

AOPA

County Airports

Legislative Impacts; Protection; Promotion

Presented by Jared Esselman

Director, State and Local

Advocacy



HARVARD Kennedy School

JOHN F. KENNEDY SCHOOL OF GOVERNMENT



Symposium on Inclusive Growth & Development

A showcase for innovative and practical ideas that broaden access to growth opportunities.

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4 Adaptations of Any Airport



General Aviation is the foundation your airport is built on.



CEO's looking to expand their companies in your county will look at the 'health' and stability of the airport.



Cargo Operations



Commercial Flights

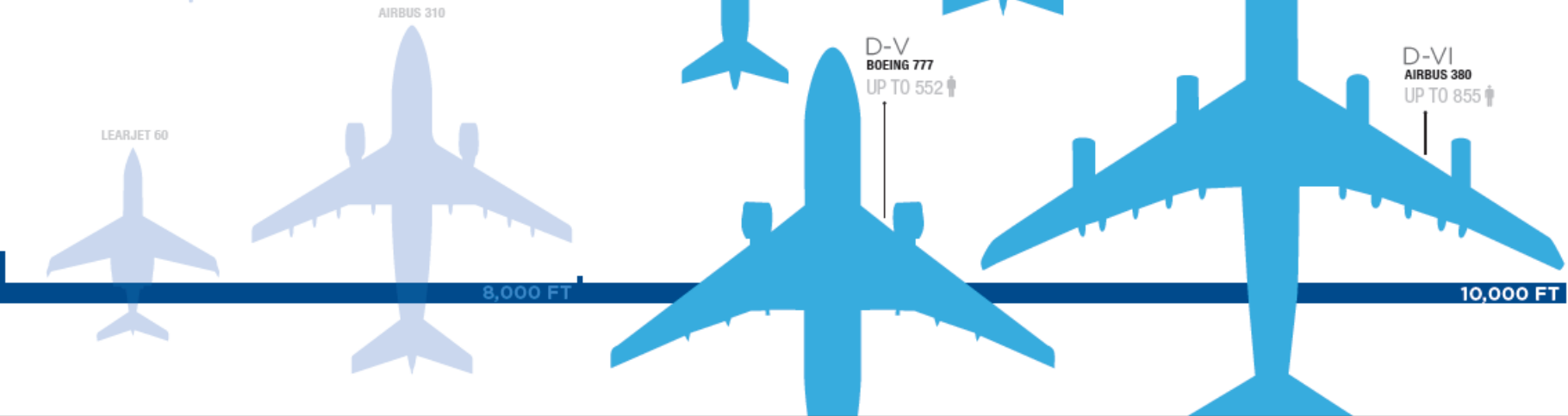
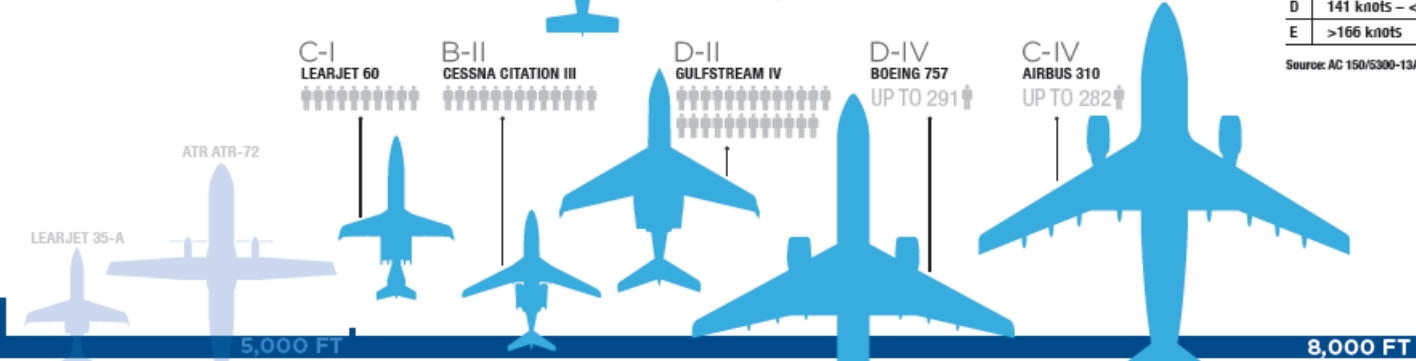
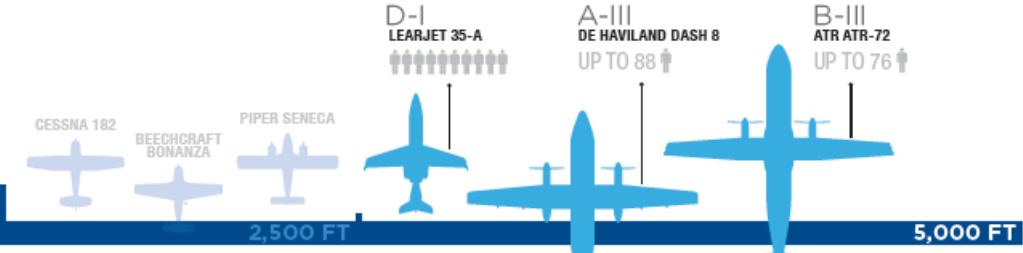
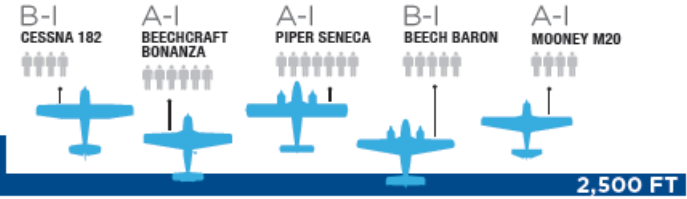
Your airport is your front door to the world. It's the first thing people see when they visit, and it is their departing memory as they leave. This is your one true first impression.

--Jared Esselman
Director, AOPA



WHO CAN LAND AT OUR AIRPORT?

Ever wonder what kind of aircraft can land at your airport? Or insert other general overview copy here. Insert other general overview copy here. Insert other general overview copy here. Insert other general overview copy here.



Runway Design Codes

Aircraft Approach Category

	V _{ref} /Approach Speed
A	<91 knots
B	91 knots – <121 knots
C	121 knots – <141 knots
D	141 knots – <166 knots
E	>166 knots

Source: AC 150/5300-13A

Aircraft Design Group

	Tail Height	Wingspan
I	<20'	<49'
II	20' – <30'	49' – <79'
III	30' – <45'	79' – <118'
IV	45' – <60'	118' – <171'
V	60' – <66'	171' – <214'
VI	66' – <80'	214' – <262'





PHOTOMODUGNO

ACRP

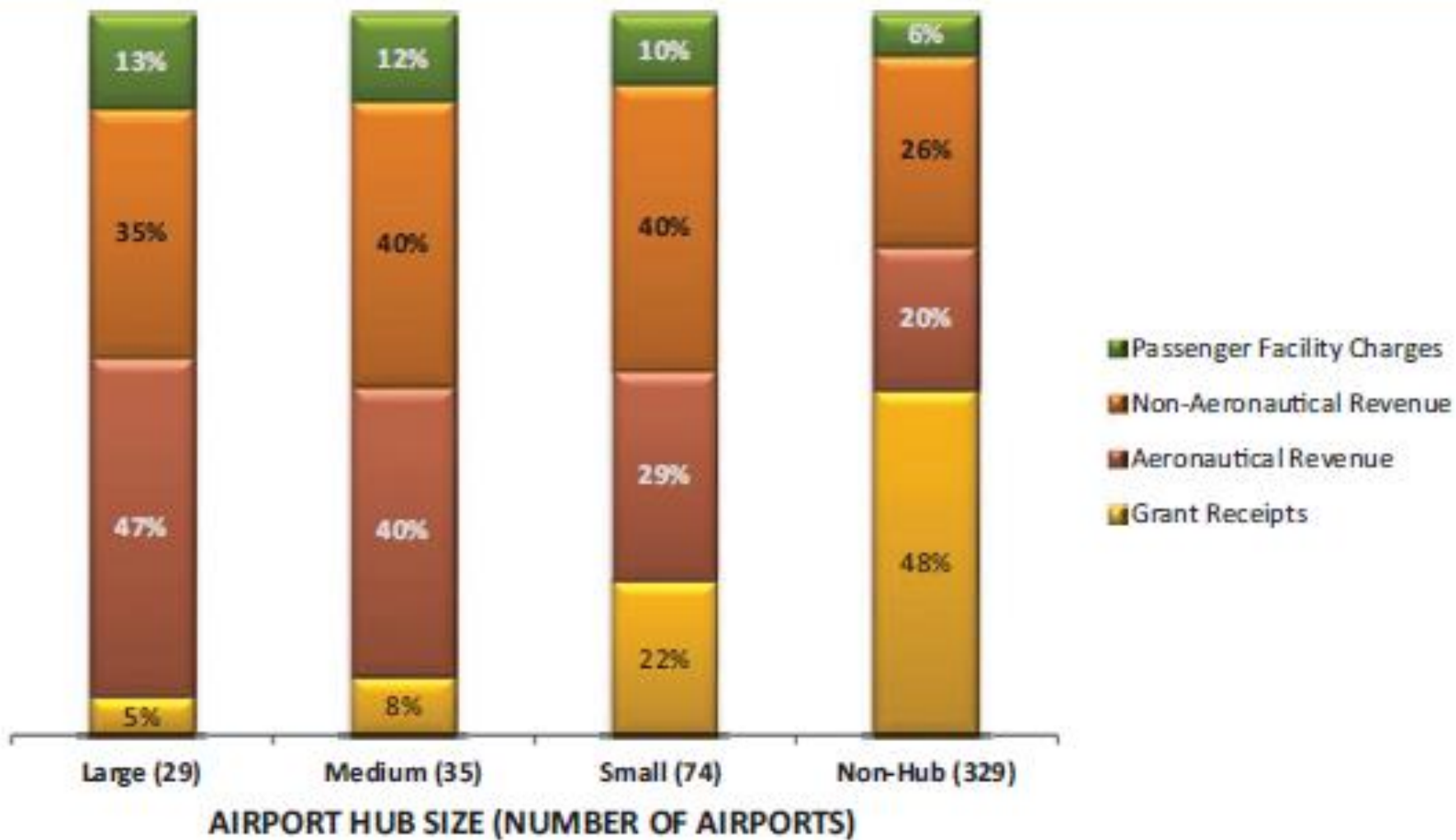
REPORT 121

Innovative Revenue Strategies— An Airport Guide



AIRPORT
COOPERATIVE
RESEARCH
PROGRAM

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ACRP

REPORT 141

AIRPORT
COOPERATIVE
RESEARCH
PROGRAM

Renewable Energy as an Airport Revenue Source

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TRANSPORTATION RESEARCH BOARD



Pacific Ocean

Atlantic Ocean

Gulf of Mexico



- Redding Municipal Airport
- San Rafael Airport
- San Francisco Int'l Airport
- San Jose Int'l Airport
- Fresno-Yosemite Int'l Airport
- Santa Barbara Municipal Airport
- Bob Hope Airport
- San Diego Int'l Airport
- Yuma Int'l Airport
- Glendale Municipal Airport
- Reno-Tahoe Int'l Airport
- Metropolitan Oakland Int'l Airport
- Meadows Field Airport
- San Bernardino Int'l Airport
- Bagdad Airport
- Ernest A Love Field Airport
- Phoenix Sky Harbor Int'l Airport
- Tucson Int'l Airport
- Las Cruces Int'l Airport
- Tucson Int'l Airport
- San Antonio Int'l Airport
- San Antonio Int'l Airport
- Austin-Bergstrom Int'l Airport
- Dallas Fort Worth Int'l Airport
- Albuquerque Int'l Sunport
- Garfield County Regional Airport
- Denver Int'l Airport
- Chicago-Rockford Int'l Airport
- Dane County Airport
- Indianapolis Int'l Airport
- Lambert-St Louis Int'l Airport
- Shelby Cleveland County Regional Airport
- Smyrna Airport
- Chattanooga Metropolitan Airport
- Cobb County Airport
- Manchester-Boston Regional Airport
- Burlington Int'l Airport
- Logan Int'l Airport
- Barnstable Municipal Airport
>
- Teterboro Airport
- Newark Liberty Int'l Airport
- Baltimore-Washington Int'l Airport
- Person County Airport
- Warren Field
- Charlotte Douglas Int'l Airport
- Gainesville Regional Airport
- Lakeland Linder Regional Airport
- Page Field



Solar IV
2 MW

Solar II
1.6 MW

Solar III
4.5 MW

Solar I
2 MW



ACRP

SYNTHESIS 69

AIRPORT
COOPERATIVE
RESEARCH
PROGRAM

Airport Sustainability Practices— Drivers and Outcomes for Small Commercial and General Aviation Airports

Sponsored by
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Aviation Administration



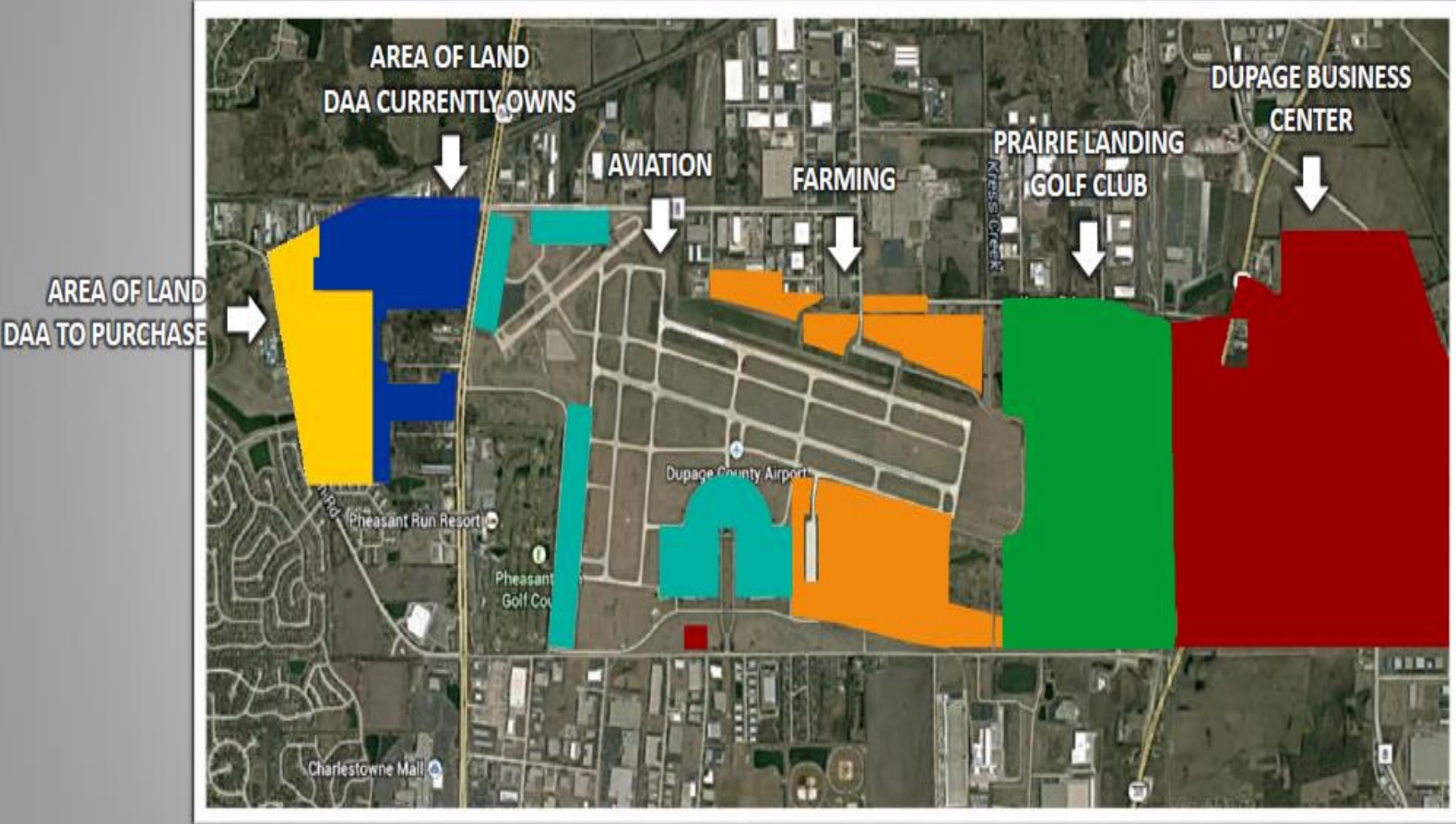
A Synthesis of Airport Practice

TRB TRANSPORTATION RESEARCH BOARD
The National Academies of
SCIENCES • ENGINEERING • MEDICINE

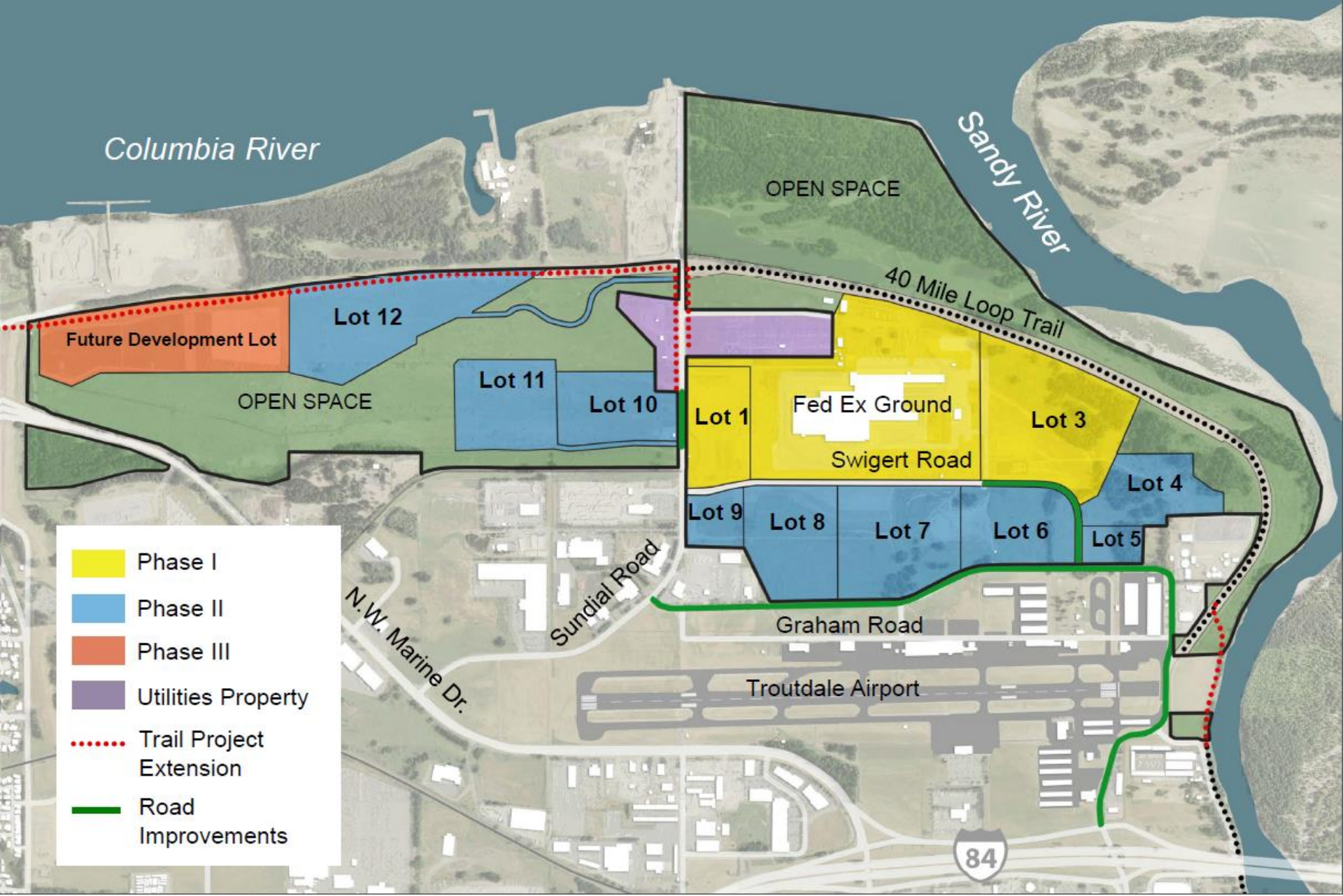


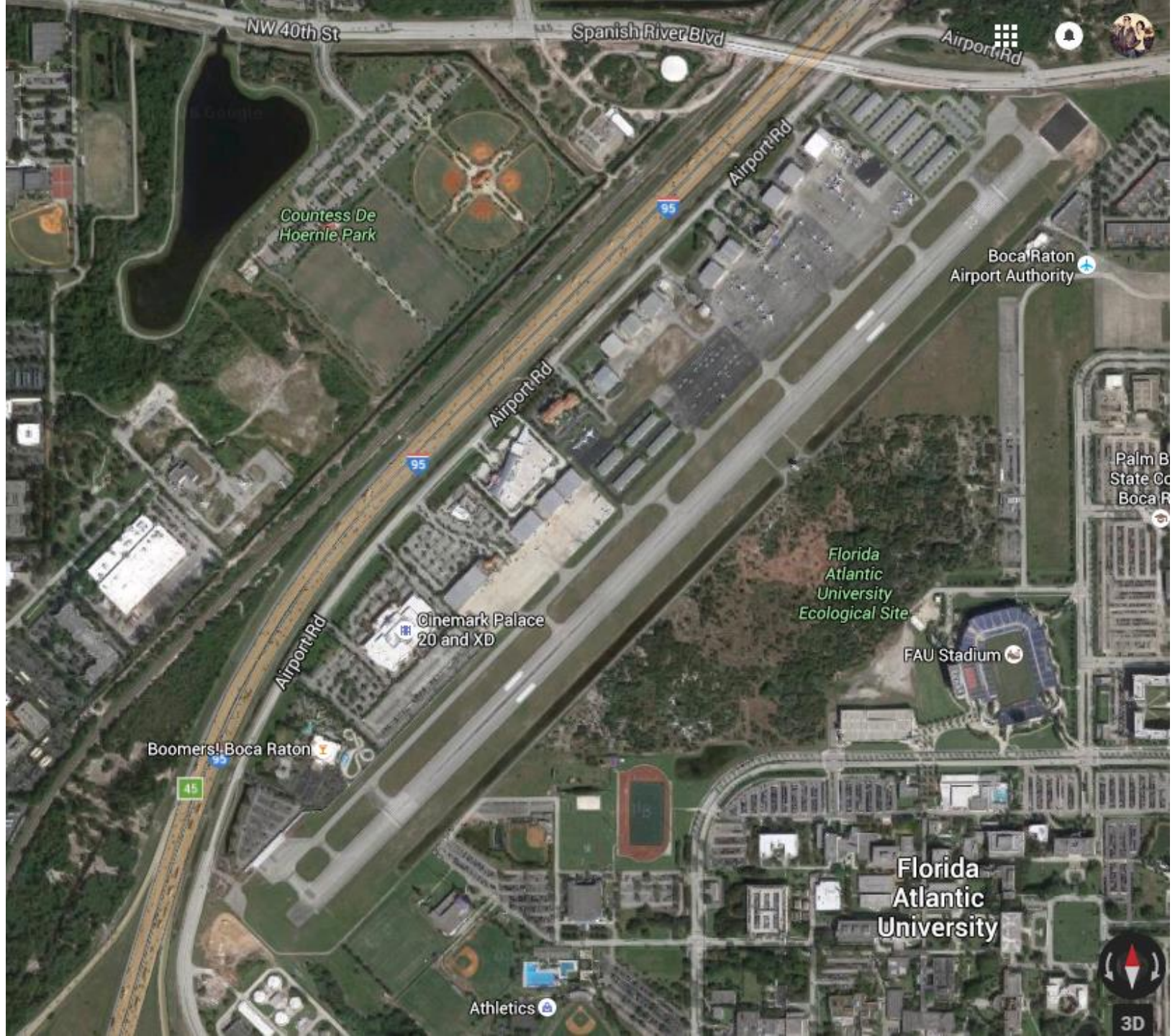


DuPage Airport Authority Sources of Revenue



TRIP Development Plan





NW 40th St

Spanish River Blvd

Airport Rd

Countess De Hoernle Park

Airport Rd

Boca Raton Airport Authority

Airport Rd

95

Palm Beach State College Boca Raton

Florida Atlantic University Ecological Site

Cinemark Palace 20 and XD

FAU Stadium

Boomers! Boca Raton

45

Florida Atlantic University

Athletics



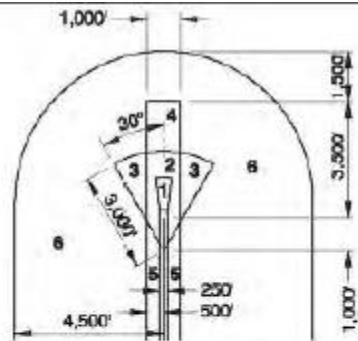
3D

Protecting Your Engine: Growing Together



- Land Use Planning and Zoning
- Partnership between development planning and airport planning
- County Comprehensive Plan – account for airport growth planning and neighborhoods
- Zoning ordinances follow comprehensive plan
- Noise – Noise standards, can we rely on the old standards?
- FAA Land use tool kit
- CA sample

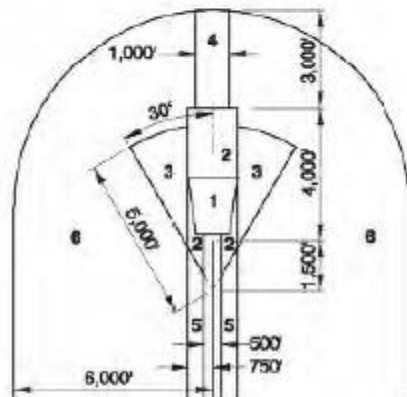




**Example 1:
Short General Aviation Runway**

Assumptions:

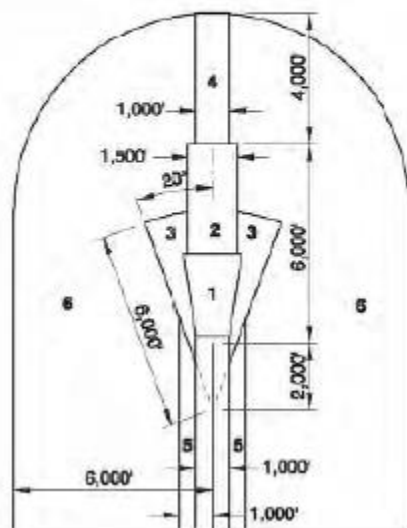
- Length less than 4,000 feet
 - Approach visibility minimums \geq 1 mile or visual approach only
 - Zone 1 = 250' x 450' x 1,000'
- See Note 1.



**Example 2:
Medium General Aviation Runway**

Assumptions:

- Length 4,000 to 5,999 feet
 - Approach visibility minimums \geq 3/4 mile and $<$ 1 mile
 - Zone 1 = 1,000' x 1,510' x 1,700'
- See Note 1.



**Example 3:
Long General Aviation Runway**

Assumptions:

- Length 6,000 feet or more
 - Approach visibility minimums $<$ 3/4 mile
 - Zone 1 = 1,000' x 1,750' x 2,500'
- See Note 1.

Nature of Risk

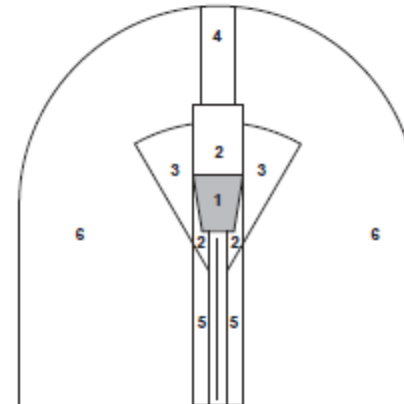
- Normal Maneuvers:
 - Aircraft on very close final approach or departure – very high risk
- Altitude
 - Less than 200 feet above runway
- Common Accident Types
 - Arrival: Downdrafts and wind gusts. Low glide paths
 - Departure: Runway overruns, aborted takeoffs and engine failures
- Risk Level
 - Very high
- Percentage of near-runway accidents in this zone: 20% - 21%



SHORT FINAL

Basic Compatibility Policies

- Normally Allow
 - None
- Limit
 - None
- Avoid
 - Nonresidential uses except if very low intensity in character and confined to the outer sides
 - Parking lots, streets, roads
- Prohibit
 - All new structures and residential land uses
- Other Factors
 - Airport ownership of property encouraged
 - Uses on airport property subject to FAA standards



Refer to Chapter 3 for dimensions.

	Maximum Residential Densities	Maximum Nonresidential Intensities	Maximum Single Acre
	Average number of dwelling units per gross acre	Average number of people per gross acre	2x the Average number of people per gross acre
Rural	0	0 – See Note A	0
Suburban	0	0 – See Note A	0
Urban	0	0 – See Note A	0
Dense Urban	0	0 – See Note A	0

Note A: Exceptions can be permitted for agricultural activities, roads, and automobile parking provided that FAA criteria are satisfied.

Nature of Risk

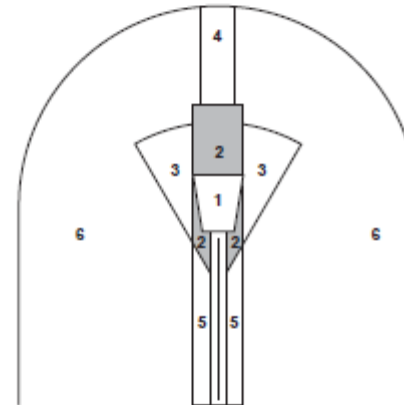
- Normal Maneuvers
 - Aircraft overflying at low altitudes on final approach and straight-out departures
- Altitude
 - Between 200 and 400 feet above runway
- Common Accident Types
 - Arrival: Similar to Zone 1, aircraft under-shooting approaches, forced short landings
 - Departure: Similar to Zone 1, emergency landing on straight-out departure
- Risk Level
 - High
 - Percentage of near-runway accidents in this zone: 8% - 22%



FINAL APPROACH

Basic Compatibility Policies

- Normally Allow
 - Agriculture; non-group recreational uses
 - Low-hazard materials storage, warehouses
 - Low-intensity light industrial uses; auto, aircraft, marine repair services
- Limit
 - Single-story office buildings
 - Nonresidential uses to activities that attract few people
- Avoid
 - All residential uses except as infill in developed areas
 - Multi-story uses; uses with high density or intensity
 - Shopping centers, most eating establishments
- Prohibit
 - Theaters, meeting halls and other assembly uses
 - Office buildings greater than 3 stories
 - Labor-intensive industrial uses
 - Children's schools, large daycare centers, hospitals, nursing homes
 - Stadiums, group recreational uses
 - Hazardous uses (e.g. aboveground bulk fuel storage)



Refer to Chapter 3 for dimensions.

	Maximum Residential Densities	Maximum Nonresidential Intensities	Maximum Single Acre
	Average number of dwelling units per gross acre	Average number of people per gross acre	2x the Average number of people per gross acre
Rural	See Note A	10 – 40	50 – 80
Suburban	1 per 10 - 20 ac.	40 – 60	80 – 120
Urban	0	60 – 80	120 – 160
Dense Urban	0	See Note B	See Note B

Note A: Maintain current zoning if less than density criteria for suburban setting.

Note B: Allow infill at up to average intensity of comparable surrounding uses.

Nature of Risk

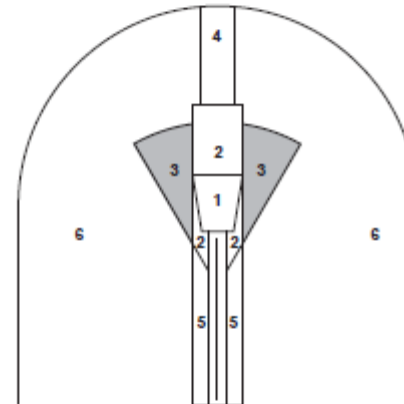
- Normal Maneuvers
 - Aircraft—especially smaller, piston-powered aircraft— turning base to final on landing approach or initiating turn to en route direction on departure
- Altitude
 - Less than 500 feet above runway, particularly on landing
- Common Accident Types
 - Arrival: Pilot overshoots turn to final and inappropriately cross controls the airplane rudder and ailerons while attempting to return to the runway alignment causing stall, spin, and uncontrolled crash
 - Departure: Mechanical failure on takeoff; low altitude gives pilot few options on emergency landing site; or, pilot attempts to return to airport and loses control during tight turn
- Risk Level
 - Moderate to high
 - Percentage of near-runway accidents in this zone: 4% - 8%



TURNING TO FINAL

Basic Compatibility Policies

- Normally Allow
 - Uses allowed in Zone 2
 - Greenhouses, low-hazard materials storage, mini-storage, warehouses
 - Light industrial, vehicle repair services
- Limit
 - Residential uses to very low densities
 - Office and other commercial uses to low intensities
- Avoid
 - Commercial and other nonresidential uses having higher usage intensities
 - Building with more than 3 aboveground habitable floors
 - Hazardous uses (e.g., aboveground bulk fuel storage)
- Prohibit
 - Major shopping centers, theaters, meeting halls and other assembly facilities
 - Children's schools, large daycare centers, hospitals, nursing homes
 - Stadiums, group recreational uses



Refer to Chapter 3 for dimensions.

	Maximum Residential Densities	Maximum Nonresidential Intensities	Maximum Single Acre
	Average number of dwelling units per gross acre	Average number of people per gross acre	3x the Average number of people per gross acre
Rural	See Note A	50 – 70	150 – 210
Suburban	1 per 2 - 5 ac.	70 – 100	210 – 300
Urban	See Note B	100 – 150	300 – 450
Dense Urban	See Note B	See Note B	See Note B

Note A: Maintain current zoning if less than density criteria for suburban setting.

Note B: Allow infill at up the average of surrounding residential area.

Nature of Risk

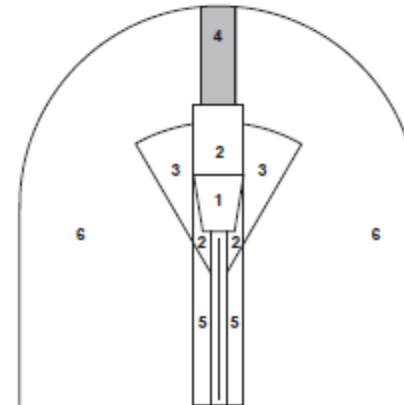
- Normal Maneuvers
 - Approaching aircraft usually at less than traffic pattern altitude. Particularly applicable for busy general aviation runways (because of elongated traffic pattern), runways with straight-in instrument approach procedures, and other runways where straight-in or straight-out flight paths are common
- Altitude
 - Less than 1,000 feet above runway
- Common Accident Types
 - Arrival: Pilot undershoots runway during an instrument approach, aircraft loses engine on approach, forced landing
 - Departure: Mechanical failure on takeoff
- Risk Level
 - Moderate
 - Percentage of near-runway accidents in this zone: 2% - 6%



LONG FINAL

Basic Compatibility Policies

- Normally Allow
 - Uses allowed in Zone 3
 - Restaurants, retail, industrial
- Limit
 - Residential uses to low density
- Avoid
 - High-intensity retail or office buildings
- Prohibit
 - Children's schools, large daycare centers, hospitals, nursing homes
 - Stadiums, group recreational uses
- Other Factors
 - Most low to moderate intensity uses are acceptable. Restrict assemblages of people
 - Consider potential airspace protection hazards of certain energy/industrial projects



Refer to Chapter 3 for dimensions.

	Maximum Residential Densities	Maximum Nonresidential Intensities	Maximum Single Acre
	Average number of dwelling units per gross acre	Average number of people per gross acre	3x the Average number of people per gross acre
Rural	See Note A	70 – 100	210 – 300
Suburban	1 per 2 - 5 ac.	100 – 150	300 – 450
Urban	See Note B	150 – 200	450 – 600
Dense Urban	See Note B	See Note B	See Note B

Note A: Maintain current zoning if less than density criteria for suburban setting.

Note B: Allow infill at up average density/intensity of comparable surrounding users.

Give Us A Shout!

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