

Nantucket Memorial Airport Commission

Master Plan Workshop

October 26, 2012



Agenda

- Introductions
- Master Plan 101
 - Airport Planning Issues
 - Noise Abatement Activities
 - Environmental Monitoring
 - Public Outreach Program
- Next Steps, Questions, Issues?



Master Plan 101

- What is an airport master plan and why is it important?
- What is covered?
- What is the schedule?
- How does the public participate?



A Master Plan Is...

- **Study** of current airport uses and deficiencies
- **Process** to identify priority projects to help airport operate efficiently and safely
- **Opportunity** to look at the big picture – how does airport interact with island community and how can interactions be improved
- **Analysis** of environmental impacts and mitigation
- **Framework** for 5 year Capital Improvement Plan (CIP) to set FAA Entitlement \$ and Airport investment budgets



What is Covered in the Master Plan?

- ACK role/trends & 20-year aviation forecasts
- Inventory of existing conditions & needs
- Airfield design evaluation
- Airport Layout Plan
- Noise abatement
- Environmental stewardship
- Ground transportation
- Consistency with community goals
- Capital Improvement Plan
- and more



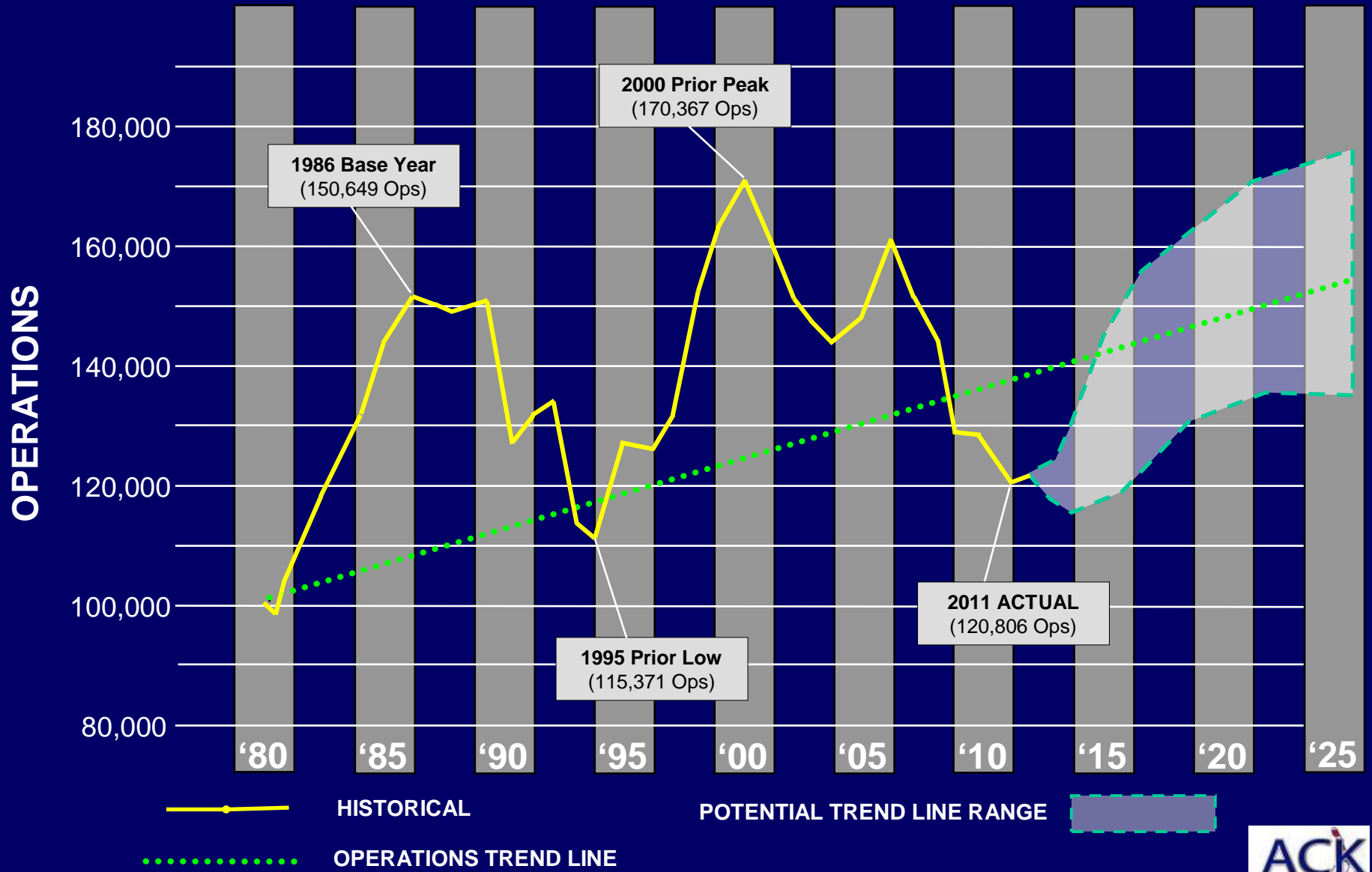
ACK Trends

- Demand is increasing—second busiest airport in Mass.
- Mix of General Aviation aircraft is changing
- Congestion due to changing GA fleet
- Larger corporate jets

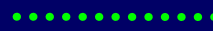


Flight Operations Forecast

NANTUCKET MEMORIAL AIRPORT



HISTORICAL



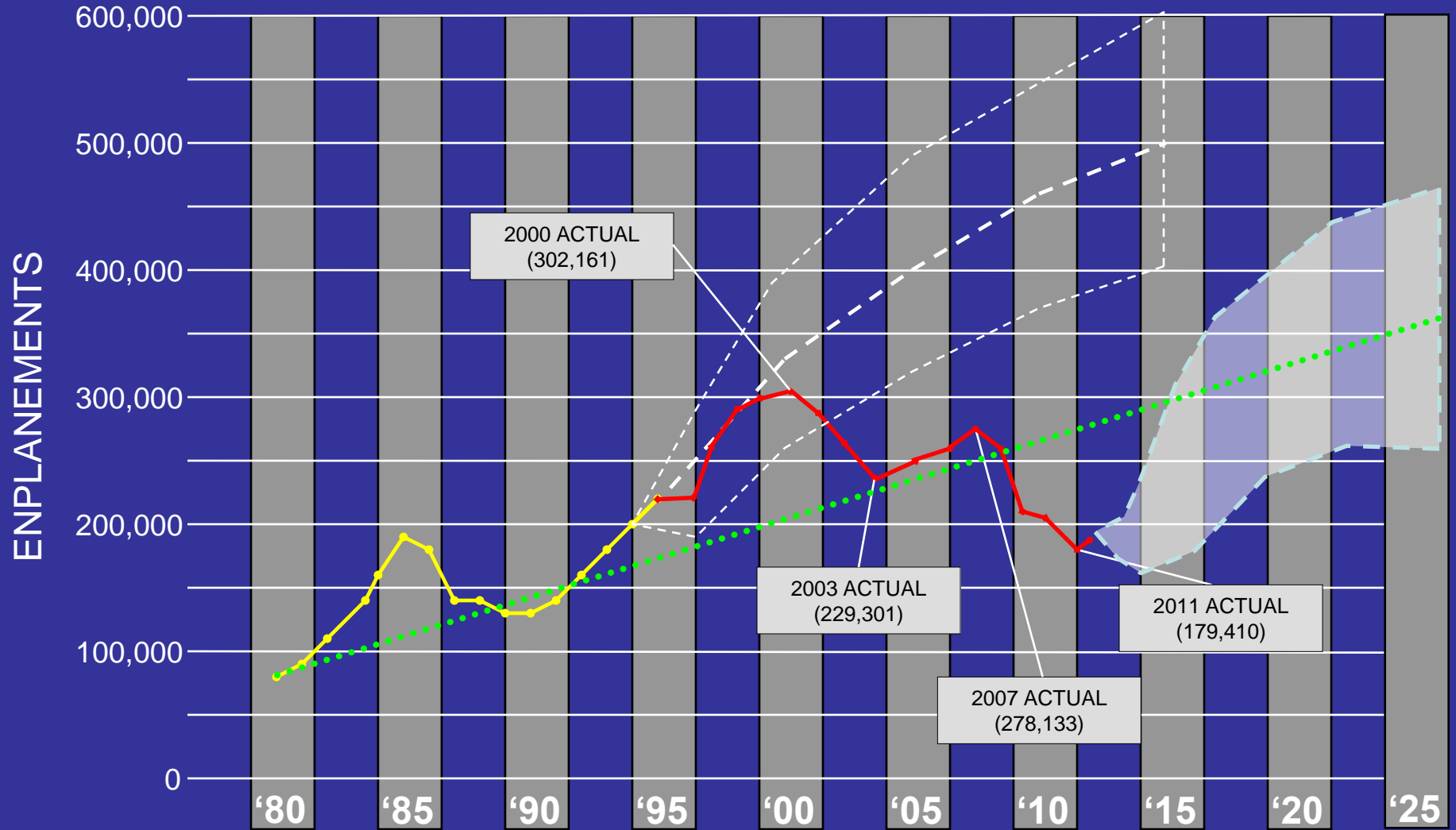
OPERATIONS TREND LINE

POTENTIAL TREND LINE RANGE



Passenger Enplanement Forecast

NANTUCKET MEMORIAL AIRPORT



- HISTORICAL
- 1995 FORECAST
- ACTUAL SINCE MASTER PLAN FORECAST (1995)
- ENPLANEMENTS TREND LINE
- POTENTIAL TREND LINE RANGE



Inventory of Existing Conditions & Needs

Recent Projects/Current Issues

Completed Projects

- Terminal Building and new ARFF Building
- Runway 33 extension 500' south
- Study of South Apron safety & capacity issues
- South Apron noise monitoring
- General Aviation/Admin Building (to be completed)

Current Issues

- Ramp Electrification (FAA rejected funding request)
- Runway 33 taxiway alignment
- South Apron Environmental Assessment (on Hold)
- Air Traffic Control Tower Rehabilitation
- On-Going Noise Abatement Initiatives
- Ongoing Environmental Monitoring Program
- Photovoltaic (solar) field proposals (on Hold)
- GIS Base Plan and Utilities GIS Master Drawing
- Airspace Protection Plan
- Airport Budget & Financial Planning
- Airport Rates & Charges Update



Planning Issues

Current Airport Safety & Operational Layout Issues

- **Mix of Large and Small GA aircraft**
- **Apron Parking of Large Corporate Jets**
- **South Ramp Congestion**
- **Control Tower Improvements**
- **RW33 Extension & Need for Parallel Taxiway**
- **Bunker Area Aviation Use**
- **Bunker Area Non-Aviation Use**
- **GIS Base Plan and Utilities GIS Master Drawing**
- **Potential Photo-Voltaic Facility Site**
- **On-going Noise Mitigation Efforts**
- **On-going Environmental Monitoring Needs**



South Apron Parking as Designed



South Apron Parking as Currently Used



Tight Taxi Clearances on the South Apron



Tight Taxi Clearances on the South Apron



Existing Conditions - South Apron Study Area



Apron Noise & Air Quality Mitigation Park Engines Aimed Away from Homes

←To Runways

To Homes →



Future Noise Mitigation Concepts

Future noise mitigation could include:

- Earth berm
- Noise wall
- Ground Power Units

(All of the above require FAA approval & funding)

- Nighttime user fees (Not Permissible)

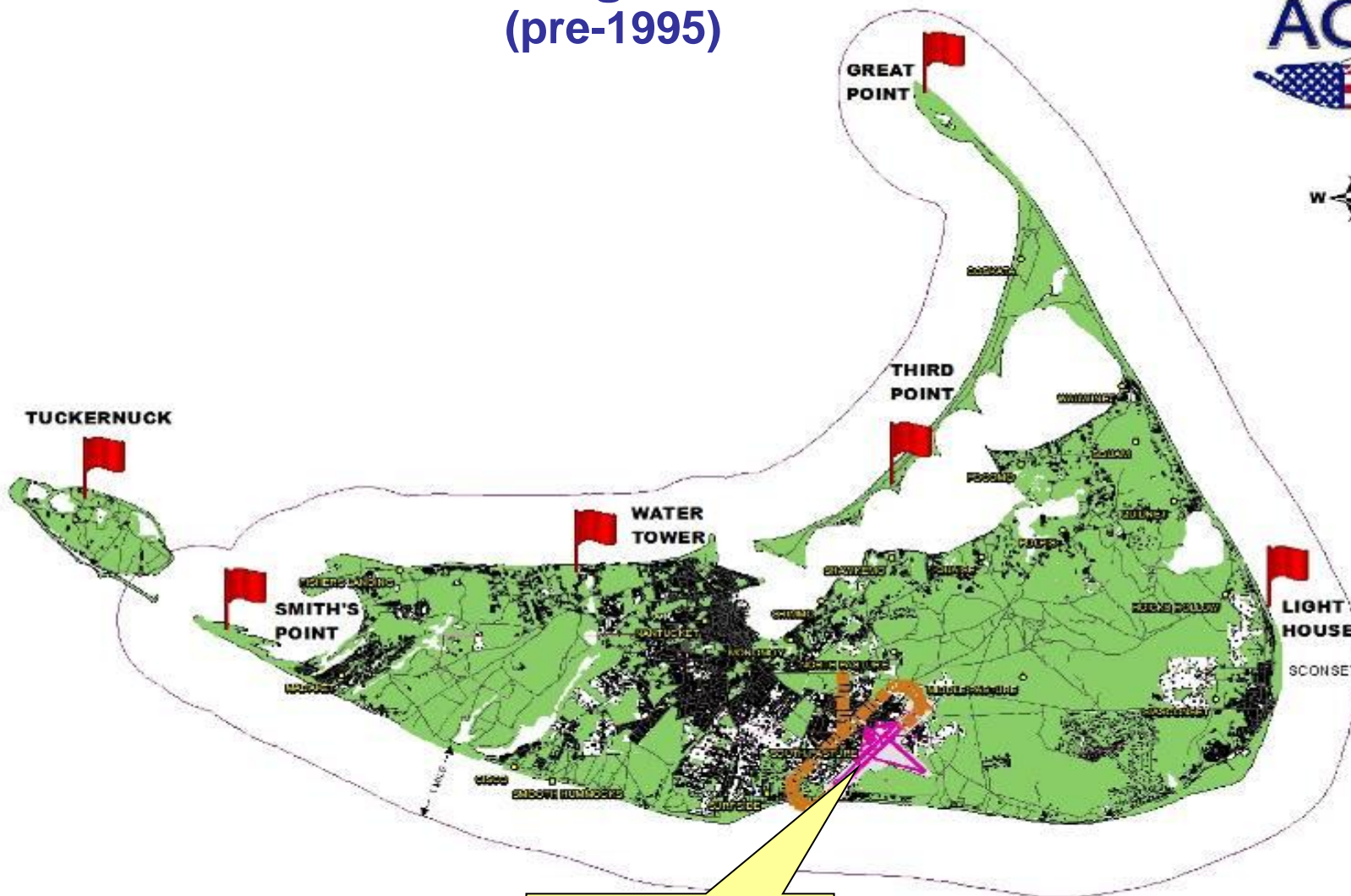


Taxiway D Widening



Noise Mitigation

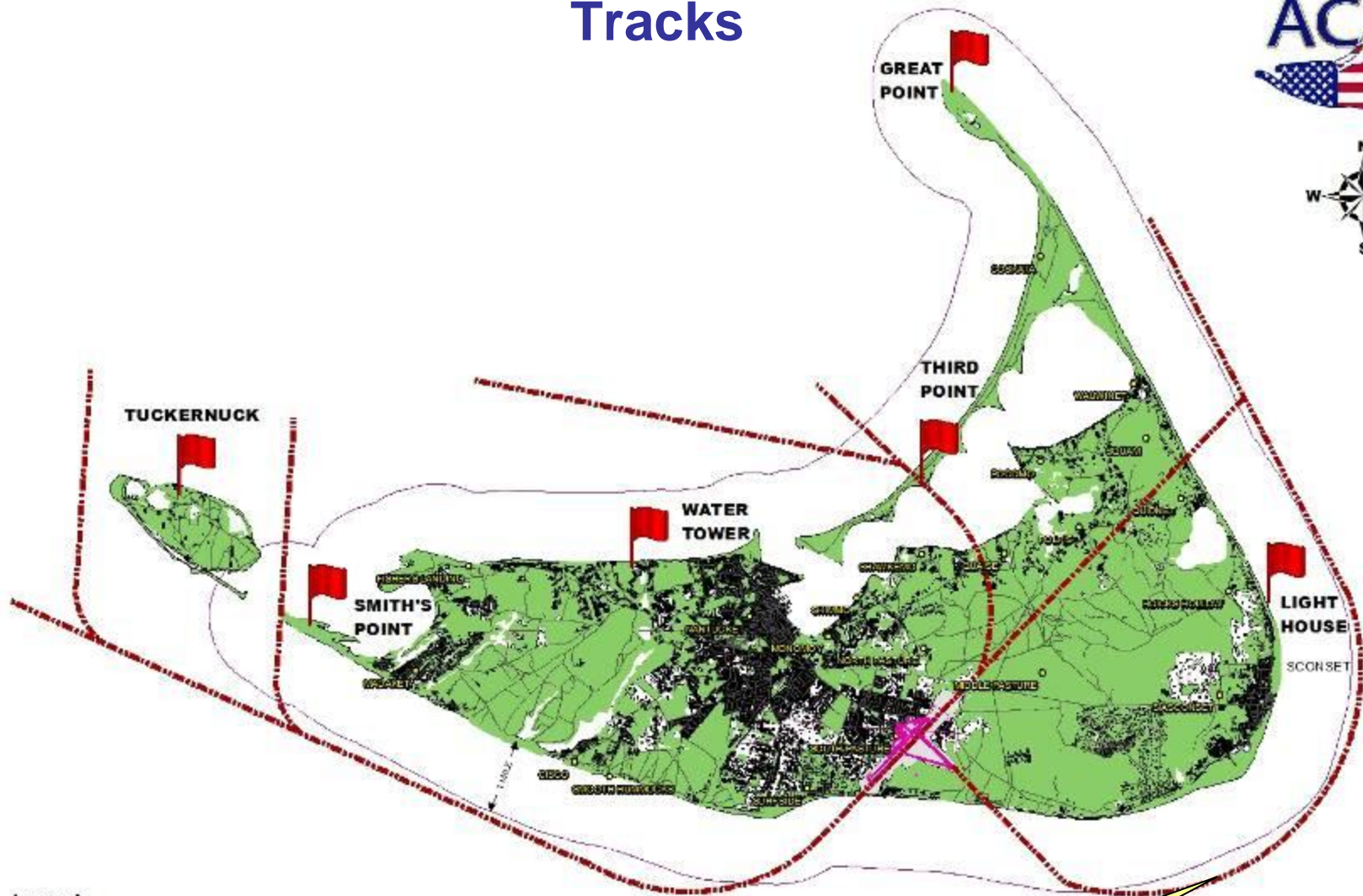
Standard FAA Flight Pattern at ACK (pre-1995)



- Legend**
- Standard Aircraft Traffic Pattern
 - Suggested Flight Corridor
 - 1 Mile Shoreline Buffer
 - Developed Areas - Noise Sensitive
 - Roads

Standard FAA Air Traffic Pattern

On-going Noise Mitigation: Avoid Developed Areas with Over-Water Flight Tracks



Legend

- Suggested Flight Corridor
- 1 Mile Shoreline Buffer
- Developed Areas - Noise Sensitive
- Roads

**Modified VFR
Flight Tracks**

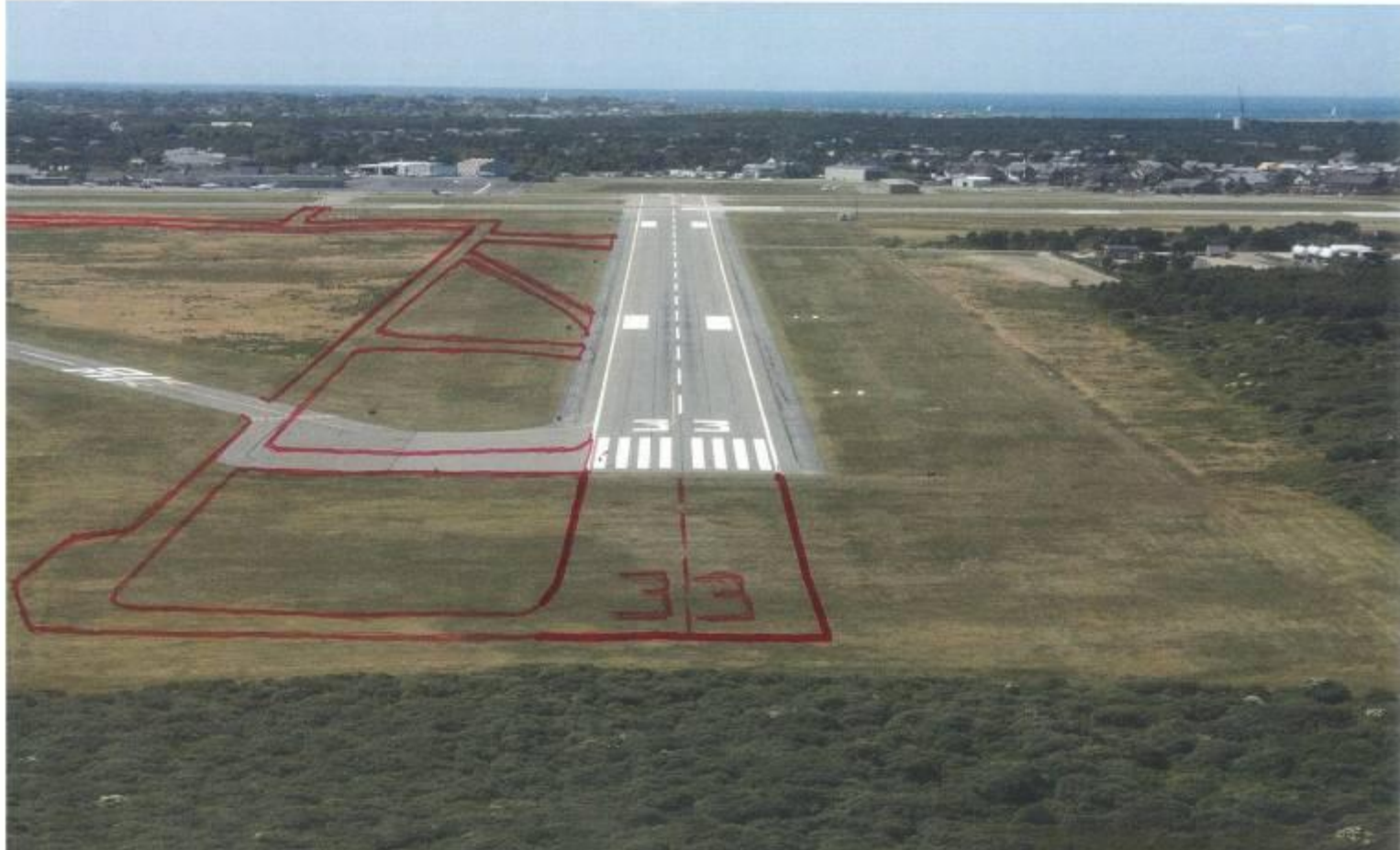
Runway 33: New 500-Foot Extension Enables Increased RW33 Over-Water Landings



Runway 33 East Side Taxiway Alternative

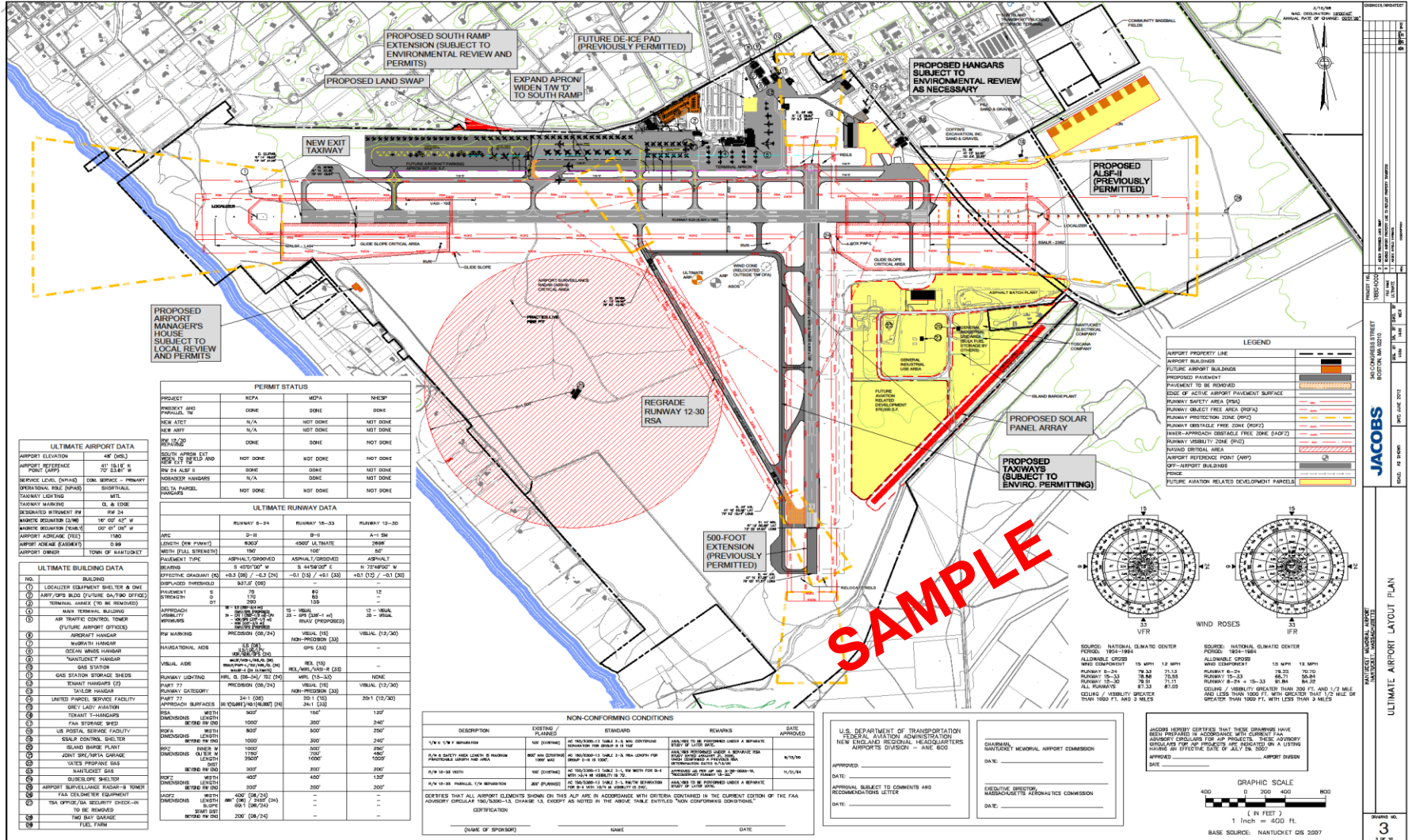


Runway 33 West Side Taxiway Alternative



Airport Layout Plan (ALP)

SAMPLE



PROPOSED AIRPORT MANAGER'S HOUSE SUBJECT TO LOCAL REVIEW AND PERMITS

PROPOSED SOUTH RAMP EXTENSION SUBJECT TO ENVIRONMENTAL REVIEW AND PERMITS

FUTURE DE-ICE PAD (PREVIOUSLY PERMITTED)

PROPOSED LAND SWAP

EXPAND APRON WIDEN TAXI 'D' TO SOUTH RAMP

PROPOSED HANGARS SUBJECT TO ENVIRONMENTAL REVIEW AS NECESSARY

PROPOSED ASPHALT (PREVIOUSLY PERMITTED)

REGRADE RUNWAY 12-30 RSA

PROPOSED SOLAR PANEL ARRAY

PROPOSED TAXIWAYS (SUBJECT TO ENVIRO. PERMITTING)

500-FOOT EXTENSION (PREVIOUSLY PERMITTED)

PERMIT STATUS			
PROJECT	DEPA	DEPA	NEEP
PROJECT BID	DOING	DOING	DOING
NEW ACT	N/A	NOT DONE	NOT DONE
NEW APF	N/A	NOT DONE	NOT DONE
APF	DOING	DOING	DOING
SOUTH APRON EXT	NOT DONE	NOT DONE	NOT DONE
DE-ICE PAD	DOING	DOING	NOT DONE
NEW 24 ALB B	DOING	DOING	NOT DONE
NONSEEP HANGARS	N/A	DOING	NOT DONE
DETA HANGARS	NOT DONE	DOING	NOT DONE

ULTIMATE RUNWAY DATA			
	RUNWAY 6-24	RUNWAY 15-33	RUNWAY 12-30
APFC	0-11	0-11	A-15M
LENGTH (NEW PAVT)	4300'	4300'	2600'
WIDTH (FULL SURFACE)	100'	100'	60'
PAVEMENT TYPE	ASPHALT/DORADO	ASPHALT/DORADO	ASPHALT
FINISH	S 45°10'0" W	S 45°10'0" W	S 70°40'0" W
EFFECTIVE GRADE/HT (AS)	+0.2 (20) / +0.2 (20)	+0.1 (20) / +0.2 (20)	+0.1 (20) / +0.2 (20)
DISPLACED THRESHOLD	547.6 (0)	0	0
AVIATION	5	10	12
PROVISION	01	02	02

ULTIMATE BUILDING DATA			
NO.	BUILDING	REMARKS	DATE
01	LOCALIZER EQUIPMENT BLDG & ONE		
02	ART/OPS BLDG (OUTRIG GATEWAY OFFICE)		
03	TRAINING CENTER (TO BE RENOVATED)		
04	MAIN TERMINAL BUILDING		
05	AIR TRAFFIC CONTROL TOWER (EXISTING AIRPORT OFFICE)		
06	APF HANGAR		
07	NONSEEP HANGAR		
08	NAVIGATION HANGAR		
09	DETA HANGAR		
10	GAZ STATION		
11	GAS STATION STORAGE SHEDS		
12	EMERGENCY HANGAR (2)		
13	AVIATION HANGAR		
14	UNITED PARCEL SERVICE FACILITY		
15	GREY LADY AVIATION		
16	TELEANT HANGARS		
17	FAA STORAGE SHED		
18	US FEDERAL SERVICE FACILITY		
19	SKYLINE CONTROL CENTER		
20	LAND SURVEY PLANT		
21	JOINT USE PARTS STORAGE		
22	TALES PROFFER BLDG		
23	NAVIGATION BLDG		
24	NONSEEP BLDG		
25	APF HANGAR		
26	APF HANGAR		
27	APF HANGAR		
28	APF HANGAR		
29	APF HANGAR		
30	APF HANGAR		
31	APF HANGAR		
32	APF HANGAR		
33	APF HANGAR		
34	APF HANGAR		
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45	APF HANGAR		
46	APF HANGAR		
47	APF HANGAR		
48	APF HANGAR		
49	APF HANGAR		
50	APF HANGAR		

NON-CONFORMING CONDITIONS			
DESCRIPTION	EXISTING PLAN/STATUS	REMARKS	DATE APPROVED
1/4" N/S 10' W/10'0"	NOT CONFORMING	AS THIS IS A 1/4" N/S 10' W/10'0" CONDITION, THE 1/4" N/S 10' W/10'0" IS NOT PERMITTED.	8/15/14
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U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
NEW ENGLAND REGIONAL HEADQUARTERS
AIRPORTS DIVISION - ANE 600

APPROVED: _____
DATE: _____

APPROVAL SUBJECT TO COMMENTS AND RECOMMENDATIONS LETTER
DATE: _____

CHAIRMAN,
NANTUCKET MEMORIAL AIRPORT COMMISSION

DATE: _____

EXECUTIVE DIRECTOR,
MASSACHUSETTS AERONAUTICS COMMISSION

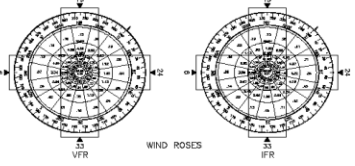
DATE: _____

I HEREBY CERTIFY THAT THESE DRAWINGS HAVE BEEN PREPARED IN ACCORDANCE WITH CURRENT FAA CATEGORY ORDINANCE FOR ALP PROJECTS. THESE DRAWINGS SHALL BE OFFICIAL DATE OF JULY 28, 2007.

APPROVED: _____
DATE: _____
AIRPORT DIVISION

GRAPHIC SCALE
1 inch = 400 FT

LEGEND	
AIRPORT PROPERTY LINE	---
AIRPORT BUILDINGS	■
FUTURE AIRPORT BUILDINGS	■
PROPOSED PAVEMENT	---
PAVEMENT TO BE RENOVATED	---
EDGE OF ACTIVE AIRPORT PAVEMENT SURFACE	---
RUNWAY SAFETY AREA (RSA)	---
RUNWAY OBSTACLE FREE AREA (ORFA)	---
RUNWAY PROTECTION ZONE (RPZ)	---
RUNWAY OBSTACLE FREE ZONE (ORFZ)	---
WATER-APPROACH OBSTACLE FREE ZONE (WAOFZ)	---
RUNWAY VISIBILITY ZONE (RVZ)	---
RENOVED ORIGINAL AREA	---
AIRPORT REFERRING POINT (ARP)	○
OFF-AIRPORT BUILDINGS	---
POSSIBLE	---
FUTURE AIRPORT RELATED DEVELOPMENT PARCELS	---



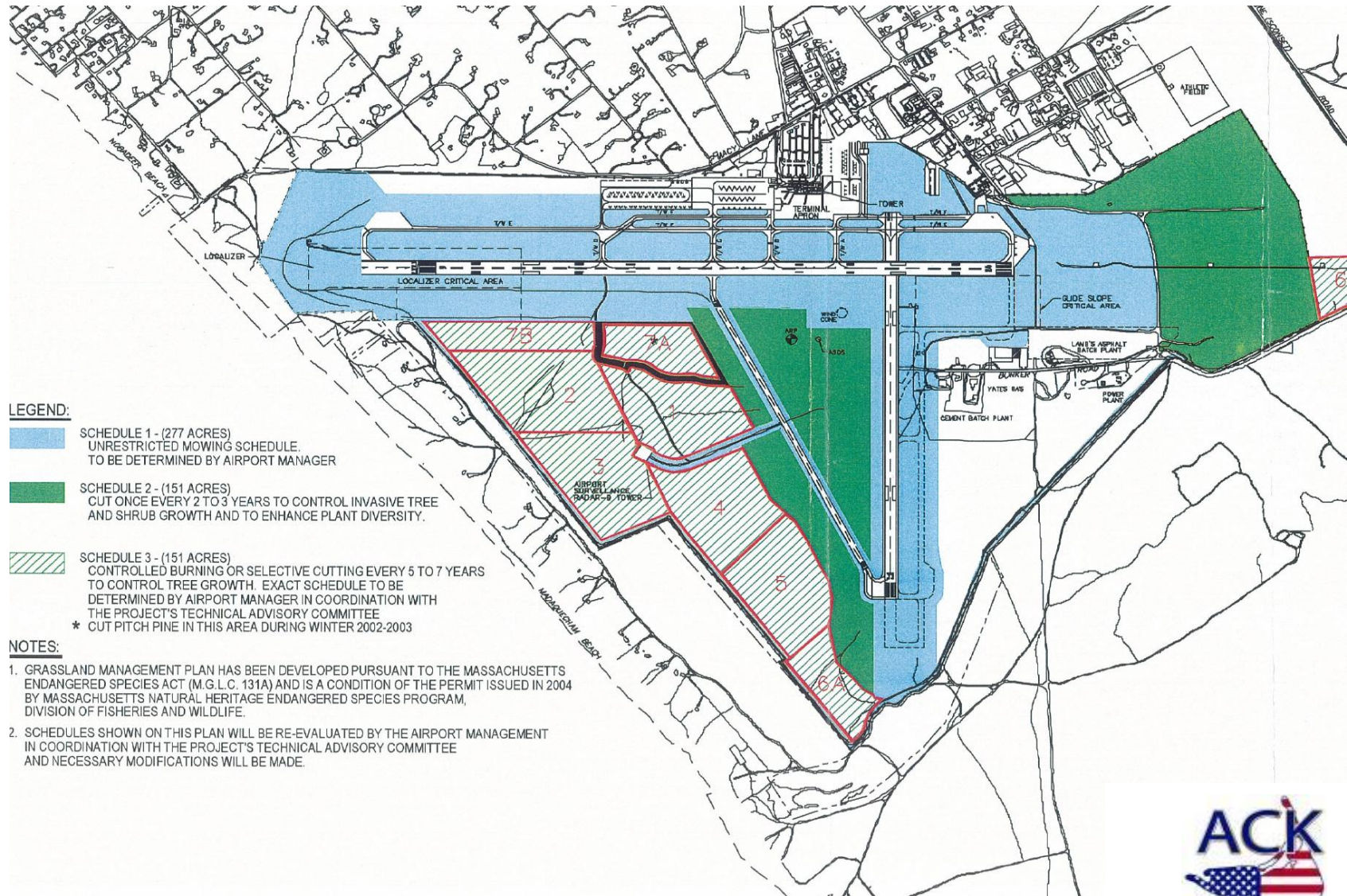
SOURCE: NATIONAL CLIMATE CENTER PERIOD: 1951-1980	
ALLOWABLE CROSS WIND COMPONENT	15 MPH 12 MPH
RUNWAY 6-24	19.33 11.5
RUNWAY 15-33	28.84 20.8
RUNWAY 6-24 + 15-33	29.51 21.1
ALL RUNWAYS	31.33 22.0

SOURCE: NATIONAL CLIMATE CENTER PERIOD: 1981-2010	
ALLOWABLE CROSS WIND COMPONENT	15 MPH 12 MPH
RUNWAY 6-24	28.22 20.5
RUNWAY 15-33	46.71 30.8
RUNWAY 6-24 + 15-33	34.84 26.2
ALL RUNWAYS	31.33 22.0

NOTE: VISIBILITY GREATER THAN 200 FT. AND 1/2 MILE AND LESS THAN 1000 FT. WITH GREATER THAN 1/2 MILE OR GREATER THAN 1000 FT. WITH LESS THAN 1/2 MILE.



On-Going Environmental Monitoring MESA Vegetation Management Plan



Environmental Program Elements

- **Compliance with current MESA Permit**
- **Controlled Burn & Habitat Monitoring**
- **Historic/Archaeological & Tribal Coordination**
- **Sustainability Assessment/ Energy Audit**
- **Renewable Photovoltaic/ Solar/ Wind initiatives**
- **Greenhouse Gas mitigation objectives**
- **On-Going Noise Monitoring**
- **Noise Contour Mapping**
- **SWPP & SPCC Updates**
- **Traffic Reduction Concepts: Taxi, Bus, Bikes**



Budget & Financial Planning

- Airport funds come from user fees & FAA
- Rates and charges will be updated
- FAA funds are both **entitlement funds** and **discretionary funds**
- Discretionary FAA funds are competitive
- Projects that address safety issues are priority projects for FAA Entitlement \$\$
- FAA restricts how its funds can be spent



FAA Capital Improvement Program (CIP)

NANTUCKET MEMORIAL AIRPORT - Proposed FY13-14 FAA CIP

2013 (@ 90% FAA Reimb.; 7.5% STATE; 2.5% ACK)		FAA Entitlement	FAA Discretionary	MASS DOT	AIRPORT	TOTAL
"Replace MITLs on R/W 12-30; Replace 5,000 LF of Fence"		\$393,300		\$32,775	\$10,925	\$437,000
Infrastructure for "PAPIs and REILs for R/W 33"		\$315,000		\$26,250	\$8,750	\$350,000
"Widen & Relocate T/W D and Remove R/W 33 Pad"		\$337,500		\$28,125	\$9,375	\$375,000
"Master Plan/GIS Base Mapping/Enviro-Surveys"		\$675,000		\$56,250	\$18,750	\$750,000
Sub-Total Projects 1 thru 6		\$1,720,800		\$143,400	\$47,800	\$1,912,000
	FY '13 Estimated ENTITLEMENT	\$1,600,000				
	SUBTRACT FY 2013 PROJECTS	-\$120,800				
	Unused Entitlement from FY '12	\$908,300				
	CARRYOVER FROM FY '13 TO FY '14	\$787,500				

2014 (@ 90% FAA Reimb.; 5% STATE; 5% ACK)		FAA Entitlement	FAA Discretionary	MASS DOT	AIRPORT	TOTAL
"EA/EIR Permitting/Compliance Program"		\$315,000		\$17,500	\$17,500	\$350,000
"Taxiway E (& Run-up Pads) Mill and Overlay; Replace 5,000 Feet of Fence"		\$1,844,100		\$102,450	\$102,450	\$2,049,000
Sub-Total Projects 1 thru 3		\$2,969,100	\$1,234,100	\$164,950	\$164,950	\$3,299,000
	FY '14 Estimated ENTITLEMENT	\$1,600,000				
	SUBTRACT FY 2014 PROJECTS	\$1,369,100				
	Unused Entitlement from FY '13	\$787,500	446,600			

Commission's Role in Master Plan

- Help identify & define issues for Master Plan
- Participate in planning process at key milestones
- Get others involved
- Help identify ways we can keep you up to date:
 - Meetings
 - Newsletters
 - Robust airport web page with master plan documents and updates
 - Presentations at neighborhood events
 - Participate on Working Group
 - ?



Public Outreach Program

Expansive & Open Planning Process

- **Working Group**
- **Meetings and Workshops**
 - Public focus groups
 - Informational meetings
 - Speakers Bureau
- **Events**
 - Airport tours and Open Houses
 - Fly-a-Friend / Fly-a-Reporter
- **Communications & Public Information Pieces**
 - Airport Master Plan web page
 - Airplane seat-back inserts or bill stuffers
 - Social media (Facebook and Twitter)
 - Media releases at key milestones



Master Plan Working Group/ Advisory Committee

- **Purpose of Working Group**
 - Provides input to Goals & Objectives and long-range planning
 - Forum to freely present issues, ideas and provide guidance
- **Structure of Working Group**
- Three subcommittees: Airside, Landside, and Environmental
 - Discussions related to aviation, flight safety, community concerns, planning, coordination, fiscal and legal issues
 - Provide linkage to various groups that members have been drawn from as communicators to larger Island-wide community
- **Composition of Working Group**
 - Members from Airport, tenants, users, NPEDC, FAA, MassDOT, community groups and general public
 - Diverse range of community interests and opinions



Schedule

Master Plan

- **Winter 2012–13** create Working Group
- Ongoing environmental monitoring
- **May 30, 2013** - Complete scoping/ID 3-Phase Approach
- **May 30, 2014** - Identify needs/ priorities/ projects/CIP \$; complete Master Plan/ ENF/ Scope EA Grant
- **June 30, 2015** - Complete Environmental Assessment for 5-year CIP Projects

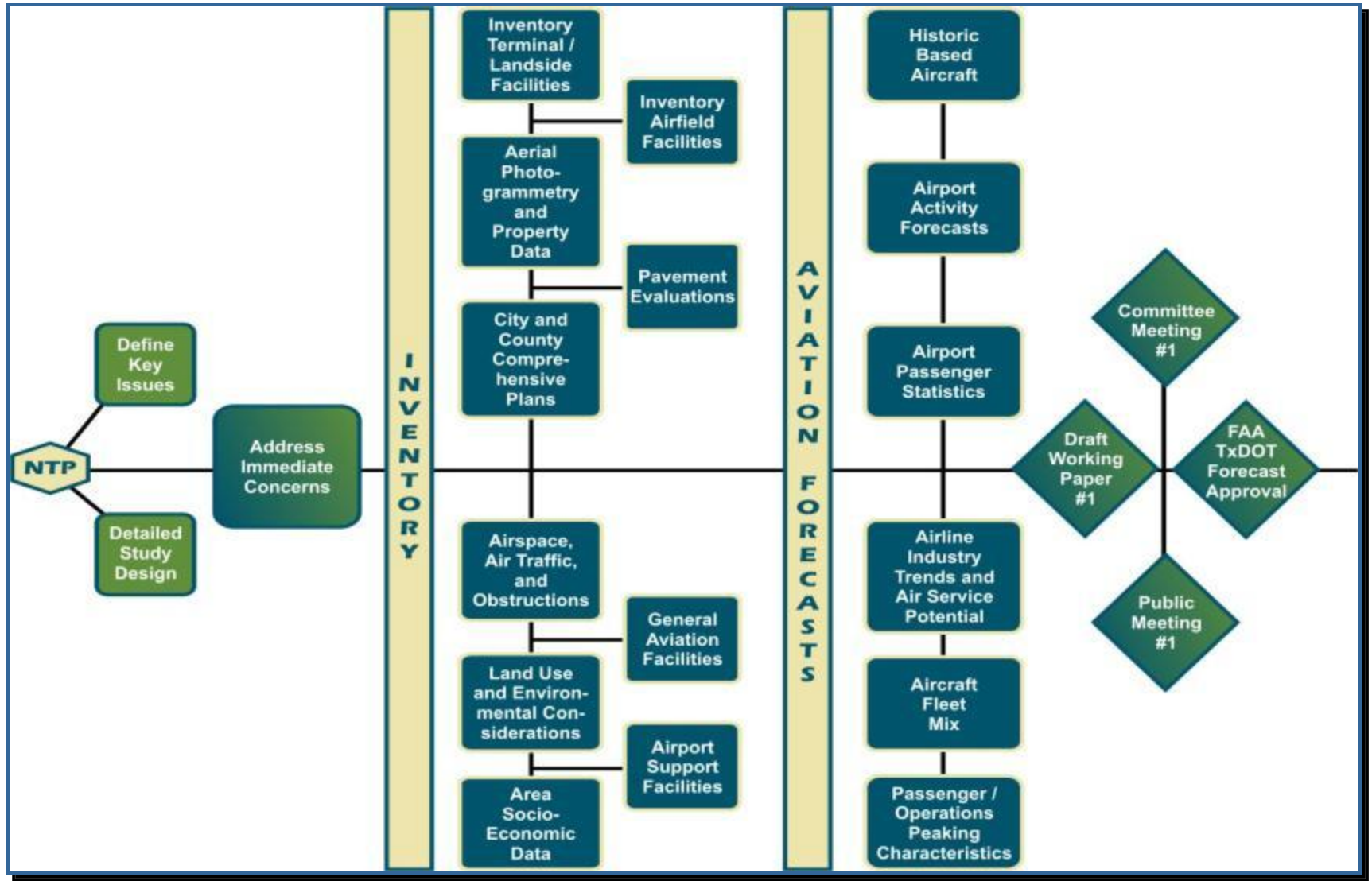
Financial Plan

- **July 2013–May 2014** – Draft and final 5-year plan consistent with MP

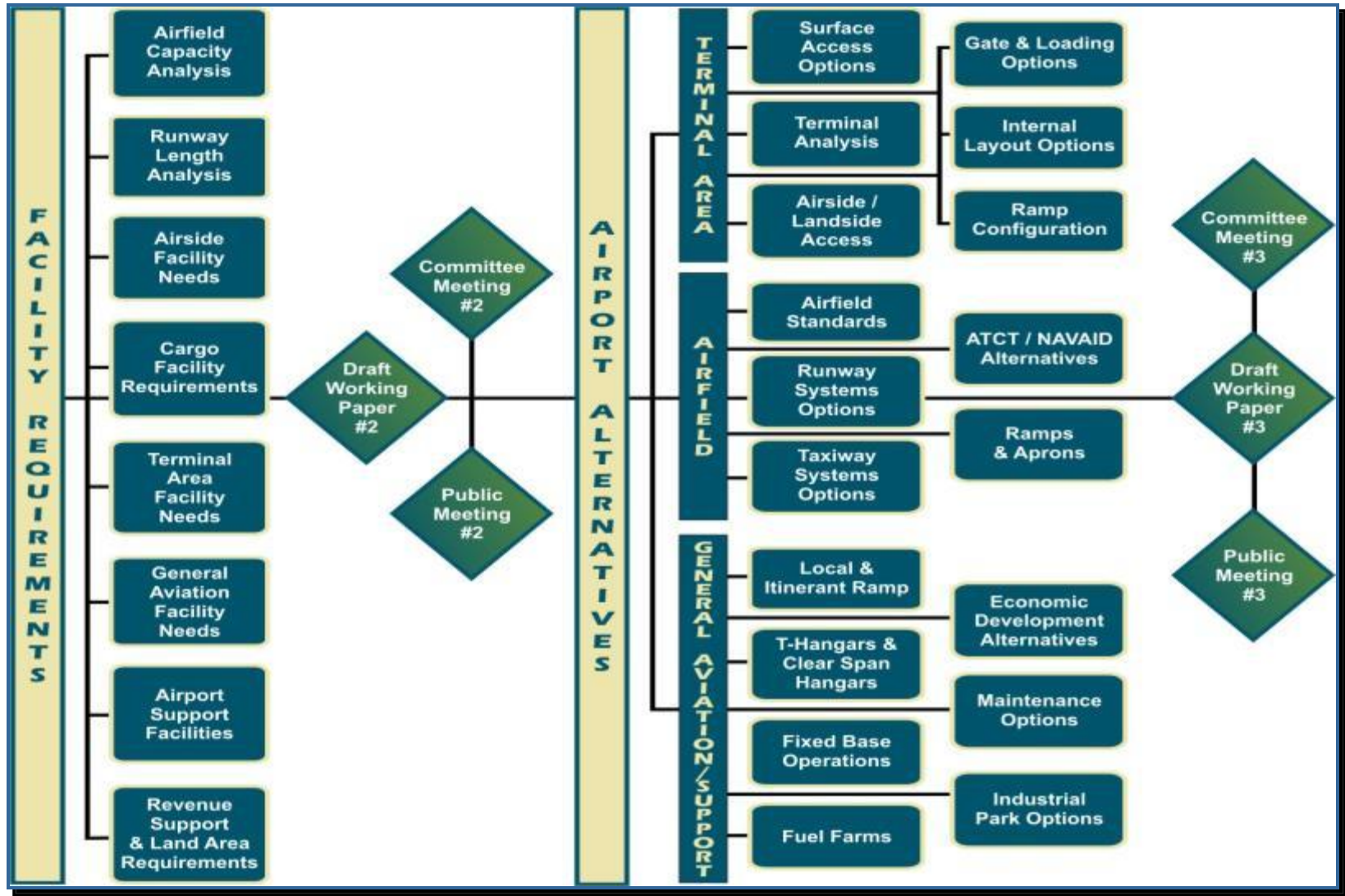
! Public outreach throughout process !



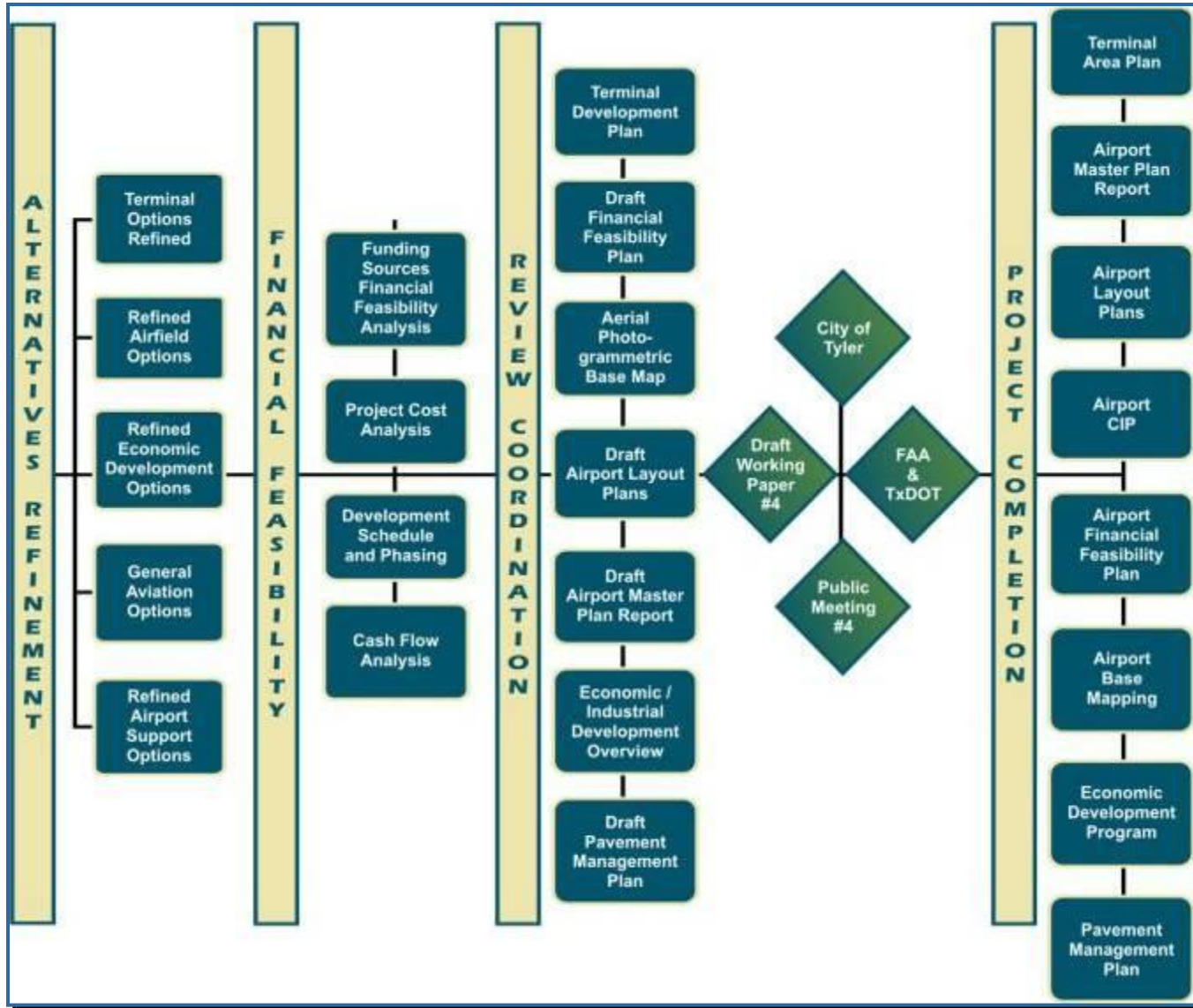
Master Plan Schedule - Phase 1 Tasks (Typ.)



Master Plan Schedule – Phase 2 Tasks (Typ.)



Master Plan Schedule – Phase 3 Tasks (Typ.)



Next Steps:

- **Form Working Group**
- **Develop Draft Scope of Work for Master Plan**
- **Hold kickoff Working Group meeting to review scope, process & schedule (approx. Feb. 2013)**
- **Hold Client Group meeting with FAA & MassDOT Aeronautics on Scope**





Discussion

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