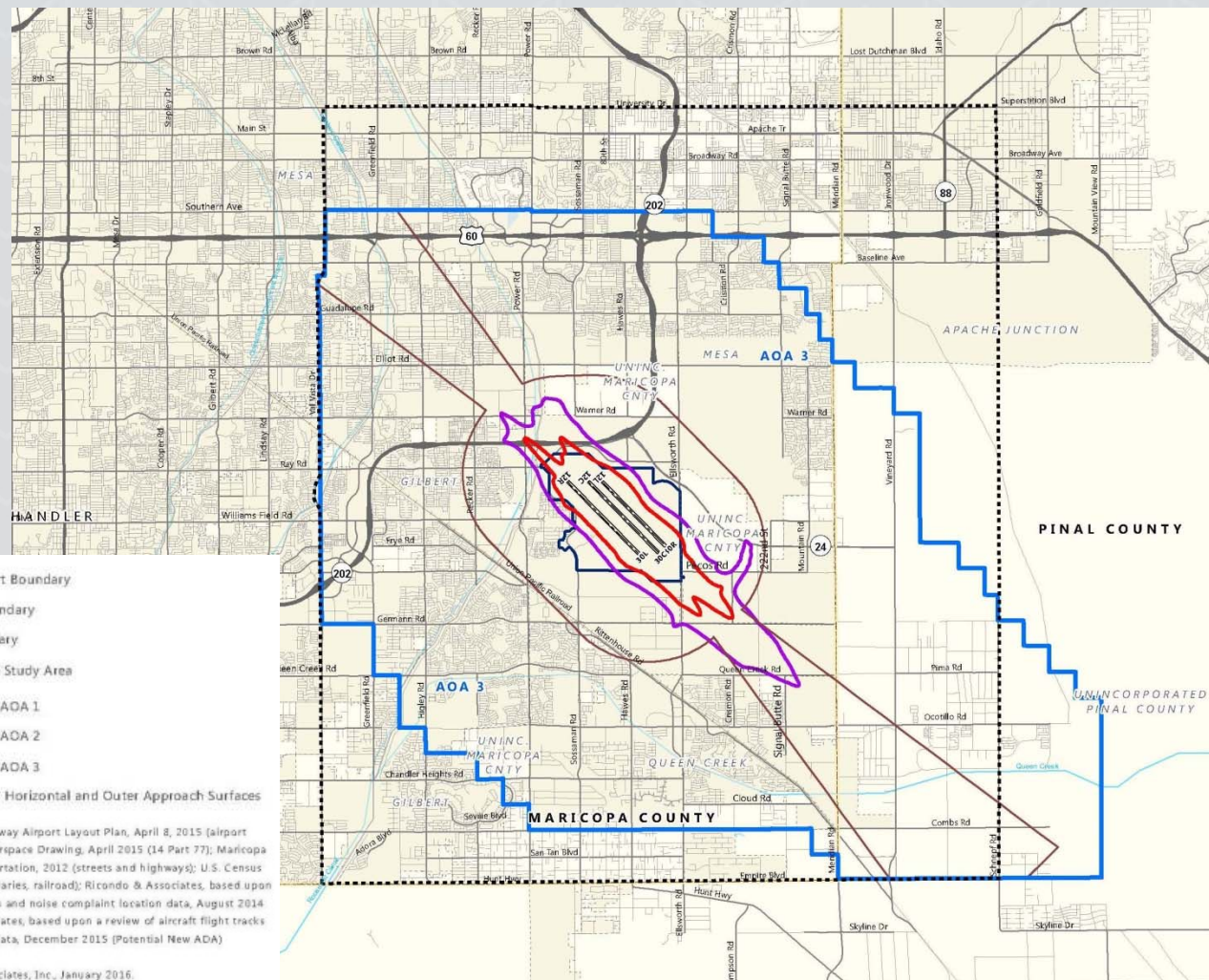


Proposed Flight Safety Policies

- Prohibit in AOA 1, AOA 2, AOA 3
 - Glint and glare causing persistent after-image or flash blindness
 - Lighting that can distract pilots or interfere with vision on approach
 - Lights mimicking airport identification and landing lights
 - Dust, smoke, vapor obscuring pilot vision
 - Thermal hazards interfering with aircraft control



Proposed Updated Airport Planning Area and Overlay Zones



Proposed Flight Safety Policies

- Prohibit in AOA 1, AOA 2, AOA 3
 - Glint and glare causing persistent after-image or flash blindness
 - Lighting that can distract pilots or interfere with vision on approach
 - Lights mimicking airport identification and landing lights
 - Dust, smoke, vapor obscuring pilot vision
 - Thermal hazards interfering with aircraft control
 - Electromagnetic interference
 - Bird attractants



Proposed Noise and Public Safety Policies

LAND USE

Airspace Protection

- Objects penetrating a critical airspace surface
- Objects determined to be hazards
- Objects not penetrating a critical airspace surface but subject to FAA DNH conditions

Flight Safety

- Glint and glare causing persistent after-image or flash blindness
- Lighting that can distract pilots or interfere with vision on approach
- Lighting that can be confused with airport identification and approach lighting
- Dust, water vapor, or smoke dense enough to impair pilot vision
- Electromagnetic interference with aviation navigation and communications equipment

Bird Attractants

- Solid waste landfills
- Trash transfer stations that are not fully enclosed
- Commercial/institutional composting operations that accept food waste
- Stormwater management facilities creating standing water
- Wastewater treatment facilities and associated settling ponds
- Wetlands mitigation projects

Overflight Zone

AOA 1

AOA 2

AOA 3

1	1	1
		4
		4
		4
		4
2	2	2
3	3	3

LEGEND

- Compatible: Use is allowed.
- 1, 2, 3, 4, Conditionally Compatible: Use is allowed subject to stated conditions.
- Incompatible: Use is not allowed.



Airspace Protection and Flight Safety Matrix Notes

NOTES

- 1 Project sponsor must comply with conditions cited in FAA Determination of No Hazard.
- 2 Permit only when required by other provisions of municipal, county, or state law. Measures must be taken to minimize the risk of attracting birds.
- 3 Permit only where projects provide unique functions that must remain on site or are otherwise directed by state or federal law, state or federal regulatory decision, or court order.
- 4 Most likely to be problematic if located within the area defined by the 14 CFR Part 77 horizontal and outer approach surfaces.



Next Steps

1. Prepare draft, updated ALUCP, March-April 2016
2. Targeted outreach for AOA 3/Traffic Pattern Airspace boundary, April-May 2016
3. PMGAA approval of updated ALUCP, May-June 2016
4. PMGAA coordination with local governments to support ALUCP implementation and outreach