FREUDENTHAL & ELKOWITZ CONSULTING GROUP, INC.

STATE ENVIRONMENTAL QUALITY REVIEW ACT (SEQRA) ENVIRONMENTAL ASSESSMENT FORM AND ENVIRONMENTAL ASSESSMENT REPORT PROPOSED ADOPTION OF THE UPDATED AIRPORT LAYOUT PLAN EAST HAMPTON AIRPORT

HAMLET OF WAINSCOTT
TOWN OF EAST HAMPTON
SUFFOLK COUNTY, NEW YORK

NOVEMBER 2002

TOWN OF EAST HAMPTON

Environmental Assessment Form
Part I
(To be completed by the Applicant)

Note: To be accompanied by a survey showing location of project or action, including elevations.

The purpose of this Environmental Assessment Form is to provide information which will assist the Town in determining whether the action you propose may have a significant impact or effect on the environment. Answers to these questions will be considered as part of the application for approval and may be subject to further verification and public review. Please complete the entire form, leaving no blanks. If a question does not apply, please so indicate.

The information provided herein will be reviewed relative to the criteria of Part II which is to be completed by an agency of the Town. In providing any additional information you believe would assist the agency in completing Part II, this review process may be expedited.

TOWN REVIEWING AGENCY: Town of East Hampton Town Board

Project Title: Proposed Adoption of the Updated Airport Layout Plan
Street: Daniels Hole Road
School District: Wainscott
Zoning District: Commercial-Industrial (CI), Parks & Conservation (PC) and Water Recharge Overlay (WRO) Districts
County Tax Map Parcel #:
Map, Block, Lot: See Attached

Site Plan: ___
Subwaiver: ___
Subdivision: ___
Special Permit: ___
Zoning Change: ___
Plan Adoption: X

APPLICANT/SPONSOR

Name: Town of East Hampton Town Board
Address: 159 Pantigo Road
P.O. & Zip: East Hampton, New York 11937
Telephone #: (631) 324-0118

APPLICANT'S ATTORNEY

Name: N/A
Address:
P.O. & Zip:
Telephone #:

APPLICANT'S SURVEYOR/ENGINEER

Name: TriState Planning & Engineering, P.C.
Address: 208 Glen Cove Road
P.O. & Zip: Old Westbury, New York 11568
Telephone #: (516) 294-4776

DESCRIPTION OF PROJECT: (Briefly describe type of project or action)

See Attached

NOTE: If insufficient space exists to give appropriate answers to any question(s) on this form, please attach sheet giving such answers properly referenced to question number and page number.

A. SITE DESCRIPTION

Physical setting of overall project, both developed and undeveloped areas.

1. Present Land Use: ____Urban __X__Industrial __X__Commercial ____Residential ____Forest ____Agricultural ____Rural (non-farm) (suburban) __X__Other Airport

2. Total Acreage of Project Area: 607.0± acres

APPROXIMATE ACREAGE	PRESENTLY	AFTER COMPLETION
Meadow or Brushland (Non Agricultural)	0 acres	0 acres
Forested	363.4 acres	354.0 acres
Agricultural (includes orchards, pasture, cropland, etc.)	0 acres	0 acres
Wetland (freshwater or tidal as per Articles 24,25 of ECL)	0.30 acres	0.30 acres
Unvegetated (rock, earth, fill)	0 acres	0 acres
Roads, buildings, other paved surfaces	56.9 acres	58.0 acres
Other (indicate type) Ground Cover (grasses and shrubs)	186.4 acres	194.7 acres

3. What is predominant soil type(s) on project site: See Attached

a) Soil Drainage __X__Well drained 100 % of site
____Moderately well drained ____% of site
____Poorly drained ____% of site

b) If any agricultural land is involved, how many acres of soil are classified within soil group 1 through 4 of the NYS Land Classification System? N/A acres (See 1 NYCRR 370)

4. Approximate percentage of proposed project site with slopes:
__X__0-10% slopes 90 % of site
__X__10-15% slopes 10 % of site
____15% or greater ____% of site

5. Is project substantially contiguous to, or contain a building, site or district, listed on the State or the National Registers of Historic Places? ____Yes __X__No

6. Is project substantially contiguous to a site listed on the Register of National Natural Landmarks? ____Yes __X__No

7. What is the depth of the water table? 18±-68± (in feet)

8. Is site located over a primary, principal, or sole source aquifer? __X__Yes ____No

9. Do hunting, fishing, or shell fishing opportunities presently exist in the project ares? ____Yes __X__No

10. Does project site contain any species of plant or animal life that is identified as threatened or endangered? ____Yes __X__No
According to: Site inspections conducted by Orland J. Blanchard, Ph.D.
Identify each species: ____

11. Are there any unique or unusual land forms on the project site (i.e., cliffs, dunes, other geological formations)?
____Yes __X__No Describe: ____

12. Is the project site presently used by the community or neighborhood as an open space or recreation area? ____Yes __X__No
If yes, explain: However, the site is used as a municipal airport.

13. Does the present site include scenic views known to be important to the community? ______Yes __X__No

14. Streams within or contiguous to project area: a) Name of stream and name of river to which it is tributary None

15. Lakes, ponds, wetland areas within or contiguous to project areas: A) Name: ~~Unnamed~~ NYSDEC Wetland SA-34 b) Size (in acres) 0.30

16. Is the site served by existing public utilities? X Yes ___No
a) If yes, does sufficient capacity exist to allow connection? X Yes ____No
b) If yes, will improvements be necessary to allow connection: ____Yes X No

17. Is the site located in an agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ______Yes X No

18. Is the site located in or substantially contiguous to a Critical Environmental Area designated pursuant to Article 8 of the ECL, and 6 NYCRR 617? X Yes ______No (South Fork SGPA and Water Recharge Overlay District)

19. Has the site ever been used for the disposal of solid or hazardous wastes? ______Yes X No

B. PROJECT DESCRIPTION

1. Physical dimensions and scale of project (fill in dimensions as appropriate).
a) Total contiguous acreage owned or controlled by the project sponsor: 607.0± ac.
b) Project acreage to be developed: 252.7 acres initially.
c) Project acreage to remain undeveloped: 354.3 acres.
d) Length of project, in miles: N/A (if appropriate)
e) If the project is an expansion, indicate percent of expansion proposed: N/A %
f) Number of off-street parking spaces existing 110 % 110 % proposed
g) Maximum vehicular trips generated per hour (upon completion of project): 83± (PM Peak Hour) % *Based on an average rate of 0.52 trips per based aircraft and 160 based aircraft.
h) If residential: Number and type of housing units: N/A

	One Family	Two Family	Multiple Family	Condominium
Initially				
Ultimately				

i) Dimensions (in feet) of largest proposed structure: (Automated Weather Observation System - includes 3 concrete footings. One is 5 ft. x 5 ft. and two are 2 ft. by 2 ft.)
height 30 ft. width * length *
j) Linear feet of frontage along a public thoroughfare project will occupy: 7,300± feet. (Length of newly aligned Daniel's Hole Road and includes footage on both sides of roadway, where applicable)

2. How much natural ~~vegetation~~ material (i.e., rock, earth, etc.) will be removed from the site? 0 tons/cubic yards

3. Will disturbed areas be reclaimed? ______Yes ______No X N/A

4. How many acres of vegetation (trees, shrubs, ground covers) will be removed from the site? 9.4± acres Type: Woodland

5. Will any mature forest (over 100 years old) or other locally important vegetation be removed by this project? ______Yes X No

6. If single phase project: Anticipated period of construction: ______months (including demolition) N/A

7. If multi-phased: See Attached

a) Total number of phases anticipated _________(number)

b) Anticipated date of commencement, phase I: _____month _____year (including demolition)

c) Approximate completion date final phase: _____month _____year

d) Is phase I functionally dependent on subsequent phases?
_______Yes _______No

8. Will blasting occur during construction? ______Yes ___X___No

9. Number of jobs generated: ___*___during construction (See Attachment)
___0___after completion

10. Number of jobs eliminated by this project: ___0___.

11. Will project require relocation of any projects or facilities?
_______Yes ___X___No

If yes, explain: However, one of the projects in the Updated Airport Layout Plan includes relocation of a portion of Daniel's Hole Road.

12. Is surface liquid waste disposal involved? _____Yes ___X___No

a) If yes, indicate type of waste (sewage, industrial, etc.) and the amount: ____________

b) Name of water body into which effluent will be discharged: ____________

13. Is (sub)surface liquid waste disposal involved? _____Yes __X*No

*Proposed action will not increase sanitary discharge.

14. Will surface ares of an existing water body increase of decrease by proposal? _______Yes ___X___No

Explain: ____________

15. Is project, or any portion of project, located in a 100 year flood plain? _______Yes ___X___No

16. Will the project involve construction and/or demolition debris? ___X___Yes _______No

If yes, estimate the type and quantity:

Type: Runway debris from proposed runway rehabilitation.

Quantity: ____________

17. Will the project generate or involve wastes requiring special handling? _______Yes ___X___No

If yes, describe method of disposal: ____________

18. Will project use herbicides of pesticides: _____Yes ___X___No

19. Will project routinely produce odors (more than one hour per day)? _______Yes ___X___No

20. Will project routinely produce operating noise exceeding the local ambient noise levels? _______Yes ___X___No No changes in noise levels expected from proposed action (see Part III)

21. Will the project result in an increase in energy use?
_______Yes ___X___No

If yes, indicate types: ____________

22. If water supply is from wells, indicate pumping capacity:
___N/A___gallons/minute

23. Total anticipated water usage per day: ___16,529±___gallons/day.
(Not expected to change from existing condition)

24. Does project involve Local, State, or Federal funding?
___X___Yes _______No

If yes, explain: Town of East Hampton and Federal Aviation Administration

25. Approvals Required:

	Yes	No	Type	Submittal Date
Town Board	X		Airport Layout Plan Adoption	
Planning Board		X		
Zoning Board		X		
SC Health Dept.		X		
SC Planning Comm.		X		
Other County Agencies		X		
State DEC		X		
Federal Agencies	X		~~Airport Layout~~ Plan (FAA)	
Town Trustees		X		
Architectural Review Board		X		
Other State Agencies	X		New York State Dept. of Transportation	

C. ZONING AND PLANNING INFORMATION

1. Does the proposed action involve a planning or zoning decision? X Yes ____ No

If yes, indicate decision required:
___ Zoning Amendment ___Zoning Variance ___Special Use Permit
___ Subdivision ___Site Plan ___New/revision of Master Plan
___ Natural Resources Special Permit ___Resource Management Plan
X Other Adoption of Updated Airport Layout Plan

2. What is the zoning classification(s) of the site? Commercial-Industrial (CI) (462± acres), Parks and Conservation (PC) (145± acres) and within the Water Recharge Overlay (WRO) District

3. What is the maximum potential development of the site if developed as permitted by the present zoning? Approximately 402 Commercial lots on that portion of the site zoned CI (i.e., 462± acres)

4. What is the proposed zoning of the site? N/A

5. What is the maximum potential development of the site if developed as permitted by the proposed zoning? N/A

6. Is the proposed action consistent with the recommended uses in adopted local land use plans? X Yes ____ No

7. What are the predominant land use(s) and zoning classifications within a 1/4 mile radius of proposed action? Industrial, Commercial, Religious and Residential; Commercial-Industrial (CI), Parks and Conservation (PC), Water Recharge Overlay (WRO) District, and Town of Southampton Zoning Districts: Country Residence (120,000 sq. ft.) and Aquifer Protection Overlay (APO) District.

8. Is the proposed action compatible with adjoining/surrounding land uses within 1/4 mile? X Yes ____ No

9. If the proposed action is the subdivision of land, how many lots are proposed? N/A

a) Number: ____

b) What is the minimum lot size proposed? ____

10. Will the proposed action require nay authorization(s) for the formation of sewer or water districts? ____ Yes X No

11. Will the proposed action create a demand for any community provided services (recreation, education, police, fire protection)? ____ Yes X No

12. Will the proposed action result in the generation of traffic significantly above present levels? ____ Yes X No

a) If yes, is the existing road network adequate to handle the additional traffic? ____ Yes ____ No

D. <u>INFORMATIONAL DETAILS</u>

Attach any additional information as may be needed to clarify your project. If there are or may be any adverse impacts associated with your proposal, please discuss such impacts and measures which you proposed to mitigate or avoid them.

E. <u>VERIFICATION</u>

I certify that the information provided above is true to the best of my knowledge.

Applicant/Sponsor Name: Town of East Hampton Town Board c/o Freudenthal & Elkowitz Consulting Group, Inc. Date: 11/26/02

Signature: Theresa Elkowitz, President

Title: President

Proposed Adoption of Updated Airport Layout Plan
East Hampton Airport
Town of East Hampton
Environmental Assessment Form - Part I

Attachment

Suffolk County Tax Map Numbers for the East Hampton Airport

0300-181-1-4.2
0300-181-2-1
0300-181-2-2
0300-181-2-3
0300-181-2-4
0300-181-2-5
0300-181-2-6
0300-181-3-1.3
0300-181-3-1.1
0300-181-3-2
0300-181-3-3
0300-181-5-1.1
0300-180-1-8.5
0300-180-1-8.13
0300-191-2-1
0300-191-2-2
0300-191-2-3
0300-191-2-7.1
0300-191-2-7.2
0300-191-2-7.3
0300-191-2-7.4
0300-191-2-8
0300-191-2-9
0300-191-2-10
0300-191-2-11
0300-191-3-1
0300-191-3-5.1
0300-191-3-5.2
0300-191-3-5.7
0300-191-3-7.2
0300-191-3-7.3
0300-191-3-37.1
0300-191-3-34

0300-191-3-33
0300-191-3-44
0300-191-3-43.1
0300-191-3-54
0300-191-3-45
0300-191-3-48
0300-191-3-49
0300-191-3-50
0300-191-3-38.1
0300-191-3-39
0300-191-3-51
0300-191-3-52
0300-191-3-53
0300-191-3-40.1
0300-191-3-41.1
0300-191-3-42.1

Item No. A (3): Soil Types

Carver and Plymouth Sands - 0-3 percent slopes (CpA), 3-15 percent slopes (CpC), and 15-35 percent slopes (CpE); Cut and Fill Land, gently sloping (CuB); Plymouth Loamy Sands - 0-3 percent slopes (PlA) and 3-8 percent slopes (PlB); Riverhead Sandy Loam - 0-3 percent Slopes (RdA); Plymouth Loamy Sand, silty substratum - 0-3 percent slopes (PSA) and 3-8% slopes (PSB); and Bridgehampton Silt Loam - 0-2 percent slopes (BgA).

Description of Project

The proposed action consists of the adoption of an updated Airport Layout Plan (ALP) including nine airport improvement projects (hereinafter, the ALP projects) and the release of 87± acres from the airport boundaries which may be considered within the five-year time span of the ALP for the East Hampton Airport. There is also one potential future project (i.e., the installation of a Precision Approach System) for later consideration and is included in the ALP. This action is classified as Unlisted pursuant to the State Environmental Quality Review Act and its implementing regulations at 6 NYCRR Part 617, and is a Type I Action pursuant to Chapter 75 of the Town Code. The East Hampton Airport is located at Daniel's Hole Road, in the hamlet of Wainscott, Town of East Hampton, Suffolk County.

The proposed action constitutes the adoption of an updated ALP which includes the following improvements for consideration within the five years following adoption:

Project 1 - Runway 10-28 Protection Zone and Approach Surface

This project involves the removal of obstructions within navigable airspace at both ends of the runway to provide increased safety during take-off and landing procedures. According to the project engineer, TriState Planning & Engineering, P.C., approximately 3.2 acres of vegetation would be cleared for Runway 28. Also, existing telephone poles within the Runway 28 approach surface are proposed to be removed and all telephone and cable lines would be buried. Improvements for Runway 10 would include approximately 2.7 acres of selective tree topping to a point 10 feet below the approach surface (same will allow a few years for regrowth before trimming is again necessary) and the removal of individual bushes and brush in the safety area.

Project 2 - Parallel Taxiway to Runway 10-28

This project involves the addition of a small taxiway area (810 feet in length and 35 feet wide) to the north of Runway 10-28 to create a full-length parallel taxiway. The installation of same would avoid the present unsafe practice in which aircraft must back taxi on the active runway or taxi along Runway 4-22 in order to return to the passenger terminal area. The project would be implemented as a safety measure and will not increase aircraft usage. Approximately 33,750 square feet of additional pavement would be required for the proposed taxiway improvements. The area is currently grass, and thus, no clearing of vegetation would be required.

Project 3 - Runway Safety Areas for Runway 22 and Runway 28

This project involves grading the width of the existing runway safety areas (located on either side of the runways) as well as the length of the runway safety area (located beyond the runway ends) to meet FAA safety standards in the event that an aircraft undershoots, overshoots or diverts from the runway area. Specifically, Runway 22 would be shortened to allow the Runway Safety Area to remain clear of Daniel's Hole Road. As part of Project No. 4, the realignment of Daniel's Hole Road would remove same from the Runway Safety Area east of Runway 28. An area of approximately 500 feet wide and 1,000 feet beyond Runway 28 would be regraded.

Project 4 - Runway 28 Approach over Daniel's Hole Road

This project involves the realignment of Daniel's Hole Road in order to provide an Object Free Area (OFA) to reduce the risk of damage to aircraft in the event of an undershoot, overshoot or diversion from the runway. Specifically, 1,230 linear feet of Daniel's Hole Road and a 70-linear foot section of roadway leading to the East Hampton Indoor Tennis Club would be removed and replaced with 2,850 linear feet of roadway. Approximately 31,200 square feet of pavement would be removed and revegetated, and the proposed new area of roadway would be 68,400 square feet. That new roadway and shoulder areas would require the removal of approximately 2.6 acres of vegetation. As part of the proposed realignment, existing slopes would be regraded to FAA standards and drainage improvements would be made (i.e., additional drywells would be installed).

Project 5 - Deer Fence Openings

This project involves the installation of additional deer fence enclosures (to the existing fencing) to prevent wildlife from entering the Air Operations Area (AOA). Deer have been reported by pilots to have been on or near the active runways at the airport. Each year, at least two aircraft have struck deer during landing or take-off and extensive damage to the aircraft often occurs. This project involves the installation of fencing and "cattle crossing" grating (i.e., round steel pipe laid side by side with gaps in between and painted a dark color to blend with the surrounding area). The proposed fencing would be similar to the existing fencing in that it would be installed parallel to the road and would consist of 10-foot high tension wire on wooden posts.

Project 6 - Bury Power Lines in Runway 22 Approach

This project involves the removal of an existing electrical transmission tower and associated utility poles and the subsequent burial of power lines below the ground surface in order to remove an obstruction to the Runway 22 approach. The power lines would be buried at a depth of 36 to 48 inches below grade surface in an existing cleared area.

Project 7 - Taxiway System Improvements

This project involves the construction of a new taxiway section from the T-hangar complex (adjacent to the terminal building) that connects to Runway 10-28 at the end of Runway 10. These taxiway system improvements would eliminate the current method where all aircraft entering or exiting the existing T-hangar complex must cross an active runway and/or back taxi if using Runway 10. This current method also creates operational constraints, such as the need to hold and wait for aircraft arriving or departing Runway 10-28. The proposed new connector taxiway from the T-hangars to Runway 10 would be 1,073 linear feet and would require the removal of approximately 2.4 acres of vegetation. The proposed by-pass taxiway to Runway 28 would be 223 linear feet. Approximately 45,500 square feet of new pavement would be required.

Project 8 - Automated Weather Observation Station (AWOS)

This project involves the construction of an Automated Weather Observation Station (AWOS) on the "triangle" area created by the three runways. The AWOS will increase airport safety by providing direct, minute-to-minute updated weather forecasts to incoming pilots and would eliminate the need for pilots to contact airport management for such information. No clearing or paving is required for the AWOS.

Project 9 - Rehabilitation/Reconstruction of Runway 4-22

This project involves the reconstruction of Runway 4-22 that is currently very deteriorated. The existing 100-foot runway width exceeds the 75 foot minimum requirement and would be reduced to 75 feet and the shoulder areas would be regraded. In addition, the runway length would be shortened by 134 feet. Total impervious surface area would be reduced by 69,696± square feet.

Also included in this project is the removal of obstructions (i.e., trimming and/or clearing of trees) in the approach surface to Runway 4-22. According to the project engineer, approximately 1.2 acres would be cleared and 1.0 acre of woodland would be trimmed for Runway 4. Improvements to the approach surface to Runway 22 would include trimming approximately 1.7 acres of woodland.

Implementation of the proposed action would minimally increase the area of impervious surfaces on-site (+1.10 acres), and thus, the volume of stormwater runoff generated on-site would only slightly increase. According to the project engineer, the existing drainage system (i.e., drywells) could accommodate the minor increase in stormwater. However, the proposed realignment of Daniel's Hole Road and the associated slope modification and regrading would require the installation of drywells.

Public water is currently supplied to the site from the Suffolk County Water Authority and via on-site private wells. Existing water usage at the site is approximately 16,529 gallons per day. Upon implementation of the proposed project, there would be no projected changes in water use or the volume of sanitary flow generated on-site. Sanitary waste from the subject property is currently directed to an on-site sanitary system.

The following tanks are registered to and/or maintained by the East Hampton Town Airport: one 12,000-gallon underground storage tank for jet fuel, one 8,000-gallon underground storage tank for Avgas, one 1,000-gallon underground storage tank for propane and one 275-gallon above ground storage tank for No. 2 fuel oil. There are also additional tanks registered to and/or maintained by on-site fixed based operators, as follows: additional tanks one 2,000-gallon underground storage tank for No. 2 fuel oil, and two 55-gallon waste oil drums. No new tanks are proposed. Natural gas is and would also continue to be used on-site for heating purposes.

Also being considered by the Town Board of the Town of East Hampton is the release of 87± acres of land from the Airport boundaries. Specifically, the potential future land release includes twenty tax lots along Industrial Road totaling 40± acres and a 47±-acre undeveloped parcel at the northeast portion of the site across Daniel's Hole Road.

The release of land from the Airport boundaries would not alter existing uses nor would it alter development potential thereon. The future land release is subject to the approval of the Federal Aviation Administration (FAA). The Town would seek a "Deed of Release" from the FAA that would eliminate the need for the FAA to review separate applications for the release of individual lots for non-aeronautical use, comprising the 87± acres, in the future. Any development of specific parcels or lots (aviation or non-aviation) would be subject to review in accordance with the State Environmental Quality Review Act and its implementing regulations at 6 NYCRR 617 as well as relevant Town of East Hampton regulations.

Future Project Being Considered

The Town Board of the Town of East Hampton is considering the potential future installation of a Precision Approach System (PAS) to Runway 10. The PAS provides lateral and vertical guidance to the runway, provides a visual reference of the runway alignment and assists pilots with distance perception. All of these benefits contribute to a more stable descent path. The installation of a PAS would reduce the visibility needs to one-half mile rather than the current one-mile distance required, and would also facilitate pilots in landing their aircraft in adverse weather conditions. Currently, the existing airport conditions (i.e., lack of the PAS) prevent approximately 15 percent of aircraft from landing.

As part of the installation of the PAS to Runway 10, Medium Intensity Approach Lights (MALS) and Runway Alignment Indicator Lights (RAILS) (together, referred to as MALSR) would be installed to provide visual reference to the runway alignment and to enhance with distance perception. The MALSR approach light system assists the pilot in judging alignment and distance for the final segment of the approach, and thus, allows the aircraft to operate in instrument flight rules (IFR) weather. The weather minimums for the non-precision approach to Runway 10 and 28 are currently 500 feet Minimum Descent Altitude (MDA) and one to one and a half miles visibility. A precision approach to Runway 10 would reduce the minimums to as low as 256 feet MDA and one-half mile. The reduced approach minimums would also allow the airport to remain open to arriving aircraft and enhance the safety of the approach in poor weather conditions.

The MALSR would extend outward from the runway end for approximately 2,500 feet under the approach. An underground power cable would extend to each light unit. The area required for the MALSR light units would be approximately six acres in size, wherein existing vegetation would be removed and/or replaced with low-lying vegetation and the area fenced.

Also, as part of the installation of the PAS to Runway 10, the Runway Protection Zone (RPZ) would need to be larger than the existing RPZ. The current RPZ is approximately 29 acres, and the required RPZ for the PAS would increase to 79± acres. Approximately 35 acres of the total 79 acres are outside the existing property line and within the boundaries of the Town of Southampton. Should the PAS be implemented, trees within and adjoining the RPZ would need to "topped" to eliminate obstructions in the flight path of approaching pilots.

Finally, the installation of the PAS would require a slope modification from its existing 34 to 1 slope to a slope of 50 to 1, as required by the Federal Aviation Regulation Part 77. The approach surface begins 200 feet out from the runway end and would slope outward and upward at 50 feet horizontal for every foot of vertical change in elevation.

Item No. B (7): Construction Schedule

Implementation of the ALP projects would be phased over a 20-year period and are dependent upon the need for each individual project and the availability of funding from the FAA and Town of East Hampton. Therefore, neither a construction schedule nor the number of construction jobs can be determined at this time.

Note: This document shall not be considered official until and unless it has been signed by the responsible official of the lead agency.

TOWN OF EAST HAMPTON
NEW YORK 11937
ENVIRONMENTAL ASSESSMENT FORM
PART II
(to be completed by Lead Agency)

TOWN REVIEWING AGENCY:

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PROJECT TITLE: Proposed Adoption of the Updated Aiport Layout Plan
East Hampton Airport
STREET: Daniel's Hole Road, Wainscott, New York

SCHOOL DISTRICT: Wainscott
ZONING DISTRICT: Commercial-Industrial (CI), Parks and Conservation (PC) and Water Recharge Overlay (WRO) District
SUFFOLK COUNTY TAX MAP#:

APPLICANT: Town of East Hampton Town Board
Address: 159 Pantigo Road, East Hampton, New York 11937
PO & Zip #:

Telephone #: (516) 324-0118

SITE PLAN:
SUB.WAIVER:
SUBDIVISION:
SPECIAL PERMIT:
ZONE CHANGE:
VARIANCE:
NATURAL RESOURCES SPECIAL PERMIT:
OTHER: Adoption of Plan

COMMENTS:

POSSIBLE IMPACT ON LAND

1. Will there be a significant adverse impact as a result of physical change to the project site? No

2. Will there be a significant adverse impact to any unique or unusual landforms on the site? No

POSSIBLE IMPACT ON WATER

3. Will there be a significant adverse impact to any water body designated as protected? No - See evaluation in Environmental Assessment Report annexed hereto.

4. Will there be a significant adverse impact to any non-protected existing or new body of water? No

5. Will there be a significant adverse impact to surface or groundwater quality? No - See evaluation in Environmental Assessment Report annexed hereto.

6. Will there be a significant adverse impact as a result of altered drainage flow patterns or surface water runoff? No - See evaluation in Environmental Assessment Report annexed hereto.

POSSIBLE IMPACT ON AIR QUALITY

7. Will there be a significant adverse impact to air quality? No

POSSIBLE IMPACT ON PLANTS/ANIMALS

8. Will there be a significant adverse impact to any threatened or endangered species? No - See evaluation in Environmental Assessment Report annexed hereto.

9. Will there be a significant adverse impact to non-threatened or non-endangered species? No - See evaluation in Environmental Assessment Report annexed hereto.

POSSIBLE IMPACT ON AGRICULTURAL LANDS

10. Will there be a significant adverse impact to agricultural land resources? No

POSSIBLE IMPACT ON AESTHETIC RESOURCES

11. Will there be a significant adverse impact to aesthetic resources? No

POSSIBLE IMPACT ON HISTORIC RESOURCES

12. Will there be a significant adverse impact to any site or structure of historic, prehistoric or paleontological importance? No - The New York State Office of Parks, Recreation and Historic Preservation (OPRHP) issued a clearanc letter, a copy of which is annexed hereto.

POSSIBLE IMPACT ON OPEN SPACE AND RECREATION

13. Will there be a significant adverse impact to the quality and quantity of existing or future open space or recreational opportunities? No

POSSIBLE IMPACT ON TRANSPORTATION

14. Will there be a significant adverse impact to existing transportation systems? No

POSSIBLE IMPACT ON ENERGY

15. Will there be a significant adverse impact to the community's sources of fuel or energy supply? No

POSSIBLE IMPACT ON NOISE

16. Will there be objectionable odors, noise, glare, vibration or electrical disturbance as a result of this project? No - See evaluation in Environmental Assessment Report annexed hereto.

POSSIBLE IMPACT ON HEALTH AND HAZARDS

17. Will there be a significant adverse impact to public health and safety? No

POSSIBLE IMPACT ON GROWTH AND CHARACTER OF THE COMMUNITY OR NEIGHBORHOOD

18. Will there be a significant adverse impact to the character of the existing community? No

19. Is there or is there likely to be controversy related to the potential environmental impacts? No

COMMENTS:

LEAD AGENCY: Town of East Hampton Town Board

DATE: November 26, 2002

PREPARED BY: Freudenthal & Elkowitz Consulting Group, Inc.

DATE: November 26, 2002

ENVIRONMENTAL ASSESSMENT REPORT
PROPOSED ADOPTION OF THE UPDATED AIRPORT LAYOUT PLAN
FOR THE EAST HAMPTON AIRPORT
DANIEL'S HOLE ROAD, HAMLET OF WAINSCOTT
TOWN OF EAST HAMPTON, NEW YORK

PROJECT LOCATION:

607±-acre parcel
Daniel's Hole Road
Hamlet of Wainscott
Town of East Hampton, New York

APPLICANT:

Town of East Hampton Town Board
159 Pantigo Road
East Hampton, New York 11937

Contact: Eric Bregman, Esq.

LEAD AGENCY:

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159 Pantigo Road
East Hampton, New York 11937

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DATE OF PREPARATION: November 2002

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I. INTRODUCTION

This document is an Environmental Assessment Report for the proposed improvements at the East Hampton Airport located on Daniel's Hole Road in the hamlet of Wainscott, Town of East Hampton, Suffolk County. The proposed action consists of the adoption of an updated Airport Layout Plan (ALP) which includes the following nine projects for further consideration by the Town of East Hampton Town Board during the normal five-year time span of the ALP (hereinafter, the ALP Projects):

1. Runway 10-28 Protection Zone and Approach Surface;
2. Parallel Taxiway to Runway 10-28;
3. Runway Safety Areas;
4. Runway 28 Approach over Daniel's Hole Road;
5. Deer Fence Openings;
6. Bury Power Lines in Runway 22 Approach;
7. Taxiway System Improvements;
8. Automated Weather Observation Station (AWOS); and
9. Rehabilitation/Reconstruction of Runway 4-22.

Also included as part of the ALP is the release of lands from the Airport boundaries located to the north and south of Industrial Road and one parcel at the northeast portion of the airport property.

This Environmental Assessment Report also evaluates a project which is included in the ALP for potential future consideration by the Town Board of the Town of East Hampton after the five-year horizon of the ALP update, as follows: the installation of a Precision Approach System (PAS) which would provide vertical and horizontal approach guidance to incoming pilots. Although this project is not proposed for implementation in the next five years, its environmental impacts are evaluated herein to ensure a comprehensive environmental review pursuant to 6 NYCRR Part 617.

This Environmental Assessment Report provides a comprehensive environmental review and analyzes the potential environmental impacts associated with the ALP projects and the release of lands being considered as part of the updated ALP, as well as the implementation of the potential future project. Parts I and II of Environmental Assessment Form were prepared and the following specific issues were identified as requiring further analysis and are addressed in this report:

- Project Description;
- Water Resources;
- Ecology;
- Land Use and Zoning; and
- Noise.

This Environmental Assessment Report is organized such that a general discussion of the existing conditions of the project site, as they relate to each of the above issues, are described in each relevant section. The impact analysis consists of a discussion of the cumulative impacts of the proposed action on each environmental issue evaluated followed by an impact analysis of each specific project.

II. PROJECT DESCRIPTION

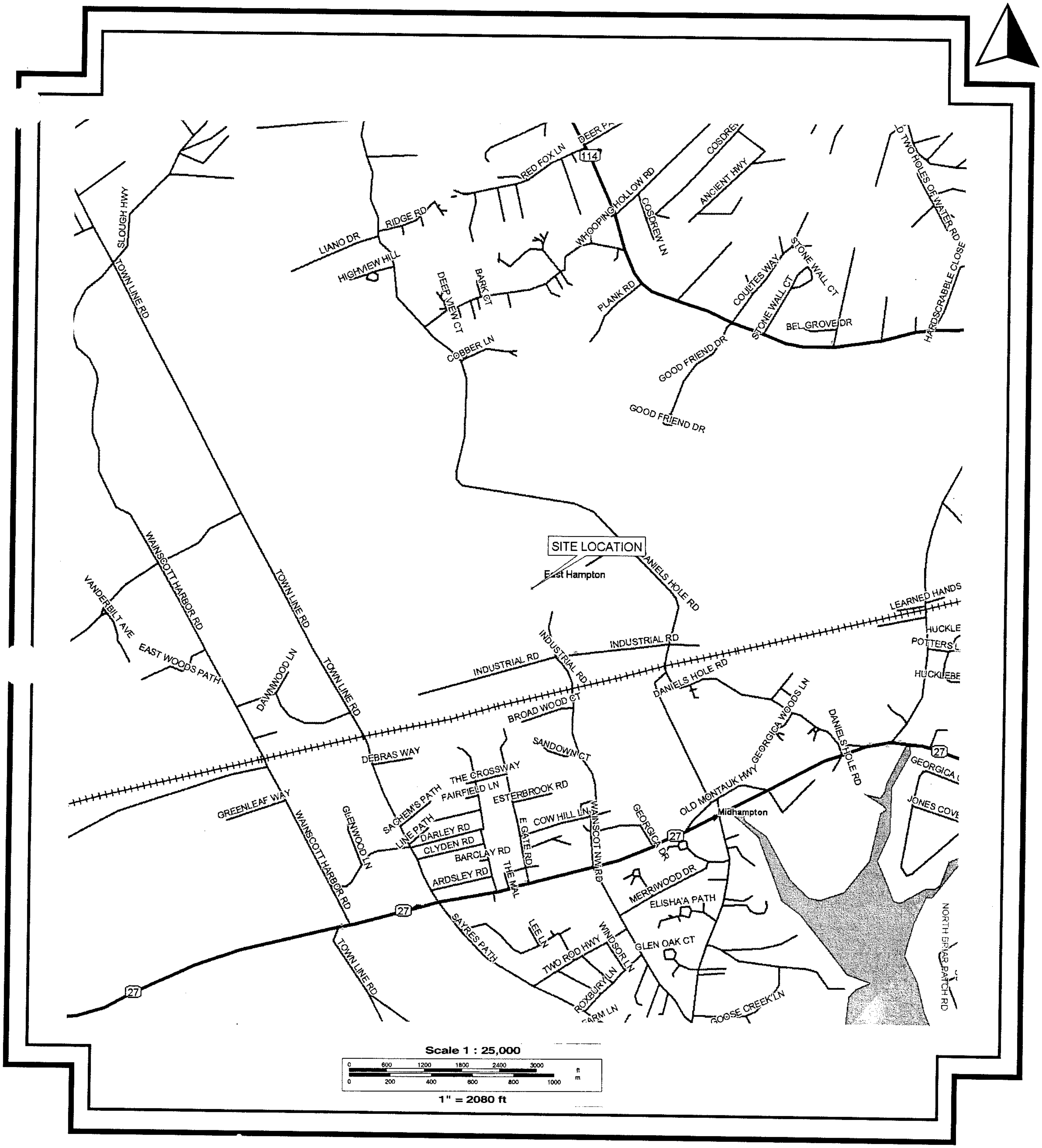
The proposed action consists of the adoption of an updated Airport Layout Plan (ALP) (see Appendix B) including nine airport improvement projects (hereinafter, the ALP projects) and the release of 87± acres from the airport boundaries which may be considered within the five-year time span of the ALP for the East Hampton Airport. There is also one potential future project (i.e., the installation of a Precision Approach System) for later consideration and is included in the ALP. The East Hampton Airport is located at Daniel's Hole Road, in the hamlet of Wainscott, Town of East Hampton, Suffolk County (see Figure 1 - Site Location Map).

The East Hampton Airport has been in existence since November 1942, when the East Hampton Town Board entered into an agreement with the United States relative to the operation and maintenance of the airport. This agreement was aimed at increasing the national defense during World War II. The existing airport encompasses 607± acres and is designated a general aviation airport by the Federal Aviation Administration.

There are currently three runways at the airport. Runway 10-28 runs east-west and is 4,225 feet long and 100 feet wide. Runway 4-22 runs from southwest to northeast and is 2,501 feet long and 100 feet wide. Runway 16-34 runs from southeast to northwest and is 2,223 feet long and 75 feet wide.

Currently, one terminal building exists at the Airport property. The terminal building is 5,000 square feet in size and was constructed in 1997. Additionally, there are fourteen buildings/hangars as well as a cellular communications tower. Five of the hangars house multiple aircraft and are owned by private individuals and corporations. The remaining buildings/hangars are currently occupied by fixed-based operators and aviation tenants.

The majority of the airport property (i.e., 462± acres) is situated in the Commercial - Industrial (CI) District. To the north of the industrial park, the site is also situated within the Water Recharge Overlay District. The northwestern portion of the site (approximately 145 acres) is zoned Parks & Conservation and almost entirely undeveloped.



Source: DeLorme Street Atlas USA (2003)

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Figure 1

The proposed action constitutes the adoption of an updated ALP which includes the following improvements for consideration within the five years following adoption:

Project 1 - Runway 10-28 Protection Zone and Approach Surface

This project involves the removal of obstructions within navigable airspace at both ends of the runway to provide increased safety during take-off and landing procedures. According to the project engineer, TriState Planning & Engineering, P.C., approximately 3.2 acres of vegetation would be cleared for Runway 28. Also, existing telephone poles within the Runway 28 approach surface are proposed to be removed and all telephone and cable lines would be buried. Improvements for Runway 10 would include approximately 2.7 acres of selective tree topping to a point 10 feet below the approach surface (same will allow a few years for regrowth before trimming is again necessary) and the removal of individual bushes and brush in the safety area.

Project 2 - Parallel Taxiway to Runway 10-28

This project involves the addition of a small taxiway area (810 feet in length and 35 feet wide) to the north of Runway 10-28 to create a full-length parallel taxiway. The installation of same would avoid the present unsafe practice in which aircraft must back taxi on the active runway or taxi along Runway 4-22 in order to return to the passenger terminal area. The project would be implemented as a safety measure and will not increase aircraft usage. Approximately 33,750 square feet of additional pavement would be required for the taxiway improvements. The area is currently grass, and thus, no clearing of vegetation would be required.

Project 3 - Runway Safety Areas for Runway 22 and Runway 28

This project involves grading the width of the existing runway safety areas (located on either side of the runways) as well as the length of the runway safety area (located beyond the runway ends) to meet FAA safety standards in the event that an aircraft undershoots, overshoots or diverts from the runway area. Specifically, Runway 22 would be shortened to allow the Runway Safety Area to remain clear of Daniel's Hole Road. As part of Project No. 4, the realignment of Daniel's Hole Road would remove same from the Runway Safety Area east of Runway 28. An area of approximately 500 feet wide and 1,000 feet beyond Runway 28 would be regraded.

Project 4 - Runway 28 Approach over Daniel's Hole Road

This project involves the realignment of Daniel's Hole Road in order to provide an Object Free Area (OFA) to reduce the risk of damage to aircraft in the event of an undershoot, overshoot or diversion from the runway. Specifically, 1,230 linear feet of Daniel's Hole Road and a 70-linear foot section of roadway leading to the East Hampton Indoor Tennis Club would be removed and replaced with 2,850 linear feet of roadway. Approximately 31,200 square feet of pavement would be removed and revegetated, and the proposed new area of roadway would be 68,400 square feet. That new roadway and shoulder areas would require the removal of approximately 2.6 acres of vegetation. As part of the proposed realignment, existing slopes would be regraded to FAA standards and drainage improvements would be made (i.e., additional drywells would be installed).

Project 5 - Deer Fence Openings

This project involves the installation of additional deer fence enclosures (to the existing fencing) to prevent wildlife from entering the Air Operations Area (AOA). Deer have been reported by pilots to have been on or near the active runways at the airport. Each year, at least two aircraft have struck deer during landing or take-off and extensive damage to the aircraft often occurs. This project involves the installation of fencing and "cattle crossing" grating (i.e., round steel pipe laid side by side with gaps in between and painted a dark color to blend with the surrounding area). The proposed fencing would be similar to the existing fencing in that it would be installed parallel to the road and would consist of 10-foot high tension wire on wooden posts.

Project 6 - Bury Power Lines in Runway 22 Approach

This project involves the removal of an existing electrical transmission tower and associated utility poles and the subsequent burial of power lines below the ground surface in order to remove an obstruction to the Runway 22 approach. The power lines would be buried at a depth of 36 to 48 inches below grade surface in an existing cleared area.

Project 7 - Taxiway System Improvements

This project involves the construction of a new taxiway section from the T-hangar complex (adjacent to the terminal building) that connects to Runway 10-28 at the end of Runway 10. These taxiway system improvements would eliminate the current method where all aircraft entering or exiting the existing T-hangar complex must cross an active runway and/or back taxi if using Runway 10. This current method also creates operational constraints, such as the need to hold and wait for aircraft arriving or departing Runway 10-28. The proposed new connector taxiway from the T-hangars to Runway 10 would be 1,073 linear feet. That new taxiway would require the removal of approximately 2.4 acres of vegetation. The proposed by-pass taxiway to Runway 28 would be 223 linear feet. Approximately 45,500 square feet of new pavement for both taxiways would be required.

Project 8 - Automated Weather Observation Station (AWOS)

This project involves the construction of an Automated Weather Observation Station (AWOS) on the "triangle" area created by the three runways. The AWOS will increase airport safety by providing direct, minute-to-minute updated weather forecasts to incoming pilots and would eliminate the need for pilots to contact airport management for such information. No clearing or paving is required for the AWOS.

Project 9 - Rehabilitation/Reconstruction of Runway 4-22

This project involves the reconstruction of Runway 4-22 that is currently very deteriorated. The existing 100-foot runway width exceeds the 75 foot minimum requirement and would be reduced to 75 feet and the shoulder areas would be regraded. In addition, the runway length would be shortened by 134 feet. Total impervious surface area would be reduced by 69,696± square feet. Also included in this project is the removal of obstructions (i.e., trimming and/or clearing of trees) in the approach surface to Runway 4-22. According to the project engineer, approximately 1.2 acres of woodland would be cleared and 1.0 acre of woodland would be trimmed for Runway 4. Improvements to the approach surface to Runway 22 would include trimming approximately 1.7 acres of woodland.

Relevant site data for the proposed action (i.e., updated ALP with nine improvement projects), as extrapolated from the Preliminary Site Plan prepared by TriState Planning & Engineering, P.C., are as follows (see Appendix A):

Table 1

Description of the Airport Layout Plan*

Use Description	Existing Acreage	Proposed Acreage	Net Change
Total Area of Property	607.0	607.0	No change
Area of Buildings	6.7	6.7	No change
Area of Pavement	50.2	51.3	+ 1.10 ac.
Area of Ground Cover (Grasses and Shrubs)	186.4	194.7	+8.3 ac.
Area of Natural Vegetation (Wooded)	363.4	354.0	-9.4 ac.
Area of Surface Water (Daniel's Hole)	0.30	0.30	No change

*Does not include the installation of the Precision Approach System.

As indicated in Table 1, implementation of the proposed action would modify the natural areas on the subject site such that approximately 9.4 acres of natural vegetation will be removed. Of this 9.4 acres, approximately 1.10 acres will be paved and the remaining 8.3 acres will be comprised of grasses and/or low-lying vegetation. As discussed in Section III of this Environmental Assessment Report, the existing wetland on the site will not be disturbed as improvements are proposed in excess of 1,100 feet from the wetland.

As described above, four of the ALP projects will increase the area of impervious surfaces on-site by 1.10±-acres. A description of same follow:

	Impervious Surface Area
Project 1	+33,750 sq. ft.
Project 4	-31,200 sq. ft. (existing road)
	+68,400 sq. ft. (realigned road)
Project 7	+45,500 sq. ft.
Project 9	-69,696 sq. ft.
	+46,754 sq. ft. or 1.07 acres (~1.10 acres)

As implementation of the proposed action would minimally increase the area of impervious surfaces on-site (+1.10 acres), the volume of stormwater runoff generated on-site would only slightly increase. According to the project engineer, the existing drainage system (i.e., drywells) could accommodate the minor increase in stormwater. However, the proposed realignment of Daniel's Hole Road and the associated slope modification and regrading would require the installation of drywells.

Public water is currently supplied to the site from the Suffolk County Water Authority and via on-site private wells. Existing water usage at the site is approximately 16,529 gallons per day. Upon implementation of the proposed project, there would be no projected changes in water use or the volume of sanitary flow generated on-site. Sanitary waste from the subject property is currently directed to an on-site sanitary system.

Access to the subject property is from Daniel's Hole Road. No changes to the airport access are proposed.

The following tanks are registered to and/or maintained by the East Hampton Town Airport: one 12,000-gallon underground storage tank for jet fuel, one 8,000-gallon underground storage tank for Avgas, one 1,000-gallon underground storage tank for propane and one 275-gallon above ground storage tank for No. 2 fuel oil. There are also additional tanks registered to and/or maintained by on-site fixed based operators, as follows: additional tanks one 2,000-gallon underground storage tank for No. 2 fuel oil, and two 55-gallon waste oil drums. No new tanks are proposed. Natural gas is and would also continue to be used on-site for heating purposes.

Also evaluated in this Environmental Assessment Report is the release of 87± acres of land from the Airport boundaries. Specifically, the potential future land release includes twenty tax lots along Industrial Road totaling 40± acres and a 47±-acre undeveloped parcel at the northeast portion of the site across Daniel's Hole Road (See Figure 2).

The release of land from the Airport boundaries would not alter existing uses nor would it alter development potential thereon. The future land release is subject to the approval of the Federal Aviation Administration (FAA). The Town would seek a "Deed of Release" from the FAA that would eliminate the need for the FAA to review separate applications for the release of individual lots for non-aeronautical use, comprising the 87± acres, in the future. Any development of specific parcels or lots (aviation or non-aviation) would be subject to review in accordance with the State Environmental Quality Review Act and its implementing regulations at 6 NYCRR 617 as well as relevant Town of East Hampton regulations.

The Town has been developing the existing Industrial Park over the last 20 years. According to the "Map of the East Hampton Industrial Park" filed April 17, 1998, there are 24 Industrial Park lots totaling 56 acres. Of these 24 lots, seven parcels[1] would be designated for airport or aviation-related uses. The remaining 17 lots of the Industrial Park are proposed to be released from the East Hampton Airport. One of the proposed lots to be released[2] is indicated as a Town-designated access strip on the subdivision map. Two additional lots[3] are municipally-owned and are not part of, but are adjacent to, the Industrial Park.

The 47±-acre undeveloped area at the northeast portion of the site is also proposed to be released from the airport boundary. This area has been held for East Hampton Airport uses, and it has been determined by the Town of East Hampton that such area will not be needed for current or future aviation uses.

[1]Suffolk County Tax Map Nos.: District 300 - Section 191 - Block 2 - Lots 7.3, 7.4, 8 and 9; District 300 - Section 192 - Block 3 - Lots 42.1, 48 and 49.

[2]Suffolk County Tax Map No.: District 300 - Section 192 - Block 3 - Lot 52.

[3]Suffolk County Tax Map Nos.: District 300 - Section 191 - Block 2 - Lot 1; and District 300 - Section 192 - Block 3 - Lot 44.

It is important to emphasize that the release of land would not change the existing use or development potential of the subject 87± acres. While this acreage would no longer be part of the Airport as defined by the FAA, it would still be subject to various FAA restrictions, due to proximity to the airport, and would remain subject to Town of East Hampton zoning and other land use regulations. Under the current condition, the development of the parcels would require review and approval by the FAA as well as the Town of East Hampton. Although the FAA would not review the types of uses on the 87± acres, it would review all development for compliance with airport safety regulations. All development would be subject to review and approval by the Town of East Hampton.

Future Project Being Considered

The Town Board of the Town of East Hampton is considering the potential future installation of a Precision Approach System (PAS) to Runway 10. The PAS provides lateral and vertical guidance to the runway, provides a visual reference of the runway alignment and assists pilots with distance perception. All of these benefits contribute to a more stable descent path. The installation of a PAS would reduce the visibility needs to one-half mile rather than the current one-mile distance required, and would also facilitate pilots in landing their aircraft in adverse weather conditions. Currently, the existing airport conditions (i.e., lack of the PAS) prevent approximately 15 percent of aircraft from landing.

As part of the installation of the PAS to Runway 10, Medium Intensity Approach Lights (MALS) and Runway Alignment Indicator Lights (RAILS) (together, referred to as MALSR) would be installed to provide visual reference to the runway alignment and to enhance with distance perception. The MALSR approach light system assists the pilot in judging alignment and distance for the final segment of the approach, and thus, allows the aircraft to operate in instrument flight rules (IFR) weather. The weather minimums for the non-precision approach to Runway 10 and 28 are currently 500 feet Minimum Descent Altitude (MDA) and one to one and a half miles visibility. A precision approach to Runway 10 would reduce the minimums to as low as 256 feet MDA and one-half mile. The reduced approach minimums would also allow the airport to remain open to arriving aircraft and enhance the safety of the approach in poor weather conditions.

The MALSR would extend outward from the runway end for approximately 2,500 feet under the approach. An underground power cable would extend to each light unit. The area required for the MALSR light units would be approximately six acres in size, wherein existing vegetation would be removed and/or replaced with low-lying vegetation and the area fenced.

Also, as part of the installation of the PAS to Runway 10, the Runway Protection Zone (RPZ) would need to be larger than the existing RPZ. The current RPZ is approximately 29 acres, and the required RPZ for the PAS would increase to 79± acres. Approximately 35 acres of the total 79 acres are outside the existing property line and within the boundaries of the Town of Southampton. Should the PAS be implemented, trees within and adjoining the RPZ would need to "topped" to eliminate obstructions in the flight path of approaching pilots.

Finally, the installation of the PAS would require a slope modification from its existing 34 to 1 slope to a slope of 50 to 1, as required by the Federal Aviation Regulation Part 77. The approach surface begins 200 feet out from the runway end and would slope outward and upward at 50 feet horizontal for every foot of vertical change in elevation.

Purpose, Need and Benefits

As indicated in the Airport Layout Plan report prepared by TriState Planning & Engineering, P.C. (see Appendix A), the proposed updated ALP and nine specific improvements are necessary to comply with FAA safety standards and Federal Aviation Regulations, Part 77 as they relate to runway safety areas, runway protection zones and obstruction removal in the navigable airspace. The proposed safety improvements are also intended to improve operating efficiency. It should be noted that the East Hampton Airport has been an existing use since 1942, and the proposed projects are needed to upgrade safety for the existing operations in accordance with Federal Aviation Administration requirements. These improvements are not intended to - - and do not - - enlarge the capacity of the airport or change the type or size of aircraft which use or would use the airport. A summary of the outstanding safety concerns, as identified by the project engineers and included in the ALP plan, follows:

- Daniel's Hole Road crosses through the Runway 28 Safety Area and Object Free Area only 300 to 400 feet from the runway end as opposed to the FAA standard of 1,000 feet. (Project No. 4 - relocate Daniel's Hole Road to the east)

- Daniel's Hole Road crosses through the Runway 22 Safety Area and Object Free Area only 130 to 180 feet from the runway end as opposed to the FAA standard of 240 feet. (Project Nos. 3 and 9 - shorten Runway 22)

- The Threshold Surface (which is an imaginary plane above ground sloping up and outward from the runway) is penetrated by trees on approaches to Runways 10, 22 and 28 and by Daniel's Hole Road on Runways 22 and 28. (Project Nos. 1, 3 , 4 and 9 - removing and/or trimming of trees, as needed)

- In the approach surface to Runway 22, there are power lines on towers approximately 1,075 feet from the runway end. These lines and towers represent a safety problem for aircraft landing on Runway 22 and taking-off on Runway 4. (Project No. 6 - burial of power lines)

- Runway 10-28 does not have a complete parallel taxiway. This results in aircraft using the other two runways as taxiways creating a potential safety problem if aircraft are landing or taking-off on those runways. (Project No. 2 - complete missing portion of taxiway)

- Runway 10-28 has a taxiway that crosses at approximately 1,250 feet from the west end of the runway. This crossing is at the normal touch-down point on the runway on an uncontrolled airfield. This crossing point poses a threat to safety for aircraft landing or taking-off from either end of the runway. (Project No. 7 - relocate taxiway)

- Deer have been reported by pilots to have been on or near the active runways at the airport. Each year, at least two aircraft have struck deer during landing or take-off and extensive damage to the aircraft often occurs. The existing deer fence has several road penetrations without gates and deer pass freely through these openings. (Project No. 5 - install deer fencing where not already installed and install "cattle crossings" where access roads break continuity of fencing)

In addition to the above safety concerns, the following items have been identified by the project engineer as warranting improvement to increase operating efficiency:

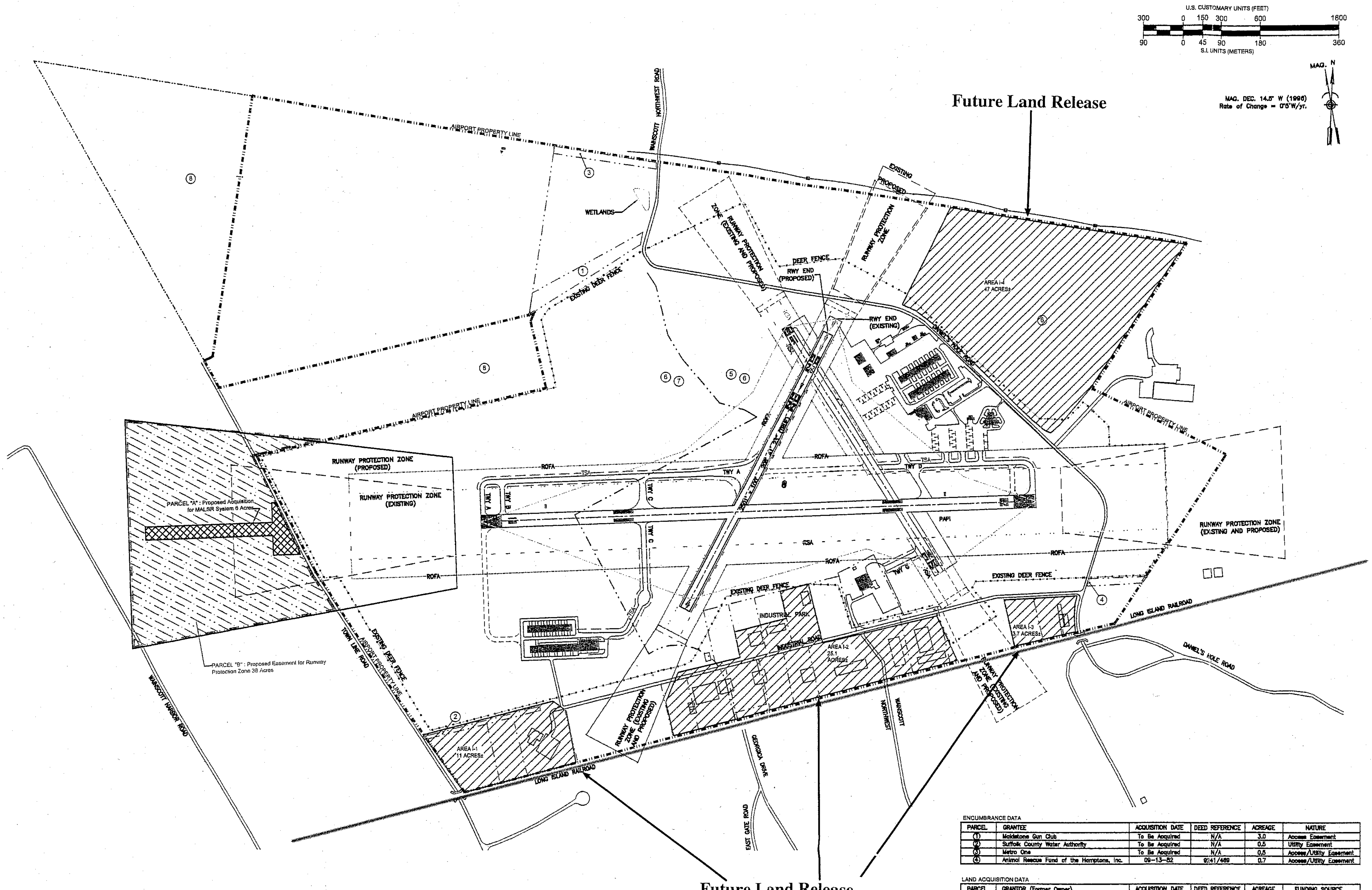
- Runway 28 has no by-pass, and thus, aircraft are forced to queue behind other aircraft that may be delayed due to mechanical problems or departure clearance approval.

- Runway 4-22 has an asphalt surface that is badly deteriorated and requires reconstruction.

- Pilots approaching the airport or planning a flight to the airport have no direct means of determining the current weather conditions. Pilots must rely upon a call to airport management for realtime airport weather conditions. The availability of an Automated Weather Observation Station (AWOS) would benefit all pilots using the airport.

- The weather minimums for the non-precision approach to Runway 10 and 28 are currently 500 feet Minimum Descent Altitude (MDA) and one to one and a half miles visibility. A precision approach to Runway 10 would reduce the minimums to as low as 256 feet MDA and one-half mile. The reduced approach minimums would also allow the airport to remain open to arriving aircraft and enhance the safety of the approach in poor weather conditions.

Each of the proposed nine improvement projects have been designed to improve the above safety concerns and recommended efficiency items.



ENCUMBRANCE DATA

PARCEL	GRANTEE	ACQUISITION DATE	DEED REFERENCE	ACREAGE	NATURE
1	Maidstone Gun Club	To Be Acquired	N/A	3.0	Access Easement
2	Suffolk County Water Authority	To Be Acquired	N/A	0.5	Utility Easement
3	Metro One	To Be Acquired	N/A	0.5	Access/Utility Easement
4	Animal Rescue Fund of the Hamptons, Inc.	09-13-82	9241/469	0.7	Access/Utility Easement

LAND ACQUISITION DATA

PARCEL	GRANTOR (Former Owner)	ACQUISITION DATE	DEED REFERENCE	ACREAGE	FUNDING SOURCE
5	Arnold E. Mulford	03-08-41	2174/348	208	Local
6	Suffolk County	10-25-43	2219/333	585	Local
7	Suffolk County	04-06-37	1935/373	211	Local

LAND DISPOSITION DATA

PARCEL	GRANTEE	ACQUISITION DATE	DEED REFERENCE	ACREAGE	NATURE
8	Suffolk County Water Authority	Pending	TBD	70	
I-1	Town of East Hampton	Pending	TBD	11	Request FAA Release from Airport
I-2	Town of East Hampton	Pending	TBD	31	Request FAA Release from Airport
I-3	Town of East Hampton	Pending	TBD	3.7	Request FAA Release from Airport
I-4	Town of East Hampton	Pending	TBD	47	Request FAA Release from Airport

PROPOSED ACQUISITION DATA

PARCEL	GRANTOR (Present Owner)	ACQUISITION DATE	DEED REFERENCE	ACREAGE	NATURE
A		TBD	TBD	6	Required for MALSR light units.
B		TBD	TBD	38	Height and Land Use Control Required for RPZ and Approach Surface.

NO	REVISIONS	DATE
1		
2		
3		
4		
5		
6		
7		
8		

This drawing and electronic file is prepared for the exclusive use by the Owner and Engineer for the project identified below.

East Hampton Airport

Suffolk County, New York

Owner: Town of East Hampton

TSPE

Specializing in Airport Services

208 Glen Cove Road
Old Westbury, NY 11568-1524
Tel:(516) 294-4776
E-mail: admin@tspe.com

PROJECT:

Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

SHEET TITLE:

Airport Property Map

DESIGNED BY: SML
CHECKED BY: JMC
SCALE: Horiz. : 1" = 300' Vert. : N/A
SHEET NO. 11 OF 12
DATE: Nov. 15, 2002

Figure 2 - Future Parcels Being Considered for Release

III. WATER RESOURCES

Existing Conditions

Groundwater

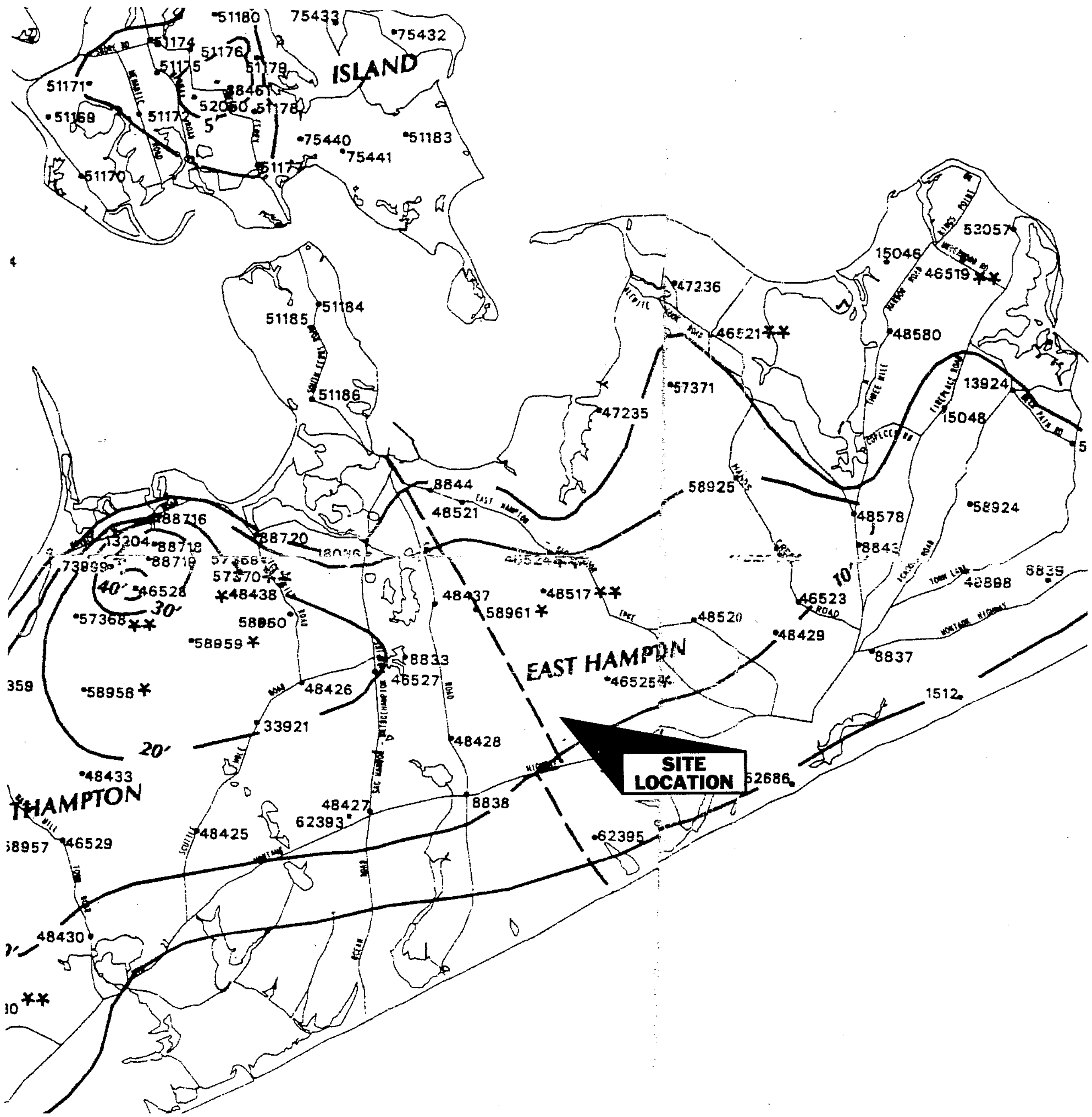
Long Island is considered a sole source aquifer region, which means that the groundwater is the single water supply source. Thus, all land uses have the potential to impact the quality of the water supply.

The airport facility is situated to the south of the groundwater divide. According to the Suffolk County Department of Health Services (SCDHS) Groundwater Contour Map (1999), the water table lies at approximately 12 feet above mean sea level (msl) (see Figure 3). As depicted on the USGS topographic maps, Sag Harbor and East Hampton Quadrangles (see Figure 4), the surface elevation of the airport property ranges between 30 feet (southeastern corner) and 75 feet (northwestern corner) above msl. The surface elevation of the main operations area ranges between 30 and 50 feet above msl. Thus, the depth to groundwater on the entire property ranges between 18 and 63 feet below grade surface (bgs) and ranges between 18 and 38 below grade surface (bgs) for the main operations area. As the property is south of the groundwater divide, the direction of flow is essentially from north to south. Bedrock is located approximately 1,300 feet below grade surface (bgs).

<u>The Long Island Comprehensive Waste Treatment Management Plan *(208 Study)*</u>

In 1978, Long Island was divided into eight hydrogeologic zones in *The Long Island Comprehensive Waste Treatment Management Plan* (the *208 Study*). Since the completion of this study, the boundaries of the hydrogeologic zones have been adjusted. The most recent boundary delineations are depicted on the Suffolk County Sanitary Code - Article 7 Groundwater Management Zones Map of 1993. The subject property is situated within Hydrogeologic Zone V: Western South Fork.

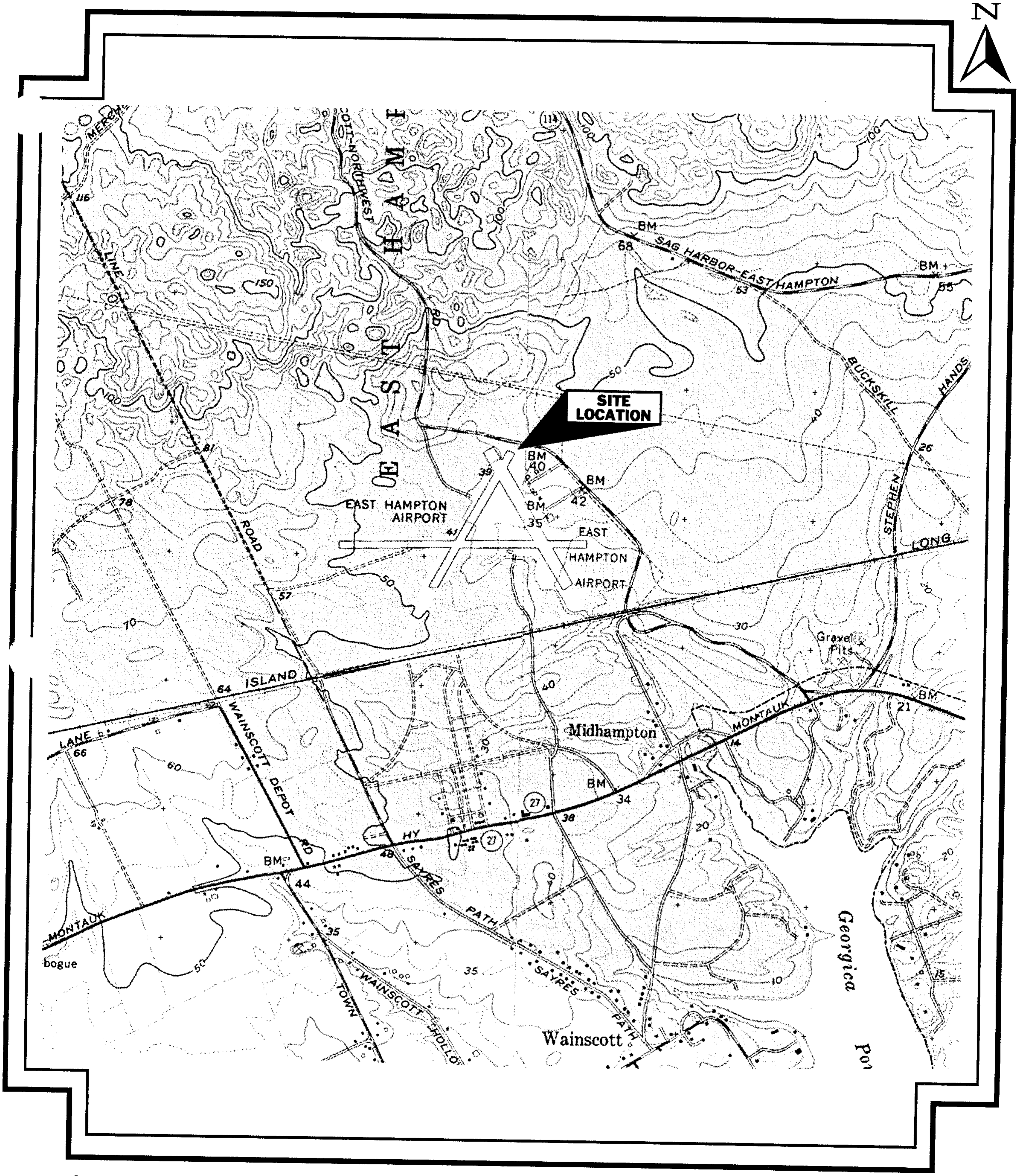
Scale 1" = 2 Miles



Groundwater Contour Map

Source: Water Table Map and Groundwater Contours
of Suffolk County, New York
Suffolk County Department of Health Services, 1999

Figure 3



Source: U.S.G.S. Topographic Map
Sag Harbor and East Hampton Quadrangles

FREUDENTHAL & ELKOWITZ CONSULTING GROUP, INC.

Figure 4

Zone V extends over the central portion of the South Fork. Groundwater in this zone discharges to ponds, bays and the Atlantic Ocean. There is also the potential for saltwater intrusion if pumping patterns are not carefully managed. This is due to adjacent saltwater bodies in the south. In addition, Zone V is presently the site of numerous supply wells. Zone V has been impacted by agricultural activities.

The *208 Study* lists structural, non-structural and non-point source control options for wastewater management for each Hydrogeologic Zone. For Hydrogeologic Zone V (Western South Fork), the highest priority area wide alternatives are as follows:

1. Minimize population density by encouraging large lot development (one dwelling unit/one or more acres), where possible, to protect the groundwater from future pollutant loading.

2. Control the establishment of new landfills and the expansion of existing ones.

3. Reduce excessive use of irrigation water to minimize saltwater intrusion.

4. Optimize pumping patterns to minimize saltwater upconing.

5. Restrict the use of inorganic, fast-acting fertilizers. Promote the use of low-maintenance lawns.

According to the Suffolk County Water Authority Water Distribution Maps and as confirmed in correspondence of October 15, 2002 from the Suffolk County Water Authority (SCWA) (see Appendix C), there is a public supply wellfield on Town Line Road, a 31.097-acre parcel to the bordering the northwest portion of the subject property. The Town Line Road public supply wellfield consists of two (2) supply wells - Well No. 1 is 438 feet deep and Well No. 2 is 178 feet deep. According to data provided by the SCWA, groundwater quality in the vicinity of the subject site is of excellent quality and are within New York State Drinking Water Standards.

Special Groundwater Protection Area (SGPA) Plan

The Long Island Comprehensive Special Groundwater Protection Area Plan (SGPA) was prepared in 1992 by the Long Island Regional Planning Board to protect the three major aquifers underlying Long Island that supply potable water. SGPAs are significant, largely undeveloped or sparsely developed geographic areas of Long Island that provide recharge to portions of the deep flow aquifer system. Nine SGPAs are located on Long Island: North Hills, Oyster Bay, West Hills/Melville, Oak Brush Plains, South Setauket Woods, Central Suffolk, Southold, South Fork and Hither Hills. The subject property is situated within the South Fork Special Groundwater Protection Area (SPGA).

The South Fork SGPA comprises approximately 29,000 acres "in the heart of the eastern Long Island resort, farm and residential area" (Page 3-95). The site is depicted on the Land Use Plan for the South Fork SGPA as "Utilities and Industrial Uses" and the Airport use is consistent with the Land Use Plan.

As indicated in the South Fork SGPA discussion, "Groundwater below the undeveloped central portion of the SGPA can be assumed to be pristine as reflected by the quality of the three glacial production wells at SCWA Division Street, and SCDHS profile test well S-71318, located just north of the LIRR near Town Line Road..." (Page 3-97). Also, as discussed above, data provided by the SCWA indicates that groundwater quality in the vicinity of the subject site is of excellent quality and well within New York State Drinking Water Standards.

The SGPA Plan contains a specific recommendation that is relevant to the proposed action. This recommendation states that "the towns should limit commercial and industrial uses to those few areas already committed to them." The East Hampton Airport is situated within the Commercial/Industrial (CI) Zoning District. The SGPA Plan also recognizes (on page 3-101) that the East Hampton Airport (and surrounding properties) are in an area that contain the most industrial zoning within the South Fork SGPA. Additional recommendations for land uses within the SGPA and a consistency analysis with same are included in the *Potential Impacts and Proposed Mitigation* section.

Nonpoint Source Management Handbook

The *Nonpoint Source Management Handbook*, which was prepared as part of the USEPA's 208 Plan Implementation Program, is divided into several elements: Land Use; Stormwater Runoff; On-site Systems; Highway Deicing; Fertilizer; Animal Waste; Wells-Water Supply; Boat Pollution; and Site Plan Review and Ordinances. The *Handbook* makes a variety of recommendations for counties, municipalities, engineers, etc., to use in the controlling of non-point sources of groundwater contamination. A discussion of the relevant recommendations from this study along with a review of the project's consistency with them are included in the sub-section entitled *Potential Impacts and Proposed Mitigation.*

Suffolk County Sanitary Code

In order to protect the groundwater quality in Suffolk County, the Suffolk County Department of Health Services adopted Articles 6, 7 and 12 of the Suffolk County Sanitary Code (SCSC). Article 6, Realty Subdivisions, Developments and Other Construction Projects, contains several provisions relevant to this project, as summarized below.

Article 6, Realty Subdivisions, Developments and Other Construction Projects, states that individual or subsurface sewerage systems may be approved by the SCDHS as the method of disposal provided the following conditions are met:

- The construction project is located within Groundwater Management Zones III, V, or VI, and the population density equivalent is equal to or less than that of a realty subdivision or development of single-family residences wherein all parcels consist of an area of at least 40,000 square feet;

- The construction project, or any portion thereof, is not located within an existing sewer district and is located in an area where subsoil and groundwater conditions are conducive to the proper functioning of individual or subsurface sewerage systems; and

- The individual sewerage or subsurface systems comply with the Department's current standards and the minimum State requirements as set forth in 10 NYCRR Part 75 to the extent applicable to Suffolk County.

Currently, the Airport is served by individual on-site sanitary systems. According to the project engineer, the existing airport generates approximately 16,529 gpd of sanitary waste. As the site is situated within Hydrogeologic Zone V and utilizes on-site sanitary systems, the maximum permissible flow is 300 gpd per acre or 182,100± gpd. Thus, the existing sanitary flow is significantly less than that which is permitted, and therefore, sanitary discharge to on-site systems complies with Article 6 of the SCSC.

Article 12 of the SCSC addresses the storage and handling of toxic and hazardous materials in order to safeguard water resources from existing sources of contamination and to prevent further pollution from new sources. Relevant aspects of Section 760-1205 relate to the storage of fuel oil in underground/above ground storage tanks and the storage of pesticides and related materials.

Pursuant to Section 760-1208, underground or above ground storage tanks (with a storage capacity of less than 1,100 gallons) that contain kerosene, number 2 fuel oil, number 4 fuel oil, number 6 fuel oil, diesel oil, lubricating oil or gasoline in above ground tanks that are used solely for on-site heating or intermittent stationary power production (such as stand-by electricity generation) are exempt from most provisions of Article 12.

Pursuant to §760-1210, new storage facilities to be used for the underground storage of toxic or hazardous materials shall be "designed and constructed in a manner which will, in the opinion of the Commissioner [of the Suffolk County Department of Health Services], provide the maximum reasonable protection available against leakage or spillage from the facility due to corrosion, breakage, structural failure, or other means. Double-walled or equivalent facilities are required for all toxic and hazardous." There are currently four underground storage tanks registered to and/or maintained by the East Hampton Airport, as follows: one 12,000-gallon underground storage tank for jet fuel, one 8,000-gallon underground storage tank for Avgas, and one 1,000-gallon underground storage tank for propane and one 275-gallon aboveground storage tank for No. 2 fuel oil. The following tanks are also on-site and registered to and/or maintained by fixed based operators: one 2,000-gallon underground storage tank for No. 2 fuel oil and two, 55-gallon waste oil drums.

In May 1985, Article 7 was adopted and added to the Suffolk County Sanitary Code. The intent of this article was to protect the groundwater of Suffolk County, especially in the deep recharge areas of Zones I, II, III and V described in the *208 Study*, from discharge of sewage, industrial wastes, toxic or other hazardous materials and stormwater runoff. Under Section 705 of this Article, permits are required for construction of new or alteration to existing disposal systems, except stormwater disposal. Section 706 provides additional restrictions for the deep recharge zones and water supply sensitive areas including stringent limitations on toxic and hazardous materials storage and discharge. The subject property is located in Hydrogeologic Zone V - a deep recharge area.

Pursuant to §760-703(W) of the Suffolk County Sanitary Code, Water Supply Sensitive Areas are defined as follows: "(1) a groundwater area separated from a larger regional groundwater system where salty groundwater may occur within the Upper Glacial aquifer, and where deepening of private wells and/or development of community water supplies may be limited; (2) Areas in close proximity to existing or identified future public water supply wellfields. In general, for the purposes of this Article, "close proximity" shall mean within 1,500 feet upgradient or 500 feet downgradient of public supply wells screened in the Upper Glacial aquifer.

Review of the Suffolk County Water Authority (SCWA) Water Distribution Maps indicates a wellfield on Town Line Road, a 31.097-acre parcel bordering the northwest portion of the subject property. Pursuant to correspondence from the SCWA, dated October 15, 2002, the Town Line Road public supply wellfield consists of two (2) supply wells. Well No. 1 is 438 feet deep and Well No. 2 is 178 feet deep. The subject site is situated south and east of the Town Line Road wellfield, and thus, is both cross-gradient and downgradient. The northern taxiway which runs parallel to Runway 10-28 is approximately 600 feet south of the SCWA property line. The proposed taxiway improvement from Runway 10-28 is 900± feet south of the SCWA property line. Accordingly, the subject property is not classified as a water supply sensitive area.

Water Usage

Potable water to the terminal building and several hangars on the airport property is supplied by the Suffolk County Water Authority (SCWA). Additionally, three private wells supply potable water to the hangars. Two of the private wells supply water to each of the hangars occupied by Sound Aircraft, and the third private well supplies water to the hangar occupied by Myers Aero Service. There is no irrigation system on the Airport property. Total water usage at the existing airport facility is approximately 16,529 gallons per day (gpd).

Stormwater Runoff

With regard to stormwater runoff, the *Long Island Segment of the Nationwide Urban Runoff Program* (*NURP Study*) has made the following findings with regard to groundwater and surface water:

Groundwater

- Most of the runoff into recharge basins is derived from rain that falls directly on impervious surfaces, except during storms of high intensity, high volume and/or long duration.
- In general, with the exception of lead and chloride, the concentrations of inorganic chemicals measured in stormwater runoff do not have the potential to adversely affect groundwater quality.
- Infiltration through the soil is generally an effective mechanism for reducing lead and probably chromium from runoff on Long Island. Although the *NURP Study* findings concerning chromium are not conclusive, data from a spill at Farmingdale indicate attenuation. Chloride is not attenuated. The effect of infiltration on nitrogen is undetermined.
- Coliform and fecal streptococcal indicator bacteria are removed from stormwater as it infiltrates through soil.

Surface Water

- Any control of chemical constituents in runoff requires awareness of the year-round presence. The use of highway deicing salts in winter explains the high chloride concentrations found in runoff during that season.

- Stormwater is a major source of coliform loading to Long Island bays. Some of the bays in Suffolk County contain areas where impaired water quality exists for reasons other than stormwater runoff (e.g., localized duck farm discharges).

- The evidence accumulated in the *NURP Study* strongly supports the belief that fecal coliform loads are derived from non-human sources. Estimates indicate that the dog population could be a major source of the fecal coliform load in stormwater runoff. Dogs and birds are common throughout the study area, but the data are not sufficiently conclusive to permit ideal source or combination of sources.

Stormwater runoff associated with the airport facility is collected and contained via drywells. There were approximately 27 dry wells in strategic locations to prevent the ponding of stormwater within the Air Operations Area. The stormwater management system meets the requirements of the Town of East Hampton. Furthermore, there is no direct discharge of stormwater runoff into an existing surface waterbody. Relative to surface water, it should be noted that no highway deicing salts are used on the airport property. A consistency analysis with the above findings is included in the *Potential Impacts and Proposed Mitigation* sub-section.

Surface Water

According to the Federal Emergency Management Agency Flood Insurance Rate Maps (FIRM) - Panel Nos. 532, 534 (not printed), 551 and 553, the subject site is situated in Zone X, which is located outside of the 500-year floodplain category.

According to the New York State Department of Environmental Conservation Freshwater Wetlands Maps Nos. 21 and 22 of 39 (Sag Harbor and East Hampton Quadrangles), one designated Freshwater Wetland (identified as SA-34) is located at the northern portion of the Airport on the west side of Wainscott Northwest Road. The National Wetlands Inventory Map Nos. 752 and 257 (Sag Harbor and East Hampton Quadrangles) identified this wetland as PEM1Fx (Palustrine, Emergent, Persistent, Semipermanent, Excavated).

There are no tidal wetlands on or proximate to the site.

<u>Potential Impacts and Proposed Mitigation</u>

Analysis of Cumulative Groundwater and Surface Water Quality Impacts Associated with the ALP Projects

Groundwater

As indicated in the *Existing Conditions* sub-section, depth to groundwater at the subject site ranges from approximately 18 and 63 feet below grade surface (bgs) and the subject property is located in Hydrogeologic Zone V.

To minimize the potential for adverse impacts to groundwater, the ALP projects will comply with the relevant "Highest Priority Areawide Alternatives" and other applicable recommendations of the *208 Study*, as follows:

- According to the airport manager, there is no irrigation system installed on the subject property. Also, manual irrigation is and would continue to be minimal (if at all), and thus, there would be no excessive irrigation that could affect saltwater intrusion.

- No fertilizers are used on the airport property, and same would not be used upon implementation of the ALP projects.

- Indigenous species would be used in the areas to be replanted with low-lying vegetation.

Special Groundwater Protection Area (SGPA) Plan

The subject property is located within the South Fork SGPA. The SGPA Plan contains a specific recommendation that is relevant to the proposed action. This recommendation states that "the towns should limit commercial and industrial uses to those few areas already committed to them." According to East Hampton Zoning Code, the East Hampton Airport is situated within the Commercial/Industrial (CI) Zoning District. The SGPA Plan also recognizes (on page 3-101) that the East Hampton Airport and surrounding properties are in an area that contains the most industrial zoning within the South Fork SGPA. A consistency analysis with specific SGPA Plan recommendations follows:

1. *Suffolk County, the Town of Southampton and the Town of East Hampton should continue to purchase farmland development rights in order to consolidate and expand farm preservation area. The towns should also use clustering and TDR as appropriate to add to the area. To the extent feasible, road frontage should remain in agricultural use.*

This recommendation is not applicable to the proposed action, as the subject property is used for airport and related uses. The property is not used for agricultural purposes.

2. *Suffolk County should continue to support the Cornell Cooperative Extension Service efforts to introduce and to secure the adoption of best management practices for agriculture.*

This recommendation is not applicable to the subject property, as same is not used agriculture.

3. *The County and towns should continue to acquire and preserve woodland and non-farm parcels in accordance with the town's greenbelt plans. The towns should also utilize mandatory clustering and, where appropriate, TDR to supplement their purchases.*

This recommendation is not applicable as the subject property is developed with an existing airport and related uses and projects would provide for safety improvements.

4. *The towns should rezone areas not already zoned for residential uses at five acres per dwelling unit to require a minimum lot size of five acres. However, provision should be made for transfer of development rights to sites outside the SGPA at the rate of one unit for every two acres.*

This recommendation is not applicable as the subject property is and would continue to be utilized for Airport and industrial uses. Furthermore, such use is consistent with the Land Use Map in the SGPA Plan.

5. *The towns should consider granting a density bonus that would permit development at less than five acres per dwelling unit whenever two or more of the long narrow lots are merged in a clustered subdivision.*

The property does not consist of long, narrow lots and does not involve residential development. Therefore, this recommendation is not applicable.

6. *The towns should limit commercial and industrial uses to those few areas already committed to them.*

The proposed action complies with the above recommendation. The East Hampton Airport and the adjoining Industrial Park (along Industrial Road) are zoned within the existing Commercial - Industrial zoning district. The East Hampton Airport has been in existence since November 1942 and the adjoining industrial park has existed for over 20 years. The ALP projects consist of improvements to the existing Airport use to improve operations and to comply with FAA safety requirements, and thus, no changes to the Airport use are proposed. Furthermore, this use conform with the Land Use Map included in the SGPA Plan.

7. *The NYSDEC and the two towns should require the filling and regrading of mined sites. The Town of Southampton should consider the reuse of the deep hole just west of the Bridgehampton Race Track as part of a recreation oriented residential development.*

This recommendation is not relevant to the proposed action as no mines exist on the Airport property.

Nonpoint Source Management Handbook

The *Nonpoint Source Management Handbook,* which was prepared as part of the USEPA's 208 Plan Implementation Program, is divided into several elements: Land Use; Stormwater Runoff; On-site Systems; Highway Deicing; Fertilizer; Animal Waste; Wells-Water Supply; Boat Pollution; and Site Plan Review and Ordinances. The *Handbook* makes a variety of recommendations for counties, municipalities, engineers, etc., to use in the controlling of non-point sources of groundwater contamination. A discussion of the relevant recommendations from this study along with a review of the project's consistency with them follows:

Land Use

1. *Limit new development, particularly industrial uses, in the deep recharge and critical recharge areas.*

The subject property is located in a deep recharge area. However, the existing Airport has been in operation for over fifty years and is located in an industrially-zoned area of the Town. The proposed action consists of safety upgrades and will not change the intensity of use of the property. Thus, the proposed action will comply with this recommendation.

2. *Aggregate uses that would require similar sewage treatment at densities where sewage treatment will be economically feasible in those portions of the deep recharge areas where development is unavoidable.*

As indicated in the subsection entitled *Sewage Disposal*, below, the sewage density of the proposed action is well within the requirements of Article 6 of the Suffolk County Sanitary Code. Furthermore, neither SCDHS nor the Town of East Hampton has required sewage treatment. Thus, the proposed action complies with this recommendation.

4. *Limit the removal of natural vegetation and the creation of lawn areas.*

Implementation of the ALP projects will result in the removal of 9.4 acres of natural vegetation (i.e., wooded areas) and the replanting of 8.3 of those acres with grasses and/or low-lying vegetation. This vegetation replacement is necessary for the improvement of runways, runway safety areas and the elimination of obstructions in the flight path/approach to the runway. Overall, the area of grasses and low-lying vegetation will increase from 186.4 acres (i.e., 30.7 percent of the site) to 194.7 acres (32.1 percent of the site), representing a 1.4 percent increase over the entire site. Additionally, indigenous or non-fertilizer dependent species will be planted. Thus, the proposed project complies with this recommendation.

Stormwater Runoff

1. *Minimize grade changes and site clearing. Preserve swales in their natural state. Avoid disturbance of existing grades, vegetation or soils and the alteration of surface hydrology.*

   Implementation of the proposed action will increase the impervious surface area by only 1.10 acres and will not therefore, result in a significant increase in stormwater runoff. As part of the ALP projects, grading activities adjacent to the runway would be required. However, according to the project engineer, there would be minimal slope modifications. In fact, there will be no changes in the slope breakdown[4] in the post-development condition. There are currently drywells on-site and additional drywells are not required for the minimal increase in stormwater runoff. There are no natural swales on the Airport property. Thus, the proposed project is consistent with this recommendation.

2. *Provide temporary on-site areas to receive stormwater runoff flows that are generated by construction and other site development activities. Do not allow increased sediment resulting from the construction or operational phase of site development to leave the site or to be discharged into stream corridors, marine or freshwater wetlands. Cover or plant exposed soils and soon as possible.*

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[4]Approximately 90 percent of the site is comprised of slopes at 0 to 10 percent grade. The remaining 10 percent of the site is comprised of slopes at 11 to 15 percent grade.

Implementation of the ALP projects would increase the total area of impervious surfaces by only 1.10 acres, and thus, a significant increase in stormwater runoff would not be expected. The existing drainage system is and would continue to accommodate stormwater runoff and permit on-site recharge. These are no stream corridors or marine wetlands on-site. Additionally, all improvements will be in excess of 1,100 feet from the on-site freshwater wetland.

Prior to the proposed runway and taxiway improvements, roadway realignment and other improvements, a proper erosion and sedimentation control plan will be implemented. The erosion and sedimentation control plan would include methods to, among other things, control stormwater during construction through the use of controls such as temporary basins; control sedimentation via the use of haybales, silt fences and the like; and protect existing drywells by preventing sediment transport thereto, etc. Bare soils will not be left uncovered for prolonged periods of time. Thus, the proposed project would comply with this recommendation.

3. *Detain runoff on-site and direct stormwater from road surfaces to sediment basins before discharge to a sump wherever topography limits or precludes the on-site recharge.*

Stormwater runoff is and will continue to be recharged on-site via drywells. According to the project engineer, no additional drywells will be needed except for the relocation of Daniel's Hole Road, and new drywells will be installed as part of that relocation. Thus, the proposed project would comply with this recommendation.

4. *Stabilize exposed slopes during and after construction by using temporary and/or permanent, structural or non-structural stabilization measures.*

Erosion control measures will be installed prior to initiating any roadway, taxiway and other Airport improvements. In addition, as slope modifications are minimal, associated stabilization measures are not necessary. As such, the action will comply with this recommendation.

5. *Use stormwater detention to maintain the same volume and rate of site runoff after development as that which existed prior to development.*

As previously indicated in this Environmental Assessment Report, implementation of the proposed project would minimally increase the area of impervious surfaces on-site (+1.10 acre), and thus, the volume of stormwater runoff generated on-site would only slightly increase. According to the project engineer, the existing drainage system (i.e., drywells) could accommodate the minor increase in stormwater. However, the proposed realignment of Daniel's Hole Road and the associated slope modification and regrading would require the relocation of drywells. Such drywells would be relocated or new drywells will be installed. Accordingly, implementation of the ALP projects will comply with this recommendation.

Fertilizer

1. *Retain as much of the natural vegetation of the site as possible. Minimize grade changes and site clearing.*

Implementation of the proposed action would result in the replacement of 9.4 acres of natural vegetation (i.e., wooded areas) with 8.3 acres of groundcover and/or low-lying vegetation for the improvement of runways, runway safety areas and the elimination of obstructions in the flight path/approach to the runway. Overall, the area of groundcover and/or low-lying vegetation will increase by 1.4 percent over the entire site. There would be no use of fertilizers to maintain same. Only indigenous or non-fertilizer dependent species will be planted. In addition, although grading activities adjacent to Runway 10-28 and Runway 4-22 would be required, there would be minimal slope modifications. Thus, implementation of the ALP projects will conform with this recommendation.

2. *Retain native vegetation on steep slopes, in steep swales, on Carver or other excessively drained sandy-gravelly soils, in areas with a high water table or adjacent to surface waters.*

This recommendation is not relevant as there are no steep slopes, no steep swales and no excessively-drained sandy-gravelly soils found on the site.

3. *Establish or rehabilitate lawn areas only when certain conditions indicate suitability for turf. These conditions include: nearly level or moderately sloped terrain, moderately drained soils, a moderately fine or medium textured surface, a small or a moderate amount of stony or sandy soil, a seasonal high water table more than 12" below the surface.*

The site is nearly level to moderately sloped, has a seasonal high water table more than 12 inches below the surface and contains soils with the appropriate texture and drainage characteristics. Thus, the proposed project will comply with this recommendation.

4. *Use native plants for the planting of areas that have been disturbed by grading. Consider the use of alternate types of groundcover and other plant materials to avoid or reduce lawn area and the consequent need for fertilizer applications, extensive watering and maintenance.*

All areas proposed for replanting would consist of indigenous species and there would be no fertilizer use on-site.

Suffolk County Sanitary Code

As indicated in the *Existing Conditions* sub-section, Suffolk County has promulgated various regulations and standards that are designed to protect the water resources of Long Island. Article 6 of the Suffolk County Sanitary Code (SCSC) specifically governs sanitary wastewater discharges. The regulations contained in Article 6 protect water resources by limiting the "population density equivalent" within specific Groundwater Management Zones. Since the subject property is situated within Groundwater Management Zone V and utilizes on-site sanitary systems, Article 6 of the SCSC allows a maximum permitted sanitary discharge of 300 gallons per day per acre or 182,100± gpd. As the existing sanitary flow is approximately 16,529 gpd and the proposed airport improvement projects will not increase the volume the sanitary waste generated at the site, the proposed project will comply with Article 6 standards. According to the project engineer, sanitary waste would continue to be accommodated with on-site sanitary systems and an expansion to the existing systems would not be required.

Article 12 of the Suffolk County Sanitary Code relates to the storage and handling of toxic and hazardous materials. As the proposed action does not include any improvements that would alter the storage or handling of toxic materials, the relevant aspects of Article 12 would relate only to the storage of fuel oil in above ground or underground storage tanks. As indicated earlier in this section, there are currently one 12,000-gallon underground storage tank for jet fuel, one 8,000-gallon underground storage tank for Avgas, and one 1,000-gallon underground storage tank for propane, one 2,000-gallon underground storage tank for No. 2 fuel oil and one 275-gallon above ground storage tank for No. 2 fuel oil. There are also two, 55-gallon waste oil drums. No new tanks or storage facilities are proposed. Thus, storage at the Airport would continue to comply with Article 12 of the SCSC.

Article 7 of the Suffolk County Sanitary Code requires that permits be secured for the construction of new or alteration of existing disposal systems, except stormwater disposal. Also, Article 7 provides additional restrictions for the deep recharge zones and water supply sensitive areas including stringent limitations on toxic and hazardous materials storage and discharge. As the proposed airport improvement projects do not involve the installation of a new sanitary system or alteration of the existing sanitary system, and no changes in the existing hazardous materials stored on-site are proposed, Article 7 is not applicable to the proposed action.

Water Usage

Potable water to the Airport is and would continue to be supplied by the Suffolk County Water Authority (SCWA) and via on-site private wells. Upon implementation of any or all projects identified in the ALP, water usage at the site (i.e., 16,529± gpd) is not expected to change because the ALP projects will not increase operations at the airport.

Stormwater Runoff

In their respective locations, Project Nos. 2, 4 and 7 will increase impervious surface area as they consist of the addition of a new taxiway on the northern side of Runway 10-28, the realignment and slight increase in the length of Daniel's Hole Road and a new by-pass taxiway to Runway 28. However, Project 9 includes reducing the length and width of Runway 4-22 and will therefore, locally decrease the area of impervious surface area. Overall, total impervious surface area at the site will increase by approximately 1.10 acres.

As the overall increase in impervious surface area would be relatively small (i.e., 1.10± acres), there would be a minimal increase in stormwater generated on-site. However, all stormwater would continue to be collected via existing drywells. Also, due to the distance between the nearest improvement to the wetland (1,100± feet) and the minimal increase in stormwater, there would be no stormwater runoff to Daniel's Hole. The realignment of Daniel's Hole Road and the associated slope modification and regrading would include the relocation of drywells or installation of new drywells in this area to ensure that stormwater continues to be collected and recharged on-site.

Minor impacts to drainage patterns may occur during the construction process. As indicated in section entitled *Project Description*, Project Nos. 1, 2, 3, 4, 7 and 9 involve clearing and grading activities and may have the potential to cause erosion. However, best management practices and erosion control measures would be employed to minimize this impact. These mitigation measures would include, but not be limited to: the strategic placement of silt fences and hay bales around existing drywells to control siltation; the installation of pavement and/or vegetation as soon as possible after soil disturbance.

With regard to the quality of recharge, the Long Island *NURP* investigations have evaluated a number of contaminants present in runoff to recharge basins and those detected in groundwater beneath the basins. Based on the results of this study, the following general recommendations were made:

<u>Groundwater</u>

- *Continue to use recharge basins wherever feasible for the disposal of stormwater and the replenishment of the groundwater.*

  As there are no recharge basins on-site, this recommendation is not applicable to the proposed project. However, on-site stormwater is and will continue to be collected and recharged on the subject property via drywells to ensure continued replenishment of groundwater.

- *Consider the use of in-line storage leaching drainage systems, or components thereof, as a substitute for recharge basins in areas, other than parking lots, where maintenance will be assured and where the value of the land for development purposes is greater than the cost of installing and maintaining the underground system. Storage leaching drainage systems should also be considered for use where the installation of recharge basins is not feasible.*

As indicated above, drywells are used to recharge all stormwater from a two-inch rain event over a 24-hour period, and same are maintained by the Town. Thus, the ALP projects would comply with this recommendation.

- *Prevent illegal discharges to drainage systems or recharge basins. Such discharges, which often result from improper storage or deliberate dumping or chemicals, must be controlled at the source.*

The ALP projects do not include any improvements that would alter the storage or handling of toxic materials. As indicated earlier in this section, there are currently five tanks on-site: one 12,000-gallon underground storage tank for jet fuel, one 8,000-gallon underground storage tank for Avgas, one 1,000-gallon underground storage tank for propane, one 2,000-gallon underground storage tank for No. 2 fuel oil and one 275-gallon above ground storage tank for No. 2 fuel oil. There are also two, 55-gallon waste oil drums. The existing on-site tanks are maintained by Airport management or fixed-based operators to ensure that no leakage occurs. Thus, the ALP projects will comply with this recommendation.

Surface Water

- *To maintain existing water quality where it is currently satisfactory:*

  Preclude any additional direct discharge of stormwater runoff into surface waters, using all available means for detention and/or recharge to reduce bacterial loads.

  As indicated, Daniel's Hole is located on-site. However, improvements as part of the ALP projects would be at least 1,100 feet from the wetland. Thus, implementation of the ALP projects would not impact same. Furthermore, as discussed above, all on-site stormwater is and would continue to be collected and recharged on the subject property. Thus, the implementation of the ALP projects would comply with this recommendation.

  Protect stream corridors from encroachment.

  There are no stream corridors on the subject site, and thus, this recommendation is not applicable to the ALP projects.

Surface Water

According to the Federal Emergency Management Agency Flood Insurance Rate Maps (FIRM) - Panel Nos. 532, 534 (not printed), 551 and 553, the subject site is situated in Zone X, and thus, outside of the 500-year floodplain category.

According to the New York State Department of Environmental Conservation Freshwater Wetlands Maps No. 21 and 22 of 39 (Sag Harbor and East Hampton Quadrangles), there is one designated Freshwater Wetland (identified as SA-34) is located at the northern portion of the subject property on the west side of Wainscott Northwest Road. The National Wetlands Inventory Map No. 752 and 257(Sag Harbor and East Hampton Quadrangles) identifies this wetland as PEM1Fx (Palustrine, Emergent, Persistent, Semipermanent, Excavated). There are no tidal wetlands on or proximate to the site.

None of the ALP projects in the updated ALP will disturb property within 1,100+ feet of the on-site wetlands. Accordingly, no adverse impacts to surface waters are expected.

Analysis of Potential for Groundwater and Surface Water Quality Impacts Associated with the ALP Projects

As described above, the cumulative impacts of the ALP projects on water resources are not expected to be significant. Also, the proposed action would comply with the recommendations of the *208 Study, SGPA Plan, Nonpoint Source Management Handbook,* Suffolk County Sanitary Code, Long Island *NURP* Investigations. Below is a discussion each project and its individual impact to groundwater and surface water quality.

Project 1 - Runway 10-28 Protection Zone and Approach Surface

This project involves the removal of obstructions within the navigable airspace at both ends of the runway to provide increased safety during take-off and landing procedures. Approximately 3.2 acres of woodland would be removed and replaced with low-lying vegetation for Runway 28. Improvements for Runway 10 would include individual tree topping and removal of individual bushes in the safety area. Implementation of this project would result in the removal of vegetation, but would not increase stormwater runoff as the surface in this area would remain pervious. As there are no projected increases in operations, there would be no increases in water usage or sanitary flow.

Project 2 - Parallel Taxiway to Runway 10-28

This project involves the addition of a small taxiway area to the north of Runway 10-28 to eliminate the need to back taxi on Runway 10-28 or taxi along Runway 4-22 in order to return to the passenger terminal area. As such, this project is being implemented as a safety measure and will not increase aircraft usage. No clearing of vegetation would be required. Approximately 33,750 square feet of additional pavement would be required for the proposed taxiway and therefore, there would be an increase in stormwater runoff in this area of the subject site. As indicated by the project engineer, the existing drywells can accommodate the increased stormwater in the area of these improvements, and thus, no improvements to the drainage system would be required. As there are no projected increases in operations, there would be no increases in water usage or sanitary flow.

Project 3 - Runway Safety Areas for Runway 22 and Runway 28

This project involves grading the width of the existing runway safety areas (located on either side of the runways) as well as the length of the runway safety area (located beyond the runway ends) to meet FAA safety standards in the event that an aircraft may undershoot, overshoot or divert from the runway area. Specifically, Runway 22 would be shortened to allow the Runway Safety Area to remain clear of Daniel's Hole Road. Also, included as part of Project No. 4, described below, the realignment of Daniel's Hole Road would remove same from the Runway Safety Area of Runway 28. An area of approximately 500 feet wide and 1,000 feet beyond Runway 28 would be regraded.

The proposed improvements in Project No. 3 would have no impact on the existing impervious surface area or operations at the airport. As such, this project would not impact existing stormwater runoff volumes, water usage or sanitary flow. Prior to the regrading of an existing area beyond Runway 28, erosion control measures to prevent sedimentation will be developed and implemented.

Project 4 - Runway 28 Approach over Daniel's Hole Road

This project involves the realignment of Daniel's Hole Road in order to provide an Object Free Area (OFA) to reduce the risk of damage to aircraft in the event of an undershoot, overshoot or diversion from the runway. Specifically, 1,230 linear feet of Daniel's Hole Road and a 70-linear foot section of roadway leading to the East Hampton Indoor Tennis Club would be removed and replaced with 2,850 linear feet of roadway. Approximately 31,200 square feet of pavement would be removed, and the proposed new area of roadway would be 68,400 square feet. That new roadway and associated shoulder areas would require the removal of vegetation. As part of the proposed realignment, existing slopes would be regraded to FAA standards. The proposed realignment of Daniel's Hole Road and the associated slope modification and regrading would require the relocation of drywells or the installation of new drywells. As there are no projected increases in operations, there would be no increases in water usage or sanitary flow.

Project 5 - Deer Fence Openings

This project involves the installation of additional deer fence enclosures (to the existing fencing) to prevent wildlife from entering the Air Operations Area (AOA). The procedure involves the installation of fencing and "cattle crossing" grating (i.e., round steel pipe laid side by side with gaps in between and painted a dark color to blend with the surrounding area). The proposed fencing would be similar to the existing fencing in that it would be installed parallel to the road and would consist of 10-foot high tension wire on wooden posts. As this project includes only the installation of fencing, there would be no projected increase in water usage, sanitary flow, or stormwater runoff.

Project 6 - Bury Power Lines in Runway 22 Approach

This project involves the removal of an existing electrical transmission tower and utility poles and the subsequent burial of power lines below the ground surface in order to remove an obstruction to the Runway 22 approach. The power lines would be buried at a depth of 36 to 48 inches below grade surface in an existing cleared area. As this project includes only the installation of electrical lines below grade surface in an existing cleared area, there would be no projected increase in water usage, sanitary flow, or stormwater runoff.

Project 7 - Taxiway System Improvements

This project involves the construction of a new taxiway section from the T-hangar complex that connects to Runway 10-28 at the end of Runway 10. These taxiway system improvements would eliminate the current unsafe method where all aircraft entering or exiting the existing T-hangar complex must cross an active runway and/or back taxi if using Runway 10. This current method also creates operational constraints, such as the need to hold and wait for aircraft arriving or departing Runway 10-28. The proposed new connector taxiway from the T-hangars to Runway 10 would be 1,073 linear feet, and would require the removal of approximately 2.4 acres of vegetation. The proposed by-pass taxiway to Runway 28 would be 223 linear feet. Approximately 45,500 square feet of new pavement for both taxiways would be required.

As the proposed Project No. 7 includes the installation of new pavement, there would be an increase in stormwater runoff. However, as indicated by the project engineer, the existing drywells can accommodate the increased stormwater in the area of these improvements, and thus, no improvements to the drainage system would be required. As there are no projected increases in operations, there would be no increases in water usage or sanitary flow.

Project 8 - Automated Weather Observation Station (AWOS)

This project involves the construction of an Automated Weather Observation Station (AWOS) on the property to increase airport safety by providing minute-to-minute updated weather forecasts. No clearing or paving is required. Therefore, as this project includes only the installation of an AWOS in an existing cleared area, there would be no projected increase in water usage, sanitary flow, or stormwater runoff.

Project 9 - Rehabilitation/Reconstruction of Runway 4-22

This project involves the reconstruction of Runway 4-22 that is currently very deteriorated. The existing 100-foot runway width exceeds the 75 foot minimum requirement and would be reduced to 75 feet, and the shoulder areas would be regraded. In addition, the runway length would be shortened by 134 feet. As this project would locally decrease the area of impervious surface, there would be a resultant decrease in stormwater runoff. Although this project also includes the removal of 1.2 acres of woodland (and the replanting with native grasses and/or low lying vegetation), these areas would continue to be pervious and thus, no significant changes in stormwater would be expected. As there are no projected increases in operations, there would be no increases in water usage or sanitary flow.

Analysis of Potential for Groundwater and Surface Water Quality Impacts Associated with the Release of Lands from the Airport Boundaries

The ALP includes the release of land from the Airport boundaries. As discussed in the Land Use and Zoning section of this Environmental Assessment Report, these parcels are zoned for industrial uses and can be developed, upon review and approval by the Town of East Hampton, for aviation or non-aviation purposes. The lots within or adjacent to the Town Industrial Park are intended for such use, as needed. The Town has no plans for development of the parcel north of Daniel's Hole Road for private, public or quasi-public projects. Any development of any released property that might be proposed in the future would be subject to all applicable Town, County and State reviews. The proposed ALP update does not - and the re-drawing of the airport property line would not - change the current conditions, requirements, possibility or feasibility of development of any of the parcels. Thus, the release of land from the Airport boundaries would not change the development potential of such land. Therefore, there would be no associated increases in water usage, sanitary waste, stormwater generation or any other factor which may adversely impact water resources.

Analysis of Potential for Groundwater and Surface Water Quality Impacts Associated with the Future Project Being Considered

The Town of East Hampton is considering the installation of a Precision Approach System (PAS) to Runway 10 to provide lateral and vertical guidance to the runway, provide a visual reference of the runway alignment and assist pilots with distance perception. All of these benefits contribute to a more stable descent path. As part of the installation of the PAS to Runway 10, Medium Intensity Approach Lights (MALS) and Runway Alignment Indicator Lights (RAILS) (together, referred to as MALSR) would be installed to provide visual reference to the runway alignment and enhance with distance perception. The MALSR would extend outward from the runway end for approximately 2,500 feet under the approach and would require that approximately six acres be cleared and the area fenced.

Also, as part of the installation of the PAS, the Runway Protection Zone (RPZ) would need to be larger than the existing RPZ. The current RPZ is approximately 29 acres and the required RPZ for the PAS would increase to 79± acres. Approximately 35 acres of the total 79 acres are outside the existing property line. Should the PAS be implemented, trees adjoining the RPZ would need to "topped" to eliminate obstructions in the flight path of approaching pilots. As the implementation of the PAS would require that approximately six acres of vegetation be replaced with alternate (low-lying) vegetation, there would be a minimal increase in stormwater runoff. However, as the surface would remain pervious, stormwater would continue to be recharged on-site.

According to the project engineer, the installation of a PAS could potentially increase airport operations on Runway 10 by 3.2 percent. Therefore, water usage and sanitary flow at the site would be expected to increase minimally.

Finally, the installation of the PAS would require a slope modification from its existing 34 to 1 slope to a slope of 50 to 1, as required by the Federal Aviation Regulation Part 77. The approach surface begins 200 feet out from the runway end and will slope outward and upward at 50 feet horizontal for every foot of vertical change in elevation. Prior to the implementation of this project, a proper erosion and sedimentation control plan would be developed. The plan should include methods to, amongst other things, stabilize slopes, control stormwater during construction, prevent sedimentation, and limit exposure time for bare soils.

IV. ECOLOGY

Existing Conditions

The subject site was visited on October 19, 2000 by Orland J. Blanchard, Ph.D. (see Appendix D) for the purpose of conducting an ecological survey. Additional experience with the site had been gained during an earlier botanical inventory of the East Hampton Airport property and environs on June 10, 1987 for Dru Associates, Inc. (with Ron Abrams, Larry Penny and Randall Christensen).

A total of 134 species were recorded on the subject site, including 35 woody species and 99 herbaceous plants (see Table 2). In addition the following animals were noted: one mammal (by indirect evidence), five bird species, five butterflies and one dragonfly (see Appendix D). The October 19, 2000 visit was at a season, and in weather conditions, when few animals are active; the June 10, 1987 visit was almost exclusively devoted to the botany of the site and hence few animals were recorded.)

The following ecological communities (see Edinger *et al.*, 2002) were identified on the subject site 1) Pitch Pine- Oak Forest, 2) Mowed Roadside/Pathway 3) Successional Old Field, and 4) Coastal Plain Pond.

The proposed modifications to this very large (607± acres) site are relatively small, widely separated and well-localized. The fourth community--the wetland at Daniel's Hole--is not to be disturbed and is not proximate to any of the proposed airport improvement projects, and therefore, a detailed discussion of same is not included.

The Pitch Pine-Oak Forest is a major community on the subject site and is the only natural community to be impacted on the site, which is to say that it alone is not maintained by human activity. It is dominated by a mixture of Pitch Pine (*Pinus rigida*) and oaks--particularly Black Oak (*Quercus velutina*), Scarlet Oak (*Q. coccinea*), and White Oak (*Q. alba*). The amount of Pitch Pine varies tremendously and probably reflects a varied fire history in the immediate area, as well as, perhaps, stages in recovery from earlier clearing of parts of the forest.

Mockernut Hickory (*Carya tomentosa*) and Post Oak (*Quercus stellata*) are present in the tree stratum in smaller numbers. Common low shrubs are Early Lowbush Blueberry (*Vaccinium pallidum*), Late Lowbush Blueberry (*V. angustifolium*), and Black Huckleberry (*Gaylussacia baccata*). Where the forest canopy is more open, areas of the taller shrub species Scrub Oak (*Quercus ilicifolia*) may be found. In general, the herbaceous stratum is sparse. However, a few herbs and other shrubs of medium to low stature are present as well, including Sweetfern (*Comptonia peregrina*), Trailing Arbutus (*Epigaea repens*), Wintergreen (*Gaultheria procumbens*), Sheep Laurel (*Kalmia angustifolia*), Staggerbush (*Lyonia mariana*), Bayberry (*Myrica pensylvanica*), Bracken Fern (*Pteridium aquilinum*), a Sedge (*Carex pensylvanica*), and Catbrier (*Smilax glauca*).

Along edges of the existing roads and airfield clearings, one finds a flora that is akin to pine barrens openings (Edinger *et al.*, 2002), but which also includes dry-ground weeds. These areas characteristically support a mixture of grasses and herbs such as Bluestem (*Andropogon* sp.), Bearberry (*Arctostaphylos uva-ursi*), Wild Indigo (*Baptisia tinctoria*), Golden Aster (*Chrysopsis mariana*), Horseweed (*Conyza canadensis*), Poverty Grass (*Danthonia spicata*), Purple Love Grass (*Eragrostis spectabilis*), Slender Fragrant Goldenrod (*Euthamia caroliniana*), Frostweed (*Helianthemum canadense*), Golden Heather (*Hudsonia ericoides*), False Heather (*Hudsonia tomentosa*), Orangegrass (*Hypericum gentianoides*), Cat's Ear (*Hypochaeris radicata*), Dwarf Dandelion (*Krigia virginica*), Pinweed (*Lechea* sp.), Round-headed Bush-Clover (*Lespedeza capitata*), Ox-eye Daisy (*Leucanthemum vulgare*), Blue Toadflax (*Linaria canadensis*), Cow-Wheat (*Melampyrum lineare*), Pine-Barrens Sandwort (*Minuartia caroliniana*), Poverty Panic Grass (*Panicum depauperatum*), Atlantic Golden Aster (*Pityopsis falcata*), Bracted Plantain (*Plantago aristata*), Bitter Milkwort (*Polygala polygama*), Jointweed (*Polygonella articulata*), Blue-eyed Grass (*Sisyrinchium* sp.), Gray Goldenrod (*Solidago nemoralis*), and Sand Grass (*Triplasis purpurea*).

The second and third vegetation types on the airport property, Mowed Roadside/Pathway and Successional Old Field, are both characterized as "cultural" by Edinger et al. (2002), which means that they are maintained by human activity. The two tend to blend into one another depending on the frequency of mowing, which varies in part with distance from the runways proper. In the old field vegetation type, the plants tend to be taller, and woody species are often able to gain a foothold. Also, in general, more weedy species exist closer to the runway perhaps as a result of disturbance of the soil during plowing in the wintertime. Nowhere is there a true turf of grasses.

Without attempting to strictly separate the two vegetation types (see discussion in the *Potential Impacts and Proposed Mitigation* sub-section in which the impacts on the vegetation types are evaluated), the following are representative of the species that were found in various sections of the mowed part of the site: Bluestem (*Andropogon* sp.), Bearberry (*Arctostaphylos uva-ursi*), Wild Indigo (*Baptisia tinctoria*), Frostweed (*Helianthemum canadense*), Golden Heather (*Hudsonia ericoides*), False Heather (*Hudsonia tomentosa*), Orangegrass (*Hypericum gentianoides*), Cat's Ear (*Hypochaeris radicata*), Dwarf Dandelion (*Krigia virginica*), Pinweed (*Lechea* sp.), Round-headed Bush-Clover (*Lespedeza capitata*), Cow-Wheat (*Melampyrum lineare*), Pine-Barrens Sandwort (*Minuartia caroliniana*), Poverty Panic Grass (*Panicum depauperatum*), Atlantic Golden Aster (*Pityopsis falcata*), Bracted Plantain (*Plantago aristata*), English Plantain (*Plantago lanceolata*), Bitter Milkwort (*Polygala polygama*), Jointweed (*Polygonella articulata*), Blue-eyed Grass (*Sisyrinchium* sp.), Gray Goldenrod (*Solidago nemoralis*), Sand Grass (*Triplasis purpurea*), Horseweed (*Conyza canadensis*), Yarrow (*Achillea millefolium*), and saplings of Scrub Oak (*Quercus ilicifolia*) and Black Oak (*Q. velutina*).

The Coastal Plains Pond community consists of Daniel's Hole, a small pond next to its namesake road. It is located to the north of the developed portion of the Airport and no disturbance to same will take place. The slope between the pond and the road is somewhat weedy, supporting such plants as Common Mullein (*Verbascum thapsus*), Butter and Eggs (*Linaria vulgaris*), Evening Primrose (*Oenothera* sp.) and Quack Grass (*Elytrigia repens*). Elsewhere the margins of the pond are relatively undisturbed. Plants of these margins, and the emergent and floating plants within the pond, include a sedge (*Carex scoparia*), Spike Rush (*Eleocharis* sp.), Boneset (*Eupatorium perfoliatum*), Manna Grass (*Glyceria* sp.), Soft Rush (*Juncus effusus*), Water-Horehound (*Lycopus* sp.), Maleberry (*Lyonia ligustrina*), Meadow-Beauty (*Rhexia virginica*), Swamp Dewberry (*Rubus hispidus*), Skullcap (*Scutellaria* sp.), Woolgrass (*Scirpus cyperinus*), Common Cattail (*Typha latifolia*), Steeplebush (*Spiraea tomentosa*), Highbush Blueberry (*Vaccinium corymbosum*) and Lance-leafed Violet (*Viola lanceolata*).

Five species of birds were observed on the site. Of these, two almost never breed on Long Island (Ruby-crowned Kinglet, Yellow-rumped Warbler). When they were seen on October 19, 2000, they were in the status of migrants or winter visitors. The three others, American Kestrel, Blue Jay and Black-capped Chickadee, are included in the following discussion and enumeration.

The published 1980-1985 breeding bird census for New York State (Andrle & Carroll, eds., 1988) indicates that census blocks 7253A and B include parts of the subject site. These blocks also include several other habitats (residential, estuarine, sandpits, etc.) and therefore represent a considerably greater diversity than might be expected on the subject site itself. Accordingly, the lists from the two blocks were merged, but then those species of obvious different habitat preference were eliminated. The approximately 55 remaining confirmed breeders from the merged blocks are listed below.

(Note: The **bolded** names are explained in next paragraph.)

Agelaius phoeniceus	**Red-winged Blackbird**
Archilochus colubris	Ruby-throated Hummingbird
Baeolophus bicolor	Tufted Titmouse
Bombycilla cedrorum	Cedar Waxwing
Bubo virginianus	Great Horned Owl
Buteo jamaicensis	Red-tailed Hawk
Cardinalis cardinalis	Northern Cardinal
Carpodacus mexicanus	House Finch
Certhia americana	Brown Creeper
Charadrius vociferus	Killdeer
Coccyzus americanus	Yellow-billed Cuckoo
Contopus virens	Eastern Wood-Pewee
Corvus brachyrhynchos	American Crow
Cyanocitta cristata	**Blue Jay**
Dendroica cerulea	Cerulean Warbler
Dendroica discolor	**Prairie Warbler**
Dendroica pensylvanica	Chestnut-sided Warbler
Dendroica petechia	Yellow Warbler
Dendroica pinus	**Pine Warbler**
Dumetella carolinensis	**Gray Catbird**
Empidonax virescens	Acadian Flycatcher
Falco sparverius	American Kestrel
Geothlypis trichas	**Common Yellowthroat**
Hirundo rustica	Barn Swallow
Hylocichla mustelina	Wood Thrush
Icterus galbula	**Baltimore Oriole**
Melospiza georgiana	Swamp Sparrow

Melospiza melodia	Song Sparrow
Mimus polyglottos	**Northern Mockingbird**
Mniotilta varia	**Black-and-white Warbler**
Molothrus ater	**Brown-headed Cowbird**
Myiarchus crinitus	Great Crested Flycatcher
Otus asio	Eastern Screech Owl
Passer domesticus	House Sparrow
Picoides pubescens	**Downy Woodpecker**
Picoides villosus	Hairy Woodpecker
Pipilo erythrophthalmus	**Rufous-sided Towhee**
Piranga olivacea	**Scarlet Tanager**
Poecile atricapillus	**Black-capped Chickadee**
Polioptila caerulea	Blue-Gray Gnatcatcher
Quiscalus quiscula	Common Grackle
Sayornis phoebe	Eastern Phoebe
Seiurus aurocapillus	**Ovenbird**
Setophaga ruticilla	American Redstart
Spizella passerina	Chipping Sparrow
Spizella pusilla	Field Sparrow
Sturnus vulgaris	European Starling
Tachycineta bicolor	Tree Swallow
Toxostoma rufum	**Brown Thrasher**
Troglodytes aedon	**House Wren**
Turdus migratorius	**American Robin**
Tyrannus tyrannus	**Eastern Kingbird**
Vermivora pinus	Blue-winged Warbler
Vireo griseus	White-eyed Vireo
Zenaida macroura	**Mourning Dove**

A further guide as to which of these species might be expected at the subject site may be found in Kerlinger & Doremus (1981), who conducted a study of the breeding birds of New York's pine-barrens habitats. Twenty of those on the above list (shown in **bold**) are also on Kerlinger & Doremus' list. Many of the 55 species listed above should be expected on the subject site, and particularly many of the bolded 20.

Finally, a recent (1999) study by Hugh McGuinness actually surveyed bird species on the airport site itself. The focus was on breeders that prefer grasslands and old fields, but while few grassland species were documented, his overall results support predictions that are made here using somewhat more generalized data. In all, he recorded 36 of the 55 species on our list above, as well as all 20 of the species in the more refined, **bolded** list of pine barrens breeders.

McGuinness also documented nine bird species not listed above, as follows:

Ammodramus savannarum	Grasshopper Sparrow
Coccyzus erythropthalmus	Black-Billed Cuckoo
Colaptes auratus	Northern Flicker
Parus bicolor	Tufted Titmouse
Passerculus sandwichensis	Savanna Sparrow
Passerina cyanea	Indigo Bunting
Sitta canadensis	Red-breasted Nuthatch
Sitta carolinensis	White-breasted Nuthatch
Vireo olivacea	Red-eyed Vireo

Of these, he estimated that breeding pairs were present for only two of the species, the Indigo Bunting and the Grasshopper Sparrow. The latter is of interest in that it is listed by NYSDEC as a species of special concern. It is discussed later under New York Natural Heritage Program (NHP)-listed species.

The single mammal recorded tentatively on site, the Woodchuck, was inferred from a burrow rather than by direct observation. Paul F. Connor of the New York State Museum studied the mammals of Long Island in the 1960s, and in his published report he illustrated a pine barrens near Flanders in the Town of Southampton (1971, fig. 3). In the caption he describes having found the following species there in 1962:

Blarina brevicauda	Short-tailed Shrew
Didelphis marsupialis	Opossum
Glaucomys volans	Southern Flying Squirrel
Mustela frenata	Long-tailed Weasel
Odocoileus virginianus	White-tailed Deer
Peromyscus leucopus	White-footed Mouse
Pitymys pinetorum	Pine Mouse
Scalopus aquaticus	Eastern Mole
Sciurus carolinensis	Eastern Gray Squirrel

Some of these species are likely to occur at the subject site, as does probably the Raccoon (*Procyon lotor*) as it is a frequent associate of human habitation.

No herpetofaunal species (reptiles and amphibians) were noted during visits to the site. However, the South Fork Natural History Society's list of "Reptiles and Amphibians of the South Fork, Long Island, New York" (Sabin 1995), identifies 14 of the 41 listed species as being either "abundant" or "common." Eliminating the marine and wetland species among these 14 leaves the following:

Bufo woodhousii fowleri	Fowler's Toad
Coluber c. constrictor	Northern Black Racer
Plethodon cinereus	Red-backed Salamander
Terrapene c. carolina	Eastern Box Turtle
Thamnophis sirtalis	Eastern Garter Snake

According to NYSDEC's New York State Amphibian and Reptile Atlas Project, compiled by Alvin Breisch (www.dec.state.ny.us/website/ dfwmr/wildlife/herp/, accessed 20 Oct 2002), three additional terrestrial herpetofaunal species were recorded in the years 1990-1999 from the census blocks ("Sag Harbor, N.Y." quadrangle) that includes the subject site. These three are the Eastern Spadefoot (*Scaphiopus holbrooki*), Eastern Hognose Snake (*Heterodon platyrhinos*), and Eastern Milk Snake (*Lampropeltis triangulum*). All are listed as uncommon by Sabin, but like the five above, one or more of them might possibly occur on the site.

At the small wetland identified as Daniel's Hole, some species of frogs, turtles and salamanders undoubtedly occur, but neither Daniel's Hole nor its immediate vicinity are to be impacted by any of the proposed airport projects. Thus, no species will be affected in the area.

Five species of butterfly were seen at the site (see Table 2), all of which are either common, or in the case of the Variegated Fritillary, a frequent late-season stray from the south. Butterflies have short flight seasons and these seasons vary among species. Thus, during any one visit, regardless of the timing, a very incomplete picture of the local diversity is obtained. However, a list of butterfly "possibles" for the site have been compiled by considering species found or noted at other predominantly pine-barrens areas in Suffolk County. Taking together, including five sites visited fairly recently in Southampton and adjacent Brookhaven, i.e. Speonk (two sites, 1997, 1998-99, 2001), Eastport (1999), East Moriches (2001) and Hampton Bays (2002), the following list of 28 additional butterfly species can be assembled:

Ancyloxypha numitor	Least Skipper
Atalopedes campestris	Sachem
Cercyonis pegala	Common Wood Nymph
Colias eurytheme	Orange Sulfur
Danaus plexippus	Monarch
Epargyreus clarus	Silver-spotted Skipper
Erynnis brizo	Sleepy Duskywing
Erynnis icelus	Dreamy Duskywing
Erynnis juvenalis	Juvenal's Duskywing
Everes comyntas	Eastern Tailed Blue
Incisalia augustinus	Brown Elfin
Junonia coenia	Common Buckeye
Limenitis arthemis astyanax	Red-spotted Purple
Megisto cymela	Little Wood Satyr
Papilio glaucus	Tiger Swallowtail
Papilio troilus	Spicebush Swallowtail
Phoebis sennae	Cloudless Sulfur
Phyciodes tharos	Pearl Crescent
Pieris rapae	Cabbage White

Poanes zabulon	Zabulon Skipper
Polites themistocles	Tawny-edged Skipper
Polygonia interrogationis	Question Mark
Satyrium calanus	Banded Hairstreak
Satyrium edwardsii	Edwards' Hairstreak
Strymon melinus	Gray Hairstreak
Vanessa atalanta	Red Admiral
Vanessa cardui	Painted Lady
Vanessa virginiensis	American Lady

Together these sights represent observations from every month from May through November. Presumably, a number of the species listed here would be encountered at the subject site in the appropriate season.

Of the 134 plant species recorded at the site, two are listed by the New York Natural Heritage Program (NHP). These are the Pine-Barrens Sandwort (*Minuartia caroliniana*) and the Flax-leaf Whiteatop (*Aster solidagineus*).

The Pine-Barrens Sandwort plants occur in two of the proposed project areas– the triangular "island" formed by the intersection of the three runways, and the northwest side of Runway 22. Until as recently as April 1999, the Pine-Barrens Sandwort was on the "Active" list of the New York Natural Heritage Program (NHP) as an S2 plant.[5] However, as of at least July 2000, this species was demoted to NHP's Watch List and to S3 status.[6] The watch list consists of species that "may need more information or monitoring to decide if they should be actively inventoried" by NHP (Young, 1988). Flax-leaf Whitetop was found on the airport property during the 1987 visit, and was located along the edge of the power line cut on the northern edge of the airport property on the west side of Daniel's Hole Road. This species is classified by NHP as an S2 plant, i.e., having fewer than 20 occurrences in New York State. Since, however, it is far from any of the proposed on-site projects, it will remain untouched.

A rare moth, the Aureolaria Seed borer (*Rhodecia aurantiago*), was documented as a caterpillar along the power-line right-of-way just north of the airport. Its caterpillars feed on the Cutleaf False-Foxglove (*Aureolaria pedicularia*) that grows there. Again, the food plants are at a distance from any of the disturbance proposed on the Airport property.

Included on the NYSDEC Species of Special Concern list is the Grasshopper Sparrow (*Ammodramus savannarum*), which was documented on-site by McGuinness in 1999. McGuiness inferred that there were an estimated three breeding pairs during his 1999 work at the subject site. The Grasshopper Sparrow is a bird of grasslands, and its primary habitats in New York are grain crops and pastureland (Andrle & Carroll, 1988). The open-field character of the airport site is suitable for the bird. However, it is virtually certain that if the airport were not there, the Grasshopper Sparrow would not be there either.

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[5]S2 status means typically 6 to 20 occurrences of an organism.

[6]S3 means typically 21 to 100 known occurrences of an organism.

There is also evidence that yet another NHP-listed animal might occur, as well as evidence that a third will not. The butterfly list above includes the Edwards' Hairstreak (*Satyrium edwardsii*), whose caterpillars feed on Scrub Oak--a plant that is not uncommon at the site. This insect is treated as S3S4 by NHP, meaning that it is known from perhaps 100 or more localities. It could occur wherever Scrub Oak is present in large numbers.

One potential occurrence of a rarity species can most likely be dismissed. Our ecologist and two amateurs interested in butterflies had visited Town Line Road on the strength of information that Wild Lupine grew there. This is the food plant of the caterpillar of the Frosted Elfin (*Callophrys irus*), an S1S3 insect. On May 4, 2002, in good weather (when the adult insects should have been flying), the food plant was found in fair numbers, but the insect was not, despite a careful search.

Correspondence of September 8, 1999 was forwarded to the New York State Department of Environmental Conservation (NYSDEC), Division of Fish, Wildlife & Marine Resources, New York Natural Heritage Program (NHP), requesting a determination as to whether the proposed projects would potentially impact threatened/endangered species or natural communities (see Appendix D). A response from NHP dated September 21, 1999 indicated that there were no records of known occurrences of rare or state listed animals and plants, of significant natural communities, or of other significant habitats, on or in the immediate vicinity of the Airport. However, in a subsequent letter dated November 7, 2000, NHP advised that two animal species, one plant species, and two natural community types were identified on or near the subject site (see Table 2).

The first animal species, the Aureolaria Seed-borer (*Rhodecia aurantiago*) was also found during the course of the present survey and has already been discussed.

The second animal, the Coastal Barrens Buck Moth (*Hemileuca maia ssp5*), is listed as a species of "special concern." Thus, there is a documented concern for its continued welfare in New York. The actual sampling that forms the basis of the NHP record apparently took place along the power line right-of-way east of the airport. This location is further confirmed by local Buck Moth expert John Cryan (personal communications). Thus, there is apparently no direct documentation that the insect is present on the subject property. Buck Moth caterpillars feed on Scrub Oak (*Quercus ilicifolia*), and same would be impacted by two of the proposed on-site projects. However, the actual acreage of this forest to be lost constitutes less than one percent of the 900 local acres which the Buck Moth is said to occupy (see Appendix D). This amount of loss is negligible.

The plant called the Opelousa Smartweed (*Polygonum hydropiperoides* var. *opelousanum*) was included as being on or proximate to the subject site. The Opelousa Smartweed, which is protected as a threatened species on the New York state list, was not observed on the site. It is important to note that this is a wetland species whose occurrence is based on a 73-year-old record and whose location is only vaguely indicated. Were it to occur on-site at all, it would be found in Daniel's Hole, where it would be afforded wetlands protection and would in any case be far from the impacts of any of the proposed projects.

The two natural community types are the Pitch Pine-Oak Forest (440 local acres) and the Coastal Oak-Heath Forest (2,700 local acres). Pitch Pine-Oak Forest has recently been revised to S4 rank by NHP and is therefor no longer listed by them. Moreover, the two projects that would impact less than two percent of the total 440 acres of this forest type. Such an impact would be virtually negligible.

The second community type, the Coastal Oak-Heath Forest, is centered on the Long Pond Greenbelt and the surrounding morainal hills to the northwest of the subject site. It is not apparent that this community type actually occurs *on* the subject site at all, but is instead nearby. In any event, the proposed projects will not disturb the northwestern portion of the Airport and therefore no disturbance to the same is expected.

Four species of plant seen at the subject site are listed by NYSDEC as being "exploitably vulnerable." These are

Epigaea repens	Trailing Arbutus
Kalmia angustifolia	Sheep Laurel
Kalmia latifolia	Mountain Laurel
Myrica pensylvanica	Bayberry

Exploitably vulnerable species are so designated because they are subject to being taken from the wild. In the cases of the four woody species listed here, this most likely means that they are dug up by individuals or commercial concerns for landscaping or ornamental plants. In fact, all four of these species are fairly frequent and widespread on Long Island, as can be seen from maps in the "New York Metropolitan Flora Woody Plant Workbook" (Clemants, 1999).

Table 2

Ecological Survey

TREES, SHRUBS AND WOODY VINES

Acer rubrum	Red Maple
Amelanchier sp.	Shadbush
Arctostaphylos uva-ursi	Bearberry
Aronia sp.	Chokeberry
Carya tomentosa	Mockernut Hickory
Comptonia peregrina	Sweetfern
Epigaea repens	Trailing Arbutus
Gaultheria procumbens	Wintergreen
Gaylussacia baccata	Black Huckleberry
Hudsonia ericoides	Golden Heather
Hudsonia tomentosa	False Heather
Kalmia angustifolia	Sheep Laurel
Kalmia latifolia	Mountain Laurel
Lyonia ligustrina	Maleberry
Lyonia mariana	Staggerbush
Myrica pensylvanica	Bayberry
Pinus rigida	Pitch Pine
Populus grandidentata	Big-toothed Aspen
Quercus alba	White Oak
Quercus coccinea	Scarlet Oak
Quercus ilicifolia	Scrub Oak
Quercus sp.	Oak (seedlings)
Quercus stellata	Post Oak
Quercus velutina	Black Oak
Rhus copallinum	Dwarf Sumac
Rhus glabra	Smooth Sumac
Rubus hispidus	Swamp Dewberry
Rubus sp.	Brambles
Sassafras albidum	Sassafras
Smilax glauca	Catbrier
Smilax rotundifolia	Greenbrier
Spiraea tomentosa	Steeple Bush
Vaccinium angustifolium	Late Lowbush Blueberry
Vaccinium corymobosum	Highbush Blueberry
Vaccinium pallidum	Early Lowbush Blueberry

HERBACEOUS PLANTS

Achillea millefolium	Yarrow
Agalinis setacea/tenuifolia	Gerardia
Agalinis purpurea	Purple Gerardia
Agrostis sp.	Bent Grass
Andropogon sp.	Bluestem
Arctium sp.	Burdock
Artemisia vulgaris	Mugwort
Asclepias amplexicaulis	Blunt-leafed Milkweed
Aster linariifolius	Stiff Aster
Aster paternus	White-topped Aster
Aster solidagineus	Flax-leaf White-Top
Aster sp.	Aster
Aureolaria pedicularia	Cutleaf False-Foxglove
Baptisia tinctoria	Wild Indigo
Calystegia sepium	Hedge Bindweed
Carex pensylvanica	Sedge
Carex scoparia	Sedge
Carex sp.	Sedge
Chamaesyce maculata	Wartweed
Chrysopsis mariana	Golden Aster
Cichorium intybus	Chicory
Cirsium pumilum	Pasture Thistle
Comandra umbellata	Bastard Toadflax
Conyza canadensis	Horseweed
Dactylis glomerata	Orchard Grass
Danthonia spicata	Poverty Grass
Deschampsia flexuosa	Common Hairgrass
Digitaria sp.	Crab Grass
Eleocharis sp.	Spikerush
Elytrigia repens	Quack Grass
Eragrostis spectabilis	Purple Love Grass
Eupatorium perfoliatum	Boneset
Euthamia tenuifolia	Slender Fragrant Goldenrod
Festuca sp.	Fescue
Glyceria sp.	Manna Grass
Helianthemum canadense	Frostweed
Helianthemum propinquum	Frostweed
Hieracium caespitosum	King Devil

HERBACEOUS PLANTS (Cont'd.)

Hieracium sp.	Hawkweed
Hieracium venosum	Rattlesnake Weed
Holcus lanatus	Velvet Grass
Hypericum gentianoides	Orangegrass
Hypericum sp.	St.-John's Wort
Hypochaeris radicata	Cat's Ear
Juncus effusus	Soft Rush
Juncus greenei	Rush
Juncus tenuis	Path Rush
Krigia virginica	Dwarf Dandelion
Lactuca sp.	Wild Lettuce
Lechea sp.	Pinweed
Lepidium virginicum	Peppergrass
Lespedeza capitata	Round-headed Bush-Clover
Lespedeza intermedia	Bush-Clover
Leucanthemum vulgare	Ox-eye Daisy
Linaria canadensis	Blue Toadflax
Linaria vulgaris	Butter-and-Eggs
Lotus corniculatus	Bird's-foot Trefoil
Lupinus perennis	Wild Lupine
Lycopus sp.	Water-Horehound
Lysimachia quadrifolia	Whorled Loosestrife
Melampyrum lineare	Cow-Wheat
Melilotus officinalis	Yellow Sweet Clover
Minuartia caroliniana	Pine-Barrens Sandwort
Monotropa uniflora	Indian Pipe
Panicum depauperatum	Poverty Panic Grass
Panicum sp.	Panic Grass
Panicum virgatum	Switch Grass
Phytolacca americana	Pokeweed
Pityopsis falcata	Atlantic Golden Aster
Plantago aristata	Bracted Plantain
Plantago lanceolata	English Plantain
Polygala polygama	Bitter Milkwort
Polygonatum pubescsens	Solomon's Seal
Polygonella articulata	Jointweed

HERBACEOUS PLANTS (Cont'd.)

Polygonum sp.	Lady's-Thumb
Potentilla argentea	Silvery Cinquefoil
Potentilla canadensis	Dwarf Cinquefoil
Potentilla recta	Rough-fruited Cinquefoil
Potentilla simplex	Old-field Cinquefoil
Pteridium aquilinum	Bracken Fern
Rhexia virginica	Meadow-Beauty
Rudbeckia hirta	Black-eyed Susan
Rumex acetosella	Sheep Sorrel
Scirpus cyperinus	Woolgrass
Scutellaria sp.	Skullcap
Sisyrinchium atlanticum	Blue-eyed Grass
Sisyrinchium sp.	Blue-eyed Grass
Smilacina racemosa	False Solomon's Seal
Solidago bicolor	Silverrod
Solidago nemoralis	Gray Goldenrod
Tephrosia virginiana	Goat's-Rue
Trifolium arvense	Rabbit's-foot Clover
Trifolium pratense	Red Clover
Trifolium procumbens	Low Hop Clover
Triplasis purpurea	Sand Grass
Typha latifolia	Common Cattail
Verbascum thapsus	Common Mullein
Viola lanceolata	Lance-leafed Violet
Viola sagittata	Fringed Violet

MAMMALS

Marmota monax	Woodchuck (burrow)

BIRDS

Cyanocitta cristata	Blue Jay
Dendroica coronata	Yellow-Rumped Warbler
Falco sparverius	American Kestrel
Poecile atricapillus	Black-capped Chickadee
Regulus calendula	Ruby-crowned Kinglet

BUTTERFLIES

Celastrina ladon	Spring Azure
Colias philodice	Clouded Sulfur
Euptoieta claudia	Variegated Fritillary
Junonia coenia	Buckeye
Lycaena phlaeas	American Copper

ODONATA

Anax junius	Green Darner

Potential Impacts and Proposed Mitigation

Analysis of Cumulative Ecological Impacts Associated with the ALP Projects

Given the size of the Airport property (607± acres) and the fact that the proposed modifications are relatively small, widely-separate and well-localized, it is more appropriate to discuss the potential ecological impacts of each individual project. Such discussion is included below.

Analysis of Potential for Ecological Impacts Associated with the ALP Projects

Impacts are presented on a project-by-project basis, and provide specific and detailed information on the actual organisms and communities to be affected by each project.

Project 1 - Runway 10-28 Protection Zone and Approach Surface

Project No. 1 would occur in an area defined ecologically as a young Pitch Pine-Oak Forest, in which oaks dominate and few pitch pines (*Pinus rigida*) are present. Heaths form a shrub layer within the area and few herbaceous species were identified in the field. No rare species were noted. In the area that would be disturbed, the following herbaceous and tree species were identified:

Carex pensylvanica	Sedge
Comptonia peregrina	Sweetfern
Epigaea repens	Trailing Arbutus
Gaultheria procumbens	Wintergreen
Gaylussacia baccata	Black Huckleberry
Kalmia angustifolia	Sheep Laurel
Lyonia mariana	Staggerbush
Pinus rigida	Pitch Pine
Quercus alba	White Oak
Quercus coccinea	Scarlet Oak
Quercus ilicifolia	Scrub Oak
Quercus velutina	Black Oak
Rubus hispidus	Swamp Dewberry
Smilax glauca	Catbrier
Vaccinium angustifolium	Late Lowbush Blueberry
Vaccinium pallidum	Early Lowbush Blueberry

Implementation of this project would result in the replacement of this vegetation with low-lying indigenous species and would cause associated loss of species. However, some animals displaced would be expected to disperse to the abundant surrounding woodlands and grasslands as these provide suitable habitat for the species identified. Also, no rare, threatened or endangered species were identified, and thus, no adverse impacts to the same would be expected.

Project 2 - Parallel Taxiway to Runway 10-28

The proposed parallel taxiway would traverse a triangular-shaped area of Mowed Roadside/Pathway community that supports a variety of native and introduced plant species. The following plants were identified along the proposed taxiway route:

Arctostaphylos uva-ursi	Bearberry
Aster linariifolius	Stiff Aster
Carex sp.	Sedge
Chamaesyce maculata	Wartweed
Cichorium intybus	Chicory
Conyza canadensis	Horseweed
Deschampsia flexuosa	Common Hairgrass
Digitaria sp.	Crab Grass
Eragrostis spectabilis	Purple Love Grass
Helianthemum canadense	Frostweed
Hieracium sp.	Hawkweed
Hudsonia tomentosa	False Heather
Hypericum gentianoides	Orangegrass
Lechea sp.	Pinweed
Lepidium virginicum	Peppergrass
Minuartia caroliniana	Pine-Barrens Sandwort
Myrica pensylvanica	Bayberry

Panicum sp.	Panic Grass
Pinus rigida	Pitch Pine seedlings
Pityopsis falcata	Atlantic Golden Aster
Plantago lanceolata	English Plantain
Polygonella articulata	Jointweed
Potentilla argentea	Silvery Cinquefoil
Potentilla recta	Rough-fruited Cinquefoil
Quercus sp.	Oak (seedlings)
Trifolium sp.	Clover
Vaccinium pallidum	Early Lowbush Blueberry

Also noted in this area were lichens, mosses and earth stars. Considerable bare, unvegetated ground was evident as well. Numerous grasshoppers were seen in the area, and an American Kestrel (*Falco sparverius*) flew low over the site and took prey (probably a grasshopper, a major component of their diet) in the northern part of the triangular-shaped area.

Small groups of Pine-Barrens Sandwort (*Minuartia caroliniana*) were found about 50 feet west of the eastern end of the proposed taxiway, and as scattered individuals still further to the west. As indicated in the *Existing Conditions* section, the Pine-Barrens Sandwort was on the "Active" list of the New York Natural Heritage Program (NHP) as an S2 plant.[7] However, this species was demoted to NHP's Watch List and to S3 status.[8] The watch list consists of species that "may need more information or monitoring to decide if they should be actively inventoried" by NHP (Young, 1988). Nonetheless, considering that NHP has deemed that this species no longer needs to be actively inventoried, and thus, the removal of same would not be expected to have adverse ecological impacts.

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[7]S2 status means typically 6 to 20 occurrences of an organism.

[8]S3 means typically 21 to 100 known occurrences of an organism.

As discussed in Project 3, the NYSDEC-Special Concern Grasshopper Sparrow (*Ammodramus savannarum*) has been reported as perhaps breeding near the Project 2 area. The removal of vegetation for Project 2 may somewhat reduce the breeding habitat on-site for this species, at least to the extent that the work impacts areas of tall grasses. Mitigation measures are discussed in Project 3.

In conclusion, as no rare, threatened or endangered species were identified within the project area, no adverse impacts to the same would be expected.

Project 3 - Runway Safety Areas

Disturbance to vegetation is expected on the northwest side of Runway 22 opposite the triangular-shaped area formed by the intersection of the three runways. This area is presently maintained as a mixture of Mowed Roadside/Pathway and Successional Old Field communities and supports weedy, introduced plant species near the runway and native grasslands species further from the runway. The plants observed in this area were:

Arctostaphylos uva-ursi	Bearberry
Baptisia tinctoria	Wild Indigo
Conyza canadensis	Horseweed
Euthamia tenuifolia	Slender Fragrant Goldenrod
Helianthemum canadense	Frostweed
Hudsonia tomentosa	False Heather
Hypericum gentianoides	Orangegrass
Hypochoeris radicata	Cat's Ear
Lechea sp.	Pinweed

Minuartia caroliniana	Pine-Barrens Sandwort
Pityopsis falcata	Atlantic Golden Aster
Polygonella articulata	Jointweed
Triplasis purpurea	Sand Grass

Also noted in this area were lichens and mosses. In addition, an animal burrow, apparently that of a woodchuck, was observed. Several unidentified sparrows flew up from clumps of grass and landed in or behind other clumps some distance away.

Several plants of the Pine-Barrens Sandwort were seen in the northern, more native half of the area described above, where they occurred in the vicinity of clones of Bearberry (*Arctostaphylos uva-ursi*). Grading of the RSA will require clearing of vegetation, including the Pine-Barrens Sandwort which may be present. As discussed under Project 2, the Pine-Barrens Sandwort is identified by NHP as being on its Watch List. Species on the Watch List are not actively inventoried, and this particular plant was recently demoted to the NHP Watch List from the "Active List."

The NYSDEC-Special Concern Grasshopper Sparrow (*Ammodramus savannarum*) has been reported as perhaps breeding near the Project 2 and Project 3 areas. The removal of vegetation for Project 3 may somewhat reduce the breeding habitat on-site for this species, at least to the extent that the work impacts areas of tall grasses. By way of mitigation, the Massachusetts Audubon Society recommends that airfields restrict mowing during the breeding season (May 1 to July 31) on those portions of the airfields not directly adjacent to runways and taxiways. When shrub cover reaches 35 percent, Grasshopper Sparrows will abandon a breeding site (Andrle & Carroll, 1988), and thus, it may be advisable to cut back or burn these successional areas as the need to do so arises.

In conclusion, as no rare, threatened or endangered species were identified within the project area, no adverse impacts to the same would be expected.

Project 4 - Runway 28 Approach over Daniel's Hole Road

The forested land on the Airport property that would be potentially impacted by the realignment of Daniel's Hole Road was field-surveyed and is described under Project No. 1. Implementation of this action would result in the removal of this vegetation and would cause associated displacement of wildlife species. As indicated in the impact analysis for Project No. 1, this would cause some loss of species. However, some animals displaced would be expected to disperse to the abundant surrounding woodlands and grasslands as these provide suitable habitat for the species identified. Also, as no rare, threatened or endangered species were identified, no adverse impacts to the same would be expected.

Project 5 - Deer Fence Openings

Project 5 involves the installation of fencing and cattle crossing grating to prevent wildlife from entering the Air Operations Area (AOA). During the installation of same, all deer within the confines of the fenced property (i.e., airport boundary) will be removed so as to avoid trapping the deer within the property line. There are no rare, threatened or endangered species in the area of the proposed fence and thus, same would not be impacted.

Project 6 - Bury Power Lines in Runway 22 Approach

The power lines are not situated on the Airport property but are located within a right-of-way maintained by the Long Island Power Authority (LIPA) adjacent to the north property boundary of the Airport. A rare moth species, the Aureolaria Seed-borer (*Rhodecia aurantiago*), has been reported at the power line right-of-way on the west side of Wainscott Northwest Road. This species was also identified in the New York Natural Heritage's second letter dated November 7, 2000 (see Appendix B). During the site inspection, Dr. Blanchard inspected the area in the vicinity of the proposed powerline burial area to ascertain whether the food plant of the moth's caterpillar, Cutleaf False-Foxglove (*Aureolaria pedicularia*) was present. The food plant was not present, and therefore, the moth would not be expected in this area. Thus, no adverse impacts to this rare moth are expected.

Project 7 - Taxiway System Improvements

The taxiway alignment that would connect the T-hangar complex to the end of Runway 10 and the by-pass taxiway at Runway 28 will traverse both Mowed Roadside/Pathway, Successional Old Field areas and Pitch Pine-Oak vegetation. The grassland areas are maintained by mowing and are generally weedy next to the runway. However, closer to the forest, the grassland is primarily native in its composition, and consists of the following elements:

Achillea millefolium	Yarrow
Agalinis tenuifolia/setacea	Gerardia
Arctostaphylos uva-ursi	Bearberry
Artemisia vulgaris	Mugwort
Baptisia tinctoria	Wild Indigo
Conyza canadensis	Horseweed
Danthonia spicata	Poverty Grass
Epigaea repens	Trailing Arbutus
Eragrostis spectabilis	Purple Love Grass
Euthamia tenuifolia	Slender Fragrant Goldenrod
Hieracium sp.	Hawkweed
Hudsonia ericoides	Golden Heather
Hypericum gentianoides	Orangegrass
Hypochoeris radicata	Cat's Ear
Leucanthemum vulgare	Ox-eye Daisy
Pityopsis falcata	Atlantic Golden Aster
Plantago aristata	Bracted Plantain
Plantago lanceolata	English Plantain
Polygonella articulata	Jointweed
Quercus ilicifolia	Scrub Oak (seedlings)

Rumex acetosella	Sheep Sorrel
Trifolium arvense	Rabbit's-foot Clover
Trifolium pratense	Red Clover
Vaccinium pallidum	Early Lowbush Blueberry

A second, smaller mowed area, located between the forest and the paved area of the T-hangar complex, also includes some of the plants listed above.

The forested area, through which most of the length of the taxiway will pass is Pitch Pine-Oak Forest in which the pines are taller and of greater girth than the associated oaks. This is a typical example of a fire-suppressed type of pine-barrens vegetation. The principal shrubs are various species of heaths. The following plants were noted:

Arctostaphylos uva-ursi	Bearberry
Carex pensylvanica	Sedge
Carya tomentosa	Mockernut Hickory
Epigaea repens	Trailing Arbutus
Gaultheria procumbens	Wintergreen
Gaylussacia baccata	Black Huckleberry
Monotropa uniflora	Indian Pipe
Myrica pensylvanica	Bayberry
Pinus rigida	Pitch Pine
Pteridium aquilinum	Bracken Fern
Quercus alba	White Oak
Quercus coccinea	Scarlet Oak
Quercus ilicifolia	Scrub Oak
Quercus stellata	Post Oak
Quercus velutina	Black Oak
Vaccinium angustifolium	Late Lowbush Blueberry
Vaccinium pallidum	Early Lowbush Blueberry

Three species of birds were called in--the Black-capped Chickadee (*Poecile atricapillus*), the Ruby-crowned Kinglet (*Regulus calendula*) and the Yellow-rumped Warbler (*Dendroica coronata*). A small group of Blue Jays (*Cyanocitta cristata)* was noted separately.

The vegetation in the area of the proposed new taxiway would be mowed or replaced with ground cover. This would cause some loss of species. However, some animals displaced would be expected to disperse to the abundant surrounding woodlands and grasslands as these provide suitable habitat for the species identified.

As such, no significant impacts to wildlife in the project area are anticipated.

Project 8 - Automated Weather Observation Station (AWOS)

The AWOS is proposed to be located within the triangular-shaped area outside of the Runway Object Free Areas for each runway. The plant species identified in this area were discussed in Project No. 2.

As the AWOS is a small device, its location can be finalized in the field at the time of construction, so that it is away from areas that contain the Pine-Barrens Sandwort (*Minuartia caroliniana*). The Pine-Barrens Sandwort is the only species listed by NHP, who record it on its Watch List.

In conclusion, the proposed location of the AWOS does not contain any rare, threatened or endangered species, and therefore, no significant impacts to the same would be expected.

Project 9 - Rehabilitation/Reconstruction of Runway 4-22

The rehabilitation and reconstruction of Runway 4-22 to decrease the length and reduce the width of the runway will involve existing impervious surface areas. Therefore, the ecological impacts will be limited to the potential damage of the vegetated edges while moving machinery during the construction period.

As indicated in the discussion for Project 3, disturbance to vegetation is expected on the northwest side of Runway 22 opposite the triangular-shaped area formed by the intersection of the three runways. This area is presently maintained as a grassland through mowing and supports both weedy, introduced plant species near the runway and native grasslands species further from the runway.

As this project involves the reduction of impervious surface area, there are ecological benefits. Furthermore, the reduction of the runway width will permit an additional seeding of 12.5 feet on each side of the runway with native grassland to help mitigate grassland losses elsewhere.

This project would occur in areas of existing developed areas, and thus, no significant impacts on ecological resources are anticipated.

Analysis of Potential for Ecological Impacts Associated with the Release of Lands from the Airport Boundaries

The future release of land from the Airport boundaries would not alter the existing or potential future land use. The properties are currently zoned and partially used for commercial and industrial uses. Those Industrial Road lots that are currently vacant would most likely be developed with industrial and commercial uses given their location within the Town Industrial park and proximity to the existing Airport and surrounding commercial and industrial uses. The Town has no plans for private or municipal development or uses on the 47± acre parcel north of Daniel's Hole Road. None of the ALP projects would affect any development on these parcels, nor is any development on these parcels dependent on or related to any of the ALP projects.

Conversely, none of the ALP projects are contingent or dependent on or related in any way with the development of any or all of these parcels. The ALP projects affect only the safety and operations of the airport; they are not related to development of the released parcel. Moreover, the future development of the Industrial Park and northern parcel would be subject to SEQRA review and other applicable regulations of the Town of East Hampton.

Analysis of Potential for Ecological Impacts Associated with the Future Project Being Considered

As part of the installation of the PAS to Runway 10, the Runway Protection Zone (RPZ) would need to be larger than the existing RPZ. In comparison, the current RPZ is approximately 29 acres and the required RPZ for the PAS would increase to 79± acres. Approximately 35 acres of the total 79 acres are outside the existing property line. The following is an ecological description of the Runway Protection Zone that extends west past Town Line Road into the Town of Southampton. Since access to the site proper was not available, the ecological description is based on the following:

- General experience with the ecology and terrestrial biota of Long Island;
- Published information on the ecology and terrestrial biota of Long Island;
- Earlier participation in floristic and ecological inventories of the East Hampton Airport property and environs in two separate projects--the first on June 10, 1987 for Dru Associates, Inc. (with Ron Abrams, Larry Penny and Randall Christensen), and the second on October 19, 2000 for Freudenthal & Elkowitz Consulting Group, Inc.;
- A past and unrelated visit to Town Line Road on May 4, 2002;
- Independent, unrelated pre-project communication with experienced experts; and
- Examination of aerial photographs.

The RPZ for Runway 10 is predominantly wooded, but various clearings are evident in the west, made accessible via Wainscott Harbor Road (which existed only as an unpaved track through the woods as recently as the late 1960s).

The site slopes gently upward toward its center and toward the west, grading from below 60 feet in elevation to above 70 feet. The soils are primarily Bridgehampton Silt Loam and Plymouth Loamy Sand with a silty substratum. They differ somewhat from the prevailing soil types around the rest of the airport in being merely well drained as opposed to excessively drained as in the Carver-and-Plymouth Sand and Plymouth Loamy Sand (Warner *et al.*, 1975).

The forest that comprises by far the greatest part of the subject site, is, like that of virtually all of the forest surrounding the airport, Pitch Pine-Oak Forest (see Edinger *et al.*, 2002). In this particular example, the Pitch Pine (*Pinus rigida*) is found in relatively low numbers, especially as compared to the pine-oak forest type on the south side of the airport. The other dominant trees--the oaks--include Black Oak (*Quercus velutina*), Scarlet Oak (*Q. coccinea*), and White Oak (*Q. alba*). Mockernut Hickory (*Carya tomentosa*) and Post Oak (*Quercus stellata*) might also occur. Common low shrubs are Early Lowbush Blueberry (*Vaccinium pallidum*), Late Lowbush Blueberry (*V. angustifolium*), and Black Huckleberry (*Gaylussacia baccata*). Where the forest canopy is more open, areas of the taller shrub species Scrub Oak (*Quercus ilicifolia*) may be found. In general, the herbaceous stratum is sparse, but a few herbs and other shrubs of medium to low stature are present as well, including at least some from the following list:

Arctostaphylos uva-ursi	Bearberry
Carex pensylvanica	Sedge
Comptonia peregrina	Sweetfern
Epigaea repens	Trailing Arbutus
Gaultheria procumbens	Wintergreen
Kalmia angustifolia	Sheep Laurel
Lyonia mariana	Staggerbush
Monotropa uniflora	Indian Pipe
Myrica pensylvanica	Bayberry
Pteridium aquilinum	Bracken Fern
Smilax glauca	Catbrier

Much smaller areas of open ground and road edges (such as that along Town Line Road where occasional grading or mowing keep back the woody species) may support a flora that is similar to that of pine barrens openings (Edinger et al., 2002), but which also includes weeds characteristic of drier habitats. These areas typically support a mixture of grasses and herbs, such as

Andropogon sp.	Bluestem
Arctostaphylos uva-ursi	Bearberry
Baptisia tinctoria	Wild Indigo
Chrysopsis mariana	Golden Aster
Conyza canadensis	Horseweed
Danthonia spicata	Poverty Grass
Eragrostis spectabilis	Purple Love Grass
Euthamia caroliniana	Slender Fragrant Goldenrod
Helianthemum canadense	Frostweed
Hudsonia ericoides	Golden Heather
Hudsonia tomentosa	False Heather
Hypericum gentianoides	Orangegrass
Hypochaeris radicata	Cat's Ear
Krigia virginica	Dwarf Dandelion
Lechea sp.	Pinweed
Lespedeza capitata	Round-headed Bush- Clover
Leucanthemum vulgare	Ox-eye Daisy
Linaria canadensis	Blue Toadflax
Melampyrum lineare	Cow-Wheat
Minuartia caroliniana	Pine-Barrens Sandwort
Panicum depauperatum	Poverty Panic Grass
Pityopsis falcata	Atlantic Golden Aster
Plantago aristata	Bracted Plantain
Polygala polygama	Bitter Milkwort

Polygonella articulata	Jointweed
Sisyrinchium sp.	Blue-eyed Grass
Solidago nemoralis	Gray Goldenrod
Triplasis purpurea	Sand Grass

A small subset of these species would be expected to be found in any such openings that are present on the expanded RPZ site.

Other plants seen in the vicinity of the airport, a few of which may occur on the RPZ site, are

Acer rubrum	Red Maple
Achillea millefolium	Yarrow
Agalinis purpurea	Purple Gerardia
Agrostis sp.	Bent Grass
Amelanchier sp.	Shadbush
Aronia sp.	Chokeberry
Artemisia vulgaris	Mugwort
Asclepias amplexicaulis	Blunt-leafed Milkweed
Aster linariifolius	Stiff Aster
Aster sp.	Aster
Aureolaria pedicularia	Cutleaf False-Foxglove
Calystegia sepium	Hedge Bindweed
Carex scoparia	Sedge
Carex sp.	Sedge
Chamaesyce maculata	Wartweed
Cichorium intybus	Chicory
Cirsium pumilum	Pasture Thistle
Comandra umbellata	Bastard Toadflax
Dactylis glomerata	Orchard Grass

Deschampsia flexuosa	Common Hairgrass
Digitaria sp.	Crab Grass
Festuca sp.	Fescue
Helianthemum propinquum	Frostweed
Hieracium pratense	King Devil
Hieracium sp.	Hawkweed
Hieracium venosum	Rattlesnake Weed
Holcus lanatus	Velvet Grass
Juncus greenei	Rush
Juncus tenuis	Path Rush
Kalmia latifolia	Mountain Laurel
Lactuca sp.	Wild Lettuce
Lepidium virginicum	Peppergrass
Lespedeza intermedia	Bush-Clover
Linaria canadensis	Blue Toadflax
Lotus corniculatus	Bird's-foot Trefoil
Lupinus perennis	Wild Lupine
Lysimachia quadrifolia	Whorled Loosestrife
Melilotus officinalis	Yellow Sweet Clover
Panicum sp.	Panic Grass
Phytolacca americana	Pokeweed
Plantago lanceolata	English Plantain
Polygonatum pubescsens	Solomon's Seal
Populus grandidentata	Big-toothed Aspen
Potentilla argentea	Silvery Cinquefoil
Potentilla canadensis	Dwarf Cinquefoil
Potentilla recta	Rough-fruited Cinquefoil
Potentilla simplex	Old-field Cinquefoil
Rhus copallinum	Dwarf Sumac

Rhus glabra	Smooth Sumac
Rubus hispidus	Swamp Dewberry
Rubus sp.	Brambles
Rudbeckia hirta	Black-eyed Susan
Rumex acetosella	Sheep Sorrel
Sassafras albidum	Sassafras
Smilacina racemosa	False Solomon's Seal
Smilax rotundifolia	Greenbrier
Solidago bicolor	Silverrod
Tephrosia virginiana	Goat's-Rue
Trifolium arvense	Rabbit's-foot Clover
Trifolium pratense	Red Clover
Trifolium procumbens	Low Hop Clover
Viola sagittata	Fringed Violet

Birds that might occur on this site would be the same as in the list given under Existing Conditions for the airport as a whole, but would be even more skewed toward the pine-barrens breeders (**bolded**), since the proposed expanded RPZ is primarily Pitch Pine-Oak Forest.

Likewise, possible mammals, herpetofauna and butterflies would be the same as for the airport site as a whole, although in the case of the mammals, the woodchuck would probably not be found, given its usual habits and habitat. Similarly, for most species of butterfly the relative lack of open areas and their associated nectar-source flowers would probably limit these insects' abundance.

Since rare species are just that--rare, none would be *expected* on the proposed expanded RPZ. The one NHP-listed plant species that elsewhere may be impacted by the ALP projects is the Pine-barrens Sandwort (*Minuartia caroliniana*). This is a plant of open areas and for that reason would not be likely to occur on the RPZ site. The Pine-barrens Sandwort has recently been demoted by NHP from their Active List to their Watch List.

One potential rarity, a butterfly called the Frosted Elfin (*Callophrys irus*), was shown earlier not to be present. A search on Town Line Road in the RPZ area, where the insect's food plant occurs and at a season when the butterfly would be expected to be on the wing, failed to identify it.

Pitch Pine-Oak Forest, though classified as S3S4 in NHP's November 7, 2000 letter, has since been reclassified as strictly S4, i.e., "apparently secure in New York State." In any event, virtually no disturbance will occur to this plant community except for the possible felling or "topping" of a few of the tallest trees.

V. LAND USE AND ZONING

Existing Conditions

Land Use

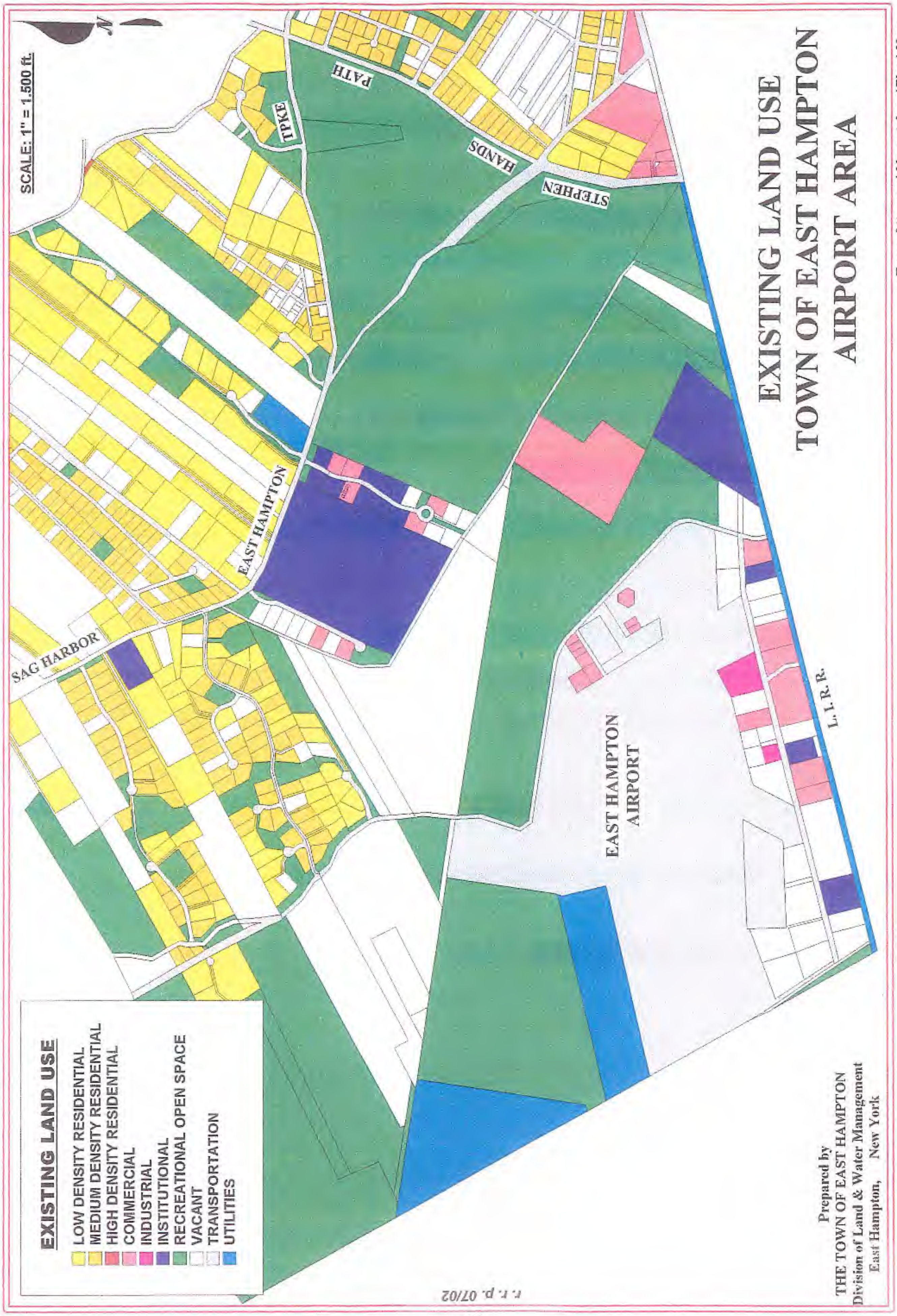
The airport property is a total of 607± acres and consists of the East Hampton Airport in the central portion of the site and associated aviation uses surrounding same. There is one terminal building located at the northwestern portion of the site. The terminal building is 5,000 square feet in size and was constructed in 1997. Additionally, there are fourteen hangars adjacent to the terminal building and at the southwestern portion of the site. Five of the hangars house multiple aircraft and are owned by private individuals and corporations. The remaining hangars are currently occupied by fixed-based operators and aviation tenants. There is also a cellular communications tower on-site.

The northern portion of the site consists of undeveloped land. The Town of East Hampton Industrial Park is located at the southern portion of the site. Land uses in the Industrial Park include commercial, non-aviation uses. Daniel's Hole Road is located on the west side of the Airport property and traverses the north portion of the site just beyond Runways 16 and 22.

Land uses surrounding the East Hampton Airport property (see Figure 5) are as follows:

North - To the north of the subject site are the Suffolk County Water Authority Town Line Road public supply wellfield and recreational open space. Further north are vacant land, recreational open space, residential and institutional uses.

South - The Long Island Railroad tracks border the site to the south. Further south are residential properties. Commercial uses are also situated to the south and southeast.



Town Attorney\Airport Area\Final Map

Figure 5

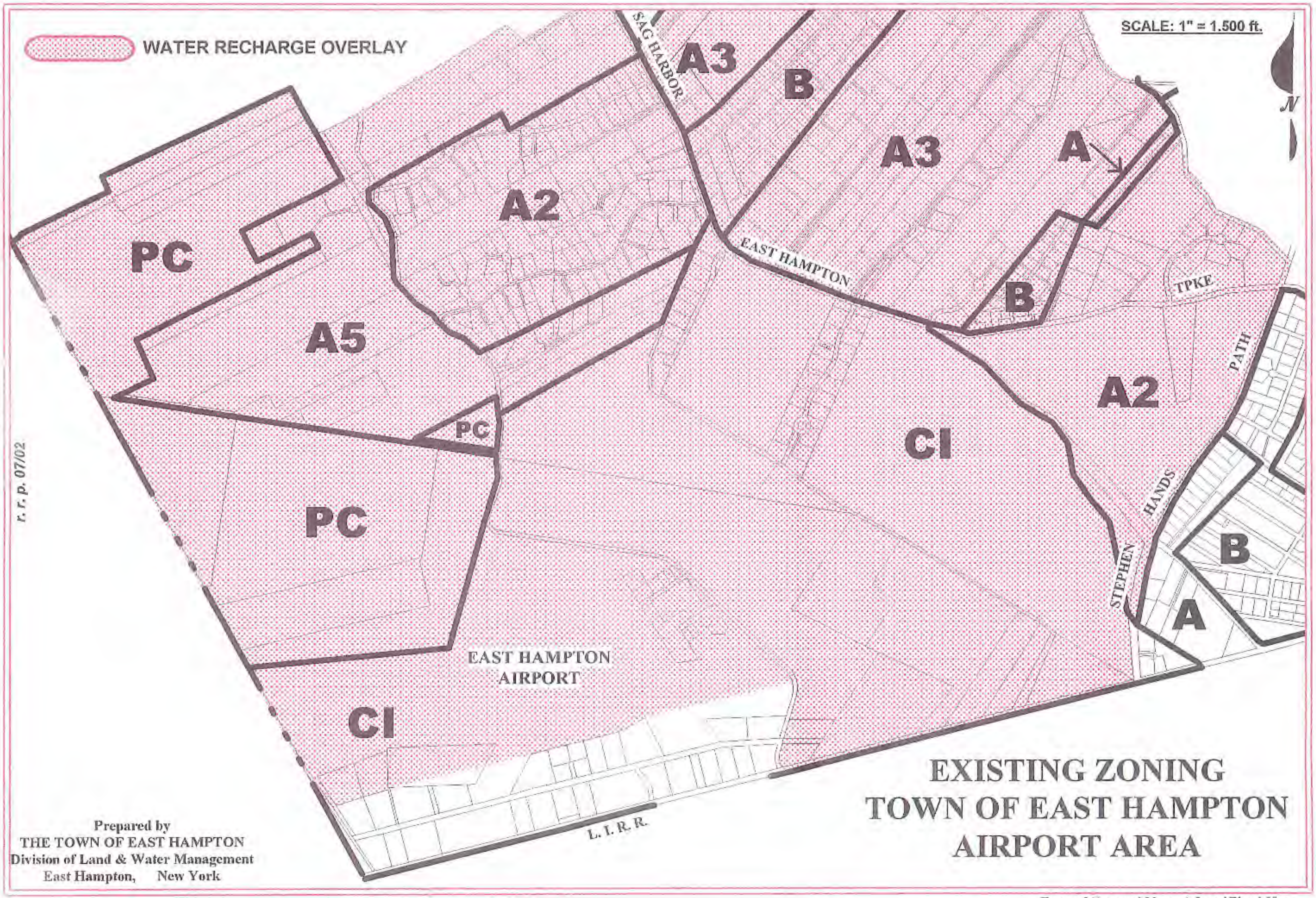
East - To the east of the site is primarily open space, with the exception of the East Hampton Indoor Tennis Club. East of Stephens Hand Path are residential properties. Town recreational fields and the Child Development Center of the Hamptons are being developed on the west side of Stephens Hand Path.

West - The Southampton/East Hampton town line is to the west. Land uses include residential and vacant properties.

Zoning

The majority of the airport property (i.e., 462± acres) is situated in the Commercial - Industrial (CI) District. To the north of the industrial park, the site is also situated within the Water Recharge Overlay District (approximately 501.9 acres). The northwestern portion of the site (approximately 145 acres) is zoned Parks & Conservation (see Figure 6 - Zoning Map).

Pursuant to Table II in Section 255-11-10 of the Town of East Hampton Zoning Code, permitted uses in the Commercial - Industrial (CI) Zoning District include the following: park; nature preserve or sanctuary; agriculture; artists and craftsmen workshops; boatyard; carpentry, plumbing or heating supply shop; custom workshop; filling station; repair and storage garages; motor vehicle salesroom and lot; printing shop; recording and film production facilities; repair shop for household, business or personal; riding academy; exercise studio; taxi company; wholesale businesses; publishing; truck terminal or truck transfer station; and warehouse, storage yards or building supplies distribution. An air terminal is permitted only in the CI District by special permit.



Town Attorney\Airport Area\Final Map

Figure 6

The bulk requirements of the CI District are set forth in Table I of Section 255-11-10 of the Town Zoning Code and are as follows:

Table 3

Bulk Requirements of the Commercial-Industrial (CI) Zoning District

DIMENSIONAL REGULATION	CI
Maximum Height	2 stories/35 feet
Minimum Area	40,000 square feet
Maximum Lot Coverage Building/Total Lot	50 percent/75 percent[9]
Minimum Lot Width	100 feet
Minimum Front Yard	50 feet
Minimum Side Yard	15 feet[10]
Minimum Rear Yard	25 feet[10]

The northwestern portion of the subject site (approximately 145 acres) is zoned in the Parks & Conservation (PC) District. Pursuant to Table II in Section 255-11-10 of the Town of East Hampton Zoning Code, permitted uses in the PC District include parks and nature preserves. Special permit uses include a membership club, fire station, police station, post office, public utility, mariculture (research and development) and recreational marina.

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[9]Except in the Water Recharge Overlay District where lot coverage is 30 percent maximum, and total lot coverage is forty percent maximum, and total clearing is fifty-percent maximum.

[10]Except if bordering a residence district, in which case the distance doubles.

Water Recharge Overlay District (WRO)

Approximately 501.9 acres of the airport property are also situated within the Town's Water Recharge Overlay (WRO) District. The purpose of the WRO is "to provide for the application of a system of needed additional regulations for properties located in areas where disproportionately large quantities of rainwater are recharged into and stored in the underground aquifer, in order to help ensure the continued sufficiency and purity of the town's irreplaceable groundwater supply and sole source of drinking water."

As part of the WRO regulations, the Town Code limits the extent of clearing on parcels within the WRO District. For those parcels zoned Commercial - Industrial (CI), the limit of clearing is 10,000 square feet or 50 percent of the lot area, whichever is greater. Currently, of the overall 607 acres which comprise the Airport property, approximately 363.4 acres of such are wooded. The majority of this wooded area is located north of the Town Industrial Park, and thus, within that portion of the subject property zoned within the WRO. Therefore, approximately 72.4 percent of the WRO-zoned portion of the site (i.e., 501.9 acres) is wooded.

In addition to the clearing restrictions, WRO regulations prohibit the storage of certain hazardous substances and chemicals as identified by the Town's Natural Resources Director. According to Airport management, there are currently four underground storage tanks on the subject property, as follows: one 12,000-gallon underground storage tank for jet fuel, one 8,000-gallon underground storage tank for AvGas, one 1,000-gallon underground storage tank for propane gas and one 2,000-gallon underground storage tank for No. 2 fuel oil. There is also one 275-gallon above ground storage tank for No. 2 fuel oil. While some of the hangars utilize heating oil, the majority of the hangars utilize natural gas for heating purposes. Also, two of the fixed based operators (FBOs) each have a 55-gallon waste oil drum for which they are responsible for their own disposal. No new tanks or storage facilities are proposed. Thus, storage at the Airport would continue to comply with the WRO regulations.

Relevant Comprehensive Plans

Town of East Hampton Comprehensive Plan - 1984

The *Town of East Hampton Comprehensive Plan* (*1984 Comprehensive Plan*) includes a discussion of the existing land uses in the Wainscott planning area. As indicated in the *1984 Comprehensive Plan*, "The northern portion of the Wainscott planning area contains approximately 2,644 acres. Within this area, the land zoned for residential use is largely undeveloped morainal land. The Town owned airport facility, including wooded buffers and industrial leased land, is the largest single ownership tract in the planning area. . ." The March 1984 existing land use inventory for the Wainscott planning area indicated that 39.8 percent or 1,667 acres was committed to "residential use and transportation-utilities-communications forms" (page 3-5).

The Future Land Use Plan included in the *1984 Comprehensive Plan* "represents an ideal picture of the community to help assure that land is used in a reasonable manner for the benefit of the whole community. While the Plan incorporates current land use patterns, it is sometimes necessary to utilize a broad brush approach over isolated or undesirable uses to delineate suitable patterns for future land use." The *1984 Comprehensive Plan* included a discussion of the industrial pattern in the Town, and particularly, the East Hampton Airport. Relevant to the Airport, the *1984 Comprehensive Plan* indicates that ". . . the neighboring residential areas have been growing and there now appears to be great citizen concern as to the increase in aircraft use and the possibility of expansion of the functional level of service. Aircraft approaches and takeoffs do take overflight patterns across some of the community's most desirable year-round and second home neighborhoods and therefore offers threats to the tranquil environment expected by its residents." However, the following is also noted:

> *. . .In response to protecting the approaches to the present runway system, the Town of East Hampton has kept large areas of industrial zoning to the north, east and south of the airport. It has also recently mandated agreements from realty subdividers requiring notations on subdivision maps (when within one mile of the facility), that such is the case and that prospective purchasers be made aware of such conditions prior to purchase.*

Additionally, the *1984 Comprehensive Plan* ". . .recognizes that the second or leisure home community is a large part of the Town's economic resources and that industrial and commercial land use activities form secondary roles to this resource. Consequently, the Future Land Use Plan, although protective of the present airport configuration, does not <u>envision</u> airport functional use changes and does not support reorientation of runways toward that purpose. The Plan also recommends that the Planning Board, in its review of residential subdivisions, make strong attempts to hold open space corridors beneath the present airport flight approaches."

<u>Town of East Hampton Comprehensive Plan - Transportation Element (1997)</u>

In August 1997, L.K. McLean Associates, P.C. published an update to the transportation element of the Town's Comprehensive Plan to address the key issue of improving mobility during the summer season. According to the 1997 *Town of East Hampton Comprehensive Plan - Transportation Element* (1997 Transportation Plan), the average summer traffic growth on the Town's roadways ". . .exceeds 8 percent each year, which causes congestion levels to increase on more roadway segments each year. Typical average annual traffic growth elsewhere on Long Island is on the order of 1-2 percent per year." Therefore, there is a need for other modes of travel "to accommodate summer traffic conditions and thereby attempt to manage the overwhelming demand on the roadway system."

Relevant to the East Hampton Airport, the 1997 Transportation Plan indicates that because of local community opposition to the encouragement of growth in air travel to East Hampton, it is recommended that only those projects identified on the Airport Layout Plan (then-May 1994) and those projects with only aircraft safety-related purposes (i.e., those which would not encourage additional airport operations) be undertaken at the airport (page 7-3).

Town of East Hampton Open Space Plan/Community Preservation Project Plan (1996)

The *Town of East Hampton Open Space Plan/Community Preservation Project Plan* (*1996 Open Space Plan*) was developed, in general, to evaluate existing tracts of land to determine their environmental sensitivity and provide recommendations to protect and enhance these lands. The subject property consists of 607.0± acres of which 56.9± acres are developed with buildings and other impervious surface (i.e., pavement). If the ALP projects area implemented, impervious area would increase to 58.0± acres. The East Hampton Airport is included on the *1996 Open Space Plan* as containing tracts of land with environmental sensitivity. These tracts of land are listed under two different Suffolk County Tax Map (SCTM) Nos. 300-180-1- 8.12 and 300-181-1- 4.2 (hereafter Lot 8.12 and Lot 4.2).

Lot 8.12 is described as being 320.7 acres and includes a portion of the East Hampton Airport and industrial park surrounded by woodlands. In addition, the *1996 Open Space Plan* indicates the presence of the East Hampton Town Airport, industrial park, woodland, and potential South Fork Bicycle Path route on the site. The potential South Fork Bicycle Path route is essentially along or adjacent to the Long Island Railroad right-of-way. The plan recommends protecting the trail/bicycle path routes on-site.

Lot 4.2 (north and east of Daniel's Hole Road) is described as being 107.3 acres and includes the East Hampton Airport, pine barrens core area,[11] groundwater recharge area, trails, and SGPA. The *1996 Open Space Plan* recommends that this parcel be rezoned to Parks & Conservation. According to the Town of East Hampton zoning map, this parcel is currently zoned in the Commercial-Industrial District and within the Water Recharge Overlay District.

Town of Southampton Comprehensive Plan Update - 1998

The Town of East Hampton is considering, as a potential future project, the installation of a Precision Approach System (PAS) to Runway 10. As part of the installation of the PAS, the Runway Protection Zone (RPZ) would need to be larger than the existing RPZ. The current RPZ is approximately 29 acres, and the required RPZ for the PAS would increase to 79± acres. Approximately 35 acres of the total 79 acres are outside the existing property line and within the boundaries of the Town of Southampton. Thus, the *Southampton Tomorrow: Comprehensive Plan Update Implementation Strategies, Southampton, New York, December 1998* (hereafter *Comprehensive Plan Update*) was reviewed and recommendations regarding the land uses to the west of the East Hampton Airport in the Town of Southampton are considered.

The *Comprehensive Plan Update* was developed for the purpose of controlling land use for the benefit of the whole community. Currently, land uses to the west of the East Hampton Airport consist of residential and vacant land. Based upon maps in the Town of Southampton *Comprehensive Plan Update* and the Geographic Information System maintained by the Town, portions of the land west of the site are designated as agricultural land and open space/greenbelt area. With the relatively limited use of the East Hampton Airport, the agricultural and open space character of the area is not currently being impacted.

[11] This area is not designated Core Preservation Area of the Central Pine Barrens.

Additionally, the Town of Southampton *Comprehensive Plan Update* identifies the significant air travel resources to the Town. The two airports discussed are Southampton's Gabreski Airport, located north of the Village of Westhampton Beach, and Islip's MacArthur Airport. MacArthur Airport is recognized as the significant commercial airport and Gabreski Airport as a local airport serving aviation and military uses predominantly.

Potential Impacts and Proposed Mitigation

Analysis of Cumulative Land Use and Zoning Impacts Associated with the ALP Projects

Land Use

Implementation of the nine ALP projects would not alter the existing land uses on the site, but would improve the physical conditions thereof as same relate to airport operations. The projects include various safety upgrades to the Runway Safety Areas and Runway Protection Zones and will not increase Airport operations. New taxiways would be installed to the north of Runway 10-28 and at the eastern portion of the Airport to connect the T-hangar complex to Runway 10. Additionally, the ALP projects would include the realignment of Daniel's Hole Road in order to provide an Object Free Area (OFA) to reduce the risk of damage to aircraft in the event of an undershoot, overshoot or diversion from the runway. The 1,230 linear feet of Daniel's Hole Road and a 70-linear foot section of roadway leading to the Tennis Club would be removed and replaced with 2,850 linear feet of roadway. Implementation of the ALP projects would not adversely impact any surrounding land uses.

Zoning

The majority of the airport property (i.e., 462± acres) is situated in the Commercial - Industrial (CI) District. To the north of the industrial park, the site is also situated within the Water Recharge Overlay District. The northwestern portion of the site is zoned Parks & Conservation (PC).

In accordance with Section 255-11-10 of the Town Zoning Code, the proposed projects will comply with the bulk requirements of the CI District.

Table 4

Consistency Analysis with the Bulk Requirements of the CI Zoning District

DIMENSIONAL REGULATION	BULK REQUIREMENT	ALP PROJECTS
Maximum Height	2 stories/35 feet	n/a*
Minimum Area	40,000 square feet	462± acres
Maximum Lot Coverage Building/Total Lot	50 percent/75 percent	1.5 percent/2.6 percent
Minimum Lot Width	100 feet	3,060± feet
Minimum Front Yard	50 feet	270± feet
Minimum Side Yard	15 feet	540± feet
Minimum Rear Yard	25 feet	930± feet

*Building heights are limited by Federal Aviation Regulations - Part 77.

The northwestern portion of the subject site (approximately 145 acres) is zoned in the Parks & Conservation (PC) District and ALP projects do not include any site improvements in this area of the property.

In accordance with §255-3-65 (E), the total permitted clearing of the subject property is 50 percent or 303.5± acres, although a portion of the property is already cleared for the existing Airport. Currently, of the 501.9 acres in the WRO, approximately 363.4 acres or 72.4 percent of the property is wooded. Implementation of the ALP projects will require the removal and replacement of 9.4 acres of wooded area with 8.3 acres of grasses and/or low-lying vegetation, thereby reducing the total area of natural vegetation on-site to 354.0 acres or 70.5 percent of the site. Thus, the proposed project will comply with the clearing limits set forth in §255-3-65 (E) of the Town Code.

In addition to the clearing restrictions, WRO regulations prohibit the storage of certain hazardous substances and chemicals as identified by the Town's Natural Resources Director. According to Airport management, implementation of the proposed action would not increase or in any way change the storage of hazardous materials on the site.

Relevant Comprehensive Plans

Town of East Hampton Comprehensive Plan - 1984

The *1984 Comprehensive Plan* states, ". . . the neighboring residential areas have been growing and there now appears to be great citizen concern as to the increase in aircraft use and the possibility of expansion of the functional level of service. Aircraft approaches and takeoffs do take overflight patterns across some of the community's most desirable year-round and second home neighborhoods and therefore offers threats to the tranquil environment expected by its residents."

As indicated in Table 1.1 in the ALP report (see Appendix B), the FAA and East Hampton Airport records indicate that operations at the airport steadily increased from 1965 to 1985. Thus, during the preparation and filing of the *1984 Comprehensive Plan*, it appeared that airport operations were going to continue to rise. However, after 1985, operations began to decline and annual reports today reflect no greater than and even fewer operations in 2001 than 1985. According to the project engineer and airport planners, the decline in general aviation activity from the mid-1980s to early 1990s could be attributed to a multitude of reasons, including an increase fuel prices, the de-funding of pilot training of veterans of the Vietnam War, significant increases in liability insurance, and declining sales in general aviation aircraft.

The *1984 Comprehensive Plan* indicated that "... although protective of the present airport configuration, does not envision airport functional use changes and does not support reorientation of runways toward that purpose." The ALP projects are proposed as safety upgrades to the exiting East Hampton Airport and do not involve functional use changes and will not reorient runways.[12] Thus, the proposed action will comply with this recommendation of the *1984 Comprehensive Plan.*

Town of East Hampton Comprehensive Plan - Transportation Element (1997)

The 1997 Transportation Plan includes a recommendation to "... implement only specific, previously identified, improvements which will not encourage growth in operations and cause negative environmental impacts." Relevant to the East Hampton Airport, the 1997 Transportation Plan indicates that because of local community opposition to the encouragement of growth in air travel to East Hampton, it is recommended that only those projects identified on the Airport Layout Plan (May 1994) and those projects with only aircraft safety-related purposes (i.e., those which would not encourage additional airport operations) be undertaken at the airport (page 7-3). The ALP projects were included on the 1994 Airport Layout Plan and will, therefore, comply with the 1997 Transportation Plan. [13]

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[12]It is important to note that the existing runways were not arbitrarily located on the subject site. The orientation of the runways provides the best functional use based upon wind patterns, with some consideration given to the shape of the property.

[13]The 1994 ALP has since been invalidated by the FAA. This does not change the conclusion or recommendations of the 1997 Transportation Plan.

Town of East Hampton Open Space Plan/Community Preservation Project Plan (April 1996)

The majority of the proposed ALP projects include the clearing and grading of land for safety-related purposes. Approximately 8.3 acres will be converted from forest land to grasslands or low-lying vegetation and an additional 1.10 acres will be paved. Thus, the project will have a negligible affect on open space. In addition, the 9.4 acres constitute land currently within the airport boundaries and within an industrial-zoned portion of the Town.

The *1996 Open Space Plan* recommends the protection of trail/bicycle path routes on-site and the rezoning of Lot 4.2 to Parks & Conservation. However, as indicated in the *Existing Conditions* sub-section, this area of the subject property is zoned Commercial-Industrial and is within the Water Recharge Overlay District. Also, the ALP projects would not impact the potential South Fork Bicycle Path.

It is important to note that the areas of the ALP projects are proximate to the existing airport features (e.g., runways, taxiways, hangars, and terminal building). As such, these lands are the least likely to be utilized as trail/bicycle path routes or for a park due to the presence of the airport and the associated safety concerns and noise.

Furthermore, no improvements are proposed in the northwestern portion of the airport property which is zoned for Parks & Conservation uses. Thus, there would be no impacts to the existing designated open space on the subject property.

Potential Land Use and Zoning Impacts Associated with the ALP Projects

Implementation of the nine ALP projects would not alter the existing uses of the property, but would improve the physical conditions thereon. A discussion of each individual project and the associated land use and zoning impacts associated therewith follows.

Project 1 - Runway 10-28 Protection Zone and Approach Surface

This project involves the clearing and maintenance of navigable airspace at both ends of the runway to provide increased safety during take-off and landing procedures. Approximately 3.2 acres would be cleared for Runway 28. Improvements for Runway 10 would include individual tree topping and removal of individual bushes in the safety area. As there would be no change to the existing Airport use, and this project does not impact surrounding land uses, there are no expected significant adverse impacts to land use or zoning.

Project 2 - Parallel Taxiway to Runway 10-28

This project involves the addition of a small taxiway area to the north of Runway 10-28 to eliminate the need to back taxi on the active runway or taxi along Runway 4-22 in order to return to the passenger terminal area. The project is being implemented as a safety measure and will not increase aircraft usage. Approximately 33,750 square feet of additional pavement would be required for the taxiway improvements. No clearing of vegetation would be required. As this project would not alter the existing use of the property as an Airport, and this project does not impact surrounding land uses, there would be no expected significant adverse impacts to land use or zoning.

Project 3 - Runway Safety Areas for Runway 22 and Runway 28

This project involves grading the width and length of the runway safety areas to meet FAA safety standards in the event that an aircraft may undershoot, overshoot or divert from the runway area. Specifically, Runway 22 would be shortened to allow the Runway Safety Area to remain clear of Daniel's Hole Road. Also, included as part of Project 4, described below, the realignment of Daniel's Hole Road would remove same from the Runway Safety Area of Runway 28. An area of approximately 500 feet wide and 1,000 feet beyond Runway 28 would be regraded. As this project would not alter the existing use of the property as an Airport, and this project does not impact surrounding land uses, there would be no expected significant adverse impacts to land use or zoning.

Project 4 - Runway 28 Approach over Daniel's Hole Road

This project involves the realignment of Daniel's Hole Road in order to provide an Object Free Area (OFA) to reduce the risk of damage to aircraft in the event of an undershoot, overshoot or diversion from the runway. Specifically, 1,230 linear feet of Daniel's Hole Road and a 70-linear foot section of roadway leading to the Tennis Club would be removed and replaced with 2,850 linear feet of roadway. Approximately 31,200 square feet of pavement would be removed, and the proposed new area of roadway would be 68,400 square feet. That new roadway and associated shoulder areas will require the removal of approximately 2.6 acres of vegetation. As part of the proposed realignment, existing slopes would be regraded to FAA standards and drainage improvements would be made (i.e., additional drywells would be installed). This project would not alter the existing land uses or zoning, and thus, no adverse impacts to same are expected. Additionally, while the proposed project involves the realignment of Daniel's Hole Road, same would be within the Airport boundaries and there would be no impact to surrounding land uses.

Project 5 - Deer Fence Openings

This project involves the installation of additional deer fence enclosures (to the existing fencing) to prevent wildlife from entering the Air Operations Area (AOA). The fencing would be similar to the existing fencing in that it would be installed parallel to the road and would consist of 10-foot high tension wire on wooden posts. As the project involves only the installation of additional fencing and same would be consistent with the existing fencing, there are no significant adverse land use or zoning impacts expected.

Project 6 - Bury Power Lines in Runway 22 Approach

This project involves the removal of an existing electrical transmission tower and utility poles and the subsequent burial of power lines below the ground surface in order to remove an obstruction to the Runway 22 approach. The power lines would be buried at a depth of 36 to 48 inches below grade surface in an existing cleared area. As the project involves only the burial of power lines in a cleared area, there are no significant adverse land use or zoning impacts expected.

Project 7 - Taxiway System Improvements

This project involves the construction of a new taxiway section from the T-hangar complex (adjacent to the terminal building) to Runway 10. The new connector taxiway from the T-hangars to Runway 10 would be 1,073 linear feet and would require the removal approximately 2.4 acres of vegetation. The by-pass taxiway to Runway 28 would be 223 linear feet. Approximately 45,500 square feet of new pavement for both taxiways would be required. As this project would not alter the existing use of the property as an Airport, and this project does not impact surrounding land uses, there would be no expected significant adverse impacts to land use or zoning.

Project 8 - Automated Weather Observation Station (AWOS)

This project involves the construction of an Automated Weather Observation Station (AWOS) on the property to increase airport safety by providing minute-to-minute updated weather forecasts. No clearing or paving is required. As the project involves only the installation of an AWOS, there are no significant adverse land use or zoning impacts expected.

Project 9 - Rehabilitation/Reconstruction of Runway 4-22

This project involves the reconstruction of Runway 4-22 that is current very deteriorated. The existing 100-foot runway width exceeds the 75 foot minimum requirement and would be reduced to 75 feet and shoulder areas would be regraded. In addition, the runway length would be shortened by 134 feet. This project also involves the removal of woodland (approximately 1.2 acres) and the trimming of trees (approximately 2.7 acres) in the approach surface to Runway 4-22. As this project would not alter the existing use of the property as an Airport, and this project does not impact surrounding land uses, there would be no expected significant adverse impacts to land use or zoning.

Potential Land Use and Zoning Impacts Associated with the Release of Lands

The future release of 87± acres from the Airport boundaries would not alter the existing or potential future land use. The properties are currently zoned and partially used for commercial and industrial uses. Those properties that are currently vacant would most likely be developed with industrial and commercial uses given their proximity to the existing Airport and surrounding commercial and industrial uses, and thus, would not substantially alter the character of the area. Although the FAA would not review the types of uses on the 87± acres, it would review all development for compliance with airport safety regulations. Additionally, any development of specific parcels or lots (aviation or non-aviation) would still be subject to Town of East Hampton zoning and other land use regulations.

It should be noted that the Town has been developing the existing Industrial Park over the last 20 years. According to the "Map of the East Hampton Industrial Park" filed April 17, 1998, there are 24 Industrial Park lots totaling 56 acres. Of these 24 lots, seven parcels[14] are designated for airport or aviation-related uses. The remaining 17 lots of the Industrial Park are proposed to be released from the East Hampton Airport. One of the proposed lots to be released[15] is indicated as a Town-designated access strip on the subdivision map. Two additional lots[16] are municipally-owned and are not part of, but are adjacent to, the industrial park.

The 47±-acre undeveloped area at the northeast portion of the site is also proposed to be released from the airport boundary. This area has been held for East Hampton Airport uses, and it has been determined by the Town of East Hampton that such area will not be needed for current or future aviation uses. The 1996 Open Space Plan recommends the rezoning of this tract of land to Parks & Conservation and the release of such land from the airport boundaries would not preclude the implementation of this recommendation and would facilitate it.

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[14]Suffolk County Tax Map Nos.: District 300 - Section 191 - Block 2 - Lots 7.3, 7.4, 8 and 9; District 300 - Section 192 - Block 3 - Lots 42.1, 48 and 49.

[15]Suffolk County Tax Map No.: District 300 - Section 192 - Block 3 - Lots 52.

[16]Suffolk County Tax Map Nos.: District 300 - Section 191 - Block 2 - Lot 1; and District 300 - Section 192 - Block 3 - Lots 44.

Analysis of Potential for Land Use and Zoning Impacts Associated with the Future Project Being Considered

The future installation of the Precision Approach System (PAS) would require a larger Runway Protection Zone (RPZ) such that 35± acres outside the Airport boundaries would be impacted. A portion of the RPZ lies within the Town of Southampton and in an area zoned for residential uses (Country Residence - 120,000 square feet) and several residential properties would be within the western edge of the RPZ. The RPZ guidelines state that incompatible objects and activities should be cleared from the RPZ. Objects that generally have an adverse impact on the airport being situated within the RPZ include fuel handling and storage facilities, smoke and dust generating activities, misleading lights, and those objects which may create glare or attract wildlife. The RPZ's function is to enhance the protection of people and property on the ground. This is achieved through the airport's control of the RPZ which is preferably exercised through the acquisition of property. While it is desirable to clear all objects from the RPZ, some uses are permitted, provided they do not attract wildlife, are outside the ROFA/TOFA, and do not interfere with navigational aids.

For the portion of the 35 acres within the approach surface, existing trees would need to be trimmed to remove obstructions from the navigable airspace. In addition, a six-acre area would be necessary for the installation of lighting and would require that all vegetation be cleared and the area be fenced. This six-acre area would extend outwards from the runway and would extend outside the airport boundaries, and into the Town of Southampton. As part of this action, it would be necessary for the Town of East Hampton to consult with the Town of Southampton prior to the implementation of same.

VI. NOISE

Existing Conditions

A Noise Impact Study utilizing FAA's Integrated Noise Model (INM) Version 6.0 was prepared by the project engineer, TriState Planning & Engineering, P.C. (see Appendix E), and a summary of same follows.

The level of noise perceived to be generated from an airport is directly related to the number and type of aircraft operations. Approximately 60 percent of the annual aircraft activity at the East Hampton Airport occurs in the summer months (June, July and August). During the summer months, the airport has a much larger number of aircraft because of the increased number of summer residents. Thus, it can be concluded that the maximum noise impact would be experienced during the summer months.

Aircraft Fleet Mix and Time-of-Day Operations

A key element of the INM input data is the aircraft operations and fleet mix reflecting the aircraft types conducting approaches, departures, and touch and go operations. Since there is not an air traffic controller at the East Hampton Airport, assumptions were made for the number of operations of each aircraft type and the time of day the operations occur. For the purpose of defining night and day operations, the INM identifies daytime operations as occurring between 7 a.m. and 10 p.m. and nighttime operations as occurring between 10 p.m. and 7 a.m.

Jet aircraft using East Hampton Airport often operate in a limited weight configuration because of the length of Runway 10-28. In other words, the aircraft do not carry a full load of fuel or passengers and operate at reduced power settings. This produces less noise than if the aircraft operated on longer runways with full loads.

Runway Usage

As indicated in Table A-2 of the Noise Impact Study (see Appendix E), the wind conditions at the East Hampton Airport favor the usage of Runway 10-28. Approximately 70 percent of the propeller aircraft and 100 percent of the jet and commuter aircraft use Runway 10-28. Small propeller aircraft use Runways 4-22 and 16-34 equally (about 15 percent each) throughout the year at different times as the prevailing winds shift with the seasons.

Time of Day/Night Operations

The day and night distinction for operations is important when developing noise contours as the INM places a 10 decibel-weighted penalty on night-time activity. The standard Day-Night split, which was applied to East Hampton Airport, assumes 92 percent day operations (7:00 a.m. and 10:00 p.m.) and eight percent nighttime operations (10:00 p.m. and 7:00 a.m.). These percentages were also used for all of the noise analyses.

Flight Tracks: Arrival, Departure, Touch and Go Operations

Aircraft departure and arrival flight tracks for the INM assumptions were defined as to the position and procedures for each flight. The flight tracks were based on standard aircraft operating procedure, airport management comments, and the common destinations of itinerant aircraft flights in the northeast. It should be recognized that no two aircraft fly exactly the same path due to factors such as equipment differences, pilot skill, instrumentation and weather conditions. Therefore, the flight tracks should be considered as representative "centerlines of flight corridors" into and out of the Airport. The flight tracks are depicted in Figures A-1 through A-3 in Appendix E.

Modeling of Noise Levels

The INM includes the day-night noise levels (DNL) on and around the airport. The DNL measurement is characterized as the Equivalent Sound Level over a 24-hour period or that sound level directly related to the effects of sound on people since it expresses the equivalent magnitude of the sound as the function of frequency of occurrence and time, and the addition of 10dBA (A-weighted sound pressure level) to all noise levels measured between 10 p.m. and 7 a.m.[17]

Grid Point Analysis

A grid point analysis was performed to determine noise levels for the following four scenarios at five geographic points, Points A-E, around the Airport:

Case One	-	Year 2000: Average Day of Year
Case Two	-	Year 2000: Average Day in Summer
Case Three	-	Year 2005: Average Day of Year
Case Four	-	Year 2005: Average Day in Summer
Case Five	-	Future with Precision Approach System (PAS) on Runway 10: Average Day of Year
Case Six	-	Future with PAS on Runway 10: Average Day in Summer

These points were selected based upon their proximity to residential and other developed land uses. The grid point geographical coordinates are listed in Table A-3 and are depicted on the land use maps in Figures A-1 through A-3 in Appendix E. A discussion of the grid point analysis is included in the *Cumulative Noise Impacts* section.

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[17]As defined by the New York State Department of Environmental Conservation, *Assessing and Mitigating Noise Impacts*, February 2001.

Noise Model

In addition to the grid point analysis, noise contours were generated for the 65, 70 and 75 DNL (day-night level) to depict the areas within such contours for the following six scenarios:

Case One	-	Year 2000: Average Day of Year
Case Two	-	Year 2000: Average Day in Summer
Case Three	-	Year 2005: Average Day of Year
Case Four	-	Year 2005: Average Day in Summer
Case Five	-	Future with PAS on Runway 10: Average Day of Year
Case Six	-	Future with PAS on Runway 10: Average Day in Summer

As indicated earlier in this section, approximately 60 percent of the annual aircraft activity occurs in the months of June, July, and August. The future 2005 levels represents a 15 percent increase in 2000 aircraft activity based upon normal background growth. A discussion of the noise contour analysis is included in the *Cumulative Noise Impacts* section.

Cumulative Noise Impacts Associated with the ALP Projects

A grid point analysis was performed to determine noise levels for the following four scenarios at five geographic points, Points A-E, around the Airport:

Case One	-	Year 2000: Average Day of Year
Case Two	-	Year 2000: Average Day in Summer
Case Three	-	Year 2005: Average Day of Year
Case Four	-	Year 2005: Average Day in Summer
Case Five	-	Future with PAS on Runway 10: Average Day of Year
Case Six	-	Future with PAS on Runway 10: Average Day in Summer

These points were selected based upon their proximity to residential and other developed land uses.

Table 5

Grid Point Measurements

Grid	Grid Point Noise Level in DNL					
	Case One Year 2000 Avg Day of Year	**Case Two Year 2000 Avg Summer Day**	**Case Three Year 2005 Avg Day of Year**	**Case Four Year 2005 Avg Summer Day**	**Case Five PAS* Avg Day of Year**	**Case Six PAS* Avg Summer Day**
A	56.9	60.9	57.5	61.5	57.7	61.6
B	54.0	58.0	54.6	58.7	54.7	58.7
C	52.0	55.8	52.6	56.4	52.7	56.5
D	57.0	60.9	57.5	61.4	57.7	61.6
E	48.8	52.6	49.4	53.2	49.4	53.2

*Precision Approach System on Runway 10

As indicated in Table 5, above, the projected increase in noise levels at each point from 2000 to 2005 are less than five decibels. Pursuant to the New York State Department of Environmental Conservation,[18] the human reaction to an increase of less than five decibels is unnoticeable to tolerable. Thus, the projected changes in noise levels from the present operating conditions to 2005 would not impact the surrounding community.

Pursuant to the U.S. Department of Housing and Development (HUD), the noise environment is characterized as either acceptable, normally unacceptable and unacceptable, as described in Table 6, below.

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[18]New York State Department of Environmental Conservation, *Assessing and Mitigating Noise Impacts*, February 2001 (page 15).

Table 6

Noise Categories Defined by
U.S. Department of Housing and Urban Development

Category	DNL Value	Description of Noise Environment
Acceptable	≤65 dB	The noise exposure may be of some concern but common building construction will make the indoor environment acceptable and the outdoor environment will be reasonably pleasant for recreation and play.
Normally Unacceptable	> 65 ≤75 dB	The noise exposure is significantly more severe; barriers may be necessary between the site and prominent noise sources to make the outdoor environment acceptable; special building construction may be necessary to ensure that people indoors are sufficiently protected from outdoor noise.
Unacceptable	> 75 dB	The noise exposure is so severe that the construction cost to make the indoor noise environment acceptable may be prohibitive and the outdoor environment would still be unacceptable.

As indicated in Table 5, the noise levels at Points A through E range from 48.8 DNL (Case One - Point E) to 61.5 DNL (Case Four - Point A). Thus, pursuant to HUD criteria, the noise environment at all points is acceptable.

As stated in §185-3(A) of the Town Code, acceptable noise levels in a residential district between the hours of 7 a.m. and 7 p.m. is 65 dBA or less, and 50 dBA or less from 7 p.m. and 7 a.m. However, pursuant to §185-4(L), the provisions of §185-3 shall apply to the use or occupancy of any lot or structure thereon and to noise produced thereby except for, "All noises coming from the normal operations of properly equipped aircraft, not including scale model aircraft."

Noise Model Summary

In addition to the grid point analysis, noise contours were generated for the 65, 70 and 75 DNL (day-night level) to depict the areas within such contours for the same six scenarios. As indicated earlier in this section, approximately 60 percent of the aircraft activity occurs in the months of June, July, and August. The future 2005 levels incorporate a 15 percent increase in aircraft activity based upon normal background growth. It is imperative to stress that such increase is not a result of the ALP projects. Table 7 provides detailed data for the noise contour areas and the land uses within such contour for each scenario.

Table 7

Noise Contour Area Analysis

Case No. and Description	Noise Level	Noise Contour Area Off Airport Property	Low Density Residential (Ac.)	Medium Density Residential (Ac.)	Vacant (Ac.)	Recreational Open Space (Ac.)	Institutional/ Commercial (Ac.)
(1) Year 2000: Average Day of Year	65 DNL 70 DNL 75 DNL	5.3 acres On-site only On-site only	– – –	– – –	0.6 – –	4.7 – –	– – –
(2) Year 2000: Average Day in Summer	65 DNL 70 DNL 75 DNL	57.8 acres 2.3 acres On-site only	1.4 – –	9.5 – –	6.1 – –	32.1 2.3 –	8.7 – –
(3) Year 2005: Average Day of Year	65 DNL 70 DNL 75 DNL	8.5 acres On-site only On-site only	– – –	– – –	1.0 – –	7.0 – –	0.5 – –
(4) Year 2005: Average Day in Summer	65 DNL 70 DNL 75 DNL	79.2 acres 5.7 acres On-site only	3.0 – –	10.8 – –	8.7 0.5 –	44.8 5.2 –	11.9 – –
(5) Future with Precision Approach on Runway 10: Average Day of Year	65 DNL 70 DNL 75 DNL	11.4 acres On-site only On-site only	– – –	0.6 – –	1.6 – –	8.6 – –	0.6 – –
(6) Future with Precision Approach on Runway 10: Average Day in Summer	65 DNL 70 DNL 75 DNL	83.5 acres 6.2 acres On-site only	5.6 – –	11.9 – –	9.4 0.7 –	44.4 5.5 –	12.2 – –

As indicated in Table 7, during an average summer day under the present operating conditions (Case No. 2), the 65 DNL contour comprises 57.8± acres off airport property. Based upon the projected background growth rate, the INM model forecasts that the 65 DNL contour will encompass an area of 79.2 acres during the average summer day (Case No. 4). Thus, an additional 21.4 acres would be impacted.

An analysis of the land uses within the 65 DNL contour area in Case No. 4 indicates that 53.5 acres of the total 79.2 acres are comprised of recreational open space. This represents roughly 68 percent of the 65 DNL contour area, compared to 38.2 acres or 66 percent of the existing 65 DNL contour area. When compared to the existing residential area within the 65 DNL contour (i.e., 10.9 acres), the projected background growth rate would result in an additional 2.9 acres of residential uses within such contour area. Pursuant to HUD criteria (see Table 6), noise levels of 65 DNL or less are acceptable. Thus, no adverse noise impacts associated with the projected background growth are expected. Furthermore, it should be noted that no residential uses are within the 70 DNL contour area and no property outside the Airport boundaries is within the 75 DNL contour area.

Overall, the ALP projects consist of the repair and maintenance of existing facilities and will not create additional aircraft operations or allow larger aircraft to use the facility; therefore, no adverse noise impacts associated with same are expected as a result. The changes in noise levels around the airport would be expected to result from growth in general aviation activity and would not be attributed to the implementation of the ALP projects.

Minor increases to existing noise levels will only be experienced during the construction phase of each project, and they will be of short duration. It is anticipated that all construction activities will be performed during the normal workday and not during sensitive evening and night hours. In conclusion, no adverse impacts to existing noise levels are associated with the ALP projects or the projected background rate.

Analysis of Potential for Noise Impacts Associated with the ALP Projects

The following is an analysis of potential impacts associated with the nine ALP projects in relation to noise:

Project 1 - Runway 10-28 Protection Zone and Approach Surface

This project involves the clearing and maintenance of navigable airspace at both ends of the runway to provide increased safety during take-off and landing procedures. Note that the grading, clearing and/or cutting of trees/brush and minor excavation activities associated with the burial of utility poles removal will produce a temporary, minor increase to existing noise levels during the construction phase of the project. However, no long-term impacts to existing noise levels are associated with this project.

Project 2 - Parallel Taxiway to Runway 10-28

This project involves the addition of a small taxiway area to the north of Runway 10-28 to avoid the present unsafe practice where aircraft must back taxi on the active runway or taxi along Runway 4-22 in order to return to the passenger terminal area. The project will not increase aircraft usage and is being implemented as a safety measure. Note that the project will generate a temporary, minor increase to existing noise levels during the construction phase associated with the use of machinery and equipment. However, no long-term impacts to noise levels are associated with this project.

Project 3 - Runway Safety Areas

This project involves grading the width of the existing runway safety areas (located on either side of the runways) as well as the length of the runway safety area (located beyond the runway ends) to meet FAA safety standards in the event that an aircraft may undershoot, overshoot or divert from the runway area. The project will produce a temporary, minor increase in noise levels during the construction period due to the machinery and/or equipment used in the grading process, however, no long-term noise impacts are associated with this project.

Project 4 - Runway 28 Approach over Daniel's Hole Road

This project involves the realignment of Daniel's Hole Road in order to provide an Object Free Area (OFA) that will reduce the risk of damage to aircraft in the event of an undershoot, overshoot or diversion from the runway. Note that the construction of the new roadway, associated clearing/grubbing and installation of drainage systems will result in a temporary, minor increase to existing noise levels during the construction phase of the project, however, no long-term impacts to existing noise levels are associated with this project.

Project 5 - Deer Fence Openings

This project involves the installation of additional deer fence enclosures (to the existing fencing) to prevent wildlife from entering the Air Operations Area (AOA). The procedure involves the installation of gates, fencing and cattle crossings, which is expected to generate insignificant noise impacts during the construction process. No long-term noise impacts are expected to result.

Project 6 - Bury Power Lines in Runway 22 Approach

This project involves the removal of an existing electrical transmission tower and utility poles and the subsequent burial of power lines below the ground surface in order to remove an obstruction to the Runway 22 approach. As the procedure involves construction and excavation activities, a temporary, minor increase to existing noise levels is expected, however, no long-term impacts to noise levels are associated with this project.

Project 7 - Taxiway System Improvements

This project involves the construction of a new taxiway section from the T-hangar complex that connects to Runway 10-28 at the end of Runway 10 and a by-pass taxiway will be constructed near the end of Runway 28.. These taxiway systems improvements would eliminate the current unsafe method wherein all aircraft entering or leaving the existing T-hangar complex must cross an active runway and/or back taxi if using Runway 10, which also creates operational constraints such as the need to hold and wait for aircraft arriving or departing Runway 10-28. Note that a temporary, minor increase to existing noise levels will be generated during the construction phase of the new T-hangar complex, however, the project will be implemented as a safety measure and will not increase aircraft usage. Thus, no long-term noise impacts are associated with this project.

Project 8 - Automated Weather Observation Station (AWOS)

This project involves the construction of an Automated Weather Observation Station (AWOS) on the property to increase airport safety by providing minute-to-minute updated weather forecasts. A temporary, minor increase to noise levels will occur during the construction phase of the project, however, no long-term impacts to noise levels are expected to result.

Project 9 - Rehabilitation/Reconstruction of Runway 4-22

This project involves the reconstruction of Runway 4-22 that is currently very deteriorated. The existing 100-foot runway width exceeds the 75 foot minimum requirement, and would be reduced to 75 feet and the shoulder areas regraded. In addition, the runway length would be shortened by 134 feet. Temporary, short-term increases to noise levels are expected during the construction phase of the project, however, the new runway will not generate use by larger aircraft or result in additional usage of the facility. No long-term impacts to noise levels are associated with this project.

Analysis of Potential for Noise Impacts Associated with the Release of Lands from the Airport Boundaries

The future release of land from the Airport boundaries would not be expected to result in adverse noise impacts. These properties are currently zoned and partly used for commercial and industrial uses; the release of same would not alter the existing or future noise environment. Those properties that are currently vacant would most likely be developed with industrial and commercial uses given their proximity to the existing Airport and surrounding commercial and industrial uses. However, there are no current development proposals for these properties. Thus, whether they are ultimately developed for aviation or non-aviation purposes would not substantially alter the future noise environment. Nonetheless, it is important to note that the development of same would be subject to SEQRA review and development approval by the Town of East Hampton.

Analysis of Potential for Noise Impacts Associated with the Future Project Being Considered

The implementation of the Precision Approach System (PAS) to Runway 10 would provide lateral and vertical guidance to the runway, provide a visual reference of the runway alignment and assist pilots with distance perception. All of these benefits contribute to a more stable descent path. Due to the lack of vertical guidance, pilots currently make power adjustments in the final segment of the approach which increase noise. In some instances, missed approaches at the runway result in pilots applying power to the aircraft and climbing out to conduct another approach to the runway. These activities can be significant noise sources at the airport. The installation of the PAS would assist the pilot in making approaches to the runway avoiding power adjustments and missed approaches, and therefore, noise associated with same would be eliminated.

Approximately 70 percent of the propeller aircraft and 100 percent of the jet and commuter aircraft use Runway 10-28. As part of the analysis, the future installation of the Precision Approach System to Runway 10 was considered and represented in INM as Case Nos. 5 and 6. In essence, the PAS would permit Runway 10 to remain open during poor weather conditions, whereas under the existing condition, it would now be closed. Based upon the analysis of weather, the additional amount of time the airport would be open and the aircraft utilizing the airport, the availability of a PAS could potentially increase airport operations on Runway 10 by 3.2 percent.

As indicated in Table 5, the projected increase in noise levels from the present operating conditions to PAS conditions are less than five decibels. Therefore, pursuant to NYSDEC criteria, no adverse noise impacts to the surrounding community would be expected.

As indicated in Table 7, should the precision approach system be considered at some future time, the 65 DNL contour for the average summer day (Case No. 6) would extend over an area of 83.5 acres off-site. Thus, as compared to the 2005 average summer day, an additional 4.3 acres would be within the 65 DNL contour area. However, the 65 DNL contour area would contain 6.2 acres of residentially-used property, or 3.7 acres greater than that in the 2005 conditions. Similar to the 2005 conditions, the majority of the area within the 65 DNL contour area (i.e., 53.8 acres or approximately 64 percent of the area) is characterized as vacant land and residential open space.

Pursuant to HUD, a DNL value of 65 dB or less may be of some concern but common building construction will make the indoor environment acceptable and the outdoor environment will be reasonably pleasant for recreation and play. Notwithstanding this, if the PAS is considered for implementation some time in the future, it would be necessary to prepare a detailed noise analysis to accurately assess potential impacts that might result at that time.

The noise study projected that the 70 DNL contour would extend over 5.6 acres off airport property. However, no residential properties are within the 70 DNL contour.

Finally, as indicated in Table 7, under present and future conditions, the 75 DNL contour does not affect any properties outside of the Airport boundaries.

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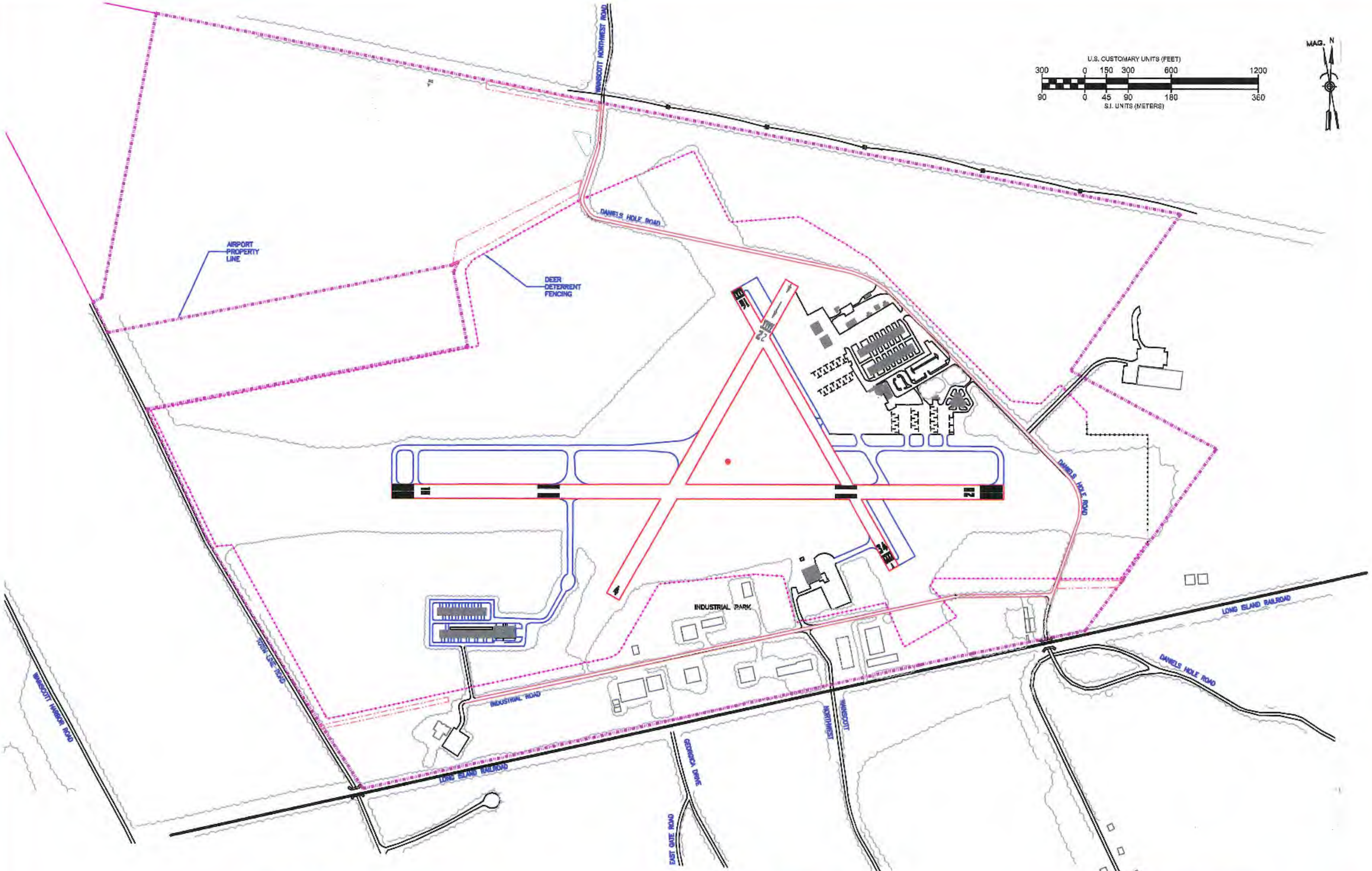
APPENDIX A



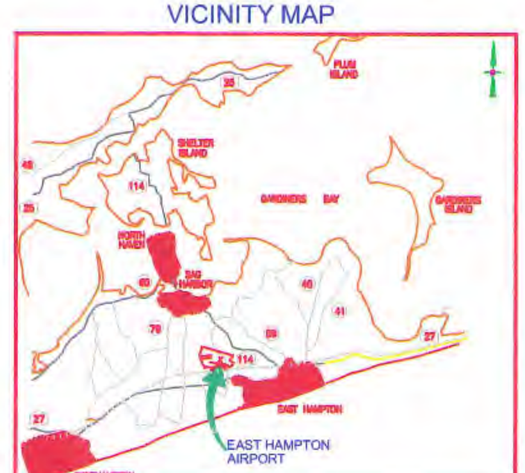
East Hampton Airport

East Hampton, New York

Owner:
Town of East Hampton

LOCATION MAP

VICINITY MAP



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12. Aerial Photograph

Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

TSPE TriState Planning & Engineering, P.C.
208 Glen Cove Road
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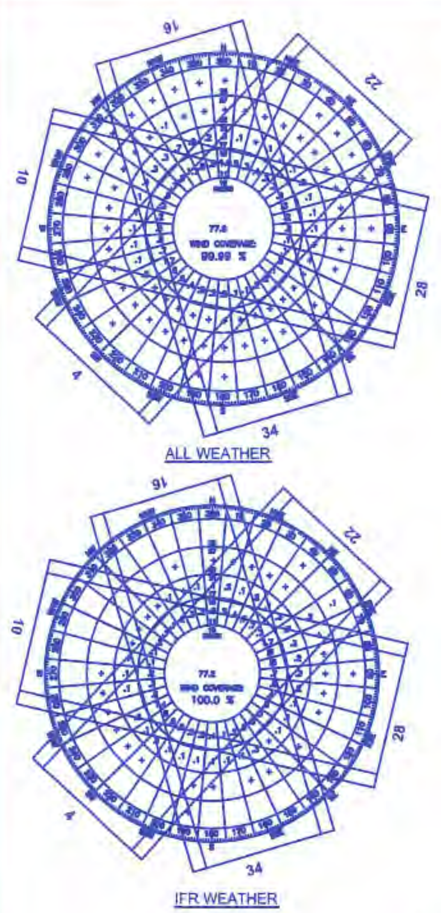
Cover Sheet

ENGINEER'S SEAL:

DATE: Nov. 15, 2002

SHEET NO. 1 OF 12



ALL WEATHER

IFR WEATHER

PERCENT WIND COVERAGE

RUNWAY	13 KNOTS ALL WEATHER	13 KNOTS IFR	16 KNOTS ALL WEATHER	16 KNOTS IFR
10-28	94.54%	93.77%	98.42%	97.95%
4-22	92.35%	98.04%	96.81%	98.66%
16-34	94.98%	91.58%	98.71%	96.78%
COMBINED	99.98%	99.99%	99.99%	100.00%

Source: National Climatic Center, Asheville NC
Observations taken at: Westhampton Beach, NY
Period Covered: 1990-1999

SYMBOLIC LEGEND

EXISTING	DESCRIPTION
	Airport Reference Point
	Building – Airport
	Building Other
---55---	Existing Contour Line and Elevation
	Airport Property Line
	Runway Object Free Area (ROFA)
	Runway Protection Zone (RPZ)
	Runway Safety Area (RSA)
	Deer Deterrent Fencing
	Tree Line
BAA	Based Aircraft Apron
IAA	Itinerant Aircraft Apron
	Power Line and Towers

TAXIWAY DATA TABLE

TAXIWAY	LENGTH	WIDTH
A	2,283'	35'
B	234'	35'
C	1,251'	35'
D	1,368'	35'

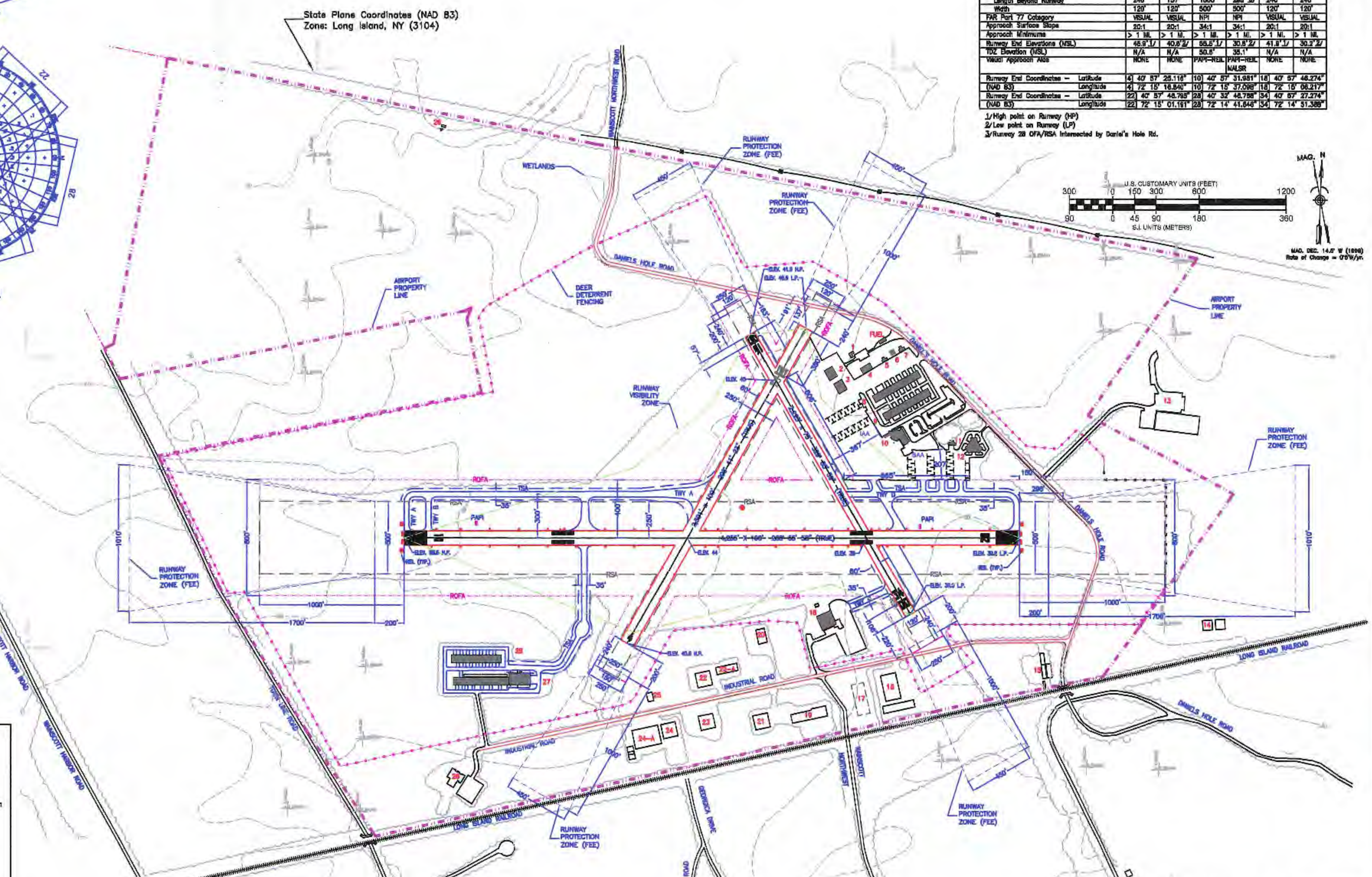
AIRPORT DATA TABLE

AIRPORT DATA	EXISTING
Airport Elevation (MSL)	55.51' MSL
Airport Reference Point (ARP) – Latitude	40° 57' 34.480"
(NAD 83) – Longitude	72° 15' 08.682"
Mean Max Temperature of Hottest Month	82°
Airport Terminal Area NAVAIDS	VOR/DME, RNAV, GPS
Magnetic Variation	14.5° W
Date of Magnetic Variation	1996
NPIAS Service Level	GENERAL AVIATION
Wind Coverage Crosswind Component	
VFR	99.99%
IFR	99.99%
All Weather	99.99%
Airport Reference Code (ARC)	C-II
Design Aircraft	CHALLENGER 600
Taxiway Lighting	MITL's
Taxiway Marking	BASIC

RUNWAY DATA TABLE

RUNWAY DATA	RUNWAY 4-22 EXISTING		RUNWAY 10-28 EXISTING		RUNWAY 16-34 EXISTING	
Effective Gradient (%)	0.20		0.57		0.54	
Maximum Grade Change	0.20		0.57		0.54	
Wind Coverage (%)	98.61%		98.61%		98.61%	
Max. Elevation (MSL)	45.9'		55.5'		41.9'	
Runway Length	2,501'		4,255'		2,223'	
Runway Width	100'		100'		75'	
Useable Runway Length	2,501'		4,255'		2,223'	
Surface Type	ASPHALT		ASPHALT		ASPHALT	
Pavement Strength Single Wheel	8,000 (lbs)		30,000 (lbs)		8,000 (lbs)	
Dual Wheel	N/A		60,000 (lbs)		N/A	
Dual Tandem	N/A		N/A		N/A	
Runway Lighting	NONE		MIRL's		NONE	
Runway Marking	VISUAL		NPI		VISUAL	
Airport Reference Code (ARC)	B-I		D-II		B-I	
Design Aircraft	PIPER CHEYENNE		GULFSTREAM-IV		PIPER CHEYENNE	
Line of Sight Violations	NONE		NONE		NONE	
Stage Length	300 MILES		500 MILES		300 MILES	
Object Free Zone (OFZ)	250'		400'		250'	
Runway End	RWY 4	RWY 22	RWY 10	RWY 28	RWY 16	RWY 34
Displaced Threshold	NONE	380'	NONE	NONE	57'	106'
Displaced Threshold Elevation (MSL)	N/A	41.1'	N/A	N/A	41.5'	30.9'
Runway Object Free Area (ROFA)						
Length Beyond Runway	240'	91'	1000'	150' 3/	183'	220'
Width	250'	250'	800'	800'	250'	250'
Runway Safety Area (RSA)						
Length Beyond Runway	240'	137'	1000'	288' 3/	240'	240'
Width	120'	120'	500'	500'	120'	120'
FAR Part 77 Category	VISUAL	VISUAL	NPI	NPI	VISUAL	VISUAL
Approach Surface Slope	20:1	20:1	34:1	34:1	20:1	20:1
Approach Minimums	> 1 MI.	> 1 MI.	> 1 MI.	> 1 MI.	> 1 MI.	> 1 MI.
Runway End Elevations (MSL)	45.9' 1/	40.6' 2/	55.5' 1/	30.6' 2/	41.9' 1/	30.2' 2/
TDZ Elevation (MSL)	N/A	N/A	50.6'	35.1'	N/A	N/A
Visual Approach Aids	NONE	NONE	PAPI-REIL	PAPI-REIL MALSR	NONE	NONE
Runway End Coordinates – Latitude	4 40° 57' 25.116"		10 40° 57' 31.981"		16 40° 57' 46.274"	
(NAD 83) Longitude	4 72° 15' 16.840"		10 72° 15' 37.098"		16 72° 15' 06.217"	
Runway End Coordinates – Latitude	22 40° 57' 46.795"		28 40° 32' 46.788"		34 40° 57' 27.274"	
(NAD 83) Longitude	22 72° 15' 01.191"		28 72° 14' 41.646"		34 72° 14' 51.388"	

1/ High point on Runway (HP)
2/ Low point on Runway (LP)
3/ Runway 28 OFA/RSA Intersected by Daniel's Hole Rd.



AIRPORT FACILITIES

1. Former Flight School (presently unlet) – Town of East Hampton
2. Sound Aircraft Services
3. Sound Aircraft Services
4. Myers Aero Service
5. Pegasus Transfer
6. Munson/Ryan
7. Jay Andreassi
8. Hampton Hangars, Inc.
9. Hampton Hangars, Inc.
10. Terminal Building – Town of East Hampton
11. Hampton Transfer
12. East Hampton Hangar, Inc.
13. East Hampton Indoor Tennis
14. Animal Rescue Fund
15. Wainscott Foliage Fund
16. 39 Industrial Road, LLC
17. (Reserved)
18. Aviation Resources, Inc.
19. Walt Disney Imagineering
20. MAPEASY
21. Living Water Full Gospel Church
22. Ron Sullivan Welding
23. LTV
24. LTV
25. (Reserved)
26. Apple East
27. East End Hangars
28. East End Hangars
29. Cellular One Transmission Tower

METRIC CONVERSION TABLE

U.S. Customary Units (feet)	35	79	131	200	250	450	700	1,010	1,510	1,700	1,750
S.I. Units (m)	10.5	24	40	60	75	138	210	303	453	510	525

MODIFICATIONS TO STANDARDS

	ITEM MODIFIED	CURRENT STANDARD	PROPOSED DIMENSION	DATE APPROVED
1				
2				
3				
4				
5				
6				

NO	REVISIONS	DATE
1		
2		
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This drawing and electronic file is prepared for the exclusive use by the Owner and Engineer for the project identified below.

East Hampton Airport

Suffolk County, New York

Owner: Town of East Hampton

TSPE TriState Planning & Engineering, P.C.

Specializing in Airport Services

200 Glen Cove Road
Old Westbury, NY 11568-1524
Tel:(516)284-4775
E-mail: admin@tspe.com

PROJECT:

Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

SHEET TITLE:

Existing Airport Layout

DESIGNED BY: LAC

CHECKED BY: THC

SCALE: Horiz. : 1" = 300' Vert. : N/A

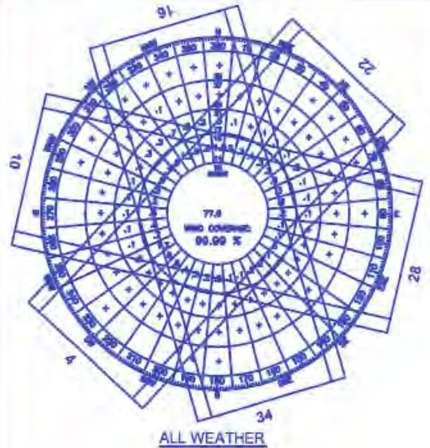
DATE: Nov. 15, 2002

SHEET NO. 2 OF 12

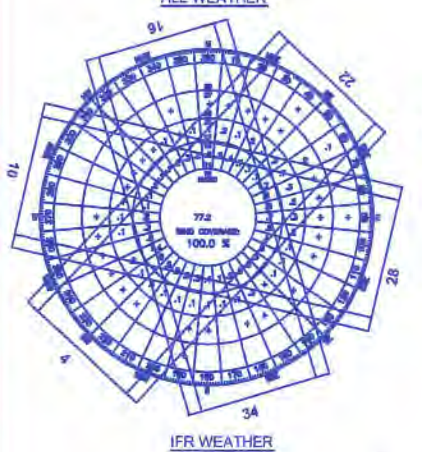
PERCENT WIND COVERAGE

RUNWAY	13 KNOTS ALL WEATHER	13 KNOTS IFR	16 KNOTS ALL WEATHER	16 KNOTS IFR
10-28	94.54%	93.77%	98.42%	97.95%
4-22	92.36%	98.04%	96.81%	98.66%
16-34	94.96%	91.58%	98.71%	96.78%
COMBINED	99.96%	99.99%	99.99%	100.00%

Source: National Climatic Center, Asheville NC
Observations taken at: Westhampton Beach, NY
Period Covered: 1990-1999



ALL WEATHER



IFR WEATHER

SYMBOLIC LEGEND

EXISTING	DESCRIPTION
	Airport Reference Point
	Building – Airport
	Building Other
	Existing Contour Line and Elevation
	Airport Property Line
	Runway Object Free Area (ROFA)
	Runway Protection Zone (RPZ)
	Runway Safety Area (RSA)
	Deer Deterrent Fencing
	Tree Line
	Proposed Development Project
	Proposed Cattle Crossing Location
BAA	Based Aircraft Apron
IAA	Itinerant Aircraft Apron
	Obstruction Removal (On Airport)
	Clearance for Existing Approach
	Clearance for Proposed Approach
	Re-aligned Road
	Land Area for FAA Release

AIRPORT DATA TABLE

AIRPORT DATA		EXISTING	PROPOSED
Airport Elevation (MSL)		55.51' MSL	55.51' MSL
Airport Reference Point (ARP) –	Latitude	40° 57' 34.460"	40° 57' 34.267"
(NAD 83) –	Longitude	72° 15' 06.662"	72° 15' 06.722"
Mean Max Temperature of Hottest Month		82°	82°
Airport Terminal Area NAVAIDS		VOR/DME, RNAV, GPS	VOR/DME, RNAV, GPS
Magnetic Variation		14.5° W	14.5° W
Date of Magnetic Variation		1996	1996
NPIAS Service Level		GENERAL AVIATION	GENERAL AVIATION
Wind Coverage Crosswind Component			
VFR		99.99%	99.99%
IFR		99.99%	99.99%
All Weather		99.99%	99.99%
Airport Reference Code (ARC)		C-II	C-II
Design Aircraft		CHALLENGER 600	CHALLENGER 600
Taxiway Lighting		MITL's	MITL's
Taxiway Marking		BASIC	BASIC

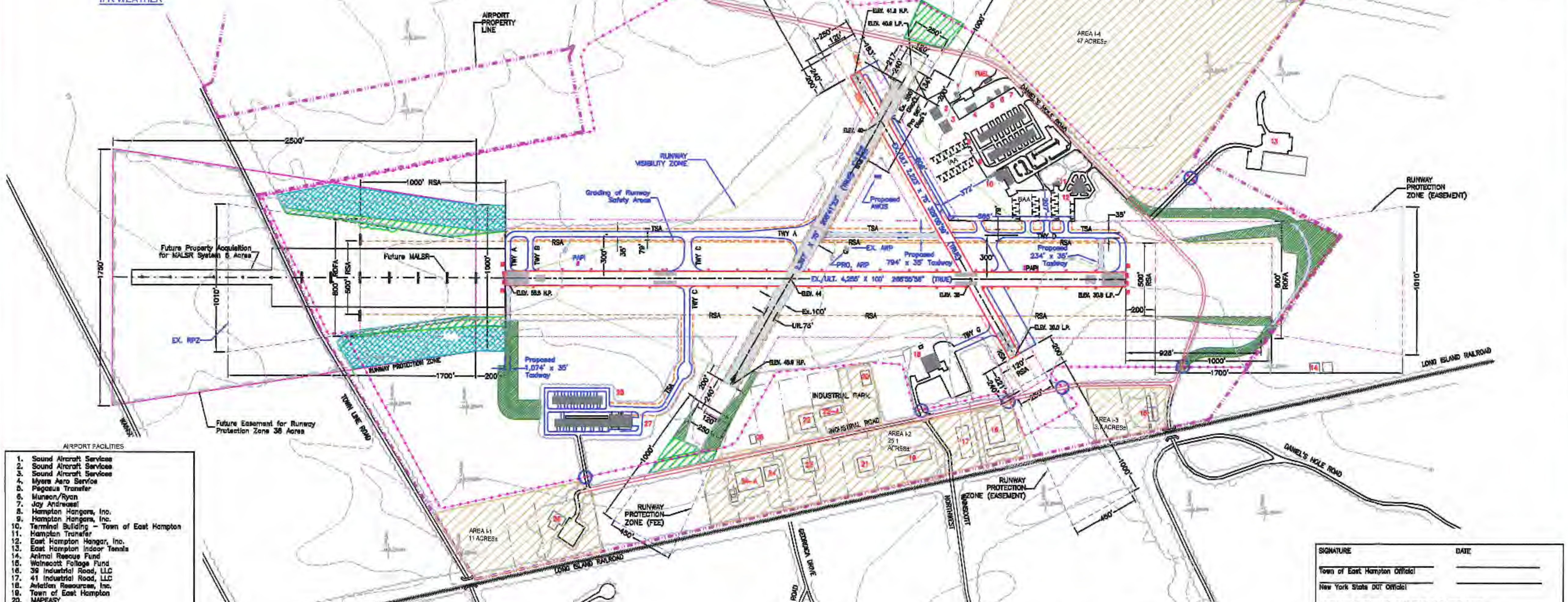
TAXIWAY	LENGTH	WIDTH
A	2,283'	35'
B	234'	35'
C	1,251'	35'
D	1,386'	35'

RUNWAY DATA TABLE

RUNWAY DATA	RUNWAY 4-22 EXISTING		RUNWAY 4-22 ULTIMATE		RUNWAY 10-28 EXISTING		RUNWAY 10-28 ULTIMATE		RUNWAY 16-34 EXISTING		RUNWAY 16-34 ULTIMATE	
Effective Gradient (%)	0.20		0.20		0.57		0.57		0.54		0.54	
Maximum Grade Change	0.20		0.20		0.57		0.57		0.54		0.54	
Wind Coverage (%)	98.81%		98.81%		98.81%		98.42%		98.61%		98.61%	
Max. Elevation (MSL)	45.9'		45.9'		55.5'		55.5'		41.9'		41.9'	
Runway Length	2,501'		2,367'		4,255'		4,255'		2,223'		2,223'	
Runway Width	100'		75'		100'		100'		75'		75'	
Usable Runway Length	2,501'		2,367'		4,255'		4,255'		2,223'		2,223'	
Surface Type	ASPHALT		ASPHALT		ASPHALT		ASPHALT		ASPHALT		ASPHALT	
Pavement Strength — Single Wheel	8,000 (lbs)		8,000 (lbs)		30,000 (lbs)		30,000 (lbs)		8,000 (lbs)		12,500 (lbs)	
Dual Wheel	N/A		12,500 (lbs)		60,000 (lbs)		60,000 (lbs)		N/A		N/A	
Dual Tandem	N/A		N/A		N/A		N/A		N/A		N/A	
Runway Lighting	NONE		NONE		MIRL's		HIRL's		NONE		NONE	
Runway Marking	VISUAL		VISUAL		NPI		PI		VISUAL		VISUAL	
Airport Reference Code (ARC)	B-I		B-I		D-II		D-II		B-I		B-I	
Design Aircraft	PIPER CHEYENNE		PIPER CHEYENNE		GULFSTREAM-IV		GULFSTREAM-IV		PIPER CHEYENNE		PIPER CHEYENNE	
Line of Sight Violations	NONE		NONE		NONE		NONE		NONE		NONE	
Stage Length	300 MILES		300 MILES		500 MILES		500 MILES		300 MILES		300 MILES	
Object Free Zone (OFZ)	250'		250'		400'		400'		250'		250'	
Runway End	RWY 4	RWY 22	RWY 4	RWY 22	RWY 10	RWY 28	RWY 10	RWY 28	RWY 16	RWY 34	RWY 16	RWY 34
Displaced Threshold	NONE	350'	NONE	567'	NONE	NONE	NONE	NONE	57'	106'	57'	106'
Displaced Threshold Elevation (MSL)	N/A	41.1'	N/A	41.1'	N/A	N/A	N/A	N/A	41.5'	30.9'	41.5'	30.9'
Runway Object Free Area (ROFA)												
Length Beyond Runway	240'	91'	240'	217'	1000'	150 3/	1000'	928' 3/	183'	240'	183'	240'
Width	250'	250'	250'	250'	800'	800'	800'	800'	250'	250'	250'	250'
Runway Safety Area (RSA)												
Length Beyond Runway	240'	137'	240'	240'	1000'	298' 3/	1000'	1000'	240'	240'	240'	240'
Width	120'	120'	120'	120'	500'	500'	500'	500'	120'	120'	120'	120'
FAR Part 77 Category	VISUAL	VISUAL	VISUAL	VISUAL	NPI	NPI	PI	NPI	VISUAL	VISUAL	VISUAL	VISUAL
Approach Surface Slope	20:1	20:1	20:1	20:1	34:1	34:1	50:1	34:1	20:1	20:1	20:1	20:1
Approach Minimums	> 1 MI.	> 1 MI.	> 1 MI.	> 1 MI.	> 1 MI.	> 1 MI.	< 3/4 MI.	> 1 MI.	> 1 MI.	> 1 MI.	> 1 MI.	> 1 MI.
Runway End Elevations (MSL)	45.9' 1/	40.8' 2/	45.9' 1/	40.8' 2/	55.5' 1/	30.8' 2/	55.5' 1/	30.8' 2/	41.9' 1/	30.2' 2/	41.9' 1/	30.2' 2/
TDZ Elevation (MSL)	N/A	N/A	N/A	N/A	50.8'	35.1'	50.8'	35.1'	N/A	N/A	N/A	N/A
Visual Approach Aids	NONE	NONE	NONE	NONE	PAPI-REIL	PAPI-REIL MALSR	PAPI-REIL	PAPI-REIL	NONE	NONE	NONE	NONE
Runway End Coordinates – Latitude (NAD 83)	4 40° 57' 25.116"		4 40° 57' 25.116"		10 40° 57' 31.981"		10 40° 57' 31.981"		16 40° 57' 46.274"		16 40° 57' 46.274"	
Longitude	4 72° 15' 16.840"		4 72° 15' 16.840"		10 72° 15' 37.098"		10 72° 15' 37.098"		16 72° 15' 06.217"		16 72° 15' 06.217"	
Runway End Coordinates – Latitude (NAD 83)	22 40° 57' 46.795"		22 40° 57' 45.664"		28 40° 32' 46.768"		28 40° 32' 46.768"		34 40° 57' 27.274"		34 40° 57' 27.274"	
Longitude	22 72° 15' 01.191"		22 72° 15' 02.030"		28 72° 14' 41.846"		28 72° 14' 41.846"		34 72° 14' 51.388"		34 72° 14' 51.388"	

1/ High point on Runway (HP)
2/ Low point on Runway (LP)
3/ Runway 28 ROFA or RSA Penetrated by Daniels Hole Rd.

State Plane Coordinates (NAD 83)
Zone: Long Island, NY (3104)



AIRPORT FACILITIES

1. Sound Aircraft Services
2. Sound Aircraft Services
3. Sound Aircraft Services
4. Myers Aero Service
5. Pegasus Transfer
6. Munson/Ryan
7. Jay Andreassi
8. Hampton Hangars, Inc.
9. Hampton Hangars, Inc.
10. Terminal Building – Town of East Hampton
11. Hampton Transfer
12. East Hampton Hangar, Inc.
13. East Hampton Indoor Tennis
14. Animal Rescue Fund
15. Wainscott Foliage Fund
16. 39 Industrial Road, LLC
17. 41 Industrial Road, LLC
18. Aviation Resources, Inc.
19. Town of East Hampton
20. MAPEASY
21. Town of East Hampton
22. Ron Sullivan Welding
22A. G.T. Power Systems
23. Living Water Full Gospel Church
24. LTV
24A. LTV
25. East Hampton Fire Station
26. Apple East
27. East End Hangars
28. East End Hangars
29. Cellular One Transmission Tower

METRIC CONVERSION TABLE

U.S. Customary Units (feet)	35	79	131	200	250	450	700	1,010	1,510	1,700	1,750
S.I. Units (m)	10.5	24	40	60	75	138	210	303	463	510	525

MODIFICATIONS TO STANDARDS

	ITEM MODIFIED	CURRENT STANDARD	PROPOSED DIMENSION	DATE APPROVED
1				
2				
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4				
5				
6				

SIGNATURE DATE

Town of East Hampton Official

New York State DOT Official

APPROVED SUBJECT TO COMMENTS IN LETTER DATED ______

Manager, New York ADO

** SPECIAL NOTE

FAA'S APPROVAL OF THIS AIRPORT LAYOUT PLAN (ALP) REPRESENTS ACCEPTANCE OF THE GENERAL LOCATION OF FUTURE FACILITIES DEPICTED. DURING THE PRELIMINARY DESIGN PHASE, THE AIRPORT SPONSOR IS REQUIRED TO RESUBMIT FOR APPROVAL THE FINAL LOCATIONS, HEIGHTS AND EXTERIOR FINISH OF STRUCTURES. FAA CONCERN IS OBSTRUCTIONS, IMPACT ON ELECTRONIC AIDS OR ADVERSE EFFECT ON CONTROLLER VIEW OF AIRCRAFT APPROACHES AND GROUND MOVEMENT AREAS, WHICH COULD ADVERSELY AFFECT THE SAFETY, EFFICIENCY OR UTILITY OF THE AIRPORT.

NO	REVISIONS	DATE
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East Hampton Airport

Suffolk County, New York

Owner: Town of East Hampton

TSPE

Specializing in Airport Services

PROJECT:

Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

SHEET TITLE:

Proposed Airport Layout (Winter)

DESIGNED BY: SML

CHECKED BY: JMC

SCALE: Horiz. : 1" = 300' Vert. : N/A

DATE: Nov. 15, 2002

SHEET NO. 3a OF 12

SYMBOLIC LEGEND

EXISTING	DESCRIPTION
	Airport Reference Point
	Building – Airport
	Building Other
	Existing Contour Line and Elevation
	Airport Property Line
	Runway Object Free Area (ROFA)
	Runway Protection Zone (RPZ)
	Runway Safety Area (RSA)
	Deer Deterrent Fencing
	Tree Line
	Proposed Development Project
	Proposed Cattle Crossing Location
BAA	Based Aircraft Apron
IAA	Itinerant Aircraft Apron
	Obstruction Removal (On Airport)
	Clearance for Existing Approach
	Clearance for Proposed Approach
	Re-aligned Road
	Land Area for FAA Release

AIRPORT DATA TABLE

AIRPORT DATA		EXISTING	PROPOSED
Airport Elevation (MSL)		55.51' MSL	55.51' MSL
Airport Reference Point (ARP) –	Latitude	40° 57' 34.480"	40° 57' 34.287"
(NAD 83) –	Longitude	72° 15' 05.662"	72° 15' 06.722"
Mean Max Temperature of Hottest Month		82°	82°
Airport Terminal Area NAVAIDS		VOR/DME, RNAV, GPS	VOR/DME, RNAV, GPS
Magnetic Variation		14.5° W	14.5° W
Date of Magnetic Variation		1998	1996
NPIAS Service Level		GENERAL AVIATION	GENERAL AVIATION
Wind Coverage Crosswind Component			
VFR		99.99%	99.99%
IFR		99.99%	99.99%
All Weather		99.99%	99.99%
Airport Reference Code (ARC)		C-II	C-II
Design Aircraft		CHALLENGER 600	CHALLENGER 600
Taxiway Lighting		MITL's	MITL's
Taxiway Marking		BASIC	BASIC

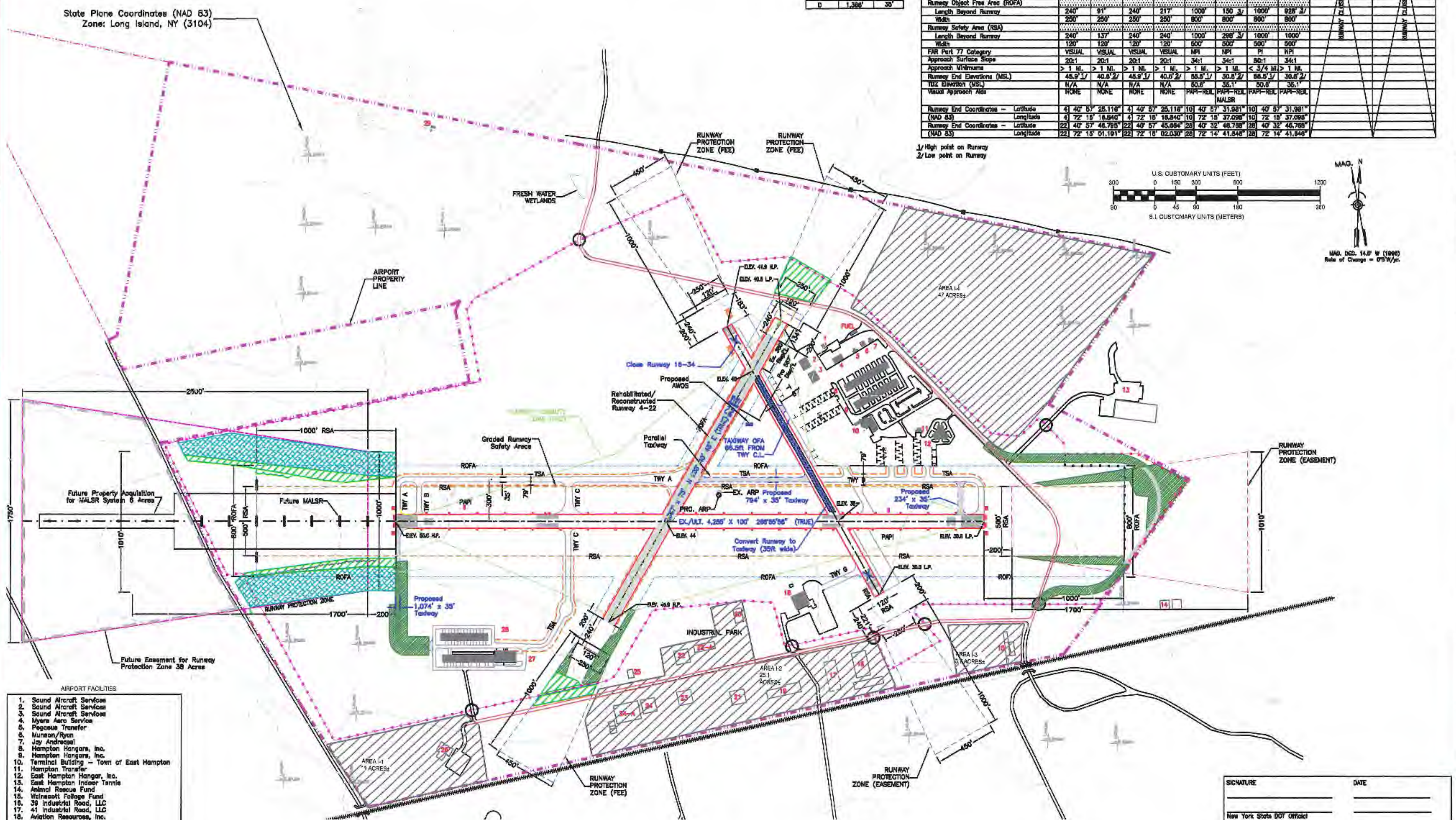
TAXIWAY DATA TABLE

TAXIWAY	LENGTH	WIDTH
A	2,283'	35'
B	234'	35'
C	1,251'	35'
D	1,386'	35'

RUNWAY DATA TABLE

RUNWAY DATA	RUNWAY 4-22				RUNWAY 10-28				RUNWAY 16-34	
	EXISTING		ULTIMATE		EXISTING		ULTIMATE			
Effective Gradient (%)	0.20		0.20		0.57		0.57			
Maximum Grade Change	0.20		0.20		0.57		0.57			
Wind Coverage (%)	98.61%		98.61%		98.61%		98.42%			
Max. Elevation (MSL)	45.9'		45.9'		55.5'		55.5'			
Runway Length	2,501'		2,387'		4,255'		4,255'			
Runway Width	100'		75'		100'		100'			
Usable Runway Length	2,501'		2,387'		4,255'		4,255'			
Surface Type	ASPHALT		ASPHALT		ASPHALT		ASPHALT			
Pavement Strength Single Wheel	8,000 (lbs)		8,000 (lbs)		30,000 (lbs)		30,000 (lbs)			
Dual Wheel	N/A		12,500 (lbs)		60,000 (lbs)		60,000 (lbs)			
Dual Tandem	N/A		N/A		N/A		N/A			
Runway Lighting	NONE		NONE		MIRL's		HIRL's		RUNWAY CLOSED DURING SUMMER MONTHS	RUNWAY CLOSED DURING SUMMER MONTHS
Runway Marking	VISUAL		VISUAL		NPI		PI			
Airport Reference Code (ARC)	B-I		B-I		D-II		D-II			
Design Aircraft	PIPER CHEYENNE		PIPER CHEYENNE		GULFSTREAM-IV		GULFSTREAM-IV			
Line of Sight Violations	NONE		NONE		NONE		NONE			
Stage Length	300 MILES		300 MILES		500 MILES		500 MILES			
Object Free Zone (OFZ)	250'		250'		400'		400'			
Runway End	RWY 4	RWY 22	RWY 4	RWY 22	RWY 10	RWY 28	RWY 10	RWY 28		
Displaced Threshold	NONE	380'	NONE	587'	NONE	NONE	NONE	NONE		
Displaced Threshold Elevation (MSL)	N/A	41.1'	N/A	41.1'	N/A	N/A	N/A	N/A		
Runway Object Free Area (ROFA)										
Length Beyond Runway	240'	91'	240'	217'	1000'	150 3/	1000'	928' 3/		
Width	250'	250'	250'	250'	800'	800'	800'	800'		
Runway Safety Area (RSA)										
Length Beyond Runway	240'	137'	240'	240'	1000'	298' 3/	1000'	1000'		
Width	120'	120'	120'	120'	500'	500'	500'	500'		
FAR Part 77 Category	VISUAL	VISUAL	VISUAL	VISUAL	NPI	NPI	PI	NPI		
Approach Surface Slope	20:1	20:1	20:1	20:1	34:1	34:1	50:1	34:1		
Approach Minimums	> 1 Mi.	> 1 Mi.	> 1 Mi.	> 1 Mi.	> 1 Mi.	> 1 Mi.	< 3/4 Mi.	> 1 Mi.		
Runway End Elevations (MSL)	45.9' 1/	40.8' 2/	45.9' 1/	40.6' 2/	55.5' 1/	30.8' 2/	55.5' 1/	30.8' 2/		
TDZ Elevation (MSL)	N/A	N/A	N/A	N/A	50.6'	35.1'	50.6'	35.1'		
Visual Approach Aids	NONE	NONE	NONE	NONE	PAPI-REIL	PAPI-REIL MALSR	PAPI-REIL	PAPI-REIL		
Runway End Coordinates – Latitude	4 40° 57' 25.116"		4 40° 57' 25.116"		10 40° 57' 31.981"		10 40° 57' 31.981"			
(NAD 83) Longitude	4 72° 15' 16.840"		4 72° 15' 16.840"		10 72° 15' 37.096"		10 72° 15' 37.096"			
Runway End Coordinates – Latitude	22 40° 57' 46.795"		22 40° 57' 45.664"		28 40° 32' 46.768"		28 40° 32' 46.768"			
(NAD 83) Longitude	22 72° 15' 01.191"		22 72° 15' 02.030"		28 72° 14' 41.846"		28 72° 14' 41.846"			

1/ High point on Runway
2/ Low point on Runway



AIRPORT FACILITIES

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METRIC CONVERSION TABLE

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S.I. Units (m)	10.5	24	40	60	76	135	210	303	453	610	525

MODIFICATIONS TO STANDARDS

	ITEM MODIFIED	CURRENT STANDARD	PROPOSED DIMENSION	DATE APPROVED
1				
2				
3				
4				
5				
6				

SIGNATURE ______________________ DATE ______________

New York State DOT Official

APPROVED SUBJECT TO COMMENTS IN LETTER DATED ______________

Manager, New York ADO

** SPECIAL NOTE

FAA'S APPROVAL OF THIS AIRPORT LAYOUT PLAN (ALP) REPRESENTS ACCEPTANCE OF THE GENERAL LOCATION OF FUTURE FACILITIES DEPICTED. DURING THE PRELIMINARY DESIGN PHASE, THE AIRPORT SPONSOR IS REQUIRED TO RESUBMIT FOR APPROVAL THE FINAL LOCATIONS, HEIGHTS AND EXTERIOR FINISH OF STRUCTURES. FAA CONCERN IS OBSTRUCTIONS, IMPACT ON ELECTRONIC AIDS OR ADVERSE EFFECT ON CONTROLLER VIEW OF AIRCRAFT APPROACHES AND GROUND MOVEMENT AREAS, WHICH COULD ADVERSELY AFFECT THE SAFETY, EFFICIENCY OR UTILITY OF THE AIRPORT.

NO	REVISIONS	DATE
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East Hampton Airport

Suffolk County, New York

Owner: Town of East Hampton

TSPE
Planning & Engineering, P.C.
Specializing in Airport Services
205 Glen Cove Road
Old Westbury, NY 11568-1524
Tel:(516) 294-4776
E-mail: admin@tspe.com

PROJECT:

Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

SHEET TITLE:

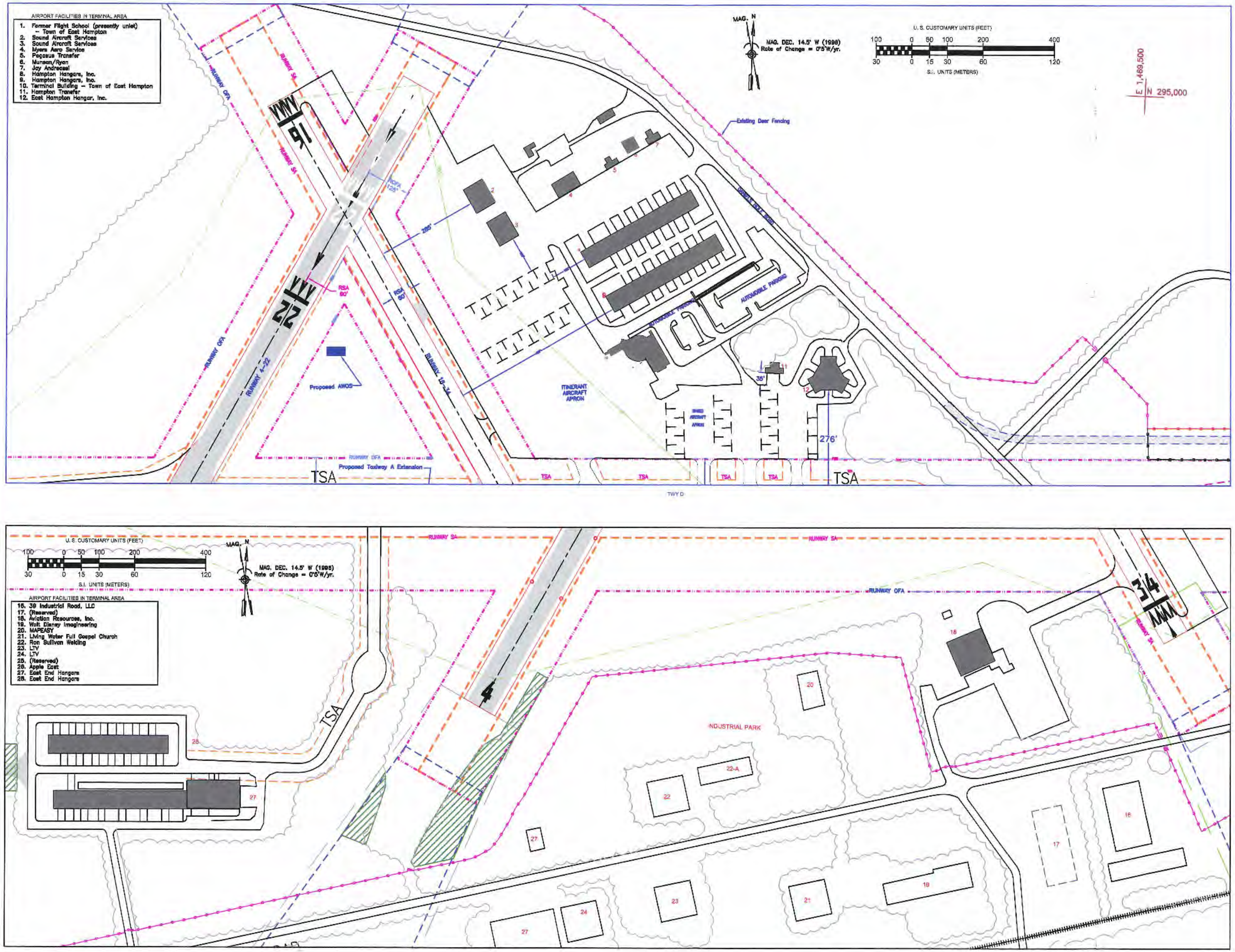
Proposed Airport Layout Plan (Summer)

DESIGNED BY: LAC

CHECKED BY: THC

SCALE: Horiz. : 1" = 300' Vert. : N/A

DATE: Nov. 15, 2002



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East Hampton Airport

Suffolk County, New York

Owner: Town of East Hampton

TSPE TriState Planning & Engineering, P.C.

Specializing in Airport Services

306 Glen Cove Road
Old Westbury, NY 11568-1524
Tel (516) 294-4776
E-mail: admin@tspe.com

PROJECT:

Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

SHEET TITLE:

Building Area Layout

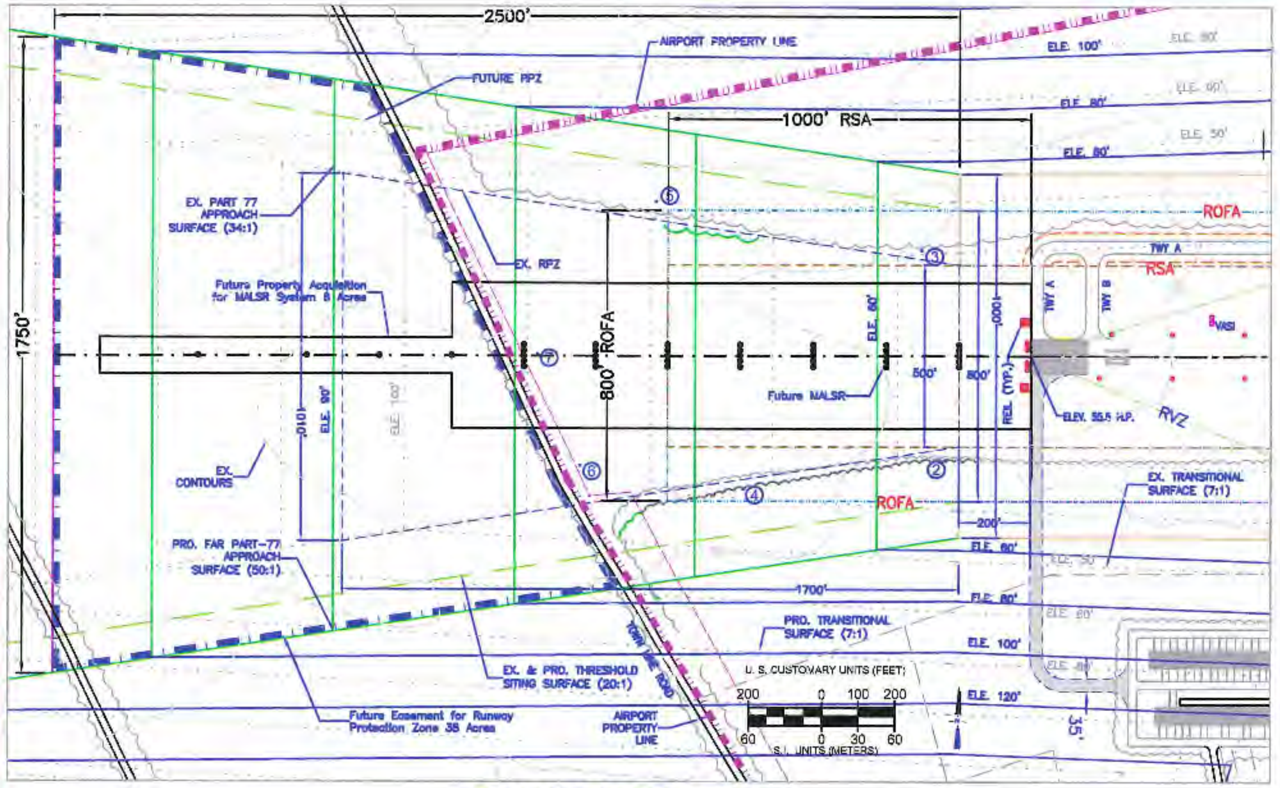
DESIGNED BY: SML

CHECKED BY: JMC

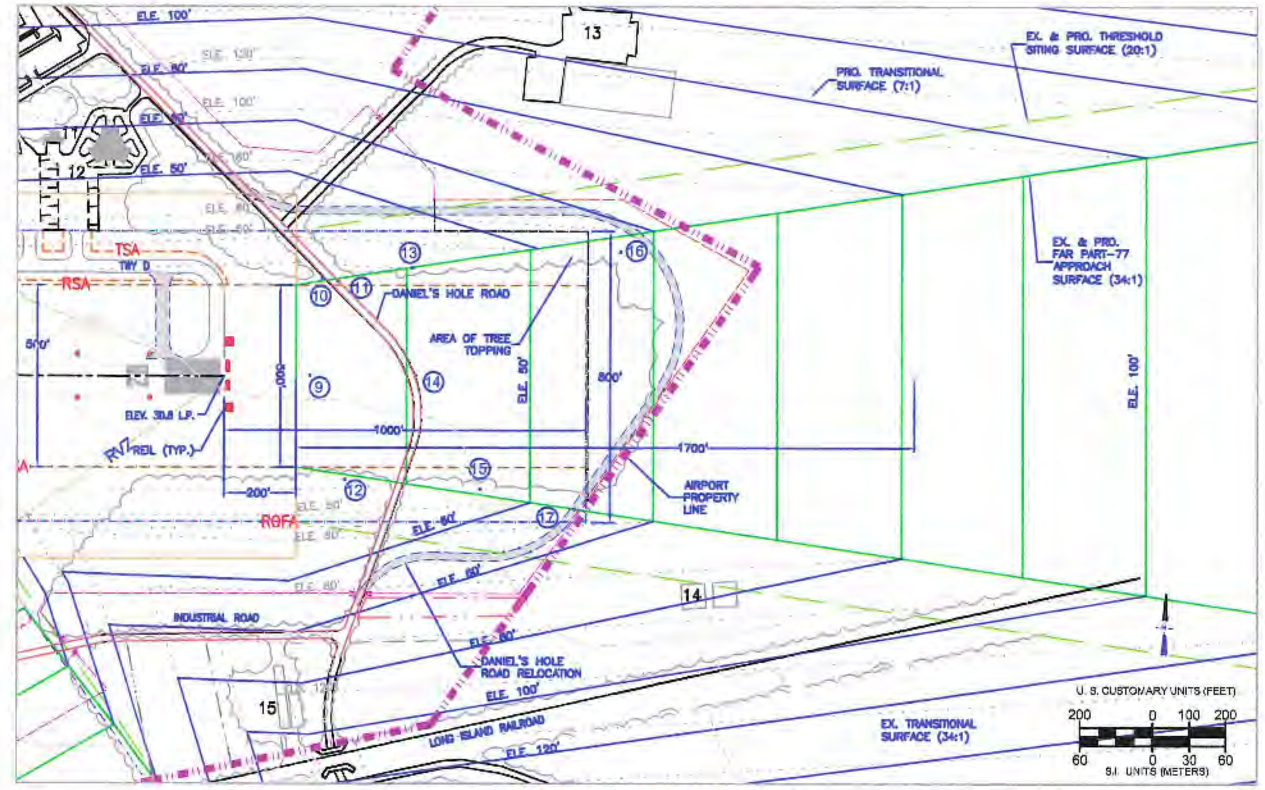
SCALE: Horiz. : 1" = 100' Vert. : N/A

SHEET NO. 4 OF 12

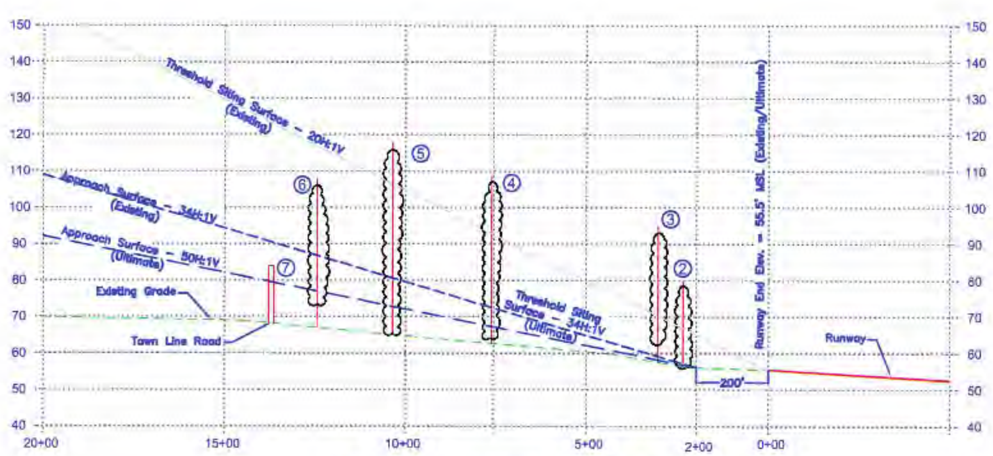
DATE: Nov. 15, 2002



RUNWAY 10 APPROACH PLAN



RUNWAY 28 APPROACH PLAN

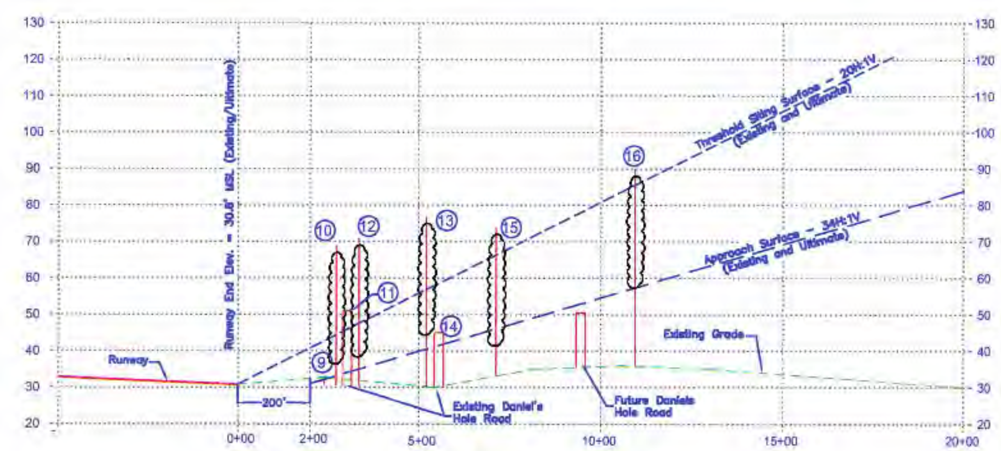


RUNWAY 10 APPROACH PROFILE

RUNWAY 10 - FAR PART 77 ANALYSIS SUMMARY

	OBJECT	TOP ELEV.	DIST. FROM RWY END	OFFSET	PENETRATION	SURFACE PENETRATED	PROPOSED ACTION
1	Ground	44'	-2,705'	192' R	8'	Approach	None
2	Tree	80'	236'	289' R	23'	Transitional	Top to 10' Below Surface
3	Tree	95'	303'	290' L	34'	Transitional	Top to 10' Below Surface
4	Tree	109'	791'	368' R	24'	Transitional	Top to 10' Below Surface
5	Tree	118'	1,034'	422' L	21'	Transitional	Top to 10' Below Surface
6	Tree	108'	1,244'	304' R	15'	Approach	Top to 10' Below Surface
7	Road	84'	1,363'	2' L	-30'	Approach	None

* Obstruction No. 1 is not illustrated in plan or profile

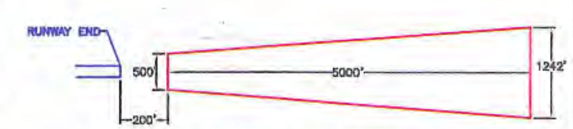


RUNWAY 28 APPROACH PROFILE

RUNWAY 28 - FAR PART 77 ANALYSIS SUMMARY

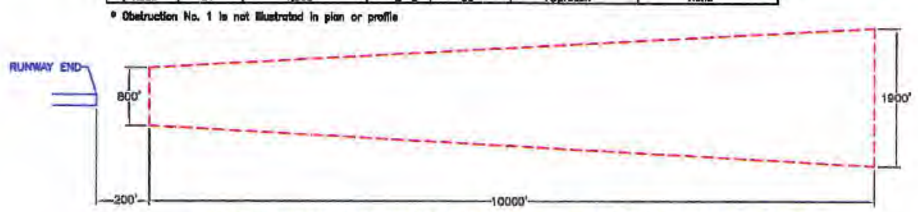
	OBJECT	TOP ELEV.	DIST. FROM RWY END	OFFSET	PENETRATION	SURFACE PENETRATED	PROPOSED ACTION
8	Ground	44'	-1,550'	182' L	9'	Approach	None
9	Ground	33'	238'	2' R	0'	Approach	None
10	Tree	69'	272'	270' R	35'	Transitional	Top to 10' Below Surface
11	Road	51'	315'	282' R	14'	Approach	Relocate Road
12	Tree	71'	335'	284' L	33'	Transitional	Top to 10' Below Surface
13	Tree	77'	521'	297' R	30'	Transitional	Top to 10' Below Surface
14	Road	45'	542'	1' R	-3'	Approach	Relocate Road
15	Tree	74'	710'	310' L	18'	Approach	Top to 10' Below Surface
16	Tree	90'	1,095'	341' R	14'	Transitional	Top to 10' Below Surface
17	Fut. Rd.	90'	1,095'	341' R	14'	Transitional	Top to 10' Below Surface

* Obstruction No. 8 is not illustrated in plan or profile



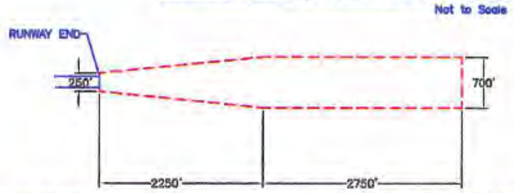
TYPICAL RUNWAY 10-28 EXISTING PART 77 APPROACH SURFACE - FULL PLAN VIEW

Not to Scale



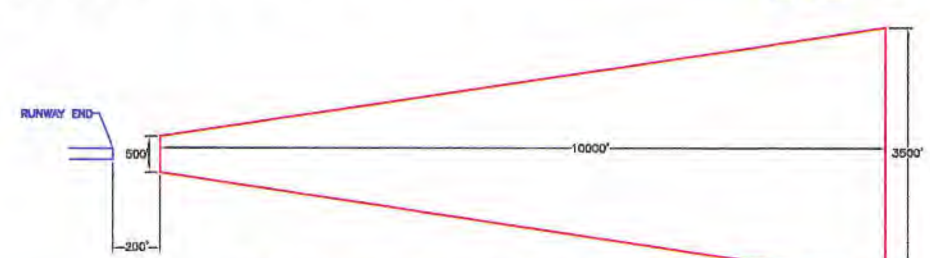
TYPICAL RUNWAY 10 PROPOSED THRESHOLD SITING SURFACE - FULL PLAN VIEW

Not to Scale



TYPICAL RUNWAY 10-28 EXISITING THRESHOLD SITING SURFACE - FULL PLAN VIEW

Not to Scale



TYPICAL RUNWAY 10 PROPOSED PART 77 APPROACH SURFACE - FULL PLAN VIEW

Not to Scale

NOTE : INFORMATION ON OBSTRUCTIONS WAS OBTAINED FROM THE AERONAUTICAL DATA SHEET CONCURRENT WITH OBSTRUCTION CHART (OC-5016) 2nd EDITION FOR EAST HAMPTON AIRPORT (HTO) PREPARED BY THE NATIONAL GEODETIC SURVEY, U.S. DEPARTMENT OF COMMERCE. SURVEY PERFORMED IN SEPTEMBER 1996.

NOTES:
1. PART 77 APPROACH SURFACES ON RUNWAY 10-28 BEGIN 200 FT. FROM THE RUNWAY END

NO.	REVISIONS	DATE
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East Hampton Airport

Suffolk County, New York

Owner: Town of East Hampton

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Specializing in Airport Services

206 Glen Cove Road
Old Westbury, NY 11568-1524
Tel.(516) 294-4776
E-mail: admin@tspe.com

PROJECT:

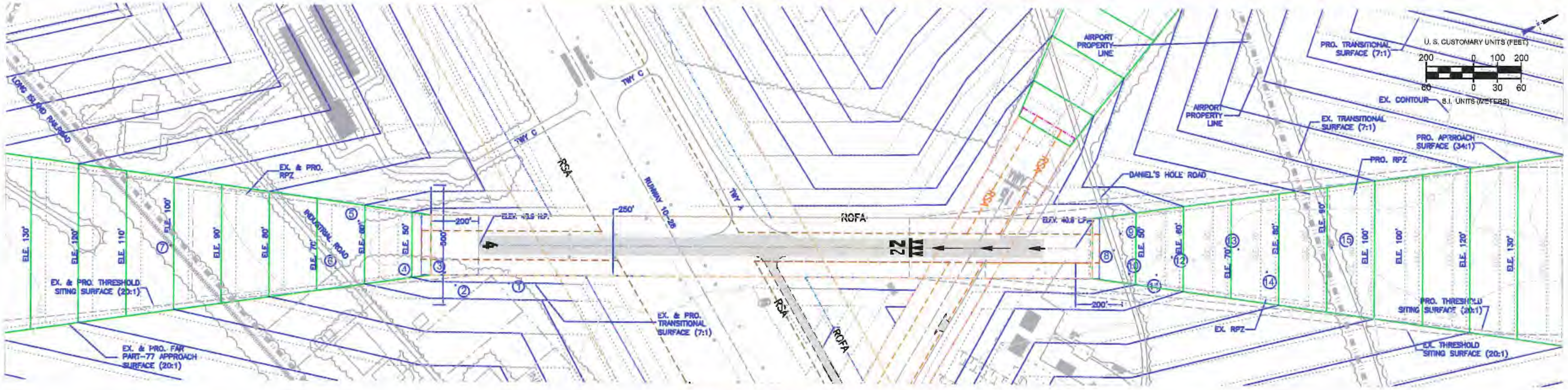
Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

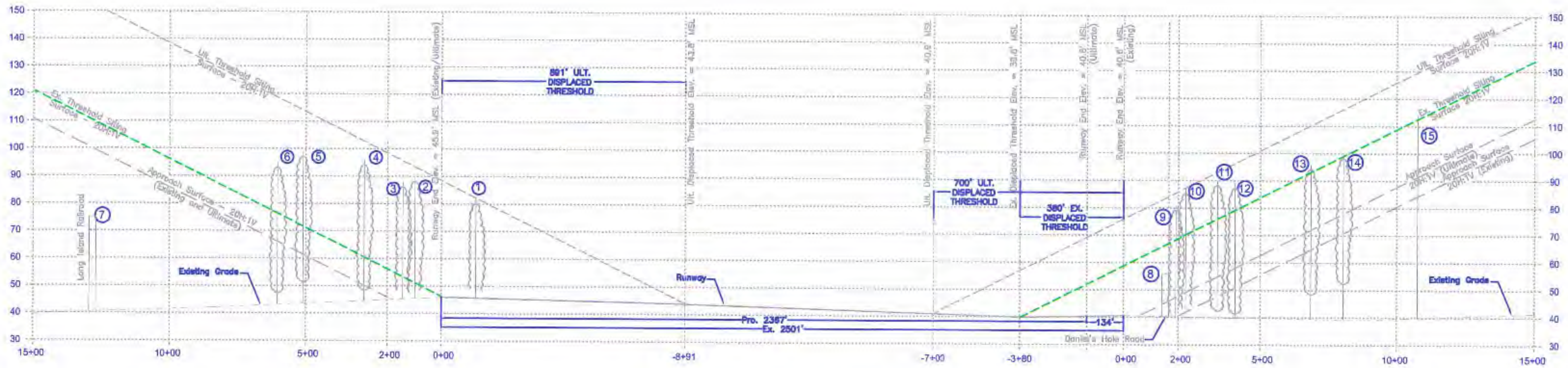
SHEET TITLE:

Runway 10-28 Approach Plan and Profile

DESIGNED BY: THC
CHECKED BY: SML
SCALE: Horiz. : 1" = 200' Vert. : 1" = 20'
SHEET NO. 5 OF 12
DATE: Nov. 15, 2002



RUNWAY 4-22 APPROACH PLAN



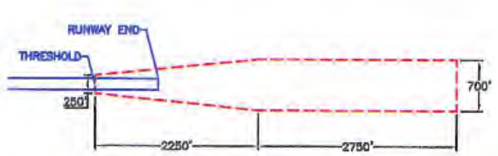
RUNWAY 4-22 APPROACH PROFILE

RUNWAY 4 - FAR PART 77 ANALYSIS SUMMARY

	OBJECT	TOP ELEV.	DIST. FROM RWY END	OFFSET	PENETRATION	SURFACE PENETRATED	PROPOSED ACTION
1	Tree	82'	-130'	189' R	37'	Transitional	None
2	Tree	90'	85'	168' R	44'	Transitional	None
3	Tree	88'	140'	116' R	42'	Approach	None
4	Tree	96'	282'	132' R	46'	Approach	None
5	Tree	99'	507'	98' L	38'	Approach	None
6	Tree	95'	601'	98' R	28'	Approach	None
7	Railroad	75'	1,293'	8' R	-28'	Approach	None

RUNWAY 22 - FAR PART 77 ANALYSIS SUMMARY

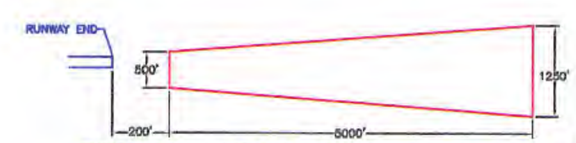
	OBJECT	TOP ELEV.	DIST. FROM RWY END	OFFSET	PENETRATION	SURFACE PENETRATED	PROPOSED ACTION
8	Road	56'	164'	7' L	15'	Approach	None
9	Tree	81'	181'	63' R	40'	Approach	None
10	Tree	87'	228'	108' L	48'	Approach	None
11	Tree	90'	343'	109' L	42'	Approach	None
12	Tree	89'	407'	35' L	38'	Approach	None
13	Tree	96'	686'	0	31'	Approach	None
14	Tree	100'	805'	94' L	29'	Approach	None
15	Transmission Tower	114'	1,076'	9' R	30'	Approach	Bury Power Lines



TYPICAL RUNWAY 4-22 THRESHOLD SITING SURFACE - FULL PLAN VIEW

Not to Scale

NOTES:
1. THRESHOLD SITING SURFACES ON RUNWAY 4-22 BEGIN AT THE RUNWAY THRESHOLD



TYPICAL RUNWAY 4-22 PART 77 APPROACH SURFACE - FULL PLAN VIEW

Not to Scale

NOTES:
1. PART 77 APPROACH SURFACES ON RUNWAY 4-22 BEGIN 200 FT. FROM THE RUNWAY END

NOTE: INFORMATION ON OBSTRUCTIONS WAS OBTAINED FROM THE AERONAUTICAL DATA SHEET CONCURRENT WITH OBSTRUCTION CHART (OC-5016) 2nd EDITION FOR EAST HAMPTON AIRPORT (HTO) PREPARED BY THE NATIONAL GEODETIC SURVEY, U.S. DEPARTMENT OF COMMERCE. SURVEYS PERFORMED IN SEPTEMBER 1998.

NO	REVISIONS	DATE
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This drawing and electronic file is prepared for the exclusive use by the Owner and Engineer for the project identified below.

East Hampton Airport

Suffolk County, New York

Owner: Town of East Hampton

TSPE TriState Planning & Engineering, P.C.

Specializing in Airport Services

205 Glen Cove Road
Old Westbury, NY 11568-1524
Tel (516) 294-4776
E-mail: admin@tspe.com

PROJECT:

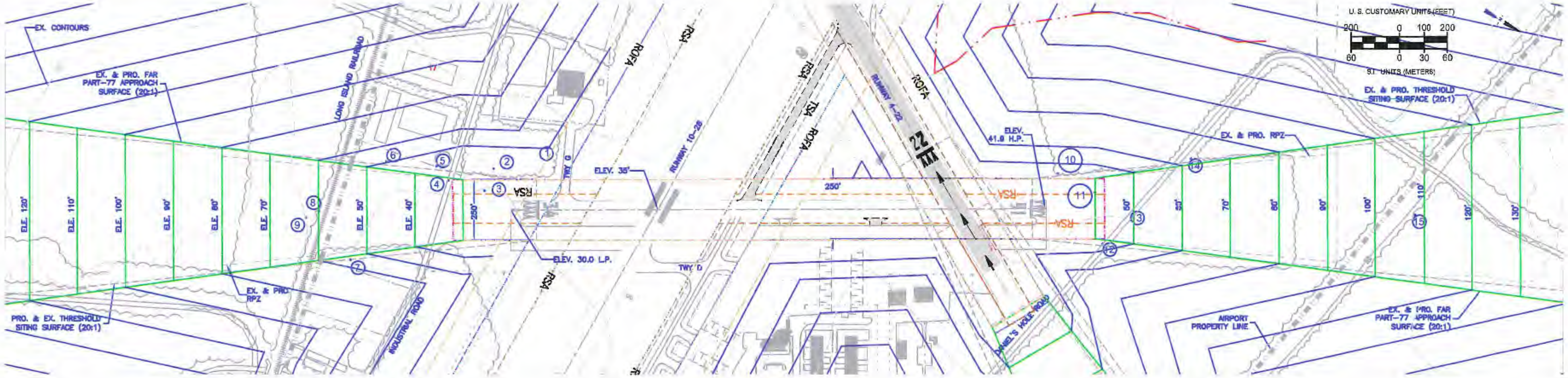
Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

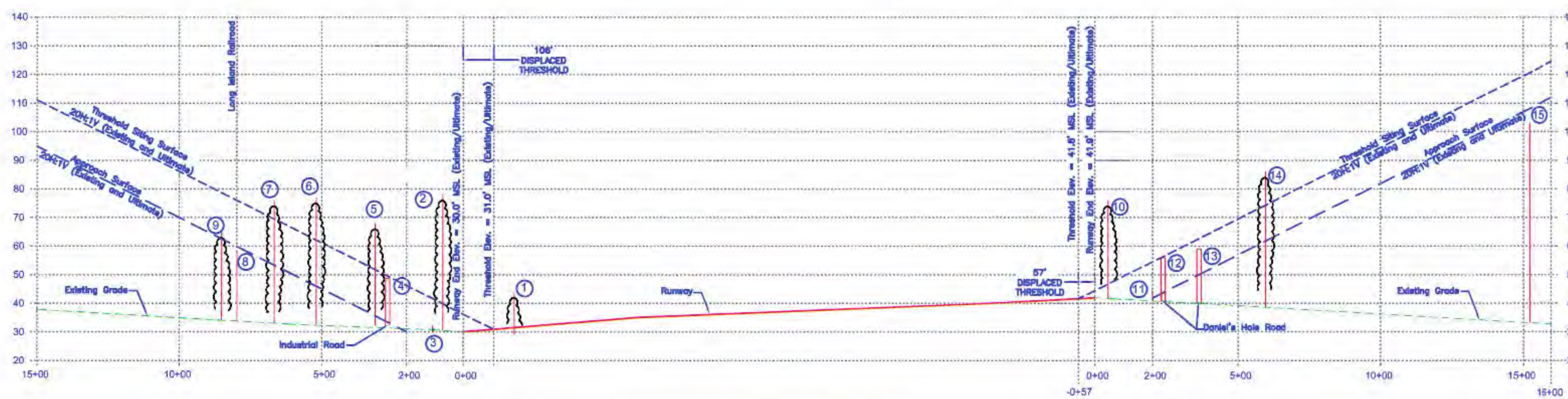
SHEET TITLE:

Runway 4-22 Approach Plan and Profile

DESIGNED BY: THC
CHECKED BY: SML
SCALE: Horiz. : 1" = 200' Vert. : 1" = 20'
DATE: Nov. 15, 2002
SHEET NO. 6 OF 12



RUNWAY 16-34 APPROACH PLAN



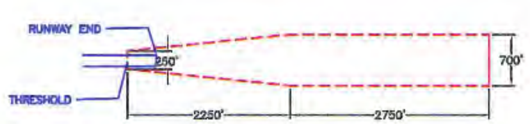
RUNWAY 16-34 APPROACH PROFILE

RUNWAY 34 - FAR PART 77 ANALYSIS SUMMARY

	OBJECT	TOP ELEV.	DIST. FROM RWY END	OFFSET	PENETRATION	SURFACE PENETRATED	PROPOSED ACTION
1	Tree	44'	-180'	175' L	13'	Transitional	None
2	Tree	76'	73'	170' L	46'	Transitional	None
3	Ground	32'	100'	79' L	2'	Transitional	None
4	Road	49'	280'	122' L	16'	Approach	None
5	Tree	68'	311'	180' L	32'	Transitional	None
6	Tree	77'	519'	201' L	31'	Transitional	None
7	Tree	78'	686'	206' R	23'	Transitional	None
8	Railroad	58'	797'	5' R	-2'	Approach	None
9	Tree	65'	850'	31' R	2'	Approach	None

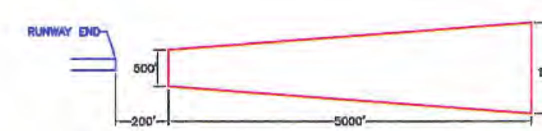
RUNWAY 16 - FAR PART 77 ANALYSIS SUMMARY

	OBJECT	TOP ELEV.	DIST. FROM RWY END	OFFSET	PENETRATION	SURFACE PENETRATED	PROPOSED ACTION
10	Tree	76'	46'	161' R	34'	Transitional	None
11	Ground	45'	200'	73' R	3'	Approach	None
12	Road	67'	231'	139' L	14'	Approach	None
13	Road	59'	356'	0' R	9'	Approach	None
14	Tree	86'	567'	212' R	24'	Transitional	None
15	Transmission Tower	103'	1,522'	20' R	-5'	Approach	Relocate
16	Rod on Ol. Tower	211'	2,301'	1,100' R	5'	Transitional	None



TYPICAL RUNWAY 16-34 THRESHOLD SITING SURFACE - FULL PLAN VIEW
Not to Scale

NOTES:
1. THRESHOLD SITING SURFACES ON RUNWAY 16-34 BEGIN AT THE RUNWAY THRESHOLD



TYPICAL RUNWAY 16-34 PART 77 APPROACH SURFACE - FULL PLAN VIEW
Not to Scale

NOTES:
1. PART 77 APPROACH SURFACES ON RUNWAY 16-34 BEGIN 200 FT. FROM THE RUNWAY END

NOTE : INFORMATION ON OBSTRUCTIONS WAS OBTAINED FROM THE AERONAUTICAL DATA SHEET CONCURRENT WITH OBSTRUCTION CHART (OC-5016) 2nd EDITION FOR EAST HAMPTON AIRPORT (HTO) PREPARED BY THE NATIONAL GEODETIC SURVEY, U.S. DEPARTMENT OF COMMERCE. SURVEYS PERFORMED IN SEPTEMBER 1996.

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East Hampton Airport

Suffolk County, New York

Owner: Town of East Hampton

TSPE TriState Planning & Engineering, P.C.

Specializing in Airport Services

200 Glen Cove Road
Old Westbury, NY 11568-1524
Tel:(516) 294-4775
E-mail: admin@tspe.com

PROJECT:

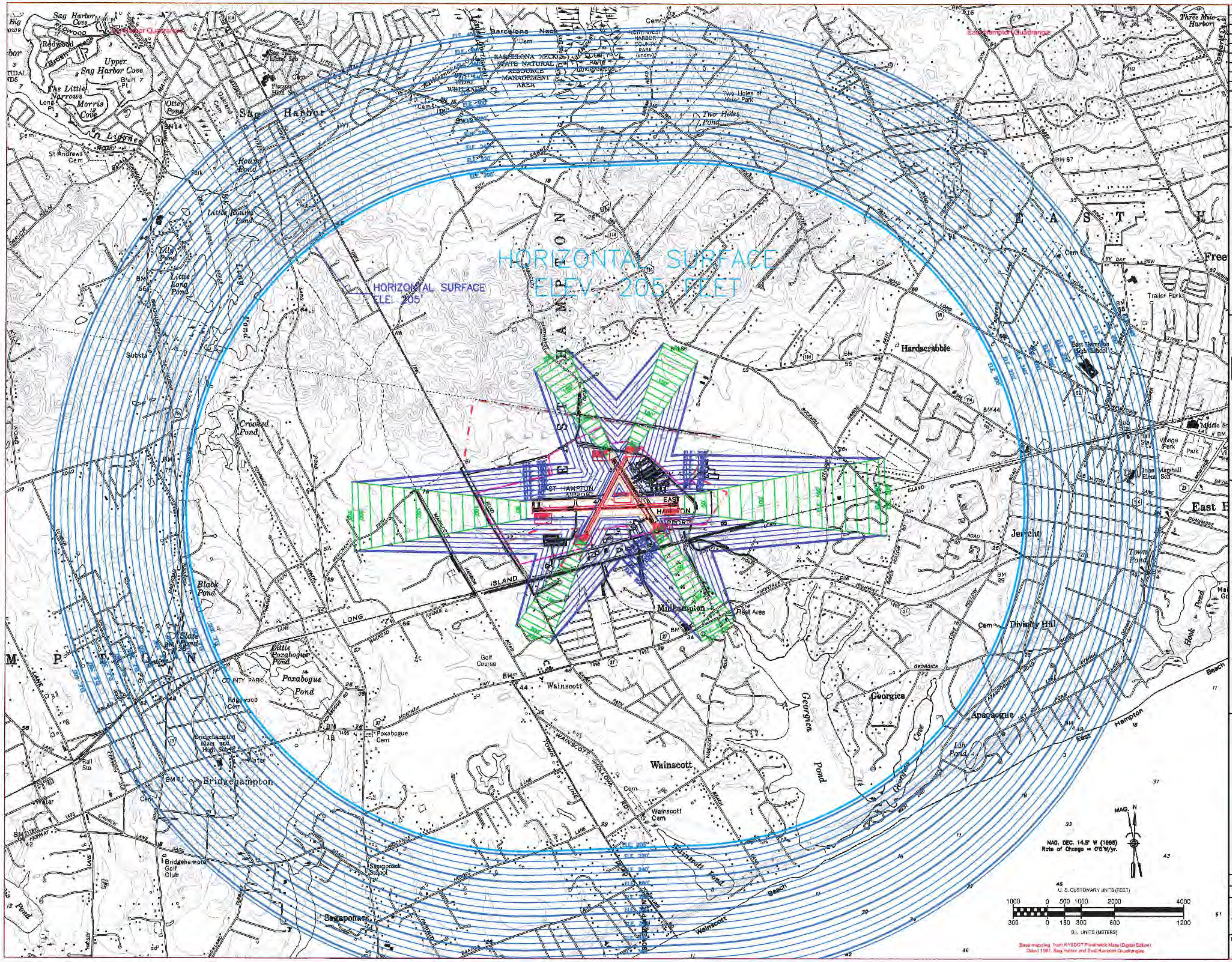
Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

SHEET TITLE:

Runway 16-34 Approach Plan and Profile

DESIGNED BY: SVL
CHECKED BY: JVC
SCALE: Horiz. : 1" = 200' Vert. : 1" = 20'
SHEET NO. 7 OF 12
DATE: Nov. 15, 2002



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This drawing and electronic file is prepared for the exclusive use by the Owner and Engineer for the project identified below.

East Hampton Airport

Suffolk County, New York

Owner: Town of East Hampton

TSPE

Planning & Engineering, P.C.

Specializing in Airport Services

Old Westbury, NY 11568-1524

E-mail: [illegible]

PROJECT:

Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

SHEET TITLE:

Existing FAR Part 77 Surfaces

DESIGNED BY:	THC
CHECKED BY:	SML
SCALE: Horiz. : 1" = 1,000' Vert. : N/A	SHEET NO. 8 OF 12
DATE: Nov. 15, 2002	

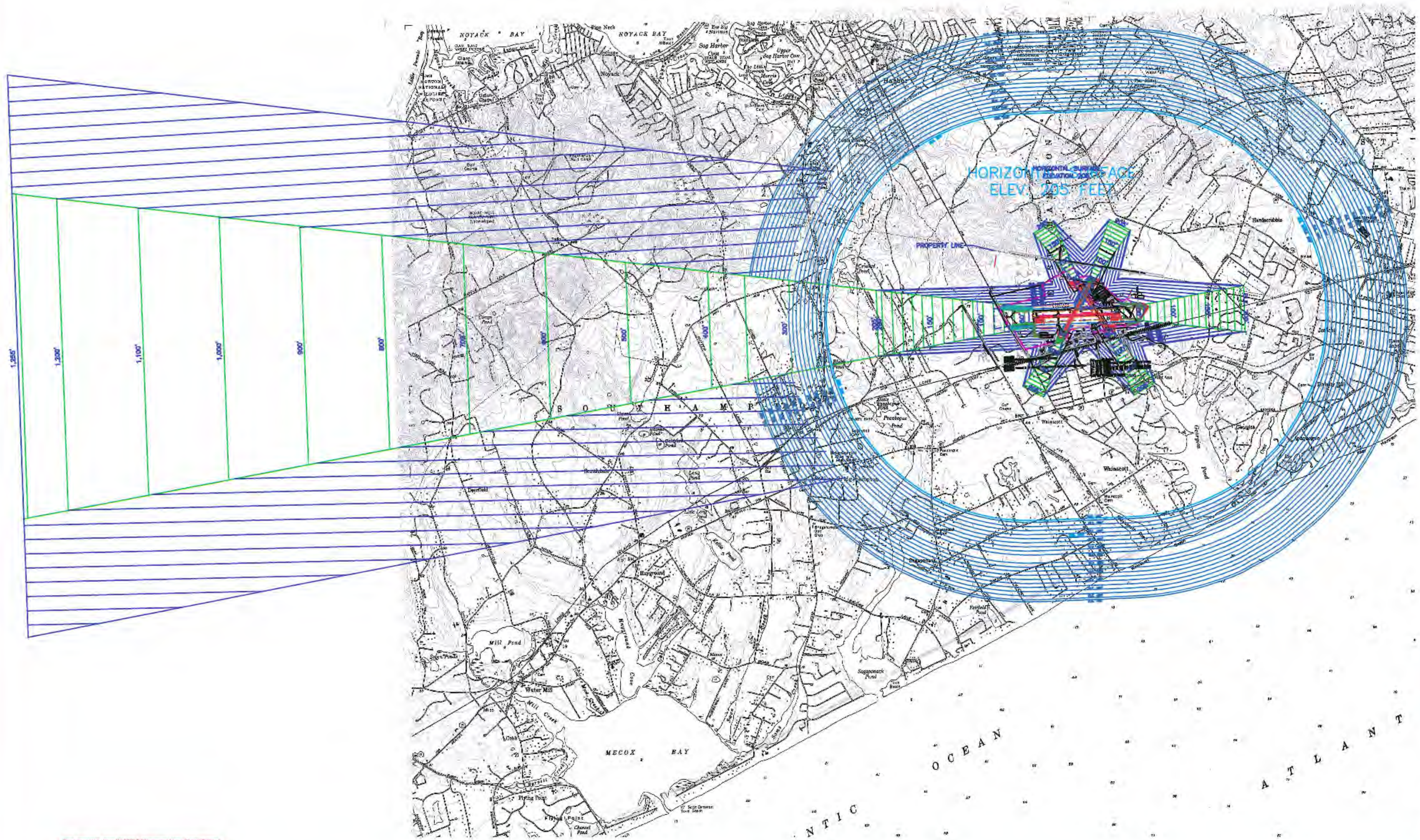
Sag Harbor Quadrangle

East Hampton Quadrangle

U. S. CUSTOMARY UNITS (FEET)
2000 0 1000 2000 4000 8000
600 0 300 600 1200 2400
S.I. UNITS (METERS)

MAG. N

MAG. DEC. 14.5° W (1996)
Rate of Change = 0°5'W/yr.



Base mapping from NYSDOT Planimetric Maps (Digital Edition) Dated 1991, Sag Harbor and East Hampton Quadrangles

NO	REVISIONS	DATE
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East Hampton Airport

Suffolk County, New York

Owner: Town of East Hampton

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Specializing in Airport Services

205 Glen Cove Road
Old Westbury, NY 11568-1524
Tel:(516) 294-4775
E-mail: admin@tspe.com

PROJECT:

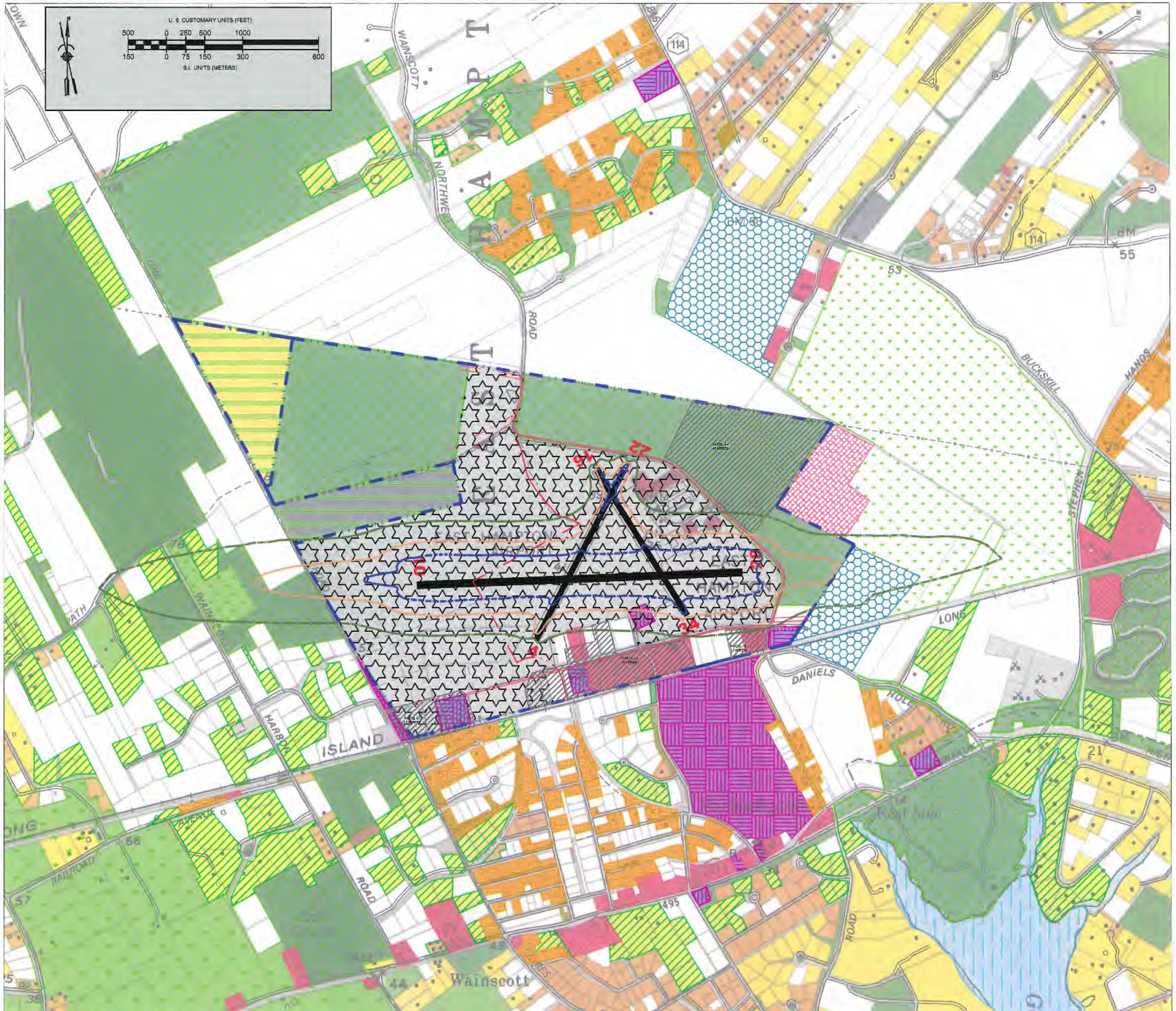
Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

SHEET TITLE:

Future FAR Part 77 Surfaces

DESIGNED BY: THC
CHECKED BY: SML
SCALE: Horiz. : 1" = 2,000' Vert. : N/A
DATE: Nov. 15, 2002
SHEET NO. 9 OF 12



Low Density Res.
Medium Density Res.
Institution
Commercial
Industrial
Agriculture/ Rec Open Space
Vacant
Transportation
Utilities
Surface Waters

Contour 65 DNL
Contour 70 DNL
Contour 75 DNL

Property Line

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East Hampton Airport

Suffolk County, New York

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TSPE

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Specializing in Airport Services

208 Glen Cove Road
Old Westbury, NY 11568-1524
Tel:(516) 294-4778
E-mail: admin@tspe.com

PROJECT:

Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

SHEET TITLE:

Land Use Map
2005 Noise Contours
Avg. Summer Day
(Precision Approach to Runway 10)

DESIGNED BY: SML

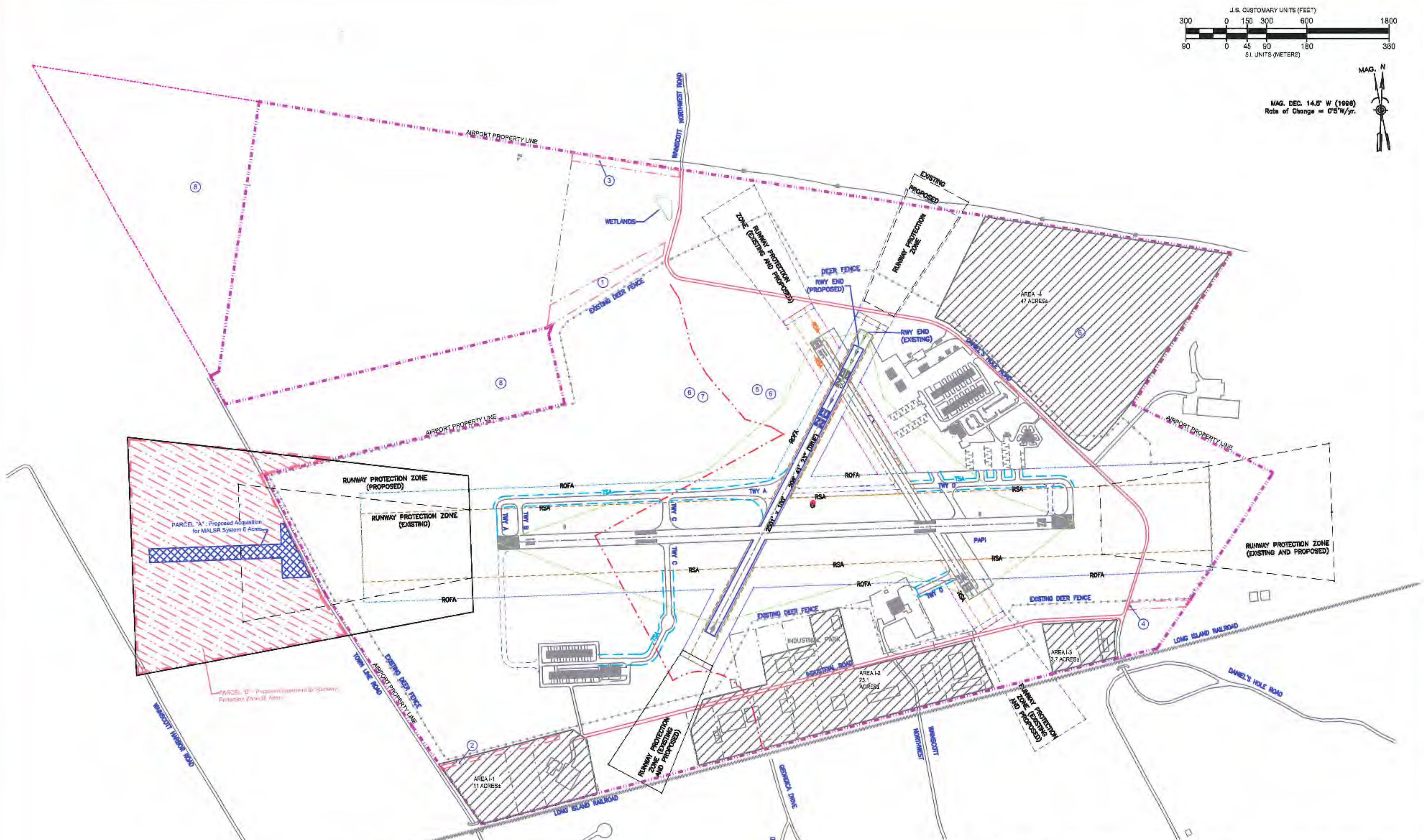
CHECKED BY: JMC

SCALE:
Horiz. : 1" = 500'
Vert. : N/A

DATE: Nov. 15, 2002

SHEET NO. 10 OF 12

Prepared By: TSPE, September 29, 2002
g:\ehp\ehp-03\Report EA2002\Summary.dwg



ENCUMBRANCE DATA

PARCEL	GRANTEE	ACQUISITION DATE	DEED REFERENCE	ACREAGE	NATURE
1	Maidstone Gun Club	To Be Acquired	N/A	3.0	Access Easement
2	Suffolk County Water Authority	To Be Acquired	N/A	0.5	Utility Easement
3	Metro One	To Be Acquired	N/A	0.5	Access/Utility Easement
4	Animal Rescue Fund of the Hamptons, Inc.	09-13-82	9241/469	0.7	Access/Utility Easement

LAND ACQUISITION DATA

PARCEL	GRANTOR (Former Owner)	ACQUISITION DATE	DEED REFERENCE	ACREAGE	FUNDING SOURCE
5	Arnold E. Mulford	03-08-41	2174/348	208	Local
6	Suffolk County	10-25-43	2319/333	665	Local
7	Suffolk County	04-08-37	1935/373	211	Local

LAND DISPOSITION DATA

PARCEL	GRANTEE	ACQUISITION DATE	DEED REFERENCE	ACREAGE	NATURE
8	Suffolk County Water Authority	Pending	TBD	70	
I-1	Town of East Hampton	Pending	TBD	11	Request FAA Release from Airport
I-2	Town of East Hampton	Pending	TBD	31	Request FAA Release from Airport
I-3	Town of East Hampton	Pending	TBD	3.7	Request FAA Release from Airport
I-4	Town of East Hampton	Pending	TBD	47	Request FAA Release from Airport

PROPOSED ACQUISITION DATA

PARCEL	GRANTOR (Present Owner)	ACQUISITION DATE	DEED REFERENCE	ACREAGE	NATURE
A		TBD	TBD	6	Required for MALSR light units.
B		TBD	TBD	38	Height and Land Use Control Required for RPZ and Approach Surface.

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East Hampton Airport

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Owner: Town of East Hampton

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Old Westbury, NY 11568-1524
Tel:(516) 294-4776
E-mail: admin@tspe.com

PROJECT:

Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

SHEET TITLE:

Airport Property Map

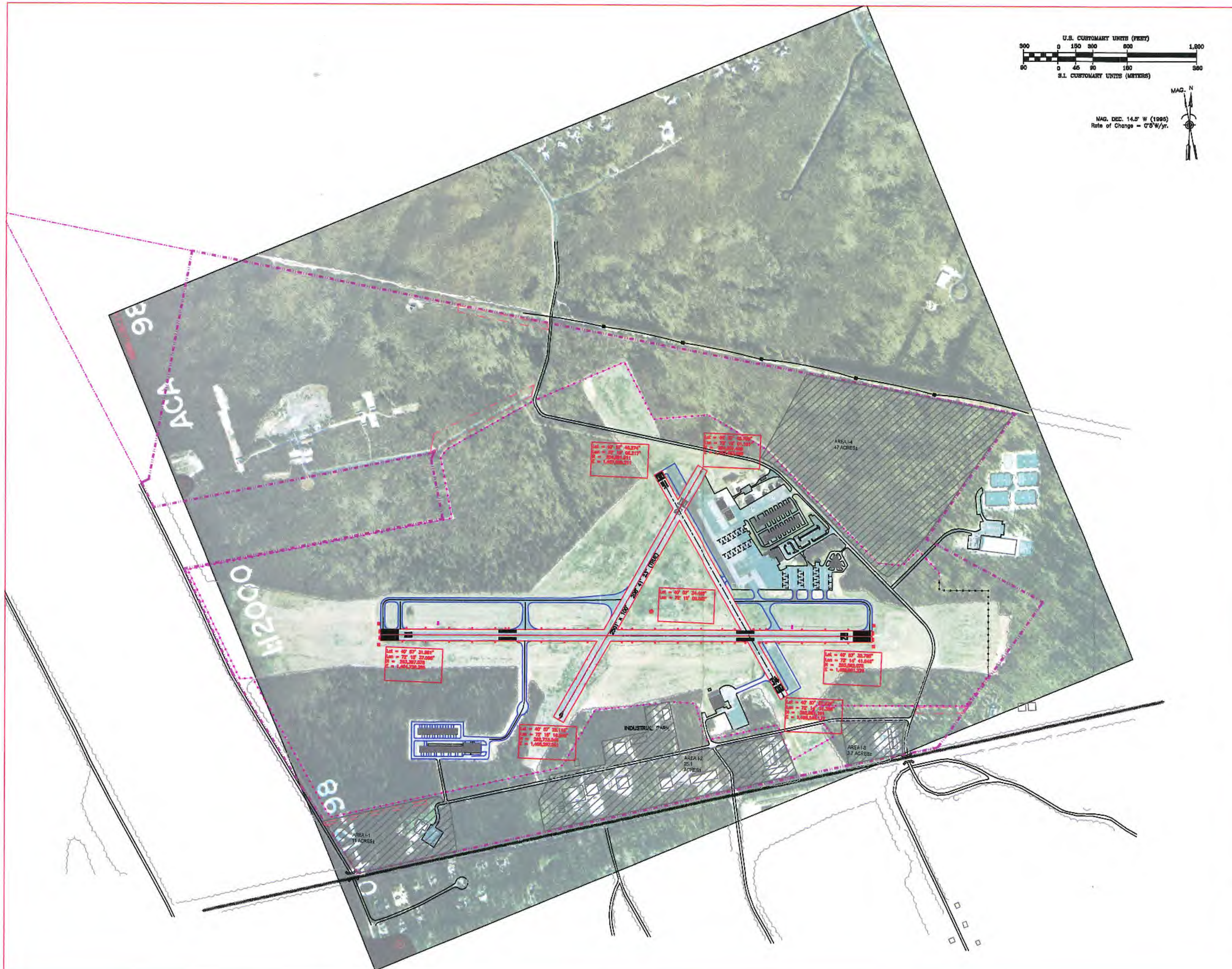
DESIGNED BY: SML

CHECKED BY: JMC

SCALE:
Horiz. : 1" = 300'
Vert. : N/A

DATE:
Nov. 15, 2002

SHEET NO. 11 OF 12



NO	REVISIONS	DATE
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Tel:(516) 294-4776
E-mail: admin@tspe.com

PROJECT:

Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

SHEET TITLE:

Aerial Photograph

DESIGNED BY: THC

CHECKED BY: SML

SCALE: Horiz. : 1" = 300' Vert. : N/A

SHEET NO. 12 OF 12

DATE: Nov. 15, 2002

APPENDIX B

AIRPORT LAYOUT PLAN REPORT
for

EAST HAMPTON AIRPORT

East Hampton, New York

DRAFT

November 25, 2002

Sponsored by:

The Town of East Hampton

Prepared by:
TriState Planning & Engineering, P.C.
208 Glen Cove Road, Old Westbury, New York 11568

Table of Contents

INTRODUCTION

This report provides information used in the preparation of an updated Airport Layout Plan for the East Hampton Airport. This update is part of the FAA's ongoing process to require airports to maintain an airport layout plan that reflects the existing conditions at the airport as well as the planned improvements and changes at the Airport.

This study updates the Airport Layout Plan to reflect current conditions in the year 2002 and to show several projects the Town of East Hampton proposes for consideration during the next five years at the airport as well as some projects for consideration under a subsequent Airport Layout Plan.

In 1936 Suffolk County acquired approximately 600 acres of land through a tax sale and turned the property over to the Town of East Hampton. The town constructed the Airport on those 600 acres with an initial layout of three runways, 10-28, 4-22, and 16-34; all were 2,500 feet in length. In 1952, Runway 10-28 was extended to its current length, and in 1984 Runway 16-34 was reduced from 100 feet in width to 75 feet in width, displacing it approximately 62.5 feet west of the original alignment.

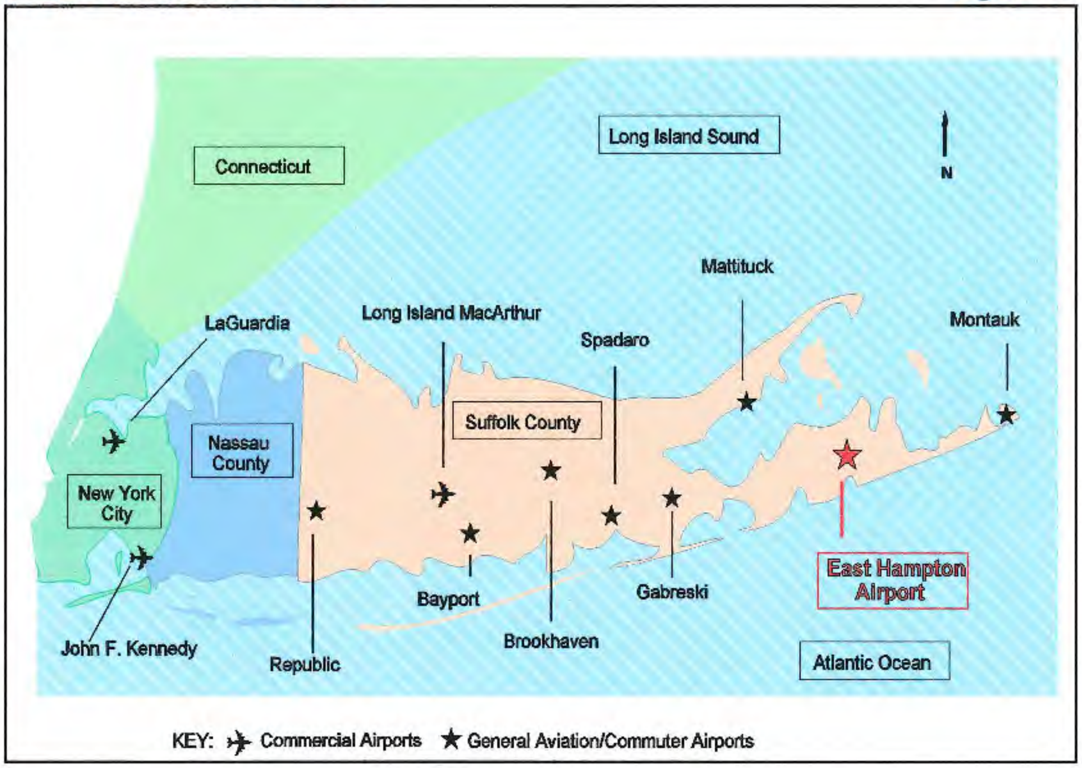
The airport serves as the year-round base for about 160 aircraft, but in the summer months there are 50 to 60 additional aircraft parked at the Airport. The majority of aircraft using the airport are single or twin engine propellor aircraft, but business jets and helicopters are also frequent users of the facilities.

Airport Location:

East Hampton Airport is located in the western portion of the Town of East Hampton, Suffolk County, Long Island, New York. The location of the airport, as well as other airports on Long Island, is illustrated in Figure 1.1. Figure 1.2 shows maps at two scales indicating the location of the airport within the communities on the south fork of Long Island.

AIRPORTS ON LONG ISLAND

Figure 1.1



EAST HAMPTON AIRPORT LOCATION

Figure 1.2

AIRPORT DATA AND CLASSIFICATION

East Hampton Airport currently encompasses approximately 607 acres of land along the western boundary of the Town of East Hampton, New York. The character of the airport is that of a general aviation airport with some commuter and air taxi service. The FAA Classification of the airport in the *National Plan of Integrated Airport Systems* is General Aviation. The most demanding aircraft using the airport on a routine basis is the Challenger CL-600 which is an approach category "C" aircraft. Its wingspan puts it into Group II for planning purposes. Thus the Airport Reference Code (ARC) is C-II; See Glossary of Terms for more detail.

East Hampton Airport has three runways; the main runway, Runway 10-28, is 4,255 feet long and 100 feet wide. The airport also has two cross wind runways, Runway 4-22, which is 2,501 feet long and 100 feet wide and Runway 16-34 which is 2,223 feet long and 75 feet wide.

For individual runways, the planning criteria is based upon the following:

- Rwy 10-28 = Challenger CL 600 = Design Group C-II
  Max Takeoff Wt = 41,250 lbs, Wingspan = 61.8 ft

- Rwy 4-22 and 16-34 = Piper 400 Cheyenne = Design Group B-I
  Max Takeoff Wt = 12,050 lbs, Wingspan = 47.7 ft.

The airport has a 5,000 square foot terminal building which was constructed in 1997. In addition to the terminal building, fourteen buildings, including hangars, are located on the airport.

Five of the buildings are T-hangar units that house multiple aircraft. The remaining buildings are currently occupied by Fixed Base Operators (FBO's) and/or aviation tenants.

The Existing Conditions Layout Plan for the East Hampton Airport is illustrated in Figure 1.3 along with the Airport Data Table, Runway Data Table, and Building List.

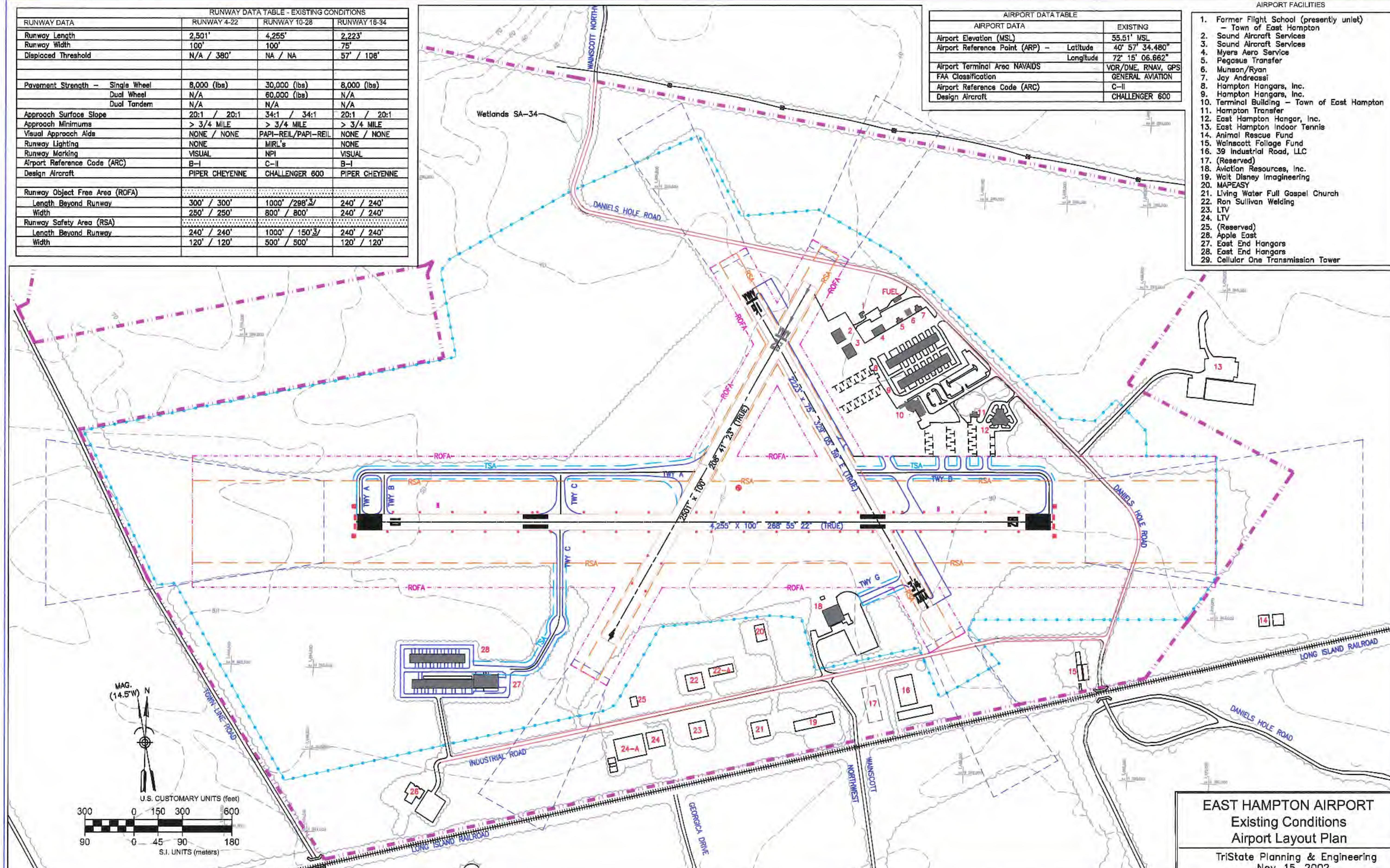
Figure 1.3

RUNWAY DATA TABLE - EXISTING CONDITIONS			
RUNWAY DATA	RUNWAY 4-22	RUNWAY 10-28	RUNWAY 16-34
Runway Length	2,501'	4,255'	2,223'
Runway Width	100'	100'	75'
Displaced Threshold	N/A / 380'	NA / NA	57' / 106'
Pavement Strength – Single Wheel	8,000 (lbs)	30,000 (lbs)	8,000 (lbs)
Dual Wheel	N/A	60,000 (lbs)	N/A
Dual Tandem	N/A	N/A	N/A
Approach Surface Slope	20:1 / 20:1	34:1 / 34:1	20:1 / 20:1
Approach Minimums	> 3/4 MILE	> 3/4 MILE	> 3/4 MILE
Visual Approach Aids	NONE / NONE	PAPI–REIL/PAPI–REIL	NONE / NONE
Runway Lighting	NONE	MIRL's	NONE
Runway Marking	VISUAL	NPI	VISUAL
Airport Reference Code (ARC)	B–I	C–II	B–I
Design Aircraft	PIPER CHEYENNE	CHALLENGER 600	PIPER CHEYENNE
Runway Object Free Area (ROFA)			
Length Beyond Runway	300' / 300'	1000' /298' 3/	240' / 240'
Width	250' / 250'	800' / 800'	240' / 240'
Runway Safety Area (RSA)			
Length Beyond Runway	240' / 240'	1000' / 150' 3/	240' / 240'
Width	120' / 120'	500' / 500'	120' / 120'

AIRPORT DATA TABLE	
AIRPORT DATA	EXISTING
Airport Elevation (MSL)	55.51' MSL
Airport Reference Point (ARP) – Latitude	40° 57' 34.480"
Longitude	72° 15' 06.662"
Airport Terminal Area NAVAIDS	VOR/DME, RNAV, GPS
FAA Classification	GENERAL AVIATION
Airport Reference Code (ARC)	C–II
Design Aircraft	CHALLENGER 600

AIRPORT FACILITIES

1. Former Flight School (presently unlet) – Town of East Hampton
2. Sound Aircraft Services
3. Sound Aircraft Services
4. Myers Aero Service
5. Pegasus Transfer
6. Munson/Ryan
7. Jay Andreassi
8. Hampton Hangars, Inc.
9. Hampton Hangars, Inc.
10. Terminal Building – Town of East Hampton
11. Hampton Transfer
12. East Hampton Hangar, Inc.
13. East Hampton Indoor Tennis
14. Animal Rescue Fund
15. Wainscott Foilage Fund
16. 39 Industrial Road, LLC
17. (Reserved)
18. Aviation Resources, Inc.
19. Walt Disney Imagineering
20. MAPEASY
21. Living Water Full Gospel Church
22. Ron Sullivan Welding
23. LTV
24. LTV
25. (Reserved)
26. Apple East
27. East End Hangars
28. East End Hangars
29. Cellular One Transmission Tower



EAST HAMPTON AIRPORT
Existing Conditions
Airport Layout Plan
TriState Planning & Engineering
Nov. 15, 2002

EHP–03/Report ALP/Fig 1.1
Sept. 18, 2002

DRAFT

AIRPORT ACTIVITY

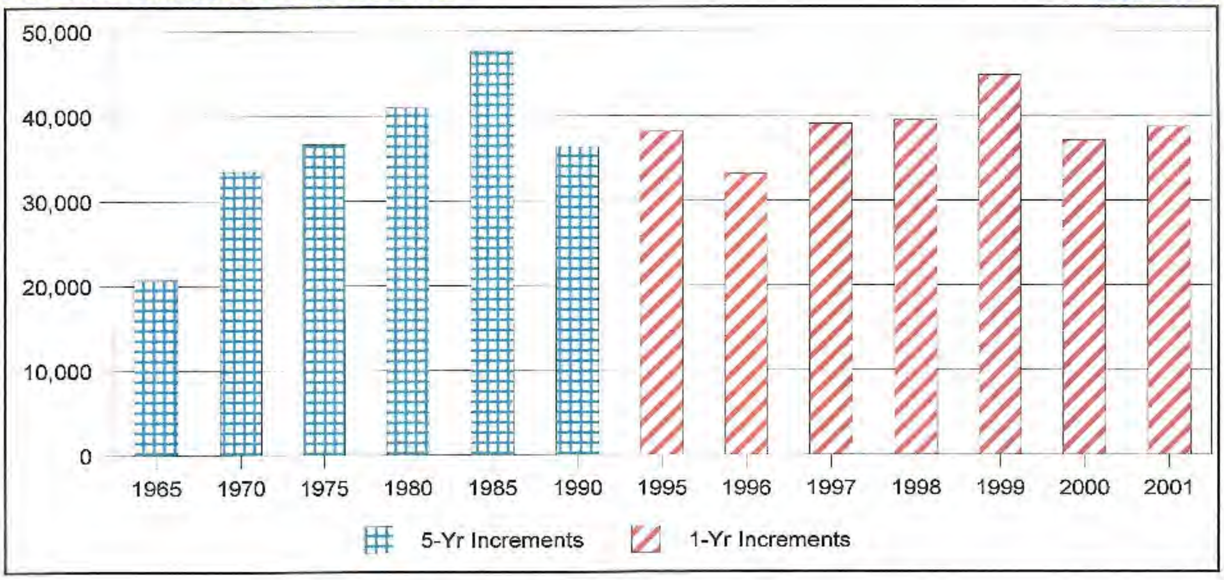
Aircraft Activity History

There are two sources for aircraft operations data for the East Hampton Airport: The FAA and the records of the airport staff. Table 1.1 and Figure 1.4 reflect aircraft movements reported by the airport management staff. The airport records the number of aircraft movements between 8:00 A.M. and sundown but does not record movements at other times when the airport is unattended. Based upon the airport staff experience the recorded movements should typically be increased by 15% to compensate for unrecorded movements.

AIRCRAFT ACTIVITY DATA **Table 1.1**

Data in 5-year Increments			Data in 1-year Increments		
Year	Airport Recorded Movements	Estimated Movements (+ 15%)	Year	Airport Recorded Movements	Estimated Movements (+15%)
1965	18,000	20,700	1995	33,212	38,194
1970	29,100	33,465	1996	28,850	33,178
1975	31,900	36,685	1997	33,966	39,061
1980	35,700	41,055	1998	34,332	39,482
1985	41,426	47,640	1999	38,967	44,812
1990	31,607	36,348	2000	32,316	37,163
1995	33,212	38,194	2001	33,674	38,725
2000	32,316	37,163			

HISTORIC AIRCRAFT MOVEMENTS **Figure 1.4**



The airport records each aircraft landing and each aircraft take-off as a "movement".

The FAA's terminology for aircraft movements is "aircraft operation". An operation is defined as a single take-off or landing (e.g., an aircraft that leaves (take-off's) from East Hampton Airport, and then returns (landing) is counted as two operations).

The FAA does not directly collect data on aircraft operations at airports without Air Traffic Control Towers. Therefore, the FAA database for East Hampton is dependent upon information filed by the NYSDOT. This data has not been filed on a regular basis in the past, thus gaps in historic data exist within the FAA records. When this occurs, the FAA automatically uses the data from the most recently filed reports, giving the appearance that activity was exactly constant over a span of several years when it has, in fact, varied a considerable amount. This is in fact what has happened at East Hampton. The FAA figures have remained unchanged from 1997 to 2000 and as projected to 2015. The airport staff records appear to be a more accurate record of actual activity.

FAA TERMINAL AREA FORECAST **Table 1.2**

REGION STATE: AEA-NY **LOCID: HTO**
CITY: EAST HAMPTON **AIRPORT: EAST HAMPTON**

	Aircraft Operations				
Year	Air Taxi and Commuter	General Aviation	Military	Total	Based Aircraft
1980	4,700	41,079	12	45,791	40
1985	6,400	38,354	50	44,804	128
1990	43,200	40,550	50	83,800	128
1995	43,200	40,550	50	83,800	128
1997	25,200	26,000	50	51,250	129
1998	18,200	33,000	50	51,250	129
1999	18,200	33,000	50	51,250	129
2000	18,200	33,000	50	51,250	129
2005	*18,200*	*33,000*	*50*	*51,250*	*129*
2010	*18,200*	*33,000*	*50*	*51,250*	*129*
2015	*18,200*	*33,000*	*50*	*51,250*	*129*

Source: FAA Terminal Area Forecast

Forecast of Aircraft Activity

The airport data shows a relatively flat level of aircraft activity since 1990 and the FAA forecasts for East Hampton, as with the rest of the northeastern United States, is for essentially no growth in activity for the next few years. Therefore, the most probable scenario for forecasted airport activity is for "status quo". However, there could be a number of unforseen events that would result in additional activity at East Hampton Airport. Those might involve such factors as a strong economic climate, lower fuel costs, lower cost aircraft, more pilot training programs, displacement of general aviation aircraft from other Long Island airports, and continued growth in the East Hampton residential areas. Countering these growth factors might also be factors that would cause declines in airport use. These would be downturns in the general economy, higher fuel prices, higher insurance costs.

As such, an arbitrary growth of 15% over the next 5 to 10 years was used to represent a potential forecast of the future activity. Beyond that growth of 15%, the possible increase of activity which might result from having a precision approach on Runway 10, was reviewed. A detailed analysis, of the additional amount of time the airport would be open, showed a potential increase of 3.2% in air traffic resulting from the precision approach. These two factors together would result in the activity levels shown in Table 1.3 using either the airport records or the FAA Terminal Area Forecast data for the year 2000 as the beginning point.

AIRCRAFT ACTIVITY FORECAST **Table 1.3**

Forecast Scenarios	Airport Records		FAA Terminal Area Forecasts (aircraft operations)
	Recorded Aircraft Movements	Adjusted upward for time Airport is unattended	
2000 Base Year	32,316	37,163	51,250
With 15% Growth	37,163	42,738	58,938
With 15% growth and 3.2% for Precision Approach	38,352	44,106	60,824

The highest traffic levels shown in Table 1.3 (using FAA data as a starting point) were used for the Environmental Assessment, Noise Analysis. Relative to the Airport Layout Plan these forecasts do not represent a need to make any significant change in the airside facilities. The current capacity of the runway and taxiway system are well above the high range of forecasted aircraft landings and take-offs (FAA AC 150/5060-5, Airport Capacity and Delay, estimates that a single runway can accommodate nearly 200,000 annual aircraft operations).

Throughout the past 20 years, activity at the airport has consisted of approximately 75% transient and 25% local flights, and that relationship is expected to continue.

Based Aircraft Analysis

The number of aircraft based at the East Hampton Airport has shown a positive growth trend over the past 20 to 30 years. If growth continued over the next 10 to 20 years, the airport would experience an increasing demand for hangars and aircraft apron space. However, recent manufacturing and sales of general aviation aircraft have been low and the FAA is forecasting a very slow growth in the next 10 to 15 years. This could result in only a few additional aircraft being based at the East Hampton Airport. However, should the FAA impose flight limitations on other Long Island airports, that could result in the relocation of aircraft to the East Hampton Airport, placing greater demands on the aircraft parking space and hangars.

Table 1.4 provides data for the number and type of aircraft at the airport since 1970.

The airport has, in the year 2002, approximately 160 based aircraft ranging from small single engine propellor aircraft to a limited number of business jets. During the summer months the airport has a much larger number of aircraft using the airport because of the increased number of summer residents. There are generally 50 to 60 additional aircraft parked on the airport during busy summer weekends.

BASED AIRCRAFT DATA **Table 1.4**

Year	Based Aircraft						Additional Summer Aircraft
	Total Aircraft	Single Engine	Multi Engine	Turbo Prop	Jet	Rotor	
1970	30	25	5	0	0	0	NA
1975	30	25	4	0	0	1	NA
1980	33	23	6	2	1	1	50
1985	80	59	12	8	1	0	40
1990	100	74	14	10	1	1	50
1995	129	94	19	12	2	2	55
2000	160	110	26	15	5	4	60

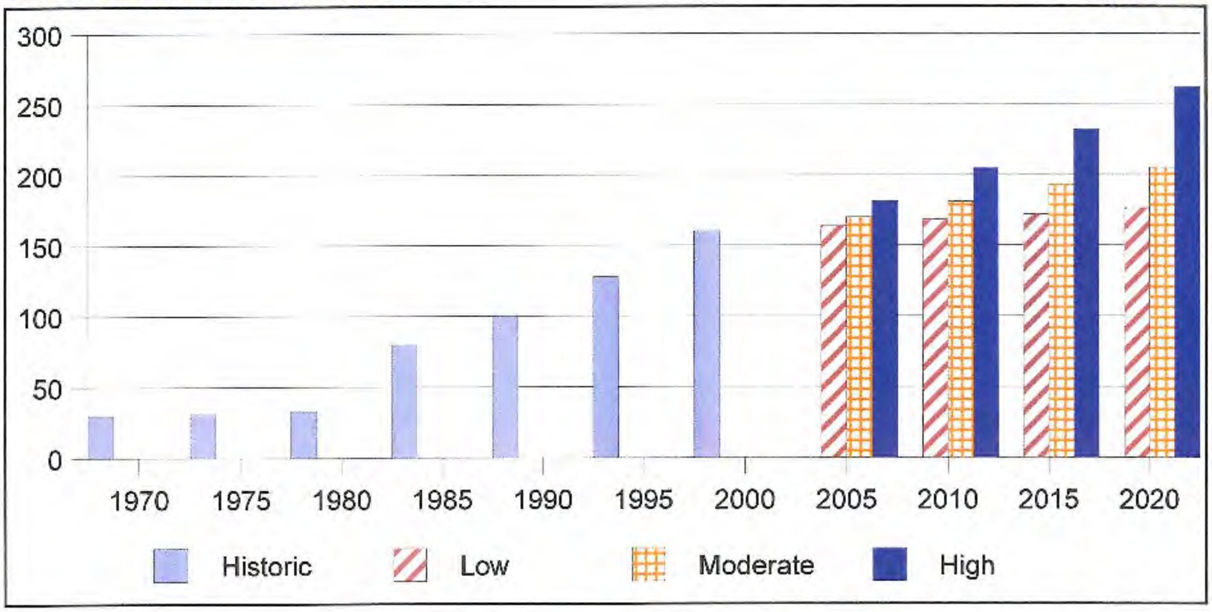
Source: Airport Records

The range of growth rates over the next 20 years, considered in this study, was from a low rate of about 0.5% per year to a high of about 2.5% per year. The planning process does not represent an obligation, nor a recommendation to initiate facility expansion unless there is a clear need to do so. However, in the planning sense, the intent is to present a plan that could accommodate a continued growth in the number of East Hampton residents and visitors that wish to use the airport if that growth actually occurs. Table 1.5 and Figure 1.2 depict the potential growth in based aircraft under three growth scenarios, 0.5% per year, 1.25% per year, and 2.5% per year.

BASED AIRCRAFT FORECAST **Table 1.5**

Year	Low Growth 0.5% per yr	Moderate Growth 1.25% per yr	High Growth 2.50% per yr
2000	160	160	160
2005	164	170	181
2010	168	181	205
2015	172	193	232
2020	177	205	262

BASED AIRCRAFT FORECAST **Figure 1.5**



This study used the "moderate growth" of 1.25% per year which assumes increases in based aircraft at a rate lower than experienced in the past 10 to 20-year period but greater than the FAA forecast and industry trend of near zero growth for the next few years.

COMPLIANCE WITH FAA STANDARDS

Advisory Circular 5300-13 Standards

The Federal Aviation Administration standards for airports are set forth in their Advisory Circular 5300-13, *Airport Design* (Change # 7). There were three scenarios created for East Hampton Airport, using the FAA computer program:

- B-I (Vis) = Approach Category B, Design Group I with visual approaches,
- C-II (Npi) = Approach Category C, Design Group II with non-precision approaches not less than 1 mile visibility,
- C-II (Pi) = Approach Category C, Design Group II with precision approach (Cat-I) on one runway end.

The first scenario represents the standards for both Runways 4-22 and 16-34; the second and third scenarios represent the standards for Runway 10-28 with a non-precision approach on each end, and with a possible future precision approach on one end and a non-precision approach on the other end. Table 1.6 provides a detailed listing of the FAA standards for each of the three scenarios.

The standards which are not met at East Hampton Airport are the Runway Safety Areas (RSA) and Object Free Areas (ROFA) beyond runway end and the Runway Protection Zones (RPZ) and Threshold Surfaces. The RSA and OFA standards are violated at the ends of Runways 28 and 22, and the RPZ extends off airport property for all runways. The airport meets or exceeds the other standards relating to runway and taxiway dimensions and clearances.

FAA STANDARDS **Table 1.6**

AIRPORT AND RUNWAY DATA	*Existing Rwy 4-22 Rwy 16-34*	*Existing Rwy 10-28*	*Rwy 10-28 With Precision Approach*
Aircraft Approach Category and Airplane Design Group	B-I	C-II	C-II
Note: Runways 4-22 and 16-34 serve small planes exclusively			
Airplane wingspan	47.80	78.99	78.99
Primary runway end approach visibility minimum	> 1 Mile	> 1 Mile	≥ CAT 1
Airplane undercarriage width (1.15 x main gear track)	12.16	15.81	15.87
Airport elevation	56	56	56
Runway and taxiway width and clearance standard dimensions (in feet)			
Runway centerline to parallel taxiway/taxilane centerline	150	300	400
Runway centerline to edge of aircraft parking	125	400	500
Runway width	60	100	100
Runway shoulder width	10	10	10
Runway safety area width	120	500	500
Runway safety area length beyond each runway end	240	1,000	1,000
Runway object free area width	250	800	800
Runway object free area length beyond each runway end	240	1,000	1,000
Clearway width	500	500	500
Runway protection zone at the primary runway end (in feet)			
Width 200 feet from runway end	250	500	1,000
Width 1200 feet from runway end	450	1,010	1,750
Length	1,000	1,700	2,500
Runway protection zone at other runway end (in feet)			
Width 200 feet from runway end	250	500	500
Width 1200 feet from runway end	450	1,010	1,010
Length	1,000	1,700	1,700
Threshold surface at primary runway end (in feet)			
Distance out from threshold to start of surface	0	0	200
Width of surface at start of trapezoidal section	700	400	1,000
Width of surface at end of trapezoidal section	1,000	1,000	4,000
Length of trapezoidal section	2,250	1,500	10,000
Length of rectangular section	2,250	8,500	0
Slope of surface	20:1	20:1	34:1

Threshold surface at other runway end (in feet)			
Distance out from threshold to start of surface	0	0	0
Width of surface at start of trapezoidal section	700	400	400
Width of surface at end of trapezoidal section	1,000	1,000	1,000
Length of trapezoidal section	2,250	1,500	1,500
Length of rectangular section	2,250	8,500	8,500
Slope of surface	20:1	20:1	20:1
Taxiways			
Taxiway centerline to fixed or movable object	44.5	65.5	65.5
Taxiway width	25	35	35
Taxiway safety area width	49	79	79
Taxiway object free area width	89	131	131

The Runway Safety Areas (RSA) standards as defined in AC 150/5300-13 - Airport Design states that runway safety areas will be:

1. cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations,

2. drained by grading or storm sewers to prevent water accumulation,

3. capable, under dry conditions, of supporting snow removal equipment, aircraft rescue and firefighting equipment, and the occasional passage of aircraft without causing structural damage to the aircraft and

4. free of objects, except for objects that need to be located in the runway safety area because of their function.

The Object Free Area (OFA) is defined in FAA Advisory Circular, AC 150/5300-13 - Airport Design as an area on the ground centered on a runway, or taxiway, centerline to enhance the safety of aircraft by providing a defined surface suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway surface.

FAR Part 77 Standards

Airspace around airports is protected from obstruction by the imaginary surfaces defined in Federal Aviation Regulations, Part 77 Objects Affecting Navigable Airspace and more specifically in Subpart C Obstruction Standards. Those portions that apply to the East Hampton Airport are identified below:

§77.23 *Standards for determining obstructions*, an existing object, including a mobile object, is, and a future object would be, an obstruction to air navigation if it is of greater height than any of the following surfaces and as established under §77.25; fifteen feet for any other public roadway (the clearance is seventeen feet for an Interstate Highway).

§77.25 *Civil airport imaginary surfaces*,

> ***Primary surface*** width shall be 250 feet for utility runways having only visual approaches, 500 feet for other than utility runways having visibility minimums greater than three-fourths statute mile, and 1,000 feet for nonprecision approaches with visibility minimums as low as three-fourths of a statute mile, and for precision instrument runways. The primary surface extends 200 feet beyond each end of the runway.
>
> The ***Approach surface*** shall have extend outward and upward from the end of the primary surface with the inner edge the same width as the primary surface. The approach surface shall expand uniformly to a width of: 1,250 feet for that end of a utility runway with only visual approaches, 3,500 feet for that end of a nonprecision instrument runway, other than utility, having visibility minimums greater than three-fourths of a statute mile; and 16,000 feet for precision instrument runways.
>
> The approach surface extends for a horizontal distance of : 5,000 feet at a slope of 20 to 1 for all utility and visual runways, 10,000 feet at a slope of 34 to 1 for all nonprecision instrument runways other than utility, and 10,000 feet at a slope of 50 to 1 with an additional 40,000 feet at a slope of 40 to 1 for all precision instrument runways.
>
> The ***Transitional surface*** extends outward and upward at a slope of 7:1 from the sides of the primary surface and from the sides of the approach surfaces.

SAFETY ISSUES

FAA standards that relate to public safety are of paramount importance and there are several such areas of concern at East Hampton Airport, as follows:

- Daniel's Hole Road crosses through the Runway 28 Safety Area and Object Free Area only 300 to 400 feet from the runway end as opposed to the standard of 1,000 feet.
- Daniel's Hole Road crosses through the Runway 22 Safety Area and Object Free Area only 130 to 180 feet from the runway end as opposed to the standard of 240 feet.
- The Threshold Surface (which is an imaginary plane above ground sloping up and outward from the runway) is penetrated by trees on approaches to Runways 10, 22, and 28 and by Daniel's Hole Road on Runways 22 and 28.

- In the approach surface to Runway 22 there are power lines on towers approximately 1,075 feet from the runway end. These lines and towers represent a safety problem for aircraft landing on Runway 22 and taking-off on Runway 4.

- Runway 10-28 does not have a complete parallel taxiway. This results in aircraft using the other two runways as taxiways creating a potential safety problem if aircraft are landing or taking-off on those runways.

- Runway 10-28 has a taxiway that crosses it about 1,250 feet from the west end of the runway. This crossing is at the normal touch-down point on the runway on a uncontrolled airfield. This crossing point poses a threat to safety for aircraft landing or taking-off from either end of the runway.

- Deer have been reported, by pilots, to be on or near the active runways at the airport an average of 100 times each year over the past 7 years. Each year 2 or more aircraft strike deer during landing and taking-off and extensive damage to the aircraft often occurs. The existing deer fence has several road penetrations without gates (because the general public uses the roads) and deer pass freely through those openings.

GENERAL NEEDS

The Airport Air Operations Area (AOA) meets the FAA standards; however, the following areas are noted as warranting improvement based upon operating efficiency:

- Runway 28 has no by-pass taxiway which leaves aircraft waiting in queue behind aircraft that may be delayed due to mechanical problems or departure clearance approval.

- Runway 4-22 has an asphalt surface that is badly deteriorated. A February 1999 pavement management assessment by the NSYDOT showed Runway 4-22 pavement to be in such bad condition as to require reconstruction. Since that time the surface conditions have worsened and the runway may soon become unusable.

- Pilots approaching the airport or planning a flight to the airport have no direct means of determining the current weather conditions. Pilots must rely upon a call to the airport manager's office for realtime airport weather conditions. The availability of an Automated Weather Observation Station (AWOS) would benefit all pilots using the airport.

- The Town of East Hampton has utilized portions of the airport property, not required for aviation needs, for industrial development; That has been undertaken on a individual parcel basis. The town proposes to request that the FAA grant a release for four areas of land totaling 86.8 acres from the airport.

- The weather minimums for the non-precision approach to Runway 10 and 28 are currently 500 ft Minimum Descent Altitude (MDA) and 1 to 1½ miles visibility. With a precision approach to Runway 10, the minimums would be reduced to as low as 256 feet MDA and ½ mile. The reduced approach minimums would keep the airport open to arriving aircraft and enhance the safety of the approach in poor weather conditions. The additional guidance system would also keep aircraft on a more direct approach glidepath to the runway, avoiding low approaches and power adjustments.

POTENTIAL IMPROVEMENT PROJECTS

The potential improvement projects, shown on the Airport Layout Plan for consideration, are identified and described on the following pages. Figure 1-6 provides a graphic layout of the improvement projects.

Project 1. Runway 10-28 Protection Zone and Approach Surfaces

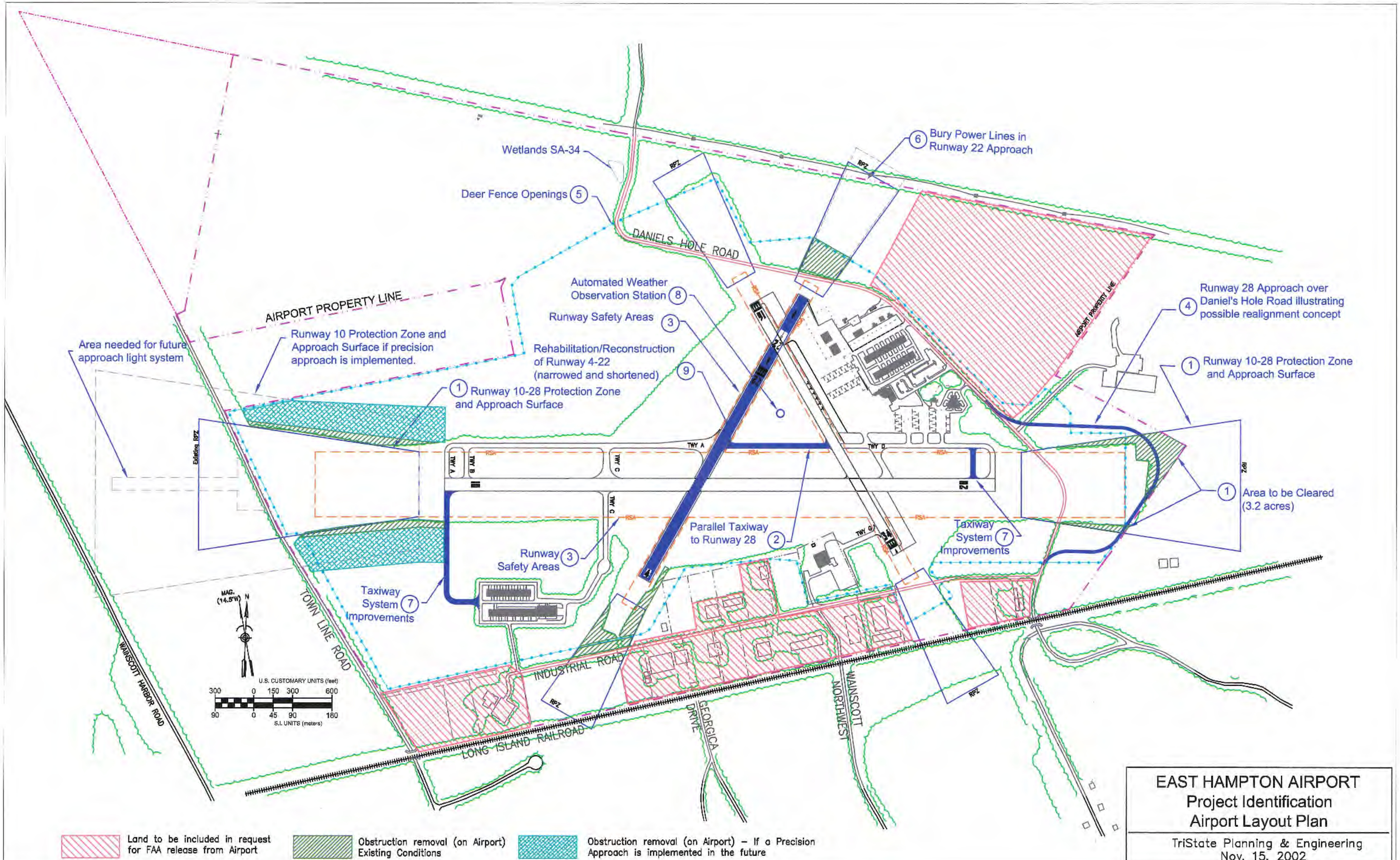
The ALP shows a project to maintain the Runway Protection Zones at each end of Runway 10-28 in accordance with the FAA standards. This will involve selective trimming and/or removal of trees and other obstructions within that portion of the RPZ that are on the airport property.

The Runway 10 RPZ is generally clear and requires only routine maintenance, however, the Runway 28 RPZ includes approximately 3.2± acres of trees, within the airport boundary, that should be cleared.

At each end of the runway there are trees that penetrate the approach surface and/or the transitional surfaces as defined in FAR Part 77. This potential project would include trimming or clearing those trees to a point 10 feet below the approach surfaces (this allows a few years of regrowth before trimming is again necessary), and burying the telephone lines within the Runway 28 approach surface.

The Aeronautical Data Sheet prepared by the National Geodetic Survey and the U.S. Department of Commerce for the Federal Aviation Administration based upon survey information from September 1996, indicated that 5 individual trees, located on airport property, penetrate the Runway 10 approach or transitional surface. If an arborist indicates that a tree is unable to sustain life when cut to the required height, the tree would be removed. Additionally, any small trees or brush which has grown within that portion of the RPZ which is on the airport, is would be cleared.

West of Town Line Road, on lands not owned by the Town of East Hampton, are 9.5± acres of trees within the Runway 10 RPZ and under the approach surface. In order to effectuate this goal, the Town of East Hampton would have to pursue easements or purchase the land within this area, to trim the trees below the approach surface and maintain the approach clear of obstructions.



Prepared By: TSPE, Nov. 27, 2002
EHP-03/report ALP/Figure 1-6

Runway 28 RPZ encompasses approximately 17 acres of trees of which approximately 3.2 acres are on airport property. The Town of East Hampton proposes to maintain the 3.2 acres, on airport property, to meet the FAA standards.

It is recommended that the Town of East Hampton pursue easements or purchase that portion of the RPZ that is off the airport and maintain the area clear of obstructions.

The Aeronautical Data for Runway 28, indicated 5 trees, located on airport property, that penetrate the approach or transitional surfaces. It is typical that these trees would be cut 10 feet below the approach/transitional surfaces (this type of cutting allows some time before regrow requires trimming again). If an arborist indicates that a tree is unable to sustain life when cut to the required height, the tree would be removed.

The Aeronautical Data Sheets do not identify the telephone pole(s) along Daniel's Hole Road as obstructions, however, the poles could potentially be removed and all telephone, cable TV, or other lines be placed underground as a matter of safety.

Project 2: Parallel Taxiway to Runway 10-28

Presently the parallel taxiway for Runway 10-28 has a missing section at its midpoint (between Runways 4-22 and 16-34). FAA AC 150/5300-13 - Airport Design, (Chapter 4, Paragraph 405) states that a basic airport consists of a runway with a full length parallel taxiway. The East Hampton Airport has three runways, however, not one of the runways has a full length parallel taxiway. From a safety perspective, it is recommended that the full length parallel taxiway for Runway 10-28 be completed.

The current airfield configuration, requires aircraft using Runway 10-28 to either taxi on Runway 10-28 or Runway 4-22 to access the terminal area. The FAA discourages aircraft taxiing on active runways as a matter of safety. Aircraft taxiing on runways presents the opportunity for an accident if an aircraft using the runway fails to see the taxiing aircraft, particularly at East Hampton where there is no Air Traffic Controller.

The absence of a direct taxi route to the terminal area also results in increased taxiing times, distances, and fuel usage.

The improvement included on the ALP is to construct approximately 810 feet of taxiway, 35 feet wide, located 300 feet to the north of Runway 10-28, between Runways 4-22 and 16-34. Construction of the taxiway section will include minimal grading to meet the FAA criteria for taxiway shoulders and safety areas, centerline markings, taxiway edge lights, and the installation of dry wells to accommodate runoff associated with the taxiway. This taxiway section will connect the eastern side of Taxiway A with the western side of Taxiway D and provide aircraft a full length parallel taxiway to Runway 10-28.

Project 3: Runway Safety Areas

The FAA defines Runway Safety Areas as a surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes or injury to its occupants in the event of an undershoot, overshoot, or excursion from the runway. Besides enhancing aircraft safety, the safety area provides accessibility for emergency equipment after an overrun incident.

The improvement included on the ALP is to grade the runway safety areas on either side of the runways and for the full length of the runway safety areas. For Runway 10-28, the recommendation is to relocate Daniel's Hole Road around the runway safety area. For Runway 4-22 it is recommended that the Runway be shortened approximately 134 feet to meet safety area standards and so that the northwest corner of the Obstruction Free Area and Runway Safety Area are south of Daniel's Hole Road. Table 1.7 provides a summary of the situation and action for each runway.

Plan for Runway Safety Area Improvements **Table 1.7**

Runway	Current Status	Action Considered
4	Meets dimensional standards	Grade as needed
22	Daniels Hole Rd. crosses at 130 ft.	Shorten Runway
10	Meets dimensional standards	Grade as needed
28	Daniels Hole Rd. crosses at 298 ft.	Realign Daniels Hole Rd.
16	Meets dimensional standards	Grade as needed
34	Meets dimensional standards	Grade as needed

Project 4: Runway 28 Approach over Daniel's Hole Road

The Approach Surface, which is an obstruction free plane in space extending outward and upward from its inner edge (which is 200 feet from the end of the runway) is specified in Federal Aviation Regulations, Part 77, *Objects Affecting Navigable Airspace*. For Runway 28 this surface has a slope of 1 foot vertical to 34 feet horizontal distance. It begins at a width or 500 feet and flares to 3,500 feet wide as it extends outward from the inner edge for a distance of 10,000 feet.

Federal Aviation Regulations, Part 77, *Objects Affecting Navigable Airspace*, Subpart C - *Obstructions Standards*, Paragraph 77.23(5)(b)(2) states that a public roadway is considered an obstruction to a point 15 feet above the roadway. Currently the road passes through the approach surface as shown in Table 1.8.

Approach Surface Clearance Over Daniel's Hole Road **Table 1.8**

Location where Road crosses Runway 28 Approach Surface	Distance from Inner Edge of Approach Surface (the inner edge is 200 feet from end of runway)	Elevation Above Daniel's Hole Road
North Edge	98 ft.	2.88 ft.
Extended Runway Centerline	315 ft.	9.26 ft.
South Edge	290 ft.	8.50 ft.

The runway Object Free Area for Runway 28 is 800 feet wide and extends 1,000 feet beyond the runway end. AC 150/5300-13 - *Airport Design* states that objects, such as Daniel's Hole Road, non-essential for air navigation or aircraft ground maneuvering purposes, are not to be placed in the OFA. Off the end of Runway 28, Daniel's Hole Road is located approximately 515 feet along the extended Runway 28 centerline and is closer at the edges.

The ALP shows a realignment of Daniel's Hole Road, on airport property, in order that vehicles on the road will remain below the Approach Surface and outside the Runway Object Free Area for Runway 28. To accomplish this, the road would be realigned to cross under the approach at a distance of approximately 1,100 feet east of its present location. The realignment concept would create 2,850± feet of new roadway and disturb approximately 3.3 acres.

Project 5: Deer Fence Openings

Presently, a deer deterrent fence encloses most of the airport. However, the fence has several openings, at roadway crossings that allow deer, and other wildlife, to enter the airport and wander onto the Air Operations Area (AOA). The purpose of the fencing is to eliminate or minimize the incidence of deer and other wildlife entering the AOA and being struck by aircraft during take-offs, landings and taxi operations. Reducing the number of deer and other wildlife within the AOA will reduce the opportunities for collisions and therefore will improve the safety conditions on the airport, protect the lives of the users, and avoid damage to aircraft.

Pilots using the East Hampton Airport routinely contact airport management staff, via the aircraft radio, requesting them to chase deer from the AOA, which is usually done with noise and lights. At night pilots routinely make low passes over the runway to frighten deer away (also making unnecessary flights over the neighborhoods around the airport). The Airport Manager's office maintains a record of reports of deer on the runways or taxiways and over the past seven years approximately 100 instances have been reported each year. Approximately twice each year aircraft strike deer causing damage to the aircraft and placing the occupants at risk. MBNA America Bank's Chief of Flight Operations went so far as to send a letter to the Airport Manager expressing his concerns about the safety of their flight operations because of the number of deer on the airport.

A Technical Assistance Report was completed at the FAA Technical Center, Pomona Airport, NJ, entitled *White Tailed Deer Population Assessment at FAA Technical Center*, June 1993. The report concluded that fencing was the most viable alternative to deter deer. Other actions considered in that report included harassment and animal destruction.

The improvement shown on the East Hampton Airport Layout Plan is to close openings in the existing deer fence to further deter deer from entering the AOA and gaining access to the aircraft movement areas.

In areas where the fence is not closed because it crosses a public roadway, the ALP shows a "cattle crossing grate" could be installed in lieu of a gate. The existing fence crosses public roadways in seven locations, two along Daniel's Hole Road, one along a private road to a tennis club (which is located off Daniel's Hole Road), and in four locations along Industrial Road. The cattle crossing grates should be of a specified length that deter deer from jumping the grate.

In order to deter deer from passing between the end of the fence and the cattle crossing grate, the improvement on the ALP is that additional fencing be installed parallel to the roadway (perpendicular to the existing fence) a distance of 25± feet. Additionally, new technology electric fence materials are being tested which may also be used in close proximity to the AOA as a secondary device to keep deer out of the aircraft movement areas.

Project 6: Bury Power Lines in Runway 22 Approach

The Aeronautical Data Sheet prepared by the National Geodetic Survey and the U.S. Department of Commerce for the Federal Aviation Administration based upon survey information from September 1996, indicated that an existing power line tower is an obstruction to the FAR Part 77 Approach Surface for Runway 22. Additionally, power poles along Daniel's Hole Road also obstruct the approach.

The towers and their associated power lines are approximately 114 feet above ground level, and are located 1,075 feet from the existing runway end along the extended runway centerline. They penetrate the standard approach surface to Runway 22 by approximately 30 feet.

The recommendation is to temporarily displace the landing threshold on Runway 22 and to then bury the power lines in that area where they pass under the approach surface. This project is a safety issue needed to protect the navigable airspace.

The improvement included in the ALP is to temporary displaced threshold for Runway 22 should not be viewed as a long term solution because it leaves a shortened landing length for aircraft using that runway. This condition is more critical in the summer months when Runway 16-34 is closed, and under certain wind conditions when nearly all small and medium size aircraft will use Runway 4-22.

Project 7: Taxiway System Improvements

A T-hangar complex located in the southwest corner of the airport has only one taxiway accessing the runways. This taxiway connects to Runway 10-28 approximately 1,250 feet from the end of Runway 10.

The use of this taxiway requires all aircraft entering or leaving the T-hangar complex to cross an active runway in the aircraft touch-down zone. This creates an unsafe condition for aircraft using Runway 10-28 and requires aircraft going to or from the T-hangars to hold for aircraft arriving on or departing from Runway 10-28. Since there is no control tower at the airport, the pilots must rely upon announcements on the Unicom to determine when it is safe to cross the runway.

The improvement shown on the ALP is to construct a new taxiway west of the T-hangar complex that connects at the end of Runway 10 and a new by-pass connector taxiway at the end of Runway 28.

This will involve construction of approximately 1,300 feet of taxiway 35 feet wide. In order to provide clearance for the Taxiway Object Free Area (TOFA), approximately 3.2 acres of trees and brush must be cleared.

The project will also entail grading to meet the FAA criteria for taxiway shoulders and safety areas, centerline markings, taxiway edge lights, and the installation of dry wells to accommodate the additional stormwater runoff will be included in the project.

Project 8: Automated Weather Observation Station (AWOS)

An Automated Weather Observation Station (AWOS) provides current and accurate weather conditions. AWOS's automatically measure meteorological conditions including cloud height, visibility, wind speed and direction, temperature and the dew point. The AWOS reduces and electronically analyzes the data which is broadcasted via weather reports which can be received on aircraft radios.

An AWOS is recommended for installation at the East Hampton Airport. The AWOS should be located in an area free of FAA regulated surfaces, in the "triangular" area created by the three runways.

Project 9: Rehabilitation/Reconstruction of Runway 4-22

The paved surface of Runway 4-22 has deteriorated to the point where it may soon be unusable. Failure to maintain this runway would leave the airport with only one runway in the summer when Runway 16-34 is closed due to the large number of parked aircraft.

Currently, Runway 4-22 is 100 feet wide and 2,501 feet long. The FAA standard width for this type of runway (Group B-I with approach visibility minimums not lower than 3/4 statute miles) is 60 feet, However, because of pilot training programs and the fact that severe crosswind conditions often exist at the airport, it is recommended that the Runway only be reduced to 75 feet.

The present end of the runway is only 130 feet (along the extended centerline) from Daniel's Hole Road which does not allow for the FAA standard Runway Safety Area of 240 feet beyond runway end (see Project 3). Thus, the recommendation is to shorten the runway approximately 125 feet (from 2,501 feet to 2,376 feet) at the time of the reconstruction project such that the full RSA and ROFA standards are met.

The recommended project is to reconstruct the runway to a reduced uniform width of 75 feet and a length of 2,376 feet. An engineering evaluation should be performed to determine if the existing pavement can be recycled in place and be used as a base course to reduce the amount of truck traffic to and from the airport and to reduce the use of raw materials.

Reducing the runway width will require that the runway shoulders and safety area be re-graded to meet the current FAA criteria and the runway edge lighting system will be moved closer to coincide with the new edges of the runway. It is assumed that the existing stormwater collection and drywell system will be adequate to capture the stormwater runoff. The final positioning of the displaced thresholds will also involve maintaining the area clear of obstructions and activities incompatible with aircraft.

Related Action: Town request for FAA to release land from the Airport.

The town has designated four areas that is proposes to be included in a request to FAA to release property to the Town of East Hampton to use for non-aviation purposes. Three of the areas are along the south side of the airport in the industrial park for a total of 39.8 acres. The fourth area is located north of Daniel's Hole Road, containing 47 acres of vacant open space, and the town will determine an appropriate non-aviation use in the future.

Any action by the town to change the nature of use or uses that are not conforming to the current zoning for that property will be subject to the process required by the town.

Project for Future Consideration: Medium Intensity Approach Light System with RAILS (MALSR) for a Precision Approach to Runway 10

For many years, the Airport Layout Plans (ALPs) for the East Hampton Airport have included a precision approach to Runway 10-28, and this ALP update continues to show that potential project. However, the FAA is not currently installing Instrument Landing Systems equipment at non-hub airports and that the Global Positioning System signal is not sufficiently accurate for a precision approach at East Hampton Airport. Therefore, a precision approach is included on the ALP for future consideration only.

In conjunction with the FAA providing a published precision approach to Runway 10, at some time in the future, a Medium Intensity Approach Light System (MALSR), should be provided to assist the pilot in judging alignment and distance for the final segment of the approach.

The lights in a MALSR system are configured such that they are mounted on frangible standards at a height below the approach surface but above the surrounding tree tops to afford pilots a clear view of the lights.

With the implementation of a precision approach (with MALSR) to Runway 10, several other changes will be necessary, including changes in the RPZ and the Approach Slope.

The Runway Protection Zone for a precision approach to Runway 10 will be larger than the existing RPZ for a non-precision approach. In comparison, the RPZ for the non-precision approach is approximately 29 acres and the RPZ for a precision approach is approximately 79 acres.

Much of the property for the RPZ's is within the present airport boundary. However, portions of both RPZs and the area required for the MALSR light units lies west of the existing airport boundary, in the Town of Southampton. For the existing non-precision RPZ approximately 9 acres are outside the airport property. For a precision approach to Runway 10, an additional 35 acres (for a total of 44 acres) are outside the existing airport property line. Within the RPZ an area of approximately 6 acres will be required for the MALSR light towers.

The area in the RPZ could remain as open space but trees would need to be trimmed below the approach surface. The 6 acres required for the MALSR would need to be cleared and fenced, and an underground power cable would be installed to each light unit.

The precision approach would have an FAR Part 77 approach surface with a slope of 50 to 1, whereas the existing non-precision approach surface has a slope of 34 to 1. The inner edge of the non-precision approach surface is 500 feet wide and the inner edge of the precision approach surface at 1,000 feet wide. Both surfaces flare outward and extend upward from their inner edge.

The south edges of the approach surfaces cross the airport boundary at approximately 900 feet from their inner edge (1,100 feet from the runway end). The existing 34:1 approach surface is approximately 26 feet above the runway end elevation at the airport boundary and the 50:1 surface for the precision approach would be at an elevation of about 18 feet above the runway end at that point.

At such time that the FAA is able to provide sufficiently accurate GPS services for a precision approach to Runway 10, it is recommended that the town re-evaluate the need and benefits of the reduced minimums that the approach could offer and weight those against the costs and impacts of the changes necessary to implement the approach.

EVALUATION OF NEED

Project 1: Runway 10-28 Protection Zone and Approach Surface

The FAA Runway Protection Zone standards and the FAR Part 77 Approach Surfaces are based upon the type of aircraft using the airport and the type of published approaches to the runway. These standards are based upon the FAA's commitment to aviation safety. Thus the need for the recommended improvements is safety and to bring existing conditions up to current standards.

Project 2: Parallel Taxiway to Runway 10-28

FAA AC 150/5300-13 - Airport Design, states that a basic airport consists of a runway with a full length parallel taxiway. The East Hampton Airport has three runways, however, not one of the runways has a full length parallel taxiway. This project is to complete the full length parallel taxiway for Runway 10-28 based upon the safety issue of not having aircraft taxi on active runways as well as reducing the taxiing distances on the airport. Of the estimated 37,000 aircraft operations at the airport each year, approximately 71 percent use Runway 10-28. Half of these taxi to Runway 10 for take-off or taxi back from landing on Runway 28, thus approximately 13,000 aircraft operations have a need for this section of taxiway each year.

Project 3: Runway Safety Areas

The FAA has placed a high priority upon improving the safety areas at airports where the current conditions do not meet standards. The need for making the recommended improvements is to provide a surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes or injury to its occupants in the event of an undershoot, overshoot, or excursion from the runway. Besides enhancing aircraft safety, the safety area provides accessibility for emergency equipment after an overrun incident.

Project 4: Runway 28 Approach over Daniel's Hole Road

The Approach Surface for Runway 28 has a slope of 1 foot vertical to 34 feet horizontal distance. It begins at a width of 500 feet and flares to 3,500 feet wide as it extends outward from the inner edge for a distance of 10,000 feet. The Approach Surface, which is an obstruction free plane in space extending outward and upward from its inner edge (which is 200 feet from the end of the runway) is specified in Federal Aviation Regulations, Part 77, *Objects Affecting Navigable Airspace*. Furthermore, Subpart C - *Obstructions Standards*, Paragraph 77.23(5)(b)(2) states that a public roadway is considered an obstruction up to a point 15 feet above the roadway. Currently Daniel's Hole Road passes through the approach surface at only 3 feet to 10 feet above the roadway.

The recommended relocation of Daniel's Hole Road is needed to correct a current condition that represents a safety problem. Each year approximately 7,000 aircraft landings occur on Runway 28 and pass through the airspace just above the roadway.

Project 5: Deer Fence Openings

In recent years, pilots report deer on or near the runways at East Hampton Airport approximately 100 times each year, and an average of 2 aircraft strike deer on the runways or taxiways. The recommendation is to install grates and additional sections of fence at locations where public use roadways currently create openings in the existing deer entry deterrent fence.

The need for this project is to reduce the number of deer that gain access into the Air Operations Area where they pose a risk to the aircraft as well as themselves. Reducing the number of deer and other wildlife within the AOA will reduce the opportunities for collisions and therefore will improve the safety conditions on the airport, protect the lives of the users and avoid damage to aircraft.

Project 6: Bury Power Lines in Runway 22 Approach

The need for this project is to improve safety in the approach airspace and provide adequate landing length on Runway 22. The power line towers penetrate the standard approach surface by approximately 30 feet and require a displacement of the threshold such that only 1,800 feet are available for landing. This takes away 25% of the length of the runway.

Project 7: Taxiway System Improvements

The improvement shown on the ALP is to provide a taxiway from an existing T-hangar complex (south of Runway 10) to the west end of the Runway is to reduce the need for aircraft to cross the active runway. This taxiway will allow many aircraft from the T-hangars to taxi directly to the end of the runway for takeoff.

The need for the recommended by-pass taxiway is to reduce delays to departing aircraft by allowing aircraft to take-off when they are ready to go. If the first aircraft in line for the runway is delayed, the others behind it can use the bypass to access the runway.

Project 8: Automated Weather Observation Station (AWOS)

The Automated Weather Observation Station (AWOS), as shown on the ALP, could fulfill a need for pilots to have access to current aviation related weather conditions at the airport. This enhances the pilots ability to make correct decisions when planning a flight.

Project 9: Rehabilitation/Reconstruction of Runway 4-22

The reconstruction of the pavement for Runway 4-22 is needed to keep the runway available to aircraft operators when needed. This is the cross-wind runway so it is important to have it available when wind conditions make it dangerous for small aircraft to use Runway 10-28. The reconstructed runway will not be as long nor as wide as the existing pavement. This has the benefit of off-setting the amount of impervious surfaces on the airport that will result from some of the other recommended improvements.

Related Action: Town request for FAA to release 86.8 acres from the Airport.

The town's request for the land release is not related to the needs of the airport other than to provide supplemental sources of funds to offset the costs of operating the airport.

Project for Future Consideration: Medium Intensity Approach Light System with RAILS (MALSR) for a Precision Approach to Runway 10

The need for a precision approach at East Hampton Airport is a function of the extent of weather occurrence below the present minima and the number of annual aircraft operations that potentially occur during that condition. The FAA is currently updating the definitions of instrument approaches and the criteria for Category I approaches. As a Global Landing System (which provides a signal more accurate than the current GPS) becomes available in the area of the East Hampton Airport, the Town of East Hampton can more accurately determine the benefits from providing an MALSR to further reduce the landing minima.

The FAA's determination of eligibility of the MALSR for funding assistance would also be determined using the results of a Benefit-Cost Analysis prepared under their guidelines.

PROJECT COST ESTIMATES

The anticipated construction costs of the recommended projects were developed using recent cost data from similar projects at the airport or at other airports on Long Island. FAA and NYSDOT information was used to supplement this data base where necessary.

Project 1: Runway 10-28 Protection Zone and Approach Surface

Work Item	Quantity	Units	Unit Price	Cost
Tree trimming in transitional surface for Rwy 10	3.0	Ac	$5,000	$15,000
Tree clearing in RPZ Rwy 28	3.2	Ac	$10,000	$32,000
Soft Costs (Design, Bidding, Inspection, Admin.)	30%	NA	NA	$14,100
			Total Budgeting Amount	**$61,100**

Project 2: Parallel Taxiway to Runway 10-28

Work Item (Taxiway is 810 feet long by 35 feet wide)	Quantity	Units	Unit Price	Cost
Erosion Control and Environmental Protection	2.00	Ac	$5,000	$10,000
Site preparation, excavation and grading	1.00	Ac	$25,000	$25,000
Pavement section (810 ft x 35 ft x 24 in)	28,350	SF	$4	$113,400
Marking and Signs	1	LS	$12,000	$12,000
Taxiway Lighting and Rwy Light Adjustment	810	LF	$25	$20,250
Drainage (dry wells)	8	Ea	$3,500	$28,000
Seeding and mulch (use indigenous plants)	1.0	Ac	$10,000	$10,000
Soft Costs (Design, Bidding, Inspection, Admin.)	30%	NA	NA	$65,595
			Total Budgeting Amount	**$284,245**

Project 3: Runway Safety Areas

Work Item	Quantity	Units	Unit Price	Cost
Erosion Control and Environmental Protection	8.0	Ac	$2,000	$16,000
Minor grading in Rwy Safety Areas (10% of RSA)	8.0	Ac	$5,000	$40,000
Seeding and mulch (use indigenous plants)	1.0	Ac	$10,000	$10,000
Soft Costs (Design, Bidding, Inspection, Admin.)	30%	NA	NA	$19,800
			Total Budgeting Amount	**$85,800**

Note: Rwy 22 RSA will be per FAA standards following the reduction of the Runway 4-22 length and Rwy 28 RSA will be standard following the relocation of Daniel's Hole Road.

Project 4: Runway 28 Approach over Daniel's Hole Road

Work Item (new roadway is 2,850 feet long by 30 feet wide)	Quantity	Units	Unit Price	Cost
Erosion Control and Environmental Protection	6.00	Ac	$5,000	$30,000
Site preparation, excavation and grading	5.00	Ac	$25,000	$125,000
Pavement section (2,850 ft x 30 ft x 24 in)	85,500	SF	$4	$342,000
Marking and Signs	1	LS	$15,000	$15,000
Remove existing roadway	45,000	SF	$1	$45,000
Drainage (culverts, dry wells, misc)	5	Ac	$20,000	$100,000
Grade Runway Safety Area (500 ft x 800 ft)	9.2	Ac	$5,000	$46,000
Seeding and mulch (use indigenous plants)	14.2	Ac	$10,000	$142,000
Reconnect Drives and other services	1	LS	$75,000	$75,000
Soft Costs (Design, Bidding, Inspection, Admin.)	30%	NA	NA	$276,000
			Total Budgeting Amount	**$1,196,000**

Project 5: Deer Fence Openings

Work Item	Quantity	Units	Unit Price	Cost
Erosion Control and Environmental Protection	1	Ac	$2,000	$2,000
Site preparation, excavation and grading	1.0	Ac	$25,000	$25,000
Deer Grates (includes base, grates, and misc.)	7	Ea	$30,000	$210,000
Deer Fence (high tension wire to match existing in 25 foot sections each side of the deer grate)	7	Ea	$2,500	$17,500
Seeding and mulch (use indigenous plants)	1.0	Ac	$10,000	$10,000
Soft Costs (Design, Bidding, Inspection, Admin.)	30%	NA	NA	$79,350
Total Budgeting Amount				**$343,850**

Project 6: Bury Power Lines in Runway 22 Approach

Work Item	Quantity	Units	Unit Price	Cost
Erosion Control and Environmental Protection	1	Ac	$2,000	$2,000
Site preparation, excavation and grading	4.00	Ac	$25,000	$100,000
Bury high voltage power cables (3,000 ft)	3,000	LF	$300	$900,000
Seeding and mulch (use indigenous plants)	4.0	Ac	$10,000	$40,000
Soft Costs (Design, Bidding, Inspection, Admin.)	30%	NA	NA	$312,600
Total Budgeting Amount				**$1,354,600**

Project 7: Taxiway System Improvements

Work Item (Taxiway is 1,300 feet long by 35 feet wide)	Quantity	Units	Unit Price	Cost
Erosion Control and Environmental Protection	2	Ac	$5,000	$10,000
Clearing and Grubbing	2.00	Ac	$10,000	$20,000
Site preparation, excavation and grading	2.00	Ac	$25,000	$50,000
Pavement section (1,300 ft x 35 ft x 24 in)	28,350	SF	$4	$113,400
Marking and Signs	1	LS	$12,000	$12,000
Taxiway Lighting and Rwy Light Adjustment	1,300	LF	$25	$32,500
Drainage (dry wells)	14	Ea	$3,500	$49,000
Seeding and mulch (use indigenous plants)	1.5	Ac	$10,000	$15,000
Soft Costs (Design, Bidding, Inspection, Admin.)	30%	NA	NA	$90,570
			Total Budgeting Amount	**$392,470**

Project 8: Automated Weather Observation Station (AWOS)

Work Item	Quantity	Units	Unit Price	Cost
Erosion Control and Environmental Protection	0.1	Ac	$2,000	$200
Site preparation, excavation and grading	0.10	Ac	$25,000	$2,500
Install AWOS unit	1	LS	$25,000	$25,000
Seeding and mulch (use indigenous plants)	0.1	Ac	$10,000	$1,000
Soft Costs (Design, Bidding, Inspection, Admin.)	30%	NA	NA	$8,610
			Total Budgeting Amount	**$37,310**

Project 9: Rehabilitation/Reconstruction of Runway 4-22

Work Item (Runway is 2,376 feet long by 75 feet wide)	Quantity	Units	Unit Price	Cost
Erosion Control and Environmental Protection	7	Ac	$5,000	$37,305
Remove Existing Pavement	27,778	SY	$1.00	$27,778
Site preparation, excavation and grading	6.05	Ac	$25,000	$151,354
Pavement section (2,376 ft x 75 ft x 24 in)	178,200	SF	$4	$712,800
Marking and Signs	1	LS	$20,000	$20,000
Runway Edge and Threshold Lighting System	2,376	LF	$110	$261,360
Drainage (Clean and repair dry wells)	20	Ea	$1,500	$30,000
Seeding and mulch (use indigenous plants)	2	Ac	$10,000	$20,000
Soft Costs (Design, Bidding, Inspection, Admin.)	30%	NA	NA	$378,179
			Total Budgeting Amount	**$1,638,776**

AIRPORT CAPITAL IMPROVEMENT PROGRAM (ACIP)

The FAA accepts programming of airport improvement projects via a form that sets out the schedule, costs and approval status of each project as well as the anticipated source of funding for the project. The above projects were used to prepare the ACIP for these projects as presented on the following pages.

AIRPORT CAPITAL IMPROVEMENT PLAN

U.S. Department of Transportation
Federal Aviation Administration

1. Airport: **East Hampton Airport** | 2. State: **New York** | 3. NPIAS No.: **3-36-0024** | 4. LOCID: **06N**

5. Project No. and Description (by funding Year in Priority Order) (a)		Federal Funds (b)	State Funds (c)	Local Funds Private (d)	Local Funds Sponsor (e)	Total $ (f)	Environmental Impact (g)	Start Date (h)	Completion Date (i)
2003-1	**Runway 10-28 Protection Zone and Approach Surfaces (obstruction removal)** *Design, bidding, and construction phase for trimming trees and removing obstructions in the Runways 10 and 28 RPZ and approaches. The project includes minor tree trimming in the Runway 10 approach but the Runway 28 approach has approximately 3.2± acres of trees, within the Airport boundary, that are to be cleared.*	$54,990	$3,055	**$0**	$3,055	$61,100	Form C complete	Jan. 2003	Sept. 2003
2003-2	**Parallel Taxiway to Runway 10-28** *Engineering, design, bidding, and construction of approximately 810 feet of taxiway, 35 feet wide with marking, lighting, and modification to existing runway lights.*	$255,821	$14,212	**$0**	$14,212	$284,245	Form C complete	Mar 2003	August 2003
2003-3	**Runway Safety Area Improvements** *Grade safety areas, adjust light bases, re-establish turf.*	$77,220	$4,290	**$0**	$4,290	$85,800	Form C complete	Jan. 2003	Aug. 2003
	2003 TOTALS	**$388,031**	**$21,557**	**$0**	**$21,557**	**$431,145**			
2004-4	**Runway 28 Approach over Daniel's Hole Road, road relocation** *Engineering, design, bidding, and construction of the realignment of approximately one-half mile of a 2-lane public roadway. The realignment will remain on the Airport and will include removing the existing roadway and grading the RSA to meet FAA standards. Reconnections to existing drives, utilities, etc.*	$1,076,400	$59,800	$0	$59,800	$1,196,000	Form C complete	Jan. 2004	July 2005
2004-5	**Deer Fence Openings (install grates and fence)** *Engineering, design, bidding, and construction of the cattle crossing grates plus 25 ft sections of fence along the road. This treatment will occur at sevel locations where public use roads penetrate the existing deer fence.*	$309,465	$17,193	$0	$17,193	$343,850	Form C complete	June 2004	Dec. 2004
2004-6	**Bury Power Lines in Runway 22 Approach** *Engineering, design, bidding, and construction of the realignment for removing approximately 3,000 LF of power lines and their towers and place the power cables underground.*	$1,219,140	$67,730	$0	$67,730	$1,354,600	Form C complete	Dec. 2004	Sept. 2005
	2004 TOTALS	**$2,605,005**	**$144,723**	**$0**	**$144,723**	**$2,894,450**			

AIRPORT CAPITAL IMPROVEMENT PLAN

U.S. Department of Transportation
Federal Aviation Administration

1. Airport: East Hampton Airport			2. State: New York			3. NPIAS No.: 3-36-0024		4. LOCID: 06N	
5. Project No. and Description (by funding Year in Priority Order)		Federal Funds	State Funds	Local Funds		Total $	Environmental Impact	Start Date	Completion Date
				Private	Sponsor				
2005-7	**Taxiway System Improvements** *Engineering, design, bidding, and construction of approximately 1,300 feet of taxiway, 35 feet wide with marking, lighting, and modification to existing runway lights.*	$353,223	$19,624	**$0**	$19,624	$392,470	Form C complete	Jan. 2005	Sept. 2005
2005-8	**Automated Weather Observation Station (AWOS)** *Installation of a standard FAA approved Automated Weather Observation Station.*	$76,500	$4,250	**$0**	$4,250	$85,000	Form C complete	April 2005	Aug. 2005
	2005 TOTALS	**$429,723**	**$23,874**	**$0**	**$23,874**	**$477,470**			
2006-9	**Rehabilitate/Reconstruct Runway 4-22** *Engineering, design, bidding, and construction of 2,376 feet of runway, 75 feet wide with marking, lighting.*	$1,474,898	$81,939	**$0**	$81,939	$1,638,776	Form C complete	Jan. 2005	Sept. 2005
	2006 TOTALS	**$1,474,898**	**$81,939**	**$0**	**$81,939**	**$1,638,776**			

LAYOUT PLAN DRAWINGS

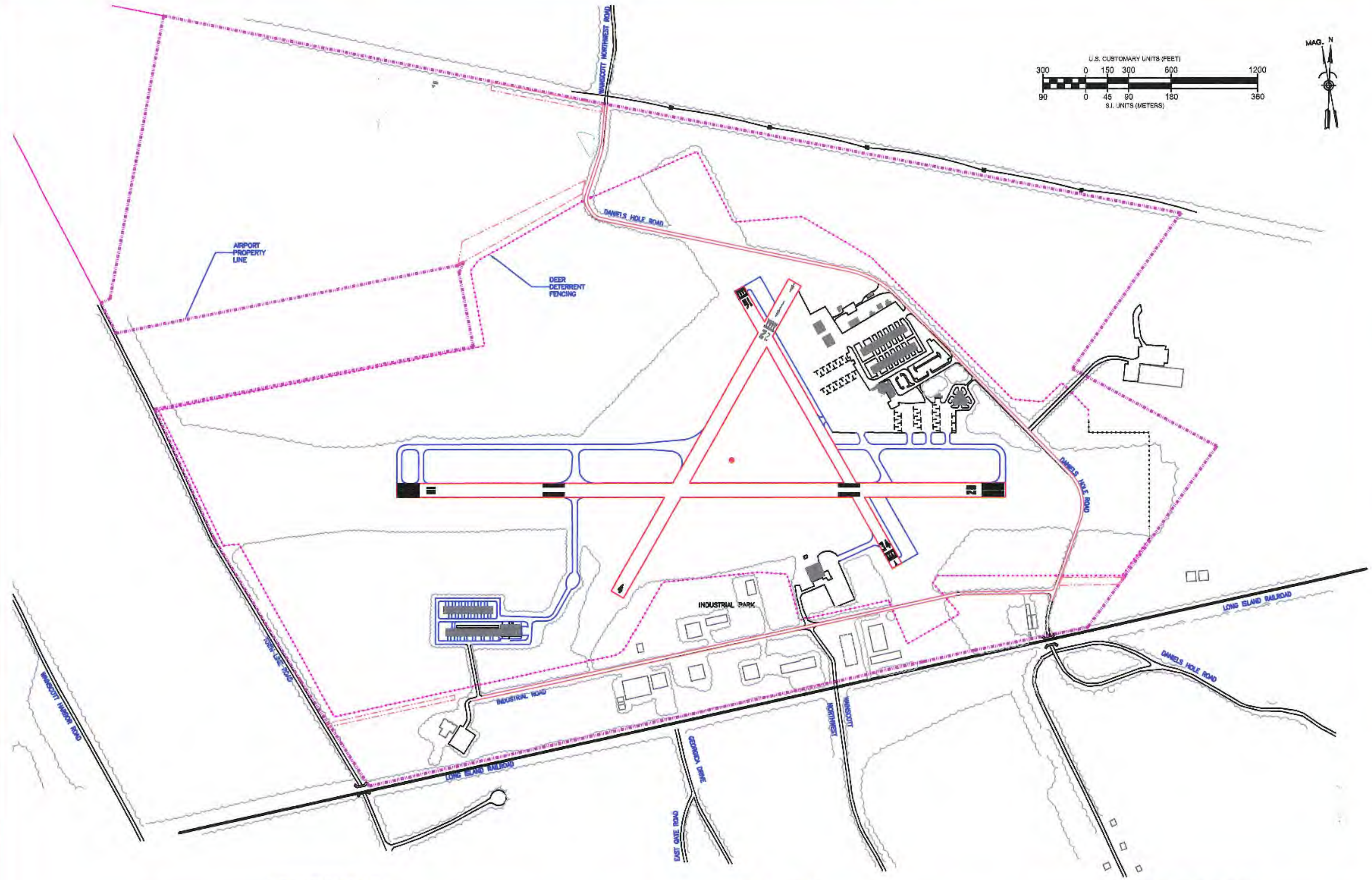
The drawing set which constitutes the Airport Layout Plan drawings include the following:

1. Cover Sheet with location map and vicinity map.
2. Existing Airport Layout Plan (reflecting recently completed projects)

3a Proposed Airport Layout Plan (winter operations)
3b Proposed Airport Layout Plan (summer operations)

4. Building Area Layout
5. Runway 10-28 Approach Plan and Profile
6. Runway 4-22 Approach Plan and Profile
7. Runway 16-34 Approach Plan and Profile
8. Existing FAR Part 77 Surfaces overlaid on USGS maps
9. Proposed FAR Part 77 Surfaces overlaid on USGS maps
10. Land Use
11. Airport Property Map
12. Aerial Photograph

Reduced format copies of these drawings are provided on the following pages.



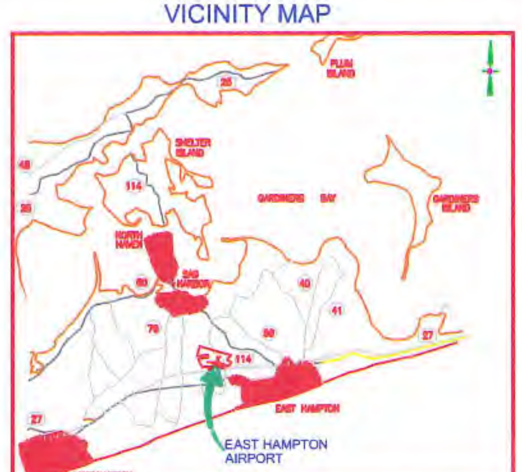
East Hampton Airport

East Hampton, New York

Owner:
Town of East Hampton

LOCATION MAP

VICINITY MAP



DRAWING INDEX

Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

TSPE TriState Planning & Engineering, P.C.
208 Glen Cove Road
Old Westbury, NY 11568-1524
(516) 294-4778
www.TSPE.com

Cover Sheet		ENGINEER'S SEAL:
DATE: Nov. 15, 2002	SHEET NO. 1 OF 12	

PERCENT WIND COVERAGE

RUNWAY	13 KNOTS ALL WEATHER	13 KNOTS IFR	16 KNOTS ALL WEATHER	16 KNOTS IFR
10–28	94.54%	93.77%	98.42%	97.95%
4–22	92.36%	96.04%	98.81%	98.86%
16–34	94.98%	91.56%	98.71%	98.78%
COMBINED	99.98%	99.99%	99.99%	100.00%

Source: National Climatic Center, Asheville NC
Observations taken at: Westhampton Beach, NY
Period Covered: 1980–1999

SYMBOLIC LEGEND

EXISTING	DESCRIPTION
	Airport Reference Point
	Building – Airport
	Building Other
---55---	Existing Contour Line and Elevation
	Airport Property Line
	Runway Object Free Area (ROFA)
	Runway Protection Zone (RPZ)
	Runway Safety Area (RSA)
	Deer Deterrent Fencing
	Tree Line
BAA	Based Aircraft Apron
IAA	Itinerant Aircraft Apron
	Power Line and Towers

TAXIWAY DATA TABLE

TAXIWAY	LENGTH	WIDTH
A	2,283'	35'
B	234'	35'
C	1,251'	35'
D	1,368'	35'

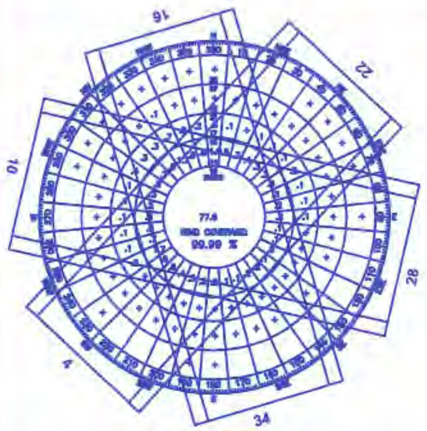
AIRPORT DATA TABLE

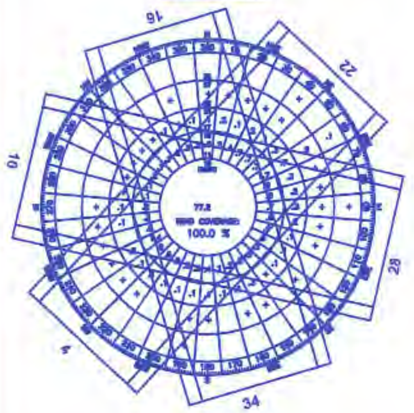
AIRPORT DATA	EXISTING
Airport Elevation (MSL)	55.51' MSL
Airport Reference Point (ARP) – Latitude	40° 57' 34.480"
(NAD 83) – Longitude	72° 15' 08.882"
Mean Max Temperature of Hottest Month	82°
Airport Terminal Area NAVAIDS	VOR/DME, RNAV, GPS
Magnetic Variation	14.5° W
Date of Magnetic Variation	1996
NPIAS Service Level	GENERAL AVIATION
Wind Coverage Crosswind Component	
VFR	99.99%
IFR	99.99%
All Weather	99.99%
Airport Reference Code (ARC)	C–II
Design Aircraft	CHALLENGER 600
Taxiway Lighting	MITL's
Taxiway Marking	BASIC

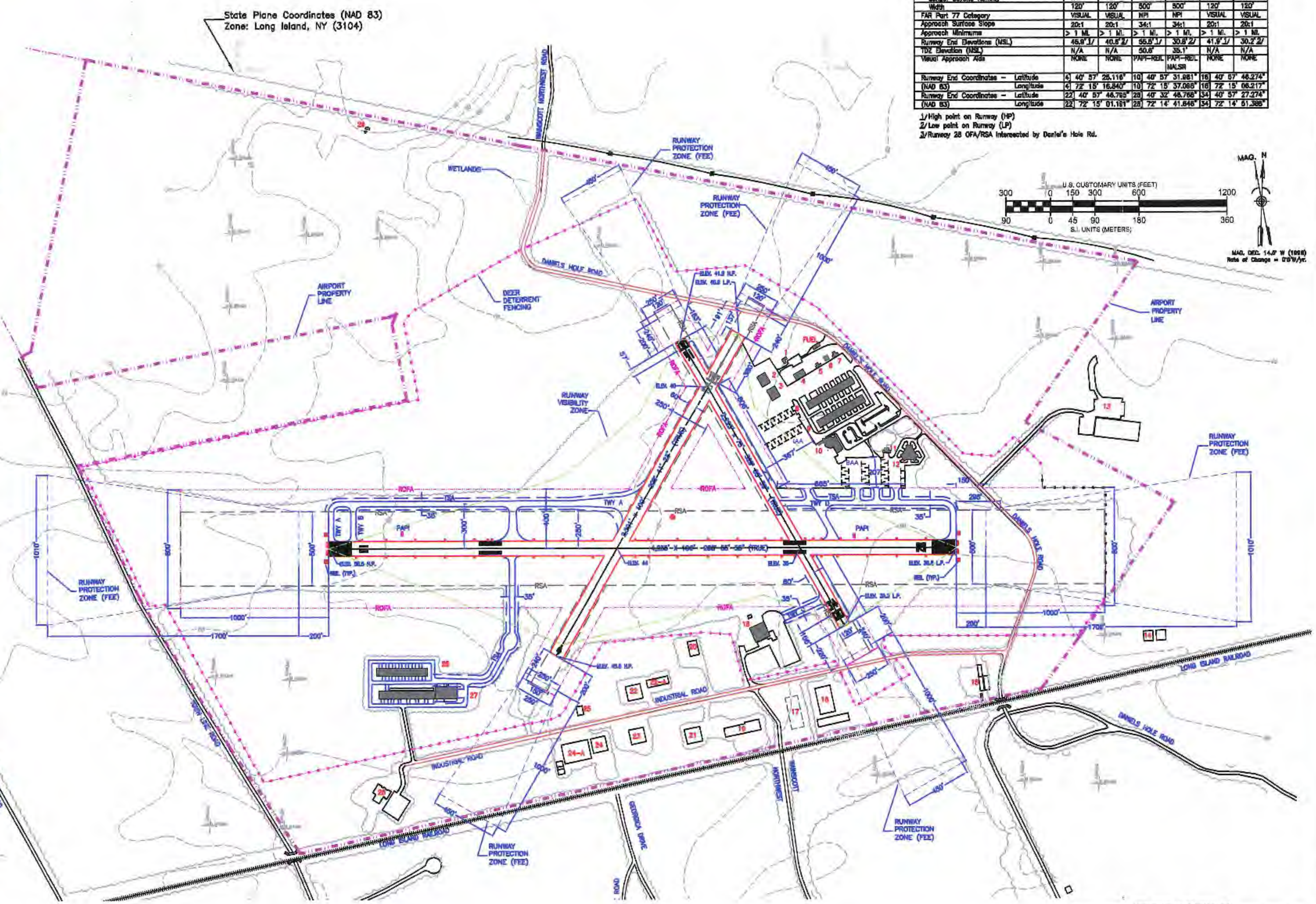
RUNWAY DATA TABLE

RUNWAY DATA	RUNWAY 4-22 EXISTING		RUNWAY 10-28 EXISTING		RUNWAY 16-34 EXISTING	
Effective Gradient (%)	0.20		0.57		0.54	
Maximum Grade Change	0.20		0.57		0.54	
Wind Coverage (%)	98.61%		98.61%		98.61%	
Max. Elevation (MSL)	45.9'		55.5'		41.9'	
Runway Length	2,501'		4,255'		2,223'	
Runway Width	100'		100'		75'	
Usable Runway Length	2,501'		4,255'		2,223'	
Surface Type	ASPHALT		ASPHALT		ASPHALT	
Pavement Strength Single Wheel	8,000 (lbs)		30,000 (lbs)		8,000 (lbs)	
Dual Wheel	N/A		60,000 (lbs)		N/A	
Dual Tandem	N/A		N/A		N/A	
Runway Lighting	NONE		MIRL's		NONE	
Runway Marking	VISUAL		NPI		VISUAL	
Airport Reference Code (ARC)	B–I		D–II		B–I	
Design Aircraft	PIPER CHEYENNE		GULFSTREAM–IV		PIPER CHEYENNE	
Line of Sight Violations	NONE		NONE		NONE	
Stage Length	300 MILES		500 MILES		300 MILES	
Object Free Zone (OFZ)	250'		400'		250'	
Runway End	RWY 4	RWY 22	RWY 10	RWY 28	RWY 16	RWY 34
Displaced Threshold	NONE	350'	NONE	NONE	57'	106'
Displaced Threshold Elevation (MSL)	N/A	41.1'	N/A	N/A	41.5'	30.9'
Runway Object Free Area (ROFA)						
Length Beyond Runway	240'	91'	1000'	150' 3/	183'	220'
Width	250'	250'	800'	800'	250'	250'
Runway Safety Area (RSA)						
Length Beyond Runway	240'	137'	1000'	295' 3/	240'	240'
Width	120'	120'	500'	500'	120'	120'
FAR Part 77 Category	VISUAL	VISUAL	NPI	NPI	VISUAL	VISUAL
Approach Surface Slope	20:1	20:1	34:1	34:1	20:1	20:1
Approach Minimums	> 1 MI.	> 1 MI.	> 1 MI.	> 1 MI.	> 1 MI.	> 1 MI.
Runway End Elevations (MSL)	45.9' 1/	40.6' 2/	55.5' 1/	30.8' 2/	41.9' 1/	30.2' 2/
TDZ Elevation (MSL)	N/A	N/A	50.6'	35.1'	N/A	N/A
Visual Approach Aids	NONE	NONE	PAPI–REIL	PAPI–REIL MALSR	NONE	NONE
Runway End Coordinates – Latitude (NAD 83)	4 40° 57' 25.116"		10 40° 57' 31.981"		16 40° 57' 46.274"	
Longitude	4 72° 15' 16.840"		10 72° 15' 37.068"		16 72° 15' 06.217"	
Runway End Coordinates – Latitude (NAD 83)	22 40° 57' 46.795"		28 40° 32' 48.768"		34 40° 57' 27.274"	
Longitude	22 72° 15' 01.161"		28 72° 14' 41.846"		34 72° 14' 51.386"	

1/ High point on Runway (HP)
2/ Low point on Runway (LP)
3/ Runway 28 OFA/RSA Intersected by Daniel's Hole Rd.


ALL WEATHER


IFR WEATHER



AIRPORT FACILITIES

1. Former Flight School (presently unlet) – Town of East Hampton
2. Sound Aircraft Services
3. Sound Aircraft Services
4. Myers Aero Service
5. Pegasus Transfer
6. Munson/Ryan
7. Jay Andreassi
8. Hampton Hangars, Inc.
9. Hampton Hangars, Inc.
10. Terminal Building – Town of East Hampton
11. Hampton Transfer
12. East Hampton Hangar, Inc.
13. East Hampton Indoor Tennis
14. Animal Rescue Fund
15. Wainscott Foliage Fund
16. 39 Industrial Road, LLC
17. (Reserved)
18. Aviation Resources, Inc.
19. Walt Disney Imagineering
20. MAPEASY
21. Living Water Full Gospel Church
22. Ron Sullivan Welding
23. LTV
24. LTV
25. (Reserved)
26. Apple East
27. East End Hangars
28. East End Hangars
29. Cellular One Transmission Tower

METRIC CONVERSION TABLE

U.S. Customary Units (feet)	35	78	131	200	250	450	700	1,010	1,510	1,700	1,750
S.I. Units (m)	10.5	24	40	60	76	135	210	303	463	510	525

MODIFICATIONS TO STANDARDS

	ITEM MODIFIED	CURRENT STANDARD	PROPOSED DIMENSION	DATE APPROVED
1				
2				
3				
4				
5				
6				

NO	REVISIONS	DATE
1		
2		
3		
4		
5		
6		
7		
8		

East Hampton Airport

Suffolk County, New York

Owner: Town of East Hampton

TSPE TriState Planning & Engineering, P.C.
Specializing in Airport Services
208 Glen Cove Road
Old Westbury, NY 11568-1524
Tel:(516) 284-4776
E-mail: admin@tspe.com

PROJECT:

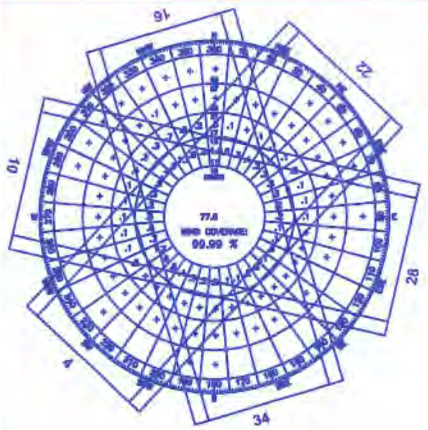
Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

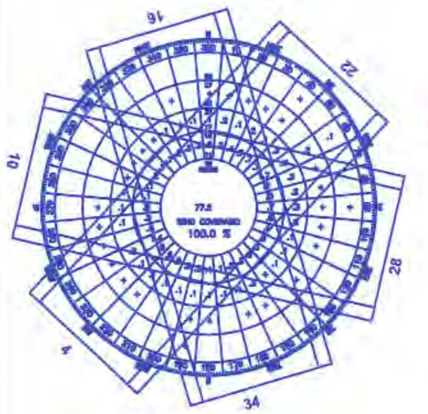
SHEET TITLE:

Existing Airport Layout

DESIGNED BY: LAC
CHECKED BY: THC
SCALE: Horiz. : 1" = 300' Vert. : N/A
DATE: Nov. 15, 2002
SHEET NO. 2 OF 12



ALL WEATHER



IFR WEATHER

PERCENT WIND COVERAGE

RUNWAY	13 KNOTS ALL WEATHER	13 KNOTS IFR	16 KNOTS ALL WEATHER	16 KNOTS IFR
10–28	94.54%	93.77%	98.42%	97.95%
4–22	92.36%	98.04%	98.81%	98.68%
16–34	94.96%	91.58%	98.71%	96.76%
COMBINED	99.96%	99.99%	99.99%	100.00%

Source: National Climatic Center, Asheville NC
Observations taken at: Westhampton Beach, NY
Period Covered: 1990–1999

SYMBOLIC LEGEND

EXISTING	DESCRIPTION
	Airport Reference Point
	Building – Airport
	Building Other
	Existing Contour Line and Elevation
	Airport Property Line
	Runway Object Free Area (ROFA)
	Runway Protection Zone (RPZ)
	Runway Safety Area (RSA)
	Deer Deterrent Fencing
	Tree Line
	Proposed Development Project
	Proposed Cattle Crossing Location
BAA	Based Aircraft Apron
IAA	Itinerant Aircraft Apron
	Obstruction Removal (On Airport)
	Clearance for Existing Approach
	Clearance for Proposed Approach
	Re-aligned Road
	Land Area for FAA Release

AIRPORT DATA TABLE

AIRPORT DATA	EXISTING	PROPOSED
Airport Elevation (MSL)	55.51' MSL	55.51' MSL
Airport Reference Point (ARP) – Latitude	40° 57' 34.480"	40° 57' 34.287"
(NAD 83) – Longitude	72° 15' 06.662"	72° 15' 06.722"
Mean Max Temperature of Hottest Month	82°	82°
Airport Terminal Area NAVAIDS	VOR/DME, RNAV, GPS	VOR/DME, RNAV, GPS
Magnetic Variation	14.5° W	14.5° W
Date of Magnetic Variation	1998	1998
NPIAS Service Level	GENERAL AVIATION	GENERAL AVIATION
Wind Coverage Crosswind Component		
VFR	99.99%	99.99%
IFR	99.99%	99.99%
All Weather	99.99%	99.99%
Airport Reference Code (ARC)	C–II	C–II
Design Aircraft	CHALLENGER 600	CHALLENGER 600
Taxiway Lighting	MITL's	MITL's
Taxiway Marking	BASIC	BASIC

TAXIWAY	LENGTH	WIDTH
A	2,283'	35'
B	234'	35'
C	1,251'	35'
D	1,388'	35'

RUNWAY DATA TABLE

RUNWAY DATA	RUNWAY 4-22 EXISTING		RUNWAY 4-22 ULTIMATE		RUNWAY 10-28 EXISTING		RUNWAY 10-28 ULTIMATE		RUNWAY 16-34 EXISTING		RUNWAY 16-34 ULTIMATE	
Effective Gradient (%)	0.20		0.20		0.57		0.57		0.54		0.54	
Maximum Grade Change	0.20		0.20		0.57		0.57		0.54		0.54	
Wind Coverage (%)	98.81%		98.81%		98.81%		98.42%		98.81%		98.81%	
Max. Elevation (MSL)	46.9'		46.9'		55.5'		55.5'		41.9'		41.9'	
Runway Length	2,501'		2,387'		4,255'		4,255'		2,223'		2,223'	
Runway Width	100'		75'		100'		100'		75'		75'	
Usable Runway Length	2,501'		2,387'		4,255'		4,255'		2,223'		2,223'	
Surface Type	ASPHALT		ASPHALT		ASPHALT		ASPHALT		ASPHALT		ASPHALT	
Pavement Strength – Single Wheel	8,000 (lbs)		8,000 (lbs)		30,000 (lbs)		30,000 (lbs)		8,000 (lbs)		12,500 (lbs)	
Dual Wheel	N/A		12,500 (lbs)		60,000 (lbs)		60,000 (lbs)		N/A		N/A	
Dual Tandem	N/A		N/A		N/A		N/A		N/A		N/A	
Runway Lighting	NONE		NONE		MIRL's		HIRL's		NONE		NONE	
Runway Marking	VISUAL		VISUAL		NPI		PI		VISUAL		VISUAL	
Airport Reference Code (ARC)	B–I		B–I		D–II		D–II		B–I		B–I	
Design Aircraft	PIPER CHEYENNE		PIPER CHEYENNE		GULFSTREAM–IV		GULFSTREAM–IV		PIPER CHEYENNE		PIPER CHEYENNE	
Line of Sight Violations	NONE		NONE		NONE		NONE		NONE		NONE	
Stage Length	300 MILES		300 MILES		500 MILES		500 MILES		300 MILES		300 MILES	
Object Free Zone (OFZ)	250'		250'		400'		400'		250'		250'	
Runway End	RWY 4	RWY 22	RWY 4	RWY 22	RWY 10	RWY 28	RWY 10	RWY 28	RWY 16	RWY 34	RWY 16	RWY 34
Displaced Threshold	NONE	380'	NONE	567'	NONE	NONE	NONE	NONE	57'	106'	57'	106'
Displaced Threshold Elevation (MSL)	N/A	41.1'	N/A	41.1'	N/A	N/A	N/A	N/A	41.5'	30.9'	41.5'	30.9'
Runway Object Free Area (ROFA)												
Length Beyond Runway	240'	81'	240'	217'	1000'	150 3/	1000'	928' 3/	183'	240'	183'	240'
Width	250'	250'	250'	250'	800'	800'	800'	800'	250'	250'	250'	250'
Runway Safety Area (RSA)												
Length Beyond Runway	240'	137'	240'	240'	1000'	298' 3/	1000'	1000'	240'	240'	240'	240'
Width	120'	120'	120'	120'	500'	500'	500'	500'	120'	120'	120'	120'
FAR Part 77 Category	VISUAL	VISUAL	VISUAL	VISUAL	NPI	NPI	PI	NPI	VISUAL	VISUAL	VISUAL	VISUAL
Approach Surface Slope	20:1	20:1	20:1	20:1	34:1	34:1	50:1	34:1	20:1	20:1	20:1	20:1
Approach Minimums	> 1 MI.	> 1 MI.	> 1 MI.	> 1 MI.	> 1 MI.	> 1 MI.	< 3/4 MI.	> 1 MI.	> 1 MI.	> 1 MI.	> 1 MI.	> 1 MI.
Runway End Elevations (MSL)	45.9' 1/	40.6' 2/	45.9' 1/	40.6' 2/	55.5' 1/	30.8' 2/	55.5' 1/	30.8' 2/	41.9' 1/	30.2' 2/	41.9' 1/	30.2' 2/
TDZ Elevation (MSL)	N/A	N/A	N/A	N/A	50.6'	35.1'	50.6'	35.1'	N/A	N/A	N/A	N/A
Visual Approach Aids	NONE	NONE	NONE	NONE	PAPI–REIL	PAPI–REIL MALSR	PAPI–REIL	PAPI–REIL	NONE	NONE	NONE	NONE
Runway End Coordinates – Latitude	4 40° 57' 25.116"		4 40° 57' 25.116"		10 40° 57' 31.981"		10 40° 57' 31.981"		16 40° 57' 46.274"		16 40° 57' 46.274"	
(NAD 83) Longitude	4 72° 15' 16.840"		4 72° 15' 16.840"		10 72° 15' 37.098"		10 72° 15' 37.098"		16 72° 15' 08.217"		16 72° 15' 08.217"	
Runway End Coordinates – Latitude	22 40° 57' 46.795"		22 40° 57' 45.664"		28 40° 32' 46.768"		28 40° 32' 46.768"		34 40° 57' 27.274"		34 40° 57' 27.274"	
(NAD 83) Longitude	22 72° 15' 01.191"		22 72° 15' 02.030"		28 72° 14' 41.848"		28 72° 14' 41.848"		34 72° 14' 51.388"		34 72° 14' 51.388"	

1/ High point on Runway (HP)
2/ Low point on Runway (LP)
3/ Runway 28 ROFA or RSA Penetrated by Daniels Hole Rd.

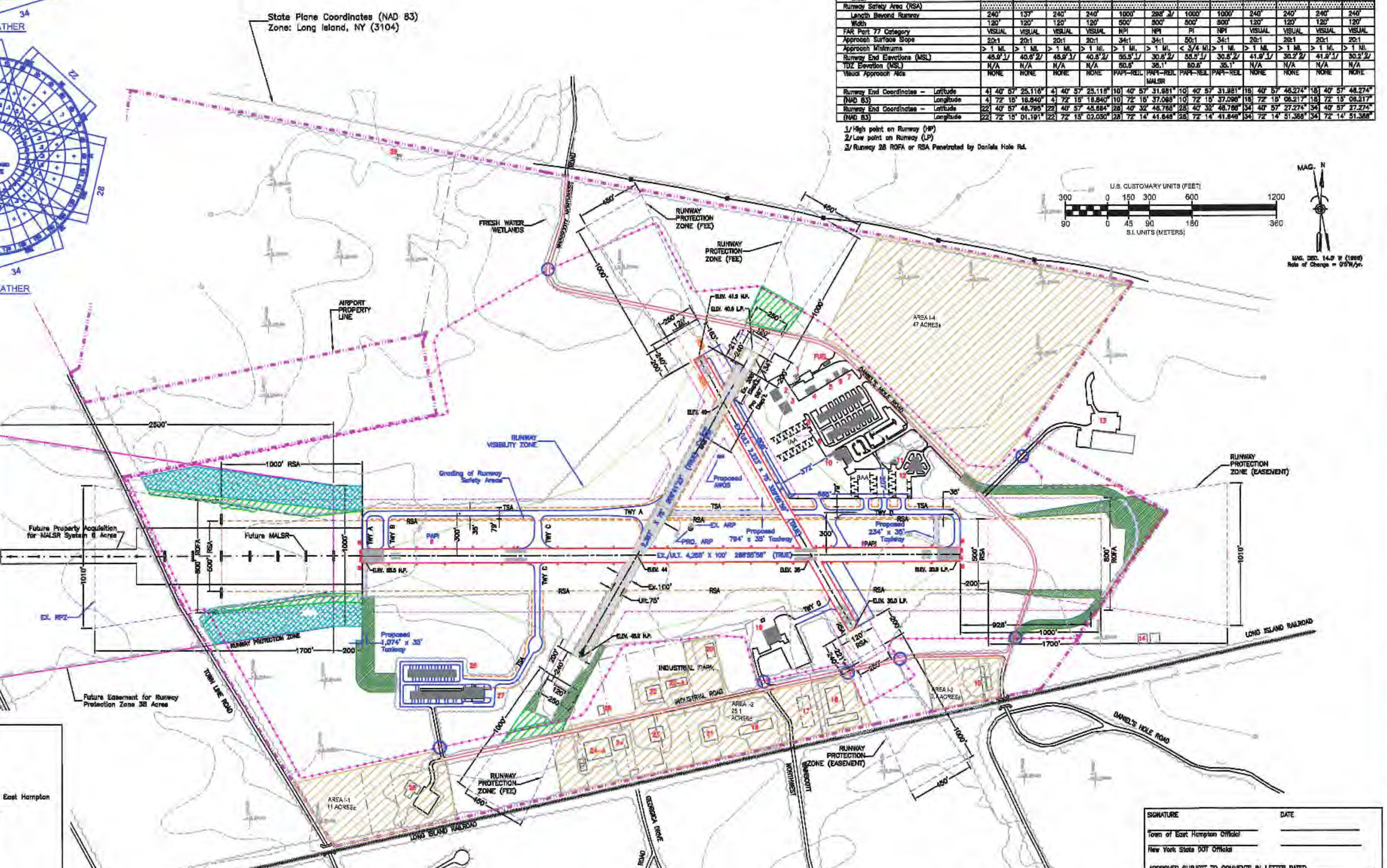
NO	REVISIONS	DATE
1		
2		
3		
4		
5		
6		
7		
8		

This drawing and electronic file is prepared for the exclusive use by the Owner and Engineer for the project identified below.

East Hampton Airport

Suffolk County, New York

Owner: Town of East Hampton



TSPE Tri-State Planning & Engineering, P.C.

Specializing in Airport Services

PROJECT:

Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

SHEET TITLE:

Proposed Airport Layout (Winter)

AIRPORT FACILITIES

1. Sound Aircraft Services
2. Sound Aircraft Services
3. Sound Aircraft Services
4. Myers Aero Service
5. Pegasus Transfer
6. Munson/Ryan
7. Jay Andreasel
8. Hampton Hangars, Inc.
9. Hampton Hangars, Inc.
10. Terminal Building – Town of East Hampton
11. Hampton Transfer
12. East Hampton Hangar, Inc.
13. East Hampton Indoor Tennis
14. Animal Rescue Fund
15. Wainscott Foliage Fund
16. 39 Industrial Road, LLC
17. 41 Industrial Road, LLC
18. Aviation Resources, Inc.
19. Town of East Hampton
20. MAPEASY
21. Town of East Hampton
22. Ron Sullivan Welding
22A. G.T. Power Systems
23. Living Water Full Gospel Church
24. LTV
24A. LTV
25. East Hampton Fire Station
26. Apple East
27. East End Hangars
28. East End Hangars
29. Cellular One Transmission Tower

METRIC CONVERSION TABLE

U.S. Customary Units (feet)	35	79	131	200	250	450	700	1,010	1,510	1,700	1,750
S.I. Units (m)	10.5	24	40	60	75	135	210	303	463	510	525

MODIFICATIONS TO STANDARDS

	ITEM MODIFIED	CURRENT STANDARD	PROPOSED DIMENSION	DATE APPROVED
1				
2				
3				
4				
5				
6				

SIGNATURE DATE

Town of East Hampton Official

New York State DOT Official

APPROVED SUBJECT TO COMMENTS IN LETTER DATED ____________

Manager, New York ADO

** SPECIAL NOTE

FAA'S APPROVAL OF THIS AIRPORT LAYOUT PLAN (ALP) REPRESENTS ACCEPTANCE OF THE GENERAL LOCATION OF FUTURE FACILITIES DEPICTED. DURING THE PRELIMINARY DESIGN PHASE, THE AIRPORT SPONSOR IS REQUIRED TO RESUBMIT FOR APPROVAL THE FINAL LOCATIONS, HEIGHTS AND EXTERIOR FINISH OF STRUCTURES. FAA CONCERN IS OBSTRUCTIONS, IMPACT ON ELECTRONIC AIDS OR ADVERSE EFFECT ON CONTROLLER VIEW OF AIRCRAFT APPROACHES AND GROUND MOVEMENT AREAS, WHICH COULD ADVERSELY AFFECT THE SAFETY, EFFICIENCY OR UTILITY OF THE AIRPORT.

DESIGNED BY: SML

CHECKED BY: JMC

SCALE: Horiz. : 1" = 300' Vert. : N/A

DATE: Nov. 15, 2002

SHEET NO. 3a OF 12

SYMBOLIC LEGEND

EXISTING	DESCRIPTION
	Airport Reference Point
	Building – Airport
	Building Other
	Existing Contour Line and Elevation
	Airport Property Line
	Runway Object Free Area (ROFA)
	Runway Protection Zone (RPZ)
	Runway Safety Area (RSA)
	Deer Deterrent Fencing
	Tree Line
	Proposed Development Project
	Proposed Cattle Crossing Location
BAA	Based Aircraft Apron
IAA	Itinerant Aircraft Apron
	Obstruction Removal (On Airport)
	Clearance for Existing Approach
	Clearance for Proposed Approach
	Re-aligned Road
	Land Area for FAA Release

AIRPORT DATA TABLE

AIRPORT DATA		EXISTING	PROPOSED
Airport Elevation (MSL)		55.51' MSL	55.51' MSL
Airport Reference Point (ARP) –	Latitude	40° 57' 34.460"	40° 57' 34.287"
(NAD 83) –	Longitude	72° 15' 08.882"	72° 15' 08.722"
Mean Max Temperature of Hottest Month		82°	82°
Airport Terminal Area NAVAIDS		VOR/DME, RNAV, GPS	VOR/DME, RNAV, GPS
Magnetic Variation		14.5° W	14.5° W
Date of Magnetic Variation		1996	1996
NPIAS Service Level		GENERAL AVIATION	GENERAL AVIATION
Wind Coverage Crosswind Component			
VFR		99.99%	99.99%
IFR		99.99%	99.99%
All Weather		99.99%	99.99%
Airport Reference Code (ARC)		C-II	C-II
Design Aircraft		CHALLENGER 600	CHALLENGER 600
Taxiway Lighting		MITL's	MITL's
Taxiway Marking		BASIC	BASIC

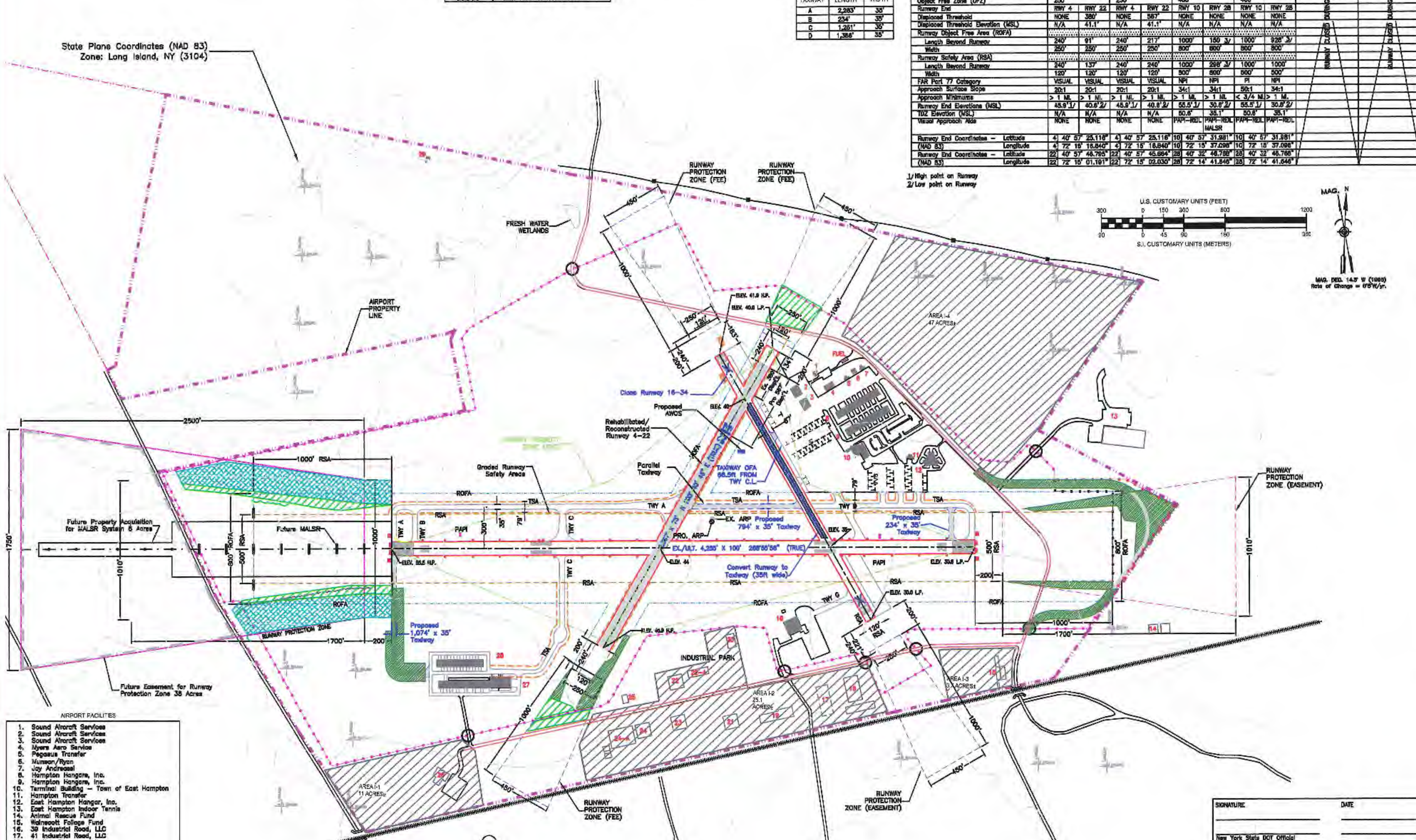
TAXIWAY DATA TABLE

TAXIWAY	LENGTH	WIDTH
A	2,263'	35'
B	234'	35'
C	1,261'	35'
D	1,368'	35'

RUNWAY DATA TABLE

RUNWAY DATA		RUNWAY 4-22				RUNWAY 10-28				RUNWAY 16-24
		EXISTING		ULTIMATE		EXISTING		ULTIMATE		
Effective Gradient (%)		0.20		0.20		0.57		0.57		RUNWAY CLOSED DURING SUMMER MONTHS
Maximum Grade Change		0.20		0.20		0.57		0.57		RUNWAY CLOSED DURING SUMMER MONTHS
Wind Coverage (%)		98.61%		98.61%		98.61%		98.42%		
Max. Elevation (MSL)		45.9'		45.9'		55.5'		55.5'		
Runway Length		2,501'		2,367'		4,255'		4,255'		
Runway Width		100'		75'		100'		100'		
Usable Runway Length		2,501'		2,367'		4,255'		4,255'		
Surface Type		ASPHALT		ASPHALT		ASPHALT		ASPHALT		
Pavement Strength	Single Wheel	8,000 (lbs)		8,000 (lbs)		30,000 (lbs)		30,000 (lbs)		
	Dual Wheel	N/A		12,500 (lbs)		80,000 (lbs)		80,000 (lbs)		
	Dual Tandem	N/A		N/A		N/A		N/A		
Runway Lighting		NONE		NONE		MIRL's		HIRL's		
Runway Marking		VISUAL		VISUAL		NPI		PI		
Airport Reference Code (ARC)		B-I		B-I		D-II		D-II		
Design Aircraft		PIPER CHEYENNE		PIPER CHEYENNE		GULFSTREAM-IV		GULFSTREAM-IV		
Line of Sight Violations		NONE		NONE		NONE		NONE		
Stage Length		300 MILES		300 MILES		500 MILES		500 MILES		
Object Free Zone (OFZ)		250'		250'		400'		400'		
Runway End		RWY 4	RWY 22	RWY 4	RWY 22	RWY 10	RWY 28	RWY 10	RWY 28	
Displaced Threshold		NONE	380'	NONE	587'	NONE	NONE	NONE	NONE	
Displaced Threshold Elevation (MSL)		N/A	41.1'	N/A	41.1'	N/A	N/A	N/A	N/A	
Runway Object Free Area (ROFA)										
Length Beyond Runway		240'	91'	240'	217'	1000'	180 3/	1000'	928' 3/	
Width		250'	250'	250'	250'	800'	800'	800'	800'	
Runway Safety Area (RSA)										
Length Beyond Runway		240'	137'	240'	240'	1000'	298' 3/	1000'	1000'	
Width		120'	120'	120'	120'	500'	500'	500'	500'	
FAR Part 77 Category		VISUAL	VISUAL	VISUAL	VISUAL	NPI	NPI	PI	NPI	
Approach Surface Slope		20:1	20:1	20:1	20:1	34:1	34:1	50:1	34:1	
Approach Minimums		> 1 MI.	> 1 MI.	> 1 MI.	> 1 MI.	> 1 MI.	> 1 MI.	< 3/4 MI.	> 1 MI.	
Runway End Elevations (MSL)		45.9' 1/	40.6' 2/	45.9' 1/	40.8' 2/	55.5' 1/	30.8' 2/	55.5' 1/	30.8' 2/	
TDZ Elevation (MSL)		N/A	N/A	N/A	N/A	50.6'	35.1'	50.6'	35.1'	
Visual Approach Aids		NONE	NONE	NONE	NONE	PAPI-REIL	PAPI-REIL MALSR	PAPI-REIL	PAPI-REIL	
Runway End Coordinates –	Latitude	4 40° 57' 25.116"		4 40° 57' 25.116"		10 40° 57' 31.981"		10 40° 57' 31.981"		
(NAD 83)	Longitude	4 72° 15' 16.840"		4 72° 15' 16.840"		10 72° 15' 37.098"		10 72° 15' 37.098"		
Runway End Coordinates –	Latitude	22 40° 57' 46.795"		22 40° 57' 45.664"		28 40° 32' 46.766"		28 40° 32' 46.766"		
(NAD 83)	Longitude	22 72° 15' 01.191"		22 72° 15' 02.030"		28 72° 14' 41.846"		28 72° 14' 41.646"		

1/ High point on Runway
2/ Low point on Runway



AIRPORT FACILITIES

1. Sound Aircraft Services
2. Sound Aircraft Services
3. Sound Aircraft Services
4. Myers Aero Service
5. Pegasus Transfer
6. Munson/Ryan
7. Jay Andreassi
8. Hampton Hangars, Inc.
9. Hampton Hangars, Inc.
10. Terminal Building – Town of East Hampton
11. Hampton Transfer
12. East Hampton Hangar, Inc.
13. East Hampton Indoor Tennis
14. Animal Rescue Fund
15. Wainscott Foliage Fund
16. 39 Industrial Road, LLC
17. 41 Industrial Road, LLC
18. Aviation Resources, Inc.
19. Town of East Hampton
20. MAPEASY
21. Town of East Hampton
22. Ron Sullivan Welding
22A. G.T. Power Systems
23. Living Water Full Gospel Church
24. LTV
24A. LTV
25. East Hampton Fire Station
26. Apple East
27. East End Hangars
28. East End Hangars
29. Cellular One Transmission Tower

METRIC CONVERSION TABLE

U.S. Customary Units (feet)	35	78	131	200	250	450	700	1,010	1,510	1,700	1,750
S.I. Units (m)	10.6	24	40	60	76	136	210	303	463	510	525

MODIFICATIONS TO STANDARDS

	ITEM MODIFIED	CURRENT STANDARD	PROPOSED DIMENSION	DATE APPROVED
1				
2				
3				
4				
5				
6				

SIGNATURE DATE

New York State DOT Official

APPROVED SUBJECT TO COMMENTS IN LETTER DATED ________

Manager, New York ADO

** SPECIAL NOTE

FAA'S APPROVAL OF THIS AIRPORT LAYOUT PLAN (ALP) REPRESENTS ACCEPTANCE OF THE GENERAL LOCATION OF FUTURE FACILITIES DEPICTED. DURING THE PRELIMINARY DESIGN PHASE, THE AIRPORT SPONSOR IS REQUIRED TO RESUBMIT FOR APPROVAL THE FINAL LOCATIONS, HEIGHTS AND EXTERIOR FINISH OF STRUCTURES. FAA CONCERN IS OBSTRUCTIONS, IMPACT ON ELECTRONIC AIDS OR ADVERSE EFFECT ON CONTROLLER VIEW OF AIRCRAFT APPROACHES AND GROUND MOVEMENT AREAS, WHICH COULD ADVERSELY AFFECT THE SAFETY, EFFICIENCY OR UTILITY OF THE AIRPORT.

NO	REVISIONS	DATE
1		
2		
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East Hampton Airport

Suffolk County, New York

Owner: Town of East Hampton

TSPE Tri-State Planning & Engineering, P.C.

Specializing in Airport Services

208 Glen Cove Road
Old Westbury, NY 11568-1524
Tel:(516) 294-4776
E-mail: admin@tspe.com

PROJECT:

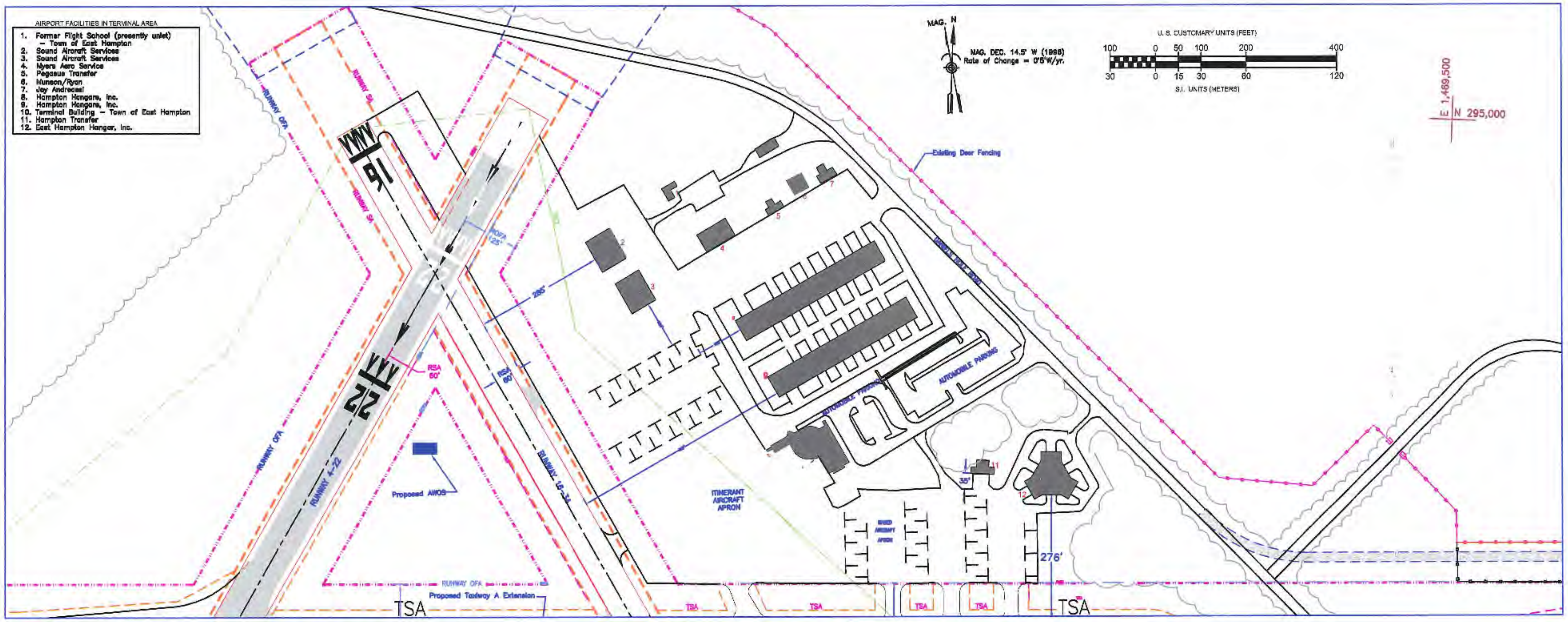
Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

SHEET TITLE:

Proposed Airport Layout Plan (Summer)

DESIGNED BY: LAC
CHECKED BY: THC
SCALE: Horiz. : 1" = 300' Vert. : N/A
DATE: Nov. 15, 2002
SHEET NO. 3b OF 12



NO	REVISIONS	DATE
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East Hampton Airport

Suffolk County, New York

Owner: Town of East Hampton

TSPE TriState Planning & Engineering, P.C.

Specializing in Airport Services

200 Glen Cove Road
Old Westbury, NY 11568-1504
Tel:(516) 294-4776
E-mail: [illegible]@tspe.com

PROJECT:

Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

SHEET TITLE:

Building Area Layout

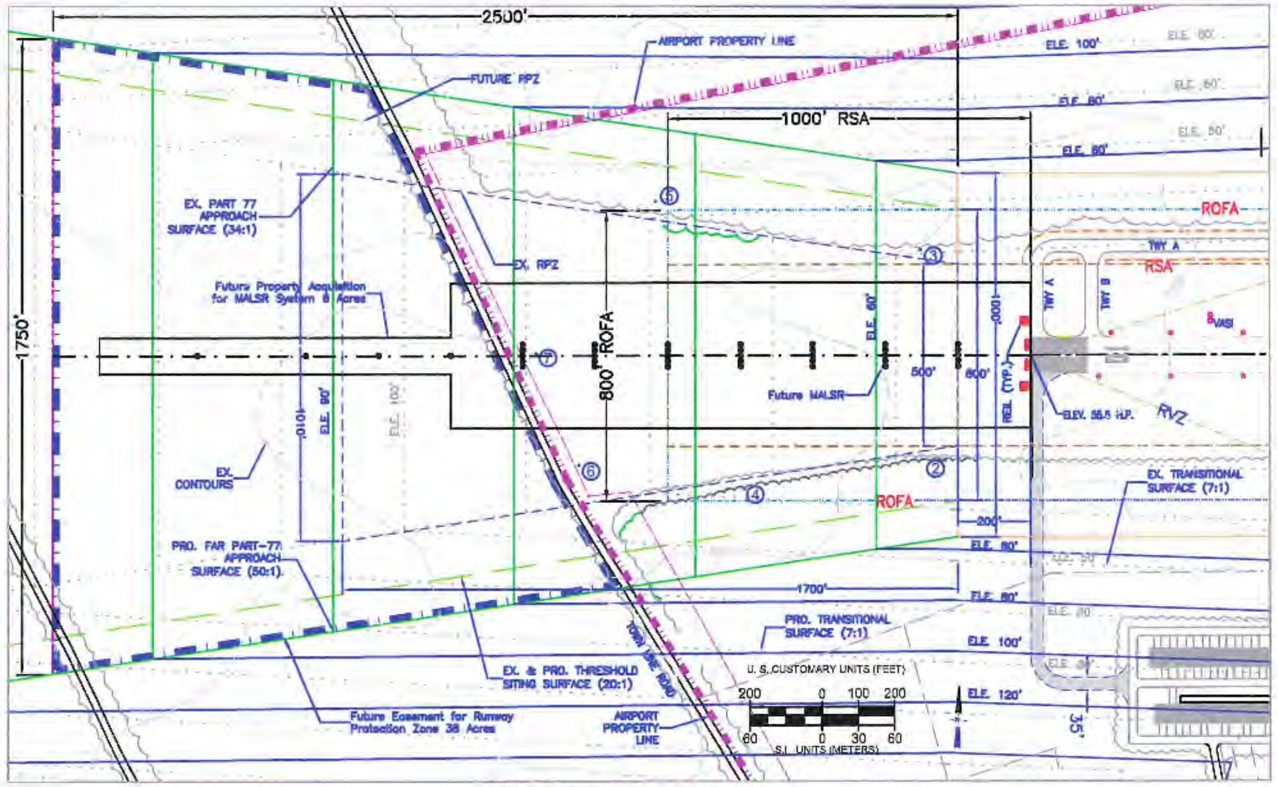
DESIGNED BY: SML

CHECKED BY: JMC

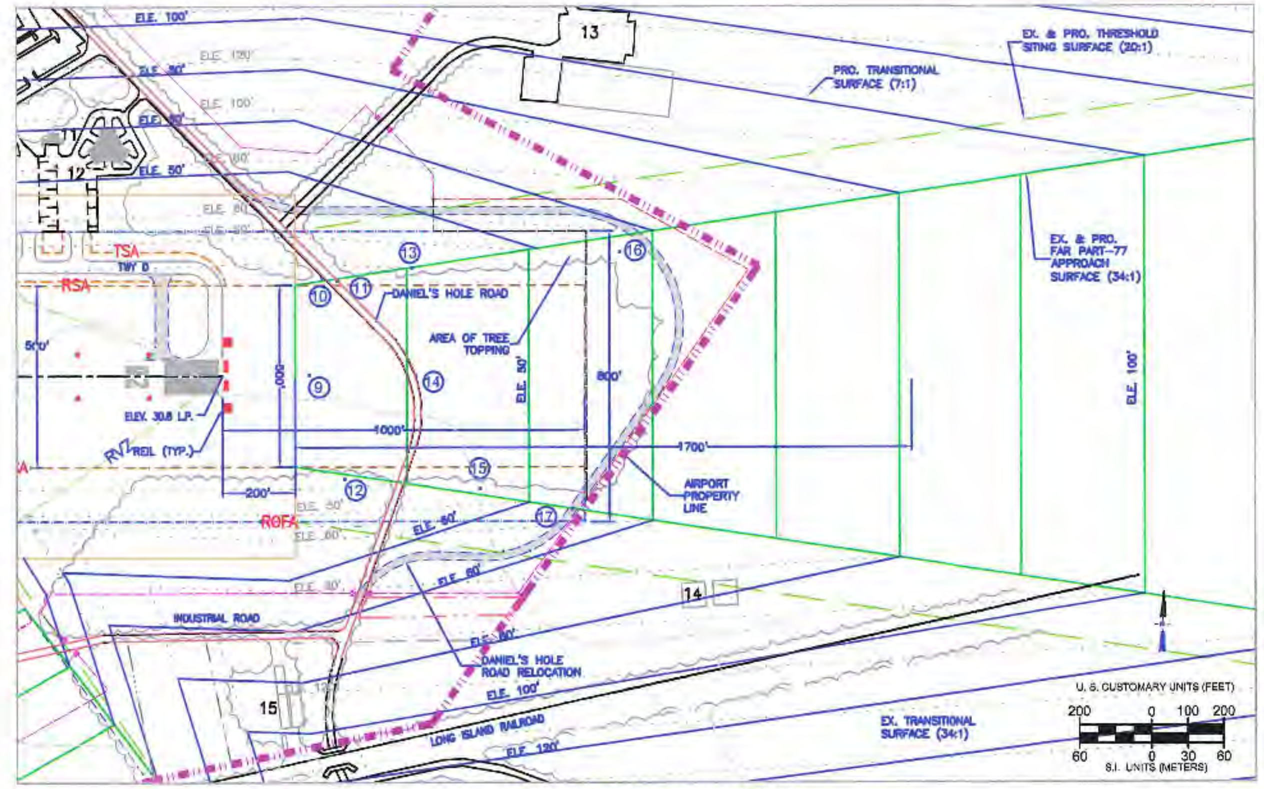
SCALE: Horiz. : 1" = 100' Vert. : N/A

DATE: Nov. 15, 2002

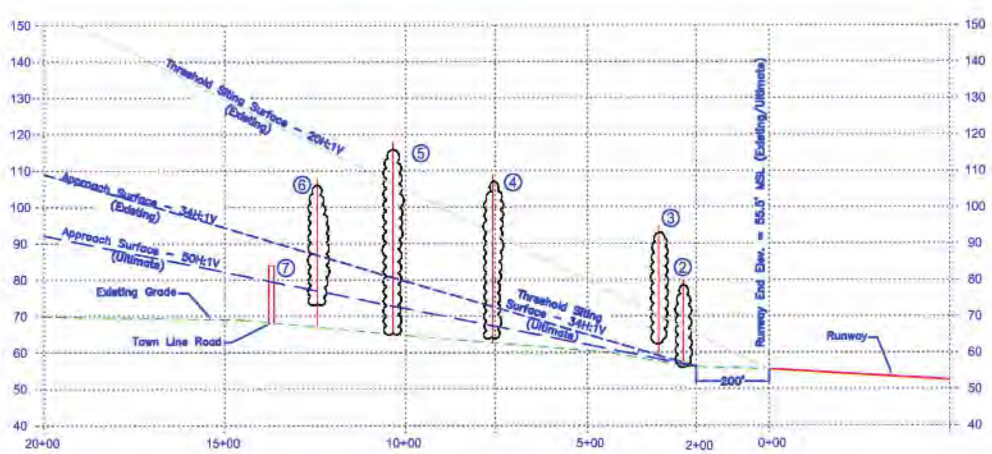
SHEET NO. 4 OF 12



RUNWAY 10 APPROACH PLAN



RUNWAY 28 APPROACH PLAN

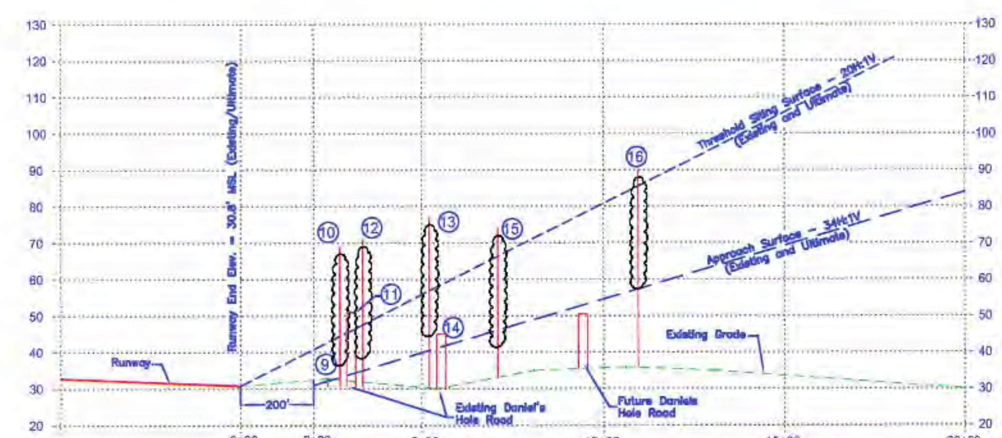


RUNWAY 10 APPROACH PROFILE

RUNWAY 10 - FAR PART 77 ANALYSIS SUMMARY

	OBJECT	TOP ELEV.	DIST. FROM RWY END	OFFSET	PENETRATION	SURFACE PENETRATED	PROPOSED ACTION
1	Ground	44'	-2,705'	192' R	9'	Approach	None
2	Tree	80'	238'	289' R	23'	Transitional	Top to 10' Below Surface
3	Tree	95'	303'	290' L	34'	Transitional	Top to 10' Below Surface
4	Tree	109'	791'	368' R	24'	Transitional	Top to 10' Below Surface
5	Tree	118'	1,034'	422' L	21'	Transitional	Top to 10' Below Surface
6	Tree	108'	1,244'	304' R	15'	Approach	Top to 10' Below Surface
7	Road	64'	1,363'	2' L	-30'	Approach	None

* Obstruction No. 1 is not illustrated in plan or profile

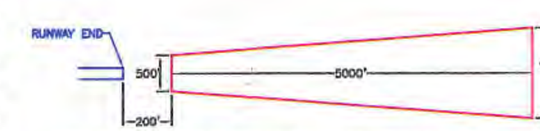


RUNWAY 28 APPROACH PROFILE

RUNWAY 28 - FAR PART 77 ANALYSIS SUMMARY

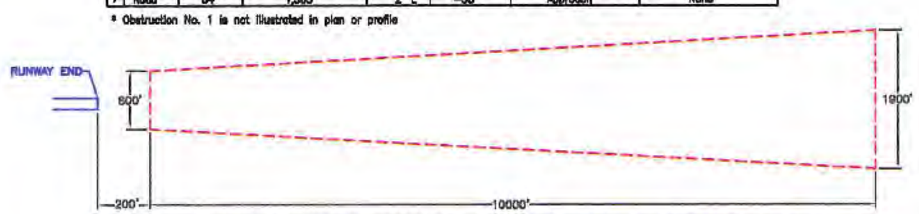
	OBJECT	TOP ELEV.	DIST. FROM RWY END	OFFSET	PENETRATION	SURFACE PENETRATED	PROPOSED ACTION
8	Ground	44'	-1,550'	192' L	9'	Approach	None
9	Ground	33'	238'	2' R	0'	Approach	None
10	Tree	69'	272'	270' R	35'	Transitional	Top to 10' Below Surface
11	Road	51'	315'	262' R	14'	Approach	Relocate Road
12	Tree	71'	335'	284' L	33'	Transitional	Top to 10' Below Surface
13	Tree	77'	521'	297' R	30'	Transitional	Top to 10' Below Surface
14	Road	45'	542'	1' R	-3'	Approach	Relocate Road
15	Tree	74'	710'	310' L	18'	Approach	Top to 10' Below Surface
16	Tree	90'	1,095'	341' R	14'	Transitional	Top to 10' Below Surface
16	Fut. Rd.	90'	1,095'	341' R	14'	Transitional	Top to 10' Below Surface

* Obstruction No. 8 is not illustrated in plan or profile



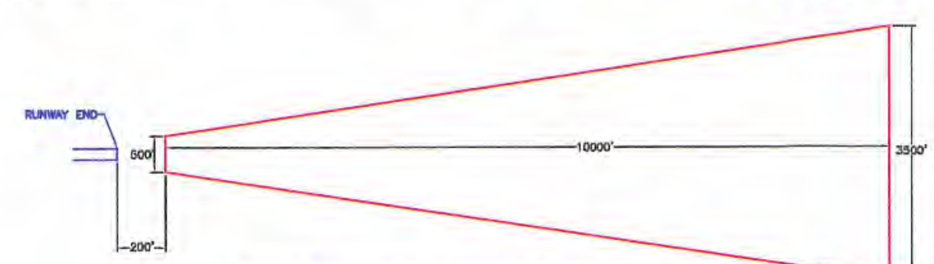
TYPICAL RUNWAY 10-28 EXISTING PART 77 APPROACH SURFACE - FULL PLAN VIEW

Not to Scale



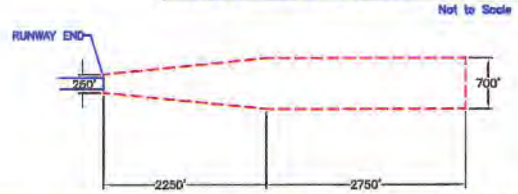
TYPICAL RUNWAY 10 PROPOSED THRESHOLD SITING SURFACE - FULL PLAN VIEW

Not to Scale



TYPICAL RUNWAY 10 PROPOSED PART 77 APPROACH SURFACE - FULL PLAN VIEW

Not to Scale



TYPICAL RUNWAY 10-28 EXISITING THRESHOLD SITING SURFACE - FULL PLAN VIEW

Not to Scale

NOTE : INFORMATION ON OBSTRUCTIONS WAS OBTAINED FROM THE AERONAUTICAL DATA SHEET CONCURRENT WITH OBSTRUCTION CHART (OC-5016) 2nd EDITION FOR EAST HAMPTON AIRPORT (HTO) PREPARED BY THE NATIONAL GEODETIC SURVEY, U.S. DEPARTMENT OF COMMERCE. SURVEY PERFORMED IN SEPTEMBER 1996.

NOTES:
1. PART 77 APPROACH SURFRACES ON RUNWAY 10-28 BEGIN 200 FT. FROM THE RUNWAY END

NO	REVISIONS	DATE
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East Hampton Airport

Suffolk County, New York

Owner: Town of East Hampton

TSPE TriState Planning & Engineering, P.C.

Specializing in Airport Services

208 Glen Cove Road
Old Westbury, NY 11568-1524
Tel:(516) 294-4776
E-mail: admin@tspe.com

PROJECT:

Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

SHEET TITLE:

Runway 10-28 Approach Plan and Profile

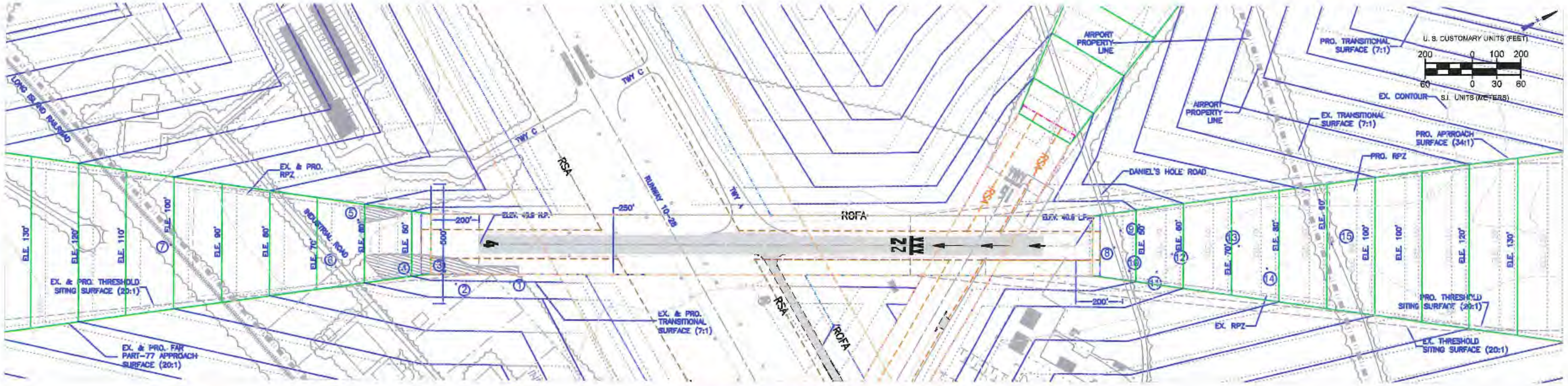
DESIGNED BY: THC

CHECKED BY: SML

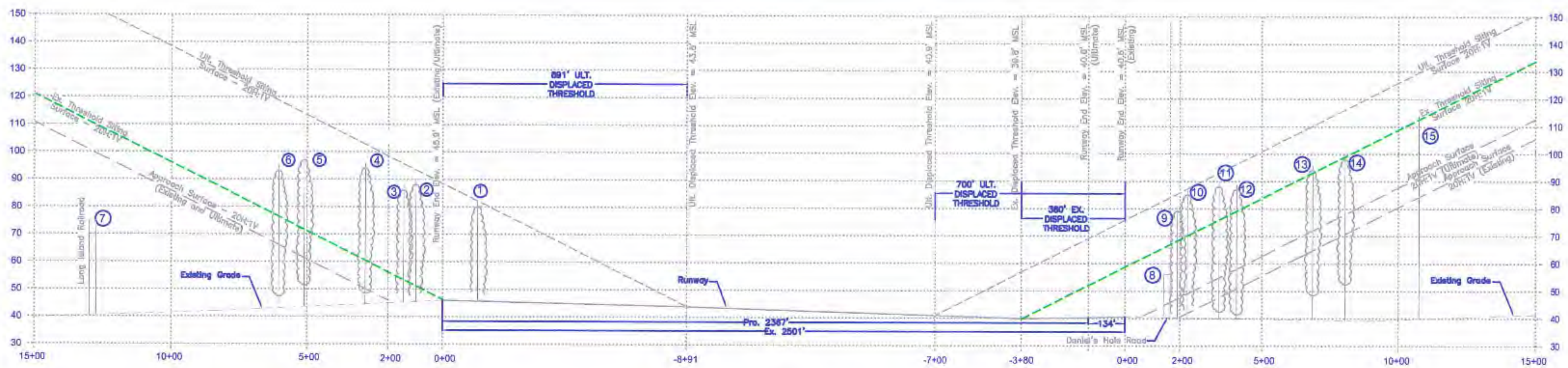
SCALE:
Horiz. : 1" = 200'
Vert. : 1" = 20'

SHEET NO. 5 OF 12

DATE: Nov. 15, 2002



RUNWAY 4-22 APPROACH PLAN



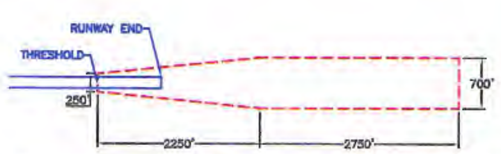
RUNWAY 4-22 APPROACH PROFILE

RUNWAY 4 - FAR PART 77 ANALYSIS SUMMARY

	OBJECT	TOP ELEV.	DIST. FROM RWY END	OFFSET	PENETRATION	SURFACE PENETRATED	PROPOSED ACTION
1	Tree	82'	-130'	159' R	37'	Transitional	None
2	Tree	90'	95'	188' R	44'	Transitional	None
3	Tree	88'	140'	115' R	42'	Approach	None
4	Tree	96'	282'	132' R	46'	Approach	None
5	Tree	99'	507'	98' L	38'	Approach	None
6	Tree	95'	601'	98' R	29'	Approach	None
7	Railroad	75'	1,293'	8' R	-28'	Approach	None

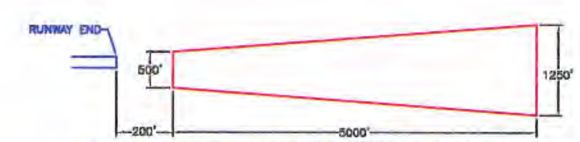
RUNWAY 22 - FAR PART 77 ANALYSIS SUMMARY

	OBJECT	TOP ELEV.	DIST. FROM RWY END	OFFSET	PENETRATION	SURFACE PENETRATED	PROPOSED ACTION
8	Road	58'	164'	7' L	16'	Approach	None
9	Tree	81'	191'	63' R	40'	Approach	None
10	Tree	87'	228'	106' L	46'	Approach	None
11	Tree	90'	343'	109' L	42'	Approach	None
12	Tree	89'	407'	35' L	38'	Approach	None
13	Tree	98'	666'	0	31'	Approach	None
14	Tree	100'	805'	94' L	29'	Approach	None
15	Transmission Tower	114'	1,075'	8' R	30'	Approach	Bury Power Lines



TYPICAL RUNWAY 4-22 THRESHOLD SITING SURFACE - FULL PLAN VIEW
Not to Scale

NOTES:
1. THRESHOLD SITING SURFACES ON RUNWAY 4-22 BEGIN AT THE RUNWAY THRESHOLD



TYPICAL RUNWAY 4-22 PART 77 APPROACH SURFACE - FULL PLAN VIEW
Not to Scale

NOTES:
1. PART 77 APPROACH SURFACES ON RUNWAY 4-22 BEGIN 200 FT. FROM THE RUNWAY END

NOTE: INFORMATION ON OBSTRUCTIONS WAS OBTAINED FROM THE AERONAUTICAL DATA SHEET CONCURRENT WITH OBSTRUCTION CHART (OC-5016) 2nd EDITION FOR EAST HAMPTON AIRPORT (HTO) PREPARED BY THE NATIONAL GEODETIC SURVEY, U.S. DEPARTMENT OF COMMERCE. SURVEYS PERFORMED IN SEPTEMBER 1996.

NO	REVISIONS	DATE
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East Hampton Airport

Suffolk County, New York

Owner: Town of East Hampton

TSPE TriState Planning & Engineering, P.C.
Specializing in Airport Services
206 Glen Cove Road
Old Westbury, NY 11568-1624
Tel:(516) 294-4776
E-mail: admin@tspe.com

PROJECT:

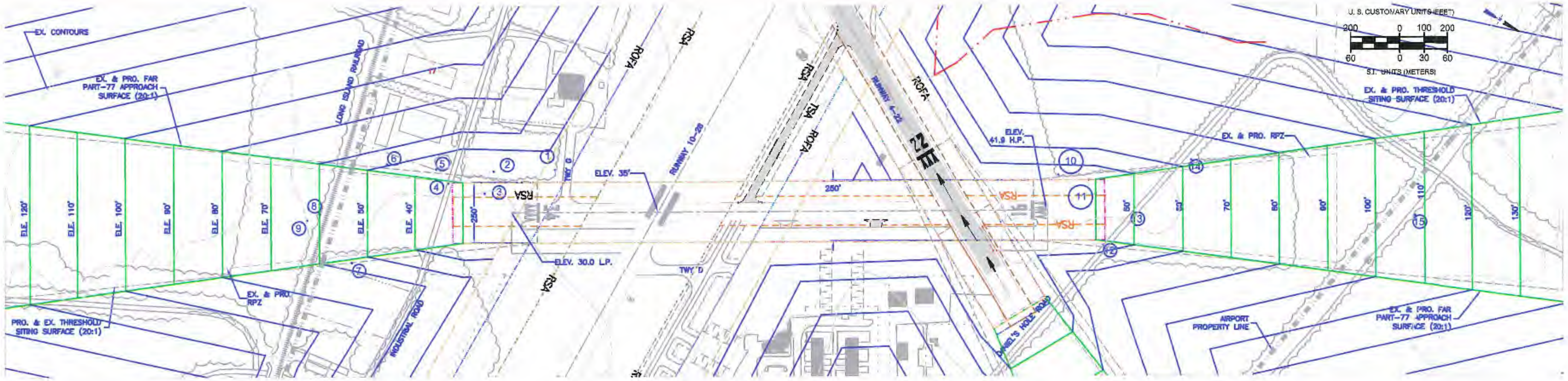
Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

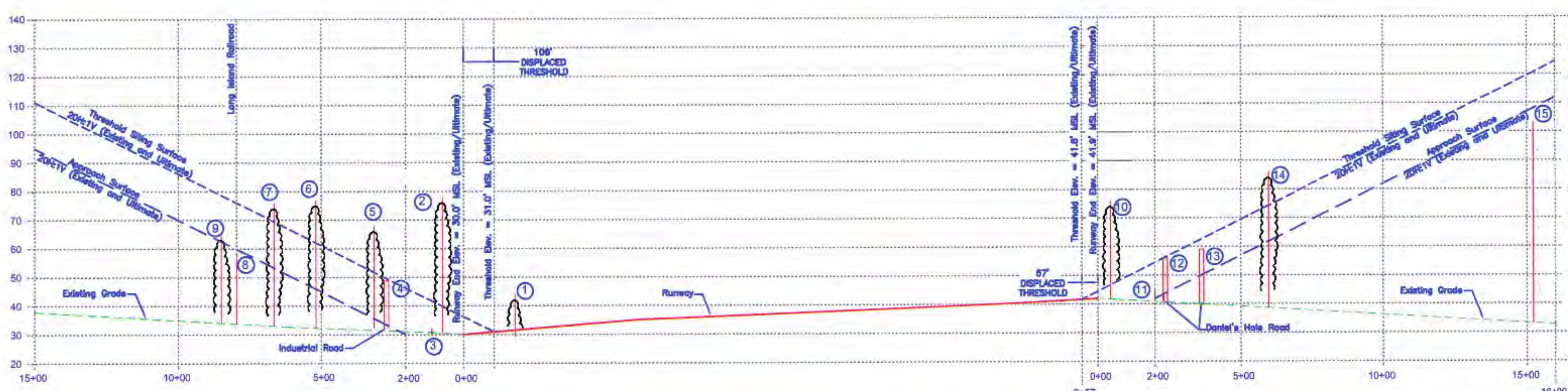
SHEET TITLE:

Runway 4-22 Approach Plan and Profile

DESIGNED BY: THC
CHECKED BY: SML
SCALE: Horiz. : 1" = 200' Vert. : 1" = 20'
DATE: Nov. 15, 2002
SHEET NO. 6 OF 12



RUNWAY 16-34 APPROACH PLAN



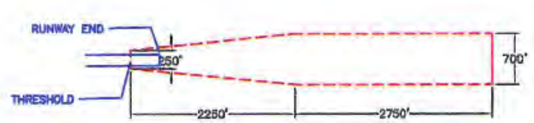
RUNWAY 16-34 APPROACH PROFILE

RUNWAY 34 - FAR PART 77 ANALYSIS SUMMARY

	OBJECT	TOP ELEV.	DIST. FROM RWY END	OFFSET	PENETRATION	SURFACE PENETRATED	PROPOSED ACTION
1	Tree	44'	−180'	175' L	13'	Transitional	None
2	Tree	78'	73'	170' L	48'	Transitional	None
3	Ground	32'	100'	79' L	2'	Transitional	None
4	Road	49'	260'	122' L	16'	Approach	None
5	Tree	68'	311'	180' L	32'	Transitional	None
6	Tree	77'	519'	201' L	31'	Transitional	None
7	Tree	78'	686'	206' R	23'	Transitional	None
8	Railroad	58'	797'	5' R	−2'	Approach	None
9	Tree	65'	850'	31' R	2'	Approach	None

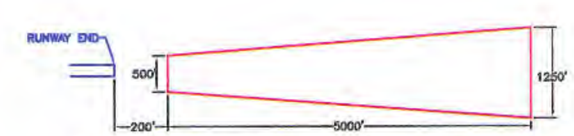
RUNWAY 16 - FAR PART 77 ANALYSIS SUMMARY

	OBJECT	TOP ELEV.	DIST. FROM RWY END	OFFSET	PENETRATION	SURFACE PENETRATED	PROPOSED ACTION
10	Tree	76'	46'	151' R	34'	Transitional	None
11	Ground	45'	200'	73' R	3'	Approach	None
12	Road	57'	231'	139' L	14'	Approach	None
13	Road	59'	356'	0' R	9'	Approach	None
14	Tree	88'	587'	212' R	24'	Transitional	None
15	Transmission Tower	103'	1,522'	20' R	−5'	Approach	Relocate
16	Rod on OL Tower	211'	2,301'	1,100' R	5'	Transitional	None



TYPICAL RUNWAY 16-34 THRESHOLD SITING SURFACE - FULL PLAN VIEW
Not to Scale

NOTES:
1. THRESHOLD SITING SURFACES ON RUNWAY 16-34 BEGIN AT THE RUNWAY THRESHOLD



TYPICAL RUNWAY 16-34 PART 77 APPROACH SURFACE - FULL PLAN VIEW
Not to Scale

NOTES:
1. PART 77 APPROACH SURFACES ON RUNWAY 16-34 BEGIN 200 FT. FROM THE RUNWAY END

NOTE : INFORMATION ON OBSTRUCTIONS WAS OBTAINED FROM THE AERONAUTICAL DATA SHEET CONCURRENT WITH OBSTRUCTION CHART (OC-5016) 2nd EDITION FOR EAST HAMPTON AIRPORT (HTO) PREPARED BY THE NATIONAL GEODETIC SURVEY, U.S. DEPARTMENT OF COMMERCE. SURVEYS PERFORMED IN SEPTEMBER 1998.

NO	REVISIONS	DATE
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This drawing and electronic file is prepared for the exclusive use by the Owner and Engineer for the project identified below.

East Hampton Airport

Suffolk County, New York

Owner: Town of East Hampton

TSPE TriState Planning & Engineering, P.C.
Specializing in Airport Services
200 Glen Cove Road
Old Westbury, NY 11568-1524
Tel (516) 294-4776
E-mail: admin@tspe.com

PROJECT:

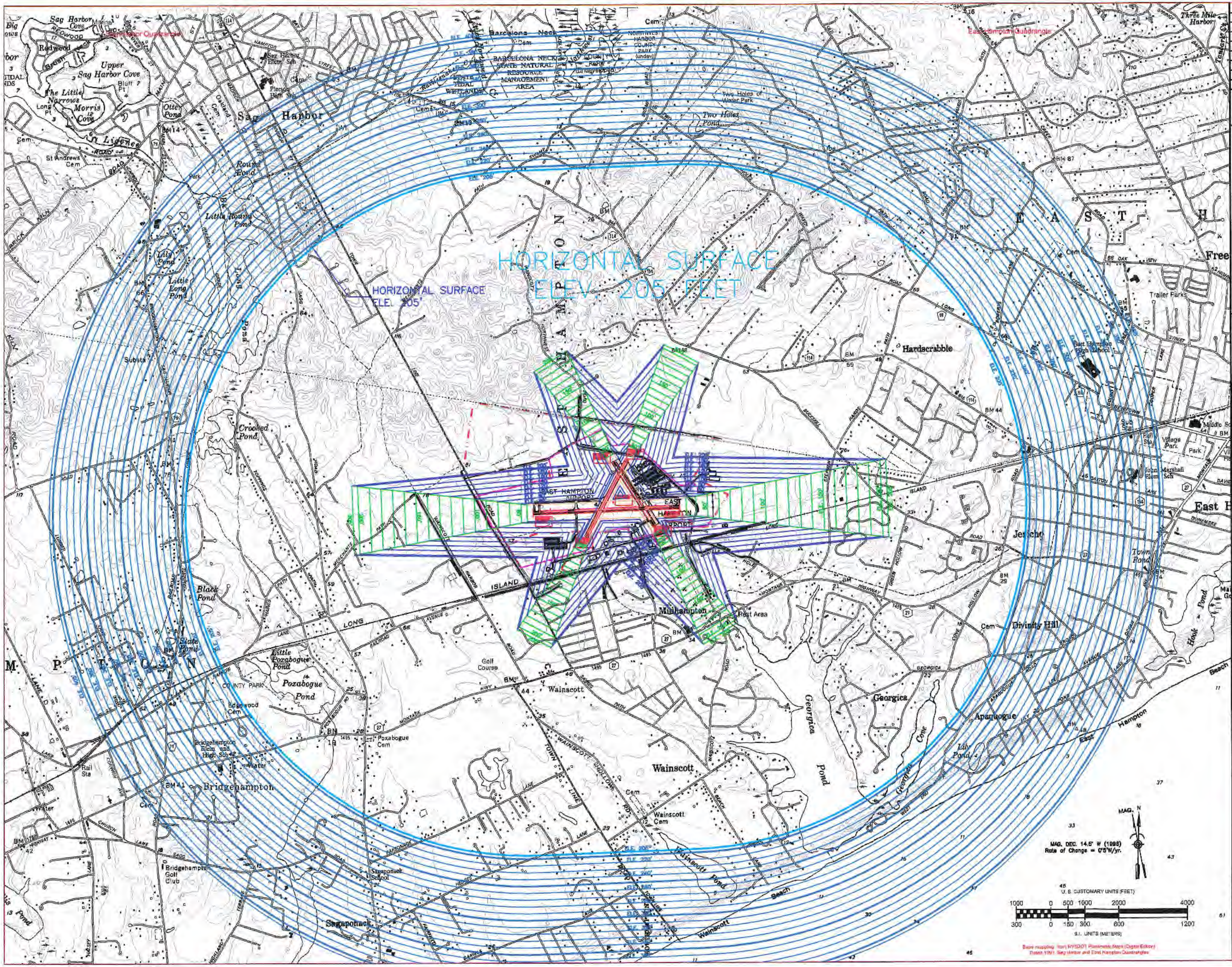
Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

SHEET TITLE:

Runway 16-34 Approach Plan and Profile

DESIGNED BY: SML
CHECKED BY: JMC
SCALE: Horiz. : 1" = 200' Vert. : 1" = 20'
DATE: Nov. 15, 2002
SHEET NO. 7 OF 12



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Suffolk County, New York

Owner: Town of East Hampton

TSPE

Planning & Engineering, P.C.

Specializing in Airport Services

PROJECT:

Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

SHEET TITLE:

Existing FAR Part 77 Surfaces

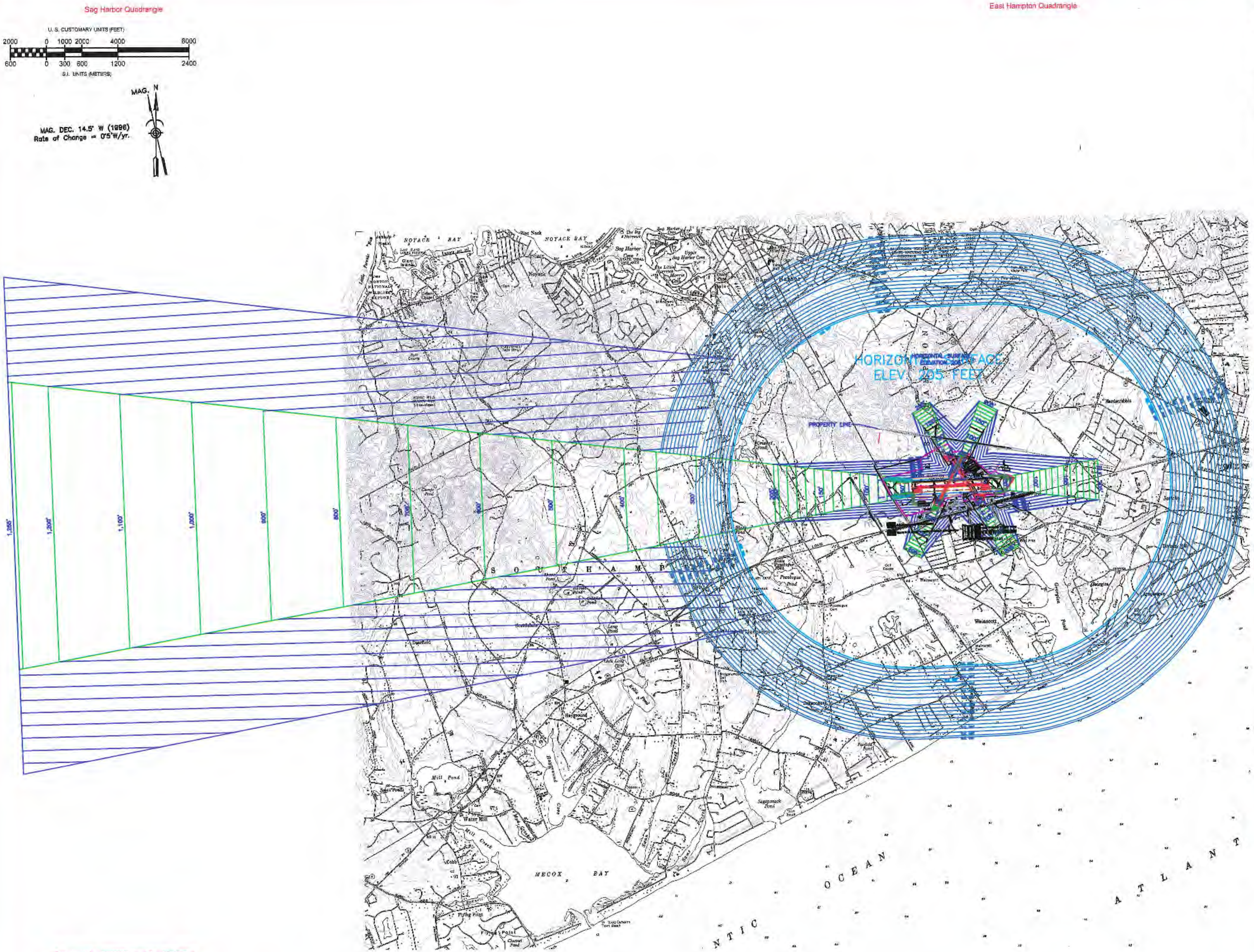
DESIGNED BY: THC

CHECKED BY: SML

SCALE:
Horiz. : 1" = 1,000'
Vert. : N/A

DATE: Nov. 15, 2002

SHEET NO. 8 OF 12



Base mapping from NYSDOT Planimetric Maps (Digital Edition)
Dated 1991, Sag Harbor and East Hampton Quadrangles

NO	REVISIONS	DATE
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Old Westbury, NY 11568-1524
Tel:(516) 294-4776
E-mail: admin@tspe.com

PROJECT:

Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

SHEET TITLE:

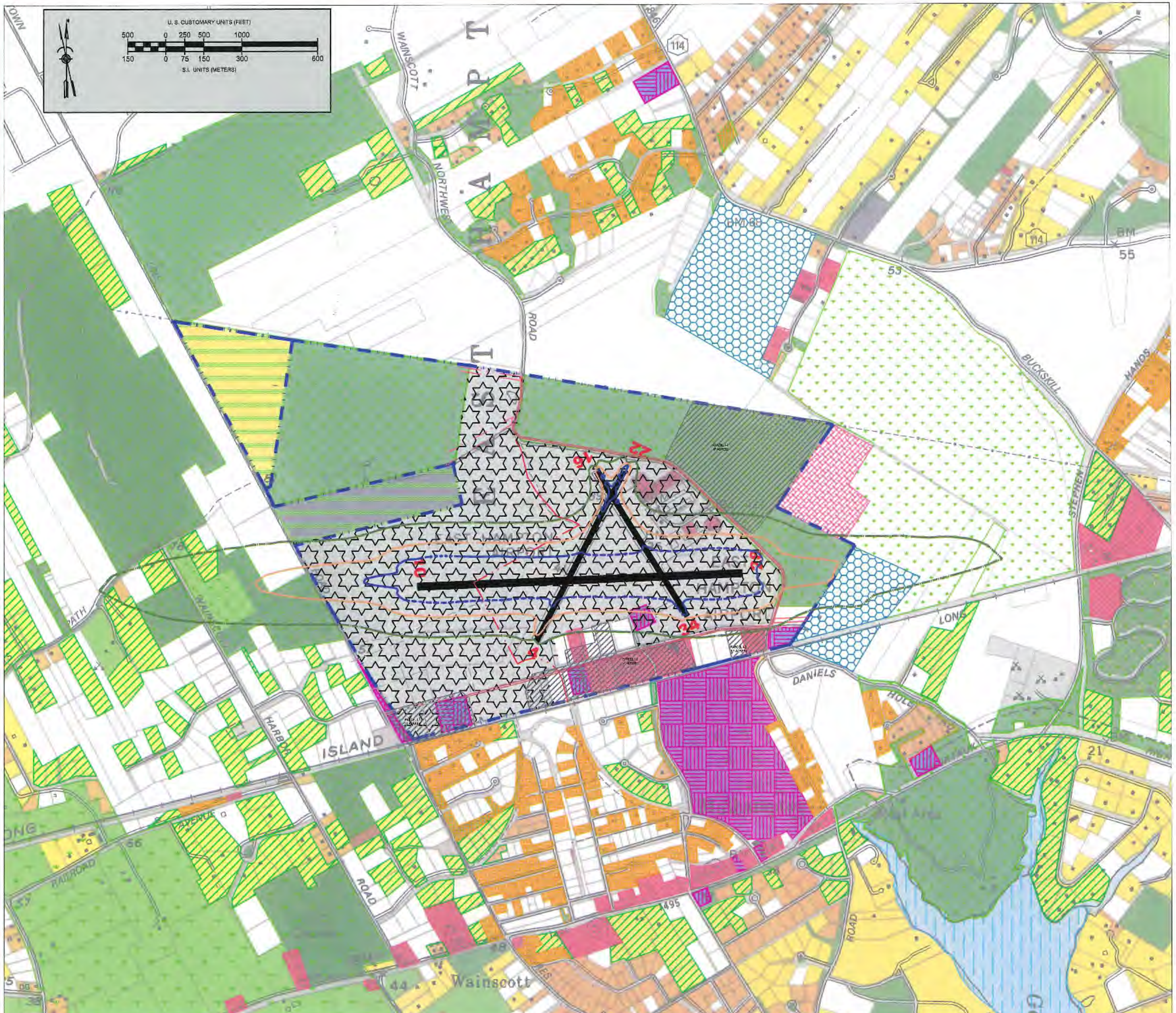
Future FAR Part 77 Surfaces

DESIGNED BY: THC
CHECKED BY: SML

SCALE:
Horiz. : 1" = 2,000'
Vert. : N/A

SHEET NO. 9 OF 12

DATE: Nov. 15, 2002



Low Density Res.
Medium Density Res.
Institution
Commercial
Industrial
Agriculture/ Rec Open Space
Vacant
Transportation
Utilities
Surface Waters

Contour 65 DNL
Contour 70 DNL
Contour 75 DNL

Property Line

Prepared By: TSPE, September 29, 2002
g:\ehp\ehp-03\Report EA2002\Summary.dwg

NO	REVISIONS	DATE
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PROJECT:

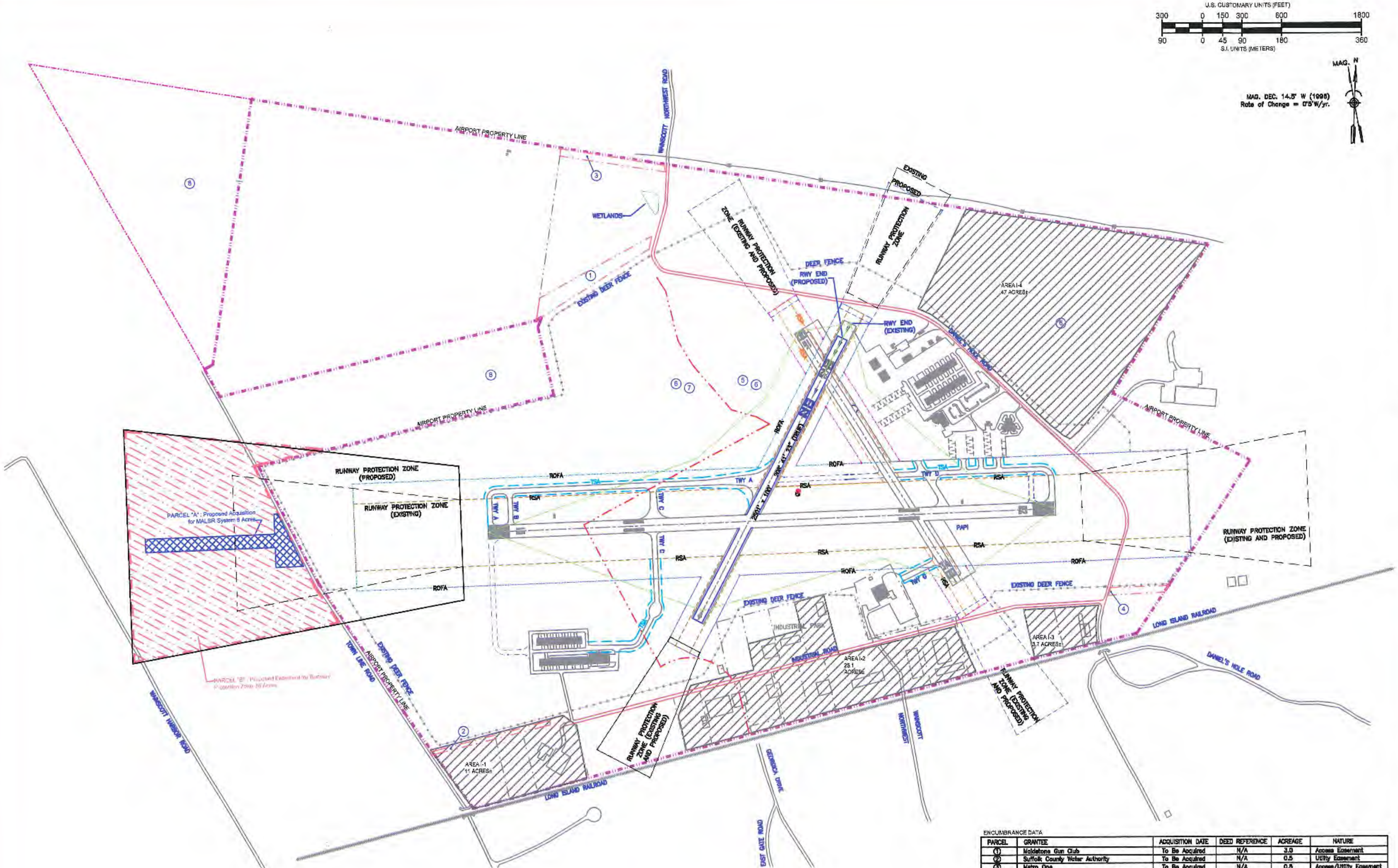
Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

SHEET TITLE:

Land Use Map 2005 Noise Contours Avg. Summer Day (Precision Approach to Runway 10)

DESIGNED BY: SML
CHECKED BY: JMC
SCALE: Horiz. : 1" = 600' Vert. : N/A
DATE: Nov. 15, 2002
SHEET NO. 10 OF 12



ENCUMBRANCE DATA

PARCEL	GRANTEE	ACQUISITION DATE	DEED REFERENCE	ACREAGE	NATURE
1	Maidstone Gun Club	To Be Acquired	N/A	3.0	Access Easement
2	Suffolk County Water Authority	To Be Acquired	N/A	0.5	Utility Easement
3	Metro One	To Be Acquired	N/A	0.5	Access/Utility Easement
4	Animal Rescue Fund of the Hamptons, Inc.	09-13-82	9241/469	0.7	Access/Utility Easement

LAND ACQUISITION DATA

PARCEL	GRANTOR (Former Owner)	ACQUISITION DATE	DEED REFERENCE	ACREAGE	FUNDING SOURCE
5	Arnold E. Mulford	03-08-41	2174/348	208	Local
6	Suffolk County	10-25-43	2319/333	885	Local
7	Suffolk County	04-06-37	1935/373	211	Local

LAND DISPOSITION DATA

PARCEL	GRANTEE	ACQUISITION DATE	DEED REFERENCE	ACREAGE	NATURE
8	Suffolk County Water Authority	Pending	TBD	70	
I-1	Town of East Hampton	Pending	TBD	11	Request FAA Release from Airport
I-2	Town of East Hampton	Pending	TBD	31	Request FAA Release from Airport
I-3	Town of East Hampton	Pending	TBD	3.7	Request FAA Release from Airport
I-4	Town of East Hampton	Pending	TBD	47	Request FAA Release from Airport

PROPOSED ACQUISITION DATA

PARCEL	GRANTOR (Present Owner)	ACQUISITION DATE	DEED REFERENCE	ACREAGE	NATURE
A		TBD	TBD	6	Required for MALSR light units.
B		TBD	TBD	38	Height and Land Use Control Required for RPZ and Approach Surface.

NO	REVISIONS	DATE
1		
2		
3		
4		
5		
6		
7		
8		

This drawing and electronic file is prepared for the exclusive use by the Owner and Engineer for the project identified below.

East Hampton Airport

Suffolk County, New York

Owner: Town of East Hampton

TSPE TriState Planning & Engineering, P.C.

Specializing in Airport Services

209 Glen Cove Road
Old Westbury, NY 11568-1624
Tel (516) 294-4776
E-mail: admin@tspe.com

PROJECT:

Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

SHEET TITLE:

Airport Property Map

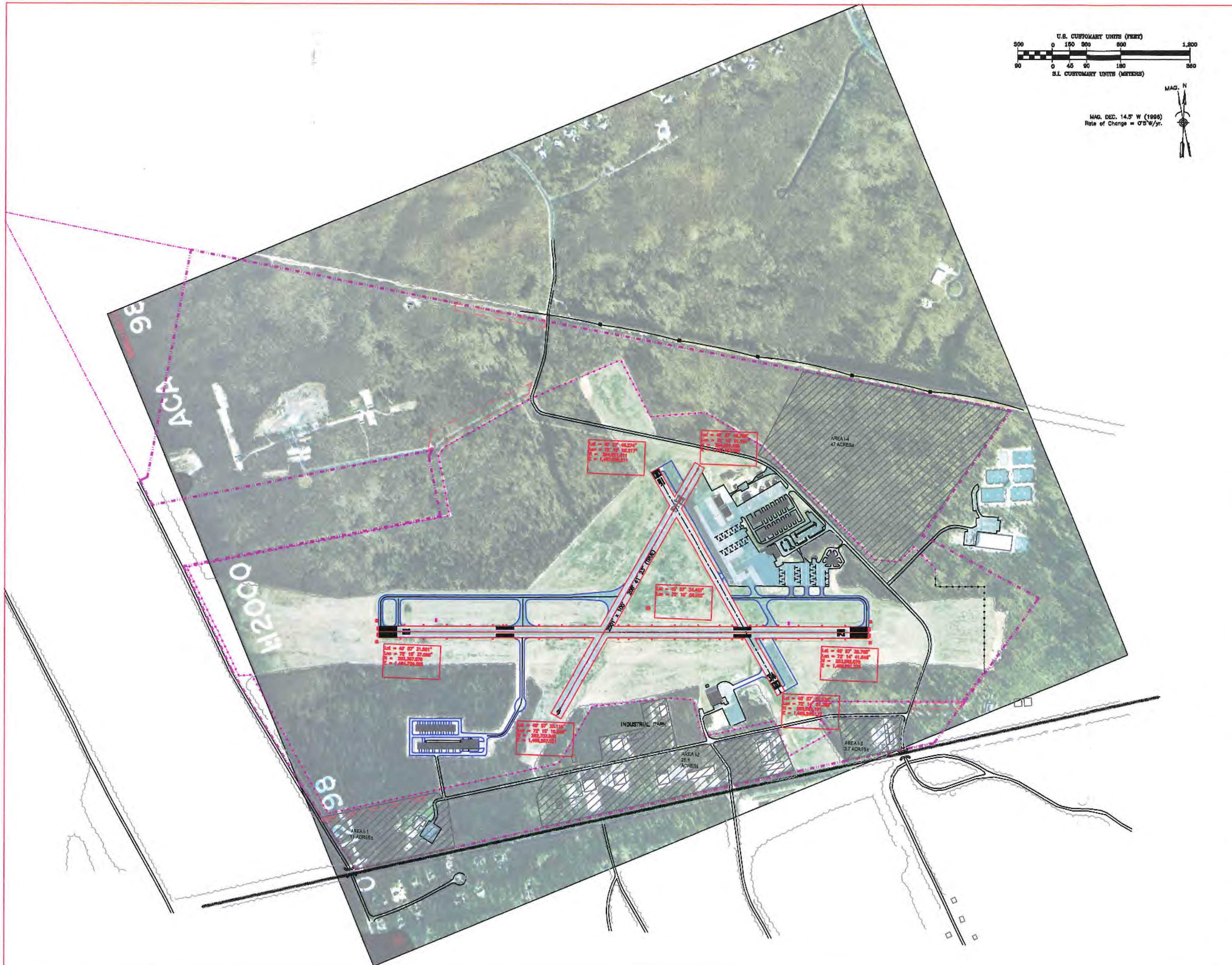
DESIGNED BY: SV

CHECKED BY: JMC

SCALE: Horiz. : 1" = 300' Vert. : N/A

DATE: Nov. 15, 2002

SHEET NO. 11 OF 12



NO.	REVISIONS	DATE
1		
2		
3		
4		
5		
6		
7		
8		

This drawing and electronic file is prepared for the exclusive use by the Owner and Engineer for the project identified below.

East Hampton Airport

Suffolk County, New York

Owner: Town of East Hampton

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Specializing in Airport Services

208 Glen Cove Road
Old Westbury, NY 11568-1524
Tel:(516) 294-4776
E-mail: admin@tspe.com

PROJECT:

Airport Layout Plan Update

FAA AIP No. 3-36-0024-17-97

SHEET TITLE:

Aerial Photograph

DESIGNED BY: THC

CHECKED BY: SML

SCALE: Horiz. : 1" = 300' Vert. : N/A

SHEET NO. 12 OF 12

DATE: Nov. 15, 2002

Appendix A

Aircraft Operations with Precision Approach to Runway 10

AIRCRAFT OPERATIONS WITH PRECISION APPROACH TO RUNWAY 10

Approach Minimums with Various Approach Components

To better understand how the addition of various approach components can affect the approach minimums to East Hampton Airport, comparisons are made with other Long Island Airports in Table A-1 and for the East Hampton Airport, Table A-2. The following are abbreviations used in the table:

ALS: Approach Light System
Cat. A & B : Aircraft with approach speeds less than 121 knots.
Cat. C: Aircraft with approach speeds 121 knots or more but less than 141 knots.
Cat. D: Aircraft with approach speeds 141 knots or more but less than 166 knots.
MDA: Minimum Descent Altitude in feet above mean sea level.
Vis. : Visibility in fractions of a mile or in feet.

APPROACH MINIMUMS AT OTHER LONG ISLAND AIRPORTS — Table A-1

Airport: Francis S. Gabreski (FOK) - West Hampton Beach, NY
Touchdown Zone Elevation = 67 ft MSL

	ALS	Cat. A & B		Cat. C Aircraft		Cat. D Aircraft	
		MDA	Vis.	MDA	Vis.	MDA	Vis.
Runway 24:(Straight in)							
ILS	Yes	267 ft.	½ mi.	267 ft.	½ mi.	267 ft.	½ mi.
NDB or GPS	Yes	640 ft.	¾ mi.	640 ft.	1 mi.	640 ft.	1 ½ mi.

Source: U.S. Terminal Procedures, Northeast, 30 Nov. 2000, United States Government Flight Information Publication

The above information indicates that the pilot is able to land when clouds are as low as 200 feet above ground (MDA - Touchdown Zone Elevation) and the forward visibility is as low as one-half mile, however without the ILS the NDB or GPS approach will enable landings only when clouds are 573 feet or more above ground and the visibility is at least three-fourths of a mile.

Airport: Shirley/Brookhaven (HWV) - Shirley, NY
Touchdown Zone Elevation = 82 ft MSL

	ALS	Cat. A & B		Cat. C Aircraft		Cat. D Aircraft	
		MDA	Vis.	MDA	Vis.	MDA	Vis.
Runway 6:(Straight in)							
ILS	Yes	309 ft.	½ mi.	NA	NA	NA	NA
VOR	Yes	620 ft.	1 mi.	NA	NA	NA	NA
GPS (w/ALS)	Yes	440 ft.	½ mi.	NA	NA	NA	NA
Runway 24: (Straight in)							
GPS (no ALS)	No	480 ft.	1 mi.	NA	NA	NA	NA

Source: U.S. Terminal Procedures, Northeast, 30 Nov. 2000, United States Government Flight Information Publication

Airport: Islip/Long Island MacArthur (ISP) - Islip, NY Touchdown Zone Elevation = 99 ft MSL							
	ALS	Cat. A & B		Cat. C Aircraft		Cat. D Aircraft	
		MDA	Vis.	MDA	Vis.	MDA	Vis.
Runway 6:(Straight in)							
ILS (Straight in)	Yes	294 ft.	2,400 ft	294 ft.	2,400 ft	294 ft.	2,400 ft
NDB or GPS	Yes	580 ft.	4,000 ft.	580 ft.	4,000 ft.	580 ft.	6,000 ft.

Source: U.S. Terminal Procedures, Northeast, 30 Nov. 2000, United States Government Flight Information Publication

EXISTING INSTRUMENT APPROACHES AT EAST HAMPTON AIRPORT **Table A-2**

Airport: East Hampton (HTO) - East Hampton, NY Touchdown Zone Elevation = 56 ft MSL							
	ALS	Cat. A & B		Cat. C Aircraft		Cat. D Aircraft	
		MDA	Vis.	MDA	Vis.	MDA	Vis.
Runway 10:(Straight in)							
VOR/DME, RNAV or GPS	No	500 ft.	1 mi.	500 ft.	1¼ mi.	500 ft.	1 ½ mi.
Runway 28:(Straight in)							
VOR/DME, RNAV or GPS	No	460 ft.	1 mi.	460 ft.	1¼ mi.	460 ft.	1¼ mi.

Source: U.S. Terminal Procedures, Northeast, 30 Nov. 2000, United States Government Flight Information Publication

Based upon the information provided above the approach minimums at East Hampton Airport could be expected to be reduced with the installation of Approach Lights. Beyond that, if the FAA provides a WAAS system in the Long Island area, the minimums could be reduced further. Table A-3 provides an estimate of potential minimums under two scenarios, one assumes the existing GPS system plus an MALSR and the second assumes an FAA WAAS available on Long Island.

POSSIBLE APPROACH MINIMUMS FOR RUNWAY 10 AT EAST HAMPTON AIRPORT **Table A-3**

Airport: East Hampton (HTO) - East Hampton, NY
Touchdown Zone Elevation = 56 ft MSL
Runway 10 with Possible Future Approach Improvements

	ALS	Cat. A & B		Cat. C Aircraft		Cat. D Aircraft	
		MDA	Vis.	MDA	Vis.	MDA	Vis.
Runway 10:(Straight in)							
GPS (Existing)	No	500 ft.	5,000 ft. or 1 mi.	500 ft.	6,000 ft. or 1¼ mi.	500 ft.	7,400 ft. or 1½ mi.
GPS + MALSR (Non-precision)	Yes	500 ft.	4,000 ft. or ¾ mi.	500 ft.	5,000 ft. or 1 mi.	500 ft.	6,600 ft. 1¼ mi.
GLS + MALSR + WAAS (Precision)	Yes	256 ft.	2,400 ft. or ½ mi.	256 ft.	2,400 ft. or ½ mi.	256 ft.	2,400 ft. or ½ mi.

These changes could result in the airport being available to aircraft during those periods when the weather conditions were: Ceiling between 200 and 500 feet (AGL) and the visibility between ½ and 1 ½ miles.

Additional Time Airport Could be Available

The time that East Hampton Airport could be available with lower approach minimums can be assessed by reviewing the weather conditions reported for the area. The FAA standard process for evaluating wind and weather conditions is through the use of data available from the National Oceanic and Atmospheric Administration (NOAA) National Data Center. A 36 point wind tabulation and monthly and annual data were purchased for Westhampton Beach, Reporting Station NY 74486 with data from 1990 - 1999.

That data was grouped into five specific classifications. For each classification the number of hourly weather observations provides a relative comparison of the percentage of time a given condition existed and the direction and speed for the winds during that time period. That tabulation provided the information for Table A-4.

WIND AND WEATHER OBSERVATIONS **Table A-4**

Set I.D.	Ceiling (ft)	Visibility (mi)	Observations	Percent Occurrence	Wind Coverage on Rwy 10 (15kts crosswind and 0 tailwind)
A	All Weather		58,910	100	47%
B	>=1000	>= 3	49,338	84%	45%
C	>= 200 but < 1000	>= ½ but < 3	7,363	12%	61%
D	> 500	> 1	52,940	90%	46%
E	> 200	> ½	55,759	95%	47%
1/	>= 200 but < 500	>= ½ but < 1	2,819	5%	64%

1/ Calculated from data E minus D.
Source: National Oceanic and Atmospheric Administration (NOAA) National Data Center

The above data shows that a reduction of the ceiling minimums from 500 feet to 200 feet ceiling and visibility minimums from 1 mile to ½ mile would make the airport accessible about 5% more of the time which equates to 438 hours (0.05 x 8,760) per year.

However, since only Runway 10 would be available, the winds would limit its use to only about 64% of that time or 280 hours (438 x 0.64) each year. This represents an additional time of 3.2% that the Airport would be in use with a MALSR on Runway 10 and FAA area coverage with WAAS.

Potential Use of Rwy 10 Precision Approach

The aircraft presently based at East Hampton Airport and those visiting the airport are primarily small single engine, fixed wing aircraft with 4 to 6 seats. Those aircraft and/or pilots are not all capable or trained to fly instrument approaches. However, such systems, particularly GPS units, are becoming more affordable and pilots continue to become qualified for IFR conditions. Thus, this analysis assumes that all operations might experience some beneficial use of a MALSR on Runway 10 at the Airport. Business and executive type aircraft are typically equipped for IFR approaches and could be assured of getting into and out of the Airport when needed. The precision approach would also provide aircraft a stable descent path thus often positioning the aircraft higher on final approach and reducing the need to adjust power from the engines in that portion of the approach; this results in less noise.

The ILS would approach would also reduce the number of times when pilots might attempt to land only to find the weather has closed the airport, resulting in multiple approaches, circling while waiting for the weather to clear, and executing missed approaches.

Table A-5 provides a projection of potential aircraft activity for the Airport with its present configuration and with the addition of approach lights on Runway 10. This assumes the minimums would change from 500 foot ceiling down to 200 foot ceiling and the visibility would change from the present minimum of 1 mile down to ½ mile.

The FAA Terminal Area Forecasts for East Hampton Airport were checked on the FAA internet site in July of 2002 and it was found to be the same as was projected in April 2000; i.e. a flat level of activity at 51,250 annual operations from the year 2000 to 2015. While this is the current FAA's forecasts they are revised annually. In order not to understate the potential aircraft noise, the Integrated Noise Model (INM) analysis was run assuming the potential for future growth of the order of 15%.

In addition, the analysis assumed that an additional 3.2% of use might be the result from the installation of a precision approach (with the MALSR) on Runway 10.

POTENTIAL FUTURE AIRPORT ACTIVITY **Table A-5**

Condition	Annual Aircraft Operations				Avg. Day Annual	Avg. Day Summer*
	Jet	Commuter	Propeller	Totals		
Year 2000 (Base)	1,538	7,688	42,024	51,250	140.41	334.24
Plus 15% Growth with existing approach.	1,769	8,841	48,328	58,938	161.47	384.38
Plus 3.2% with precision approach on Rwy 10	1,826	9,124	49,874	60,824	166.64	396.68

* Assumes that 60% of the annual operations occurs the months of June, July, and August (92 days)

This data was allocated to the six runway headings at East Hampton Airport with all of the addition flights occurring on Runway 10 where the MALSR installation is considered. The results are shown in Table A-6.

This table does not take into consideration any reduction in approaches which might be reduced by avoiding missed approaches, multi approaches and circling for weather to clear when the weather would be below the existing minimums.

The various levels of weather minima for Visual Flight Rules (VFR) and Instrument Flight Rules (IFR) are illustrated in Figure A-1 along with the graphic illustration of the increased number of aircraft which might be expected to operate at the Airport with a precision approach to Runway 10.

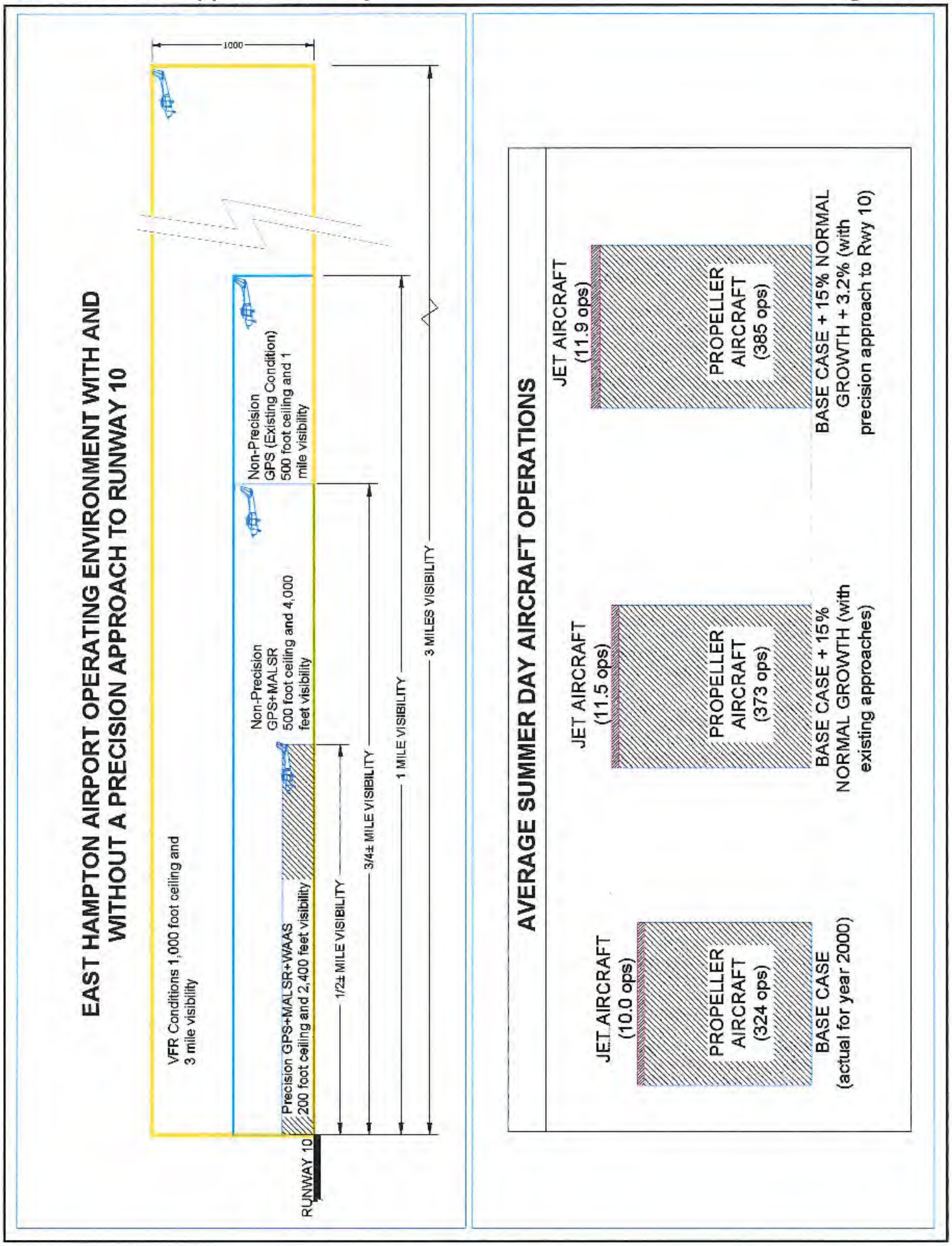
AVERAGE DAY AIRCRAFT OPERATIONS BY RUNWAY BY AIRCRAFT TYPE **Table A-6**

	Daily Activity with 15% increase with existing approaches.			Daily Activity with 15% and with precision approach on Rwy 10 (+ 3.2%)		
Aircraft Type/Rwy	**Usage %**	**Avg Day Annual**	**Avg. Day Summer***	**Usage %**	**Avg Day Annual**	**Avg. Day Summer***
Propellor Driven Aircraft						
4	5.0%	7.83	18.64	4.8%	7.83	18.64
10	32.0%	50.12	119.31	34.1%	55.13	131.24
16	6.0%	9.40	22.37	5.8%	9.40	22.37
22	10.0%	15.66	37.28	9.7%	15.66	37.28
28	38.0%	59.52	141.68	36.8%	59.52	141.68
34	9.0%	14.10	33.56	8.7%	14.10	33.56
Totals	100%	156.63	372.84	100.0%	161.64	384.77
Jet Aircraft						
10	40.0%	1.94	4.62	42.4%	2.12	4.99
28	60.0%	2.90	6.92	57.6%	2.88	6.92
Totals	100%	4.84	11.54	1	5.00	11.91
TOTALS	**na**	**161.47**	**384.38**	**na**	**166.64**	**396.68**

* Assumes that 60% of the annual operations occurs the months of June, July, and August (92 days)

Weather Minima and Aircraft Operations
with Precision Approach to Rwy 10

Figure A-1



Appendix B

FAA Checklist for Master Plans and Airport Layout Plans

DRAFT
Eastern Region Airports Division
Airport Layout Plan
Guidance

RECEIVED
JUN 24 2002

Contents

A. Airport Layout Plan Checklist

Appendix A provides a copy of the Eastern Region Airport Layout Plan Checklist. The checklist follows the guidance in AC 150/5300-13 Change 6, Appendix 7. The Checklist should be used for the following:

1. To assist in the development of the scope of work for an ALP update by the sponsor, consultant, and the FAA.
2. To assist the sponsor and consultant in preparing the ALP
3. To assist the FAA employee reviewing the ALP

In regard to this, the completed ALP checklist shall be attached to a scope of work for an ALP Update with the necessary items checked off in the first column. The sponsor/consultant shall attach a copy of this checklist to a draft ALP submitted for approval with the second column checked. A signature line is provided so that the consultant may certify that all the necessary items are included on the Alp drawing set. The FAA employee shall use this checklist when reviewing the ALP and check off the items in the third column.

Please note that some items on the checklist are optional and should be included if the checklist attached to work scope specifies this. Other items identified on the checklist are required for all ALP submittals and are already checked in the first column.

At the end of the checklist for each drawing are additional lines where items may be added as determined at the scope of work development stage.

A brief description of the purpose of each drawing is also provided to assist the sponsor.

B. Airport Layout Plan Drawing Set Standard Tables

Based on the ALP checklist, several standard ALP tables have been created including (see Appendix B):

1. Airport Data Table (ALP)
2. Runway Data Table (ALP)
3. Modification of Standard Table (ALP)
4. Legend (All drawings)
5. Runway Safety Area Determination Table (ALP)
6. Declared Distance Table (ALP)
7. Facilities Table (ALP and Terminal Area Plan)
8. Obstruction Table (Airspace & Approach & Profile)
9. Property Acquisition Table (Property Map)
10. RPZ Control Plan Table (Land Use Map)

These tables are provided on the FAA Eastern Region internet site in excel and AutoCad format for use by consultants and sponsors. The tables are designed to be pasted into the electronic ALP to ensure consistency. The items in the tables correspond to the checklist. These standard tables may be used for all future ALP updates. If items in the table do not apply, N/A may be entered into the table. Note the runway data table may be reduced or enlarged depending upon the number of runways at the airport.

C. Electronic Airport Layout Plans

Electronic ALPs will be collected at the completion of the ALP update. The Electronic format should follow the guidance in Appendix 15 of Advisory Circular 150/5300-13 Change 6 to ensure easy transfer of data. In addition, the electronic version should be in the UTM NAD 83 coordinate system, different features should be on different layers and a list of the layers and their contents should be provided (see Appendix C). The electronic version should be sent in **"Model Space"** and all external reference (Xref) such as title blocks shall be bound to the geographic ALP drawing. The electronic version of the ALP should be submitted to the project manager at the ADO on CD, who will forward it the AEA-610 planner for inclusion in the ALP library. The original electronic version of the ALP will be recast into the "DWF" format, which will also be stored in the ALP library. The "DWF' files can be accessed with a "Whip Viewer" which will be provided on the airports division staffs' computers

The ALP library will be stored on a central server to allow read, zoom, pan and print options to the ADO, Region and other Eastern Region divisions for reference.

D. Pen and Ink Change Approvals

Pen and ink change approvals will be recorded by the Regional Office in a central database. The ADOs will copy the AEA-610 planner on all pen and ink change approval letters. The AEA-610 planner will ensure that the information is recorded in the database. The database will be accessible to the ADO, Region, and other divisions within the Eastern Region as a read only document for reference purposes. The electronic ALP and the pen and ink change list will be set up to allow an individual to toggle back and forth between these windows.

Once an ALP update has been completed the previous pen and ink changes will be archived as they should be incorporated in the update.

ALP approval letters will also be included in the database. AEA-610 will scan in ALP approval letters and enter the path into the database so that they may be accessed along with the pen and ink changes and the electronic ALP.

E. Ongoing ALPs

The Region will maintain a list of ongoing ALP updates and planning studies. In order to accomplish this the ADO will copy the AEA-610 planner on workscope approval letters. The AEA-610 planner will make sure that the planning study is included on the list of ongoing planning studies. In addition, once the ALP has been approved by the ADO and received by AEA-610 the project will be removed from the list and new ALP approval date will be recorded and the ALP approval letter scanned in. This data will be made available on the Eastern Region website for use by other divisions and Headquarters who often ask for this information.

F. ALP coordination

A courtesy copy of the ALP will be coordinated with the Runway Safety Program Manager for all towered airports as part of the normal NRA process. It is not necessary to coordinate the ALP with AEA-610 unless there is a specific issue that needs to be reviewed.

G. Runway Safety Area Determinations

A runway safety area determination should be made or revisited at the time of the ALP update. If necessary a new runway safety area determination should be submitted in the appendix of the ALP/Master Plan document. A sample format for the determination is provided in Appendix D. In addition, once the determination is approved by the FAA, the determination should be included in the RSA determination box on the ALP.

H. Signage Plans

Approved signage plans must be maintained for all Part 139 airports. Development such as new or realigned taxiways, taxilanes, and runways could affect the signage plan and will require a revision.

In the ALP approval letter for all Part 139 airports the following phrase should be included:

> "Prior to any the construction of any development that may affect the signage of the airport a revised signage plan should be submitted to AEA-620 for review and approval. No construction should occur until the revised signage plan has been approved. Once approved, an electronic version of the signage plan should be filed with AEA-620."

The electronic format should follow the same guidelines as outlined for the electronic ALP as described in Section C above. AEA-620 will maintain an electronic library of approved signage plans for Part 139 airports.

In addition, for on-airport airspace cases at Part 139 airports that may affect the signage, the following paragraph should be included in the airspace approval letter.

> "Please coordinate with AEA-620 regarding any necessary changes to the signage plan due to the proposed development. A revised signage plan in should be submitted and approved prior to the start of construction. Once approved, an electronic version of the signage plan should be filed with AEA-620."

Appendix A – Eastern Region ALP Checklist

DRAFT
Airport Layout Plan Checklist

This checklist is recommended for use by consultants, airport sponsors, and FAA Airports District Office (ADO) personnel to help insure that all pertinent information is reflected on the Airport Layout Plan (ALP) set of drawings. This checklist can be used for the small airports as well as for the larger, more complex ones and therefore every drawing or item in the checklist may not apply in all airport situations. Items that are always required are identified on the checklist. Other optional items that are required should be identified in the scope of work. In addition, all of the drawings may not be required. The ADO personnel with the sponsor will identify what drawings are required in the scope of work. This involves the ADO working closely with the airport sponsor and their consultant to evaluate and reach agreement on the use of the checklist in the ALP project during the drafting of the scope of work. The individual checklist items as well as the case-by-case drawings that apply to a given airport situation depend on the nature and complexity of the facility and the evaluation during the ALP workscope determination process. Sound planning and understanding of local needs and conditions should be taken into account during this process. If during or after this process, the airport sponsor or their consultant disagrees with the ADO regarding the applicability of any element of the checklist to a given ALP project, they should provide the rationale for any such disagreement to the ADO. The ADO shall determine whether or not the rationale is acceptable and make the appropriate determination. In summary, this checklist should be used as part of the ALP workscope development process, during the preparation of the ALP, and in the draft and final ALP reviews.

AIRPORT: East Hampton Airport **LOCATION:** Sulfolk County, New York

SPONSOR: ______________________ **DATE:** __________
Signature

CONSULTANT: ______________________ **DATE:** __________
Signature

STATE: ______________________ **DATE:** __________
Signature

FAA PROJECT MGR: ______________________ **DATE:** __________

THIS CHECKLIST WAS COMPLETED FOR **(check all that apply):**

(✓) **ALP Workscope Purposes**
( ) **ALP Preparation Purposes**
( ) **ALP Review Purposes**

Revision	Date

DRAFT
Airport Layout Plan Checklist

Note: The following information provides specific instructions on its use in terms of completing the checklist. This checklist should be reviewed three separate times: first in the preparation of the scope of work, second during the sponsor preparation of the drawing and finally during the ADO review.

Specific Instructions:

1. When used for **ALP Workscope preparation purposes**, A check mark should be put in the "Required in Scope" column for each checklist item to indicate that it is required on the ALP. Leaving the cell blank will indicate that the item is not required. Note that some items are already checked. These are items that are not optional and will always be required on the specific drawing. This work should be done as a joint effort by the airport sponsor (and their consultant) and the ADO in developing the ALP workscope. Any item requiring explanations should be given as remarks.

2. When used for **ALP preparation purposes**, the preparer (airport sponsor and their consultant) should put a check mark in the **"Sponsor Check"** column for each item that is included on the ALP. Note that the checks should match up with the items checked in the "Required in Scope" column. If this is not the case the sponsor should provide additional information in the remarks section or upfront in the overall remarks section. The checklist completed by the preparer should (shall, if so stated in an agreed to ALP Workscope) be submitted to the ADO with the draft ALP drawings.

3. When used for **ALP review purposes**, the ADO reviewer will put a check mark in the **"ADO Check"** column to confirm that every item required in the work scope has been included on the drawings in a satisfactory manner. The ADO should submit the completed checklist to the preparer with the marked-up draft ALP drawings and/or ALP written comments.

References:

The ALP checklist below is based primarily on Appendix 7 of AC 150/5300-13, Airport Design, latest edition. Appendix 7 covers ALP components and preparation. The Airport Property Map (formerly Exhibit "A") component of the ALP checklist is based primarily on AC 150/5100-17, Land Acquisition and Relocation Assistance for Airport Improvement Program Assisted Projects, dated 3/29/96.

Use the space below for any detailed remarks.

DRAFT
Airport Layout Plan Checklist

I	DRAWINGS REQUIRED				
		Required In Scope X	Sponsor Check X	ADO Check X	Remarks
	a. Existing Airport Layout Drawing (Pages 4-8)	X	✔		
	b. Proposed Airport Layout Drawing (Pages 4-8)	X	✔		
	c. Airport Airspace Drawing (Pages 9-10)	X	✔		
	d. Inner Portion of the Approach Surface Drawing. (Pages 11-12)	X	✔		
	e. Terminal Area Drawing. (Page 13)		✔		
	f. Land Use Plan Drawing including RPZ Control Plan (Page 14)	X			
	g. Airport Property Map Drawing, (Formerly Exhibit. "A"). (Page 15-16)		✔		
	h. Utility Plan Drawing				

Note: Normally, the Airport Layout Drawing and the Airport Airspace Drawing should be presented on separate sheets. The Property Map (formerly Exhibit "A"), if done as part of a new or updated ALP set of drawings, should also be depicted on a separate sheet (or sheets for large airports).

DRAFT
Airport Layout Plan Checklist

II.	EXISTING AND PROPOSED AIRPORT LAYOUT DRAWINGS				
	Purpose: The Existing Airport Layout Plan is an inventory of the airport and should show all existing facilities and airport design standards. The proposed Airport Layout Plan represent the 20 year plan for the airport and should illustrate all existing facilities and airport design standards as well as proposed development and airport design standards. Any development at the airport must be shown on an approved ALP.				
		Required in Scope X	Sponsor Check X	ADO Check X	Remarks
1.	Features:				
	a. Layout of existing and ultimate facilities	X	✔		
	b. Wind rose and coverage analysis.	X	✔		
	c. Standard airport and runway data tables.	X	✔		
	d. Standard Legend and building tables.	X	✔		
	e. Title and revision blocks.	X			
	f. Sponsor approval block.	X			
	g. List of approved modifications to FAA Airport Design Standards (with dates), including proposed and planned modification to Standards (See Standard table "Modification of Standards")				
	h. List of non-std. Conditions & proposed disposition.				
2.	Preparation Guidelines:				
	a. Sheet Size, recommended 22"x34".				
	b. Scale, Determined by airport size 1"=200' to 1"=600'				Scale: 1" =300'
	(1) Show Bar Scale.	X	✔		
	(2) Metric conversion table	X	✔		
	c. North Point:	X	✔		
	(1) True	X	✔		
	(2) Magnetic and year of magnetic declination.	X	✔		
	(3) North is to top left of drawing.				
	d. Wind Rose: Explain in Remarks for Data source if wind data not available for ALP wind rose.	X	✔		
	(1) Data source and time period covered (latest 10-yr period, using 36 point) Individual : Combined coverage.	X	✔		
	(2) Individual and combined coverage, see paragraph 203b of AC 150/5300-13, Airport Design for information on wind conditions.	X	✔		
	(a). Runways with 10.5 knots crosswind	X	✔		
	(b). Runways with 13 knots crosswind		✔		
	(c). Runways with 16 knots crosswind		✔		
	(d). Runways with 20 knots crosswind		✔		
	(e). IFR Windrose.				
	e. Airport Reference Point (ARP)				
	(1) Existing (nearest second NAD 83).	X	✔		
	(2) Ultimate (nearest second NAD 83).	X	✔		
	(3) Use crosshair to define the location	X	✔		
	f. Topographic Information - Ground contours at intervals of 2' to 10', lightly drawn. Show any principal drainage features.	X	✔		
	g. Elevations:				
	(1). Runways - Indicate at existing and ultimate ends, displaced thresholds, touchdown zones, Intersections, high and low points - accuracy to the nearest 1/10 ft.	X	✔		
	(2). Structures on Airport - If no Terminal Area Plan Drawing., show top elevations on this sheet. Use table and numbering system.		✔		

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Airport Layout Plan Checklist

II.	EXISTING AND PROPOSED AIRPORT LAYOUT DRAWINGS (continued)				
		Required in Scope X	Sponsor Check X	ADO Check X	Remarks
	h. Runway				
	(1). Dimensions - Length and width.	X	✔		
	(2) Runway Centerline	X	✔		
	(3). Orientation:				
	(a). Show runway end numbers.	X	✔		
	(b). True bearing nearest 1/10 degree	X	✔		
	(4). Lighting				
	(a). Show threshold lights.				
	(b). No runway edge lights on drawing.				
	(5). Marking				
	(6). Show stage lengths if new runway or if runway extensions will be developed in stages.				
	(a). Show interim stage lengths on stage development sketches in ALP Narrative Report.				
	(7). End Coordinates				
	(a). Show surveyed existing runway end coordinates (nearest 1/10 second, NAD 83) and elevations (nearest 1/10 ft.).	X	✔		
	(b). For interim stage runway development show end coordinates. (nearest 0.01 second, NAD 83) and elevation (nearest 1/10 ft).				
	(c) Displaced thresholds	X	✔		
	(d) Grid crosshairs in latitude and longitude (NAD 83)	X	✔		
	(8). Monuments - (Show location of all survey monuments and reference markers. Note how monuments are protected).				
	(9). Declared Distances – Identify any stopways and/or clearways used in declared distance.				
	(10). Any displaced thresholds.		✔		
	(11). Any clearways.				
	(12). Any stopways.				
	(13). BRL and height that it is based on				
	(14). Separation dimensions from BRL (and any parallel runways.				
	(15). Runway Visibility Zone		✔		
	(i). Runway Object Free Area (OFA)	X	✔		
	(j). Precision Object Free Area (POFA)				
	(k). Runway Safety Areas.	X	✔		
	(l). Obstacle Free Zone (OFZ). - Specify "NO OFZ PENETRATIONS" when no object other than frangible NAVAIDS penetrates the OFZ. Otherwise show the object penetration and indicate how they will be eliminated. The OFZ may be depicted on the drawing with dimensions to facilitate identifying object penetrations.				

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Airport Layout Plan Checklist

II.	EXISTING AND PROPOSED AIRPORT LAYOUT DRAWINGS (continued)				
		Required in Scope X	Sponsor Check X	ADO Check X	Remarks
	(m). Threshold Details - Depict the threshold with coordinates - accuracy to nearest 0.01 second, elevation, displacement from runway end, and print "No Threshold Siting Surface Object Penetrations" with no object penetrations. Otherwise show the object penetrations and indicate how they will be eliminated.	X	✔		
	(n). RPZ details per paragraph 212, Table 2-4, and Fig. 2-3 of AC 150/5300-13, Airport Design.	X			
	(1). Show size with dim. (existing and ultimate)	X	✔		
	(2). Existing and Proposed Airport interest in RPZ (fee or easement, or non-airport).	X	✔		
	(3). If declared distance is used show approach and departure RPZs	X			N/A
	(o). Approach Surface Slope – Label approach surface slope with RPZ	X	✔		See RWy data table
	(p). Holding position and markings. Depict the holding position and marking distance from runway centerline, with dimension lines.				
	(q). Taxiway Details - Include the following:				
	(1). Dimensions (width and length).	X	✔		
	(2). Separation dimensions from parallel runways and taxilanes.	X			
	(3). Clearance dimensions to objects, including aircraft parking areas.				
	(4). Taxiway Safety areas	X	✔		
	(r). Apron details (existing/ultimate)				
	(1). Dimensions (width and length).	X	✔		
	(2). Aircraft parking arrangement.				
	(3). Taxilanes.				
	(s). Navaids and visaids (existing./ultimate).				
	(1). Location and type.	X			
	(t). Terminal area (existing/ultimate).				
	(1). Show and identify all main structures. Also show and identify by using building table and numbering system if no terminal area drawing.	X	✔		
	(2). Hangar areas and related taxiways.	X	✔		
	(3). Auto parking and entrance road.	X	✔		
	(u). Wind cone/tee and segmented circle.	X	✔		
	(v). Any weather equipment (e.g., AWOS, ASOS, etc., including related critical areas).	X	✔		
	(w). Airport service roads.	X	✔		
	(x). Airport fencing.	X	✔		
	(y). Airport Data Table (See Standard Table 1)	X	✔		
	(1). Airport elevation (nearest 1/10 ft).	X	✔		
	(2). ARP lat./long., nearest second/NAD-83.	X	✔		
	(3). Mean daily max temperature.	X	✔		
	(4). Combined wind coverage VFR/IFR (%).	X			
	(5). Airport magnetic variation and date.	X	✔		
	(6). ARC for design aircraft accommodated at the airport for approach purposes.	X	✔		
	(7). NPIAS service level, GA, RL, P, etc.	X	✔		

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Airport Layout Plan Checklist

II.	EXISTING AND PROPOSED AIRPORT LAYOUT DRAWINGS (continued)				
		Required in Scope X	Sponsor Check X	ADO Check X	Remarks
	(8). State equivalent service role (local, community, regional, etc.)				
	(9). Taxiway lighting.	X	✔		
	(10). Taxiway hold line				
	(11). Airport and Terminal Navaids.	X	✔		
	(12). Others (indicate in remarks).				
	(z). Runway Data Table (See Standard Table 2)				
	(1)Latitude and longitude of each runway end (existing/ultimate.) NAD 83	X	✔		
	(2). Approach visibility minimums (include existing/proposed, i.e.; V, 1 mile, 3/4 mile, 1/2 mile, CAT II/III.		✔		
	(3). FAR Part 77 approach slope.	X	✔		
	(4). Dimensions (width and length).	X	✔		
	(5). Pavement type.	X	✔		
	(6). Pavement design strength.	X	✔		
	(7). Lighting.	X	✔		
	(8). Marking.	X	✔		
	(9). Percent gradient.	X	✔		
	(10). Maximum grade within runway length.	X	✔		
	(11). Line of sight requirements.	X	✔		
	(12). Percent wind coverage.	X	✔		
	(13). Visual approach aids (PAPI, REIL, etc.).	X	✔		
	(14). Instrument approach aids (ILS, LOC, etc.).	X	✔		
	(15). ARC for each runway		✔		
	(16). Identify the critical aircraft. If more than one aircraft involved, then identify as follows:				
	(a). Critical aircraft by wingspan.				
	(b). Critical aircraft by approach speed.				
	(c). Critical aircraft by weight.				
	(17). Length of haul if critical aircraft over 60Klb				
	(18). RSA dimensions.	X	✔		
	(19). OFA dimensions.	X	✔		
	(20). OFZ. Specify "No OFZ object penetrations" if no object other than frangible Navaids penetrates the OFZ.		✔		
	(22). Runway elevations (nearest 0.01 ft.).				
	(a). Existing end.	X	✔		
	(b). Ultimate end.	X	✔		
	(c). Displaced threshold.	X	✔		
	(d). Touchdown zone.		✔		
	(aa). Declared Distance Table (See Standard Table 7)				
	(1). TORA.				
	(2). TODA.				
	(3). ASDA.				
	(4). LDA.				
	(5). LDA – Arrival end RSA length				
	(6). LDA – Stop end RSA length				
	(7). ASDA – RSA Length				
	(bb). Legend Table. (See Standard Table 4).	X			

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II.	EXISTING AND PROPOSED AIRPORT LAYOUT DRAWINGS (continued)				
		Required in Scope X	Sponsor Check X	ADO Check X	Remarks
	(cc). Facilities Table, (See Standard Table 5) identify by number and description. Show top building elevation if no terminal area drawing.		✔		
	(dd). Location and vicinity maps.	X	✔		
	(ee). Title and Revision Blocks.	X	✔		
	(ff). Approval Block on ALP	X	✔		
	(gg). Modification of Standard Table (See Standard Table 3)	X	✔		
	(hh). RSA Determination Table (See Standard Table 6)				

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III.	AIRSPACE DRAWING				
	Purpose: The airspace drawing illustrates all proposed Part 77 surfaces and identifies any penetrations to these surfaces. A proposed action to eliminate obstructions should be provided.				
		Required in Scope X	Sponsor Check X	ADO Check X	Remarks
	1. Part 77 Surfaces				
	a. Plan view of all Part 77 surfaces based on proposed runway lengths.	X	✔		
	b. Profile views of proposed Part 77 approaches	X	✔		
	c. Obstruction Data Table, as appropriate.				
	2. Preparation Guidelines:				
	a. Sheet Size, Same as ALP Drawing.	X	✔		
	b. Scale, recommended; 1" = 2000' for plan view 1" = 2000' (horizontal) and 1" = 100' (vertical) for approach profiles.				Ex. 1' = 1,000' Pro. 1' = 2,000'
	c. Title and Revision Blocks, format sees ALP Drawing.	X	✔		
	d. Plan view details.				
	(1). Use current USGS 71/2 minute Quad for base map when available (latitude/longitude grid tick on map). Show area under all applicable. Part 77 airport imaginary surfaces.		✔		
	(2). Show runway end numbers.	X	✔		
	(3). 50-ft elevation contours on all sloping imaginary surfaces.				
	(4). When horizontal and/or conical surfaces overlap the approach surface, show the most demanding surfaces with solid lines and others with dashed lines.		✔		
	(5). Show objects, by numbers and top elevation of any that are obstructions. Note and refer to inner portion of approach surface drawing for details on any close-in approach obstruction.		✔		
	(6). For precision instrument approaches, show entire 50,000' approach surface, (may show outer approach on separate sheet)				Shown on P77 dwg
	(7). Include a note specifying any height restriction zoning ordinances/statutes in the airport environs.				
	(8). Identify land uses in the FAR Part 77 area, especially those incompatible with normal airport operations.				
	(9). RPZ for proposed runway.	X	✔		
	(10). Airport property lines and easements (exist./ultimate).	X	✔		
	e. Approach Profile Details				
	(1). Ground profile use highest terrain across length and width of the approach surfaces.	X	✔		

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III.	AIRSPACE DRAWING (continued)				
		Required in Scope X	Sponsor Check X	ADO Check X	Remarks
	(2). Show top elev., by number, all significant objects within the approach surface; e.g., roadway, towers, etc.	X	✔		
	(3). Show existing and ultimate runway ends and Part 77 approach slopes.	X	✔		
	(4). Show threshold and slope based on threshold siting requirements per Appendix 2 of AC 159/5300-13, Airport Design, if applicable.				
	f. Show profile of entire runway if space available on sheet. As minimum, show end elev. & high/low points (nearest 1/10 ft).		✔		
	g. Obstruction Data Table (See Standard Table 8)				
	(1). List all obstructions shown in the plan and profile views.	X	✔		
	(2). Identify obstructions by number in plan profile, description and amount of Part 77 surface penetrations and proposed disposition of the obstruction including no action.	X	✔		
	(3). For any close-in obstructions in the approach areas, include note and refer to the obstruction tables on the inner portion of the approach surface drawing.	X	✔		

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IV.	INNER PORTION OF THE APPROACH SURFACE DRAWING				
	Purpose: The Inner Portion of the Approach Surface Drawing provides a detailed illustration of close in obstructions. It identifies all obstructions and a proposed action to eliminate them.				
		Required in Scope X	Sponsor Check X	ADO Check X	REMARKS
1.	Features:				
	a. Show each runway end, large scale plan view of the inner portion of the approach (existing/ultimate.). Limit to area where Part 77-approach surface reaches a 100-foot height above the runway end.	X	✔		
	b. Projected profile views of item a. above, for each runway end.	X	✔		
	c. Obstruction tables for the existing and ultimate inner portion of the approach area for each runway end.	X	✔		
2.	Preparation Guidelines:				
	a. Sheet Size, Same as ALP Drawing.	X			
	b. Scale, recommend; horizontal 1" = 200', Vertical 1" = 20'	X			Horizontal. 1' = 200' Vertical: 1' = 20'
	c. Title and Revision Blocks- Same format as ALP Drawing.	X	✔		
	d. Plan View Details				
	(1). Use aerial photos for base maps when available.				
	(2). Use numbering system to identify obstruction.	X	✔		
	(3). Depict property line when it is located within the area.		✔		
	(4). Show elevations and clearances for roads, railroads, waterways, etc., at the approach surface edges and extended runway centerline. Number these points and key to profile view and obstruction table, as appropriate.		✔		
	(5). Depict ends of runways, stopways, clearways, safety areas, and object free areas (existing/ultimate).	X	✔		
	(6). Show ground contours within the area.	X			
	(7). Show existing/ultimate approach and departure RPZ's.	X	✔		
	(8). Indicate existing/ultimate Part 77 approach slopes.	X	✔		
	(e). Profile View Details				
	(1). Depict the ground along runway safety area and significant items such as fences, stream beds, roadways, etc., regardless of whether the items are obstructions	X	✔		
	(2). Identify obstructions with number from plan.	X	✔		
	(3). Depict cross- section of roads and railroads where they intersect outer edges of approach surface.		✔		

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IV.	INNER PORTION OF THE APPROACH SURFACE DRAWING (continued)				
		Required in Scope X	Sponsor Check X	ADO Check X	REMARKS
	(f). Runway Centerline Profile				
	(1) Scale (vertical sufficient to show line-of-sight requirements.	X			
	(2) Elevations (stations and elev. at runway ends and at all points of grade change)	X	✔		
	(g). Obstruction Table (See Standard Table 8)				
	(1). Prepare separate table for each approach surface (existing /ultimate) and specify type and slope of the Part 77 approach surface.	X			
	(2). List obstructions. by number in plan and amount of Part 77 surface penetrations and proposed disposition of obstructions, also no action.	X	✔		

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V.	TERMINAL AREA DRAWING				
	Purpose: The terminal drawing provides a small scale drawing of existing and proposed terminal area development. This drawing may not be required for small airports.				
		Required in Scope X	Sponsor Check X	ADO Check X	REMARKS
1.	Features:				
	a. Large scale plan view of the area (or areas) where the aprons, buildings, hangars, parking lots, etc., are located.	X	✔		
2.	Preparation Guidelines:				
	a. Sheet Size, Same as ALP Drawing.	X	✔		
	b. Scale, 1" = 50' to 1" = 100'	X			1" = 50'
	c. Large-scale plan view of terminal area (or areas) showing details of aprons, buildings, hangars, parking lots, etc. (Existing/Ultimate.).	X	✔		
	d. BRL and height it is based on.	X	✔		
	e. Depict separation between objects and taxiways, taxilanes, and tiedowns.	X	✔		
	f. Title and Revision Blocks, Same as ALP Drawing.	X			
	g. Facilities Data Table (See Standard Table 5)				
	(1). Structure identification number (identify structures on plan view with numbers instead of words.)	X	✔		
	(2). Top elevation on structures.	X			Info. n.a.
	(3). Obstruction marking (Existing/Ultimate)				
	h. Legend, Include symbol for planned removal, abandonment., etc.	X			

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VI	LAND USE DRAWING				
	Purpose: The land use plan drawing depicts existing and recommended use of all land within the ultimate airport property line (on airport) and in the vicinity of the airport (off airport). It provides a plan for aviation/non aviation related use areas on the airport, for guidance on compatible land uses in close proximity to runways, for line of sight between runway ends and within runway visibility zones, for guidance to local authorities for establishing appropriate zoning in the vicinity of the airport and a RPZ control plan.				
		Required in Scope X	Sponsor Check X	ADO Check X	Remarks
1.	Preparation Guidelines:				
	a. Sheet Size, Same as ALP Drawing.	X	✔		
	b. Scale, Same as ALP Drawing.	X	1" = 300'		
	c. Title and Revision Blocks, Same as ALP Drawing	X	✔		
	d. Base Map, Use aerial photos when available.				
	e. Legend, Use std. drafting symbols to show various parcels and/or areas on and off the airport (existing /ultimate). Show uses by general category.	X	✔		
	f. Public Facilities				
	(1). Depict the location of all public facilities (e.g., schools, hospitals, prisons, parks, etc.) in the vicinity of the airport.		✔		
	(2). Show current noise contours, if available (date of data used).		✔		
	g. Drawing Details				
	(1). Normally limited to existing and ultimate features (i.e., runways, taxiways, RPZ's, terminal buildings and Navaids, etc.)	X	✔		
	(2). Show details to determine aeronautical areas versus non-aeronautical areas.				
	(3) RPZ Control Plan (See Standard Table 10)	X	✔		
	(4) Land Use (existing and proposed)	X	✔		
	(5) Zoning (existing and proposed)	X	✔		
	(6) Airport Property Line (existing and proposed)	X	✔		
	(7) Proposed property acquisition				

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VII.	AIRPORT PROPERTY MAP (Formerly Exhibit "A")				
	Purpose: The primary intent of the airport property map (formerly Exhibit "A") drawing, is to identify all land which is designated airport property and to provide an inventory of all parcels which make up the airport. It is a document that must be on file in the ADO as part of the development project process. If it is not on file, or needs updating, this drawing can be prepared as part of the ALP set of drawings. As a minimum, the Property Map (formerly Exhibit "A") must show the current airport research, available mapping/surveys, and field verification, as required. Physical survey of boundaries is generally not required. In those instances where field survey may be considered necessary, the property line and runway should be tied to the State grid system. Standards for precision and accuracy would be part of this review				
		Required in Scope X	Sponsor Check X	ADO Check X	REMARKS
	1. Preparation Guidelines:				
	a. Sheet Size, Same as ALP drawing.	X	✔		
	b. Scale, Same as ALP drawing Show bar scale.	X	Scale: 1" =300'		
	c. Title and Revision Blocks, See ALP Drawing. Clearly label as Airport Property Map (formerly Exhibit "A")	X	✔		
	d. Legend, Use standard drafting symbols and legend table to indicate the type of acquisition involved with each tract or area. (See Standard Table 3)	X			
	2. Specific Property Map required items:				
	a. Identify existing and proposed airport property line.	X	✔		
	b. Each parcel making up the entire airport must be shown and numbered. In addition, parcels, which were once airport property, must also be shown.	X	✔		
	c. Both fee and easement interest must be shown and separately designated.	X	✔		
	d. Delineate runways, taxiways, RPZ's, TSA's, RSA's, OFA's, BRL's, Terminal Buildings, and Navaids (existing/ultimate).	X	✔		
	e. Magnetic and true north arrows.	X	✔		
	3. Existing Property Table (See Standard Tables 9)				
	a. Show an inventory of all parcels by number, including the grantor, grantee, and type of interest, acreage, and date of acquisition. They must also show FAA project number if acquired under a grant: PFC application number if acquired with PFC.	X	✔		
	b. The purpose of acquisition if acquired under a Federal grant (approach protection., aeronautical, noise compatibility, current or future development.) based on the grant description must be indicated, plus any special conditions.		✔		
	4. Proposed Acquisition Table (See Standard Tables 9)				
	a. Show all proposed land acquisition including owner acreage and purpose.		✔		
	5. Proposed Easement Acquisition Table (See Standard Tables 9)				
	a. Show all proposed easement acquisition including owner, acreage and type of easement.		✔		

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VII.	AIRPORT PROPERTY MAP (Formerly Exhibit "A") (continued)				
		Required in Scope X	Sponsor Check X	ADO Check X	REMARKS
	i. The Property Map must be dated and amended whenever there is a change to any airport property.	X	✔		
	j. Metes and Bounds for Airport Property Line				
	k. Points of reference for tracing parcels from a deed description by scaling should be shown. As new parcels are acquired, the property map should add their associated bearings and lengths to enable quick confirmation of the parcel's location.				
	l. Fencing, if it does not obscure airport boundary lines.				

Appendix C

Compendium of Frequently Used Aviation Terms

GLOSSARY

ADVISORY CIRCULAR (AC) - Federal Aviation Administration Advisory Circular. This is an FAA document which provides guidance on aviation issues.

AIRPORT DEVELOPMENT AID PROGRAM (ADAP) - A program originally established by the Airport and Airway Development Act of 1970 to provide federal funds for certain airport improvements and new airport development; the original legislation has been revised on various occasions, resulting in the present day Airport and Airway Improvement Act of 1982. This program has been replaced by the Airport Improvement Program (AIP).

ADVISORY SERVICE - Advice and information provided by a facility to assist pilots in the safe conduct of flight and aircraft movement.

AQUEOUS FILM FORMING FOAM (AFFF) - Used by Aircraft Rescue and Fire Fighting (ARFF) vehicles for aircraft related emergencies.

AIR CARRIERS - This includes the commercial system of air transportation and consists of certified route air carriers, air taxis (including commuters) supplemental air carriers, commercial operators of large aircraft, and air travel clubs. Air Carriers are certified under FAA regulations to carry passengers under FAR Part 121, 127, 135, etc.

AIRPORT IMPROVEMENT PROGRAM (AIP) - Federal program (FAA) in which funds are supplied to airports meeting certain requirements for improvements and necessary studies.

AIRCRAFT APPROACH CATEGORY - An aircraft approach category is a FAA grouping of aircraft based on approach speed. The aircraft approach categories are:

(1) Category A: Speed less than 91 knots;
(2) Category B: Speed 91 knots or more but less than 121 knots;
(3) Category C: Speed 121 knots or more but less than 141 knots;
(4) Category D: Speed 141 knots or more but less than 166 knots.

AIRCRAFT PARKING LINE LIMIT - An aircraft parking line limit is a line established by FAA AC 5300-13, beyond which no part of a parked aircraft should protrude.

AIR NAVIGATION AID FACILITY (NAVAID) - Any facility used or available for use as an aid to air navigation, including landing areas; lights; any apparatus or equipment for disseminating weather information, for signaling, for radio direction-finding, or for radio or other electronic communication; and any other structure or mechanism having a similar purpose for guiding or controlling flight in the air or during the landing or takeoff of aircraft.

AIRPLANE DESIGN GROUP (PHYSICAL CHARACTERISTICS) - The FAA airplane Design Group subdivides airplanes by wingspan. The airplane Design Groups are:

(1) Group I: Wingspan up to but not including 49 feet (15 m);
(2) Group II: Wingspan 49 feet (15 m) up to but not including 79 feet (24 m);
(3) Group III: Wingspan 79 feet (24 m) up to but not including 118 feet (36 m);
(4) Group IV: Wingspan 118 feet (36 m) up to but not including 171 feet (52 m);
(5) Group V: Wingspan 171 feet (52 m) up to but not including 197 feet (60 m)
(6) Group VI: Wingspan 197 feet (60 m) up to but not including 262 feet (80 m).

AIRPORT HAZARD - An airport hazard is any structure or natural object located on or in the vicinity of a public airport, or any use of land near such airport, that obstructs the airspace required for the flight of aircraft in landing or taking off at

IFR aircraft and, on occasion, tower enroute control service.

APPROACH END OF RUNWAY - The approach end of runway is the near end of the runway as viewed from the cockpit of a landing airplane.

APPROACH FIX - The navigational point, determined electronically or geographically, from or over which the final approach (IFR) to an airport is executed.

APPROACH GATE - That point on the final approach course which is one mile from the approach fix on the side away from the airport or five miles from the landing threshold, whichever is farther from the landing threshold.

APPROACH SEQUENCE - The order in which aircraft are positioned while awaiting approach clearance or while on approach.

APPROACH SURFACE - An imaginary surface extending out from the end of the Primary Surface at a slope and width defined in FAR Part 77, above which the airspace must be free of obstacles as aircraft approach or depart the runway.

AREA NAVIGATION (RNAV) - A method of navigation that permits aircraft operations on any desired course within the coverage of station referenced navigation signals or within the limits of self-contained system capability.

BASED AIRCRAFT - An aircraft permanently stationed at an airport by agreement between the airport owner (management or FBO) and the aircraft owner.

CATEGORY I , II, AND III LANDINGS -
➢Category I: 200 foot ceiling and 2400 foot RVR;
➢Category II: 100 foot ceiling and 1200 foot RVR;
➢Category IIIA: zero ceiling and 700 root RVR;
➢Category IIIB: zero ceiling and 150 foot RVR;
➢Category IIIC: zero ceiling and zero RVR.
To make landing under these conditions, aircraft must be equipped with special avionics, pilot must be qualified to land under specified conditions for that category, and aircraft must have proper ground equipment for conditions.

CEILING - The height above the earth's surface of the lowest layer of clouds or obscuring phenomena that is reported as "broken" "overcast", or "obscured" and not classified as "thin" or "partial". The ceiling is reported in feet above the surface in a given location.

CERTIFICATED POINT - A city, place, or population center authorized to receive scheduled air service under a Certificate of Public - Convenience and Necessity, or under an exemption issued to an air carrier.

CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY - A document issued to an air carrier under Section 401 of the Federal Aviation Act by the Civil Aeronautics Board authorizing the carrier to engage in air transportation.

CLEAR ZONE - Defined by FAR Part 77 as an area off each runway end to be void of trees and other obstacles. The FAA has replaced this area with the Runway Protection Zone (RPZ).

CLEARWAY - A clearway is an area beyond the stop end of runway, not less than 500 feet (150 m) wide, centered on the extended centerline of the runway, and controlled by the airport authorities. The clearway is expressed in terms or a geometric plane extending from the end of the runway, with an upward slope not exceeding 1.25 percent, above which no object nor terrain may protrude. Threshold lights, however, may protrude above the clearway plane if their height above the end of the runway is 26 inches (66 cm) or less and if they are located to each side of the runway. A clearway increases the allowable operating takeoff weights of turbine-powered airplanes. For most airplanes, the maximum usable length of the clearway is less than 1,000 feet (300 m).

ENVIRONMENTAL IMPACT STATEMENT (EIS) - An environmental report describing environmental impacts which would occur during the implementation of airport improvement projects. This report includes mitigation measures and public comment.

FEDERAL AVIATION ADMINISTRATION (FAA) - Branch of the Federal Government (Department of Transportation) responsible for the safety of aviation and the operation of the air traffic control system, as well as other aviation related tasks.

FEDERAL AID TO AIRPORTS PROGRAM (FAAP) - FAA program to provide financial aid to airports. This has been replaced by the Airport Improvement Program (AIP).

FEDERAL AVIATION REGULATION (FAR) - Regulations developed by the FAA in order to maintain safety, define standards, and institute uniform practices throughout the industry.

FILLET - A concave junction formed where two surfaces meet (as at an angle), a strip that gives a rounded appearance to such a junction; also, a strip to reinforce the corner where two surfaces meet.

FINAL APPROACH FIX (FAF) - The fix from or over which final approach (IFR) to an airport is executed.

FINAL APPROACH - A flight path of a landing aircraft in the direction of landing along the extended runway centerline from the base leg to the runway. For instrument approaches, the final approach begins at the final approach fix (FAF).

FIX - A geographical position determined by visual reference to the surface by reference to one or more radio NAVAIDs, by celestial plotting, or by another navigational device.

FIXED BASE OPERATION OR FIXED BASE OPERATOR (FB0) - A sales and/or service facility located at an airport, or the person who operates such a facility.

FLIGHT PLAN - Specified information relating to the intended flight of an aircraft that is filed orally or in writing with an air traffic control facility.

FLIGHT SERVICE STATION (FSS) - A facility operated by the FAA to provide flight assistance service.

GENERAL AVIATION (GA)- All civil aircraft and aviation activity except that of the certified air carriers and military operations. GA includes corporate flying and private flying (recreation or personal).

GENERIC VISUAL GLIDESLOPE INDICATOR (GVGI) - This is a general term which includes all airport light systems used to assist pilots in maintaining the proper glideslope while on final approach to the runway during landing. These systems use colored lights to warn pilots of their position in reference to the proper glideslope. GVGI's include Precision Approach Path Indicators (PAPI) and Visual Approach Slope Indicators (VASI).

GLIDESLOPE - Vertical guidance provided by a ground based radio transmitter to an aircraft landing by use of an Instrument Landing System. This guidance informs the pilot if the aircraft is either too high or too low as it flies its approach to the runway for landing.

GLOBAL POSITIONING SYSTEM (GPS) - GPS is a navigational system based on the use of multiple satellites strategically placed in the earth's orbit. GPS is used by aircraft equipped with the proper GPS receiving equipment for enroute navigation, as well as instrument approaches to airports for landing. GPS allows aircraft to fly more freely and set waypoints (destinations)

without the need or reliance on ground based radio navigation facilities such as VORs.

LOCALIZER TYPE DIRECTIONAL AID (LDA) - A facility of comparable utility and accuracy to a localizer but which is not part of a complete ILS and will not be aligned with the runway.

LOCALIZER - A ground based radio transmitter which provides pilots with course guidance as they approach a runway for landing utilizing a Instrument Landing System. The course guidance is known as "azimuth".

MEDIUM INTENSITY APPROACH LIGHT SYSTEM (MALS) - An airport approach light system of medium intensity.

MARKER BEACON - An instrument which provides aural and/or visual identification of a specific position along a Instrument Landing System approach to a runway.

MINIMUM CROSSING ALTITUDES (MCA) - The lowest altitudes at certain radio fixes at which an aircraft can cross when proceeding in the direction of a higher minimum enroute IFR altitude.

MINIMUM DESCENT ALTITUDE (MDA) - The lowest altitude to which descent is authorized on a final approach or during circling-to-land maneuvering in execution of a standard instrument approach procedure where no electronic glide slope is provided.

MICROWAVE LANDING SYSTEM (MLS) - A type of instrument approach system which uses different radio signals than an ILS. MLS is more flexible and is less susceptible to interference. MLS is very rare due to its high cost.

MEDIUM INTENSITY RUNWAY LIGHTS (MIRL) - An airport runway lighting system of medium intensity.

MINIMUM OBSTRUCTION CLEARANCE ALTITUDE (MOCA) - The specified altitude in effect between radio fixes on VOR/LF airways, off-airway routes, or route segments, which meets obstruction clearance requirements for the entire route segment and which assures acceptable navigational signal coverage only within 22 nautical miles of a VOR.

MINIMUM VECTORING ALTITUDE (MVA) - The lowest altitude at which aircraft will be guided by a radar controller. This altitude ensures communications, radar coverage, and meets obstruction clearance criteria.

MOVEMENT AREA - The runways, taxiways, and other areas of an airport which are used for taxiing, takeoff, and landing of aircraft, excluding loading ramps and parking areas.

NAUTICAL MILE (NM) - The unit measure of distance in both nautical and aeronautical context. A nautical mile equals 1.15 statute miles (6,080 feet). The measure of speed in regards to nautical miles is known as *KNOTS* (nautical miles per hour).

NON DIRECTIONAL BEACON (NDB) - A radio beacon transmitting non directional signals whereby an aircraft equipped with direction finding equipment can determine headings to or from the radio beacon and "home" in on a track to or from it.

NEF - Noise Exposure Forecast.

NATIONAL AIRSPACE SYSTEM (NAS) - The common system of air navigation and air traffic control encompassing communications facilities, air navigation facilities, airways, controlled airspace special use airspace, and flight procedures authorized by FAR's for domestic and international aviation.

NON-PRECISION APPROACH - A standard instrument approach procedure in which no electronic glide slope is provided. A localizer, NDB, or VOR is often used.

NON PRECISION INSTRUMENT RUNWAY - A non precision instrument runway is one with an instrument approach procedure utilizing air navi-

OPERATION - Generally thought of as either a take-off or a landing of an aircraft. FAA ATCT operations include all radio contacts with an aircraft, regardless of whether or not they are taking off or landing. Operations used for planning purposes include only takeoffs, landings and touch and gos.

OUTER FIX - A fix in the destination terminal area, other than the approach fix, to which aircraft are normally cleared by an air route traffic control center or an approach control facility, and from which aircraft are cleared to the approach fix or final approach course.

PRACTICAL ANNUAL CAPACITY (PANCAP) - The practical annual capacity of an airport based, based on the runway(s).

PRACTICAL HOURLY CAPACITY (PHOCAP)-The practical hourly capacity of an airport based, based on the runway(s).

PRECISION APPROACH PATH INDICATOR (PAPI) - An airport approach light aid to pilots. See GVGI.

PAR - PRECISION APPROACH RADAR - Radar used by air traffic control specialists in a ground-controlled approach to assist a pilot on Final approach down a prescribed path leading to the runway.

PRECISION INSTRUMENT RUNWAY - A precision instrument runway is one with an instrument approach procedure utilizing an Instrument Landing System (ILS), microwave landing system (MLS), or precision approach radar (PAR). A planned precision instrument runway is one for which a precision approach system or procedure is indicated on an FAA or DOD approved airport layout plan, or on other FAA or DOD planning documents.

PRIMARY RADAR - Primary Radar occurs when the original radar pulse generated by the ground station (air traffic control) returns to the same ground station after it "bounces" off of an object (aircraft). This return notifies the controller that an aircraft is present as well as where it is and in which direction it is moving. This return can not tell a controller the altitude of the aircraft.

PRIMARY SURFACE - An imaginary horizontal surface extending out an equal distance on each side of the runway centerline a width as defined in FAR Part 77.

PRIVATE PILOT - A licensed pilot authorized to fly an aircraft carrying passengers provided he does not receive compensation.

RWY- Runway.

RUNWAY ALIGNMENT INDICATOR LIGHTS (RAIL) - (usually part of a MALS system).

RADAR (RADIO DETECTION AND RANGING) - A device which, by measuring the time interval between transmission and reception of radio pulses, provides information on range, azimuth and/or elevation of objects in the path of the transmitted pulses.

RADAR BEACON (SECONDARY RADAR) - A radar system in which the object to be detected is fitted with cooperative equipment in the form of a radio receiver/transmitter (transponder). Radio pulses transmitted from the ground based searching transmitter/receiver interrogator (air traffic control radar) site are received in the cooperative equipment and used to trigger a distinctive transmission. This transmission, not a reflected signal, is then received back at the interrogator site in order to track the aircraft and determine its altitude.

RADAR IDENTIFICATION - The process of ascertaining that a radar target is the radar return from a particular aircraft.

RADAR SERVICE - A term which encompasses aircraft separation, navigation guidance, and/or flight track monitoring services based on the use of radar which can be provided by a controller to a pilot of a radar-identified aircraft.

standards and recommendations applicable to conventional takeoff and landing airplanes.

SMALL AIRCRAFT - A small aircraft is an aircraft of 12,500 pounds (5,700 kg) or less maximum certificated takeoff weight.

STANDARD INSTRUMENT DEPARTURE (SID) - A preplanned coded air traffic control IFR departure routing, preprinted for pilot use in graphic and/or written form.

STANDARD TERMINAL ARRIVAL ROUTE (STAR) - A preplanned coded air traffic control IFR arrival routing, Preprinted for pilot use in graphic and/or written form.

STATUTE MILE - A regular "highway" mile measuring 5,280 feet.

STOL AIRCRAFT - A STOL (short takeoff and landing) aircraft is an aircraft with a certified performance capability to execute approaches along a glide slope of 6 degree or steeper and to execute missed approaches at a climb gradient sufficient to clear a 15:1 missed approach surface at sea level. The gradient is based on the airport elevation and decreases at the rate of 5 percent per 1,000 feet (300 m), i.e., for an airport at 4,000 feet (1,200 m) above Mean Sea Level (MSL), the gradient of the missed approach surface would be 18:1, 120 percent of l5:l.

STOP END OF RUNWAY - The stop end of runway is the far runway end as viewed from the cockpit of a landing airplane.

STOPWAY - A stopway is an area beyond the stop end of the takeoff runway which is no less wide than the runway and is centered on the extended centerline a' the runway. It is able to support an airplane during an aborted takeoff without causing structural damage to the airplane, and designated by the airport authorities for use in decelerating the airplane during an aborted takeoff.

STRAIGHT-IN APPROACH - Entry into the traffic pattern by interception of the extended runway centerline (final approach) without executing any other portion of the traffic pattern.

SUPPLEMENTARY AVIATION WEATHER REPORTING STATIONS (SAWRS) - A weather observation station used solely for aviation purposes and manned by non-Federal personnel. The local airport management usually provides the equipment and personnel for the station.

SURVEILLANCE APPROACH - An instrument approach conducted in accordance with directions issued by a controller referring to the surveillance radar display.

TWY - Taxiway.

TACTICAL AIR NAVIGATION (TACAN) - A military navigation aid that provides distance and direction information to appropriately equipped aircraft. Derived from "tactical air navigation".

TAXI - To operate an airplane under its own power on the ground, except the movement incident to actual takeoff and landing.

TAXILANE - A taxilane is the portion of the aircraft parking area used for access between taxiways, aircraft parking positions, hangars, storage facilities, etc. A taxilane is outside the movement area, and is normally not controlled by the Air Traffic Control Tower.

TAXIWAY - A taxiway is a defined path, from one part of an airport to another, selected or prepared for the taxiing of aircraft.

TAXIWAY SAFETY AREA - A taxiway safety area is an area centered on the taxiway centerline, which includes the taxiway and taxiway shoulders. The portion abutting the edge of the taxiway shoulders is cleared, drained, graded, and usually turfed.

Under normal conditions, the taxiway safety area is capable of supporting snow removal, fire fighting, and rescue equipment and accommodating the occasional passage of aircraft without causing major damage to the aircraft.

VERY HIGH FREQUENCY OMNI DIRECTIONAL RANGE (VOR) - A ground radio station that provides a pilot of a properly equipped aircraft with his radial location in reference to that station. A VORTAC is an electronic air navigation facility combining a VOR and a TACAN.

VICTOR AIRWAYS - Established air routes connecting most VORs in the United States. The victor airways comprise the low altitude (up to but not including 18,000 feet) airway system. (Jetways comprise the high altitude airway system).

VISIBILITY, PREVAILING - The horizontal distance at which targets of known distance are visible over at least half of the horizon. It is normally determined by an observer on or close to the ground viewing buildings or other similar objects during the day and ordinary city lights at night.

VISUAL APPROACH SLOPE INDICATOR (VASI) - The VASI is a device used by pilots to determine their position in regard to the recommended approach path for a particular airport. See also GVGI.

VISUAL FLIGHT RULES (VFR)- "See and be seen" flight rules. Each pilot is responsible for the safe spacing and proper operation of his aircraft. Under VFR, a pilot is not required to file a flight plan or be in constant radar and communication contact with air traffic control. Visual flight rules are determined by weather and require a ceiling of at least 1,000 feet and visibility of at least 3 miles.

VFR TRAFFIC - Aircraft traffic operated solely in accordance with Visual Flight Rules.

VISUAL APPROACH - A VFR approach granted to an IFR flight by air traffic control under special circumstances. Visual approaches are normally conducted by aircraft operating under visual flight rules.

VISUAL RUNWAY - A visual runway is a runway intended solely for the operation of aircraft using visual approach procedures, with no straight-in instrument approach procedure and no instrument designation indicated on an FAA or Department of Defense (DOD) approved layout plan, or, on other FAA or DOD planning documents.

VORTAC - A combination of the civil VOR/DME and the military TACAN which can provide both distance and direction of an aircraft from the station.

WAKE TURBULENCE - The air turbulence caused by a moving aircraft, originating at the tips of the wings. The turbulence is caused by vortices generated by an aircraft's wingtips as it travels through the air. This turbulence is greatest when the aircraft is taking off and landing.

WIND COVERAGE - Wind coverage is the percent of time for which aeronautical operations are considered safe due to acceptable crosswind components.

APPENDIX C

SUFFOLK COUNTY WATER AUTHORITY LABORATORY POTABLE WATER ANALYSIS

LOCATION: TOWNLINE RD EH 1 TW S#118737 DATE: 6/13/02 TIME:1500			
TOTAL COLIFORM: STANDARD METHOD #189222BMF			
BACTERIOLOGY	SATISFACTORY		
LITHIUM		1.3	ug/l-Li
BERYLLIUM	<0.3		ug/l-Be
ALUMINUM		0.02	ug/l-Al
SILICON		7.2	mg/l-Si
TITANIUM	<10.0		ug/l-Ti
TOTAL CHROMIUM	<10.0		ug/l-Cr
MANGANESE		0.02	mg/l-Mn
IRON		0.24	mg/l-Fe
NICKEL		0.5	ug/l-Ni
COPPER	<0.02		mg/l-Cu
ZINC	<0.02		mg/l-Zn
ARSENIC	<1.0		ug/l-As
SELENIUM	<2.0		ug/l-Se
SILVER	<2.5		ug/l-Ag
CADMIUM	<0.5		ug/l-Cd
TIN	<0.5		ug/l-Sn
ANTIMONY	<0.4		ug/l-Sb
BARIUM	<0.100		mg/l-Ba
THALLIUM	<0.3		ug/l-Tl
LEAD	<1.0		ug/l-Pb
BORON	<100.		ug/l-B
VANADIUM	<10.		ug/l-V
COBALT	<2.0		ug/l-Co
STRONTIUM		18.	ug/l-Sr
MOLYBDENUM	<5.0		ug/l-Mo
URANIUM	<5.0		ug/l-U
TOTAL PHOSPHATE	<0.10		mg/l-T-PO4
SODIUM		6.4	mg/l-Na
POTASSIUM		0.42	mg/l- K
CALCIUM		3.6	mg/l-Ca
MAGNESIUM		1.19	mg/l-Mg
INORGANIC ANIONS: EPA MTH. 300.0			
FLUORIDE	<0.2		mg/l-F
CHLORIDE		9.5	mg/l-Cl
NITRITE	<0.10		mg/l-NO2-N
BROMIDE	<0.05		mg/l-Br
NITRATE	<0.10		mg/l-NO3-N
ORTHO PHOSPHATE	<0.10		mg/l-O-PO4
SULFATES		2.9	mg/l-SO4
SURFACTANTS: SM185540C			
SURFACTANTS	<0.04		mg/l-MBAS
COLOR: SM182120C			
COLOR	<5.		Units
TURBIDITY: EPA MTH. 180.1			
TURBIDITY		0.22	NT Units
pH: SM184500-HB			
pH		6.4	

SUFFOLK COUNTY WATER AUTHORITY LABORATORY POTABLE WATER ANALYSIS

LOCATION: TOWNLINE RD EH 1 TW S#118737 DATE: 6/13/02 TIME:1500		
CONDUCTIVITY: SM182510B		
SPECIFIC CONDUCTANCE	67.	uhmo/cm
HARDNESS: SM182340C		
TOTAL HARDNESS	<0.0	mg/l-CaCO3
ALKALINITY: SM182320B		
TOTAL ALKALINITY	15.2	mg/l-CaCO3
NITROGEN, AMMONIA: EPA MTH. 350.1		
FREE AMMONIA	<0.01	mg/l-NH3-N
CYANIDE: SM184500-CN-F		
CYANIDE	<5.0	ug/l
MERCURY: EPA MTH. 200.8		
MERCURY	<0.2	ug/l-Hg
VOLATILE ORGANIC COMPOUNDS: EPA MTH. 524.2		
METHYLENE CHLORIDE	<0.5	ug/l
1, 1- DICHLOROETHENE	<0.5	ug/l
1, 1- DICHLOROETHANE	<0.5	ug/l
TRANS-1, 2- DICHLORETHENE	<0.5	ug/l
CIS-1, 2- DICHLOROETHENE	<0.5	ug/l
CHLOROFORM	<0.5	ug/l
1, 2- DICHLOROETHANE	<0.5	ug/l
1, 1, 1- TRICHLOROETHANE	<0.5	ug/l
CARBON TETRACHLORIDE	<0.5	ug/l
BROMODICHLOROMETHANE	<0.5	ug/l
1, 2-DICHLOROPROPANE	<0.5	ug/l
CIS-1, 3- DICHLOROPROPENE	<0.5	ug/l
TRICHLOROETHYLENE	<0.5	ug/l
1, 1, 2-TRICHLOROETHANE	<0.5	ug/l
CHLORODIBROMOMETHANE	<0.5	ug/l
TRANS-1, 3- DICHLOROPROPENE	<0.5	ug/l
BROMOFORM	<0.5	ug/l
TETRACHLOROETHYLENE	<0.5	ug/l
1, 1, 2, 2- TETRACHLOROETHANE	<0.5	ug/l
CHLOROBENZENE	<0.5	ug/l
VINYL CHLORIDE	<0.5	ug/l
BROMOCHLOROMETHANE	<0.5	ug/l
BROMOMETHANE	<0.5	ug/l
CHLOROETHANE	<0.5	ug/l
CHLOROMETHANE	<0.5	ug/l
DICHLORODIFLUOROMETHANE	<0.5	ug/l
1, 3 - DICHLOROPROPANE	<0.5	ug/l
2, 2- DICHLOROPROPANE	<0.5	ug/l
1,1- DICHLOROPROPENE	<0.5	ug/l
1, 1, 1, 2-TETRACHLOROETHANE	<0.5	ug/l
1, 2, 3- TRICHLOROPROPANE	<0.5	ug/l
1, 1, 2- TRICHLOROTRIFLUOROETHANE	<0.5	ug/l
TRICHLOROFLUOROMETHANE	<0.5	ug/l

SUFFOLK COUNTY WATER AUTHORITY LABORATORY POTABLE WATER ANALYSIS

LOCATION: TOWNLINE RD EH 1 TW S#118737 DATE: 6/13/02 TIME:1500		
DIBROMOMETHANE	<0.5	ug/l
1-CHLOROBUTANE	<5.0	ug/l
2-HEXANONE	<5.0	ug/l
4-METHYL-2-PENTANONE	<5.0	ug/l
ACETONE	<5.0	ug/l
ACRYLONITRILE	<5.0	ug/l
ALLYL CHLORIDE	<5.0	ug/l
CARBON DISULFIDE	<5.0	ug/l
CHLOROACETONITRILE	<5.0	ug/l
DIETHYL ETHER	<5.0	ug/l
ETHYL METHACRYLATE	<5.0	ug/l
HEXACHLOROETHANE	<5.0	ug/l
METHACRYLONITRILE	<5.0	ug/l
METHYL ACRYLATE	<5.0	ug/l
METHYL IODIDE	<5.0	ug/l
NITROBENZENE	<10.0	ug/l
PROPIONITRILE	<5.0	ug/l
BENZENE	<0.5	ug/l
TOLUENE	<0.5	ug/l
ETHYLBENZENE	<0.5	ug/l
PARA-META-XYLENE	<0.5	ug/l
ORTHO-XYLENE	<0.5	ug/l
PARA-DICHLOROBENZENE	<0.5	ug/l
META-DICHLOROBENZENE	<0.5	ug/l
ORTHO-DICHLOROBENZENE	<0.5	ug/l
BROMOBENZENE	<0.5	ug/l
n-BUTYLBENZENE	<0.5	ug/l
sec-BUTYLBENZENE	<0.5	ug/l
tert-BUTYLBENZENE	<0.5	ug/l
2-CHLOROTOLUENE	<0.5	ug/l
4-CHLOROTOLUENE	<0.5	ug/l
HEXACHLOROBUTADIENE	<0.5	ug/l
ISOPROPYLBENZENE	<0.5	ug/l
p-ISOPROPYLTOLUENE	<0.5	ug/l
NAPHTHALENE	<0.5	ug/l
n-PROPYLBENZENE	<0.5	ug/l
STYRENE	<0.5	ug/l
1, 2, 3-TRICHLOROBENZENE	<0.5	ug/l
1, 2, 4 TRICHLOROBENZENE	<0.5	ug/l
1, 2, 4 TRIMETHYLBENZENE	<0.5	ug/l
1, 3, 5 TRIMETHYLBENZENE	<0.5	ug/l
TERT BUTYL METHYL ETHER (MTBE)	<0.5	ug/l
2-BUTANONE (MEK)	<5.0	ug/l
TETRAHYDROFURAN	<5.0	ug/l
MICROEXTRACTABLES: EPA MTH.504.1		
1,2-DIBROMOETHANE	<0.010	ug/l
1,2-DIBROMO-3-CHLOROPROPANE	<0.010	ug/l
N-METHYLCARBAMATES: EPA MTH.531.1		
ALDICARB SULFOXIDE	<0.5	ug/l
ALDICARB SULFONE	<0.5	ug/l
OXAMYL	<0.5	ug/l
METHOMYL	<0.5	ug/l
3-HYDROXYCARBOFURAN	<0.5	ug/l
ALDICARB	<0.5	ug/l

SUFFOLK COUNTY WATER AUTHORITY LABORATORY POTABLE WATER ANALYSIS

LOCATION: TOWNLINE RD EH 1 TW S#118737 DATE: 6/13/02 TIME:1500		
CARBOFURAN	<0.5	ug/l
CARBARYL	<0.5	ug/l
1-NAPHTHOL	<0.5	ug/l
PROPOXUR	<0.5	ug/l
METHIOCARB	<0.5	ug/l
GLYPHOSATE: EPA MTH. 547		
GLYPHOSATE	<6.0	ug/l
PERCHLORATE: EPA MTH.314.0		
PERCHLORATE	<2.0	ug/l
DIQUAT AND PARAQUAT: EPA MTH. 549.2		
DIQUAT	<0.6	ug/l
PARAQUAT	<0.8	ug/l
CHLORINATED ACIDS: EPA MTH.515.3		
DALAPON	<0.97	ug/l
DICAMBA	<0.30	ug/l
2,4-D	<0.35	ug/l
PENTACHLOROPHENOL	<0.085	ug/l
SILVEX(2,4,5-TP)	<0.14	ug/l
DINOSEB	<0.82	ug/l
PICLORAM	<1.0	ug/l
TETRACHLOROTEREPHTHALIC (DCPA di-ACID)	<1.0	ug/l
BENTAZON	<0.88	ug/l
3,5-DICLOROBENZOIC ACID	<0.19	ug/l
4-NITROPHENOL	<0.91	ug/l
DICHLORPROP	<0.51	ug/l
CHORAMBEN	<0.10	ug/l
2,4,5-T	<0.20	ug/l
2,4-DB	<0.66	ug/l
ACIFLUORFEN	<1.0	ug/l
SEMIVOLATILE ORGANIC COMPOUNDS: EPA MTH. 525.2		
ISOPHORONE	<0.10	ug/l
DICHLORVOS	<0.10	ug/l
HEXACHLOROCYCLOPENTADIENE	<0.10	ug/l
EPTC	<0.10	ug/l
DIPHENAMID	<0.10	ug/l
DIMETHYLPHTHALATE	<2.0	ug/l
ACENAPHTHYLENE	<0.10	ug/l
MEVINPHOS	<0.10	ug/l
BUTYLATE	<0.10	ug/l
VERNOLATE	<0.10	ug/l
PEBULATE	<0.10	ug/l
ETRIDIAZOLE	<0.10	ug/l
2,6-DINITROTOLUENE	<0.10	ug/l
CHLORONEB	<0.10	ug/l
2-CHLOROBIPHENYL	<0.10	ug/l
TEBUTHIURON	<2.5	ug/l
FLUORENE	<0.10	ug/l
DIETHYPHTHALATE	<2.0	ug/l
2,4-DINITROTOLUENE	<0.10	ug/l
MOLINATE	<0.10	ug/l
PRONAMIDE	<0.10	ug/l
PROPACHLOR	<0.10	ug/l
ETHOPROP	<0.10	ug/l

SUFFOLK COUNTY WATER AUTHORITY LABORATORY POTABLE WATER ANALYSIS

LOCATION: TOWNLINE RD EH 1 TW S#118737 DATE: 6/13/02 TIME:1500		
CYCLOATE	<0.10	ug/l
CHLORPROPHAM	<0.10	ug/l
2,3-DICHLOROBIPHENYL	<0.10	ug/l
BHC, ALPHA	<0.10	ug/l
HEXACHLOROBENZENE	<0.10	ug/l
SIMAZINE	<0.10	ug/l
PROMETON	<0.10	ug/l
ATRAZINE	<0.10	ug/l
BHC, BETA	<0.10	ug/l
BHC, GAMMA(LINDANE)	<0.10	ug/l
METHYL PARAOXON	<0.10	ug/l
BHC, DELTA	<0.10	ug/l
PHENANTHRENE	<0.10	ug/l
PROPAZINE	<0.10	ug/l
ANTHRACENE	<0.10	ug/l
CHLORDANE (GAMMA)	<0.10	ug/l
NORFLURAZON	<0.10	ug/l
TERBACIL	<0.10	ug/l
2,4,5-TRICHLOROBIPHENYL	<0.10	ug/l
TETRACHORVINPHOS	<0.10	ug/l
CHLOROTHALONIL	<0.10	ug/l
HEPTACHLOR	<0.10	ug/l
METRIBUZIN	<0.10	ug/l
DI-N-BUTYLPHTHALATE	<2.0	ug/l
SMIETRYN	<0.10	ug/l
AMETRYN	<0.10	ug/l
ALACHLOR	<0.10	ug/l
BROMACIL	<0.10	ug/l
2,2',4,4'-TETRACHLOROBIPHENYL	<0.10	ug/l
METOLACHLOR	<0.10	ug/l
CYANAZINE	<0.10	ug/l
ALDRIN	<0.10	ug/l
TERBUTRYN	<0.10	ug/l
TRIADIMEFON	<0.10	ug/l
DCPA	<0.10	ug/l
MGK 264 - ISOMER A	<0.10	ug/l
MGK 264 - ISOMER B	<0.10	ug/l
HEPTACHLOR EPOXIDE	<0.10	ug/l
22'3'46-PENTACHLOROBIPHENYL	<0.10	ug/l
PYRENE	<0.10	ug/l
ENDOSULFAN I	<0.10	ug/l
CHLORDANE (ALPHA)	<0.10	ug/l
CHLORDANE(TRANS NONACHLOR)	<0.10	ug/l
NAPROPAMIDE	<0.10	ug/l
BUTACHLOR	<0.10	ug/l
4,4' - DDD	<0.10	ug/l
4,4' - DDT	<0.10	ug/l
4,4' - DDE	<0.10	ug/l
DIELDRIN	<0.10	ug/l
22'44'56'-HEXACHLOROBIPHENYL	<0.10	ug/l
TRICYCAZOLE	<0.10	ug/l
ENDRIN	<0.10	ug/l
CHLOROBENZILATE	<0.10	ug/l
PROMETRYN	<0.10	ug/l
ENDOSULFAN II	<0.10	ug/l
ENDRIN ALDEHYDE	<0.10	ug/l
ENDOSULFAN SULFATE	<0.10	ug/l
HEXAZINONE	<0.10	ug/l
DI(2-ETHYLEHEXYL)ADIPATE	<2.0	ug/l

SUFFOLK COUNTY WATER AUTHORITY LABORATORY POTABLE WATER ANALYSIS

LOCATION: TOWNLINE RD EH 1 TW S#118737 DATE: 6/13/02 TIME:1500		
BUTYLBENZYLPHTHALATE	<2.0	ug/l
BENZ[A]ANTHRACENE	<0.10	ug/l
CHRYSENE	<0.10	ug/l
22'33'44'6 HEPTACHLOROBIPHENYL	<0.10	ug/l
METHOXYCHLOR	<0.10	ug/l
22'33'45'66'OCTACHLOROBIPHENYL	<0.10	ug/l
DI(2-ETHYLHEXYL)PHTHALATE	<2.0	ug/l
FENARIMOL	<0.10	ug/l
CIS-PERMETHRIN	<0.10	ug/l
TRANS-PERMETHRIN	<0.10	ug/l
BENZO[B]FLUORANTHENE	<0.10	ug/l
BENZO[K]FLUORANTHENE	<0.10	ug/l
BENZO[A]PYRENE	<0.10	ug/l
FLUIDONE	<0.10	ug/l
ACETOCHLOR	<0.10	ug/l
TRIFLURALIN	<0.10	ug/l
CHLORNEB	<0.10	ug/l
CHLORPYRIFOS	<0.10	ug/l
DIAZINON	<0.10	ug/l
TRIADIMEFON	<0.10	ug/l
IMIDACHLOPRID	<0.10	ug/l
MALATHION	<0.10	ug/l
METALAXYL	<0.10	ug/l
MIREX	<0.10	ug/l
INDENO[1,2,3,C,D]PYRENE	<0.10	ug/l
DIBENZ[A,H]ANTHRACENE	<0.10	ug/l
BENZO[G,H,I]PERYLENE	<0.10	ug/l
TECHNICAL CHLORDANE I	<1.0	ug/l
TECHNICAL CHLORDANE II	<1.0	ug/l
TECHNICAL CHLORDANE III	<1.0	ug/l
TOXAPHENE	<1.0	ug/l

APPENDIX D

New York State Department of Environmental Conservation
Division of Fish, Wildlife & Marine Resources
Wildlife Resources Center – New York Natural Heritage Program
700 Troy-Schenectady Road, Latham, New York 12110-2400
Phone: (518) 783-3932 FAX: (518) 783-3916

John P. Cahill
Commissioner

September 21, 1999

Shayawn M. Lockhart
TriState Planning & Engineering
208 Glen Cove Rd
Old Westbury, NY 11568-1524

Dear Mr. Lockhart:

In response to your recent request, we have reviewed the New York Natural Heritage Program databases with respect to the proposed Improvements to the East Hampton Airport, area as indicated on the map you provided, located in the Town of East Hampton, Suffolk County.

> We have no records of <u>known</u> occurrences of rare or state-listed animals and plants, of significant natural communities, or of other significant habitats, on or in the immediate vicinity of your site.

The absence of data does not mean, however, that rare or state-listed species, natural communities or other significant habitats do not exist on or adjacent to the proposed site, but rather that our files currently do not contain any information which indicates their presence. For most sites, comprehensive field surveys have not been conducted. For these reasons, we cannot provide a definitive statement on the presence or absence of rare or state-listed species or of significant natural communities. This information should <u>not</u> be substituted for on-site surveys that may be required for environmental impact assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

This response applies only to known occurrences of rare or state-listed animals and plants, of significant natural communities, and of other significant habitats. For information regarding regulated areas or permits that may be required under state law (e.g., <u>regulated wetlands</u>), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, at the enclosed address.

Sincerely,

Betty Ketcham

Betty A. Ketcham, Information Services
NY Natural Heritage Program

Encs.
Cc: Reg. 3, Wildlife Mgr.

New York State Department of Environmental Conservation
Division of Fish, Wildlife & Marine Resources
Wildlife Resources Center – New York Natural Heritage Program
700 Troy-Schenectady Road, Latham, New York 12110-2400
Phone: (518) 783-3932 FAX: (518) 783-3916

John P. Cahill
Commissioner

November 7, 2000

Shavawn M. Lockhart
Tri State Planning & Engineering
208 Glen Cove Rd
Old Westbury, NY 11568-1524

Dear Ms. Lockhart:

In response to your recent request, we have reviewed the New York Natural Heritage Program databases with respect to the proposed Improvements to the East Hampton Airport, area as indicated on the map you provided, located in Town of East Hampton, Suffolk County.

Enclosed is a report of rare of state-listed animals and plants, significant natural communities, and other significant habitats, which our databases indicate occur, or may occur, on your site or in the immediate vicinity of your site. This information is considered sensitive and may not be released to the public without permission from the New York Natural Heritage Program.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our databases. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. This information should not be substituted for on-site surveys that may be required for environmental impact assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

This response applies only to known occurrences of rare or state-listed animals and plants, of significant natural communities, and of other significant habitats. For information regarding regulated areas or permits that may be required under state law (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, at the enclosed address.

Sincerely,

Teresa Mackey

Teresa Mackey, Information Services
NY Natural Heritage Program

Encs.
cc: Reg. 1, Wildlife Mgr

Orland J. Blanchard, Jr., Ph.D.
Freudenthal & Elkowitz Consulting Group, Inc.

368 Veterans Memorial Highway • Commack, New York 11725
Telephone: (631) 499-2222 • Facsimile: (631) 499-5928

PRESENT POSITION:

Dr. Blanchard is a Senior Environmental Scientist with Freudenthal & Elkowitz Consulting Group, Inc. who specializes in ecology and is a Professor of Biology at Long Island University, C.W. Post Campus.

PROFESSIONAL EXPERIENCE:

Dr. Blanchard is a broadly trained and respected field biologist with an extensive knowledge of the biota of the Northeast and with a range of expertise in wetlands evaluation, botanical and invertebrate inventory and the study of rare and endangered plants and animals.

Prior to establishing himself on Long Island in 1980, Dr. Blanchard lived and studied in Massachusetts, upstate New York and Indiana. Teaching and field research have taken him throughout the United States and to the West Indies, Mexico, Central America, and East Africa.

Dr. Blanchard has been active as a consultant and contractee since 1984, working directly or indirectly for such clients as the City of New York, the State Department of Transportation, the State Department of Environmental Conservation, the New York Natural Heritage Program and The Nature Conservancy. This work has included freshwater wetlands flagging and classification, botanical inventories, insect inventories, rare insect surveys, tiger salamander searches, and studies of the ecology of the federally endangered sandplain gerardia.

Dr. Blanchard has been associated with Freudenthal & Elkowitz Consulting Group, Inc. since 1989, and representative projects for which Dr. Blanchard has performed ecological investigations include:

- NYSDEC Wetland delineation and ecological assessment for 20+ acre proposed residential subdivision in Brookhaven;

- Ecological impact assessments as part of environmental impact statements prepared by Freudenthal & Elkowitz Consulting Group, Inc. throughout Long Island;

- NYSDEC and USACOE wetland delineation and ecological assessment for 23+ acre proposed residential development in Kings Point; and

PROFESSIONAL EXPERIENCE: (Cont'd.)

- Ecological investigation for proposed 22+ acre commercial center in Stony Brook.

Dr. Blanchard is a recognized field biologist on Long Island. Dr. Blanchard is a past President (1988-89) of the Long Island Botanical Society; and Chairman of a committee that is preparing an atlas of the plants of Long Island; a past member of the Board of Trustees of The Nature Conservancy and past Chairman of the Board's Stewardship Committee; and member of the Natural History Advisory Board of the Friends of Long Island Heritage. He has recently been named to the Advisory Committee of the New York Flora Association. At the present time he is collaborating with a fellow botanist on a comparative study of the grasslands of Long Island.

In his academic capacities, Dr. Blanchard has taught graduate courses in Ecology, Entomology and Vascular Plants of Long Island, and as Director of the Graduate Environmental Studies Program at C.W. Post he has established numerous contacts in the environmental community on the Island.

EDUCATION:

Ph.D., Botany, Cornell University, 1976 (major: Plant Taxonomy; minors: Plant Ecology and Entomology)

A.B., Biology, Clark University, 1966

APPENDIX E

APPENDIX A

PART I	INM INPUT
PART II	INM OUTPUT
PART III	NOISE CONTOURS
PART IV	INM AIRCRAFT DATABASE
PART V	INM AIRCRAFT SUBSTITUTION DATABASE

PART I: INTEGRATED NOISE MODEL INPUT

According to the *FAR Part 150 - Airport Noise Compatibility Planning*, Sec. A150.101 Noise contours and land usage, Subsec. (a);

> *"To determine the extent of the noise impact around an airport, airports proprietors developing noise exposure maps in accordances with this must develop Ldn contours. Continuous contours must be developed for YDNL levels of 65, 70, and 75 (additional contours may be developed and depicted when appropriate)".*

The FAA required methodology for analyzing aircraft noise conditions at airports involves use of the Integrated Noise Model (INM). The INM was developed by the Transportation Systems Center of the USDOT at Cambridge, Massachusetts and is undergoing continuous refinement. The model is designed as a conservative planning tool and is periodically updated. Version 6.0 is the most current version of the model and was used for the noise analysis at East Hampton Airport.

Methodology

The INM works by defining a network of grid points at ground level around an airport. It then selects the shortest distance from each grid point to each flight track and computes the noise exposure generated by each aircraft operation by type of aircraft. Corrections are applied for atmospheric acoustical attenuation, acoustical shielding of the aircraft engines by the aircraft itself, and aircraft speed variations. In addition, the model applies a penalty to nighttime operations to account for the increased annoyance of nighttime activity (one nighttime aircraft is considered equivalent to 10 daytime operations of the same type of aircraft). The noise exposure levels for each aircraft are then summed logarithmically at each grid location. The cumulative noise exposure levels at all grid points are then used to develop noise exposure contours for selected values (e.g. 65, 70, and 75 DNL).

INM Input Data

In order to develop DNL noise contours, the INM uses a series of input factors. Some of these factors are included in the database for the model (such as engine noise levels, thrust settings, aircraft profiles and aircraft speeds) and others are Airport-specific and need to be determined for each condition analyzed. The airport-specific data includes such information as the airport elevation, average annual temperature, runway layout and the mathematical description of ground tracks below the flight tracks. Other INM input data specific to the operations at East Hampton Airport include:

- Current aircraft operations and fleet mix,
- Runway usage in each direction by type of aircraft,
- Landing and departure flight tracks, and
- Day versus nighttime operations.

Aircraft Fleet Mix and Time-of-Day Operations

A key element of the INM input data is the aircraft operations and fleet mix reflecting the aircraft types conducting approaches, departures, and touch and go operations. Since there is not an air traffic controller at the East Hampton Airport, assumptions were made for the number of operations of each aircraft type and the time of day the operations occur. For the purpose of defining night and day operations, the INM identifies daytime operations as occurring between 7 a.m. and 10 p.m. and nighttime operations as occurring between 10 p.m. and 7 a.m.

Version 6 (utilized for this study) of the INM includes a database of aircraft identified by FAA as typical for use in aircraft noise studies. Not all aircraft are represented in this database thus, in some instances, similar "equivalent" aircraft were substituted and used to represent the fleet mix at East Hampton Airport. The substitutions were based on common noise signatures, engine performance criteria and other characteristics. Part IV of this appendix lists the INM Aircraft Database and Part V lists the INM Aircraft Substitution Database.

Jet aircraft using East Hampton Airport often operate in a limited weight configuration because of the length of Runway 10-28. In other words, the aircraft do not carry a full load of fuel or passengers and operate at reduced power settings. This produces less noise than if the aircraft operate on longer runways with full loads.

Aircraft Operations

The number of aircraft operations at East Hampton Airport have remained relatively constant. The FAA's Terminal Area Forecast does not anticipate significant growth in the number of operations however, to reflect the sensitivity of the potential for increased activity, a 15% increase was applied to the next five years to depict a 2005 noise scenario.

The East Hampton Airport activity peaks in the summer months. Approximately 60% of the activity occurs in the summer months (June, July, August) as indicated by the Airport fuel sales. It can therefore be concluded that the maximum noise impact would be experienced during those months.

As part of the analysis, a project was included for future consideration which assumed that a precision approach might be added to Runway 10. This would make that runway open during poor weather conditions when it would now be closed. Based upon the analysis of weather and aircraft presented in Appendix C the availability of a precision approach will overall add only 3.2 % more aircraft operations, they will all occur on Runway 10. The three scenarios are presented in Table A-1.

Aircraft Activity by Aircraft Type and Season **Table A-1**

Annual Aircraft Operations					Avg. Day Annual	Avg. Day June-Aug. (60%)
Year	Jets	Commuters	Propellers	Total		
2000	1,538	7,688	42,024	51,250	140.41	334.24
2005	1,768	8,841	48,329	58,938	161.47	384.38
Future	1,826	9,124	49,874	60,824	166.00	396.68

The allocation of aircraft operations to specific type of aircraft, average day, time of day, runway used, and flight tracks are presented in Tables A-5 thru A-13.

Stage Lengths

Stage length, or the distance an aircraft travels to its next destination is determined by the fuel load and thus, the weight of an aircraft and its departure profile. Stage lengths for jet aircraft at East Hampton Airport were limited due to the length of Runway 10-28. Most jets will not depart with a full load of fuel, thus their stage length was limited to 500 nautical miles.

Runway Usage

The wind conditions at East Hampton Airport favors Runway 10-28. Approximately 70% of the propeller aircraft and 100% of the jet and commuter aircraft use Runway 10-28. Small propeller aircraft use Runways 4-22 and 16-34 equally throughout the year at different times as the prevailing winds shift with the seasons. Each runway is assumed to serve about 15% of the propeller aircraft traffic. The usage allocations, including the use of a precision approach to Rwy 10, are shown in Table A-2.

Runway Usage by Type of Aircraft **Table A-2**

	Runway					
Aircraft Type	4	10	16	22	28	34
Jets:						
without precision approach	0.00%	40.00%	0.00%	0.00%	60.00%	0.00%
with precision approach Rwy 10	0.00%	41.86%	0.00%	0.00%	58.14%	0.00%
Commuters:						
without precision approach	0.00%	40.00%	0.00%	0.00%	60.00%	0.00%
with precision approach Rwy 10	0.00%	41.86%	0.00%	0.00%	58.14%	0.00%
Propeller:						
without precision approach	5.00%	32.00%	6.00%	10.00%	38.00%	9.00%
with precision approach Rwy 10	4.85%	34.11%	5.81%	9.69%	36.82%	8.72%

Time of Day/Night Operations

Day and night time splits refer to the percentage of traffic that operate during the day (7 a.m. to 10 p.m.) and that which operate at night (10 p.m. to 7 a.m.). The day and night distinction is important when developing noise contours as the INM places a 10 decibel-weighted penalty on night-time activity. The standard Day-Night split, was applied to East Hampton Airport. The standard spilt assumes 92 percent day operations and 8 percent nighttime operations. These percentages were also used for the year 2005 analyses.

Flight Tracks: Arrival, Departure, Touch and Go Operations

Aircraft depart and arrive on various flight tracks. In order to model the flight tracks for the INM, assumptions were made as to the position and procedures for each flight. The flight tracks were based on standard arrival and departure information, airport management comments, and the common destinations of itinerant aircraft flights in the northeast. It should be recognized that no two aircraft fly exactly the same path due to factors such as equipment differences, pilot skill, instrumentation and weather conditions. Thus, the flight tracks should be considered as representative "centerlines of flight corridors" into and out of the Airport.

The flight tracks are presented graphically, in Figures A-1 thru A-3.

Grid Point Analysis

A grid point analysis was completed to determine the modeled noise levels at five geographic points, points A-E, around the Airport. The points were selected based upon their proximity to residential and other developed land uses. The grid point geographical coordinates are listed in Table A-3 and are graphically located on the plannemetric use maps in Figures A-1 thru A-3.

Key Coordinates for Grid Points **Table A-3**

Grid	INM Coordinates		INM Decimal		State Plane Coordinates		D/M/S	
A	x (nmi)	-1.4352	Lat	40.960741	North	293948.2124	Lat	40°57'38.6676"
	y (nmi)	-0.0700	Lon	-72.283424	East	1458331.6751	Lon	72°17'00.3264"
B	x (nmi)	-1.1155	Lat	40.954532	North	291724.5812	Lat	40°57'16.3152"
	y (nmi)	-0.3024	Lon	-72.276389	East	1460318.8516	Lon	72°16'35.0004"
C	x (nmi)	-0.2441	Lat	40.952850	North	291216.6319	Lat	40°57'10.2600"
	y (nmi)	-0.4034	Lon	-72.257220	East	1465624.9097	Lon	72°15'25.9920"
D	x (nmi)	1.0788	Lat	40.959576	North	293827.9717	Lat	40°57'34.4736"
	y (nmi)	0.0000	Lon	-72.228119	East	1473612.2710	Lon	72°13'41.2284"
E	x (nmi)	0.2800	Lat	40.970423	North	297613.6627	Lat	40°58'13.5228"
	y (nmi)	0.6503	Lon	-72.258012	East	1465278.8626	Lon	72°15'28.8432"

Runway End Coordinates

The runway end coordinates used for the INM model are listed in Table A-4.

Runway End Coordinates **Table A-4**

Rwy	INM Coordinates		INM Decimal		State Plane Coordinates		D/M/S	
4	x (nmi)	-0.1285	Lat	40.956976	North	292733.8465	Lat	40°57'25.116"
	y (nmi)	-0.1560	Lon	-72.254678	East	1466297.0508	Lon	72°15'16.840"
	Elev	45.9	Elev	45.9	Elev	45.9	Elev	45.9
22	x (nmi)	0.0691	Lat	40.962998	North	294951.4274	Lat	40°57'46.795"
	y (nmi)	0.2051	Lon	-72.250331	East	1467453.6702	Lon	72°15'01.191"
	Elev	40.6	Elev	40.6	Elev	40.6	Elev	40.6
10	x (nmi)	-0.3843	Lat	40.958883	North	293397.7199	Lat	40°57'31.981"
	y (nmi)	-0.0416	Lon	-72.260305	East	1464729.2521	Lon	72°15'37.098"
	Elev	55.5	Elev	55.5	Elev	55.5	Elev	55.5
28	x (nmi)	0.3159	Lat	40.959102	North	293562.3565	Lat	40°57'32.768"
	y (nmi)	-0.0285	Lon	-72.244901	East	1468981.1784	Lon	72°14'41.646"
	Elev	30.8	Elev	30.8	Elev	30.8	Elev	30.8
16	x (nmi)	0.0050	Lat	40.962853	North	294890.6100	Lat	40°57'46.274"
	y (nmi)	0.1964	Lon	-72.251726	East	1467065.3360	Lon	72°15'06.217"
	Elev	41.9	Elev	41.9	Elev	41.9	Elev	41.9
34	x (nmi)	0.1929	Lat	40.957576	North	293006.4492	Lat	40°54'27.274"
	y (nmi)	-0.1175	Lon	-72.247607	East	1468244.7455	Lon	72°14'51.388"
	Elev	30.0	Elev	30.0	Elev	30.0	Elev	30.0

The allocation of aircraft operations to type of aircraft, day verses night, touch-and-go operations, and assignments of flights to flight tracks is provided in detail in Tables 5 through 14.

Table A-5			AIRCRAFT OPERATIONS BY TYPE: 2000				
				AVG. DAY OPS			
EQUIVALENT				DAY		NIGHT	
AIRCRAFT		AIRCRAFT OPERATIONS		(92%)	0.5	(8%)	0.5
TYPES [1]	% of MIX	ANNUAL	AVG. DAY	Ops	Flights	Ops	Flights
CNA 500	0.48%	247	0.677	0.62	0.31	0.05	0.03
FAL 20	0.19%	97	0.267	0.25	0.12	0.02	0.01
G-III	0.04%	19	0.053	0.05	0.02	0.00	0.00
G-IV	0.02%	10	0.028	0.03	0.01	0.00	0.00
LEAR-25	0.10%	51	0.140	0.13	0.06	0.01	0.01
LEAR-35	1.49%	764	2.092	1.92	0.96	0.17	0.08
MU 3001	0.49%	251	0.688	0.63	0.32	0.06	0.03
Sabar-80	0.19%	97	0.267	0.25	0.12	0.02	0.01
Subtotal Jets	3.00%	1,538	4.212	3.875	1.938	0.337	0.17
BEC-58P	18.00%	9,225	25.274	23.25	11.63	2.02	1.01
CNA441	4.00%	2,050	5.616	5.17	2.58	0.45	0.22
DHC-6	11.00%	5,638	15.445	14.21	7.10	1.24	0.62
GASEPF	12.00%	6,150	16.849	15.50	7.75	1.35	0.67
GASEPV	20.00%	10,250	28.082	25.84	12.92	2.25	1.12
S-76	2.00%	1,025	2.808	2.58	1.29	0.22	0.11
Subtotal Others	67.00%	34,338	94.075	86.55	43.27	7.53	3.76
Subtotal	70.00%	35,875	98.288	90.42	45.21	7.86	3.93
TOUCH AND GOES:							
BEC58P	6.00%	3,075	8.425	7.75	3.88	0.67	0.34
GASEPF	24.00%	12,300	33.699	31.00	15.50	2.70	1.35
Subtotal	30.00%	15,375	42.123	38.75	19.38	3.37	1.68
TOTAL	100.00%	51,250	140.411	129.18	64.59	11.23	5.62
[1] Represents several aircraft which can utilize the existing Runways.							
CONTROL TOTAL		51,250	Annual Operations				

Table A-6	AIRCRAFT OPERATIONS BY TYPE: 2000 (JUNE, JULY, AUGUST)						
				AVG. DAY OPS			
EQUIVALENT				DAY		NIGHT	
AIRCRAFT		AIRCRAFT OPERATIONS		(92%)	0.5	(8%)	0.5
TYPES [1]	% of MIX	ANNUAL	AVG. DAY	Ops	Flights	Ops	Flights
			JUNE-AUG				
CNA 500	0.48%	247	1.611	1.48	0.74	0.13	0.06
FAL 20	0.19%	97	0.635	0.58	0.29	0.05	0.03
G-III	0.04%	19	0.127	0.12	0.06	0.01	0.01
G-IV	0.02%	10	0.067	0.06	0.03	0.01	0.00
LEAR-25	0.10%	51	0.334	0.31	0.15	0.03	0.01
LEAR-35	1.49%	764	4.980	4.58	2.29	0.40	0.20
MU 3001	0.49%	251	1.638	1.51	0.75	0.13	0.07
Sabar-80	0.19%	97	0.635	0.58	0.29	0.05	0.03
Subtotal Jets	3.00%	1,538	10.027	9.225	4.613	0.802	0.40
BEC-58P	18.00%	9,225	60.163	55.35	27.68	4.81	2.41
CNA441	4.00%	2,050	13.370	12.30	6.15	1.07	0.53
DHC-6	11.00%	5,638	36.766	33.83	16.91	2.94	1.47
GASEPF	12.00%	6,150	40.109	36.90	18.45	3.21	1.60
GASEPV	20.00%	10,250	66.848	61.50	30.75	5.35	2.67
S-76	2.00%	1,025	6.685	6.15	3.08	0.53	0.27
Subtotal Others	67.00%	34,338	223.940	206.03	103.01	17.92	8.96
Subtotal	70.00%	35,875	233.967	215.25	107.63	18.72	9.36
TOUCH AND GOES:							
BEC58P	6.00%	3,075	20.054	18.45	9.23	1.60	0.80
GASEPF	24.00%	12,300	80.217	73.80	36.90	6.42	3.21
Subtotal	30.00%	15,375	100.272	92.25	46.13	8.02	4.01
TOTAL	100.00%	51,250	334.239	307.50	153.75	26.74	13.37
[1] Represents several aircraft which can utilize the existing Runways.							
CONTROL TOTAL		51,250	Annual Operations				

Table A-7 AIRCRAFT OPERATIONS BY TYPE: 2005

EQUIVALENT AIRCRAFT TYPES [1]	% of MIX	AIRCRAFT OPERATIONS ANNUAL	AVG. DAY	AVG. DAY OPS DAY (92%) Ops	DAY 0.5 Flights	NIGHT (8%) Ops	NIGHT 0.5 Flights
CNA 500	0.48%	284	0.778	0.72	0.36	0.06	0.03
FAL 20	0.19%	112	0.307	0.28	0.14	0.02	0.01
G-III	0.04%	22	0.061	0.06	0.03	0.00	0.00
G-IV	0.02%	12	0.032	0.03	0.01	0.00	0.00
LEAR-25	0.10%	59	0.161	0.15	0.07	0.01	0.01
LEAR-35	1.49%	878	2.406	2.21	1.11	0.19	0.10
MU 3001	0.49%	289	0.791	0.73	0.36	0.06	0.03
Sabar-80	0.19%	112	0.307	0.28	0.14	0.02	0.01
Subtotal Jets	3.00%	1,768	4.844	4.457	2.228	0.388	0.19
BEC-58P	18.00%	10,609	29.065	26.74	13.37	2.33	1.16
CNA441	4.00%	2,358	6.459	5.94	2.97	0.52	0.26
DHC-6	11.00%	6,483	17.762	16.34	8.17	1.42	0.71
GASEPF	12.00%	7,073	19.377	17.83	8.91	1.55	0.78
GASEPV	20.00%	11,788	32.295	29.71	14.86	2.58	1.29
S-76	2.00%	1,179	3.229	2.97	1.49	0.26	0.13
Subtotal Others	67.00%	39,488	108.187	99.53	49.77	8.65	4.33
Subtotal	70.00%	41,256	113.031	103.99	51.99	9.04	4.52
TOUCH AND GOES:							
BEC58P	6.00%	3,536	9.688	8.91	4.46	0.78	0.39
GASEPF	24.00%	14,145	38.753	35.65	17.83	3.10	1.55
Subtotal	30.00%	17,681	48.442	44.57	22.28	3.88	1.94
TOTAL	100.00%	58,938	161.473	148.55	74.28	12.92	6.46

[1] Represents several aircraft which can utilize the existing Runways.

CONTROL TOTAL 58,938 Annual Operations

Table A-8		AIRCRAFT OPERATIONS BY TYPE: 2005 (JUNE, JULY, AUGUST)					
				AVG. DAY OPS			
EQUIVALENT				DAY		NIGHT	
AIRCRAFT		AIRCRAFT OPERATIONS		(92%)	0.5	(8%)	0.5
TYPES [1]	% of MIX	ANNUAL	AVG. DAY	Ops	Flights	Ops	Flights
			JUNE-AUG				
CNA 500	0.48%	284	1.853	1.70	0.85	0.15	0.07
FAL 20	0.19%	112	0.730	0.67	0.34	0.06	0.03
G-III	0.04%	22	0.146	0.13	0.07	0.01	0.01
G-IV	0.02%	12	0.077	0.07	0.04	0.01	0.00
LEAR-25	0.10%	59	0.384	0.35	0.18	0.03	0.02
LEAR-35	1.49%	878	5.727	5.27	2.63	0.46	0.23
MU 3001	0.49%	289	1.883	1.73	0.87	0.15	0.08
Sabar-80	0.19%	112	0.730	0.67	0.34	0.06	0.03
Subtotal Jets	3.00%	1,768	11.531	10.609	5.304	0.923	0.46
BEC-58P	18.00%	10,609	69.188	63.65	31.83	5.54	2.77
CNA441	4.00%	2,358	15.375	14.15	7.07	1.23	0.61
DHC-6	11.00%	6,483	42.281	38.90	19.45	3.38	1.69
GASEPF	12.00%	7,073	46.125	42.44	21.22	3.69	1.85
GASEPV	20.00%	11,788	76.875	70.73	35.36	6.15	3.07
S-76	2.00%	1,179	7.688	7.07	3.54	0.61	0.31
Subtotal Others	67.00%	39,488	257.531	236.93	118.46	20.60	10.30
Subtotal	70.00%	41,256	269.063	247.54	123.77	21.53	10.76
TOUCH AND GOES:							
BEC58P	6.00%	3,536	23.063	21.22	10.61	1.85	0.92
GASEPF	24.00%	14,145	92.250	84.87	42.44	7.38	3.69
Subtotal	30.00%	17,681	115.313	106.09	53.04	9.22	4.61
TOTAL	100.00%	58,938	384.375	353.63	176.81	30.75	15.37
[1] Represents several aircraft which can utilize the existing Runways.							
CONTROL TOTAL		58,938	Annual Operations				

Table A-9

AIRCRAFT OPERATIONS BY TYPE: Future with Precision Approach Rwy 10

EQUIVALENT AIRCRAFT TYPES [1]	% of MIX	AIRCRAFT OPERATIONS ANNUAL	AIRCRAFT OPERATIONS AVG. DAY	AVG. DAY OPS DAY (92%) Ops	AVG. DAY OPS DAY 0.5 Flights	AVG. DAY OPS NIGHT (8%) Ops	AVG. DAY OPS NIGHT 0.5 Flights
CNA 500	0.48%	293	0.803	0.74	0.37	0.06	0.03
FAL 20	0.19%	116	0.317	0.29	0.15	0.03	0.01
G-III	0.04%	23	0.063	0.06	0.03	0.01	0.00
G-IV	0.02%	12	0.033	0.03	0.02	0.00	0.00
LEAR-25	0.10%	61	0.167	0.15	0.08	0.01	0.01
LEAR-35	1.49%	906	2.483	2.28	1.14	0.20	0.10
MU 3001	0.49%	298	0.817	0.75	0.38	0.07	0.03
Sabar-80	0.19%	116	0.317	0.29	0.15	0.03	0.01
Subtotal Jets	3.00%	1,826	4.999	4.599	2.300	0.400	0.20
BEC-58P	18.00%	10,948	29.995	27.60	13.80	2.40	1.20
CNA441	4.00%	2,433	6.666	6.13	3.07	0.53	0.27
DHC-6	11.00%	6,691	18.330	16.86	8.43	1.47	0.73
GASEPF	12.00%	7,299	19.997	18.40	9.20	1.60	0.80
GASEPV	20.00%	12,165	33.328	30.66	15.33	2.67	1.33
S-76	2.00%	1,216	3.333	3.07	1.53	0.27	0.13
Subtotal Others	67.00%	40,752	111.649	102.72	51.36	8.93	4.47
Subtotal	70.00%	42,577	116.648	107.32	53.66	9.33	4.67
TOUCH AND GOES:							
BEC58P	6.00%	3,649	9.998	9.20	4.60	0.80	0.40
GASEPF	24.00%	14,598	39.994	36.79	18.40	3.20	1.60
Subtotal	30.00%	18,247	49.992	45.99	23.00	4.00	2.00
TOTAL	100.00%	60,824	166.640	153.31	76.65	13.33	6.67

[1] Represents several aircraft which can utilize the existing Runways.

CONTROL TOTAL		60,824	Annual Operations

Table A-10

AIRCRAFT OPERATIONS BY TYPE: (JUNE, JULY, AUGUST)

Future with Precision Approach Rwy 10

EQUIVALENT AIRCRAFT TYPES [1]	% of MIX	AIRCRAFT OPERATIONS ANNUAL	AVG. DAY JUNE-AUG	AVG. DAY OPS DAY (92%) Ops	DAY 0.5 Flights	NIGHT (8%) Ops	NIGHT 0.5 Flights
CNA 500	0.48%	293	1.912	1.76	0.88	0.15	0.08
FAL 20	0.19%	116	0.754	0.69	0.35	0.06	0.03
G-III	0.04%	23	0.151	0.14	0.07	0.01	0.01
G-IV	0.02%	12	0.079	0.07	0.04	0.01	0.00
LEAR-25	0.10%	61	0.397	0.36	0.18	0.03	0.02
LEAR-35	1.49%	906	5.910	5.44	2.72	0.47	0.24
MU 3001	0.49%	298	1.944	1.79	0.89	0.16	0.08
Sabar-80	0.19%	116	0.754	0.69	0.35	0.06	0.03
Subtotal Jets	3.00%	1,826	11.900	10.948	5.474	0.952	0.48
BEC-58P	18.00%	10,948	71.402	65.69	32.84	5.71	2.86
CNA441	4.00%	2,433	15.867	14.60	7.30	1.27	0.63
DHC-6	11.00%	6,691	43.634	40.14	20.07	3.49	1.75
GASEPF	12.00%	7,299	47.601	43.79	21.90	3.81	1.90
GASEPV	20.00%	12,165	79.335	72.99	36.49	6.35	3.17
S-76	2.00%	1,216	7.934	7.30	3.65	0.63	0.32
Subtotal Others	67.00%	40,752	265.772	244.51	122.26	21.26	10.63
Subtotal	70.00%	42,577	277.673	255.46	127.73	22.21	11.11
TOUCH AND GOES:							
BEC58P	6.00%	3,649	23.801	21.90	10.95	1.90	0.95
GASEPF	24.00%	14,598	95.202	87.59	43.79	7.62	3.81
Subtotal	30.00%	18,247	119.003	109.48	54.74	9.52	4.76
TOTAL	100.00%	60,824	396.675	364.94	182.47	31.73	15.87
[1] Represents several aircraft which can utilize the existing Runways.							
CONTROL TOTAL		60,824	Annual Operations				

Table A-11 — RUNWAY UTILIZATION WITH CURRENT NON-PRECISION APPROACHES

EQUIVALENT AIRCRAFT TYPES	Rwy 10	Rwy 28	Rwy 4	Rwy 22	Rwy 16	Rwy 34
CNA 500	40.00%	60.00%	NA	NA	NA	NA
FAL 20	40.00%	60.00%	NA	NA	NA	NA
G-III	40.00%	60.00%	NA	NA	NA	NA
G-IV	40.00%	60.00%	NA	NA	NA	NA
LEAR-25	40.00%	60.00%	NA	NA	NA	NA
LEAR-35	40.00%	60.00%	NA	NA	NA	NA
MU 3001	40.00%	60.00%	NA	NA	NA	NA
Sabar-80	40.00%	60.00%	NA	NA	NA	NA
BEC-58P	40.00%	60.00%	NA	NA	NA	NA
CNA441	40.00%	60.00%	NA	NA	NA	NA
DHC-6	40.00%	60.00%	NA	NA	NA	NA
GASEPF	32.00%	38.00%	5.00%	10.00%	6.00%	9.00%
GASEPV	32.00%	38.00%	5.00%	10.00%	6.00%	9.00%
S-76	32.00%	38.00%	5.00%	10.00%	6.00%	9.00%
TOUCH AND GOES:						
BEC58P	40.00%	60.00%	NA	NA	NA	NA
GASEPF	32.00%	38.00%	5.00%	10.00%	6.00%	9.00%
10 Knots wind coverage:						
	43.81%	63.46%	48.54%	58.31%	53.44%	54.93%
5 Knots wind coverage:						
	32.50%	38.95%	35.12%	47.23%	36.65%	41.39%
ANNUAL CALMS =19.3% (all weather)						

Table A-12		RUNWAY UTILIZATION WITH PRECISION APPROACH ON RUNWAY 10				
EQUIVALENT AIRCRAFT TYPES	Rwy 10	Rwy 28	Rwy 4	Rwy 22	Rwy 16	Rwy 34
CNA 500	41.86%	58.14%	NA	NA	NA	NA
FAL 20	41.86%	58.14%	NA	NA	NA	NA
G-III	41.86%	58.14%	NA	NA	NA	NA
G-IV	41.86%	58.14%	NA	NA	NA	NA
LEAR-25	41.86%	58.14%	NA	NA	NA	NA
LEAR-35	41.86%	58.14%	NA	NA	NA	NA
MU 3001	41.86%	58.14%	NA	NA	NA	NA
Sabar-80	41.86%	58.14%	NA	NA	NA	NA
BEC-58P	41.86%	58.14%	NA	NA	NA	NA
CNA441	41.86%	58.14%	NA	NA	NA	NA
DHC-6	41.86%	58.14%	NA	NA	NA	NA
GASEPF	34.11%	36.82%	4.85%	9.69%	5.81%	8.72%
GASEPV	34.11%	36.82%	4.85%	9.69%	5.81%	8.72%
S-76	34.11%	36.82%	4.85%	9.69%	5.81%	8.72%
TOUCH AND GOES:						
BEC58P	41.86%	58.14%	NA	NA	NA	NA
GASEPF	34.11%	65.89%	4.85%	9.69%	5.81%	8.72%
10 Knots wind coverage:						
	43.81%	63.46%	48.54%	58.31%	53.44%	54.93%
5 Knots wind coverage:						
	32.50%	38.95%	35.12%	47.23%	36.65%	41.39%
ANNUAL CALMS =19.3% (all weather)						

Table A-13

FLIGHT TRACK USAGE BY AIRCRAFT GROUP
WITH CURRENT NON-PRECISION APPROACHES

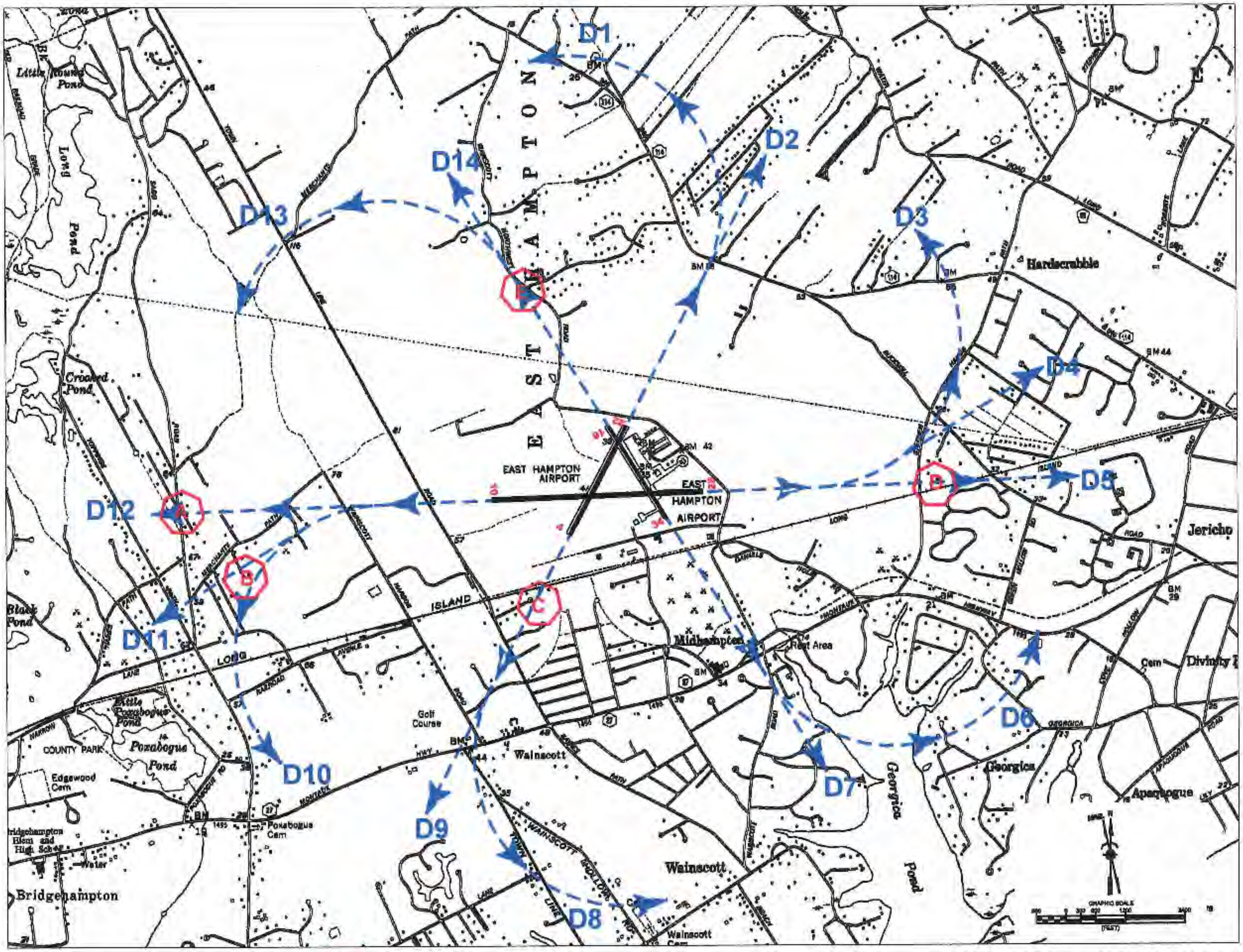
General Aviation Propeller Aircraft

	Usage	DEPARTURES			ARRIVALS			
Rwy	%	Track	% by Track	% of Total	Track	%by Track	% of Total	T&G
4	5.00%	D1	40%	2.0	A1	50%	2.5	5%
	5.00%	D2	60%	3.0	A2	50%	2.5	
10	32.00%	D3	80%	25.6	A3	80%	25.6	32%
	32.00%	D4	15%	4.8	A4	20%	6.4	
	32.00%	D5	5%	1.6			0.0	
16	6.00%	D6	60%	3.6	A5	90%	5.4	6%
	6.00%	D7	40%	2.4	A6	10%	0.6	
22	10.00%	D8	60%	6.0	A7	90%	9.0	10%
	10.00%	D9	40%	4.0	A8	10%	1.0	
28	38.00%	D10	5%	1.9	A9	20%	7.6	38%
	38.00%	D11	15%	5.7	A10	80%	30.4	
	38.00%	D12	80%	30.4			0.0	
34	9.00%	D13	60%	5.4	A11	20%	1.8	9%
	9.00%	D14	40%	3.6	A12	80%	7.2	
	1.00			100.0			100.0	

Jet and Commuter Aircraft

	Usage	DEPARTURES			ARRIVALS		
Rwy	%	Track	% by Track	% of Total	Track	% by Track	% of Total
10	40.00%	D3	80%	32.0	A3	100%	40.0
	40.00%	D4	15%	6.0			
	40.00%	D5	5%	2.0			
28	60.00%	D10	5%	3.0	A9	100%	60.0
	60.00%	D11	15%	9.0			
	60.00%	D12	80%	48.0			
				100.0			100.0

					FLIGHT TRACK USAGE BY AIRCRAFT GROUP			
Table A-14					WITH PRECISION APPROACH TO RUNWAY 10			
General Aviation Propeller Aircraft								
	Usage	DEPARTURES			ARRIVALS			
Rwy	%	Track	% by Track	% of Total	Track	%by Track	% of Total	T&G
4	4.85%	D1	40%	1.9	A1	50%	2.4	5%
	4.85%	D2	60%	2.9	A2	50%	2.4	
10	34.11%	D3	80%	27.3	A3	80%	27.3	34%
	34.11%	D4	15%	5.1	A4	20%	6.8	
	34.11%	D5	5%	1.7			0.0	
16	5.81%	D6	60%	3.5	A5	90%	5.2	6%
	5.81%	D7	40%	2.3	A6	10%	0.6	
22	9.69%	D8	60%	5.8	A7	90%	8.7	10%
	9.69%	D9	40%	3.9	A8	10%	1.0	
28	36.82%	D10	5%	1.8	A9	20%	7.4	37%
	36.82%	D11	15%	5.5	A10	80%	29.5	
	36.82%	D12	80%	29.5			0.0	
34	8.72%	D13	60%	5.2	A11	20%	1.7	9%
	8.72%	D14	40%	3.5	A12	80%	7.0	
				100.0			100.0	
Jet and Commuter Aircraft								
	Usage	DEPARTURES			ARRIVALS			
Rwy	%	Track	% by Track	% of Total	Track	% by Track	% of Total	
10	41.86%	D3	80%	33.5	A3	100%	41.9	
	41.86%	D4	15%	6.3				
	41.86%	D5	5%	2.1				
28	58.14%	D10	5%	2.9	A9	100%	58.1	
	58.14%	D11	15%	8.7				
	58.14%	D12	80%	46.5				
				100.0			100.0	



Prepared By: TSPE, October 31, 2000
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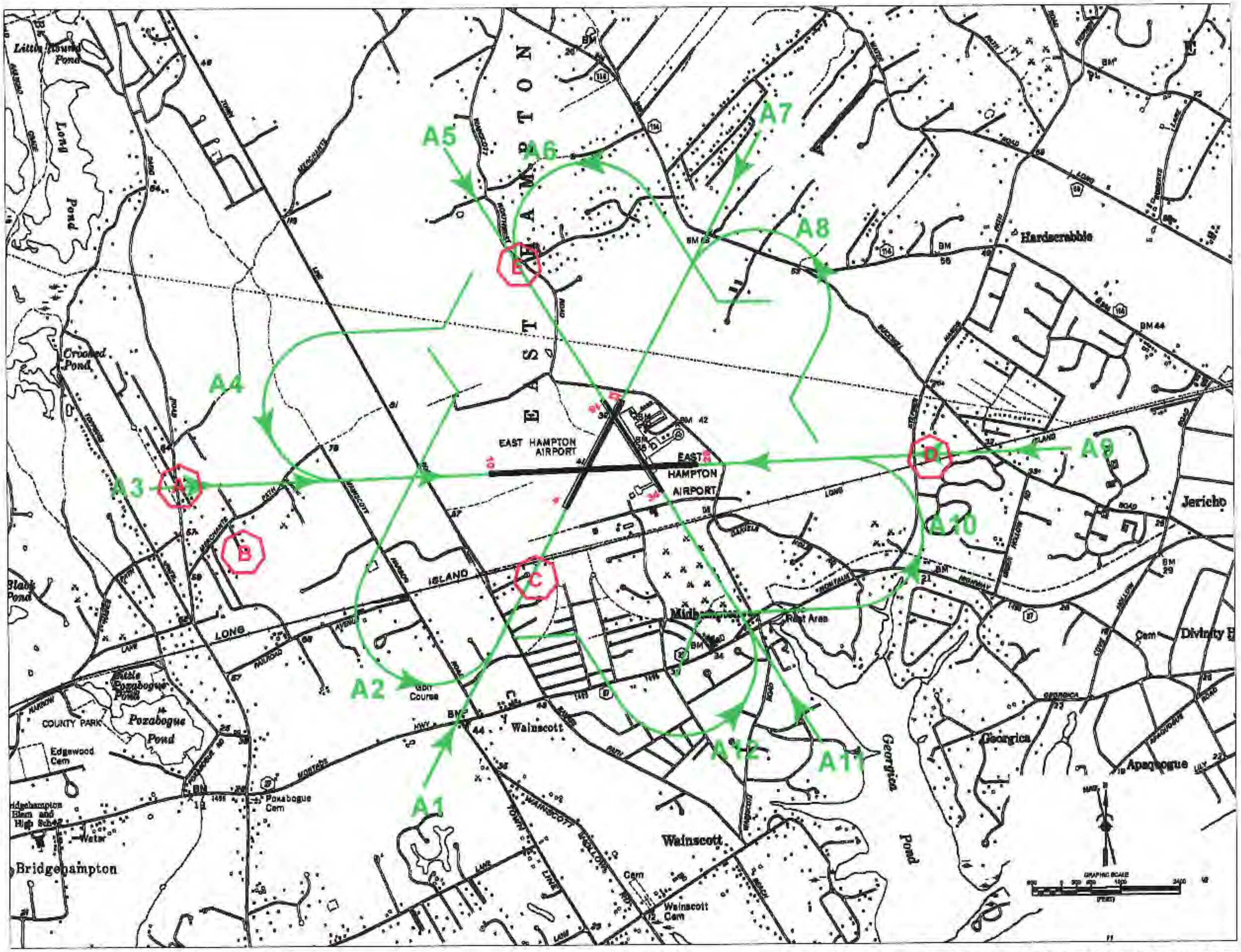
(A) Grid Points for Noise Analysis

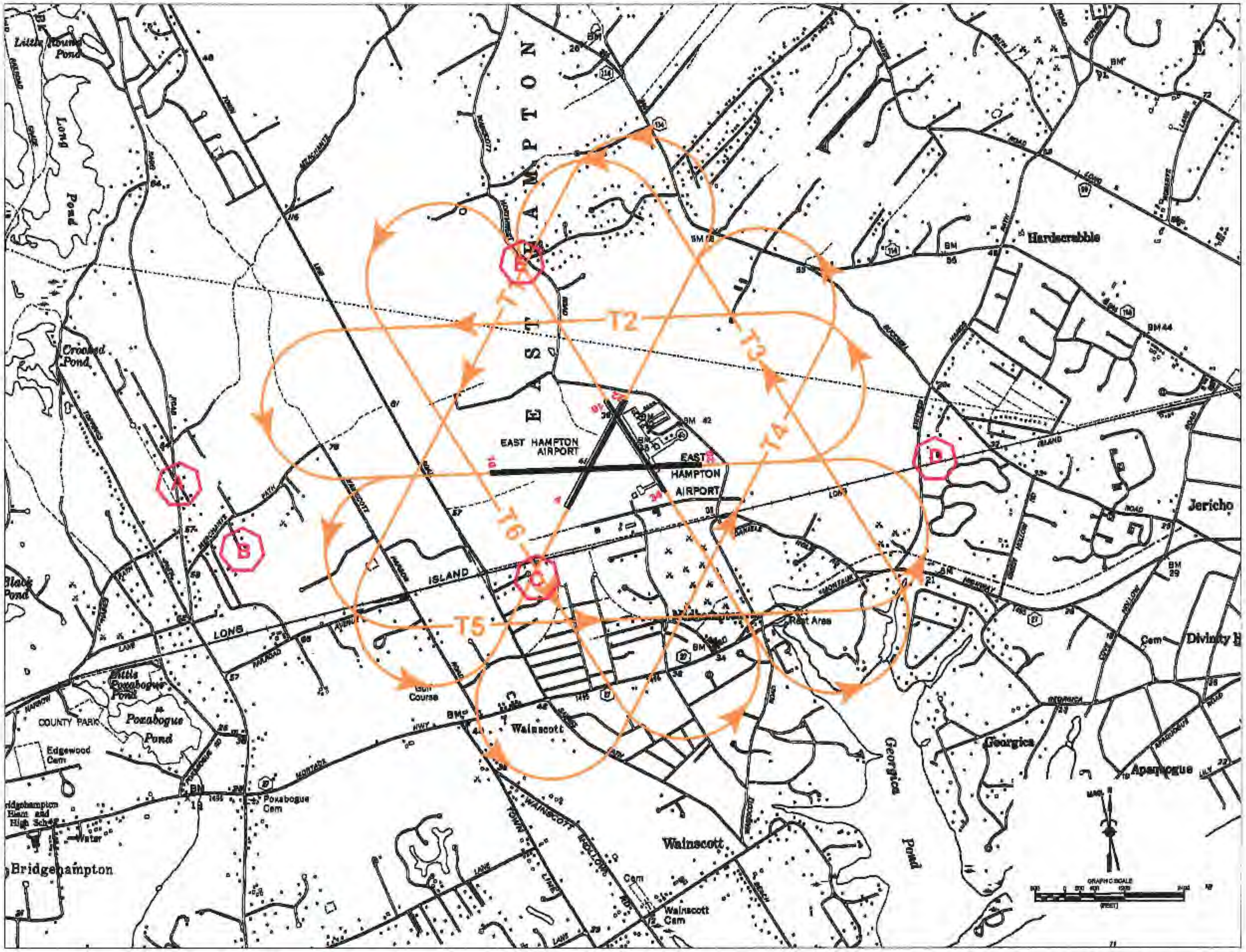
EAST HAMPTON AIRPORT
Departure Flight Tracks
Figure A-1



Prepared By: TSPE, October 31, 2000
g:\ehp\ehp-03\Report EA2002 \map1

(A) Grid Points for Noise Analysis

EAST HAMPTON AIRPORT
Arrival Flight Tracks
Figure A-2



Prepared By: TSPE, October 31, 2000
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(A) Grid Points for Noise Analysis

EAST HAMPTON AIRPORT
Touch and Go Flight Tracks
Figure A-3

PART II: INM OUTPUT

This section contains the INM output data for each of five noise cases:

Case One	-	Year 2000: Average Day of Year
Case Two	-	Year 2000: Average Day in Summer*
Case Three	-	Year 2005: Average Day of Year
Case Four	-	Year 2005: Average Day in Summer*
Case Five	-	Future with precision approach on Runway 10: Average Day of Year.
Case Six	-	Future with precision approach on Runway 10: Average Day in the Summer*

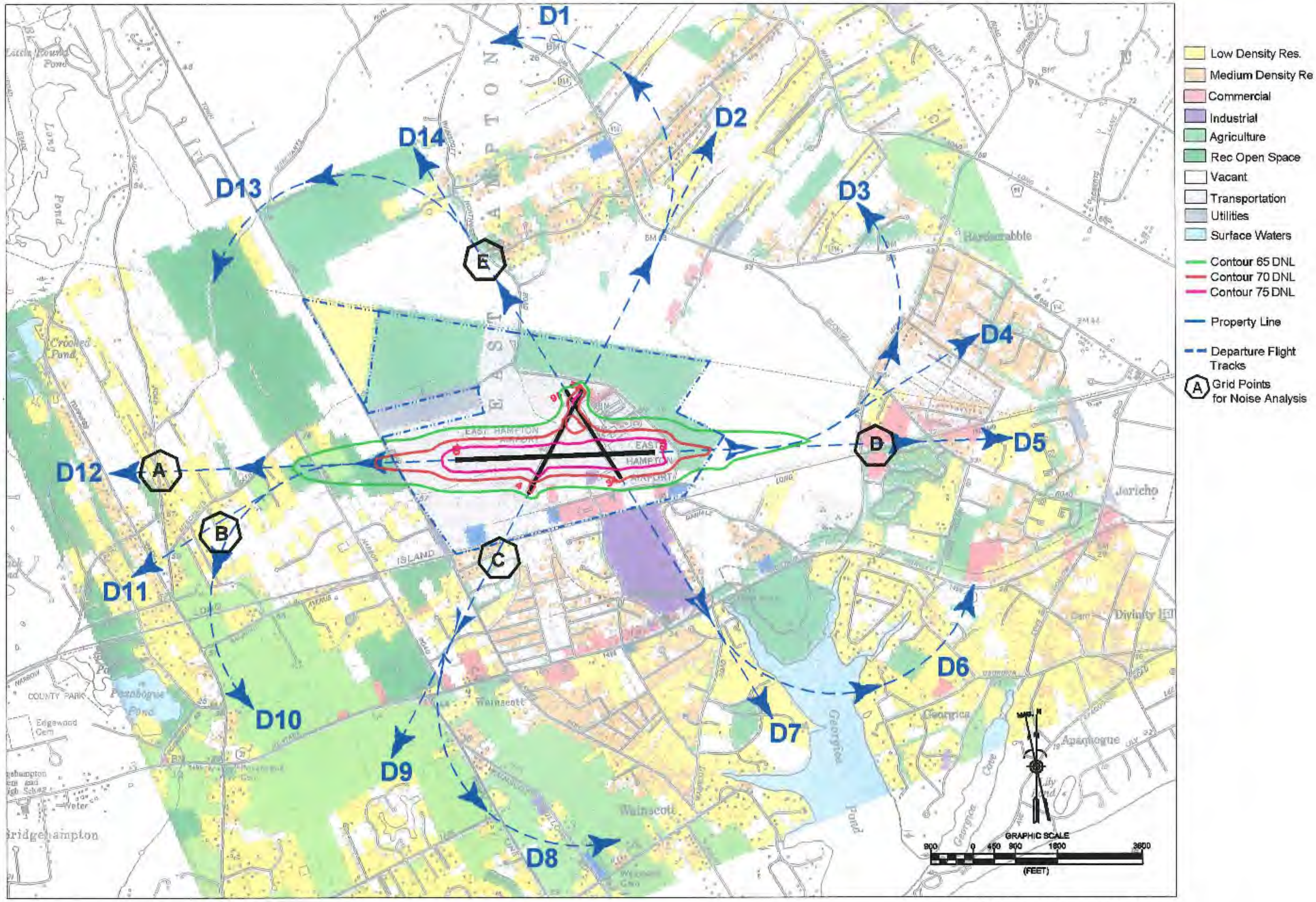
*Summer was assumed to include June, July and August when 60% of the annual operations occur.

Figures A-4, A-5, A-6 provide the summer noise contours for the years 2000, 2005 and 2005 Future case with precision approach on Runway 10.

Table A-15 summarizes comparative data from the noise model output.

Each case includes graphics displaying noise contours (65, 70, and 75 DNL), as well as the grid points and flight tracks.

The following pages present actual output data from the INM.



Prepared By: TSPE, November 27, 2002
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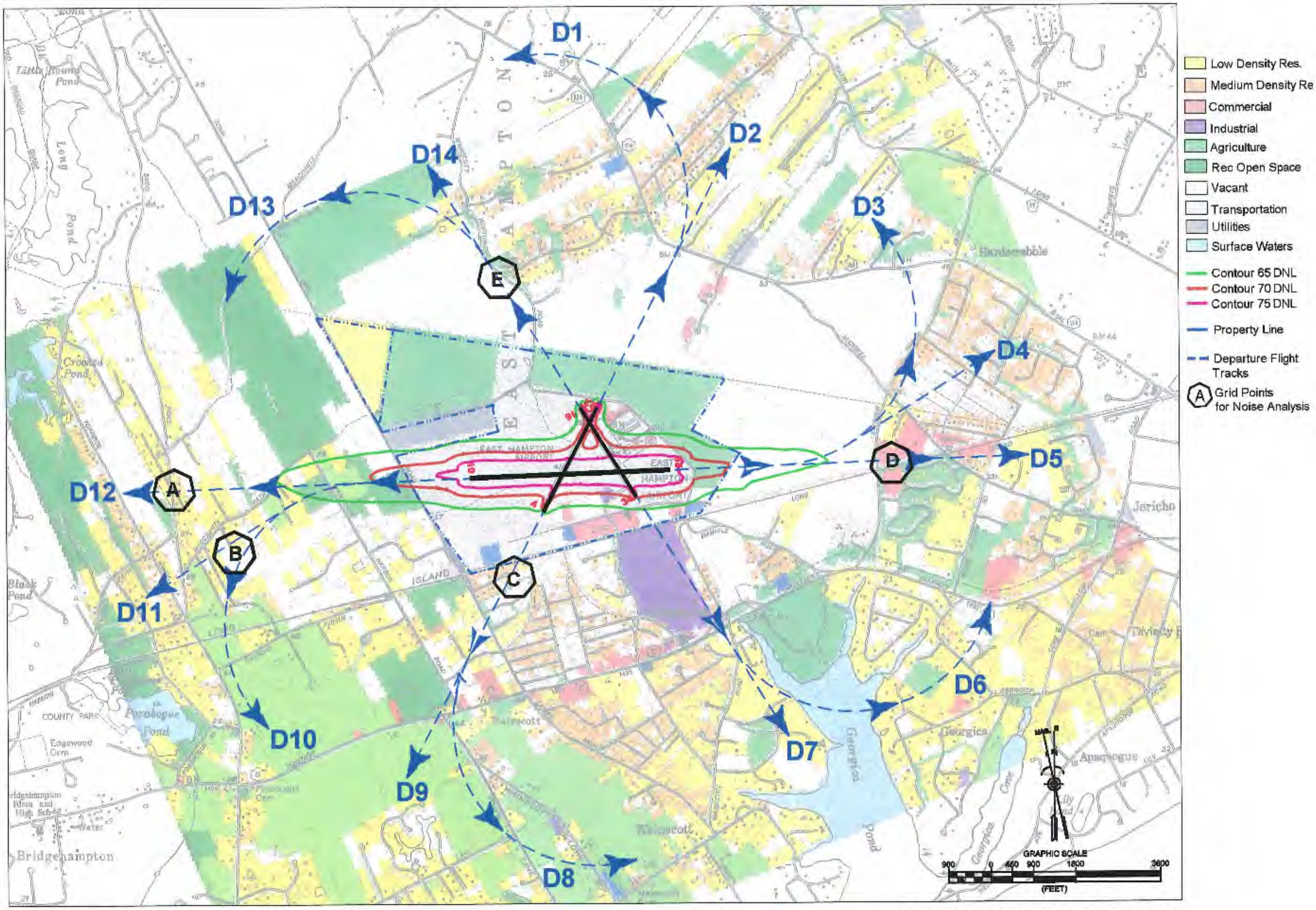
EAST HAMPTON AIRPORT
Land Use and Noise Contour Map
Case Two - Year 2000 - Average Day in Summer
Figure A-4



Prepared By: TSPE, November 27, 2002
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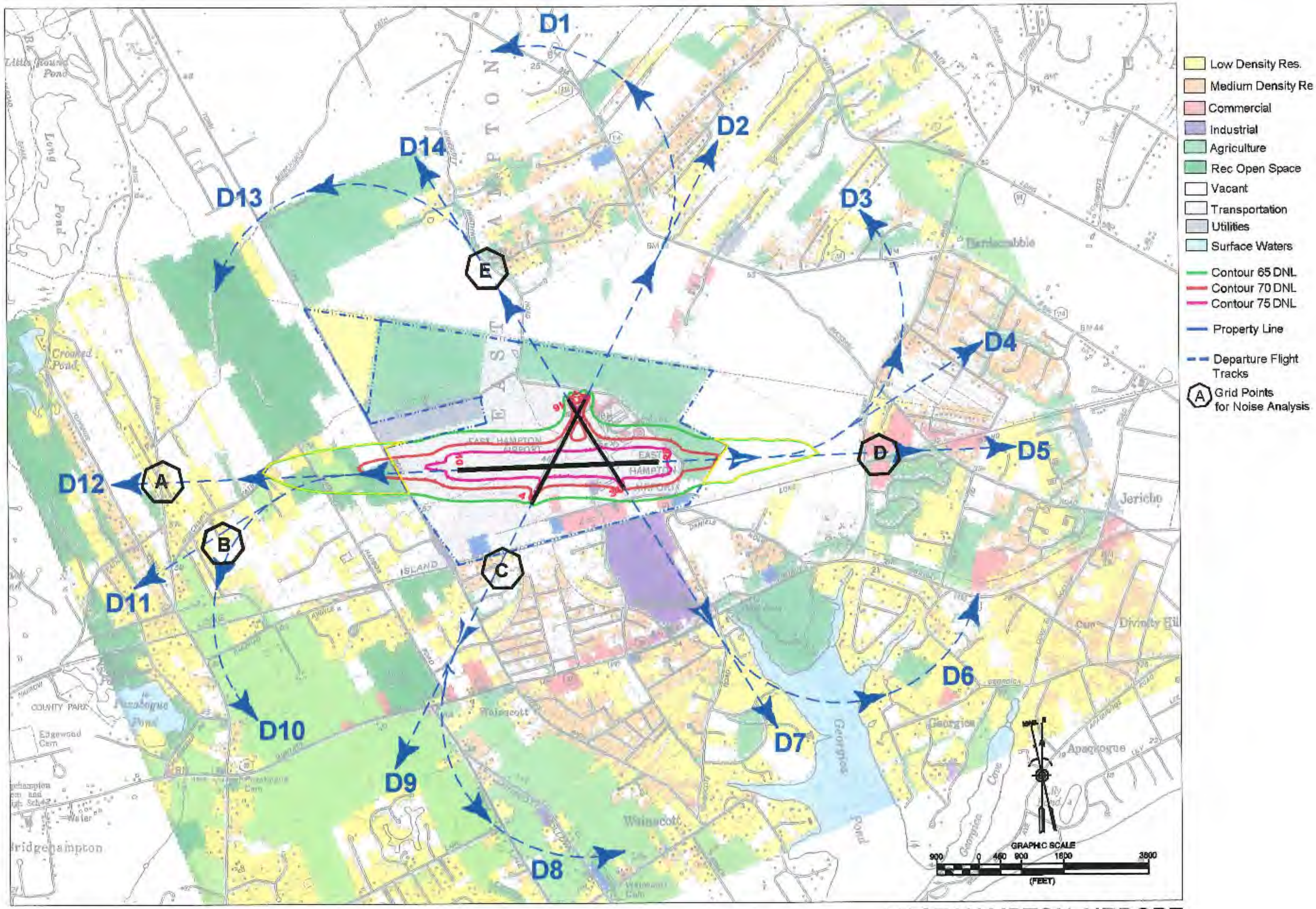
EAST HAMPTON AIRPORT
Land Use and Noise Contour Map
Case Four - Year 2005 - Average Day in Summer
Figure A-5



Prepared By: TSPE, November 27, 2002
g:\ehp\ehp-03\Report EA2002\Summary.dwg

EAST HAMPTON AIRPORT
Land Use and Noise Contour Map
Case Six - Year 2005 - Average Day in Summer with
Precision Approach to Runway 10
Figure A-6

Table A-15 **Noise Model Output Summary**

Case	Area of Noise Contour (Ac.)			Noise at Location Point (dBA)				
	65 (DNL)	70 (DNL)	75 (DNL)	G.P. "A"	G.P. "B"	G.P. "C"	G.P. "D"	G.P. "E"
One Yr. 2000	149.2	68.8	32.1	56.9	54.0	52.0	57.0	48.8
Two Yr. 2000	275.5	126.3	59.7	60.9	58.0	55.8	60.9	52.6
Three Yr. 2005	163.0	75.8	36.7	57.5	54.6	52.6	57.5	49.4
Four Yr. 2005	312.2	142.3	66.6	61.5	58.7	56.4	61.4	53.2
Five Future	167.6	78.1	36.7	57.7	54.7	52.7	57.7	49.4
Six Future	316.8	144.6	66.6	61.6	58.7	56.5	61.6	53.2

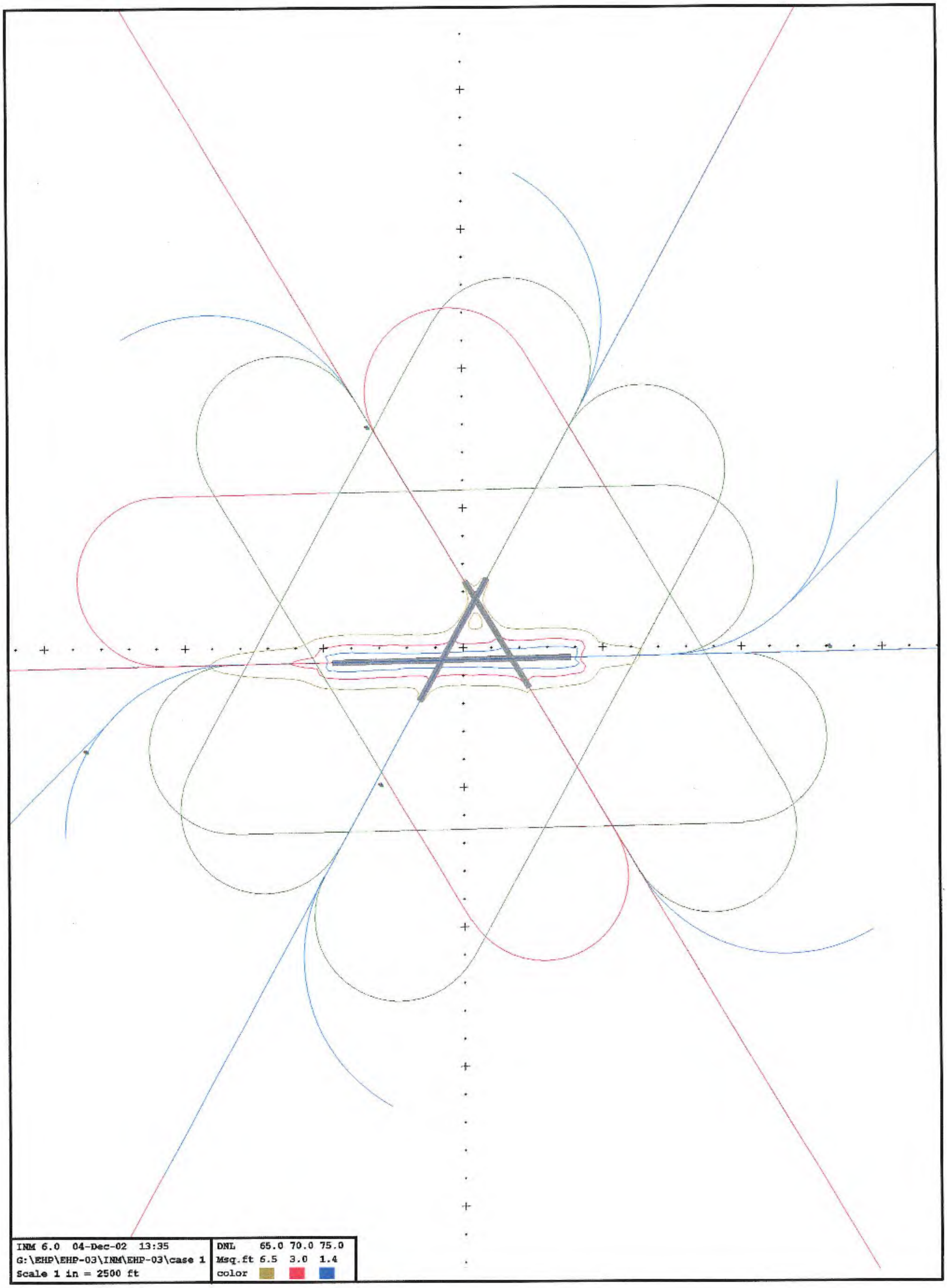
G.P. = Grid Point
Highlighted rows represent Average Day in Summer

Table A-16 **Areas of Noise Over Airport Property Line**

Cases	Total (Ac.)	Low. Res (Ac.)	Med. Res. (Ac.)	Vacant (Ac.)	Rec Open Spaces (Ac.)	Institutional (Ac.)	Commercial (Ac.)
Case One							
65 DNL	5.3	-	-	0.6	4.7	-	-
70 DNL	-	-	-	-	-	-	-
75 DNL	-	-	-	-	-	-	-
Case Two							
65 DNL	57.8	1.4	9.5	6.1	32.1	8.7	-
70 DNL	2.3	-	-	-	2.3	-	-
75 DNL	-	-	-	-	-	-	-
Case Three							
65 DNL	8.5	-	-	1.0	7.0	0.5	-
70 DNL	-	-	-	-	-	-	-
75 DNL	-	-	-	-	-	-	-
Case Four							
65 DNL	79.2	3.0	10.8	8.7	44.8	11.7	0.2
70 DNL	5.7	-	-	0.5	5.2	-	-
75 DNL	-	-	-	-	-	-	-
Case Five							
65 DNL	11.4	-	0.6	1.6	8.6	0.6	-
70 DNL	-	-	-	-	-	-	-
75 DNL	-	-	-	-	-	-	-
Case Six							
65 DNL	83.5	5.6	11.9	9.4	44.4	12.0	0.2
70 DNL	6.2	-	-	0.7	5.5	-	-
75 DNL	-	-	-	-	-	-	-

CASE ONE

YEAR 2000
AVERAGE DAY OF YEAR


INM 6.0 04-Dec-02 13:35
G:\EHP\EHP-03\INM\EHP-03\case 1
Scale 1 in = 2500 ft
DNL 65.0 70.0 75.0
Msq.ft 6.5 3.0 1.4
color

```
INM 6.0 ECHO REPORT  20-Aug-02 09:06

STUDY: g:\EHP\EHP-03\INM\EHP-03\
   Created      : 16-Aug-02 07:34
   Units        : English
   Airport      : HTO
   Description  :
      East Hampton Airport 2002

CASE: Case One
   Created      : 16-Aug-02 09:19
   Description  : Average Day of Year (Year 2000)

STUDY AIRPORT
   Latitude     : 40.959578 deg
   Longitude    : -72.251851 deg
   Elevation    : 56.0 ft
   Temperature  : 58.8 F
   Pressure     : 29.92 in-Hg
   AverageWind  : 8.0 kt
   ChangeNPD    : No

STUDY RUNWAYS
   04
      Latitude   : 40.956976 deg
      Longitude  : -72.254678 deg
      Xcoord     : -0.1285 nmi
      Ycoord     : -0.1560 nmi
      Elevation  : 45.9 ft
      OtherEnd   : 22
      Length     : 2501 ft
      Gradient   : -0.21 %
      RwyWind    : 8.0 kt
      TkoThresh  : 0 ft
      AppThresh  : 0 ft
   10
      Latitude   : 40.958884 deg
      Longitude  : -72.260305 deg
      Xcoord     : -0.3843 nmi
      Ycoord     : -0.0416 nmi
      Elevation  : 55.5 ft
      OtherEnd   : 28
      Length     : 4255 ft
      Gradient   : -0.58 %
      RwyWind    : 8.0 kt
      TkoThresh  : 0 ft
      AppThresh  : 0 ft
   16
      Latitude   : 40.962853 deg
      Longitude  : -72.251741 deg
      Xcoord     : 0.0050 nmi
      Ycoord     : 0.1964 nmi
      Elevation  : 41.9 ft
      OtherEnd   : 34
      Length     : 2222 ft
      Gradient   : -0.54 %
      RwyWind    : 8.0 kt
      TkoThresh  : 0 ft
      AppThresh  : 57 ft
   22
      Latitude   : 40.962998 deg
      Longitude  : -72.250331 deg
      Xcoord     : 0.0691 nmi
      Ycoord     : 0.2051 nmi
      Elevation  : 40.6 ft
      OtherEnd   : 04
      Length     : 2501 ft
      Gradient   : 0.21 %
      RwyWind    : 8.0 kt
      TkoThresh  : 0 ft
```

```
      AppThresh : 360 ft
   28
      Latitude  : 40.959103 deg
      Longitude : -72.244902 deg
      Xcoord    : 0.3159 nmi
      Ycoord    : -0.0285 nmi
      Elevation : 30.8 ft
      OtherEnd  : 10
      Length    : 4255 ft
      Gradient  : 0.58 %
      RwyWind   : 8.0 kt
      TkoThresh : 0 ft
      AppThresh : 0 ft
   34
      Latitude  : 40.957618 deg
      Longitude : -72.247608 deg
      Xcoord    : 0.1929 nmi
      Ycoord    : -0.1175 nmi
      Elevation : 30.0 ft
      OtherEnd  : 16
      Length    : 2222 ft
      Gradient  : 0.54 %
      RwyWind   : 8.0 kt
      TkoThresh : 0 ft
      AppThresh : 106 ft

STUDY TRACKS
   RwyId-OpType-TrkId
     Sub  PctSub    TrkType    Delta(ft)
   04-APP-A1
      0      2.50   Vectors      0.0
   04-APP-A2
      0      2.50   Vectors      0.0
   04-DEP-D1
      0      2.00   Vectors      0.0
   04-DEP-D2
      0      3.00   Vectors      0.0
   04-TGO-T1
      0    100.00   Vectors      0.0
   10-APP-A3
      0     25.60   Vectors      0.0
   10-APP-A4
      0      6.40   Vectors      0.0
   10-DEP-D3
      0     25.60   Vectors      0.0
   10-DEP-D4
      0      4.80   Vectors      0.0
   10-DEP-D5
      0      1.60   Vectors      0.0
   10-TGO-T2
      0    100.00   Vectors      0.0
   16-APP-A5
      0      5.40   Vectors      0.0
   16-APP-A6
      0      0.60   Vectors      0.0
   16-DEP-D6
      0      3.60   Vectors      0.0
   16-DEP-D7
      0      2.40   Vectors      0.0
   16-TGO-T3
      0    100.00   Vectors      0.0
   22-APP-A7
      0      9.00   Vectors      0.0
   22-APP-A8
      0      1.00   Vectors      0.0
   22-DEP-D8
      0      6.00   Vectors      0.0
   22-DEP-D9
      0      4.00   Vectors      0.0
   22-TGO-T4
      0    100.00   Vectors      0.0
```

```
   28-APP-A10
      0    30.40    Vectors      0.0
   28-APP-A9
      0     7.60    Vectors      0.0
   28-DEP-D10
      0    30.40    Vectors      0.0
   28-DEP-D11
      0     5.70    Vectors      0.0
   28-DEP-D12
      0     1.90    Vectors      0.0
   28-TGO-T5
      0   100.00    Vectors      0.0
   34-APP-A11
      0     1.80    Vectors      0.0
   34-APP-A12
      0     7.20    Vectors      0.0
   34-DEP-D13
      0     5.40    Vectors      0.0
   34-DEP-D14
      0     3.20    Vectors      0.0
   34-TGO-T6
      0   100.00    Vectors      0.0

STUDY TRACK DETAIL
   RwyId-OpType-TrkId-SubTrk
          SegType         Dist/Angle   Radius(nmi)
   04-APP-A1-0
       1  Straight        2.0000 nmi
   04-APP-A2-0
       1  Straight        0.5000 nmi
       2  Left-Turn     180.0000 deg     0.2500
       3  Straight        0.5000 nmi
   04-DEP-D1-0
       1  Straight        1.0000 nmi
       2  Left-Turn      90.0000 deg     0.5000
   04-DEP-D2-0
       1  Straight        2.0000 nmi
   04-TGO-T1-0
       1  Straight        1.0000 nmi
       2  Left-Turn     180.0000 deg     0.2500
       3  Straight        1.5000 nmi
       4  Left-Turn     180.0000 deg     0.2500
       5  Straight        0.5000 nmi
   10-APP-A3-0
       1  Straight        2.0000 nmi
   10-APP-A4-0
       1  Straight        0.5000 nmi
       2  Left-Turn     180.0000 deg     0.2500
       3  Straight        0.5000 nmi
   10-DEP-D3-0
       1  Straight        1.0000 nmi
       2  Left-Turn      90.0000 deg     0.5000
   10-DEP-D4-0
       1  Straight        1.0000 nmi
       2  Left-Turn      45.0000 deg     0.5000
       3  Straight        1.0000 nmi
   10-DEP-D5-0
       1  Straight        2.0000 nmi
   10-TGO-T2-0
       1  Straight        1.0000 nmi
       2  Left-Turn     180.0000 deg     0.2500
       3  Straight        1.5000 nmi
       4  Left-Turn     180.0000 deg     0.2500
       5  Straight        0.5000 nmi
   16-APP-A5-0
       1  Straight        2.0000 nmi
   16-APP-A6-0
       1  Straight        0.5000 nmi
       2  Left-Turn     180.0000 deg     0.2500
       3  Straight        0.5000 nmi
   16-DEP-D6-0
```

```
    1  Straight      1.0000 nmi
    2  Left-Turn    90.0000 deg    0.5000
16-DEP-D7-0
    1  Straight      2.0000 nmi
16-TGO-T3-0
    1  Straight      1.0000 nmi
    2  Left-Turn   180.0000 deg    0.2500
    3  Straight      1.5000 nmi
    4  Left-Turn   180.0000 deg    0.2500
    5  Straight      0.5000 nmi
22-APP-A7-0
    1  Straight      2.0000 nmi
22-APP-A8-0
    1  Straight      0.5000 nmi
    2  Left-Turn   180.0000 deg    0.2500
    3  Straight      0.5000 nmi
22-DEP-D8-0
    1  Straight      1.0000 nmi
    2  Left-Turn    90.0000 deg    0.5000
22-DEP-D9-0
    1  Straight      2.0000 nmi
22-TGO-T4-0
    1  Straight      1.0000 nmi
    2  Left-Turn   180.0000 deg    0.2500
    3  Straight      1.5000 nmi
    4  Left-Turn   180.0000 deg    0.2500
    5  Straight      0.5000 nmi
28-APP-A10-0
    1  Straight      0.5000 nmi
    2  Left-Turn   180.0000 deg    0.2500
    3  Straight      0.5000 nmi
28-APP-A9-0
    1  Straight      2.0000 nmi
28-DEP-D10-0
    1  Straight      1.0000 nmi
    2  Left-Turn    90.0000 deg    0.5000
?8-DEP-D11-0
    1  Straight      1.0000 nmi
    2  Left-Turn    45.0000 deg    0.5000
    3  Straight      1.0000 nmi
28-DEP-D12-0
    1  Straight      2.0000 nmi
28-TGO-T5-0
    1  Straight      1.0000 nmi
    2  Left-Turn   180.0000 deg    0.2500
    3  Straight      1.5000 nmi
    4  Left-Turn   180.0000 deg    0.2500
    5  Straight      0.5000 nmi
34-APP-A11-0
    1  Straight      2.0000 nmi
34-APP-A12-0
    1  Straight      0.5000 nmi
    2  Left-Turn   180.0000 deg    0.2500
    3  Straight      0.5000 nmi
34-DEP-D13-0
    1  Straight      1.0000 nmi
    2  Left-Turn    90.0000 deg    0.5000
34-DEP-D14-0
    1  Straight      2.0000 nmi
34-TGO-T6-0
    1  Straight      1.0000 nmi
    2  Left-Turn   180.0000 deg    0.2500
    3  Straight      1.5000 nmi
    4  Left-Turn   180.0000 deg    0.2500
    5  Straight      0.5000 nmi

S  Y AIRCRAFT
 BEC58P User-defined
    Descrip   : BARON 58P/TS10-520-L
    UserID    : COM
    WgtCat    : Small
```

```
   OwnerCat   : Commercial
   EngType    : Piston
   NoiseCat   : 10417156
   Type       : Prop
   NumEng     : 2
   NoiseId    : TSIO52
   ATRS       : No
   TkoWgt     : 6100 lb
   LndWgt     : 6100 lb
   LndDist    : 2733 ft
   StaticThr  : 779 lb
CNA441 Standard data
CNA500 User-defined
   Descrip    : CIT 2/JT15D-4
   UserID     : BJ
   WgtCat     : Large
   OwnerCat   : Gen-Aviation
   EngType    : Jet
   NoiseCat   : 10417156
   Type       : Jet
   NumEng     : 2
   NoiseId    : JT15D1
   ATRS       : No
   TkoWgt     : 14700 lb
   LndWgt     : 14000 lb
   LndDist    : 3050 ft
   StaticThr  : 2500 lb
DHC6   Standard data
FAL20  User-defined
   Descrip    : FALCON 20/CF700-2D-2
   UserID     : BJ
   WgtCat     : Large
   OwnerCat   : Gen-Aviation
   EngType    : Jet
   NoiseCat   : 10417156
   Type       : Jet
   NumEng     : 2
   NoiseId    : CF700
   ATRS       : No
   TkoWgt     : 28700 lb
   LndWgt     : 27300 lb
   LndDist    : 2490 ft
   StaticThr  : 4500 lb
GASEPF Standard data
GASEPV Standard data
GIIB   User-defined
   Descrip    : GIIB/SPEY MK511-8
   UserID     : BJ
   WgtCat     : Large
   OwnerCat   : Gen-Aviation
   EngType    : Jet
   NoiseCat   : 10417156
   Type       : Jet
   NumEng     : 2
   NoiseId    : SP5118
   ATRS       : No
   TkoWgt     : 65500 lb
   LndWgt     : 58500 lb
   LndDist    : 3200 ft
   StaticThr  : 11400 lb
GIV    User-defined
   Descrip    : GIV/TAY 611
   UserID     : BJ
   WgtCat     : Large
   OwnerCat   : Gen-Aviation
   EngType    : Jet
   NoiseCat   : 10417156
   Type       : Jet
   NumEng     : 2
   NoiseId    : TAY620
   ATRS       : No
```

```
    TkoWgt    : 71700 lb
    LndWgt    : 58500 lb
    LndDist   : 3200 ft
    StaticThr : 13850 lb
 LEAR25 User-defined
    Descrip   : LEAR 25/CJ610-8
    UserID    : BJ
    WgtCat    : Large
    OwnerCat  : Gen-Aviation
    EngType   : Jet
    NoiseCat  : 10417156
    Type      : Jet
    NumEng    : 2
    NoiseId   : CJ610
    ATRS      : No
    TkoWgt    : 15000 lb
    LndWgt    : 13500 lb
    LndDist   : 2620 ft
    StaticThr : 2950 lb
 LEAR35 User-defined
    Descrip   : LEAR 36/TFE731-2
    UserID    : BJ
    WgtCat    : Large
    OwnerCat  : Gen-Aviation
    EngType   : Jet
    NoiseCat  : 10417156
    Type      : Jet
    NumEng    : 2
    NoiseId   : TF7312
    ATRS      : No
    TkoWgt    : 18300 lb
    LndWgt    : 15300 lb
    LndDist   : 3076 ft
    StaticThr : 3500 lb
 MU3001 User-defined
    Descrip   : MU300-10/JT15D-4
    UserID    : BJ
    WgtCat    : Large
    OwnerCat  : Gen-Aviation
    EngType   : Jet
    NoiseCat  : 10417156
    Type      : Jet
    NumEng    : 2
    NoiseId   : JT15D5
    ATRS      : No
    TkoWgt    : 14100 lb
    LndWgt    : 13200 lb
    LndDist   : 2800 ft
    StaticThr : 2500 lb
 SABR80 User-defined
    Descrip   : NA SABRELINER 80
    UserID    : BJ
    WgtCat    : Large
    OwnerCat  : Gen-Aviation
    EngType   : Jet
    NoiseCat  : 10417156
    Type      : Jet
    NumEng    : 2
    NoiseId   : CF700
    ATRS      : No
    TkoWgt    : 33720 lb
    LndWgt    : 27290 lb
    LndDist   : 2490 ft
    StaticThr : 3962 lb

STUDY SUBSTITUTION AIRCRAFT
 Name    Description
    Acft   Percent
 GULF3   Gulfstream III
    GIIB   100.0 %
```

USER-DEFINED NOISE CURVES

Type	Thrust	Op	200	400	630	1000	2000	4000	6300	10000	16000	25000

USER-DEFINED METRICS

Name	Type	Family	Day	Eve	Night	10Log(T)

USER-DEFINED PROFILE IDENTIFIERS

Op	Profile	Stg	Weight(lb)

USER-DEFINED PROCEDURAL PROFILES

#	StepType	Flap	ThrType	Alt/Clm	Speed(kt)	Ang/Thr/Dis

USER-DEFINED FIXED-POINT PROFILES

#	Dist(ft)	Alt(ft)	Spd(kt)	Thrust	OpMode

USER-DEFINED FLAP COEFFICIENTS

Acft	Flap	Op	Coeff-R	Coeff-C/D	Coeff-B

USER-DEFINED JET THRUST COEFFICIENTS

Acft	ThrType	Coeff-E	Coeff-F	Coeff-Ga	Coeff-Gb	Coeff-H

USER-DEFINED PROP THRUST COEFFICIENTS

Name	ThrType	Efficiency	Power

USER-DEFINED GENERAL THRUST COEFFICIENTS

Acft	Type	Coeff-E	Coeff-F	Coeff-Ga	Coeff-Gb	Coeff-H	Coeff-K1	Coe

CASE FLIGHT OPERATIONS

Acft	Op	Profile	Stg	Rwy	Track	Sub	Group	Day	Evening	Night
BEC58P	APP	STANDARD	1	10	A3	0	COM	4.6520	0.0000	0.4040
BEC58P	APP	STANDARD	1	28	A9	0	COM	6.9780	0.0000	0.6060
BEC58P	DEP	STANDARD	1	10	D3	0	COM	3.7216	0.0000	0.3232
BEC58P	DEP	STANDARD	1	10	D4	0	COM	0.6978	0.0000	0.0606
BEC58P	DEP	STANDARD	1	10	D5	0	COM	0.2326	0.0000	0.0202
BEC58P	DEP	STANDARD	1	28	D10	0	COM	0.3489	0.0000	0.0303
BEC58P	DEP	STANDARD	1	28	D11	0	COM	1.0467	0.0000	0.0909
BEC58P	DEP	STANDARD	1	28	D12	0	COM	5.5824	0.0000	0.4848
CNA441	APP	STANDARD	1	10	A3	0	COM	1.0320	0.0000	0.0880
CNA441	APP	STANDARD	1	28	A9	0	COM	1.5480	0.0000	0.1320
CNA441	DEP	STANDARD	1	10	D3	0	COM	0.8256	0.0000	0.0704
CNA441	DEP	STANDARD	1	10	D4	0	COM	0.1548	0.0000	0.0132
CNA441	DEP	STANDARD	1	10	D5	0	COM	0.0516	0.0000	0.0044
CNA441	DEP	STANDARD	1	28	D10	0	COM	0.0774	0.0000	0.0066
CNA441	DEP	STANDARD	1	28	D11	0	COM	0.2322	0.0000	0.0198
CNA441	DEP	STANDARD	1	28	D12	0	COM	1.2384	0.0000	0.1056
CNA500	APP	STANDARD	1	10	A3	0	BJ	0.1240	0.0000	0.0120
CNA500	APP	STANDARD	1	28	A9	0	BJ	0.1860	0.0000	0.0180
CNA500	DEP	STANDARD	1	10	D3	0	BJ	0.0992	0.0000	0.0096
CNA500	DEP	STANDARD	1	10	D4	0	BJ	0.0186	0.0000	0.0018
CNA500	DEP	STANDARD	1	10	D5	0	BJ	0.0062	0.0000	0.0006
CNA500	DEP	STANDARD	1	28	D10	0	BJ	0.0093	0.0000	0.0009
CNA500	DEP	STANDARD	1	28	D11	0	BJ	0.0279	0.0000	0.0027
CNA500	DEP	STANDARD	1	28	D12	0	BJ	0.1488	0.0000	0.0144
DHC6	APP	STANDARD	1	10	A3	0	COM	2.8400	0.0000	0.2480
DHC6	APP	STANDARD	1	28	A9	0	COM	4.2600	0.0000	0.3720
DHC6	DEP	STANDARD	1	10	D3	0	COM	2.2720	0.0000	0.1984
DHC6	DEP	STANDARD	1	10	D4	0	COM	0.4260	0.0000	0.0372
DHC6	DEP	STANDARD	1	10	D5	0	COM	0.1420	0.0000	0.0124
DHC6	DEP	STANDARD	1	28	D10	0	COM	0.2130	0.0000	0.0186
DHC6	DEP	STANDARD	1	28	D11	0	COM	0.6390	0.0000	0.0558
DHC6	DEP	STANDARD	1	28	D12	0	COM	3.4080	0.0000	0.2976
FAL20	APP	STANDARD	1	10	A3	0	BJ	0.0480	0.0000	0.0040
FAL20	APP	STANDARD	1	28	A9	0	BJ	0.0720	0.0000	0.0060
FAL20	DEP	STANDARD	1	10	D3	0	BJ	0.0384	0.0000	0.0032
FAL20	DEP	STANDARD	1	10	D4	0	BJ	0.0072	0.0000	0.0006
FAL20	DEP	STANDARD	1	10	D5	0	BJ	0.0024	0.0000	0.0002
FAL20	DEP	STANDARD	1	28	D10	0	BJ	0.0036	0.0000	0.0003
FAL20	DEP	STANDARD	1	28	D11	0	BJ	0.0108	0.0000	0.0009
FAL20	DEP	STANDARD	1	28	D12	0	BJ	0.0576	0.0000	0.0048
GASEPF	APP	STANDARD	1	04	A1	0	GA	0.1937	0.0000	0.0168
GASEPF	APP	STANDARD	1	04	A2	0	GA	0.1937	0.0000	0.0168

GASEPF	APP	STANDARD	1	10	A3	0	GA	1.9840	0.0000	0.1715
GASEPF	APP	STANDARD	1	10	A4	0	GA	0.4960	0.0000	0.0429
GASEPF	APP	STANDARD	1	16	A5	0	GA	0.4185	0.0000	0.0362
GASEPF	APP	STANDARD	1	16	A6	0	GA	0.0465	0.0000	0.0040
GASEPF	APP	STANDARD	1	22	A7	0	GA	0.6975	0.0000	0.0603
GASEPF	APP	STANDARD	1	22	A8	0	GA	0.0775	0.0000	0.0067
GASEPF	APP	STANDARD	1	28	A10	0	GA	2.3560	0.0000	0.2037
GASEPF	APP	STANDARD	1	28	A9	0	GA	0.5890	0.0000	0.0509
GASEPF	APP	STANDARD	1	34	A11	0	GA	0.1395	0.0000	0.0121
GASEPF	APP	STANDARD	1	34	A12	0	GA	0.5580	0.0000	0.0482
GASEPF	DEP	STANDARD	1	04	D1	0	GA	0.1550	0.0000	0.0134
GASEPF	DEP	STANDARD	1	04	D2	0	GA	0.2325	0.0000	0.0201
GASEPF	DEP	STANDARD	1	10	D3	0	GA	1.9840	0.0000	0.1715
GASEPF	DEP	STANDARD	1	10	D4	0	GA	0.3720	0.0000	0.0322
GASEPF	DEP	STANDARD	1	10	D5	0	GA	0.1240	0.0000	0.0107
GASEPF	DEP	STANDARD	1	16	D6	0	GA	0.2790	0.0000	0.0241
GASEPF	DEP	STANDARD	1	16	D7	0	GA	0.1860	0.0000	0.0161
GASEPF	DEP	STANDARD	1	22	D8	0	GA	0.4650	0.0000	0.0402
GASEPF	DEP	STANDARD	1	22	D9	0	GA	0.3100	0.0000	0.0268
GASEPF	DEP	STANDARD	1	28	D10	0	GA	0.1472	0.0000	0.0127
GASEPF	DEP	STANDARD	1	28	D11	0	GA	0.4417	0.0000	0.0382
GASEPF	DEP	STANDARD	1	28	D12	0	GA	2.3560	0.0000	0.2037
GASEPF	DEP	STANDARD	1	34	D13	0	GA	0.4185	0.0000	0.0362
GASEPF	DEP	STANDARD	1	34	D14	0	GA	0.2790	0.0000	0.0241
GASEPF	TGO	STANDARD	1	04	T1	0	GA	0.7750	0.0000	0.0675
GASEPF	TGO	STANDARD	1	10	T2	0	GA	4.9600	0.0000	0.4320
GASEPF	TGO	STANDARD	1	16	T3	0	GA	0.9300	0.0000	0.0810
GASEPF	TGO	STANDARD	1	22	T4	0	GA	1.5500	0.0000	0.1350
GASEPF	TGO	STANDARD	1	28	T5	0	GA	5.8900	0.0000	0.5130
GASEPF	TGO	STANDARD	1	34	T6	0	GA	1.3950	0.0000	0.1215
GASEPV	APP	STANDARD	1	04	A1	0	GA	0.3230	0.0000	0.0280
GASEPV	APP	STANDARD	1	04	A2	0	GA	0.3230	0.0000	0.0280
GASEPV	APP	STANDARD	1	10	A3	0	GA	3.3075	0.0000	0.2867
GASEPV	APP	STANDARD	1	10	A4	0	GA	0.8269	0.0000	0.0717
GASEPV	APP	STANDARD	1	16	A5	0	GA	0.6977	0.0000	0.0605
GASEPV	APP	STANDARD	1	16	A6	0	GA	0.0775	0.0000	0.0067
GASEPV	APP	STANDARD	1	22	A7	0	GA	1.1628	0.0000	0.1008
GASEPV	APP	STANDARD	1	22	A8	0	GA	0.1292	0.0000	0.0112
GASEPV	APP	STANDARD	1	28	A10	0	GA	3.9277	0.0000	0.3405
GASEPV	APP	STANDARD	1	28	A9	0	GA	0.9819	0.0000	0.0851
GASEPV	APP	STANDARD	1	34	A11	0	GA	0.2326	0.0000	0.0202
GASEPV	APP	STANDARD	1	34	A12	0	GA	0.9302	0.0000	0.0806
GASEPV	DEP	STANDARD	1	04	D1	0	GA	0.2584	0.0000	0.0224
GASEPV	DEP	STANDARD	1	04	D2	0	GA	0.3876	0.0000	0.0336
GASEPV	DEP	STANDARD	1	10	D3	0	GA	3.3075	0.0000	0.2867
GASEPV	DEP	STANDARD	1	10	D4	0	GA	0.6202	0.0000	0.0538
GASEPV	DEP	STANDARD	1	10	D5	0	GA	0.2067	0.0000	0.0179
GASEPV	DEP	STANDARD	1	16	D6	0	GA	0.4651	0.0000	0.0403
GASEPV	DEP	STANDARD	1	16	D7	0	GA	0.3101	0.0000	0.0269
GASEPV	DEP	STANDARD	1	22	D8	0	GA	0.7752	0.0000	0.0672
GASEPV	DEP	STANDARD	1	22	D9	0	GA	0.5168	0.0000	0.0448
GASEPV	DEP	STANDARD	1	28	D10	0	GA	0.2455	0.0000	0.0213
GASEPV	DEP	STANDARD	1	28	D11	0	GA	0.7364	0.0000	0.0638
GASEPV	DEP	STANDARD	1	28	D12	0	GA	3.9277	0.0000	0.3405
GASEPV	DEP	STANDARD	1	34	D13	0	GA	0.6977	0.0000	0.0605
GASEPV	DEP	STANDARD	1	34	D14	0	GA	0.4651	0.0000	0.0403
GIIB	APP	STANDARD	1	10	A3	0	BJ	0.0080	0.0000	0.0000
GIIB	APP	STANDARD	1	28	A9	0	BJ	0.0120	0.0000	0.0000
GIIB	DEP	STANDARD	1	10	D3	0	BJ	0.0064	0.0000	0.0000
GIIB	DEP	STANDARD	1	10	D4	0	BJ	0.0012	0.0000	0.0000
GIIB	DEP	STANDARD	1	10	D5	0	BJ	0.0004	0.0000	0.0000
GIIB	DEP	STANDARD	1	28	D10	0	BJ	0.0006	0.0000	0.0000
GIIB	DEP	STANDARD	1	28	D11	0	BJ	0.0018	0.0000	0.0000
GIIB	DEP	STANDARD	1	28	D12	0	BJ	0.0096	0.0000	0.0000
GIV	APP	STANDARD	1	10	A3	0	BJ	0.0040	0.0000	0.0000
GIV	APP	STANDARD	1	28	A9	0	BJ	0.0060	0.0000	0.0000
GIV	DEP	STANDARD	1	10	D3	0	BJ	0.0032	0.0000	0.0000
GIV	DEP	STANDARD	1	10	D4	0	BJ	0.0006	0.0000	0.0000
GIV	DEP	STANDARD	1	10	D5	0	BJ	0.0002	0.0000	0.0000
GIV	DEP	STANDARD	1	28	D10	0	BJ	0.0003	0.0000	0.0000
GIV	DEP	STANDARD	1	28	D11	0	BJ	0.0009	0.0000	0.0000

GIV	DEP	STANDARD	1	28	D12	0	BJ	0.0048	0.0000	0.0000
LEAR25	APP	STANDARD	1	10	A3	0	BJ	0.0240	0.0000	0.0040
LEAR25	APP	STANDARD	1	28	A9	0	BJ	0.0360	0.0000	0.0060
LEAR25	DEP	STANDARD	1	10	D3	0	BJ	0.0192	0.0000	0.0032
LEAR25	DEP	STANDARD	1	10	D4	0	BJ	0.0036	0.0000	0.0006
LEAR25	DEP	STANDARD	1	10	D5	0	BJ	0.0012	0.0000	0.0002
LEAR25	DEP	STANDARD	1	28	D10	0	BJ	0.0018	0.0000	0.0003
LEAR25	DEP	STANDARD	1	28	D11	0	BJ	0.0054	0.0000	0.0009
LEAR25	DEP	STANDARD	1	28	D12	0	BJ	0.0288	0.0000	0.0048
LEAR35	APP	STANDARD	1	10	A3	0	BJ	0.3840	0.0000	0.0320
LEAR35	APP	STANDARD	1	28	A9	0	BJ	0.5760	0.0000	0.0480
LEAR35	DEP	STANDARD	1	10	D3	0	BJ	0.3072	0.0000	0.0256
LEAR35	DEP	STANDARD	1	10	D4	0	BJ	0.0576	0.0000	0.0048
LEAR35	DEP	STANDARD	1	10	D5	0	BJ	0.0192	0.0000	0.0016
LEAR35	DEP	STANDARD	1	28	D10	0	BJ	0.0288	0.0000	0.0024
LEAR35	DEP	STANDARD	1	28	D11	0	BJ	0.0864	0.0000	0.0072
LEAR35	DEP	STANDARD	1	28	D12	0	BJ	0.4608	0.0000	0.0384
MU3001	APP	STANDARD	1	10	A3	0	BJ	0.1280	0.0000	0.0120
MU3001	APP	STANDARD	1	28	A9	0	BJ	0.1920	0.0000	0.0180
MU3001	DEP	STANDARD	1	10	D3	0	BJ	0.1024	0.0000	0.0096
MU3001	DEP	STANDARD	1	10	D4	0	BJ	0.0192	0.0000	0.0018
MU3001	DEP	STANDARD	1	10	D5	0	BJ	0.0064	0.0000	0.0006
MU3001	DEP	STANDARD	1	28	D10	0	BJ	0.0096	0.0000	0.0009
MU3001	DEP	STANDARD	1	28	D11	0	BJ	0.0288	0.0000	0.0027
MU3001	DEP	STANDARD	1	28	D12	0	BJ	0.1536	0.0000	0.0144
SABR80	APP	STANDARD	1	10	A3	0	BJ	0.0480	0.0000	0.0040
SABR80	APP	STANDARD	1	28	A9	0	BJ	0.0720	0.0000	0.0060
SABR80	DEP	STANDARD	1	10	D3	0	BJ	0.0384	0.0000	0.0032
SABR80	DEP	STANDARD	1	10	D4	0	BJ	0.0072	0.0000	0.0006
SABR80	DEP	STANDARD	1	10	D5	0	BJ	0.0024	0.0000	0.0002
SABR80	DEP	STANDARD	1	28	D10	0	BJ	0.0036	0.0000	0.0003
SABR80	DEP	STANDARD	1	28	D11	0	BJ	0.0108	0.0000	0.0009
SABR80	DEP	STANDARD	1	28	D12	0	BJ	0.0576	0.0000	0.0048

CASE RUNUP OPERATIONS

Acft	RunupId	X(nmi)	Y(nmi)	Head	Thrust	Dur(sec)	Day	Evening	Night

GRID DEFINITIONS

Name	Type	X(nmi)	Y(nmi)	Ang(deg)	DisI(nmi)	DisJ(nmi)	NI	NJ	Thrsh	dAmb	Ave(min)
CONTOUR	Contour	-8.0000	-8.0000	0.0	16.0000	16.0000	2	2	75.0	3.0	24.00
LOCATION	Location	0.0000	0.0000	0.0	0.0000	0.0000	1	1	75.0	3.0	24.00

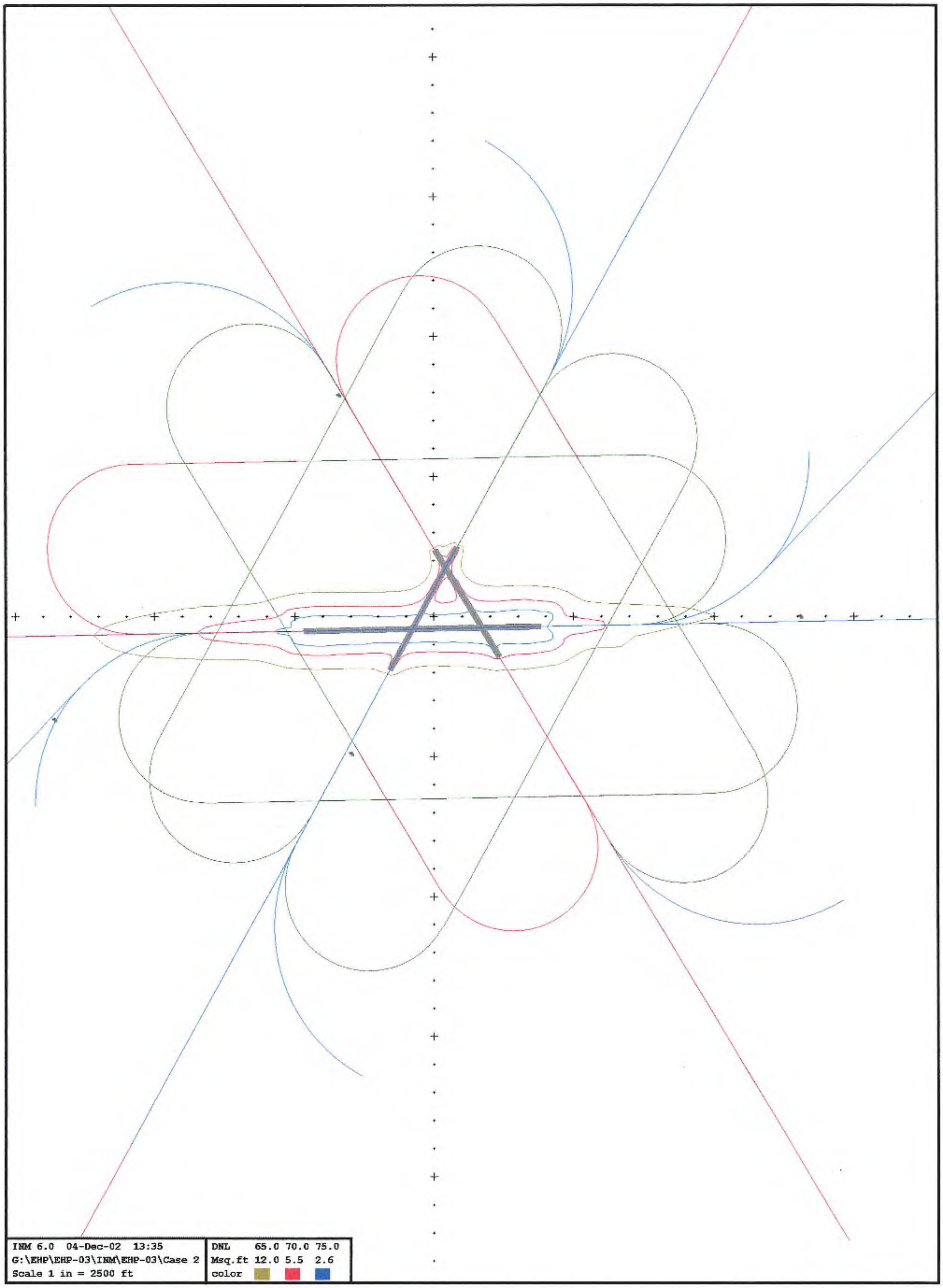
CASE RUN OPTIONS

```
   Run Type       : Single-Metric
   NoiseMetric    : DNL
   Do Terrain     : No
   Do Contour     : Yes
   Refinement     : 10
   Tolerance      : 1.00
   Low Cutoff     : 65.0
   High Cutoff    : 75.0
   Ground Type    : All-Soft-Ground
   Do Population  : No
   Do Locations   : Yes
   Do Standard    : No
   Do Detailed    : No
   Compute System Metrics:
      DNL    : Yes
      CNEL   : No
      LAEQ   : No
      LAEQD  : No
      LAEQN  : No
      SEL    : No
      LAMAX  : No
      TALA   : No
      NEF    : No
      WECPNL : No
      EPNL   : No
      PNLTM  : No
      TAPNL  : No
      CEXP   : No
```

LCMAX : No
TALC : No

CASE TWO

YEAR 2000
AVERAGE DAY IN SUMMER


INM 6.0 04-Dec-02 13:35
G:\EHP\EHP-03\INM\EHP-03\Case 2
Scale 1 in = 2500 ft
DNL 65.0 70.0 75.0
Msq.ft 12.0 5.5 2.6
color

```
INM 6.0 ECHO REPORT  20-Aug-02 09:24

STUDY: g:\EHP\EHP-03\INM\EHP-03\
   Created      : 16-Aug-02 07:34
   Units        : English
   Airport      : HTO
   Description :
      East Hampton Airport 2002

CASE: Case Two
   Created      : 19-Aug-02 15:11
   Description : Avg Summer Day  (Year 2000)

STUDY AIRPORT
   Latitude     : 40.959578 deg
   Longitude    : -72.251851 deg
   Elevation    : 56.0 ft
   Temperature : 58.8 F
   Pressure     : 29.92 in-Hg
   AverageWind : 8.0 kt
   ChangeNPD    : No

STUDY RUNWAYS
   04
      Latitude   : 40.956976 deg
      Longitude : -72.254678 deg
      Xcoord     : -0.1285 nmi
      Ycoord     : -0.1560 nmi
      Elevation : 45.9 ft
      OtherEnd   : 22
      Length     : 2501 ft
      Gradient   : -0.21 %
      RwyWind    : 8.0 kt
      TkoThresh : 0 ft
      AppThresh : 0 ft
   10
      Latitude   : 40.958884 deg
      Longitude : -72.260305 deg
      Xcoord     : -0.3843 nmi
      Ycoord     : -0.0416 nmi
      Elevation : 55.5 ft
      OtherEnd   : 28
      Length     : 4255 ft
      Gradient   : -0.58 %
      RwyWind    : 8.0 kt
      TkoThresh : 0 ft
      AppThresh : 0 ft
   16
      Latitude   : 40.962853 deg
      Longitude : -72.251741 deg
      Xcoord     : 0.0050 nmi
      Ycoord     : 0.1964 nmi
      Elevation : 41.9 ft
      OtherEnd   : 34
      Length     : 2222 ft
      Gradient   : -0.54 %
      RwyWind    : 8.0 kt
      TkoThresh : 0 ft
      AppThresh : 57 ft
   22
      Latitude   : 40.962998 deg
      Longitude : -72.250331 deg
      Xcoord     : 0.0691 nmi
      Ycoord     : 0.2051 nmi
      Elevation : 40.6 ft
      OtherEnd   : 04
      Length     : 2501 ft
      Gradient   : 0.21 %
      RwyWind    : 8.0 kt
      TkoThresh : 0 ft
```

```
      AppThresh : 360 ft
   28
      Latitude  : 40.959103 deg
      Longitude : -72.244902 deg
      Xcoord    : 0.3159 nmi
      Ycoord    : -0.0285 nmi
      Elevation : 30.8 ft
      OtherEnd  : 10
      Length    : 4255 ft
      Gradient  : 0.58 %
      RwyWind   : 8.0 kt
      TkoThresh : 0 ft
      AppThresh : 0 ft
   34
      Latitude  : 40.957618 deg
      Longitude : -72.247608 deg
      Xcoord    : 0.1929 nmi
      Ycoord    : -0.1175 nmi
      Elevation : 30.0 ft
      OtherEnd  : 16
      Length    : 2222 ft
      Gradient  : 0.54 %
      RwyWind   : 8.0 kt
      TkoThresh : 0 ft
      AppThresh : 106 ft

STUDY TRACKS
   RwyId-OpType-TrkId
     Sub  PctSub    TrkType    Delta(ft)
   04-APP-A1
     0      2.50    Vectors      0.0
   04-APP-A2
     0      2.50    Vectors      0.0
   04-DEP-D1
     0      2.00    Vectors      0.0
   04-DEP-D2
     0      3.00    Vectors      0.0
   04-TGO-T1
     0    100.00    Vectors      0.0
   10-APP-A3
     0     25.60    Vectors      0.0
   10-APP-A4
     0      6.40    Vectors      0.0
   10-DEP-D3
     0     25.60    Vectors      0.0
   10-DEP-D4
     0      4.80    Vectors      0.0
   10-DEP-D5
     0      1.60    Vectors      0.0
   10-TGO-T2
     0    100.00    Vectors      0.0
   16-APP-A5
     0      5.40    Vectors      0.0
   16-APP-A6
     0      0.60    Vectors      0.0
   16-DEP-D6
     0      3.60    Vectors      0.0
   16-DEP-D7
     0      2.40    Vectors      0.0
   16-TGO-T3
     0    100.00    Vectors      0.0
   22-APP-A7
     0      9.00    Vectors      0.0
   22-APP-A8
     0      1.00    Vectors      0.0
   22-DEP-D8
     0      6.00    Vectors      0.0
   22-DEP-D9
     0      4.00    Vectors      0.0
   22-TGO-T4
     0    100.00    Vectors      0.0
```

```
  28-APP-A10
     0   30.40   Vectors      0.0
  28-APP-A9
     0    7.60   Vectors      0.0
  28-DEP-D10
     0   30.40   Vectors      0.0
  28-DEP-D11
     0    5.70   Vectors      0.0
  28-DEP-D12
     0    1.90   Vectors      0.0
  28-TGO-T5
     0  100.00   Vectors      0.0
  34-APP-A11
     0    1.80   Vectors      0.0
  34-APP-A12
     0    7.20   Vectors      0.0
  34-DEP-D13
     0    5.40   Vectors      0.0
  34-DEP-D14
     0    3.20   Vectors      0.0
  34-TGO-T6
     0  100.00   Vectors      0.0

STUDY TRACK DETAIL
  RwyId-OpType-TrkId-SubTrk
        SegType        Dist/Angle    Radius(nmi)
  04-APP-A1-0
     1  Straight        2.0000 nmi
  04-APP-A2-0
     1  Straight        0.5000 nmi
     2  Left-Turn     180.0000 deg     0.2500
     3  Straight        0.5000 nmi
  04-DEP-D1-0
     1  Straight        1.0000 nmi
     2  Left-Turn      90.0000 deg     0.5000
  04-DEP-D2-0
     1  Straight        2.0000 nmi
  04-TGO-T1-0
     1  Straight        1.0000 nmi
     2  Left-Turn     180.0000 deg     0.2500
     3  Straight        1.5000 nmi
     4  Left-Turn     180.0000 deg     0.2500
     5  Straight        0.5000 nmi
  10-APP-A3-0
     1  Straight        2.0000 nmi
  10-APP-A4-0
     1  Straight        0.5000 nmi
     2  Left-Turn     180.0000 deg     0.2500
     3  Straight        0.5000 nmi
  10-DEP-D3-0
     1  Straight        1.0000 nmi
     2  Left-Turn      90.0000 deg     0.5000
  10-DEP-D4-0
     1  Straight        1.0000 nmi
     2  Left-Turn      45.0000 deg     0.5000
     3  Straight        1.0000 nmi
  10-DEP-D5-0
     1  Straight        2.0000 nmi
  10-TGO-T2-0
     1  Straight        1.0000 nmi
     2  Left-Turn     180.0000 deg     0.2500
     3  Straight        1.5000 nmi
     4  Left-Turn     180.0000 deg     0.2500
     5  Straight        0.5000 nmi
  16-APP-A5-0
     1  Straight        2.0000 nmi
  16-APP-A6-0
     1  Straight        0.5000 nmi
     2  Left-Turn     180.0000 deg     0.2500
     3  Straight        0.5000 nmi
  16-DEP-D6-0
```

```
      1  Straight       1.0000 nmi
      2  Left-Turn     90.0000 deg     0.5000
   16-DEP-D7-0
      1  Straight       2.0000 nmi
   16-TGO-T3-0
      1  Straight       1.0000 nmi
      2  Left-Turn    180.0000 deg     0.2500
      3  Straight       1.5000 nmi
      4  Left-Turn    180.0000 deg     0.2500
      5  Straight       0.5000 nmi
   22-APP-A7-0
      1  Straight       2.0000 nmi
   22-APP-A8-0
      1  Straight       0.5000 nmi
      2  Left-Turn    180.0000 deg     0.2500
      3  Straight       0.5000 nmi
   22-DEP-D8-0
      1  Straight       1.0000 nmi
      2  Left-Turn     90.0000 deg     0.5000
   22-DEP-D9-0
      1  Straight       2.0000 nmi
   22-TGO-T4-0
      1  Straight       1.0000 nmi
      2  Left-Turn    180.0000 deg     0.2500
      3  Straight       1.5000 nmi
      4  Left-Turn    180.0000 deg     0.2500
      5  Straight       0.5000 nmi
   28-APP-A10-0
      1  Straight       0.5000 nmi
      2  Left-Turn    180.0000 deg     0.2500
      3  Straight       0.5000 nmi
   28-APP-A9-0
      1  Straight       2.0000 nmi
   28-DEP-D10-0
      1  Straight       1.0000 nmi
      2  Left-Turn     90.0000 deg     0.5000
   28-DEP-D11-0
      1  Straight       1.0000 nmi
      2  Left-Turn     45.0000 deg     0.5000
      3  Straight       1.0000 nmi
   28-DEP-D12-0
      1  Straight       2.0000 nmi
   28-TGO-T5-0
      1  Straight       1.0000 nmi
      2  Left-Turn    180.0000 deg     0.2500
      3  Straight       1.5000 nmi
      4  Left-Turn    180.0000 deg     0.2500
      5  Straight       0.5000 nmi
   34-APP-A11-0
      1  Straight       2.0000 nmi
   34-APP-A12-0
      1  Straight       0.5000 nmi
      2  Left-Turn    180.0000 deg     0.2500
      3  Straight       0.5000 nmi
   34-DEP-D13-0
      1  Straight       1.0000 nmi
      2  Left-Turn     90.0000 deg     0.5000
   34-DEP-D14-0
      1  Straight       2.0000 nmi
   34-TGO-T6-0
      1  Straight       1.0000 nmi
      2  Left-Turn    180.0000 deg     0.2500
      3  Straight       1.5000 nmi
      4  Left-Turn    180.0000 deg     0.2500
      5  Straight       0.5000 nmi

   DY AIRCRAFT
   BEC58P User-defined
     Descrip   : BARON 58P/TS10-520-L
     UserID    : COM
     WgtCat    : Small
```

```
    OwnerCat  : Commercial
    EngType   : Piston
    NoiseCat  : 10480484
    Type      : Prop
    NumEng    : 2
    NoiseId   : TSIO52
    ATRS      : No
    TkoWgt    : 6100 lb
    LndWgt    : 6100 lb
    LndDist   : 2733 ft
    StaticThr : 779 lb
 CNA441 Standard data
 CNA500 User-defined
    Descrip   : CIT 2/JT15D-4
    UserID    : BJ
    WgtCat    : Large
    OwnerCat  : Gen-Aviation
    EngType   : Jet
    NoiseCat  : 10480484
    Type      : Jet
    NumEng    : 2
    NoiseId   : JT15D1
    ATRS      : No
    TkoWgt    : 14700 lb
    LndWgt    : 14000 lb
    LndDist   : 3050 ft
    StaticThr : 2500 lb
 DHC6   Standard data
 FAL20  User-defined
    Descrip   : FALCON 20/CF700-2D-2
    UserID    : BJ
    WgtCat    : Large
    OwnerCat  : Gen-Aviation
    EngType   : Jet
    NoiseCat  : 10480484
    Type      : Jet
    NumEng    : 2
    NoiseId   : CF700
    ATRS      : No
    TkoWgt    : 28700 lb
    LndWgt    : 27300 lb
    LndDist   : 2490 ft
    StaticThr : 4500 lb
 GASEPF Standard data
 GASEPV Standard data
 GIIB   User-defined
    Descrip   : GIIB/SPEY MK511-8
    UserID    : BJ
    WgtCat    : Large
    OwnerCat  : Gen-Aviation
    EngType   : Jet
    NoiseCat  : 10480484
    Type      : Jet
    NumEng    : 2
    NoiseId   : SP5118
    ATRS      : No
    TkoWgt    : 65500 lb
    LndWgt    : 58500 lb
    LndDist   : 3200 ft
    StaticThr : 11400 lb
 GIV    User-defined
    Descrip   : GIV/TAY 611
    UserID    : BJ
    WgtCat    : Large
    OwnerCat  : Gen-Aviation
    EngType   : Jet
    NoiseCat  : 10480484
    Type      : Jet
    NumEng    : 2
    NoiseId   : TAY620
    ATRS      : No
```

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      TkoWgt    : 71700 lb
      LndWgt    : 58500 lb
      LndDist   : 3200 ft
      StaticThr : 13850 lb
   LEAR25 User-defined
      Descrip   : LEAR 25/CJ610-8
      UserID    : BJ
      WgtCat    : Large
      OwnerCat  : Gen-Aviation
      EngType   : Jet
      NoiseCat  : 10480484
      Type      : Jet
      NumEng    : 2
      NoiseId   : CJ610
      ATRS      : No
      TkoWgt    : 15000 lb
      LndWgt    : 13500 lb
      LndDist   : 2620 ft
      StaticThr : 2950 lb
   LEAR35 User-defined
      Descrip   : LEAR 36/TFE731-2
      UserID    : BJ
      WgtCat    : Large
      OwnerCat  : Gen-Aviation
      EngType   : Jet
      NoiseCat  : 10480484
      Type      : Jet
      NumEng    : 2
      NoiseId   : TF7312
      ATRS      : No
      TkoWgt    : 18300 lb
      LndWgt    : 15300 lb
      LndDist   : 3076 ft
      StaticThr : 3500 lb
   MU3001 User-defined
      Descrip   : MU300-10/JT15D-4
      UserID    : BJ
      WgtCat    : Large
      OwnerCat  : Gen-Aviation
      EngType   : Jet
      NoiseCat  : 10480484
      Type      : Jet
      NumEng    : 2
      NoiseId   : JT15D5
      ATRS      : No
      TkoWgt    : 14100 lb
      LndWgt    : 13200 lb
      LndDist   : 2800 ft
      StaticThr : 2500 lb
   SABR80 User-defined
      Descrip   : NA SABRELINER 80
      UserID    : BJ
      WgtCat    : Large
      OwnerCat  : Gen-Aviation
      EngType   : Jet
      NoiseCat  : 10480484
      Type      : Jet
      NumEng    : 2
      NoiseId   : CF700
      ATRS      : No
      TkoWgt    : 33720 lb
      LndWgt    : 27290 lb
      LndDist   : 2490 ft
      StaticThr : 3962 lb

STUDY SUBSTITUTION AIRCRAFT
   Name    Description
      Acft    Percent
   GULF3   Gulfstream III
      GIIB    100.0 %
```

USER-DEFINED NOISE CURVES

Type	Thrust	Op	200	400	630	1000	2000	4000	6300	10000	16000	25000

USER-DEFINED METRICS

Name	Type	Family	Day	Eve	Night	10Log(T)

USER-DEFINED PROFILE IDENTIFIERS

Op	Profile	Stg	Weight(lb)

USER-DEFINED PROCEDURAL PROFILES

#	StepType	Flap	ThrType	Alt/Clm	Speed(kt)	Ang/Thr/Dis

USER-DEFINED FIXED-POINT PROFILES

#	Dist(ft)	Alt(ft)	Spd(kt)	Thrust	OpMode

USER-DEFINED FLAP COEFFICIENTS

Acft	Flap	Op	Coeff-R	Coeff-C/D	Coeff-B

USER-DEFINED JET THRUST COEFFICIENTS

Acft	ThrType	Coeff-E	Coeff-F	Coeff-Ga	Coeff-Gb	Coeff-H

USER-DEFINED PROP THRUST COEFFICIENTS

Name	ThrType	Efficiency	Power

USER-DEFINED GENERAL THRUST COEFFICIENTS

Acft	Type	Coeff-E	Coeff-F	Coeff-Ga	Coeff-Gb	Coeff-H	Coeff-K1	Coe

CASE FLIGHT OPERATIONS

Acft	Op	Profile	Stg	Rwy	Track	Sub	Group	Day	Evening	Night
BEC58P	APP	STANDARD	1	10	A3	0	COM	15.0720	0.0000	0.9640
BEC58P	APP	STANDARD	1	28	A9	0	COM	22.6080	0.0000	1.4460
BEC58P	DEP	STANDARD	1	10	D3	0	COM	8.8576	0.0000	0.7712
BEC58P	DEP	STANDARD	1	10	D4	0	COM	1.6608	0.0000	0.1446
BEC58P	DEP	STANDARD	1	10	D5	0	COM	0.5536	0.0000	0.0482
BEC58P	DEP	STANDARD	1	28	D10	0	COM	0.8304	0.0000	0.0723
BEC58P	DEP	STANDARD	1	28	D11	0	COM	2.4912	0.0000	0.2169
BEC58P	DEP	STANDARD	1	28	D12	0	COM	13.2864	0.0000	1.1568
CNA441	APP	STANDARD	1	10	A3	0	COM	2.4600	0.0000	0.2120
CNA441	APP	STANDARD	1	28	A9	0	COM	3.6900	0.0000	0.3180
CNA441	DEP	STANDARD	1	10	D3	0	COM	1.9680	0.0000	0.1696
CNA441	DEP	STANDARD	1	10	D4	0	COM	0.3690	0.0000	0.0318
CNA441	DEP	STANDARD	1	10	D5	0	COM	0.1230	0.0000	0.0106
CNA441	DEP	STANDARD	1	28	D10	0	COM	0.1845	0.0000	0.0159
CNA441	DEP	STANDARD	1	28	D11	0	COM	0.5535	0.0000	0.0477
CNA441	DEP	STANDARD	1	28	D12	0	COM	2.9520	0.0000	0.2544
CNA500	APP	STANDARD	1	10	A3	0	BJ	0.2960	0.0000	0.0240
CNA500	APP	STANDARD	1	28	A9	0	BJ	0.4440	0.0000	0.0360
CNA500	DEP	STANDARD	1	10	D3	0	BJ	0.2368	0.0000	0.0192
CNA500	DEP	STANDARD	1	10	D4	0	BJ	0.0444	0.0000	0.0036
CNA500	DEP	STANDARD	1	10	D5	0	BJ	0.0148	0.0000	0.0012
CNA500	DEP	STANDARD	1	28	D10	0	BJ	0.0222	0.0000	0.0018
CNA500	DEP	STANDARD	1	28	D11	0	BJ	0.0666	0.0000	0.0054
CNA500	DEP	STANDARD	1	28	D12	0	BJ	0.3552	0.0000	0.0288
DHC6	APP	STANDARD	1	10	A3	0	COM	6.7640	0.0000	0.5880
DHC6	APP	STANDARD	1	28	A9	0	COM	10.1460	0.0000	0.8820
DHC6	DEP	STANDARD	1	10	D3	0	COM	5.4112	0.0000	0.4704
DHC6	DEP	STANDARD	1	10	D4	0	COM	1.0146	0.0000	0.0882
DHC6	DEP	STANDARD	1	10	D5	0	COM	0.3382	0.0000	0.0294
DHC6	DEP	STANDARD	1	28	D10	0	COM	0.5073	0.0000	0.0441
DHC6	DEP	STANDARD	1	28	D11	0	COM	1.5219	0.0000	0.1323
DHC6	DEP	STANDARD	1	28	D12	0	COM	8.1168	0.0000	0.7056
FAL20	APP	STANDARD	1	10	A3	0	BJ	0.1160	0.0000	0.0120
FAL20	APP	STANDARD	1	28	A9	0	BJ	0.1740	0.0000	0.0180
FAL20	DEP	STANDARD	1	10	D3	0	BJ	0.0928	0.0000	0.0096
FAL20	DEP	STANDARD	1	10	D4	0	BJ	0.0174	0.0000	0.0018
FAL20	DEP	STANDARD	1	10	D5	0	BJ	0.0058	0.0000	0.0006
FAL20	DEP	STANDARD	1	28	D10	0	BJ	0.0087	0.0000	0.0009
FAL20	DEP	STANDARD	1	28	D11	0	BJ	0.0261	0.0000	0.0027
FAL20	DEP	STANDARD	1	28	D12	0	BJ	0.1392	0.0000	0.0144
GASEPF	APP	STANDARD	1	04	A1	0	GA	0.4613	0.0000	0.0400
GASEPF	APP	STANDARD	1	04	A2	0	GA	0.4613	0.0000	0.0400

GASEPF	APP	STANDARD	1	10	A3	0	GA	4.7232	0.0000	0.4096
GASEPF	APP	STANDARD	1	10	A4	0	GA	1.1808	0.0000	0.1024
GASEPF	APP	STANDARD	1	16	A5	0	GA	0.9963	0.0000	0.0864
GASEPF	APP	STANDARD	1	16	A6	0	GA	0.1107	0.0000	0.0096
GASEPF	APP	STANDARD	1	22	A7	0	GA	1.6605	0.0000	0.1440
GASEPF	APP	STANDARD	1	22	A8	0	GA	0.1845	0.0000	0.0160
GASEPF	APP	STANDARD	1	28	A10	0	GA	5.6088	0.0000	0.4864
GASEPF	APP	STANDARD	1	28	A9	0	GA	1.4022	0.0000	0.1216
GASEPF	APP	STANDARD	1	34	A11	0	GA	0.3321	0.0000	0.0288
GASEPF	APP	STANDARD	1	34	A12	0	GA	1.3284	0.0000	0.1152
GASEPF	DEP	STANDARD	1	04	D1	0	GA	0.3690	0.0000	0.0320
GASEPF	DEP	STANDARD	1	04	D2	0	GA	0.5535	0.0000	0.0480
GASEPF	DEP	STANDARD	1	10	D3	0	GA	4.7232	0.0000	0.4096
GASEPF	DEP	STANDARD	1	10	D4	0	GA	0.8856	0.0000	0.0768
GASEPF	DEP	STANDARD	1	10	D5	0	GA	0.2952	0.0000	0.0256
GASEPF	DEP	STANDARD	1	16	D6	0	GA	0.6642	0.0000	0.0576
GASEPF	DEP	STANDARD	1	16	D7	0	GA	0.4428	0.0000	0.0384
GASEPF	DEP	STANDARD	1	22	D8	0	GA	1.1070	0.0000	0.0960
GASEPF	DEP	STANDARD	1	22	D9	0	GA	0.7380	0.0000	0.0640
GASEPF	DEP	STANDARD	1	28	D10	0	GA	0.3505	0.0000	0.0304
GASEPF	DEP	STANDARD	1	28	D11	0	GA	1.0517	0.0000	0.0912
GASEPF	DEP	STANDARD	1	28	D12	0	GA	5.6088	0.0000	0.4864
GASEPF	DEP	STANDARD	1	34	D13	0	GA	0.9963	0.0000	0.0864
GASEPF	DEP	STANDARD	1	34	D14	0	GA	0.6642	0.0000	0.0576
GASEPF	TGO	STANDARD	1	04	T1	0	GA	1.8450	0.0000	0.1605
GASEPF	TGO	STANDARD	1	10	T2	0	GA	11.8080	0.0000	1.0272
GASEPF	TGO	STANDARD	1	16	T3	0	GA	2.2140	0.0000	0.1926
GASEPF	TGO	STANDARD	1	22	T4	0	GA	3.6900	0.0000	0.3210
GASEPF	TGO	STANDARD	1	28	T5	0	GA	14.0220	0.0000	1.2198
GASEPF	TGO	STANDARD	1	34	T6	0	GA	3.3210	0.0000	0.2889
GASEPV	APP	STANDARD	1	04	A1	0	GA	0.7688	0.0000	0.0668
GASEPV	APP	STANDARD	1	04	A2	0	GA	0.7688	0.0000	0.0668
GASEPV	APP	STANDARD	1	10	A3	0	GA	7.8720	0.0000	0.6835
GASEPV	APP	STANDARD	1	10	A4	0	GA	1.9680	0.0000	0.1709
GASEPV	APP	STANDARD	1	16	A5	0	GA	1.6605	0.0000	0.1442
GASEPV	APP	STANDARD	1	16	A6	0	GA	0.1845	0.0000	0.0160
GASEPV	APP	STANDARD	1	22	A7	0	GA	2.7675	0.0000	0.2403
GASEPV	APP	STANDARD	1	22	A8	0	GA	0.3075	0.0000	0.0267
GASEPV	APP	STANDARD	1	28	A10	0	GA	9.3480	0.0000	0.8117
GASEPV	APP	STANDARD	1	28	A9	0	GA	2.3370	0.0000	0.2029
GASEPV	APP	STANDARD	1	34	A11	0	GA	0.5535	0.0000	0.0481
GASEPV	APP	STANDARD	1	34	A12	0	GA	2.2140	0.0000	0.1922
GASEPV	DEP	STANDARD	1	04	D1	0	GA	0.6150	0.0000	0.0534
GASEPV	DEP	STANDARD	1	04	D2	0	GA	0.9225	0.0000	0.0801
GASEPV	DEP	STANDARD	1	10	D3	0	GA	7.8720	0.0000	0.6835
GASEPV	DEP	STANDARD	1	10	D4	0	GA	1.4760	0.0000	0.1282
GASEPV	DEP	STANDARD	1	10	D5	0	GA	0.4920	0.0000	0.0427
GASEPV	DEP	STANDARD	1	16	D6	0	GA	1.1070	0.0000	0.0961
GASEPV	DEP	STANDARD	1	16	D7	0	GA	0.7380	0.0000	0.0641
GASEPV	DEP	STANDARD	1	22	D8	0	GA	1.8450	0.0000	0.1602
GASEPV	DEP	STANDARD	1	22	D9	0	GA	1.2300	0.0000	0.1068
GASEPV	DEP	STANDARD	1	28	D10	0	GA	0.5842	0.0000	0.0507
GASEPV	DEP	STANDARD	1	28	D11	0	GA	1.7527	0.0000	0.1522
GASEPV	DEP	STANDARD	1	28	D12	0	GA	9.3480	0.0000	0.8117
GASEPV	DEP	STANDARD	1	34	D13	0	GA	1.6605	0.0000	0.1442
GASEPV	DEP	STANDARD	1	34	D14	0	GA	1.1070	0.0000	0.0961
GIIB	APP	STANDARD	1	10	A3	0	BJ	0.0240	0.0000	0.0040
GIIB	APP	STANDARD	1	28	A9	0	BJ	0.0360	0.0000	0.0060
GIIB	DEP	STANDARD	1	10	D3	0	BJ	0.0192	0.0000	0.0032
GIIB	DEP	STANDARD	1	10	D4	0	BJ	0.0036	0.0000	0.0006
GIIB	DEP	STANDARD	1	10	D5	0	BJ	0.0012	0.0000	0.0002
GIIB	DEP	STANDARD	1	28	D10	0	BJ	0.0018	0.0000	0.0003
GIIB	DEP	STANDARD	1	28	D11	0	BJ	0.0054	0.0000	0.0009
GIIB	DEP	STANDARD	1	28	D12	0	BJ	0.0288	0.0000	0.0048
GIV	APP	STANDARD	1	10	A3	0	BJ	0.0120	0.0000	0.0000
GIV	APP	STANDARD	1	28	A9	0	BJ	0.0180	0.0000	0.0000
GIV	DEP	STANDARD	1	10	D3	0	BJ	0.0096	0.0000	0.0000
GIV	DEP	STANDARD	1	10	D4	0	BJ	0.0018	0.0000	0.0000
GIV	DEP	STANDARD	1	10	D5	0	BJ	0.0006	0.0000	0.0000
GIV	DEP	STANDARD	1	28	D10	0	BJ	0.0009	0.0000	0.0000
GIV	DEP	STANDARD	1	28	D11	0	BJ	0.0027	0.0000	0.0000

GIV	DEP	STANDARD	1	28	D12	0	BJ	0.0144	0.0000	0.0000
LEAR25	APP	STANDARD	1	10	A3	0	BJ	0.0600	0.0000	0.0040
LEAR25	APP	STANDARD	1	28	A9	0	BJ	0.0900	0.0000	0.0060
LEAR25	DEP	STANDARD	1	10	D3	0	BJ	0.0480	0.0000	0.0032
LEAR25	DEP	STANDARD	1	10	D4	0	BJ	0.0090	0.0000	0.0006
LEAR25	DEP	STANDARD	1	10	D5	0	BJ	0.0030	0.0000	0.0002
LEAR25	DEP	STANDARD	1	28	D10	0	BJ	0.0045	0.0000	0.0003
LEAR25	DEP	STANDARD	1	28	D11	0	BJ	0.0135	0.0000	0.0009
LEAR25	DEP	STANDARD	1	28	D12	0	BJ	0.0720	0.0000	0.0048
LEAR35	APP	STANDARD	1	10	A3	0	BJ	0.9160	0.0000	0.0800
LEAR35	APP	STANDARD	1	28	A9	0	BJ	1.3740	0.0000	0.1200
LEAR35	DEP	STANDARD	1	10	D3	0	BJ	0.7328	0.0000	0.0640
LEAR35	DEP	STANDARD	1	10	D4	0	BJ	0.1374	0.0000	0.0120
LEAR35	DEP	STANDARD	1	10	D5	0	BJ	0.0458	0.0000	0.0040
LEAR35	DEP	STANDARD	1	28	D10	0	BJ	0.0687	0.0000	0.0060
LEAR35	DEP	STANDARD	1	28	D11	0	BJ	0.2061	0.0000	0.0180
LEAR35	DEP	STANDARD	1	28	D12	0	BJ	1.0992	0.0000	0.0960
MU3001	APP	STANDARD	1	10	A3	0	BJ	0.3000	0.0000	0.0280
MU3001	APP	STANDARD	1	28	A9	0	BJ	0.4500	0.0000	0.0420
MU3001	DEP	STANDARD	1	10	D3	0	BJ	0.2400	0.0000	0.0224
MU3001	DEP	STANDARD	1	10	D4	0	BJ	0.0450	0.0000	0.0042
MU3001	DEP	STANDARD	1	10	D5	0	BJ	0.0150	0.0000	0.0014
MU3001	DEP	STANDARD	1	28	D10	0	BJ	0.0225	0.0000	0.0021
MU3001	DEP	STANDARD	1	28	D11	0	BJ	0.0675	0.0000	0.0063
MU3001	DEP	STANDARD	1	28	D12	0	BJ	0.3600	0.0000	0.0336
SABR80	APP	STANDARD	1	10	A3	0	BJ	0.1160	0.0000	0.0120
SABR80	APP	STANDARD	1	28	A9	0	BJ	0.1740	0.0000	0.0180
SABR80	DEP	STANDARD	1	10	D3	0	BJ	0.0928	0.0000	0.0096
SABR80	DEP	STANDARD	1	10	D4	0	BJ	0.0174	0.0000	0.0018
SABR80	DEP	STANDARD	1	10	D5	0	BJ	0.0058	0.0000	0.0006
SABR80	DEP	STANDARD	1	28	D10	0	BJ	0.0087	0.0000	0.0009
SABR80	DEP	STANDARD	1	28	D11	0	BJ	0.0261	0.0000	0.0027
SABR80	DEP	STANDARD	1	28	D12	0	BJ	0.1392	0.0000	0.0144

CASE RUNUP OPERATIONS

Acft	RunupId	X(nmi)	Y(nmi)	Head	Thrust	Dur(sec)	Day	Evening	Night

CASE GRID DEFINITIONS

Name	Type	X(nmi)	Y(nmi)	Ang(deg)	DisI(nmi)	DisJ(nmi)	NI	NJ	Thrsh	dAmb	Ave(min)
CONTOUR	Contour	-8.0000	-8.0000	0.0	16.0000	16.0000	2	2	75.0	3.0	24.00
LOCATION	Location	0.0000	0.0000	0.0	0.0000	0.0000	1	1	75.0	3.0	24.00

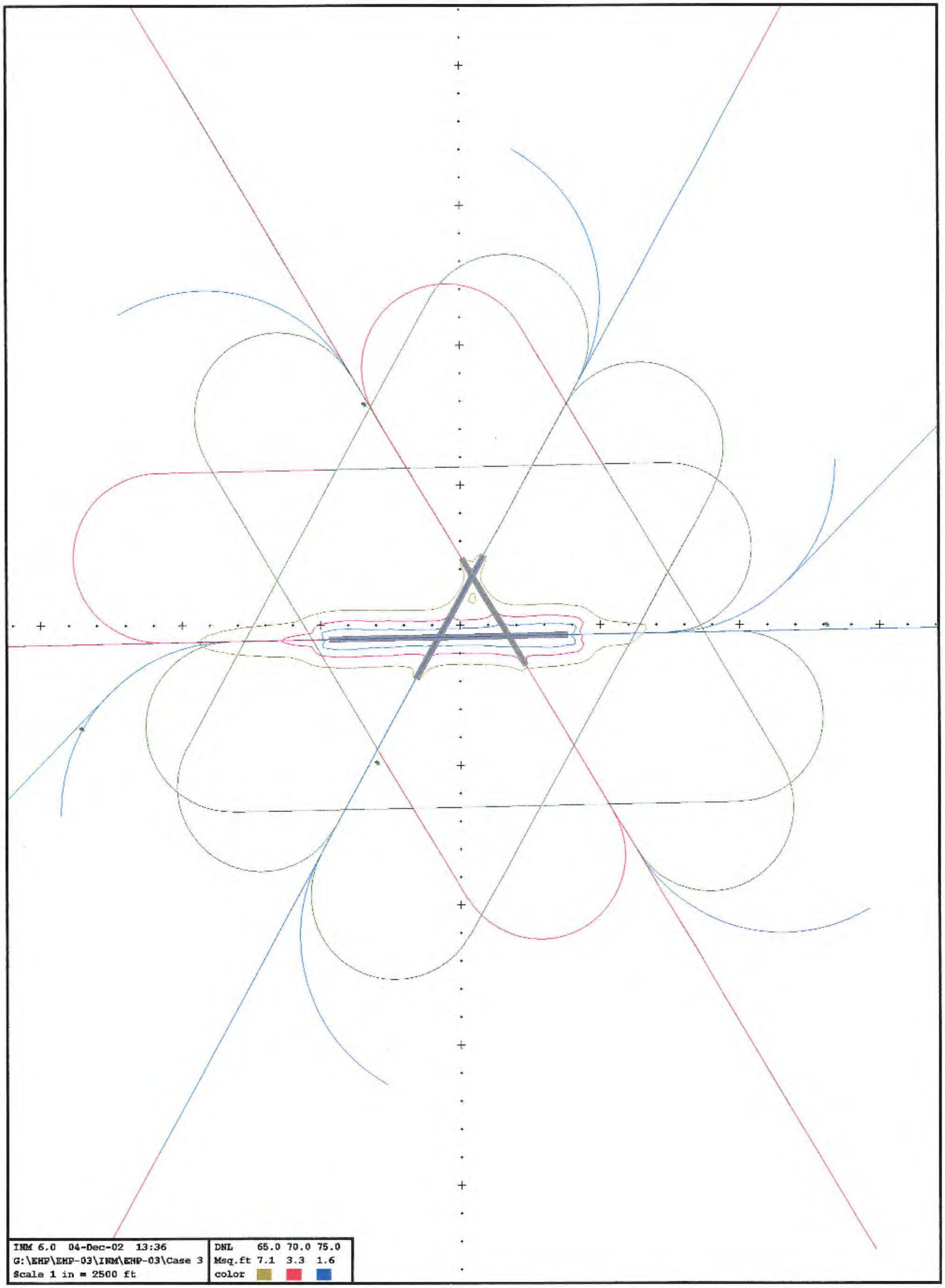
CASE RUN OPTIONS

```
   Run Type       : Single-Metric
   NoiseMetric    : DNL
   Do Terrain     : No
   Do Contour     : Yes
   Refinement     : 10
   Tolerance      : 1.00
   Low Cutoff     : 65.0
   High Cutoff    : 75.0
   Ground Type    : All-Soft-Ground
   Do Population : No
   Do Locations   : Yes
   Do Standard    : No
   Do Detailed    : No
   Compute System Metrics:
      DNL     : Yes
      CNEL    : No
      LAEQ    : No
      LAEQD   : No
      LAEQN   : No
      SEL     : No
      LAMAX   : No
      TALA    : No
      NEF     : No
      WECPNL : No
      EPNL    : No
      PNLTM   : No
      TAPNL   : No
      CEXP    : No
```

LCMAX : No
TALC : No

CASE THREE

YEAR 2005
AVERAGE DAY OF YEAR


INM 6.0 04-Dec-02 13:36
G:\EHP\EHP-03\INM\EHP-03\Case 3
Scale 1 in = 2500 ft
DNL 65.0 70.0 75.0
Msq.ft 7.1 3.3 1.6
color

```
INM 6.0 ECHO REPORT  20-Aug-02 09:38

STUDY: g:\EHP\EHP-03\INM\EHP-03\
   Created      : 16-Aug-02 07:34
   Units        : English
   Airport      : HTO
   Description :
      East Hampton Airport 2002

CASE: Case Three
   Created      : 19-Aug-02 15:41
   Description : Average Day of Year (Year 2005)

STUDY AIRPORT
   Latitude     : 40.959578 deg
   Longitude    : -72.251851 deg
   Elevation    : 56.0 ft
   Temperature : 58.8 F
   Pressure     : 29.92 in-Hg
   AverageWind : 8.0 kt
   ChangeNPD    : No

STUDY RUNWAYS
   04
      Latitude   : 40.956976 deg
      Longitude : -72.254678 deg
      Xcoord     : -0.1285 nmi
      Ycoord     : -0.1560 nmi
      Elevation : 45.9 ft
      OtherEnd   : 22
      Length     : 2501 ft
      Gradient   : -0.21 %
      RwyWind    : 8.0 kt
      TkoThresh : 0 ft
      AppThresh : 0 ft
   10
      Latitude   : 40.958884 deg
      Longitude : -72.260305 deg
      Xcoord     : -0.3843 nmi
      Ycoord     : -0.0416 nmi
      Elevation : 55.5 ft
      OtherEnd   : 28
      Length     : 4255 ft
      Gradient   : -0.58 %
      RwyWind    : 8.0 kt
      TkoThresh : 0 ft
      AppThresh : 0 ft
   16
      Latitude   : 40.962853 deg
      Longitude : -72.251741 deg
      Xcoord     : 0.0050 nmi
      Ycoord     : 0.1964 nmi
      Elevation : 41.9 ft
      OtherEnd   : 34
      Length     : 2222 ft
      Gradient   : -0.54 %
      RwyWind    : 8.0 kt
      TkoThresh : 0 ft
      AppThresh : 57 ft
   22
      Latitude   : 40.962998 deg
      Longitude : -72.250331 deg
      Xcoord     : 0.0691 nmi
      Ycoord     : 0.2051 nmi
      Elevation : 40.6 ft
      OtherEnd   : 04
      Length     : 2501 ft
      Gradient   : 0.21 %
      RwyWind    : 8.0 kt
      TkoThresh : 0 ft
```

```
      AppThresh : 360 ft
   28
      Latitude  : 40.959103 deg
      Longitude : -72.244902 deg
      Xcoord    : 0.3159 nmi
      Ycoord    : -0.0285 nmi
      Elevation : 30.8 ft
      OtherEnd  : 10
      Length    : 4255 ft
      Gradient  : 0.58 %
      RwyWind   : 8.0 kt
      TkoThresh : 0 ft
      AppThresh : 0 ft
   34
      Latitude  : 40.957618 deg
      Longitude : -72.247608 deg
      Xcoord    : 0.1929 nmi
      Ycoord    : -0.1175 nmi
      Elevation : 30.0 ft
      OtherEnd  : 16
      Length    : 2222 ft
      Gradient  : 0.54 %
      RwyWind   : 8.0 kt
      TkoThresh : 0 ft
      AppThresh : 106 ft

STUDY TRACKS
   RwyId-OpType-TrkId
     Sub  PctSub    TrkType    Delta(ft)
   04-APP-A1
      0      2.50   Vectors      0.0
   04-APP-A2
      0      2.50   Vectors      0.0
   04-DEP-D1
      0      2.00   Vectors      0.0
   04-DEP-D2
      0      3.00   Vectors      0.0
   04-TGO-T1
      0    100.00   Vectors      0.0
   10-APP-A3
      0     25.60   Vectors      0.0
   10-APP-A4
      0      6.40   Vectors      0.0
   10-DEP-D3
      0     25.60   Vectors      0.0
   10-DEP-D4
      0      4.80   Vectors      0.0
   10-DEP-D5
      0      1.60   Vectors      0.0
   10-TGO-T2
      0    100.00   Vectors      0.0
   16-APP-A5
      0      5.40   Vectors      0.0
   16-APP-A6
      0      0.60   Vectors      0.0
   16-DEP-D6
      0      3.60   Vectors      0.0
   16-DEP-D7
      0      2.40   Vectors      0.0
   16-TGO-T3
      0    100.00   Vectors      0.0
   22-APP-A7
      0      9.00   Vectors      0.0
   22-APP-A8
      0      1.00   Vectors      0.0
   22-DEP-D8
      0      6.00   Vectors      0.0
   22-DEP-D9
      0      4.00   Vectors      0.0
   22-TGO-T4
      0    100.00   Vectors      0.0
```

```
   28-APP-A10
      0   30.40   Vectors      0.0
   28-APP-A9
      0    7.60   Vectors      0.0
   28-DEP-D10
      0   30.40   Vectors      0.0
   28-DEP-D11
      0    5.70   Vectors      0.0
   28-DEP-D12
      0    1.90   Vectors      0.0
   28-TGO-T5
      0  100.00   Vectors      0.0
   34-APP-A11
      0    1.80   Vectors      0.0
   34-APP-A12
      0    7.20   Vectors      0.0
   34-DEP-D13
      0    5.40   Vectors      0.0
   34-DEP-D14
      0    3.20   Vectors      0.0
   34-TGO-T6
      0  100.00   Vectors      0.0

STUDY TRACK DETAIL
   RwyId-OpType-TrkId-SubTrk
          SegType          Dist/Angle    Radius(nmi)
   04-APP-A1-0
       1  Straight        2.0000 nmi
   04-APP-A2-0
       1  Straight        0.5000 nmi
       2  Left-Turn     180.0000 deg      0.2500
       3  Straight        0.5000 nmi
   04-DEP-D1-0
       1  Straight        1.0000 nmi
       2  Left-Turn      90.0000 deg      0.5000
   04-DEP-D2-0
       1  Straight        2.0000 nmi
   04-TGO-T1-0
       1  Straight        1.0000 nmi
       2  Left-Turn     180.0000 deg      0.2500
       3  Straight        1.5000 nmi
       4  Left-Turn     180.0000 deg      0.2500
       5  Straight        0.5000 nmi
   10-APP-A3-0
       1  Straight        2.0000 nmi
   10-APP-A4-0
       1  Straight        0.5000 nmi
       2  Left-Turn     180.0000 deg      0.2500
       3  Straight        0.5000 nmi
   10-DEP-D3-0
       1  Straight        1.0000 nmi
       2  Left-Turn      90.0000 deg      0.5000
   10-DEP-D4-0
       1  Straight        1.0000 nmi
       2  Left-Turn      45.0000 deg      0.5000
       3  Straight        1.0000 nmi
   10-DEP-D5-0
       1  Straight        2.0000 nmi
   10-TGO-T2-0
       1  Straight        1.0000 nmi
       2  Left-Turn     180.0000 deg      0.2500
       3  Straight        1.5000 nmi
       4  Left-Turn     180.0000 deg      0.2500
       5  Straight        0.5000 nmi
   16-APP-A5-0
       1  Straight        2.0000 nmi
   16-APP-A6-0
       1  Straight        0.5000 nmi
       2  Left-Turn     180.0000 deg      0.2500
       3  Straight        0.5000 nmi
   16-DEP-D6-0
```

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     1  Straight      1.0000 nmi
     2  Left-Turn    90.0000 deg     0.5000
 16-DEP-D7-0
     1  Straight      2.0000 nmi
 16-TGO-T3-0
     1  Straight      1.0000 nmi
     2  Left-Turn   180.0000 deg     0.2500
     3  Straight      1.5000 nmi
     4  Left-Turn   180.0000 deg     0.2500
     5  Straight      0.5000 nmi
 22-APP-A7-0
     1  Straight      2.0000 nmi
 22-APP-A8-0
     1  Straight      0.5000 nmi
     2  Left-Turn   180.0000 deg     0.2500
     3  Straight      0.5000 nmi
 22-DEP-D8-0
     1  Straight      1.0000 nmi
     2  Left-Turn    90.0000 deg     0.5000
 22-DEP-D9-0
     1  Straight      2.0000 nmi
 22-TGO-T4-0
     1  Straight      1.0000 nmi
     2  Left-Turn   180.0000 deg     0.2500
     3  Straight      1.5000 nmi
     4  Left-Turn   180.0000 deg     0.2500
     5  Straight      0.5000 nmi
 28-APP-A10-0
     1  Straight      0.5000 nmi
     2  Left-Turn   180.0000 deg     0.2500
     3  Straight      0.5000 nmi
 28-APP-A9-0
     1  Straight      2.0000 nmi
 28-DEP-D10-0
     1  Straight      1.0000 nmi
     2  Left-Turn    90.0000 deg     0.5000
 28-DEP-D11-0
     1  Straight      1.0000 nmi
     2  Left-Turn    45.0000 deg     0.5000
     3  Straight      1.0000 nmi
 28-DEP-D12-0
     1  Straight      2.0000 nmi
 28-TGO-T5-0
     1  Straight      1.0000 nmi
     2  Left-Turn   180.0000 deg     0.2500
     3  Straight      1.5000 nmi
     4  Left-Turn   180.0000 deg     0.2500
     5  Straight      0.5000 nmi
 34-APP-A11-0
     1  Straight      2.0000 nmi
 34-APP-A12-0
     1  Straight      0.5000 nmi
     2  Left-Turn   180.0000 deg     0.2500
     3  Straight      0.5000 nmi
 34-DEP-D13-0
     1  Straight      1.0000 nmi
     2  Left-Turn    90.0000 deg     0.5000
 34-DEP-D14-0
     1  Straight      2.0000 nmi
 34-TGO-T6-0
     1  Straight      1.0000 nmi
     2  Left-Turn   180.0000 deg     0.2500
     3  Straight      1.5000 nmi
     4  Left-Turn   180.0000 deg     0.2500
     5  Straight      0.5000 nmi

  Y AIRCRAFT
 BEC58P User-defined.
    Descrip   : BARON 58P/TS10-520-L
    UserID    : COM
    WgtCat    : Small
```

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    OwnerCat  : Commercial
    EngType   : Piston
    NoiseCat  : 15147012
    Type      : Prop
    NumEng    : 2
    NoiseId   : TSIO52
    ATRS      : No
    TkoWgt    : 6100 lb
    LndWgt    : 6100 lb
    LndDist   : 2733 ft
    StaticThr : 779 lb
CNA441 Standard data
CNA500 User-defined
    Descrip   : CIT 2/JT15D-4
    UserID    : BJ
    WgtCat    : Large
    OwnerCat  : Gen-Aviation
    EngType   : Jet
    NoiseCat  : 15147012
    Type      : Jet
    NumEng    : 2
    NoiseId   : JT15D1
    ATRS      : No
    TkoWgt    : 14700 lb
    LndWgt    : 14000 lb
    LndDist   : 3050 ft
    StaticThr : 2500 lb
DHC6   Standard data
FAL20  User-defined
    Descrip   : FALCON 20/CF700-2D-2
    UserID    : BJ
    WgtCat    : Large
    OwnerCat  : Gen-Aviation
    EngType   : Jet
    NoiseCat  : 15147012
    Type      : Jet
    NumEng    : 2
    NoiseId   : CF700
    ATRS      : No
    TkoWgt    : 28700 lb
    LndWgt    : 27300 lb
    LndDist   : 2490 ft
    StaticThr : 4500 lb
GASEPF Standard data
GASEPV Standard data
GIIB   User-defined
    Descrip   : GIIB/SPEY MK511-8
    UserID    : BJ
    WgtCat    : Large
    OwnerCat  : Gen-Aviation
    EngType   : Jet
    NoiseCat  : 15147012
    Type      : Jet
    NumEng    : 2
    NoiseId   : SP5118
    ATRS      : No
    TkoWgt    : 65500 lb
    LndWgt    : 58500 lb
    LndDist   : 3200 ft
    StaticThr : 11400 lb
GIV    User-defined
    Descrip   : GIV/TAY 611
    UserID    : BJ
    WgtCat    : Large
    OwnerCat  : Gen-Aviation
    EngType   : Jet
    NoiseCat  : 15147012
    Type      : Jet
    NumEng    : 2
    NoiseId   : TAY620
    ATRS      : No
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      TkoWgt    : 71700 lb
      LndWgt    : 58500 lb
      LndDist   : 3200 ft
      StaticThr : 13850 lb
   LEAR25 User-defined
      Descrip   : LEAR 25/CJ610-8
      UserID    : BJ
      WgtCat    : Large
      OwnerCat  : Gen-Aviation
      EngType   : Jet
      NoiseCat  : 15147012
      Type      : Jet
      NumEng    : 2
      NoiseId   : CJ610
      ATRS      : No
      TkoWgt    : 15000 lb
      LndWgt    : 13500 lb
      LndDist   : 2620 ft
      StaticThr : 2950 lb
   LEAR35 User-defined
      Descrip   : LEAR 36/TFE731-2
      UserID    : BJ
      WgtCat    : Large
      OwnerCat  : Gen-Aviation
      EngType   : Jet
      NoiseCat  : 15147012
      Type      : Jet
      NumEng    : 2
      NoiseId   : TF7312
      ATRS      : No
      TkoWgt    : 18300 lb
      LndWgt    : 15300 lb
      LndDist   : 3076 ft
      StaticThr : 3500 lb
   MU3001 User-defined
      Descrip   : MU300-10/JT15D-4
      UserID    : BJ
      WgtCat    : Large
      OwnerCat  : Gen-Aviation
      EngType   : Jet
      NoiseCat  : 15147012
      Type      : Jet
      NumEng    : 2
      NoiseId   : JT15D5
      ATRS      : No
      TkoWgt    : 14100 lb
      LndWgt    : 13200 lb
      LndDist   : 2800 ft
      StaticThr : 2500 lb
   SABR80 User-defined
      Descrip   : NA SABRELINER 80
      UserID    : BJ
      WgtCat    : Large
      OwnerCat  : Gen-Aviation
      EngType   : Jet
      NoiseCat  : 15147012
      Type      : Jet
      NumEng    : 2
      NoiseId   : CF700
      ATRS      : No
      TkoWgt    : 33720 lb
      LndWgt    : 27290 lb
      LndDist   : 2490 ft
      StaticThr : 3962 lb

STUDY SUBSTITUTION AIRCRAFT
   Name     Description
      Acft    Percent
   GULF3    Gulfstream III
      GIIB    100.0 %
```

USER-DEFINED NOISE CURVES

Type	Thrust	Op	200	400	630	1000	2000	4000	6300	10000	16000	25000

USER-DEFINED METRICS

Name	Type	Family	Day	Eve	Night	10Log(T)

USER-DEFINED PROFILE IDENTIFIERS

Op	Profile	Stg	Weight(lb)

USER-DEFINED PROCEDURAL PROFILES

#	StepType	Flap	ThrType	Alt/Clm	Speed(kt)	Ang/Thr/Dis

USER-DEFINED FIXED-POINT PROFILES

#	Dist(ft)	Alt(ft)	Spd(kt)	Thrust	OpMode

USER-DEFINED FLAP COEFFICIENTS

Acft	Flap	Op	Coeff-R	Coeff-C/D	Coeff-B

USER-DEFINED JET THRUST COEFFICIENTS

Acft	ThrType	Coeff-E	Coeff-F	Coeff-Ga	Coeff-Gb	Coeff-H

USER-DEFINED PROP THRUST COEFFICIENTS

Name	ThrType	Efficiency	Power

USER-DEFINED GENERAL THRUST COEFFICIENTS

Acft	Type	Coeff-E	Coeff-F	Coeff-Ga	Coeff-Gb	Coeff-H	Coeff-K1	Coe

CASE FLIGHT OPERATIONS

Acft	Op	Profile	Stg	Rwy	Track	Sub	Group	Day	Evening	Night
BEC58P	APP	STANDARD	1	10	A3	0	COM	5.3480	0.0000	0.4640
BEC58P	APP	STANDARD	1	28	A9	0	COM	8.0220	0.0000	0.6960
BEC58P	DEP	STANDARD	1	10	D3	0	COM	4.2784	0.0000	0.3712
BEC58P	DEP	STANDARD	1	10	D4	0	COM	0.8022	0.0000	0.0696
BEC58P	DEP	STANDARD	1	10	D5	0	COM	0.2674	0.0000	0.0232
BEC58P	DEP	STANDARD	1	28	D10	0	COM	0.4011	0.0000	0.0348
BEC58P	DEP	STANDARD	1	28	D11	0	COM	1.2033	0.0000	0.1044
BEC58P	DEP	STANDARD	1	28	D12	0	COM	6.4176	0.0000	0.5568
CNA441	APP	STANDARD	1	10	A3	0	COM	1.1880	0.0000	0.1040
CNA441	APP	STANDARD	1	28	A9	0	COM	1.7820	0.0000	0.1560
CNA441	DEP	STANDARD	1	10	D3	0	COM	0.9504	0.0000	0.0832
CNA441	DEP	STANDARD	1	10	D4	0	COM	0.1782	0.0000	0.0156
CNA441	DEP	STANDARD	1	10	D5	0	COM	0.0594	0.0000	0.0052
CNA441	DEP	STANDARD	1	28	D10	0	COM	0.0891	0.0000	0.0078
CNA441	DEP	STANDARD	1	28	D11	0	COM	0.2673	0.0000	0.0234
CNA441	DEP	STANDARD	1	28	D12	0	COM	1.4256	0.0000	0.1248
CNA500	APP	STANDARD	1	10	A3	0	BJ	0.1440	0.0000	0.0120
CNA500	APP	STANDARD	1	28	A9	0	BJ	0.2160	0.0000	0.0180
CNA500	DEP	STANDARD	1	10	D3	0	BJ	0.1152	0.0000	0.0096
CNA500	DEP	STANDARD	1	10	D4	0	BJ	0.0216	0.0000	0.0018
CNA500	DEP	STANDARD	1	10	D5	0	BJ	0.0072	0.0000	0.0006
CNA500	DEP	STANDARD	1	28	D10	0	BJ	0.0108	0.0000	0.0009
CNA500	DEP	STANDARD	1	28	D11	0	BJ	0.0324	0.0000	0.0027
CNA500	DEP	STANDARD	1	28	D12	0	BJ	0.1728	0.0000	0.0144
DHC6	APP	STANDARD	1	10	A3	0	COM	3.2680	0.0000	0.2840
DHC6	APP	STANDARD	1	28	A9	0	COM	4.9020	0.0000	0.4260
DHC6	DEP	STANDARD	1	10	D3	0	COM	2.6144	0.0000	0.2272
DHC6	DEP	STANDARD	1	10	D4	0	COM	0.4902	0.0000	0.0426
DHC6	DEP	STANDARD	1	10	D5	0	COM	0.1634	0.0000	0.0142
DHC6	DEP	STANDARD	1	28	D10	0	COM	0.2451	0.0000	0.0213
DHC6	DEP	STANDARD	1	28	D11	0	COM	0.7353	0.0000	0.0639
DHC6	DEP	STANDARD	1	28	D12	0	COM	3.9216	0.0000	0.3408
FAL20	APP	STANDARD	1	10	A3	0	BJ	0.0560	0.0000	0.0040
FAL20	APP	STANDARD	1	28	A9	0	BJ	0.0840	0.0000	0.0060
FAL20	DEP	STANDARD	1	10	D3	0	BJ	0.0448	0.0000	0.0032
FAL20	DEP	STANDARD	1	10	D4	0	BJ	0.0084	0.0000	0.0006
FAL20	DEP	STANDARD	1	10	D5	0	BJ	0.0028	0.0000	0.0002
FAL20	DEP	STANDARD	1	28	D10	0	BJ	0.0042	0.0000	0.0003
FAL20	DEP	STANDARD	1	28	D11	0	BJ	0.0126	0.0000	0.0009
FAL20	DEP	STANDARD	1	28	D12	0	BJ	0.0672	0.0000	0.0048
GASEPF	APP	STANDARD	1	04	A1	0	GA	0.2227	0.0000	0.0195
GASEPF	APP	STANDARD	1	04	A2	0	GA	0.2227	0.0000	0.0195

GASEPF	APP	STANDARD	1	10	A3	0	GA	2.2810	0.0000	0.1997
GASEPF	APP	STANDARD	1	10	A4	0	GA	0.5702	0.0000	0.0499
GASEPF	APP	STANDARD	1	16	A5	0	GA	0.4811	0.0000	0.0421
GASEPF	APP	STANDARD	1	16	A6	0	GA	0.0535	0.0000	0.0047
GASEPF	APP	STANDARD	1	22	A7	0	GA	0.8019	0.0000	0.0702
GASEPF	APP	STANDARD	1	22	A8	0	GA	0.0891	0.0000	0.0078
GASEPF	APP	STANDARD	1	28	A10	0	GA	2.7086	0.0000	0.2371
GASEPF	APP	STANDARD	1	28	A9	0	GA	0.6772	0.0000	0.0593
GASEPF	APP	STANDARD	1	34	A11	0	GA	0.1604	0.0000	0.0140
GASEPF	APP	STANDARD	1	34	A12	0	GA	0.6415	0.0000	0.0562
GASEPF	DEP	STANDARD	1	04	D1	0	GA	0.1782	0.0000	0.0156
GASEPF	DEP	STANDARD	1	04	D2	0	GA	0.2673	0.0000	0.0234
GASEPF	DEP	STANDARD	1	10	D3	0	GA	2.2810	0.0000	0.1997
GASEPF	DEP	STANDARD	1	10	D4	0	GA	0.4277	0.0000	0.0374
GASEPF	DEP	STANDARD	1	10	D5	0	GA	0.1426	0.0000	0.0125
GASEPF	DEP	STANDARD	1	16	D6	0	GA	0.3208	0.0000	0.0281
GASEPF	DEP	STANDARD	1	16	D7	0	GA	0.2138	0.0000	0.0187
GASEPF	DEP	STANDARD	1	22	D8	0	GA	0.5346	0.0000	0.0468
GASEPF	DEP	STANDARD	1	22	D9	0	GA	0.3564	0.0000	0.0312
GASEPF	DEP	STANDARD	1	28	D10	0	GA	0.1693	0.0000	0.0148
GASEPF	DEP	STANDARD	1	28	D11	0	GA	0.5079	0.0000	0.0445
GASEPF	DEP	STANDARD	1	28	D12	0	GA	2.7086	0.0000	0.2371
GASEPF	DEP	STANDARD	1	34	D13	0	GA	0.4811	0.0000	0.0421
GASEPF	DEP	STANDARD	1	34	D14	0	GA	0.3208	0.0000	0.0281
GASEPF	TGO	STANDARD	1	04	T1	0	GA	0.8915	0.0000	0.0775
GASEPF	TGO	STANDARD	1	10	T2	0	GA	5.7056	0.0000	0.4960
GASEPF	TGO	STANDARD	1	16	T3	0	GA	1.0698	0.0000	0.0930
GASEPF	TGO	STANDARD	1	22	T4	0	GA	1.7830	0.0000	0.1550
GASEPF	TGO	STANDARD	1	28	T5	0	GA	6.7754	0.0000	0.5890
GASEPF	TGO	STANDARD	1	34	T6	0	GA	1.6047	0.0000	0.1395
GASEPV	APP	STANDARD	1	04	A1	0	GA	0.3715	0.0000	0.0322
GASEPV	APP	STANDARD	1	04	A2	0	GA	0.3715	0.0000	0.0322
GASEPV	APP	STANDARD	1	10	A3	0	GA	3.8042	0.0000	0.3302
GASEPV	APP	STANDARD	1	10	A4	0	GA	0.9510	0.0000	0.0826
GASEPV	APP	STANDARD	1	16	A5	0	GA	0.8024	0.0000	0.0697
GASEPV	APP	STANDARD	1	16	A6	0	GA	0.0892	0.0000	0.0077
GASEPV	APP	STANDARD	1	22	A7	0	GA	1.3374	0.0000	0.1161
GASEPV	APP	STANDARD	1	22	A8	0	GA	0.1486	0.0000	0.0129
GASEPV	APP	STANDARD	1	28	A10	0	GA	4.5174	0.0000	0.3922
GASEPV	APP	STANDARD	1	28	A9	0	GA	1.1294	0.0000	0.0980
GASEPV	APP	STANDARD	1	34	A11	0	GA	0.2675	0.0000	0.0232
GASEPV	APP	STANDARD	1	34	A12	0	GA	1.0699	0.0000	0.0929
GASEPV	DEP	STANDARD	1	04	D1	0	GA	0.2972	0.0000	0.0258
GASEPV	DEP	STANDARD	1	04	D2	0	GA	0.4458	0.0000	0.0387
GASEPV	DEP	STANDARD	1	10	D3	0	GA	3.8042	0.0000	0.3302
GASEPV	DEP	STANDARD	1	10	D4	0	GA	0.7133	0.0000	0.0619
GASEPV	DEP	STANDARD	1	10	D5	0	GA	0.2378	0.0000	0.0206
GASEPV	DEP	STANDARD	1	16	D6	0	GA	0.5350	0.0000	0.0464
GASEPV	DEP	STANDARD	1	16	D7	0	GA	0.3566	0.0000	0.0310
GASEPV	DEP	STANDARD	1	22	D8	0	GA	0.8916	0.0000	0.0774
GASEPV	DEP	STANDARD	1	22	D9	0	GA	0.5944	0.0000	0.0516
GASEPV	DEP	STANDARD	1	28	D10	0	GA	0.2823	0.0000	0.0245
GASEPV	DEP	STANDARD	1	28	D11	0	GA	0.8470	0.0000	0.0735
GASEPV	DEP	STANDARD	1	28	D12	0	GA	4.5174	0.0000	0.3922
GASEPV	DEP	STANDARD	1	34	D13	0	GA	0.8024	0.0000	0.0697
GASEPV	DEP	STANDARD	1	34	D14	0	GA	0.5350	0.0000	0.0464
GIIB	APP	STANDARD	1	10	A3	0	BJ	0.0120	0.0000	0.0000
GIIB	APP	STANDARD	1	28	A9	0	BJ	0.0180	0.0000	0.0000
GIIB	DEP	STANDARD	1	10	D3	0	BJ	0.0096	0.0000	0.0000
GIIB	DEP	STANDARD	1	10	D4	0	BJ	0.0018	0.0000	0.0000
GIIB	DEP	STANDARD	1	10	D5	0	BJ	0.0006	0.0000	0.0000
GIIB	DEP	STANDARD	1	28	D10	0	BJ	0.0009	0.0000	0.0000
GIIB	DEP	STANDARD	1	28	D11	0	BJ	0.0027	0.0000	0.0000
GIIB	DEP	STANDARD	1	28	D12	0	BJ	0.0144	0.0000	0.0000
GIV	APP	STANDARD	1	10	A3	0	BJ	0.0040	0.0000	0.0000
GIV	APP	STANDARD	1	28	A9	0	BJ	0.0060	0.0000	0.0000
GIV	DEP	STANDARD	1	10	D3	0	BJ	0.0032	0.0000	0.0000
GIV	DEP	STANDARD	1	10	D4	0	BJ	0.0006	0.0000	0.0000
GIV	DEP	STANDARD	1	10	D5	0	BJ	0.0002	0.0000	0.0000
GIV	DEP	STANDARD	1	28	D10	0	BJ	0.0003	0.0000	0.0000
GIV	DEP	STANDARD	1	28	D11	0	BJ	0.0009	0.0000	0.0000

GIV	DEP	STANDARD	1	28	D12	0	BJ	0.0048	0.0000	0.0000
LEAR25	APP	STANDARD	1	10	A3	0	BJ	0.0280	0.0000	0.0040
LEAR25	APP	STANDARD	1	28	A9	0	BJ	0.0420	0.0000	0.0060
LEAR25	DEP	STANDARD	1	10	D3	0	BJ	0.0224	0.0000	0.0032
LEAR25	DEP	STANDARD	1	10	D4	0	BJ	0.0042	0.0000	0.0006
LEAR25	DEP	STANDARD	1	10	D5	0	BJ	0.0014	0.0000	0.0002
LEAR25	DEP	STANDARD	1	28	D10	0	BJ	0.0021	0.0000	0.0003
LEAR25	DEP	STANDARD	1	28	D11	0	BJ	0.0063	0.0000	0.0009
LEAR25	DEP	STANDARD	1	28	D12	0	BJ	0.0336	0.0000	0.0048
LEAR35	APP	STANDARD	1	10	A3	0	BJ	0.4440	0.0000	0.0400
LEAR35	APP	STANDARD	1	28	A9	0	BJ	0.6660	0.0000	0.0600
LEAR35	DEP	STANDARD	1	10	D3	0	BJ	0.3552	0.0000	0.0320
LEAR35	DEP	STANDARD	1	10	D4	0	BJ	0.0666	0.0000	0.0060
LEAR35	DEP	STANDARD	1	10	D5	0	BJ	0.0222	0.0000	0.0020
LEAR35	DEP	STANDARD	1	28	D10	0	BJ	0.0333	0.0000	0.0030
LEAR35	DEP	STANDARD	1	28	D11	0	BJ	0.0999	0.0000	0.0090
LEAR35	DEP	STANDARD	1	28	D12	0	BJ	0.5328	0.0000	0.0480
MU3001	APP	STANDARD	1	10	A3	0	BJ	0.1440	0.0000	0.0120
MU3001	APP	STANDARD	1	28	A9	0	BJ	0.2160	0.0000	0.0180
MU3001	DEP	STANDARD	1	10	D3	0	BJ	0.1152	0.0000	0.0032
MU3001	DEP	STANDARD	1	10	D4	0	BJ	0.0216	0.0000	0.0006
MU3001	DEP	STANDARD	1	10	D5	0	BJ	0.0072	0.0000	0.0002
MU3001	DEP	STANDARD	1	28	D10	0	BJ	0.0108	0.0000	0.0003
MU3001	DEP	STANDARD	1	28	D11	0	BJ	0.0324	0.0000	0.0009
MU3001	DEP	STANDARD	1	28	D12	0	BJ	0.1728	0.0000	0.0048
SABR80	APP	STANDARD	1	10	A3	0	BJ	0.0560	0.0000	0.0040
SABR80	APP	STANDARD	1	28	A9	0	BJ	0.0840	0.0000	0.0060
SABR80	DEP	STANDARD	1	10	D3	0	BJ	0.0448	0.0000	0.0032
SABR80	DEP	STANDARD	1	10	D4	0	BJ	0.0084	0.0000	0.0006
SABR80	DEP	STANDARD	1	10	D5	0	BJ	0.0028	0.0000	0.0002
SABR80	DEP	STANDARD	1	28	D10	0	BJ	0.0042	0.0000	0.0003
SABR80	DEP	STANDARD	1	28	D11	0	BJ	0.0126	0.0000	0.0009
SABR80	DEP	STANDARD	1	28	D12	0	BJ	0.0672	0.0000	0.0048

CASE RUNUP OPERATIONS

Acft	RunupId	X(nmi)	Y(nmi)	Head	Thrust	Dur(sec)	Day	Evening	Night

GRID DEFINITIONS

Name	Type	X(nmi)	Y(nmi)	Ang(deg)	DisI(nmi)	DisJ(nmi)	NI	NJ	Thrsh	dAmb	Ave(min)
CONTOUR	Contour	-8.0000	-8.0000	0.0	16.0000	16.0000	2	2	75.0	3.0	24.00
LOCATION	Location	0.0000	0.0000	0.0	0.0000	0.0000	1	1	75.0	3.0	24.00

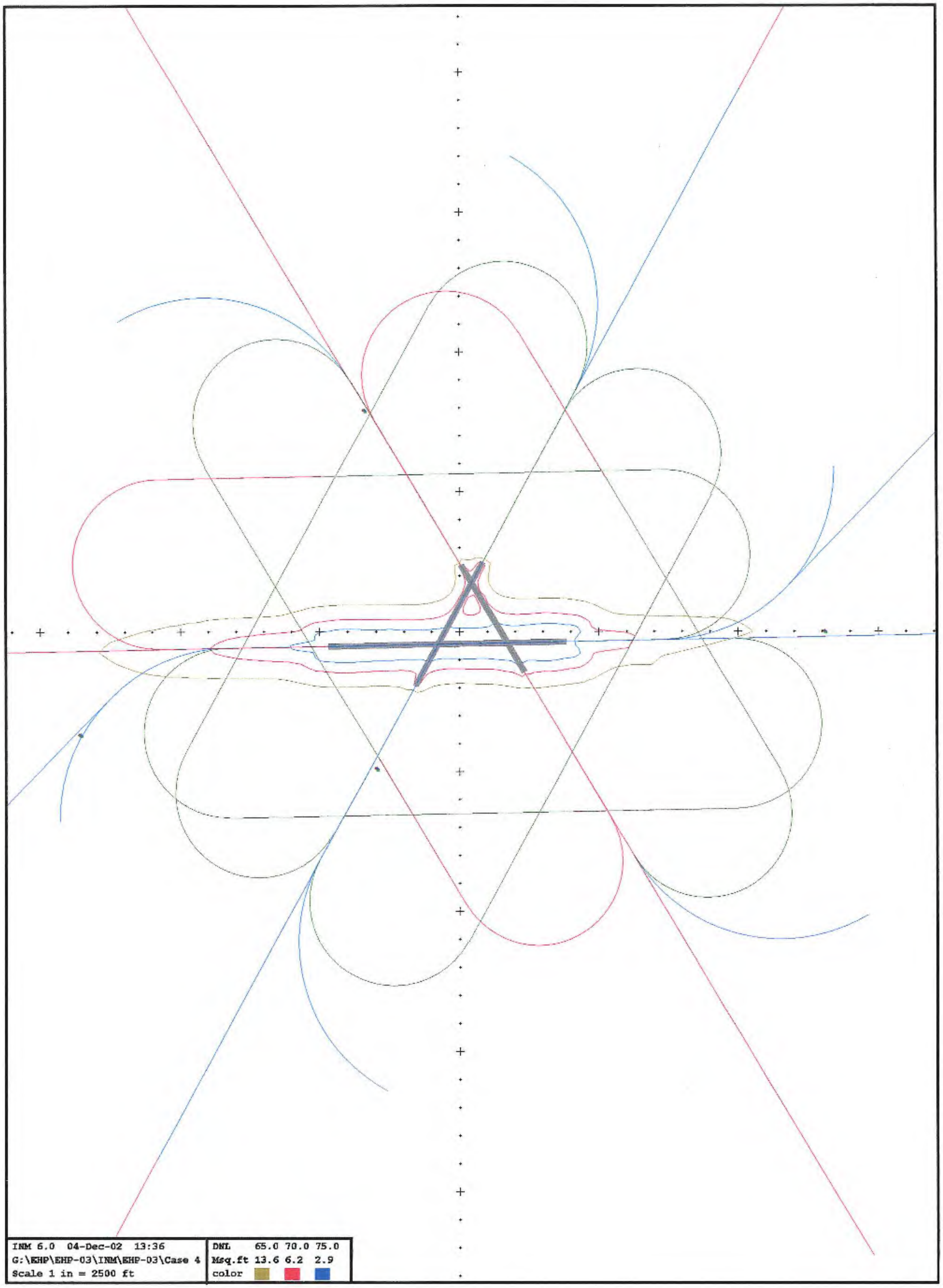
CASE RUN OPTIONS

```
   Run Type       : Single-Metric
   NoiseMetric    : DNL
   Do Terrain     : No
   Do Contour     : Yes
   Refinement     : 10
   Tolerance      : 1.00
   Low Cutoff     : 65.0
   High Cutoff    : 75.0
   Ground Type    : All-Soft-Ground
   Do Population  : No
   Do Locations   : Yes
   Do Standard    : No
   Do Detailed    : No
   Compute System Metrics:
      DNL    : Yes
      CNEL   : No
      LAEQ   : No
      LAEQD  : No
      LAEQN  : No
      SEL    : No
      LAMAX  : No
      TALA   : No
      NEF    : No
      WECPNL : No
      EPNL   : No
      PNLTM  : No
      TAPNL  : No
      CEXP   : No
```

LCMAX : No
TALC : No

CASE FOUR

YEAR 2005
AVERAGE DAY IN SUMMER


INM 6.0 04-Dec-02 13:36
G:\EHP\EHP-03\INM\EHP-03\Case 4
Scale 1 in = 2500 ft
DNL 65.0 70.0 75.0
Msq.ft 13.6 6.2 2.9
color

```
INM 6.0 ECHO REPORT  19-Aug-02 16:28

STUDY: g:\EHP\EHP-03\INM\EHP-03\
   Created     : 16-Aug-02 07:34
   Units       : English
   Airport     : HTO
   Description :
      East Hampton Airport 2002

CASE: Case Four
   Created     : 19-Aug-02 16:03
   Description : Avg Day Summer (Year 2005)

STUDY AIRPORT
   Latitude    : 40.959578 deg
   Longitude   : -72.251851 deg
   Elevation   : 56.0 ft
   Temperature : 58.8 F
   Pressure    : 29.92 in-Hg
   AverageWind : 8.0 kt
   ChangeNPD   : No

STUDY RUNWAYS
   04
      Latitude  : 40.956976 deg
      Longitude : -72.254678 deg
      Xcoord    : -0.1285 nmi
      Ycoord    : -0.1560 nmi
      Elevation : 45.9 ft
      OtherEnd  : 22
      Length    : 2501 ft
      Gradient  : -0.21 %
      RwyWind   : 8.0 kt
      TkoThresh : 0 ft
      AppThresh : 0 ft
   10
      Latitude  : 40.958884 deg
      Longitude : -72.260305 deg
      Xcoord    : -0.3843 nmi
      Ycoord    : -0.0416 nmi
      Elevation : 55.5 ft
      OtherEnd  : 28
      Length    : 4255 ft
      Gradient  : -0.58 %
      RwyWind   : 8.0 kt
      TkoThresh : 0 ft
      AppThresh : 0 ft
   16
      Latitude  : 40.962853 deg
      Longitude : -72.251741 deg
      Xcoord    : 0.0050 nmi
      Ycoord    : 0.1964 nmi
      Elevation : 41.9 ft
      OtherEnd  : 34
      Length    : 2222 ft
      Gradient  : -0.54 %
      RwyWind   : 8.0 kt
      TkoThresh : 0 ft
      AppThresh : 57 ft
   22
      Latitude  : 40.962998 deg
      Longitude : -72.250331 deg
      Xcoord    : 0.0691 nmi
      Ycoord    : 0.2051 nmi
      Elevation : 40.6 ft
      OtherEnd  : 04
      Length    : 2501 ft
      Gradient  : 0.21 %
      RwyWind   : 8.0 kt
      TkoThresh : 0 ft
```

```
   AppThresh : 360 ft
  28
     Latitude  : 40.959103 deg
     Longitude : -72.244902 deg
     Xcoord    : 0.3159 nmi
     Ycoord    : -0.0285 nmi
     Elevation : 30.8 ft
     OtherEnd  : 10
     Length    : 4255 ft
     Gradient  : 0.58 %
     RwyWind   : 8.0 kt
     TkoThresh : 0 ft
     AppThresh : 0 ft
  34
     Latitude  : 40.957618 deg
     Longitude : -72.247608 deg
     Xcoord    : 0.1929 nmi
     Ycoord    : -0.1175 nmi
     Elevation : 30.0 ft
     OtherEnd  : 16
     Length    : 2222 ft
     Gradient  : 0.54 %
     RwyWind   : 8.0 kt
     TkoThresh : 0 ft
     AppThresh : 106 ft

STUDY TRACKS
  RwyId-OpType-TrkId
    Sub  PctSub   TrkType   Delta(ft)
  04-APP-A1
     0     2.50   Vectors     0.0
  04-APP-A2
     0     2.50   Vectors     0.0
  04-DEP-D1
     0     2.00   Vectors     0.0
  04-DEP-D2
     0     3.00   Vectors     0.0
  )4-TGO-T1
     0   100.00   Vectors     0.0
  10-APP-A3
     0    25.60   Vectors     0.0
  10-APP-A4
     0     6.40   Vectors     0.0
  10-DEP-D3
     0    25.60   Vectors     0.0
  10-DEP-D4
     0     4.80   Vectors     0.0
  10-DEP-D5
     0     1.60   Vectors     0.0
  10-TGO-T2
     0   100.00   Vectors     0.0
  16-APP-A5
     0     5.40   Vectors     0.0
  16-APP-A6
     0     0.60   Vectors     0.0
  16-DEP-D6
     0     3.60   Vectors     0.0
  16-DEP-D7
     0     2.40   Vectors     0.0
  16-TGO-T3
     0   100.00   Vectors     0.0
  22-APP-A7
     0     9.00   Vectors     0.0
  22-APP-A8
     0     1.00   Vectors     0.0
  22-DEP-D8
     0     6.00   Vectors     0.0
  22-DEP-D9
     0     4.00   Vectors     0.0
  22-TGO-T4
     0   100.00   Vectors     0.0
```

```
   28-APP-A10
      0    30.40   Vectors      0.0
   28-APP-A9
      0     7.60   Vectors      0.0
   28-DEP-D10
      0    30.40   Vectors      0.0
   28-DEP-D11
      0     5.70   Vectors      0.0
    '8-DEP-D12
      0     1.90   Vectors      0.0
   28-TGO-T5
      0   100.00   Vectors      0.0
   34-APP-A11
      0     1.80   Vectors      0.0
   34-APP-A12
      0     7.20   Vectors      0.0
   34-DEP-D13
      0     5.40   Vectors      0.0
   34-DEP-D14
      0     3.20   Vectors      0.0
   34-TGO-T6
      0   100.00   Vectors      0.0

STUDY TRACK DETAIL
   RwyId-OpType-TrkId-SubTrk
          SegType         Dist/Angle    Radius(nmi)
   04-APP-A1-0
       1  Straight       2.0000 nmi
   04-APP-A2-0
       1  Straight       0.5000 nmi
       2  Left-Turn    180.0000 deg      0.2500
       3  Straight       0.5000 nmi
   04-DEP-D1-0
       1  Straight       1.0000 nmi
       2  Left-Turn     90.0000 deg      0.5000
   04-DEP-D2-0
       1  Straight       2.0000 nmi
    4-TGO-T1-0
       1  Straight       1.0000 nmi
       2  Left-Turn    180.0000 deg      0.2500
       3  Straight       1.5000 nmi
       4  Left-Turn    180.0000 deg      0.2500
       5  Straight       0.5000 nmi
   10-APP-A3-0
       1  Straight       2.0000 nmi
   10-APP-A4-0
       1  Straight       0.5000 nmi
       2  Left-Turn    180.0000 deg      0.2500
       3  Straight       0.5000 nmi
   10-DEP-D3-0
       1  Straight       1.0000 nmi
       2  Left-Turn     90.0000 deg      0.5000
   10-DEP-D4-0
       1  Straight       1.0000 nmi
       2  Left-Turn     45.0000 deg      0.5000
       3  Straight       1.0000 nmi
   10-DEP-D5-0
       1  Straight       2.0000 nmi
   10-TGO-T2-0
       1  Straight       1.0000 nmi
       2  Left-Turn    180.0000 deg      0.2500
       3  Straight       1.5000 nmi
       4  Left-Turn    180.0000 deg      0.2500
       5  Straight       0.5000 nmi
   16-APP-A5-0
       1  Straight       2.0000 nmi
    6-APP-A6-0
       1  Straight       0.5000 nmi
       2  Left-Turn    180.0000 deg      0.2500
       3  Straight       0.5000 nmi
   16-DEP-D6-0
```

```
    1  Straight       1.0000 nmi
    2  Left-Turn     90.0000 deg     0.5000
16-DEP-D7-0
    1  Straight       2.0000 nmi
16-TGO-T3-0
    1  Straight       1.0000 nmi
    2  Left-Turn    180.0000 deg     0.2500
    3  Straight       1.5000 nmi
    4  Left-Turn    180.0000 deg     0.2500
    5  Straight       0.5000 nmi
22-APP-A7-0
    1  Straight       2.0000 nmi
22-APP-A8-0
    1  Straight       0.5000 nmi
    2  Left-Turn    180.0000 deg     0.2500
    3  Straight       0.5000 nmi
22-DEP-D8-0
    1  Straight       1.0000 nmi
    2  Left-Turn     90.0000 deg     0.5000
22-DEP-D9-0
    1  Straight       2.0000 nmi
22-TGO-T4-0
    1  Straight       1.0000 nmi
    2  Left-Turn    180.0000 deg     0.2500
    3  Straight       1.5000 nmi
    4  Left-Turn    180.0000 deg     0.2500
    5  Straight       0.5000 nmi
28-APP-A10-0
    1  Straight       0.5000 nmi
    2  Left-Turn    180.0000 deg     0.2500
    3  Straight       0.5000 nmi
28-APP-A9-0
    1  Straight       2.0000 nmi
28-DEP-D10-0
    1  Straight       1.0000 nmi
    2  Left-Turn     90.0000 deg     0.5000
28-DEP-D11-0
    1  Straight       1.0000 nmi
    2  Left-Turn     45.0000 deg     0.5000
    3  Straight       1.0000 nmi
28-DEP-D12-0
    1  Straight       2.0000 nmi
28-TGO-T5-0
    1  Straight       1.0000 nmi
    2  Left-Turn    180.0000 deg     0.2500
    3  Straight       1.5000 nmi
    4  Left-Turn    180.0000 deg     0.2500
    5  Straight       0.5000 nmi
34-APP-A11-0
    1  Straight       2.0000 nmi
34-APP-A12-0
    1  Straight       0.5000 nmi
    2  Left-Turn    180.0000 deg     0.2500
    3  Straight       0.5000 nmi
34-DEP-D13-0
    1  Straight       1.0000 nmi
    2  Left-Turn     90.0000 deg     0.5000
34-DEP-D14-0
    1  Straight       2.0000 nmi
34-TGO-T6-0
    1  Straight       1.0000 nmi
    2  Left-Turn    180.0000 deg     0.2500
    3  Straight       1.5000 nmi
    4  Left-Turn    180.0000 deg     0.2500
    5  Straight       0.5000 nmi

DY AIRCRAFT
BEC58P User-defined
   Descrip   : BARON 58P/TS10-520-L
   UserID    : COM
   WgtCat    : Small
```

```
      OwnerCat  : Commercial
      EngType   : Piston
      NoiseCat  : 15103324
      Type      : Prop
      NumEng    : 2
      NoiseId   : TSIO52
      ATRS      : No
      TkoWgt    : 6100 lb
      LndWgt    : 6100 lb
      LndDist   : 2733 ft
      StaticThr : 779 lb
   CNA441 Standard data
   CNA500 User-defined
      Descrip   : CIT 2/JT15D-4
      UserID    : BJ
      WgtCat    : Large
      OwnerCat  : Gen-Aviation
      EngType   : Jet
      NoiseCat  : 15103324
      Type      : Jet
      NumEng    : 2
      NoiseId   : JT15D1
      ATRS      : No
      TkoWgt    : 14700 lb
      LndWgt    : 14000 lb
      LndDist   : 3050 ft
      StaticThr : 2500 lb
   DHC6   Standard data
   FAL20  User-defined
      Descrip   : FALCON 20/CF700-2D-2
      UserID    : BJ
      WgtCat    : Large
      OwnerCat  : Gen-Aviation
      EngType   : Jet
      NoiseCat  : 15103324
      Type      : Jet
      NumEng    : 2
      NoiseId   : CF700
      ATRS      : No
      TkoWgt    : 28700 lb
      LndWgt    : 27300 lb
      LndDist   : 2490 ft
      StaticThr : 4500 lb
   GASEPF Standard data
   GASEPV Standard data
   GIIB   User-defined
      Descrip   : GIIB/SPEY MK511-8
      UserID    : BJ
      WgtCat    : Large
      OwnerCat  : Gen-Aviation
      EngType   : Jet
      NoiseCat  : 15103324
      Type      : Jet
      NumEng    : 2
      NoiseId   : SP5118
      ATRS      : No
      TkoWgt    : 65500 lb
      LndWgt    : 58500 lb
      LndDist   : 3200 ft
      StaticThr : 11400 lb
   GIV    User-defined
      Descrip   : GIV/TAY 611
      UserID    : BJ
      WgtCat    : Large
      OwnerCat  : Gen-Aviation
      EngType   : Jet
      NoiseCat  : 15103324
      Type      : Jet
      NumEng    : 2
      NoiseId   : TAY620
      ATRS      : No
```

```
      TkoWgt     : 71700 lb
      LndWgt     : 58500 lb
      LndDist    : 3200 ft
      StaticThr  : 13850 lb
   LEAR25 User-defined
      Descrip    : LEAR 25/CJ610-8
      UserID     : BJ
      WgtCat     : Large
      OwnerCat   : Gen-Aviation
      EngType    : Jet
      NoiseCat   : 15103324
      Type       : Jet
      NumEng     : 2
      NoiseId    : CJ610
      ATRS       : No
      TkoWgt     : 15000 lb
      LndWgt     : 13500 lb
      LndDist    : 2620 ft
      StaticThr  : 2950 lb
   LEAR35 User-defined
      Descrip    : LEAR 36/TFE731-2
      UserID     : BJ
      WgtCat     : Large
      OwnerCat   : Gen-Aviation
      EngType    : Jet
      NoiseCat   : 15103324
      Type       : Jet
      NumEng     : 2
      NoiseId    : TF7312
      ATRS       : No
      TkoWgt     : 18300 lb
      LndWgt     : 15300 lb
      LndDist    : 3076 ft
      StaticThr  : 3500 lb
   MU3001 User-defined
      Descrip    : MU300-10/JT15D-4
      UserID     : BJ
      WgtCat     : Large
      OwnerCat   : Gen-Aviation
      EngType    : Jet
      NoiseCat   : 15103324
      Type       : Jet
      NumEng     : 2
      NoiseId    : JT15D5
      ATRS       : No
      TkoWgt     : 14100 lb
      LndWgt     : 13200 lb
      LndDist    : 2800 ft
      StaticThr  : 2500 lb
   SABR80 User-defined
      Descrip    : NA SABRELINER 80
      UserID     : BJ
      WgtCat     : Large
      OwnerCat   : Gen-Aviation
      EngType    : Jet
      NoiseCat   : 15103324
      Type       : Jet
      NumEng     : 2
      NoiseId    : CF700
      ATRS       : No
      TkoWgt     : 33720 lb
      LndWgt     : 27290 lb
      LndDist    : 2490 ft
      StaticThr  : 3962 lb

STUDY SUBSTITUTION AIRCRAFT
   Name    Description
      Acft    Percent
   GULF3   Gulfstream III
      GIIB    100.0 %
```

USER-DEFINED NOISE CURVES

Type	Thrust	Op	200	400	630	1000	2000	4000	6300	10000	16000	25000

USER-DEFINED METRICS

Name	Type	Family	Day	Eve	Night	10Log(T)

USER-DEFINED PROFILE IDENTIFIERS

Op	Profile	Stg	Weight(lb)

USER-DEFINED PROCEDURAL PROFILES

#	StepType	Flap	ThrType	Alt/Clm	Speed(kt)	Ang/Thr/Dis

USER-DEFINED FIXED-POINT PROFILES

#	Dist(ft)	Alt(ft)	Spd(kt)	Thrust	OpMode

USER-DEFINED FLAP COEFFICIENTS

Acft	Flap	Op	Coeff-R	Coeff-C/D	Coeff-B

USER-DEFINED JET THRUST COEFFICIENTS

Acft	ThrType	Coeff-E	Coeff-F	Coeff-Ga	Coeff-Gb	Coeff-H

USER-DEFINED PROP THRUST COEFFICIENTS

Name	ThrType	Efficiency	Power

USER-DEFINED GENERAL THRUST COEFFICIENTS

Acft	Type	Coeff-E	Coeff-F	Coeff-Ga	Coeff-Gb	Coeff-H	Coeff-K1	Coe

CASE FLIGHT OPERATIONS

Acft	Op	Profile	Stg	Rwy	Track	Sub	Group	Day	Evening	Night
BEC58P	APP	STANDARD	1	10	A3	0	COM	12.7320	0.0000	1.1080
BEC58P	APP	STANDARD	1	28	A9	0	COM	19.0980	0.0000	1.6620
BEC58P	DEP	STANDARD	1	10	D3	0	COM	10.1856	0.0000	0.8864
BEC58P	DEP	STANDARD	1	10	D4	0	COM	1.9098	0.0000	0.1662
BEC58P	DEP	STANDARD	1	10	D5	0	COM	0.6366	0.0000	0.0554
BEC58P	DEP	STANDARD	1	28	D10	0	COM	0.9549	0.0000	0.0831
BEC58P	DEP	STANDARD	1	28	D11	0	COM	2.8647	0.0000	0.2493
BEC58P	DEP	STANDARD	1	28	D12	0	COM	15.2784	0.0000	1.3296
CNA441	APP	STANDARD	1	10	A3	0	COM	1.4160	0.0000	0.1240
CNA441	APP	STANDARD	1	28	A9	0	COM	2.1240	0.0000	0.1860
CNA441	DEP	STANDARD	1	10	D3	0	COM	1.1328	0.0000	0.0992
CNA441	DEP	STANDARD	1	10	D4	0	COM	0.2124	0.0000	0.0186
CNA441	DEP	STANDARD	1	10	D5	0	COM	0.0708	0.0000	0.0062
CNA441	DEP	STANDARD	1	28	D10	0	COM	0.1062	0.0000	0.0093
CNA441	DEP	STANDARD	1	28	D11	0	COM	0.3186	0.0000	0.0279
CNA441	DEP	STANDARD	1	28	D12	0	COM	1.6992	0.0000	0.1488
CNA500	APP	STANDARD	1	10	A3	0	BJ	0.3400	0.0000	0.0280
CNA500	APP	STANDARD	1	28	A9	0	BJ	0.5100	0.0000	0.0420
CNA500	DEP	STANDARD	1	10	D3	0	BJ	0.2720	0.0000	0.0224
CNA500	DEP	STANDARD	1	10	D4	0	BJ	0.0510	0.0000	0.0042
CNA500	DEP	STANDARD	1	10	D5	0	BJ	0.0170	0.0000	0.0014
CNA500	DEP	STANDARD	1	28	D10	0	BJ	0.0255	0.0000	0.0021
CNA500	DEP	STANDARD	1	28	D11	0	BJ	0.0765	0.0000	0.0063
CNA500	DEP	STANDARD	1	28	D12	0	BJ	0.4080	0.0000	0.0336
DHC6	APP	STANDARD	1	10	A3	0	COM	7.7800	0.0000	0.6760
DHC6	APP	STANDARD	1	28	A9	0	COM	11.6700	0.0000	1.0140
DHC6	DEP	STANDARD	1	10	D3	0	COM	6.2240	0.0000	0.5408
DHC6	DEP	STANDARD	1	10	D4	0	COM	1.1670	0.0000	0.1014
DHC6	DEP	STANDARD	1	10	D5	0	COM	0.3890	0.0000	0.0338
DHC6	DEP	STANDARD	1	28	D10	0	COM	0.5835	0.0000	0.0507
DHC6	DEP	STANDARD	1	28	D11	0	COM	1.7505	0.0000	0.1521
DHC6	DEP	STANDARD	1	28	D12	0	COM	9.3360	0.0000	0.8112
FAL20	APP	STANDARD	1	10	A3	0	BJ	0.1360	0.0000	0.0120
FAL20	APP	STANDARD	1	28	A9	0	BJ	0.2040	0.0000	0.0180
FAL20	DEP	STANDARD	1	10	D3	0	BJ	0.1088	0.0000	0.0096
FAL20	DEP	STANDARD	1	10	D4	0	BJ	0.0204	0.0000	0.0018
FAL20	DEP	STANDARD	1	10	D5	0	BJ	0.0068	0.0000	0.0006
FAL20	DEP	STANDARD	1	28	D10	0	BJ	0.0102	0.0000	0.0009
FAL20	DEP	STANDARD	1	28	D11	0	BJ	0.0306	0.0000	0.0027
FAL20	DEP	STANDARD	1	28	D12	0	BJ	0.1632	0.0000	0.0144
GASEPF	APP	STANDARD	1	04	A1	0	GA	0.5305	0.0000	0.0463
GASEPF	APP	STANDARD	1	04	A2	0	GA	0.5305	0.0000	0.0463

GASEPF	APP	STANDARD	1	10	A3	0	GA	5.4323	0.0000	0.4736
GASEPF	APP	STANDARD	1	10	A4	0	GA	1.3581	0.0000	0.1184
GASEPF	APP	STANDARD	1	16	A5	0	GA	1.1459	0.0000	0.0999
GASEPF	APP	STANDARD	1	16	A6	0	GA	0.1273	0.0000	0.0111
GASEPF	APP	STANDARD	1	22	A7	0	GA	1.9098	0.0000	0.1665
GASEPF	APP	STANDARD	1	22	A8	0	GA	0.2122	0.0000	0.0185
GASEPF	APP	STANDARD	1	28	A10	0	GA	6.4509	0.0000	0.5624
GASEPF	APP	STANDARD	1	28	A9	0	GA	1.6127	0.0000	0.1406
GASEPF	APP	STANDARD	1	34	A11	0	GA	0.3820	0.0000	0.0333
GASEPF	APP	STANDARD	1	34	A12	0	GA	1.5278	0.0000	0.1332
GASEPF	DEP	STANDARD	1	04	D1	0	GA	0.4244	0.0000	0.0370
GASEPF	DEP	STANDARD	1	04	D2	0	GA	0.6366	0.0000	0.0555
GASEPF	DEP	STANDARD	1	10	D3	0	GA	5.4323	0.0000	0.4736
GASEPF	DEP	STANDARD	1	10	D4	0	GA	1.0186	0.0000	0.0888
GASEPF	DEP	STANDARD	1	10	D5	0	GA	0.3395	0.0000	0.0296
GASEPF	DEP	STANDARD	1	16	D6	0	GA	0.7639	0.0000	0.0666
GASEPF	DEP	STANDARD	1	16	D7	0	GA	0.5093	0.0000	0.0444
GASEPF	DEP	STANDARD	1	22	D8	0	GA	1.2732	0.0000	0.1110
GASEPF	DEP	STANDARD	1	22	D9	0	GA	0.8488	0.0000	0.0740
GASEPF	DEP	STANDARD	1	28	D10	0	GA	0.4032	0.0000	0.0351
GASEPF	DEP	STANDARD	1	28	D11	0	GA	1.2095	0.0000	0.1054
GASEPF	DEP	STANDARD	1	28	D12	0	GA	6.4509	0.0000	0.5624
GASEPF	DEP	STANDARD	1	34	D13	0	GA	1.1459	0.0000	0.0999
GASEPF	DEP	STANDARD	1	34	D14	0	GA	0.7639	0.0000	0.0666
GASEPF	TGO	STANDARD	1	04	T1	0	GA	2.1220	0.0000	0.1845
GASEPF	TGO	STANDARD	1	10	T2	0	GA	13.5808	0.0000	1.1808
GASEPF	TGO	STANDARD	1	16	T3	0	GA	2.5464	0.0000	0.2214
GASEPF	TGO	STANDARD	1	22	T4	0	GA	4.2440	0.0000	0.3690
GASEPF	TGO	STANDARD	1	28	T5	0	GA	16.1272	0.0000	1.4022
GASEPF	TGO	STANDARD	1	34	T6	0	GA	3.8196	0.0000	0.3321
GASEPV	APP	STANDARD	1	04	A1	0	GA	0.8840	0.0000	0.0767
GASEPV	APP	STANDARD	1	04	A2	0	GA	0.8840	0.0000	0.0767
GASEPV	APP	STANDARD	1	10	A3	0	GA	9.0522	0.0000	0.7859
GASEPV	APP	STANDARD	1	10	A4	0	GA	2.2630	0.0000	0.1965
GASEPV	APP	STANDARD	1	16	A5	0	GA	1.9094	0.0000	0.1658
GASEPV	APP	STANDARD	1	16	A6	0	GA	0.2122	0.0000	0.0184
GASEPV	APP	STANDARD	1	22	A7	0	GA	3.1824	0.0000	0.2763
GASEPV	APP	STANDARD	1	22	A8	0	GA	0.3536	0.0000	0.0307
GASEPV	APP	STANDARD	1	28	A10	0	GA	10.7494	0.0000	0.9333
GASEPV	APP	STANDARD	1	28	A9	0	GA	2.6874	0.0000	0.2333
GASEPV	APP	STANDARD	1	34	A11	0	GA	0.6365	0.0000	0.0553
GASEPV	APP	STANDARD	1	34	A12	0	GA	2.5459	0.0000	0.2210
GASEPV	DEP	STANDARD	1	04	D1	0	GA	0.7072	0.0000	0.0614
GASEPV	DEP	STANDARD	1	04	D2	0	GA	1.0608	0.0000	0.0921
GASEPV	DEP	STANDARD	1	10	D3	0	GA	9.0522	0.0000	0.7859
GASEPV	DEP	STANDARD	1	10	D4	0	GA	1.6973	0.0000	0.1474
GASEPV	DEP	STANDARD	1	10	D5	0	GA	0.5658	0.0000	0.0491
GASEPV	DEP	STANDARD	1	16	D6	0	GA	1.2730	0.0000	0.1105
GASEPV	DEP	STANDARD	1	16	D7	0	GA	0.8486	0.0000	0.0737
GASEPV	DEP	STANDARD	1	22	D8	0	GA	2.1216	0.0000	0.1842
GASEPV	DEP	STANDARD	1	22	D9	0	GA	1.4144	0.0000	0.1228
GASEPV	DEP	STANDARD	1	28	D10	0	GA	0.6718	0.0000	0.0583
GASEPV	DEP	STANDARD	1	28	D11	0	GA	2.0155	0.0000	0.1750
GASEPV	DEP	STANDARD	1	28	D12	0	GA	10.7494	0.0000	0.9333
GASEPV	DEP	STANDARD	1	34	D13	0	GA	1.9094	0.0000	0.1658
GASEPV	DEP	STANDARD	1	34	D14	0	GA	1.2730	0.0000	0.1105
GIIB	APP	STANDARD	1	10	A3	0	BJ	0.0280	0.0000	0.0040
GIIB	APP	STANDARD	1	28	A9	0	BJ	0.0420	0.0000	0.0060
GIIB	DEP	STANDARD	1	10	D3	0	BJ	0.0224	0.0000	0.0032
GIIB	DEP	STANDARD	1	10	D4	0	BJ	0.0042	0.0000	0.0006
GIIB	DEP	STANDARD	1	10	D5	0	BJ	0.0014	0.0000	0.0002
GIIB	DEP	STANDARD	1	28	D10	0	BJ	0.0021	0.0000	0.0003
GIIB	DEP	STANDARD	1	28	D11	0	BJ	0.0063	0.0000	0.0009
GIIB	DEP	STANDARD	1	28	D12	0	BJ	0.0336	0.0000	0.0048
GIV	APP	STANDARD	1	10	A3	0	BJ	0.0160	0.0000	0.0000
GIV	APP	STANDARD	1	28	A9	0	BJ	0.0240	0.0000	0.0000
GIV	DEP	STANDARD	1	10	D3	0	BJ	0.0128	0.0000	0.0000
GIV	DEP	STANDARD	1	10	D4	0	BJ	0.0024	0.0000	0.0000
GIV	DEP	STANDARD	1	10	D5	0	BJ	0.0008	0.0000	0.0000
GIV	DEP	STANDARD	1	28	D10	0	BJ	0.0012	0.0000	0.0000
GIV	DEP	STANDARD	1	28	D11	0	BJ	0.0036	0.0000	0.0000

GIV	DEP	STANDARD	1	28	D12	0	BJ	0.0192	0.0000	[illegible]
LEAR25	APP	STANDARD	1	10	A3	0	BJ	0.0720	0.0000	0.0080
LEAR25	APP	STANDARD	1	28	A9	0	BJ	0.1080	0.0000	0.0120
LEAR25	DEP	STANDARD	1	10	D3	0	BJ	0.0576	0.0000	0.0064
LEAR25	DEP	STANDARD	1	10	D4	0	BJ	0.0108	0.0000	0.0012
LEAR25	DEP	STANDARD	1	10	D5	0	BJ	0.0036	0.0000	0.0004
LEAR25	DEP	STANDARD	1	28	D10	0	BJ	0.0054	0.0000	0.0006
LEAR25	DEP	STANDARD	1	28	D11	0	BJ	0.0162	0.0000	0.0018
LEAR25	DEP	STANDARD	1	28	D12	0	BJ	0.0864	0.0000	0.0096
LEAR35	APP	STANDARD	1	10	A3	0	BJ	1.0520	0.0000	0.0920
LEAR35	APP	STANDARD	1	28	A9	0	BJ	1.5780	0.0000	0.1380
LEAR35	DEP	STANDARD	1	10	D3	0	BJ	0.8416	0.0000	0.0736
LEAR35	DEP	STANDARD	1	10	D4	0	BJ	0.1578	0.0000	0.0138
LEAR35	DEP	STANDARD	1	10	D5	0	BJ	0.0526	0.0000	0.0046
LEAR35	DEP	STANDARD	1	28	D10	0	BJ	0.0789	0.0000	0.0069
LEAR35	DEP	STANDARD	1	28	D11	0	BJ	0.2367	0.0000	0.0207
LEAR35	DEP	STANDARD	1	28	D12	0	BJ	1.2624	0.0000	0.1104
MU3001	APP	STANDARD	1	10	A3	0	BJ	0.3480	0.0000	0.0320
MU3001	APP	STANDARD	1	28	A9	0	BJ	0.5220	0.0000	0.0480
MU3001	DEP	STANDARD	1	10	D3	0	BJ	0.2784	0.0000	0.0256
MU3001	DEP	STANDARD	1	10	D4	0	BJ	0.0522	0.0000	0.0048
MU3001	DEP	STANDARD	1	10	D5	0	BJ	0.0174	0.0000	0.0016
MU3001	DEP	STANDARD	1	28	D10	0	BJ	0.0261	0.0000	0.0024
MU3001	DEP	STANDARD	1	28	D11	0	BJ	0.0783	0.0000	0.0072
MU3001	DEP	STANDARD	1	28	D12	0	BJ	0.4176	0.0000	0.0384
SABR80	APP	STANDARD	1	10	A3	0	BJ	0.1360	0.0000	0.0120
SABR80	APP	STANDARD	1	28	A9	0	BJ	0.2040	0.0000	0.0180
SABR80	DEP	STANDARD	1	10	D3	0	BJ	0.1088	0.0000	0.0096
SABR80	DEP	STANDARD	1	10	D4	0	BJ	0.0204	0.0000	0.0018
SABR80	DEP	STANDARD	1	10	D5	0	BJ	0.0068	0.0000	0.0006
SABR80	DEP	STANDARD	1	28	D10	0	BJ	0.0102	0.0000	0.0009
SABR80	DEP	STANDARD	1	28	D11	0	BJ	0.0306	0.0000	0.0027
SABR80	DEP	STANDARD	1	28	D12	0	BJ	0.1632	0.0000	0.0144

CASE RUNUP OPERATIONS

Acft	RunupId	X(nmi)	Y(nmi)	Head	Thrust	Dur(sec)	Day	Evening	Night

GRID DEFINITIONS

Name	Type	X(nmi)	Y(nmi)	Ang(deg)	DisI(nmi)	DisJ(nmi)	NI	NJ	Thrsh	dAmb	Ave(min)
CONTOUR	Contour	-8.0000	-8.0000	0.0	16.0000	16.0000	2	2	75.0	3.0	24.00
LOCATION	Location	0.0000	0.0000	0.0	0.0000	0.0000	1	1	75.0	3.0	24.00

CASE RUN OPTIONS

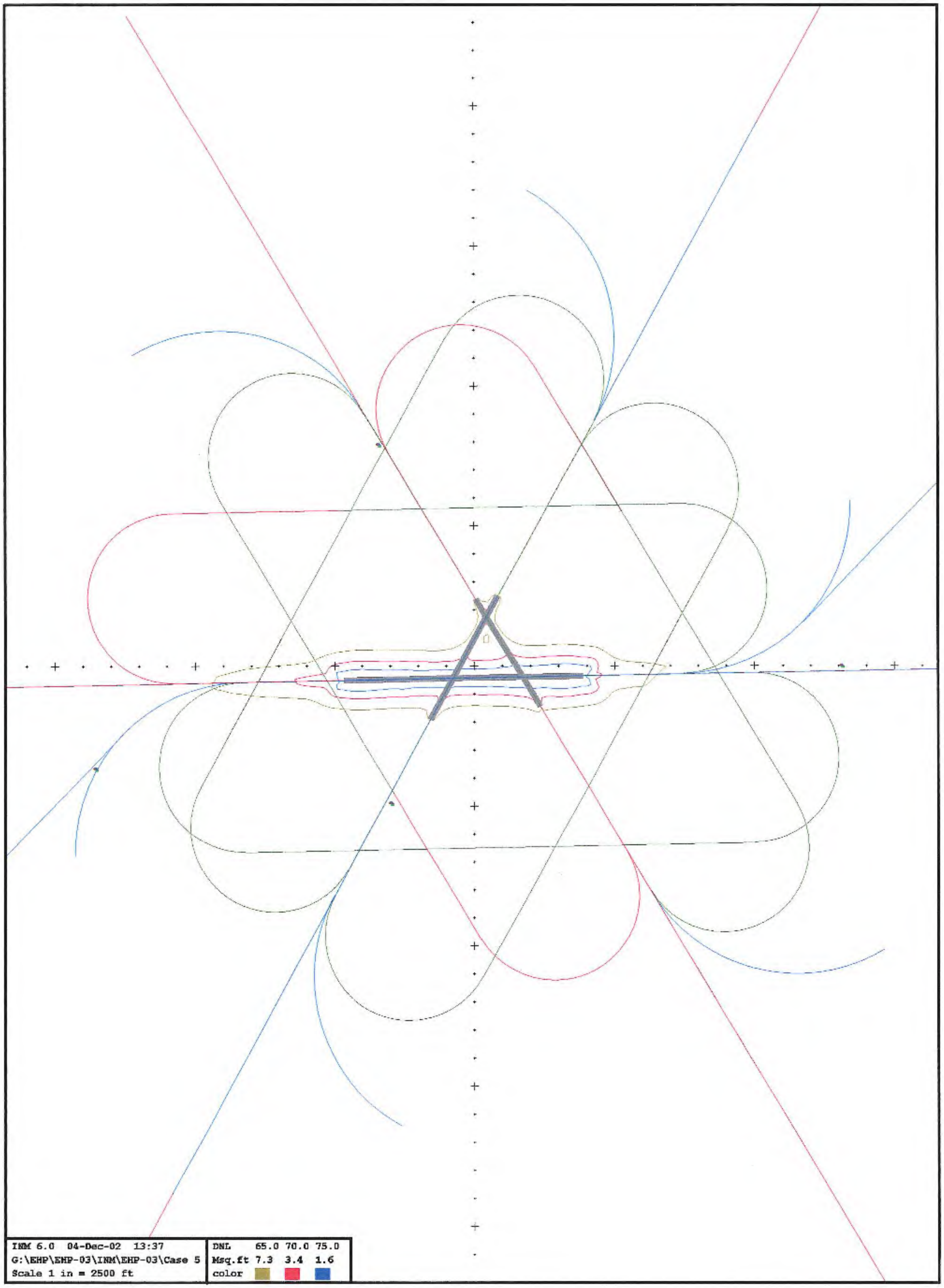
Run Type : Single-Metric
NoiseMetric : DNL
Do Terrain : No
Do Contour : Yes
Refinement : 10
Tolerance : 1.00
Low Cutoff : 65.0
High Cutoff : 75.0
Ground Type : All-Soft-Ground
Do Population : No
Do Locations : Yes
Do Standard : No
Do Detailed : No
Compute System Metrics:
DNL : Yes
CNEL : No
LAEQ : No
LAEQD : No
LAEQN : No
SEL : No
LAMAX : No
TALA : No
NEF : No
WECPNL : No
EPNL : No
PNLTM : No
TAPNL : No
CEXP : No

LCMAX : No
TALC : No

CASE FIVE

FUTURE WITH PRECISION APPROACH ON RUNWAY 10

AVERAGE DAY OF YEAR


INM 6.0 04-Dec-02 13:37
G:\EHP\EHP-03\INM\EHP-03\Case 5
Scale 1 in = 2500 ft
DNL 65.0 70.0 75.0
Msq.ft 7.3 3.4 1.6
color

```
INM 6.0 ECHO REPORT  20-Aug-02 10:00

STUDY: g:\EHP\EHP-03\INM\EHP-03\
   Created     : 16-Aug-02 07:34
   Units       : English
   Airport     : HTO
   Description :
      East Hampton Airport 2002

CASE: Case Five
   Created     : 19-Aug-02 16:33
   Description :

STUDY AIRPORT
   Latitude    : 40.959578 deg
   Longitude   : -72.251851 deg
   Elevation   : 56.0 ft
   Temperature : 58.8 F
   Pressure    : 29.92 in-Hg
   AverageWind : 8.0 kt
   ChangeNPD   : No

STUDY RUNWAYS
   04
      Latitude  : 40.956976 deg
      Longitude : -72.254678 deg
      Xcoord    : -0.1285 nmi
      Ycoord    : -0.1560 nmi
      Elevation : 45.9 ft
      OtherEnd  : 22
      Length    : 2501 ft
      Gradient  : -0.21 %
      RwyWind   : 8.0 kt
      TkoThresh : 0 ft
      AppThresh : 0 ft
   10
      Latitude  : 40.958884 deg
      Longitude : -72.260305 deg
      Xcoord    : -0.3843 nmi
      Ycoord    : -0.0416 nmi
      Elevation : 55.5 ft
      OtherEnd  : 28
      Length    : 4255 ft
      Gradient  : -0.58 %
      RwyWind   : 8.0 kt
      TkoThresh : 0 ft
      AppThresh : 0 ft
   16
      Latitude  : 40.962853 deg
      Longitude : -72.251741 deg
      Xcoord    : 0.0050 nmi
      Ycoord    : 0.1964 nmi
      Elevation : 41.9 ft
      OtherEnd  : 34
      Length    : 2222 ft
      Gradient  : -0.54 %
      RwyWind   : 8.0 kt
      TkoThresh : 0 ft
      AppThresh : 57 ft
   22
      Latitude  : 40.962998 deg
      Longitude : -72.250331 deg
      Xcoord    : 0.0691 nmi
      Ycoord    : 0.2051 nmi
      Elevation : 40.6 ft
      OtherEnd  : 04
      Length    : 2501 ft
      Gradient  : 0.21 %
      RwyWind   : 8.0 kt
      TkoThresh : 0 ft
```

```
      AppThresh : 360 ft
   28
      Latitude  : 40.959103 deg
      Longitude : -72.244902 deg
      Xcoord    : 0.3159 nmi
      Ycoord    : -0.0285 nmi
      Elevation : 30.8 ft
      OtherEnd  : 10
      Length    : 4255 ft
      Gradient  : 0.58 %
      RwyWind   : 8.0 kt
      TkoThresh : 0 ft
      AppThresh : 0 ft
   34
      Latitude  : 40.957618 deg
      Longitude : -72.247608 deg
      Xcoord    : 0.1929 nmi
      Ycoord    : -0.1175 nmi
      Elevation : 30.0 ft
      OtherEnd  : 16
      Length    : 2222 ft
      Gradient  : 0.54 %
      RwyWind   : 8.0 kt
      TkoThresh : 0 ft
      AppThresh : 106 ft

STUDY TRACKS
   RwyId-OpType-TrkId
     Sub  PctSub   TrkType   Delta(ft)
   04-APP-A1
     0      2.50   Vectors     0.0
   04-APP-A2
     0      2.50   Vectors     0.0
   04-DEP-D1
     0      2.00   Vectors     0.0
   04-DEP-D2
     0      3.00   Vectors     0.0
   04-TGO-T1
     0    100.00   Vectors     0.0
   10-APP-A3
     0     25.60   Vectors     0.0
   10-APP-A4
     0      6.40   Vectors     0.0
   10-DEP-D3
     0     25.60   Vectors     0.0
   10-DEP-D4
     0      4.80   Vectors     0.0
   10-DEP-D5
     0      1.60   Vectors     0.0
   10-TGO-T2
     0    100.00   Vectors     0.0
   16-APP-A5
     0      5.40   Vectors     0.0
   16-APP-A6
     0      0.60   Vectors     0.0
   16-DEP-D6
     0      3.60   Vectors     0.0
   16-DEP-D7
     0      2.40   Vectors     0.0
   16-TGO-T3
     0    100.00   Vectors     0.0
   22-APP-A7
     0      9.00   Vectors     0.0
   22-APP-A8
     0      1.00   Vectors     0.0
   22-DEP-D8
     0      6.00   Vectors     0.0
   22-DEP-D9
     0      4.00   Vectors     0.0
   22-TGO-T4
     0    100.00   Vectors     0.0
```

28-APP-A10			
0	30.40	Vectors	0.0
28-APP-A9			
0	7.60	Vectors	0.0
28-DEP-D10			
0	30.40	Vectors	0.0
28-DEP-D11			
0	5.70	Vectors	0.0
28-DEP-D12			
0	1.90	Vectors	0.0
28-TGO-T5			
0	100.00	Vectors	0.0
34-APP-A11			
0	1.80	Vectors	0.0
34-APP-A12			
0	7.20	Vectors	0.0
34-DEP-D13			
0	5.40	Vectors	0.0
34-DEP-D14			
0	3.20	Vectors	0.0
34-TGO-T6			
0	100.00	Vectors	0.0

STUDY TRACK DETAIL

RwyId-OpType-TrkId-SubTrk	SegType	Dist/Angle	Radius(nmi)
04-APP-A1-0			
1	Straight	2.0000 nmi	
04-APP-A2-0			
1	Straight	0.5000 nmi	
2	Left-Turn	180.0000 deg	0.2500
3	Straight	0.5000 nmi	
04-DEP-D1-0			
1	Straight	1.0000 nmi	
2	Left-Turn	90.0000 deg	0.5000
04-DEP-D2-0			
1	Straight	2.0000 nmi	
04-TGO-T1-0			
1	Straight	1.0000 nmi	
2	Left-Turn	180.0000 deg	0.2500
3	Straight	1.5000 nmi	
4	Left-Turn	180.0000 deg	0.2500
5	Straight	0.5000 nmi	
10-APP-A3-0			
1	Straight	2.0000 nmi	
10-APP-A4-0			
1	Straight	0.5000 nmi	
2	Left-Turn	180.0000 deg	0.2500
3	Straight	0.5000 nmi	
10-DEP-D3-0			
1	Straight	1.0000 nmi	
2	Left-Turn	90.0000 deg	0.5000
10-DEP-D4-0			
1	Straight	1.0000 nmi	
2	Left-Turn	45.0000 deg	0.5000
3	Straight	1.0000 nmi	
10-DEP-D5-0			
1	Straight	2.0000 nmi	
10-TGO-T2-0			
1	Straight	1.0000 nmi	
2	Left-Turn	180.0000 deg	0.2500
3	Straight	1.5000 nmi	
4	Left-Turn	180.0000 deg	0.2500
5	Straight	0.5000 nmi	
16-APP-A5-0			
1	Straight	2.0000 nmi	
16-APP-A6-0			
1	Straight	0.5000 nmi	
2	Left-Turn	180.0000 deg	0.2500
3	Straight	0.5000 nmi	
16-DEP-D6-0			

```
    1  Straight      1.0000 nmi
    2  Left-Turn    90.0000 deg    0.5000
16-DEP-D7-0
    1  Straight      2.0000 nmi
16-TGO-T3-0
    1  Straight      1.0000 nmi
    2  Left-Turn   180.0000 deg    0.2500
    3  Straight      1.5000 nmi
    4  Left-Turn   180.0000 deg    0.2500
    5  Straight      0.5000 nmi
22-APP-A7-0
    1  Straight      2.0000 nmi
22-APP-A8-0
    1  Straight      0.5000 nmi
    2  Left-Turn   180.0000 deg    0.2500
    3  Straight      0.5000 nmi
22-DEP-D8-0
    1  Straight      1.0000 nmi
    2  Left-Turn    90.0000 deg    0.5000
22-DEP-D9-0
    1  Straight      2.0000 nmi
22-TGO-T4-0
    1  Straight      1.0000 nmi
    2  Left-Turn   180.0000 deg    0.2500
    3  Straight      1.5000 nmi
    4  Left-Turn   180.0000 deg    0.2500
    5  Straight      0.5000 nmi
28-APP-A10-0
    1  Straight      0.5000 nmi
    2  Left-Turn   180.0000 deg    0.2500
    3  Straight      0.5000 nmi
28-APP-A9-0
    1  Straight      2.0000 nmi
28-DEP-D10-0
    1  Straight      1.0000 nmi
    2  Left-Turn    90.0000 deg    0.5000
28-DEP-D11-0
    1  Straight      1.0000 nmi
    2  Left-Turn    45.0000 deg    0.5000
    3  Straight      1.0000 nmi
28-DEP-D12-0
    1  Straight      2.0000 nmi
28-TGO-T5-0
    1  Straight      1.0000 nmi
    2  Left-Turn   180.0000 deg    0.2500
    3  Straight      1.5000 nmi
    4  Left-Turn   180.0000 deg    0.2500
    5  Straight      0.5000 nmi
34-APP-A11-0
    1  Straight      2.0000 nmi
34-APP-A12-0
    1  Straight      0.5000 nmi
    2  Left-Turn   180.0000 deg    0.2500
    3  Straight      0.5000 nmi
34-DEP-D13-0
    1  Straight      1.0000 nmi
    2  Left-Turn    90.0000 deg    0.5000
34-DEP-D14-0
    1  Straight      2.0000 nmi
34-TGO-T6-0
    1  Straight      1.0000 nmi
    2  Left-Turn   180.0000 deg    0.2500
    3  Straight      1.5000 nmi
    4  Left-Turn   180.0000 deg    0.2500
    5  Straight      0.5000 nmi

)Y AIRCRAFT
3EC58P User-defined.
  Descrip    : BARON 58P/TS10-520-L
  UserID     : COM
  WgtCat     : Small
```

```
   OwnerCat  : Commercial
   EngType   : Piston
   NoiseCat  : 9650028
   Type      : Prop
   NumEng    : 2
   NoiseId   : TSIO52
   ATRS      : No
   TkoWgt    : 6100 lb
   LndWgt    : 6100 lb
   LndDist   : 2733 ft
   StaticThr : 779 lb
CNA441 Standard data
CNA500 User-defined
   Descrip   : CIT 2/JT15D-4
   UserID    : BJ
   WgtCat    : Large
   OwnerCat  : Gen-Aviation
   EngType   : Jet
   NoiseCat  : 9650028
   Type      : Jet
   NumEng    : 2
   NoiseId   : JT15D1
   ATRS      : No
   TkoWgt    : 14700 lb
   LndWgt    : 14000 lb
   LndDist   : 3050 ft
   StaticThr : 2500 lb
DHC6   Standard data
FAL20  User-defined
   Descrip   : FALCON 20/CF700-2D-2
   UserID    : BJ
   WgtCat    : Large
   OwnerCat  : Gen-Aviation
   EngType   : Jet
   NoiseCat  : 9650028
   Type      : Jet
   NumEng    : 2
   NoiseId   : CF700
   ATRS      : No
   TkoWgt    : 28700 lb
   LndWgt    : 27300 lb
   LndDist   : 2490 ft
   StaticThr : 4500 lb
GASEPF Standard data
GASEPV Standard data
GIIB   User-defined
   Descrip   : GIIB/SPEY MK511-8
   UserID    : BJ
   WgtCat    : Large
   OwnerCat  : Gen-Aviation
   EngType   : Jet
   NoiseCat  : 9650028
   Type      : Jet
   NumEng    : 2
   NoiseId   : SP5118
   ATRS      : No
   TkoWgt    : 65500 lb
   LndWgt    : 58500 lb
   LndDist   : 3200 ft
   StaticThr : 11400 lb
GIV    User-defined
   Descrip   : GIV/TAY 611
   UserID    : BJ
   WgtCat    : Large
   OwnerCat  : Gen-Aviation
   EngType   : Jet
   NoiseCat  : 9650028
   Type      : Jet
   NumEng    : 2
   NoiseId   : TAY620
   ATRS      : No
```

```
      TkoWgt    : 71700 lb
      LndWgt    : 58500 lb
      LndDist   : 3200 ft
      StaticThr : 13850 lb
   LEAR25 User-defined
      Descrip   : LEAR 25/CJ610-8
      UserID    : BJ
      WgtCat    : Large
      OwnerCat  : Gen-Aviation
      EngType   : Jet
      NoiseCat  : 9650028
      Type      : Jet
      NumEng    : 2
      NoiseId   : CJ610
      ATRS      : No
      TkoWgt    : 15000 lb
      LndWgt    : 13500 lb
      LndDist   : 2620 ft
      StaticThr : 2950 lb
   LEAR35 User-defined
      Descrip   : LEAR 36/TFE731-2
      UserID    : BJ
      WgtCat    : Large
      OwnerCat  : Gen-Aviation
      EngType   : Jet
      NoiseCat  : 9650028
      Type      : Jet
      NumEng    : 2
      NoiseId   : TF7312
      ATRS      : No
      TkoWgt    : 18300 lb
      LndWgt    : 15300 lb
      LndDist   : 3076 ft
      StaticThr : 3500 lb
   MU3001 User-defined
      Descrip   : MU300-10/JT15D-4
      UserID    : BJ
      WgtCat    : Large
      OwnerCat  : Gen-Aviation
      EngType   : Jet
      NoiseCat  : 9650028
      Type      : Jet
      NumEng    : 2
      NoiseId   : JT15D5
      ATRS      : No
      TkoWgt    : 14100 lb
      LndWgt    : 13200 lb
      LndDist   : 2800 ft
      StaticThr : 2500 lb
   SABR80 User-defined
      Descrip   : NA SABRELINER 80
      UserID    : BJ
      WgtCat    : Large
      OwnerCat  : Gen-Aviation
      EngType   : Jet
      NoiseCat  : 9650028
      Type      : Jet
      NumEng    : 2
      NoiseId   : CF700
      ATRS      : No
      TkoWgt    : 33720 lb
      LndWgt    : 27290 lb
      LndDist   : 2490 ft
      StaticThr : 3962 lb

STUDY SUBSTITUTION AIRCRAFT
   Name    Description
      Acft    Percent
   GULF3   Gulfstream III
      GIIB    100.0 %
```

USER-DEFINED NOISE CURVES

Type	Thrust	Op	200	400	630	1000	2000	4000	6300	10000	16000	25000

USER-DEFINED METRICS

Name	Type	Family	Day	Eve	Night	10Log(T)

USER-DEFINED PROFILE IDENTIFIERS

Op	Profile	Stg	Weight(lb)

USER-DEFINED PROCEDURAL PROFILES

#	StepType	Flap	ThrType	Alt/Clm	Speed(kt)	Ang/Thr/Dis

USER-DEFINED FIXED-POINT PROFILES

#	Dist(ft)	Alt(ft)	Spd(kt)	Thrust	OpMode

USER-DEFINED FLAP COEFFICIENTS

Acft	Flap	Op	Coeff-R	Coeff-C/D	Coeff-B

USER-DEFINED JET THRUST COEFFICIENTS

Acft	ThrType	Coeff-E	Coeff-F	Coeff-Ga	Coeff-Gb	Coeff-H

USER-DEFINED PROP THRUST COEFFICIENTS

Name	ThrType	Efficiency	Power

USER-DEFINED GENERAL THRUST COEFFICIENTS

Acft	Type	Coeff-E	Coeff-F	Coeff-Ga	Coeff-Gb	Coeff-H	Coeff-K1	Coe

CASE FLIGHT OPERATIONS

Acft	Op	Profile	Stg	Rwy	Track	Sub	Group	Day	Evening	Night
BEC58P	APP	STANDARD	1	10	A3	0	COM	5.7822	0.0000	0.5028
BEC58P	APP	STANDARD	1	28	A9	0	COM	8.0178	0.0000	0.6972
BEC58P	DEP	STANDARD	1	10	D3	0	COM	4.6230	0.0000	0.4020
BEC58P	DEP	STANDARD	1	10	D4	0	COM	0.8694	0.0000	0.0756
BEC58P	DEP	STANDARD	1	10	D5	0	COM	0.2898	0.0000	0.0252
BEC58P	DEP	STANDARD	1	28	D10	0	COM	0.4002	0.0000	0.0348
BEC58P	DEP	STANDARD	1	28	D11	0	COM	1.2006	0.0000	0.1044
BEC58P	DEP	STANDARD	1	28	D12	0	COM	6.4170	0.0000	0.5580
CNA441	APP	STANDARD	1	10	A3	0	COM	1.2863	0.0000	0.1131
CNA441	APP	STANDARD	1	28	A9	0	COM	1.7837	0.0000	0.1569
CNA441	DEP	STANDARD	1	10	D3	0	COM	1.0285	0.0000	0.0905
CNA441	DEP	STANDARD	1	10	D4	0	COM	0.1934	0.0000	0.0170
CNA441	DEP	STANDARD	1	10	D5	0	COM	0.0645	0.0000	0.0057
CNA441	DEP	STANDARD	1	28	D10	0	COM	0.0890	0.0000	0.0078
CNA441	DEP	STANDARD	1	28	D11	0	COM	0.2671	0.0000	0.0235
CNA441	DEP	STANDARD	1	28	D12	0	COM	1.4275	0.0000	0.1256
CNA500	APP	STANDARD	1	10	A3	0	BJ	0.1550	0.0000	0.0126
CNA500	APP	STANDARD	1	28	A9	0	BJ	0.2150	0.0000	0.0174
CNA500	DEP	STANDARD	1	10	D3	0	BJ	0.1240	0.0000	0.0100
CNA500	DEP	STANDARD	1	10	D4	0	BJ	0.0233	0.0000	0.0019
CNA500	DEP	STANDARD	1	10	D5	0	BJ	0.0078	0.0000	0.0006
CNA500	DEP	STANDARD	1	28	D10	0	BJ	0.0107	0.0000	0.0009
CNA500	DEP	STANDARD	1	28	D11	0	BJ	0.0322	0.0000	0.0026
CNA500	DEP	STANDARD	1	28	D12	0	BJ	0.1720	0.0000	0.0139
DHC6	APP	STANDARD	1	10	A3	0	COM	3.5322	0.0000	0.3059
DHC6	APP	STANDARD	1	28	A9	0	COM	4.8978	0.0000	0.4241
DHC6	DEP	STANDARD	1	10	D3	0	COM	2.8241	0.0000	0.2446
DHC6	DEP	STANDARD	1	10	D4	0	COM	0.5311	0.0000	0.0460
DHC6	DEP	STANDARD	1	10	D5	0	COM	0.1770	0.0000	0.0153
DHC6	DEP	STANDARD	1	28	D10	0	COM	0.2445	0.0000	0.0212
DHC6	DEP	STANDARD	1	28	D11	0	COM	0.7334	0.0000	0.0635
DHC6	DEP	STANDARD	1	28	D12	0	COM	3.9200	0.0000	0.3395
FAL20	APP	STANDARD	1	10	A3	0	BJ	0.0629	0.0000	0.0042
FAL20	APP	STANDARD	1	28	A9	0	BJ	0.0872	0.0000	0.0058
FAL20	DEP	STANDARD	1	10	D3	0	BJ	0.0503	0.0000	0.0033
FAL20	DEP	STANDARD	1	10	D4	0	BJ	0.0095	0.0000	0.0006
FAL20	DEP	STANDARD	1	10	D5	0	BJ	0.0032	0.0000	0.0002
FAL20	DEP	STANDARD	1	28	D10	0	BJ	0.0044	0.0000	0.0003
FAL20	DEP	STANDARD	1	28	D11	0	BJ	0.0131	0.0000	0.0009
FAL20	DEP	STANDARD	1	28	D12	0	BJ	0.0698	0.0000	0.0047
GASEPF	APP	STANDARD	1	04	A1	0	GA	0.2208	0.0000	0.0192
GASEPF	APP	STANDARD	1	04	A2	0	GA	0.2208	0.0000	0.0192

GASEPF	APP	STANDARD	1	10	A3	0	GA	2.5116	0.0000	0.2184
GASEPF	APP	STANDARD	1	10	A4	0	GA	0.6256	0.0000	0.0544
GASEPF	APP	STANDARD	1	16	A5	0	GA	0.4784	0.0000	0.0416
GASEPF	APP	STANDARD	1	16	A6	0	GA	0.0552	0.0000	0.0048
GASEPF	APP	STANDARD	1	22	A7	0	GA	0.8004	0.0000	0.0696
GASEPF	APP	STANDARD	1	22	A8	0	GA	0.0920	0.0000	0.0080
GASEPF	APP	STANDARD	1	28	A10	0	GA	2.7140	0.0000	0.2360
GASEPF	APP	STANDARD	1	28	A9	0	GA	0.6808	0.0000	0.0592
GASEPF	APP	STANDARD	1	34	A11	0	GA	0.1564	0.0000	0.0136
GASEPF	APP	STANDARD	1	34	A12	0	GA	0.6440	0.0000	0.0560
GASEPF	DEP	STANDARD	1	04	D1	0	GA	0.1750	0.0000	0.0152
GASEPF	DEP	STANDARD	1	04	D2	0	GA	0.2671	0.0000	0.0232
GASEPF	DEP	STANDARD	1	10	D3	0	GA	2.5141	0.0000	0.2186
GASEPF	DEP	STANDARD	1	10	D4	0	GA	0.4697	0.0000	0.0408
GASEPF	DEP	STANDARD	1	10	D5	0	GA	0.1566	0.0000	0.0136
GASEPF	DEP	STANDARD	1	16	D6	0	GA	0.3223	0.0000	0.0280
GASEPF	DEP	STANDARD	1	16	D7	0	GA	0.2118	0.0000	0.0184
GASEPF	DEP	STANDARD	1	22	D8	0	GA	0.5341	0.0000	0.0464
GASEPF	DEP	STANDARD	1	22	D9	0	GA	0.3592	0.0000	0.0312
GASEPF	DEP	STANDARD	1	28	D10	0	GA	0.1658	0.0000	0.0144
GASEPF	DEP	STANDARD	1	28	D11	0	GA	0.5065	0.0000	0.0440
GASEPF	DEP	STANDARD	1	28	D12	0	GA	2.7167	0.0000	0.2362
GASEPF	DEP	STANDARD	1	34	D13	0	GA	0.4789	0.0000	0.0416
GASEPF	DEP	STANDARD	1	34	D14	0	GA	0.3223	0.0000	0.0280
GASEPF	TGO	STANDARD	1	04	T1	0	GA	0.9109	0.0000	0.0792
GASEPF	TGO	STANDARD	1	10	T2	0	GA	6.1941	0.0000	0.5386
GASEPF	TGO	STANDARD	1	16	T3	0	GA	1.0931	0.0000	0.0950
GASEPF	TGO	STANDARD	1	22	T4	0	GA	1.8218	0.0000	0.1584
GASEPF	TGO	STANDARD	1	28	T5	0	GA	6.7406	0.0000	0.5861
GASEPF	TGO	STANDARD	1	34	T6	0	GA	1.6396	0.0000	0.1426
GASEPV	APP	STANDARD	1	04	A1	0	GA	0.3679	0.0000	0.0319
GASEPV	APP	STANDARD	1	04	A2	0	GA	0.3679	0.0000	0.0319
GASEPV	APP	STANDARD	1	10	A3	0	GA	4.1851	0.0000	0.3631
GASEPV	APP	STANDARD	1	10	A4	0	GA	1.0424	0.0000	0.0904
GASEPV	APP	STANDARD	1	16	A5	0	GA	0.7972	0.0000	0.0692
GASEPV	APP	STANDARD	1	16	A6	0	GA	0.0920	0.0000	0.0080
GASEPV	APP	STANDARD	1	22	A7	0	GA	1.3337	0.0000	0.1157
GASEPV	APP	STANDARD	1	22	A8	0	GA	0.1533	0.0000	0.0133
GASEPV	APP	STANDARD	1	28	A10	0	GA	4.5223	0.0000	0.3924
GASEPV	APP	STANDARD	1	28	A9	0	GA	1.1344	0.0000	0.0984
GASEPV	APP	STANDARD	1	34	A11	0	GA	0.2606	0.0000	0.0226
GASEPV	APP	STANDARD	1	34	A12	0	GA	1.0731	0.0000	0.0931
GASEPV	DEP	STANDARD	1	04	D1	0	GA	0.2916	0.0000	0.0253
GASEPV	DEP	STANDARD	1	04	D2	0	GA	0.4450	0.0000	0.0386
GASEPV	DEP	STANDARD	1	10	D3	0	GA	4.1893	0.0000	0.3635
GASEPV	DEP	STANDARD	1	10	D4	0	GA	0.7826	0.0000	0.0679
GASEPV	DEP	STANDARD	1	10	D5	0	GA	0.2609	0.0000	0.0226
GASEPV	DEP	STANDARD	1	16	D6	0	GA	0.5371	0.0000	0.0466
GASEPV	DEP	STANDARD	1	16	D7	0	GA	0.3529	0.0000	0.0306
GASEPV	DEP	STANDARD	1	22	D8	0	GA	0.8900	0.0000	0.0772
GASEPV	DEP	STANDARD	1	22	D9	0	GA	0.5985	0.0000	0.0519
GASEPV	DEP	STANDARD	1	28	D10	0	GA	0.2762	0.0000	0.0240
GASEPV	DEP	STANDARD	1	28	D11	0	GA	0.8440	0.0000	0.0732
GASEPV	DEP	STANDARD	1	28	D12	0	GA	4.5269	0.0000	0.3927
GASEPV	DEP	STANDARD	1	34	D13	0	GA	0.7980	0.0000	0.0692
GASEPV	DEP	STANDARD	1	34	D14	0	GA	0.5371	0.0000	0.0466
GIIB	APP	STANDARD	1	10	A3	0	BJ	0.0126	0.0000	0.0000
GIIB	APP	STANDARD	1	28	A9	0	BJ	0.0174	0.0000	0.0000
GIIB	DEP	STANDARD	1	10	D3	0	BJ	0.0100	0.0000	0.0000
GIIB	DEP	STANDARD	1	10	D4	0	BJ	0.0019	0.0000	0.0000
GIIB	DEP	STANDARD	1	10	D5	0	BJ	0.0006	0.0000	0.0000
GIIB	DEP	STANDARD	1	28	D10	0	BJ	0.0009	0.0000	0.0000
GIIB	DEP	STANDARD	1	28	D11	0	BJ	0.0026	0.0000	0.0000
GIIB	DEP	STANDARD	1	28	D12	0	BJ	0.0139	0.0000	0.0000
GIV	APP	STANDARD	1	10	A3	0	BJ	0.0084	0.0000	0.0000
GIV	APP	STANDARD	1	28	A9	0	BJ	0.0116	0.0000	0.0000
GIV	DEP	STANDARD	1	10	D3	0	BJ	0.0067	0.0000	0.0000
GIV	DEP	STANDARD	1	10	D4	0	BJ	0.0013	0.0000	0.0000
GIV	DEP	STANDARD	1	10	D5	0	BJ	0.0004	0.0000	0.0000
GIV	DEP	STANDARD	1	28	D10	0	BJ	0.0006	0.0000	0.0000
GIV	DEP	STANDARD	1	28	D11	0	BJ	0.0017	0.0000	0.0000

GIV	DEP	STANDARD	1	28	D12	0	BJ	0.0093	0.0000	0.0000
LEAR25	APP	STANDARD	1	10	A3	0	BJ	0.0335	0.0000	0.0042
LEAR25	APP	STANDARD	1	28	A9	0	BJ	0.0465	0.0000	0.0058
LEAR25	DEP	STANDARD	1	10	D3	0	BJ	0.0268	0.0000	0.0033
LEAR25	DEP	STANDARD	1	10	D4	0	BJ	0.0050	0.0000	0.0006
LEAR25	DEP	STANDARD	1	10	D5	0	BJ	0.0017	0.0000	0.0002
LEAR25	DEP	STANDARD	1	28	D10	0	BJ	0.0023	0.0000	0.0003
LEAR25	DEP	STANDARD	1	28	D11	0	BJ	0.0070	0.0000	0.0009
LEAR25	DEP	STANDARD	1	28	D12	0	BJ	0.0372	0.0000	0.0047
LEAR35	APP	STANDARD	1	10	A3	0	BJ	0.4777	0.0000	0.0419
LEAR35	APP	STANDARD	1	28	A9	0	BJ	0.6623	0.0000	0.0581
LEAR35	DEP	STANDARD	1	10	D3	0	BJ	0.3819	0.0000	0.0335
LEAR35	DEP	STANDARD	1	10	D4	0	BJ	0.0718	0.0000	0.0063
LEAR35	DEP	STANDARD	1	10	D5	0	BJ	0.0239	0.0000	0.0021
LEAR35	DEP	STANDARD	1	28	D10	0	BJ	0.0331	0.0000	0.0029
LEAR35	DEP	STANDARD	1	28	D11	0	BJ	0.0992	0.0000	0.0087
LEAR35	DEP	STANDARD	1	28	D12	0	BJ	0.5301	0.0000	0.0465
MU3001	APP	STANDARD	1	10	A3	0	BJ	0.3143	0.0000	0.0126
MU3001	APP	STANDARD	1	28	A9	0	BJ	0.4357	0.0000	0.0174
MU3001	DEP	STANDARD	1	10	D3	0	BJ	0.2512	0.0000	0.0100
MU3001	DEP	STANDARD	1	10	D4	0	BJ	0.0473	0.0000	0.0019
MU3001	DEP	STANDARD	1	10	D5	0	BJ	0.0157	0.0000	0.0006
MU3001	DEP	STANDARD	1	28	D10	0	BJ	0.0218	0.0000	0.0009
MU3001	DEP	STANDARD	1	28	D11	0	BJ	0.0653	0.0000	0.0026
MU3001	DEP	STANDARD	1	28	D12	0	BJ	0.3487	0.0000	0.0139
SABR80	APP	STANDARD	1	10	A3	0	BJ	0.0629	0.0000	0.0042
SABR80	APP	STANDARD	1	28	A9	0	BJ	0.0872	0.0000	0.0058
SABR80	DEP	STANDARD	1	10	D3	0	BJ	0.0503	0.0000	0.0033
SABR80	DEP	STANDARD	1	10	D4	0	BJ	0.0095	0.0000	0.0006
SABR80	DEP	STANDARD	1	10	D5	0	BJ	0.0032	0.0000	0.0002
SABR80	DEP	STANDARD	1	28	D10	0	BJ	0.0044	0.0000	0.0003
SABR80	DEP	STANDARD	1	28	D11	0	BJ	0.0131	0.0000	0.0009
SABR80	DEP	STANDARD	1	28	D12	0	BJ	0.0698	0.0000	0.0047

CASE RUNUP OPERATIONS

Acft	RunupId	X(nmi)	Y(nmi)	Head	Thrust	Dur(sec)	Day	Evening	Night

GRID DEFINITIONS

Name	Type	X(nmi)	Y(nmi)	Ang(deg)	DisI(nmi)	DisJ(nmi)	NI	NJ	Thrsh	dAmb	Ave(min)
CONTOUR	Contour	-8.0000	-8.0000	0.0	16.0000	16.0000	2	2	75.0	3.0	24.00
LOCATION	Location	0.0000	0.0000	0.0	0.0000	0.0000	1	1	75.0	3.0	24.00

CASE RUN OPTIONS

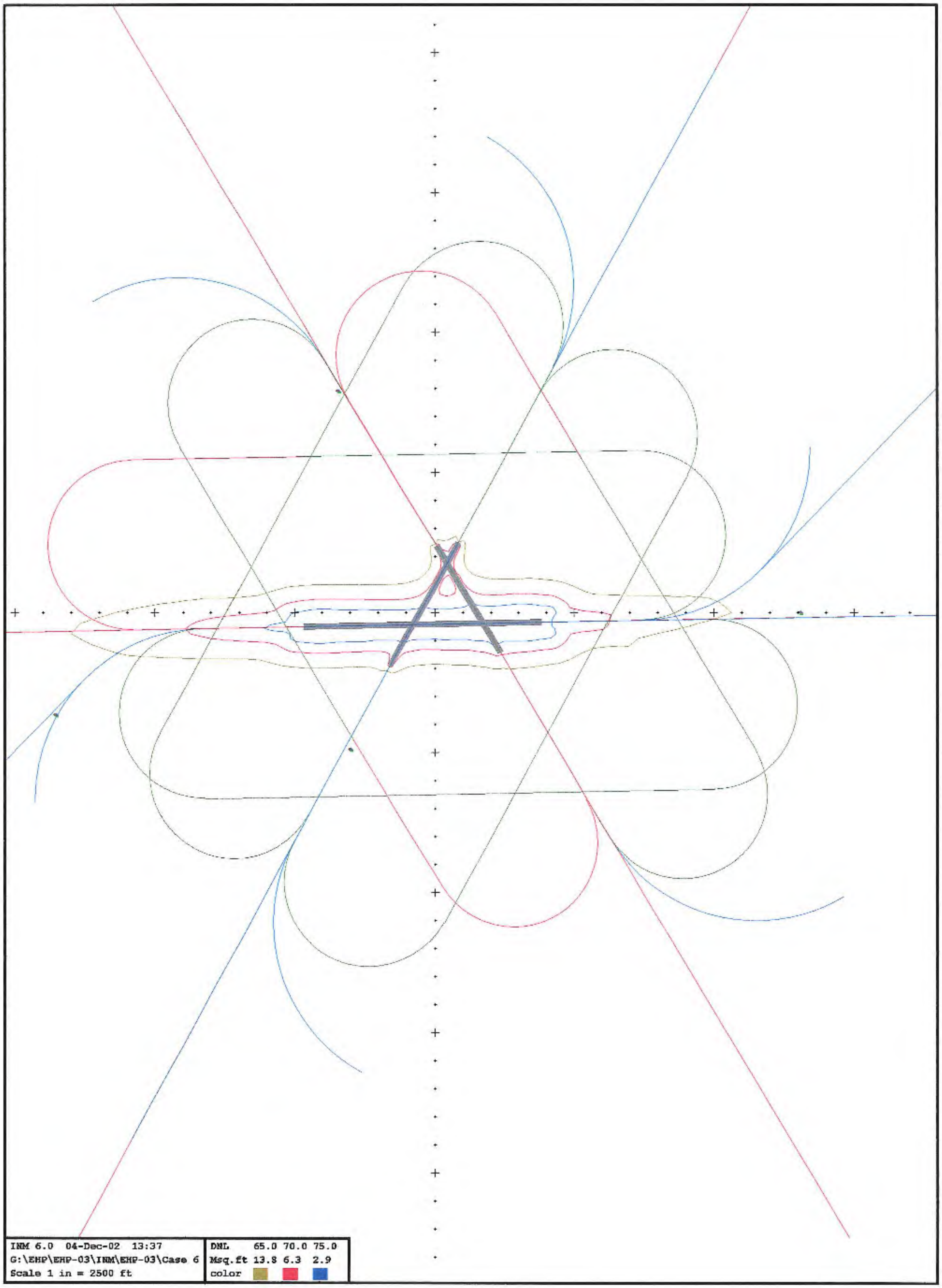
```
Run Type       : Single-Metric
NoiseMetric    : DNL
Do Terrain     : No
Do Contour     : Yes
Refinement     : 10
Tolerance      : 1.00
Low Cutoff     : 65.0
High Cutoff    : 75.0
Ground Type    : All-Soft-Ground
Do Population  : No
Do Locations   : Yes
Do Standard    : No
Do Detailed    : No
Compute System Metrics:
   DNL    : Yes
   CNEL   : No
   LAEQ   : No
   LAEQD  : No
   LAEQN  : No
   SEL    : No
   LAMAX  : No
   TALA   : No
   NEF    : No
   WECPNL : No
   EPNL   : No
   PNLTM  : No
   TAPNL  : No
   CEXP   : No
```

[illegible] : No
TALC : No

CASE SIX

FUTURE WITH PRECISION APPROACH ON RUNWAY 10

AVERAGE DAY IN SUMMER


INM 6.0 04-Dec-02 13:37
G:\EHP\EHP-03\INM\EHP-03\Case 6
Scale 1 in = 2500 ft
DNL 65.0 70.0 75.0
Msq.ft 13.8 6.3 2.9
color

```
INM 6.0 ECHO REPORT  20-Aug-02 10:12

STUDY: g:\EHP\EHP-03\INM\EHP-03\
   Created      : 16-Aug-02 07:34
   Units        : English
   Airport      : HTO
   Description  :
      East Hampton Airport 2002

CASE: Case Six
   Created      : 20-Aug-02 07:38
   Description  :

STUDY AIRPORT
   Latitude     : 40.959578 deg
   Longitude    : -72.251851 deg
   Elevation    : 56.0 ft
   Temperature  : 58.8 F
   Pressure     : 29.92 in-Hg
   AverageWind  : 8.0 kt
   ChangeNPD    : No

STUDY RUNWAYS
   04
      Latitude   : 40.956976 deg
      Longitude  : -72.254678 deg
      Xcoord     : -0.1285 nmi
      Ycoord     : -0.1560 nmi
      Elevation  : 45.9 ft
      OtherEnd   : 22
      Length     : 2501 ft
      Gradient   : -0.21 %
      RwyWind    : 8.0 kt
      TkoThresh  : 0 ft
      AppThresh  : 0 ft
   10
      Latitude   : 40.958884 deg
      Longitude  : -72.260305 deg
      Xcoord     : -0.3843 nmi
      Ycoord     : -0.0416 nmi
      Elevation  : 55.5 ft
      OtherEnd   : 28
      Length     : 4255 ft
      Gradient   : -0.58 %
      RwyWind    : 8.0 kt
      TkoThresh  : 0 ft
      AppThresh  : 0 ft
   16
      Latitude   : 40.962853 deg
      Longitude  : -72.251741 deg
      Xcoord     : 0.0050 nmi
      Ycoord     : 0.1964 nmi
      Elevation  : 41.9 ft
      OtherEnd   : 34
      Length     : 2222 ft
      Gradient   : -0.54 %
      RwyWind    : 8.0 kt
      TkoThresh  : 0 ft
      AppThresh  : 57 ft
   22
      Latitude   : 40.962998 deg
      Longitude  : -72.250331 deg
      Xcoord     : 0.0691 nmi
      Ycoord     : 0.2051 nmi
      Elevation  : 40.6 ft
      OtherEnd   : 04
      Length     : 2501 ft
      Gradient   : 0.21 %
      RwyWind    : 8.0 kt
      TkoThresh  : 0 ft
```

```
      AppThresh : 360 ft
   28
      Latitude  : 40.959103 deg
      Longitude : -72.244902 deg
      Xcoord    : 0.3159 nmi
      Ycoord    : -0.0285 nmi
      Elevation : 30.8 ft
      OtherEnd  : 10
      Length    : 4255 ft
      Gradient  : 0.58 %
      RwyWind   : 8.0 kt
      TkoThresh : 0 ft
      AppThresh : 0 ft
   34
      Latitude  : 40.957618 deg
      Longitude : -72.247608 deg
      Xcoord    : 0.1929 nmi
      Ycoord    : -0.1175 nmi
      Elevation : 30.0 ft
      OtherEnd  : 16
      Length    : 2222 ft
      Gradient  : 0.54 %
      RwyWind   : 8.0 kt
      TkoThresh : 0 ft
      AppThresh : 106 ft

STUDY TRACKS
   RwyId-OpType-TrkId
     Sub  PctSub   TrkType   Delta(ft)
   04-APP-A1
      0     2.50   Vectors     0.0
   04-APP-A2
      0     2.50   Vectors     0.0
   04-DEP-D1
      0     2.00   Vectors     0.0
   04-DEP-D2
      0     3.00   Vectors     0.0
   04-TGO-T1
      0   100.00   Vectors     0.0
   10-APP-A3
      0    25.60   Vectors     0.0
   10-APP-A4
      0     6.40   Vectors     0.0
   10-DEP-D3
      0    25.60   Vectors     0.0
   10-DEP-D4
      0     4.80   Vectors     0.0
   10-DEP-D5
      0     1.60   Vectors     0.0
   10-TGO-T2
      0   100.00   Vectors     0.0
   16-APP-A5
      0     5.40   Vectors     0.0
   16-APP-A6
      0     0.60   Vectors     0.0
   16-DEP-D6
      0     3.60   Vectors     0.0
   16-DEP-D7
      0     2.40   Vectors     0.0
   16-TGO-T3
      0   100.00   Vectors     0.0
   22-APP-A7
      0     9.00   Vectors     0.0
   22-APP-A8
      0     1.00   Vectors     0.0
   22-DEP-D8
      0     6.00   Vectors     0.0
   22-DEP-D9
      0     4.00   Vectors     0.0
   22-TGO-T4
      0   100.00   Vectors     0.0
```

```
   28-APP-A10
      0    30.40   Vectors      0.0
   28-APP-A9
      0     7.60   Vectors      0.0
   28-DEP-D10
      0    30.40   Vectors      0.0
   28-DEP-D11
      0     5.70   Vectors      0.0
   28-DEP-D12
      0     1.90   Vectors      0.0
   28-TGO-T5
      0   100.00   Vectors      0.0
   34-APP-A11
      0     1.80   Vectors      0.0
   34-APP-A12
      0     7.20   Vectors      0.0
   34-DEP-D13
      0     5.40   Vectors      0.0
   34-DEP-D14
      0     3.20   Vectors      0.0
   34-TGO-T6
      0   100.00   Vectors      0.0

STUDY TRACK DETAIL
   RwyId-OpType-TrkId-SubTrk
          SegType          Dist/Angle    Radius(nmi)
   04-APP-A1-0
       1  Straight        2.0000 nmi
   04-APP-A2-0
       1  Straight        0.5000 nmi
       2  Left-Turn     180.0000 deg      0.2500
       3  Straight        0.5000 nmi
   04-DEP-D1-0
       1  Straight        1.0000 nmi
       2  Left-Turn      90.0000 deg      0.5000
   04-DEP-D2-0
       1  Straight        2.0000 nmi
   04-TGO-T1-0
       1  Straight        1.0000 nmi
       2  Left-Turn     180.0000 deg      0.2500
       3  Straight        1.5000 nmi
       4  Left-Turn     180.0000 deg      0.2500
       5  Straight        0.5000 nmi
   10-APP-A3-0
       1  Straight        2.0000 nmi
   10-APP-A4-0
       1  Straight        0.5000 nmi
       2  Left-Turn     180.0000 deg      0.2500
       3  Straight        0.5000 nmi
   10-DEP-D3-0
       1  Straight        1.0000 nmi
       2  Left-Turn      90.0000 deg      0.5000
   10-DEP-D4-0
       1  Straight        1.0000 nmi
       2  Left-Turn      45.0000 deg      0.5000
       3  Straight        1.0000 nmi
   10-DEP-D5-0
       1  Straight        2.0000 nmi
   10-TGO-T2-0
       1  Straight        1.0000 nmi
       2  Left-Turn     180.0000 deg      0.2500
       3  Straight        1.5000 nmi
       4  Left-Turn     180.0000 deg      0.2500
       5  Straight        0.5000 nmi
   16-APP-A5-0
       1  Straight        2.0000 nmi
   16-APP-A6-0
       1  Straight        0.5000 nmi
       2  Left-Turn     180.0000 deg      0.2500
       3  Straight        0.5000 nmi
   16-DEP-D6-0
```

```
     1  Straight       1.0000 nmi
     2  Left-Turn     90.0000 deg     0.5000
 16-DEP-D7-0
     1  Straight       2.0000 nmi
 16-TGO-T3-0
     1  Straight       1.0000 nmi
     2  Left-Turn    180.0000 deg     0.2500
     3  Straight       1.5000 nmi
     4  Left-Turn    180.0000 deg     0.2500
     5  Straight       0.5000 nmi
 22-APP-A7-0
     1  Straight       2.0000 nmi
 22-APP-A8-0
     1  Straight       0.5000 nmi
     2  Left-Turn    180.0000 deg     0.2500
     3  Straight       0.5000 nmi
 22-DEP-D8-0
     1  Straight       1.0000 nmi
     2  Left-Turn     90.0000 deg     0.5000
 22-DEP-D9-0
     1  Straight       2.0000 nmi
 22-TGO-T4-0
     1  Straight       1.0000 nmi
     2  Left-Turn    180.0000 deg     0.2500
     3  Straight       1.5000 nmi
     4  Left-Turn    180.0000 deg     0.2500
     5  Straight       0.5000 nmi
 28-APP-A10-0
     1  Straight       0.5000 nmi
     2  Left-Turn    180.0000 deg     0.2500
     3  Straight       0.5000 nmi
 28-APP-A9-0
     1  Straight       2.0000 nmi
 28-DEP-D10-0
     1  Straight       1.0000 nmi
     2  Left-Turn     90.0000 deg     0.5000
 28-DEP-D11-0
     1  Straight       1.0000 nmi
     2  Left-Turn     45.0000 deg     0.5000
     3  Straight       1.0000 nmi
 28-DEP-D12-0
     1  Straight       2.0000 nmi
 28-TGO-T5-0
     1  Straight       1.0000 nmi
     2  Left-Turn    180.0000 deg     0.2500
     3  Straight       1.5000 nmi
     4  Left-Turn    180.0000 deg     0.2500
     5  Straight       0.5000 nmi
 34-APP-A11-0
     1  Straight       2.0000 nmi
 34-APP-A12-0
     1  Straight       0.5000 nmi
     2  Left-Turn    180.0000 deg     0.2500
     3  Straight       0.5000 nmi
 34-DEP-D13-0
     1  Straight       1.0000 nmi
     2  Left-Turn     90.0000 deg     0.5000
 34-DEP-D14-0
     1  Straight       2.0000 nmi
 34-TGO-T6-0
     1  Straight       1.0000 nmi
     2  Left-Turn    180.0000 deg     0.2500
     3  Straight       1.5000 nmi
     4  Left-Turn    180.0000 deg     0.2500
     5  Straight       0.5000 nmi

 Y AIRCRAFT
 BEC58P User-defined.
   Descrip    : BARON 58P/TS10-520-L
   UserID     : COM
   WgtCat     : Small
```

```
    OwnerCat   : Commercial
    EngType    : Piston
    NoiseCat   : 9700788
    Type       : Prop
    NumEng     : 2
    NoiseId    : TSIO52
    ATRS       : No
    TkoWgt     : 6100 lb
    LndWgt     : 6100 lb
    LndDist    : 2733 ft
    StaticThr  : 779 lb
 CNA441 Standard data
 CNA500 User-defined
    Descrip    : CIT 2/JT15D-4
    UserID     : BJ
    WgtCat     : Large
    OwnerCat   : Gen-Aviation
    EngType    : Jet
    NoiseCat   : 9700788
    Type       : Jet
    NumEng     : 2
    NoiseId    : JT15D1
    ATRS       : No
    TkoWgt     : 14700 lb
    LndWgt     : 14000 lb
    LndDist    : 3050 ft
    StaticThr  : 2500 lb
 DHC6   Standard data
 FAL20  User-defined
    Descrip    : FALCON 20/CF700-2D-2
    UserID     : BJ
    WgtCat     : Large
    OwnerCat   : Gen-Aviation
    EngType    : Jet
    NoiseCat   : 9700788
    Type       : Jet
    NumEng     : 2
    NoiseId    : CF700
    ATRS       : No
    TkoWgt     : 28700 lb
    LndWgt     : 27300 lb
    LndDist    : 2490 ft
    StaticThr  : 4500 lb
 GASEPF Standard data
 GASEPV Standard data
 GIIB   User-defined
    Descrip    : GIIB/SPEY MK511-8
    UserID     : BJ
    WgtCat     : Large
    OwnerCat   : Gen-Aviation
    EngType    : Jet
    NoiseCat   : 9700788
    Type       : Jet
    NumEng     : 2
    NoiseId    : SP5118
    ATRS       : No
    TkoWgt     : 65500 lb
    LndWgt     : 58500 lb
    LndDist    : 3200 ft
    StaticThr  : 11400 lb
 GIV    User-defined
    Descrip    : GIV/TAY 611
    UserID     : BJ
    WgtCat     : Large
    OwnerCat   : Gen-Aviation
    EngType    : Jet
    NoiseCat   : 9700788
    Type       : Jet
    NumEng     : 2
    NoiseId    : TAY620
    ATRS       : No
```

```
      TkoWgt     : 71700 lb
      LndWgt     : 58500 lb
      LndDist    : 3200 ft
      StaticThr  : 13850 lb
   LEAR25 User-defined
      Descrip    : LEAR 25/CJ610-8
      UserID     : BJ
      WgtCat     : Large
      OwnerCat   : Gen-Aviation
      EngType    : Jet
      NoiseCat   : 9700788
      Type       : Jet
      NumEng     : 2
      NoiseId    : CJ610
      ATRS       : No
      TkoWgt     : 15000 lb
      LndWgt     : 13500 lb
      LndDist    : 2620 ft
      StaticThr  : 2950 lb
   LEAR35 User-defined
      Descrip    : LEAR 36/TFE731-2
      UserID     : BJ
      WgtCat     : Large
      OwnerCat   : Gen-Aviation
      EngType    : Jet
      NoiseCat   : 9700788
      Type       : Jet
      NumEng     : 2
      NoiseId    : TF7312
      ATRS       : No
      TkoWgt     : 18300 lb
      LndWgt     : 15300 lb
      LndDist    : 3076 ft
      StaticThr  : 3500 lb
   MU3001 User-defined
      Descrip    : MU300-10/JT15D-4
      UserID     : BJ
      WgtCat     : Large
      OwnerCat   : Gen-Aviation
      EngType    : Jet
      NoiseCat   : 9700788
      Type       : Jet
      NumEng     : 2
      NoiseId    : JT15D5
      ATRS       : No
      TkoWgt     : 14100 lb
      LndWgt     : 13200 lb
      LndDist    : 2800 ft
      StaticThr  : 2500 lb
   SABR80 User-defined
      Descrip    : NA SABRELINER 80
      UserID     : BJ
      WgtCat     : Large
      OwnerCat   : Gen-Aviation
      EngType    : Jet
      NoiseCat   : 9700788
      Type       : Jet
      NumEng     : 2
      NoiseId    : CF700
      ATRS       : No
      TkoWgt     : 33720 lb
      LndWgt     : 27290 lb
      LndDist    : 2490 ft
      StaticThr  : 3962 lb

STUDY SUBSTITUTION AIRCRAFT
   Name     Description
     Acft     Percent
  GULF3   Gulfstream III
     GIIB     100.0 %
```

USER-DEFINED NOISE CURVES

Type	Thrust	Op	200	400	630	1000	2000	4000	6300	10000	16000	25000

USER-DEFINED METRICS

Name	Type	Family	Day	Eve	Night	10Log(T)

USER-DEFINED PROFILE IDENTIFIERS

Op	Profile	Stg	Weight(lb)

USER-DEFINED PROCEDURAL PROFILES

#	StepType	Flap	ThrType	Alt/Clm	Speed(kt)	Ang/Thr/Dis

USER-DEFINED FIXED-POINT PROFILES

#	Dist(ft)	Alt(ft)	Spd(kt)	Thrust	OpMode

USER-DEFINED FLAP COEFFICIENTS

Acft	Flap	Op	Coeff-R	Coeff-C/D	Coeff-B

USER-DEFINED JET THRUST COEFFICIENTS

Acft	ThrType	Coeff-E	Coeff-F	Coeff-Ga	Coeff-Gb	Coeff-H

USER-DEFINED PROP THRUST COEFFICIENTS

Name	ThrType	Efficiency	Power

USER-DEFINED GENERAL THRUST COEFFICIENTS

Acft	Type	Coeff-E	Coeff-F	Coeff-Ga	Coeff-Gb	Coeff-H	Coeff-K1	Coe

CASE FLIGHT OPERATIONS

Acft	Op	Profile	Stg	Rwy	Track	Sub	Group	Day	Evening	Night
BEC58P	APP	STANDARD	1	10	A3	0	COM	13.7600	0.0000	1.1983
BEC58P	APP	STANDARD	1	28	A9	0	COM	19.0800	0.0000	1.6617
BEC58P	DEP	STANDARD	1	10	D3	0	COM	11.0014	0.0000	0.9581
BEC58P	DEP	STANDARD	1	10	D4	0	COM	2.0689	0.0000	0.1802
BEC58P	DEP	STANDARD	1	10	D5	0	COM	0.6896	0.0000	0.0601
BEC58P	DEP	STANDARD	1	28	D10	0	COM	0.9524	0.0000	0.0829
BEC58P	DEP	STANDARD	1	28	D11	0	COM	2.8571	0.0000	0.2488
BEC58P	DEP	STANDARD	1	28	D12	0	COM	15.2706	0.0000	1.3299
CNA441	APP	STANDARD	1	10	A3	0	COM	3.0587	0.0000	0.2640
CNA441	APP	STANDARD	1	28	A9	0	COM	4.2413	0.0000	0.3660
CNA441	DEP	STANDARD	1	10	D3	0	COM	2.4455	0.0000	0.2111
CNA441	DEP	STANDARD	1	10	D4	0	COM	0.4599	0.0000	0.0397
CNA441	DEP	STANDARD	1	10	D5	0	COM	0.1533	0.0000	0.0132
CNA441	DEP	STANDARD	1	28	D10	0	COM	0.2117	0.0000	0.0183
CNA441	DEP	STANDARD	1	28	D11	0	COM	0.6351	0.0000	0.0548
CNA441	DEP	STANDARD	1	28	D12	0	COM	3.3945	0.0000	0.2930
CNA500	APP	STANDARD	1	10	A3	0	BJ	0.3687	0.0000	0.0335
CNA500	APP	STANDARD	1	28	A9	0	BJ	0.5113	0.0000	0.0465
CNA500	DEP	STANDARD	1	10	D3	0	BJ	0.2948	0.0000	0.0268
CNA500	DEP	STANDARD	1	10	D4	0	BJ	0.0554	0.0000	0.0050
CNA500	DEP	STANDARD	1	10	D5	0	BJ	0.0185	0.0000	0.0017
CNA500	DEP	STANDARD	1	28	D10	0	BJ	0.0255	0.0000	0.0023
CNA500	DEP	STANDARD	1	28	D11	0	BJ	0.0766	0.0000	0.0070
CNA500	DEP	STANDARD	1	28	D12	0	BJ	0.4092	0.0000	0.0372
DHC6	APP	STANDARD	1	10	A3	0	COM	8.4093	0.0000	0.7333
DHC6	APP	STANDARD	1	28	A9	0	COM	11.6607	0.0000	1.0167
DHC6	DEP	STANDARD	1	10	D3	0	COM	6.7234	0.0000	0.5863
DHC6	DEP	STANDARD	1	10	D4	0	COM	1.2644	0.0000	0.1103
DHC6	DEP	STANDARD	1	10	D5	0	COM	0.4215	0.0000	0.0367
DHC6	DEP	STANDARD	1	28	D10	0	COM	0.5820	0.0000	0.0508
DHC6	DEP	STANDARD	1	28	D11	0	COM	1.7461	0.0000	0.1522
DHC6	DEP	STANDARD	1	28	D12	0	COM	9.3326	0.0000	0.8138
FAL20	APP	STANDARD	1	10	A3	0	BJ	0.1467	0.0000	0.0126
FAL20	APP	STANDARD	1	28	A9	0	BJ	0.2033	0.0000	0.0174
FAL20	DEP	STANDARD	1	10	D3	0	BJ	0.1172	0.0000	0.0100
FAL20	DEP	STANDARD	1	10	D4	0	BJ	0.0221	0.0000	0.0019
FAL20	DEP	STANDARD	1	10	D5	0	BJ	0.0073	0.0000	0.0006
FAL20	DEP	STANDARD	1	28	D10	0	BJ	0.0102	0.0000	0.0009
FAL20	DEP	STANDARD	1	28	D11	0	BJ	0.0304	0.0000	0.0026
FAL20	DEP	STANDARD	1	28	D12	0	BJ	0.1627	0.0000	0.0139
GASEPF	APP	STANDARD	1	04	A1	0	GA	0.5256	0.0000	0.0456
GASEPF	APP	STANDARD	1	04	A2	0	GA	0.5256	0.0000	0.0456

GASEPF	APP	STANDARD	1	10	A3	0	GA	5.9787	0.0000	0.5187
GASEPF	APP	STANDARD	1	10	A4	0	GA	1.4892	0.0000	0.1292
GASEPF	APP	STANDARD	1	16	A5	0	GA	1.1388	0.0000	0.0988
GASEPF	APP	STANDARD	1	16	A6	0	GA	0.1314	0.0000	0.0114
GASEPF	APP	STANDARD	1	22	A7	0	GA	1.9053	0.0000	0.1653
GASEPF	APP	STANDARD	1	22	A8	0	GA	0.2190	0.0000	0.0190
GASEPF	APP	STANDARD	1	28	A10	0	GA	6.4605	0.0000	0.5605
GASEPF	APP	STANDARD	1	28	A9	0	GA	1.6206	0.0000	0.1406
GASEPF	APP	STANDARD	1	34	A11	0	GA	0.3723	0.0000	0.0323
GASEPF	APP	STANDARD	1	34	A12	0	GA	1.5330	0.0000	0.1330
GASEPF	DEP	STANDARD	1	04	D1	0	GA	0.4165	0.0000	0.0361
GASEPF	DEP	STANDARD	1	04	D2	0	GA	0.6357	0.0000	0.0552
GASEPF	DEP	STANDARD	1	10	D3	0	GA	5.9847	0.0000	0.5192
GASEPF	DEP	STANDARD	1	10	D4	0	GA	1.1180	0.0000	0.0970
GASEPF	DEP	STANDARD	1	10	D5	0	GA	0.3727	0.0000	0.0323
GASEPF	DEP	STANDARD	1	16	D6	0	GA	0.7673	0.0000	0.0666
GASEPF	DEP	STANDARD	1	16	D7	0	GA	0.5042	0.0000	0.0437
GASEPF	DEP	STANDARD	1	22	D8	0	GA	1.2715	0.0000	0.1103
GASEPF	DEP	STANDARD	1	22	D9	0	GA	0.8550	0.0000	0.0742
GASEPF	DEP	STANDARD	1	28	D10	0	GA	0.3946	0.0000	0.0342
GASEPF	DEP	STANDARD	1	28	D11	0	GA	1.2057	0.0000	0.1046
GASEPF	DEP	STANDARD	1	28	D12	0	GA	6.4670	0.0000	0.5611
GASEPF	DEP	STANDARD	1	34	D13	0	GA	1.1399	0.0000	0.0989
GASEPF	DEP	STANDARD	1	34	D14	0	GA	0.7673	0.0000	0.0666
GASEPF	TGO	STANDARD	1	04	T1	0	GA	2.1678	0.0000	0.1886
GASEPF	TGO	STANDARD	1	10	T2	0	GA	14.7412	0.0000	1.2826
GASEPF	TGO	STANDARD	1	16	T3	0	GA	2.6014	0.0000	0.2263
GASEPF	TGO	STANDARD	1	22	T4	0	GA	4.3356	0.0000	0.3772
GASEPF	TGO	STANDARD	1	28	T5	0	GA	16.0419	0.0000	1.3957
GASEPF	TGO	STANDARD	1	34	T6	0	GA	3.9021	0.0000	0.3395
GASEPV	APP	STANDARD	1	04	A1	0	GA	0.8758	0.0000	0.0761
GASEPV	APP	STANDARD	1	04	A2	0	GA	0.8758	0.0000	0.0761
GASEPV	APP	STANDARD	1	10	A3	0	GA	9.9618	0.0000	0.8654
GASEPV	APP	STANDARD	1	10	A4	0	GA	2.4813	0.0000	0.2156
GASEPV	APP	STANDARD	1	16	A5	0	GA	1.8975	0.0000	0.1648
GASEPV	APP	STANDARD	1	16	A6	0	GA	0.2189	0.0000	0.0190
GASEPV	APP	STANDARD	1	22	A7	0	GA	3.1746	0.0000	0.2758
GASEPV	APP	STANDARD	1	22	A8	0	GA	0.3649	0.0000	0.0317
GASEPV	APP	STANDARD	1	28	A10	0	GA	10.7646	0.0000	0.9352
GASEPV	APP	STANDARD	1	28	A9	0	GA	2.7003	0.0000	0.2346
GASEPV	APP	STANDARD	1	34	A11	0	GA	0.6203	0.0000	0.0539
GASEPV	APP	STANDARD	1	34	A12	0	GA	2.5543	0.0000	0.2219
GASEPV	DEP	STANDARD	1	04	D1	0	GA	0.6940	0.0000	0.0603
GASEPV	DEP	STANDARD	1	04	D2	0	GA	1.0593	0.0000	0.0920
GASEPV	DEP	STANDARD	1	10	D3	0	GA	9.9717	0.0000	0.8663
GASEPV	DEP	STANDARD	1	10	D4	0	GA	1.8629	0.0000	0.1618
GASEPV	DEP	STANDARD	1	10	D5	0	GA	0.6210	0.0000	0.0539
GASEPV	DEP	STANDARD	1	16	D6	0	GA	1.2784	0.0000	0.1111
GASEPV	DEP	STANDARD	1	16	D7	0	GA	0.8401	0.0000	0.0730
GASEPV	DEP	STANDARD	1	22	D8	0	GA	2.1185	0.0000	0.1840
GASEPV	DEP	STANDARD	1	22	D9	0	GA	1.4245	0.0000	0.1238
GASEPV	DEP	STANDARD	1	28	D10	0	GA	0.6575	0.0000	0.0571
GASEPV	DEP	STANDARD	1	28	D11	0	GA	2.0090	0.0000	0.1745
GASEPV	DEP	STANDARD	1	28	D12	0	GA	10.7753	0.0000	0.9361
GASEPV	DEP	STANDARD	1	34	D13	0	GA	1.8994	0.0000	0.1650
GASEPV	DEP	STANDARD	1	34	D14	0	GA	1.2784	0.0000	0.1111
GIIB	APP	STANDARD	1	10	A3	0	BJ	0.0293	0.0000	0.0042
GIIB	APP	STANDARD	1	28	A9	0	BJ	0.0407	0.0000	0.0058
GIIB	DEP	STANDARD	1	10	D3	0	BJ	0.0235	0.0000	0.0033
GIIB	DEP	STANDARD	1	10	D4	0	BJ	0.0044	0.0000	0.0006
GIIB	DEP	STANDARD	1	10	D5	0	BJ	0.0015	0.0000	0.0002
GIIB	DEP	STANDARD	1	28	D10	0	BJ	0.0020	0.0000	0.0003
GIIB	DEP	STANDARD	1	28	D11	0	BJ	0.0061	0.0000	0.0009
GIIB	DEP	STANDARD	1	28	D12	0	BJ	0.0325	0.0000	0.0047
GIV	APP	STANDARD	1	10	A3	0	BJ	0.0168	0.0000	0.0000
GIV	APP	STANDARD	1	28	A9	0	BJ	0.0232	0.0000	0.0000
GIV	DEP	STANDARD	1	10	D3	0	BJ	0.0134	0.0000	0.0000
GIV	DEP	STANDARD	1	10	D4	0	BJ	0.0025	0.0000	0.0000
GIV	DEP	STANDARD	1	10	D5	0	BJ	0.0008	0.0000	0.0000
GIV	DEP	STANDARD	1	28	D10	0	BJ	0.0012	0.0000	0.0000
GIV	DEP	STANDARD	1	28	D11	0	BJ	0.0035	0.0000	0.0000

GIV	DEP	STANDARD	1	28	D12	0	BJ	0.0186	0.0000	0.0000
LEAR25	APP	STANDARD	1	10	A3	0	BJ	0.0754	0.0000	0.0084
LEAR25	APP	STANDARD	1	28	A9	0	BJ	0.1046	0.0000	0.0116
LEAR25	DEP	STANDARD	1	10	D3	0	BJ	0.0603	0.0000	0.0067
LEAR25	DEP	STANDARD	1	10	D4	0	BJ	0.0113	0.0000	0.0013
LEAR25	DEP	STANDARD	1	10	D5	0	BJ	0.0038	0.0000	0.0004
LEAR25	DEP	STANDARD	1	28	D10	0	BJ	0.0052	0.0000	0.0006
LEAR25	DEP	STANDARD	1	28	D11	0	BJ	0.0157	0.0000	0.0017
EAR25	DEP	STANDARD	1	28	D12	0	BJ	0.0837	0.0000	0.0093
LEAR35	APP	STANDARD	1	10	A3	0	BJ	1.1397	0.0000	0.1006
LEAR35	APP	STANDARD	1	28	A9	0	BJ	1.5803	0.0000	0.1394
LEAR35	DEP	STANDARD	1	10	D3	0	BJ	0.9112	0.0000	0.0804
LEAR35	DEP	STANDARD	1	10	D4	0	BJ	0.1714	0.0000	0.0151
LEAR35	DEP	STANDARD	1	10	D5	0	BJ	0.0571	0.0000	0.0050
LEAR35	DEP	STANDARD	1	28	D10	0	BJ	0.0789	0.0000	0.0070
LEAR35	DEP	STANDARD	1	28	D11	0	BJ	0.2366	0.0000	0.0209
LEAR35	DEP	STANDARD	1	28	D12	0	BJ	1.2648	0.0000	0.1116
MU3001	APP	STANDARD	1	10	A3	0	BJ	0.3729	0.0000	0.0335
MU3001	APP	STANDARD	1	28	A9	0	BJ	0.5171	0.0000	0.0465
MU3001	DEP	STANDARD	1	10	D3	0	BJ	0.2982	0.0000	0.0268
MU3001	DEP	STANDARD	1	10	D4	0	BJ	0.0561	0.0000	0.0050
MU3001	DEP	STANDARD	1	10	D5	0	BJ	0.0187	0.0000	0.0017
MU3001	DEP	STANDARD	1	28	D10	0	BJ	0.0258	0.0000	0.0023
MU3001	DEP	STANDARD	1	28	D11	0	BJ	0.0774	0.0000	0.0070
MU3001	DEP	STANDARD	1	28	D12	0	BJ	0.4138	0.0000	0.0372
SABR80	APP	STANDARD	1	10	A3	0	BJ	0.1467	0.0000	0.0126
SABR80	APP	STANDARD	1	28	A9	0	BJ	0.2033	0.0000	0.0174
SABR80	DEP	STANDARD	1	10	D3	0	BJ	0.1172	0.0000	0.0100
SABR80	DEP	STANDARD	1	10	D4	0	BJ	0.0221	0.0000	0.0019
SABR80	DEP	STANDARD	1	10	D5	0	BJ	0.0073	0.0000	0.0006
SABR80	DEP	STANDARD	1	28	D10	0	BJ	0.0102	0.0000	0.0009
SABR80	DEP	STANDARD	1	28	D11	0	BJ	0.0304	0.0000	0.0026
SABR80	DEP	STANDARD	1	28	D12	0	BJ	0.1627	0.0000	0.0139

CASE RUNUP OPERATIONS

Acft	RunupId	X(nmi)	Y(nmi)	Head	Thrust	Dur(sec)	Day	Evening	Night

GRID DEFINITIONS

Name	Type	X(nmi)	Y(nmi)	Ang(deg)	DisI(nmi)	DisJ(nmi)	NI	NJ	Thrsh	dAmb	Ave(min)
CONTOUR	Contour	-8.0000	-8.0000	0.0	16.0000	16.0000	2	2	75.0	3.0	24.00
LOCATION	Location	0.0000	0.0000	0.0	0.0000	0.0000	1	1	75.0	3.0	24.00

CASE RUN OPTIONS

```
   Run Type       : Single-Metric
   NoiseMetric    : DNL
   Do Terrain     : No
   Do Contour     : Yes
   Refinement     : 10
   Tolerance      : 1.00
   Low Cutoff     : 65.0
   High Cutoff    : 75.0
   Ground Type    : All-Soft-Ground
   Do Population  : No
   Do Locations   : Yes
   Do Standard    : No
   Do Detailed    : No
   Compute System Metrics:
      DNL    : Yes
      CNEL   : No
      LAEQ   : No
      LAEQD  : No
      LAEQN  : No
      SEL    : No
      LAMAX  : No
      TALA   : No
      NEF    : No
      WECPNL : No
      EPNL   : No
      PNLTM  : No
      TAPNL  : No
      CEXP   : No
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LCMAX : No
TALC : No

PART IV

INM AIRCRAFT DATABASE

```
File: D:\inm600\sys_data\aircraft.dbf
Last update: 13-Sep-1999
Fields(15):
 1  ACFT_ID      C   6
 2  ACFT_DESCR   C  40
 3  GROUP_ID     C   3
 4  WGT_CAT      C   1
 5  OWNER_CAT    C   1
 6  ENG_TYPE     C   1
 7  NOISE_CAT    C   1
 8  NOISE_ID     C   6
 9  NUMB_ENG     N   1.0
10  THR_RESTOR   C   1
11  MX_GW_TKO    N   6.0
12  MX_GW_LND    N   6.0
13  MX_DS_STOP   N   5.0
14  COEFF_TYPE   C   1
15  THR_STATIC   N   6.0
Records(226):
 707    , B707-120/JT3C                                , COM , H , C , J , 1 , JT4A   , 4 , N , 302400 , 188900 , 6682 , J , 10120
 707120 , B707-120B/JT3D-3                             , COM , H , C , J , 1 , JT3D   , 4 , N , 302400 , 188900 , 6893 , J , 14850
 707320 , B707-320B/JT3D-7                             , COM , H , C , J , 1 , JT3D   , 4 , N , 334000 , 247000 , 5622 , J , 19000
 707QN  , B707-320B/JT3D-7QN                           , COM , H , C , J , 2 , JT3DQ  , 4 , N , 334000 , 247000 , 5622 , J , 19000
 720    , B720/JT3C                                    , COM , L , C , J , 1 , JT4A   , 4 , N , 223500 , 155600 , 4871 , J , 10120
 720B   , B720B/JT3D-3                                 , COM , L , C , J , 1 , JT3D   , 4 , N , 234000 , 175000 , 5717 , J , 18000
 727100 , B727-100/JT8D-7                              , COM , L , C , J , 1 , 3JT8D  , 3 , N , 169500 , 142500 , 4867 , J , 14000
 727200 , B727-200/JT8D-7                              , COM , L , C , J , 1 , 3JT8D  , 3 , N , 217600 , 163300 , 5571 , J , 11895
 727D15 , B727-200/JT8D-15                             , COM , L , C , J , 1 , 3JT8D  , 3 , N , 208000 , 169000 , 4922 , J , 15500
 727D17 , B727-200/JT8D-17                             , COM , L , C , J , 2 , 3JT8DQ , 3 , N , 208000 , 169000 , 5444 , J , 16000
 727EM1 , FEDX 727-100/JT8D-7                          , COM , L , C , J , 3 , 3JT8E7 , 3 , N , 169500 , 142500 , 4867 , J , 14000
 727EM2 , FEDX 727-200/JT8D-15                         , COM , L , C , J , 3 , 3JT8E5 , 3 , N , 208000 , 169000 , 4922 , J , 15500
 727Q15 , B727-200/JT8D-15QN                           , COM , L , C , J , 2 , 3JT8DQ , 3 , N , 208000 , 169000 , 4922 , J , 15500
 727Q7  , B727-100/JT8D-7QN                            , COM , L , C , J , 2 , 3JT8DQ , 3 , N , 169500 , 142500 , 4867 , J , 14000
 727Q9  , B727-200/JT8D-9                              , COM , L , C , J , 2 , 3JT8DQ , 3 , N , 191000 , 160000 , 5444 , J , 14500
 727QF  , UPS 727100 22C 25C                           , COM , L , C , J , 3 , TAY651 , 3 , N , 169000 , 142500 , 4448 , J , 15380
 737    , B737/JT8D-9                                  , COM , L , C , J , 1 , 2JT8D  , 2 , N , 109000 ,  98000 , 3900 , J , 14500
 737300 , B737-300/CFM56-3B-1                          , COM , L , C , J , 3 , CFM563 , 2 , N , 135000 , 114000 , 4580 , J , 20000
 7373B2 , B737-300/CFM56-3B-2                          , COM , L , C , J , 3 , CFM563 , 2 , N , 139000 , 114000 , 4580 , J , 22000
 737400 , B737-400/CFM56-3C-1                          , COM , L , C , J , 3 , CFM563 , 2 , N , 150000 , 124000 , 5062 , J , 23500
 737500 , B737-500/CFM56-3B-1                          , COM , L , C , J , 3 , CFM563 , 2 , N , 138500 , 111000 , 4551 , J , 20000
 737D17 , B737-200/JT8D-17                             , COM , L , C , J , 2 , 2JT8DQ , 2 , N , 124000 , 107000 , 4244 , J , 16000
 737N17 , B737-200/JT8D-17 Nordam B737 LGW Hushkit     , COM , L , C , J , 3 , 2JT8DN , 2 , N , 124000 , 107000 , 4244 , J , 16000
 737N9  , B737/JT8D-9 Nordam B737 LGW Hushkit          , COM , L , C , J , 3 , 2JT8DN , 2 , N , 109000 ,  98000 , 3900 , J , 14500
 737QN  , B737/JT8D-9QN                                , COM , L , C , J , 2 , 2JT8DQ , 2 , N , 109000 ,  98000 , 3900 , J , 14500
 747100 , B747-100/JT9DBD                              , COM , H , C , J , 2 , JT9DBD , 4 , N , 733000 , 516600 , 5727 , J , 33042
 74710Q , B747-100/JT9D-7QN                            , COM , H , C , J , 3 , JT9DFL , 4 , N , 733000 , 564000 , 6200 , J , 45500
 747200 , B747-200/JT9D-7                              , COM , H , C , J , 3 , JT9DFL , 4 , N , 775000 , 564000 , 6200 , J , 45500
 74720A , B747-200/JT9D-7A                             , COM , H , C , J , 3 , JT9D7Q , 4 , N , 785000 , 564000 , 6200 , J , 46300
 74720B , B747-200/JT9D-7Q                             , COM , H , C , J , 3 , JT9D7Q , 4 , N , 800000 , 630000 , 6200 , J , 53000
 747400 , B747-400/PW4056                              , COM , H , C , J , 3 , PW4056 , 4 , N , 870000 , 630000 , 6989 , J , 56800
 747SP  , B747SP/JT9D-7                                , COM , H , C , J , 3 , JT9DFL , 4 , N , 702000 , 475000 , 5911 , J , 45500
 757PW  , B757-200/PW2037                              , COM , L , C , J , 3 , PW2037 , 2 , N , 240000 , 198000 , 4790 , J , 38300
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757RR	B757-200/RB211-535E4		COM	L	C	J	3	RR535E	2	N	220000	198000	4640	J	40100
767300	B767-300/PW4060		COM	H	C	J	3	2CF680	2	N	407000	320000	4710	J	60000
767CF6	B767-200/CF6-80A		COM	H	C	J	3	2CF680	2	N	315500	270000	4700	J	48000
767JT9	B767-200/JT9D-7R4D		COM	H	C	J	3	2CF680	2	N	351000	270000	4744	J	48000
777200	Boeing 777-200 GE90-76B		COM	H	C	J	3	GE9076	2	N	535000	445000	4450	J	77000
A10A	FAIRCHILD THUNDERBOLT II TF34-GE-100	NM	MIL	L	M	J	0	AGE100	2	N	50000	33140	0	J	9065
A3	MCDONNELL DOUGLAS SKYWARRIOR J79-GE-8	NM	MIL	L	M	J	0	GE-8	2	N	80000	62923	0	J	11000
A300	A300B4-200/CF6-50C2		COM	H	C	J	3	2CF650	2	N	364000	295000	5367	J	52500
A310	A310-300/CF6-80C2A2		COM	H	C	J	3	2CF650	2	N	331000	271000	4880	J	53500
A320	A320-211/CFM56-5A-1		COM	L	C	J	3	CFM565	2	N	162000	142000	1730	J	25000
A37	CESSNA DRAGONFLY J85-GE-17A	NM	MIL	L	M	J	0	J8517A	2	N	14399	9556	0	J	2851
A4C	MCDONNELL DOUGLAS SKYHAWK J52-P-8A	NM	MIL	L	M	J	0	J52P8A	1	N	24490	16103	0	J	9293
A5C	J79-GE-10	NM	MIL	L	M	J	0	GE-10	2	N	80000	62923	0	J	11870
A6A	GRUMMAN INTRUDER J52-P-8B	NM	MIL	L	M	J	0	J52P8B	2	N	60400	45500	1900	J	9300
A7D	A-7D E/TF-41-A-1		MIL	L	M	J	0	TF41	1	N	42000	37100	7356	J	14500
A7E	VOUGHT CORSAIR II TF41-A-2	NM	MIL	L	M	J	0	TF41A2	1	N	42000	29426	0	J	15000
AV8A	BAE HARRIER AV8A	NM	MIL	L	M	J	0	AV-8A	1	N	0	0	0	J	0
AV8B	BAE HARRIER F402-RR-408	NM	MIL	L	M	J	0	RR-408	1	N	31000	25000	0	J	24000
B1	ROCKWELL LANCER F101-GE-102	NM	MIL	H	M	J	0	GE-102	4	N	477000	295000	0	J	31000
B2A	F118-GE-110	NM	MIL	H	M	J	0	GE-110	4	N	376000	169000	0	J	19000
B52BDE	BOEING STRATOFORTRESS J57P-19W	NM	MIL	H	M	J	0	J57P19	8	N	420000	0	0	J	0
B52G	BOEING STRATOFORTRESS J57-P-43WB	NM	MIL	H	M	J	0	J57P43	8	N	488000	0	0	J	14000
B52H	BOEING STRATOFORTRESS B52H	NM	MIL	H	M	J	0	B-52H	8	N	0	0	0	J	0
B57E	ENGLISH ELECTRIC CANBERRA J57-PW-P-5	NM	MIL	L	M	J	0	J57P5	2	N	54800	0	0	J	11000
BAC111	BAC111/SPEY MK511-14		COM	L	C	J	2	2JT8D	2	N	89600	82000	4449	J	11400
BAE146	BAE146-200/ALF502R-5		COM	L	C	J	3	AL502R	4	N	93000	81000	3770	J	6970
BAE300	BAE146-300/ALF502R-5		COM	L	C	J	3	AL502R	4	N	97500	84500	3960	J	6970
BEC58P	BARON 58P/TS10-520-L		GA	S	G	P	0	TSIO52	2	N	6100	6100	2733	P	779
BUCCAN	RR SPEY RB 168-1A	NM	MIL	L	M	J	0	RB168	2	N	45843	0	0	J	11330
C118	MCDONNELL DOUGLAS LIFT PW R-2800-CB17	NM	MIL	L	M	P	0	RCB17	4	N	107000	85180	0	P	1865
C119L	FAIRCHILD FLYING BOX CAR C119L	NM	MIL	L	M	P	0	C-119	2	N	74300	45000	0	P	0
C12	BEECH SUPER KING AIR HURON PW PT6A-41	NM	MIL	S	M	T	0	PT6A41	2	N	12500	12500	1760	P	850
C121	C121	NM	MIL	L	M	J	0	C-121	2	N	0	0	0	J	0
C123K	FAIRCHILD PW R-2800-99W AUX J85-GE17	NM	MIL	L	M	P	0	R2800	2	N	60000	29904	0	P	1715
C130	C-130H/T56-A-15		MIL	L	M	T	3	T56A15	4	N	155000	135000	4850	P	8026
C130AD	LOCKHEED HERCULES T56-A15	NM	MIL	L	M	T	0	C-130A	4	N	175000	175000	0	P	4508
C130E	C-130E/T56-A-7		MIL	L	M	T	0	T56A7	4	N	155000	130000	4670	P	7063
C-130E	LOCKHEED HERCULES T56-A15 C130E	NM	MIL	L	M	T	0	T56-15	4	N	175000	175000	0	J	4508
C130HP	LOCKHEED HERCULES C130HP	NM	MIL	L	M	T	0	C-130H	4	N	0	0	0	P	0
C131B	GENERAL DYNAMICS CV34 PW R-2800-99W	NM	MIL	L	M	J	0	R99W	2	N	41740	38000	0	J	2900
C135A	BOEING STRATOLIFTER PW J57-59W	NM	MIL	H	M	J	0	J5759W	4	N	300000	157000	0	J	14000
C135B	BOEING STRATOLIFTER C135B	NM	MIL	H	M	J	0	J5759	4	N	300000	157000	0	J	14000
C137	JT3D-3B	NM	MIL	H	M	J	0	JT3D3B	4	N	322000	0	0	J	18000
C140	LOCKHEED JETSTAR TFE731-3	NM	MIL	L	M	J	0	TFE731	4	N	44507	38312	0	J	3000
C141A	LOCKHEED STARLIFTER TF-33-P-7	NM	MIL	H	M	J	0	TF33P7	4	N	342283	124892	0	J	21000
C17	F117-PW-100	NM	MIL	H	M	J	0	PW-100	4	N	585000	446000	3000	J	40700
C18A	JT41-11	NM	MIL	H	M	J	0	JT4111	4	N	331000	247000	2575	J	18000
C-20	GULFSTREAM III MK611-8RR	NM	MIL	L	M	J	0	MK6118	2	N	74600	66000	3190	J	13850
C21A	LEARJET 35 TFE731-2-2B	NM	MIL	L	M	J	0	TFE73B	2	N	18300	15567	0	J	3500
C22	BOEING 727 TRS18-1	NM	MIL	L	M	J	0	TRS181	3	N	0	0	0	J	0
C23	PT6A-65AR	NM	MIL	L	M	J	0	PT6R65	2	N	25600	25100	1920	J	1424
C5A	LOCKHEED GALAXY TF39-GE-1	NM	MIL	H	M	J	0	TF39GE	4	N	769000	636000	2230	J	41000

C7A	DEHAVILLAND CARIBOU DHC-4A	NM	MIL	L	M	P	0	PW123	2	N	0	0	0	P	0
C9A	MCDONNELL DOUGLAS DC9 JT8D-9	NM	MIL	L	M	J	0	JT8D9	2	N	121000	110000	4680	J	14500
CANBER	2 RR AVON 109	NM	MIL	L	M	J	0	AVON	2	N	54935	27947	0	J	7396
CIT3	CIT 3/TFE731-3-100S		GA	L	G	J	3	TF7313	2	N	20000	17000	2770	J	3650
CL600	CL600/ALF502L		GA	L	G	J	3	AL502L	2	N	36000	33000	3300	J	7500
CL601	CL601/CF34-3A		GA	L	G	J	3	CF34	2	N	43100	36000	3550	J	9220
CNA441	CONQUEST II/TPE331-8		COM	S	C	T	0	TPE331	2	N	9900	9400	1939	P	1535
CNA500	CIT 2/JT15D-4		GA	L	G	J	3	JT15D1	2	N	14700	14000	3050	J	2500
COMJET	1985 BUSINESS JET		GA	L	G	J	1	CGAJ	2	N	19200	16200	2889	J	2900
COMSEP	1985 1-ENG COMP		GA	S	G	P	0	CGASEP	1	N	2440	2400	1156	P	605
CONCRD	CONCORDE/OLY593		COM	H	C	J	0	OLY593	4	N	400000	245000	10600	J	38100
CVR580	CV580/ALL 501-D15		COM	L	C	T	0	501D13	2	N	58000	52000	4256	P	8100
DC1010	DC10-10/CF6-6D		COM	H	C	J	3	CF66D	3	N	455000	363000	5820	J	40000
DC1030	DC10-30/CF6-50C2		COM	H	C	J	3	CF66D	3	N	572000	403000	5418	J	53200
DC1040	DC10-40/JT9D-20		COM	H	C	J	3	CF66D	3	N	555000	403000	6020	J	49400
DC3	DC3/R1820-86		COM	L	C	P	0	2R2800	2	N	28000	24500	2222	P	3120
DC6	DC6/R2800-CB17		COM	L	C	P	0	4R2800	4	N	106000	95000	3010	P	4180
DC820	DC-8-20/JT4A		COM	H	C	J	1	JT4A	4	N	317600	194400	6527	J	11850
DC850	DC8-50/JT3D-3B		COM	H	C	J	1	JT3D	4	N	325000	240000	5400	J	18000
DC860	DC8-60/JT3D-7		COM	H	C	J	1	JT3D	4	N	355000	275000	5310	J	19000
DC870	DC8-70/CFM56-2C-5		COM	H	C	J	3	CFM562	4	N	355000	258000	6500	J	22000
DC8QN	DC8-60/JT8D-7QN		COM	H	C	J	2	JT3DQ	4	N	355000	275000	5310	J	19000
DC910	DC9-10/JT8D-7		COM	L	C	J	1	2JT8D	2	N	90700	81700	5030	J	14000
DC930	DC9-30/JT8D-9		COM	L	C	J	1	2JT8D	2	N	114000	102000	4680	J	14500
DC93LW	DC9-30/JT8D-9 w/ ABS Lightweight hushkit		COM	L	C	J	3	2JT8DL	2	N	114000	102000	4680	J	14500
DC950	DC9-50/JT8D-17		COM	L	C	J	2	2JT8DQ	2	N	121000	110000	4880	J	16000
DC95HW	DC9-50/JT8D17 w/ ABS Heavyweight hushkit		COM	L	C	J	3	2JT8DH	2	N	121000	110000	4880	J	16000
DC9Q7	DC9-10/JT8D-7QN		COM	L	C	J	2	2JT8DQ	2	N	90700	81700	5030	J	14000
DC9Q9	DC9-30/JT8D-9QN		COM	L	C	J	2	2JT8DQ	2	N	114000	102000	4680	J	14500
DHC6	DASH 6/PT6A-27		COM	S	C	T	0	PT6A27	2	N	12500	12300	1500	P	2000
DHC6QP	DASH 6/PT6A-27 Raisbeck Quiet Prop Mod		COM	S	C	T	0	RAISQP	2	N	12500	12300	1500	P	2000
DHC7	DASH 7/PT6A-50		COM	L	C	T	3	PT6A50	4	N	41000	39000	2150	P	2850
DHC8	DASH 8-100/PW121		COM	L	C	T	3	PW120	2	N	34500	33900	3000	J	4750
DHC830	DASH 8-300/PW123		COM	L	C	T	3	PW120	2	N	43000	42000	3500	J	4918
DOMIN	BRISTOL SIDDELEY VIPER 521	NM	MIL	S	M	J	0	VIPER	2	N	20497	0	0	J	3125
E3A	BOEING SENTRY TF33-PW-100A	NM	MIL	H	M	J	0	PW100A	4	N	324909	160000	0	J	21000
E4	BOEING 747 CF6-50E	NM	MIL	H	M	J	0	CF650E	4	N	800000	564000	6170	J	52500
E8A	JT3D-3B	NM	MIL	H	M	J	0	JT3D3	4	N	336000	263000	0	J	18000
EA6B	J52-P-408	NM	MIL	L	M	J	0	P4A	2	N	65000	45500	1900	J	11200
EMB145	Embraer 145 ER/Allison AE3007		COM	L	C	J	3	AE3007	2	N	45420	41230	4232	J	7500
F10062	F100/TAY 620-15		COM	L	C	J	3	TAY620	2	N	95000	85500	4560	J	13900
F10065	F100/TAY 650-15		COM	L	C	J	3	TAY650	2	N	98000	88000	4704	J	15100
F100D	ROCKWELL SUPER SABRE PW J57-P-21A	NM	MIL	L	M	J	0	J57P21	1	N	32839	32315	0	J	17000
F101B	PW J57-P-55	NM	MIL	L	M	J	0	J57P55	2	N	52408	44578	0	J	0
F102	PW J57-P-23	NM	MIL	L	M	J	0	J57P23	1	N	31505	0	0	J	17000
F104G	LOCKHEED STARFIGHTER J79-GE-11A	NM	MIL	L	M	J	0	GE11A	1	N	28779	23000	0	J	16000
F105D	PW J75-P-19W	NM	MIL	L	M	J	0	J75P19	1	N	52847	41321	0	J	26000
F106	PW J57-P-17	NM	MIL	L	M	J	0	J57P17	1	N	41440	37170	0	J	25000
F111AE	GENERAL DYNAMICS F111AE PW TF30-P-100	NM	MIL	L	M	J	0	TF30P1	2	N	100000	72418	0	J	25000
F111D	GENERAL DYNAMICS F111D	NM	MIL	L	M	J	0	F111D	2	N	0	0	0	J	0
F-111F	GENERAL DYNAMICS F111F	NM	MIL	L	M	J	0	F111F	2	N	0	0	0	J	0
F117A	F404-GE-F1D2	NM	MIL	L	M	J	0	GEF1D2	2	N	52500	45385	0	J	11000

F14A	GRUMMAN TOMCAT TF30-P-414A	NM	MIL	L	M	J	0	TF30P4	2	N	53000	36000	0	J	21000
F14B	GRUMMAN TOMCAT F110-GE-400	NM	MIL	L	M	J	0	GE400	2	N	74349	64277	0	J	27000
F15A	MCDONNELL DOUGLAS EAGLE F100-PW-100	NM	MIL	L	M	J	0	PW100	2	N	56000	0	2500	J	25000
F15E20	MCDONNELL DOUGLAS EAGLE F100-PW-220	NM	MIL	L	M	J	0	PW2205	2	N	81000	44300	0	J	23000
F15E29	MCDONNELL DOUGLAS EAGLE F100-PW-229	NM	MIL	L	M	J	0	PW2295	2	N	0	0	0	J	29000
F16A	GENERAL DYNAMICS FALCON PW200	NM	MIL	L	M	J	0	PW200	1	N	0	0	0	J	0
F16GE	GENERAL DYNAMICS FALCON F110-GE-100	NM	MIL	L	M	J	0	GE100	1	N	42300	29261	0	J	29000
F16PW0	GENERAL DYNAMICS FALCON F100-PW-220	NM	MIL	L	M	J	0	PW220	1	N	42300	28058	0	J	24000
F16PW9	GENERAL DYNAMICS F FALCON F100-PW-229	NM	MIL	L	M	J	0	PW229	1	N	42300	28809	0	J	29000
F-18	MCDONNELL DOUGLAS HORNET F404-GE-400	NM	MIL	L	M	J	0	GE404	2	N	56000	36665	0	J	16000
F18EF	Boeing F-18E/F / F404-GE-400	NM	MIL	L	M	J	0	F18EF	2	N	66000	0	0	J	22000
F28MK2	F28-2000/RB183MK555		COM	L	C	J	2	RB183	2	N	65000	59000	3540	J	9850
F28MK4	F28-4000/RB183MK555		COM	L	C	J	2	RB183P	2	N	73000	64000	3546	J	9900
F4C	F-4C/J79-GE-15		MIL	L	M	J	0	J79	2	N	52000	40000	4444	J	10900
F-4C	MCDONNELL DOUGLAS PHANTOM J79-6517A17	NM	MIL	L	M	J	0	J79651	2	N	61795	46000	3780	J	18000
F5AB	NORTHRUP TIGER J85-GE-13	NM	MIL	L	M	J	0	GE-13	2	N	20576	19857	0	J	4080
F5E	NORTHRUP TIGER J85-GE-21B	NM	MIL	L	M	J	0	GE21B	2	N	25152	25147	5000	J	5000
F8	VOUGHT F-8 CRUSADER PW J57-P-201	NM	MIL	L	M	J	0	J57P20	1	N	27500	0	0	J	18000
FAL20	FALCON 20/CF700-2D-2		GA	L	G	J	2	CF700	2	N	28700	27300	2490	J	4500
FB111A	GENERAL DYNAMICS FB111 PW TF30-P-100	NM	MIL	L	M	J	0	FB111A	2	N	100000	72418	0	J	25000
GASEPF	1985 1-ENG FP PROP		GA	S	G	P	0	SEPFP	1	N	2200	2200	1160	P	560
GASEPV	1985 1-ENG VP PROP		GA	S	G	P	0	SEPVP	1	N	3000	3000	1111	P	790
GIIB	GIIB/SPEY MK511-8		GA	L	G	J	2	SP5118	2	N	65500	58500	3200	J	11400
GIV	GIV/TAY 611		GA	L	G	J	3	TAY620	2	N	71700	58500	3200	J	13850
HARRIE	BAE HARRIER AV8 RR PEGASUS 6	NM	MIL	L	M	J	0	PEGAS	1	N	16000	11989	0	J	19198
HAWK	RR ADOUR MK151	NM	MIL	S	M	J	0	ADOUR	1	N	12000	7447	0	J	5350
HS748	RR DART RDA7 MK 536-2	NM	MIL	L	M	J	0	DART	2	N	0	46486	0	J	0
HS748A	HS748/DART MK532-2		COM	L	C	T	2	RDA532	2	N	46500	43000	3360	P	5150
HUNTER	RR AVON RA28	NM	MIL	L	M	J	0	RA28	1	N	23990	13809	0	J	9913
IA1125	ASTRA 1125/TFE731-3A		GA	L	G	J	3	TF7313	2	N	23500	20700	3689	J	3700
JAGUAR	SEPECAT JAGUAR	NM	MIL	L	M	J	0	JAGUA	2	N	34100	0	0	J	0
JPATS	Raytheon T-6A Texan II / PT6A-68	NM	MIL	S	M	T	0	PT6A68	1	N	6300	0	0	P	1100
KC10A	CFG-50C2	NM	MIL	H	M	J	0	CFG50C	3	N	590000	403000	5350	J	53000
KC135	KC135A/J57-P-59W		MIL	H	M	J	0	J57	4	N	300000	228000	6689	J	11750
KC-135	BOEING STRATOTANKER KC135R F108-CF100	NM	MIL	H	M	J	0	F108CF	4	N	323000	0	0	J	22000
KC135B	KC135B/JT3D-7		MIL	H	M	J	0	JT3D	4	N	300000	228000	6689	J	19000
KC135R	KC135R/CFM56-2B-1		MIL	H	M	J	0	CFM56A	4	N	324000	244000	6556	J	22000
KC97L	BOEING STRATOFREIGHTER PW R-436-59B	NM	MIL	L	M	P	0	R43659	4	N	0	0	0	P	2570
L1011	L1011/RB211-22B		COM	H	C	J	3	RB2112	3	N	430000	358000	5693	J	42000
L10115	L1011-500/RB211-224B		COM	H	C	J	3	RB2112	3	N	510000	368000	6800	J	50000
L188	L188C/ALL 501-D13		COM	L	C	T	0	T56A7	4	N	116000	98100	4960	P	8000
LEAR25	LEAR 25/CJ610-8		GA	L	G	J	2	CJ610	2	N	15000	13500	2620	J	2950
LEAR35	LEAR 36/TFE731-2		GA	L	G	J	3	TF7312	2	N	18300	15300	3076	J	3500
LIGHTN	RR AVON 302C	NM	MIL	L	M	J	0	302C	2	N	41876	0	2880	J	13218
MD11GE	MD-11/CF6-80C2D1F		COM	H	C	J	3	2CF68D	3	N	682400	433300	5131	J	61500
MD11PW	MD-11/PW 4460		COM	H	C	J	3	PW4460	3	N	682400	433300	4681	J	60000
MD81	MD-81/JT8D-209		COM	L	C	J	3	2JT8D2	2	N	140000	128000	4860	J	19300
MD82	MD-82/JT8D-217A		COM	L	C	J	3	2JT8D2	2	N	149500	130000	4920	J	20900
MD83	MD-83/JT8D-219		COM	L	C	J	3	2JT8D2	2	N	160000	139500	5200	J	21700
MD9025	MD-90/V2525-D5		COM	L	C	J	3	V2525	2	Y	156000	142000	3000	J	25000
MD9028	MD-90/V2528-D5		COM	L	C	J	3	V2525	2	Y	156000	142000	3000	J	28000
MU3001	MU300-10/JT15D-4		GA	L	G	J	3	JT15D5	2	N	14100	13200	2800	J	2500

NIMROD	RR SPEY MK511	NM	MIL	L	M	J	0	SPEY	4	N	191748	0	0	J	10947
OV10A	ROCKWELL BRONCO T76	NM	MIL	L	M	T	0	T76	2	N	14466	10721	0	J	715
P3A	LOCKHEED ORION T56-A-14	NM	MIL	L	M	T	0	T56A14	4	N	142000	104000	0	J	4910
P3C	LOCKHEED ORION / T56-A-14	NM	MIL	L	M	T	0	T56-14	4	N	135000	104000	0	J	4910
PHANTO	MCDONNELL DOUGLAS PHANTOM F-4	NM	MIL	L	M	J	0	PHANTO	2	N	0	0	0	J	0
PROVOS	BRISTON SIDDELEY VIPER 11	NM	MIL	S	M	J	0	VIP11	1	N	7295	4654	0	J	2454
S3A&B	LOCKHEED VIKING TF34-6E-2	NM	MIL	L	M	J	0	TF346E	2	N	52539	45914	1600	J	9275
SABR80	NA SABRELINER 80		GA	L	G	J	2	CF700	2	N	33720	27290	2490	J	3962
SD330	SD330/PT6A-45AR		COM	L	C	T	3	PT6A45	2	N	22900	22600	3650	P	2670
SF340	SF340B/CT7-9B		COM	L	C	T	3	CT75	2	N	27300	26500	3470	P	4067
SR71	JT11D-20B	NM	MIL	L	M	J	0	JT11D2	2	N	170000	60000	2600	J	32500
T1	LOCKHEED SEA STAR JT15D-5	NM	MIL	L	M	J	0	JT15DM	1	N	16100	15700	0	J	2965
T29	GENERAL DYNAMICS CV34 PW R-2800-99W	NM	MIL	L	M	P	0	T-29	2	N	41740	0	0	P	0
T-2C	ROCKWELL BUCKEYE J85-6E-4	NM	MIL	L	M	J	0	J856E4	2	N	13284	12646	0	J	2950
T3	AEIO-540-D4A5	NM	MIL	S	M	J	0	AEIO54	1	N	2525	2738	0	J	260
T33A	LOCKHEED T-33A J33-35	NM	MIL	L	M	J	0	J3335	2	N	0	0	0	J	5203
T34	BEECH MENTOR (BE45) PT6A-25	NM	MIL	S	M	P	0	PT6A25	1	N	4300	4300	0	P	715
T37B	CESSNA 318 J69-T-25	NM	MIL	S	M	J	0	J69T25	2	N	6625	0	0	J	1025
T-38A	NORTHRUP TALON T-38A	NM	MIL	S	M	J	0	TJ85	2	N	12093	0	0	J	3850
T39A	ROCKWELL SABRELINER GEJ85	NM	MIL	L	M	J	0	GEJ85	2	N	0	0	0	J	0
T41	CESSNA 172 O-320-E2D	NM	MIL	S	M	P	0	O320E2	1	N	0	0	0	P	110
T42	BEECH BARON (BE55)	NM	MIL	S	M	P	0	IO-550	2	N	5500	5400	2450	P	300
T-43A	BOEING 737 T43A	NM	MIL	L	M	J	0	T-43A	2	N	0	0	0	J	0
T44	T44	NM	MIL	L	M	J	0	T-44	2	N	0	0	0	J	0
T45	PT6A-45AG	NM	MIL	L	M	J	0	F405RR	2	N	14081	15129	0	J	5450
TORNAD	RB199-34R	NM	MIL	L	M	J	0	RB1993	2	N	45000	30620	1215	J	16075
TR1	J75-P-13B	NM	MIL	L	M	J	0	J75P1B	1	N	40000	0	0	J	17000
U2	LOCKHEED U2 J75-P-13	NM	MIL	L	M	J	0	J75P13	1	N	40000	10000	0	J	11000
U21	BEECH UTE PW PT6A-20	NM	MIL	S	M	T	0	PT6A20	2	N	12500	12500	1760	P	850
U4B	ROCKWELL SUPER COMMANDER 1G0-540B1A	NM	MIL	S	M	P	0	540B1A	2	N	0	0	0	P	350
U6	DEHAVILLAND BEAVER PW R-985 DHC-2	NM	MIL	S	M	P	0	R985	1	N	0	0	0	P	330
U8F	BEECH SEMINOLE 0-480-1 D50	NM	MIL	S	M	P	0	C480	2	N	0	0	0	P	254
VC10	RR CONWAY RC0-42	NM	MIL	H	M	J	0	CONWY	4	N	311912	147875	0	J	20996
VICTOR	BRITISH AEROSPACE VICTOR	NM	MIL	L	M	J	0	VICTO	4	N	0	0	0	J	0
VULCAN	BRITTEN NORMAN VULCAN RR OLYMPUS 301	NM	MIL	H	M	J	0	RROLYM	4	N	200564	0	0	J	20007
YC14	GE CF6-50D	NM	MIL	L	M	J	0	CF650D	2	N	237000	181000	0	J	51000
YC15	PWJT8D-17	NM	MIL	L	M	J	0	JT8D17	4	N	0	0	0	J	16000

PART V

INM AIRCRAFT SUBSTITUTION DATABASE

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Last update: 14-Sep-1999
Fields(12):
 1  SUB_ID       C   6
 2  SUB_DESCR    C  40
 3  ACFT_ID1     C   6
 4  PERCENT1     N   5.1
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 6  PERCENT2     N   5.1
 7  ACFT_ID3     C   6
 8  PERCENT3     N   5.1
 9  ACFT_ID4     C   6
10  PERCENT4     N   5.1
11  ACFT_ID5     C   6
12  PERCENT5     N   5.1
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 7073SH , 707-300 ADV/C w/Shannon H/K                  , 707QN  , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 707C56 , 707 w/CFM56                                  , DC870  , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 717    , BOEING 717-200 (MD-95) 114000 LBS            , DC93LW , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 717ER  , BOEING 717-200 (MD-95) 121000 LBS            , DC95HW , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 720TJ  , B720 Turbojet                                , DC820  , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 727RR1 , 727-100 with RR TAY 650 eng.                 , 727EM1 , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 727RR2 , 727-200 with RR TAY 650 eng.                 , 727EM2 , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 73717A , 737-100 w/JT8D-7A                            , 737QN  , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 737215 , 737-200 ADV w/JT15QN                         , 737D17 , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 737222 , Boeing 737-222                               , 737QN  , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 747122 , Boeing 747-122                               , 74720A , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 7472G2 , 747-200 w/JT9D-7R4G2                         , 747200 , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 7473G2 , 747-300 w/JT9D-7R4G2                         , 74720B , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 747R21 , 747 w/CF6 or RB211 engines                   , 74720B , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 767400 , Boeing 767-400                               , 767300 , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 A319   , Airbus A-319                                 , A320   , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 A321   , Airbus A-321                                 , A320   , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 A330   , Airbus A330                                  , A310   , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 A340   , Airbus A340                                  , DC870  , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 AA5A   , Grumman Cheetah (AA5A)                       , GASEPF , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 AC50   , Commander 500                                , BEC58P , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 AC56   , Commander 560                                , BEC58P , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 AC69   , Jet Prop Commander                           , CNA441 , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 AC95   , Aero Commander 695                           , CNA441 , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 AEROJT , Aero Commander Jet Commander                 , LEAR25 , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 AN124  , Antonov-124                                  , 74720B , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 AN26   , Antonov-26                                   , CVR580 , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 AN74TK , Antonov-74                                   , DC9Q9  , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 ATR42  , Avions de Transport Regional ATR-42          , DHC8   , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 ATR72  , Avions de Transport Regional ATR-72          , HS748A , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 BAEATP , British Aerospace Advanced Turboprop ATP     , HS748A , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 BAEJ31 , British Aerospace BAe Jetsream 31            , DHC6   , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 BAEJ41 , British Aerospace Bae Jetstream 41           , SF340  , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 BEC100 , Beech King Air 100                           , CNA441 , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 BEC18  , Beechcraft Model 18                          , BEC58P , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
 BEC190 , Beech 1900                                   , DHC6   , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
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BEC200	Beech Super King Air 200	DHC6	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BEC20A	Beech Starship 2000	SD330	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BEC23	Beechcraft Model 23 Musketeer	GASEPF	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BEC24	Beechcraft Model 24 Sierra	GASEPF	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BEC300	Beech Super King Air 300	DHC6	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BEC30B	Beech Super King Air 300B	DHC6	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BEC33	Beechcraft Model 33 Debonair/Bonanza	GASEPV	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BEC400	Beechcraft Beechjet 400	LEAR35	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BEC45	Beechcraft Model 45 Mentor (T34A & T34B)	GASEPV	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BEC50	Beechcraft Model 50 Twin Bonanza	BEC58P	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BEC55	Beechcraft Model 55 Barron	BEC58P	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BEC58	Beechcraft Model 58 Barron	BEC58P	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BEC60	Beechcraft Model 60 Duke	BEC58P	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BEC65	Beechcraft Model 65 Queen Air	BEC58P	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BEC76	Beechcraft Model 76 Duchess	BEC58P	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BEC80	Beechcraft Model Queen Air 80 series	BEC58P	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BEC90	Beech King Air C90	CNA441	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BEC95	Beechcraft Model 95 Travel Air	BEC58P	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BEC99	Beech Airliner Model 99	DHC6	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BEC9F	Beech F90 Super King Air	CNA441	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BECM35	Beechcraft Model M35 Bonanza	GASEPV	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BL14	Bellanca Cruisair	GASEPF	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BL26	Bellanca Super Viking Model 17-30A	GASEPF	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BLCH10	Bellanca Champion Citabria CH10	GASEPF	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BN2A	Britten-Norman BN-2A Islander	BEC58P	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
BN3	Britten-Norman BN-3 Nymph	GASEPF	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
C141	Lockheed C-141 Starlifter	707320	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
C17A	Globemaster III C-17	DC870	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
C20	US Military Gulfstream III	GIIB	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
C20A	US Military Gulfstream III	GIIB	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
C26	Military Metro/Merlin	DHC6	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
C45	Military Twin Beech 18	BEC58P	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
C5	Lockheed Galaxy	74720B	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
C8	US Army DHC-5 Buffalo	HS748A	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
C9B	Navy DC9-30 SkyTrain	DC9Q9	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CA212	CASA C-212 Aviocar	DHC6	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CAN235	CACA-Nurtanio CN-235 Airtech	SF340	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CC138	Canadian Air Force DHC-6 Twin Otter	DHC6	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CL610	Canadair CL-610 Challenger E	CL601	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CLREGJ	Canadair Regional Jet	CL601	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA150	Cessna 150	GASEPF	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA152	Cessna 152	GASEPF	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA170	Cessna 170	GASEPF	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA172	Cessna 172 Skyhawk	GASEPF	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA177	Cessna 177 Cardinal	GASEPF	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA17B	Cessna 177B or RG Cardinal	GASEPV	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA180	Cessna Skywagon	GASEPV	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA182	Cessna 182 Skylane	GASEPV	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA185	Cessna Skywagon	GASEPV	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA205	Cessna 205 Super Skywagon	GASEPV	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA207	Cessna 207 Turbo Stationair	GASEPV	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA208	Cessna 208 Caravan I	GASEPF	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0

CNA210	Cessna 210 Centurion/II	GASEPV	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA303	Cessna 303 Crusader	BEC58P	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA305	Cessna 305/L-19 or O-1 Bird Dog	GASEPF	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA310	Cessna 310	BEC58P	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA320	Cessna 320 Skynight	BEC58P	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA335	Cessna 335	BEC58P	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA336	Cessna 336 Skymaster	BEC58P	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA337	Cessna 337 Super Skymaster	BEC58P	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA340	Cessna 340	BEC58P	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA401	Cessna 401	BEC58P	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA402	Cessna 402	BEC58P	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA404	Cessna 404 Titan	BEC58P	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA414	Cessna 414 Chancellor	BEC58P	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA421	Cessna 421 Golden Eagle	BEC58P	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA425	Cessna 425 Corsair/Conquest I	CNA441	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA501	Cessna Citation I Single Pilot (SP)	CNA500	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA525	Cessna Citation Jet	CNA500	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA550	Cessna Model 550 Citation II	MU3001	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA551	Cessna Citation II Single Pilot (SP)	MU3001	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA560	Cessna 560 Citation V	MU3001	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA650	Cessna 650 Citation VII	CIT3	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNA750	Cessna Citation X	CL600	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNACAR	Cessna AGCARRYALL	GASEPV	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNATRK	Cessna AGTRUCK	GASEPV	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNAWAG	Cessna AGWAGON	GASEPV	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNV240	Convair 240	DC3	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNV600	Convair 600	HS748A	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNV640	Convair 640	HS748A	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNV880	Convair 880	DC820	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CNV990	Convair 990	707	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
CONSTE	Lockheed Constellation	DC6	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
DALPHA	Dassault Alpha Jet	FAL20	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
DBMERC	Dassualt Mercure	737D17	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
DC4	Douglas DC-4	DC6	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
DC7	Douglas DC-7	DC6	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
DC86BT	DC8-62/63 w/Burbank Treatment	DC8QN	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
DC9317	DC930 w/JT8D-17 &15	DC9Q9	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
DC937A	DC930 w/JT8D-7 & 7A	DC9Q9	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
DC9411	DC940 w/JT8D-11	DC9Q9	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
DHC2	De Havilland DHC-2 Beaver	GASEPV	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
DHC4	De Havilland DHC-4 Caribou	DC3	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
DO228	Dornier-228	DHC6	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
DO328	Dornier-328	DHC8	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
EMB110	Embraer Bandeirante 110	DHC6	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
EMB120	Embraer Bandeirante 120	DHC8	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
EMB135	Embraer EMB-135	CL600	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
F10	Douglas Skyknight	LEAR25	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
F90	Beech Super King Air	CNA441	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
FAL10	Falcon 10	LEAR35	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
FAL200	Falcon 200	LEAR35	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
FAL20A	Falcon 2000	CL600	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0
FH227	Fairchild-Hiller F-227 (Fokker 27 Elong)	HS748A	100.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0	-NONE-	0.0

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FH27    , Fairchild-Hiller F-27 (Fokker 27)             , HS748A , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
FK27    , Fokker F.27                                   , HS748A , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
FK50    , Fokker 50                                     , DHC830 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
FK70    , Fokker 70                                     , F10062 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
G164AG  , GrummanAmerican Super Agcat                   , GASEPV , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
GA7     , Grumman Cougar (GA7)                          , BEC58P , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
GC1     , Vought Swift                                  , GASEPF , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
GROB15  , Burkhart Grob G 115                           , GASEPF , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
GSPORT  , Great Lakes Sport                             , GASEPF , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
GULF1   , Gulfstream I (G159)                           , HS748A , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
GULF2   , Gulfstream II                                 , GIIB   , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
GULF3   , Gulfstream III                                , GIIB   , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
GULFCO  , Gulfstream Commander                          , CNA441 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
HS125   , Hawker-Siddeley 125                           , LEAR25 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
HS1258  , Bae (Hawker-Siddeley) 125-800                 , LEAR35 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
IA1123  , IAI 1123 Westwind                             , LEAR25 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
IA1124  , IAI 1124 Westwind                             , IA1125 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
IARAVA  , IAI Arava                                     , DHC6   , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
IL114   , Ilyushin-114                                  , CVR580 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
IL62    , Ilyushin-62                                   , 707QN  , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
IL76    , Ilyushin-76                                   , DC8QN  , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
IL86    , Ilyushin-86                                   , DC8QN  , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
IL96    , Illyushin-96                                  , 747200 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
JST1TF  , Jetstar 1 Turbofan                            , LEAR35 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
JST1TJ  , Jetstar 1 Turbojet                            , LEAR25 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
JST2TF  , Lockheed Jetstar 2                            , LEAR35 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
KC135E  , Boeing KC135 Stratotanker (Re-engined)        , 707320 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
LA42    , Lake LA-4-200 Buccaneer                       , GASEPV , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
LEAR23  , Learjet 23                                    , LEAR25 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
LEAR24  , Learjet 24                                    , LEAR25 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
LEAR31  , Learjet 31                                    , LEAR35 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
LEAR36  , Learjet 36                                    , LEAR35 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
LEAR45  , Learjet 45                                    , LEAR35 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
LEAR55  , Learjet 55                                    , LEAR35 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
LEAR60  , Learjet 60                                    , LEAR35 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
LOADMS  , Ayres LoadMaster                              , SD330  , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
M20J    , Mooney 201LM and 205  (M20J)                  , GASEPV , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
M20K    , Mooney 252TSE (M20K)                          , GASEPV , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
M20L    , Mooney Pegasus (M20L)                         , GASEPV , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
MB339C  , Aermacchi M.B. 339-C                          , A7D    , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
MD80    , McDonnell-Douglas  MD80                       , MD81   , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
MD87    , McDonnell-Douglas  MD87                       , MD81   , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
MD88    , McDonnell-Douglas  MD88                       , MD83   , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
MD8819  , MD88 w/JT8D-119                               , MD81   , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
MU2     , Mitsubishi MU-2                               , DHC6   , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
MU300   , Mitsubishi Diamond MU-300                     , CNA500 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
N24     , Gov. Aircraft Factories N24                   , CNA441 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
NRD262  , Nord-Aviation NORD-262                        , SD330  , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
OV1     , Grumman Mohawk OV-1                           , DHC6   , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
PA17    , Piper PA-17 Vagabond                          , GASEPF , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
PA18    , Piper PA-18 Super Cub                         , GASEPF , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
PA22CO  , Piper PA-22 Colt                              , GASEPF , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
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PA22TR , Piper PA-22 Tripacer                         , GASEPF , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA23AP , Piper PA-23-235 Apache                       , BEC58P , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA23AZ , Piper PA-23 Aztec                            , BEC58P , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA24   , Piper PA-24 Comanche                         , GASEPV , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA25   , Piper PA-25 Pawnee                           , GASEPV , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA28AR , Piper PA-28-181 Archer II                    , GASEPF , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA28C2 , Piper PA-28-235E Cherokee 235E               , GASEPV , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA28CA , Piper PA-28R-200 Cherokee Arrow II           , GASEPV , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA28CC , Piper PA-28-180 Cherokee Challenger          , GASEPF , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA28CH , Piper PA-28-140 Cherokee 140                 , GASEPF , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA28DK , Piper PA-28-236 Dakota                       , GASEPV , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA28WA , Piper PA-28-161 Warrior II                   , GASEPF , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA30   , Piper PA-30 Twin Comanche                    , BEC58P , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA31   , Piper PA-31 Navajo                           , BEC58P , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA31CH , Piper PA-31-350 Chieftain                    , BEC58P , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA31T  , Piper PA-31T Cheyenne                        , CNA441 , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA32C6 , Piper PA-32 Cherokee Six                     , GASEPV , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA32LA , Piper PA-32R-300 Lance                       , GASEPV , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA32SG , Piper PA-32 Saratoga                         , GASEPV , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA34   , Piper PA-34 Seneca                           , BEC58P , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA36   , Piper 36 Brave                               , BEC58P , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA38   , Piper PA-38-112 Tomahawk                     , GASEPF , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA39   , Piper PA-39 Twin Comanche C/R                , BEC58P , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA42   , Piper PA-42 Cheyenne III                     , CNA441 , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA44   , Piper 44 Seminole                            , BEC58P , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA46   , Piper PA-46 Malibu                           , GASEPV , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA60   , Piper Aerostar Model 600/700                 , BEC58P , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PA61   , Piper PA-61 Aerostar Model 601               , BEC58P , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PC6    , Pilatus PC-6                                 , GASEPV , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
PITTS1 , Pitts S-1 Special                            , GASEPF , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
RJ70   , RJ70                                         , BAE146 , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
RWCM12 , Rockwell Commander 112 (Alpine)              , GASEPF , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
RWCM14 , Rockwell Commander 114 (Gram Turismo)        , GASEPV , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
RWCM50 , Rockwell Shrike Commander 500S               , BEC58P , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
RWCM69 , Rockwell Turbo Commander 690                 , CNA441 , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
RWCMTH , Rockwell Thrust Commander (SR2)              , GASEPV , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
S2     , Grumman S-2 Tracker                          , DC3    , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
S212   , Siai Marchetti S212                          , CNA500 , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
SA226  , Swearingen Metro II                          , DHC6   , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
SA227  , Swearingen Metro III                         , DHC6   , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
SAAB20 , SAAB 2000                                    , HS748A , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
SABR40 , Sabreliner 40                                , LEAR25 , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
SABR60 , Sabreliner 60                                , LEAR25 , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
SABR65 , Sabreliner 65                                , LEAR35 , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
SABR70 , Sabreliner 70                                , LEAR25 , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
SABR75 , Sabreliner 75                                , LEAR25 , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
SAMER2 , Swearingen Merlin II                         , CNA441 , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
SAMER3 , Swearingen Merlin III                        , CNA441 , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
SAMER4 , Swearingen Merlin IV                         , DHC6   , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
SD360  , Shorts 360                                   , SD330  , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
SE210  , Aerospatiale Caravelle                       , 737    , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
SF260M , Siai Marchetti SF260M                        , GASEPV , 100.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0 , -NONE- , 0.0
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SN600  , Aerospatiale SN 600 Corvette           , CNA500 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
T37    , USAF Cessna T37 or 318                 , LEAR25 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
T38    , USAF Northrop T38                      , LEAR25 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
T43A   , USAF 737-200                           , 737    , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
T47A   , US Navy Cessna Citation S/II           , CNA500 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
TAYF19 , Taylorcraft Sprtsman 100 (F19)         , GASEPF , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
TED600 , Ted Smith Aerostar 600                 , BEC58P , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
TU134  , Tupolev-134                            , DC930  , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
TU154  , Tupolev-154                            , 727D17 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
TU204  , Tupolev-204                            , 757RR  , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
TU334  , Tuploev-334                            , F10065 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
U3     , USAF Cessna Model 310                  , BEC58P , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
UV18   , US Military DHC-6 Twin Otter           , DHC6   , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
VC10TF , Vickers VC10 TurboFan                  , 707    , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
VC10TJ , Vickers VC10 TurboJet                  , DC820  , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
VC2    , Vickers VC2 Viscount                   , L188   , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
YAK42  , Yakolev Yak-42                         , 727100 , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
YS11   , Nihon Aeroplane (NAMC) YS-11           , HS748A , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
YS11C  , Nihon Aeroplane (NAMC) YS-11 Cargo     , HS748A , 100.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0 , -NONE- ,   0.0
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