

# Airport Planning Overview

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Design and Operations Task Force  
(AP-ADO/TF/3)*

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Federal Aviation  
Administration



# Learning Objectives

- 1. Office of Airports Overview**
- 2. U.S. System of Airports**
- 3. Approach to Planning**
  - Airport Layout Plans
  - Airport Master Plans
  - National Planning



# 1. Office of Airports Overview



# Office of Airports: Responsibilities

- **Airport Planning**
- **Environmental Review**
- **Airport Financial Assistance Programs**
- **Safety oversight and Certification (Part 139)**
- **Safety and Design Standards**
- **Airport Compliance**



# 2. U.S. System of Airports

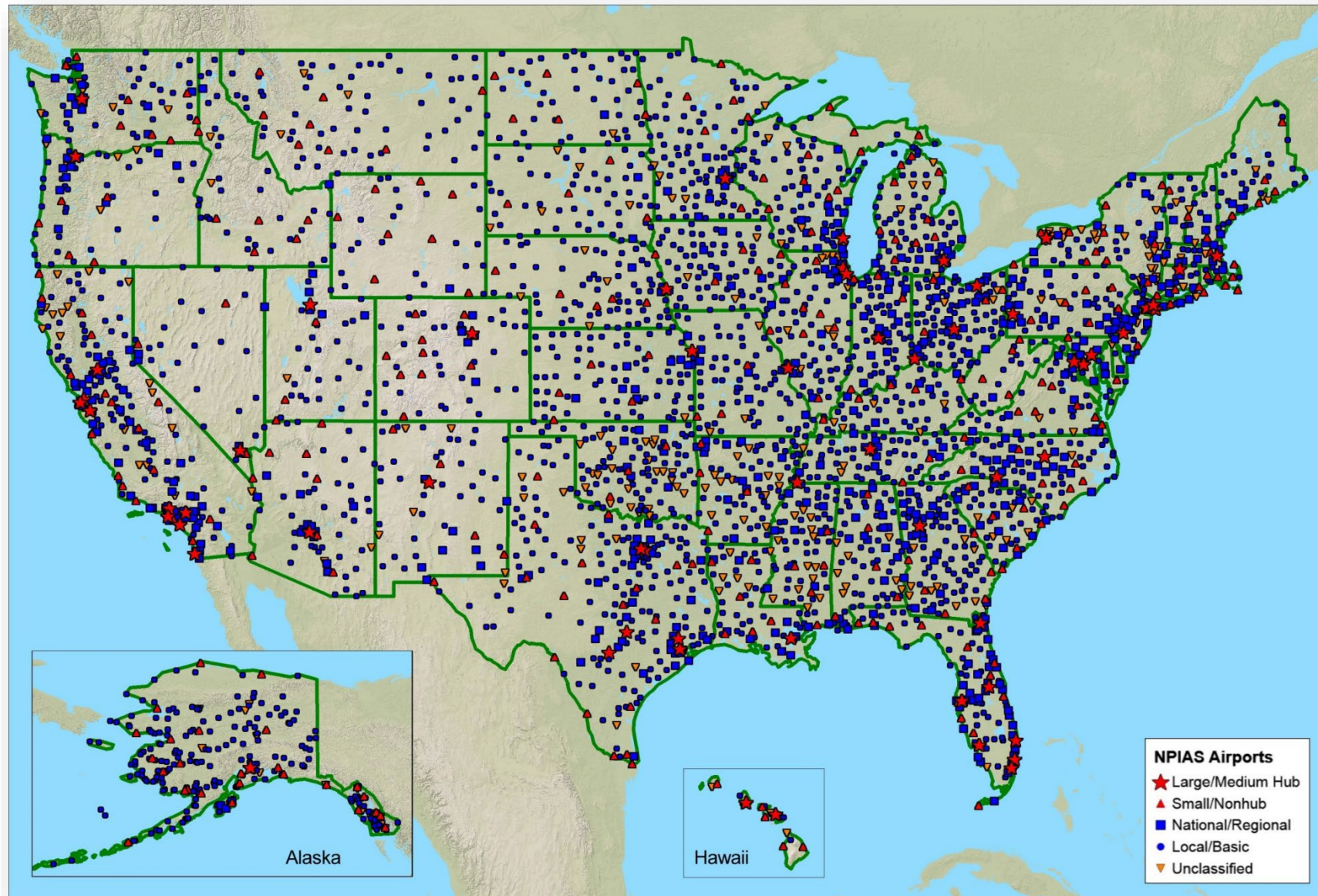


# U.S. System of airports (as of Sept 2020)

- **19,636** total U.S. landing facilities
- **3,304** existing airports in the National Plan of Integrated Airport Systems (“NPIAS”)
- **519** airports certificated under Part 139 commercial service by aircraft with 9 or more seats
- **396** primary airports scheduled commercial service with at least 10,000 annual enplanements



# NPIAS Airports



# NPIAS—Airports with Federal Interest

	Airport Type	Number of Airports	% of U.S. Enplanements	Examples
Primary	<b>Large Hub</b> (>1.0% of all enplanements)	30	71%	Atlanta, Boston, Chicago, DFW, Houston, Miami, etc.
	<b>Medium Hub</b> (0.25 - 1.0% of all enplanements)	31	16%	Anchorage, Burbank, Columbus, Fort Myers, etc.
	<b>Small Hub</b> (0.05 - 0.25% of all enplanements)	69	8%	Asheville, Birmingham, Charleston, Huntsville, etc.
	<b>Non-Hub</b> (>10,000 enplanements, but less than 0.05% of all enplanements)	266	3%	Augusta, Daytona Beach, Aspen, Baton Rouge, etc.
	<b>Subtotal—Primary airports</b>	<b>396</b>		
NonPrimary	<b>General Aviation—National</b>	92		FXE, APA, SDM, EFD, etc.
	<b>General Aviation—Regional</b>	482		Cecil, Dayton, Leesburg, etc.
	<b>General Aviation—Local</b>	1,213		Homestead, Rexburg, etc.
	<b>General Aviation—Basic</b>	893		Arcadia, Ocean City, etc.
	<b>General Aviation—Unclassified</b>	228		
	<b>Subtotal—Nonprimary airports</b>	<b>2,908</b>	<b>0.1%</b>	
	<b>Total—existing NPIAS airports</b>	<b>3,304</b>	<b>100%</b>	

As of Sept 2020

# U.S. Airport Ownership Model

- **Ownership and control**

- States (very few—e.g., Hawaii, Rhode Island, Maryland)
- Counties
- City departments
- Independent government authorities

- **Operation and management**

- Direct employment of management and staff
- Contract services (extensive)
- Management services (less frequent)

- **Major influences**

- Federal influence on safety and environmental sustainability (as well as significant capacity and efficiency projects)
- Airline influence on investment and capacity
- Financial market influence on availability of capital funds



# 3. Approach to Planning

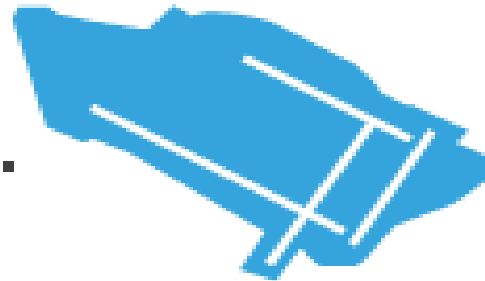


# Airport Planning

- Airports large and small benefit from the planning process (e.g., an Airport Master Plan)
- Calculated approach instead of reactionary.



General Aviation



Large Commercial Service Facilities

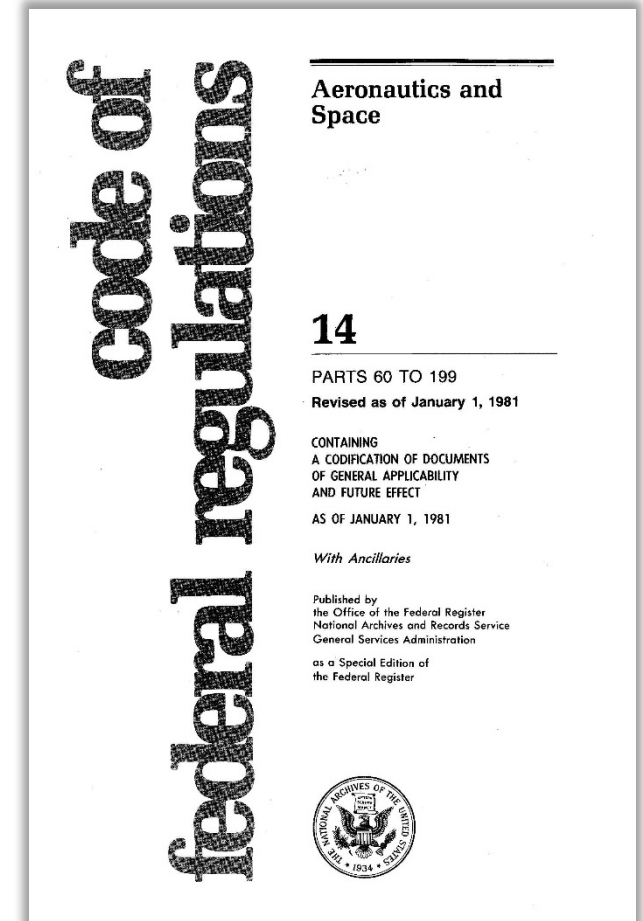


# Airport Layout Plans



# Airport Layout Plans

- **1946 - “Master Plan Layout” requirements developed**
  - Federal Airport Act, signed May 13, 1946
- **1964 - “Master Plan Layout” changed to “Airport Layout Plan”**
  - March 11, 1964, Federal Airport Act Amendment (PL 88-280)
- **1981 CFR documented requirement for sponsors to maintain a current ALP**



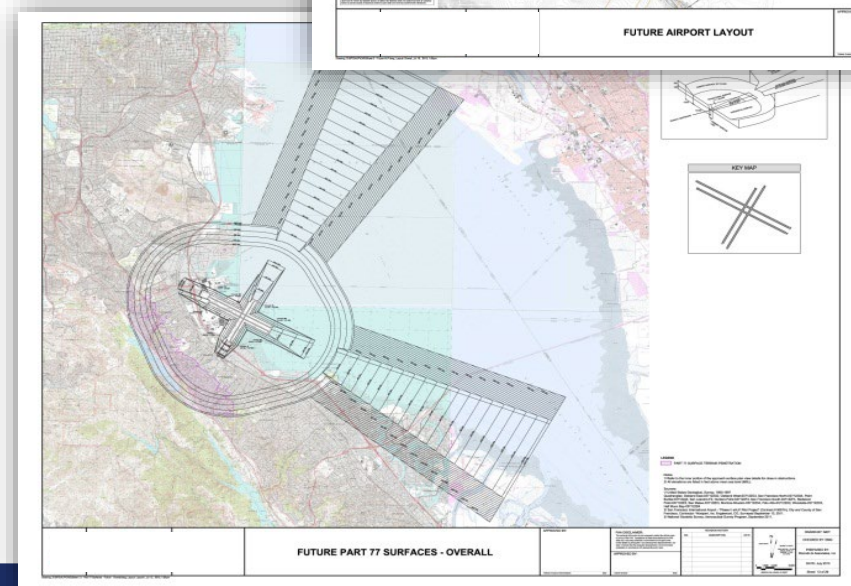
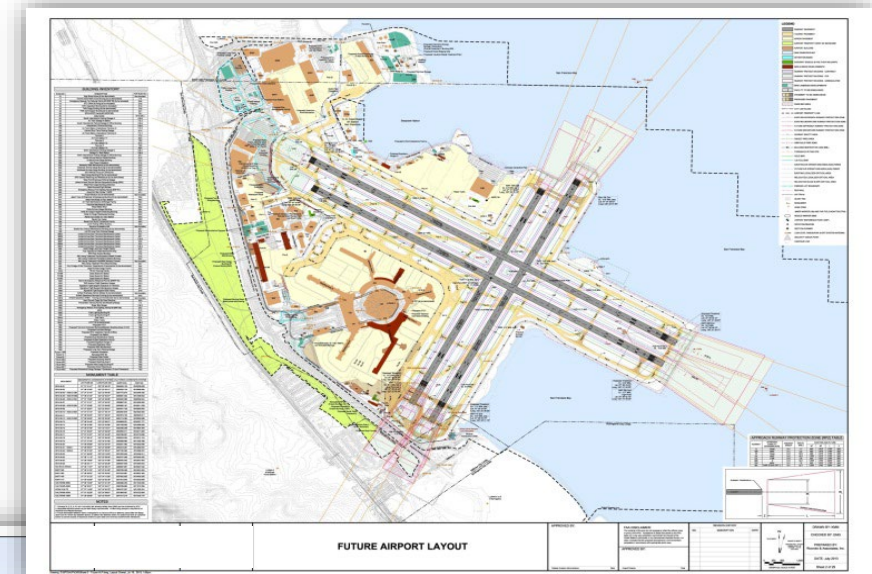
# Airport Layout Plans

- **Required for every airport in the NPIAS**
- **Depicts existing facilities**
- **Depicts future development**
  - Documents short, medium, and long term projects
  - Tool to review and approve future development
    - Airport design
    - Airspace
    - Environmental
    - Etc.



# Airport Layout Plan Set

- Drawing set typically includes the following sheets:
  - Title Sheet
  - Airport Data Sheet
  - Existing Airport Layout Plan
  - Future Airport Layout Plan
  - Airport Airspace Drawing
  - Inner Approach Surface Drawing
  - Runway Departure Surface Drawing(s)
  - Terminal Area Drawing
  - Land Use Drawings (on- and off-airport)
  - Airport Property Map



# Airport Master Planning

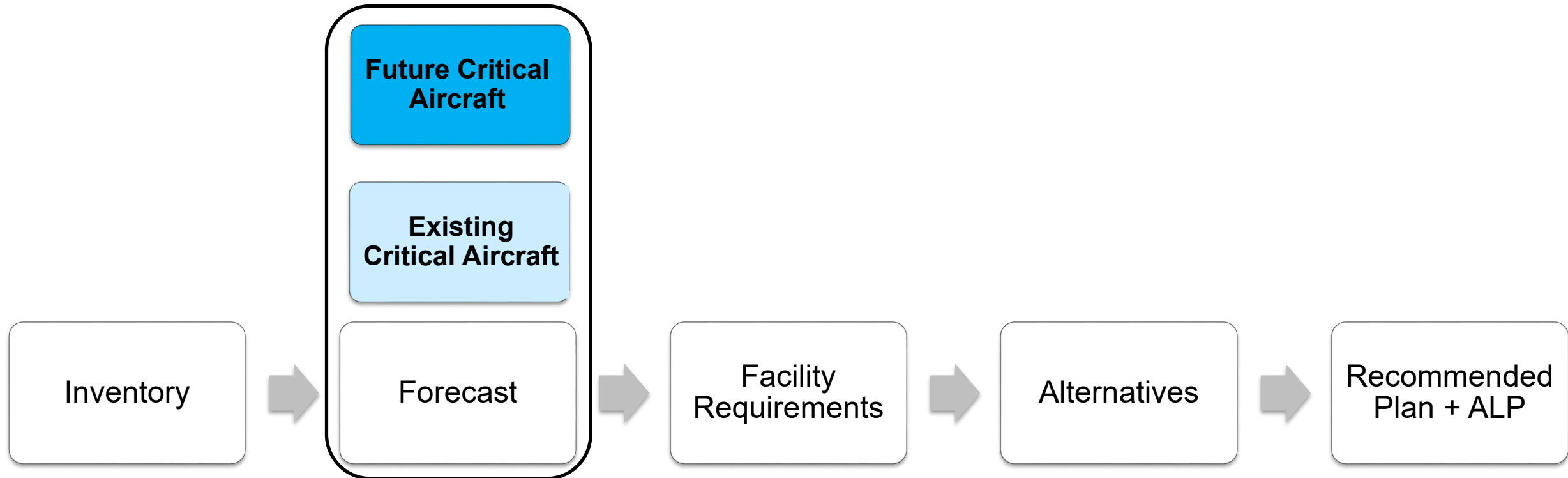


# Airport Master Plans

- Provides a blueprint for short, medium and long-term development
- Includes a capital improvement plan (CIP) which programs future projects
- Includes Airport Layout Plan (ALP) drawing set, which serves as a management tool and guide development (required by the FAA for obligated airports)



# Airport Master Plans - Process

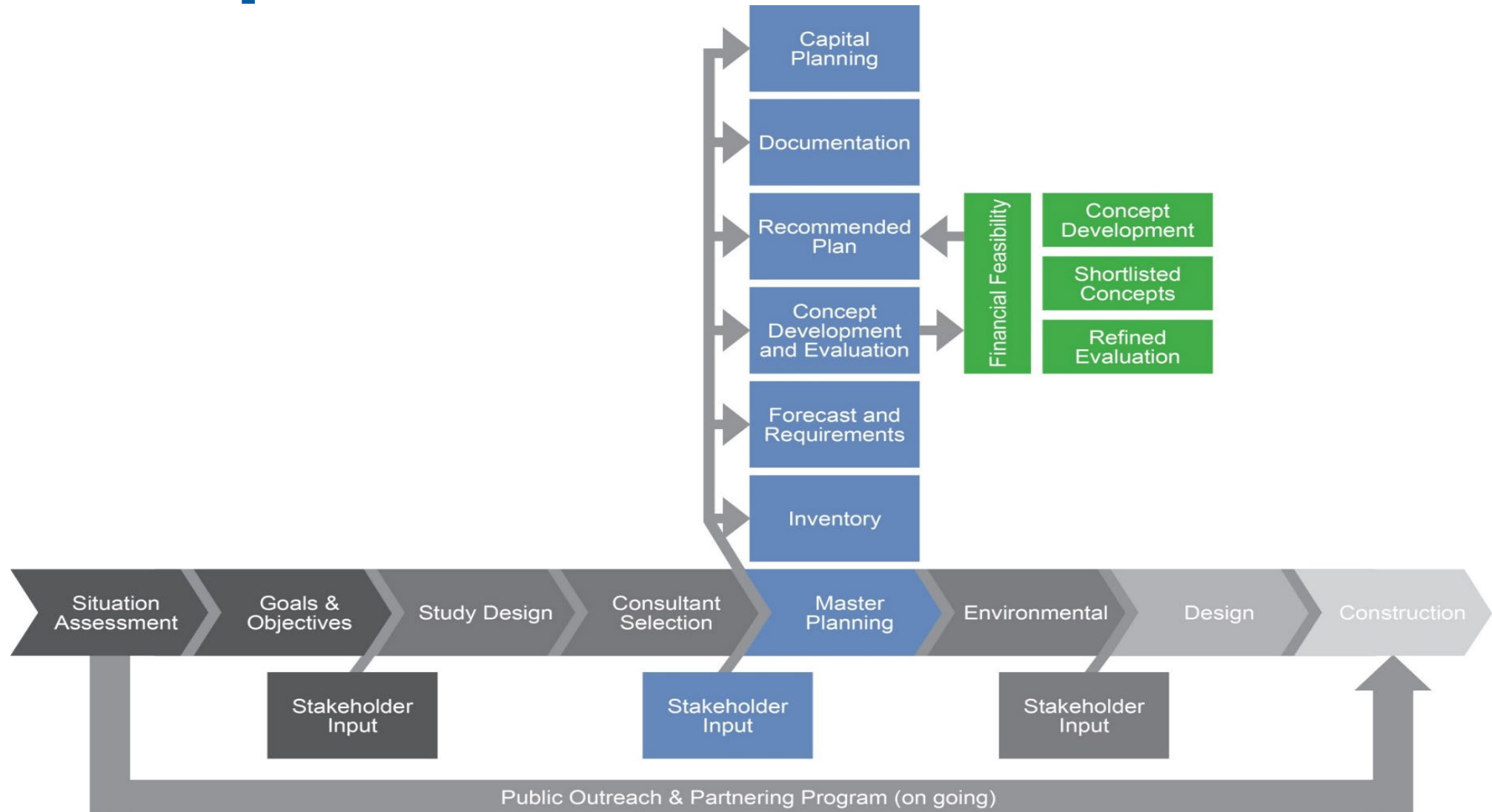


# Airport Master Plan Outcome

- **Answers the question: What is needed in the short, medium and long-term timeframes?**
  - Blueprint for short, medium and long-term development
  - ALP Set
  - Capital Improvement Program (\$)



# Master Planning vs. Overall Development Process



# Planning at the National Level



# National Plan of Integrated Airport Systems (NPIAS)

- Identifies airports included in the national system
- Airport roles
- Airport development needs over the next 5 years
  - Estimates total costs
  - Types of projects (airfield, terminal, reconstruction, standards, etc.)



# NPIAS Report

- **Required by law to publish a report every other year and provide it to Congress**
  - Defines national airport system & individual airport's role to Congress, public, and international representatives
  - Identifies development needed at these airports to meet their role as shown in our Plan
- **Utilized by Congress in discussions of total airport development needs**



# FAA Identifies Development

- **Airport Master Plans**
- **Stand-Alone Studies (RSAT, RIM, Terminal Area Plans, etc.)**
- **Meetings with Airport Sponsors (CIP or PFC)**
- **System Plans (State or Regional)**
- **Inspections (Part 139, state 5010, and airport safety inspections)**
- **Wildlife Hazard Assessments / Site Visits**
- **Input from other Federal agencies (TSA, FHWA, FTA, etc.)**



# Planning Outcome



# Resources

- [AC 150/5070-6, Airport Master Plans](#)
- [AC 150/5000-17, Critical Aircraft and Regular Use Determination](#)
- [AC 150/5360-13A, Airport Terminal Planning](#)
- [AC 150/5050-4, Citizen Participation in Airport Planning](#)
- [AC 150/5300-13, Airport Design](#)
- [NPIAS Report](#)
- [Airport Cooperative Research Program](#) (See research reports and synthesis documents).



# Thank You

