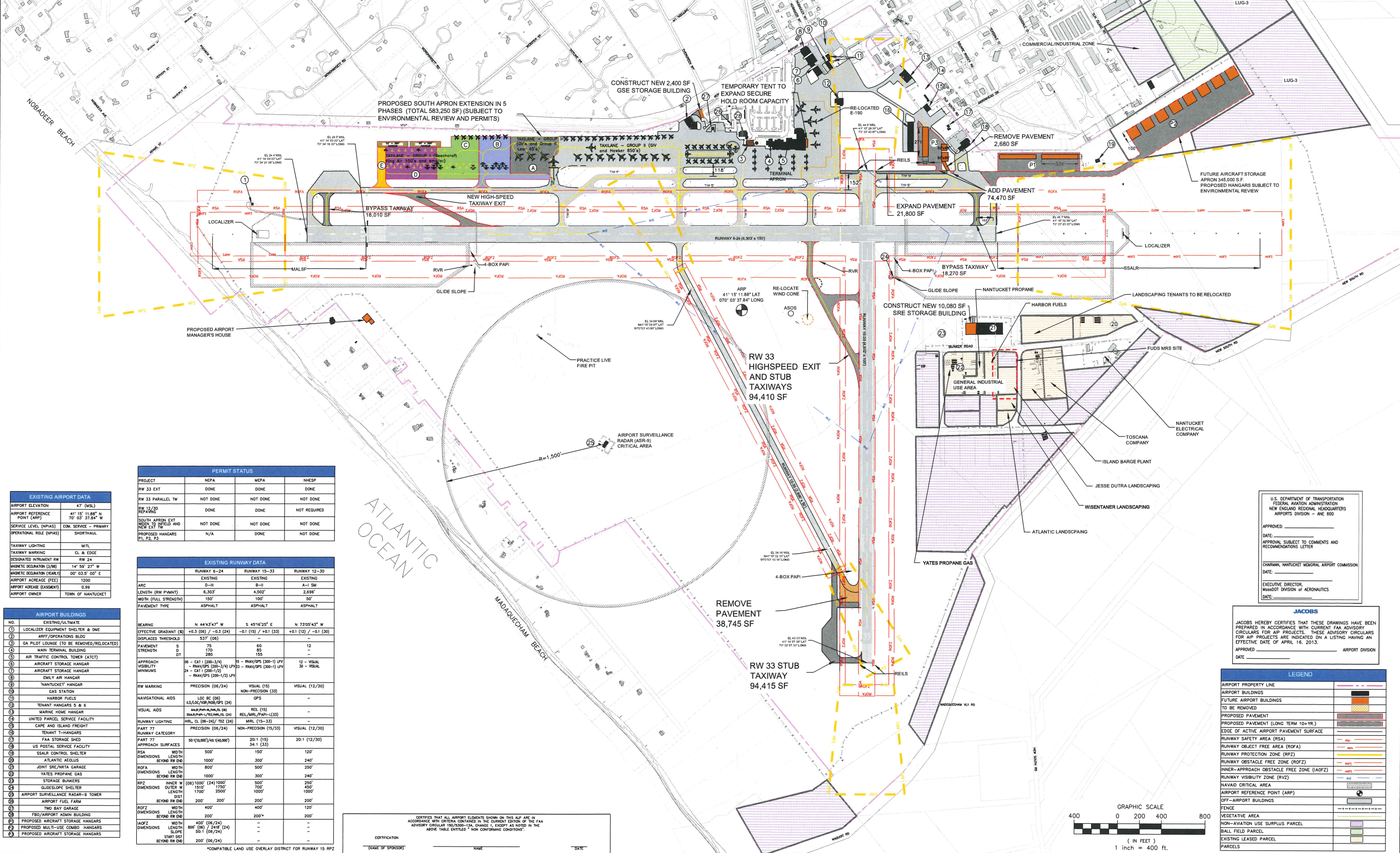


| NON-CONFORMING CONDITIONS   |                               |   |  |          |
|---|-------------------------------|---|--|----------|
| DESCRIPTION   | EXISTING / PLANNED            | STANDARD  | REMARKS  | DATE     |
| 1/4" E 1/4" F SEPARATION  | 132' (EXISTING)               | AC 150/2000-13 TABLE 2-3, MIN. CENTERLINE SEPARATION FOR GROUP 1 & 2          | ANALYSIS PERFORMED UNDER A SEPARATE RFA GROUP DATED JANUARY 25, 2015 | 8/12/00  |
| R/W & SAFETY AREA LENGTH & MAXIMUM PRACTICABLE LENGTH AND AREA  | 800' MIN (EXISTING) 1000' MAX | AC 150/2000-13 TABLE 2-3, RFA LENGTH FOR GROUP 1 & 2 IS 1000'                 | APPROVED AS PER AIR NO. 2-20-0033-19, RECONSTRUCT RUNWAY 15-33       | 11/27/04 |
| R/W 10-33 WIDTH   | 100' (EXISTING)               | AC 150/2000-13 TABLE 2-3, R/W WIDTH FOR B-1 WITH 30.0' MIN. VISIBILITY IS 75' |  |          |
| CERTIFIES THAT ALL AIRPORT ELEMENTS SHOWN ON THIS A/P ARE IN ACCORDANCE WITH THE CRITERIA CONTAINED WITHIN THE CURRENT EDITION OF FAA ADVISORY CIRCULAR AC150/2000-13A, CHANGE ONE DATED 12/26/2014 EXCEPT WHERE NOTED AS SUBSTANDARD, ABOVE. |                               |   |  |          |
| CERTIFICATION   |                               |   |  |          |
| (NAME OF SPONSOR)   | NAME                          | DATE  |  |          |



| PERMIT STATUS            |               |          |              |
|--------------------------|---------------|----------|--------------|
| PROJECT                  | NEPA          | MEPA     | NHESP        |
| RW 33 EXT                | DONE          | DONE     | DONE         |
| RW 33 PARALLEL TW        | NOT DONE      | NOT DONE | NOT DONE     |
| RW 12/30 REPAIRING       | DONE          | DONE     | NOT REQUIRED |
| SOUTH APRON EXT          | NOT DONE      | NOT DONE | NOT DONE     |
| WATERC RELOCATION (EAST) | 50' 03" 00" E |          |              |
| PROPOSED HANGARS         | P1, P2, P3    | DONE     | NOT DONE     |

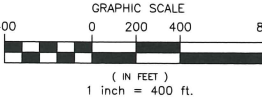
| EXISTING RUNWAY DATA    |                               |                          |                       |
|-------------------------|-------------------------------|--------------------------|-----------------------|
|                         | RUNWAY 6-24                   | RUNWAY 15-33             | RUNWAY 12-30          |
| EXISTING                | EXISTING                      | EXISTING                 | EXISTING              |
| ARC                     | D-III                         | B-III                    | A-I SM                |
| LENGTH (RW PAVMT)       | 6,303'                        | 4,502'                   | 2,698'                |
| WIDTH (FULL STRENGTH)   | 150'                          | 100'                     | 50'                   |
| PAVEMENT TYPE           | ASPHALT                       | ASPHALT                  | ASPHALT               |
| BEARING                 | N 44°43'47" W                 | S 45°16'25" E            | N 73°05'43" W         |
| EFFECTIVE GRADIENT (IN) | +0.3 (08) / -0.3 (24)         | -0.1 (19) / +0.1 (33)    | +0.1 (12) / -0.1 (30) |
| DISPLACED THRESHOLD     | 537' (08)                     | -                        | -                     |
| PAVEMENT                | S                             | 60                       | 12                    |
| STRENGTH                | D                             | 170                      | 85                    |
| DT                      | 280                           | 155                      | -                     |
| APPROACH                | 06 - CAT I (200-3/4)          | 32 - RNAV/PS (300-1) LPV | 12 - VISUAL           |
| VISIBILITY              | RNAV/PS (200-3/4) LPV         | RNAV/PS (300-1) LPV      | 30 - VISUAL           |
| MINIMUMS                | 24 - CAT I (200-1/2)          | RNAV/PS (300-1) LPV      | -                     |
| RW MARKING              | PRECISION (06/24)             | VISUAL (15)              | VISUAL (12/30)        |
| NAVIGATIONAL AIDS       | LOC BC (06)                   | NON-PRECISION (33)       | -                     |
| VISUAL AIDS             | U.S./LOC/LOC/LOC/PS (24)      | GPS                      | -                     |
| RUNWAY LIGHTING         | HIRL CL (06-24)/ TDZ (24)     | HIRL (15-33)             | -                     |
| PART 77                 | PRECISION (06/24)             | NON-PRECISION (15/33)    | VISUAL (12/30)        |
| RUNWAY CATEGORY         | 50-100,000/14-140,000         | 20-1 (15)                | 20-1 (12/30)          |
| APPROACH SURFACES       | PRECISION (06/24)             | NON-PRECISION (15/33)    | VISUAL (12/30)        |
| RSR                     | WIDTH 500'                    | 150'                     | 120'                  |
| LENGTH                  | 1000'                         | 300'                     | 240'                  |
| BEYOND RW END           | 800'                          | 500'                     | 250'                  |
| ROFA                    | WIDTH 1000'                   | 300'                     | 240'                  |
| LENGTH                  | 1000'                         | 300'                     | 240'                  |
| BEYOND RW END           | 1000'                         | 300'                     | 240'                  |
| RPZ                     | INNER W (06) 1000' (24) 1000' | 500'                     | 250'                  |
| OUTER W                 | 1700'                         | 700'                     | 450'                  |
| LENGTH                  | 1700'                         | 1000'                    | 1000'                 |
| DT                      | 200'                          | 200'                     | 200'                  |
| BEYOND RW END           | 400'                          | 400'                     | 120'                  |
| ROFZ                    | WIDTH 400'                    | 200'                     | 200'                  |
| LENGTH                  | 400'                          | 200'                     | 200'                  |
| BEYOND RW END           | 400'                          | 200'                     | 200'                  |
| HAZT                    | WIDTH 800' (06/24)            | 200'                     | 200'                  |
| LENGTH                  | 800' (06/24)                  | 200'                     | 200'                  |
| BEYOND RW END           | 800' (06/24)                  | 200'                     | 200'                  |
| START DIST              | 200' (06/24)                  | -                        | -                     |
| BEYOND RW END           | 200' (06/24)                  | -                        | -                     |

CERTIFICATION  
(NAME OF SPONSOR) NAME DATE

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
NEW ENGLAND REGIONAL HEADQUARTERS  
AIRPORTS DIVISION - AVE 600  
APPROVED: \_\_\_\_\_  
DATE: \_\_\_\_\_  
APPROVAL SUBJECT TO COMMENTS AND  
RECOMMENDATIONS LETTER  
CHAIRMAN, NANTUCKET MEMORIAL AIRPORT COMMISSION  
DATE: \_\_\_\_\_  
EXECUTIVE DIRECTOR,  
HAWAIIAN DIVISION OF AERONAUTICS  
DATE: \_\_\_\_\_

JACOBS  
JACOBS HEREBY CERTIFIES THAT THESE DRAWINGS HAVE BEEN  
PREPARED IN ACCORDANCE WITH CURRENT FAA ADVISORY  
CIRCULARS FOR AIR PROJECTS. THESE ADVISORY CIRCULARS  
FOR AIR PROJECTS ARE INDICATED ON A LISTING HAVING AN  
EFFECTIVE DATE OF APRIL 16, 2013.  
APPROVED: \_\_\_\_\_ AIRPORT DIVISION  
DATE: \_\_\_\_\_

| LEGEND                                    |     |
|---|-----|
| AIRPORT PROPERTY LINE                     | --- |
| AIRPORT BUILDINGS                         | ■   |
| FUTURE AIRPORT BUILDINGS                  | ■   |
| TO BE REMOVED                             | ■   |
| PROPOSED PAVEMENT                         | ■   |
| PROPOSED PAVEMENT (LONG TERM 10+YR)       | ■   |
| EDGE OF ACTIVE AIRPORT PAVEMENT SURFACE   | --- |
| RUNWAY SAFETY AREA (RSA)                  | --- |
| RUNWAY OBSTACLE FREE AREA (ROFA)          | --- |
| RUNWAY PROTECTION ZONE (RPZ)              | --- |
| RUNWAY OBSTACLE FREE ZONE (ROFZ)          | --- |
| INNER-APPROACH OBSTACLE FREE ZONE (IAOFZ) | --- |
| RUNWAY VISIBILITY ZONE (RVZ)              | --- |
| NAVAID CRITICAL AREA                      | --- |
| AIRPORT REFERENCE POINT (ARP)             | ●   |
| OFF-AIRPORT BUILDINGS                     | --- |
| FENCE                                     | --- |
| VEGETATIVE AREA                           | --- |
| NON-AVIATION USE SURPLUS PARCEL           | --- |
| BALL FIELD PARCEL                         | --- |
| EXISTING LEASED PARCEL                    | --- |
| PARCELS                                   | --- |



ULTIMATE AIRPORT  
LAYOUT PLAN  
DRAFT

| Rev. | Date      | Description     | Appr. |
|------|-----------|-----------------|-------|
| 1    | 2/23/2015 | Design file no. |       |
| 2    | 2/23/2015 | Drawing code    |       |
| 3    | 2/23/2015 | File name       |       |
| 4    | 2/23/2015 | Plot date       |       |
| 5    | 2/23/2015 | Plot scale      |       |

|                  |                  |
|------------------|------------------|
| Designed by: WER | Rev.:            |
| Drawn by: KHL    | Design file no.: |
| Reviewed by: WER | Drawing code:    |
| Submitted by:    | File name:       |
|                  | Plot date:       |
|                  | Plot scale:      |

NANTUCKET MEMORIAL AIRPORT  
NANTUCKET  
MASSACHUSETTS  
JACOBS  
TWO EXECUTIVE PARK DRIVE  
SUITE 205  
BEDFORD, MA 03110

Sheet  
reference  
number:  
3  
3 OF 11



# Summary of ATM actions/disposition of various parcels voted to be transferred to control of Airport

| ATM-1997<br>(Note 1) | ATM 1997   | ATM 2009             | ATM 2011<br>(Note 4)     | Owner/Disposition<br>(per TON GIS Map as of 2-11-15) |
|----------------------|------------|----------------------|--------------------------|--|
| 88-17                |            |                      |                          | TON  |
| 88-19                |            |                      |                          | TON  |
| 88-61                |            |                      |                          | TON  |
| 88-64                |            |                      |                          | TON  |
| 88-65                | → (Note 2) | Transferred 10/20/97 |                          | See property history attached                        |
| 88-66                |            |                      |                          | TON  |
| 88-67                |            |                      |                          | TON  |
| 88-68                | → (Note 2) | Transferred 10/20/97 |                          | See property history attached (Note 6)               |
| 88-69                |            | Transferred 6/4/98   |                          | See property history attached (Note 6)               |
| 88-70                |            | → (Note 3)           |                          | No record in GIS                                     |
| 88-71                |            | → (Note 3)           |                          | No record in GIS                                     |
| 88-72                |            | → (Note 3)           |                          | No record in GIS                                     |
| 88-73                |            | → (Note 3)           |                          | No record in GIS                                     |
| 88-75                |            |                      |                          | TON  |
| 88-77                |            |                      |                          | TON  |
|                      |            |                      | 78-19                    | TON  |
|                      |            |                      | 79-13                    | TON  |
|                      |            |                      | 79-63                    | TON  |
|                      |            |                      | 79-113                   | See property history attached (Note 6)               |
|                      |            |                      | 88-36                    | No record in GIS                                     |
|                      |            |                      | Portions of three        | ?  |
|                      |            |                      | "paper" streets (Note 5) |  |

## Summary of ATM actions/disposition of various parcels voted to be transferred to control of Airport

### NOTES

- Note 1 Authorized transfer of enumerated lots to control of Airport Commission.
- Note 2 Authorized BOS to swap these two lots, along with others in settlement of litigation relating to redemption of tax titles.
- Note 3 Authorized BOS to sell parcels as part of "Nantucket Yard Sale Program. FinCom comment suggested taking back "One Big Beach" easements as full or partial consideration.
- Note 4 Authorized transfer of control of enumerated lots to Airport Commission.
- Note 5
  - 1) Weeweeder Ave between the western sideline of Everett St. and the western sideline of Russell St.
  - 2) Everett St. between the southern sideline of Weeweeder Ave to the Atlantic Ocean, not including any portion of Boulevard
  - May be part of transfer of "paper" street transfer to Sande Robert, current owner of the Devine property
  - 3) Boulevard from the western sideline of Everett Street to the Western sideline of Russell Street.
- Note 6 Not aware (from material I have) of any ATM authorization to sell

## 56R MADEQUECHAM VLY RD

**Location** 56R MADEQUECHAM VLY RD

**Assessment** \$1,697,100

**Mblu** 88/ / 65/ /

**Appraisal** \$1,697,100

**Acct#** 00008648

**PID** 8648

**Owner** ROOS GERALDINE R TRST

**Building Count** 1

### Current Value

| Appraisal      |              |             |             |
|----------------|--------------|-------------|-------------|
| Valuation Year | Improvements | Land        | Total       |
| 2015           | \$401,600    | \$1,295,500 | \$1,697,100 |
| Assessment     |              |             |             |
| Valuation Year | Improvements | Land        | Total       |
| 2015           | \$401,600    | \$1,295,500 | \$1,697,100 |

### Owner of Record

**Owner** ROOS GERALDINE R TRST  
**Co-Owner** ROOS GERALDINE R TRUST  
**Address** P O BOX 117  
KEARSARGE, NH 03847

**Sale Price** \$2,000,000  
**Book & Page** 01120/0141  
**Sale Date** 01/03/2008

### Ownership History

| Ownership History            |            |             |            |
|------------------------------|------------|-------------|------------|
| Owner                        | Sale Price | Book & Page | Sale Date  |
| SUNDELL TRACY C              | \$175,000  | 00606/0169  | 01/05/1999 |
| NANTUCKET SETTLEMENT LAND TR | \$0        | 00550/0222  | 10/20/1997 |
| TOWN OF NANTUCKET            | \$0        | 00081/ 371  |            |

### Building Information

#### Building 1 : Section 1

**Year Built:** 1999  
**Living Area:** 1984  
**Replacement Cost:** \$409,415  
**Building Percent** 97  
**Good:**  
**Replacement Cost**  
**Less Depreciation:** \$397,100

| Building Attributes |             |
|---------------------|-------------|
| Field               | Description |
|                     |             |



# SURFSIDE

**Location** SURFSIDE

**Assessment** \$251,900

**Mblu** 88 / 68 /

**Appraisal** \$251,900

**Acct#** 00008651

**PID** 8651

**Owner** MARBLEHAVEN LLC

**Building Count** 1

## Current Value

| Appraisal      |              |           |           |
|----------------|--------------|-----------|-----------|
| Valuation Year | Improvements | Land      | Total     |
| 2015           | \$0          | \$251,900 | \$251,900 |
| Assessment     |              |           |           |
| Valuation Year | Improvements | Land      | Total     |
| 2015           | \$0          | \$251,900 | \$251,900 |

## Owner of Record

**Owner** MARBLEHAVEN LLC

**Sale Price** \$120,232

**Co-Owner** C/O PHILIP WATERMAN III

**Book & Page** 01254/0236

**Address** 1095 PARK AVENUE  
NEW YORK, NY 10128

**Sale Date** 11/15/2010

## Ownership History

| Ownership History            |            |             |            |
|------------------------------|------------|-------------|------------|
| Owner                        | Sale Price | Book & Page | Sale Date  |
| SEIDMAN L WILLIAM            | \$125,000  | 00717/0139  | 10/11/2001 |
| NANTUCKET SETTLEMENT LAND TR | \$0        | 00550/0225  | 10/20/1997 |
| TOWN OF NANTUCKET            | \$0        | 00000/ 000  |            |

## Building Information

### Building 1 : Section 1

**Year Built:**

**Living Area:** 0

**Replacement Cost:** \$0

**Building Percent**

**Good:**

**Replacement Cost**

**Less Depreciation:** \$0

| Building Attributes |             |
|---------------------|-------------|
| Field               | Description |
|                     |             |

## 50R MADEQUECHAM VLY RD

**Location** 50R MADEQUECHAM VLY RD

**Assessment** \$1,822,700

**Mblu** 88/ / 69/ /

**Appraisal** \$1,822,700

**Acct#** 00008652

**PID** 8652

**Owner** 50 RMVR LLC

**Building Count** 1

### Current Value

| Appraisal      |              |             |             |
|----------------|--------------|-------------|-------------|
| Valuation Year | Improvements | Land        | Total       |
| 2015           | \$330,000    | \$1,492,700 | \$1,822,700 |
| Assessment     |              |             |             |
| Valuation Year | Improvements | Land        | Total       |
| 2015           | \$330,000    | \$1,492,700 | \$1,822,700 |

### Owner of Record

**Owner** 50 RMVR LLC  
**Co-Owner**  
**Address** 1095 PARK AV  
NEW YORK, NY 10128

**Sale Price** \$400,000  
**Book & Page** 001356/0049  
**Sale Date** 11/30/2012

### Ownership History

| Ownership History       |             |             |            |
|-------------------------|-------------|-------------|------------|
| Owner                   | Sale Price  | Book & Page | Sale Date  |
| 50RMVR LLC              | \$1,479,768 | 01254/0205  | 11/15/2010 |
| SEIDMAN SARAH B         | \$555,000   | 00654/0106  | 03/10/2000 |
| CONTE CATHERINE TRUSTEE | \$0         | 00654/0102  | 03/10/2000 |
| CONTE CATHERINE TR      | \$50,000    | 00579/0176  | 06/04/1998 |

### Building Information

#### Building 1 : Section 1

**Year Built:** 1999  
**Living Area:** 1068  
**Replacement Cost:** \$336,333  
**Building Percent** 97  
**Good:**  
**Replacement Cost**  
**Less Depreciation:** \$326,200

| Building Attributes |  |
|---------------------|--|
|                     |  |



## 50 OKORWAW AV

**Location** 50 OKORWAW AV

**Assessment** \$1,487,800

**Mblu** 79/ / 113/ /

**Appraisal** \$1,487,800

**Acct#** 00007346

**PID** 7346

**Owner** ROSS ADAM & EMMA

**Building Count** 1

### Current Value

| Appraisal      |              |           |             |
|----------------|--------------|-----------|-------------|
| Valuation Year | Improvements | Land      | Total       |
| 2015           | \$643,900    | \$843,900 | \$1,487,800 |
| Assessment     |              |           |             |
| Valuation Year | Improvements | Land      | Total       |
| 2015           | \$643,900    | \$843,900 | \$1,487,800 |

### Owner of Record

**Owner** ROSS ADAM & EMMA

**Sale Price** \$353,100

**Co-Owner**

**Book & Page** 01375/0117

**Address** 2 GREGLIN AVE PMB # 248  
NANTUCKET, MA 02554-2830

**Sale Date** 03/14/2013

### Ownership History

| Ownership History |            |             |           |
|-------------------|------------|-------------|-----------|
| Owner             | Sale Price | Book & Page | Sale Date |
| NANTUCKET TOWN OF | \$0        | 00081/ 254  |           |

### Building Information

#### Building 1 : Section 1

**Year Built:** 2013

**Living Area:** 3958

**Replacement Cost:** \$641,388

**Building Percent** 100

**Good:**

**Replacement Cost**

**Less Depreciation:** \$641,400

| Building Attributes |             |
|---------------------|-------------|
| Field               | Description |
| Style               | Colonial    |
| Model               | Residential |

## ARTICLE 79

(Airport: Real Estate Disposition)

To see if the Town will vote to transfer the following parcels of land from the jurisdiction of the Board of Selectmen/Treasurer to Nantucket Memorial Airport Commission:

| <u>Assessor's Reference</u> | <u>Block/Lots</u>   | <u>Area/S.F.</u> |
|-----------------------------|---------------------|------------------|
| 88-17                       | 285; 1-8            | 29,000           |
| 88-19                       | 303; 1-4, 28-34     | 29,000           |
| 88-61                       | 285; 9-17, 26-34    | 40,000           |
| 88-64                       | 303; 16, 17, 27, 28 | 10,000           |
| 88-65                       | 303; 18-25          | 25,000           |
| 88-66                       | 379; 18-25          | 25,000           |
| 88-67                       | 379; 16, 17, 27, 28 | 10,000           |
| 88-68                       | 380; 18-25          | 25,000           |
| 88-69                       | 380; 26, 27         | 5,000            |
| 88-70                       | 380; 28, 29, 30     | 7,500            |
| 88-71                       | 380; 31             | 2,500            |
| 88-72                       | 380; 1-4, 32-34     | 19,000           |
| 88-73                       | 380; 5-6            | 7,250            |
| 88-75                       | 381; 1-4, 28-34     | 29,000           |
| 88-77                       | 381; 16-27          | 35,000           |

provided however, that each such transfer shall first comply with the requirements of Article 33 of the 1994 Annual Town Meeting.

(Board of Selectmen for Airport Commission)

**FINANCE COMMITTEE RECOMMENDATION:** We recommend that the Town vote to adopt Article 79 with the following amendments:

amend the first sentence as follows (*NOTE: new language is shown as highlighted text; language to be deleted is shown by strike-out; these means to denote changes are not meant to become part of the text*):

"To see if the Town will vote to transfer the following parcels of land from the jurisdiction of the Board of Selectmen/Treasurer to the inhabitants of the Town of Nantucket, by and through the Nantucket Memorial Airport Commission:";

delete parcel 88-69 from the Assessor's Reference column.

We further recommend that all expenses in connection with the transfer of these properties shall be paid by the Airport Commission.







①  
2009

## ARTICLE 86

(Real Estate Conveyance: 6 Easy Street)

To see if the Town will vote to authorize the Board of Selectmen to convey, sell, or otherwise dispose of Town property located at 6 Easy Street and described in the Town Assessor's records as Map 42.3.1, Parcel 16, or any portions thereof or interests therein, subject to Massachusetts G.L. c. 30B, or to take any other action related thereto.

(Board of Selectmen)

**FINANCE COMMITTEE MOTION:** Moved that the Board of Selectmen is hereby authorized to convey, sell, or otherwise dispose of Town property located at 6 Easy Street and described in the Town Assessor's records as Map 42.3.1, Parcel 16, or any portions thereof or interests therein, subject to Massachusetts G.L. c. 30B and guidelines established under the "Nantucket Yard Sale" program on file in the office of the Board of Selectmen.

**BOARD OF SELECTMEN COMMENT:** The Board of Selectmen supports the Finance Committee Motion.

## ARTICLE 87

(Real Estate Conveyance: Surfside)

To see if the Town will vote to authorize the Board of Selectmen to convey, sell, or otherwise dispose of Town property located off Madequecham Valley Road and Lindsay Avenue in the Surfside area of Nantucket as shown on the plan entitled "Plan of Lands, Surfside, Nantucket, Mass.," dated September 1972 and filed with the Nantucket County Registry of Deeds in Plan File 3-D, and further described in the Town Assessor's records as Map 88, Parcels 70, 71, 72 and 73, or any portions thereof or interests therein, subject to Massachusetts G.L. c. 30B, or to take any other action related thereto.

(Board of Selectmen)

**FINANCE COMMITTEE MOTION:** Moved that the Board of Selectmen is hereby authorized to convey, sell, or otherwise dispose of Town property located off Madequecham Valley Road and Lindsay Avenue in the Surfside area of Nantucket as shown on the plan entitled "Plan of Lands, Surfside, Nantucket, Mass.," dated September 1972 and filed with the Nantucket County Registry of Deeds in Plan File 3-D, and further described in the Town Assessor's records as Map 88, Parcels 70, 71, 72 and 73, or any portions thereof or interests therein, subject to Massachusetts G.L. c. 30B and guidelines established under the "Nantucket Yard Sale" program on file in the office of the Board of Selectmen.

**FINANCE COMMITTEE COMMENT:** The Town should strongly consider accepting the grant to the Town of an appropriate "One Big Beach" easement over nearby or adjacent properties as full or partial consideration for the sale of these parcel(s).

**BOARD OF SELECTMEN COMMENT:** The Board of Selectmen supports the Finance Committee Motion.



2011

interests of all or any portion pursuant to Chapter 30B of the Massachusetts General Laws and guidelines established under the "Nantucket Yard Sales" program on file at the Board of Selectmen's office, provided that a conservation restriction has been placed on the properties protecting their open space value to adjoining properties;

- To dedicate all or any portion of Miller Lane, Lot B2 and all or any portion of Lot B-1 labeled "Buffer Area", and Map 42.2.3 Parcel 19, 76 Washington Street for open space and recreational purposes, or to sell, convey or otherwise dispose of the fee or lesser interests of any portion of the land identified to the Nantucket Islands Land Bank;

All as shown on a map entitled "2011 Annual Town Meeting Warrant Article 110" dated January 2011.

#### ARTICLE 111

##### (Real Estate Conveyance: Transfer of Miscellaneous Town Land to Airport)

To see if the Town will vote pursuant to Chapter 40 section 15A to authorize the Board of Selectmen to transfer the care, custody, management and control of the following parcels of land to the Nantucket Memorial Airport for any and all airport purposes; any such disposition to be on such terms and conditions the Board of Selectmen deem appropriate, which may include the reservation of easements and restrictions in regard to the following land:

- Map 78 Parcel 19, Surfside;
- Map 79 Parcel 13, Weweeder Avenue;
- Map 79 Parcel 63, Monohansett Road;
- Map 79 Parcel 113, Monohansett Road;
- Map 88 Parcel 36, Boulevarde
- Weweeder Avenue between the western sideline of Everett Street to the western sideline of Russell Street
- Everett Street between the southern sideline of Weweeder Avenue to the Atlantic Ocean, not including any portion of Boulevarde;
- Boulevarde from the western sideline of Everett Street to the western sideline of Russell Street.

All as shown on a map entitled "2011 Annual Town Meeting Warrant Article 111" dated January 2011 and filed herewith at the Office of the Town Clerk.

Or to take any other action related thereto.

##### (Board of Selectmen for Airport Commission)

FINANCE COMMITTEE MOTION: Moved that the Board of Selectmen is authorized to transfer the care, custody, management and control of the following parcels of land to the Nantucket Memorial Airport for any and all airport purposes; any such disposition to be on such terms and conditions the Board of Selectmen deem appropriate, which may include the reservation of easements and restrictions in regard to the following land:

- 2011
- Map 78 Parcel 19, Surfside;
  - Map 79 Parcel 13, Weweeder Avenue;
  - Map 88 Parcel 36, Boulevard - *SWEET (IN THE OCEAN)*
  - Weweeder Avenue between the western sideline of Everett Street to the western sideline of Russell Street
  - Everett Street between the southern sideline of Weweeder Avenue to the Atlantic Ocean, not including any portion of Boulevard;
  - Boulevard from the western sideline of Everett Street to the western sideline of Russell Street.

All as shown on a map entitled "2011 Annual Town Meeting Warrant Article 111" dated January 2011.

**BOARD OF SELECTMEN COMMENT:** The Board of Selectmen supports the Finance Committee Motion.

#### ARTICLE 112

(Real Estate Conveyance: Miscellaneous Land)

To see if the Town will vote to authorize the transfer of the following parcels of land from the care and custody of the Nantucket Memorial Airport Commission to the Town of Nantucket and/or the Nantucket Islands Land Bank for any and all legal purposes:

- Map 69 Parcel 3.1 (a portion of), 10 Sun Island Road;
- Map 69 Parcel 106, 6 Sun Island Road;

All as shown on a map entitled "2011 Annual Town Meeting Warrant Article 112" dated January 2011 and filed herewith at the Office of the Town Clerk.

Or to take any other action related thereto.

*(Board of Selectmen for Airport Commission)*

**FINANCE COMMITTEE MOTION:** Moved that the following parcels of land are transferred from the care and custody of the Nantucket Memorial Airport Commission to the Town of Nantucket and/or the Nantucket Islands Land Bank for any and all legal purposes:

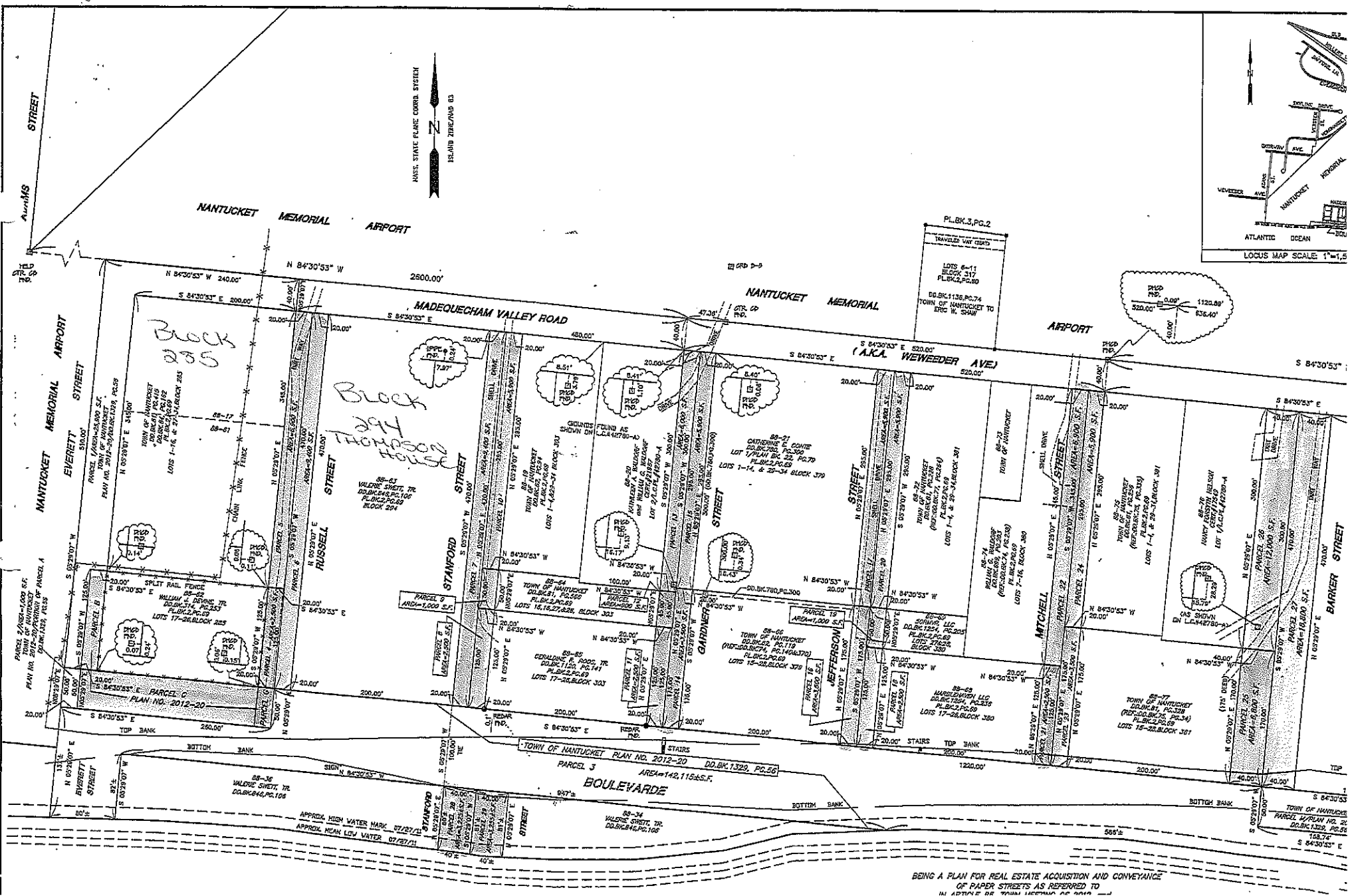
- Map 69 Parcel 3.1 (a portion of), 10 Sun Island Road;

All as shown on a map entitled "2011 Annual Town Meeting Warrant Article 112" dated January 2011.

**BOARD OF SELECTMEN COMMENT:** The Board of Selectmen supports the Finance Committee Motion.



PLAN



BEING A PLAN FOR REAL ESTATE ACQUISITION AND CONVEYANCE  
OF PAPER STREETS AS REFERRED TO  
IN ARTICLE 26 TOWN RECORDS OF NANTUCKET

2012

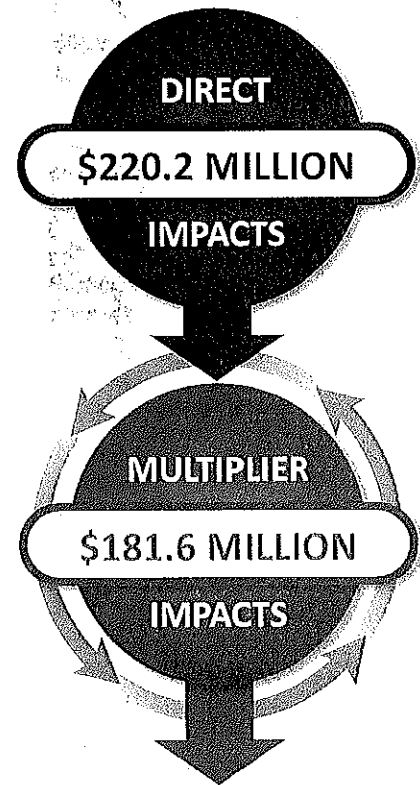
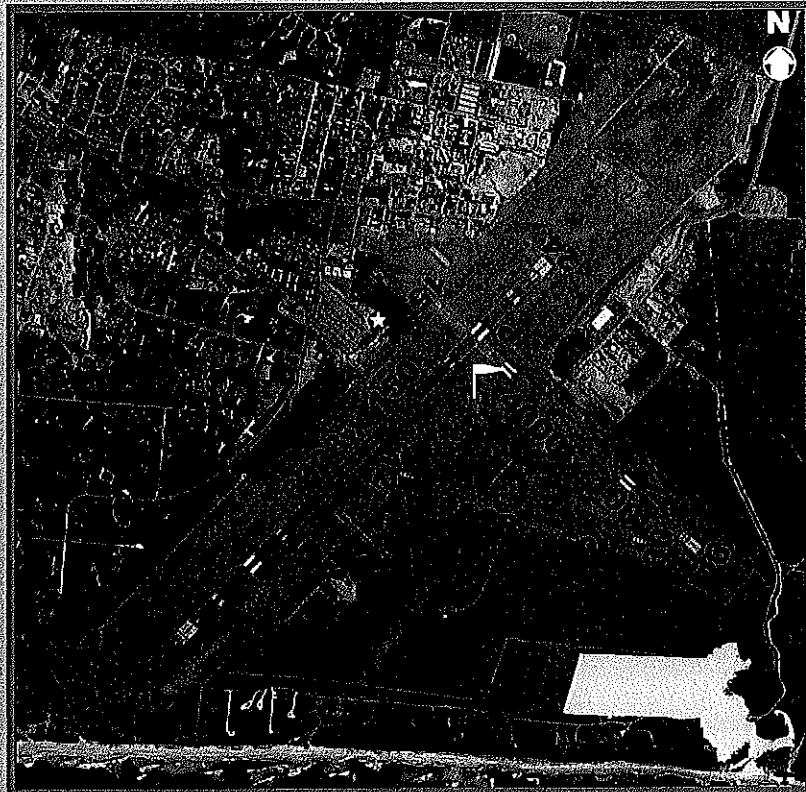
## THE ECONOMIC IMPACT OF

## Nantucket Memorial Airport (ACK)

Centrally located on the island of Nantucket, Nantucket Memorial Airport serves the commercial service and general aviation needs of the island. With its three runways, the longest of which is 6,303 feet, the airport can accommodate a wide range of commercial service and general aviation aircraft. The airport's facilities and services are ideal for accommodating the aviation needs of both local and transient users.

As the premier destination airport in Massachusetts' system of commercial service airports serving the Cape and Islands region, flights from Hyannis, New Bedford, Plymouth, and other locations bring vacationers and summer home owners to Nantucket during the airport's peak period of activity from Memorial Day to Labor Day. The airport experiences a significant amount of general aviation activity, which is crucial to the day-to-day economy of the island. Corporate flights transport executives to summer homes, while smaller general aviation aircraft bring private pilots to the island, many of whom fly in to visit the island's beaches or eat at the airport's Crosswinds Restaurant & Bar. Nantucket Memorial Airport is also important to the island's economy by supporting the transport of workers who commute daily from the mainland as well as the transport of time sensitive cargo and food to the island. The airport is the primary means of evacuation off of the island during emergencies, with air ambulance activity being common during the summer months.

The annual economic impact of Nantucket Memorial Airport is associated with direct impacts that come from operations at the airport, construction projects that are undertaken by the airport and its tenants, and spending from visitors who arrive on the island via commercial service and general aviation aircraft.



## TOTAL AIRPORT IMPACTS

|         |                 |
|---------|-----------------|
| Jobs    | 4,017           |
| Payroll | \$120.8 million |
| Output  | \$401.8 million |

**Direct Impacts** include both on-airport and visitor impacts. On-airport impacts are those benefits associated with on-airport businesses, government tenants, and capital construction projects. Visitor impacts generally take place off-airport and are attributable to visitor spending.

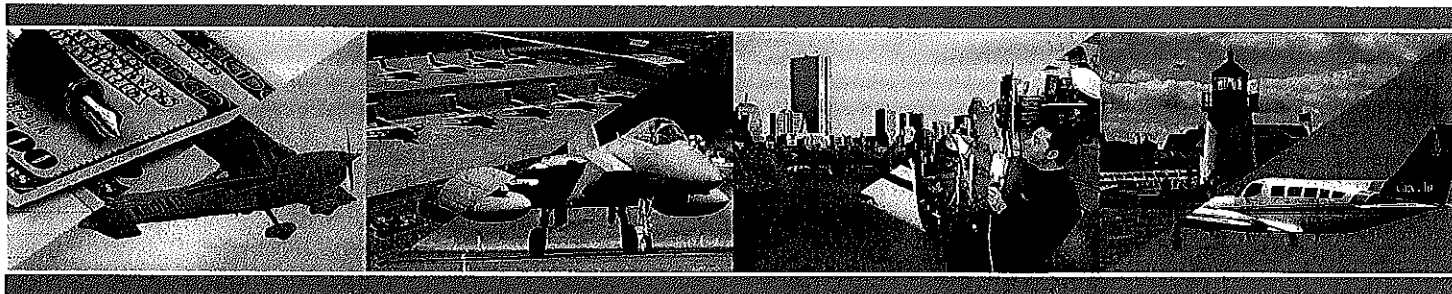
**Multiplier Impacts** consist of indirect and induced impacts. Indirect impacts are related to the re-circulation of monies spent locally by on-airport businesses. Induced impacts are those impacts resulting from the re-circulation of employee payroll within the economy.

**Total Economic Impacts** are the combination of all direct and multiplier impacts.



# Massachusetts

## STATEWIDE AIRPORT ECONOMIC IMPACT STUDY



## Aviation: Our Link to Economic Prosperity

Airports provide connectivity to worldwide markets and destinations, sustaining Massachusetts' expanding business community and its world renowned tourist destinations.

For the Commonwealth of Massachusetts, the sound of commerce resonates through its commercial service and general aviation airports. From the largest to the smallest, each of the 39 public-use airports (including Boston Logan International Airport) that constitute the Commonwealth's airport system contribute significantly to local, state and regional economies – resulting in the enhanced quality of life enjoyed by Massachusetts businesses, residents, and visitors. As primary economic engines that support existing industries while also helping develop new growth, Massachusetts' airports are responsible for generating billions of dollars in economic benefits for the Commonwealth that includes supporting thousands of local jobs. It is through this diverse system of airports that aviation helps to sustain, lead, and diversify the Commonwealth's economy.

## Study Process

The Massachusetts Department of Transportation Aeronautics Division commissioned this Federal Aviation Administration funded study to examine the relationship between the state's system of airports and the economy. The study follows an approved methodology that has successfully quantified the value of airports and airport systems throughout the United States.

There are many ways that airports can produce economic benefits for their host communities. On-airport businesses such as airlines, flight schools, fixed base operators, corporate flight departments, aircraft maintenance businesses, as well as various government entities are responsible for thousands of jobs and extensive capital projects. Additionally, visitors who arrive on commercial airlines or on private aircraft also create economic activity through local spending for hotels, restaurants, retail, and entertainment. All of these actions contribute directly to creating additional jobs and greater local economic benefits.

The economic contribution of each airport in the Massachusetts airport system was measured in terms of employment, payroll, and total economic output. Through a comprehensive survey process, the direct economic benefits related to on-airport tenants/businesses and visitor-related expenditures were calculated for each airport. Multiplier impacts associated with these activities were also calculated using multipliers that are specific to Massachusetts. For example, when an airport employee purchases local goods and services, that spending and re-spending generates additional economic activity in the region. The total economic impact is the sum of all direct on-airport, direct visitor, and multiplier impacts.

## Statewide Impacts

When all of the impacts of Massachusetts' 39 airports are added together, 124,369 total jobs can be traced to the aviation industry. These employees account for more than \$4.9 billion in total payroll and generate nearly \$11.9 billion in total economic activity.

In addition to these economic benefits, airports in Massachusetts provide a number of health, welfare, and safety benefits, the impacts of which are beyond conventional measurement. Services such as medical transport and evacuation, flight training, law enforcement flights, wildlife management, military exercises, and search-and-rescue operations all contribute directly to the quality of life of those who live and work in Massachusetts.

## TOTAL STATEWIDE IMPACTS

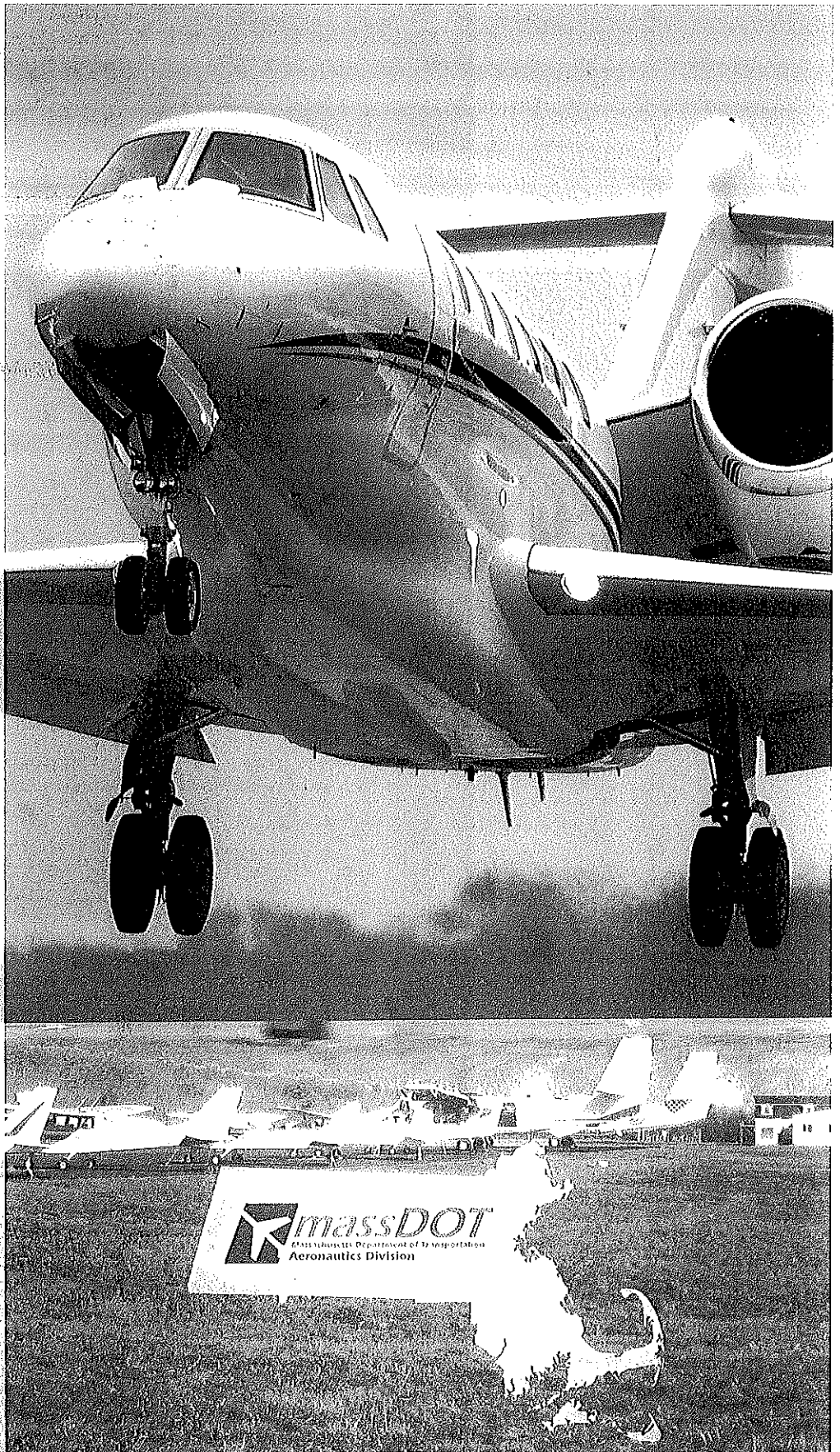
|         |                       |
|---------|-----------------------|
| Jobs    | <b>124,369</b>        |
| Payroll | <b>\$4.9 billion</b>  |
| Output  | <b>\$11.9 billion</b> |

**Employment** measures the number of full-time equivalent jobs related to airport activity including on-airport construction. A part-time employee counts as half a full-time employee.

**Payroll** measures the total annual wages and benefits paid to all workers whose salaries are directly attributable to airport activity.

**Economic Activity (Output)** measures the value of goods and services related to airports in Massachusetts. The output of on-airport businesses is typically assumed to be the sum of annual gross sales and average annual capital expenditures.

# Massachusetts



## Massachusetts Statewide Airport Economic Impact Study

2012

Executive Summary



# Aviation: Our Link to Economic Prosperity

Airports provide connectivity to worldwide markets and destinations, sustaining the Bay State's rapidly expanding business community and its world renowned tourist destinations.

For the Commonwealth of Massachusetts, the sound of commerce and the life of its residents resonate through its commercial and general aviation airports. Each of these 39 public-use airports, from the largest to the smallest, contributes to the Commonwealth's economy and to the quality of life enjoyed by Massachusetts businesses, residents, and visitors. As major economic catalysts, Massachusetts' airports are responsible for generating billions of dollars in economic benefit and supporting thousands of jobs. It is through this diverse system of airports that aviation contributes significantly in helping to sustain, lead, and diversify the Commonwealth's economy.

This report summarizes the significant economic benefit that Massachusetts derives each year from its public-use airports. Sponsored by the Massachusetts Department of Transportation (MassDOT) Aeronautics Division and funded by the Federal Aviation Administration (FAA), this study is a continuation of an overall planning effort

initiated by the Aeronautics Division in 1999 with the Massachusetts Statewide Airport System Plan (MSASP). While the MSASP examined the structure and long-term development of the statewide airport system, one of the goals of the Statewide Airport Economic Impact Study is to show how aviation serves as an economic engine for the Commonwealth, as well as to identify some of the many other benefits that aviation brings to its host communities. Like the MSASP, the planning process for the Statewide Airport Economic Impact Study was guided by a Project Management Team (PMT) chaired by MassDOT Aeronautics. Completed volunteer reports submitted from the aviation, state, national, and local aviation, state, and defense sectors. Both the MSASP and Massachusetts Statewide Airport Economic Impact Study are the first of their kind, and they are the first of their kind.

**Promote aviation throughout the Commonwealth, while providing an efficient, integrated airport system that will enhance airport safety, economic development, and environmental stewardship.**

*—MassDOT Aeronautics Division Mission Statement*



# Study Overview

The 39 public-use airports in Massachusetts are important transportation resources as well as significant economic engines. The analysis presented in this study considers the annual economic impacts accrued in 2010 associated with airport business operations, on-airport construction, military aviation, visitors who arrive via commercial airlines, and visitors who arrive on privately-owned general aviation aircraft. These impacts are reported for each airport in terms of employment, payroll, and total economic activity.

Overall, Massachusetts public-use airports generate \$11.9 billion in total annual economic activity, including \$4.9 billion in total annual payroll resulting from 124,369 jobs that can be traced to the aviation industry. In addition to these economic benefits, airports in Massachusetts provide a number of health, welfare, and safety benefits, the impacts of which are beyond conventional measurement. Services such as medical transport and evacuation, flight training, law enforcement flights, wildlife management, military exercises, and search-and-rescue operations, all contribute directly to the quality of life of those who live and work in Massachusetts.

## Massachusetts Public-Use Airport System

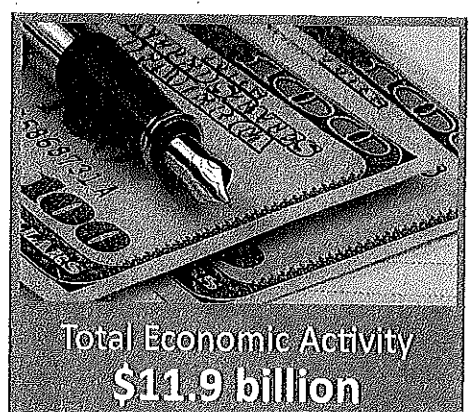
Massachusetts' system of public-use airports is comprised of nine commercial service and 30 general aviation airports. While most of the system's 39 airports are publicly-owned, 11 are privately-owned and operated.

The MassDOT Aeronautics Division supports the operation and development of 36 of these airports through:

- Grant funding
- Airport inspections
- Technical guidance
- Statewide planning initiative
- Aviation education outreach
- Communication with local, state and federal officials

The Massachusetts Port Authority (Massport) owns and operates the remaining three airports: Boston Logan International Airport, Laurence G. Hanscom Field, and Worcester Regional Airport.

## TOTAL ECONOMIC IMPACTS OF MASSACHUSETTS' PUBLIC-USE AIRPORTS



*Aviation boosts local economies and creates new markets at home and abroad. From the business trips and vacations we take, to the products and services we enjoy, aviation makes it all happen.*

*— Federal Aviation Administration*



# Study Process

There are many ways that airports can produce economic benefits within their communities. On-airport businesses such as airlines, flight schools, fixed-base operators (FBOs), corporate flight departments, aircraft maintenance businesses, as well as various government entities (e.g., airport sponsors, the FAA, military air facilities, and the Transportation Security Administration (TSA)) are responsible for thousands of jobs and extensive capital projects at airports throughout the Commonwealth. Additionally, visitors who arrive on commercial airlines or on private aircraft also create economic activity through local spending for hotels, restaurants, retail, and entertainment. All of these actions contribute directly to creating additional jobs and greater local economic benefits.

The economic impacts generated by the 39 Massachusetts airports were calculated using an FAA-approved methodology that involved on-site data gathering and active survey efforts to tabulate the direct impacts of airports and their tenants. A sampling of visitors using commercial service and general aviation, as well as data from the Massachusetts Office of Travel & Tourism, were utilized to assess visitor spending habits.

Industry accepted ratios were then used to convert this spending into Massachusetts-specific jobs and payroll.

Note that as airport direct impacts are released into the statewide economy, they create subsequent ripples throughout the economy through multiplier impacts. For example, when FBO employees use their salary to buy groceries at a local store, their spending helps support that store and its employees. That spending then re-circulates or multiplies in local economies until the benefits ultimately leak outside of the state. For this study, multiplier impacts were calculated using Massachusetts-specific multipliers. In general, for every \$100 spent by aviation-related businesses, an additional multiplier impact of \$56 is created within Massachusetts. The total economic impact is the sum of the direct on-airport, direct visitor, and multiplier impacts.

The quantitative benefits of the airport system are expressed as jobs, payroll, and output. Output can be thought of as a measure of annual economic activity or spending.



# How Aviation's Benefits Are Quantified

## Economic Impact Types

### Direct Impacts

Include both on-airport and visitor impacts. On-airport impacts are those benefits associated with on-airport businesses, government tenants, and capital construction projects. Visitor impacts generally take place off-airport and are attributable to visitor spending.

### Multiplier Impacts

consist of indirect and induced impacts. Indirect impacts are related to the re-circulation of monies spent locally by on-airport businesses. Induced impacts are those impacts resulting from the re-circulation of employee payroll within the economy.

### Total Economic Impacts

are the combination of all direct and multiplier impacts.

## Impact Measures

### Employment

measures the number of full-time equivalent (FTE) jobs related to airport activity. Two part-time employees count as one full-time employee. In the case of seasonal employment, two seasonal full-time employees count as one year-round full-time employee and four seasonal part-time employees count as one year-round full-time employee.

### Payroll

measures the total annual wages, salary, and benefits paid to all workers whose employment is directly attributable to airport activity.

### Economic Activity (Output)

measures the value of goods and services related to airports in Massachusetts. The output of on-airport businesses is typically assumed to be the sum of annual gross sales and average annual capital expenditures. For those organizations where gross sales is not applicable (such as a government agency), output is estimated as the sum of annual payroll, annual expenses, and average annual capital expenditures.

## Direct Impacts

VISITOR

ON-AIRPORT

CAPITAL  
PROJECTS

## Multiplier Impacts

INDIRECT  
AND  
INDUCED

TOTAL  
OUTPUT

*I use general aviation to reach more than 100 customers who are located up and down the East Coast.*

—Massachusetts Business Owner

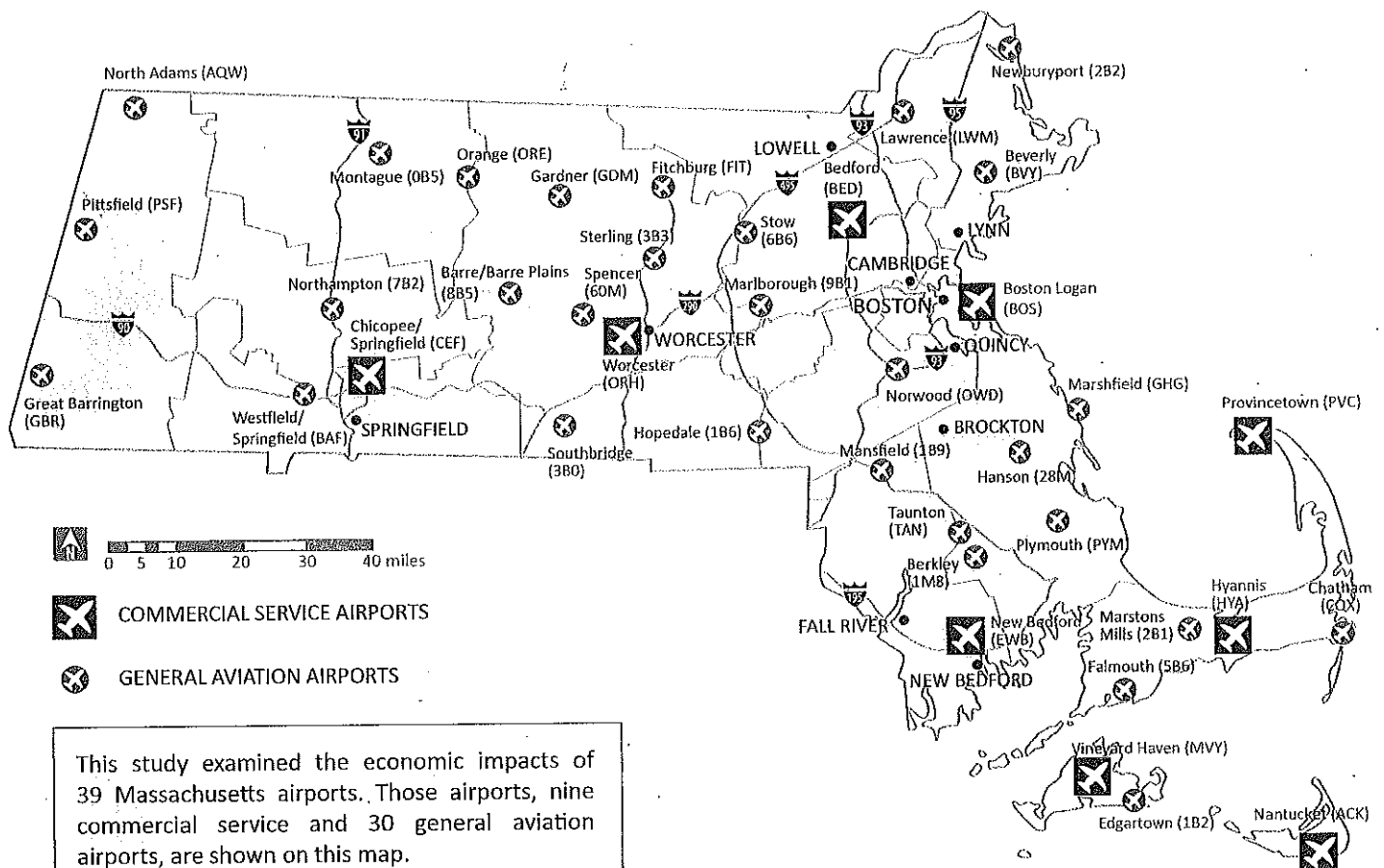


# Summary of Total Impacts by Airport

## COMMERCIAL SERVICE AIRPORTS

| Associated City                          | Airport Name  | Total Employment | Total Payroll          | Total Output            |
|--|---|------------------|------------------------|-------------------------|
| Bedford                                  | Laurence G. Hanscom Field*                          | 11,765           | \$701,389,000          | \$1,408,507,000         |
| Boston                                   | Boston Logan International Airport                  | 94,552           | \$3,535,892,000        | \$8,865,164,000         |
| Chicopee/Springfield                     | Westover Air Reserve Base/Metropolitan Airport*     | 5,484            | \$229,098,000          | \$324,113,000           |
| Hyannis                                  | Barnstable Municipal Airport-Boardman/Polando Field | 2,246            | \$74,445,000           | \$227,349,000           |
| Nantucket                                | Nantucket Memorial Airport                          | 4,017            | \$120,822,000          | \$401,804,000           |
| New Bedford                              | New Bedford Regional Airport                        | 234              | \$8,301,000            | \$26,356,000            |
| Provincetown                             | Provincetown Municipal Airport                      | 343              | \$9,480,000            | \$27,743,000            |
| Vineyard Haven                           | Martha's Vineyard Airport                           | 1,003            | \$30,398,000           | \$94,663,000            |
| Worcester                                | Worcester Regional Airport                          | 418              | \$13,980,000           | \$51,453,000            |
| <b>COMMERCIAL SERVICE AIRPORT TOTALS</b> |   | <b>120,062</b>   | <b>\$4,723,805,000</b> | <b>\$11,427,152,000</b> |

\* Includes economic impacts associated with military operations located on the airport. See page 9 for specific military totals.



## GENERAL AVIATION AIRPORTS

| Associated City                 | Airport Name                                       | Total Employment | Total Payroll | Total Output  |
|---------------------------------|--|------------------|---------------|---------------|
| Barre/Barre Plains              | Tanner-Hiller Airport                              | 2                | \$14,000      | \$268,000     |
| Berkley                         | Myricks Airport                                    | 2                | \$21,000      | \$27,000      |
| Beverly                         | Beverly Municipal Airport                          | 213              | \$7,023,000   | \$21,954,000  |
| Chatham                         | Chatham Municipal Airport                          | 144              | \$4,319,000   | \$12,947,000  |
| Edgartown                       | Katama Airpark                                     | 19               | \$568,000     | \$1,789,000   |
| Falmouth                        | Falmouth Airpark                                   | 5                | \$139,000     | \$823,000     |
| Fitchburg                       | Fitchburg Municipal Airport                        | 105              | \$3,957,000   | \$11,257,000  |
| Gardner                         | Gardner Municipal Airport                          | 8                | \$267,000     | \$1,121,000   |
| Great Barrington                | Walter J. Koladza Airport                          | 38               | \$1,026,000   | \$2,590,000   |
| Hanson                          | Cranland Airport                                   | 3                | \$141,000     | \$183,000     |
| Hopedale                        | Hopedale Industrial Park Airport                   | 13               | \$348,000     | \$793,000     |
| Lawrence                        | Lawrence Municipal Airport                         | 220              | \$8,039,000   | \$23,469,000  |
| Mansfield                       | Mansfield Municipal Airport                        | 59               | \$1,624,000   | \$9,087,000   |
| Marlborough                     | Marlboro Airport                                   | 20               | \$415,000     | \$2,581,000   |
| Marshfield                      | Marshfield Municipal Airport - George Harlow Field | 58               | \$2,559,000   | \$8,086,000   |
| Marstons Mills                  | Cape Cod Airfield                                  | 10               | \$196,000     | \$810,000     |
| Montague                        | Turners Falls Airport                              | 34               | \$1,370,000   | \$4,342,000   |
| Newburyport                     | Plum Island Airport                                | 2                | \$33,000      | \$151,000     |
| North Adams                     | Harriman and West Airport                          | 135              | \$5,367,000   | \$16,949,000  |
| Northampton                     | Northampton Airport                                | 24               | \$622,000     | \$1,973,000   |
| Norwood                         | Norwood Memorial Airport                           | 386              | \$15,649,000  | \$51,394,000  |
| Orange                          | Orange Municipal Airport                           | 109              | \$3,300,000   | \$9,419,000   |
| Pittsfield                      | Pittsfield Municipal Airport                       | 125              | \$4,919,000   | \$17,963,000  |
| Plymouth                        | Plymouth Municipal Airport                         | 301              | \$12,046,000  | \$48,514,000  |
| Southbridge                     | Southbridge Municipal Airport                      | 17               | \$509,000     | \$1,789,000   |
| Spencer                         | Spencer Airport                                    | 6                | \$63,000      | \$349,000     |
| Sterling                        | Sterling Airport                                   | 13               | \$364,000     | \$1,053,000   |
| Stow                            | Minute Man Air Field                               | 94               | \$2,821,000   | \$8,580,000   |
| Taunton                         | Taunton Municipal Airport - King Field             | 23               | \$705,000     | \$2,202,000   |
| Westfield/Springfield           | Westfield-Barnes Regional Airport*                 | 2,119            | \$59,492,000  | \$180,772,000 |
| GENERAL AVIATION AIRPORT TOTALS |  | 4,307            | \$137,916,000 | \$443,235,000 |

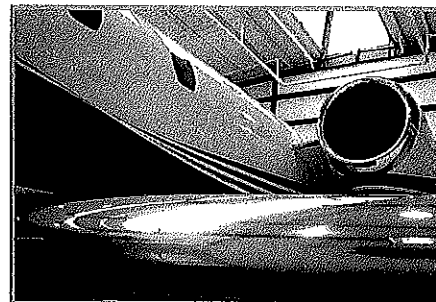
\* Includes economic impacts associated with military operations located on the airport. See page 9 for specific military totals.

## ALL AIRPORTS TOTAL

Total Employment 124,369

Total Payroll \$4,861,721,000

Total Output \$11,870,387,000





# Massport Airports

The Massachusetts Port Authority (Massport) plays an important role for the Massachusetts Statewide Airport System as owner and operator of Boston Logan International Airport, Laurence G. Hanscom Field, and Worcester Regional Airport. Massport's defined mission is to operate as an integrated world-class transportation network that promotes economic growth and opportunity, enhances the quality of life of New England residents and protects the freedom to travel safely, securely, efficiently and cost-effectively. In meeting its responsibility to connect New England with the world, Massport also strives to always be a good steward by treating colleagues and customers with respect, embracing diversity and minimizing the impact of transportation services on their neighbors and the environment.

In fulfillment of that Massport mission, Boston Logan International Airport and Laurence G. Hanscom Field, New England's preeminent commercial service airport and general aviation airport respectively, make significant contributions to the overall economic benefits generated by the Massachusetts airport system. Including Worcester Regional Airport, a largely untapped commercial service airport serving New England's second largest city, Massport airports generate approximately \$10.3 billion or 87 percent of the state airport system's total annual economic activity. This includes nearly 107,000 Massachusetts jobs with a total annual payroll estimated at nearly \$4.3 billion.

## ECONOMIC IMPACT OF MASSPORT AIRPORTS

**BOSTON LOGAN INTERNATIONAL  
AIRPORT (BOS)**  
\$8.9 BILLION  
85.9%

**WORCESTER REGIONAL  
AIRPORT (ORH)**  
\$51.5 MILLION  
0.5%

**TOTAL ECONOMIC IMPACT  
\$10.3 BILLION**

**LAURENCE G. HANSCOM  
FIELD (BED)  
AIR FORCE BASE**  
\$1.2 BILLION  
11.2%

**LAURENCE G. HANSCOM  
FIELD (BED)  
CIVILIAN AIRPORT FACILITIES**  
\$249 MILLION  
2.4%

**D 33L-15R**

# Additional Areas of Analysis

## Qualitative Benefits

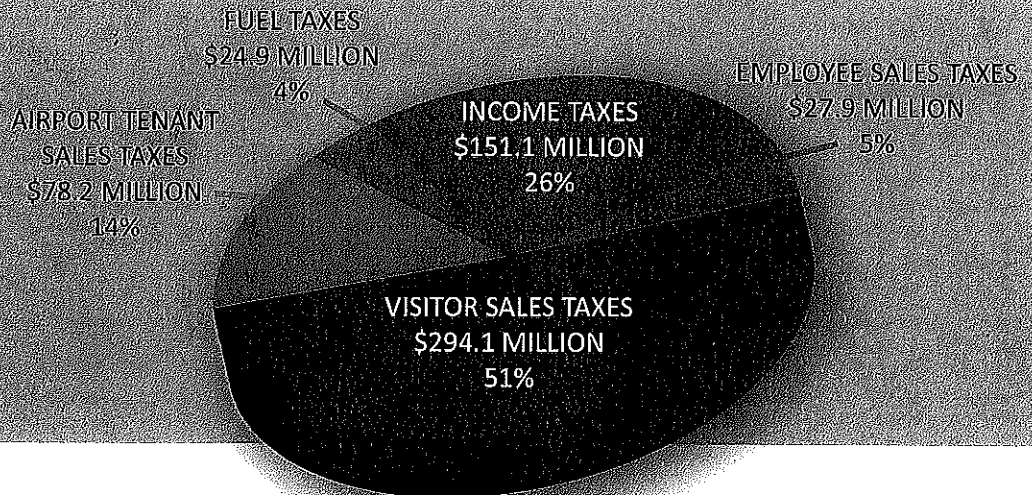
In addition to substantial annual economic benefits, Massachusetts' airports provide many qualitative benefits related to health, welfare, and safety that help to preserve and improve the overall quality of life in the Commonwealth. These qualitative benefits include:

- Facilitating emergency medical transport
- Providing police support
- Supporting aerial surveying, photography, and inspection operations
- Conducting search-and-rescue operations
- Supporting the U.S. military and other government organizations
- Providing youth outreach activities



## Tax Receipt Impacts

Massachusetts airports annually generate more than \$576 million in tax revenues for the Commonwealth through a variety of airport-related activities.

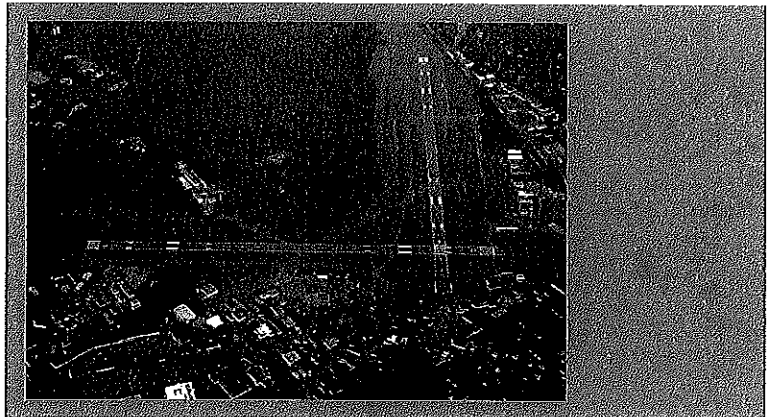


## Airport Valuation

Airports are nearly irreplaceable infrastructure assets for Massachusetts that have been built and developed over generations. In order to actually replicate the Commonwealth's existing airport system (excluding Logan International), it would cost in excess of \$5.5 billion in today's dollars.

### AIRPORT VALUATION ANALYSIS

| Airport Type                                     | Estimated Airport Replacement Cost |
|--|------------------------------------|
| Commercial Service*                              | \$3,896,496,000                    |
| General Aviation                                 | \$1,593,141,000                    |
| <b>TOTAL</b>                                     | <b>\$5,489,637,000</b>             |
| *Boston Logan International Airport not included |                                    |



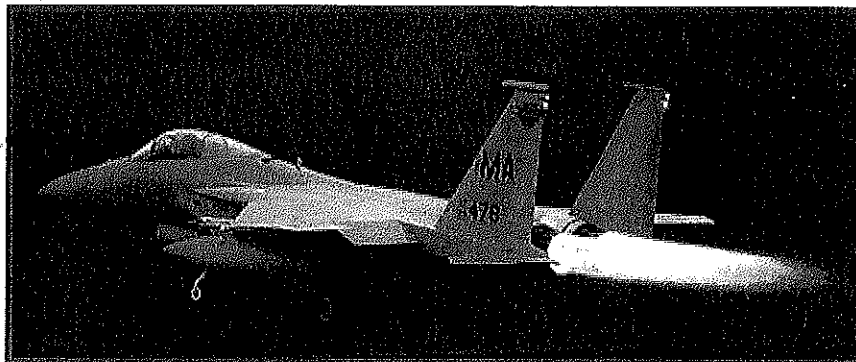


# Unique Segments of Aviation

The Massachusetts Statewide Airport Economic Impact Study included three case studies of unique segments of aviation in Massachusetts.

## Military Aviation

Dating back to colonial America, Massachusetts has a long and storied military tradition that includes all branches of service. In addition to its many military bases and research facilities, Massachusetts is home to four active military air facilities that support multiple service branches. Additionally, due to their proximity to Boston-area technology resources, these facilities are on the cutting edge of military research and development. In return for the strategic military value that these bases provide to the nation, Massachusetts also realizes a significant economic benefit that results from those military-related activities, including providing employment for residents, sales revenue for companies, and tax revenues for state and local governments.



### ECONOMIC IMPACT OF MILITARY AVIATION

| Military Air Facility             | Employment    | Payroll              | Output                 |
|-----------------------------------|---------------|----------------------|------------------------|
| Hanscom AFB                       | 10,214        | \$625,959,000        | \$1,158,616,000        |
| Westover AFB                      | 5,214         | \$218,933,000        | \$294,057,000          |
| Westfield-Barnes Regional Airport | 1,625         | \$33,772,000         | \$111,680,000          |
| Otis Air National Guard Base      | 871           | \$51,039,000         | \$68,445,000           |
| <b>Total</b>                      | <b>17,924</b> | <b>\$929,703,000</b> | <b>\$1,632,798,000</b> |



### ECONOMIC IMPACT OF CAPE & ISLANDS

| Airport Name           | Employment   | Payroll              | Output               |
|------------------------|--------------|----------------------|----------------------|
| Barnstable Municipal   | 2,246        | \$74,445,000         | \$227,349,000        |
| Cape Cod Airfield      | 10           | \$196,000            | \$810,000            |
| Chatham Municipal      | 144          | \$4,319,000          | \$12,947,000         |
| Falmouth Airpark       | 5            | \$139,000            | \$823,000            |
| Provincetown Municipal | 343          | \$9,480,000          | \$27,743,000         |
| Katama Airpark         | 19           | \$568,000            | \$1,789,000          |
| Martha's Vineyard      | 1,003        | \$30,398,000         | \$94,663,000         |
| Nantucket Memorial     | 4,017        | \$120,822,000        | \$401,804,000        |
| <b>Total</b>           | <b>7,787</b> | <b>\$240,367,000</b> | <b>\$767,928,000</b> |

## Cape & Islands

One of the most distinctive facets of the Massachusetts airport system is its importance to the transportation capacity and economic vitality of the Cape and Islands. Comprised of Cape Cod, Martha's Vineyard and Nantucket Island, this region represents one of Massachusetts' most iconic and precious natural resources. Through its airports, aviation has become intertwined within the fabric of the region's character - part of what makes the Cape and Islands one of the world's premier travel destinations. Roles that airports specifically play for the area include:

- Meeting demands for aviation access to and from the region
- Meeting demands for aviation access within the region
- Providing fast, all-season emergency transportation services
- Providing recreational opportunities for residents and visitors alike

## Aircraft Maintenance Service Facilities

Aircraft are highly engineered machines that need unique care and maintenance. Aircraft maintenance service facilities located at airports throughout Massachusetts provide a variety of airframe and powerplant services as well as aircraft customization and avionics sales and repair. Many of these activities take place at businesses dedicated to aircraft maintenance, but a number of other on-airport businesses, most notably fixed-base operators, also attribute some of their economic impact to maintenance activities. The technicians at these businesses have years of knowledge and experience and provide high quality workmanship. Massachusetts' aircraft maintenance businesses are capable of providing a range of services for everything from piston-powered aircraft to turbine-powered jets at facilities ranging in size from small, one-person shops to large repair stations with over 100 employees.

One of the most notable examples of aircraft maintenance service facilities at Massachusetts' airports is Gulfstream Aerospace Corporation's service center at Westfield-Barnes Regional Airport. Gulfstream designs, develops, manufactures, services, and supports one of the world's most technologically advanced business-jet aircraft. Gulfstream's service center at Westfield-Barnes Regional is a certified FAA and European Aviation Safety Agency Part 145 repair station, which means the facility is capable of performing maintenance, repairs, alterations, and inspections on aircraft registered in the United States and European Union (EU) countries. The service center plays a critical role in servicing business-jet aircraft in the high-traffic New York and Boston metropolitan areas.

### ECONOMIC IMPACT OF AIRCRAFT MAINTENANCE

|  |               |
|--|---------------|
| Aircraft Maintenance Service Businesses: | 63            |
| Total Jobs:                              | 773           |
| Total Payroll:                           | \$40,284,000  |
| Total Output:                            | \$110,127,000 |

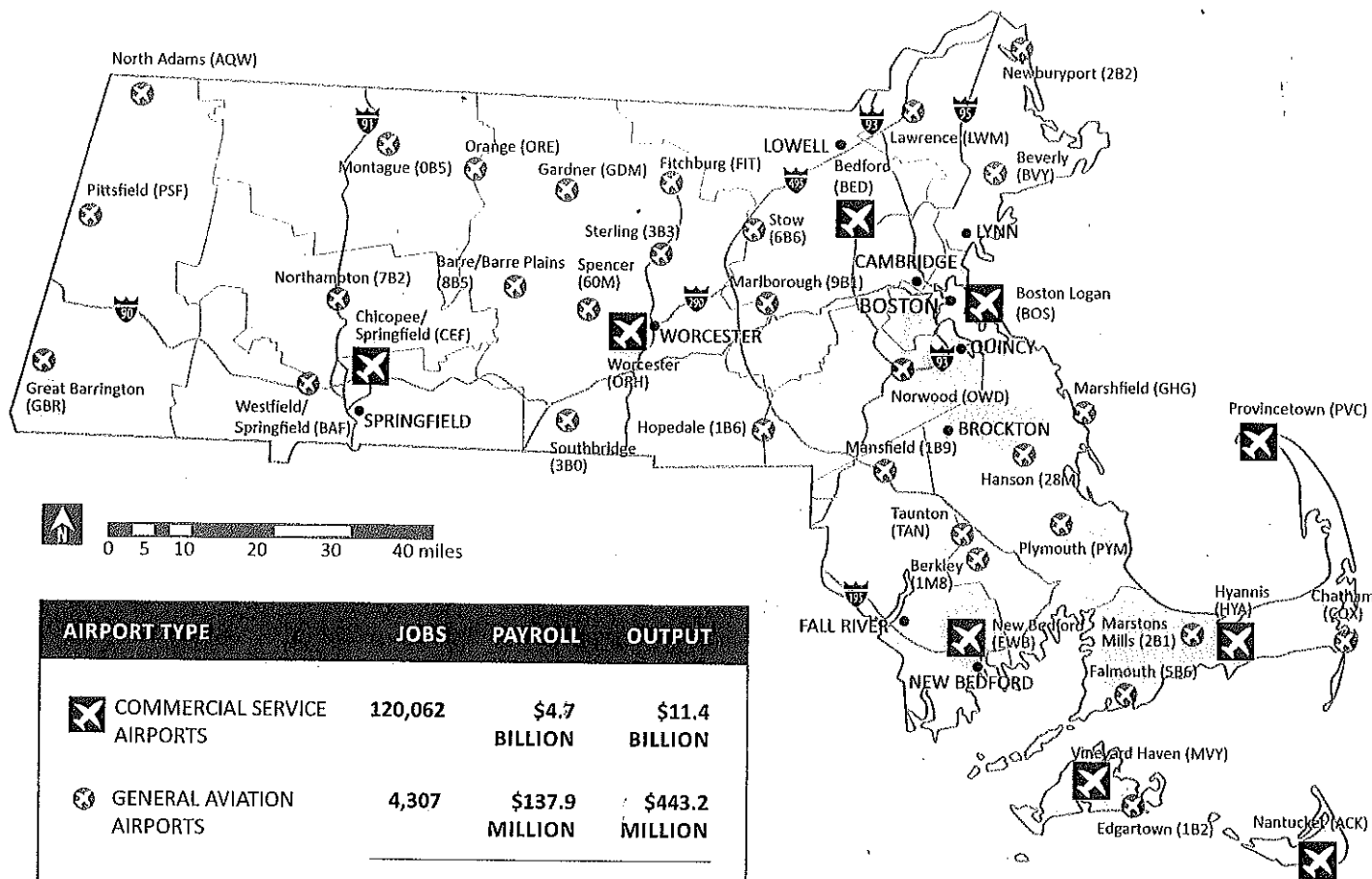


*Westfield is an important location for Gulfstream. The New York area has the most business jet traffic in the world and the Boston area is also a business-jet hub. Westfield supports operators elsewhere in the Northeast and in Canada, Europe, and the Caribbean. The site's long reach and capabilities are tremendous assets to Gulfstream.*

*—Gulfstream Aerospace Corporation*







#### MassDOT Aeronautics Division Mission Statement:

Promote aviation throughout the Commonwealth, while providing an efficient integrated airport system that will enhance airport safety, economic development, and environmental stewardship.

#### For More Information, Contact:

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#### Project Management Team:

- Federal Aviation Administration (FAA)
- MassDOT Aeronautics Division
- Aircraft Owners and Pilots Association (AOPA)
- Cape Air
- Former Massachusetts Aeronautics Commission
- Massachusetts Airport Management Association (MAMA)
- Massachusetts Office of Business Development (MOBD)
- Massachusetts Port Authority (Massport)
- MassDOT Office of Transportation Planning (OTP)
- National Business Aviation Association (NBAA)
- Massachusetts Business Aviation Association (MBAA)

#### Report Prepared by:

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## THE ECONOMIC IMPACT OF

# Nantucket Memorial Airport (ACK)

2014

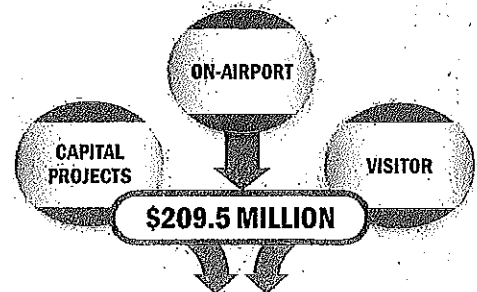
Centrally located on the south side of the island of Nantucket, Nantucket Memorial Airport serves the commercial service and general aviation needs of the island. With its three runways, the longest of which is 6,303 feet, the airport can accommodate a wide range of commercial service and general aviation aircraft. The airport's facilities and services are ideal for accommodating the aviation needs of both local and transient users, while the air traffic control tower further enhances airport safety and efficiency.

As the premier destination airport in Massachusetts' system of commercial service airports serving the Cape and Islands region, flights from Hyannis, New Bedford, Plymouth, and other locations bring vacationers and summer home owners to Nantucket during the airport's peak period of activity from Memorial Day to Labor Day. The airport experiences a significant amount of general aviation activity, which is crucial to the day-to-day economy of the island. Corporate flights transport executives to summer homes, while smaller general aviation aircraft bring private pilots to the island, many of whom fly in to visit the island's beaches or eat at the airport's Crosswinds Restaurant & Bar. Nantucket Memorial Airport is also important to the island's economy by supporting the transport of workers who commute daily from the mainland as well as the transport of time sensitive cargo and food to the island. The airport is the primary means of evacuation off of the island during emergencies, with air ambulance activity being common during the summer months.

The annual economic impact of Nantucket Memorial Airport is associated with direct impacts that come from operations at the airport, construction projects that are undertaken by the airport and its tenants, and spending from visitors who arrive on the island via commercial service and general aviation aircraft.



### Direct Impacts



### Multiplier Impacts



### Total Impacts

| TOTAL OUTPUT |                 |
|--------------|-----------------|
| Jobs         | 3,802           |
| Payroll      | \$116.6 MILLION |
| Output       | \$378.5 MILLION |

## Economic Impact Types

### Direct Impacts

include both on-airport and visitor impacts. On-airport impacts are those benefits associated with on-airport businesses, government tenants, military aviation, and capital construction projects. Visitor impacts generally take place off-airport and are attributable to visitor spending.

### Multiplier Impacts

consist of indirect and induced impacts. Indirect impacts are related to the recirculation of monies spent locally by on-airport businesses. Induced impacts are those impacts resulting from the recirculation of employee payroll within the economy.

### Total Economic Impacts

are the combination of all direct and multiplier impacts.



# Massachusetts

## Statewide Airport Economic Impact Study Update

### Statewide Impacts

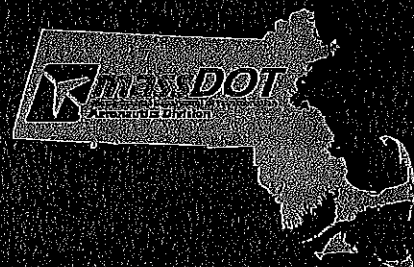
In 2013, when all of the impacts of Massachusetts' 39 airports were added together, 162,256 total jobs could be traced to the aviation industry. These employees accounted for more than \$6.1 billion in total payroll and generated nearly \$16.6 billion in total economic activity.

In addition to these economic benefits, airports in Massachusetts provide a number of health, welfare, and safety benefits, the impacts of which are beyond conventional measurement. Services such as medical transport and evacuation, flight training, law enforcement flights, wildlife management, military exercises, and search-and-rescue operations all contribute directly to the quality of life of those who live and work in Massachusetts.

TOTAL JOBS 162,256

TOTAL PAYROLL \$6.1 BILLION

TOTAL OUTPUT \$16.6 BILLION



**Employment** measures the number of full-time equivalent jobs related to airport activity including on-airport construction. A part-time employee counts as half a full-time employee.

**Payroll** measures the total annual wages and benefits paid to all workers whose salaries are directly attributable to airport activity.

**Economic Activity (Output)** measures the value of goods and services related to airports in Massachusetts. The output of on-airport businesses is typically assumed to be the sum of annual gross sales and average annual capital expenditures.

### A Connection to Economic Growth

Airports provide connectivity to worldwide markets and destinations, sustaining Massachusetts' expanding business community and its world renowned tourist destinations.

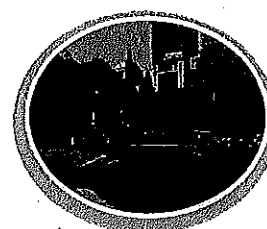
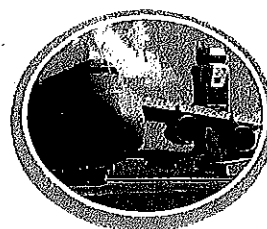
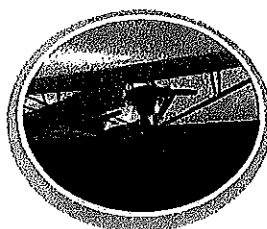
For the Commonwealth of Massachusetts, the sound of commerce resonates through its commercial service and general aviation airports. From the largest to the smallest, each of the 39 public-use airports (including Boston Logan International Airport) that constitute the Commonwealth's airport system contribute significantly to local, state and regional economies – resulting in the enhanced quality of life enjoyed by Massachusetts businesses, residents, and visitors. As primary economic engines that support existing industries while also helping develop new growth, Massachusetts' airports are responsible for generating billions of dollars in economic benefits for the Commonwealth that includes supporting thousands of local jobs. It is through this diverse system of airports that aviation helps to sustain, lead, and diversify the Commonwealth's economy.

### Study Process

The economic impacts associated with aviation in Massachusetts were estimated using a standard econometric modeling process that has been approved by the FAA. This economic input-output model estimates economic impacts in terms of jobs, payroll and economic output. This methodology has been used to successfully quantify the value of airports and airport systems throughout the United States.

The input for this model came from numerous data gathering efforts for each Massachusetts airport. Airport managers and aviation-related businesses and government organizations were surveyed to collect the data necessary to estimate the on-airport employment, payroll, and output each airport supports. This included data pertaining to construction expenditures associated with on-airport capital projects. Visitors to Massachusetts using general aviation aircraft were surveyed to estimate the economic impacts their expenditures support. The economic impacts produced by visitors arriving in Massachusetts via commercial airlines were estimated by updating the expenditure patterns of those visitors from the 2011 Massachusetts Statewide Airport Economic Impact Study.

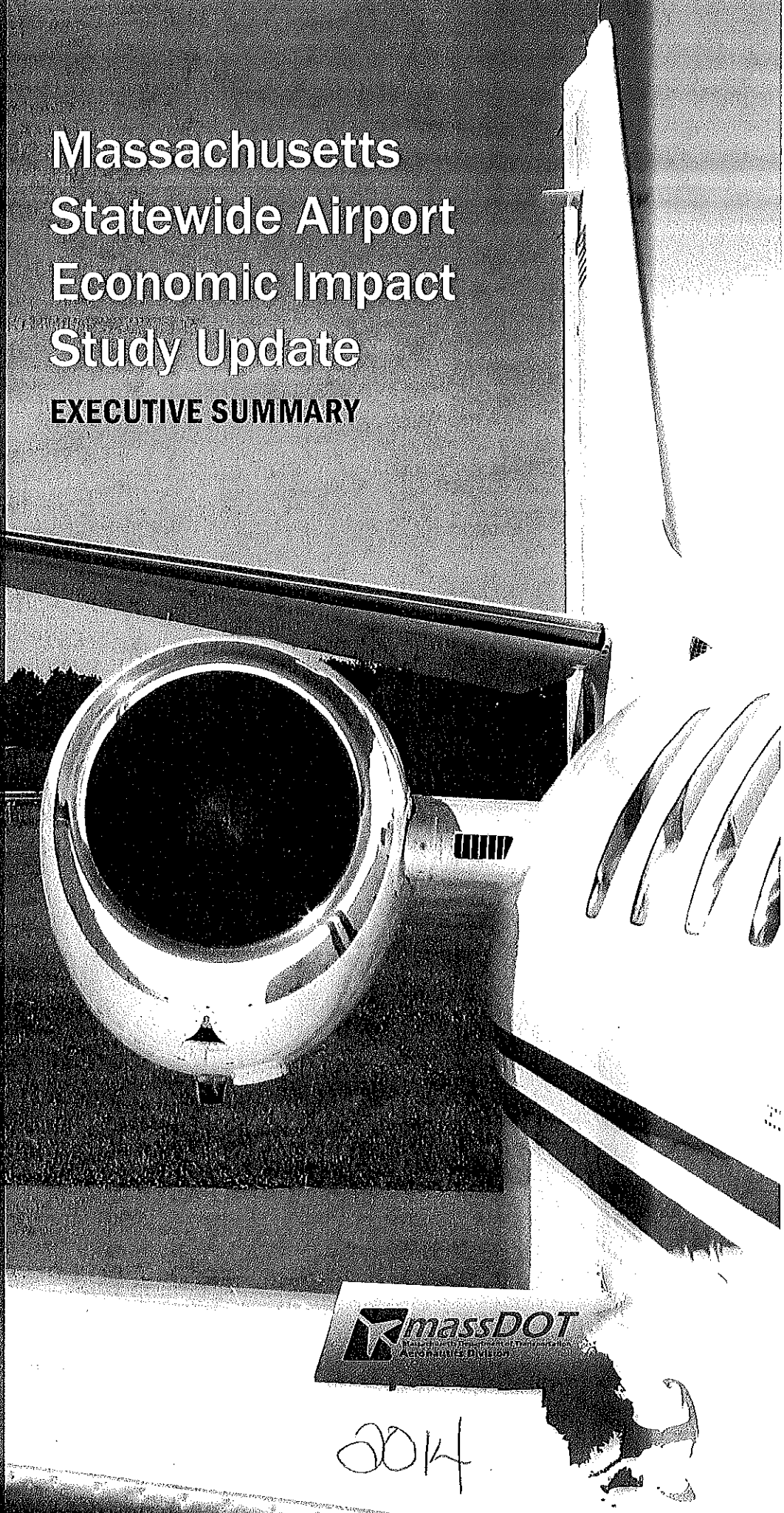
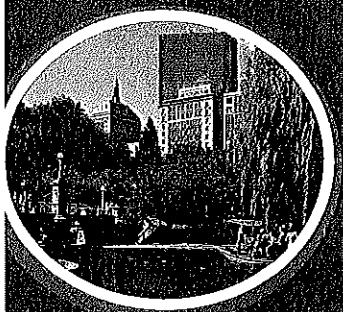
The induced and indirect impacts of these airport activities were calculated using multipliers that are specific to Massachusetts. In general, for every \$100 spent by aviation-related businesses, an additional multiplier impact of \$56 is created within Massachusetts. The total economic impact is the sum of all on-airport, construction, military aviation, visitor, and multiplier impacts.



Massachusetts

# Massachusetts Statewide Airport Economic Impact Study Update

**EXECUTIVE SUMMARY**



2014



# Massachusetts Airports:

## A Connection to Economic Growth

For the Commonwealth of Massachusetts, airports and aviation are a significant part of the state's emerging economy. Aviation has helped transform the way people and goods move across the globe, sustaining the Bay State's rapidly expanding business community and its world renowned tourist destinations. It has brought distant markets together and made a global economy possible. Businesses rely on aviation to deliver enhanced products and services to global markets in distant locations that would otherwise be difficult to reach or inaccessible. At both the state and regional levels, airports and the links they provide help to drive the economies in those states by generating billions of dollars in economic benefits that in turn support thousands of related jobs.

From 2011 to 2013, the Federal Aviation Administration (FAA), Massachusetts Department of Transportation (MassDOT), and airport sponsors have strategically

invested in airport infrastructure to improve and enhance economic development opportunities. These investments have already seen substantial return in the Commonwealth. As an update to the 2011 Massachusetts Statewide Airport Economic Impact Study, this 2014 study summarizes the significant economic benefit that Massachusetts derives each year from its 39 public-use airports. Sponsored by the Massachusetts Department of Transportation Aeronautics Division, this study is a continuation of an overall planning effort initiated by the Aeronautics Division in 2009 with the Massachusetts Statewide Airport System Plan (MSASP). While the MSASP examined the structure and long-term development of the statewide airport system as a whole, the goal of the Massachusetts Statewide Airport Economic Impact Study Update is to show how aviation serves as an economic engine for the Commonwealth, as well as documenting some of the many other benefits that air transportation brings to its host communities.

### *MassDOT Aeronautics Division Mission Statement*

*Promote aviation throughout the Commonwealth, while providing an efficient, integrated airport system that will enhance airport safety, economic development, and environmental stewardship.*



# Study Overview

Aviation is a significant economic catalyst in Massachusetts. From the airlines that serve the Commonwealth's commercial service airports and the variety of general aviation services found throughout the state to the military air facilities on the front lines of national defense, the aviation industry supports thousands of jobs and billions of dollars in economic activity. Commercial airlines in Massachusetts boarded more than 15 million passengers in 2013 while general aviation aircraft conducted an estimated 1.4 million operations.

When all of the impacts of Massachusetts' 39 public-use airports and associated military air facilities are added together, more than 162,000 jobs can be traced to the aviation industry. These employees receive \$6.1 billion in total annual payroll and generate \$16.6 billion in total economic activity. Since the 2011 Massachusetts Statewide Airport Economic Impact Study, these impacts have increased by approximately 38,000 jobs, \$1.2 billion in payroll, and \$4.7 billion in output.

On top of the economic impacts that can be measured quantitatively, airports in Massachusetts provide numerous health, welfare, and safety benefits that defy conventional measurement. Such services include medical transport and evacuation, flight training, law enforcement flights, wildlife management, search and rescue operations, and military exercises, all of which contribute directly to the quality of life

of those who live and work in the Commonwealth. Further case study analysis of aviation education and air charter provide examples of how Massachusetts airports improve the quality of life for Commonwealth residents, over and above the jobs, payroll, and economic activity that they generate.

## Massachusetts Public-Use Airport System


Massachusetts' system of public-use airports is comprised of nine commercial service and 30 general aviation airports. While most of the system's 39 airports are publicly-owned, 11 are privately-owned and operated.

The **MassDOT Aeronautics Division** supports the operation and development of 36 of these airports through:

- Grant funding
- Airport inspections
- Technical guidance
- Statewide planning initiative
- Aviation education outreach
- Communication with local, state and federal officials

The **Massachusetts Port Authority (Massport)** owns and operates the remaining three airports: Boston Logan International Airport, Laurence G. Hanscom Field, and Worcester Regional Airport.

## TOTAL ECONOMIC IMPACTS OF MASSACHUSETTS' PUBLIC-USE AIRPORTS



**162,256**  
Total Jobs



**\$6.1 billion**  
Total Payroll



**\$16.6 billion**  
Total Output





# Study Process

The economic impacts associated with aviation in Massachusetts were estimated using a standard econometric modeling process that has been approved by the FAA. This input-output model estimates economic impacts in terms of jobs, payroll and economic output. This methodology has been used to successfully quantify the value of airports and airport systems throughout the United States.

The input for this model came from numerous data gathering efforts for each Massachusetts airport. Airport managers, aviation-related businesses, and government organizations were surveyed to collect the data necessary to estimate the on-airport employment, payroll, and output each airport supports. This included data pertaining to construction expenditures associated with on-airport capital projects. Visitors to Massachusetts using general aviation aircraft were surveyed to estimate the economic impacts their expenditures support. The economic

impacts produced by visitors arriving in Massachusetts via commercial airlines were estimated by updating the expenditure patterns of those visitors from the 2011 Massachusetts Statewide Airport Economic Impact Study.

The induced and indirect impacts of these airport activities were calculated using multipliers that are specific to Massachusetts. For example, when an airport employee uses their salary to buy groceries at a local store, their spending helps to support that store and its employees. That spending then circulates or multiplies through the local economy by supporting the jobs and payroll of other businesses and thereby generates additional economic activity in the region. In general, for every \$100 spent by aviation-related businesses, an additional multiplier impact of \$56 is created within Massachusetts. The total economic impact is the sum of all on-airport, construction, military aviation, visitor, and multiplier impacts.

*Our fleet has grown to over a dozen aircraft and our business aviation department manages aircraft all over the world. While we began with a staff of one, we now currently employ 26 people.*

*— Alpha One Flight Service, Plymouth Municipal Airport*



# Quantifying Aviation Benefits

## Economic Impact Types

### Direct Impacts

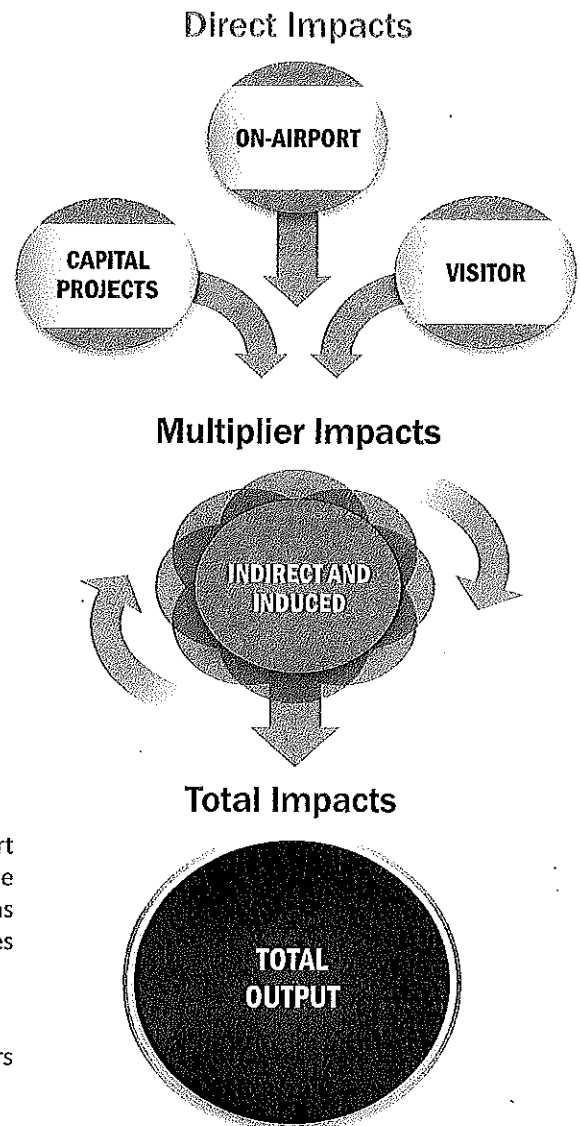
include both on-airport and visitor impacts. On-airport impacts are those benefits associated with on-airport businesses, government tenants, military aviation, and capital construction projects. Visitor impacts generally take place off-airport and are attributable to visitor spending.

### Multiplier Impacts

consist of indirect and induced impacts. Indirect impacts are related to the recirculation of monies spent locally by on-airport businesses. Induced impacts are those impacts resulting from the recirculation of employee payroll within the economy.

### Total Economic Impacts

are the combination of all direct and multiplier impacts.



## Impact Measures

### Employment

measures the number of full-time equivalent (FTE) jobs related to airport activity. Two part-time employees count as one full-time employee. In the case of seasonal employment, two seasonal full-time employees count as one year-round full-time employee and four seasonal part-time employees count as one year-round full-time employee.

### Payroll

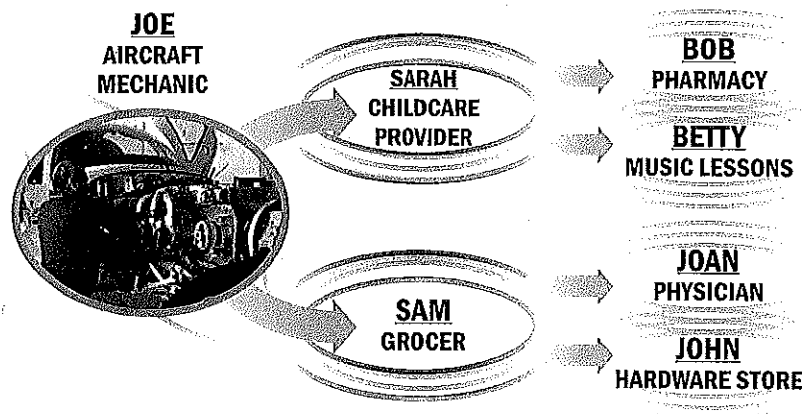
measures the total annual wages, salary, and benefits paid to all workers whose employment is directly attributable to airport activity.

### Economic Activity (Output)

measures the value of goods and services related to airports in Massachusetts. The output of on-airport businesses is typically assumed to be the sum of annual gross sales and average annual capital expenditures. For those organizations where gross sales is not applicable (such as a government agency), output is estimated as the sum of annual payroll, annual expenses, and average annual capital expenditures.

## Ripple Effect

Multiplier impacts result from the recirculation and re-spending of direct impacts within the economy. For example, as airport employees spend their salary for housing, food, and services, those expenditures circulate, or ripple, through the economy resulting in increased spending, payroll, and employment throughout Massachusetts.





# Massachusetts Annual Economic Impacts

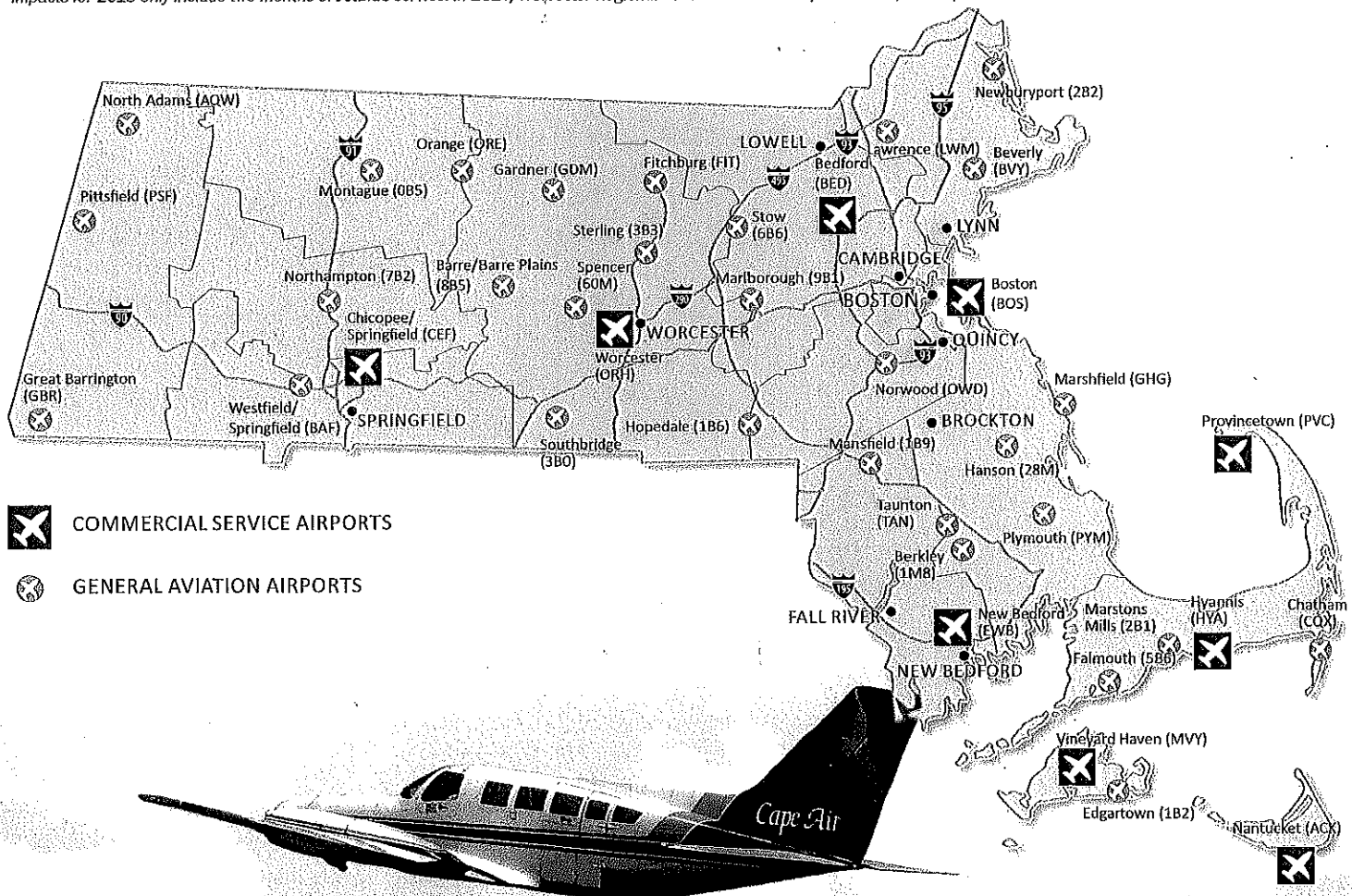
## COMMERCIAL SERVICE AIRPORTS

| Associated City                          | Airport Name  | Total Employment <sup>2</sup> | Total Payroll <sup>2</sup> | Total Output <sup>2</sup> |
|--|---|-------------------------------|----------------------------|---------------------------|
| Bedford                                  | Laurence G. Hanscom Field <sup>1</sup>                      | 12,355                        | \$1,162,158,000            | \$1,604,078,000           |
| Boston                                   | Boston Logan International Airport                          | 131,991                       | \$4,290,597,000            | \$13,359,865,000          |
| Chicopee/Springfield                     | Westover Air Reserve Base/Metropolitan Airport <sup>1</sup> | 5,241                         | \$195,081,000              | \$255,691,000             |
| Hyannis                                  | Barnstable Municipal Airport-Boardman/Polando Field         | 2,135                         | \$85,358,000               | \$208,023,000             |
| Nantucket                                | Nantucket Memorial Airport                                  | 3,802                         | \$116,648,000              | \$378,531,000             |
| New Bedford                              | New Bedford Regional Airport                                | 297                           | \$10,625,000               | \$32,434,000              |
| Provincetown                             | Provincetown Municipal Airport                              | 379                           | \$11,336,000               | \$33,945,000              |
| Vineyard Haven                           | Martha's Vineyard Airport                                   | 1,232                         | \$38,170,000               | \$120,049,000             |
| Worcester                                | Worcester Regional Airport <sup>3</sup>                     | 358                           | \$14,925,000               | \$46,433,000              |
| <b>COMMERCIAL SERVICE AIRPORTS TOTAL</b> |   | <b>157,790</b>                | <b>\$5,924,898,000</b>     | <b>\$16,039,049,000</b>   |

<sup>1</sup> Includes economic impacts associated with military operations located on the airport. See page 8 for specific military totals.

<sup>2</sup> Total impacts include all on-airport business, construction, visitor, and multiplier impacts.

<sup>3</sup> Impacts for 2013 only include two months of JetBlue service. In 2014, Worcester Regional's JetBlue service surpassed 110,000 enplanements.



# Massachusetts Annual Economic Impacts

## GENERAL AVIATION AIRPORTS

| Associated City                        | Airport Name                                       | Total Employment <sup>2</sup> | Total Payroll <sup>2</sup> | Total Output <sup>2</sup> |
|--|--|-------------------------------|----------------------------|---------------------------|
| Barre/Barre Plains                     | Tanner-Hiller Airport                              | 5                             | \$94,000                   | \$548,000                 |
| Berkley                                | Myricks Airport                                    | 3                             | \$34,000                   | \$74,000                  |
| Beverly                                | Beverly Municipal Airport                          | 245                           | \$10,122,000               | \$32,502,000              |
| Chatnam                                | Chatham Municipal Airport                          | 149                           | \$4,347,000                | \$12,518,000              |
| Edgartown                              | Katama Airpark                                     | 17                            | \$520,000                  | \$1,895,000               |
| Falmouth                               | Falmouth Airpark                                   | 7                             | \$271,000                  | \$621,000                 |
| Fitchburg                              | Fitchburg Municipal Airport                        | 129                           | \$4,752,000                | \$14,619,000              |
| Gardner                                | Gardner Municipal Airport                          | 8                             | \$237,000                  | \$800,000                 |
| Great Barrington                       | Walter J. Koladza Airport                          | 43                            | \$1,164,000                | \$3,321,000               |
| Hanson                                 | Cranland Airport                                   | 9                             | \$291,000                  | \$972,000                 |
| Hopedale                               | Hopedale Industrial Park Airport                   | 14                            | \$408,000                  | \$899,000                 |
| Lawrence                               | Lawrence Municipal Airport                         | 267                           | \$10,212,000               | \$30,147,000              |
| Mansfield                              | Mansfield Municipal Airport                        | 54                            | \$1,804,000                | \$9,392,000               |
| Marlborough                            | Marlboro Airport                                   | 5                             | \$144,000                  | \$468,000                 |
| Marshfield                             | Marshfield Municipal Airport - George Harlow Field | 74                            | \$3,627,000                | \$9,154,000               |
| Marstons Mills                         | Cape Cod Airport                                   | 8                             | \$213,000                  | \$876,000                 |
| Montague                               | Turners Falls Airport                              | 14                            | \$498,000                  | \$1,801,000               |
| Newburyport                            | Plum Island Airport                                | 2                             | \$35,000                   | \$121,000                 |
| North Adams                            | Harriman and West Airport                          | 97                            | \$3,557,000                | \$11,259,000              |
| Northampton                            | Northampton Airport                                | 25                            | \$480,000                  | \$2,000,000               |
| Norwood                                | Norwood Memorial Airport                           | 394                           | \$16,863,000               | \$52,232,000              |
| Orange                                 | Orange Municipal Airport                           | 147                           | \$4,849,000                | \$13,992,000              |
| Pittsfield                             | Pittsfield Municipal Airport                       | 226                           | \$10,260,000               | \$35,387,000              |
| Plymouth                               | Plymouth Municipal Airport                         | 319                           | \$13,669,000               | \$47,867,000              |
| Southbridge                            | Southbridge Municipal Airport                      | 20                            | \$556,000                  | \$1,712,000               |
| Spencer                                | Spencer Airport                                    | 3                             | \$63,000                   | \$141,000                 |
| Sterling                               | Sterling Airport                                   | 21                            | \$426,000                  | \$1,546,000               |
| Stow                                   | Minute Man Air Field                               | 141                           | \$4,563,000                | \$12,315,000              |
| Taunton                                | Taunton Municipal Airport - King Field             | 31                            | \$978,000                  | \$3,261,000               |
| Westfield/Springfield                  | Westfield-Barnes Regional Airport <sup>1</sup>     | 1,989                         | \$74,067,000               | \$213,628,000             |
| <b>GENERAL AVIATION AIRPORTS TOTAL</b> |  | <b>4,466</b>                  | <b>\$169,104,000</b>       | <b>\$516,068,000</b>      |

## ALL AIRPORT TOTALS

|                  |                  |
|------------------|------------------|
| Total Employment | 162,256          |
| Total Payroll    | \$6,094,002,000  |
| TOTAL OUTPUT     | \$16,555,117,000 |

<sup>1</sup> Includes economic impacts associated with military operations located on the airport. See page 8 for specific military totals.

<sup>2</sup> Total impacts include all on-airport business, construction, visitor, and multiplier impacts.





# Massport Airports



The Massachusetts Port Authority (Massport) plays a critical role in supporting the movement of people and goods in New England. Whether by boat or plane, Massport helps to connect the region to the national and global marketplace. Massport is focused on promoting safe, efficient, and cost-effective travel and transportation with an eye toward simultaneously enhancing economic prosperity and minimizing the impact of transportation services on surrounding communities and the environment.

Massport is the owner and operator of Massachusetts' premier airports: Boston Logan International Airport, Laurence G. Hanscom Field, and Worcester Regional Airport. Boston Logan International is the largest airport in New England, with over 40 airlines serving more than

30 million passengers each year. Focusing on general aviation activity, Laurence G. Hanscom Field boasts outstanding facilities for corporate and private users and a convenient location that is just minutes from Boston's major highways and the Route 128 Technology Corridor. Meanwhile, Worcester Regional Airport serves Central Massachusetts' residents and businesses by supporting a mix of commercial service and general aviation activity. In 2014, Worcester Regional's enplanements increased by more than 110,000 as a result of JetBlue service.

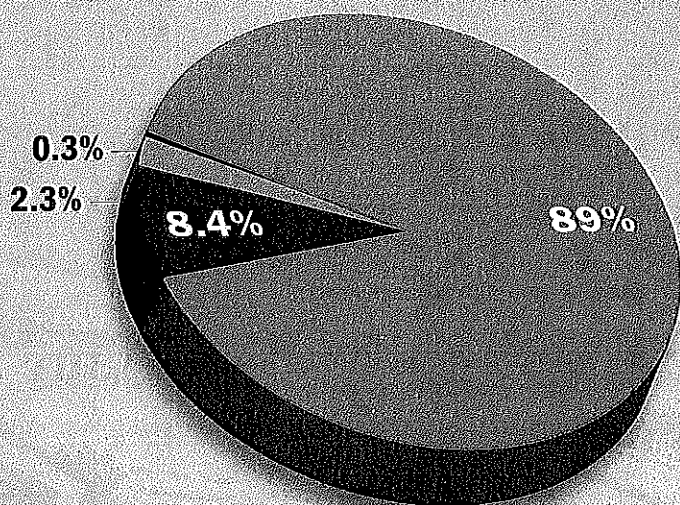
Massport's airports generate approximately \$15.1 billion in total output, which is 91 percent of the state airport system's total annual economic activity. This impact includes nearly 145,000 Massachusetts jobs and a total annual payroll estimated at \$5.5 billion.







## ECONOMIC IMPACT OF MASSPORT AIRPORTS

### TOTAL ECONOMIC IMPACT

**\$15.1 BILLION**



|   |  |                        |
|---|--|------------------------|
|  | Boston Logan Int'l (BOS)                                       | <b>\$13.4 billion</b>  |
|  | Laurence G. Hanscom Field<br>Air Force Base                    | <b>\$1.3 billion</b>   |
|  | Laurence G. Hanscom Field (BED)<br>Civilian Airport Facilities | <b>\$348.9 million</b> |
|  | Worcester Regional Airport (ORH)                               | <b>\$46.4 million</b>  |

Note: Massport numbers and percentages are rounded.

# Additional Areas of Analysis

## Qualitative Benefits

Beyond the quantitative aspects of aviation benefits, there are also qualitative benefits that deserve consideration when the total value of an airport system is analyzed. Qualitative benefits are those activities which take place at an airport on a regular basis that add to the quality of life, but are difficult to assign a dollar value. Qualitative benefits typically enhance the health, welfare, or safety of individuals in the airport's market area. While it may be difficult to place a dollar value on such impacts, these benefits, which vary throughout the Massachusetts airport system, improve the quality of life of the Commonwealth's residents in a variety of ways. Examples of qualitative benefits of aviation at Massachusetts' airports include facilitating emergency medical transport; providing police support; supporting forest and wildlands firefighting operations; serving as a staging area for community events; conducting search-and-rescue operations; supporting aerial surveying, photography, and inspection operations; providing youth outreach activities; and supporting the U.S. military and other government organizations.

## Military

Massachusetts has a long and distinguished military tradition dating back to colonial America. In addition to its many military bases and research facilities, Massachusetts is home to four active military air facilities that support multiple service branches: Hanscom AFB, Westover ARB, Barnes ANGB, and Joint Base Cape Cod. Along with the strategic military value that these facilities provide to the nation, Massachusetts realizes notable economic benefits from military aviation activities. The economic impacts attributed to these facilities are estimated at approximately 18,000 total jobs, \$1.4 billion in total annual payroll, and \$1.7 billion in total annual output.

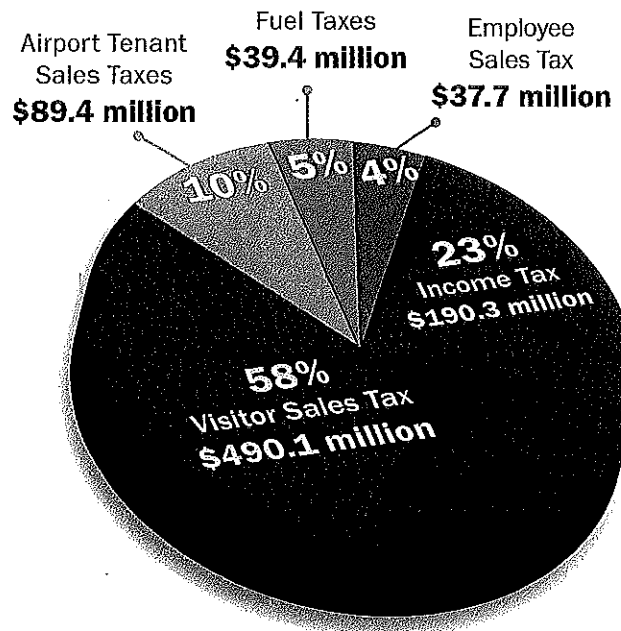
| Airport Name        | Employment    | Payroll                | Output                 |
|---------------------|---------------|------------------------|------------------------|
| Hanscom AFB         | 10,610        | \$1,066,163,000        | \$1,255,196,000        |
| Westover ARB        | 5,083         | \$188,105,000          | \$233,482,000          |
| Barnes ANGB         | 1,302         | \$32,685,000           | \$106,359,000          |
| Joint Base Cape Cod | 1,192         | \$92,990,000           | \$134,571,000          |
| <b>TOTAL</b>        | <b>18,187</b> | <b>\$1,379,943,000</b> | <b>\$1,729,608,000</b> |



## Tax Impacts

Aviation in the Commonwealth plays an important role in generating tax revenues for Massachusetts and local municipalities for the provision of community services and protection of the public's health, safety, and welfare. A tax analysis was conducted for this study that estimated the revenues generated through the state sales tax, local sales taxes, lodging/restaurant taxes, rental car taxes, state income taxes, and aviation fuel taxes. The analysis also estimated the taxes paid by on-airport businesses, visitors arriving by both commercial airlines and general aviation aircraft, and employees supported by airport-related activity. These employees included those working on the airport for businesses and government organizations and those found off-airport that are supported by visitor spending. The analysis found that Massachusetts' airports annually generate an estimated \$846.9 million in tax revenues from aviation-related activities.

## TOTAL ECONOMIC IMPACT \$846.9 MILLION





# Aviation's Unique Aspects

## Aviation Education

With aviation passenger traffic climbing globally and a record number of new aircraft orders, the time for training highly qualified aircraft operators, technicians, and engineers is now – and Massachusetts is positioning itself to fill that need. Here in Massachusetts, we see this as an opportunity! The Massachusetts airport system is currently home to 37 airport-based flight schools that provide flight training certifications from private pilot to airline transport pilot, as well as specialty training in aircraft such as helicopters, sport aircraft, and taildraggers. Beyond this, through a variety of independent but related initiatives – individuals, groups, schools, airports, and businesses are working together to create a “pathway” for the citizens of the Commonwealth to lucrative careers in aviation.

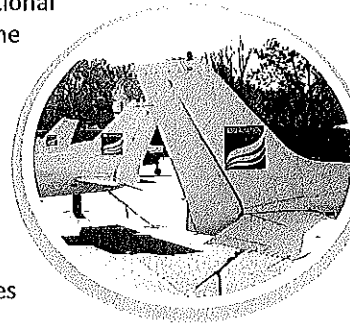
## Early Education

Passion for aviation is typically born at an early age and is often fostered by those aviation enthusiasts that can be found at the local airport. Through airport open-houses, air shows, airport tours and other events, kids are exposed to the world of aviation. Established airport programs like the Experimental Aircraft Association (EAA), Young Eagles, and the Civil Air Patrol provide children with their first opportunity to fly in a small plane and to be part of the aviation community.

Other outreach efforts such as the Wright Flight program establish working partnerships between airports and the local schools to extend aviation education into the curriculum.

## Secondary Education

In recent years, a renewed emphasis is being placed on STEM (Science, Technology, Engineering and Math) education within Massachusetts as a means of preparing its youth for the career demands of today and tomorrow – and aviation is a primary beneficiary of that effort. The Wright Flight program, which provides students with ground school training, is part of an outreach effort that establishes working partnerships between airports and the local schools to extend aviation education into the curriculum. Westfield Vocational Technical High School is in the process of starting a FAA Part 147 maintenance program that will enable students to graduate from high school with an airframe and powerplant license, which is critical to supply tomorrow's workforce for companies like Gulfstream at Westfield-Barnes Regional Airport.



## Post-Secondary Education

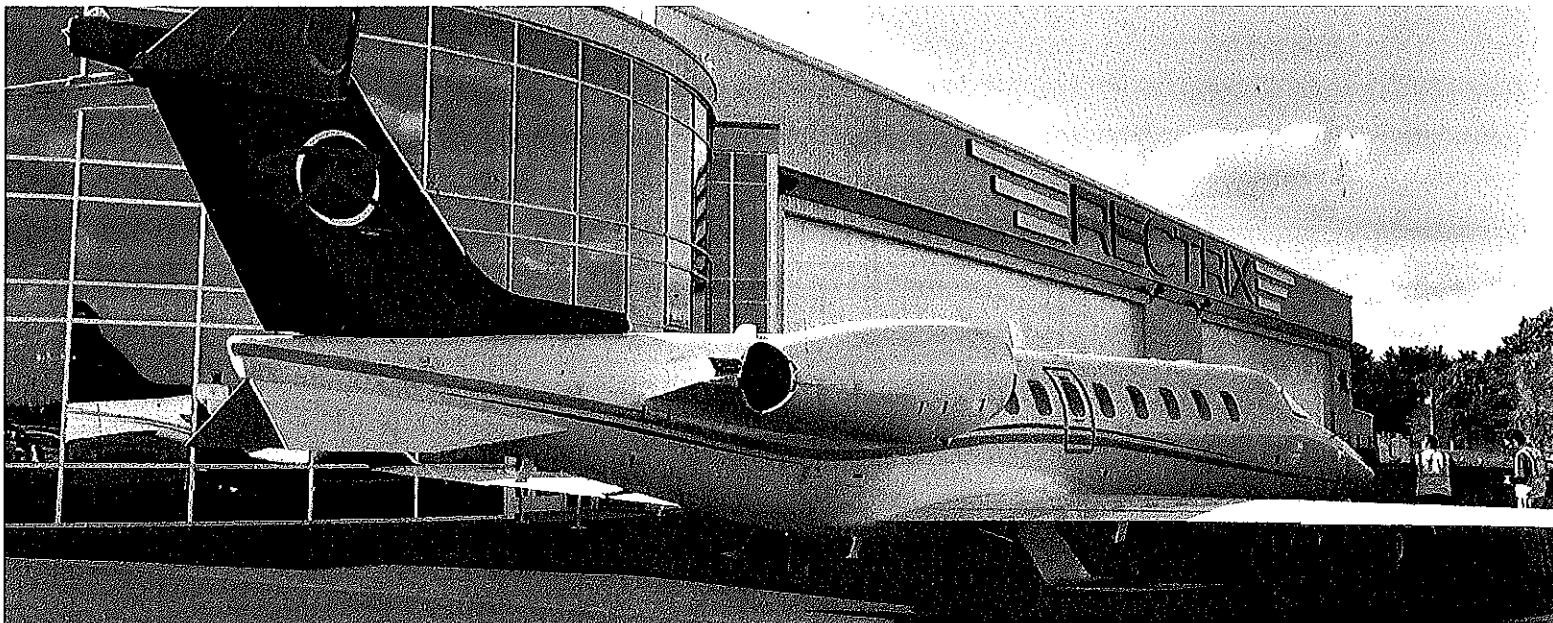
Massachusetts is home to a world-renowned college educational system – and this extends directly to the aviation industry. Bridgewater State University is the preeminent aviation program in New England, boasting its own flight academy and offering degrees that enable graduates to pursue careers as pilots, airport managers, flight planners, systems engineers, flight instructors, and air traffic controllers. Cape Cod Community College is initiating the development of a unique FAA-certified aircraft maintenance training program for meeting the critical need for highly skilled technicians in airframe and powerplant repair and certification for airlines like Cape Air. Other schools like North Shore Community College and Westfield State University partner with local flight schools to offer opportunities to integrate flight training with an aviation degree program. Finally, at the heart of the country's epicenter for technology education, the Massachusetts Institute of Technology, Worcester Polytechnic Institute, and Boston University continue to develop the nation's leading aerospace scientists and engineers that will shape the future of aviation.

Education activities located on Massachusetts airports result in 487 jobs earning nearly \$14.3 million in payroll. Total output from on-airport education surpasses \$45.2 million.

### ON-AIRPORT EDUCATION IMPACTS

|                  |              |
|------------------|--------------|
| Total Employment | 487          |
| Total Payroll    | \$14,275,000 |
| Total Output     | \$45,223,000 |





*Commercial charter flights are a critical and efficient way to move people and cargo. They provide a direct and efficient way to move people and cargo, often avoiding the delays and inefficiencies of commercial airlines. Commercial charter flights are a critical and efficient way to move people and cargo, often avoiding the delays and inefficiencies of commercial airlines.*

*— John J. White, President, Rectrix*

## Air Charter

Time is a finite resource – and whether it is spent for professional or personal purposes, there is no getting around the fact that we cannot create more time. However, we can use it more wisely and more efficiently, such as when we utilize charter aircraft. Air charter refers to a variety of services available that allow individuals, corporations, or groups to move people and cargo in the fastest, most efficient manner available today. It can include the transporting of business people to open new markets, the transfer of patients during medical emergencies, the shipping of time-sensitive cargo to restart a production line that is down, as well as any other use where time and convenience are of the essence.

Air charter can eliminate logistical ineffectiveness by providing immediate point-to-point travel services that are fast and reliable. Moreover, flight time itself is much more productive as charter aircraft have the capability to allow their passengers to operate much as they would in a professional office. Air charter operators board passengers closer to their points of origin and deliver them closer to their final destination by effectively utilizing the country's vast general aviation airport network. This not only makes travel more convenient, it also allows businesses to operate in, or develop markets outside of major metropolitan areas due to the speed and accessibility provided by air charter.

Massachusetts realizes and benefits from significant air charter operations throughout its airport system. With 21 companies providing air charter services based within the Commonwealth, in addition to multiple companies operating as brokers for other air charter companies both inside of and outside of the Commonwealth, air charter is a driving force within Massachusetts. As evidenced by the pronounced use

of Massachusetts airports by NetJets, Flight Options, Rectrix, PlaneSense, and other operators and air charter brokerages that service Fortune 500 companies, air charter is an important tool that helps businesses to continue to operate, while also serving as a potential incentive for new businesses to locate to the Commonwealth. This important segment of the aviation industry is responsible for an estimated 408 jobs, \$22.1 million in payroll, and \$99.6 million in economic output.

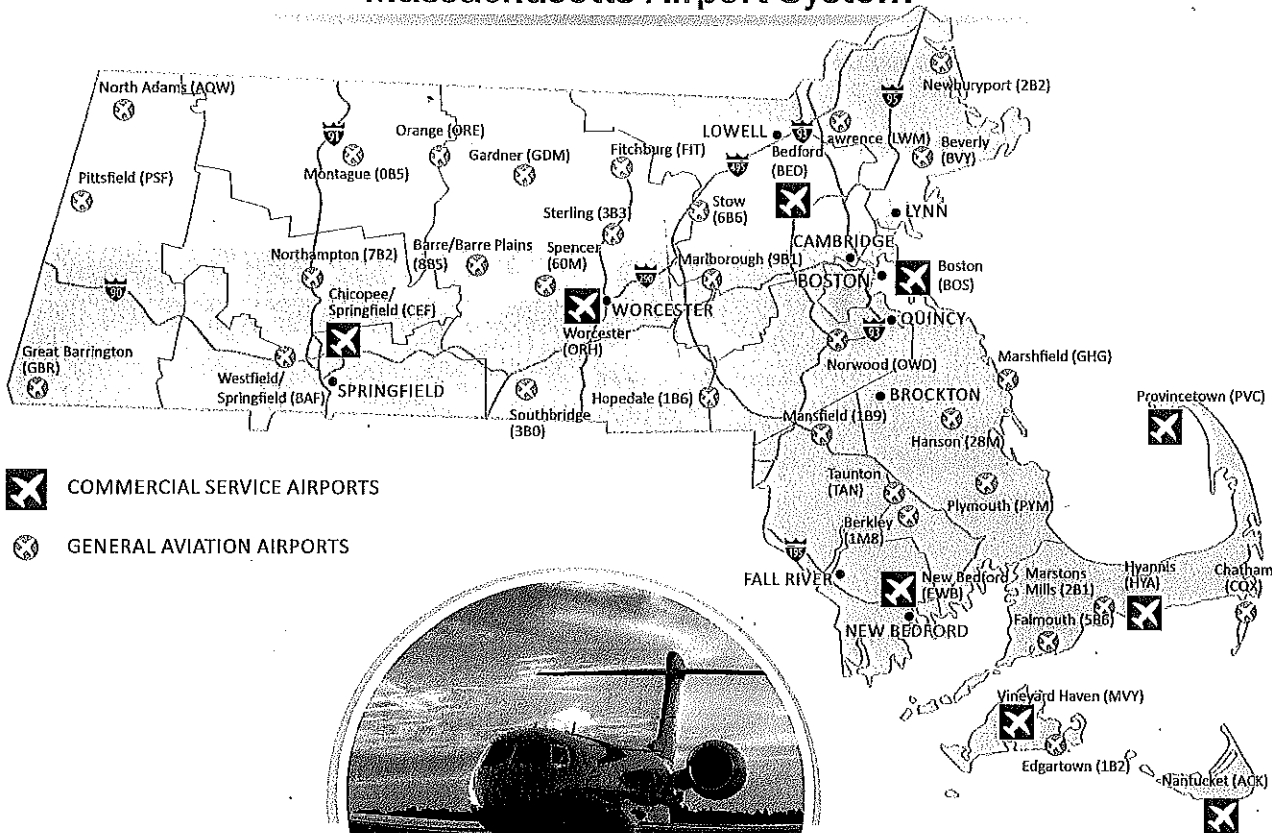
Air charter operations are also critical to support Massachusetts' world class educational system, as students from around the world frequently travel via charter aircraft. Professional and collegiate sports teams regularly utilize air charter as they travel to and from the area for games and tournaments, as do thousands of fans in support of their teams. As an internationally recognized vacation destination, charter aircraft operations have proven to be a critical asset in moving tourists to and from distant destinations. For those who want to live in Massachusetts but have business interests elsewhere, air charter also allows those individuals the flexibility to be full-time or part-time citizens of our state. For many of Massachusetts' renowned festivals and events, air charter is one of the most important tools for allowing national and international access and participation. Additionally, an important component of air charter is that it can serve as a lifeline during emergency medical events where immediacy and accessibility save lives.

### AIR CHARTER IMPACTS


|                  |              |
|------------------|--------------|
| Total Employment | 408          |
| Total Payroll    | \$22,089,000 |
| Total Output     | \$99,621,000 |

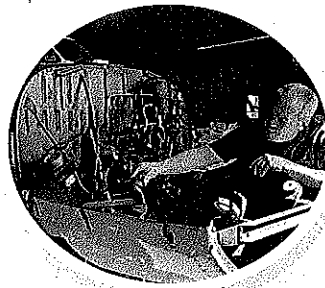


# Massachusetts Airport System



 COMMERCIAL SERVICE AIRPORTS

 GENERAL AVIATION AIRPORTS



## For More Information, Contact:

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- Federal Aviation Administration (FAA)
- MassDOT Aeronautics Division
- Aircraft Owners and Pilots Association (AOPA)
- Massachusetts Airport Management Association (MAMA)
- Massachusetts Office of Business Development (MOBD)
- Massachusetts Port Authority (Massport)
- National Business Aviation Association (NBAA)

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- 3-126th AVN TBOS, Camp Edwards

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 & Spotlight Communications

*Massachusetts' 39 public-use airports offer a competitive business advantage. Overall, for every \$100 spent by aviation related businesses, an additional \$56 is created as a multiplier impact that boosts spending, payroll and employment benefits improving the quality of life in Massachusetts for all its residents.*