



# *Alternative Corridor Evaluation Process (ACE)*

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# *Presentation Summary*

- Intent
- Overview of corridor planning and screening
- Process and technology integration
- Conclusions

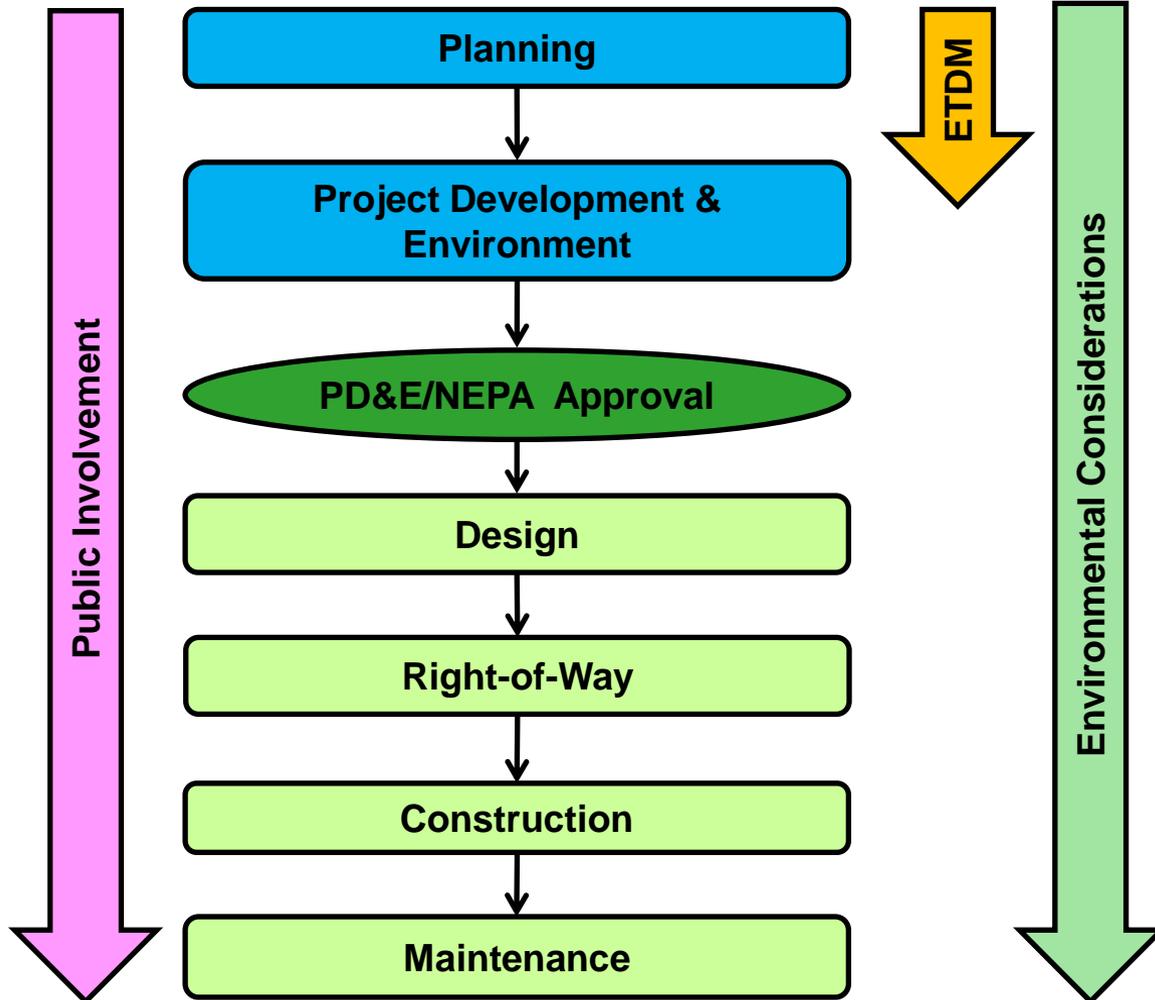


# *Why a new process?*

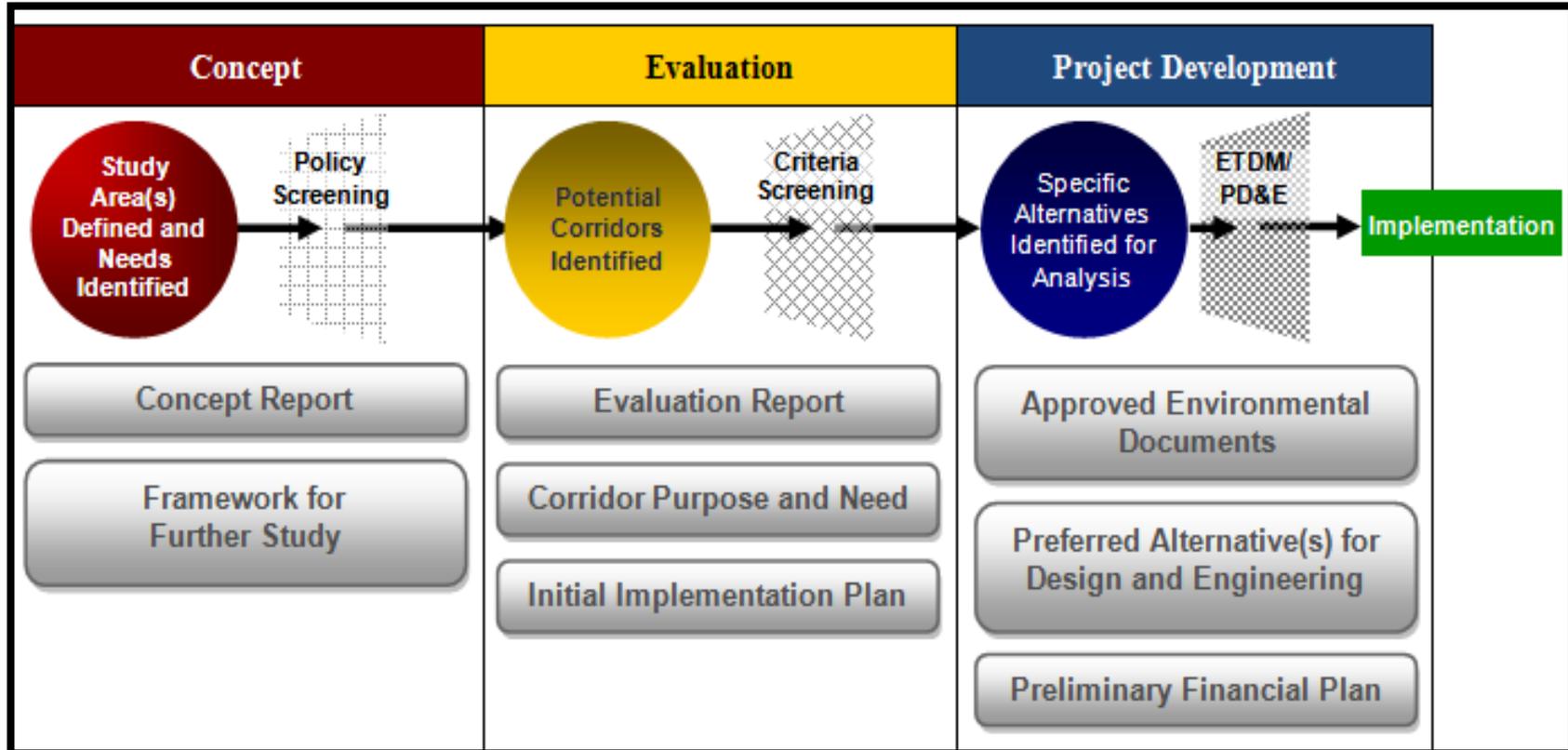
- Integrating technology and process
- Bringing greater value to technology
- Improve Planning and Environmental Linkages
- Take advantage of MAP-21 flexibilities – using planning products
- Statewide consistency
- Focus Environmental Impact Statements



# Project Identification & Phasing



# Corridor Planning and Screening Process



# Concept Stage

- Consistency with State Long-Range Transportation Plan goals and objectives
- Early identification of needs
- Public Involvement/Coordination/Input using technology
  - Locals
  - Regulatory and resource agencies (Federal, State and Local)
  - Other stakeholders
  - Review of considerations by Stakeholders
- High level consideration and identification of potential community and environmental resource concerns
  - GIS Analysis, data mining
  - Early avoidance and minimization and identification of mitigation opportunities



# Data Management

## Natural:

- Wetlands
- Water Quality and Quantity
- Floodplains
- Wildlife and Habitat
- Coastal and Marine

## Physical:

- Noise
- Air Quality
- Contamination
- Navigation
- Infrastructure

Special Designations (e.g., SSL, AP, OFWs, etc.)

## Community:

- Aesthetics
- Land Use
- Relocation Potential
- Farmlands
- Economic
- Mobility
- Social/Community Concerns

## Cultural:

- Section 4(f) Potential
- Historic and Archaeological Sites
- Recreation Areas



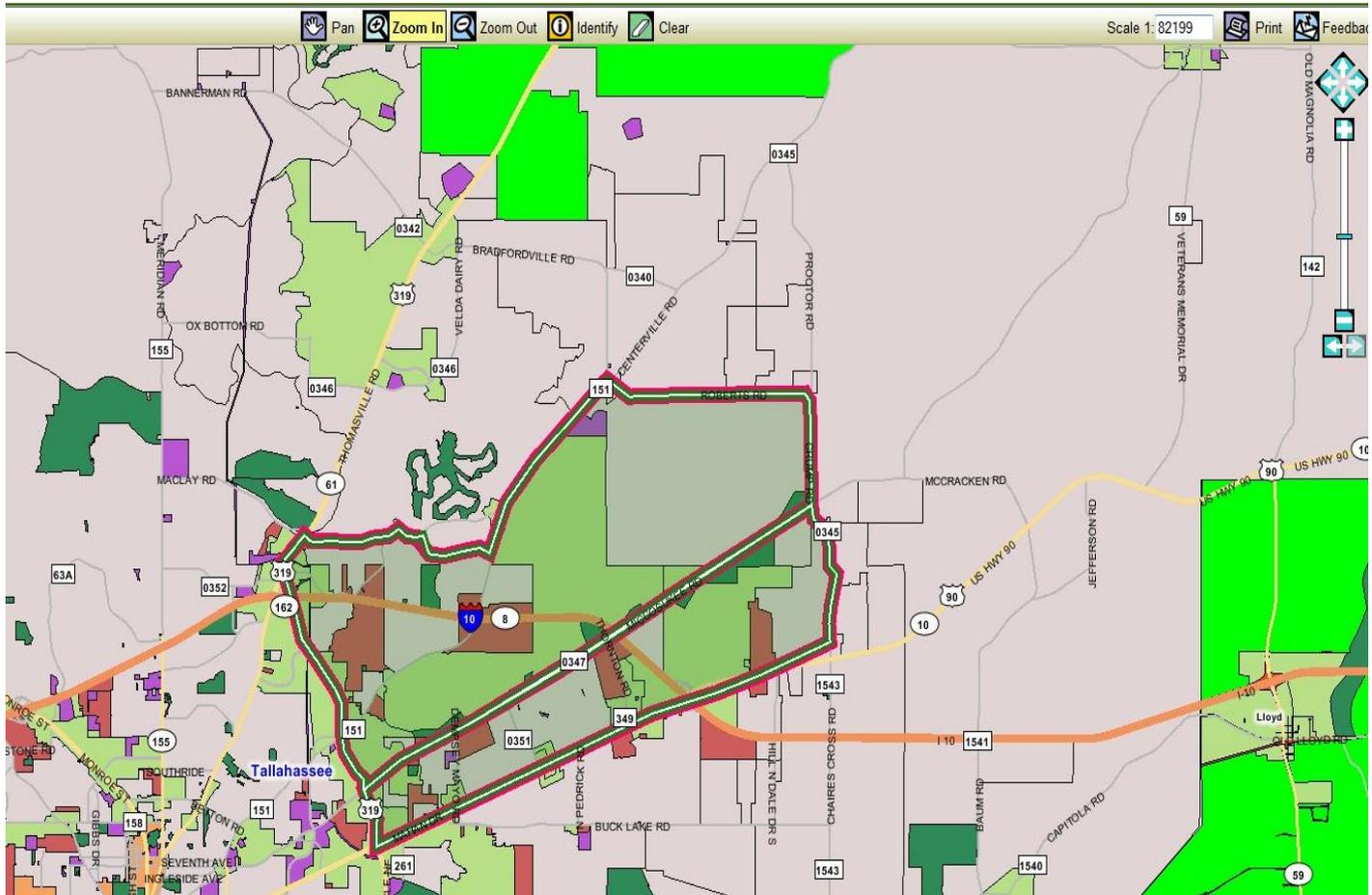
# Concept Stage – Screening Tool

- Helps scope the corridor
- Environmental Screening Tool (EST)
  - Over 550 Data Layers
  - Potential identification of environmental features, areas to avoid, etc.
- Helps set the framework for future activities
  - Refinement of analysis
  - Continuous coordination
  - Documentation
- No project, YET...





# Sample



# GIS Analysis

X
hide menu <<
GIS Analysis Report

**Tools**

**Reports**

Project Diary >

Advance Notification Package >

Project Effects >

Reminders >

Agency Participation >

Community Coordination >

Cumulative Effects >

Performance Management >

Invoicing Reports >

Project Tracker >

Document Review >

**Wizards**

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## GIS Analysis Report

**#12938 ACE Analysis Routine Test Project**

Show Results for Entire Alternative	Show Results for Individual Features
<input type="checkbox"/> Select All Alternatives	<input type="checkbox"/> Select All Features
<input checked="" type="checkbox"/> Alternative #1 - Northern Study Area	Alternative #1 - Northern Study Area has only one feature. <a href="#">?</a>
<input checked="" type="checkbox"/> Alternative #2 - Southern Study Area	Alternative #2 - Southern Study Area has only one feature. <a href="#">?</a>
<input checked="" type="checkbox"/> Alternative #3 - New Alignment - Non Study Area	Alternative #3 - New Alignment - Non Study Area has only one feature. <a href="#">?</a>

**Show Analysis Types for Resource Issues:**

<input type="checkbox"/> Aesthetic Effects	<input type="checkbox"/> Infrastructure	<input type="checkbox"/> Section 4(f)
<input type="checkbox"/> Air Quality	<input type="checkbox"/> Land Use Changes	<input type="checkbox"/> Social
<input type="checkbox"/> Coastal and Marine	<input type="checkbox"/> Mobility	<input type="checkbox"/> Special Designations
<input type="checkbox"/> Contaminated Sites	<input type="checkbox"/> Navigation	<input type="checkbox"/> Water Quality and Quantity
<input type="checkbox"/> Economic	<input type="checkbox"/> Noise	<input checked="" type="checkbox"/> Wetlands
<input type="checkbox"/> Farmlands	<input type="checkbox"/> Recreation Areas	<input checked="" type="checkbox"/> Wildlife and Habitat
<input type="checkbox"/> Floodplains	<input type="checkbox"/> Relocation Potential	
<input type="checkbox"/> Historic and Archaeological Sites	<input type="checkbox"/> Secondary and Cumulative Effects	

**Select Analysis Types and Buffer Distances**

<input type="checkbox"/> Select All	<input type="checkbox"/> 0 ft.	<input type="checkbox"/> 100 ft.	<input type="checkbox"/> 200 ft.	<input type="checkbox"/> 500 ft.	<input type="checkbox"/> 1320 ft.	<input type="checkbox"/> 2640 ft.	<input type="checkbox"/> 5280 ft.
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**Wildlife and Habitat**

<input type="checkbox"/> 1990 FFWCC Habitat and Landcover GRID	<input type="checkbox"/> 0 ft.	<input type="checkbox"/> 100 ft.	<input type="checkbox"/> 200 ft.	<input type="checkbox"/> 500 ft.	N/A	N/A	<input type="checkbox"/> 5280 ft.
<input type="checkbox"/> 2003 FFWCC Habitat and Landcover GRID	<input type="checkbox"/> 0 ft.	<input type="checkbox"/> 100 ft.	<input type="checkbox"/> 200 ft.	<input type="checkbox"/> 500 ft.	N/A	N/A	<input type="checkbox"/> 5280 ft.

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# *Concept Stage Expectations*

- Build an understanding of the corridor area
- Identify environmental features
- Receive actionable commentary from stakeholders
- Identify avoidance and minimization strategies
- Identify mitigation opportunities that may be or may become available, if projects are identified and advanced



# *Evaluation Stage*

- Refine corridor(s) – consider multiple corridors, modes and environmental issues/resources
- Develop corridor purpose and need
- Identify strategies – operational and capital
- Work closer with MPOs, Local Governments and other stakeholders
- Continue outreach and coordination with stakeholders
- Community and environmental avoidance, minimization and mitigation opportunities that may be or may become available, if projects are identified and advanced



# *The Alternative Corridor Evaluation Process*

- Continuous coordination with Lead Agency including concurrence at decision points
- Documented involvement of stakeholders in decision-making
- Uses existing and new vetted technologies
- Flexibility in its application
- Information all in one place, products available for future phases
- Define Purpose and Need
- Define affected environment
- Identify reasonable alternatives for NEPA Analysis



# *What is ACE?*

- Intended for various project types regardless of mode:
  - New alignments
  - Major realignments
  - Major bypasses – truck, city/town, etc.
  - Other projects?
- Purpose of ACE is to identify reasonable alternatives for NEPA analysis
- Provides a continuously coordinated and documented process to make corridor decisions with stakeholder involvement
- Early avoidance, minimization and consideration/identification of mitigation opportunities
- Helps refine the affected environment and identify issues/resources of focus

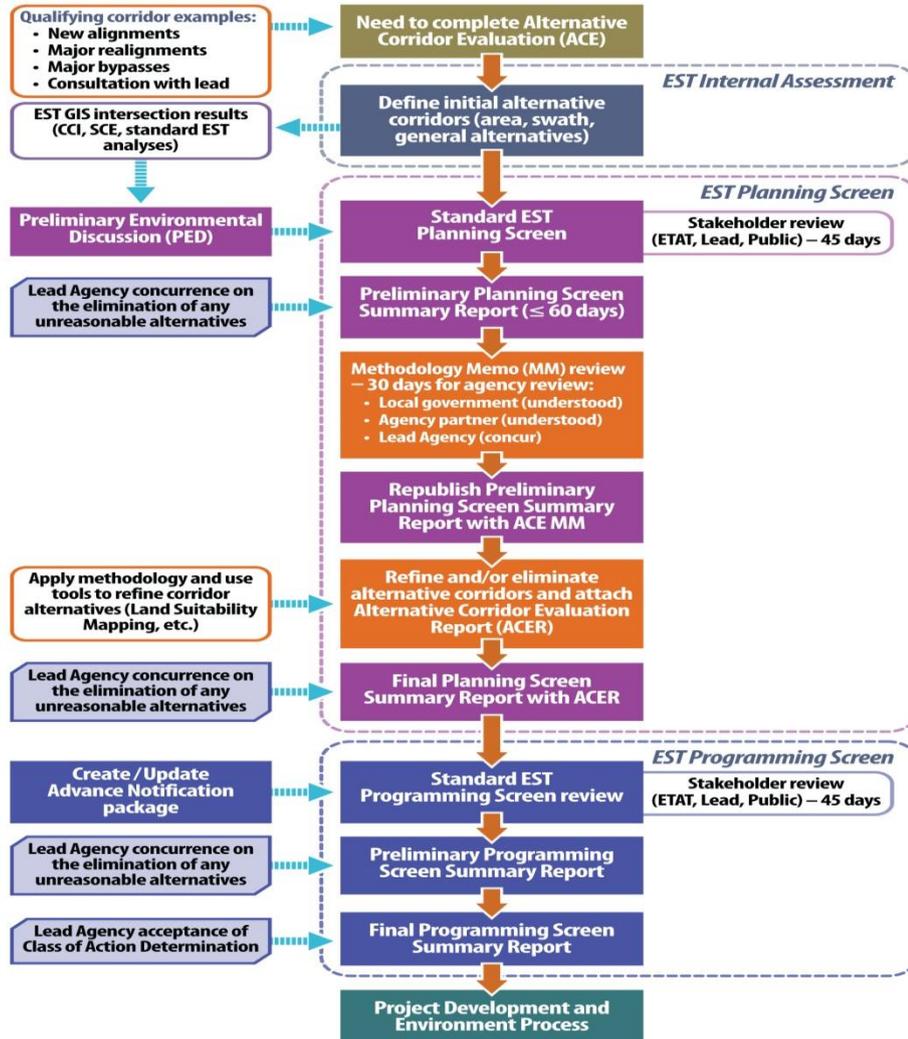


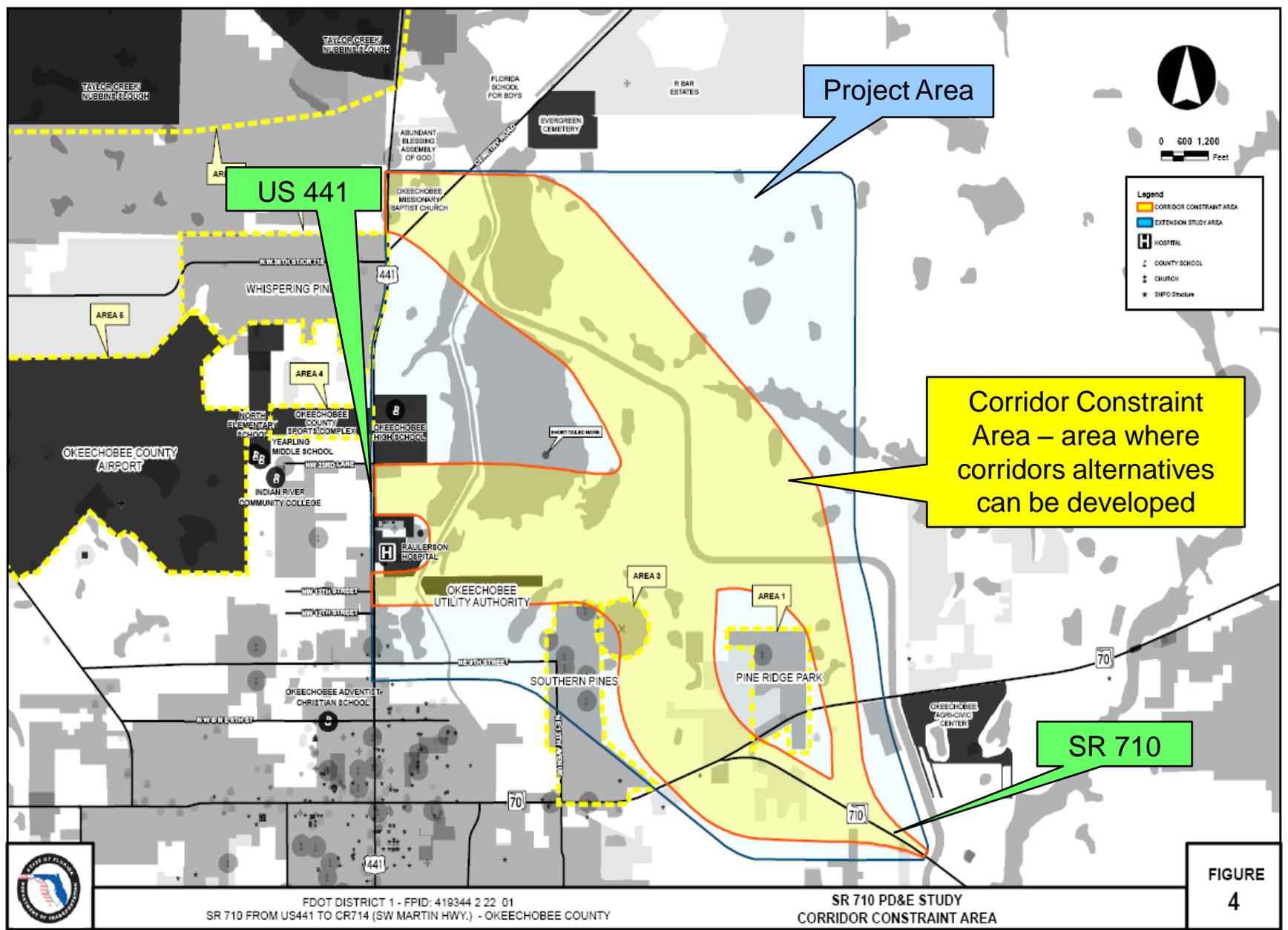
# ACE Basics

- Define initial corridor alternative(s) and considerations
  - Use Corridor Planning Process and technology
- Define environmental setting
  - Issues/resources of focus
  - Greater understanding and coordination
- Develop Analysis Methodology Memorandum to define/refine alternatives with stakeholder input
  - e.g., Land Suitability Mapping and/or other tools
- Define/ refine corridor alternatives using methodology
- Alternative Corridor Evaluation Report (ACER)
  - Defined affected environment
  - Alternative(s) for detailed study in NEPA with stakeholder input
  - Elimination of unreasonable alternative(s)



# ACE Process





Project Area

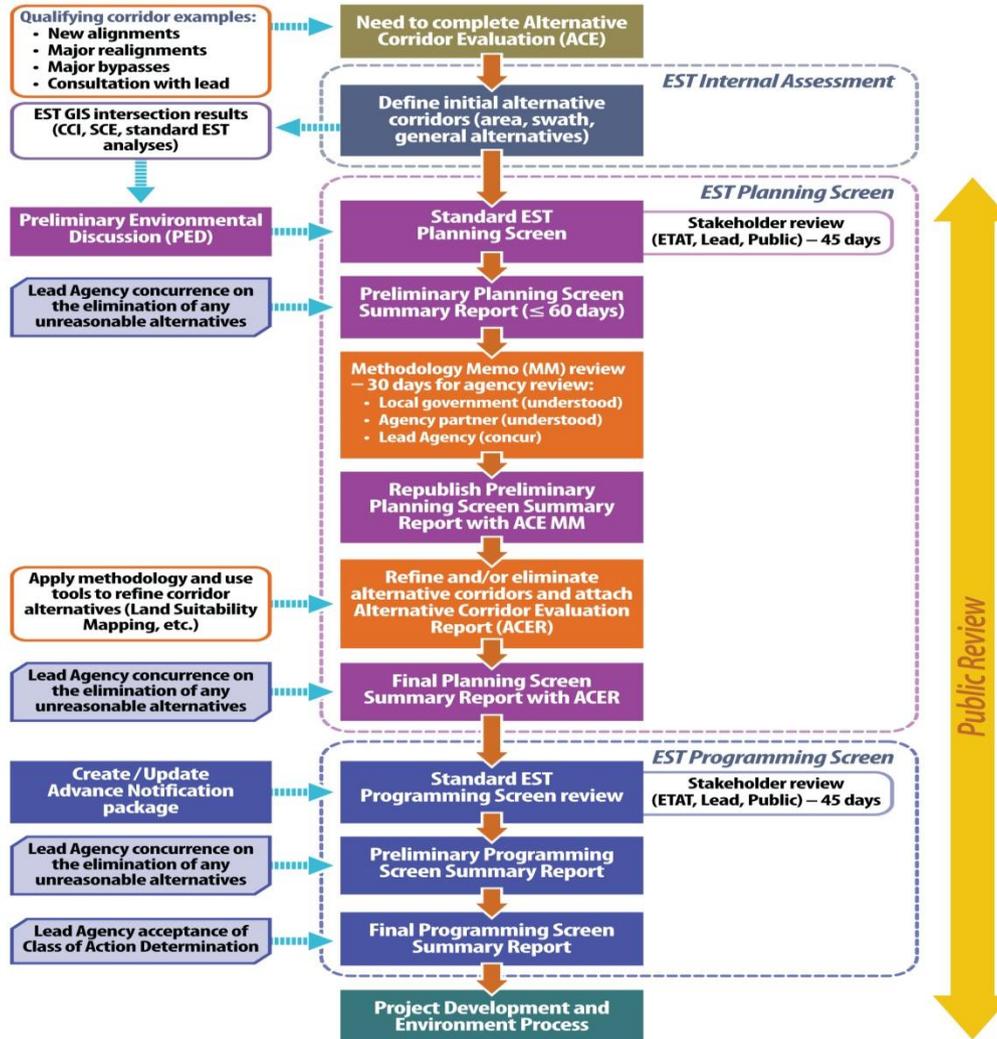
US 441

Corridor Constraint Area – area where corridors alternatives can be developed

SR 710



# ACE Process



Qualifying corridor examples:

- New alignments
- Major realignments
- Major bypasses
- Consultation with lead

EST GIS intersection results (CCI, SCE, standard EST analyses)

Preliminary Environmental Discussion (PED)

Lead Agency concurrence on the elimination of any unreasonable alternatives

Apply methodology and use tools to refine corridor alternatives (Land Suitability Mapping, etc.)

Lead Agency concurrence on the elimination of any unreasonable alternatives

Create / Update Advance Notification package

Lead Agency concurrence on the elimination of any unreasonable alternatives

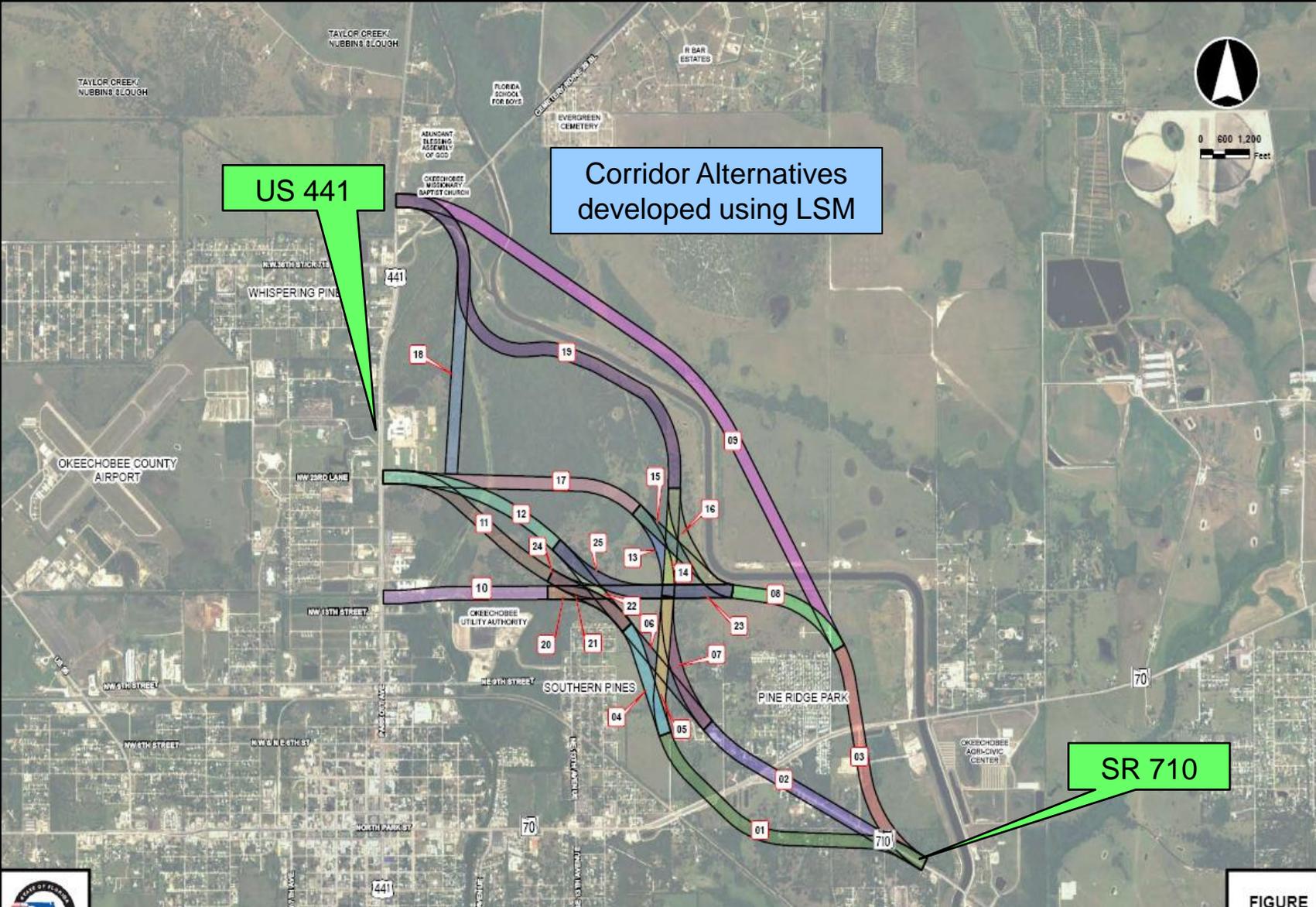
Lead Agency acceptance of Class of Action Determination



# Methodology Memorandum

- **Background**
  1. Contact personnel
  2. Basic project information
    - a. Include any previous planning studies or relevant information
    - b. Include any known issues of concern
  3. Brief description
  4. Brief Purpose and Need of the project
  
- **Describe the goals and objectives of the ACE**
  1. Provide the status in project delivery
  2. Define the intent of the study
  3. Identify the decision points/milestones
  
- **Describe the methods that will be used to analyze the alternatives and make decisions**
  1. Describe alternative corridors
  2. Describe screening criteria
  3. Briefly describe the data that will be used and how it will support the decision making process going forward
  4. Describe the rationale that will be used to eliminate alternatives
  5. Describe the data tools that will be used in the analysis [i.e., EST, Land Suitability Mapping (LSM), Quantum, etc.]
  
- **A brief description of stakeholder involvement**





**US 441**

**Corridor Alternatives developed using LSM**

**SR 710**

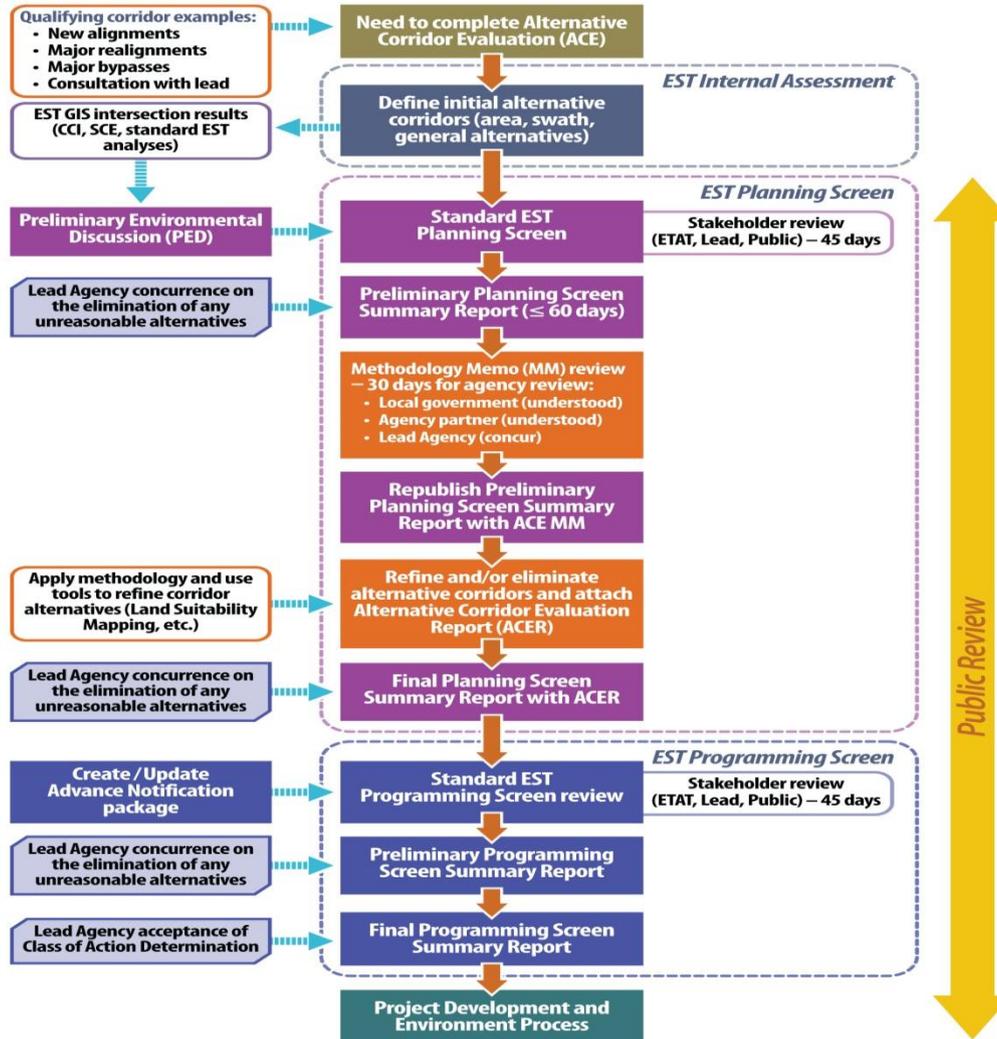


# *Project Development Stage (NEPA)*

- Clearly defined project
- Defined Purpose and Need
- **ETDM Programming Screen prior to initiation of NEPA as appropriate**
- Agency and stakeholder coordination/consultation continues
- Alternative(s) for analysis including the “No Build”
- Detailed impact analysis and determinations
- Preferred alternative defined, approved and advanced



# ACE Process



Qualifying corridor examples:  
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 • Major realignments  
 • Major bypasses  
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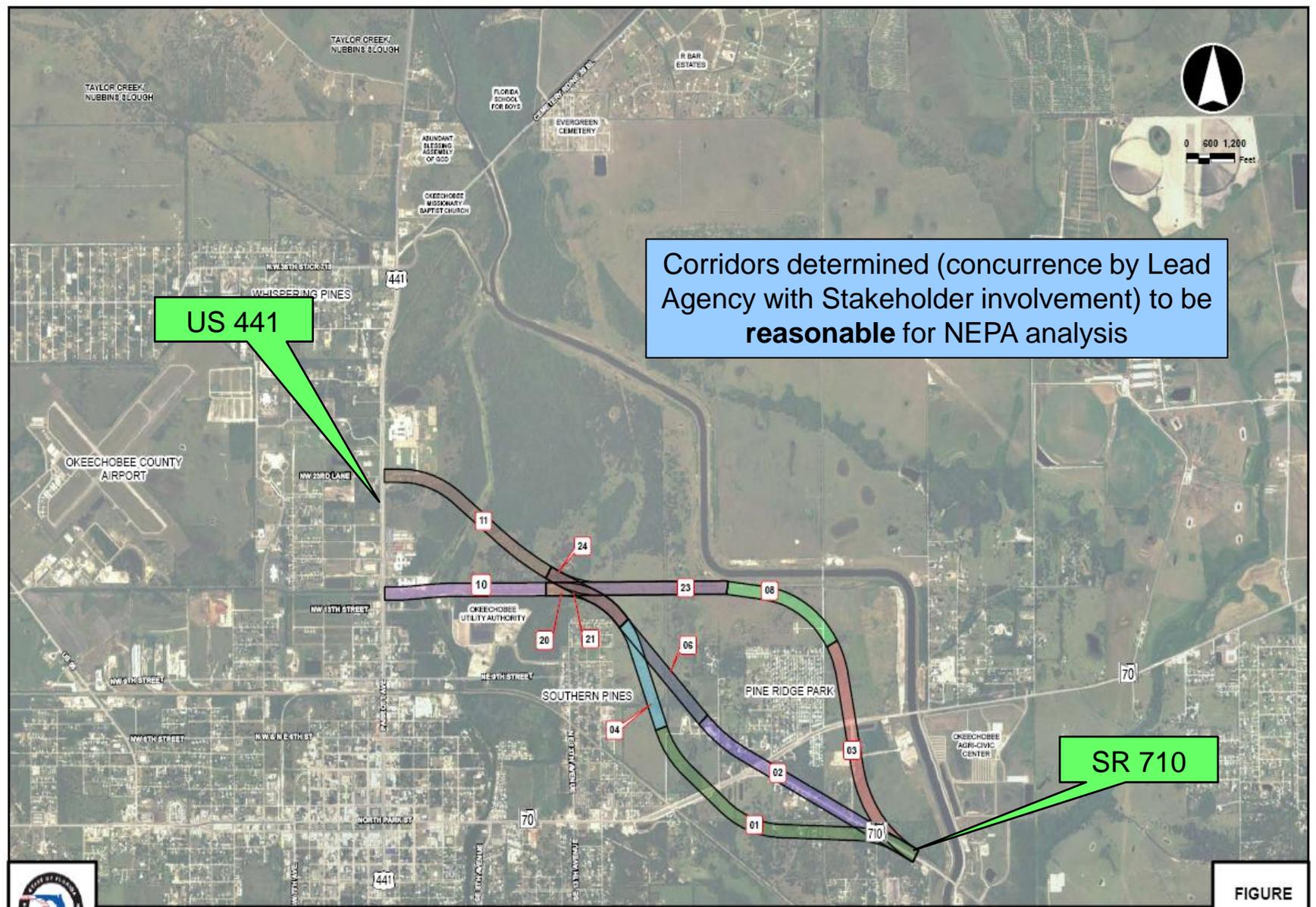
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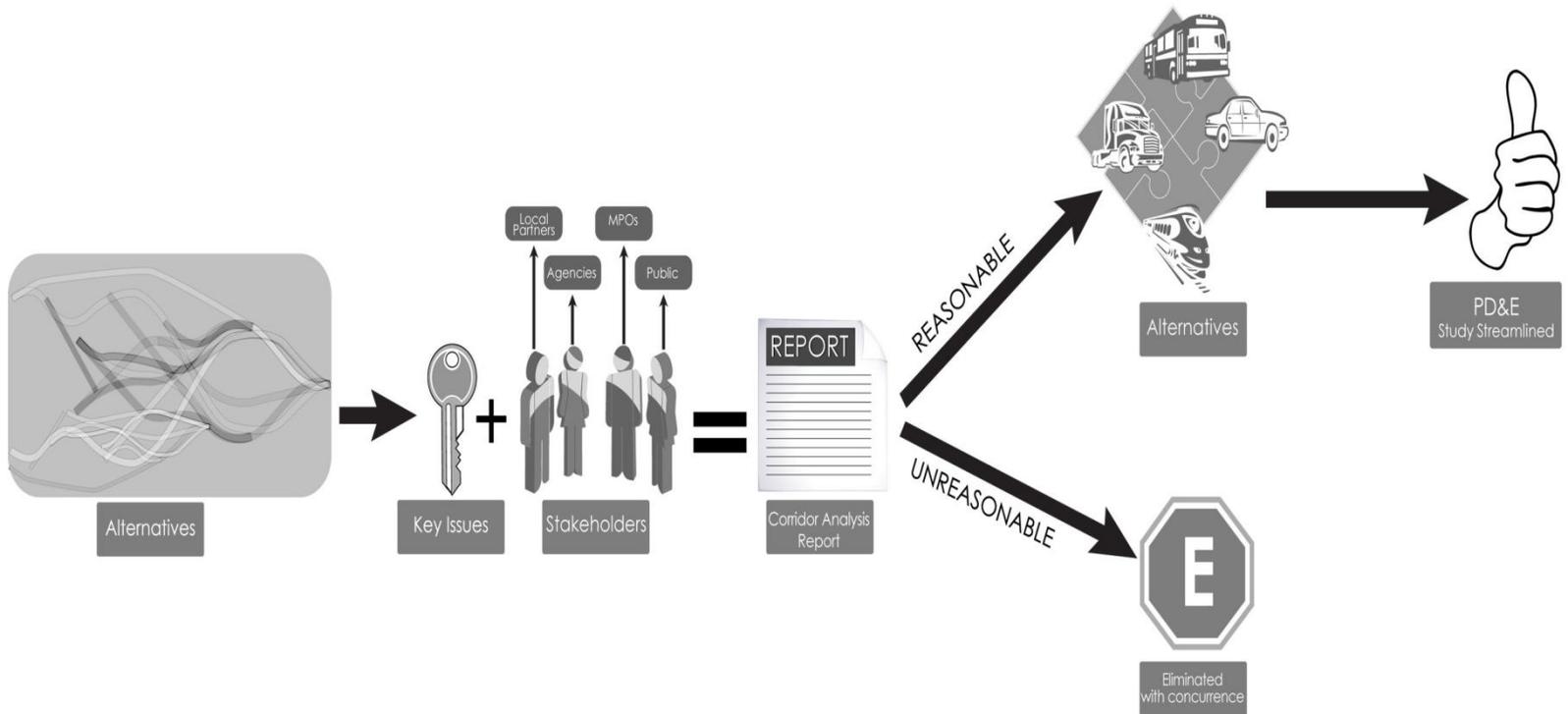
US 441

Corridors determined (concurrence by Lead Agency with Stakeholder involvement) to be **reasonable** for NEPA analysis

SR 710



# ACE in a nutshell...



# NEPA Study

- Detailed Engineering and Environmental analysis (ground level) of the identified reasonable alternatives
  - Continued Public Involvement
  - Balanced consideration of Engineering and Environment
  - Avoid, minimize and for unavoidable impacts mitigate
  - Environmental Document (EA, EIS or state document)
  
- Public Hearing
  
- Final Agency findings
  
- Final Environmental Document
  
- Preferred alternative advanced to Final Design – in some cases we may combine Preliminary Design activities as well



# *Environmental Framework*

- Continuous coordination with stakeholder input
  - Concept Stage – GIS analysis, conservation plans,...
  - Evaluation Stage – ACE (Methodology Memorandum), screening, reasonable alternatives...
  - Project Development Stage – NEPA, Preliminary Design...
- Open, documented process that integrates technologies
- Continuity in process and decisions
  - Planning and Environmental Linkages
  - Documented decisions
- Balanced consideration of the environment & transportation – joint planning





*Questions?*

