



Westover Metropolitan Airport Master Plan Update

June 2008

INTRODUCTION

Westover Metropolitan Airport (CEF) comprises the civilian portion of a joint-use facility located in Chicopee, Massachusetts. The Airport is approximately 30 miles north of Hartford, Connecticut; 70 miles east of Albany, New York; and 80 miles west of Boston, Massachusetts. The Airport is an important asset to the regional economy, producing \$7.9 million in economic output and \$2.2 million in payroll, and is responsible for producing 72 jobs.¹

CEF opened in 1940 as a staging and training base during World War II. Between 1955 and 1974, the Airport served as a Strategic Air Command (SAC) base. At that time, the Department of Defense declared approximately 2,300 acres of land at CEF as excess to Air Force needs. Today, the military portion of the airfield operates as an Air Reserve Base and is the home of the 439th Airlift Wing. The Westover Metropolitan Development Corporation (WMDC) was established in 1974 to operate and develop the civilian portion of the facility. The WMDC actively pursues opportunities to promote aviation activity. In July 2007, Skybus Airlines began service at CEF and continued to expand services there before the weak national economy and rising fuel prices resulted in its bankruptcy less than one year later.

The purpose of the Master Plan Update is to provide the WMDC with a blueprint for long-term development of the Airport. The planning process consisted of nine steps:

1. Establishing goals and objectives
2. Conducting an inventory of existing facilities

3. Forecasting aviation activity
4. Determining long-term facility requirements
5. Developing alternative concepts and plans
6. Selecting a preferred development plan
7. Identifying potential environmental considerations
8. Preparing a financial analysis for proposed development
9. Inviting public participation

This executive summary provides an overview of the Master Plan Update process and presents the recommended 2025 development plan for the Airport.

GOALS AND OBJECTIVES

In order to identify, evaluate, and select preferred development options, a set of goals and objectives related to the Airport were identified:

1. Develop a plan that ensures the Airport is safe and reliable;
2. Develop the Airport in a manner that is flexible, adaptable to changing conditions, and reflects the Airport's role as an air reserve base, and recognizes the highest and best land uses;
3. Provide facilities at a reasonable cost to all users (passengers, airlines, general aviation, employees, etc.), while ensuring that the WMDC operations are self-sustaining;
4. Develop the Airport in a manner that will minimize and reduce adverse environmental effects;
5. Support local and regional economic goals and plans without constraining long-term Airport development; and

¹ *The Economic Impact of Public-use Airports in Massachusetts*, study sponsored by the Massachusetts Aeronautics Commission (1996.)

- 6. Build and maintain community confidence and support.

A set of specific objectives was also developed for each goal to identify how the goal would be achieved.

INVENTORY

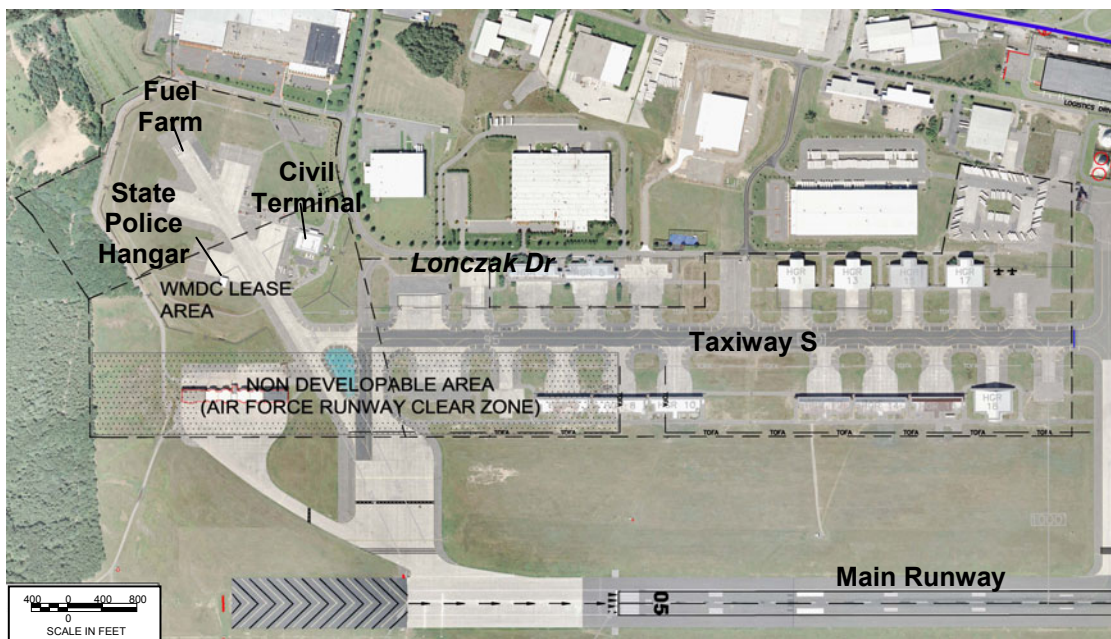
An Airport inventory was undertaken to determine the type, number, and condition of existing facilities and to document changes that had occurred since the previous master plan. **Figure 1** shows the exiting Airport layout.

The airfield, which is controlled by the Air Force, consists of an 11,597-foot northeast by southwest runway (Runway 5-23), a 7,082-foot northwest by southeast crosswind runway (Runway 15-33), associated taxiways, and holding pads. The Westover ARB also has several hangars, aircraft parking aprons, an air traffic control tower, and other facilities.

The portion of the facility known as Westover Metropolitan Airport is located in the southern portion of the facility. It comprises 91 acres and features several taxiways, aircraft hangars, aircraft aprons, a civilian terminal, and a fuel farm.

Existing Airport Layout

Figure 1



AVIATION ACTIVITY FORECASTS

Forecasts of passengers, cargo, and aircraft operations (takeoffs and landings) were prepared to project the level of activity the Airport could experience in the 20-year planning horizon. In general, an airport’s future aviation activity is usually tied to a region’s projected socioeconomic growth and

anticipated air service trends. For Westover Metropolitan Airport, however, the Master Plan Update needed to recognize the fact that WMDC has been actively seeking new air service and other aviation-related business that could significantly increase activity beyond the level of what could be captured in a traditional forecast approach. For this reason, two sets of forecasts were prepared for most segments of

aviation activity: a base case forecast (which assumed a continuation of recent Airport trends, including Skybus and Pogo) and a high forecast (which assumed significant changes in service and activity levels).

Figure 2 shows the FAA-approved base case forecasts and high forecasts for passengers, cargo, civilian based aircraft, and total aircraft operations.

Passengers

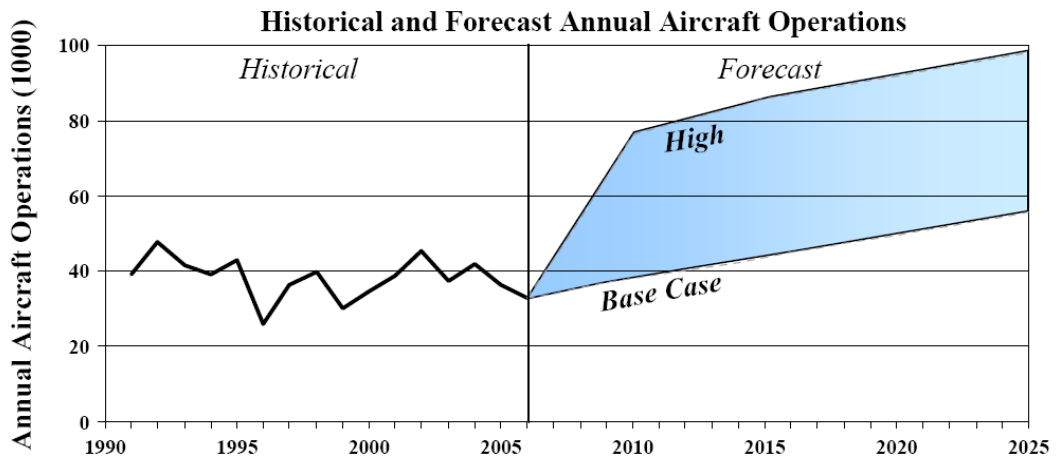
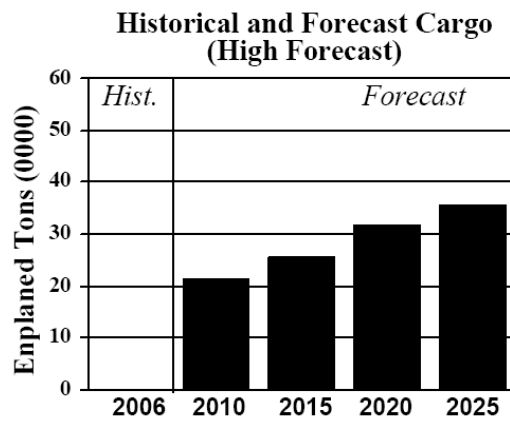
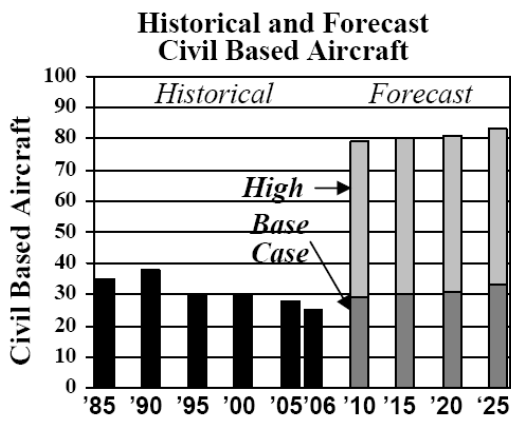
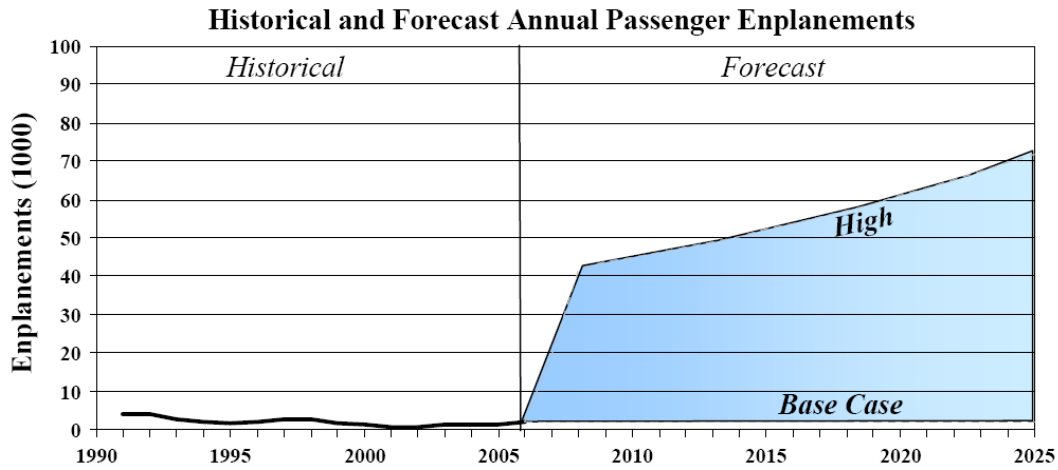
Until 2007, only passenger charter flights operated at the Airport—no scheduled commercial service was available. The base case passenger forecast assumed this service

pattern would continue through the forecast period. Under this assumption, the base case forecast shows about 2,000 annual passenger enplanements through the planning horizon.

The short-lived service provided by Skybus Airlines suggests that the area might be able to support limited commercial service under the right conditions. Therefore, a high forecast was prepared which assumed one scheduled round trip flight per day by a scheduled commercial airline in the near term, growing to about two daily round trips by the end of the 20-year planning period. This air service assumption resulted in a total of 72,000 annual passenger enplanements by 2025.

Summary of Aviation Activity Forecasts

Figure 2



Air Cargo

Currently, there is no regular air cargo service at Westover Metropolitan Airport, although between 1985 and 1990, Emery Worldwide used the Airport as a New England international sort facility. Based on more recent trends in the cargo industry, which include a shift toward “time-definite” shipping (versus “time critical” shipping), cargo operators are relying more heavily on trucks than on aircraft. For this reason, the base case forecast assumed no cargo activity at CEF. Under the high forecast scenario, however, the Master Plan Update assumed that an all-cargo airline would create a regional cargo hub at the Airport. Based on this assumption, approximately 28,000 tons of cargo would be processed at CEF by 2025.

General Aviation and Air Taxi

General aviation (GA) is defined as all aviation that is not commercial service, military, or air taxi. Base case forecasts of based GA aircraft and GA aircraft operations were developed based on a review of the region’s overall growth in the number of GA aircraft and trends in the Airport’s share of these aircraft. A high forecast was prepared to account for the possibility of a large-scale air taxi operation locating at the Airport.

Under the base case forecast, the number of civilian aircraft based at CEF is forecast to increase from 28 in 2005 to 33 in 2025. In the high scenario, based aircraft totals would reach 83 by 2025.

GA operations are forecast to increase from 4,700 in 2005 to 8,100 by 2025 under the base case forecast. Under the high forecast, the Master Plan Update forecasts a combined total of 45,200 GA and air taxi operations by 2025.

Military Operations

Although the Master Plan Update only addressed facility needs under control of WMDC, military activity needed to be considered. For this reason, a forecast of military aircraft operations was prepared based on input from the WARB. Military-related activity is forecast to increase from about 31,100 annual aircraft operations in 2005 to 47,000 operations by 2025.

Total Aircraft Operations

Total aircraft operations were estimated by combining passenger airline operations, air cargo operations, general aviation and air taxi operations, and military operations. Under the base case forecast, total aircraft operations are forecast to increase from 36,300 in 2005 to 55,800 in 2025. Under the high forecast, total aircraft operations are forecast to increase from 36,300 to 98,000 by 2025.

FACILITY REQUIREMENTS

The next step in the Master Plan Update process was to translate the forecasts into facility requirements. Facility requirements were determined by comparing future facility needs to the Airport’s existing inventory of facilities, reviewing FAA design criteria to ensure the Airport meets safety and operational standards, and considering the need to maintain or improve customer service. In addition, it is recognized that the useful life of some facilities has been reached or surpassed and that these facilities would have to be upgraded or replaced. Separate requirements analyses were prepared for the key elements of the Airport, excluding military facilities.

For the terminal, the analysis focused on requirements assuming the high passenger forecast (i.e., continued and expanding commercial service). Under this scenario, a

significant amount of terminal area would be required, compared to the amount currently available in the Civil Terminal area. By 2025, a 21,000 sf building will be required.

GA improvements would be needed to provide an upscale GA terminal/FBO facility and to account for an anticipated increase in business jet use. By 2025, a 5.7-acre site would be needed.

Air taxi requirements were determined primarily by incorporating the latest available plans provided by a potential air taxi operator. In total, approximately 20 acres would be required over the long term.

Air cargo requirements focused on site requirements potentially needed to accommodate a regional cargo operation.

Considerations included providing an apron sized to accommodate the size of aircraft anticipated to use the facility, sufficient warehouse space, adjoining truck docks, and ground access. In total, a 9.4-acre site would be needed.

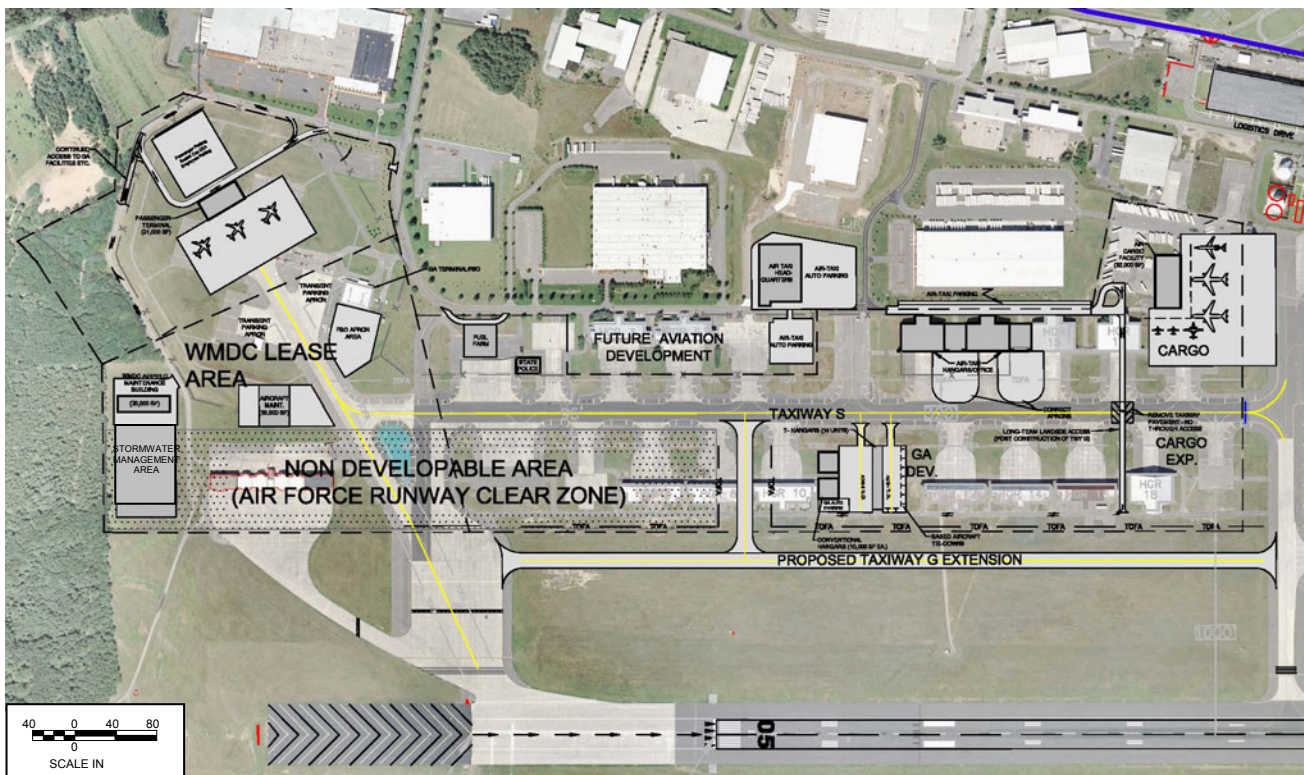
Long-term requirements for auto parking, aircraft fuel farm, and airfield maintenance facilities were also calculated. By 2025, a 1.7 acres, 0.5 acres, and 1.0 acres, respectfully, will be required for these facilities.

RECOMMENDED DEVELOPMENT PLAN

After future facility needs were identified, alternative concepts were developed and evaluated using an iterative process, and a recommended development plan was prepared. **Figure 3** shows the recommended plan.

Recommended Development

Figure 3



Recommended Airfield Development Plan

The key Master Plan Update airfield recommendation is to extend Taxiway G to the full length of Runway 5-23. (This project would be funded by the US Department of Defense.) Once this project is implemented, military aircraft would not need to traverse through the civilian portion of the Airport. In addition, the extension would allow WMDC to develop the area east of Taxiway S.

Recommended Terminal Development Plan

Two options were considered to meet the terminal requirements associated with scheduled commercial service. The first was expanding the existing civil terminal; the second was building a new, replacement terminal. Because significant renovation and expansion would be needed to meet requirements using the existing facility, and continued operation would be difficult during construction, the Master Plan Update recommends constructing a new terminal at the west end of the “Christmas Tree” apron. To minimize cost and investment, the Master Plan Update recommends constructing a semi-permanent terminal facility (for example, a stressed-fabric structure) that can be quickly and inexpensively erected. The structure could be removed or relocated with minimal effort should needs change.

Recommended Air Cargo Development Plan

Although the Airport currently has no cargo activity, the high forecast assumes a regional cargo facility. Based on a review of size requirements, the need for convenient airfield and landside access, and the limited number of

site options available, the Master Plan Update recommends locating a potential cargo facility at the north end of the Airport property, near the intersection of Taxiway S and Taxiway N. The use of this location and Taxiway N would need to be coordinated with the US Air Force.

Recommended General Aviation Development Plan

Assuming that commercial airline activity is relocated to a new terminal, the Master Plan Update recommends converting the existing civil terminal into an upscale GA terminal/FBO and providing additional ramp space for parking transient aircraft.

To accommodate based aircraft needs, the Master Plan Update recommends constructing a four-acre campus between Hangar 10 and Hangar 12 on the east side of Taxiway S. (This recommendation is contingent upon the military extending Taxiway G.) Additional GA expansion could be provided north of this site (where Hangars 12 to 16 are located) or in the five-acre area occupied by Hangars 5 and 7. (This area would have to be redesignated for Airport Use.)

Air Taxi Development Plan

The high forecast assumes that a high-end air taxi operator using very light jets would be based at Westover. The recommended plan for an air taxi facility reflects information provided by this air taxi operator. The plan features the redevelopment of Hangars 11, 13, and 15, the construction of a headquarters building, auto parking, and other facilities. By 2025, a 20 acre site will be needed.

Recommended Aircraft Maintenance Plan

WMDC continues to explore opportunities for an aircraft maintenance facility to locate at the Airport. The Master Plan Update recommends providing a site for a 30,000-square-foot aircraft maintenance hangar south of the Taxiway A/Taxiway S intersection. Landside access would be provided by Ludlow Park Drive.

Recommended Support Facilities Development Plan

Key projects recommended by the Master Plan Update include the relocation and expansion of the fuel farm (necessitated by the proposed terminal being built at the existing fuel farm site) and construction of a new airfield maintenance facility on the south side of the Airport.

ENVIRONMENTAL CONSIDERATIONS

The Master Plan Update process included an initial environmental overview of the potential impacts that will need to be considered prior to construction of the Airport improvements identified by the recommended Plan. The FAA's Airport Environmental Handbook identifies 20 impact categories that should be considered when evaluating possible environmental impacts. Overall, there appear to be no projects in the recommended Plan that would significantly affect the environment or could not be mitigated. In the future, as projects are considered for construction, more detailed environmental analysis would need to be conducted, in the form of an Environmental Assessment.

FINANCIAL ANALYSIS

A financial plan was prepared, outlining the general cost of each project, its timing, and potential revenue sources. Through 2025, the Master Plan Update identified approximately \$56.7 million of development projects, as shown in **Table 1**. The scheduling of projects in the Capital Improvement Program (CIP) reflects a balance between when meeting capacity requirements and anticipated funding availability.

The financial analysis suggests that outside funding sources will cover approximately 65 percent of the Master Plan projects. The remaining costs would have to be funded by WMDC. Based on this financial analysis, potential development needs identified in the Master Plan would exceed anticipated revenues.

PUBLIC PARTICIPATION

To ensure that the interests of all stakeholders were considered, a public participation process was established. The two key elements of the process included the formation of a Technical Advisory Committee (TAC) and holding a public workshop. The TAC consisted of WMDC staff, the consultant, the FAA, the Massachusetts Aeronautics Commission, GA users, the WARB, and local governmental planners. The TAC met to review the forecasts, facility requirements, and preliminary development concepts. Based on their comments, the concepts were further refined to prepare a draft recommended development plan. Finally, a public information workshop was held on May 12, 2008, toward the end of the process, to give the general public an opportunity to review and comment on the recommended plan.

Capital Improvement Program
(Millions of 2008 Dollars)

Table 1

Project	Phase I (2008-2012)	Phase II (2013-2017)	Phase III (2018-2025)	Total
Airfield	\$0.0	\$1.7	\$0.0	\$1.7
Terminal	\$11.8	\$0.0	\$0.0	\$11.8
General Aviation/Air Taxi	\$13.0	\$13.3	\$1.4	\$27.7
Air Cargo	\$0.0	\$7.5	\$0.0	\$7.5
Support Facilities/Misc.	\$6.1	\$1.8	\$0.0	\$7.9
Grand Total	\$30.9	\$24.4	\$1.4	\$56.7

Note: Totals may not add due to rounding. Cost includes engineering and contingency.
Source: HNTB analysis.