



RPZ's

FAA Runway Protection Zones Impacts on Roadways

2015 PURDUE ROAD SCHOOL

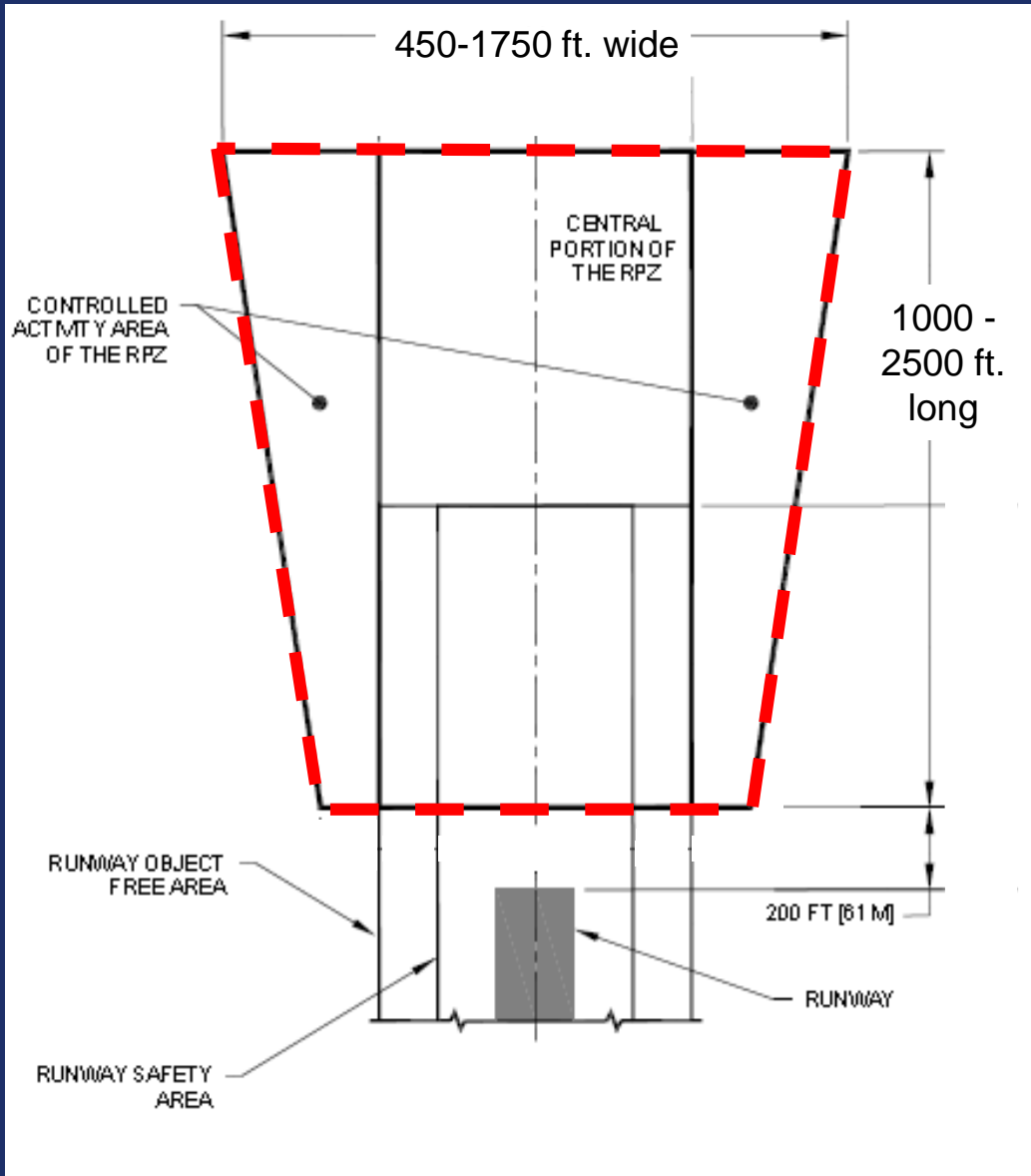
March 11, 2015

Runway Protection Zone (RPZ)

Definition

It is a trapezoidal shape formed off the end of a runway and its geometry is a function of the airport's aircraft approach category and approach visibility minimums

Runway Protection Zone (RPZ)



Aircraft Approach Category & Speed

- A < 91 knots
- B 91 thru < 121
- C 121 thru < 141
- D 141 thru < 166
- E 166 or more

Visibility Minimum

1. Visual
2. Not Lower than 1 mile
3. Not Lower than 3/4 mile
4. Lower than 3/4 mile

RPZ Size

A/B-I-Small	8 – 79 approx. acres
AB-I	14 – 79
AB-II-Small	8 - 79
AB-II thru IV	14 – 79
C/D/E –I thru VI	29-79

Runway Protection Zone (RPZ)

- 1. The function of the RPZ is to enhance the protection of people and property on the ground.**
- 2. Airport Control of RPZ is desired**
- 3. Airport owner control over RPZ**
 - A. Acquisition of land - Where practical, airport owners should own the property under the runway approach and departure areas to at least the limits of the RPZ.
 - B. Acquisition of sufficient Property interest - If impractical to own, then easement if possible.

Runway Protection Zone (RPZ)

- **Per Federal Aviation Administration (FAA):**

“It is desirable to clear the entire RPZ of all above-ground objects. Where impractical, airport owners, as a minimum, should maintain the RPZ clear of all facilities supporting incompatible activities.”

Runway Protection Zone (RPZ)

- **FAA is currently developing long-term guidelines on RPZs.**
- **Working under interim Guidance now.**
- **Interim guidance addresses when an FAA review of the RPZ is triggered.**
- **Meeting any of 2 sets of criteria result in FAA review.**

Runway Protection Zone (RPZ)

**1 - A new land uses enters an RPZ
because of**

- a) Airfield project**
- b) Change in critical design aircraft increasing RPZ**
- c) New or revised instrument approach procedure increasing RPZ**
- d) Local development proposal in the RPZ**

Runway Protection Zone (RPZ)

2 - the New Land Use is :

- a) Building and structures**
- b) Recreational land use**
- c) Transportation facilities**
- d) Fuel and hazardous material
[above and below ground]**
- a) Wastewater treatment facilities**
- b) Above ground utility infrastructure
including solar panels**

Runway Protection Zone (RPZ)

In these instances, the FAA works with the sponsor to develop a full range of alternatives

- Avoid introducing the land use into the RPZ
- Minimize the impacts of the land use in the RPZ
- Mitigate risk to people and property on ground

Runway Protection Zone (RPZ)

Alternative Documentation for FAA must include

- **Description of alternatives**
- **Cost estimates**
- **Feasibility assessment of alternative in terms of cost, constructability, etc.**
- **Preferred alternative**
- **Identification of impacted transportation agencies**
- **Analysis of portion and percentage of RPZ affected**
- **Analysis of issues affecting sponsor control**
- **Other relevant factors**

Runway Protection Zone (RPZ)

Permissible land uses (No evaluation)

(All other use must be evaluated/approved by the FAA)

- **Farming (meets crop buffers runway to crop distance standards)**
 - Must be evaluated for wildlife impacts
- **Irrigation channels that do not attract birds**
- **Airport service roads controlled by the airport operator**
- **Underground facilities that meet other FAA design criteria (eg. RSA)**
- **Unstaffed NAVAIDs and facilities considered fixed-by-function**

Case studies at 3 airports:

LaPorte Municipal
Airport



Huntingburg
Airport



Indianapolis
Executive Airport

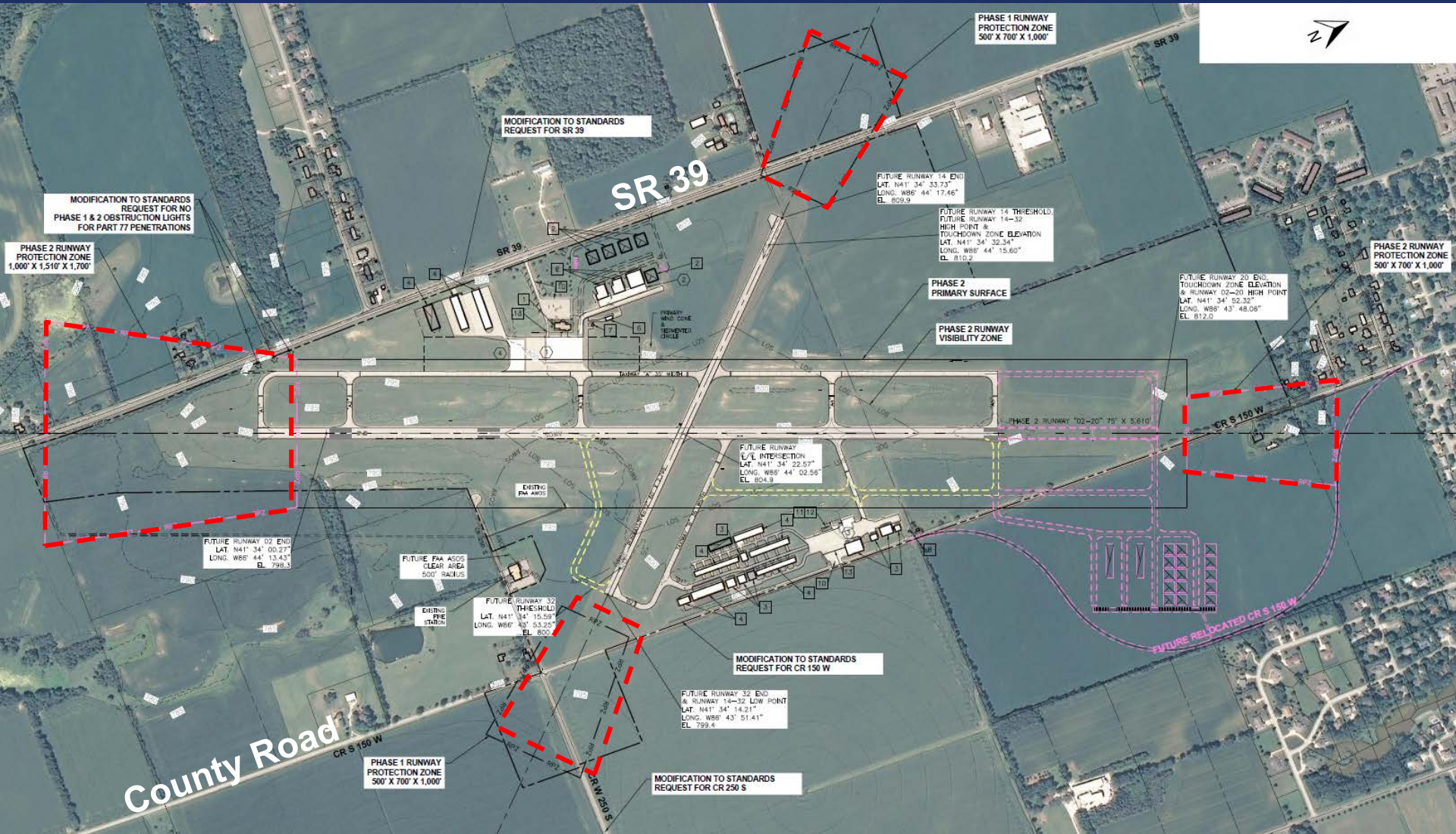


La Porte Municipal Airport

- **PROJECT:**
Airport Master Plan Development
- **TRIGGER:**
Proposed Runway End Improvements
- **CONDITIONS:**
US Highway and County Road on Each End of Runway



La Porte Municipal Airport



Proposed Phase 2

La Porte Municipal Airport

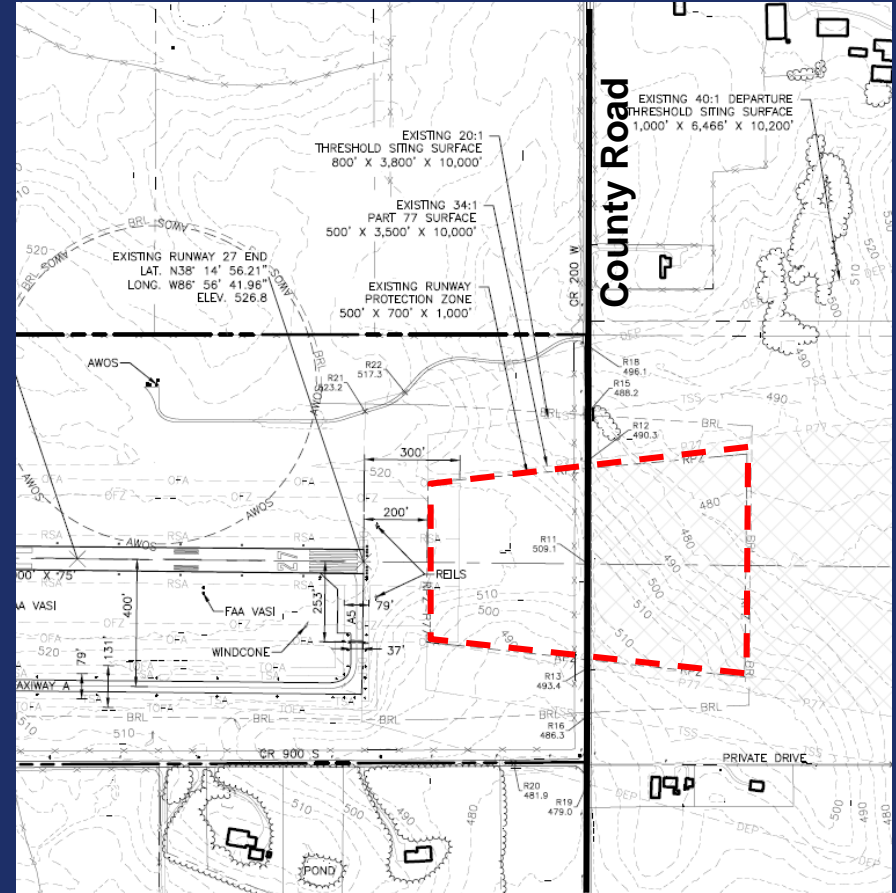
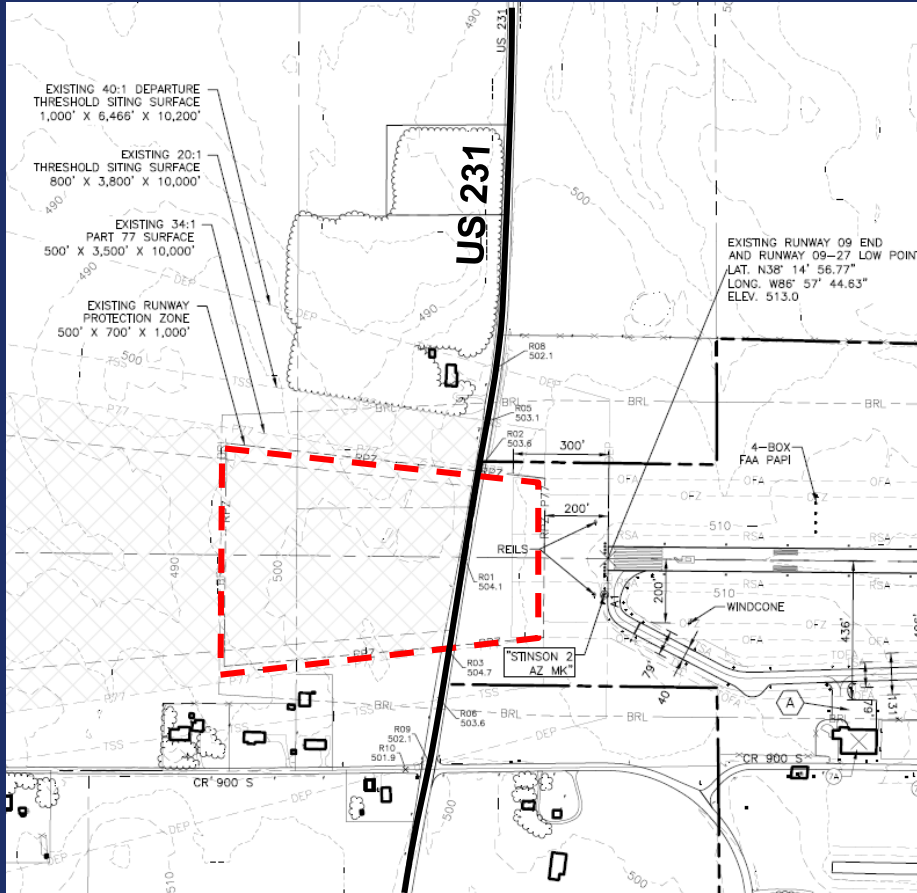
- **Prepared Alternatives to Mitigate or No Change to the FAA through FAA Modification to Standard Form**
 - Proposed Relocation of County Road (Where Impacted by Expansion and Reasonable, Feasible to Agencies)
 - Proposed Approach Modifications but no Change to SR 39 (Not Reasonable, Feasible to Agencies)
- **Received FAA Letter**
 - Accepting Proposed Changes to ALP as it was Not Reasonable or Feasible to Change SR 39

Huntingburg Airport

- **PROJECT:**
Relocate US 231 and New Primary Runway
- **TRIGGER:**
Environmental Study
- **CONDITIONS:**
US 231 to the North and
County Road to the South

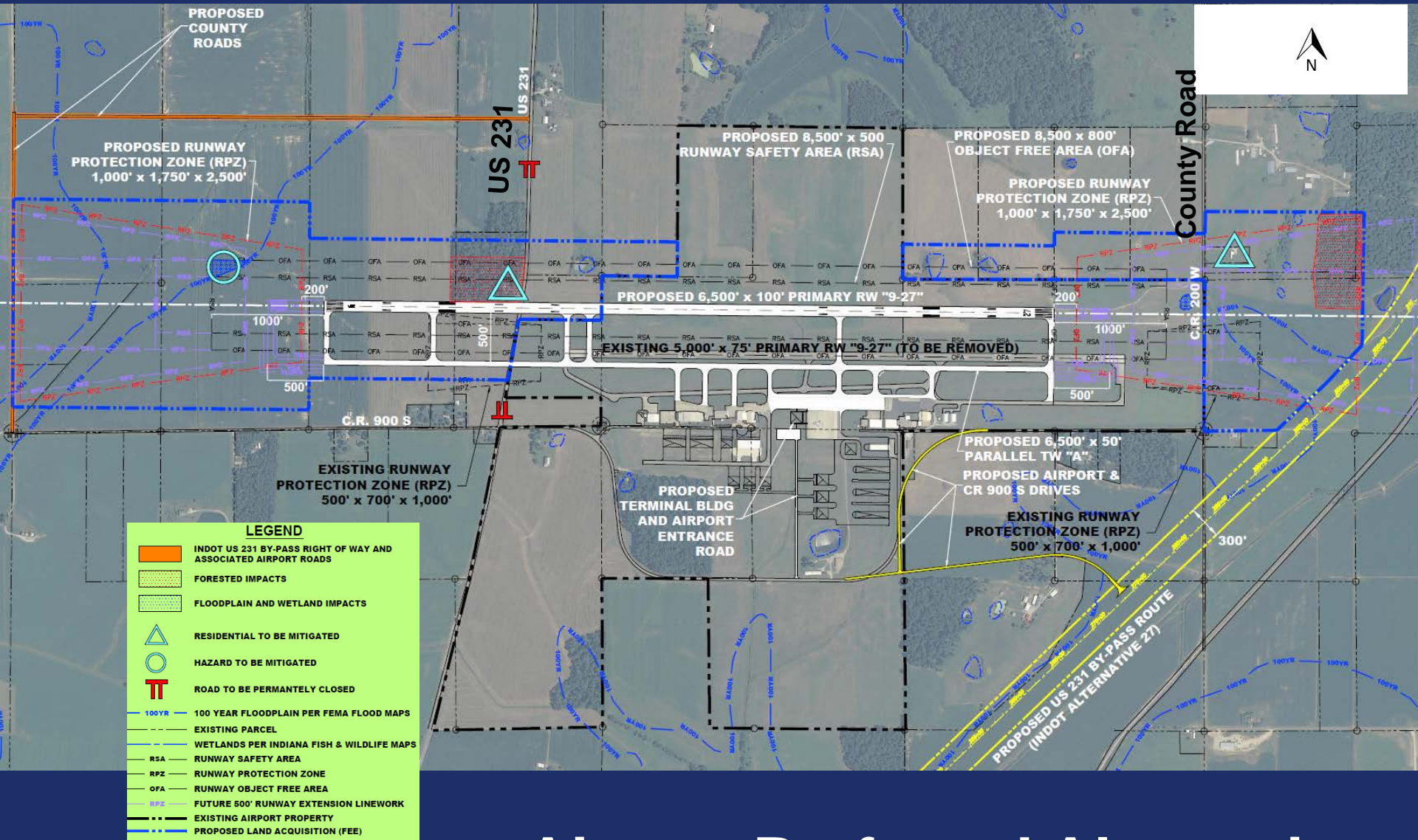


Huntingburg Airport



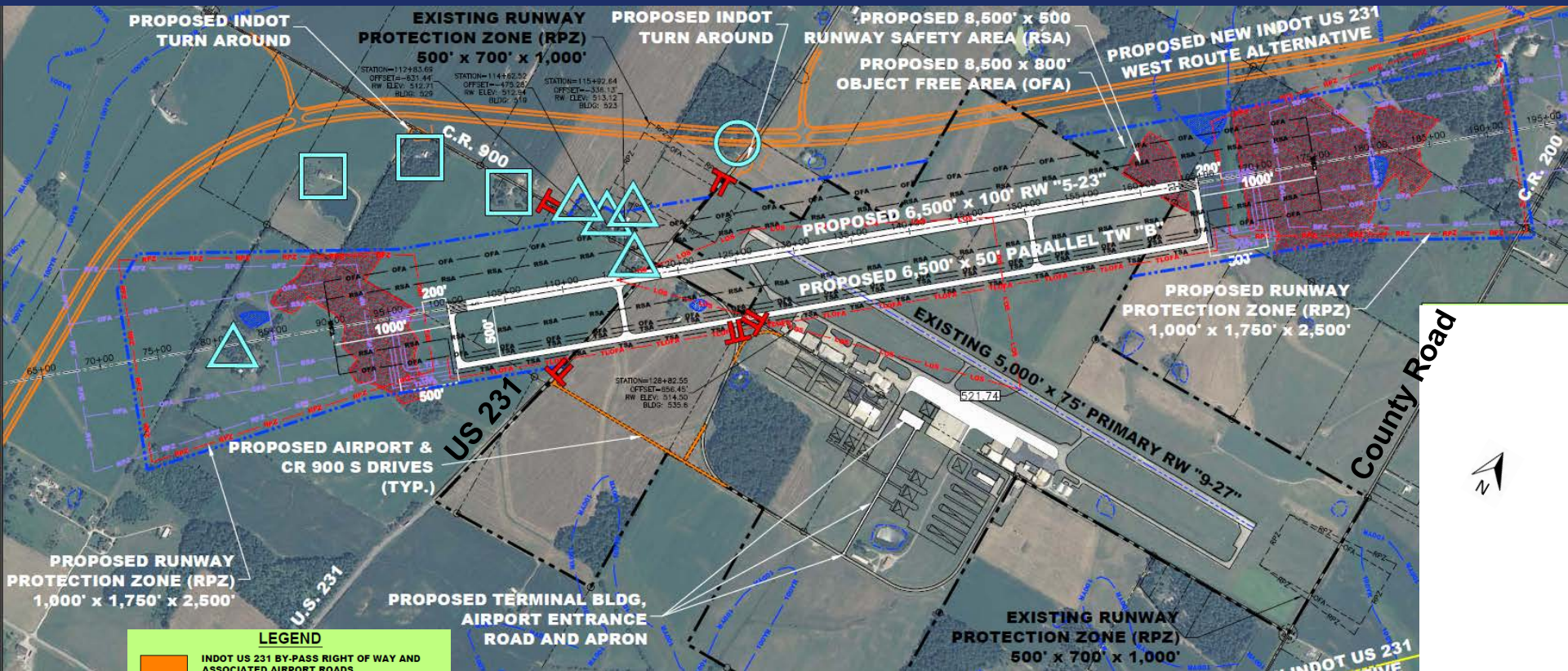
EXISTING

Huntingburg Airport



Airport Preferred Alternative

Huntingburg Airport



LEGEND

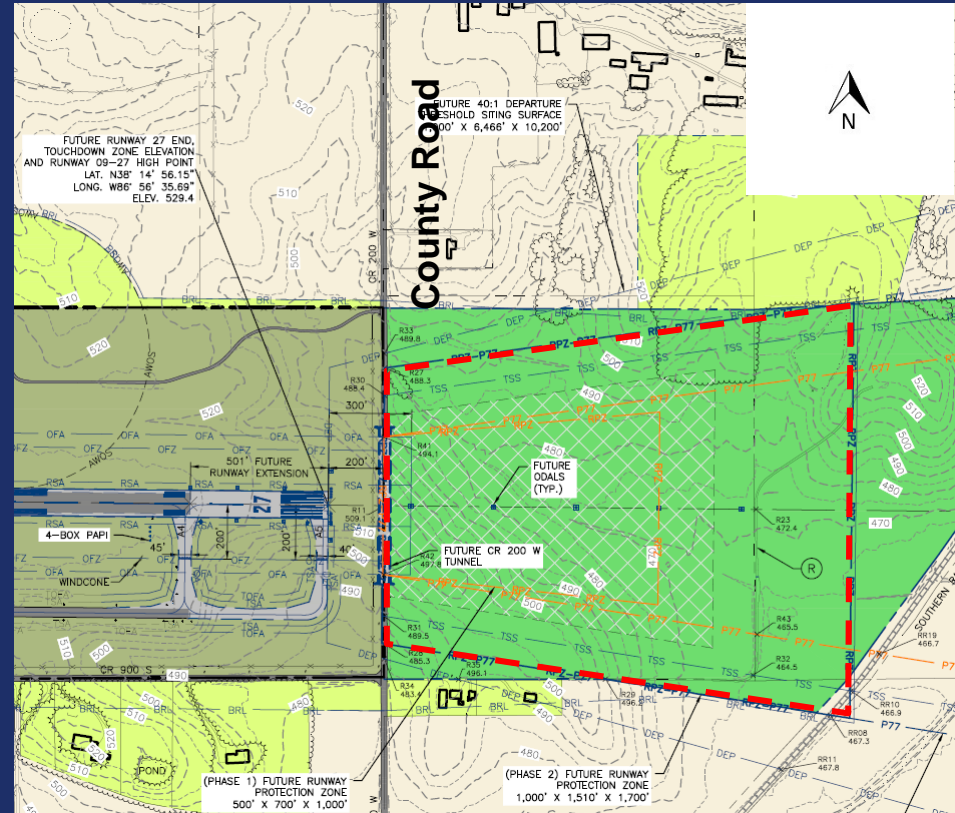
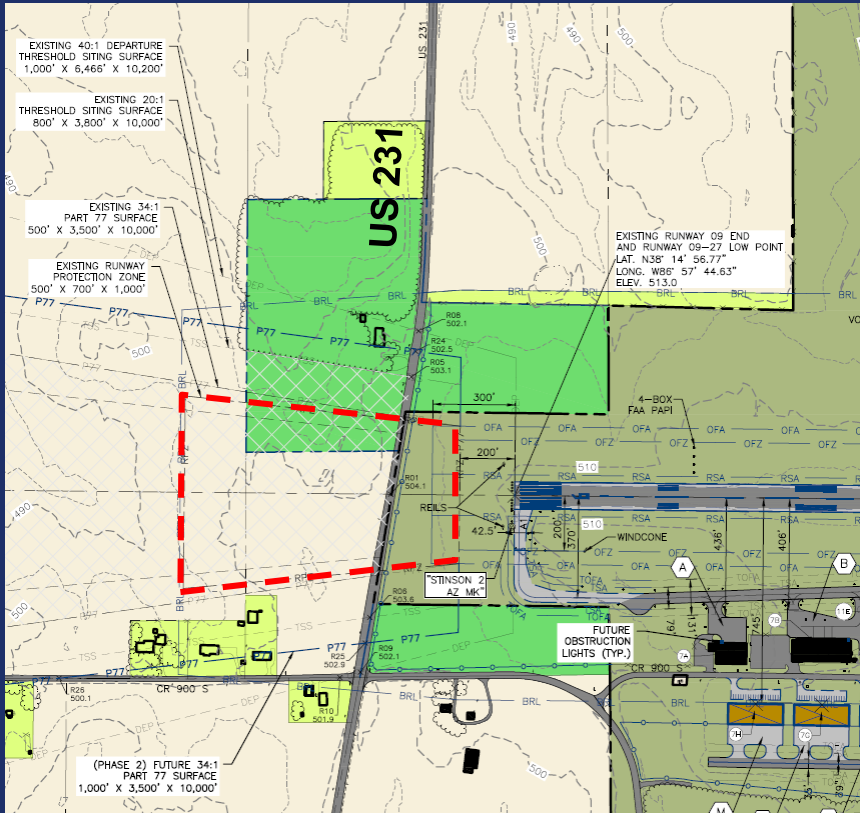
	INDOT US 231 BY-PASS RIGHT OF WAY AND ASSOCIATED AIRPORT ROADS
	FORESTED IMPACTS
	FLOODPLAIN AND WETLAND IMPACTS
	RESIDENTIAL TO BE MITIGATED
	HAZARD TO BE MITIGATED
	ROAD TO BE PERMANENTLY CLOSED
	100 YEAR FLOODPLAIN PER FEMA FLOOD MAPS
	EXISTING PARCEL
	WETLANDS PER INDIANA FISH & WILDLIFE MAPS
	RSA - RUNWAY SAFETY AREA
	RPZ - RUNWAY PROTECTION ZONE
	OFA - RUNWAY OBJECT FREE AREA
	FUTURE 500' RUNWAY EXTENSION LINWORK
	EXISTING AIRPORT PROPERTY
	PROPOSED LAND ACQUISITION (FEE)

INDOT Preferred Alternative

Huntingburg Airport

- **Over 30 Runway Alternatives**
- **Relocated US 231 Terminated due Environmental Impacts and Costs**
- **Airport Revised Alternative to Allow Extension of Existing Runway**
- **FAA RPZ Analysis with Approval Received Prior to and with the Environmental Assessment**
 - No Change to US 231 (Not Reasonable or Feasible) and Tunnel on County Road to Meet RPZ requirements even with Runway Widening Project

Huntingburg Airport



LAND INTEREST	
	EXISTING AVIATION EASEMENTS
	EXISTING AIRPORT PROPERTY
	FUTURE PROPERTY ACQUISITION - FEE
	FUTURE PROPERTY ACQUISITION - EASEMENT

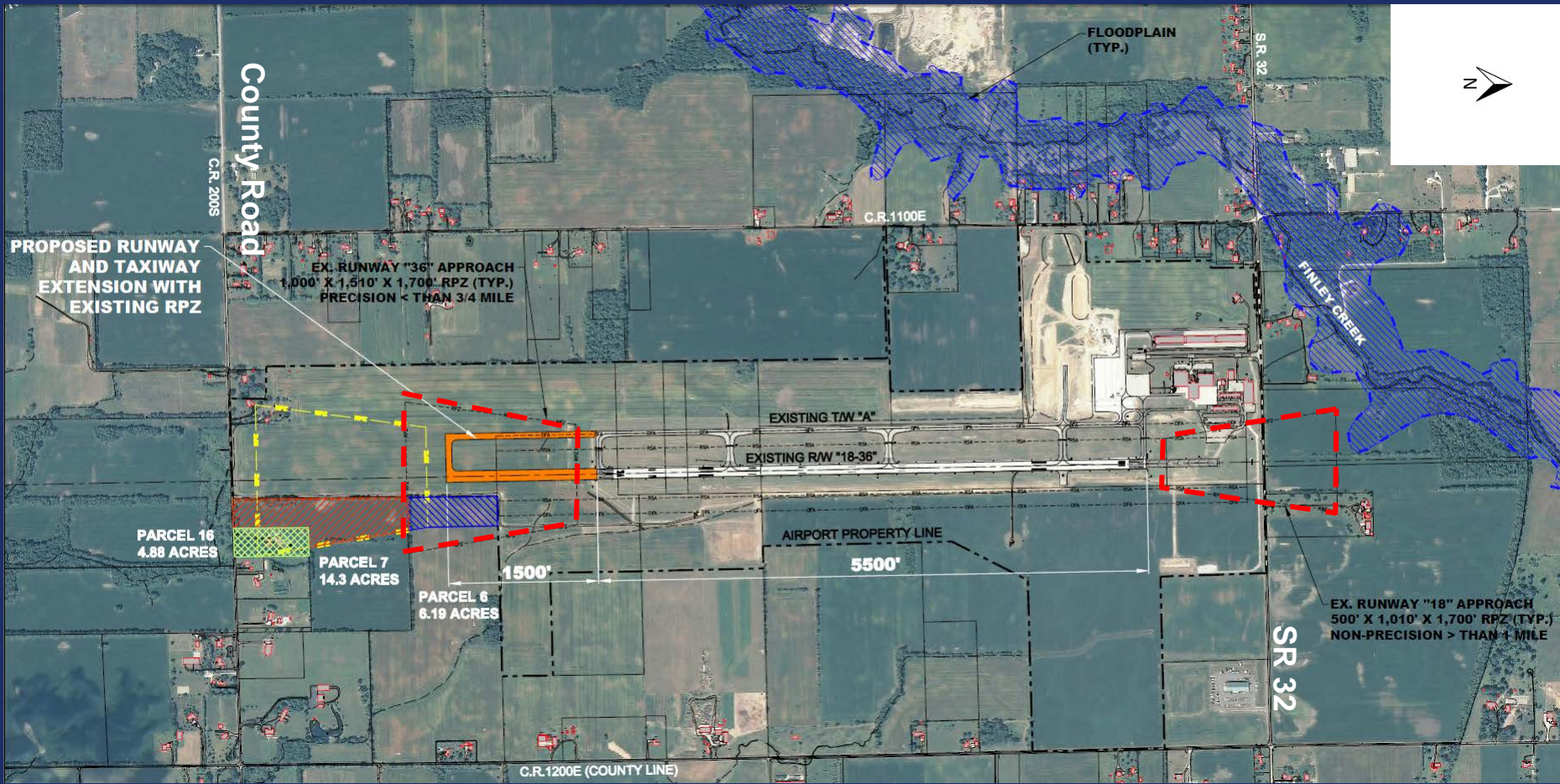
Final Alternative

Indianapolis Executive Airport

- **PROJECT:**
Extend Runway 1,500 ft.
- **TRIGGER:**
Environmental Study
- **CONDITIONS:**
SR 32 to the North

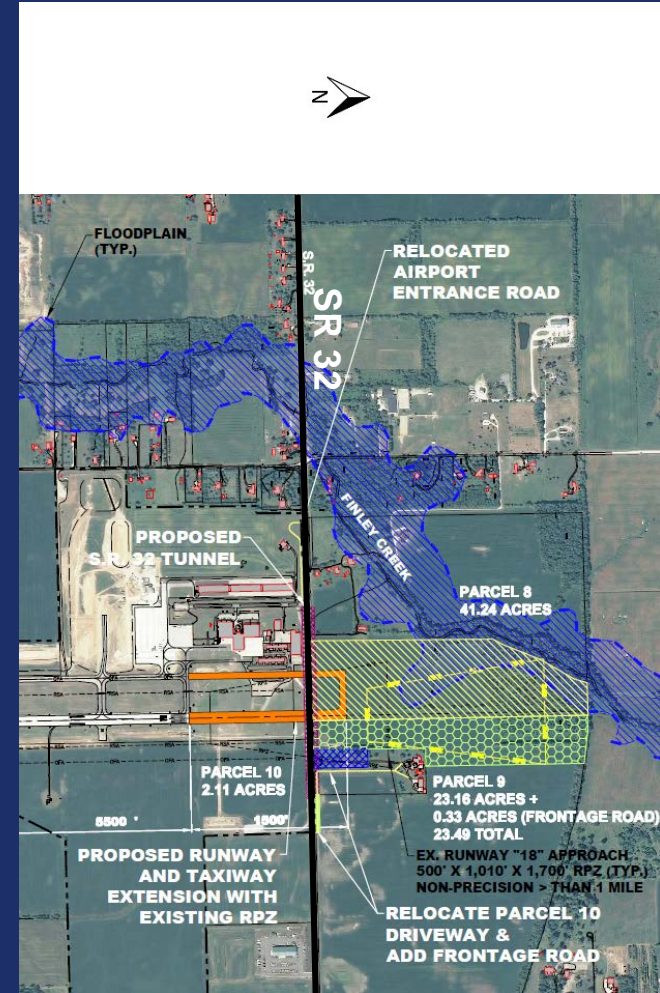
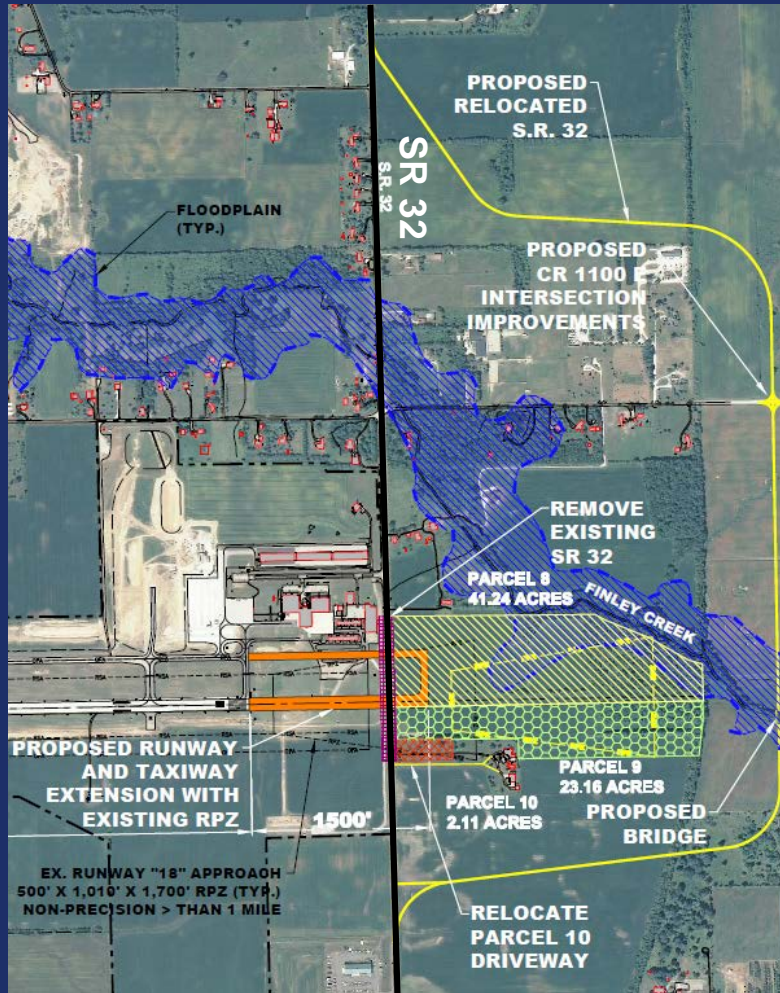


Indianapolis Executive Airport



Preferred Alternative

Indianapolis Executive Airport



Alternative Triggering SR32

Indianapolis Executive Airport

- **Not Analyzed at the Airport Layout Plan Stage (Emphasis did not exist)**
- **Analyzed and Approved Through the Environmental Assessment Alternatives**
 - No Change to SR 32 (Not Reasonable or Feasible) and Preferred Alternative as there was no change to the Runway 18 end of Runway

Case Study Summary

- **Interim Case by Case Basis –
FAA Headquarters**
- **Triggers come from the Airport and Others**
- **Must Consider Activity Level of Airport,
Roadway and Benefit to Costs**
 - To Determine FAA Submittal Needs (Alternatives)
 - What is Reasonable, Feasible for one Airport
may not be for Another Airport
 - If Mitigation Options Exists
- **FAA Takes 60 Days, 6 Months or More**

Case Study Summary

- **Why to Avoid Your Airports RPZ with Your Roadways and Non-Compatible Structures**
 - FAA Grant Assurances of the Airport Sponsor
 - The Spirit of One DOT
 - The Timeline

Runway Protection Zone (RPZ)

Questions and Answers