

Chapter 4

Airport Planning

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This chapter summarizes information that was included in the *Draft ESPR* for airport facilities and infrastructure and provides responses to scoping elements identified in the MEPA Certificate related to planned activities and improvements at Hanscom Field and the consistency of the ESPR with local and regional plans.

Summary of the *Draft ESPR*

Airport planning for Hanscom Field is based on the airport activity levels that have been forecast in the *Draft ESPR* for the 2005 and 2015 Moderate and High Growth scenarios. Planning assumptions presented are estimates of what could happen at Hanscom Field using certain assumptions, not necessarily what will happen. These planning concepts take into account the Hanscom Field Master Plan and the Massport Regulations that provide the general planning context for Hanscom Field. The following describes the key elements of conceptual programs for airport facilities and infrastructure that was described in the *Draft ESPR*:

- Additional General Aviation (GA) facilities would be needed to meet both 2005 and 2015 forecast demand.
- Additional passenger throughput capacity would be needed in the terminal to meet forecast demand for possible scheduled passenger service in the 2005 and 2015 scenarios. The future demand for the 2005 Moderate, 2005 High, and 2015 Moderate Growth scenarios might be met by reconfiguring space within the existing terminal facility. The 2015 High Growth Scenario would likely warrant additional terminal space to support commercial airline service and related support functions.
- Making more efficient use of existing paved surfaces could accommodate demand for parking spaces under the 2005 Moderate Growth Scenario. Additional public parking would be required to meet forecast demand for the 2005 High, 2015 Moderate, and 2015 High Growth scenarios and the amount of additional parking identified in the *Draft ESPR* would require filing an Environmental Notification Form (ENF) with the MEPA Office of EOEA.
- Cargo facilities may be needed to meet the potential cargo demand for the 2005 and 2015 scenarios. Truck-to-plane operations for cargo would not require new facilities.
- No new facilities are anticipated in the West Airfield Area or the Runway 5 Approach Area under any of the 2005 or 2015 Growth scenarios.

- It is Massport's policy that stormwater runoff for new projects not exceed the stormwater runoff that existed at the particular site prior to the construction of the new facility. This approach has been in place since 1995 and will be used for the construction of potential new facilities that are described below for the 2005 and 2015 Moderate and High Growth scenarios if those projects move to construction.
- Existing potable water and natural gas utility systems can accommodate potential demands of the 2005 and 2015 scenarios.
- Additional capacity and an expanded electrical distribution system and upgrades to telephone and other communications service capacities are needed to accommodate the 2005 and 2015 Moderate and High Growth scenarios.

Hanscom Field Planning and Projects

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Massport has initiated programs to ensure that Hanscom Field is operated in an environmentally friendly manner. This includes the ISO 14001 Certification of Hanscom Field and its supportive environmental programs and policies, including the Best Management Practices that were described in the *Draft ESPR*. Massport voluntarily subscribes to the guidelines of Executive Order 385 as described below and supports the more efficient use of Hanscom Field within the broader context of "Smart Growth" initiatives.

This section describes planning initiatives and projects in the landside area, elements of Massport's five-year capital program at Hanscom Field, and FAA and Massport security policies and projects that could have environmental effects. Executive Order 385 is presented, as it was in the *Draft ESPR*, to emphasize Massport's commitment to managing and operating Hanscom Field in an environmentally friendly manner.

Planning Initiatives and Projects in the Landside Area

The landside area at Hanscom Field is the area that is located outside the secure airside of the airport and that is generally accessible to the public. Examples of landside facilities include the roadway system, the parking lot in front of the Civil Air Terminal and the East Coast Aero Tech modular classrooms. Examples of airside facilities include runways and taxiways. Some structures like the Civil Air Terminal and hangars have both landside and airside components.

Massport plans to repave and reorganize the existing parking lot in the Terminal Area for future installation of a revenue collection system. Massport has installed a new boiler and also plans to invest in rehabilitation of existing systems at the Civil Air Terminal as part of on-going maintenance including replacing windows; upgrading heating, ventilation and air conditioning units; upgrading the fire alarm system; renovating bathrooms; and renovating the second floor. Massport has received third party proposals to develop the Hangar One site. Massport is also evaluating development potential at the Hangar 24 site (formerly MIT) and GA hangars at the Pine Hill area.

The *Draft ESPR* identified additional initiatives and projects in the landside area for 2005 and 2015 scenarios. These initiatives and projects were primarily associated with 2015 forecasted aviation activity levels and included additional parking in the public lot in front of the Civil Air Terminal, expansion of passenger waiting areas, and a hotel. The potential need for 2005 and 2015 initiatives and projects will be re-evaluated as part of the *2005 ESPR* for Hanscom Field

Massport's Five-Year Capital Program at Hanscom Field

Massport's five-year capital program includes the Runway Safety Area (RSA) project for Runway 23, restriping and reorganizing the parking lot in front of the Civil Air Terminal, the Vegetation Management Program, extending the maintenance garage, various terminal improvements (bathrooms, corridors) and paving the perimeter road for service vehicle access to new T-Hangars.

The RSA area for Runway 23 and the perimeter service roadway paving may require MEPA review. Other than these projects there are no planned projects prior to 2005 that would require MEPA/NEPA review. Prior to 2005, as part of on-going maintenance, Massport plans to repave and reorganize the existing parking lot in the Terminal Area and will install infrastructure for a revenue collection system. The number of spaces will not increase and, therefore, this project does not meet MEPA review thresholds. (See EOE Assistant Secretary Hunt's letter in Appendix B.)

The *Draft ESPR* identified potential projects that could occur if the aviation forecasts occur as described in the report. As indicated in the *Draft ESPR*, future environmental review would occur if an action exceeded a MEPA or NEPA threshold, or other appropriate regulatory policy. Massport will follow appropriate local, State and federal review as it is determined to be applicable for these projects.

The 2005 High Growth and the 2015 Moderate and High Growth scenarios do identify parking demand that would require MEPA review if these spaces were constructed. If this demand becomes likely, Massport would develop a specific project, review MEPA/NEPA regulations to determine whether a filing was needed and, if appropriate, make the necessary environmental filing for the project.

Massport will continue to use the ESPR process to describe planned and potential projects and review the applicability of MEPA review. The *2005 ESPR* will describe projects that may occur prior to and in 2010 and 2020 and indicate whether a MEPA filing is warranted for these projects.

Third Party Development at Hanscom Field

Third party development also occurs at Hanscom Field. The construction of T-hangars, the reconstruction of Hangar One and Hangar 24 (Massachusetts Institute of Technology), and the construction of small hangars near Pine Hill all may occur by third party developers before 2005. Massport does not anticipate that these projects would require MEPA/NEPA review. The third party developer will follow appropriate local, state and federal review as it is determined to be applicable for these and other projects.

Transportation Security Administration (TSA) and Massport Security Policies and Projects

As TSA and Massport security policies are formulated and specific projects are identified, regulatory approvals may be required. Massport will go through the appropriate environmental process for all relevant projects. Initially, Massport is enhancing the security fence around Hanscom Field by replacing portions of the current fencing with an eight-foot chain link fence. There are two phases of the security fence project which are currently funded and either under construction or in the final stages of design and permitting: 1) Terminal Area Fencing Enhancements and 2) Fencing from the Terminal Area to Pine Hill. Under the Terminal Area project, existing fence is being replaced or upgraded (adding barbed wire) at its current location to provide a uniform eight-foot chain link topped with barbed wire. Under the proposed project to Pine Hill, the existing fence will be replaced and in most instances relocated into the airfield (i.e.: pulled back from the property line). This has been done to preserve the natural vegetative buffer between the community and the airfield. The upcoming Runway Safety Area improvement project will also probably involve fence work. No other fencing projects are planned at this time.

Executive Order 385

In Massachusetts, the Governor's Executive Order 385 (Planning for Growth)¹ is the primary statement of the Commonwealth's policy on sustainability. Massport voluntarily subscribes to the guidelines of Executive Order 385 as documented in the *Draft ESPR* and this *Final ESPR*, its annual ESPR/EDRs for Logan Airport and project-specific filings with MEPA, as well as its submissions to EOEAs as specified in the Executive Order. Key features of Executive Order 385 include the following:

- Massachusetts supports economic development that does not result in preventable adverse environmental effects.
- Massachusetts promotes development that is designed to minimize environmental impacts.
- The preferred method of achieving sustainability is through voluntary actions of involved parties.
- All Commonwealth agencies are to analyze the effect of their operations on their ability, and the ability of others, to implement sustainability and, when necessary, practical, and feasible, make changes to prevent any hindrances to achieving sustainability.
- All agencies shall try to work within the local or regional growth management plans.
- Reuse and rehabilitation of existing facilities and infrastructure are preferred over new facilities and infrastructure, where practicable and consistent with other plans.
- Regional transportation planning shall be coordinated among all involved agencies.
- Unnecessary loss of environmental resources or quality shall be minimized.

Hanscom Field is an important part of the regional transportation system and serves as a general aviation reliever for Logan Airport. This allows other airports such as Logan Airport to concentrate on large passenger and cargo aircraft. The *Draft ESPR* described future growth scenarios for 2005 and 2015 that respond to the continued importance of GA activity; include limited commercial activity to serve the potential passenger demand generated by the Hanscom Field catchment area (defined by a 30 minute uncongested drive time to the airport); and accommodate some based cargo activity.

The airport is an existing facility that is located in a light industrial/suburban environment. As described in Chapter 6, access to the airport is provided by existing roadway and transportation infrastructure. Within this framework, Massport recognizes the importance of alternative transportation modes to improve access. Massport is committed to continue to use Best Management Practices (BMPs) to minimize the environmental effects of airport operations. As described in Chapter 11, Massport's ISO 14001 and Environmental Management System provide the framework and guiding principles to implement these measures. Massport also uses BMPs to minimize the environmental effects of new developments. The 2005 and 2015 Moderate and High Growth planning scenarios also embrace this approach by minimizing the possible creation of impervious surfaces and avoiding wetlands, vernal pools, wildlife habitats, and agricultural resources to the maximum extent practicable.

Local and Regional Context

Hanscom Field is located within the towns of Bedford, Concord, Lexington and Lincoln. These towns are suburbs of Boston with strong economic ties to the high-tech and service economies that continue to flourish

along Route 128/I-95. As described in the *Draft ESPR*, these towns have undergone significant changes since 1970 when Hanscom Field activity peaked at more than 300,000 operations.

- The population of the four towns has dropped by 1.6 percent, while the number of households has increased by 37.6 percent, reflecting a more dispersed population.
- Future projections by the Metropolitan Area Planning Council (MAPC) indicate that both population and the number of households in the four towns will continue to increase over the next twenty years.
- Available employment data from 1970 indicate that the four Hanscom towns added over 20,000 jobs between 1970 and 2000, an increase of 59 percent.
- Available data also indicate that the overall number of jobs in the four Hanscom towns decreased by approximately two percent from 57,340 in 1990 to 56,050 in 2000.

Absent changes in travel behavior and land use development patterns, these increases will result in continued growth in traffic demand on area roadways regardless of what happens at Hanscom Field. Massport acknowledges the importance of managing Hanscom Field in an environmentally sensitive manner that recognizes the significance of Minute Man National Historical Park, a historic resource of national significance, the Hanscom AFB and the towns of Bedford, Concord, Lexington and Lincoln as described in this section.

Minute Man National Historical Park

The Minute Man National Historical Park, created in 1959 and operated by the National Park Service, consists of three discontinuous units (Battle Road, Wayside, and North Bridge). It covers approximately 967 acres spread out along Route 2A in Concord, Lexington, and Lincoln. The Minute Man National Historical Park is nationally significant for the site of the Battle of Concord, one of the first battles that marked the beginning of the Revolutionary War; for its association with prominent literary figures of the nineteenth and twentieth centuries; and as one of the earliest places in the nation to be commemorated.

An estimated one million people visit the Minute Man National Historical Park annually. While the Park is open year-round, its main season is the seven-month period between April and October. Major attractions are the North Bridge area in Concord and Battle Road in Concord, Lexington and Lincoln.

As discussed in the *Draft ESPR*, the 1989 General Management Plan (GMP) for Minute Man National Historical Park has largely been implemented. In recent years, new parking areas have been developed at each of the major individual sites within park boundaries. This feature accommodates visitors better and has eliminated large concentrations of traffic at any one site. The support and assistance of the Massachusetts Highway Department has contributed to the appearance of the paved sections of Battle Road today. Road "furnishings" such as appropriate, limited signage, landscaping and rebuilt stonewalls now grace Lexington Road and Route 2A. The width of these public ways has been limited to two lanes, to preserve the approximate dimensions of the historic Battle Road and enhance the visual experience of the park.

Little, if any, expansion of park boundaries or buildings is planned at Minute Man National Historical Park, and park authorities predict that annual visitations will stabilize at current levels. The Congressional boundaries of the Park are shown on Figure 1-1 and include approximately 50 acres of Massport-owned property, which is also identified on Figure 1-1. Individual programs at various sites within the park are advertised to attract audiences, but general promotion to encourage large increases in total attendance is not part of the current management plan. As indicated by the National Park Service at the March 24, 2003 meeting with Massport, work in the Minute Man National Historical Park is primarily focused on resource preservation,

rehabilitation of historic structures (e.g., North Bridge and the monument) and landscapes. This work will address cyclical and deferred maintenance needs. The only major National Park Service capital improvement project is the planned Hanscom Drive pedestrian underpass, which will connect two sections of the Battle Road Trail.

Hanscom Air Force Base

Hanscom AFB operates as a research and development office park with some residential units. The Hanscom AFB General Plan was reviewed for the *2000 ESPR*. Hanscom AFB is the home of the U.S. Air Force's Electronic Systems Center, which is responsible for the development and acquisition of integrated command and control systems, MIT Lincoln Labs and MITRE Corporation. Hanscom AFB, which directly abuts Hanscom Field on approximately 800 acres of land, has a network of roadways and utilities, residences and a school.

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Hanscom AFB and the firms that do business at the Base are important employers in the region. Changes in defense programs in the early 1990s saw cutbacks in military spending and fewer contracting jobs. The loss of jobs in Bedford between 1990 and 2000 illustrates these changes. Current plans are for the continued operation of the Base as a military facility.

Consistency with Local Plans

Massport is a state authority that is responsible for the ownership, management and maintenance of public-use transportation facilities that include Logan International Airport, Lawrence G. Hanscom Field, the Port of Boston, and the Tobin Bridge, as well as operations at Worcester Airport. Massport's goals and objectives are consistent with local plans for the towns of Bedford, Concord, Lexington and Lincoln, and regional plans such as MAPC's *MetroPlan 2000*. Massport embraces many of the principles described in these plans including the creation and operation of environmentally-friendly facilities, sustainability, and the efficient use of existing resources. As described in this *Final ESPR*, Massport seeks to achieve these results within the context of managing public-use facilities.

Activities at Hanscom Field are consistent with local, regional and other plans, to the extent that these plans or policies apply to Hanscom Field. Massport considers local zoning, but is not subject to it. As described in the *Draft ESPR*, Massport or its tenants would file a Notice of Intent with local jurisdiction if wetlands resources would be impacted by a particular action.

In general, the visions articulated by Bedford, Concord, Lexington and Lincoln and their planning documents speak to a desire to preserve the unique historical character and natural resources of the towns, while balancing the demands of changing and challenging social and economic conditions. Economic development, which has occurred throughout the four towns and the larger suburban area, and the associated traffic and environmental impacts are seen as important issues. The Hanscom Area Towns (HATS) Master Plan, which was prepared in July 1997, also speaks to these themes.

Massport operates Hanscom Field in an environmentally friendly manner as demonstrated in the *Draft ESPR* and in this *Final ESPR*. The efficient use of Hanscom Field as an existing part of the region's transportation infrastructure is consistent with "Smart Growth" policies, including those outlined in MAPC's *MetroPlan 2000*. In addition, through the ESPR process, Massport has identified and clearly described potential environmental effects of future scenarios to provide a comprehensive evaluation of potential conditions that would be associated with forecasted aviation activity levels.

During the *Draft ESPR* public review process, commenters indicated that the *Draft ESPR* was not consistent with the plans of Bedford, Concord, Lexington, and Lincoln and the HATS Master Plan. In general, the towns' plans articulate visions for small-town and rural/agricultural environments and reiterate commitments to protect and enhance the many cultural and historic resources in this area. The HATS Master Plan was developed in response to the *1995 GEIR* and its development scenarios, which included a golf course, office space and a hotel. The *Draft ESPR* focuses on aviation-related uses. A hotel was included in the 2015 scenarios, but unlike the *1995 GEIR*, this concept did not include conference facilities.

The inconsistencies between the plans and the *Draft ESPR* generally arise from the basic use of Massport property at Hanscom Field for aviation purposes within a local planning and zoning context that only describes non-aviation-related uses and from the inability of the towns to exercise direct control over property owned by a state authority. None of the towns' plans or zoning specifically provide for aviation-related land uses, and some portions of Hanscom Field have been zoned as residential. The HATS Master Plan also indicated support among the four towns for local zoning control over non-aviation uses at Hanscom Field. However, Massport is not subject to local zoning.

Massport's plans are currently limited to those investments described above for the Five-Year Capital program. These efforts support Hanscom Field's role as a premier full-service GA airport. The future scenarios that were evaluated in the *Draft ESPR* and in this *Final ESPR* present estimates of what could happen at Hanscom Field using certain assumptions, not necessarily what will happen. In this context, Massport has identified appropriate environmentally beneficial measures and environmental management approaches, many already in place, that will achieve consistency with the local and regional plans described below.

Bedford

The future scenarios described in the *Draft ESPR* are consistent with Bedford's Comprehensive Plan.² Areas of consideration are land use and growth management; economic development; open spaces and natural resources; and traffic transportation.

- The future scenarios that are described in the *Draft ESPR* do not include commercial development in Bedford as was previously described in the *1995 GEIR*. Instead, the scenarios include low-density aviation uses (e.g., T-hangars or GA hangars).
- The future scenarios do not include potential development in the West Airfield Area as described in the *1995 GEIR* scenarios. This area is identified as a natural resource area, which will support wetlands and wildlife.
- Activities associated with the VMP have gone through an NOI process with the Bedford Conservation Commission and Massport has received an Order of Conditions for the VMP.
- The VMP has identified the Hartwell Town Forest/ Jordan Conservation Area as having obstructions. Massport will work with the FAA and the Town of Bedford to determine the appropriate methodology that will be used to address the existing obstructions in the Hartwell Town Forest/Jordan Conservation Area.
- Hanscom Field-related traffic is a minimal contributor to traffic volumes on Bedford roadways.

Concord

The town of Concord adopted a long-range plan³ in 1987 that has provided a planning framework for the town. This plan is in the process of being updated and revised and Massport has reviewed a draft vision

statement. The plan addresses open space, recreation, historic preservation, housing, economic development, transportation, public facilities and infrastructure. Concord used the plan as a basis for a series of follow-up studies in these areas. The future scenarios described in the *Draft ESPR* are consistent with this plan.

- Recommendations included in this *Final ESPR* seek to manage Hanscom Field related traffic through TDM and traffic management measures that do not require physical changes to the roadway network. This approach is also consistent with recommendations in Concord's 2000 *Traffic Calming and Traffic Management study*.⁴
- Massport has identified one historic property, the Wheeler-Merriam House that is currently used as a residence that could have noise exposure levels of more than 65 dBA in the 2015 High Growth Scenario. Appropriate mitigation would be explored if activity levels at Hanscom Field achieve the levels described in this scenario.
- Massport is supportive of improvements to Route 2 that are consistent with the design approaches articulated by the towns of Concord and Lincoln, including the Route 2 Committee.

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Lexington

Lexington is in the process of completing elements of its 2000 Comprehensive Plan.⁵ Four elements have been completed and were adopted by the Lexington Planning Board on January 30, 2002: Land Use, Housing, Economic Development and Natural and Cultural Resources. The Town also adopted a Transportation Demand Management Policy on September 16, 1998, which seeks to reduce the use of Single Occupancy Vehicles (SOVs). The future scenarios described in the *Draft ESPR* are consistent with this plan.

- Massport manages Hanscom Field in a manner that respects local and regional resources and is consistent with the mature land use patterns of the area. The demand for aviation at Hanscom Field is driven by the adjacent residential and commercial areas along Route 128.
- Massport promotes sustainable development at Hanscom Field and all of its properties. As described in the *Draft ESPR* and this *Final ESPR*, Massport's ISO 14001 Certification and the Environmental Management System provide the basis to manage environmental conditions associated with airport operations.
- Massport has identified TDM measures and will work with the Hanscom AFB on areas of common concern and benefit.

Lincoln

Lincoln is the smallest of the four towns in terms of population and economic base. The *Town Vision Statement* of Lincoln states that "Lincoln is a town that cherished its rural, agricultural character, its small town heritage, its open space, and its historical legacy." The future scenarios described in the *Draft ESPR* are consistent with this vision.

- Massport does not propose to change agricultural resources to non-agricultural use and, as described in Chapter 10 - Cultural and Historical Resources, will work with the Massachusetts Department of Food and Agriculture on this issue.
- Recommendations included in this *Final ESPR* seek to manage Hanscom Field related traffic through TDM and traffic management measures that do not require physical changes to the roadway network. This includes Route 2A in Lincoln.

HATS Master Plan

The HATS Master Plan⁶ was prepared in July 1997, soon after the completion of the *1995 GEIR*. The plan was a collaborative effort of the four towns and addresses topics of land use/development policies; land conservation, open space and recreation policies; Minute Man National Historical Park goals and current initiatives; cultural and historical issues; transportation policies; public transportation/private sector initiatives; economic parity/fiscal policies and zoning policies.

The future scenarios described in the *Draft ESPR* are substantially different from those that were evaluated in the *1995 GEIR*. The *1995 GEIR* scenarios included development at several locations on the airport. The 2005 and 2015 scenarios describe potential additional aviation and aviation-related uses on the airport and retain many areas in their current, natural state. The hotel consideration in the *1995 GEIR* included conference facilities, which are not part of the hotel concept analyzed in the *Draft ESPR*. Massport has also implemented many of the recommendations of the Hanscom Noise Workgroup.

Noise considerations continue to be an issue for the National Park Service. Massport met with the National Park Service to discuss these issues and will continue a dialogue to determine other potentially feasible mitigation measures. The future scenarios also emphasize TDM measures and do not include physical changes to roadways in the Minute Man National Historical Park. The future scenarios do not include potential development on Massport property within the Congressional boundary of the Minute Man National Historical Park.

Consistency with MAPC Regional Plan

MAPC, which is the regional planning agency for metropolitan Boston, represents 101 cities and towns. MAPC encourages sustainable development practices through *MetroPlan 2000*,⁷ which "encourages efficient development by promoting compact development patterns and discouraging sprawl." *MetroPlan* provides guidance to reduce the adverse environmental impacts of sprawl and to protect natural resources. The plan identifies three development areas that are distinguished by different land use densities and provisions of sewer services. Hanscom Field, which is connected to sewer service, is located within a "Multi-Service Area" as defined in *MetroPlan*.

The current use of Hanscom Field is consistent with the "Smart Growth" policies advocated in *MetroPlan 2000*. Hanscom Field is an existing resource that is well served by existing infrastructure. The future scenarios that are described in the *Draft ESPR* make efficient use of these existing resources to satisfy a demand that is generated by nearby residential and commercial activities.

Future Efforts

Massport will continue to participate in and review appropriate local and regional planning initiatives to ensure that Hanscom Field continues to meet the transportation and environmental goals and objectives of Massport and the region.

Chapter 4 Endnotes

- ¹ Executive Order No. 385 (Planning for Growth), Governor William F. Weld, April 23, 1996.
- ² Town of Bedford, *Bedford Comprehensive Plan*, 2001.
- ³ Town of Concord, *1987 Long Range Plan for Land Use to the Year 2000*, October 27, 1987.
- ⁴ Concord Transportation Plan Committee, *Final Report & Recommendations with Appendices Regarding Traffic Calming and Traffic Management in the Town of Concord*, October 27, 1987.
- ⁵ Town of Lexington, *The Lexington We Want: Comprehensive Plan, First Four Elements*, January 2002.
- ⁶ Hanscom Area Towns Committee, *Hanscom Area Towns (HATS) Master Plan*, July 1997.
- ⁷ Metropolitan Area Planning Council, *MetroPlan 2000: A Plan for Future Growth*, 1990.